SHINRYO

# SHINRYO REPORT 2021

**Corporate Profile and Sustainability Report**

English Version

# “Create a Freshening World”

**- Brand Promise -**

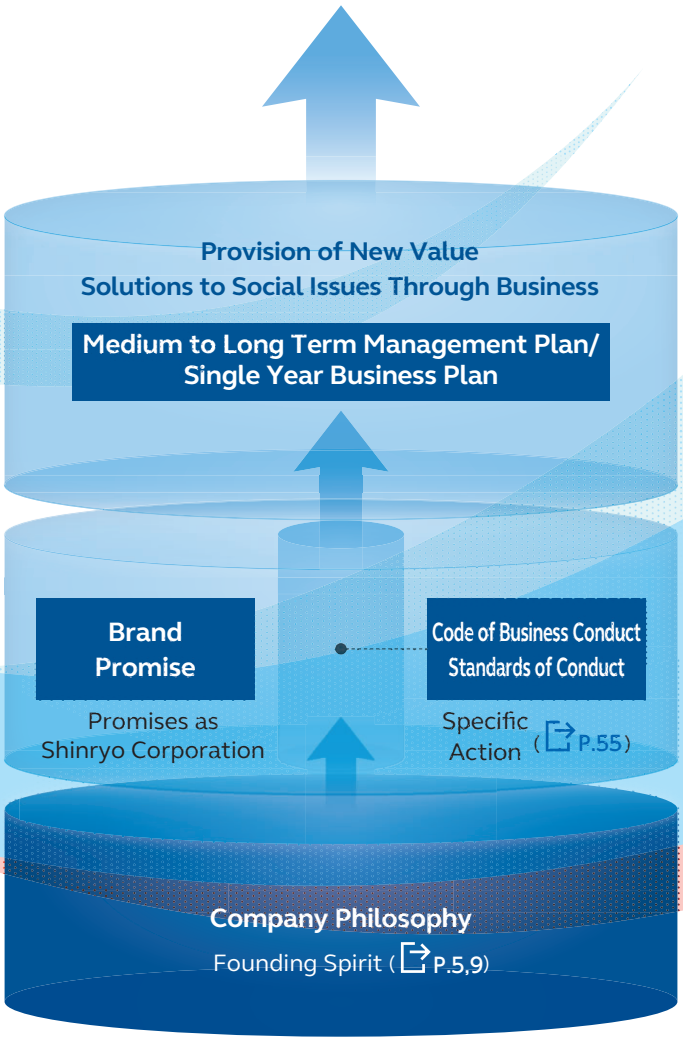
We would like to provide a comfortable
air quality appropriate for where we work,
spend our time, and in the surrounding natural environment.
We would like to create a rich and pleasant environment.

We, Shinryo Corporation strive to realize an even more
comfortable and pleasant lifestyle by
providing optimal air quality around the world.

As a means to this end, we strive to provide
new value through flexible thinking by
heightening the technology we have cultivated up
until now even further while sincerely
responding to the customers.

We will continue to strive to realize a “Freshening World” by
pursuing to over greater value.

# Creating a Freshening World and Contributing to the Development of a Sustainable Society




## Management Vision Framework

### Editorial Policy

The intent of this report is to help all of our stakeholders to deepen their understanding of Corporate Social Responsibility (CSR) activities at Shinryo Corporation.

Some of the images in this report differ from current occupational health and safety measures, but all of the images are either images taken after measures were taken for inclusion in this report or images taken before the measures began.

### Target period

This report focus on FY2020 (October 1, 2019 to September 30, 2020), including some periods before and after.

### Scope of report

Sustainability Promotion activities of Shinryo Corporation and Shinryo Group.

### Reference guidelines and standards

ISO 26000

### Informational Dissemination System

| Main Publications such as Pamphlets | Website |
|---|---|
| All activities such as financial and non-financial information | |
| SHINRYO Report 2021 (Japanese/English) | |
| Employment information | **Comprehensive corporate activities**<br>SHINRYO Corporation homepage (Japanese/English)<br>https://www.shinryo.com/en |
| Corporate information | **Employment Information**<br>Employment website<br>https://www.shinryo.com/saiyo/ |
| Various technical catalogs | **Technology**<br>Comprehensive Technologies and track records website<br>https://www.shinryo.com/tech/ |
| | **Sustainability Promotion Activities**<br>Sustainability Promotion Website<br>https://www.shinryo.com/sustainability/ |

# SHINRYO REPORT 2021

# Contents



Takeshi Kagami
Shinryo Corporation
President, Representative Director



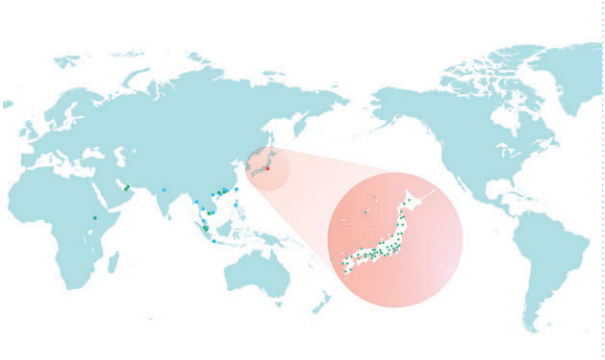
## Management Strategies



## From the Past to Today



## Company Overview



## Concepts Toward the Development of a Sustainable Society



Priority Sustainable Development Goals (SDGs)

page. 23-28

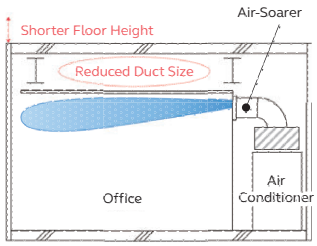
### Sustainability Promotion Management

Shinryo Corporation is engaged in business activities which follow our Management Vision to "Create a Freshening World," and it is contributing to the development of a sustainable society. In fiscal 2020, we aimed to deepen our initiatives even more, such as identifying four priority subjects according to the Sustainable Development Goals (SDGs).

## Learn About Sustainability Promotion Activities

page. 29

### Contribute to a Decarbonized Society



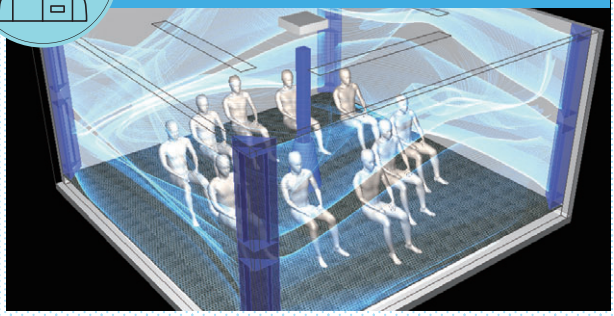
Ductless Air-conditioning System

page. 35

### Contribute to a Resilient Society

page. 43

### Realize Safe and Highly Efficient Work Processes



page. 47

### Build Refreshing Environments Rich with Creativity

page. 29-56

### Initiatives to Address Priority Subjects

Shinryo Corporation engages in CSR and sustainability promotion activities around four priority subjects. This section introduces the fiscal 2020 activities for each of these four priority subjects.

page. 57-59

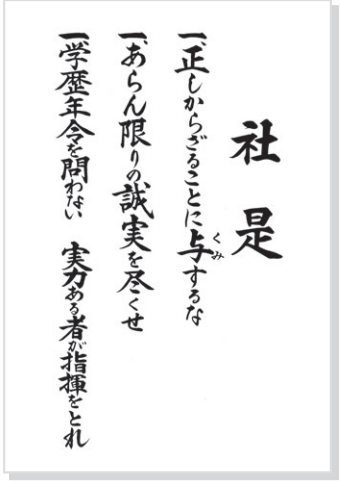
### Sustainability Promotion Activities of Shinryo Group Companies

# Adapting to Evolving Social Issues to Provide New Value

**Takeshi Kagami**
President, Representative Director

Company Philosophy

- Be fair and straightforward
- Do your best with all your effort
- Have leadership, irrespective of education, age, or nationality.




Company Philosophy (in Japanese)

This Company Philosophy clearly expresses the Life and Business philosophy of our founder Chairperson Masaru Kagami (deceased). Shinryo Corporation was established to embody this philosophy in the business world. These three principles serve as the "roots" of Shinryo Corporation and are the foundation for all thinking, decision-making and action of executives.

## To Overcome Crisis

The most devastating event of 2020 was the novel coronavirus (COVID-19) which launched the world into chaos. The confusion of this pandemic continues. However, Shinryo Group strives to ensure business continuity whilst monitoring the situation and ensuring everyone's safety during emergency declarations in Japan and lock downs overseas.

The impact of COVID-19 on the world's economy is immeasurable, and future investments in construction will surely be unpredictable in Japan. However, I know Shinryo Corporation and Shinryo Group will overcome this crisis by any means and ensure even stronger crisis management systems and the development of more flexible business continuity capabilities. Thanks to all we are learning from the experiences. We must also provide the social value necessary in a generation facing COVID-19.

As one aspect of this value creation, Shinryo Corporation is furthering proposals to ensure greater safety inside hospitals and other medical facilities and to reform ventilation systems.

After much internal debate about ways to help prevent the spread of COVID-19 infection through air-conditioning technology, we are now driving forward proposals for

stable ventilation as the most effective preventative measure (p. 44). Today, many of our customers are inquiring about these ventilation systems.

However, one drawback to advancements in ventilation is a decline in energy efficiency. Ventilation systems exhaust temperature is required to adjust air temperature when replacing it with outdoor air. Adjusting the temperature of more outdoor air coming in through the ventilation system in turn requires more energy. One technology to resolve this problem is the variable-air-volume air-conditioning system using the Coanda effect (p. 31). Last year, we adopted this new ductless air conditioning system for the first time in a real building to take advantage of the Coanda effect and create a jet of air flowing along the ceiling that feeds air for indoor air conditioning. This air-conditioning system responds to the needs of our generation by realizing excellent ventilation efficiency that delivers fresh outdoor air to every corner of the building with minimal airflow. As the importance of ventilation grows, the technology of Shinryo Corporation should play an even greater and more diverse role. We must also continue to make every effort to respond to the needs of society as an environmental engineering company.

Last July, Shinryo Corporation moved its headquarters amid the COVID-19 pandemic. The topics of debate during this move were how to make offices even safer and ways to transition to new work styles. These discussions led us to distribute office space between our old headquarters and several neighboring buildings and increase the average personal space per employee roughly 130%. These measures were not simply for comfort but also aimed to avoid closed spaces, crowded spaces, and close-contact settings (Three Cs), which will prevent the spread of COVID-19.

At the same time, we furthered the adoption of digital tools to facilitate around-the-clock access to online video conferences and advocated a paperless workplace not requiring seals. Our Group also put in place policies for employees to actively work from home to provide balance between work and raising children or taking care of families. This is one of our efforts to support flexible work styles for diverse human resources. In addition to these measures the satellite offices have opened to further enhance a decentralized workplace.

## Social Engagement Toward Growth

I strongly feel that to foster sustainable growth as a corporate enterprise during this pandemic, our Group needs to grow by not only unifying internally as a team but also connecting with others.

The first vital step is to make “connections” with others. These connections with many other people stimulate us and clearly have a beneficial impact on our work. At a time when gathering people together is difficult, we must find new ways to make these connections.

Therefore, our next step requires “connections” through digital technologies. Many companies around the world today leverage all digital technologies in an effort to cultivate more innovative business models. These digital technologies not only make work more efficient but also facilitate connections to others using our network, which have the power to expand business. The use of digital technologies will be essential for companies from now on. Shinryo Corporation must also become versed in using the power of digital connections.

As the last step, we must forge “connections” beyond industry and business category as well. Proficient cooperation between companies with different strengths enhances the power of corporate organizations. This cooperation nurtures alliances and joint development with other companies as well as inspires many more ideas. These synergistic connections will become more important than ever before.

To create new value alongside evolving social issues, a network with many of these connections is the only way to align strengths to move toward success.

## To Achieve Sustainability

Shinryo Corporation has participated in the United Nations Global Compact since 2014 and promotes greater sustainability via the concepts of the Sustainable Development Goals (SDGs). As one step toward realizing the SDGs in fiscal 2020, Shinryo Corporation examined the priority subjects (materiality) it hopes to achieve (p. 23-p. 28).

Shinryo Corporation has four priority subjects: contributions to realize a decarbonized society, contributions to a resilient society, realization of safe and highly efficient work processes, and building of refreshing environments rich with creativity. These materiality issues have been organized by considering global challenges from the impact of global warming and the Paris Agreement through to risks of natural disasters and human rights, domestic challenges from a labor shortage in the construction industry to reforms of long working hours, as well as from a perspective of cultivating an ideal corporate climate.

The concepts of the SDGs have been incorporated in our initiatives since 2017. We have meticulously reviewed our priority subjects while deepening understanding within our organization.

I believe the four priority subjects that we have chosen are the right issues to align the requirements of society and the medium- to long-term Shinryo Corporation management plans. In the future, Shinryo Group will enhance its business acumen by integrating these activities and management to provide social value. Shinryo Corporation will continue to work to reflect the feedback we receive from all of our stakeholders in our business activities in order to become a company specifically chosen by customers. I ask for your ongoing support and guidance in the future as well.

# Message from General Managers

## Yasunori Abe

Representative Director, Executive Vice President
General Manager, International Management Division & in charge of Group Management & New Work Style

Shinryo Corporation has always striven to provide friendly environments to cities and people since its founding and in accordance to its management vision to Create a Freshening World. Through these endeavors, we came to understand the fundamental harmony between the ideals of business activities at Shinryo Corporation and those of the SDGs. This began our SDG initiatives in 2017. As an environmental engineering company, Shinryo Corporation advances energy-saving proposals and technological research to reduce greenhouse gas emissions. We believe one of our duties is to contribute to the realization of a decarbonized society. We also know people are valuable resources and are working to transform the company into a highly productive place rich with creativity by offering an environment where everyone can reach their full potential. I believe this management strategy is also part of the priority subjects of the SDGs.

At our 21 overseas business sites, we aim to engage in local-oriented business activities that create roots in each country and local community.

We share our philosophy on the SDGs overseas too in the hope of becoming a corporate group that is able to realize “Create a Freshening World” business activities on a global scale.

## Tetsuro Kochiya

Representative Director, Executive Vice President
General Manager, Technical Supervision Division & in charge of Group Health and Safety & Compliance & the Environment

Digital Transformation (DX) has become an active effort in various industries today to promote a shift in business toward digital strategies. The construction industry is also part of this trend.

However, on-site efficiency is a pressing issues in the construction industry since the adoption of overtime restrictions in revisions to the Labor Standards Act that will go into effect April 2024. Programs to implement ICT on-site and use Building Information Modeling (BIM) not only take into account DX promotion but also work style reform.

Shinryo Corporation is actively expanding the use of digital technology to help enhance occupational safety and of course heighten productivity and reform work styles. The construction industry as a whole will surely see a digital transformation (DX) as digital technologies and DX evolve. During this transformation, the construction industry should provide more appealing work that contributes more greatly to society. I am confident this trend will enhance customer satisfaction. Shinryo Corporation will employ digital technologies, and I hope realize its own digital transformation (DX).

### United Nations Global Compact and Sustainable Development Goals (SDGs)

Shinryo Corporation refers to the concepts of the United Nations Global Compact and Sustainable Development Goals (SDGs) in its sustainability promotion activities and advances sustainability promotion management that has adopted the ten principles in four areas (human rights, labor, the environment, and anti-corruption) of the United Nations Global Compact as well as the concepts in the 17 SDGs targets.

These efforts demonstrate the will of Shinryo Corporation to grow as a company earning trust from the international society as it focuses its strengths into the provision of technology overseas.

## Takeo Yamaguchi

Director, Senior Managing Executive Officer
General Manager, Marketing Supervision Division

The COVID-19 pandemic ushered in a new society shifting from a focus on efficiency, which had been a prerequisite to traditional business models and the lifestyle of people, to social distancing and no contact with an emphasis on safety and security. To foster sustainable corporate growth, a response with a sense of speed is vital to accommodate new demand.

In addition to this viral crisis, the risk of climate change is the gravest issue facing the world. Modern times demand corporate strategies with ways to combat this climate change.

Shinryo Corporation strives to address a range of social issues through its technical capabilities as an environmental engineering company. I believe we can use these issues as new business opportunities for Shinryo Corporation.

That is why I hope to focus our activities on these challenges. Through efforts to propose better design, installation, and maintenance to customers, Shinryo Corporation will reduce greenhouse gas emissions and help realize a decarbonized society. By building the infrastructure and energy facilities necessary to sustain a safe, secure life in society, we will help build a resilient society.

## Katsuhiko Yakita

Director, Managing Executive Officer
General Manager, Administrative Division & Corporate Strategy and Planning Division & in charge of Sustainability Promotion & DX Promotion

A generation fighting COVID-19 has made clear how companies must change and what companies must protect. We must evolve in order to overcome this viral crisis and foster societal growth in new ways. This transformation should not adhere to convention but rather question precedent to get to the heart of the problems. On the other hand, Shinryo Corporation must also protect its company philosophy, which is its founding spirit.

Our company philosophy is the foundation of all ideas, decisions and actions of everyone working at Shinryo Corporation. Especially in these confusing times, we must never waive from the spirit of our origins.

Our company philosophy has a phrase, “Do your best with all your effort.” Today, the world needs a society that is safe to live in. Shinryo Corporation has decided upon four priority subjects to realize this society (p. 28). We will do everything in our power to faithfully find solutions to these issues as stated in our company philosophy. However, no one person can solve these problems alone. I believe we must unify our strengths with everyone around us to directly confront each priority subject and contribute to the development of a safe and sustainable society.

WE SUPPORT
UN GLOBAL COMPACT

Shinryo Corporation signs the UN Global Compact in September 2014.


Sustainable Development Goals (SDGs)

# Aiming to Create a Freshening World

**This section introduces the history of Shinryo Corporation, which was founded in 1956, that has been cultivated to its efforts in developing people toward achieving the management vision to "Create a Freshening World."**

## 1956-1968

### Founding and Trajectory

**1956**
- Established our Head Office at 45 Nishikubo Tomoecho, Minato-ku, Tokyo and founded our company with five million yen in capital
- Received our first order for cooling equipment work at the Kaori cafe and restaurant

**1957**
- Received an order for Shin- Otemachi Building, the largest building in Japan at that time, and established the foundation of our company
- Received an order for full retrofitting of construction equipment at the Fuji Tsushinki Manufacturing Kawasaki plant

**1958**
- Opened the Osaka Office

**1960**
- Moved Headquarters (2-4, Yotsuya, Shinjuku-ku, Tokyo)
- Completed the Training Dormitory "Kofu Dormitory"

**1961**
- Opened the Nagoya Office

**1964**
- Established the Construction Division and Equipment Division

**1965**
- Developed and installed Japan's first "3-pipe Air-conditioning System" in the head office of Nippon Fudosan Bank

**1966**
- Opened the Hiroshima Office

**1967**
- Opened the Sendai Office

**1968**
- Deployed three engineers on a fact-finding mission in the U.S.A.
- Introduced a skyscraper building application and refrigerator computer control at the World Trade Center Building

## 1969-1977

### Enhancement of Division-based Organization System and Expansion to New Business Regions

**1969**
- Opened the Fukuoka Office
- Received an order to install a district heating and cooling system at the Senri New Town Chuo District Center
- Received an order to install a district heating and cooling system in Shinjuku Fukutoshin District

**1970**
- Completed the headquarters building
- Established the industry's first research center for air conditioning technology
- Established the Nuclear Power Plant Department to enter the energy plant industry for nuclear power use

**1971**
- Opened the Chugoku Branch

**1972**
- Received the first order for full-fledged overseas work at the Vietnam Cho-Ray Hospital
- Opened the Sapporo Office

**1975**
- Opened the Tohoku Branch

**1976**
- Received the first order for aquarium equipment renovations of the Izu Mito Natural Aquarium (currently Izu Mito Sea Paradise)

**1977**
- Opened the Maizuru Plant
- Received order for the first phase construction of the Kwun Tong Hong Kong Subway Line

## 1978-1987

### Evolution of Japanese Business and Expansion of Overseas Business

**1978**
- Opened the Hong Kong Branch as a base for overseas expansion

**1979**
- Established overseas department as a major pillar of business for overseas expansion
- Acquired the Level 1 Plumbing Registration from the Ministry of Construction (currently the Ministry of Land, Infrastructure, Transport and Tourism)
- Developed the NAIAS sludge atmospheric flotation concentrator

**1982**
- Established a local company in Hong Kong (SHINRYO (HONG KONG) LTD.)

**1983**
- Opened the Singapore Branch
- Established a local company in Malaysia SHINRYO (MALAYSIA) SDN. BHD.

**1986**
- Established a local company in Thailand (THAI SHINRYO LTD.)

**1987**
- Established a local company in Taiwan (TAIWAN SHINRYO CO., LTD.)

Cho-Ray Hospital
Air conditioning and sanitation systems (Vietnam)

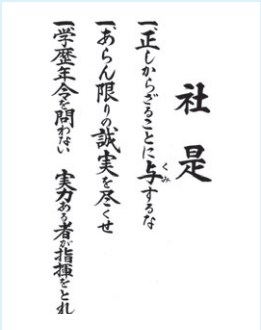
Shin-Otemachi Building
Air conditioning system

Shinjuku Fukutoshin District
District Heating and Cooling System

Established

1956 1960~ 1970~ 1980~

## History of Technical and Human Resource Development




**Company Philosophy**
The Company Philosophy clearly expresses the life philosophy and business philosophy of our founder Chairperson Masaru Kagami (deceased).

Initial Meeting to Establish Shinryo Corporation

The First Members Training at the Takamatsu Dormitory

**1969**
Enhanced the organization by adopting a division-based organization system. Authority was given to each department for the purpose of teaching junior employees

**1970**
Completed the headquarters building in Yotsuya located in Shinjuku district. Accelerated autonomy as an organization

**1970**
Established the industry's first research center (Osaki, Shinagawaku, Tokyo)

## 1988-1997

### New Mission and Restructuring of Core Businesses

**1990**
- Opened the Research and Development Center in Tsukuba Academic Town in Tsukuba City, Ibaraki
- Established a local company in the Philippines (SHINRYO (PHILIPPINES) CO., INC.)
- Received an order from THE LANDMARK TOWER YOKOHAMA

**1992**
- Opened the Technical Supervision Department and Safety Supervision Department
- Passing of Founder Chairperson Masaru Kagami

**1994**
- Established a local company in Indonesia (PT. SHINRYO INDONESIA)

**1995**
- Received an order for the first overseas district cooling system at the Kuala Lumpur International Airport

Tokyo Dome
Air conditioning System

## 1998-2008

### Establishment of Advanced Technology Regions

**1998**
- Acquired the ISO 9000s certification
- Began development of numerical fluid analysis technology using super computers
- Received an order from the Okinawa Churaumi Aquarium

**2001**
- Acquired ISO 14001 certification
- Established a local company in Singapore (SHINRYO SINGAPORE PTE, LTD.)
- Received an order for a district heating and cooling system in the Marunouchi District

**2002**
- Received an order for the Sharp Corporation Kameyama Factory

**2003**
- Released the 3D-CAD "S-CAD" working drawing CAD for construction equipment

**2005**
- Opened the Middle East (Dubai) Branch

**2007**
- Established a local company in Vietnam (SHINRYO VIETNAM CORPORATION)
- Opened the Abu Dhabi Branch

**2008**
- Registered the Research and Development Center as a Certified Environmental Survey and Odor Measurement Service

## 2009 to Present

### Perseverance and Organizational Development to Expand Business Regions

**2009**
- Started renovations of the headquarters building (energy saving Eco-project at the headquarters building)

**2010**
- Established the Control & Instrument Engineering Division

**2012**
- Commemorated for the long-time certification of the environmental management system
- Opened the Working Drawing Center
- Developed the Space Scanning System using 3D technology

**2014**
- Drafted the "Create a Freshening World" management vision
- Established the CSR Promotion Division and Compliance Promotion Division
- Introduced the overseas practical dispatch system and the overseas short term training system for new employees

**2015**
- Began on-site training for engineers from overseas

**2017**
- Standardized an English logo

**2018**
- Established a local company in India (SHINRYO SUVIDHA ENGINEERS INDIA PVT. LTD.)

**2020**
- Moved Headquarters (1-6-1, Yotsuya, Shinjuku-ku, Tokyo)

The Hong Kong and Shanghai Banking Corporation Limited, HSBC Main Building
Air conditioning, sanitation and electric system (Hong Kong)

THE LANDMARK TOWER YOKOHAMA
Air conditioning System

Sharp Corporation Kameyama Factory
Air conditioning System

The Venetian Macao Resort
Air conditioning/District Heating and Cooling system (Macao)

Petronas Penapisan (Melaka) Sdn Bhd
Cogeneration Plant
Plant facilities (Malaysia)

THAI KYOWA BIOTECHNOLOGIES CO., LTD.
Plant facilities/civil engineering and construction (Thailand)

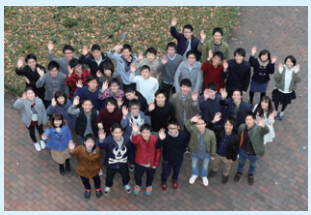
## 1990~

**1990**
Opened the Research and Development Center (Tsukuba City, Ibaraki)

**1992**
Passing of Founder Chairperson Masaru Kagami

## 2000~

**2006**
Moved the Kofu Dormitory to Yokohama



The Kofu Dormitory is used as a facility for overall training in addition to new employee training and education

