



Ryoden
Corporation
Sustainability
Report **2017**



RYODEN

Message from the CEO



CEO

Last fiscal year, uncertainties about the future of the global economy continued largely due to slowdowns in China and other emerging economies, and adverse trends in US policies and European politics, notwithstanding the sustained growth of the US economy as expectations for a business recovery helped strengthen the dollar and raise share prices.

Meanwhile, the Japanese economy saw a recovery in profits, mainly among exporting companies, on the back of weakening of the yen. Capital investment has also followed a mild recovery path.

The Ryoden Corporation Group saw its profit

decline last year in the factory automation system division, despite the steady performance of automotive capital investment projects and the semiconductor and LCD-related manufacturing equipment business, as the production of machine tools and mounters decreased in key markets. In contrast, our profit in the cooling & heating system division increased as projects with major contractors emerged later in the year while demand remained strong for replacement to comply with environmental and energy efficiency requirements as well as in the cryogenic industry including refrigeration. Our building system division, which is related to IT facility systems, recorded a substantial increase in profit despite the sluggish performance of the elevator business, as IT and security-related system sales resulted in positive sales in data communication field and as the healthcare-related system business showed steady performance in the medical field. The profitability of our electronics division remained almost unchanged as the decline in the supply of some products due to the Kumamoto and Northern Ibaraki Earthquakes was offset by the brisk production of automobile-related equipment for the European, North American and Japanese markets and also the recovery in sales of industrial equipment, particularly for factory automation in East Asia.

Under these circumstances, we established the Ibaraki Sales Office in Japan, as well as Ryosho Mexico, S.A. de C.V. in Mexico, in order to explore the needs and accelerate the process of offering effective solutions by working more closely with customers. We have also worked constantly to achieve this objective, including through information-sharing sessions at various

locations, and enhanced collaboration with our customers and partners

Regarding the environment as one of the key managerial themes, the Ryoden Corporation Group will work even more closely with customers and offer the best solutions including energy management systems with our partners having mutually trust relationship.

Moreover, we are going forward with globalization of environmental activities to advance characteristic business that incorporates environmental activities by expanding certification scope of ISO14001 certified in Japan to overseas. Our Singapore, Hong Kong, Thailand, China, Taiwan and Germany offices have already done. And then we will expand scope to US office in future.

The Nikkei Environmental Management Survey, an objective measure of corporate environmental activities, confirms our consistent performance: we were ranked eleventh among nonmanufacturing trading firms last year, after holding the No.10 spot for three straight years. We also participated in the FY2016 Environmental Reporting Platform Development Pilot Project,*1 implemented by the Ministry of the Environment, which led some institutional investors to commend us for articulating our strategy. This praise from society attests to the widespread recognition of our Group's environmental management, which we are committed to pursuing.

Finally, we will share environmental and health values with all employees and work toward the enterprise which promotes these values.

*1 URL :<https://www.env-report.env.go.jp/>

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Editorial Policy

Our environmental philosophy is to pass on the environment in a better condition to future generations with whom we share the global environment.

This report has been drawn up to inform our stakeholders about the Ryoden Corporation Group's CSR activities, including our environmental programs, which may be difficult to gauge from descriptions of our business activities alone.

This report is designed to be easier to read and to deliver our messages more clearly and precisely, by minimizing the use of jargon and technical terms. We hope this report helps our stakeholders to better understand the Ryoden Corporation Group.

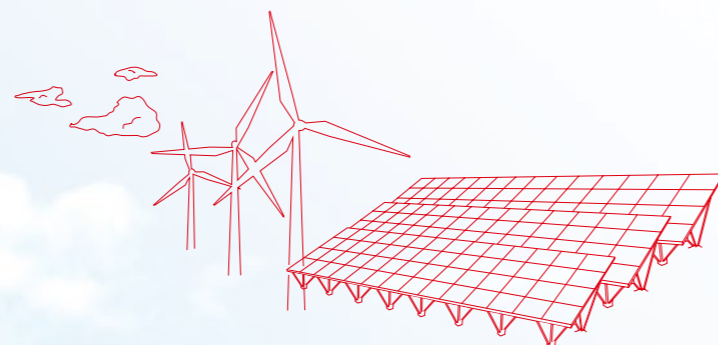
Management Principle

- Address the changes in society, striving for stability and progress in corporate management, while contributing to the community.
- Act through sincere marketing activities and the supply of progressive technology, to win the trust and expectations of customers.
- Respect the character and individuality of each employee, nurturing human resources high in specialization, innovative spirit and creativity.

Ryoden aspires to be a winning company of the time with the above mentioned guiding spirit as the core of its philosophy.

Business Activities

- 1 Adhere to laws and regulations
- 2 Aim for growth with profit
- 3 Take responsibility towards the society as a global company
- 4 Individuals should create their own views, and together create an energetic organization.
- 5 Ensure respect toward the individual's personality and uniqueness, and engage in personal development to attain high goals.
- 6 Management and the managers should fulfill their responsibilities.

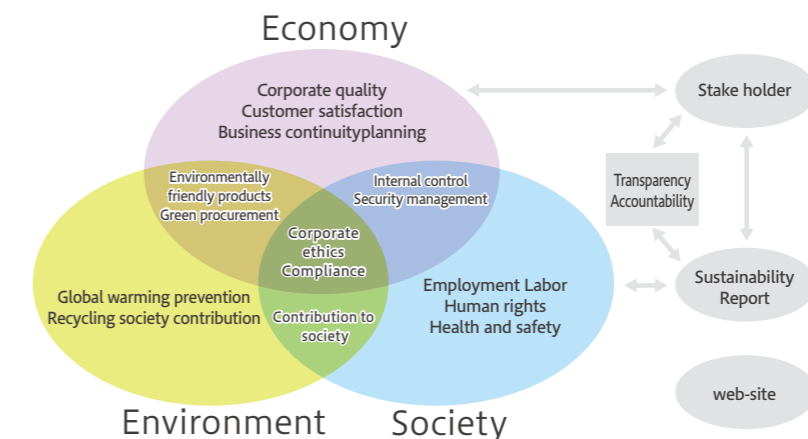


CSR Policy

The Ryoden Corporation Group places a high priority on helping global environmental preservation through business activities. For this purpose, our business activities are founded on our Environmental Basic Philosophy and Environmental

Policy. The Ryoden Corporation Group will remain dedicated to passing on a healthier global environment to future generations.

RYODEN Strategy of CSR



Overview of Our Business

Throughout the fiscal year, uncertainties about the future of the global economy continued largely due to slowdowns in China and other emerging economies and adverse trends in US policies and European politics, notwithstanding the sustained growth of the US economy as expectations for a business recovery helped strengthen the dollar and raise share prices. Meanwhile, the Japanese economy saw a recovery in profits, mainly among exporting companies, on the back of the weakening of the yen. Capital investment has also followed a mild recovery path. Among the industries served by the Ryoden Corporation Group, the recovery gained strength in industries related to industrial equipment, energy conservation and installation, while performance remained sluggish in the auto industry excluding the US and Japanese markets, mainly due to the weakness of the Chinese, ASEAN and European markets. Under these circumstances, the Group continued to

enhance its business as a “global solution provider” in response to the ever-changing business environment. The fiscal year also saw the launch of CE 2018 (Challenge & Evolution 2018), our new mid-term business plan designed to work more closely with customers, create value building on the needs of customers, increase our footprint among them and in the market, and improve profitability, as part of our active effort to suggest improvements. Also, our financial performance bounced back from the substantial drop in Q2 on a year-to-date basis, largely thanks to Group-wide efforts to accelerate activities and implement measures to curb sales and general administrative expenses. As a result, the Group earned ¥219,225 million in sales (down 1.2% on the previous year), ¥2,730 million in operating profit (down 25.7%), ¥2,442 million in ordinary profit (down 25.9%), and ¥1,388 million in current net profit vested in parent shareholders (down 24.8%) for the consolidated fiscal year.

FY	2009	2010	2011	2012	2013	2014	2015	2016
Sales (¥1 million)	168,586	197,016	202,723	203,730	224,766	237,877	221,990	219,225
Ordinary profit (¥1 million)	1,703	4,015	3,984	4,662	5,641	4,505	3,296	2,442
Personnel	1,079	1,176	1,167	1,148	1,190	1,251	1,276	1,284

Corporate Governance

■ Corporate Governance

Under our Management Principles, the Business Activities stipulate that all officers and employees of Ryoden Corporation and its Group companies will “promote the development of corporate governance which is beneficial and adequate for business management.” We carry out a wide range of measures to ensure the transparency, ethicality and accountability of our business, information disclosure, compliance with laws, regulations and rules, and the development of a governance system required by the Corporate Governance Code.

Ryoden Corporation’s Board of Directors, which consists of seventeen directors (including three outside directors) and meets regularly once a month, decides on important business matters and oversees the conduct of company operations.

The outside directors provide advice on the conduct of operations from an independent standpoint and act as a check on the others. In addition, we will newly appoint an independent outside director in the 77th year to strengthen the effectiveness of our chain of command. The Board of Directors decides on matters of the utmost

importance for Ryoden Corporation and its Group and oversees the performance of duties by the directors. In order to ensure transparency of management and rapid decision-making, the Executive Committee, comprising key directors and other executives, deliberates on crucial matters for Ryoden Corporation and its Group from diverse perspectives, with the attendance of the standing corporate auditors to ensure that discussions are proper. Ryoden Corporation’s Audit & Supervisory Board consists of two standing members and two external members. They attend the meetings of the Board of Directors as well as other key meetings under the audit policy and audit plan drawn up by the Audit & Supervisory Board, and audit and oversee legal compliance by the directors in performing their duties, verifying reports from directors and employees of Ryoden Corporation and its Group and conducting investigations into the business operation and financial standing of each company. To ensure that audits are properly conducted, they also regularly exchange information and views with the company’s internal auditing arm and financial auditor.

