



Do the best for Environment! TakasaGo!



Environmental solution professional company contributing to the global environment
Takasago Thermal Engineering Group

TAKASAGO CORPORATE REPORT 2017



Our technology for our earth

CONTENTS

Vision and summary

- 03** Top Message
- 07** Corporate Information
- 09** Corporate History
- 11** Business Performance Highlights

Group businesses

- 23** Business conducted by
- 25** the Takasago Thermal Engineering Group
- 27** Group companies in Japan
- Overseas Group Companies

Action for Value creation

- 13** Creation of value by the Takasago Thermal Engineering Group
- 15** Medium-term Business Plan
- 19** Special Feature:Development of FM and PM services

CSR management

- 29 CSR Management
in the Takasago Thermal Engineering Group
- 31 Fair and highly transparent management
- 33 Enhancement of Corporate Governance
- 35 Further improvement of customer satisfaction
- 37 Research and Development
- 39 Contribution to environmental conservation
- 41 Realization of Employee Satisfaction
- 44 Harmony with society

- 45 Introduction
of Executives
- 46 Stock information

Editorial policy

This booklet is the first issue of our Corporate Report (an integrated report). We have kept in mind that this Report contains useful information for those who are interested in the current situation and mid- to long-term future of the Takasago Thermal Engineering Group. We will continue to improve the quality of the Report based on your feedback and ideas. Please refer to the materials below for detailed information.

●Target organizations for this Report

Takasago Thermal Engineering Co., Ltd. (all offices both in Japan and overseas) and Takasago Thermal Engineering Group companies

* The entire Takasago Thermal Engineering Group is referred to as "the Takasago Thermal Engineering Group" or "the Group," and Takasago Thermal Engineering Co., Ltd. alone is referred to as "Takasago Thermal Engineering" or "we."

●Reporting period

April 1, 2016 to March 31, 2017

* Some information before/after the period above is included.

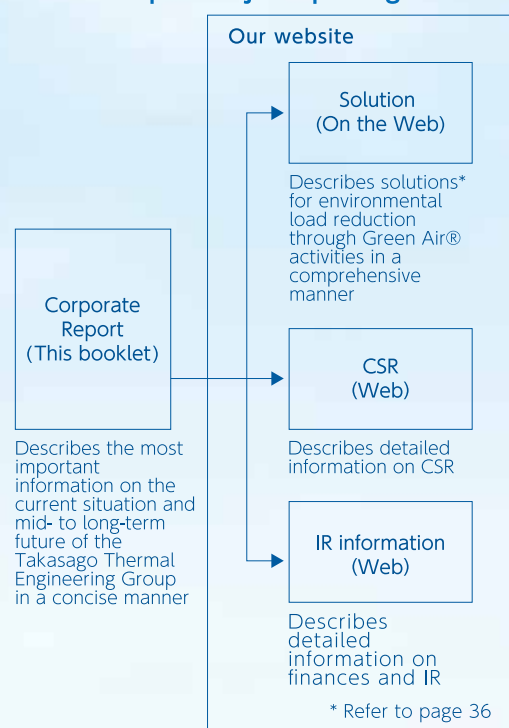
●Month of issue

August 2017 (Next issue is planned for August 2018)

●Referenced guidelines

- *International Integrated Reporting Framework*, International Integrated Reporting Council (IIRC)
- *G4 Sustainability Reporting Guidelines* (4th edition), Global Reporting Initiative (GRI)

Relationship of major reporting materials



Our innovation toward the realization of our long-term management framework has moved on to the second step, and the pace of innovation is further accelerating. At Takasago Thermal Engineering Co., Ltd., we will contribute to the global movement towards a decarbonized society, while taking forward our transformation into an integrated engineering company.



Looking ahead to the changing world

The Takasago Thermal Engineering Group aims to maintain and raise its corporate value in a continuous and sustainable manner, while looking ahead to possible changes in the business environment over the short, medium, and long terms. As for the business environment in Japan, we expect that it will remain generally steady until 2020, due to construction investment and other investments for the Tokyo Olympic and Paralympic Games. After the Games, however, demand for construction will almost certainly decrease. In local regions in particular, the population will seriously decrease and public investment is also expected to trend downward.

On the other hand, as the elderly population increases, new needs in terms of residences and medical care, which never existed before, are emerging. In addition, in the construction industry, a shift *from flow to stock management*, which means a shift from focusing on new construction to effectively reusing existing buildings, is already affecting the roles of construction and the facilities themselves, partly under the encouragement of the Ministry of Land, Infrastructure, Transport and Tourism.

Meanwhile, as for the overseas business environment, uncertainty has risen due to international political factors, such as the start of the new administration in the United States and the activities of the Islamic State.

Currently, the main customers of the Group are Japanese and Western companies developing their business overseas, and forecasts for investment from these companies are greatly fluctuating, thus our business environment is quite unpredictable. Since we have put our employees' safety first, we also have concerns about terrorist attacks taking place around the world. Nevertheless, from the medium- and long-term perspectives, the Asian and Mexican economies, in which the Group's business bases are located, have plenty of room for growth in the future, as they do now. Our key challenge is to leverage their economic growth for the Group's business opportunities.

Taking into account these changes, the Group has been and will continue promoting its long-term management framework, GReen PRIDE 100, over the course of ten years, starting in FY 2014.

Stepping stones to the future

In the medium-term business plan, iNnovate on 2016 (FY 2014 - 2016), which is the first step in our long-term management framework, we worked on building the foundations for innovation, while focusing on *the enhancement of on-site capabilities, making human resource development a top priority, and securing stable profits* as priority issues. As a result, our ordinary income was 13.4 billion yen, far exceeding our target of 10 billion yen, although orders received and net sales didn't reach our targets. Leveraging these steady business results, we need to take the next step, and another, toward our future.

As part of the plan, we are proceeding with initiatives to transform our business, which today almost exclusively specializes in HVAC system construction, into a *comprehensive equipment* provider which offers all-in-one solutions in areas ranging from electricity, sanitation, communications, and interiors to HVAC-related products. We are also making efforts to uncover demand for renovation in a society which values "stock" (existing buildings), and to strengthen our capabilities to respond to it.

Furthermore, the Group has started to expand our business in earnest, beyond the market for equipment installation, into the markets for facility management (FM) and property management (PM). These aim to support our customers in the management of buildings and other properties, in addition to

the operation and management of equipment. We will make efforts to increase orders with these approaches leveraging the Group's strengths.

As the basis on which we proceed with this business development, the Group has "assets," or extensive experience gained from our actual construction work, which is the best in the industry. Data and knowledge acquired from the actual sites of various construction projects are a great advantage in offering proposals for the optimal operation of facilities and maintenance methods. We think that this will become more advantageous when using state-of-the-art technologies such as the IoT and AI.

In overseas markets, we have further ventured to develop our integrated business, centering on plant construction, including the design and construction of whole buildings.

In the past, the Group used to start its overseas operations by establishing local subsidiaries, but from now on we will prioritize speed more than before and take into account alliances with local partners as an important alternative.

The Group will avoid slipping into complacency, keep innovation always in mind, and carry out growth strategies as professionals managing heat based on skills and know-how that we have gained over the course of many years.

● Long-term Management Framework and Medium-term Business Plans

Long-term management framework, (FY 2014 - 2023) **"GReeN PR!DE 100"**

First step

Medium-term business plan
iNnovate on 2016
(FY 2014 -2016)

Second step

Medium-term business plan
iNnovate on 2019
just move on!
(FY 2017-2019)

Third step

Next medium-term
business plan

Basic themes

Establishment of the foundations for innovation



Bold implementation of innovations for growth



Realization of our dreams and taking further steps

Business targets

Net sales **293** billion yen
Ordinary income **10** billion yen



Net sales **340** billion yen
Ordinary income **13.5** billion yen



Net sales **400** billion yen
Ordinary income **15** billion yen

Contribution to establishment of a decarbonized society

The Paris Agreement, adopted at the 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21) in December 2015, aims for net zero emissions of greenhouse gases around the world by the end of this century. Reflecting this, support for a long-term vision of a decarbonized society has spread across international society.

This is an important business opportunity as well as a big challenge for the Group because we have always earnestly sought energy efficiency in buildings and industrial facilities. In the new medium-term business plan, iNnovate on 2019 just move on! (FY 2017 - 2019), we have developed a vision of the Group for the future, "Contribution to the world by pursuing a decarbonized society through environmental engineering," in line with demand from international society.

We have considered this *environmental engineering business* as a further developed form of the *Multidiscipline engineering business*, derived from the conventional equipment installation business. For example, we need to seek the ultimate in energy savings and work on engineering, or *monodzukuri* (manufacturing),

so as to make not only systems but also whole buildings that are environmentally friendly.

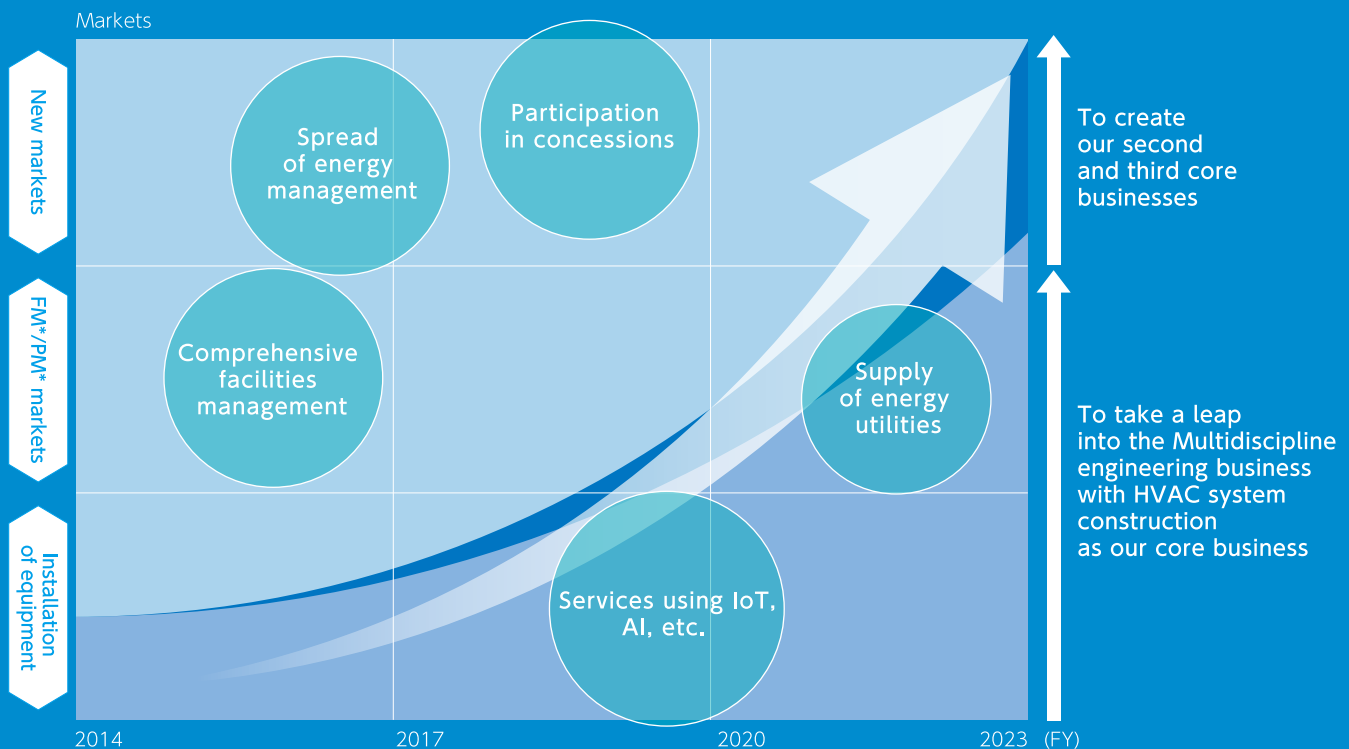
As for international business under full turnkey contracts, which has been already undertaken mainly by our international affiliates, the energy saving business, which is greatly contributing to global environmental conservation, is expected to grow. Furthermore, the potential for the carbon management business will be further expanded by adding labor-saving heat source systems which are essential for industrial facilities and the supply and management of utilities as new markets for business.

For that purpose, we're proceeding with technological development in a strategic manner.

Markets that accept such advanced energy-saving support are being gradually formed, in Japan certainly, and also overseas. At the same time, we are proceeding with the development of a new business model in which our Group leverages its technological capabilities in various settings and benefits from the value created.

Starting with our current equipment installation business, our Group aims to evolve into a company contributing more to society, through entry into the FM and PM markets and the development of new markets.

Contribution to the world by pursuing a decarbonized society through environmental engineering



*FM: Facility management. Planning and management of facilities and environments
PM: Property management

Creation of mechanisms and development of human resources, to advance innovation

In order to realize our vision forcefully, the Group is proceeding with the *creation of mechanisms* and the *development of human resources*.

In implementing the new medium-term business plan, iNnovate on 2019 just move on! (FY 2017 - 2019), we have carried out a major structural reform. Specifically, we have newly established the Business Innovation Headquarters and established the Innovation Center, as well as a section in charge of the FM and PM businesses. The Innovation Center is a new organization which performs the functions of marketing, research and development, and incubation, to promote the creation of new businesses in an integrated manner.

Resources within the Group have been concentrated in the Center, aiming to strengthen coordination and cooperation so that the Group can band together to drive its new businesses.

In order to build the New Technological Research Institute, which will play a central role in Tsukubamirai City, Ibaraki Prefecture, preparation is currently ongoing. The Institute, which aims to start its operations in 2019, is designed to integrate functions ranging from marketing and research and development for advanced technologies to commercialization. We are proceeding with the development of an information processing platform through which the operational data at the facility will be analyzed in detail by using AI so as to contribute to the effective operation and updating of our facilities.

In order to accelerate open innovation together with external research institutes and other organizations, an initiative with Nagaoka University of Technology, under which comprehensive collaboration was launched in 2014, has finally entered the full-fledged implementation stage, having gone through the preparation stage involving preparations such as personal exchanges.

As for Tsukishima Kikai Co., Ltd., which is engaged in a business and capital alliance with the Group, we will accelerate business expansion related to supplying energy and the efficient use of energy in Japan and overseas together, and the joint development of new technologies and new products.

Meanwhile, we are also proceeding with measures to refresh the mindset of employees who implement these business mechanisms. As well as reviewing and revising the human resource development system, which is currently centered on the Technical Academy, we hold training programs to develop future innovation leaders. Furthermore, in order to develop next-generation executives, an initiative called Young Board, in which employees need to participate in external training for specific periods of time, has started. In addition to conventional education which focuses on the ability to carry out on-site work, we focus on the development of human resources who will have an interest in various global trends, see things from multiple perspectives, and be capable of solving issues with flexible thinking.

We have compiled the purposes of the new medium-term business plan into a leaflet titled Vision Book, so as to execute these measures in a unified direction based on the understanding of all the officers and employees of the Group. We think that the key to success is whether we can share the same vision and work together to combine our abilities.



Investment plans and returns to shareholders

The Group plans to invest 35.0 billion yen under five themes, which are mergers and acquisitions (M&A), the acceleration of globalization, the strengthening of IT infrastructure such as information-processing platforms, the promotion of new business creation, and the strengthening of management infrastructure, for three years from FY 2017, to improve our corporate value in the medium to long term.

The consolidated business forecast for FY 2017 (the year ending on March 31, 2018) estimates that there will be 262.0 billion yen in net sales and 12.0 billion yen in ordinary income. Although profits are projected to decline from the previous fiscal year, this will be due to investment in future growth, and we believe it is essential for the lasting development of the Group.

In terms of returns to shareholders, the Group will offer stable dividends based on a 2% consolidated dividend on equity (DOE), bearing in mind the total return ratio. We will also pursue returns to shareholders including the acquisition of treasury stock, in cases such as if there is no demand for large amounts of stock.

We will continue to carry out business activities that earn us the name *Takasago*, a leading technology-oriented company and act always in accordance with our management policy and principles.

This is the first issue of our Corporate Report (an integrated report). We hope that this report will help you understand the Group's initiatives, and we look forward to your continued support.

Atsushi Ouchi
Chairman and Representative Director, CEO
Takasago Thermal Engineering Co., Ltd.

大内厚

Corporate Information

With its management policy “Contribution to society through personal harmony and creativity,” Takasago Thermal Engineering Co., Ltd. operates businesses related to the air/environment and heat/energy, based on its unique technologies.