## 2010~

**2015**
Start of Japan Invitation Program for Overseas Group Companies

**2016**
Start of Shinryo Group-wide New Employee Training

## Corporate Information

| | |
|---|---|
| Company Name | SHINRYO CORPORATION |
| Headquarters Address | 1-6-1, Yotsuya, Shinjuku-ku, Tokyo |
| Date of Establishment | February 23, 1956 |
| Number of Employees (As of September 2020) | 2,242 people (non-consolidated)<br>5,191 people (including Group companies) |
| Capital | 3.5 billion yen |

### Construction Business License (Japan) (As of January 2021)

| | |
|---|---|
| License Number | (Special 1) No. 3447 issued by Minister of Land, Infrastructure, Transport and Tourism |
| Date of License | March 11, 2020 |
| Licensed business | Plumbing, Electrical, Machine and Equipment Installation, Building, Civil Engineering, Steel Structure, Interior Finishing, Water and Sewerage Facilities, Telecommunication, Scaffolding, Earthwork and Concrete, Sanitation Facilities |
| License Number | (Ordinary 1) No. 3447 issued by Minister of Land, Infrastructure, Transport and Tourism |
| Date of License | March 11, 2020 |
| Licensed Business | Fire Protection Facilities |

### Main Registered Business (Japan)

Senior registered architect office

| | |
|---|---|
| Registration Number | No.46232 issued by Governor of Tokyo |
| Date of Registry | April 10, 2016 |

### List of qualifiers (Japan)

| Name of certification | Number of people |
|---|---|
| Professional Engineer Japan (Engineering Management) | 3 |
| Professional Engineer Japan (Environmental Engineering) | 46 |
| Professional Engineer Japan (Mechanical Engineering) | 3 |
| First-Class Plumbing Work Operation and Management Engineer | 1,178 |
| First-Class Electric Works Execution Manager | 134 |
| 1st class Qualified Certified Electrician | 36 |
| 3rd Class Electric Works Specialist | 31 |
| Class A Fire Defense Equipment Officer | 335 |
| Class B Fire Defense Equipment Officer | 21 |
| 1st-class Kenchikushi (Architect) | 39 |
| First-Class Civil Engineering Works Execution Managing Engineer | 10 |
| First-Class Building Operation and Management Engineer | 17 |
| Qualified Person for Energy Management | 121 |
| Building Facilities Diagnostic Technician | 102 |
| Building Mechanical and Electrical Engineer | 248 |
| The First Level Instrumentation Engineer | 388 |
| Professional Engineer (CxPE: Commissioning Professional Engineer) | 3 |

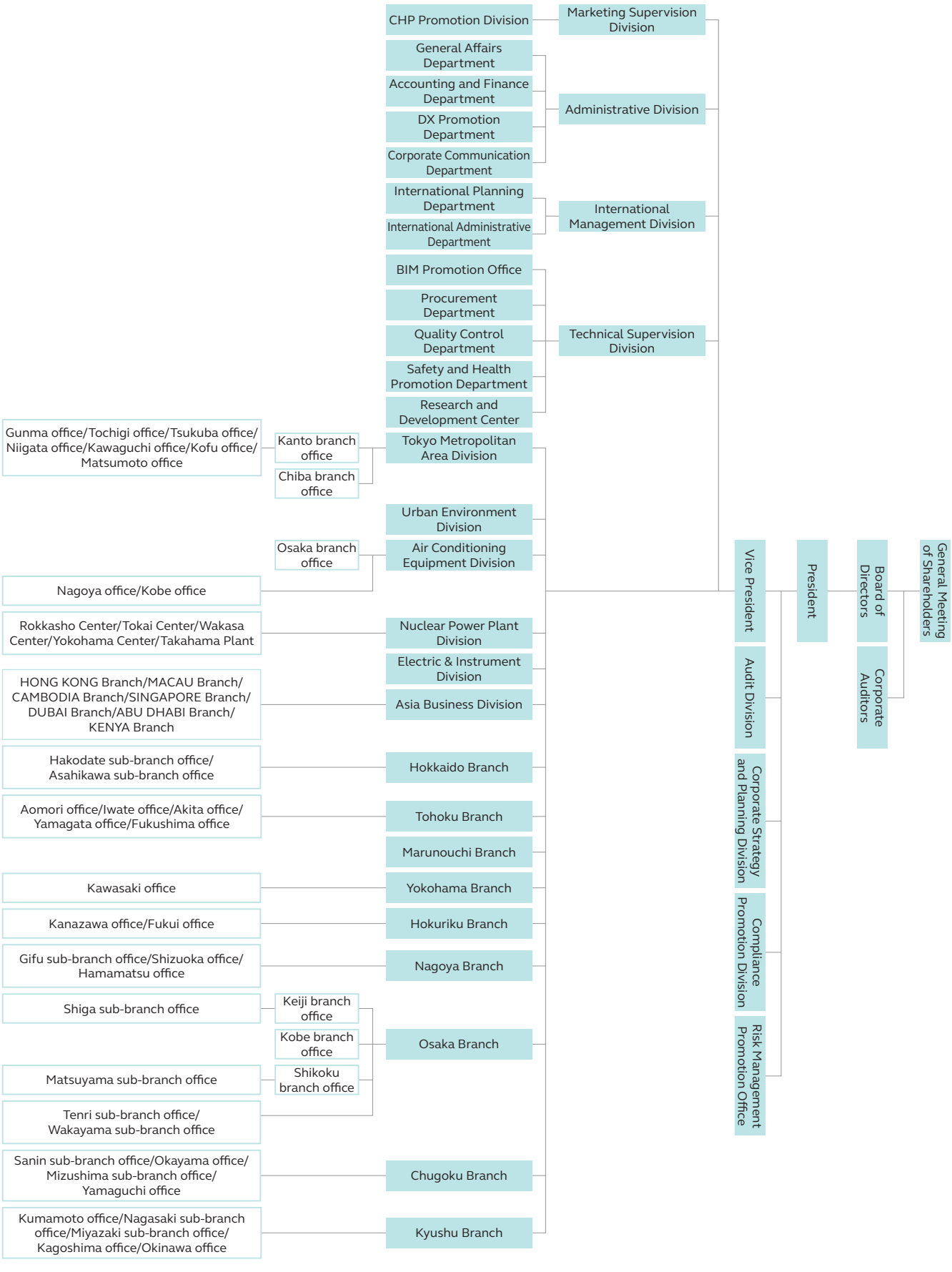
## List of Executives

| | | |
|---|---|---|
| President, Representative Director | Takeshi Kagami | |
| Representative Directors | Yasunori Abe<br>Tetsuro Kochiya | |
| Directors | Takeo Yamaguchi | |
| | Katsuhiko Yakita | |
| | Sayaka Kagami | Non-Executive Director |
| | Hideaki Fujizuka | Outside Director |
| Senior Corporate Auditor | Haruaki Kotani | |
| Corporate Auditors | Toshihito Furuya | |
| | Koichi Kubo | |

| | | |
|---|---|---|
| President & Chief Executive Officer | Takeshi Kagami* | |
| Executive Vice Presidents | Yasunori Abe* | General Manager, International Management Division & in charge of Group Management & New Work Style |
| | Tetsuro Kochiya* | General Manager, Technical Supervision Division & in charge of Group Health and Safety & Compliance |
| Senior Managing Executive Officer | Takeo Yamaguchi* | General Manager, Marketing Supervision Division |
| Managing Executive Officers | Takeshi Egi | General Manager, Osaka Branch |
| | Akihiko Suzuki | General Manager, Urban Environment Division & in charge of Marunouchi Branch |
| | Takao Watanabe | General Manager, Tokyo Metropolitan Area Division & in charge of Hokkaido Branch |
| | Koichi Kaji | General Manager, Nuclear Power Plant Division |
| | Katsuhiko Yakita* | General Manager, Administrative Division & Corporate Strategy and Planning Division & in charge of Sustainability Promotion & DX Promotion |
| | Tatsuji Yoshimura | General Manager, Asia Business Division |
| Executive Officers | Hideki Hagiwara | President & Representative Director, Shinryo Technical Service Corporation |
| | Kazuto Inabe | General Manager, Tohoku Branch |
| | Satoru Narisawa | General Manager, Nagoya Branch |
| | Takuji Fujisawa | General Manager, Air Conditioning Equipment Division |
| | Yukitoshi Maeda | General Manager, Yokohama Branch |
| | Hiroshi Ogura | General Manager, Kyushu Branch |
| | Hideki Furumoto | General Manager, Corporate Communication Department |
| | Naoki Uchiyama | In charge of Sales Promotion, Marketing Supervision Division |
| | Koji Murakami | General Manager, Marunouchi Branch |
| | Masahiko Kitabayashi | Deputy General Manager, Tokyo Metropolitan Area Division |

*Executive Officers also acting as Directors

# Organizational Chart



# Overview of Shinryo Group

**Shinryo Group provides people-friendly and environmentally-friendly air conditioning, water-supply and drainage sanitation, electrical systems, city-friendly and community-friendly district Heating and Cooling Systems, safe and secure plant systems, and comprehensive information systems that support energy savings.**
**Overseas, the Group also delivers a "Freshening World" by setting up bases primarily in Asia and the Middle East.**

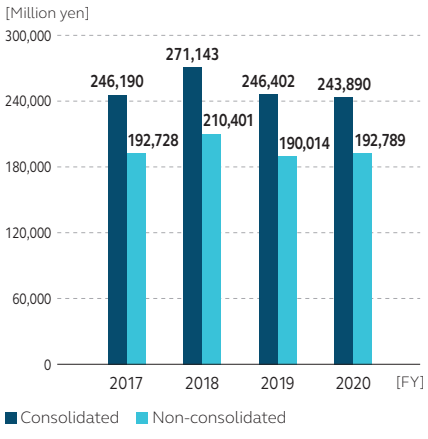
Number of Companies

**19**

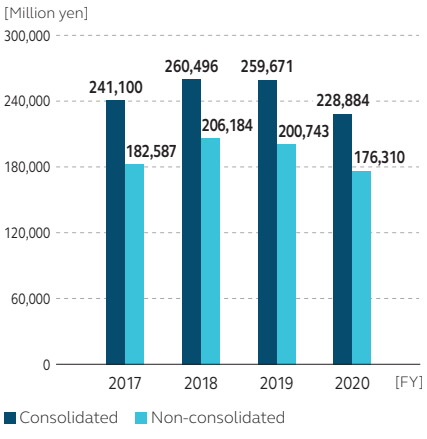
SHINRYO CORPORATION
8 Japanese Group Companies
10 Overseas Local Companies


# Business Performance Trends

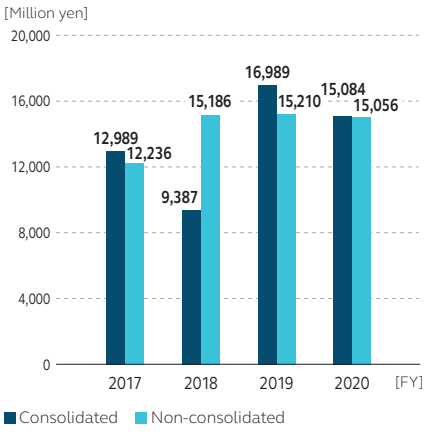
## Orders received




## Net sales




## Operating income



## Business Network

**87** bases

66 Japanese bases
21 overseas bases

## Net sales

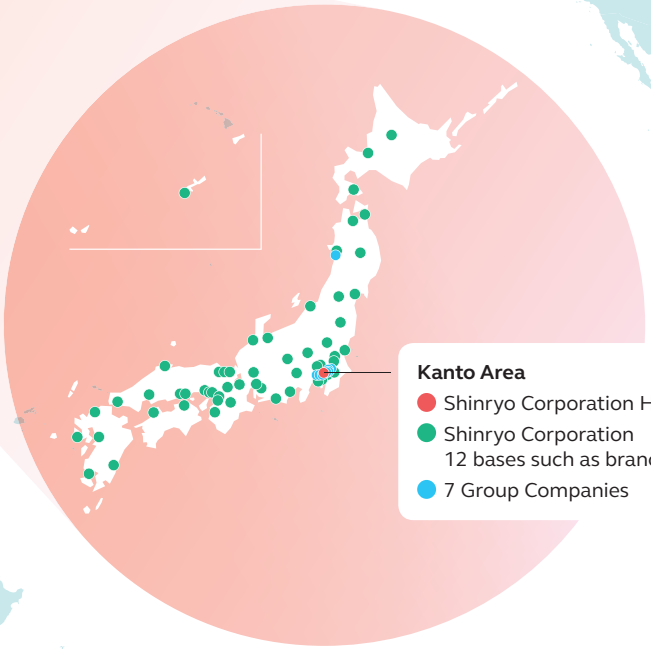
**228.8** billion yen

176.3 billion yen (non-consolidated)

## Number of Employees

**5,191** people

2,242 people (non-consolidated)




## SHINRYO CORPORATION

**Design, construction and maintenance of building system work**

Shinryo Technical Service Corporation

**Design, construction and maintenance of plumbing, drainage and sanitary service work**

Shiroguchi Co., Ltd.

**Design, construction and maintenance of electric service work**

Daiei Denki Co., Ltd.

**Design, manufacture, sales, installation and aftercare services of pumps**

Shinryo Kougyo LTD.

**Development of three-dimensional CAD/FM systems**

SYSPRO CORPORATION

**Drafting of three-dimensional CAD drawings and environmental measurement for building system work**

LE PRO CORPORATION

**International tourist hotel**

Akita Castle Hotel Co., Ltd.

**Deployment and outsourcing of human resources**

Global Staff Co., Ltd.

**Design, construction and maintenance of buildings and civil engineering/industrial production service work**

SHINRYO (HONG KONG) LTD.

SHINRYO TECHNICAL SERVICES LTD.

TAIWAN SHINRYO CO., LTD.

SHINRYO (PHILIPPINES) CO., INC.

THAI SHINRYO LTD.

SHINRYO (MALAYSIA) SDN. BHD.

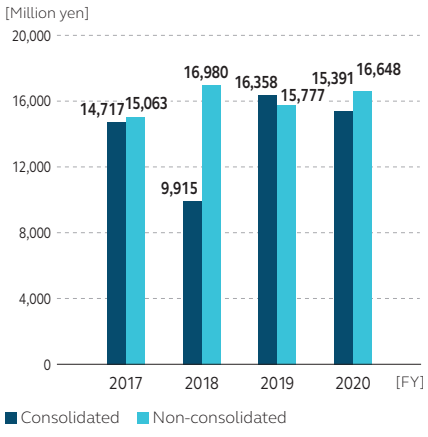
SHINRYO SINGAPORE PTE, LTD.

PT.SHINRYO INDONESIA

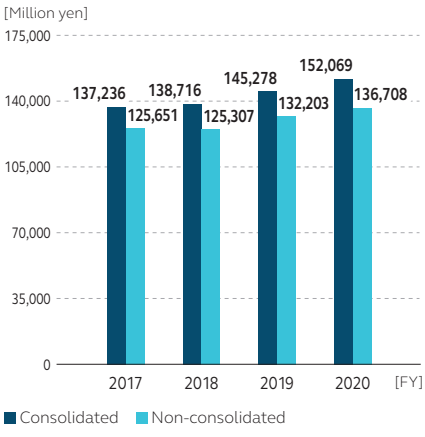
SHINRYO VIETNAM CORPORATION

SHINRYO SUVIDHA ENGINEERS INDIA PVT. LTD.

### Ordinary profit

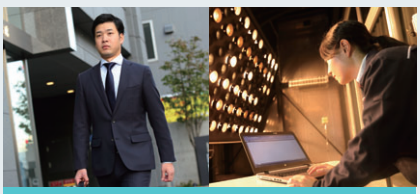



### Net assets



# Business Fields

**The features of business at Shinryo Corporation are the state-of-the-art construction technology and track record accumulated in Japan and overseas up until now. Our businesses create people-friendly and environmentally-friendly air conditioning, water-supply and drainage sanitation, electrical systems, and leading-edge production environments in addition to city-friendly and community-friendly district heating and cooling systems and comprehensive information systems that support energy savings. Shinryo Corporation will earn the trust of customers and meet their expectations with technology, proven success and sincerity.**



## Planning & Proposal/Research & Development

We propose optimal spaces according to the needs of customers in terms of both technology and cost through coordination between our design and construction divisions. Shinryo Corporation provides advanced planning through the use of computational fluid dynamic simulations.

## Design/Engineering

We listen closely to the needs of our customers to provide the suitable designs and engineering of equipment system, which includes selecting the appropriate materials and equipment.

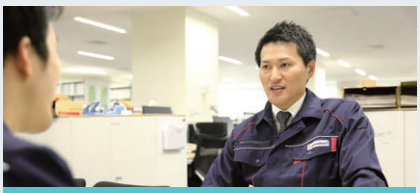
Concern for Environment

Energy Saving
Resource Saving

Comfort

Safety and Security

SHINRYO



## Maintenance

We provide the support to prolong the use of equipment systems such as operational management of those systems, commissioning, inspections for the state of equipment degradation and the formulation of long-term maintenance plans.

## Installation

We offer sound installation through means that include the creation of construction drawings, proper process management, quality management, environmentally- and safety-friendly construction management as well as test runs.

## Business Items

### ➤ Design and construction of various building services

#### Environmental service work

Air conditioning and mechanical ventilation systems/industrial air conditioning and mechanical ventilation systems/clean room systems/dry room systems/bio-hazard facilities

#### Water-supply, drainage and sanitation

Water supply and hot water supply systems/soil and waste drainage systems/gas supply systems/kitchen equipment systems

#### Urban utility service work

District heating and cooling systems/energy supply systems

#### Cogeneration systems

Power generation system/heat recovery system

#### Electric systems

Power reception and transformer systems/main and sub main power distribution systems/lighting and small power systems/extra low voltage systems/lightning protection systems/power generation systems

#### Automatic control service work

Automatic control systems/building management systems/industrial automation systems

#### Comprehensive information systems

Various control and management systems for utility plant facilities, industrial production facilities, building facilities and etc.

#### Firefighting service work

Automatic fire alarm systems/smoke purge and smoke extraction systems/evacuation guidance systems/indoor and outdoor fire hydrant system, sprinkler system and other types of fire extinguishing systems

#### Power plant service work

Ventilation and air-conditioning systems for nuclear power and thermal power plants/special filtering systems/waste treatment systems

#### Industrial production service work

Pharmaceutical and food plant facilities/petroleum-related facilities/other plant facilities

#### Special service work

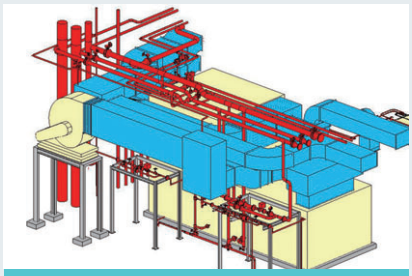
Aquarium facilities/pool facilities/weather simulation facilities/various environmental reliability testing systems/freezing and refrigerating systems/ultra-low temperature and high accuracy temperature control systems

### ➤ Design and construction of building

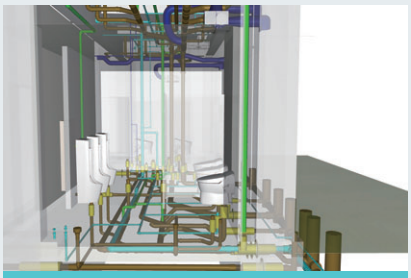
Clean rooms/plant buildings/interior finishing work/associated construction work for building services/general building facilities

### ➤ Sales of air conditioning equipment

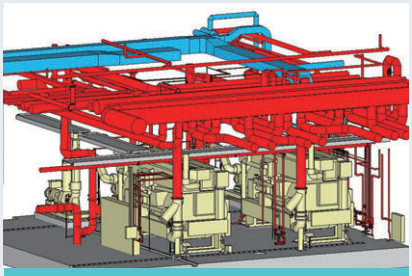
Air conditioner and other heating and cooling products/fans and blowers/sanitary ware/other products related to air conditioning and ventilation



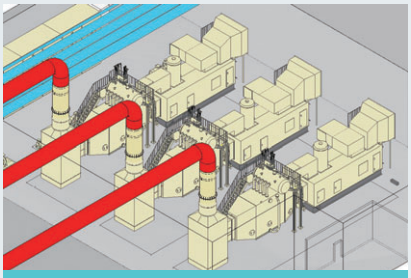
HVAC systems



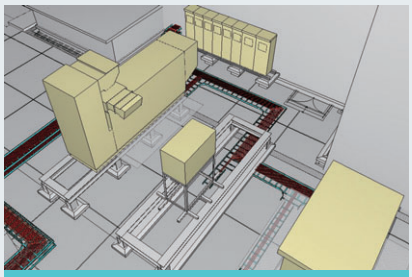
Plumbing and sanitation



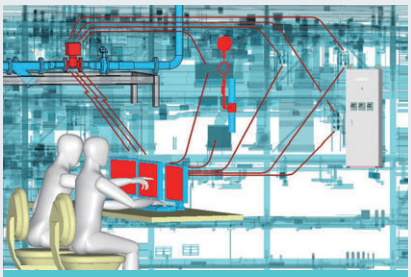
District heating and cooling systems



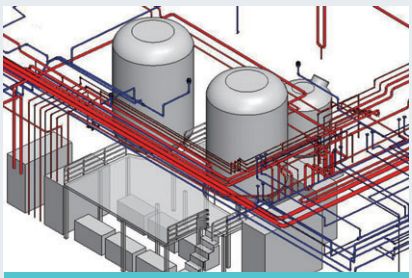
Cogeneration systems



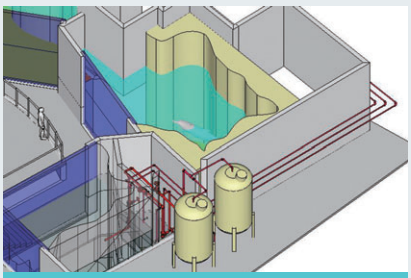
Electric systems



Comprehensive information systems



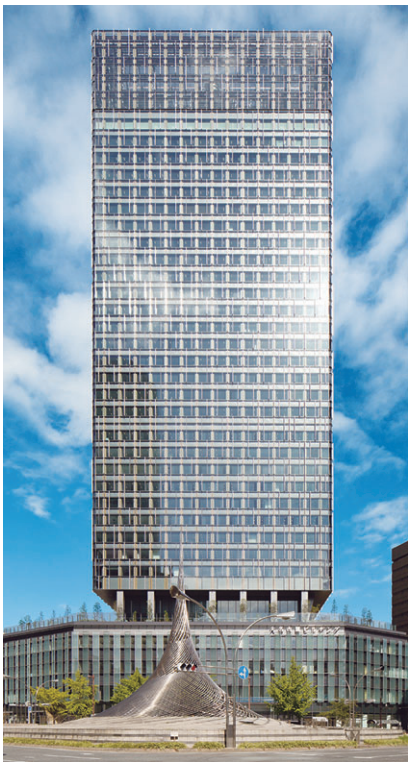
Plant facilities



Aquarium facilities

# Construction Track Record

## Japan Offices, Hotels, and District heating and Cooling Systems



**Dai Nagoya Building**
(Nagoya City, Aichi Prefecture)
Air Conditioning System

**Toranomon Hills Mori Tower**
(Minato-ku, Tokyo)
Air Conditioning System

**THE LANDMARK TOWER YOKOHAMA**
(Yokohama City, Kanagawa Prefecture)
Air Conditioning System

**Palace Hotel Tokyo · Palace Building**
(Chiyoda-ku, Tokyo)
Air Conditioning System

**FESTIVAL CITY**
(Osaka City, Osaka Prefecture)
Air Conditioning/ District Heating and Cooling System

**Tokyo Sky Tree® District DHC**
(Sumida-ku, Tokyo)

District Heating and Cooling System

**Otemachi, Marunouchi 1-chome & 2-chome and Yurakucho Districts DHC**
(Chiyoda-ku, Tokyo)

District Heating and Cooling System

**Minato Mirai 21 Central District DHC**
(Yokohama City, Kanagawa Prefecture)

District Heating and Cooling System

### Features of the sc-brain Comprehensive Information System and Main Delivery Record

sc-brain is a comprehensive information system to realize high efficiency operation and energy savings in systems by configuring operational support features to assist the operation of system equipment as well as data management features to analyze energy consumption trends. As a highly universal and easy-to-use system, sc-brain is used in facilities from office buildings and factories to district heating and cooling plants.