■ System of internal controls

In order to enhance and expand the CSR and internal control systems of our Group, Ryoden Corporation has established the following committees, which work with each other to ensure functional operation.

Internal Control Supervisory Committee

As an oversight body, we established the Internal Control Supervisory Committee, chaired by the CEO and made up of the directors with titles, to discuss basic policies on the internal controls of the Ryoden Corporation Group and verify the activities of other committees.

Ethics and Legal Compliance Committee

Recognizing compliance as a key managerial priority, we established the Ethics and Compliance Committee, and appointed a Legal Manager to take regular action to ensure legal compliance, fairness and morality in our activities.

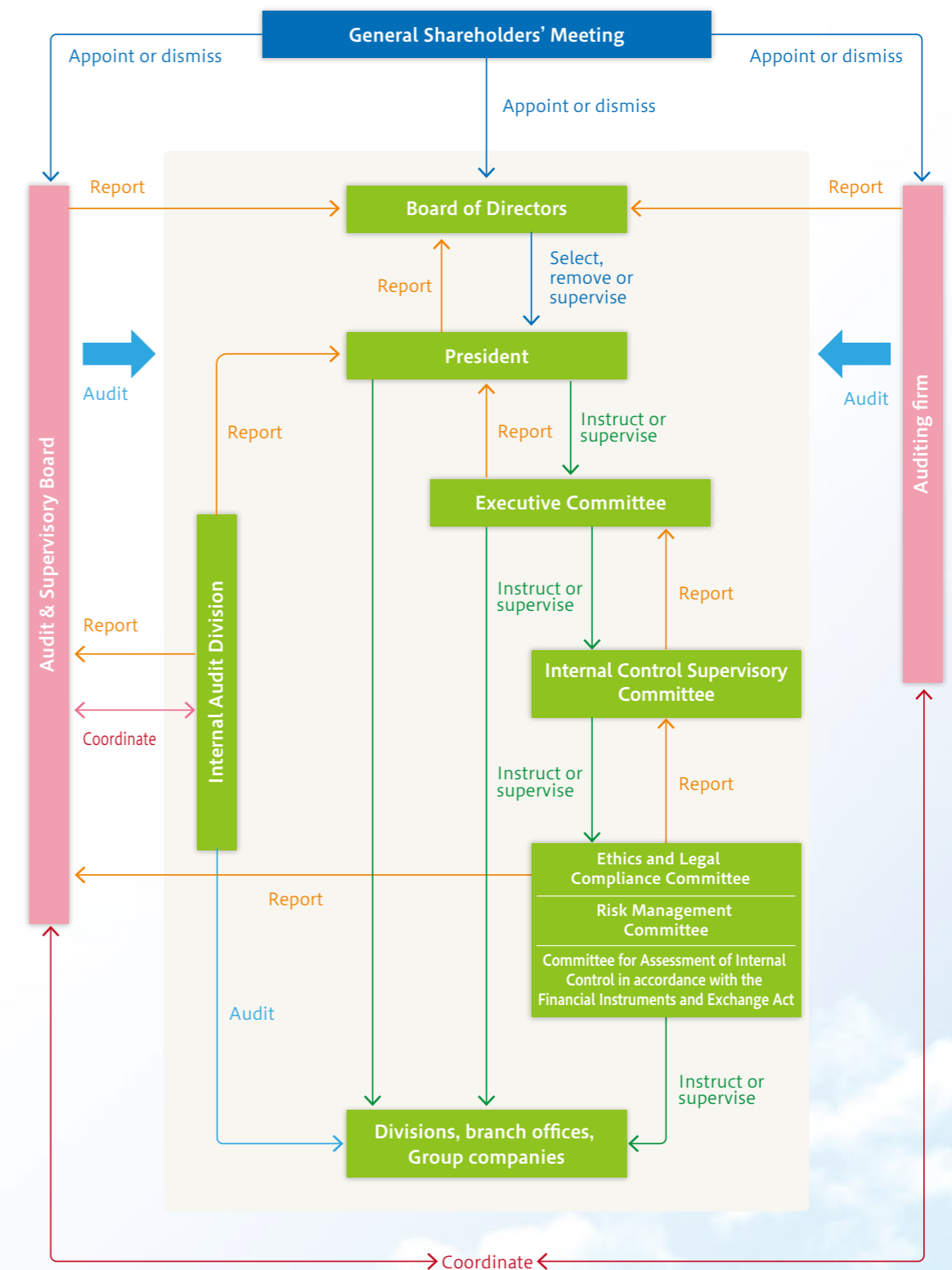
Committee for Assessment of Internal Control in accordance with the Financial Instruments and Exchange Act

For the purpose of implementing internal controls as specified in the Financial Instruments and Exchange Act and ensure the credibility of our financial reporting, we established the Committee for Assessment of Internal Control in accordance with the Financial Instruments and Exchange Act to evaluate our internal controls based on the results of internal audits conducted by the internal auditing and information system divisions regarding our control system and implementation in accordance with relevant criteria.

Risk Management Committee

To ensure the continuity and stable development of our business, we established the Risk Management Committee to conduct Group-wide risk analyses. The Committee plans measures to reduce the risks thus identified, taking into account various factors such as their probability and potential impact, and verifies implementation of the measures.

■ Ryoden Corporation's Corporate Governance Structure



Feature Ryoden Corporation Solutions

The Ryoden Corporation Group is working with our trusted partner companies to offer the best solutions to address customer needs and challenges in the field, which are identified through our close relationships with customers. We are committed to meeting the demands of customers and society and helping to conserve the global environment and promote human health by focusing on five areas: EMS and the environment, safety and security, production facilities, industrial refrigeration/heating, and building instrumentation.

EMS and the Environment

We contribute to the improvement of energy efficiency and conservation of the global environment through proposals for photovoltaics and other renewable energy sources, water, air and other environmental sensing, and next-generation energy utilizing hydrogen.

Safety and Security

With the aim of helping to ensure safety and security for people and society through our business activities, we carry out various initiatives including for improving food safety, supporting disaster prevention and reduction, and effective post-disaster medical services in the field.

Production Facilities

We propose total packages of services ranging from efficiency and labor-saving at production sites to production management, traceability, cost reduction, inspection/safety systems and assessment/testing systems, in line with the business profile and needs of customers.

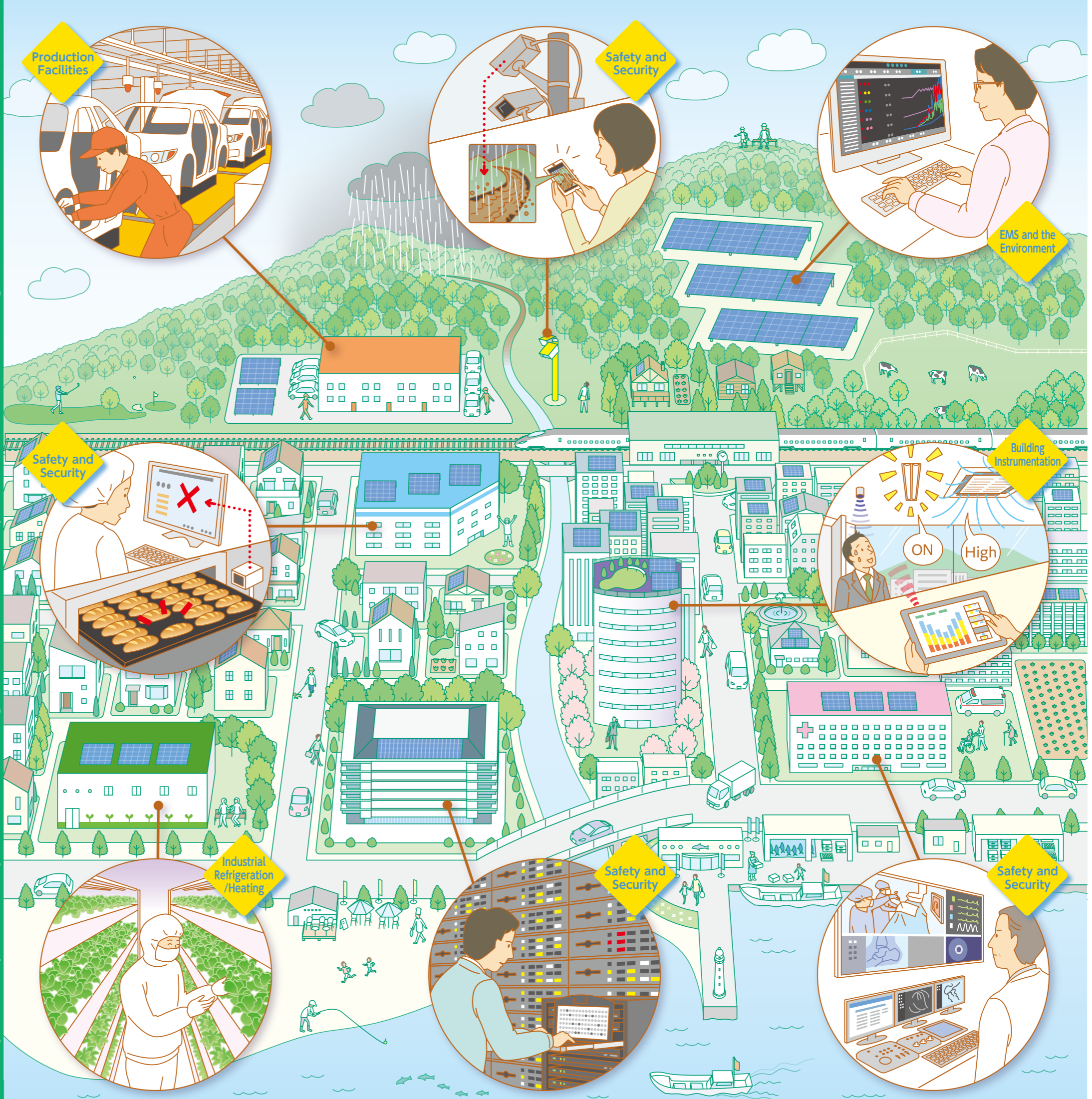
Industrial Refrigeration/Heating

Leveraging our technological prowess and expertise, we propose, design and construct sophisticated air-conditioning systems including for production facilities and testing booths. Building on our experience, we also propose and support the operation of plant factories, which are attracting global attention as a new crop production system.