Management Policy and Principles

MANAGEMENT POLICY Contribution to society through personal harmony and creativity

MANAGEMENT PRINCIPLES

- 1.To serve society through the development of business activities that focus on the creation of the best product quality
- 2.To develop technology that serves our customers’ needs and utilizes the creativity of all employees
- 3.To enhance personal character and harmony between people by nurturing talent and promoting mutual respect

Company Outline

Company name	Takasago Thermal Engineering Co., Ltd.	Stock listing	First Section of the Tokyo Stock Exchange
Established	November 16, 1923	Head Office	6-27-30, Shinjuku, Shinjuku-ku, Tokyo 160-0022
Number of employees	1,950 (as of March 31, 2017)	Phone (main):	+81-3-6369-8212
Capital	13,134 million yen	Fax (main):	+81-3-6369-9103
End of accounting period	March		

Business Description

- Heating, ventilation and air conditioning (HVAC) systems, clean rooms, and associated systems
- District heating and cooling (DHC) systems and co-generation systems
- Electrical systems and instrument systems
- Equipment diagnosis / failure diagnosis systems and dehumidifying/drying systems
- HVAC systems for nuclear energy facilities and high-precision HVAC systems
- Vacuum conveying systems for waste, and construction work
- Discharged-heat recovery systems and heating/cooling systems
- Refrigerating/freezing systems and plumbing and sanitation systems
- Design, construction, manufacture, and installation of other types of environmental control systems and thermal engineering systems
- Consulting and services concerning energy saving and environmental measures
- Business related to greenhouse gas emissions rights trading
- Purchase and sale, brokerage, lease, and management of real estate
- Labor dispatch business
- Security business and cleaning business
- Energy supply business and power generation business
- Water treatment business

License under the provisions of Article 3, paragraph (1) of the Construction Business Act

Special Construction Business

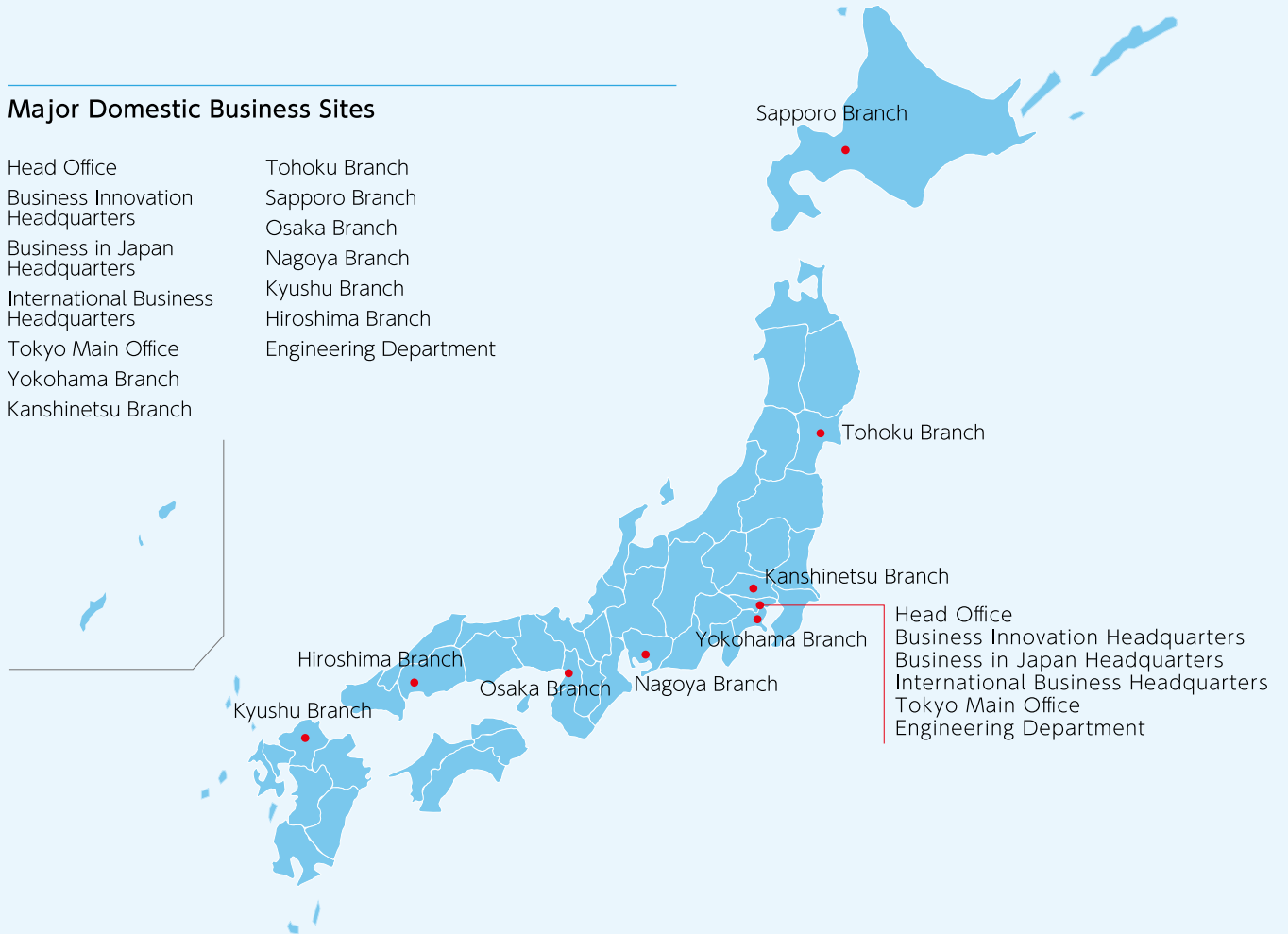
License No.: (TOKU-27) No. 5708 issued by the Minister of Land, Infrastructure, Transport and Tourism
License Date: December 4, 2015
Duration of License Validity: From December 4, 2015 to December 3, 2020
Licensed Fields of Construction Work: Plumbing, Machine and Equipment Installation, Electrical, Telecommunication, and General Building

Ordinary Construction Business

License No.: (HAN-27) No. 5708 issued by the Minister of Land, Infrastructure, Transport and Tourism
License Date: December 4, 2015
Duration of License Validity: From December 4, 2015 to December 3, 2020
Licensed Field of Construction Work: Fire Protection Facilities

Major Domestic Business Sites

Head Office	Tohoku Branch
Business Innovation Headquarters	Sapporo Branch
Business in Japan Headquarters	Osaka Branch
International Business Headquarters	Nagoya Branch
Tokyo Main Office	Kyushu Branch
Yokohama Branch	Hiroshima Branch
Kanshinetsu Branch	Engineering Department



Major examples of construction in recent years



Tokyo Square Garden
 (Society of Heating, Air-Conditioning and Sanitary Engineers of Japan Award: 54th Technical Award, Building Equipment Category)



Makuhari Techno-Garden
 (Society of Heating, Air-Conditioning and Sanitary Engineers of Japan Award: 3rd Special Award, Renewal (Renovation) Award)



Shionogi Pharmaceutical Research Center
 (Society of Heating, Air-Conditioning and Sanitary Engineers of Japan Award: 52nd Technical Award, Building Equipment Category)

Corporate History

Since its foundation in 1923, starting with HVAC system construction, Takasago Thermal Engineering Co., Ltd. has continued to strive for advancement in its technologies, as a designer and constructors trusted by customers, and also as a developer of optimal systems and equipment.

Today, as the world moves towards *decarbonization*, we will respond to the demands of society with the aim of becoming an environmental solution professional company, while further enhancing our technological capabilities.

Review of Technology

1. As constructors (professionals)

Since the foundation of the Company in 1923, heating construction work has been the purpose of our business, and we have constructed HVAC systems for many famous buildings to date, starting with entertainment hall cooling (Mitsukoshi) and whole-building heat pump heating and cooling (Kyoto Dento).

From 1960 onwards, when cooling began to become common, we have had the best construction results in the business, including comfortable HVACs for department stores and skyscrapers such as the World Trade Center Building Tokyo, high quality HVACs for buildings including the New National Theatre, Tokyo and the National Art Center, Tokyo, and HVACs for large spaces such as Tokyo Dome and Kyoto Station. We have also worked on the world's largest DHC systems at the Osaka

Expo venue and in the Shinjuku Fukutoshin (subcenter) area. In addition, we also have had a proven track record in industrial HVAC construction, starting with temperature and humidity conditioning equipment at a rayon plant before World War II (Teijin Iwakuni). Since 1970, we have worked on large-scale clean rooms for the manufacture of electronic components such as LSIs and LCDs and for pharmaceuticals manufacturing, and recently we have also been working on facilities such as dry rooms, which are essential for battery manufacturing processes.

In any era, we will respond to the requirements of the customers and will continue to work as reliable constructors for new or renovated installations.



Heating and Ventilation Vol.1 and 2, written by Masanosuke Yanagimachi Building Mechanical and Electrical Engineering Heritage No. 2



1927 Rayon plant temperature and humidity conditioning equipment (Teijin Iwakuni)



Takasago and Ebara-type centrifugal refrigerating machines JSME Mechanical Engineering Heritage No.42 Building Mechanical and Electrical Engineering Heritage No.15

History of the Takasago Thermal Engineering Group

1920

1923 Takasago Heating Works Co., Ltd. established

1950

1952 Opened Sapporo Office
1959 Opened Nagoya Office
1959 Opened Kyushu Office

1940

1943 Company renamed Takasago Thermal Engineering Co., Ltd.
1949 Opened Osaka Branch

1970

1971 Opened Atsugi Plant
Listed on the Second Section of the Osaka Securities Exchange
1972 Established Nihon Kaihatsu Kosan Co., Ltd. and NIPPON PMAC CO., LTD.
Opened Yokohama Office
1973 Changed listings to the First Sections of the Tokyo and Osaka Stock Exchanges
1974 Opened Singapore Branch

1960

1961 Completed head office building (Kanda Surugadai, Chiyoda-ku, Tokyo)
1965 Opened Hiroshima Office
1967 Opened Tohoku Office
1969 Listed on the Second Section of the Tokyo Stock Exchange

1980

1980 Established Overseas Business Division
Established T.T.E. Engineering (Malaysia) Sdn. Bhd.
1984 Established Thai Takasago Co., Ltd.
Opened General Research Institute
*Renamed Research & Development Center in 2014

2.As a developer (pioneer)

When the Company was first established, it was necessary for us to rely on imports for HVAC equipment. However, in order to construct facilities that the customers could truly be satisfied with, we believed that we should develop our technological capabilities and produce the machines and equipment by ourselves. Thus, starting with the Takasago and Ebara-type centrifugal refrigerating machines produced in 1930, the first of their type made in Japan, we have developed critical equipment, including air washers, Sirocco fans, and cooling towers.

We have since continued to develop many systems and devices, including the water heat source HP system PMAC® in response to demand for individual control of HVAC in 1971, the ice thermal storage system SIS® to support leveling of electric power usage, and the clean room system TCR-MP® and energy-saving dehumidifier WINDS® for dry rooms, in response to demand from the industrial market.

The ethos of the founder, which says, "If there is not something good enough, then we must make it ourselves," has been passed on to today.

3.To become the top company in environmental engineering

As a pioneer in the industry, by providing HVAC systems that support comfortable office environments, industrial HVAC systems that make full use of high technologies that are essential to the manufacturing industry, and energy-saving technologies that can achieve a balance between global environmental conservation and operational cost reduction, in addition to working as a service provider, we have always created spaces to satisfy our customers' needs, which vary as time goes by.

In January 2016, technologies for drastic carbon reduction for data centers and waste heat utilization for offices and other uses that were developed jointly through industry-academia-government collaboration received the Minister of the Environment Award. These collaborative control technologies achieved an energy savings rate of 70% for the first time in the world.

Through further development of the technologies we have accumulated thus far, we will continue to consolidate the capabilities of the entire Takasago Thermal Engineering Group, and as a global company, we will seek to be environmental solution professionals providing solutions and consulting from the customers' point of view.

1990

- 1990 Hong Kong Office upgraded to Hong Kong Branch
- 1991 Opened Kanto Branch *Closed in March 2011
- 1993 Established "Environmental Management Principles" (Global Environment Charter)
- 1994 Established Takasago Thermal Engineering (Hong Kong) Co., Ltd.
- 1998 Established Global Environment Division *Currently, Quality, Environment & Safety Control Division
- 1999 Completed acquisition of ISO 9001 certification for all domestic branches
Completed acquisition of ISO 14001 certification for all domestic branches

2000

- 2000 Established Takasago Maintenance Co., Ltd.
*Renamed Takasago Engineering Service Co., Ltd. in 2008
- 2001 Issued "Green Air®" environmental report
- 2003 Established Takasago Constructors And Engineers (Beijing) Co., Ltd. and CEEDI Takasago Engineering & Consulting Co., Ltd.
Liquidated Takasago Constructors And Engineers (Beijing) Co., Ltd. in April 2012
- 2005 Established Takasago Singapore Pte. Ltd.
- 2006 Introduced executive officer system
Opened Kanshinetsu Branch
- 2007 Established Takasago Vietnam Co., Ltd.
Business and capital alliance with Marusei Co., Ltd.

2010

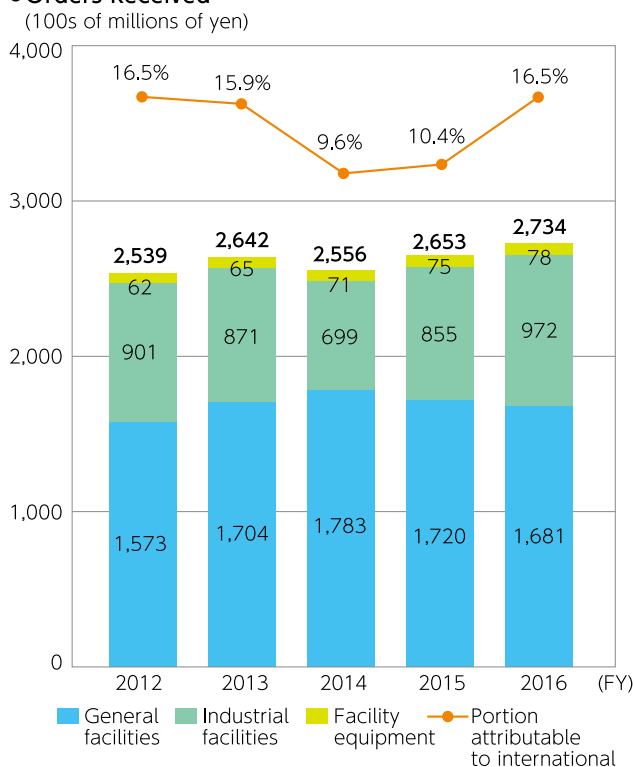
- 2010 Delisted from Osaka Securities Exchange
- 2011 Issued CSR Report
- 2012 Made Nihon Setsubi Kogyo Co., Ltd. an affiliate accounted for by the equity method
Made Marusei Co., Ltd. a consolidated subsidiary
Established "Group Code of Business Conduct"
Established Takasago Engineering India Pvt. Ltd.
- 2013 Formulated the long-term management framework, Green PRIDE 100
Opened GreenAir Plaza
Established PT. Takasago Thermal Engineering
- 2014 Established an office in Myanmar
Entered into a comprehensive collaboration agreement with the Nagaoka University of Technology
Relocated head office from Chiyoda-ku, Tokyo to Shinjuku-ku, Tokyo
Entered into a comprehensive collaboration agreement with the Malaysia-Japan International Institute of Technology (MIIT)
Made Marusei Co., Ltd. a wholly owned subsidiary.
Takasago Marusei Engineering Service Co., Ltd. was established through a merger of Marusei Co., Ltd. and Takasago Engineering Service Co., Ltd.
Entered a business and capital alliance agreement with TSUKISHIMA KIKAI Co., Ltd.
- 2015 Established Takasago Engineering Mexico, S.A. de C.V.
IMade Integrated Cleanroom Technologies Pvt. Ltd. (ICLEAN) (India) an affiliate accounted for by the equity method
- 2016 Formulated the 2019 medium-term business plan, iNnovateon 2019 "just move on!"
- 2017 Entered a business and capital alliance agreement with Yamato Inc.

Business Performance Highlights

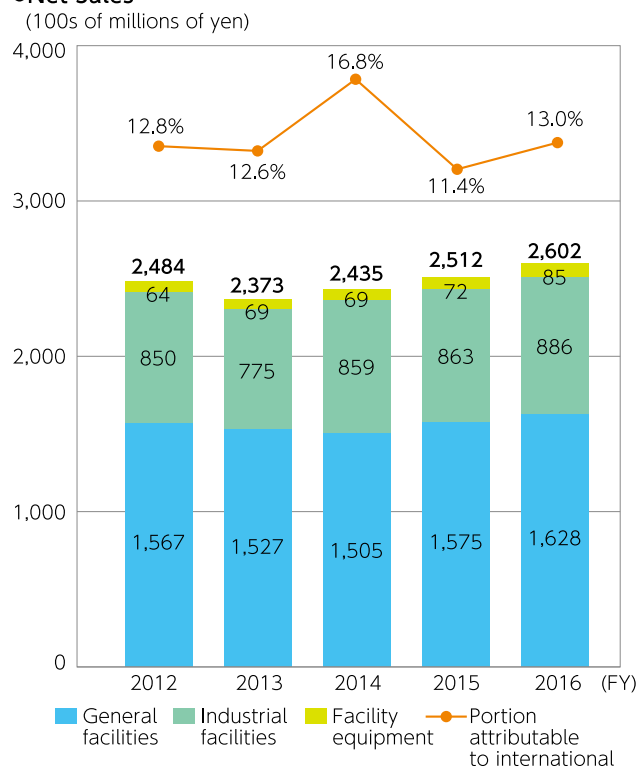
All of our orders received, net sales, and profits in FY 2016 (fiscal year ending March 2017) are the highest since FY 1999, when we began to disclose our consolidated financial information. Furthermore, our net income has reached a record high since the establishment of our company. We have succeeded in achieving the highest level of performance compared to our past performance in terms of both quality and quantity.