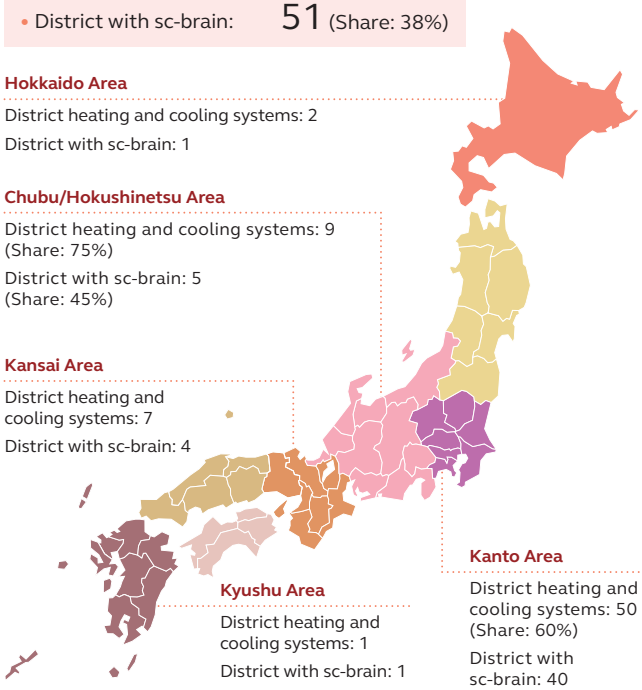
[Main Delivery Record]

- Sapporo Station area district heating and cooling systems (Sapporo City, Hokkaido)
- Narita International Airport central heating and cooling plant (Narita City, Chiba)
- Adachi Metropolitan Taxation Office (Adachi-ku, Tokyo)
- Marunouchi Center Building/Shin-Marunouchi Center Building (Chiyoda-ku, Tokyo)
- Hisaya-odori Nagoya Municipal Subway Station (Nagoya City, Aichi)
- Osaka Station area district heating and cooling systems (Osaka City, Osaka)
- Japan Post Shin-Osaka Post Office (Osaka City, Osaka)
- Fukuoka City Chiyo area district heating and cooling systems (Fukuoka City, Fukuoka)

### Construction track record in districts heating supply operations throughout Japan

**Construction/delivery record/national share**

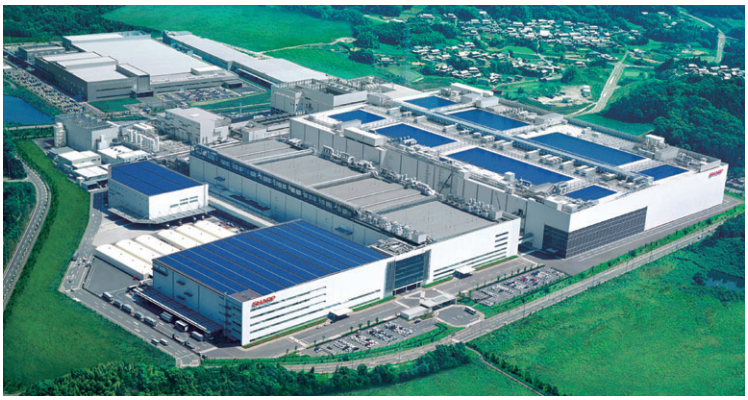
- District heating and cooling systems: 69 (Share: 51%)
- District with sc-brain: 51 (Share: 38%)



# Plants, Hospitals, Data Centers, Building Complexes, Aquariums, and Theaters

**NTT DATA Mitaka Bldg. EAST**
(Mitaka City, Tokyo)
Air Conditioning and Sanitation Systems

**D-Tower Toyosu**
(Koto-ku, Tokyo)
Air Conditioning and Sanitation Systems



**Sharp Corporation Kameyama Factory**
(Kameyama City, Mie Prefecture)
Air Conditioning System

**Shiseido Nasu Factory**
(Ohtawara City, Tochigi Prefecture)
Air Conditioning System

**Kochi Prefectural Ashizuri Aquarium**
(Tosashimizu City, Kochi Prefecture)
Rearing System

**Keio University Hospital Bldg. 1**
(Shinjuku-ku, Tokyo)
Air Conditioning System


**Yamaha Corporation Headquarters Building No.21**
(Hamamatsu City, Shizuoka Prefecture)
Air Conditioning System

**Takasaki City Theatre**
(Takasaki City, Gunma Prefecture)
Air Conditioning System

# Commercial Complexes, Medical Facilities, Public Facilities, Transportation, Energy Plants and Bio Plants

**Marina Bay Sands Integrated Resort** (Singapore)

Air Conditioning and Mechanical Ventilation Systems

**National Centre for Infectious Diseases** (Singapore)

Air Conditioning and Mechanical Ventilation Systems

**Petronas Penapisan (Melaka) Sdn Bhd Cogeneration Plant** (Malaysia)

Plant Facilities

**Jewel Changi Airport** (Singapore)

Air Conditioning and Mechanical Ventilation Systems

**THAI KYOWA BIOTECHNOLOGIES CO., LTD.** (Thailand)

Plant Facilities/Civil Engineering and Construction (Air Conditioning, Sanitation, Firefighting, Electric, and Instrumentation Systems)

**Hong Kong MTRC Airport Express Hong Kong Station** (Hong Kong)

Air Conditioning, Sanitation, Firefighting and Electric Systems

**District Cooling Plant for the New Abu Dhabi International Airport Terminal** (United Arab Emirates)

District Cooling System

# Initiatives at the Research and Development Center

**Shinryo Corporation established the industry's first research center in Shinagawa-ku, Tokyo in 1970 with the aim to Create a Freshening World. In 1990, we opened the largest facility in the industry, the Research and Development Center, in Tsukuba City, Ibaraki.**

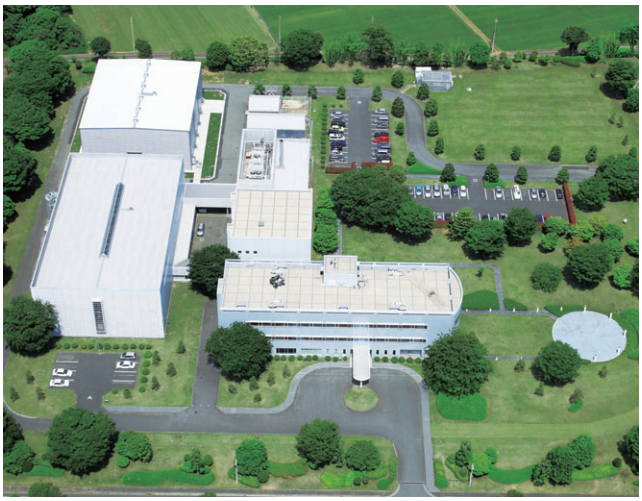
## Facility and High-precision Analysis Technologies for Large Scale Experiments

The Research and Development Center has facilities such as a large space to conduct large-scale experiments, sufficient utilities, and high-performance HPC servers able to run highly accurate simulations. Engineers can verify the performance of systems by running large-scale simulations before starting construction.

In addition, the Research and Development Center provides high-precision analysis technologies through analysis instruments such as various chromatography. To maintain analysis accuracy, the Research and Development Center has been registered as a measurement certification business and has built a management system for analysis technologies and measurement equipment.

**Registration as a measurement certification business**

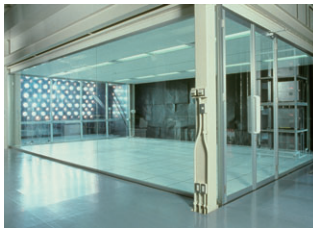
| Business classification | Register number | Date of registration |
|---|---|---|
| Concentration (in the atmosphere, water, and soil) | Ibaraki Prefecture No. 68 | June 2, 2008 |
| Sound pressure level | Ibaraki Prefecture No. 28 | February 20, 2009 |
| Oscillating acceleration level | Ibaraki Prefecture No. 20 | February 20, 2009 |



Full View of the Research and Development Center

Large-scale Experiment Space

Anechoic Room



Environment Simulation Room

Chemical Experiment Laboratory

## Open Innovation

### Cooperative research

Shinryo Corporation cooperates in research with many different universities, public research institutes and companies to bring about the highest level of research success. By leveraging mutual technology and know-how, we are building a system to broadly expand debate and ideas.

**Number of cooperative research projects**

**12** research themes

**12** institutions

Breakdown of cooperative research

**7** universities

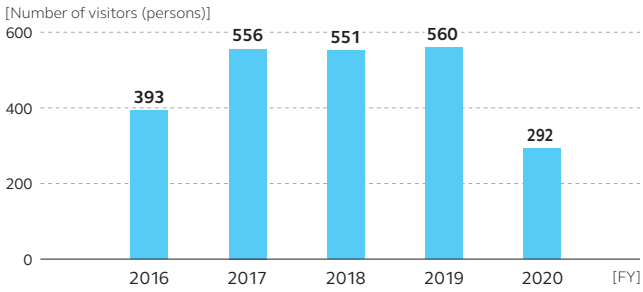
**1** public institution

**4** companies

### Number of visitors

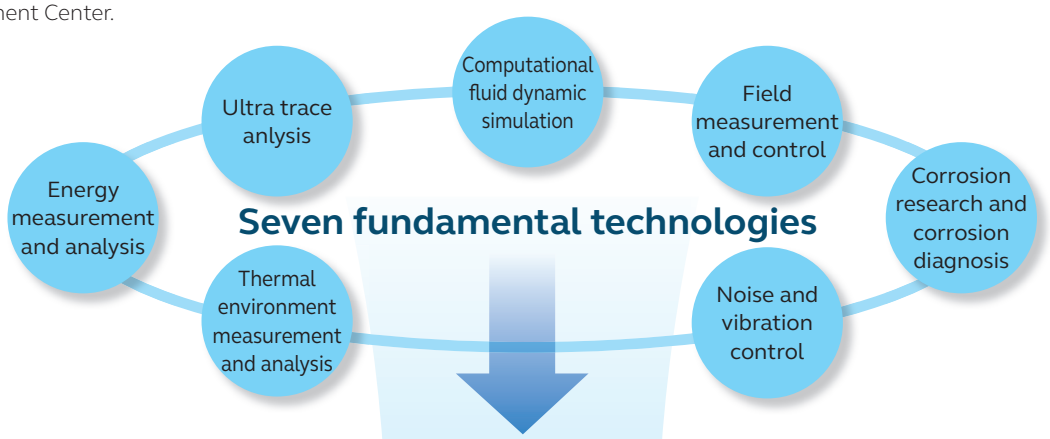
People from all walks of life, from customers to students, come to tour the Research and Development Center aimed at an open laboratory. Researchers use this as a technical showroom to offer visitors an actual look and experience into research and development by explaining their research and development themes in detail and letting visitors try demonstration equipment.

**Shift in the number of visitors**



## Promotion System for Research and Development

The Research and Development Center is furthering research and development with particular focus on four research regions based on its seven fundamental technologies. This section introduces some of the new technologies and value created by the Research and Development Center.




### Four Research Regions

**Environmental Control**

We are advancing research into air conditioning systems that build optimal environments for people, industrial products and living things.

**Energy Management**

Research in technology related to energy such as energy savings, energy creation and energy storage is advancing.

**Production Technology**

Research into accurate measurement technology, corrosion diagnosis technology for construction equipment as well as measurement and control technology for noise and vibrations in equipment on construction sites.

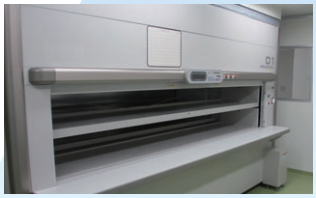
**Digital Engineering**

Research is underway for technology to run equipment optimally based on Building Information Modeling (BIM) and operational data, indoor environmental predictions through Computational Fluid Dynamics (CFD).

## Examples of Creating New Technology and Value*

### • MayuFacture® Smart Sericulture System

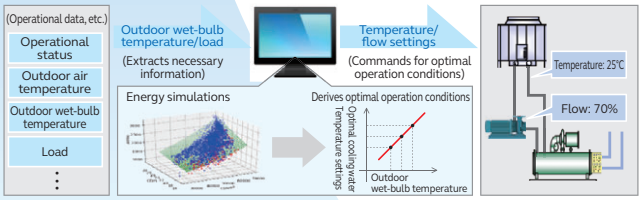
MayuFacture® can efficiently and stably rear a large number of high quality silkworms thanks to the development of a rearing system that facilitates an environment suitable to the growth of silkworms for more rapid growth in addition to genetically modified organisms.



MayuFacture®

### • Optimal Heat Source Control Systems

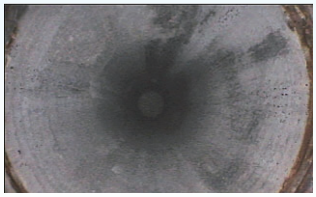
These optimal heat source control systems achieve the optimal operation of equipment by using design and operational know-how and energy simulation tools for heat source systems to derive operational conditions with the minimal amount of energy consumption.




### • Corro–Guard® Non-chemical Corrosion Prevention System

Corro-Guard® lengthens the lifespan of piping through technology to reduce the risk of occurrence of local corrosion and monitor the level of corrosion. This system improves the water quality with an ion exchange process without the introduction of rust inhibitors.

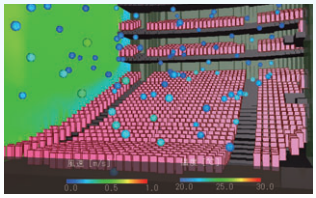
Without introduction of the corrosion prevention system



With introduction of the corrosion prevention system

### • CFD Solution

We can validate air conditioning systems to provide comfortable environments and energy savings by predicting indoor and outdoor environments through the use of CFD. In addition, visualization technology that uses Mixed Reality (MR) can present easy-to understand, three-dimensional images overlaid on actual indoor spaces.



*Please see the Shinryo Corporation homepage for more detailed information. https://www.shinryo.com/corp/rdcenter.html

# Sustainability Promotion Management

## Toward the Development of a Sustainable Society

Shinryo Corporation started CSR activities by establishing the CSR Promotion Division in 2014. The CSR Promotion Division was reformed into the Sustainability Promotion Division to expand these activities in April 2019. In October 2019, we integrated activity promotion operations with the Corporate Strategy and Planning Division to strengthen strategic activities in accordance with management policies based on greater interest in incorporating the Sustainable Development Goals (SDGs) and management as well as the growing importance of factors such as stakeholder communication today.

The significance of "sustainability" is the sustainable growth of our planet, society and organization. We will expand the efforts of Shinryo Corporation from CSR to sustainability.

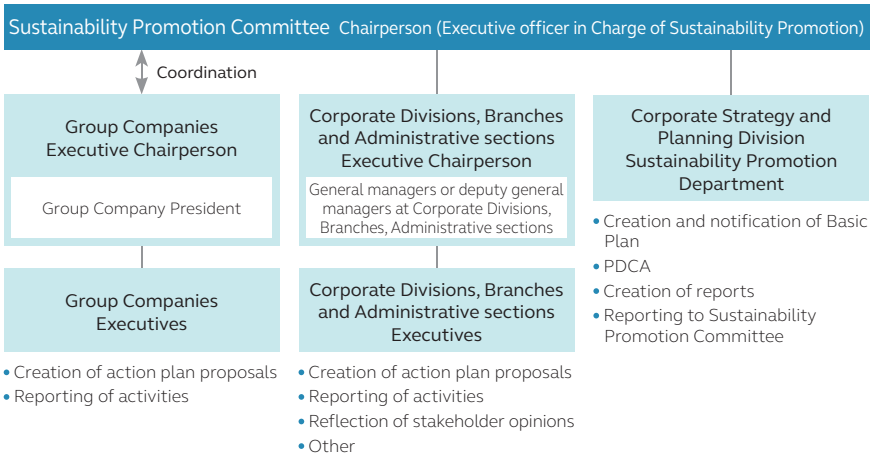
## Sustainability Promotion System

### Sustainability Promotion Committee

We have put in place a Sustainability Promotion Committee with the executive officer in charge of Sustainability Promotion as the chairperson to check the status of activities and determine activity policies in order to reflect the feedback we receive from all of our stakeholders and promote better sustainability promotion activities.

### Sustainability Promotion Department

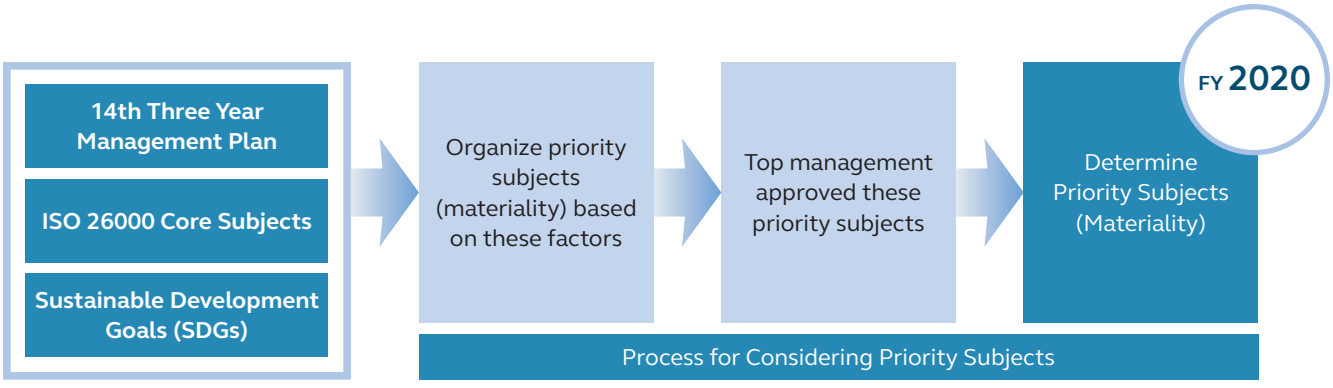
The Sustainability Promotion Department communicates activity policies defined by the Sustainability Promotion Committee to Shinryo Corporation and Shinryo Group executives to further sustainability activities in coordination with each division. The department publishes the SHINRYO Report by bundling annual activity information for feedback from all of our stakeholders to reflect and improve efforts when drafting activity plans.




## Process for Considering Priority Subjects

Shinryo Corporation has furthered its scrutiny into the social issues requiring attention for the sustainable development of society up until now through its businesses. This examination into the priority subjects to emphasize incorporated concepts from the ISO 26000 and Sustainable Development Goals (SDGs) around the Shinryo Corporation 14th Three Year Management Plan while referencing feedback from the management team and outside experts.

This report includes a detailed breakdown of the process for investigating and determining the 2020 priority subjects.



## FY2017 Association Between CSR Activities and SDGs Targets

Shinryo Corporation examined priority subjects by referring to schemes, such as the SDGs Compass: The guide for business action on the SDGs, which provides corporate action guidelines for the SDGs.

We associated the CSR efforts already in place at Shinryo Corporation and the targets of the SDGs in fiscal 2017, which was the first step of these initiatives in the SDGs, and bundled regions of contribution through existing initiatives to express in a comparison table.

### SDGs Comparison Table Included in CSR Activity List

## FY2018 Debate to Deepen Understanding About SDGs

We strove in the following two areas in fiscal 2018 with the aim of integrating SDGs and businesses in the second consecutive year:

(1) Deepen understanding about SDGs

(2) Debate new business opportunities from a perspective of SDGs


Seminar materials for executives and management

Workshop to investigate new business opportunities from an SDG perspective

## FY2019 Organization and Selection of Priority Subjects

### (1) Analyze the Impact on Society and Shinryo Businesses

In fiscal 2019, we used an evaluation sheet to analyze priority subjects from both the impact on the evaluation and decision making of stakeholders and the impact of Shinryo Corporation on the economy, environment and society according to the 169 targets and 232 indicators of the SDGs in the effort to organize and select priority subjects.

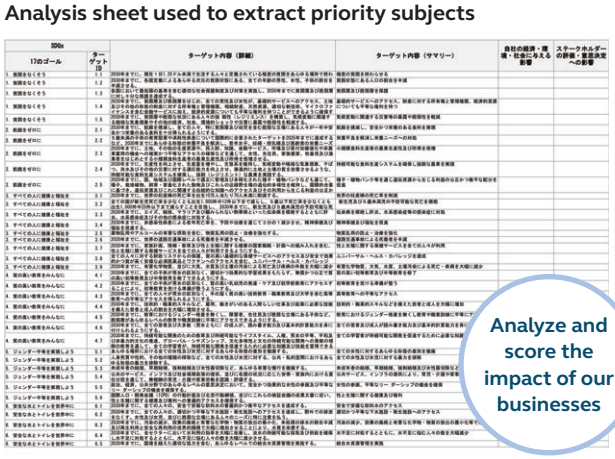
**Impact on Stakeholder Evaluation and Decision Making**

- Analysis of the Disclosure Requirements by Sector for the Principle Guidelines and SRI Survey Agencies (GRI Standards, SASB, and MSCI)
- Quantitative analysis of requirements from society, etc.

**Impact of the company on the economy, environment and society**

- Analysis of the impact from a value chain perspective
- Analysis of the relevance between the corporate philosophy and medium-term management plan

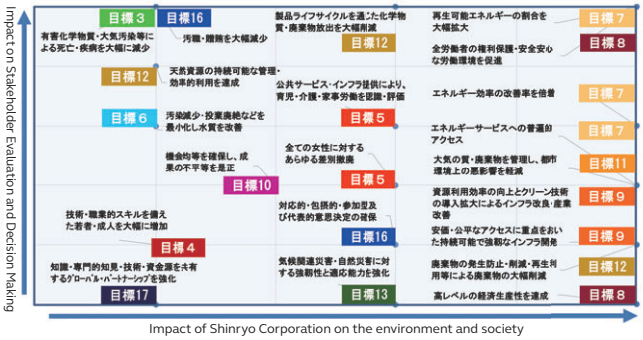
### Analysis sheet used to extract priority subjects



Analyze and score the impact of our businesses

### (2) Create a materiality map

We organized priority subjects according to the importance to society and Shinryo Corporation as a graph (materiality map).




### (3) Engage in an internal debate and dialogue with experts (exchange of idea meetings)

Shinryo Corporation created the first plan for the priority subjects (materiality) to address through repetitive internal debate based on the results of impact analyses and the materiality map. A dialogue between investigative committee members and experts incorporated highly objective ideas into the first materiality plan.

### First Materiality Plan

1. Reduce greenhouse gas emissions
2. Build robust infrastructure
3. Create work-friendly environments bringing out the full potential of employees

First Dialogue with Experts

## FY2020 Decision on Priority Subjects

### (1) Create second materiality plan

Shinryo Corporation refined the original plan based on the dialogue with outside experts when drafting the second materiality plan (shown on right).

### (2) Engage in second dialogue with outside experts

Shinryo Corporation held an idea exchange meeting with outside experts again about the revised priority subjects. These priority subjects are as follows:

**Second Materiality Plan**

1. Reduce greenhouse gas emissions
2. Build robust infrastructure
3. Provide higher quality
4. Ensure safety and security on construction sites
5. Build enthusiastic, work-friendly environments for everyone
6. Engage in fair and transparent business activities

## Dialogue on SDGs

# Second Idea Exchange Meeting with Experts to Examine the Validity and Objectivity of Priority Subjects

**Following 2019, Shinryo Corporation invited Hidemi Tomita, the Director of Lloyd's Register Japan K.K., for another idea exchange meeting with four directors who are Sustainability Promotion Committee members about the priority issue selection process as well as validity and objectivity of the priority issues. This section introduces the insight provided by Mr. Hidemi Tomita.**

Hidemi Tomita
Representative Director
Llyod's Register Japan K.K.

Mr. Hidemi Tomita cultivated experience in CSR management at a business firm before joining Lloyd's Register Japan K.K. in 2013. He was appointed Director in 2020.
He has participated in the formulation of international standards that include the ISO 26000, ISO 20400, and the GRI Standards in addition to serving on multiple government committees.

### Good Points of the Process for Determining Priority Subjects

Shinryo process to decide on priority subjects takes clearly comprehensive investigative steps. I took part in the first dialogue on priority subjects last year. Shinryo Corporation went beyond simply listening to our ideas and publishing its results in a report. This process evaluates points that have been thoroughly debated through various means, including assignments asking directors to look deeper into priority subjects independently before hosting a second exchange of idea meeting.

I also feel referencing the SDGs and items in the medium-term management plan when weighing priority subjects to create a materiality map is fantastic. Generally, discussions about priority subjects tend to become abstract and idealistic. On the other hand, Shinryo Corporation superbly links the debate to its business plans.

### Improvement Points of the Process for Determining Priority Subjects

It may be beneficial to not only organize priority subjects around SDGs but also important measures of Shinryo Group.

The SDGs are macro goals aimed for by society and humanity as a whole different from the challenges faced by corporate organizations. This approach could leave out issues not covered by the SDGs alone. In terms of diversity promotion for example, the SDGs only discuss the empowerment of women. However, corporate business operations must consider broader diversity, such as recruiting people from the countries and regions where local subsidiaries operate to act as managers and executives. Reorganization of priority subjects from a Shinryo business operational perspective would enhance integration between priority subjects and actual business plans. It is also important to not rely too much on the SDGs.

However, companies do discover issues left out of medium-term management plans by taking an SDG perspective. If Shinryo Corporation finds it has missed these types of issues, I highly encourage the company to reflect social perspectives into medium-term management plans rather than vice versa.

### Good Points of the Second Materiality Plan

I am very happy to see Shinryo Corporation heard my recommendation last year and added the issues of employee human rights and safety on construction sites to its second materiality plan. These issues seem so obvious that the company most likely omitted them from their priority subjects. However, labor conditions and human rights issues are under extreme public scrutiny, and everyone at the construction companies who are clients of Shinryo Corporation are highly aware of these problems. As a construction engineering company, it is very important for Shinryo Corporation to take the objective standpoint of its stakeholders. If a blind eye is turned toward on-site safety and security, there is a risk employees may look at the challenge and feel the issue is not relevant to them. Not all of the issues apply to every employee, but it is vital to recognize how to organize each subject so that employees can see what issues fall into their respective duties.

## Challenges of the Second Materiality Plan

I feel the point about contributing to society through Shinryo technology and business from a standpoint of Creating Shared Value (CSV)* is not expressed very well. For example, the strength in ventilation systems at Shinryo Group is surely air-conditioning technology that can help combat infectious diseases. This point should stand out as a major contribution of the company. Rather than simply appealing to better quality, I would like Shinryo Corporation to incorporate how it creates social value.

When I read the second materiality plan, I also felt it is written very much for the construction industry. I wish it would better express the uniqueness of Shinryo Corporation. For example, I would recommend the nuance behind the corporate management vision to Create a Freshening World be incorporated into this plan. Shinryo Corporation is an unlisted company. This means the people evaluating the Group are its customers in the industry who can understand the core messaging even with industry and internal company jargon. This flexibility is a strength of a private company.

However, abstract concepts can become hard to understand. It would be better to try and write with slightly more accessible everyday language. The organization of ideas in words that all employees are familiar with brings a sense of affinity and more effectively spreads this internal messaging. The process to determine priority subjects has a certain level of formality. Deciding on the challenges is not the goal but rather the starting point for these efforts. I recommend choosing language from a standpoint of how to use these priority subjects in the future.