Building Instrumentation

Demand for automatic control of buildings is increasing for energy conservation and safety purposes. The Ryoden Corporation Group proposes systems for total management and efficient operation of lighting, air conditioning and security in commercial facilities, factories and office buildings.

Ryoden Corporation helps to conserve the global environment and promote human health through its business activities.



With Our Supplier
Global Environment Initiatives
Social Contributions
With Our Employees

Feature Ryoden Corporation Solutions



To Build a Sustainable Society

Conservation of the global environment is one of the challenges to be addressed on a global scale to build a sustainable society. The Ryoden Corporation Group is contributing to reduce the burden on the global environment through its business activities, including supporting the introduction of photovoltaics and other renewable energy sources, as well as energy conservation in offices and production plants.

One-stop support for introduction of photovoltaic systems

Demand has been increasing for photovoltaics for various reasons, including falling costs and energy security in the event of disaster. The Ryoden Corporation Group provides customers with one-stop services to help plan, design, construct and operate various photovoltaic power plants ranging from small-scale to mega-solar facilities to meet their needs. We also offer services to maintain stable power generation over the long term, including a string monitoring system to detect any defective photovoltaic panels and a system to identify the malfunctioning part in a defective panel with a drone-mounted thermographic camera. In order to deliver those cutting-edge services, the Ryoden Corporation Group has constructed three photovoltaic plants at Kurihara (Miyagi Prefecture), Maebashi (Gunma Prefecture) and Hamamatsu (Shizuoka Prefecture) to launch its own power generation business. Thus, we ensure that quality services are provided to customers by making constant improvements through demonstration experiments at our own power plants by leveraging advanced technologies, including remote monitoring of power generation from the Head Office building.



Case example: Photovoltaic facilities installed on the roof of a building

Photovoltaic power generation by Ryoden Corporation Group

Plant	Kurihara (Miyagi Pref.)	Maebashi (Gunma Pref.)	Hamamatsu (Shizuoka Pref.)
Power output	2,000 kW	37 kW	50 kW



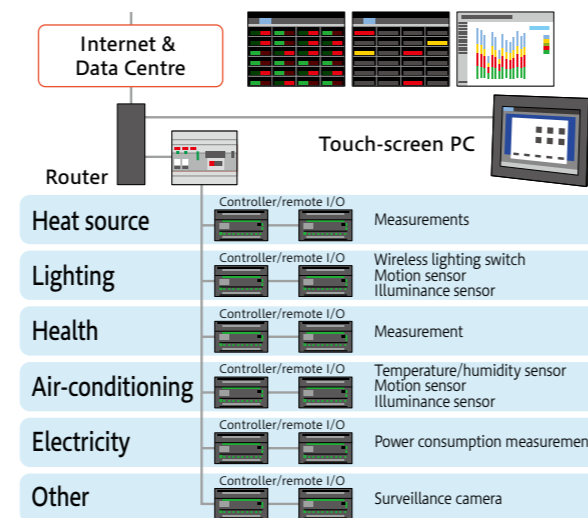
Ryoden Corporation Kurihara Power Plant (Miyagi Prefecture)

Total support for energy efficiency in offices and production plants

Energy-saving efforts are essential not only for conserving the global environment but also for cutting costs, and many customers consider that now is the time for energy conservation. The first of those efforts is the "visualization of energy," or measurement of energy consumption. Analyzing the data obtained from the detailed visualization of energy, the Ryoden Corporation Group makes proposals including the introduction of energy-efficient devices such as LED lighting to replace existing facilities and equipment. Combining air-conditioning/lighting facilities with an entrance/exit control system, we also propose an energy management system (EMS) to support energy-saving efforts, turning on/off the lighting around a desk depending on the presence or absence of the user, and making sure that air-conditioning and lighting are turned off when the last person leaves the room. Thus, we are providing comprehensive support for energy conservation in various offices and production plants, regardless of their size.



Head Office showroom



Proposing an EMS that reconciles energy efficiency with comfort



Building a Prosperous Society for the Next Generation

Research and development are making headway in innovations such as the Internet of Things (IoT) and autonomous cars, to help build a safer and more convenient society. The Ryoden Corporation Group is carrying out various activities, such as providing solutions to Jtown, the autonomous driving evaluation center, and conducting demonstration experiments to build social infrastructure based on the IoT.

Building Facilities for Specific Environment Test Field at Jtown, the First Autonomous Driving Evaluation Center in Japan

As the development of autonomous cars gains momentum both in Japan and overseas, it is essential to improve the safety of autonomous driving in order to apply this technology on actual roads. Accordingly, the Japan Automobile Research Institute (JARI) constructed Jtown in Tsukuba City, Ibaraki Prefecture as the first autonomous driving evaluation center in Japan, which became operational on 1 April 2017. Covering an area of 160,000 m², Jtown has three distinctive test areas: Specific Environment Test Field, V2X Urban Zone and Multipurpose Urban District. Of those, the Ryoden Corporation Group was responsible for building facilities for the Specific Environment Test Field, which will be used primarily to evaluate the ability of autonomous cars to recognize the surrounding environment by reproducing adverse driving conditions likely to happen on open roads such as rain, fog and backlighting. We managed to reproduce hourly rainfalls of 30 mm, 50 mm and 80 mm for the precipitation facilities, and over one hour of fog with a particle diameter of 10 μm or less for the fog generation facilities. Meanwhile, for the solar irradiation facilities, we simulated sunlight equivalent to the condition at 3 pm and 5 pm on a clear day, with an illuminance of 20,000–35,000 lx. The Ryoden Corporation Group is committed to helping improve the safety of autonomous cars through a variety of solutions.



Jtown's Specific Environment Test Field has a 200m test track with three lanes (each 3.5 m wide).



Precipitation facilities can reproduce three levels of hourly rainfall: 30 mm, 50 mm and 80 mm.



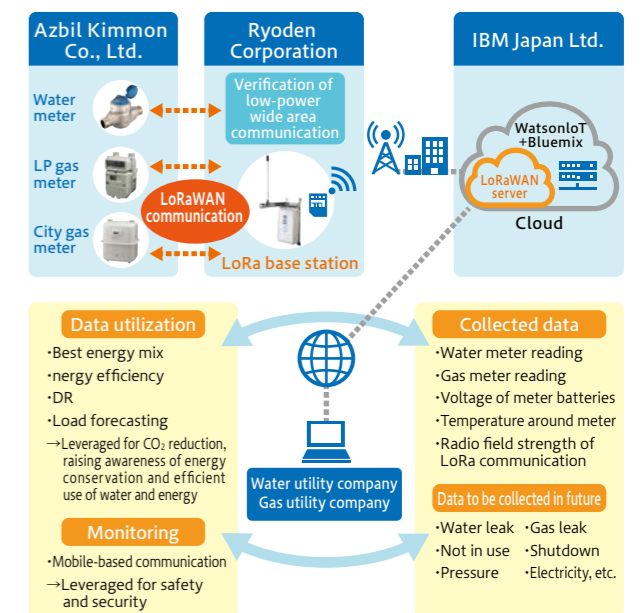
Solar irradiation testing facilities can reproduce backlight conditions including late afternoon sunlight with lights simulating the sun.



Fog generation facilities can adjust the visibility range from 15 to 80 m.

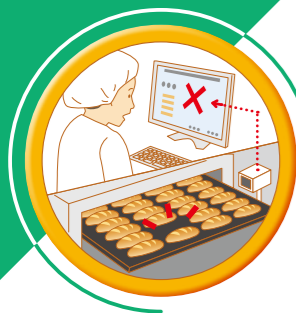
Building Convenient Social Infrastructure based on IoT

The Internet of Things (IoT) aims to create brand-new values by connecting everything to the Internet, and there are growing expectations for LoRaWAN™ as a Low Power Wide Area (LPWA) network, i.e. communication technology for reducing the power consumption of the IoT over a wide area. Seven companies, including Ryoden Corporation, Azbil Kimmon, IBM Japan, Green House, Semtech Japan, Tokyo Electron Device and Braveridge, have been conducting a demonstration experiment with LoRaWAN in Fukuoka City, Fukuoka Prefecture since April 2017 to build convenient social infrastructure based on the IoT. The demonstration experiment built a LoRaWAN network in Fukuoka to collect data from gas and water meters and verify its communication performance, while monitoring river water levels and air quality, and verifying multifunctional notification buttons in an attempt to improve safety and security in the city. Going forward, we will continue conducting demonstration experiments for social implementation and business realization, aiming to create groundbreaking innovations.