Consolidated Financial Highlights

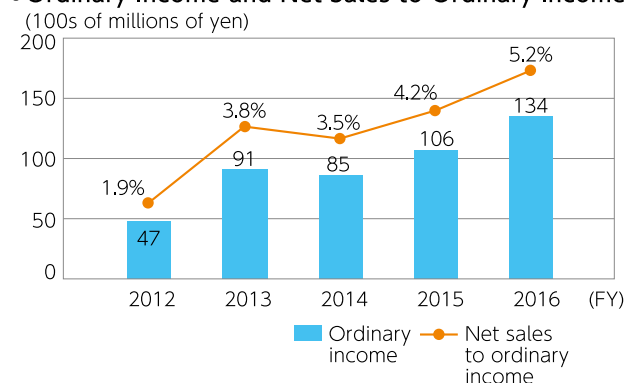
●Orders Received



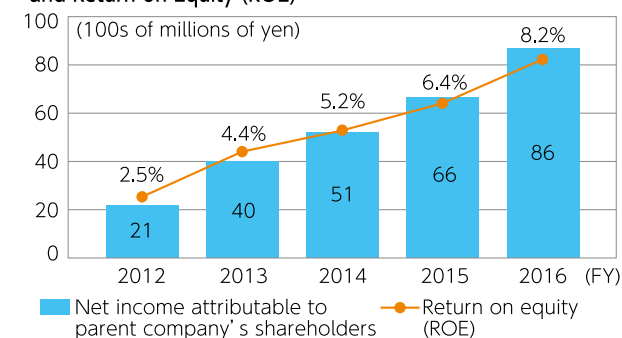
●Net Sales



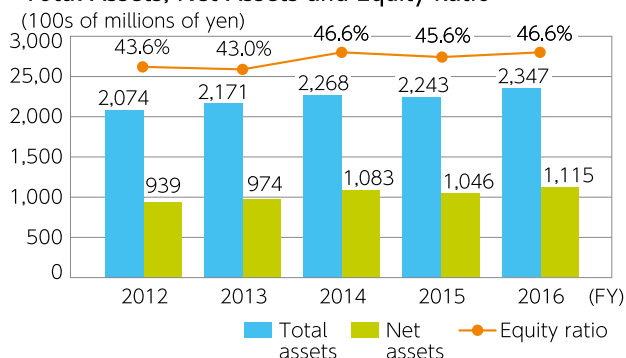
●Ordinary Income and Net Sales to Ordinary Income



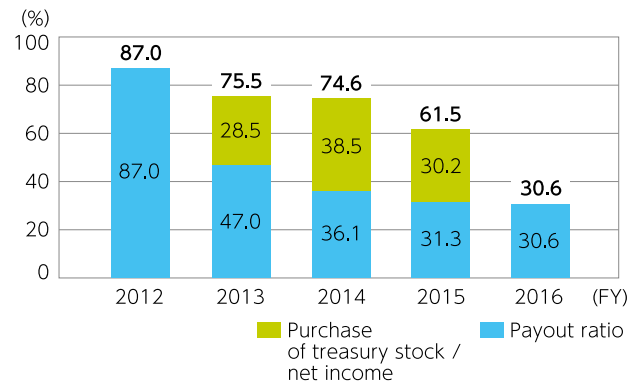
●Net Income Attributable to Parent Company's Shareholders and Return on Equity (ROE)



●Total Assets, Net Assets and Equity Ratio



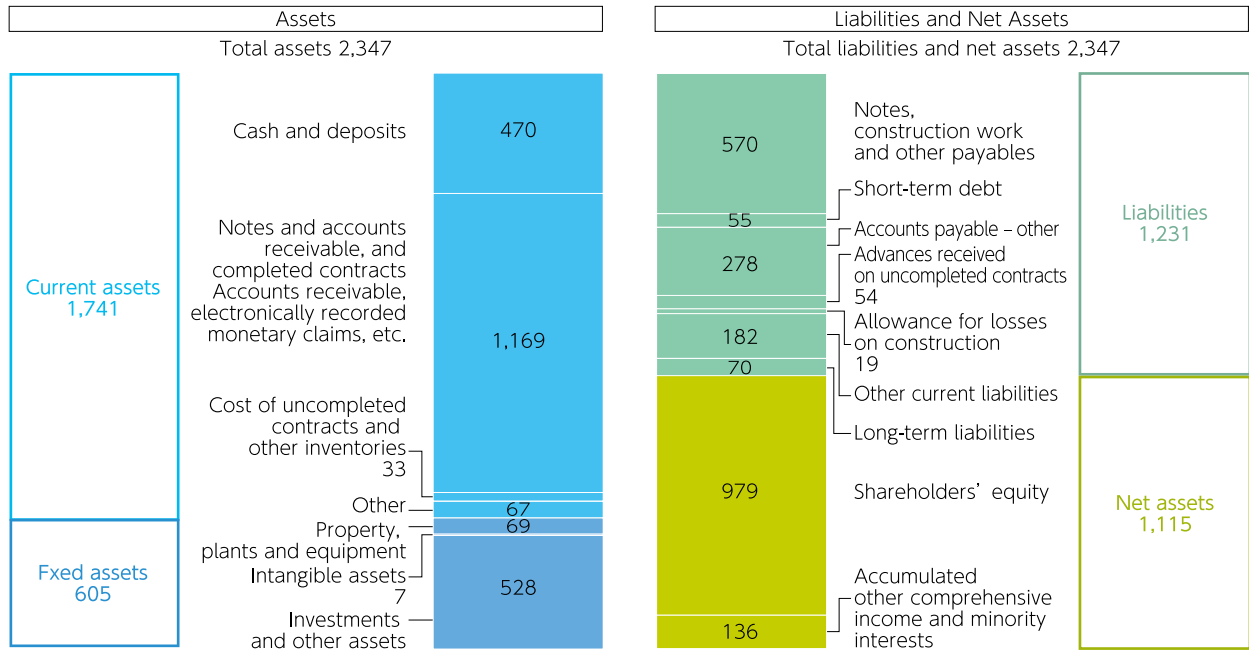
●Total Return Ratio



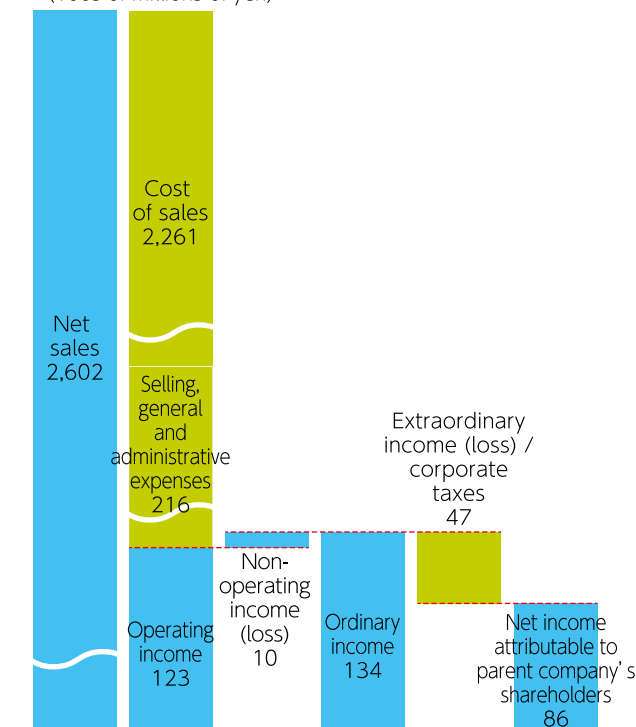
*Figures are rounded down to the nearest unit.

Consolidated Accounting Data

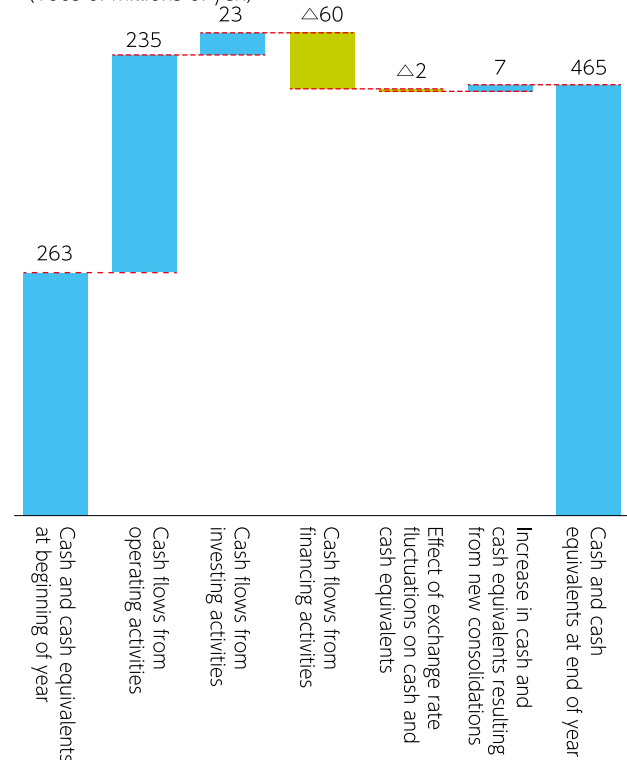
● Consolidated Balance Sheets (100s of millions of yen)



● Consolidated Statements of Income (100s of millions of yen)

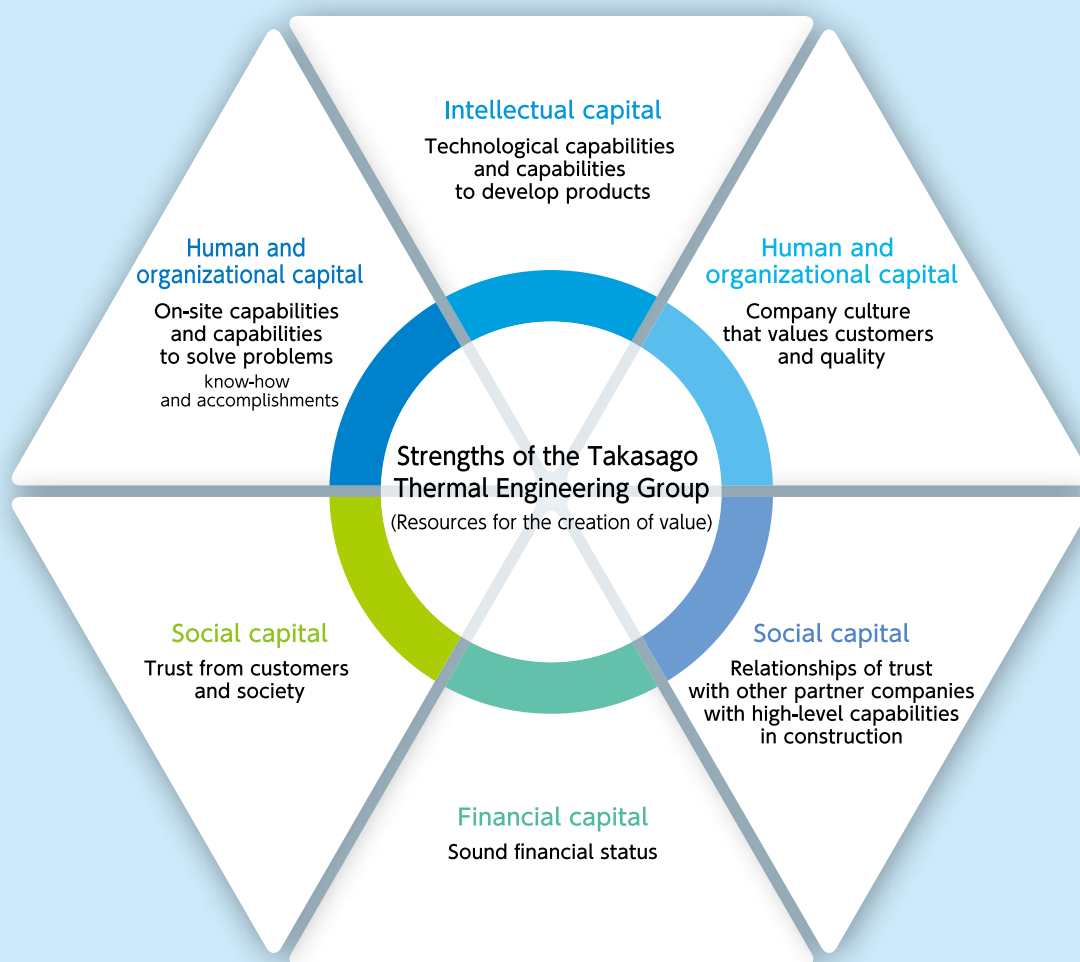


● Consolidated Statements of Cash Flows (100s of millions of yen)



Creation of value by the Takasago Thermal Engineering Group

The Takasago Thermal Engineering Group is making efforts to create social value, by means such as contributing to the establishment of a decarbonized society and creating comfortable spaces friendly to people and environments for the manufacturing of high-quality products, while always improving our strengths including our technological capabilities and capabilities to develop products as “Takasago, a leading company of technology”



Number of acquired patents

745

(As of the end of July 2017, Takasago Thermal Engineering)

Cumulative income from completed construction

Approximately **7.4** trillion yen

(As of the end of March 2017, Takasago Thermal Engineering)

Number of employees in the Takasago Thermal Engineering Group

4,831

(As of the end of March 2017)

Equity ratio

46.6%

(Fiscal year ending March 31, 2017)

Main kinds of social value that the Takasago Thermal Engineering Group creates through its business



In December 2015, the Paris Agreement was adopted at the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 21), and a shift to a decarbonized society began to be further promoted on a global scale. Supporting this trend is the social mission of the Takasago Thermal Engineering Group, which has been conducting Green Air® activities to contribute to the environment by providing air environments friendly to humans and nature for various kinds of buildings including office buildings, hotels, hospitals, and factories, and the specific outcomes of

getting closer to a decarbonized society will be the core of the social value that we will create in the future.

Value that the Takasago Thermal Engineering Group creates by leveraging its technological capital can bring further benefits, such as providing more comfortable living spaces that can improve productivity, providing epoch-making opportunities for industries and science, and bringing about new harmony between buildings, communities, and the environments surrounding them. We will continue to find and address new challenges without limiting ourselves.

* Refer to page 36

Medium-term Business Plan

We will realize a long-term vision in which we aim to transform from a contracted construction company into an integrated engineering company by steadily taking several steps.

▶ Medium-term Business Plan to Achieve our Long-term Management Framework

To steadily achieve the goals of our long-term management framework named Green PRIDE 100 for 2023, when we are to celebrate the 100th anniversary of the establishment of the Takasago Thermal Engineering Group, we are to implement a medium-term business plan for each of the three steps specified in the long-term framework.

The first step was to formulate a medium-term business plan named “iNnovate on 2016” (FY 2014 through FY 2016). We designated these three years as a period for aiming to lay the ground for reform and to strengthen the foundation of our main business, and from a comprehensive standpoint, we set out six key themes as follows: (1) enhancement of on-site construction capabilities, (2) reinforcement of on-site sales capabilities, (3) human resource development and reform of the personnel system, (4) promotion of development of new business domains, (5) reinforcement of Group management in Japan, and (6) promotion of globalization. We have addressed challenges specified in such themes through concerted efforts made across the entire Group.

The second step was to formulate a new medium-term business plan named “iNnovate on 2019 just move on!” (FY 2017 through FY 2019), and in these three years, we will resolutely conduct two reforms, in accordance with the slogan “Bold implementation of innovations for growth.”

The first one is a huge shift toward the Multidiscipline engineering business having HVAC system construction at its core, and the other one is the creation of the second and third pillars of our business.

▶ Review of the Medium-term Business Plan, “iNnovate on 2016”

The medium-term business plan, “iNnovate on 2016” , ended at the end of March 2016. We achieved our ordinary profit targets a year earlier than planned through all-out efforts made by the entire Group (10.6 billion yen for FY 2015 and 13.4 billion yen for FY 2016), which is laying the ground for reforms to achieve further growth.

Enhancement of on-site construction capabilities

We made efforts through three years to promote the establishment of a structure for systematic construction, to conduct organizational improvement activities, to promote the informatization of technologies, to improve the working environment for on-site staff, and to strengthen cost management.

Reinforcement of on-site sales capabilities

Takasago Thermal Engineering, which is the core of the Group, made company-wide efforts to promote the introduction of CRM (customer relationship management) for the first time in the Group.

Furthermore, we selected and nurtured employees who will play core roles in the development of sales engineering to meet the latent needs of clients, and we also provided systematic skill-enhancing training for salespersons. In addition, we provided training for local staff at international group companies.

Progress in Key Themes Specified in the Medium-term Business Plan, “iNnovate on 2016”

Key themes	Achievements and challenges
Strengthening of on-site construction capabilities	<ul style="list-style-type: none"> We established on-site management with an eye to the future based on early-stage construction plans and work schedules. There is still room for the improvement of efficiency in, the enhancement of, and the standardization of business processes by utilizing IT.
Reinforcement of on-site sales capabilities	<ul style="list-style-type: none"> We conducted sales engineering activities and CRM activities to improve customer satisfaction. It is necessary to formulate sales strategies from a new standpoint, by strengthening our marketing capabilities.
Human resource development and reform of personnel system	<ul style="list-style-type: none"> We put into practice the development of field representatives by utilizing educational institutions. We start to employ more diverse human resources by establishing a flexible personnel system.
Promotion of development of new business domains	<ul style="list-style-type: none"> We continued to consider new businesses and to develop new products. Challenges to be addressed are to establish systems to promote commercialization by cultivating the needs of the market and customers and to increase and develop human resources. Other challenges to be addressed are to build a foundation for the creation of new services utilizing the IoT and AI, to establish external collaboration, and to increase and develop human resources.
Reinforcement of Group management in Japan	<ul style="list-style-type: none"> We completed a merger between Marusei Co., Ltd. and Takasago Engineering Service Co., Ltd. We established a system to optimize the entire Group, to improve its efficiency, and to leverage synergy inside it.
Promotion of globalization	<ul style="list-style-type: none"> We established a local subsidiary in Mexico and concluded a business and capital alliance with ICLEAN (India). Challenges to be addressed are to strengthen the management control systems of local subsidiaries in other countries and to stabilize their profitability.