It would also be better to avoid overemphasizing the SDGs. Currently, each priority issue is associated with roughly five SDGs, but this seems a little excessive. I recommend Shinryo Corporation pinpoints the ultimate objective and steadily connects its actions to three or four goals to show clear progress. The number of goals is not what is important.

*Created Shared Value (CSV) is a business concept that refers to how corporate creation of economic value also contributes to the creation of social value (solutions to social issues).

## Priority Subject Progress Indicators

One of the most important subjects is the reduction of greenhouse gas emissions.

It may be difficult to definitively state numerical or other performance achievements with respect to goals based on international and scientific knowledge and declarations, such as the Paris Agreement and the IPPC Special Report on Global Warming of 1.5°C. However, technical development, ongoing innovation, and the success toward goals would be great ways to express Shinryo approach and passion. The problem of on-site safety and security is a serious issue in the construction industry. Shinryo Corporation should set a target in the future to demonstrate its precise on-site management.

In terms of work friendliness, Shinryo Corporation could look to its future ideal form to make every employee feel good about working in Shinryo Group.

Another potentially effective process may be for Shinryo Corporation to grasp the needs of its customers, suppliers, and partner companies through a direct exchange of ideas. For example, a single company alone cannot achieve a $CO_2$ reduction target of 80%. This goal can only be realized by first aggregating the many strengths of Shinryo Corporation, its customers, suppliers, and partner companies as well as power, gas and other utility companies.

I know Shinryo Corporation has a variety of stakeholders and the issues important to each differ slightly. It is vital for the company to have this exchange of ideas to better identify how to pursue targets.

## Timing to Revise Priority Subjects

Priority subjects are not meant to be changed frequently. I recommend making these changes at least once every three years in conjunction with revisions to the medium-term management plan.

Shinryo Corporation has been successful in reviewing the priority issues created as a foundation last year from a new perspective due to the COVID-19 pandemic which has had major global ramifications. Therefore, I think this is a great time to revise these priority subjects.

Second Dialogue with Experts

### (3) Determine priority subjects and draft future plans

Shinryo Corporation determined its priority subjects after refining the various issues according to an exchange of ideas with outside experts. The next step is to examine and set Key Performance Indicators (KPI) based on these priority subjects and work to raise awareness throughout the Group as well as draft specific activity plans.

We plan to fully disclose and provide specific activity reports of the KPI that are selected too as part of our report for the next fiscal year.

**Finalized Priority Subjects and Priority SDGs**

**P.27-28**

## Determining Priority Subjects (Materiality)

Shinryo Corporation has determined four SDG priority subjects (materiality) after broad consideration and debate. There are six goals of particular importance: 7. Affordable and Clean Energy, 8. Decent Work and Economic Growth, 9. Industry, Innovation and Infrastructure, 11. Sustainable Cities and Communities, 13. Climate Action, and 16. Peace, Justice and Strong Institutions.

These priority issues not only define important social responsibilities for Shinryo Corporation to fulfill in order to realize a decarbonized and resilient society but also include goals to better construction sites and provide refreshing environments unique to Shinryo Corporation.

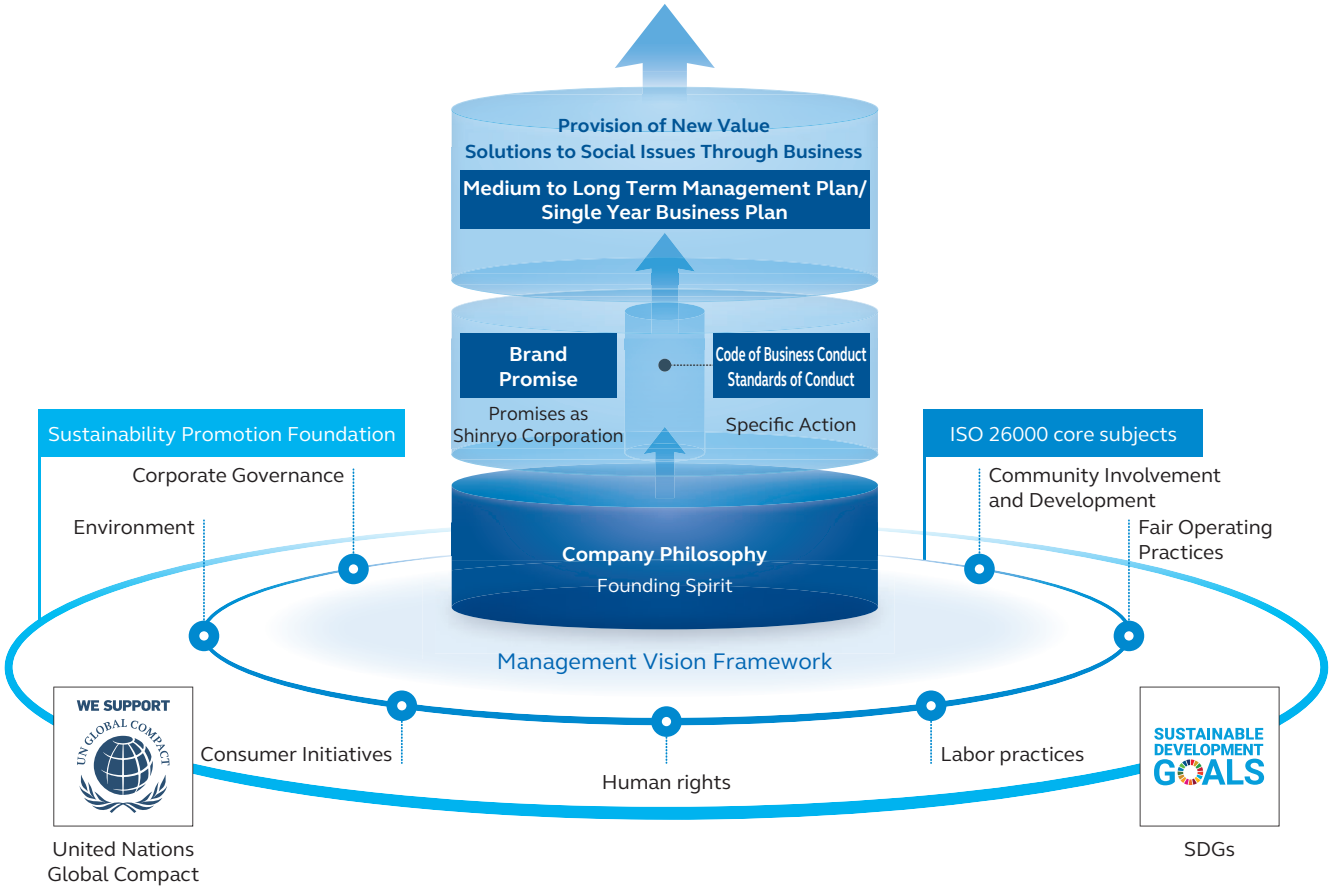
We will promote activities via a sustainability promotion system that aims to address these priority issues.

### Four Priority Subjects

- **Priority Subject 1**
  Contribute to a decarbonized society
- **Priority Subject 2**
  Contribute to a resilient society
- **Priority Subject 3**
  Realize safe and highly efficient work processes
- **Priority Subject 4**
  Build refreshing environments rich with creativity


**Priority Sustainable Development Goals (SDGs)**

Creating a Freshening World and Contributing to the Development of a Sustainable Society




**Sustainability Promotion System**

## To Address Priority Issues

Priority Subject 1

### Contribute to a Decarbonized Society

Relevant SDGs


Achieving the goals of the Paris Agreement and realizing a decarbonized society are pressing issues as the impact of global warming becomes more drastic.

As an environmental engineering company, Shinryo Corporation will strive to reduce greenhouse gas emissions and take other such measures in its business activities from design, installation and maintenance to research and development as a way to help realize a decarbonized society.

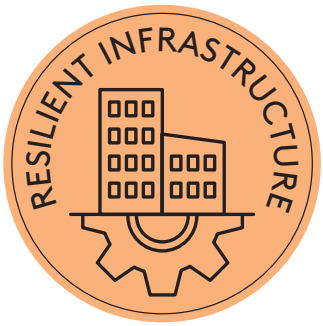

Priority Subject 2

### Contribute to a Resilient Society

Relevant SDGs


With escalating risks of natural disasters, the construction of strong infrastructure is essential to ensure sustainable corporate activities as well as safe and secure life in society.

Shinryo Corporation helps build safe, long-lasting social infrastructure by providing high-efficiency, high-quality systems and proposing optimal maintenance and renewal plans.




Priority Subject 3

### Realize Safe and Highly Efficient work Processes

Relevant SDGs


More efficient operations and higher productivity are essential issues when considering the labor shortage in the Japanese construction industry. Internationally, human rights of workers and labor management have also become issues.

Shinryo Corporation will establish safe and highly efficient work processes with the goal of realizing safe work-friendly environments and efficient construction site operations.


Priority Subject 4

### Build Refreshing Environments Rich with Creativity

Relevant SDGs


The construction industry in Japan faces the major challenges of reforming long work hours and building flexible work environments.

Shinryo Corporation will build workplaces where diverse human resources are motivated and each can reach their full potential with the goal of realizing refreshing, highly productive company rich with creativity.

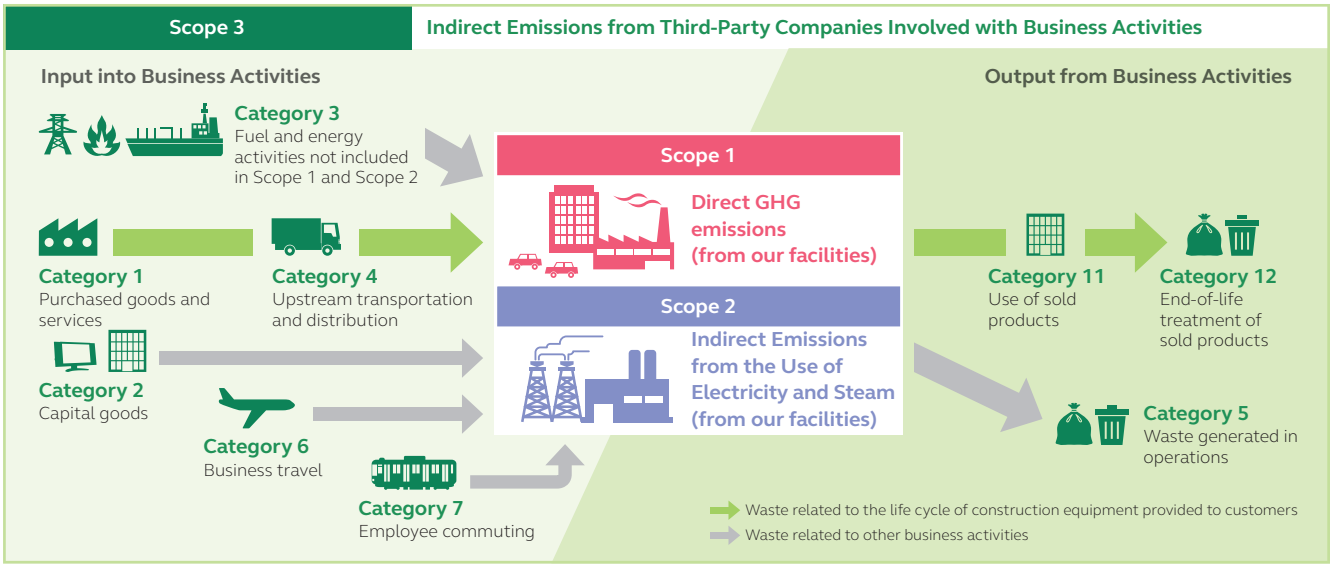
# Contribute to a Decarbonized Society

**Achieving the goals of the Paris Agreement and realizing a decarbonized society are pressing issues as the effects of global warming grow. Shinryo Corporation will strive to reduce greenhouse gas emissions and other such measures in its business activities from design, installation and maintenance to research and development as a way to help realize a decarbonized society as an environmental engineering company.**

## Approach to a Decarbonized Society

Shinryo Corporation strives to identify hot spots that impact the environment and mitigate greenhouse gas emissions by calculating Scope1, 2 and 3 greenhouse gas emissions. Of the 7,375,000 ton-$CO_2$ emissions in fiscal 2019, most emissions came from Scope 3 Category 11: Use of Sold Products followed by Category 1: Purchased Goods and Services. In the future, we will clarify the close relationship between our business activities and reductions in the environmental load to help realize a decarbonized society.

**Image of the Shinryo Corporation Supply Chain Management**




**FY 2019 Scope 1, 2 and 3 Calculation Results** (Construction Sites for Properties with Orders of 30 Million Yen or More)

| Category | | Calculation scope | Result (ton-$CO_2$) |
|---|---|---|---|
| Scope 1 | | Direct emissions from fuel consumption at Shinryo facilities, leakage of fluorocarbons, and use of company vehicles | **459** |
| Scope 2 | | Indirect emissions from the use of electricity and heat purchased by Shinryo facilities | **2,948** |
| Scope 3 | | Indirect emissions from third-party companies involved with business activities (total of all categories) | **7,371,179** |
| Category *1 and 2 | 1 Purchased goods and services | Emissions from resource harvesting and manufacture of sold goods | 405,704 |
| | 2 Capital goods | Emissions from manufacture and construction of capital assets | 104 |
| | 3 Fuel and energy activities not included in Scope 1 and Scope 2 | Emissions from manufacture such as electricity and fuel bought by the headquarters, branches and offices | 412 |
| | 4 Upstream transportation and distribution | Emissions from transportation of goods from seller to construction sites | 44,195 |
| | 5 Waste generated in operations | Emissions from disposal of waste produced on construction sites | 4,420 |
| | 6 Business travel | Emissions from fuel and power consumption of transportation agencies used for business travel of employees | 1,578 |
| | 7 Employee commuting | Emissions from electricity consumption of transportation agencies used for employee commuting | 549 |
| | 11 Use of sold products | Emissions from the operation of building equipment after delivery (operation period set to 15 years) | 6,914,082 |
| | 12 End-of-life treatment of sold products | Emissions from duct and piping waste during demolition | 135 |
| **Total of Scope 1 to 3** | | | **7,374,586** |

*1 Calculations based on the Basic Guidelines on Accounting for Greenhouse Gas Emissions throughout the Supply Chain (Ver.2.3) from the Ministry of the Environment and the Ministry of Economy, Trade and Industry
*2 Categories 8 through 10 and 13 through 15 are activities not related to our businesses

Relevant SDGs

## Scope 1 and 2 Reduction Initiatives

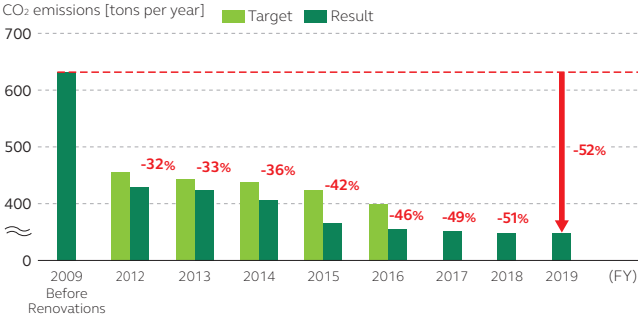
**Old Headquarters Building $CO_2$ reduction 52%** (Compared to 2009)

Shinryo Corporation engages in reduction initiatives by calculating direct emissions from business activities (Scope 1) and indirect emissions during the manufacturing stage for heat and energy used in business activities (Scope 2).

The old headquarters building constructed in 1970 (headquarters moved in July 2020) underwent the Energy saving Eco-project large-scale energy-saving renovations in 2011. The renovations adopted an air-conditioning system that improves energy efficiency and comfort as well as an operational management system that encourages employee's energy savings with the goal of reducing $CO_2$ emissions 37% over five years by fiscal 2016. As a result of operational enhancements, the old headquarters achieved this goal a year early in fiscal 2015. Further renovations thereafter succeeded in reducing $CO_2$ emissions **52%** by fiscal 2019. We properly conduct simplified and regular inspections as well in accordance with the Act on Rational Use and Proper Management of Fluorocarbons in an effort to prevent leakage of fluorocarbons.

The new headquarters also strives for resource and energy savings through efforts to improve productivity underway as part of work style reforms since fiscal 2020 from digitalization of work processes and promotion of a paperless workplace not requiring seals to the use of video conferencing systems and reforms to the operational flow (p. 48).

### $CO_2$ Emissions at the Old Headquarters Building




## Scope 3 (Category 1 and 4) Reduction Initiatives

**Reduction Initiatives $CO_2$ reduction 28%**

Shinryo Corporation engages in initiatives to further reductions in product, material and equipment procurement on construction sites by improving on-site productivity.

Reductions in reconstruction, enhancements to plant processes, and other improvements to construction productivity in addition to achieving on-site management with better efficiency driven by ICT technology furthered reductions in $CO_2$ emissions during construction, which resulted in **28%** fewer $CO_2$ emissions in fiscal 2020.

### Examples of initiatives: Remote on-site monitoring through wearable cameras

Veteran engineers confirm construction site images taken using wearable cameras, smartphones and other devices from the office or another remote location to conduct operations that include directing operational procedures and confirming the on-site progress. This allows us to not only reduce the amount of time spent in transport but also provide clear and proper instructions, which heightens operational efficiency (p. 47).

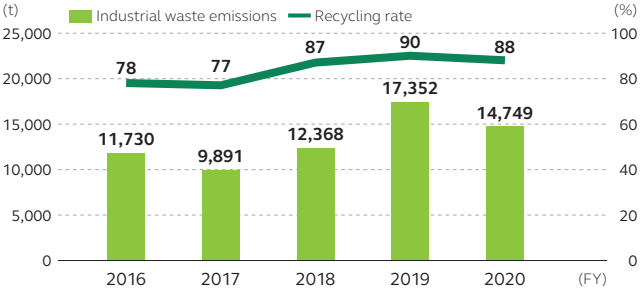
## Scope 3 (Category 5) Reduction Initiatives

**Recycling Rate 88%**

Of the industrial waste produced on construction sites, Shinryo Corporation is promoting recycling of four main materials (concrete, metal scrap, waste plastics, and waste glass, ceramics and pottery).

We achieved a recycling rate of 88% in fiscal 2020 by outsourcing recycling to industrial waste disposal and recycling companies with superior technology for processes that include material recycling and thermal recycling.

### Industrial waste emissions and recycling rate



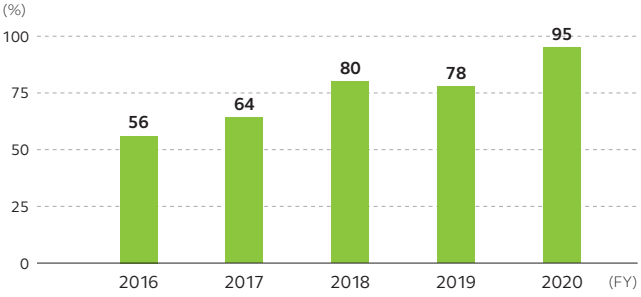

## Scope 3 (Category 11) Reduction Initiatives

**Implementation of $CO_2$ Reduction Proposals 95%**

Sales and design staff from Shinryo Corporation actively proposes effective energy-saving plans to customers to reduce the $CO_2$ emissions produced while operating construction equipment. Shinryo Corporation makes every effort to offer the most effective proposals from the adoption of equipment with high energy savings to airflow and temperature distribution simulations made possible by CFD* technologies, which is an industry-leading technique and achievement (p. 31-32).

*CFD: Computational Fluid Dynamics

### Rate of proposals for $CO_2$ reductions in design operations



## Contribute to a Decarbonized Society

### Scope 3: Category 11 and 12 Reduction Initiatives (Use and Disposal of Sold Products)

## Energy and Resource Savings Realized Through New Technologies

**Shinryo Shinjo Building**

### Building-Housing Energy-efficiency Labeling System (BELS) Certification


Exterior

Completed: June 2020
Total floor area: 4,619 m²
Building application: Office


Highest Five Star Rating from the Building-Housing Energy-efficiency Labeling System (BELS) Certification

The Shinryo Shinjo Building reconstruction completed in June 2020 (Client: Shinryo Corporation—Kanda, Chiyoda-ku, Tokyo) adopted a variety of new eco-friendly technologies. Shinryo Group was in charge of the air-conditioning, sanitation and electric systems.

The main facade stands sterically in the image of the beautifully traditional shopping and residential street. The vaulted stairway between the building entrance, offices and outer space provides a buffer that helps reduce the air-conditioning load. During the seasonal change, a natural ventilation chimney made possible from upper and lower temperature differences works as a mechanism to further reduce the air-conditioning load.

The development and introduction of two types of ductless air-conditioning systems with excellent energy savings in work areas aims to eliminate the energy net in spring and winter as well. In addition to the energy saving benefits, ductless air-conditioning reduces duct material (resource savings) and lowers the height of each floor by eliminating duct space usually required in the ceilings. This innovation enabled Shinryo Shinjo Building to add one additional floor.

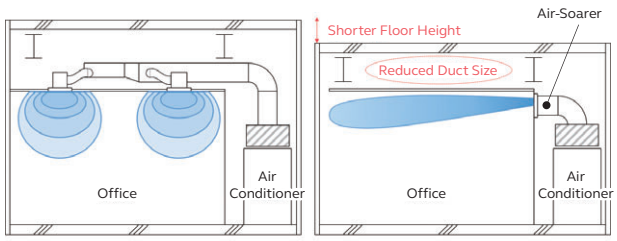
The building also earned the highest five star rating from the Building-Housing Energy-efficiency Labeling System (BELS) Certification.

### Variable-air-volume Air-Conditioning System Using the Coanda Effect

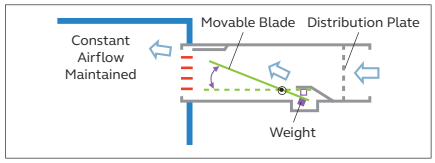
**Air Feed Power Reduction Rate 65%**

The variable-air-volume air-conditioning system using the Coanda effect (Patent No. 6453951) leverages the Coanda effect to create a jet of air flowing along the ceiling as a ductless air-conditioning system. The use of Air-Soarer®* constant autonomous airflow outlets has excellent ventilation efficiency that delivers fresh outdoor air to every corner of the building with minimal airflow. This air-conditioning system responds to the growing importance of ventilation these days as a measure against the spread of viral infections. Compared to a conventional constant air volume single duct system, Air-Soarer® features dramatic energy savings that reduce air feed power by 65%.

*Air-Soarer® was developed jointly by Mitsubishi Jisho Sekkei Inc., Shinryo Corporation, Shibaura Institute of Technology, and Kyoritsu Air Tech Inc.




Differences Between the Two Air-conditioning Systems

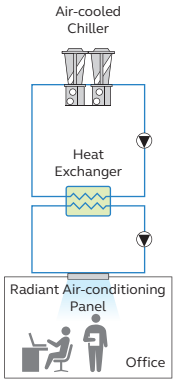



Air-Soarer® System

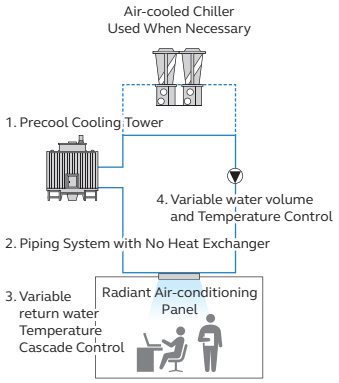
### Dynamic Range Radiant Air-conditioning

**Power Consumption Reduction Rate 46%**

A radiant air-conditioning system is a ductless air-conditioning system which provides air-conditioning from a ceiling panel that adjusts the temperature via cold and hot water. The dynamic range radiant air-conditioning system developed primarily by Shinryo Corporation is a new radiant air-conditioning system with superior energy-saving performance provided through a variety of proprietary technologies. Some of these innovations include 1. a precool cooling tower that uses outdoor air to cold water, 2. a piping system using anti-corrosive technologies to eliminate the need for heat exchangers, 3. variable return water temperature cascade control that stabilizes radiant air performance and 4. variable water volume and temperature control that optimizes the temperature range according to load.




Conventional Radiant Air-conditioning




Dynamic Range Radiant Air-conditioning

## Use of Integrated Electric-Gas Heat Source System and Recycled Waste Water Heat

**Sasashima Live 24**

Sasashima Live 24 is a redevelopment project that aims to become a hub of international exchange located south of JR Nagoya Station. The Sasashima Live 24 DHC Energy Center located in the basement of Aichi University has adopted an integrated electric-gas heat source system made possible by a gas engine cogeneration system as well as Japan's first heat source system that uses highly-processed reclaimed recycled waste water.

Shinryo Corporation took part in the design and construction of the heating supply plant. Efforts to examine the use of CFD* technology, optimal construction of heat source equipment, more efficient use of recycled waste water heat and other such mechanisms contributed to better energy efficiency.

This system uses the reclaimed recycled waste water as cooling water during the summer and as a heat source for the water source heat pump in the winter. Compared to individual air-conditioning systems, Shinryo plant realizes a 21.1% reduction in primary energy consumption.

In recognition of this achievement, Shinryo Corporation earned the Award for Excellence in the Consumer Use Category of the Cogeneration Award 2019 as well as the Demand-side Management Commendation (Commendation from the Chairman of the Heat Pump & Thermal Storage Technology Center of Japan) in 2020.