Development of LoRaWAN communication from demonstration project to data utilization

LoRaWAN™ is a registered trademark of Semitec Corporation.



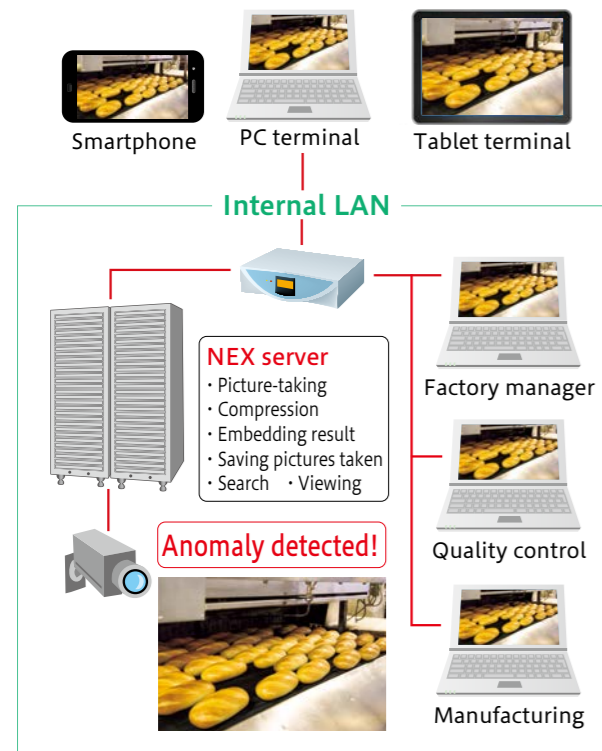
To Enhance Food Safety

Food is a very basic need of humans, and supporting food safety through business is one of the key missions of the Ryoden Corporation Group. The Group is taking various actions to improve food safety for current and future generations.

Protecting food safety by preventing outflow of contaminated products

Food contamination destroys the credibility of the manufacturer and undermines food safety for consumers. Prevention of such incidents requires not only measures against contamination such as the introduction of clean rooms and sanitary management of the manufacturing environment, but also a robust mechanism to prevent any contaminated product from reaching the market. Thus, the Ryoden Corporation Group proposes a system allowing sanitary managers immediately to view any anomaly detected by a sensor, by linking the contamination-detecting sensor with a monitoring camera. By “visualizing” whether appropriate action has been taken at the manufacturing line to resolve the problem detected by the sensor, outflow of the contaminated product may be prevented well in advance. This system is currently being used and is highly valued by more than 100 customers.

Easy, intuitive operations for search, replay, fast forward and rewind



Improving future food safety through artificial-lighting plant factories

“Artificial-lighting plant factory” refers to a system of producing crops by managing and controlling the temperature, illumination, culture fluid and other conditions of the facility at the optimal levels. It has the merit of ensuring the stable supply of crops without depending on seasonal and weather conditions. Plant factories are attracting global attention as an effective production system to address concerns about food crises, and are also expected to create jobs. The Ryoden Corporation Group leverages its experience and expertise accumulated through its flagship business areas – factory automation systems, industrial refrigeration/heating and electronic devices – to provide efficient and optimal plant factory production systems. We can handle everything, from assisting the development of a plant factory business and the introduction of equipment, such as self-developed LEDs for accelerated cultivation and a centralized management system, to construction, consulting on plant growth and maintenance services. The Ryoden Corporation Group will continue to improve food safety for the future, including through the deployment of plant factories.



Container type plant factory



LED for accelerated cultivation developed by Ryoden Corporation Group



Closed type plant factory



To Save Human Lives

Helping save human lives from disasters and supporting the improvement of life-saving medical care in the field are also key activities of the Ryoden Corporation Group. Refining its technology developed over the years, the Ryoden Corporation Group is poised to meet the demands of society.

Saving people’s lives from localized torrential rainstorms and other flood disasters

Recent years have seen an increasing number of localized torrential rainstorms that affect very specific areas in a short time, sometimes causing severe floods and fatalities. The Ryoden Corporation Group is working with Yamanashi, Fukushima, Okinawa and other prefectural governments to protect residents against localized torrential rain and other flood disasters. As part of this effort, we are seeking to issue early warnings for evacuation of local residents with a new pluviometer that estimates precipitation from the sound of the falling rain, rather than measuring precipitation in a fixed amount of time. We are currently at the demonstration stage of this initiative, in collaboration with local governments. Looking ahead, we hope to provide real-time information by linking the pluviometer with a monitoring camera, thus making it possible to send images of the river as soon as precipitation exceeds a predetermined level, for example.

Disaster prevention/reduction – Illustration of system structure



Offering first large UPS for radiological equipment in Japan

The Ryoden Corporation Group provides total support for medical care in the field, ranging from disaster risk reduction to energy management and sale/leasing of medical equipment and IT systems. Some proposals are unique to the Ryoden Corporation Group.

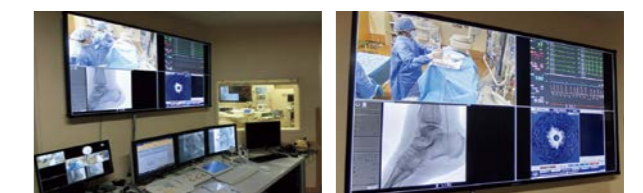
Angiographic examination image recording/distributing system

This is an unprecedented, ground-breaking system capable of harmonizing the time axes for the CINE^{※1}, IVUS^{※2}, polygraph and patient monitoring camera images, essential for angiographic examination, and distributing them live on a single split-screen monitor.

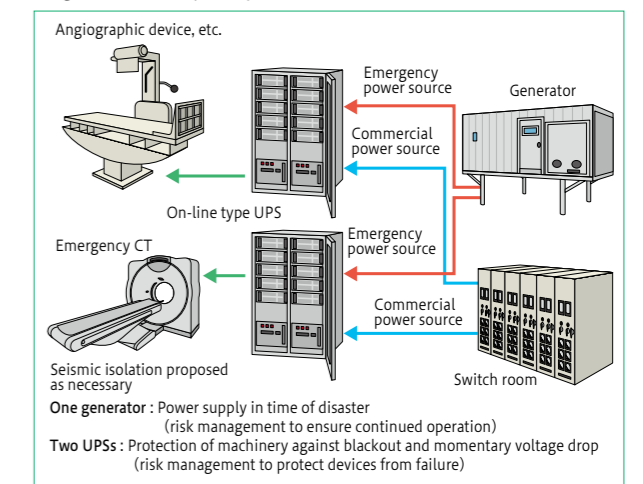
Large uninterruptible power-supply system (UPS) for radiological equipment

There was no backup power source for CTs or MRIs available in Japan until the Ryoden Corporation Group released the first large UPS for radiological equipment. Thus, it is now possible to secure a backup power source for radiological equipment in case of a blackout due to disaster.

※1 CINE: Diagnostic image technique showing heart motion throughout the cardiac cycle in a movie consisting of 16-40 images
 ※2 IVUS: Intravascular ultrasound



Example of a system for recording/distributing angiographic examination images (Katsura Hospital, Kyoto Social Welfare Foundation)



Large UPS for radiological equipment to secure backup power source in case of disaster-induced blackout

Working to Reduce Environmental Burden throughout the Supply Chain

The Ryoden Corporation Group seeks to reduce environmental burden throughout our supply chain, working with customers and suppliers to promote environmental management.

One such supplier is Alps Logistics Co. Ltd., the Group's exclusive partner specialized in logistics for semiconductors and electronic components, which commented as follows

■ Alps Logistics Co. Ltd.: Mr. Takuya Furuhashi, Manager, 1st Sales Department, 1st Sales Promotion Division (left) / Mr. Yoshihiko Miyamoto, General Manager, Quality and Environment Division

Global player in comprehensive logistics services specialized in electronic components

— Would you tell us about your business and your role in Ryoden Corporation Group's supply chain?

Alps Logistics: Being a member of the Alps Electric Group, we are a global player in comprehensive logistics services specializing in electronic components. We act as a "One Channel Service" provider in the field of transportation, warehousing and incoming/outgoing cargo handling services. In the transport business, we seek to maximize the efficiency of logistics and procurement through a "joint delivery" service, loading cargoes from multiple customers onto a single truck for a given destination, performing delivery and reception work on behalf of customers, delivering goods to the lineside, processing designated slips, and collecting kanban instructions and returnable delivery boxes. In the warehousing business, the Alps Cargo Center System (ACCS), a warehouse management system which we developed ourselves, enables items to be managed individually, which is indispensable to high-mix/low-volume delivery. As part of the supply chain of the Ryosho Corporation Group, we also provide comprehensive logistics services for semiconductors and electronic components in general, as well as for some industrial equipment and healthcare products.



Addressing four priorities aiming for "eco-friendly logistics"

— Please tell us a little bit about your environmental initiatives.

Alps Logistics: We have been working to promote green logistics (environment-friendly logistics) by obtaining ISO14001 certification for all offices in Japan. Focusing on the four priorities of reducing fuel consumption (CO₂), reducing energy use, reducing total waste emissions and improving the recycling ratio, we have been carrying out various initiatives including eco-driving and improving the loading rate, introducing LED lighting, managing air-conditioner temperature more effectively, reusing buffer materials, and conducting no-litter campaigns. We are also working to raise the awareness of employees at home, including introducing energy conservation measures at home such as the Light Down Campaign*¹ and Cool Choice*².