Achievement status of numerical targets	Targets for FY 2016	Results in FY 2014	Results in FY 2015	Results in FY 2016	(100s of millions of yen)
	Consolidated orders received	3,000	2,556	2,653	
Consolidated net sales	2,930	2,435	2,512	2,602	
Consolidated ordinary income	100	85	106	134	

Human resource development and reform of personnel system

In FY 2014, we established the Takasago Technical Academy, which is an institution for the systematic development of human resources, in order to strengthen our education system, thereby making efforts to develop technicians with comprehensive and high-level capabilities including employees of group companies. Also, we promoted the improvement of our technological capabilities and the promotion of technology transfer at the Takasago Technical School, which is an institution to support human resource development at entities including partner companies. Furthermore, we made efforts to establish a flexible personnel system to respond to changes in environments inside and outside our company and to improve the working environment as well.

Promotion of development of new business domains

We devoted ourselves to considering new businesses and developing new products. We developed a network system utilizing low-cost and high-performance sensors and AI named Green Air® Service and considered strategies such as the establishment of new business models, as well as starting demonstration tests. Also, we provided technology to ensure a high level of freshness for marine products named SIS®-HF (Super Ice System—High Freshness) for Hirado City, Nagasaki Prefecture, and we started demonstration tests at locations including other fishing ports as well. As for our efforts related to thermal storage technologies, we developed a compact and high-performance thermal storage system that enables the efficient storage and conveyance of low-temperature waste heat and started demonstration tests for commercialization. Meanwhile, we also worked on establishing systems to cultivate the needs of the market and customers and to promote commercialization

and laying the ground for the creation of new services utilizing the IoT and AI. The next step is to increase the proportion of our human resources and outside partners that can operate the aforementioned systems and services.

Reinforcement of Group management in Japan

To optimize the entire Group and improve its efficiency as well as to leverage synergy inside it, we made efforts to review our business management system, by means such as transferring and integrating businesses among Group companies.

Promotion of globalization

Our local subsidiary in Mexico, which is our first base in a region other than Asia, began to operate in a full-fledged manner. Also, we made efforts to create business synergy with Integrated Cleanroom Technologies Pvt. Ltd. (ICLEAN), which is a company accounted for by the equity method and which is engaged in the manufacturing, sales, and installation of cleanroom-related systems and interior materials mainly in India. In Thailand, Thai Takasago Co., Ltd. and a local subsidiary of TSUKISHIMA KIKAI Co., Ltd. jointly worked on design, procurement, and construction through collaboration between both entities.

Reforms of organizational structure

In order to reform our company's organizational structure, we established new divisions including the Product Innovation Center, which aims to improve construction management technologies and productivity; the BIM (building information modeling) Management Office; IT System Planning Office, which plans and coordinates our overall IT strategies; and the Human Resources Planning Office, which is in charge of the reform of personnel systems and the management of gender equality.



Example of the application of SIS®-HF (Super Ice System)



Made ICLEAN an affiliate accounted for by the equity method

▶ New Medium-term Business Plan, “iNnovate on 2019”

The basic policies of the new medium-term business plan, “iNnovate on 2019 just move on!” (FY 2017 through FY 2019), are a thorough emphasis on profits and the utilization of the Group’s collective strengths.

We will aim to further grow by setting out the following eight priority initiatives: to realize strong workplace capabilities, to strengthen group collaboration, to rebuild our international business, to advance into non-contracted and non-subcontracted work, to create new services, to build workplace environments that enable a work-life balance, to nurture diverse human resources, and to invest for reforms and strengthen the foundations of our management.

We will aim to shift to a hybrid form of business in which we conduct both construction and the provision of solutions, and in such a business, we will provide high value added through environmental engineering that supports the entire life cycle of buildings while utilizing cutting-edge technologies, including the fields of FM (facility management: planning and management of facilities and environments) and PM (property management: real estate management).

Our numerical target for consolidated sales for FY 2019 is 340.0 billion yen, and that for consolidated ordinary profit for FY 2019 is 13.5 billion yen.

Measures to be taken in each business

As for our domestic business, to further strengthen our technological capabilities and sales capabilities, we will make efforts to expand our FM and PM business by leveraging the strengths of our company and the Group, to secure an adequate number of technicians and transfer technologies by utilizing educational institutions, and to improve our business processes by establishing and utilizing a business support system such as construction management having BIM at its core.

Also, to lay the ground for the creation of new services utilizing IT infrastructure, we will make efforts to establish platforms for information processing by utilizing technologies including the IoT and AI and to promote new services.

Furthermore, to implement new business models, we will promote participation in concession*1 and PPP*2 projects and will promote our entry into the stock business, focusing on renewable energy.

To accelerate the aforementioned measures, we will make efforts to strengthen integrated management across the Group as well as to create new business and products through collaboration inside the Group. As for international business, we will make efforts to strengthen the foundations for the management of overseas group companies as well as to expand our business domains in overseas countries. We will continue to promote the strengthening of the technological capabilities of our local staff, the development of human resources for management, and collaboration with the most appropriate partner companies in overseas countries.

*1: This term refers to the right to operate facilities such as public facilities, and is a scheme in which private business operators are granted rights related to the operation of infrastructure businesses for a long period of time without transferring the ownership of such facilities.

*2: This term is an acronym for “public-private partnership” and is a system in which private business operators participate in the provision of public services. The goal is to improve efficiency in and the quality of public services by leveraging private capital and private business operators’ know-how.



Held seminars to explain the new medium-term business plan



Measures to strengthen the foundations of management

As for measures related to human resources, we will make efforts to develop the environment for employment, to establish a personnel system that enables diverse human resources to play proactive roles, and to reform working styles. Furthermore, we will promote personnel exchanges among group companies, in order to strengthen the Group's collective strengths.

We will also strengthen our organizations and systems. We will establish the Innovation Center so as to integrate the three functions of marketing, R&D, and incubation as a measure to establish a system to create new business, thereby promoting the creation of new business. Furthermore, we will improve our efficiency in management by making efforts to streamline our organization and reinforce divisions in charge of on-site tasks. In addition, we will make efforts to establish IT infrastructure for the improvement of business processes and the creation of new services.

Financial strategies

We will make efforts to improve capital efficiency by making investments for growth while maintaining financial soundness.

Increase of cash flow

We will aim to increase our sales cash flow by implementing strategies including improvements in income and expenditures related to construction. Furthermore, we will make efforts to effectively utilize our assets, by means such as reconsidering shares held for purposes other than investment.

Maintenance of financial discipline

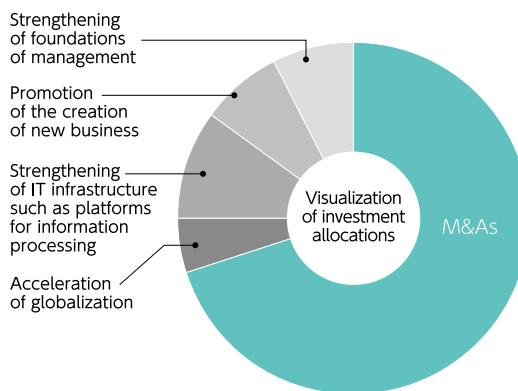
We will maintain a sound ROE and will raise funds at low interest rates and in a planned manner.

Proactive returns to shareholders

We will aim to conduct stable distributions to shareholders on a medium- and long-term basis, while maintaining a DOE (dividend on equity) of 2%. Also, we will promote returns to shareholders by means including the acquisition of treasury shares, while taking the total return ratio into consideration.

Investment strategies

We are to make 35.0 billion yen of investments in three years, under the following themes for investment: M&As, the acceleration of globalization, the strengthening of IT infrastructure, the promotion of the creation of new business, and the strengthening of the foundations of management.



Priority Initiatives

Realize strong workplace capabilities

Strengthen group collaboration

Rebuild international business

Advance into non-contracted and non-subcontracted work

Create new services

Build workplace environments that enable a work-life balance

Nurture diverse human resources

Invest for reforms and strengthen the foundations of management (including M&A)

Shift to a hybrid form of business in which we conduct both construction and the provision of solutions

Growth of business inside and outside Japan

Development of FM and PM services

Looking ahead to the increasing need for the use of existing building stock, we will establish a “hybrid business model combining construction and solutions” through which we solve customers’ issues by maximizing the utilization of the technologies and services of the Takasago Thermal Engineering Group.

Leveraging changes in the business environment for the Group’s growth opportunities

Substantial environmental change has come to the business field of equipment installation, which has been the core business of the Takasago Thermal Engineering Group. Core needs related to buildings have steadily shifted from new construction (or installation) to appropriate maintenance and renovation of existing buildings and equipment.

Since its foundation, the Takasago Thermal Engineering Group has offered value to society based on our motto “Offering high-quality equipment to our customers,” but in order to leverage this environmental change for the Group’s growth opportunities, it is essential for us to make bold efforts to develop new business in line with the needs of society.

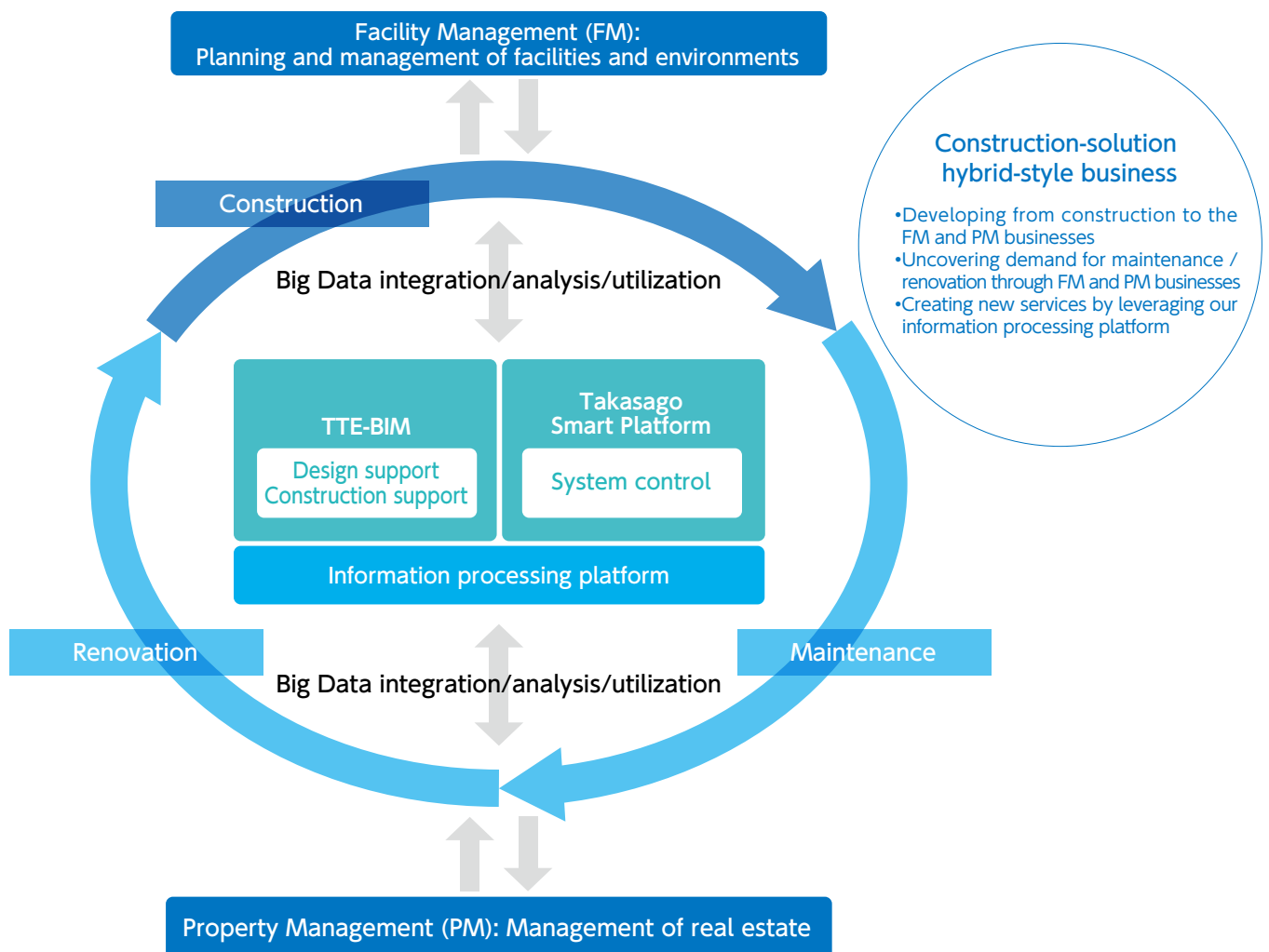
FM and PM services, which we have started with the aim of growing them into a new pillar of income for the Group, are independent from the equipment installation business, and these services aim to help customers by leveraging technologies and services that we have acquired so far. The facility management (FM) service will improve the added value of customers’ facilities,

while resolving their management issues by optimizing a combination of service elements, such as engineering allowing to them effectively utilize equipment that is in operation, energy-saving consulting, and the stable and efficient supply of energy.

The property management (PM) service, in which more advanced approaches than those in the FM service are taken, will deliver property management services to owners through our proposals for increasing the profitability of their properties.

As a system to support these services, we have newly launched the Facility&Property Management Promotion Division by integrating the Customer Center, which has received customers’ opinions through after-installation service in the past; the Energy Service Section, which does work ranging from the construction/ownership of heat source systems to their operation; and the Corporate Real Estate (CRE) Section. We have given the Customer Center a new role to create advanced FM services using state-of-the-art technologies, in collaboration with our customers.

By developing FM and PM services with conventional businesses, we will proceed with the establishment of a new business model, “the construction-solution hybrid-style business”.



Leveraging the Takasago Thermal Engineering Group's strengths

In developing FM and PM services, the Group's strengths are the many facilities that we have constructed so far; know-how, on-site information, and high-level environmental engineering technologies that we have gained from construction sites; and a system which is capable of fully covering the life cycle of buildings.

These strengths can be further enhanced in combination with our information processing platform. Takasago Smart Platform, a system control platform for which the Group is currently proceeding with development, allows us to shift building data management from the separate management of sets of data by individual divisions to shared management of data by the Group as a whole. By leveraging this business infrastructure, we will respond to our customers' needs in a more fine-tuned and efficient manner.

In addition, we will offer optimum control solutions in combination with state-of-the-art technologies, such as the IoT and AI. We will evolve our control methods from methods in which

control elements are selected by human beings based on their experience and observations, to methods in which Big Data collected by monitoring various aspects of equipment in operation is analyzed and utilized, which consequently will substantially improve the accuracy of control for energy savings and the creation of environments.

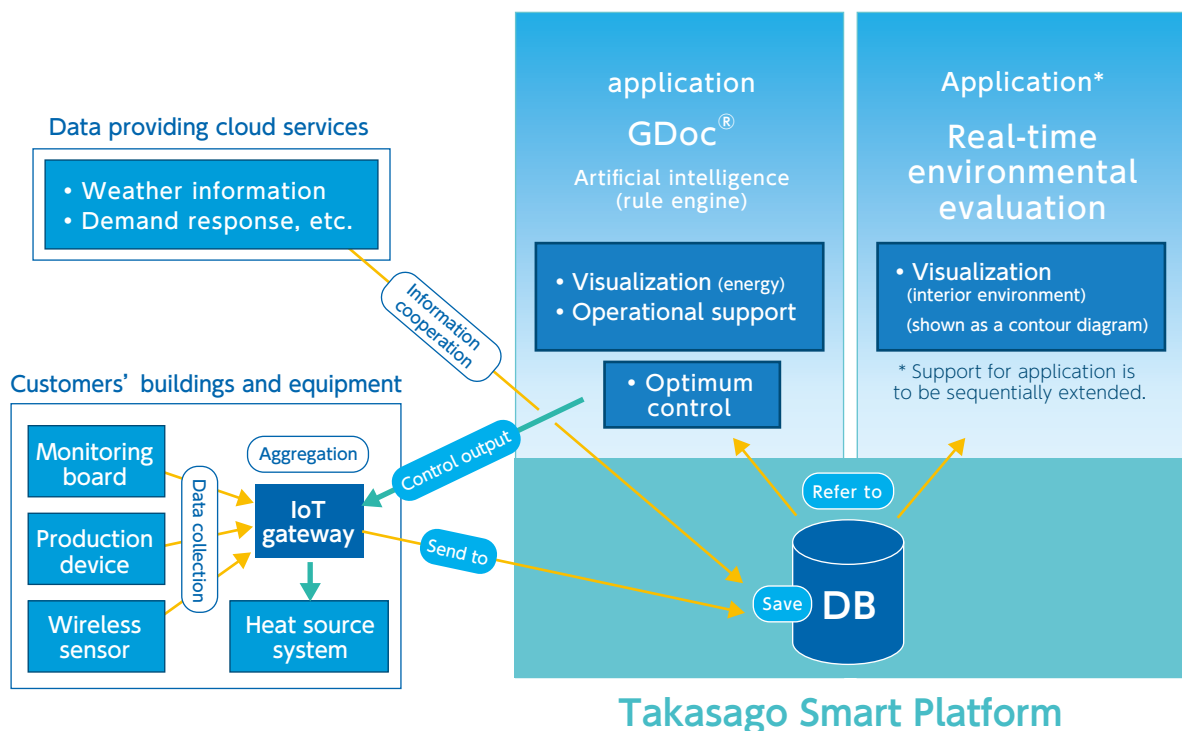
As part of that, we have participated in business model creation for Eco-Tuning, a project promoted by the Ministry of the Environment. (See p. 36)

Comprehensive perspectives as a facility partner

The Group offers a wide range of solutions to customers from comprehensive perspectives. We will solve our customers' management issues by considering whole facilities, without being bothered by the details of events.