*CFD：Computational Fluid Dynamics

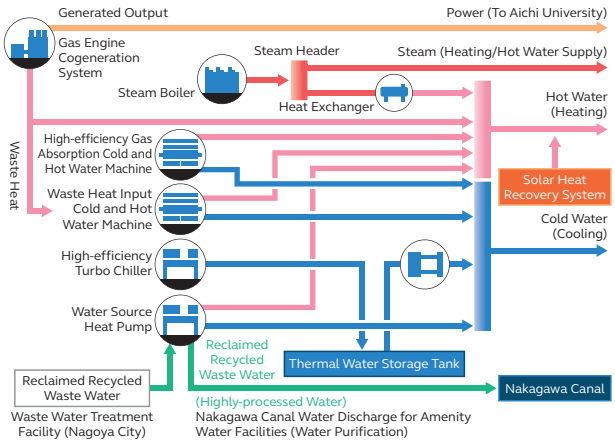



Illustration of Sasashima Live 24 District Heating Supply System

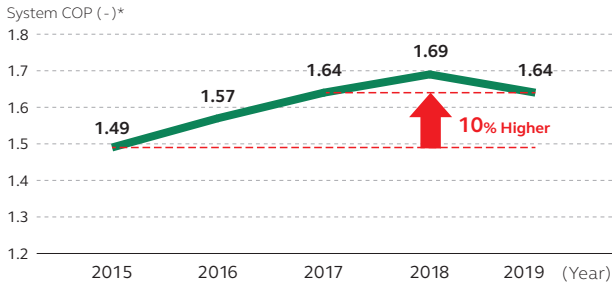
## More Efficient Heat Source System Through Commissioning

**Toranomon Hills Mori Tower**

Toranomon Hills Mori Tower is a skyscraper that opened in Minato-ku, Tokyo in 2014. The building operates a highly-efficient heat source system via an optimal heat source operation support system, large-scale thermal storage tank, and other such equipment. Shinryo Corporation was in charge of the construction and joined the commissioning team made up of managers, designers, and builders after erecting the building.

This commissioning team continually fine-tuned building systems by analyzing the operational status of the heat source system and adjusting settings of each piece of equipment as well as the optimal heat source operation support system. As a result, the heat source system saw about 10% greater efficiency than right after initial operations began. This achievement received an Award of Excellence from the Heat Pump & Thermal Storage Technology Center of Japan in 2020 as an example of impeccable improvements in operational management of heat pump and storage systems.

### Changes in the Heat Source System Efficiency




*This indicator shows the energy efficiency of heat source systems. A higher value indicates a more efficient system.

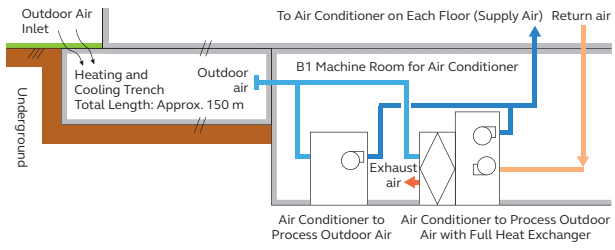
## Use of Natural Energy and Better Resource Savings During Construction

**Akita City government office**

The Akita City government office located in the center of Akita City, opened in 2016 standing across from Akita Prefectural Government Office separated by the main Sanno-Odori street. The building takes advantage of a heat source system that fully leverages ground heat through a thermal water storage tank.

Shinryo Corporation was in charge of the air conditioning system installation and helped build a system capitalizing on various natural energy sources such as ground heat, outdoor air cooling, and trench heating and cooling.

The use of natural energy realized more than a 60% reduction in energy consumption compared to standard energy consumption. This achievement received the 8th Sustainable Building Awards (Minister of Land, Infrastructure and Transport Prize [Institute for Building Environment and Energy Conservation]) in January 2020.




Heating and Cooling Trench Introduces Outdoor Air

# Environmental Management System (EMS)

**Basic Philosophy**

As a company connected to the environment, Shinryo Corporation has been practicing environmental preservation through building equipment based on our mission to Create a Freshening World.

We actively work to reduce our environmental burden and conserve the global environment in the future.

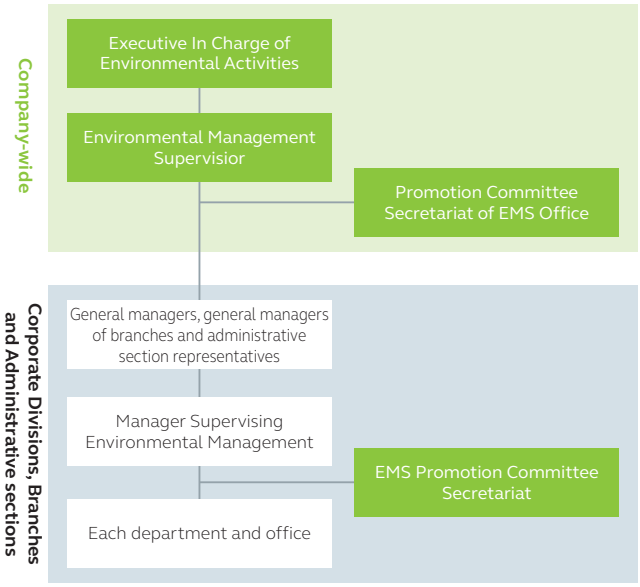
Shinryo Corporation promotes a Company-wide Environmental Management System (EMS) through the Environmental Management Supervisor according to directives from the executive in charge of environmental activities.

In March 2020, Shinryo Corporation was evaluated in the 6-1 Surveillance Inspection by the Management System Assessment Center and once again was given the ISO 14001: 2015 Environmental Management System Certification.

We focus our EMS activities on efforts toward preventing $CO_2$ emissions during operation in Scope 3 Categories 1, 4, 5 and 11 as well as activities to improve productivity and efforts to promote the 3Rs* on construction sites (P. 30).

*3Rs: Reduce, Reuse, and Recycle

**Environmental Management System**




## Response to the Amended Act on Rational Use and Proper Management of Fluorocarbons

Amendments to the Act on Rational Use and Proper Management of Fluorocarbons came into full force in April 2020. This law was enacted to mitigate emissions of fluorocarbons used as a coolant for industrial refrigeration air-conditioning equipment into the atmosphere. The 2020 amendments made preservation of documentation mandatory, such as the advanced verification issued to construction clients and issuance of collection certificates given to waste recycling operators when disposing of equipment.

Shinryo Corporation provided e-Learning to all employees in marketing positions and technical roles in Japan to raise awareness about the amendments to this act.

## 3R Promotion Initiatives

### 3R Promotion on Construction Sites

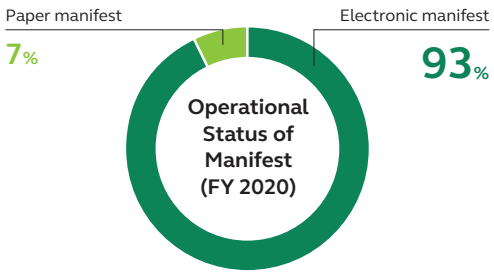
Efforts to promote reduce, reuse and recycle (3Rs) at construction sites are vital to suppress industrial waste emissions and essential to resolve the issue of waste plastics. Since its start of Environmental Management System (EMS) activities in 2001, Shinryo Corporation has undertaken a variety of measures from proper sorting and collection of industrial waste on construction sites to recycling of piping and other scarp iron. Today, Shinryo Corporation continues to strive to restrict waste on construction sites in various ways from fabricating piping and ducts in advance at plants to using simple packaging and reusable shipping containers when transporting materials.

After a specialty firm collects and takes helmets exceeding the expiry date, a recycling center sorts and crushes the helmets and uses thermal recycling to turn the processed material into fuel for the manufacture of cement. The incinerator ash is also recycled to use as part of the raw cement materials (material recycling).

Storage Site for Industrial Waste

### Operational Status of the Electronic Manifest System

Shinryo Corporation uses electronic manifests (industrial waste management ledgers) to manage the processing status of industrial waste requiring proper disposal according to the Waste Management and Public Cleansing Act. The electronic manifest system fully manages industrial waste and effectively reduces the operational burden. In fiscal 2020, 93% of all issued manifests had transitioned to electronic manifests.



# Various Environmental Initiatives

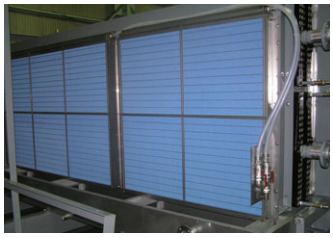
## Participation in the Keidanren Declaration on Challenge Zero

The Keidanren (Japan Business Federation) launched Challenge Zero: Innovation Challenges towards a Decarbonized Society in June 2020 with the hope of early achieving the net-zero greenhouse gas emissions advocated by the Paris Agreement. Shinryo Corporation believes in this bold Declaration on Challenge Zero effort to spearhead innovation toward a decarbonized society and has announced specific net-zero emission technology challenges.

### Innovation Example: Promotion of Energy-saving, Low-carbon Technology for Semiconductor Manufacturing Processes Using Electrolyzed Water

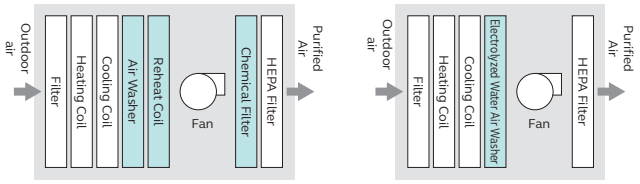
Manufacturing processes for semi-conductors, liquid crystals, and other precision products require clean rooms free of any dust or dirt in the air. However, it has become important for these manufacturing processes in recent years to not only remove dust but also gaseous contaminants from the air. Traditionally, air washers installed to an outdoor-air processing unit act as a humidifier and air purifier, but needs for measures to handle gaseous contaminants are growing in recent years. Many cases combine air washers with chemical filters to enhance gas component removal performance.

The Electrolyzed Water Air Washer newly developed by Shinryo Corporation uses electrolyzed water as an absorption liquid and enhances gas-liquid contact efficiency to succeed in highly effective acidic gas removal without employing a chemical filter (99% removal rate of $SO_4^{2-}$). Compared to systems equipped with chemical filters, a system using electrolyzed water reduces energy consumption by 24% and $CO_2$ emissions by 15% to significantly enhance energy savings and low-carbonization as well as almost eliminate the industrial waste produced by replacing chemical filters.



Pleated Media Inside the Electrolyzed Water Air Washer System

**Structural Comparison of Outdoor-air Conditioning Unit**




Conventional System

System Equipped with Electrolyzed Water Air Washer

## Rated an Excellent Company (S Class) Under the Energy Saving Act

Shinryo Corporation was rated as an excellent company (S Class) in 2019 by the Business Classification Evaluation System under the Act on the Rational Use of Energy (Energy Saving Act).

The Energy Saving Act categorizes all regularly reporting businesses into four SABC stages according to the level of their energy savings. S Class, the highest rank of the SABC Evaluation System, certifies reductions with an average of at least 1% per unit energy consumption or per unit electricity demand leveling over five years. Shinryo Corporation achieved these goals by enhancing building operations and engaging in various other activities.

## Ecological Conservation Activities Enlightenment Program "the Environmental Renaissance Activities"

Shinryo Corporation has been promoting the Environmental Renaissance Activities enlightenment program since 2015 for the purpose of heightening employee awareness about ecological conservation.

This program supplies book coupons to employees engaged in activities related to ecological conservation and environmental education to subsidize the purchase of environmental books. This also deepens understanding of ecological conservation and heightens motivation toward ongoing activities.

These activities have become a matching gift system to donate the equivalent book coupon costs that are supplied over one year to international environment NGOs. In September 2020, we matched the costs of 43 people for fiscal 2019 and donated to Conservation International Japan* (Managing Director: Yasushi Hibi), which works in biodiversity conservation activities.

*Conservation International (CI) is an international environmental non-profit organization engaged in biodiversity conservation activities in more than 70 regions worldwide with the goal of realizing a sustainable society.

### Activity Report Introduction

Norikazu Kobayashi
Nature Observation Walk: Asunaro Tree Hike (Mitsukaido Asunaro no Sato)
Senior Administrator of the Research and Development Center

In October 2019, I joined the Nature Observation Walk held in Mitsukaido Asunaro no Sato wilderness of Joso City, Ibaraki with my family and friends. I saw Sesiidae drinking nectar. The guide of our nature walk taught us snake gourds have a seed that looks like the head of a mantis and other such things while we enjoyed the local wilderness around us. This was an absolutely magnificent experience different from daily life.

Nature Observation Walk

# Contribute to a Resilient Society

**With escalating risks of natural disasters, the construction of strong infrastructure is essential to ensure sustainable corporate activities as well as safe and secure life in society. Shinryo Corporation helps build safe, long-lasting social infrastructure by providing high-efficiency, high-quality systems and proposing optimal maintenance and renewal plans.**

## Contributions to Advanced Medical Facilities

## IUHW Narita Hospital

Completed: February 2020
Total floor area: 92,652 m²
Building application: Medical complex
Chiba Prefecture

Full View of Western Side

### About the IUHW Narita Hospital

IUHW Narita Hospital located near Narita International Airport is a large-scale medical complex handling international medical needs. This hospital acts as a clinical education and research site and contributes to local employment by creating jobs and an influx of up-and-coming professionals. As the center of new urban development, the IUWH Narita Hospital is also revitalizing the region. In addition, the complex has put in place systems to realize an international level of medical care from its International Remote Diagnostic Center, which coordinates with overseas medical institutions, to its International Center for Clinical Infectious Diseases, which protects the border of Japan as a measure against pathogens near the Narita International Airport. This hospital aims to become an international core center representing Asia.

### Our Work

Air conditioning and Sanitation System

Shinryo Corporation helped design and was in charge of the air-conditioning and mechanical ventilation system installation for the 642-bed hospital wing, the heath check-up wing that houses Japan's largest center for preventative medicine, and the education and training center (includes a sanitation system). This project took care to design and installation of facility systems for the complex able to realize rational, highly efficient operations.

The active use of digital technologies and Building Information Modeling (BIM) starting from the design stage quickly responded to changing customer needs and optimized construction of the entire air-conditioning system. Simulations of the airflow and temperature distribution through the use of Computational Fluid Dynamic (CFD) technologies created the most comfortable environment in a lecture hall with a 2,000-person capacity and a high, roughly six-meter ceiling.

To provide the greatest ease of use, innovations to negative pressure isolation rooms for patients with infectious diseases enabled staff to check the differential pressure at a glance through digital differential pressure gauges. Shinryo Corporation created mock-ups of the hospital beds ahead of time to get feedback from all of the nurses about usability.

Fabrication of piping used around approximately 1,300 fan coil units at plants for the construction achieved high installation quality and greater on-site labor savings. To improve the workability and increase the system lifespan, light resin piping with excellent corrosion resistance was also adopted for the hot and cold water piping. A stockyard of materials and equipment set up off-site made material and equipment management easier. Two teams divided into functions to manage construction and to inspect the work process created an organization that not only increased operational efficiency but also enhanced the work style.

Relevant SDGs


# VOICE

## Hard Work and Perseverance Supporting Medical Care

The IUHW Narita Hospital has adopted the latest medical technologies as the largest medical complex in Narita area offering multiple medical centers in addition to its International Center for Clinical Infectious Diseases. I am confident Shinryo Corporation contributed at least a little to the most state-of-the-art medical care in Japan through participation in this project. An environmental foundation is essential to advanced medical technologies. I know we will do everything in our power to step up to challenges in the future so that our work can support medical care in background by providing the best environment.

Takao Watanabe
Managing Executive Officer
General Manager, Tokyo Metropolitan Area Division

## High On-Site Morale Motivating All

IUHW Narita Hospital has a variety of medical rooms from surgical suites to aseptic and negative pressure isolation rooms built with the optimal environment for each type of room. Shinryo Corporation had to use care to quickly secure the workers, material, and equipment necessary for work taking place during the busiest season in the construction market. Thanks to the high on-site morale bringing motivation to this project, every on site staff was able to understand the project priorities, exchange ideas and execute the work. I was also overjoyed to hear everyone from our partner companies express their interest to work with us again after the construction was complete.

Hideo Yoshida
(On-site Project Manager)
Tokyo Metropolitan Area Division
Manager, Technical Section 1,
Technical Department 1

## Contributions to Energy Savings, $CO_2$ Emission Reductions, and Local BCP

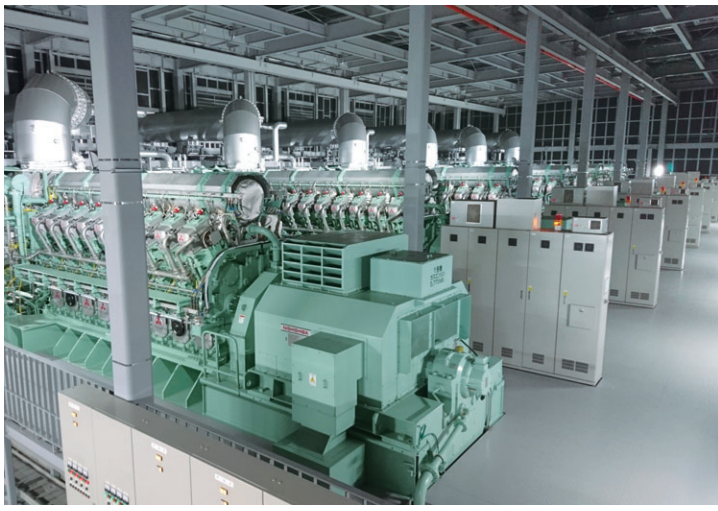
# Kiyohara Smart Energy Center

Completed: February 2020
Lot area: 20,104 m² (Energy Center)
Building application: Energy plant

Tochigi Prefecture


Exterior

Auxiliary Equipment Area (Around the Exhaust Gas Boilers/Radiators)



Gas Cogeneration

## About the Kiyohara Smart Energy Center

The Kiyohara Smart Energy Center efficiently supplies electricity and heat to seven business sites of three companies at the Kiyohara Industrial Park (three Calbee, Inc. offices, three Canon Inc. offices, and one Hisamitsu Pharmaceutical Co., Inc. office). This cogeneration center realizes enormous reductions in the environmental load unattainable by any one business site.

The facility is Japan's first cross-plant integrated energy-saving business that aligns with the Tochigi Energy Strategy and the Utsunomiya City Plan of Action Against Climate Change. The plant has the capacity to generate 34,620 kW of electric power. The scale of power generation equates to approximately 10,000 households when calculated according to power consumption of ordinary homes.

An energy management system collects data about the power and heat use of each business site with different demands according to the season and hour of the day to efficiently supply power and heat from one large-scale energy center. One major feature of this environmentally friendly system is roughly 20% better energy savings and about 20% higher reductions in $CO_2$ emissions.

In the event of a power outage, gas engine generators is self-started to resume operation to enable a power and energy supply to each business site, realizing a system supporting a high-level of business continuity.

## Our Work

**Civil Engineering and Construction of Plant Facilities**

This cogeneration energy center project centers on large-scale gas engines with a capacity to generate 30,000 kW. Shinryo Corporation was in charge of the design, procurement, construction and commissioning (EPCC) contract work for the building construction and installation of thermal insulation conduits and private distribution lines.

The design actively leveraged digital technologies. For example, we used CFD* technologies to run simulations of the environment surrounding the engines and radiators to create plans for optimizing the thermal environment. We used 3D-CAD systems to verify the specific flow of maintenance lines after construction. Reviews through these types of technologies provided an efficient design for the power generation facility. Furthermore, digital technologies also played a role in efficiently measuring the consumer premises via the use of 3D scanning.

During the construction stage, Shinryo Corporation capitalized on its vast technical expertise cultivated from a wealth of experience in district heating and cooling systems to build a plant centered around large-scale gas engines and lay roughly 8,000 meters of district conduits and private distribution lines. Every effort was also made to ensure construction that considered customer needs, such as an uninterrupted power switchover to allow existing plants to continue normal operation.

Even in terms of the energy supply, the sc-brain integrated information system from Shinryo Corporation realizes energy management that achieves both machine control and energy savings. sc-brain estimates the load to control the number of gas engines in operation and determines if the supply is insufficient, stable, or excessive from the position of the control valve opening for the hot water consumers to ensure optimal control of the hot water supply.

*Computational Fluid Dynamics (CFD) technology simulates the indoor temperature distribution and airflow.

# VOICE

### Growth and Development Through Work

The Japan's first district heating and cooling system (DHC) was born in Osaka in 1970. Shinryo Corporation participated in this project before going on to grow and develop as a company involved with a wide range of DHC facilities for over a half century. The world also evolved new needs, such as more freedom using lower-carbon energy. Kiyohara Smart Energy Center is one leading-edge facility that is able to satisfy these needs. Shinryo Corporation will continue to take on challenges in new projects and grow together with its customers.

**Akihiko Suzuki**
Managing Executive Officer
General Manager, Urban Environment Division

### A Project Challenged by Teamwork

This project let Shinryo Corporation step up to the challenge of a new EPCC contract scheme bundling all of the architecture, civil engineering and other construction work together when building this power generation plant. Taking advantage of a lot of unfamiliar technologies proved difficult. Solutions to these issues came in the form of teamwork through technical coordination between corporate divisions and cooperation between the design, sales and staffing departments at the head office. On-site staff strove to overcome the daily challenges and achieve our goals. I am very proud unifying our efforts has become one great example of work done by Shinryo Corporation.

**Yasuhide Watanabe**
(On-site Project Manager)
Urban Environment Division
Manager, Technical Section 2,
Technical Department 2

## Contributions to Education and Research

# Lab 4 at the Okinawa Institute of Science and Technology Graduate University (OIST)

Completed: December 2019
Total floor area: 18,515 m²
Building application: Education (university)/research facility

Okinawa Prefecture

Exterior

Provided by Okinawa Institute of Science and Technology Graduate University (OIST)

## About OIST Lab 4

The Okinawa Institute of Science and Technology Graduate University (OIST) is an interdisciplinary institute with a five-year doctoral program. The Japanese government led the foundation of this Graduate University to offer world-class education and research related to science and technology and in turn fosters the independent growth of Okinawa and contributes to advancements in science and technology worldwide. OIST plays a role as a base encouraging innovation in Okinawa to foster researchers who pioneer breakthrough scientific discoveries at a global level and lead the next-generation of scientific research.

With functions and designs friendly to the lush natural environment surrounding these facilities, Lab 1 to Lab 4 are connected by either skyways or underground walkways. These connections give the many researchers and students gathered at the university from more than 50 countries an easy way to travel back and forth between each lab.

In 2019, Nature Index Annual Tables rated OIST as the first in Japan and ninth in the world on the Nature Index Normalized Ranking for institutions with the highest outputs of top-quality research.

## Our Work

Air-conditioning and Sanitation System

Shinryo Corporation was in charge of building the air-conditioning and sanitation systems for the OIST Lab 4 building. We strove to create a visual environment using 3D-CAD from the final colors, lighting and types of switches in each laboratory to the flow of maintenance lines in testing areas, while working to communicate with the client and more easily verify a variety of things.

Each room at the university has specifications to control air-conditioning and generate energy savings when the room is empty via motion sensors installed to detect when someone is in the room.

A laboratory with a specially designed cluster device to explore new quantum matter at an atomic level employs innovations such as the adoption of a vibration isolator and a high-speed VAV system for the fume hood as well as a highly-expandable piping layout to allow for various layout changes after the facility is up and running.

The heat source system uses two types of gas energy sources to keep things running even in power outages during disasters. These features provide a reliable system that can adapt easily to future energy trends.

## Contributions to BCP Sites

# New Yokohama City Hall

Completed: May 2020
Total floor area: 142,582.18 m²
Building application: Municipal office

Kanagawa Prefecture

Reception (3rd Floor)

Exterior

## About the New Yokohama City Hall

The new Yokohama City Hall is the eighth built under an OPEN YOKOHAMA concept to connect the City of Yokohama with its people and nature as a sustainable international metropolis rich with diversity unique to a port city. The 32-story complex offers an office area on the highest floors, conference rooms primarily located on mid-level floors, and community and commercial spaces on the lowest floors. As a place of cooperation and co-creation between the City of Yokohama and its people, the new city hall offers an atrium (three-story vaulted space of roughly 1,200 m²) that accommodates a wide-range of events and multiple broad open spaces around surrounding buildings. Standing as a central point on the four corners of four neighboring wards, the new city hall enhances accessibility between all these regions and heightens appeal of the entire city.

The highly eco-friendly building not only serves as a center of crisis management that is able to respond to various crises but also adopts a district heating and cooling system interlinked with Yokohama Island Tower next door to supply heat, a radiant air-conditioning system, ground heat recovery, and fuel batteries. These innovations have certified the new Yokohama City Hall ZEB Ready and earned it the highest five star rating from the Building-Housing Energy Labeling System (BELS) certification as well as the CASBEE S Rank.

## Our Work

Air-conditioning System

Shinryo Corporation was in charge of building the air-conditioning system with the goals of installing a system that can be used comfortably over the long term. The desiccant air-conditioning and radiant air-conditioning system work as technologies introduced to provide ventilation through natural airflows. Meticulous temperature and lighting management and control in the offices via sensors and other detection devices both enhance energy savings and provide a comfortable indoor environment.

The construction actively used ICT and various units that take advantage of Building Information Modeling (BIM) data as well as more prefabrication and pre-cutting of piping ducts to drive productivity. Shinryo Corporation also used an off-site logistics warehouse and lifting center for the management and delivery of materials and equipment for mid-level and upper floors in order to undertake smooth and efficient delivery and lifting operations. These innovations helped save energy and resources, mitigate $CO_2$ emissions, and reduce industrial waste while contributing to more efficient work styles.