Working together to reduce CO₂ emissions from the supply chain

— Do you have any joint initiatives with your customers?

Alps Logistics: To help reduce CO₂ emissions, we provide customers with CO₂ emissions data and work with them to decrease the environmental burden, actively suggesting improvements to transport methods and routes, including modal shift.*³ In exporting semiconductors and electronic components for the Ryoden Corporation Group, for example, we used to arrange transport as necessary, but there was the issue of CO₂ emissions from the transport equipment. We joined forces to develop ways to address this issue, which culminated a few years ago in combining cargoes to the same destination for weekly shipment to Shanghai, Singapore and Thailand, for example. This is a model case where we succeeded in reducing CO₂ emissions from the whole supply chain of the Ryoden Corporation Group. Going forward, we are committed to working with the Group to promote more eco-friendly logistics.

*1 Campaign initiated by the Ministry of the Environment calling on lit-up facilities and households to turn off the lights to curb global warming. In 2017, the Campaign ran from 21 June to 7 July. On 21 June (summer solstice) and 7 July (Cool Earth Day), lit-up facilities and households across the country were encouraged to turn off the lights for two hours, from 8 pm to 10 pm.

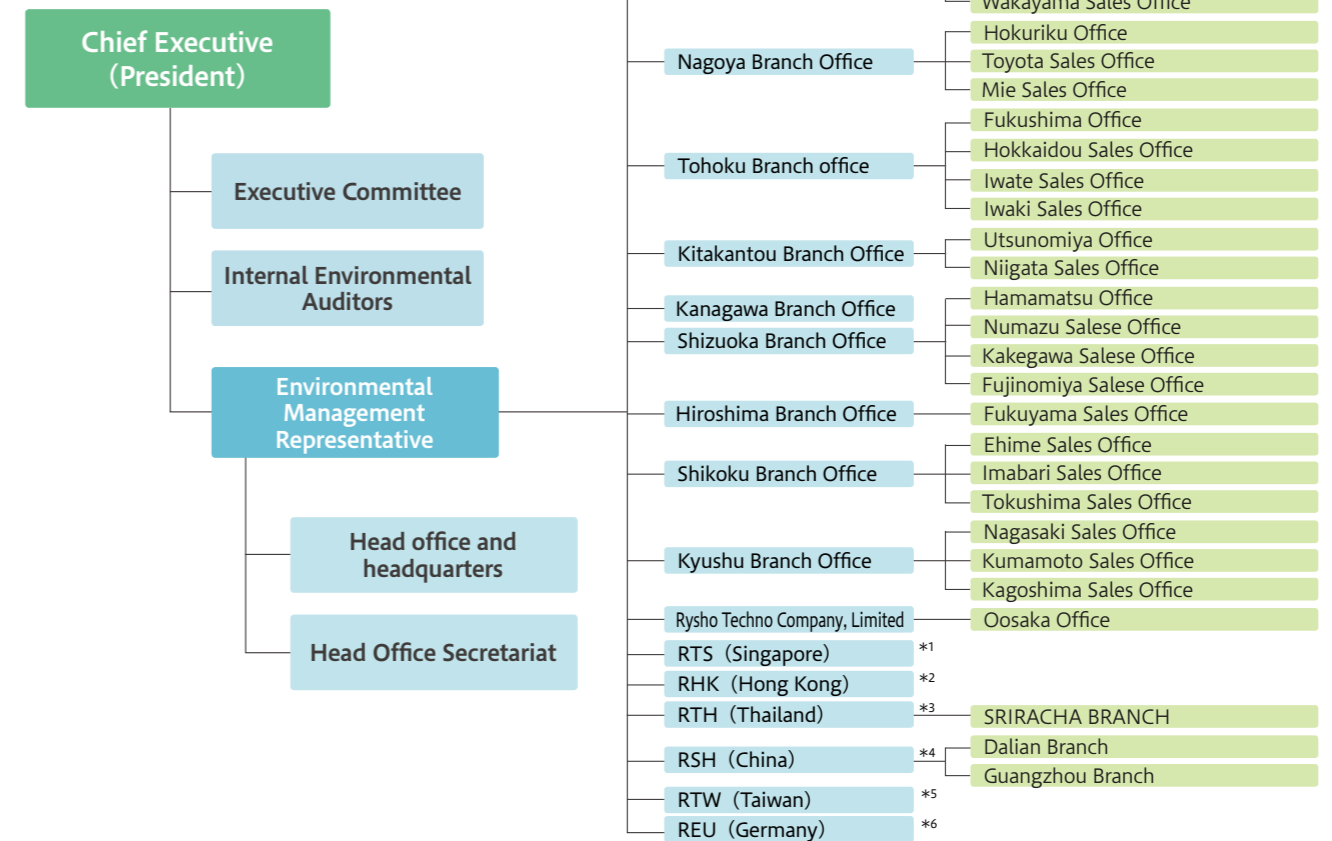
*2 Initiative advocated by the Ministry of the Environment encouraging all "wise choices" to contribute to the fight against global warming, including energy-efficient and low-carbon products, services and actions, so as to achieve the objectives that Japan has set to address global warming.

*3 Replacement of cargo transport by truck with marine or railway transport, which emits less CO₂ and enables bulk shipment.

Environmental Management Organization and History of Environmental Activities

Our environmental management structure is now aligned with our office organization to improve our environmental activities.

Environmental Management Organization



History of Environmental Activities

- Dec. 2001** Acquisition of ISO 14001 certification by Head Office, Tokyo Branch Office, Kansai Branch Office, Nagoya Branch Office, Ryoko
- Dec. 2002** ISO14001 certification is extended to all offices in Japan
- Jun. 2003** Publication of first Environmental Report (now the Sustainability Report)
- Dec. 2004** ISO14001 certification is extended to Ryosho Techno as a Ryoden Trading Group company
- Apr. 2006** Implementation of Household Environment Accounting
- Oct. 2006** Initial meeting of the Auditor Leader Conference
- May. 2007** Commencement of company-wide social contribution activities
- Jan. 2012** Ranked 11th in the trading company category of the 15th Nikkei Environmental Management Survey
- Sep. 2012** Publication of Sustainability Report (English / Chinese version)
- Apr. 2013** Launch of the Zero-Waste Campaign and adoption of FSC-certified paper for copying
- Dec. 2013** The Ryoden Trading Group's ISO 14001 certification is extended to Singaporean subsidiary RTS*¹
- Jan. 2014** Ranked 10th in the trading company category of 17th Nikkei Environmental Management Survey
- Mar. 2014** Solar power generation begins at sites in Kurihara, Miyagi Prefecture, at the North Kanto Branch Office, and at the Hamamatsu Sales Office

- Mar. 2014** Ryoden participates in the Fukushima Sakura Project
- Dec. 2014** The Ryoden Trading Group's ISO 14001 certification is extended to Hong Kong subsidiary RHK*² and Thai subsidiary RTH*³
- Jan. 2015** Ranked 10th in the trading company category of 18th Nikkei Environmental Management Survey
- Dec. 2015** The Ryoden Trading Group's ISO 14001 certification is extended to Chinese subsidiary RSH*⁴ and Taiwanese subsidiary RTW*⁵
- Jan. 2016** Ranked 10th in the trading company category of 19th Nikkei Environmental Management Survey
- Nov. 2016** Participation in MOE's Environmental Reporting Platform Development Pilot Project
- Dec. 2016** The Ryoden Trading Group's ISO 14001 certification is extended to German subsidiary REU*⁶
- Jan. 2017** Ranked 11th in the trading company category of the Nikkei Environmental Management Survey
- Apr. 2017** Objective set for reducing GHG emissions

* 1 Stands for Ryosho Techno Singapore Private Limited.
 * 2 Stands for Ryosho Hong Kong Company, Limited.
 * 3 Stands for Ryosho (Thailand) Company, Limited.
 * 4 Stands for Ryosho Electronics (Shanghai) Company, Limited.
 * 5 Stands for Ryosho Taiwan Company, Limited.
 * 6 Stands for Ryosho Europe GmbH

Results of Environmental Activities in FY 2016

Objectives for environmentally-sound business activities

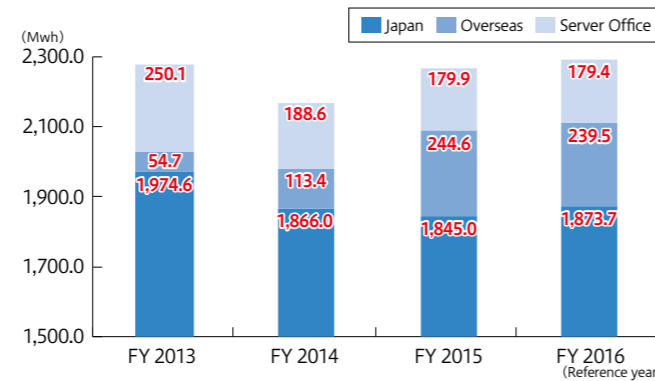
We set environmental objectives for our selected, environmentally-sound business activities (62 objectives companywide).