Not only in providing solutions, but also in all the FM and PM services, we, as a facility partner for customers, will offer our services in a more comprehensive manner, ranging from services for whole equipment systems to services for whole buildings, and even whole facilities held by customers.

Optimum control solution provided by utilizing Takasago Smart Platform



Development of FM and PM services

In order to solve issues for a wide range of customers who have facilities such as medical institutions, factories, and office buildings, we are creating new services based on the Group's technologies and know-how.

▶ FM service to support customers' operations

FM service for hospitals (energy service)

Hospitals which are entrusted with patients' lives and operate 24 hours a day need stable energy supplies to provide high-quality medical care. At the same time, in terms of hospital management, they need to cut back on energy costs. In order to respond to such needs, the Takasago Thermal Engineering Group offers one-stop service, ranging from proposals for optimal energy supply/management systems to their construction and operation.

For this service, the Group owns equipment for our customers' use and provides efficient operations, so that they can save on the initial costs necessary to install the equipment and claim tax deductions; and through optimization of facility costs, including energy costs, we can help our customers reduce total life-cycle costs.

For heat source systems, which directly affect energy efficiency, we introduce an optimum operational control system, in addition to using high-efficiency devices.

This service can help our customers reduce the burden of responding to non-medical work, such as the operation and maintenance of equipment, so that they can concentrate on their core duties, consequently improving their efficiency in the management of their hospitals.

In the operational stage, the Group conducts efficient operations reflecting our design's intent. Then, we monitor energy usage all the time to eliminate waste. We also hold regular meetings with hospitals to develop improvement measures involving users, based on the results of data analyses. Furthermore, by grasping the operational efficiency of energy equipment and reviewing and revising maintenance plans based on the actual operational conditions as needed, we achieve optimal maintenance costs and a stable energy supply without system failure.

In this way, the Group's energy services are contributing to improvements in the efficiency of hospital management.

● Energy service business scheme



* Regarding contracts with power companies, gas companies, and water works bureaus, the Group will become the main contracting party.

Shin-Oyama City Hospital (Oyama City, Tochigi Prefecture)



When Oyama City Hospital, which has worked on local medical care, was relocated to a new building, the Group proposed our energy service business. We have offered comprehensive services, ranging from design and operational management to maintenance of the energy center, a building separate from the hospital building.

Isehara Kyodo Hospital (Isehara City, Kanagawa Prefecture)



In a new hospital building to which the hospital was relocated, with its philosophy of being a "hospital which all citizens and members of the association can trust and feel safe in," great emphasis has been placed on improvements in energy saving performance and its function as a disaster base hospital. Equipment that can supply water to the local area in case of a disaster has been also installed.

FM service for factories

Among our customers who own factories, those who explore the *visualization* and *optimization* of energy throughout the whole factory, not only for HVAC systems or building equipment, have increased in number.

Thus, the Group has established a system which enables the operator to grasp the power consumption of machines and temperature fluctuations within a factory building, in real time, by installing a variety of wireless sensors that enable easy installation and relocation without wiring work, on each machine in the factory and at each point in the building.

Through this advanced approach using the IoT, we will establish and operate energy management systems directly linked to the management of factories and offer services which deliver visible outcomes; and consequently, we will expand our business to a wider range of customers.

FM services for headquarters of companies which own multiple facilities

The Act on the Rational Use of Energy (Energy Conservation Act) has required each business operator to manage energy, since its revision in 2008. However, there is always likely to be a lack of

communication between those in charge of each office and facility, for such initiatives across entire companies.

Thus, the Group supports energy-saving activities across entire companies for our customers who run multiple facilities. Acceleration of cooperation between facilities as well as eco-tuning, which aims to realize energy savings and cost reductions while maintaining comfort through improvements in equipment operations, helps to revitalize overall energy-saving activities. The Group has also developed a website for facility managers to interact with each other, on which energy usage can be compared between one's own and other facilities; information can be shared between those in charge of each facility; and interaction has been accelerated.

In the cases where the approximately 300 hospitals, welfare facilities, and other facilities that are operated by our customers introduced our services, we were mainly asked for advice by our customers in the beginning when our services were introduced, but gradually, information was increasingly shared among those in charge, and on-site findings and improvement measures promoted improvements in the energy efficiency of each facility.

Expanding the possibilities in our business by providing thorough support in line with customer needs

FM and PM Business Promotion Division

(from the left of the photo)

Director of
the Customer Center
Shinsuke Teraoka

Manager of
the Green Air Group
Shuji Hisamoto

Manager
Kazunori Norita



In offering energy services, we place great emphasis on closely listening to customer needs and make efforts to respond to various consultations in a fine-tuned manner by leveraging our strengths, which are *systems that we are capable of designing and constructing by ourselves and experience and capabilities in energy saving consultations*. As for electricity and gas, contracts are as favorable to our customers as possible.

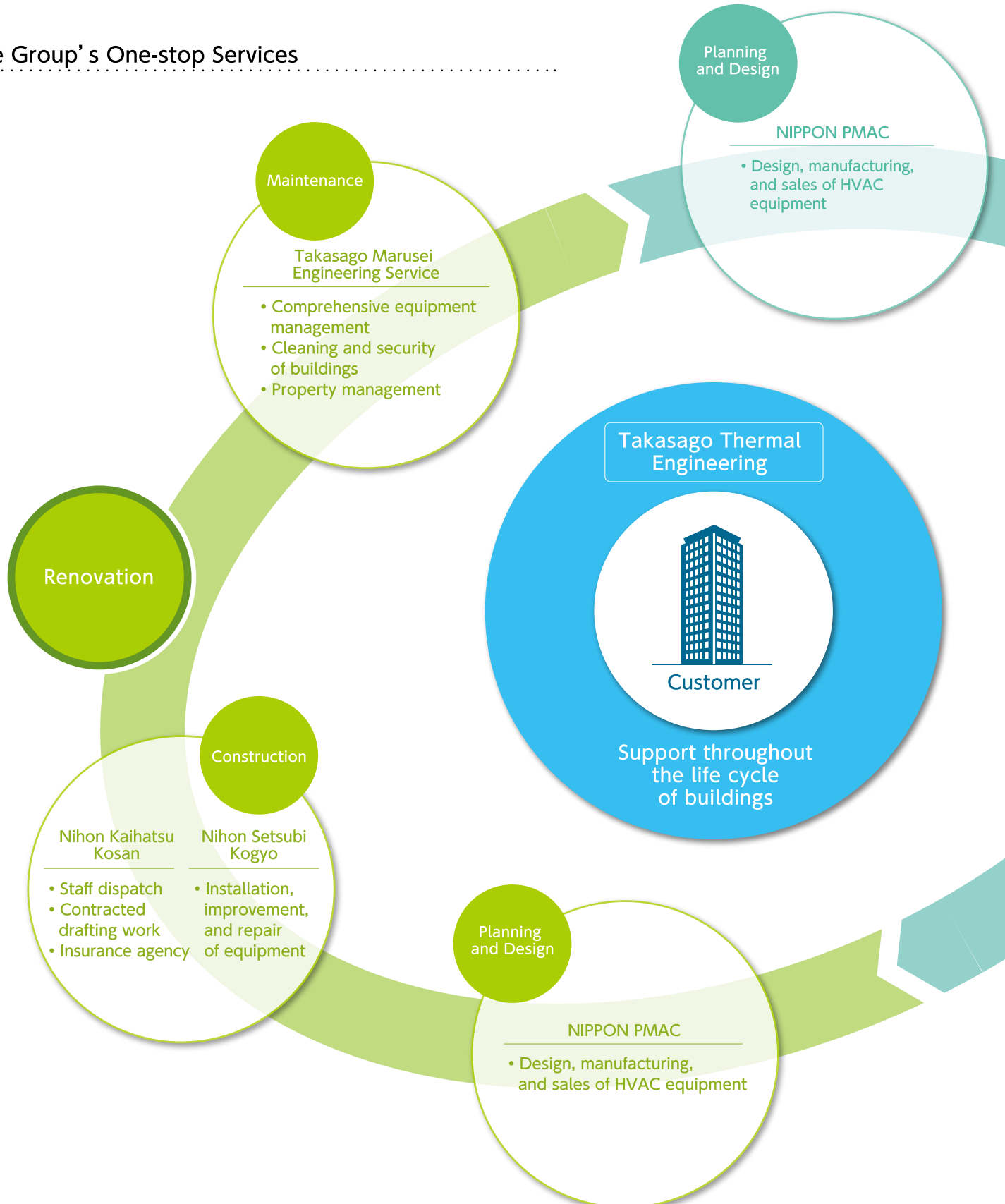
As current equipment has advanced technically, it has become challenging for customers to carry out energy saving and develop a facility maintenance plan by themselves. Equipment engineers are aging, and therefore, the number of organizations without successors for their engineers have increased as well. In such situations, we strive to demonstrate the value of our presence and act as a partner that has specialized know-how, is relied on, and can be consulted technically. Although it is important to visit our customers regularly so as to make them feel safe, it is also important to motivate them to talk with us by being always ready so that we can offer new ideas and solutions.

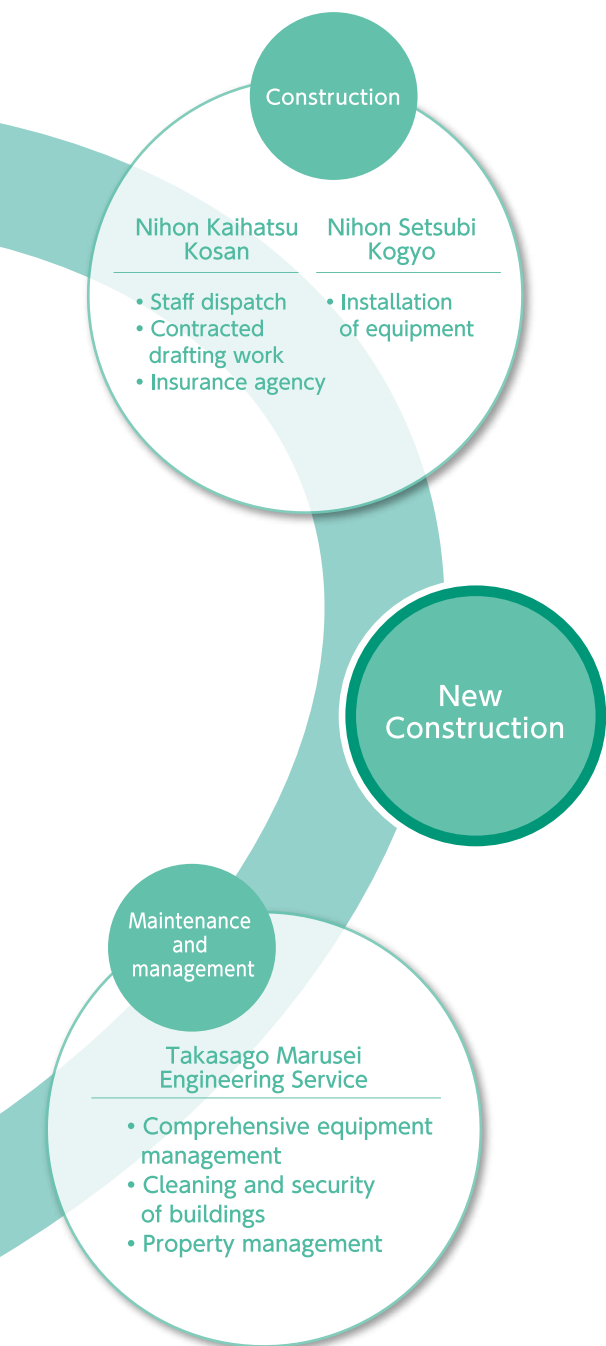
From now on, in future technological environments, we will see new relationships with our customers. We will further advance the current FM service; for example, while looking ahead to providing support for facility management other than equipment operations management, along with support for workstyle renovations and healthy management and offering our services overseas, we continue to expand our possibilities for developing new businesses.

Business conducted by the Takasago Thermal Engineering Group

Throughout the life cycle of building equipment, from planning to design, new construction, maintenance, and renovation, the Takasago Thermal Engineering Group will provide comprehensive systems engineering centered on HVAC systems for any kind of building, plant, or facility for the long term by leveraging advanced technologies.

The Group's One-stop Services

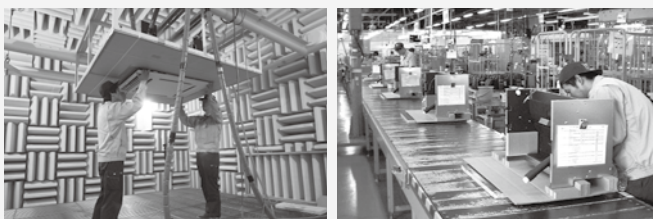




Breakdown of businesses

Design, manufacturing, and sales of equipment for facilities

We design, manufacture, and sell distinctive HVAC systems and cleanroom-related systems based on customer needs, thereby realizing a low-carbon society as well as improving customer convenience.



Installation of system (general HVAC)

We provide spaces including office buildings, skyscrapers, department stores, hotels, recreational facilities, and underground shopping areas with HVAC aimed at maintaining people's health and realizing comfortable living environments.



Installation of system (industrial HVAC, process HVAC, and work environment HVAC)

We provide HVAC that can improve work environments and production processes in plants. This contributes to the improvement of work efficiency and product quality, the shortening of process time, and cost reduction.



Comprehensive management and maintenance of equipment

We provide safety and impressive quality for customers by leveraging the equipment management technologies we have been fostering and the rich experiences we have been acquiring while achieving various accomplishments, and we will realize the creation of rich environments friendly to people through energy conservation.



Group companies in Japan

We are providing one-stop services including planning, design, construction, and maintenance through concerted efforts made with Group companies. Group companies are also in charge of the design, manufacturing, and sales of HVAC equipment and the purchase, sales, and lease of real estate.

Takasago Marusei Engineering Service Co., Ltd.

Consolidated subsidiary

MS Shibaura Bldg., 4-13-23, Shibaura, Minato-ku, Tokyo, 108-0023
Tel: +81-3-3455-3600



President
Akira Nakamura

Date established	August 13, 1966
End of accounting period	March 31
Capital	419 million yen
Shareholder composition	Takasago Thermal Engineering 100%
Number of employees	1,390
Description of business	<ol style="list-style-type: none"> 1. Maintenance business (maintenance including overall high-level maintenance and operation/maintenance of systems installed in buildings including machinery, electrical, communications, fire prevention, elevator, cleaning, and plumbing systems; the design of, installation of, and associated construction for such systems; and comprehensive system management including consulting services) 2. Cleaning and security services for buildings 3. Real estate business, property management business 4. Labor dispatch business

Takasago Marusei Engineering Service, which recently celebrated its 50th anniversary, is a comprehensive equipment management company that supports one-stop services provided by the Takasago Thermal Engineering Group and conducts a hybrid form of business in which we conduct both comprehensive equipment management and the provision of solutions. We will serve as a "facility doctor" (primary doctor for facilities) that cannot be replaced with things from the perspective of customers and will make efforts to reduce environmental impacts and minimize the lifecycle costs of equipment through energy conservation. By doing so, we will continue to aim to provide efficient maintenance tuned according to changes in the environment, thereby contributing to society.



NIPPON PMAC CO., LTD.

Consolidated subsidiary

3150, Iiyama, Atsugi City, Kanagawa 243-0213
Tel: +81-46-247-1611



President
Mikio Wakayama

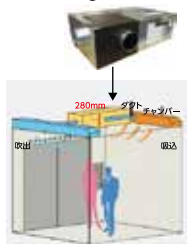
Date established	April 28, 1972
End of accounting period	March 31
Capital	390 million yen
Shareholder composition	Takasago Thermal Engineering 100%
Number of employees	270
Description of business	Design, manufacturing, import/export, sales, and maintenance of air conditioning equipment related to cooling, heating, ventilation, temperature and humidity conditioning, and general heat exchange

We keep addressing challenges in order to realize a low-carbon society, under our management philosophy, "In response to the needs of our customers, we seek to create 'comfortable spaces' which are both user- and environmentally friendly, and thereby contribute to society."

We will make efforts to fulfill our social responsibility by providing not only PMAC, which is an individual air conditioning system that uses water heat source heat pump units and enables automatic cooling and heating operations, but also distinctive HVAC equipment such as spot air conditioners for factories and warehouses, HVAC equipment for elevators, and HVAC equipment for express train drivers' seats.



Spot air conditioner



HVAC equipment for elevators



HVAC equipment for express train drivers' seats

Nihon Kaihatsu Kosan Co., Ltd.

Consolidated subsidiary

Higashi-Ote Bldg., 1-1-7 Uchi-Kanda, Chiyoda-ku, Tokyo 101-0047
Tel: +81-3-3292-6680



President
Yoshiaki Machida

Date established	March 11, 1972
End of accounting period	March 31
Capital	50 million yen
Shareholder composition	Takasago Thermal Engineering 100%
Number of employees	26
Description of business	<ol style="list-style-type: none"> 1. Real estate business 2. Life and non-life insurance agency business 3. Labor dispatch business 4. Outsourced drafting business 5. Energy service business 6. Merchandise sales business 7. Planting business



We are in charge of outsourcing tasks to flexibly respond to changes in the Takasago Thermal Engineering Group and are supporting the efficient operation of the entire Group, under our motto, "Conduct management with integrity through participation by all employees, while valuing customers, suppliers, and employees." We are engaged in the business of dispatching human resources for CAD (computer-aided design) and construction management, the insurance agency business, which provides liability insurance for Group companies and life and non-life insurance for employees, the real estate business for apartments for rent, and the outsourced drafting business for construction drawings. We will meet the needs of customers by leveraging our technical knowledge and experiences and keeping prompt responses in mind.