## Contributions to Vibrant Urban Development

# Hareza Tower

Completed: May 2020
Total floor area: Approx. 68,600 m²
Building application: Offices, movie theaters, restaurants, retail stores, and parking

Tokyo

Exterior


Corro-Guard® Non-chemical Corrosion Prevention System

## About the Hareza Tower

Hareza Tower, which was built as a certified national strategic redevelopment project for national strategic special zones, stands on the old Toshima City Office lot not far from Ikebukuro station. Offering everything from office and commercial amenities to a cinema complex, Hareza Tower is a symbol of the international city of arts and culture advocated by Toshima. The integrated use of open public space and neighboring roads of the Naka-Ikebukuro Park and Hazera Ikebukuro area newly invigorates the entire Hareza Ikebukuro area as a unified city. This is the main complex of an urban development project that aims to realize a theater district which is a stage for the entire city where everyone can become a star. The adoption of high-efficiency air-cooled packaged heat pumps and other technologies earned this facility the highest CASBEE S Rank certificate while the office areas were certified ZEB Ready in area-specific assessments.

## Our Work Air-conditioning System

Shinryo Corporation was in charge of building the air-conditioning system. Hareza Tower office floors adopted system ceiling cassette air-conditioning and humidifiers. The challenge was to more efficiently lay piping for the large number of coolants, water to supply humidifiers, and drainage. A new method developed together with our partner companies therefore worked to enhance efficiency, save energy and resources, reduce $CO_2$ emissions as well as industrial waste by setting up a new piping unit on typical floors for centralized management of orders, fabrication, and logistics.

This facility also implemented the Corro-Guard® non-chemical corrosion prevention system. This technology developed by Shinryo Corporation to suppress corrosion and aging of pipes helped to improve the lifespan of the facility. Moreover, the active introduction of other new technologies from the use of an environmental analysis system to visualize test operations in real-time, to innovations to run environmental diagnostics and propose improvements in a short time achieved an office space friendly to both people and the planet as well as a facility with a high level of maintainability.

Shinryo Corporation also engaged in efforts to provide more flexible work styles on the construction site from introducing a shift system for working hours to promoting even more active participation of female employees. These initiatives realized a work-friendly environment and better work-life balance.

# PHNOM PENH LOGISTICS CENTER

Completed: December 2019
Total floor area: 6,915 m²
Building application: Warehouse and refrigerated warehouse

Cambodia


Exterior

## About the PHNOM PENH LOGISTICS CENTER

PHNOM PENH LOGISTICS CENTER in the Phnom Penh Special Economic Zone is located in Phnom Penh, the capital of Cambodia, near the Phnom Penh International Airport facing the national highway to the Preah Sihanouk Sea Port. This logistics center not only has a fantastic location for shipping but also has been highlighted as a strategic logistics site connecting Bangkok, Thailand and Ho Chi Minh, Vietnam. The establishment of the PHNOM PENH LOGISTICS CENTER strengthens systems for providing high-quality, added value distribution services in Cambodia and the greater Mekong region, which brings with it expectations of social development in Cambodia through logistics. This logistics center responds to all distribution needs from air and sea forwarding, domestic sales distribution, manufacturing logistics (just-in-time delivery) and cross-border trucking transport to storage and shipping that use air-conditioning facilities.


## Our Work

Air-conditioning, Sanitation, Firefighting and Electric Systems

Shinryo Corporation was in charge of the design and construction of the air-conditioning, sanitation, fire-fighting and electrical systems for the largest Cambodian multifunctional logistics center with cold storage capabilities. In addition to room-temperature warehouses, PHNOM PENH LOGISTICS CENTER offers three temperature zone warehouses such as frozen (-25°C), refrigerated (+1°C) and constant temperature (+25°C) warehouses. Furthermore, it provides primary equipment specifications for stilt platforms, double-sided loading berths, and emergency power generation systems to sustain the temperatures in each warehouse even during power outage.

One point of emphasis in this project was process management. Shinryo Corporation had to import almost all of the materials and equipment necessary for the construction from abroad. This made things difficult because material and equipment management largely impacted construction processes. Construction also faced delays due to daily rain during the monsoon season in Cambodia. This also made process management a struggle due to the weather. Import and delivery management aligned with the timing of construction was a vital point of the project to prevent any large impact on the construction schedule caused by bottlenecks in material and equipment management.

Therefore, Shinryo Corporation increased on-site patrols to fully understand the progress of construction before meetings with various partner companies about specific operations, worker assignments, confirmations that preparations had been made, and other such topics. We focused on providing a high-quality facility within the construction time frame by working together with our business partners by guiding construction methods at times that drove more efficient operations.

# Realize Safe and Highly Efficient Work Processes

**More efficient operations and higher productivity are essential issues when considering the labor shortage in the Japanese construction industry. Internationally, human rights of workers and labor management have also become issues. Shinryo Corporation will establish safe and highly efficient work processes with the goal of realizing safe work-friendly environments and efficient construction site operations.**

## Quality Management System (QMS)

### Ongoing Improvements to Work Processes Using QMS

**Quality Policy**

Provide quality earning trust from our customers with all our effort.

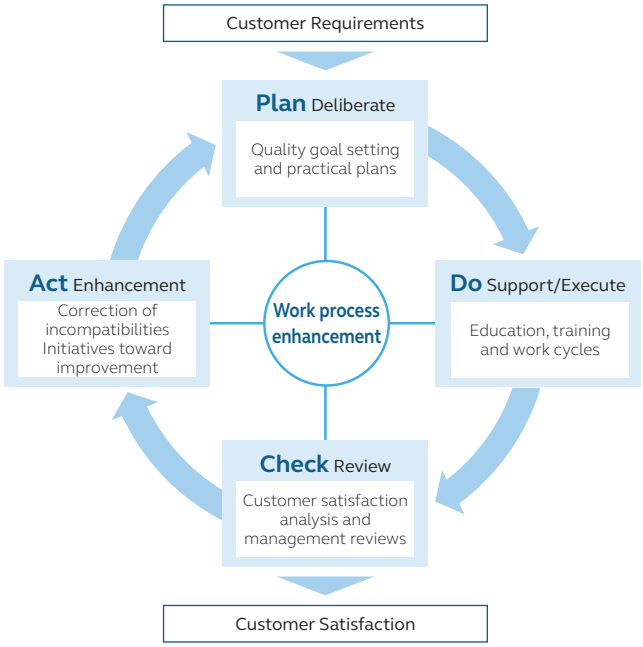
Shinryo Corporation strives to practice quality assurance activities in systems and services to provide quality that satisfies our customers based on the Quality Policy and has acquired the ISO 9001 Quality Management System at corporate divisions and branches throughout Japan.

In addition, we conduct activities to incorporate customer feedback from customer satisfaction surveys after the completion of construction. Shinryo Corporation will always strive to ensure quality that earns the trust of customers.

**ISO 9001-certified Divisions and Branch Offices as well as Overseas Branches**

- Tokyo Metropolitan Area Division
- Urban Environment Division
- Nuclear Power Plant Division
- Electric & Instrument Division
- Hokkaido Branch
- Tohoku Branch
- Marunouchi Branch
- Yokohama Branch
- Hokuriku Branch
- Nagoya Branch
- Osaka Branch
- Chugoku Branch
- Kyushu Branch
- HONG KONG Branch
- SINGAPORE Branch

**Ongoing improvements to work processes**




### ISO 9001 Internal Auditor Training

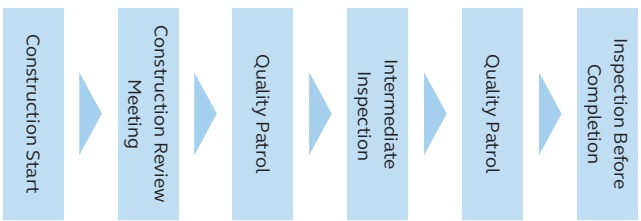
Shinryo Corporation conducts internal auditor training as necessary to educate internal auditors in the Quality Management System (QMS). Employees who have acquired the internal audit certification are also expanding internal audits and continually improving the QMS.

### Initiatives to Improve On-site Construction Quality

Construction sites repeatedly hold meetings to discuss issues and conducts internal inspections in a construction cycle that aligns with the progress of the work according to a quality manual.

By regularly engaging in meetings to discuss issues, on-site quality patrols, and internal inspections at the start of construction, we are able to identify construction issues and address problems in a timely manner in an effort to complete a complex that fully satisfies every single customer requirement on delivery.

**Example of Operational Flow According to a Construction Cycle**



## Quality Patrol

Quality patrols on construction sites check to make sure various aspects of construction are done properly, such as aspects related to design requirements and legal, regulatory and internal technical standards.

People in charge of quality management regularly patrol construction sites to verify whether construction satisfies the living environment, room pressure and other conditions included in design drawings and construction quality plans as well as construction blueprints by following a checklist. To prevent any quality issues after delivery, we inspect the state of important management items laid out for each construction site. These important management items are organized using examples of issues on other projects that have happened in the past and items pointed out by customers on customer satisfaction surveys. Efforts using this PDCA cycle strive to prevent recurrence of the same issues. Quality patrols continually improve quality according to these management items as a system that makes every effort to further improve quality.

Shinryo Corporation will establish on-site inspection protocols, such as the quality patrols, to provide even better facility systems that earn customer trust.

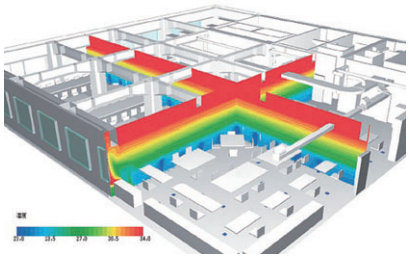
## Initiatives to Improve On-site Construction Quality Using BIM

Shinryo Corporation uses Building Information Modeling (BIM) to improve construction quality and respond to customer requirements in facility operations after delivery, whether comfortable living environments, energy efficiency, or the prevention of quality issues.

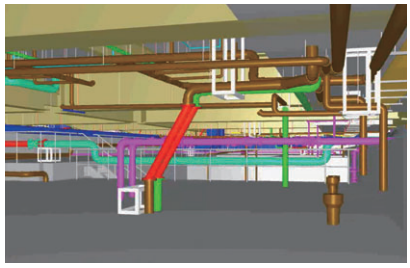
CFD* leveraging BIM identifies room humidity and temperature before construction so that Shinryo Corporation may draft construction plans that can realize comfortable indoor living environments.

The use of BIM also predicts the behavior of piping on base isolation floors during earthquakes and verifies whether there is any interference between the building structure and equipment systems to help construct facilities with excellent seismic stability.

Moreover, we strive to improve system quality by taking advantage of BIM when identifying progress and conducting inspections during and after a wide range of construction.



Estimation of Indoor Thermal Environments Using CFD

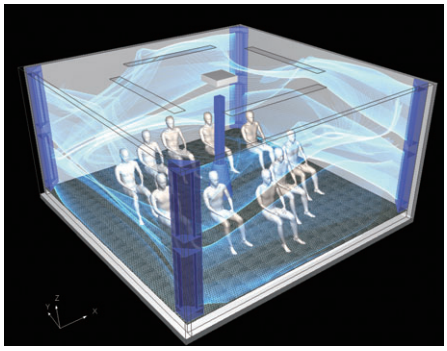


Verification of Piping Behavior During Earthquakes

## Proposals to Innovate Ventilation for Ensuring Safety in Medical Environments

As the importance of measures to fight the spread of viral infections grows, Shinryo Corporation is furthering proposals to ensure greater safety inside hospitals and other medical facilities and to reform ventilation systems. These proposals focus on core local hospitals and medical care facilities. We formed a Ventilation Innovation Team comprised of employees in charge of marketing and design. All of these team members learn beforehand what they need to know about viral pathways and the relationship between air-conditioning systems and COVID-19. This puts in place a group of people able to innovate and propose ventilation options.

CFD* technology simulates the state of current ventilation and identifies and clarifies the airflow gaps inside a hospitals to create system renewal proposals that offer more reliable ventilation. CFD can also replicate phenomena such as the density distribution of aerosol particles and the airborne behavior of pathogens. We also propose full-fledge plans with measures to combat the spread of viral infections by combining various technical measures to prevent the spread of viruses from air-pressure control system technology to simple push-pull devices for medical examination rooms.



Airflow Distribution Simulation of a Waiting Area

*CFD: Computational Fluid Dynamics

# Health and Safety Initiatives

**Shinryo Group Health and Safety Policy**

Safety First for our Prosperity

Shinryo Group has prioritized safety above all else based on the Health and Safety Policy unchanged since its founding. All employees and our partner companies engage in health and safety activities to prevent labor accidents.

To eradicate occupational accidents, it is important to nurture in us a higher sensitivity to dangers and extract latent on-site hazards before we can have the ability to execute any types of countermeasures. That is why Shinryo Corporation actively provides education and training opportunities. We are also working to improve the workplace environment and enhance technical training by recognizing social issues as grave issues faced by Shinryo Corporation, such as a lack of skilled craftspersons, a growing number of elderly and a declining number of youth entering the workforce.

## Cooperation with the Health and Safety Council

At the headquarters and branches, the Health and Safety Council play central role in formulating annual plans and conduct training for managers, health and safety supervisors as well as diverse specialty training and education for partner companies.

In particular, we consider managers who act as the deputy of the business proprietor as key persons for health and safety management who clearly identify dangers and hazards. We also ask training be taken once every five years to better the skills of managers as well as health and safety supervisors so that they can formulate measures to prevent occupational accidents.

We actively hold special training such as that for full harness safety belts required as of 2019, operation of aerial work vehicles, scaffolding assembly, oxygen deficient work, and procedures for handling asbestos while promoting employees of partner companies to acquire certifications. In addition, we incorporate and further special education necessary for workers according to legal revisions in annual activity plans of the Council and encourage strategic acquisition of certifications.

Especially during the busiest times for the industry, Shinryo Corporation regularly conducts safety patrols to identify on-site construction issues and guide corrective actions to address on-site danger factors. During the period when Shinryo Corporation could not conduct safety patrols due to the impact of COVID-19, we took various steps such as requesting each partner company to execute on-site inspections to prevent occupational accidents at their constructions sites.

Training to Better the Skills of Managers and Health and Safety Supervisors

## Promotion to Expand the Construction Career Up System

The Construction Career Up System, launched in April 2019, is a certification system developed by the Ministry of Land, Infrastructure, Transport and Tourism in cooperation with construction industry organizations and other entities for the purpose of certifying the skills and experience that an engineer has amassed from an objective standpoint. Japan plans to make the introduction of this certification system mandatory on all construction sites in 2023. The adoption of this system is expected to drive on-site work efficiency by enhancing registration of practical experience and certification of engineers, by ensuring fair evaluation of those skills, and by improving construction quality.

Shinryo Corporation promotes the use of the Construction Career Up System with the hope of improving construction quality by not only visualizing the careers of individual engineers but also capabilities of partner companies through a number of experienced engineers they employ. Therefore, the Headquarters as well as Osaka, Kyushu, Tohoku, and other branches practice this system on model sites in an effort to encourage and expand the certification to partner companies. In September 2020, about 700 member companies of the Health and Safety Council registered business information.

Promotion of the Construction Career Up System on Construction Sites

Construction Career Up System Logo

## Overseas Health and Safety Activities

Shinryo Group has a broad-range of construction sites in Asia, India, Africa, the Middle East, and many other parts of the world. Health and safety management practices differ according to the circumstances in each country. We have put in place a system that links the Health and Safety Promotion Department of Shinryo Corporation with safety management supervisors at each business location and on construction sites to maintain a high-level of safety management while incorporating management techniques in Japan. Moreover, sharing and learning about the safety initiatives in each country heightens safety awareness and nurtures a culture of safety.

Shinryo Corporation conducts construction site safety patrols and Health and Safety Council meetings around safety supervisors appointed from safety management supervisors in Japan and local staff. The COVID-19 pandemic greatly impacted 2020. Our organization struggled to use every means possible such as online services to combat those effects. SHINRYO HONG KONG held health and safety conferences (safety forums) online for safety education and commendations.

Overseas On-site Safety Patrols

## Measures to Prevent the Spread of COVID-19 Infection on Construction Sites

Shinryo Corporation does everything in its power to prevent the spread of COVID-19 on construction sites with the formulation of preventive guidelines founded in the Ministry of Land, Infrastructure, Transport and Tourism Guidelines for Preventing the Spread of COVID-19 in the Construction Industry as a step to combat the pandemic.

These guidelines bundle basic measures, such as temperature measurements via thermographic cameras, health checks before work starts, masks, and setup of disinfectant liquid, in addition to specific response measures, such as staggered starting times to avoid crowded areas and adjustments to seating layouts in worker offices. The Health and Safety Promotion Department provided comprehensive direction on preventative steps to all construction sites.

Morning Meeting Ensuring Social Distancing

## Asbestos and RCF Management

Shinryo Corporation put in place a system to precisely manage asbestos and Refractory Ceramic Fiber (RCF), which may have adverse health effects.

We drafted guidelines that define safe operational procedures and internal rules to thoroughly manage these materials through an asbestos and RCF construction cycle. Any work to remove asbestos or RCF requires a manager on-site to verify and provide guidance to ensure the work is done safely, such as overseeing removal plans, isolation and processing methods, safety clothing and protective gear. We also raise awareness through education about amendments to any relevant laws or regulations. In addition to holding briefings for managers on amendments to the Air Pollution Control Act and Ordinance on Prevention of Health Impairment Due to Asbestos in 2020, Shinryo Corporation raised awareness by publishing technical information in the Technical Report distributed throughout the company.

Removal Operations for Products that Contain RCF

## Use of Green Site Construction Website

Green Site is a system to create, submit, and manage labor and safety documents online (Operated by: MC Data Plus, Inc.). Many construction companies have adopted this system because it can dramatically reduce the work related to creating documents and improve operational efficiency.

Green Site allows companies to check labor and safety documents submitted by partner companies in a timely manner. This builds a system that enables the dedicated staff of Shinryo Corporation to internally review documents from not only primary suppliers but also secondary and subsequent suppliers. We are able to properly engage in uncompromising compliance with laws and regulations by using this system to prepare the documentation required under the Construction Industry Law and other statutory regulations. Shinryo Corporation is actively taking advantage of this tool during the COVID-19 pandemic to provide information. One example is the guidance that we offered to partner companies through Green Site about employment adjustment subsidies (Ministry of Health, Labour and Welfare).

## Promotion of Technical Employee Training

Shinryo Corporation conducts annual mid-level supervisor training to mid-level technical supervisors as a way to better teach the know-how necessary for on-site project managers.

This training program provides practical classes, such as explanations on the Construction Industry Law and the Industrial Safety and Health Law as well as labor management of employees and proper handling procedures for industrial waste, asbestos and fluorocarbons. It also creates opportunities for trainees to take the stance of on-site project managers and ready themselves through compliance examples requiring close attention on-site. Mid-level supervisor training has been held online several times for a total of roughly 160 trainees between June and September 2020.

Online Mid-Level Supervisor Training

# CSR Procurement Guidelines

Shinryo Corporation pursues initiatives through cooperation and coordination with its business partners, especially partner companies, to expand activities to not only its own business activities but also throughout our supply chain.

In terms of procurement, we have established Shinryo CSR Procurement Guidelines and have asked over 500 companies to cooperate while deepening understating about corporate social responsibility.

**Shinryo CSR Procurement Guidelines and Items Therein**

1. Fair and sound corporate activities
2. Quality, safety, and business continuity
3. Consideration of human rights, labor, and occupational health and safety
4. Consideration of the environment
5. Legal compliance
6. Management of information

# Build Refreshing Environments Rich with Creativity

**The construction industry in Japan faces the major challenges of reforming long work hours and building flexible work environments. Shinryo Corporation will build workplaces where diverse human resources are motivated and can each reach their full potential with the goal of realizing refreshing, highly productive company rich with creativity.**

## Toward New Work Style

Shinryo Corporation dramatically reformed work styles in 2020 as a measure to fight the spread of COVID-19 infection in an effort to build a safe, secure environment that protects the health of all employees and partners. When Japan issued a state of emergency, we accelerated digital efforts from all fronts and asked many employees to telecommute, including those working on construction sites, in addition to changing how we use office space upon arrival at the office.

Our response also transitioned the conferences and on-site morning meetings that had ordinary been done face-to-face for years to online formats and divided offices to avoid crowded spaces.

Shinryo Corporation hopes to leverage these work style changes and realizations gained while handling this viral crisis in future work style reforms. We will realize ideal work styles unique to Shinryo Corporation from a safe and secure workplace to a sense of satisfaction, and reforms to long working hours.

## Various Efficiency Initiatives on Construction Sites

### Morning Meeting Reforms

Our construction sites have begun executing reforms to morning meetings that avoid close contact settings yet further efficiency. Some of our construction sites have divided and conduct morning meetings across multiple locations such as the on-site office and worker stations while displaying job descriptions and other necessary information on large monitors installed at each venue. This reform did not only avoid a cluster of people but also quickly communicated information and cut the time required for morning meetings in half.

We also remotely stream morning meetings on construction sites to devices such as smart phones. This has also become an initiative that is part of our training for young employees to provide explanations and guidance on topics such as how to conduct concise morning meetings and give clear instructions to workers.

Informational Sharing via Large Monitors and Reductions to Time Spent on Morning Meetings

### Use of ICT Technologies

Shinryo Corporation uses ICT technologies to advance initiatives that remotely support on-site construction safety and quality management.

Some construction sites have on-site personnel put on wearable cameras and conduct patrols of the site while managers at a remote location verify the online video stream to provide guidance, such as indicating areas needing corrective action. This system enables clear instructions because any specific directions that are required can be shared in images by capturing a screenshot and using the handwriting function to fill in those instructions. Each site operates more efficiently because managers can check video recorded of each site to provide instructions at a later date when unavailable to verify the site remotely in real-time.

Directions Given Remotely from the Office to the Construction Site

Instructions from the Office Implemented on Site

### Online Project Manager Meetings

Tokyo Metropolitan Area Division transitioned the Project Manager Meetings joined by project managers responsible for construction sites to an online format.

This meeting shares technical as well as health and safety information across organizational boundaries. Our headquarters had acted as the venue, but sometimes project managers were unable to attend when busy during peak seasons or when working on construction sites far away. The participation rate dramatically improved by converting to an online meeting. Direct and timely instructions and briefings through this meeting helped project managers better understand the information and facilitated more effective on-site operations.

Due to the COVID-19 pandemic, other construction sites were unable to perform in-person plant inspections overseas when installing foreign-made air-conditioners. Therefore, the on-site offices in Japan connected with the overseas production plants online to perform remote inspections. The plants set up fixed cameras on testing measurement devices, electrically-operated valves, and other equipment so that we could monitor and confirm the status of the air-conditioning system from Japan by the behavior and operational data. Note that the delivery and installation methods for air conditioners were determined by checking the actual products after they are delivered to the logistics warehouse in Japan. Thus combining remote checks with psychical inspections helped enhance reliability.

Relevant SDGs

## Building an Environment to Accommodate New Work Styles

### Adoption of a Distributed Office Style

Shinryo Corporation moved its headquarters to the Comore Yotsuya office and commercial complex right next to JR Yotsuya Station in July 2020. Using this move as an opportunity, we distributed our offices between the old headquarters building and neighboring buildings, which increased the average personal space of each employee roughly 130%. This measure was not simply for comfort in the office but also aimed to avoid closed spaces, crowded spaces, and close-contact settings (Three Cs), which prevent the spread of COVID-19. We actively use video conferencing systems to share internal information. However, Shinryo Corporation also took measures to enhance face-to-face meeting spaces and encourage thorough debate in order to provide an environment where employees can select the best method for smooth and effective communication according to the purpose of each meeting.

Distributed Offices Near Headquarters

### Opening of Satellite Offices

Shinryo Corporation listened to employee feedback gained from a telework survey and opened three satellite offices in Saitama City, Yokohama City, and Kobe City in October 2020. These offices equipped with network infrastructure and security put in place systems and environments for employees to work safely and efficiently closer to their homes.

### Policy Measures for Telework

Shinryo Corporation drafted Telework Regulations that clearly define the rules for telecommuting and work at satellite offices. The clear language therein defines policies from work hour management to company regulations in August 2020.

In the future, these policies will also act as a system to support flexible work styles for employees to balance work, raising children and taking care of family, and as a measure to ensure business continuity even when commuting to the office is restricted due to circumstances such as the pandemic or natural disasters (p. 49).

### Commitment to Business Digitalization and a Paperless Workplace Not Requiring In-person Signatures

Shinryo Corporation committed to promoting a paperless workplace not requiring in-person signatures as well as the digitalization of business in June 2020 as part of its efforts to transition business to digital mediums so as to ensure work continuity even from places outside the workplace. The entire organization searched for and organized paper documents and introduced multiple displays to allow everyone to sufficiently see technical materials without paper.

**Commitment to a Paperless Workplace Not Requiring In-person Signatures**

- We will aim to digitalize internal approval procedures by the end of 2021 to eliminate in-person signatures.
- We will aim to eliminate the use of paper in internal operations.

## Refreshing Work Style Project for Employees to Reform Their Own Work Styles

### Aiming to Improve Group-wide Productivity

Shinryo Corporation started the Refreshing Work Style Project to reform work styles in 2016. Model teams in technical, design, sales and administrative sections have built upon innovation to drive operational efficiency and improve productivity.

In 2020, the three Group companies—Shinryo Technical Service Corporation, Shiroguchi, and Daiei Denki—involved with system design and installation started the initiative with the participation of overseas branches. Cooperation throughout the Group aims to go beyond measures to solve issues faced by each company to heighten productivity throughout the entire Shinryo Group.

**Vision, goal and targets of the Refreshing Work Style Project Vision**

| | |
|---|---|
| **Vision**<br>Ideal form through achieving goals | Refreshing and open corporate climate rich with creativity |
| **Goal**<br>Realize work style reform | Execute efficient operations |
| **Targets**<br>Challenges to overcome | ❶ Correcting long working hours<br>❷ Realizing a work-life balance |

### Practical Use of Guidelines

We have compiled the various reforms of model teams that have brought greater efficiency to work styles into Refreshing Work Style Project Guidelines published on the internal message board. Employees can refer to these guidelines to incorporate ingenuity right for each of their tasks and further heighten their performance.