Number of objectives	Objectives achieved	Objectives missed
62	53	9

Environmentally Friendly Offices

Reduce electricity use

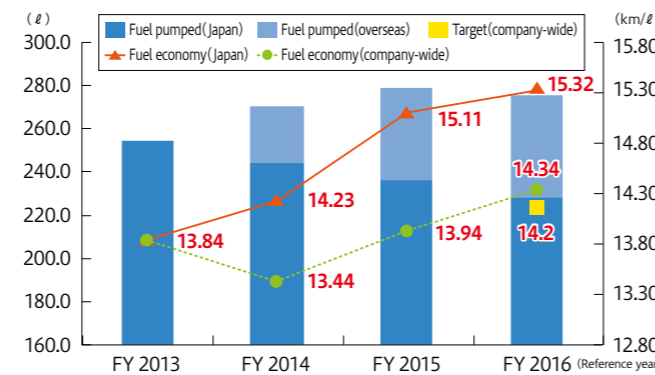
Objective for FY2016: Same as FY2015 performance ⇒ **Almost objective achieved**
 ⇒ Objective: 2,268.6Mwh
 ⇒ Result: 2,292.5Mwh
 Starting in FY2016, the objective also covers the Server Office.



Improve the fuel economy of commercial vehicles

Objective for FY2016: Improvement of 1.3% on FY2015 (14.20 km/l)
 ⇒ Result: 14.34 km/l ⇒ **Objective achieved**

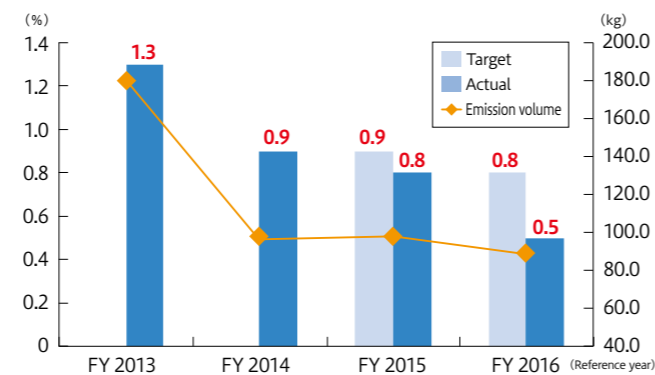
Objective achieved



Reduce percentage of waste disposed of as landfill

Objective for FY2016: 0.8%
 ⇒ Result: 0.5% ⇒ **Objective achieved**

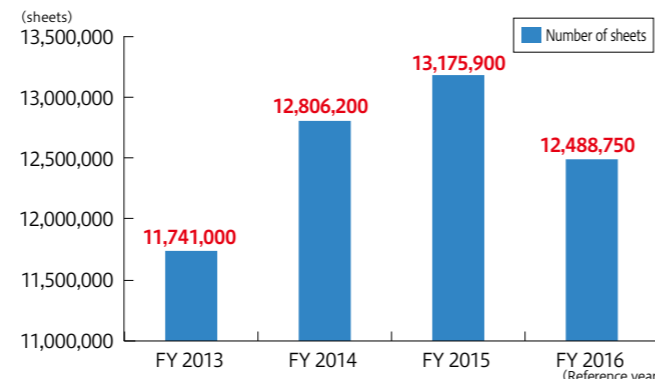
Objective achieved



Paper use

Objective for FY2016: Use of paper products from properly managed forests
 ⇒ Result: 100% use of FSC-certified paper for copying in all offices
 ⇒ **Objective achieved**

Objective achieved



Environmental Activities in FY 2017

Our environmental activities in FY 2017 will focus on the following four cores.

New initiatives

NEW

Enhanced efforts to achieve a low-carbon society

Reduce greenhouse gas emissions (suppress GHG emissions to 1,842 t or below).

Enhanced efforts to achieve a recycling-oriented society

Reduce the percentage of waste disposed of as landfill (0.5% or below) and continue to use of paper products from properly managed forests.

Objectives for environmentally-sound business activities

We set environmental objectives for our selected, environmentally-sound business activities.

Social contribution programs

Global environment activities to conserve biodiversity.



Chemical Substance Management in Ryoden Corporation Group

1. Over 30,000 information disclosures per year

The management of chemical substances is a corporate responsibility and entails efforts throughout the supply chain. The Ryoden Corporation Group focuses on appropriate management and smooth disclosure of information on chemical substances in products. The number of information disclosures has been increasing year by year, from 9,880 in FY 2011 to over 30,000 in FY 2016.

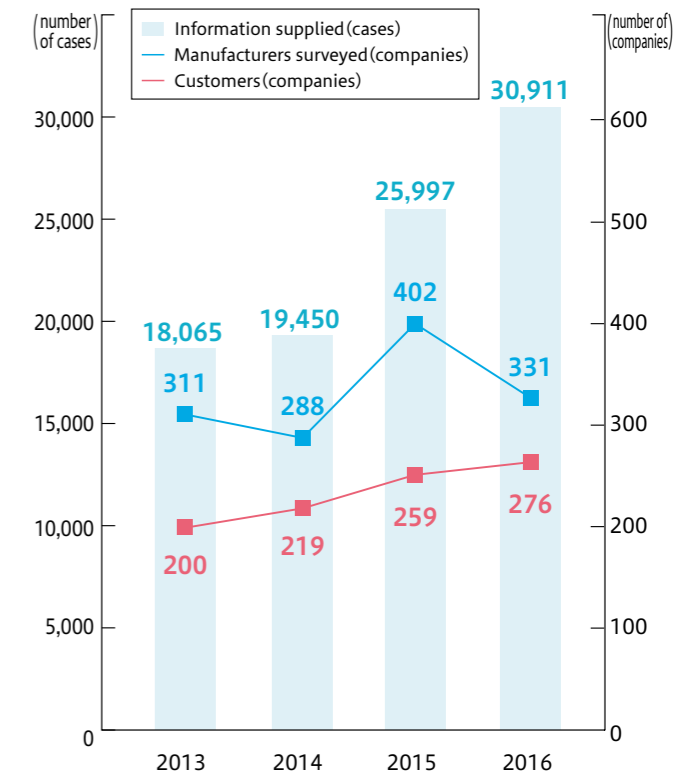
2. Activities to "listen to live opinions"

In FY 2016, we visited 13 customers and suppliers in total to listen to their "real opinions" and integrate them into the activities of the Ryoden Corporation Group, thus improving the services provided. We will seek to further improve our activities by prioritizing communication with our customers and suppliers.

3. Preparing for chemSHERPA

The Ryoden Corporation Group meets various needs of customers including for AIS data, JGP files, JAMA sheets, ICP data and non-use warranty. We also comply with ProChemist/AS (for the electric and electronics industry) and IMDS (for the auto industry). We are also preparing to sign onto chemSHERPA, which will be a common scheme for supply chains in the future.

《CMS Group Customer Initiatives》



《Information on conflict minerals》

103 disclosures to 34 clients

FY 2016 Environmental Accounting Report

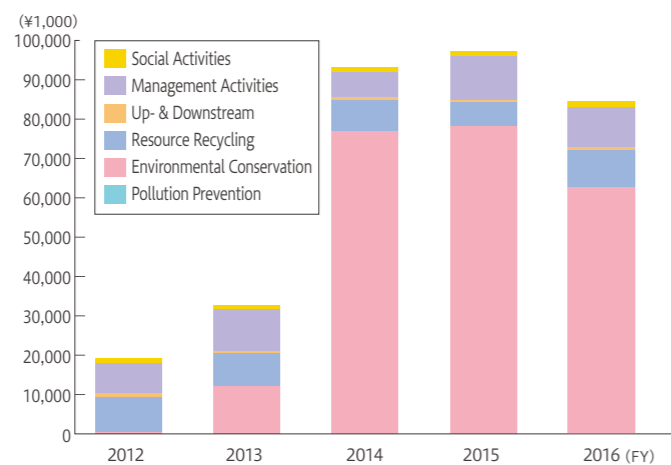
1. Environmental Conservation Costs

Data covers all offices and affiliates in Japan.

Category		Scope	Cost (¥1,000)		
External Expenses	Business Area Costs	Pollution Prevention Costs	Water Pollution Prevention Costs, etc.	34	
		Environmental Conservation Costs	Energy Conservation Measures, Global Warming Prevention Costs, etc.	14	
			Depreciation expenses of photovoltaic power plant	61,772	
	Resource Recycling Costs	Industrial Waste Transportation & Disposal Consignment Costs	8,671	8,671	
		Industrial Waste Storage Area Maintenance Costs	0		
	Up- and Downstream Costs	Green Procurement Support, etc.	642	83,187	
	Management Costs	ISO 14001 Certification Maintenance Costs	3,409		10,927
		Internal Audit Costs	611		
		Creation of Environmental Reports & Other	6,135		
		Environmental activities underpinning costs of overseas subsidiaries	772		
	Social Activity Costs	Environmental Conservation Costs Associated with Social Activities (Donations to Environmental Conservation Groups, Aid Costs, etc.)	1,127		
Environmental Damage Countermeasure Costs	Environmental Damage-Related Costs	0			
Internal Expenses	Management Costs		30,383		
Total			113,570		

Shifts in Environmental Preservation Costs

Includes photovoltaic facilities since FY2013.