Nihon Setsubi Kogyo Co., Ltd.

Affiliate accounted for by the equity method

Tokyo Sankei Bldg. 1-7-2, Otemachi, Chiyoda-ku, Tokyo 100-0004
Tel: +81-3-3279-1731



President
Masato Takayama

Date established	September 1, 1966
End of accounting period	March 31
Capital	460 million yen
Shareholder composition	Takasago Thermal Engineering 34.0%
Number of employees	380
Description of business	<ol style="list-style-type: none"> 1. Design and installation of HVAC, plumbing, systems 2. Design and installation of refrigeration systems 3. Design and installation of systems for pollution and building disaster prevention 4. Design and installation of electrical and communications systems 5. Design and installation of interior systems in buildings and the manufacturing and sales of furniture, kitchen equipment, fire fighting system, and gas appliances for stores 6. Design and installation for the repair and painting of various types of pipes and the development, manufacturing, and sales of related equipment 7. Research, development, surveys, and consulting relating to the repair and painting of various types of pipes




We are conducting business related to buildings ranging from office buildings to various kinds of commercial facilities and apartment buildings, focusing on renovation construction. In FY 2017, we will devote ourselves to realizing the ideal state of our company, setting out the key theme of "Contribution to a society in which people are rich at heart by integrating the growth of our employees and partner companies and leveraging it as our company's strength." Furthermore, we will further pursue quality-oriented management while providing high-quality services, so as to provide safety, security, and reliability for customers.

Overseas Group Companies

Starting with the establishment of a local subsidiary in Malaysia in 1980, we have been increasing the number of group companies mainly in Asian countries. In May 2015, we began to operate Takasago Engineering Mexico, which is our first base in Central and South America, in a full-fledged manner.


1 Takasago Constructors and Engineers (Beijing) Co., Ltd. Consolidated subsidiary

19M, Oriental Kenzo Plaza, 48 Dong Zhimenwai Aven. Dongcheng District, Beijing, People's Republic of China
TEL: 86-10-8454-9488

Name of Representative	Yoshito Ikeda	
Date established	July 31, 2003	
End of accounting period	December 31	
Capital	CNY46.69 million	
Shareholder composition	Takasago Thermal Engineering 100%	
Number of employees	157	
Description of business	Contractor for construction and building system installation	


5 Thai Takasago Co., Ltd. Consolidated subsidiary

Bangna Towers C 16th Fl., 40/14 Moo 12, Bangna-Trad Rd., K. M. 6. 5, Bangkaew, Bangplee, Samutprakarn 10540 Thailand
TEL:66-2-751-9695

Name of Representative	Takehisa Muraki	
Date established	July 17, 1984	
End of accounting period	December 31	
Capital	THB20 million	
Shareholder composition	Takasago Thermal Engineering 49%, Phaisan family 46.5%, THAI MC Co., 4.5%	
Number of employees	272	
Description of business	Design and installation of HVAC, plumbing, and electrical systems	


2 Takasago Singapore Pte. Ltd. Consolidated subsidiary

1 Jalan Kilang Timor #08-01, Pacific Tech Centre Singapore 159303
TEL: 65-6737-3312

Name of Representative	Masanori Atarashi	
Date established	January 18, 2005	
End of accounting period	December 31	
Capital	S\$5.57 million	
Shareholder composition	Takasago Thermal Engineering 100%	
Number of employees	81	
Description of business	Construction management, design, and construction for clean rooms, utilities, and HVAC, electrical, sanitation, and fire fighting systems, etc.	


6 T.T.E. Engineering (Malaysia) Sdn. Bhd. Consolidated subsidiary

4th Floor, Menara Choy Fook On, No. 1B, Jalan Yong Shook Lin, Section 7, 46050 Petaling Jaya, Selangor Malaysia
TEL:60-3-7955-5972

Name of Representative	Keiichi Asano	
Date established	November 11, 1980	
End of accounting period	December 31	
Capital	MYR1 million	
Shareholder composition	Takasago Thermal Engineering 30%, TTE Malaysia Holdings Sdn. Bhd. 70%	
Number of employees	153	
Description of business	Design and installation of HVAC, plumbing, and electrical systems	


3 Takasago Thermal Engineering (Hong Kong) Co., Ltd. Consolidated subsidiary

17th Floor, Hong Kong and Macau Building, 156-157 Connaught Road, Central, Hong Kong
TEL:852-2520-2403

Name of Representative	Masashi Sangu	
Date established	March 3, 1994	
End of accounting period	December 31	
Capital	HK\$81 million	
Shareholder composition	Takasago Thermal Engineering 100%	
Number of employees	55	
Description of business	Design and installation of HVAC, plumbing, and electrical systems	

4 Takasago Vietnam Co., Ltd. Consolidated subsidiary

3rd Floor, AC Office Building, Lot A1A, Handicraft & Manufacturing Industrial Zone, Dich Vong Hau Ward, Cau Giay District, Hanoi, Vietnam
TEL:84-24-6275-1932

Name of Representative	Naohiro Yamamoto	
Date established	March 19, 2007	
End of accounting period	December 31	
Capital	VND138,078 million	
Shareholder composition	Takasago Thermal Engineering 100%	
Number of employees	79	
Description of business	Design and installation of HVAC, ventilation, plumbing systems and wholesaling of equipment and materials	

Major bases in overseas countries



7 Takasago Engineering Mexico, S.A.de C.V.

Consolidated subsidiary

Anillo Vial 2 Fray Junipero Serra, Pabellon Santa Fe #2601 Piso 4, Residencial Juriquilla Santa Fe, Queretaro, QRO., Mexico
TEL:521-442-217-1054

Name of Representative	Kenichiro Tanaka
Date established	November 3, 2014
End of accounting period	December 31
Capital	MXN125 million
Shareholder composition	Takasago Thermal Engineering Group 100%
Number of employees	46
Description of business	Design and installation of HVAC, plumbing, and electrical systems



9 PT. Takasago Thermal Engineering

Non-consolidated subsidiary not accounted for by the equity method

Gedung Mugi Griya, Lantai 4 - Unit 406, JL. MT. Haryono, Kav. 10, Tebet, Jakarta Selatan 12810, INDONESIA
TEL:62-21-8370-8518

Name of Representative	Junichi Sarukawa
Date established	November 19, 2013
End of accounting period	December 31
Capital	IDR17,302 million
Shareholder composition	Takasago Thermal Engineering 67%, PT. MARINDO INTICOR 33%
Number of employees	66
Description of business	Design and construction of clean rooms, installation of HVAC and electrical systems, etc., and associated services



8 Takasago Engineering India Pvt. Ltd.

Non-consolidated subsidiary not accounted for by the equity method

NO.442, 2nd Floor, 17th Cross, Sector-IV, HSR Layout, Bangalore-560 102, India
TEL:91-80-6756-8100

Name of Representative	Hirotake Yaegashi
Date established	November 6, 2012
End of accounting period	March 31
Capital	INR600 million
Shareholder composition	Takasago Thermal Engineering Group 100%
Number of employees	210
Description of business	Design and construction of clean rooms, installation of HVAC systems, etc., and associated services

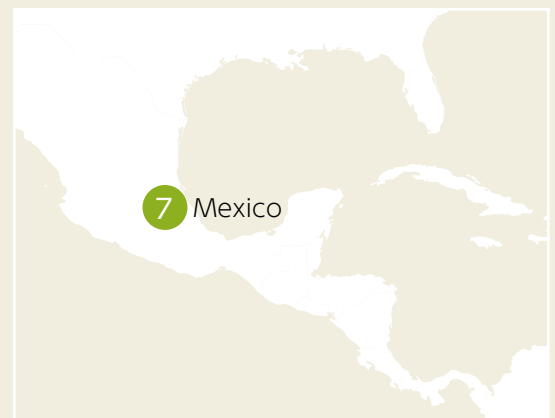


10 Integrated Cleanroom Technologies Pvt. Ltd.

Affiliate accounted for by the equity method

3rd Floor, Ratna Arcade, Sy.No. 126-128. Kompally, Hyderabad - 500014 Telangana, India.
TEL:91-40-2716-5311

Name of Representative	K. Gopi (Chairman and Managing Director)
Date established	November 25, 2002
End of accounting period	March 31
Capital	INR47 million
Shareholder composition	Takasago Thermal Engineering Group 32.54%, others 67.46%
Number of employees	516
Description of business	Manufacturing, sales, and installation of equipment and interior materials for clean rooms at pharmaceutical companies and hospitals, etc.



CSR Management in the Takasago Thermal Engineering Group

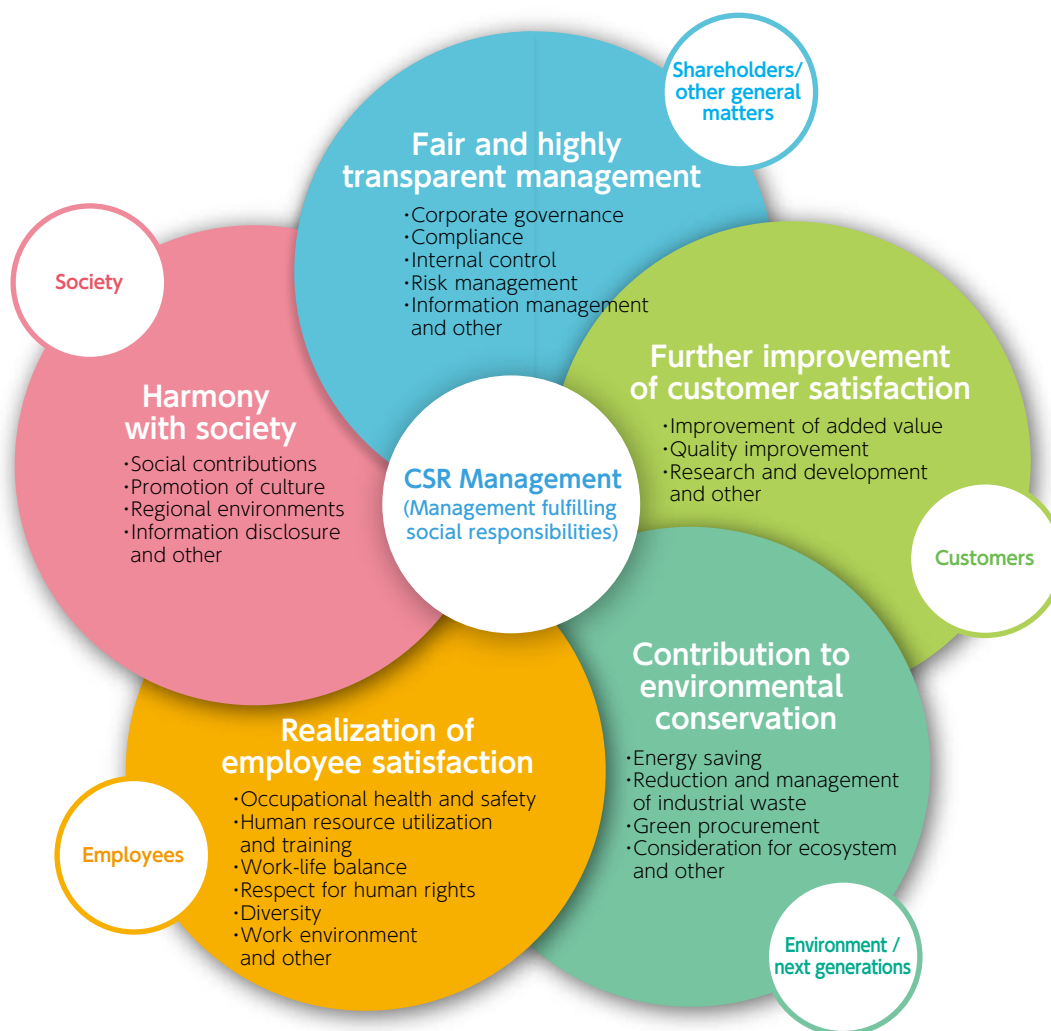
In accordance with our management principles, we will fulfill our responsibilities as a member of society considering CSR management as a core element of our management philosophy which cannot be separated from our business activities.

► CSR Management at Takasago Thermal Engineering

Takasago Thermal Engineering has management principles stipulating, "Contribute to society through creating the highest quality based on the promotion of mutual respect." Thus, we consider the following sentence a fundamental idea in our CSR management: Considering CSR management, which means management fulfilling social responsibilities, as a core element of our management philosophy which cannot be separated from our business activities, we make efforts to improve our corporate value while shouldering our social responsibilities, and we aim to

realize a sustainable society.

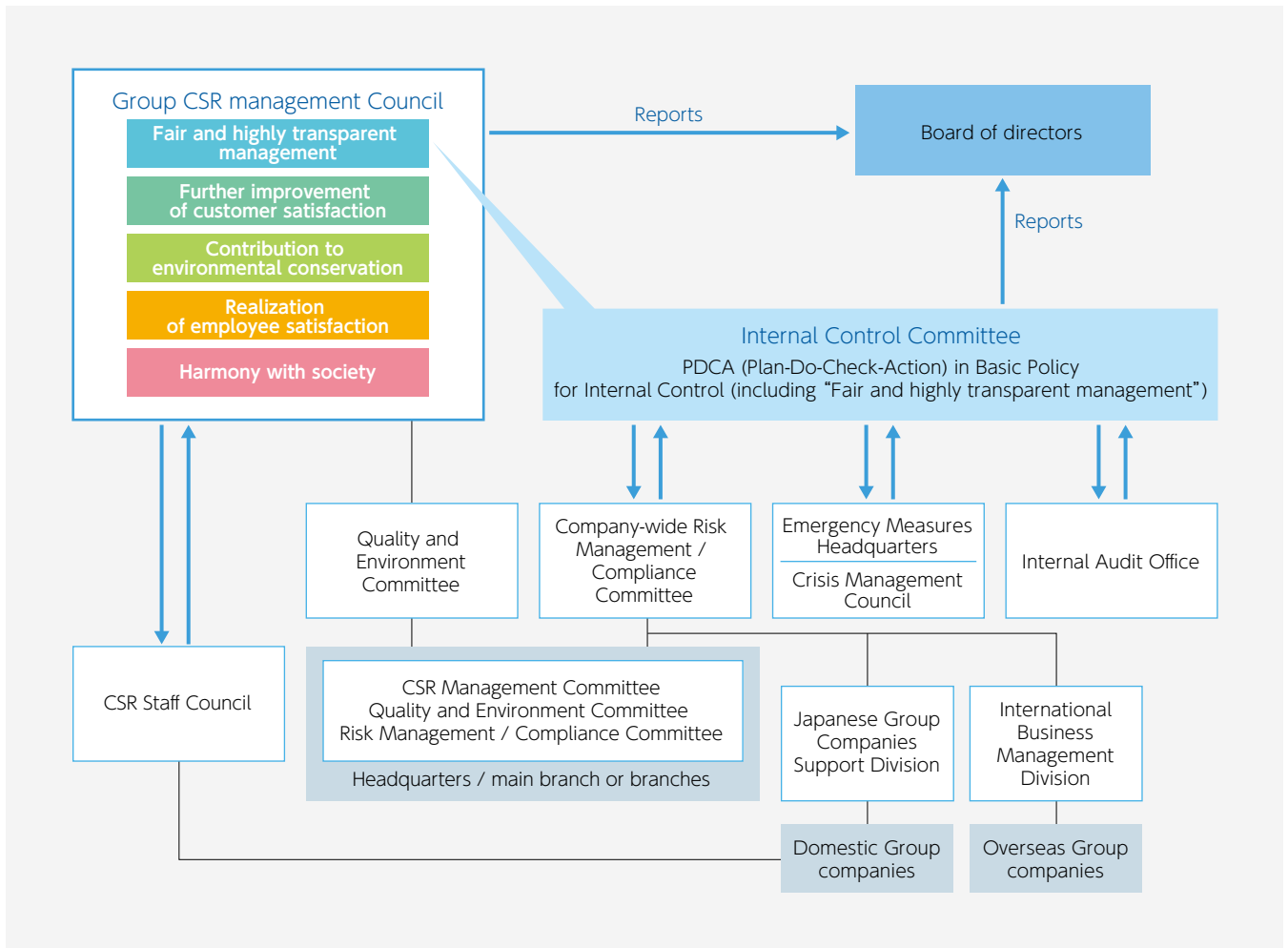
We will deepen our communication with all of our stakeholders and fulfill our responsibilities as a member of society, for example, contributing to the sustainable development of society by providing technologies for saving energy and reducing CO2 emissions, aiming to realize the highest-quality environment and a decarbonized society through personal harmony and the creativity of individuals.



► Basic CSR policies

1. The top management shall recognize that CSR management is its own role and take the initiative.
2. Promote fair and highly transparent management, by means including the implementation of corporate ethics and establishment of an internal control system.
3. Actively promote environmental conservation activities as an enterprise that calls itself an environmental solution company.
4. Develop and provide products and services which are socially useful, yet high quality, and achieve customer satisfaction.
5. Pursue the improvement of employee satisfaction by developing a physically and mentally safe and healthy work environment not only for our employees but also for everyone working at our workplace, and also promoting the development of systems raising the motivation of employees and the development of the employees' skills.
6. Try to establish harmony with society, for example, by proactively implementing activities for communication with society.
7. Develop a system to promote the above policies.