The Nuclear Power Plant Division has modified a concentration time initiative that lets each person focus on their work by setting up concentration booths in the corner of the office separated by partitions to ensure both the time and space to concentrate. This initiative not only improves individual work efficiency but also gives everyone enough time to think and find inspiration.


Better Concentration and Work Efficiency Using the Concentration Booth

# Cultivating an Enthusiastic Workplace

## Introduction of Programs to Support Flexible Work Styles

Shinryo Corporation is introducing various policies to encourage employees to take leave thanks to policies and mutual support that build a flexible workplace so that employees can work while taking care of family as well as having and raising children.

| Program | Overview |
|---|---|
| Telework Program | • This program provides work-from-home and other telework options to smoothly execute the Business Continuity Plan (BCP) if working on-site is difficult when pregnant or raising children or when caring for oneself or sick family or in large-scale natural disasters or pandemic-type situations. |
| Transfer System to Accompany Spouse | • This policy allows employees to transfer when an employed spouse has been transferred if they want to keep working at a Shinryo Corporation office and a place at that office is available. |
| Come-back System | • This policy allows regular employees who have worked at Shinryo Corporation for more than three years and resigned to (1) raise children, (2) care for family, or (3) transfer with a spouse to return to work within five years of their resignation as a general rule. |
| Occupational System | • This policy supports ongoing employment by providing work transfers based on the desires of regular employees who would like to limit their work area or type of job according to their circumstances, such as care to a sick family member. We also offer this program to employees hired mid-career. |
| Half-day leave acquisition system for annual paid leave | • This system allows employees to take annual paid leave in half day increments. |
| Expanded administration of an accumulation system | • This expansion allows employees to carry over the number of days left in annual leave to the next fiscal year to use the paid leave they have left the previous year and the year before that for non-work related injuries and illnesses as well as to care for children and other family members. |
| Special allowances for annual paid leave | • Employees who do not have 20 days of total annual paid leave carried over from the previous year and provided in the current fiscal year may take special leave (paid) according to their tenure at the company in the event of an absence for the reason of sickness after all of the annual paid leave is extinguished. |
| Leave acquisition promotion system | • Project leave policy: Employees in construction roles may take consecutive leave at appropriate times such as at the completion of on-site construction (up to five business days that may be taken by splitting).<br>• Anniversary leave policy: All employees may take leave on days recommended by the company such as their birthday, birthdays of family members or school events (three working days per year). |
| Special leave program | • Refresh leave policy: Employees may take designated consecutive leave as commemoration for 10, 20 and 30 years of work. |
| Maternity leave program for spouses | • This program allows employees to take up to five days of leave from one month before the due date to one year after their spouse gives birth. It also lets employees take leave in half-day increments. |

## Activities to Promote Active Participation of Diverse Human Resources

Shinryo Corporation has established systems and policies to promote and support the active participation of diverse human resources. We also promote the active participation of women and conduct activities to communicate the appeal of the construction industry.

| Purpose | Systems/Policies/Events |
|---|---|
| Promote the success of female employees | • Release of information and action plans based on the Law to Promote Women in the Workplace on the Ministry of Health, Labour and Welfare Positive Ryouritsu website<br>• Publication of an Independent Conduct Plan for Female Employees Participation on the Keidanren (Japan Business Federation) website |
| Promote active participation of senior employees with rich experience | • Revisions of the retirement age to 65 (60 before the change in April 2020) with raises, promotions and ongoing additions of points for retirement benefits from the date of joining of the company to the age of 65<br>• Life plan seminars for 58-year old employees |
| Promote active participation of employees hired mid-career | • Implementation of training for new employees (company philosophy, founding spirit, programs and regulations, compliance, occupational health and safety management, disaster prevention measures, etc.) |
| Promote active participation of foreign nationals | • Japan invitation program for overseas Group companies (annual seminar, but not held in fiscal 2020)<br>• Practical technical training of engineers from SHINRYO (PHILIPPINES) CO., INC.<br>• Implementation of a variety of education for overseas branches and overseas Group company staff (compliance, safety and technical education) |
| Promote active participation of employees with disabilities | • Work assignments according to aptitude in fields such as design and legal affairs<br>• Establishment of satellite offices equipped with environments offering amenities such as work support systems and barrier-free designs |

## Physical and Mental Health

Shinryo Corporation engages in initiatives that support physical and mental health to give all employees a refreshing every day.

As measures to prevent the spread of COVID-19 infection that began at the end of January 2020, we provided hand sanitizer and other considerations at all of our business locations, executed Three-C measures in office environments and continually evoked caution through our internal message board and enlightenment posters. Shinryo Corporation also strengthened measures when the amendment bill for the Health Promotion Law went into full force in April as a way to prevent passive smoking, such as prohibiting smoking during working hours and completely isolating smoking areas at the own building. In addition, industrial doctors actively engaged in awareness-raising activities through the Health and Safety Committee, such as lectures about preventative health care as well as holding health seminars for breast cancer education.

### VOICE

**Hiroyuki Irie**
Manager
Human Resource Welfare Section, General Affairs Department

Shinryo Corporation extended the retirement age to 65 in April 2020. I believe establishing an environment where employees of all ages can work confidently in good physical and mental health is more important than ever. This type of environment does not stop at drafting policies but will actively work to provide health guidance through industrial doctors and public health nurses and raise awareness about health in addition to other activities.

| Item | Policies/Education |
|---|---|
| Promotion of health management | • Health Consultation Office through the industrial doctors (offered once a week)<br>• 24-hour health consultation service (telephone/email consultations)<br>• Support for dental check-ups (provides free check-ups at the headquarters and 1,200 dental clinics contracted by Shinryo Corporation throughout Japan)<br>• Grants for rubella vaccinations (provides support to employees and family members who live with them)<br>• Implementation of flu vaccinations right in offices (Headquarters, Yokohama Branch, etc.)<br>• Full support for treatments to quit smoking (provides full support to employees who quit smoking for three or more months after starting treatment) |
| Mental Health | • Implementation of stress-checks, creation of opportunities for employees who would like consultations and advice from doctors, and implementation of PDCA to improve the workplace environment<br>• Consultation Office through industrial mental health professionals (offered once a month)<br>• Implementation of mental self-care education for new employees<br>• Implementation of mental health education (35 newly appointed managers and 34 specialized education candidates took this program in fiscal 2020) |

## Workplace Communication

### Informational Sharing Between Employees During the COVID-19 Pandemic

Many employees worked remotely until almost the end of May after the COVID-19 infection spread to metropolitan areas at the end of March and Japan declared a national state of emergency in April 2020. To alleviate employee concerns during this time even if just a little, Shinryo Corporation issued internal news bulletins online to share corporate policies and initiatives in an easy-to-understand manner. These bulletins supplement the lack of information while telecommuting with video messages from management, information about telework, health management while working from home, and the situation at the headquarters and in the city.


Internal Refreshingness News Bulletin Information

### Commendation Programs to Encourage Higher Employee Motivation

#### President's Awards

Shinryo Corporation established the President's Awards as a public internal commendation program to praise performance in highly difficult tasks and to recognize various projects and sites for original ideas and creativity.

Our anniversary ceremony held every February commemorates winners who offer technical presentations at the Shinryo Forum and advance technology internally.

#### Idea Proposals

Idea Proposals is a program to solicit ideas from all employees whether ways to vitalize operations or rationalize technology, and then commemorates the best proposals. We make the ideas that are celebrated public on our database so that employees can take practical advantage of the proposals in business.

### Club Activities

Shinryo Corporation supports internal club activities as a way for employees to refresh their bodies and minds through sports and culture activities and a place for communication between employees regardless of affiliation, occupation or age. We provide grants to clubs endorsed after meeting approval requirements for expenses such as competition and other participation fees, transportation costs, and equipment purchases. Currently, Shinryo Corporation has approved basketball, baseball, martial arts, tennis, running, soccer, crossminton, mountaineering, and other such clubs.

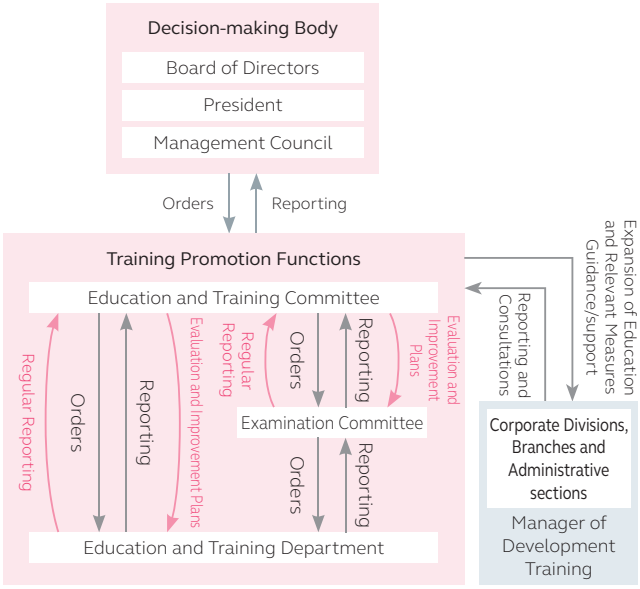
Employees Competing at a Martial Arts Tournament

# Human Resource Development Rich with Creativity

## Promotion Systems for Education and Training

Shinryo Corporation plans and launches educations programs centered upon the education and training committee for the purpose of improving business execution skills by bringing understanding of the corporate philosophy and basic philosophy. The Examination Committee drives forward training practically in each department while improving the skills of each employee through promotion examinations.

**Development Training System Framework**

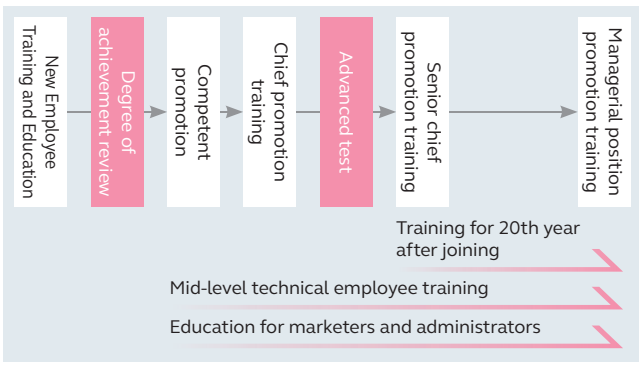



### Development Training System

We designate group training and internal testing as required training to recognize the roles of employees and improve their knowledge and skill by level.

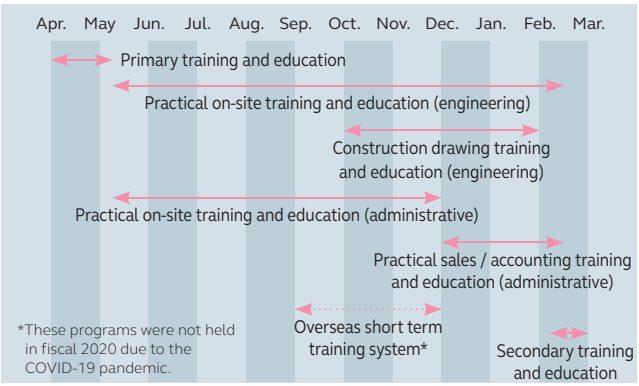
New employee training and education provides the training and education necessary for new employees to learn the basics. This program also provides promotions in stages from the second year on by passing internal tests and external certification exams, which takes the skills of managers to the next level. The broad curriculum such as elective external seminars by duty and position and practical education according to department and occupation also establishes a development training system able to ensure the continued learning of each and every employee.

**Group training by level and year**




### New Employee Training and Education

Over the one-year of new employee training and education, we have established the perfect curriculum for each technical and administrative system to teach the skills necessary to create an organization where everyone can work with confidence right after assignment.

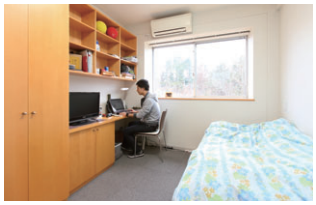



#### Training Dormitory “Kofu Dormitory”

The overall training and education at Kofu Dormitory for approximately one year is an ongoing tradition at Shinryo Corporation since its founding. Employees who enter the company in the same year are able to build bonds by living and learning together. The system helps employees in many ways, such as alleviating concerns about the job and seeking advice from those with more experience at meetings held by each team at the dormitory.

*This dormitory puts in place various measures in 2020 to avoid the Three Cs and prevent the spread of COVID-19 infection.

Kofu Dormitory



Dormitory

#### Primary Training and Education

Primary training and education teaches the posture necessary for professionals from the corporate philosophy, policies, and other basic knowledge to business manners over the first month after joining Shinryo Corporation. This program also provides the essential basics for safety management on construction sites as well as on-site operations while interweaving technical experience. In addition, employees learn basic knowledge about Shinryo Corporation businesses through mediums such as courses to teach basic knowledge on construction equipment as well as information related to the main equipment and materials handled on construction sites.

Driver Training for Aerial Work Vehicles

### Practical Training on Construction Sites

We conduct practical training and education for roughly six months after the primary training and education for not only technical employees but also administrative employees on construction sites in metropolitan areas. Senior employees are in charge of this practical education and teach a broad range of knowledge, including overall management operations related to processes, quality and safety as well as handling procedures for work drawings and the main equipment. This helps deepen understanding about its business through practical training on construction sites, which are most important to Shinryo Corporation.

### Overseas Short term Training System

Overseas short term training system for new employees held every year. This system helps deepen understanding about living and working overseas by providing an opportunity for new junior employees to travel to construction sites overseas and work on-site there for one week. Communication with local staff also cultivates human resources who have a global perspective and will to work overseas.

*This training program was not implemented in fiscal 2020.

### Education by Assignment

Shinryo Corporation provides practical education by assignment by dividing engineers and administrators. Engineers take part in training to learn how to create work drawings using 3D CAD software while administrators learn the basic foundation to sales and accounting through hands-on training. These programs also provide an opportunity to reaffirm the attitude as a professional in secondary training after the initial training is done.

## VOICE

Ryuho Matsuoka
New Employee

I started by taking the new employee training and education mostly online due to the COVID-19 pandemic. I was a bit lost at first, but I came to feel closer to my colleagues during the exchange of ideas in the group work with my peers on the other side of the computer screen. I also learned a lot more from veteran employees in the practical on-site training and education. I will use this knowledge and experience in my work and when creating work drawings. I hope I will become an engineer who people are confident giving work.

## Training and Education for Diverse Human Resources

Shinryo Corporation develops diverse human resources and strives to build an environment where everyone can reach their full potential and actively participate.

### Human Resources Active on the Global Stage

Shinryo Corporation pioneered overseas business in the industry in 1972, opened branches and overseas Group companies focusing on Asia/Middle East, and has expanded those businesses. Launched in 2014, the overseas practical dispatch system is for employees who have worked for the company between four to eight years that have first-hand experience in Japan as a way to cultivate human resources active on the global stage.

In this program, employees selected from an open solicitation each year are appointed overseas from one to three years to gain experience from the start to the completion of an overseas project.

### Human Resources with Diverse Skills

Shinryo Corporation provides support such as subsidies for the cost of acquiring certifications to employees and incentives for employees who have acquired certifications in order to cultivate human resources who have a high level of technical and specialized abilities and skills. We broadly support not only certifications required by the business but also from a perspective of ability development.

| | |
|---|---|
| Technical | Professional Engineer, First-Class Plumbing Work Operation and Management Engineer, First-Class Architect, First-Class Instrumentation Engineer, First-Class Electric Works Execution Manager, etc. |
| Administrative | First-Grade Official Business Skills in Bookkeeping, First-Class Construction Industry Accountants, etc. |

### New Employee Training for Mid-career Hires

Shinryo Corporation provides training to mid-career employees with experience working at another company or institution. Shinryo Corporation offers opportunities to deepen understanding about important matters that include the founding spirit and basic philosophy in addition to the management vision. In addition, we provide company policy, regulation, compliance, health and safety management training.

### Active Participation of Human Resources Regardless of Education, Age or Nationality

Shinryo Corporation has translated the Japanese in its company philosophy that states to “have leadership, irrespective of education and age” to include nationality in the English translation. To develop as a global enterprise, we need to build an environment able to cultivate and facilitate a wide range of human resources to actively participate unbounded by nationality.

**Company Philosophy**

- Be fair and straightforward
- Do your best with all your effort
- Have leadership, irrespective of education, age, or nationality.

# Corporate Governance

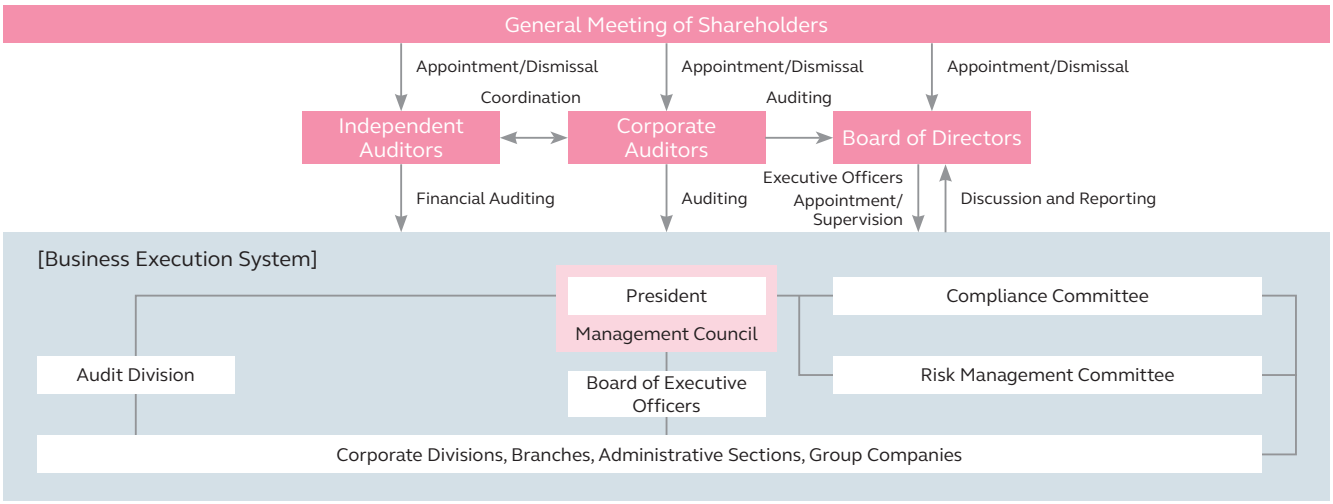
## Corporate Governance System

The Board of Directors deliberates submitted agenda items based on agenda and reporting criteria stipulated by agenda items and by Board of Directors rules set forth in the Companies Act. The Management Council deliberates on important matters concerning company management, in addition to proposals submitted to the Board of Directors. The Executive Officers communicates reports on the status of work execution by executives and resolutions of the Management Council, and performs prior hearings on opinions concerning matters for deliberation by the Management Council. The Audit Division verifies compliance and the efficacy and efficiency of systems, organizations, and work activities. In addition, it has performed audits of not only domestic and overseas workplaces but also of construction sites.

The Compliance Committee seeks to enforce and improve awareness of legal compliance in conjunction with corporate ethics in collaboration with the Committee and supervisors in each department and Group company, while also conducting policy decision-making and corrective guidance with regard to consultations and information received through the Helpline consultation service.

The Risk Management Committee is also extracting vital technological and contractual risks in large-scale jobs which have the potential to greatly affect management and periodically engages in discussions about measures to respond to these risks.

**Corporate Governance System**




## Internal Control

Since the construction of the internal control system is mandated by the Companies Act, Shinryo Corporation has performed reviews of the system as necessary, and works to fully secure compliance and enhance consistency and efficiency in work execution.

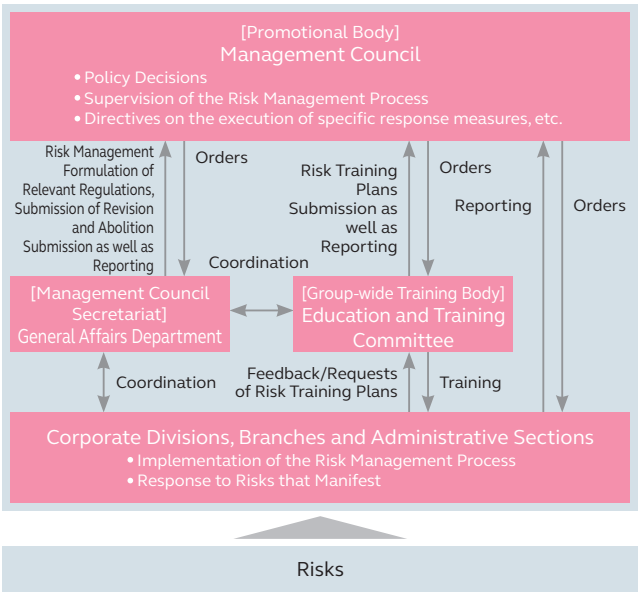
**Overview of Shinryo Corporation's basic policy on internal control system**

1. Systems to ensure that the execution of duties of executives and employees of the Group conforms to laws, regulations, and the Articles of Incorporation
2. Systems concerning the preservation and management of information pertaining to the execution of duties of directors
3. Rules and other systems concerning management of the risk of loss in the Group
4. Systems to ensure the efficient execution of duties of directors in the Group
5. Systems to ensure reasonable work in the Group composed of our company and Group companies
6. Matters concerning the employees in cases of auditors requesting the appointment of employees to assist the duties of auditors
7. Systems by which executives and employees of the Group or those that received the report to inform to auditors, and other systems concerning reporting to auditors
8. Systems to otherwise ensure the effective conduct of audits by auditors

# Risk Management/Business Continuity Plan (BCP)

We have established systems and measures to minimize all risks in the business environment surrounding Shinryo Group, such as quality, safety, the environment, compliance and information, and to continue and recover business as quickly as possible. Shinryo Group has put in place Risk Management Regulations that gather basic risk management items and Crisis Management Measure Regulations. We also created specific response guidelines to ensure the ability to rapidly respond to not only risks that occur in Japan but also overseas.

**Risk Management System**




## Information Security Management Systems

We strive to properly manage the information of our customers and partners. A PDCA cycle has also been put in place to periodically conduct and improve security auditing at the main offices and on-site administration offices while clarifying internal rules in accordance with the Management Rules of Corporate Information. In addition, we are actively striving to hold liaison conferences to share information with the people in charge of each department as well as actively conduct activities such as employee enlightenment. In February 2020, we conducted e-Learning on security and malware threats when using the Internet to raise awareness about steps to prevent informational leaks and other measures.

## Response to the COVID-19 Pandemic

Shinryo Corporation established the Shinryo Group Risk Response Task Force presided over by the President as General Manager while advancing efforts to prevent the spread of the virus at all of its business locations worldwide starting at the end of January 2020 to guide the decisions and execution of measures to ensure business continuity.

To protect the health and safety of all Shinryo Group executives and employees worldwide, the task force has worked to check the health of everyone involved, gather and share information about the virus, procure masks, antiseptics and other preventative articles, and build a workplace environment to prevent the spread of the virus. We closed some offices and construction sites when Japan declared a state-of-emergency and migrated to a telecommuting and staggered working system.

In the future, Shinryo Corporation will always strive to share information throughout the Group as well as rapidly consider and roll out relevant countermeasures.

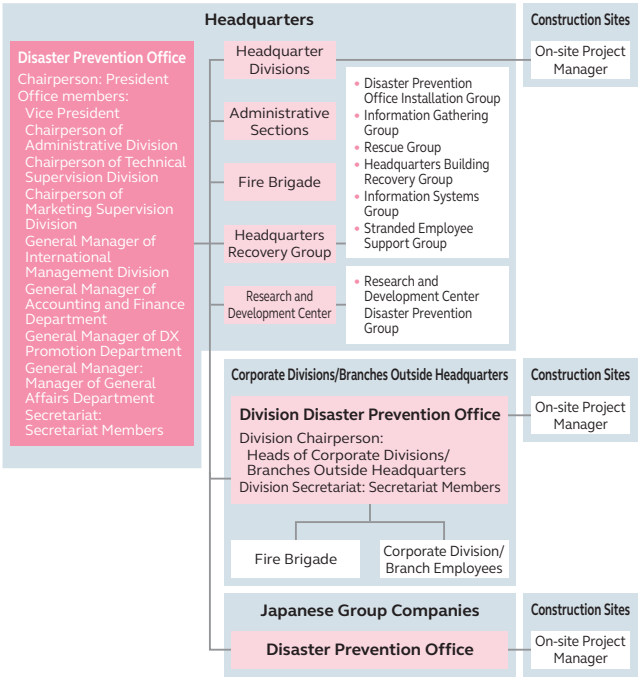
## Business Continuity Plan (BCP)

Shinryo Corporation has formulated a Business Continuity Plan (BCP) that defines the response methods and organization in the event of a disaster, and this plan is continually reviewed and strengthened to resume business activities as soon as possible even in the event of a large-scale disaster. In times of peace, we strive to improve the practicality of the BCP by conducting regular training while pushing forward preliminary measures such as building internal infrastructure and preparing cooperative systems with partner companies. Shinryo Corporation concluded cooperative disaster management agreements with local governments and other such partners to respond to requests for support at the time of natural disasters.

### Business Continuity Plan (BCP) Basic Policies of Shinryo Corporation

1. Immediately provide support by prioritizing the safety of executives and employees.
2. Sustain ongoing operation of corporate functions by recovering company facilities as soon as possible.
3. Cooperate with the recovery of sites currently under construction or completed properties as support toward the business continuity activities of our customers.
4. Introduce support to recovering infrastructure and support for residence affected by the disaster as much as possible as a member of the local community.