2. Economic Effect of Environmental Conservation

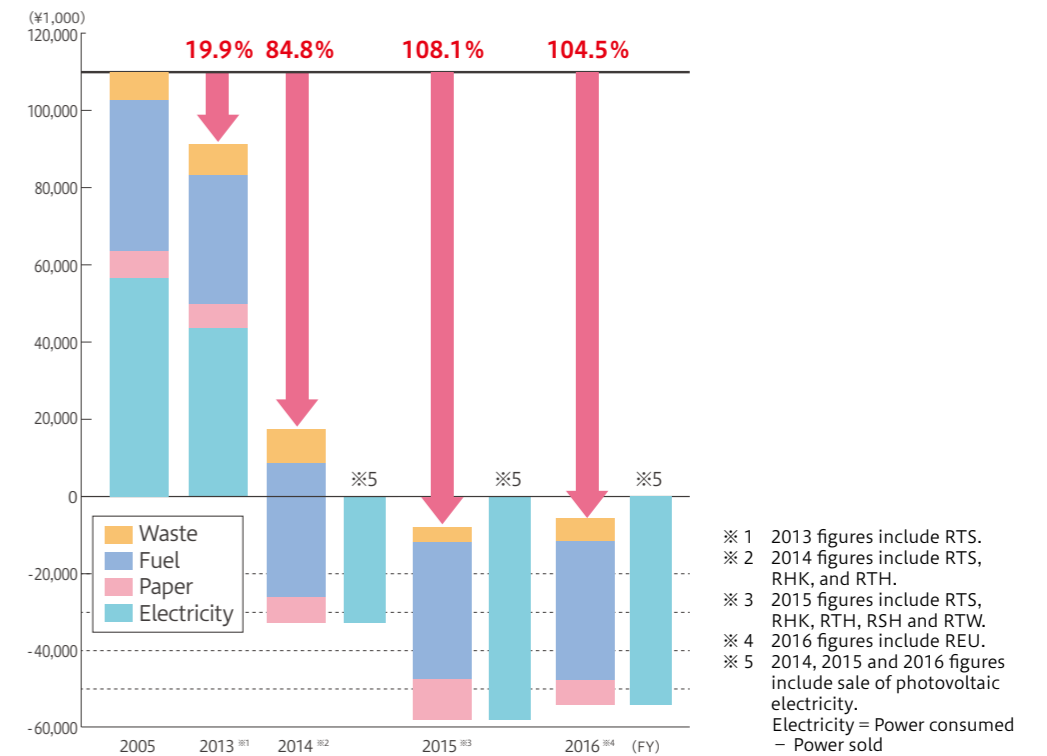
Data covers all offices and affiliates in Japan.

Category	Scope	Costs Reduced (¥1,000)		
		Results (Before Revision)	Results (After Revision)	
Business Area Effect	Environmental Conservation Costs	Electricity Usage Reduction Effect	12,400	113,360
		Sales of photovoltaic power	98,518	98,518
		Copy Paper Usage Reduction Effect	-120	-120
		Vehicle Fuel Reduction Effect	10,547	4,847
	Resource Recycling Costs	Industrial Waste Generation and Disposal Reduction Effect	-1,286	-1,286
	Effect of Sale of Recycled Components	41	41	
Up- & Downstream Effects	Green Procurement Effect	0	0	
Management Activities Effects	Effect of Optimizing Management Activities	0	0	
Total		120,100	215,360	

※ Economic impact figures are in comparison to 2005 results (impact of environmental conservation = 2005 figures – 2015 figures).
 ※ Contribution of sales from expansion of sale of environmentally friendly products not calculated.
 ※ Figures after revision represent amount of fuel and electricity used in FY2015 as converted to FY2005 prices.

We prepared a transition table with adjustments for impacts from external factors (gasoline prices, electricity charges) to identify the changing economic impact of our environmental activities.

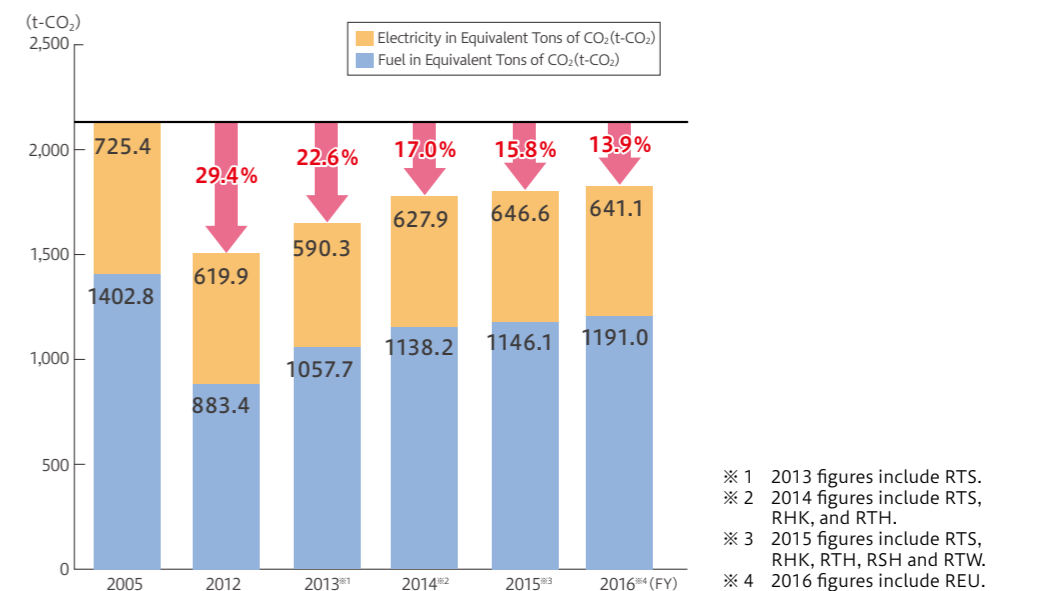
Trends in Economic of All Environmental Conservation Activities



3. Global Warming (GHG emissions) Reduction Effects due to Environmental Conservation Activities

Emissions	Unit	t-CO ₂	
	CO ₂ emissions from electricity consumption		1,191.0
CO ₂ emissions from gasoline consumption		620.5	
GHG emissions from gas oil consumption		20.6	

Transitions in GHG emissions



Biodiversity Preservation Projects

This was the Group's tenth year of undertaking social contribution programs. In FY 2016, a total of 696 employees and families participated in the various programs.

Head Office/Tokyo Branch Office/Ryosho Techno Topic

Participation in Tokyo Cleanup Action

Organized by Bureau of Environment, Tokyo Metropolitan Government
Held in October, January **Total participants** 143
Outline of activity

The Head Office, Tokyo Branch and Ryosho Techno have been participating since 2007 in the Tokyo Greenship Action program to protect the natural environment in the Kiyose Matsuyama area.



In FY2016, we engaged in various activities such as replacing wooden fences and ropes, removing non-native plants, cutting trees for forest regeneration, clearing away fallen branches and monitoring nature. On 10 April 2017, we received a letter of appreciation from the Kiyose Municipal Government for our environmental conservation activities in the Kiyose Matsuyama greenery area over the years.



RYOSHO (THAILAND) CO.,LTD Topic

Mangrove Reforestation

Organized by Independent project **Held in** January **Total participants** 40
Outline of activity

As our second social contribution project, we planted mangrove saplings along the Mae Klong River, located some 150 km to the southwest of Bangkok. For most of the participating employees and their families, it was their first experience of reforestation. They enjoyed the activity, covered with mud. We are committed to implementing more social contribution and environmental conservation projects in Thailand.



Cruising to the reforestation site



The first reforestation experience was tough but enjoyable.



Office-level activities



Kansai Branch Office

Participation in the Adopt-a-River program

Organized by Osaka Prefectural Government
Held in June, November, February **Total participants** 129



Kyoto Branch Office

Participation in the All-Kyoto Beautification Drive

Organized by Community Beautification Section, Environment Bureau, Kyoto Municipal Government
Held in November **Total participants** 21



Ryosho Techno Osaka Branch Office

Cleanup of Kawada Park and Access Roads

Organized by Independent project
Held in July, November, March **Total participants** 20



Nagoya Branch Office

Participation in the Nagoya Higashiyama Forest

Organized by Nagoya Higashiyama Forest Conservation Group with the cooperation of the City of Nagoya
Held in October **Total participants** 84



Tohoku Branch Office

Participation in the Cosmo Earth Conscious Act Clean Campaign in Natori (Kitakama Beach)

Organized by Cosmo Oil, Fukushima FM
Held in October **Total participants** 9



Kitakantou Branch Office

Cutting bamboo grass around the Kakumanbuchi Wetland on Mount Akagi

Organized by Committee for Preserving the Natural Environment of Mount Akagi
Held in November **Total participants** 28



Utsunomiya Office

Maintenance of grounds of Shimotsuke Sanrakuen children's home

Organized by Kitakantou Branch Office, Shimotsuke Sanrakuen
Held in June **Total participants** 19



Kanagawa Office

Voluntary cleanup of Yamashita Park and Waterfront

Organized by Naka Ward Volunteer Center, Yokohama Municipal Government
Held in October **Total participants** 26



Shizuoka Branch Office

Participation in the Shizuoka Adopt-a-River Program

Organized by Shizuoka City
Held in May **Total participants** 27



Hamamatsu Office

Participation in the Sea Turtle Nesting Beach Cleanup

Organized by City of Hamamatsu
Held in May **Total participants** 16



Hiroshima Branch Office

Participation in the Peace Memorial Park Reforestation Volunteer program

Organized by Independent project
Held in December **Total participants** 30



Shikoku Branch Office

Weeding and cleanup (waste collection) of an irrigation channel in the vicinity of the office

Organized by Independent project
Held in March **Total participants** 36



Kyushu Branch Office

Winter forest conservation activity (forest management)

Organized by Kyushu Branch Office, Mitsubishi Electric
Held in January **Total participants** 18