▶ CSR management system



We established the Group CSR Management Committee, chaired by the President, aiming to manage our CSR activities. At the Council, we deliberate our basic policies, review our activities, and discuss matters that need to be improved. Furthermore, the CSR Staff Council, where intercompany matters are discussed, and the CSR Management Committees established at headquarters and branches, in addition to the CSR Management Office that we established within the Corporate Planning Division, review the implementation status of and issues concerning our CSR

activities and discuss these matters to solve the issues and improve the situation.

In FY 2017, we will develop a working environment where women/veteran employees and people with disabilities can play critical roles, and also we will proceed with activities which we should conduct to fulfill our social responsibilities as an enterprise, such as environmental engineering as our main business and forest conservation activities, besides risk management / compliance matters which we obviously should work on.



CSR Management Committee



CSR Staff Council

Fair and highly transparent management

We make efforts for thorough consciousness and practice, with a recognition that compliance is an essential element of CSR management. In addition, we are making efforts for measures to prevent management risks from arising, and minimizing the impact of crises.

Compliance

Based on the recognition that securement of compliance is the foundation of our CSR management, we are continuing to make efforts to be thorough in daily practice and in our consciousness. As a first step, we established the Code of Business Conduct, which stipulates the ethical and behavioral standards for executives and employees, in 2002. In 2011, this was expanded into our Group Action Guidelines, basic action guidelines for executives and employees. These have been compiled into a small booklet titled Group Code of Business Conduct, which is used for situations including

daily business and in-house training. In April 2016, we revised the booklet for global use.

We also established the Compliance Office within the Legal Services Division in 2013.

The Compliance Office manages training through the compliance program and PDCA activities in related measures, as well as making efforts to improve compliance awareness, the prompt detection and prevention of problems, and the implementation of improvements, through such efforts as enhancing our whistleblowing system.

●Ten Group Action Guidelines

1. Act in compliance with laws and regulations and internal rules and according to ethical standards.
2. Ensure appropriate accounting and safeguard company property.
3. Promote a fair, safe, and healthy working environment.
4. Secure safety at construction sites and maintain/improve the quality of work
5. Promote appropriate management/disclosure of information.
6. Maintain ethically appropriate relationships with customers.
7. Maintain fair competition with competitors.
8. Establish ethically appropriate relationships with subcontractors.
9. Consider social responsibility, social contributions, and the global environment.
10. Break relationships with anti-social forces and organizations.

Risk management

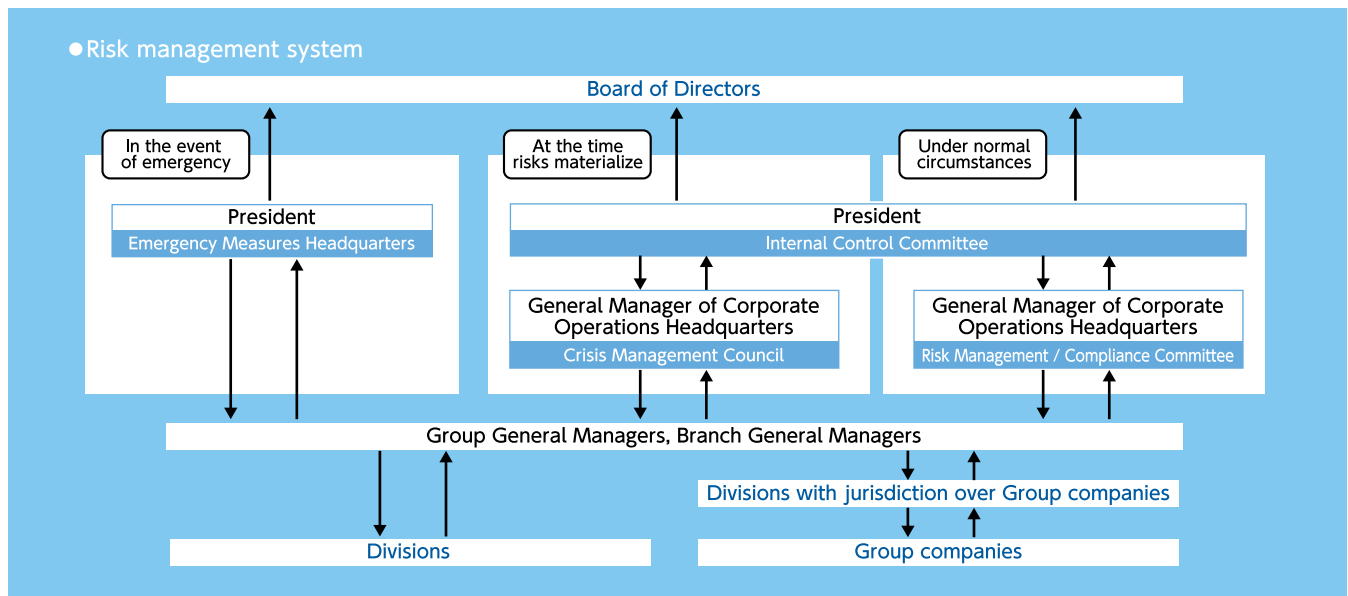
The Company conducts risk management in order to prevent all risks that relate to our business from materializing and, if risks do materialize, namely, when crises occur, to minimize losses from such risks.

To prevent risks from materializing, we, in accordance with the Risk Management Regulations, established the Risk Management / Compliance Committee, which is chaired by the General Manager of Corporate Management Headquarters, with the president as chief officer in charge. The committee is responsible for the approval of risk management policies, identification of risks, and assessment of such risks based on the probability of occurrence as well as impact on management, along with developing risk

mitigation measures and related progress management, all in an effort to ensure the effectiveness of risk management.

Meanwhile, a system working against the possible materialization of risks, that is, when crises do occur, has been developed to minimize damage and loss in such an event in accordance with the Crisis Management Regulations.

In addition, we make efforts to mitigate the risks that we give first priority to as focused key risks, which are defined as risks that have a severe impact on management and have a high probability of materializing, and strengthen the PDCA cycle with which we review our progress and the issues, to use them as feedback to modify our risk mitigation activities every quarter.



Major risks and countermeasures

Risk	Description	Countermeasures
Risk of unprofitable construction	<ul style="list-style-type: none"> • Risk of unexpected additional costs at the construction stage 	<ul style="list-style-type: none"> • Find sites that we should pay attention to, and check their status and manage monitoring through interviews.
Risk of accidents and disasters during construction	<ul style="list-style-type: none"> • Risks of compensation for damages, defect liability, and other obligations due to disasters or accidents during construction 	<ul style="list-style-type: none"> • Ensure preparation and observance of procedures for safety and health. • Plan and manage measures related to the securement of company-wide general safety through on-site patrols. • Understand site management status and review/summarize actual cases of guidance on-site.
Risks of overseas business	<ul style="list-style-type: none"> • Risks such as unexpected legal restrictions and changes in areas where we develop overseas business, political instability, fluctuations in market conditions and exchange rates 	<ul style="list-style-type: none"> • Establish risk management documents, and broadly implement the contents of the documents. • Make the details of risks broadly known, and share case studies of risks throughout the entire group.
Risk of natural disaster	<ul style="list-style-type: none"> • Risks associated with the occurrence of large-scale natural disasters such as earthquakes 	<ul style="list-style-type: none"> • Formulate a business continuity plan (BCP) in case of large-scale disaster, and conduct relevant training. • Stockpile necessary supplies. • Introduce safety confirmation system for executives and staff.
Risk of legal restrictions	<ul style="list-style-type: none"> • Risks arising from revision, abolition, and introduction of legal restrictions, and changes in application of standards, etc. 	<ul style="list-style-type: none"> • Distribute the Group Enterprise Ethics Grand Plan and proactively use the plan in daily work, in-house training, etc. • Provide training through a compliance program, and manage related measures with the PDCA cycle.
Risk of information leakage	<ul style="list-style-type: none"> • Risk of leakage of confidential information / personal information 	<ul style="list-style-type: none"> • Implement information security education aiming to raise awareness about information management, and issue the Information Security Brochure. • Encrypt all personal computers installed at on-site offices. • Introduce a cyber-terrorism countermeasure system.

► Strengthening our capacity to respond to disasters in accordance with the Business Continuity Plan (BCP)

In April 2014, the Business Continuity Plan (BCP) in preparation for the event of a large-scale earthquake was established. We have developed a system to fulfill our social responsibility as a building constructor if a disaster occurs, for example, assistance for the recovery of hospitals and other facilities with a highly public nature as well as our customers' supply chains. In FY 2016, we conducted a drill to call up the Emergency Measures

Headquarters staff assuming a great earthquake had happened outside work hours. The headquarters makes efforts for what they call BCM, aiming to enhance the effectiveness of our BCP.

* BCP means a plan to continue operations when there is a disaster whereas BCM (Business Continuity Management) means activities that enhance the effectiveness of BCP such as implementing training and strengthening necessary business resources.



Training assuming earthquakes beneath the city center

Enhancement of Corporate Governance

We ensure the legitimacy, transparency, and promptness of management, and increase management efficiency in order to earn the trust of society and raise our mid- to long-term corporate value.

▶ Basic philosophy on corporate governance

Our basic policy on corporate governance shall be to ensure the legitimacy, transparency, and promptness of management, and increase management efficiency in order to earn the trust of society and raise our mid- to long-term corporate value.

▶ Ensure the effectiveness of the Board of Directors

Aiming to operate an effective Board of Directors

The Company strives to make the Board of Directors active through directors familiar with the Company's business and external directors that serve in the role of management supervisors from an independent standpoint. As of July 2017, the Board consists of nine directors (including three external directors).

A meeting of the Board of Directors is held once a month in principle, and also may be held when needed, to make decisions on the execution of important business and to supervise directors' execution of duties in order to enhance management efficiency while ensuring legitimacy and propriety in the execution of business. In FY 2015, we established the Management Committee as a subsidiary body of the Board of Directors. The Board of Directors delegates to the Management Committee some of its decision-making authority, allowing the Board of Directors to operate in an effective manner, with enhanced powers to review critical management issues including growth strategies, and an accelerated decision-making process for the allocation of management resources.

Executive officers strive to execute their duties flexibly in accordance with the management principles laid out by the Board of Directors, and report as appropriate the status of the execution of their duties primarily through Executive Officers' meetings.

Nomination Compensation Committee

We established the Nomination Compensation Committee, which comprises the representative directors, the chairman and director, president, vice presidents, and external directors. This committee conducts discussions on the appointment, dismissal, and compensation of directors, corporate auditors, and executive officers of the Company and its subsidiaries.

Analysis and evaluation of effectiveness

In March 2017, each director and corporate auditor conducted a self-assessment. After deliberation by the representative directors, external directors, and external auditors, the effectiveness of the Board of Directors as a whole was analyzed and evaluated at meetings of the Board of Directors.

▶ Advisory Council

As a consultative body serving the Board of Directors, we have the Advisory Council, whose members are the chairman, president, and vice presidents, all of whom are representative directors, along with the external directors/auditors. The Council conducts reviews of the balance of composition of the entire Board of Directors, analyses/evaluations of their efficiency, confirmation of policies for training for directors/auditors and provision of information, and other matters every year in principle, which contributes to the vitalization of the Board of Directors.

▶ Audit system

The Company has adopted an auditor system. There are five auditors including three external auditors as of July 2017. They conduct audits to ensure legal compliance and propriety in the directors' execution of business. The external auditors ensure the objectivity and neutrality of management audits by stating their opinions from objective and professional points of view.

Furthermore, the auditors cooperate with accounting auditors and the Internal Audit Office while exchanging information with leaders including the directors and auditors of subsidiaries, and improve the effectiveness of audits through active communication.

▶ Support of the Corporate Governance Code

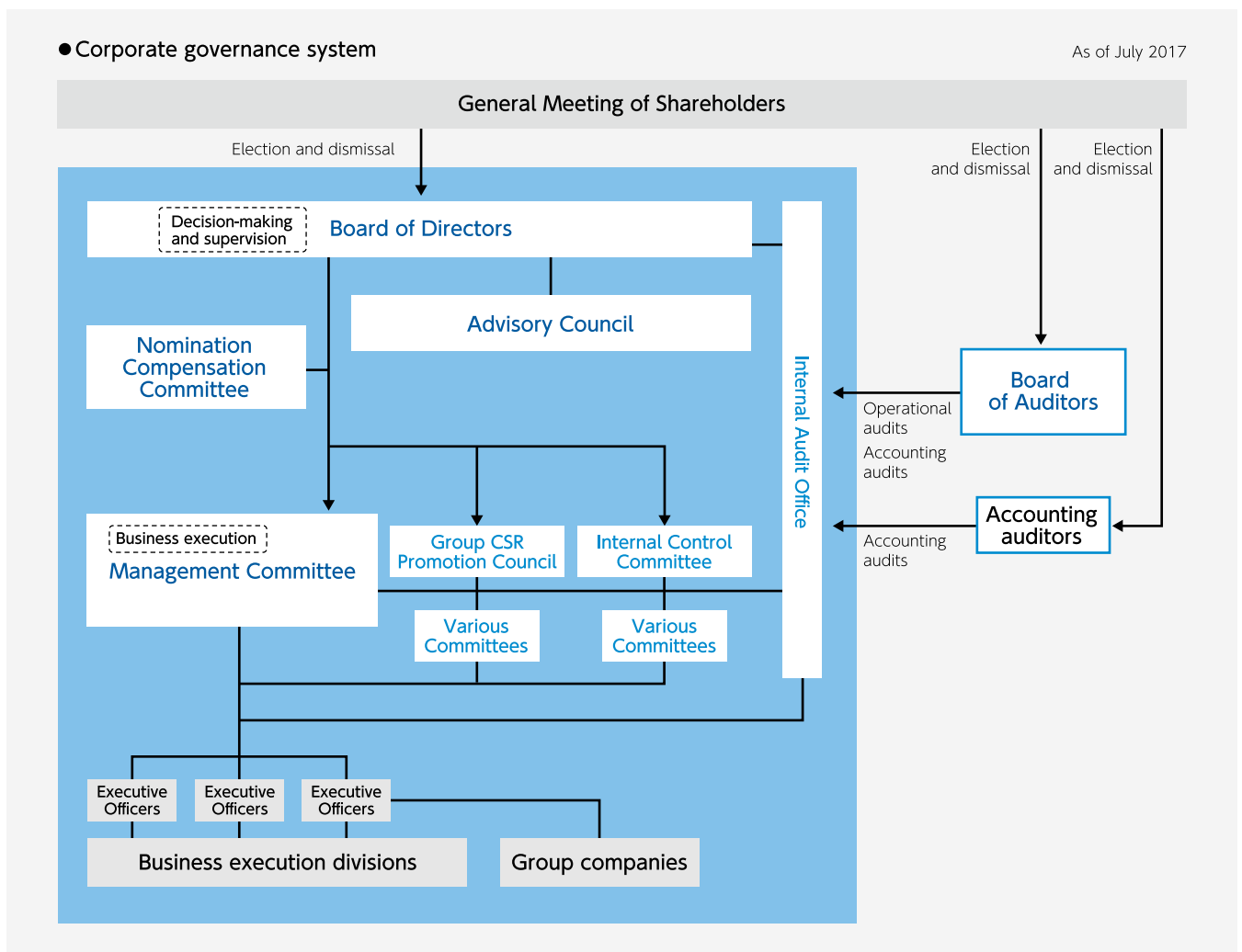
The Japanese version of the Corporate Governance Code went into effect in June 2015. As of July 2017, we are in full compliance with all 73 principles of the Code, including the Code's five basic principles: securing the rights and equal treatment of shareholders, appropriate cooperation with stakeholders other than shareholders, ensuring appropriate information disclosure and transparency, responsibilities of the board, and dialog with shareholders. Thus, we will aim to realize aggressive management through effective corporate governance, to continue to evaluate and verify, and to work independently under the Code to contribute to the Company's sustainable growth and the improvement of our corporate value over the mid to long term.



▶ Operation of Internal Control System

We believe that the basic concept of an internal control system is to attempt to ensure the effectiveness, efficiency, and reliability of business operations, and ensure they are conducted appropriately. Furthermore, Group companies shall ensure the appropriateness of business operations in accordance with factors including the size and business characteristics of each business and associated risks. In FY 2015, we established the Internal Control Committee, comprising

the representative directors, Group General Managers from the head office, and officers in charge of domestic and overseas group companies. Since then, the Internal Control Committee has promoted the development and operation of internal control systems in the Company and at our Group companies across the entire Group.



Officers' workshop (June 9, 2017)

Approximately 60 people, mostly officers, attended the workshop given by Shuma Uchino, an external director, under the theme "Takasago Thermal Engineering from an external director's point of view - Ideal form for profit/risk management associated with the reform of business models."

Starting with an *external director's perspective*, he lectured about *macroeconomics and trends in business results, financial indices, and case studies of the reform of business models*, taking advantage of his specialty, discussed our *workplace skills, aggressive power, and defensive capability* in an objective way, and lastly showed the direction that we should take so as to fulfill our mission: "Contribution to the world by pursuing a decarbonized society through environmental engineering."

Further improvement of customer satisfaction

We make efforts to always deliver building facilities and services which are high quality and superior in their safety and performance, and to gain our customers' satisfaction and trust. As a part of such activities, we focus on activities which enable both energy-saving at customers' sites and the creation of the best-quality air.