**Organizational Structure During Disasters**



# Compliance

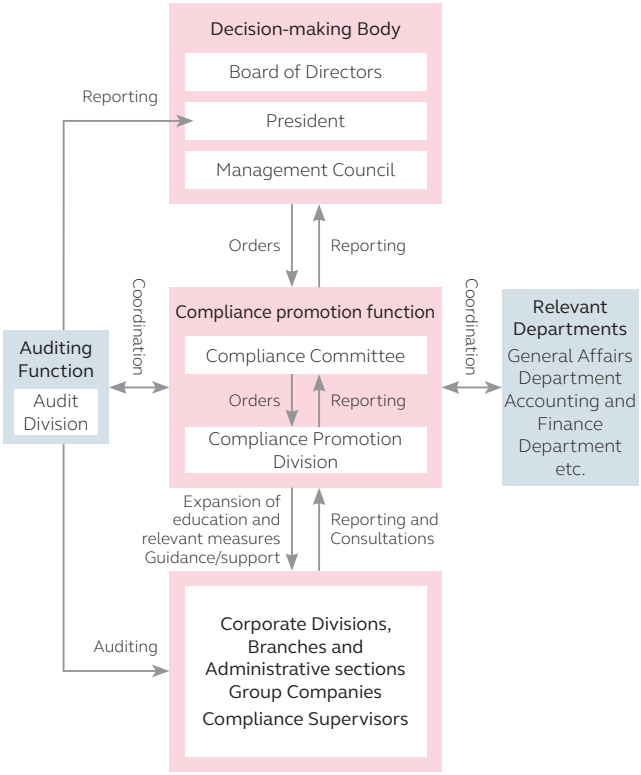
## Comprehensive Compliance

Shinryo Group believes comprehensive compliance is the most important issue in management. All executives and employees of the Group will practice legal compliance, which is at the heart of the Company Philosophy to "be fair and straightforward" in their actions while striving to gain the support of all of our stakeholders as a company aiming to "Create a Freshening World."

### Compliance Promotion System

We are building a Compliance Promotion System that encompasses our Group companies. We work to practice compliance unified as a Group with the Shinryo Corporation Compliance Committee and Compliance Promotion Division at our core.

**Compliance Promotion System diagram**




### Shinryo Group Code of Business Conduct

We, the executives and employees of Shinryo Group, have basic and common awareness of corporate ethics and compliance in accordance with Shinryo Group's company philosophy and this Code of Business Conduct and Standards of Conduct, and positively practice compliance in our daily business with a strong sense of belonging to the company.

**Shinryo Group Code of Business Conduct**

1. Pursue customer satisfaction by standing in customers' positions.
2. Pursue management efficiency for the sake of shareholders.
3. Create energetic and comfortable workplaces that staff can show their families how proud they are of their Company.
4. Together with our business partners, thoroughly comply with corporate ethics, laws, and regulations and conduct fair, transparent, and open.
5. Constantly pursue how we should be as a member of a healthy society.
6. As a global enterprise, contribute to the societal development of related countries.

### Compliance Guidelines

Shinryo Group Compliance Guidelines are the basic principles all of the executives and employees of Shinryo Group must adhere to. These guidelines are founded in our Company Philosophy, Code of Business Conduct, and Standards of Conduct, and we have defined the Specific Compliance Items for the Code of Business Conduct and Standards of Conduct, which are our evaluation criteria in conducting our day-today business. In addition, Shinryo Corporation and all of the executives and employees of Group companies have taken the guideline education and have committed to compliance.

#### Explanations on Related Laws and Regulations booklet

Shinryo Corporation created the Explanations on Related Laws and Regulations as a separate booklet from the Shinryo Group Compliance Guidelines. This information is advantageous in education as a manual bringing together systematically organized laws such as the Antimonopoly Act and Construction Industry Law. In addition, we will work to update this information and raise awareness following legal amendments.

#### Collection of Compliance Examples

Shinryo Corporation created a Collection of Compliance Examples extracted from specific examples related to compliance as a document to use in compliance education. We have included a wide range of content to select examples appropriate to the class and role of the student to further ingrain compliance awareness in all executives and employees.

## Establishment of the “Helpline” Consultation Service

We have a Helpline compliance consultation service installed with the objective of preventing legal violations or inappropriateness as well as quickly discovering and correcting signs of these issues. We are working to make it widely used by all persons participating in the work of Shinryo Corporation.

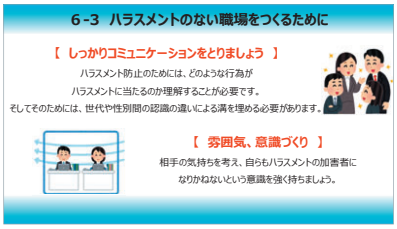
## Implementation of Comprehensive Compliance Education

### Implementation of education for every executive and employee throughout the Group

Compliance education is regularly held for Shinryo Corporation and Group companies worldwide. In fiscal 2020, the education addressed harassment. By handling social issues in a timely manner, Shinryo Corporation strives to build an environment to engage in operations while always keeping in mind compliance.

### Periodic Distribution of Shinryo Compliance News

Shinryo Compliance News is distributed periodically by email to all of our executives and employees. The news covers a broad range of topics from legal explanations about the Construction Industry Law and other statutory regulations relevant to Shinryo Group businesses, and points on legal amendments to compliance in the workplace. Each issue also provides a system to easily offer feedback and make inquiries about compliance through a questionnaire.



Shinryo Compliance News

### Implementation of Antimonopoly Act Training

We are deepening understanding of comprehensive compliance to the Antimonopoly Act by conducting Antimonopoly Act Training mainly for employees in marketing positions. In October 2020, Shinryo Corporation expanded this training to administrative employees to raise even greater awareness in the Group.

### Implementation of Broad Education

Shinryo Corporation provides education that is tailored to the target trainees.

| Target Trainees | Content |
|---|---|
| Engineers | Compliance violations likely to occur on construction sites |
| New employees | Explanation on Compliance Guidelines |
| New mid-level employees | Explanation on Compliance Guidelines |
| Newly promoted employees | Companies and compliance |
| Managers | Explanation on civil code amendments |
| Employees in each department | Various compliance violations likely to occur in business |

## Cooperation Between Group Companies

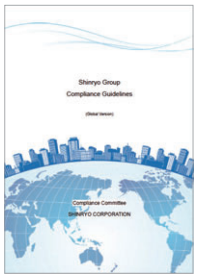
We regularly hold informational liaison meetings with Group companies in Japan and share information about compliance such as response to legal reforms and formulation of internal rules to unify compliance awareness and operation as Shinryo Group.

## Strengthening compliance at overseas local companies

### Formulation of Overseas Guidelines

We formulated the Compliance Guidelines (Global Version) for Japanese employees active globally as well as executives and employees of overseas Group companies. We are defining basic mandatory principles in-line with different cultures and customs everyone should adhere to based on compliance with each type of international rule which includes compliance to the laws and regulations in each country and region as well as human rights. In addition, all managers undergo education for these guidelines and vow to adhere to this compliance.

Shinryo Corporation has also built a system to provide education on compliance required outside of Japan for Japanese employees newly dispatched overseas to deepen understanding before they take their post.



Compliance Guidelines (Global Version)

### Thorough Compliance to Guidelines for Anti-corruption Overseas

Shinryo Corporation has formulated and conducts operations under the Guidelines for Anti-corruption Overseas. These guidelines clarify compliance items and the compliance system related to government officials when conducting business overseas. These guidelines also include countermeasures tailored to the circumstances of each country and region in addition to basic principles as well as anti-corruption concepts common to each country. We respond to changes both statutory and political in a timely manner while continually making revisions. Furthermore, all of the Japanese employees who work at overseas bases as well as executives and employees from local companies participate in training about these guidelines.

**Shinryo Group Basic Principles on Anti-corruption Overseas**

1. We will not pursue the acquisition, expansion or profit in business through bribery or any other inappropriate means.
2. We will comply with bribery and anti-corruption laws and regulations in each country and region while adhering to Article 18 of the Unfair Competition Prevention Act in Japan (prohibition of illicit profits to foreign public officials).
3. We will never give gifts with the intention of acquiring business or gaining favor even if such practices are customary in the country or region.

# Responding to Antisocial Forces

We will work to stay faithful to our Code of Business Conduct and Standards of Conduct stating our intention to never succumb to the threats of antisocial forces and resolutely eliminate them in a courageous manner.

# Sustainability Promotion Activities at Shinryo Group Companies

**Each company of Shinryo Group is aiding in the growth of society from initiatives to solve social issues through its businesses.**

## Akita Castle Hotel Co., Ltd.

### Eco Hotel Declaration with the Aim of an Environmentally-friendly Hotel

Hideyuki Nagasawa
President, Representative Director

Date of Establishment: 1970
Address: 1-3-5 Nakadori, Akita-shi, Akita

Akita Castle Hotel has come to be loved as a place of local community events through hotel, wedding, banquet, restaurant and other services since opening in 1970. Under a theme of incorporating hotel quality in welfare sites, we expanded our activities in 2001 by developing a medical business to supply meals to hospitals and other welfare facilities. Our mission is to deliver hospitality customers love by relying on the expertise that we have gained since our founding.

Our hotel took many steps to prevent the spread of COVID-19 infection as an urgent mission to ensure the safety and security of everyone. These measures included thorough sanitation of the hotel, staff wearing masks, and social distancing. I feel an approach that very carefully addresses the needs of each person in a detailed manner is expected more than ever before.

We also launched the Eco Hotel Declaration to promote higher energy savings in hotel equipment, the adoption of paper straws, use of biomass ink, and other activities that help protect the environment. The Akita Castle Hotel strives to build an appealing hotel while adapting to an evolving sense of values in the new world from SDGs and other such perspectives.

Thanks to all of our patrons, we celebrated our 50th anniversary last year. Our hotel will respond to the changes in society and pursue services offering comfort right for customer needs.

Hotel Exterior

Adoption of Paper Straws and Paper Bags Printed Using Biomass Ink

## Global Staff Co., Ltd.

### Transforming Changes in Society to Opportunities with the Aim of Growth

Hiroki Kishimoto
President, Representative Director

Date of Establishment: 1998
Address: Shinryo No.5 Bldg., 14 Arakicho, Shinjuku-ku, Tokyo

Global Staff was founded in 1998 to provide outsourcing services from human resource deployment and human resource recruiting services to office work outsourcing focusing on construction and retail service businesses. As human resource recruiting services increasingly receive inquiries, we communicate closely with clients to best match the experience and skills of candidates with client needs in an effort to please both the client and the candidate.

In a construction industry facing labor shortages, Global Staff acts as place to ensure the active participation of excellent architectural engineers with vast experience in their 60s and 70s. Many veteran engineers today are actively working in many different types of employment roles. Many of our clients have praised our services by telling us how hiring veteran engineers transforms the division of labor and helps prevent long working hours throughout their entire company or how their vast experience makes it easy to entrust them with work. I have come to feel our services help contribute to the development of a sustainable society with our customers.

The social environment surrounding our company is always changing, such as reforms in work styles to telework or working at home, and amendments to labor laws. However, I see these changes as an important opportunity to continually take on the challenge of finding solutions to problems. Global Staff aims to foster further growth by quickly and flexibly adapting to the changes in society and supporting each employee to enthusiastically engage in their work.

Remote Interview with a Candidate

## Shinryo Technical Service Corporation

### Ideal Annual Maintenance Proposals

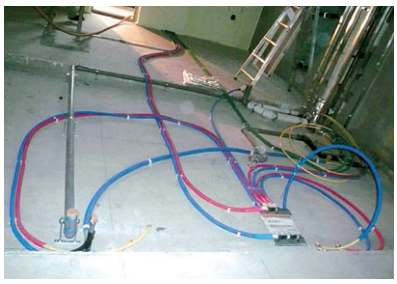
Shinryo Technical Service Corporation proposes ideal annual maintenance plans to customers that take into account everything from the runtime and operational procedures of equipment to maintenance periods recommended by manufacturers. These proposals strive to sustain the initial performance of equipment and prolong trouble-free use. During equipment renewals, Shinryo Technical Service Corporation proposes equipment that can provide energy savings throughout the life cycle and better facility systems.

Proposal Meeting of Maintenance Plans

## Shiroguchi Co., Ltd.

### Use of the Smart Siphon Waste Water System

Shiroguchi introduced the Smart Siphon Waste Water System into the (Tentative Name) Kameido 6-chome Project in Koto-ku, Tokyo. A traditional waste water system uses gravity and requires an incline for piping to drain water, which limits options for waste water facilities. The introduction of this new system eliminates the need for a slope by using siphon power to improve the layout freedom of waste water facilities. This innovation can contribute to longer lasting buildings and higher resource value by making it easier to revise the layout of facilities.



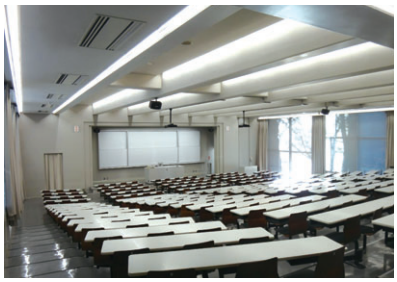
Installation of the Smart Siphon

## Daiei Denki Co., Ltd.

### Energy-saving Proposals for Educational Institutes

Daiei Denki proposes strategic renewal plans to save energy and reduce greenhouse gas emissions from electric systems of educational institutes that are long time clients.

The company strives to provide eco-friendly power reception and transformer systems, such as the adoption of LED lighting and motion sensor controls, while consulting with each customer. This includes the implementation of the Top Runner Transformer 2014 earlier than the standard renewal timing to dramatically enhance energy-saving performance compared to a conventional transformer.



LED Lighting in Classrooms

## Shinryo Kougyo LTD.

### Disaster Recovery Support of the Tohoku Region

Shinryo Kougyo was in charge of overhauling the waste water pump at the Shimekiri-numa No. 2 Waste Drainage System (Pump System) in Miyagi Prefecture, which went offline due to damage from the torrential rain during Typhoon Hagibis in 2019. The waste water drainage system is a facility that not only reduces flood damage from excess water pooling on farmland and roadways but also protects the life and property of local residents. Shinryo Kougyo worked to quickly recover the system while servicing and recycling the equipment that is used in addition to putting in place steps to prevent damage from disasters in the future, such as raising the switchboard.

Pump After Servicing

## SYSPRO CORPORATION

### Protecting Important Customer Information

SYSPRO CORPORATION strictly manages the document and drawing data given to us by customers as well as the model data and programs delivered to customers on internal and external servers able to restrict access to a limited number of people. The company constantly monitors the status of networks and hardware and provides essential maintenance, such as updates to software to respond to the latest cyber threats, to protect customer data whether loss or leakage.

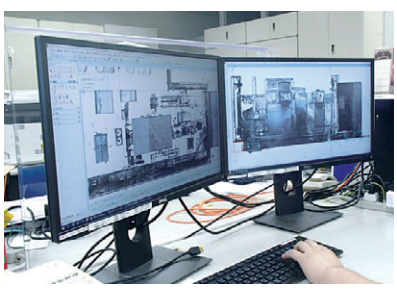
Server Maintenance

## LE PRO CORPORATION

### Proposing More Rational Operations Through BIM*

Conventional system repairs require measurements by hand if there are no up-to-date blueprints to create and revise the drawings. However, the use of laser scanning measurement technologies dramatically reduces the labor required for these measurements. The transition of measurement data to a CAD format enables rational proposals in line with site needs from reviewing work drawings to installation simulations.

*BIM: Building Information Modeling



BIM Conversion of Measurement Data

## THAI SHINRYO

### Online Technical Training

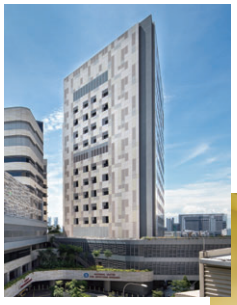
THAI SHINRYO held online technical training for engineer staff. This online training program intended to enhance the skills of employees as project managers is a 20-hour course that was taken by about 50 engineers on a broad range of things from technical topics such as design calculations, installation quality and material selection to on-site topics such as operational procedures and safety management. The program was held online on short notice to prevent the spread of COVID-19 infection. However, this new distance-learning format proved effective by allowing on-site staff who were too far away to take the course in person to participate, which increased the number of people able to undergo the training compared to previous years.


Lecture During the Training

## SHINRYO SINGAPORE

### Social Contributions Led by the National Centre for Infectious Diseases

The National Centre for Infectious Diseases (NCID) was built in 2018 in preparation for any large-scale infectious disease pandemics. It offers a NCID that receives and treats patients with infectious diseases as well as Centre for Healthcare Innivation (CHI). Shinryo Corporation was in charge of building the air-conditioning and mechanical ventilation system. Today, NCID is on the front lines using all of its capabilities to treat the COVID-19 pandemic in Singapore. SHINRYO SINGAPORE has been entrusted with future system maintenance, and it will make every effort to ensure to sustain NCID functions as a medical institution.



NCID Exterior

NCID Interior

## SHINRYO MALAYSIA

### On-Site Safety Forum Held at the Cogeneration Plant

SHINRYO MALAYSIA celebrated 250,000 hours free of accidents requiring time off of work and held a safety forum at its Malaysia cogeneration plant. All of our customers and partner companies participated on the day of the forum with speeches from on-site safety managers to help reaffirm the importance of safety procedures. SHINRYO MALAYSIA also presented mementos to partner companies and employees who brought awareness to safety and have helped on-site operations for many years.

With Safety First for Our Prosperity as a basic policy, we will always endeavor to eradicate occupational accidents.

Safety Forum

## SHINRYO INDONESIA

### Work Style Reform Promotion

Shinryo Corporation and local Shinryo Group companies launched an Overseas Work Style Reform Project. This effort aims to reduce overtime and improve the leave acquisition rate to realize better work styles by considering the circumstances in each country. Singapore, Indonesia, the Philippines, and Vietnam will lead the roll-out of the project before it is expanded to other local companies.

SHINRYO INDONESIA headquarters and construction sites will reference the Shinryo Corporation Refreshing Work Style Project toward work style reforms to implement initiatives, such as no overtime days and on-site management using tablets, in the hope of improving work efficiency and productivity as well as building a more appealing workplace.

On-site Management Using Tablets

# Social Engagement

**Shinryo Corporation actively conducts activities to demonstrate the importance of community and culture as a company that contributes to the development of sustainable society. We also believe that steadily accumulating small, close-at-hand activities is important in engaging with local communities.**

## Donation Activities

### Donations to Organizations Supporting Disaster-afflicted Areas

Shinryo Corporation has been a supporting member of the non-profit organization Japan Voluntary Organizations Active in Disaster (JVOAD) since 2018. This organization provides a system to quickly obtain information from disaster-afflicted areas to make contributions according to needs.

In light of the growing number of serious and more frequent natural disasters of modern times and need for support in disaster-afflicted areas over the longer term, Shinryo Corporation also continues to donate funding to organization that actively support the recovery of disaster-afflicted areas.

In November 2019, we sought to help people affected by Typhoon Hagibis and donated 5 million yen to JVOAD to provide relief to people and for recovery support activities of areas afflicted by the disaster.

### Donation of Old Model Uniforms

In July 2020, Shinryo Corporation donated roughly 2,000 old model and unused uniforms (equivalent to 5.8 million yen) to the Japan Relief Clothing Center (JRCC). As Shinryo Corporation searched for a way to use these old uniforms, this donation became a way to sponsor JRCC activities that provide clothing aid to refugees, people afflicted by disasters and other people in need worldwide. The JRCC sent these uniforms as relief supplies to international institutions and organizations such as the Red Cross who expressed their need in Africa and the rest of the world.

Uniform Shipment

## Volunteer Activities

Our corporate divisions and branches in Japan take part in the Plus Volunteer Activity. The Plus Volunteer Activity aims to add (plus) clean-up and other volunteer activities to events such as gatherings with employees, families and partner companies held at each department. Our overseas local companies also continually take part in volunteer activities deeply rooted in local communities.

### Clean-up Activities Around the Dormitory (New Employees)

In September 2020, new Shinryo employees took part in a clean-up activity to pick up fallen leaves and other trash in the gutters and on the roads around the Kofu Training Dormitory. This effort shares our gratitude with the local community that supports us on a daily basis.

Clean-up Activity Along the Road

### Welfare Volunteer Activities (SHINRYO HONG KONG)

In May 2020, five employees from SHINRYO HONG KONG took part in activities held by Open Door Community Services in Hong Kong to distribute masks, antiseptic gel, food, and other supplies to people in need. SHINRYO HONG KONG has sponsored the volunteer activities and community services of this organization for people in need and has continually supported their activities for ten years since 2011. We hope to continue our contributions to the local Hong Kong community.

Group Photo of All the Participants Lifesaving Training

## Support for Culture and the Arts

Shinryo Corporation promotes activities to support the development of superb and vibrant arts and culture.

### We support the following organizations:

NHK Symphony Orchestra, Tokyo/Orchestra Ensemble Kanazawa/Osaka Symphony Orchestra/Osaka Philharmonic Orchestra/Kanagawa Philharmonic Orchestra/Kansai Philharmonic Orchestra/The Kyushu Symphony Orchestra/Sapporo Symphony Orchestra/New National Theatre, Tokyo/New Japan Philharmonic/Sendai Philharmonic Orchestra/Central Aichi Symphony Orchestra/Tokyo Symphony Orchestra/Tokyo Metropolitan Symphony Orchestra/Tokyo Nikikai Opera Foundation/Tokyo Philharmonic Orchestra/Nagoya Philharmonic Orchestra/The Japan Opera Foundation/Japan Century Symphony Orchestra/Japan Philharmonic Orchestra/Japan Performing Arts Foundation/Hiroshima Symphony Orchestra/Asami Maki Ballet/Yomiuri Nippon Symphony Orchestra

# Activity Results of Shinryo Group and Priority Subject Breakdown

Shinryo Corporation organized SDGs and priority subjects to emphasize in its initiatives (p. 23 to p. 28). This page summarizes the report themes and location of specific information about the new prioritized issues.

| FY 2020 Activities | | | Reference page |
|---|---|---|---|
| **Sustainability Promotion Management** | | • Toward the Development of a Sustainable Society<br>• Sustainability Promotion System<br>• Process for Considering Priority Subjects<br>• Dialogue on Sustainability Development Goals (SDGs)<br>• Determining Priority Subjects (Materiality) | 23-28 |
| **Initiatives to Address Priority Subjects** | **Priority Subject 1**<br>**Contribute to a Decarbonized Society** | Approach to a Decarbonized Society | 29-32 |
| | | Environmental Management System (EMS)<br>• Response to the Amended Act on Rational Use and Proper Management of Fluorocarbons<br>• 3R Promotion Initiatives | 33 |
| | | Various Environmental Initiatives<br>• Participation in the Keidanren Declaration on Challenge Zero<br>• Rated an Excellent Company (S Class) Under the Energy Saving Act<br>• Ecological Conservation Activities Enlightenment Program "the Environmental Renaissance Activities" | 34 |
| | **Priority Subject 2**<br>**Contribute to a Resilient Society** | Contributions to Advanced Medical Facilities: IUHW Narita Hospital | 35-36 |
| | | Contributions to Energy Savings, $CO_2$ Emission Reductions, and Local BCP: Kiyohara Smart Energy Center | 37-38 |
| | | Contributions to Education and Research: Lab 4 at the Okinawa Institute of Science and Technology Graduate University (OIST) | 39 |
| | | Contributions to BCP Sites: New Yokohama City Hall | 40 |
| | | Contributions to Vibrant Urban Development: Hareza Tower | 41 |
| | | Contributions to Urban Distribution Centers: PHNOM PENH LOGISTICS CENTER | 42 |
| | **Priority Subject 3**<br>**Realize Safe and Highly Efficient Work Processes** | Quality Management System (QMS)<br>• Ongoing Improvements to Work Processes Using QMS<br>• Initiatives to Improve On-site Construction Quality | 43-44 |
| | | Health and Safety Initiatives | 45 |
| | | CSR Procurement Guidelines | 46 |
| | **Priority Subject 4**<br>**Build Refreshing Environments Rich with Creativity** | Toward New Work Style<br>• Various Efficiency Initiatives on Construction Sites<br>• Building an Environment to Accommodate New Work Styles<br>• Refreshing Work Style Project for Employees to Reform Their Own Work Styles | 47-48 |
| | | Cultivating an Enthusiastic Workplace<br>• Introduction of Programs to Support Flexible Work Styles<br>• Activities to Promote Active Participation of Diverse Human Resources<br>• Physical and Mental Health<br>• Workplace Communication | 49-50 |
| | | Human Resource Development Rich with Creativity<br>• Promotion Systems for Education and Training<br>• Training and Education for Diverse Human Resources | 51-52 |
| | | Corporate Governance<br>• Corporate Governance System<br>• Internal Control<br>• Risk Management/Business Continuity Plan (BCP) | 53-54 |
| | | Compliance<br>• Comprehensive Compliance<br>• Responding to Antisocial Forces | 55-56 |
| **Sustainability Promotion Activities at Shinryo Group Companies** | | Activities of Group Companies Worldwide (12 Companies) | 57-59 |
| **Social Engagement** | | • Donation Activities<br>• Volunteer Activities<br>• Support for Culture and the Arts | 60 |

SHINRYO REPORT 2021

Published January 2021 (Next Report Scheduled for January 2022)

Shinryo Corporation

Sustainability Promotion Department, Corporate Strategy and Planning Division

COMORE YOTSUYA/YOTSUYA TOWER, 5th Floor, 1-6-1, Yotsuya, Shinjuku-ku, Tokyo 160-8510, Japan

**https://www.shinryo.com/sustainability/**

SHINRYO CORPORATION

Published in January 2021