RYOSHO TECHNO SINGAPORE PTE LTD

Clean up activity 2016 at Pulau Serangoon

Organized by Renesas Singapore
Held in October **Total participants** 5



RYOSHO HONG KONG COMPANY, LIMITED

Cleanup of Sha Lan Beach

Organized by Hong Kong government
Held in October **Total participants** 13



RYOSHO ELECTRONICS (SHANGHAI) COMPANY, LIMITED

Weeding and cleanup of a park near the office

Organized by Independent project
Held in March **Total participants** 25



RYOSHO TAIWAN COMPANY, LIMITED

Participation in 2017 Guoshengpu Beach Cleanup Action program

Organized by Taiwan Environmental Information Association (TEIA)
Held in June **Total participants** 7



Our Responsibility to Employees and Their Families

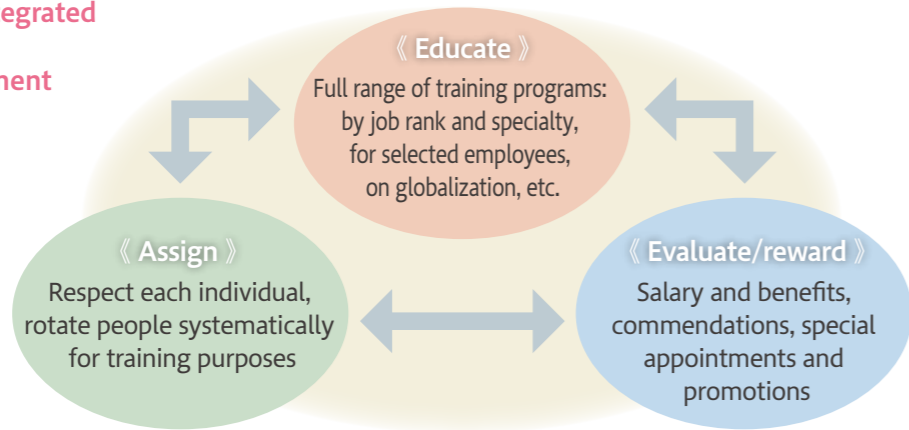
To provide a pleasant working environment where all employees feel at home, and to ensure that each finds their job rewarding, continues to grow through their work, and develops the skills to pursue their career on the world stage: those are the basic goals of Ryoden Corporation's human resources policy. To that end we respect the diversity of the people who work here, and make every effort to bring them and their families a greater sense of security.

■ Creating a rewarding workplace

Human resources management at Ryoden Corporation is underpinned by one basic principle: pursuing the maximum results for both employee and company. We

seek to enable our people to produce results and, through their work, to increase their own worth in their quest for individual self-fulfillment.

The three integrated elements of HR management



■ A system of rewards based on each person's skill level, function, and performance

We value not just quantitative outcomes but also accomplishment of qualitative behavioral process objectives, thereby nurturing a culture that enables

employees to set their sights high. We also draw up a separate training and assignment sheet on each employee to facilitate their personal development.

■ A multifaceted approach to education and training

We have a full range of off-the-job training programs based on education in the workplace through people's work.

These start with training for new hires and continue with various other training sessions, including those designed to improve personal and business skills by grade, to impart the expertise and skills required for the relevant

position or task, and to provide technical education for strengthening the solution business in partnership with the relevant division. Nurturing people with the ability to work globally is a top priority, and we are accelerating efforts to develop global staff with excellent communication skills by sending employees abroad on training programs and encouraging them to sit the TOEIC exam once a year.



English proficiency training

An off-JT program to improve English proficiency through group work with foreign nationals, thus promoting cross-cultural understanding and global communication skills



Team-building program for new employees

In a training facility deep in the mountains, new employees learn firsthand the indispensability of teamwork by tackling difficult assignments together while preparing their own meals. They also develop communication skills that will help them understand each other better.

■ Response to changes in working style

We are seeking to energize and ensure the optimal use of human resources by providing opportunities for a wide range of talents and embracing the capabilities, personalities and differences of individual employees. In April 2018, we will launch a new personnel system to transform the working style.

(1) Introduction of a new personnel system. We will eliminate the line between the main career track and the clerical career track in order to promote the mobility and flexibility of jobs, expand the fields of occupation and evolve tasks, without the limitations of the existing framework.

(2) Empowerment of women. We will seek to create a corporate culture that links the advancement of women to the development of the workplace by expanding the fields of occupation for women while considering the specific working environment facing female employees.

(3) Redesigning of career from 60. In order to encourage the effective reemployment of senior talented staff and leverage their wealth of experience and capabilities, we will develop a system for matching their desire to work with the employment needs of the company.

■ Striking a work-life balance and embracing diversity

We are committed to creating a quality workplace where people at all stages of life, whether they are raising children, caring for family members, or are seniors, can work in security and fulfill their potential in their own way.

1 Creating a pleasant workplace for every kind of employee

Ryoden Corporation seeks to build flexible systems that can accommodate various working styles. For example, we extended the period of parental leave this year to facilitate the admission of children to child-care facilities. We also included three paid holidays in the parental leave period to help male employees take the leave. We intend to improve the system still further so that employees may work with a sense of security, including by increasing the paid leave that may be taken by the hour.

2 Educational program tailored to the employee's stage of life

We hold various seminars on life planning by employees. For example, we hold seminars on sound financial planning and career development for employees in their

30s. For those in their 50s, we explain post-retirement benefits and pension plans, in addition to life plan seminars to provide advice and support on a meaningful life after retirement at 60, life planning, health promotion, and household finances.



Life-planning seminar for 50-somethings

A seminar on retirement pay and the pension system, living a meaningful life after retirement, post-retirement life planning and financial planning, and improving fitness. Employees, many of whom bring their spouses, find it an enjoyable and fulfilling experience. The photo shows participants having fun doing calisthenics and working up a sweat.

■ Creating a working environment where individual employees can realize their potential through transformation of working style

In response to the diversification of human resources and working styles, the Human Resources Department is working to eliminate the traditional, gender-based division of labor and promote the mobility and flexibility of assigned tasks, so that employees have greater opportunities to work in accordance with their changing life stages.

By making proactive changes, rather than modifying our system in response to social factors including the shrinking workforce, declining birth rate and population aging, we

aim to transform our traditional job system and even corporate culture. By expanding occupational fields and skillfully organizing tasks, individual employees will be able to challenge themselves, transform their working style to suit themselves, and deliver their full potential. This year marks the 70th anniversary of Ryoden Corporation. In a bid to become a "centennial company," we are committed to creating an environment that benefits each employee by proactively transforming the working style, rather than simply adjusting the existing system.

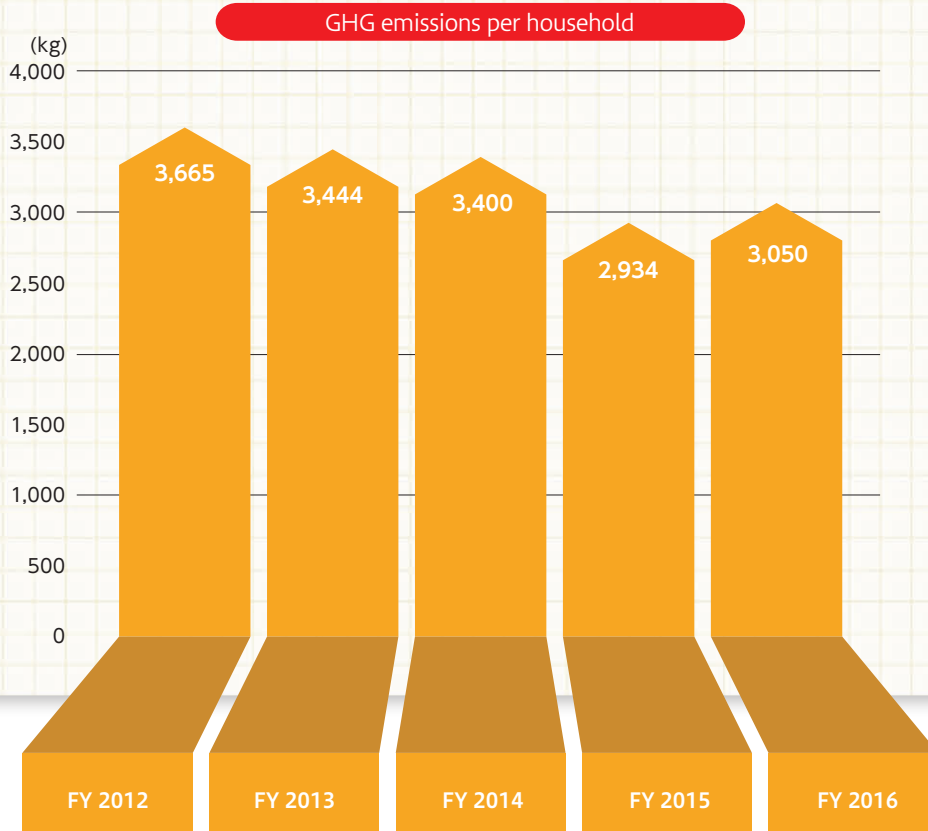
Household Environmental Accounting

As part of our effort to encourage environmentally conscious behavior at home, we invite our employees to participate in the annual “household environmental accounting” exercise to keep track of the total amount of electricity, gas, water, kerosene, and gasoline used at home and to convert it into equivalent greenhouse gas emissions.

By identifying the amount of GHG emitted from each household, “household environmental accounting” aims to encourage ecological and economical behavior through an ongoing review of living activities from an environmentally sound perspective.

The chart below shows the trend of GHG emissions per household over the five-year period since FY2012.

One of the factors for the increase in GHG emissions in FY2016 over FY2015 may have been the unusually hot summer and cold winter, which increased the burden from air-conditioners.



No. 11 among trading firms
in the 20th Nikkei Environmental Management Survey



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