► Provision of the quality with which we can gain customers' satisfaction and their trust

Basic policy on quality

Our basic philosophy is to gain customers' satisfaction and trust by continuously providing building facilities and services which are high quality and superior in their safety and performance. We have established basic quality policies based on our philosophy, and we have codified our system for promoting such policies. We have developed a system to support customers' requests and inquiries in a prompt and appropriate manner, and try to maintain/improve our building facilities and services that we have provided.

Quality control system

We are certified under the Quality Management System (ISO 9001:2015), undergo external renewal inspections, and continue improving. We carry out high-quality, quick-delivery construction / construction management, and operational support based on our management system, leading to customer satisfaction.

Also, as an effort made to strengthen quality control, we have established the Safety/Quality Management Group within the Business in Japan Headquarters to consolidate quality control systems.

We evaluate the results of our activities to achieve focused targets every quarter, plan and manage measures related to the shared securement of quality for all offices, and understand and provide instructions on the status of the management of construction sites by patrolling the sites of each office.

We will continue to try to enhance our quality control system so as to precisely respond to customers' needs, and contribute to the business activities of our customers.

Efforts made to improve quality

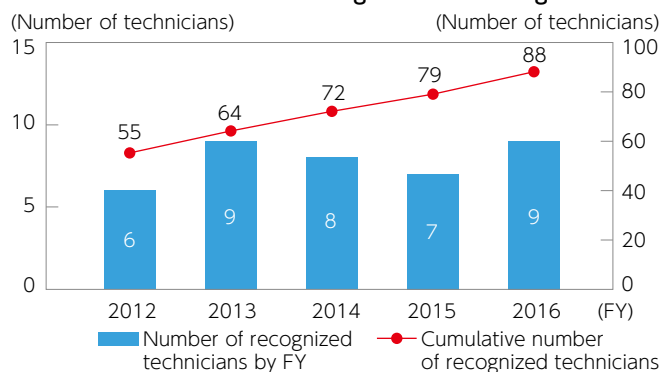
When performing construction work, we hold a kick-off meeting prior to the construction work, identify and consider key points for the construction work, and try to share the points, which enables us to make the construction work more efficient and maintain the level of quality.

In order to secure quality and improve construction management techniques/skills, the Technology Development Department and the Technology Management Department are proceeding with the introduction of techniques including the el-brazing method and the no water discharge flushing method. In addition, the Takasago Academy, which is the department responsible for the development of human resources, leads the development of our technical staff development system. Its activities are not only for the training/education of employees including those from Group companies, but also for the improvement of skills and the strengthening of the technical knowledge of employees through means such as the promotion of the acquisition of certifications. In addition, we are promoting self-improvement for technical staff members, the advancement of technologies, and technical exchanges through technology demonstrations at the Takasago Thermal Engineering Group Technical Presentation Fair; the holding of technical seminars; and the issuance of a booklet for internal use titled "Technology Update."

Securement of quality by working together with cooperating companies

We try to secure quality at construction sites, working together with approximately 10,000 technicians from cooperating companies, and therefore advanced skills and teamwork at the construction sites are essential. Thus, in FY 2007, we launched the Takasago Meister System, through which we recognize excellent technicians who are superior in technical skills and leadership as top-notch technicians (Takasago Meisters), targeting technicians from cooperating companies, who are the main force at construction sites. We had cumulatively recognized 88 technicians by FY 2016, and gave them Meister Helmets and rewards corresponding to their contributions.

●Number of those who are recognized as Takasago Meisters



FY 2016 Excellent Company Award commendation / Takasago Meister recognition ceremony



Trophies for Excellent Company Award / Takasago Meister

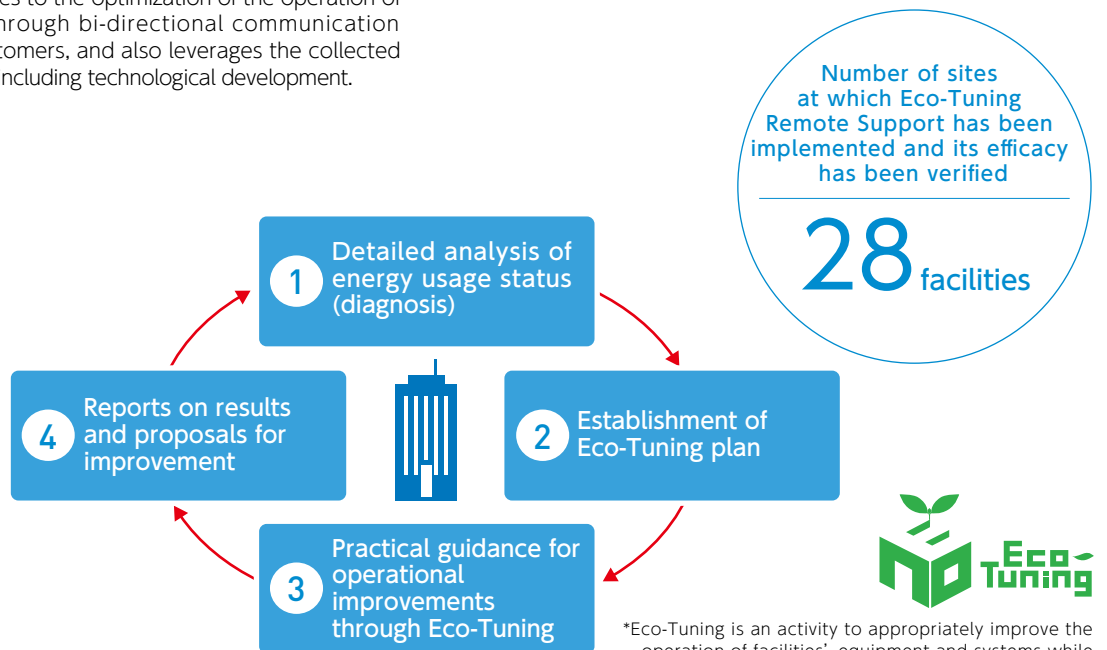
▶ Green Air® Activities

Promotion of Green Air® activities and sending associated information out

We promote Green Air® activities to improve customer satisfaction. Information about these activities, which enable both energy-saving / reduction of environmental loads at customers' sites and the creation of the best-quality air environment, is sent out from the Takasago Thermal Engineering Group's Green Air Plaza integrated showroom, which has been recently opened in Kyobashi, Tokyo, which is the place where we founded our business. Green Air Plaza contributes to the optimization of the operation of customers' facilities through bi-directional communication between us and the customers, and also leverages the collected information for purposes including technological development.

Green Air® activities throughout the entire group

Among the Eco-Tuning projects promoted by the Ministry of the Environment (MOE) for the realization of a low-carbon society, our Group supports the implementation of the mechanisms for Econ-Tuning Remote Support, which is for efficiently improving operations by leveraging operational data from facilities, and has implemented the system and verified its effectiveness at 28 facilities. In addition, in order to improve our Eco-Tuning technology, we will increase the number of Category 1 / Category 2 Eco-Tuning Engineers and acquire the Eco-Tuning Business certification, making efforts for Eco-Tuning in a sustainable/continuous manner.



*Eco-Tuning is an activity to appropriately improve the operation of facilities' equipment and systems while maintaining the comfort and productivity of buildings so as to reduce greenhouse gas emissions generated by buildings for the realization of a low-carbon society. Eco-Tuning is a registered trademark of the MOE.

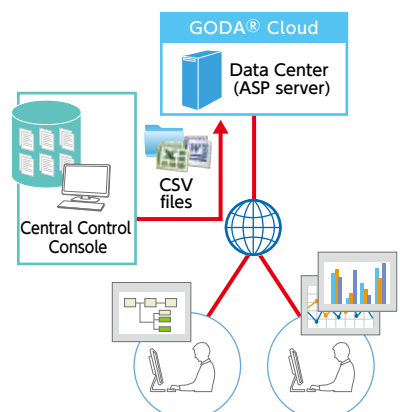
Cloud-Based Data Analysis Tool, GODA® Cloud

●Cloud-Based Data Analysis Tool, which supports the optimization of life-cycle cost and energy management

GODA® Cloud is an energy analysis tool, which flexibly "visualizes" the data from customers' facilities using data from central control devices. It was adopted as a tool for Eco-Tuning for the MOE Eco-Tuning Business Model Establishment Project from FY 2014 through 2016. Our Group will make efforts to solve issues together with our customers by proactively using GODA® Cloud so as to solve the issues surrounding the promotion of the optimization of life-cycle costs and energy-saving at customers' facilities for the realization of a decarbonized society.

*GODA: Gathering Operation Date and Analysis

●Network diagram of GODA® Cloud Service



Research and Development

From the perspectives of *optimized environments for minimizing energy consumption*, *environmental technologies to improve productivity*, and *building construction technologies to contribute to high quality and labor savings*, we promote research and development to contribute to a decarbonized/sustainable society as well as the spread and deployment of the outcomes of such research and development.

▶ Basic policy on research and development

Based on the policy stipulated in one of our management principles, "to develop technology that serves our customers' needs and utilizes the creativity of all employees," the Takasago Thermal Engineering Group proceeds with its research and development in accordance with the following policies: 1. To provide an optimized environment for low energy consumption; 2. To pursue environmental technologies to improve productivity; and 3. To develop building construction technologies to contribute to high quality and labor savings.

▶ Research and development strategies

Our Group creates and spreads/deploys technologies and products to contribute to a decarbonized/sustainable society as an *environmental solution professional contributing to the global environment*.

We will aim to leap into the Multidiscipline engineering business having air conditioning installation as its core by realizing high value-added one-stop service and value chains in the life cycle of buildings, by developing advanced design/construction management methodologies using artificial intelligence, information and communication technologies, and BIM information.

In addition, we will enter the stock business, which is one of our new business areas, by developing advanced technologies including technology for the storage and conversion of heat/energy, and also proceed with the creation of the second and third pillars of our business by applying and advancing the technologies we already have in existing markets.

These efforts will be made by conducting a series of processes for marketing / research and development / creation for our new businesses in an integrated manner through the newly established Innovation Center. We will also accelerate our open innovation, including industry-academia-government collaboration.

▶ Research and development activities and outcomes

Equipment installation business

Next Generation Energy Management System

We have developed a cloud service-based energy management system (GDoc®), which visualizes the operation of facilities in buildings over their entire life cycle to support and optimize operations, and are proceeding with its introduction for demonstration/verification purposes.

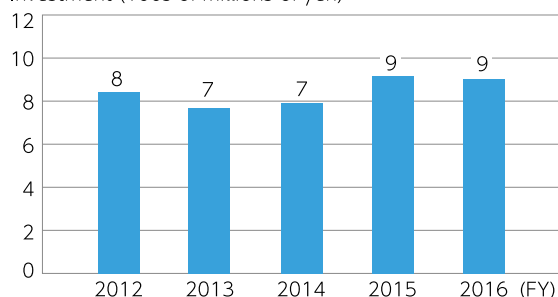
In addition, we will proceed with the development of a system which realizes totally optimized operations by strengthening the evaluation of operations in terms of energy consumption and heat sources and diagnosis functions for detecting errors/deterioration in multiple buildings by managing facility operations data in an integrated manner, as well as expanding the coverage of the application through the advancement of functions such as heat exchange between heat sources.

● Target markets for research and development



● Investment in research and development (consolidated)

Investment (100s of millions of yen)



* Figures are rounded down to the nearest unit.

● An example of a GDoc® control screen



High speed VAV device and control/monitoring system for air supply and exhaust

We have added a new model that supports greater air volume to the high-speed VAV (variable air volume devices) product family, which is for fume hoods* used by medical/chemical manufacturers and research institutions at universities, and developed an integrated air supply and exhaust monitoring system for a small-size system, the i-Fume mini, thus enhancing our product line-up.

* Local exhaust ventilation that protects researchers and experimenters from substances harmful to the human body.

Low-temperature waste heat storage system using adsorptive material

Development was done through collaboration with the New Energy and Industrial Technology Development Organization (NEDO) and a few companies. Based on the technologies of the National Institute of Advanced Industrial Science and Technology, we were able to make adsorptive materials much higher performance and establish a technology for mass production, and now it is possible to store waste heat that is 100° C or lower, which used to be difficult to practically use, in a high-density manner and use the heat when necessary. In addition to the use of waste heat at a fixed place, a compact and portable thermal storage system enables off-line heat transportation. We plan to commercialize the technology after it goes through its introduction for demonstrations

Business of manufacture/sales of facility equipment

We have developed a floor standing portable spot air conditioner, the ASC40, which can improve the working temperature environment at manufacturing plants and warehouses, and Nippon PMAC has started to sell the product. The ASC40 is a low energy-consumption cooling/heating air conditioner which uses a heat pump system, equipped with a DC inverter compressor, and it is no longer necessary to collect drain water which is stuck in a water tank because the drain water that has condensed during cooling operations is vaporized within the machine. The ASC40 provides a comfortable thermal environment for focused spots all year round as it works also as a heater.

●An integrated air supply and exhaust monitoring system for fume hoods

Providing safe work environments with the capacity for high-speed control, whose performance is comparable to Japan's top-level equivalents.

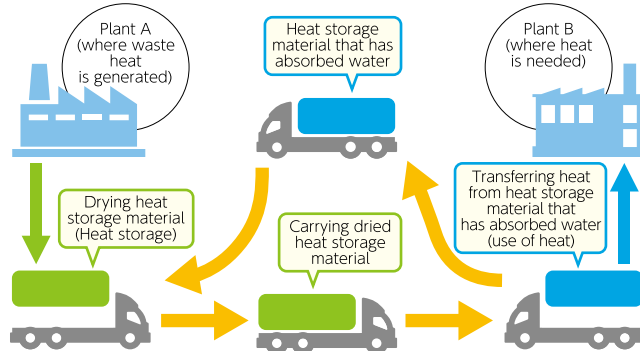
Round-shape high-speed VAV

High-speed VAV control / monitoring system for air supply and exhaust, i-Fume

Cube-shape high-speed VAV (VAV: variable air volume control device)

Simplified VAV control / monitoring system for air supply and exhaust, i-Fume mini

●Use of waste heat using off-line heat transportation

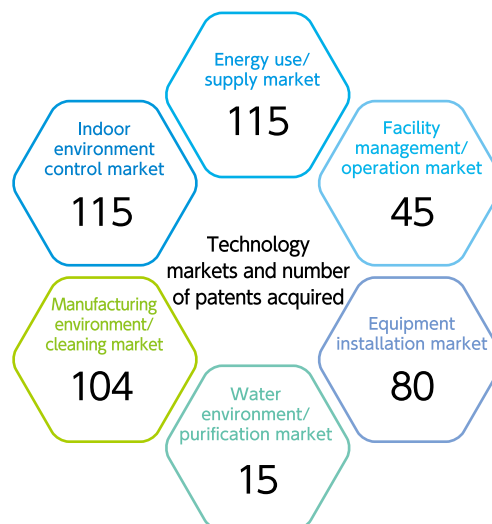


●A drain-less, floor standing, portable spot air conditioner



▶ Intellectual property management

As of the end of July 2017, the number of patents we have acquired is 745 (including patents, utility models, designs, and trademarks), which is the best in the industry. Among these, the number of patents is 495, which account for two thirds of the total, comprising 474 domestic patents and 21 overseas patents. We not only apply these patents to our solutions, but also proceed with efforts made to offer such technologies to others through the licensing of our patents.



Contribution to environmental conservation

We work on our contributions to the realization of a decarbonized society, a society harmonized with nature, and the establishment of a recycling-oriented society by proactively using environmental conservation technologies. We support the efforts made by our customers for environment conservation, as well as continuing to reduce the environmental load generated by our own business activities.

▶ Basic policy and management system

The Company's basic philosophy on environmental conservation is to "endeavor to harness our corporate power and environmental preservation technologies, with the aim of contributing to the *sustained development of society while protecting the Earth's environment.*" Based on this philosophy, we have defined a Basic Policy for the Environment in order to standardize our structure for promoting environmental conservation. In our business activities, we strive to proactively develop technologies that save energy and reduce CO₂ emissions, optimize equipment operations in collaboration with our customers, and help to create a decarbonized society through our core business.

We also comply thoroughly with all environmental laws and regulations and seek to prevent environmental pollution, while working actively to save energy and reduce CO₂ internally through efforts at our production sites (including construction sites) and offices.

▶ Toward the establishment of a decarbonized society

We list "contribution to the establishment of a decarbonized society" as one of our environmental goals, and will make more proactive efforts to move from a low-carbon society to a decarbonized society.

Dissemination and deployment of our own environmental conservation technologies

We try to make effective use of heat by transporting waste heat to remote places with heat storage system using our proprietary adsorptive material.

Proposals for energy-saving measures at building design and construction phases

We reduce CO₂ emissions, for example, by proposing air conditioners which are efficient in energy savings at the design phase and optimizing the operating time of equipment at the building construction phase.

Reduction of building construction materials

We try to optimize transportation routes so as to reduce the amount of building construction materials such as ducts, piping, and frames. At the same time, we contribute to the reduction of CO₂ emissions during operations by saving transportation energy.

Reduction of electricity used at offices

We try to reduce the amount of electricity used by controlling overtime work based on working-style reform and turning off the lights during lunch break.

Shifting company cars to fuel efficient vehicles (Green procurement)

We try to reduce CO₂ emissions by introducing fuel efficient vehicles (4 stars or better), hybrid vehicles (HVs), electric vehicles (EVs), and fuel cell vehicles (FCVs).

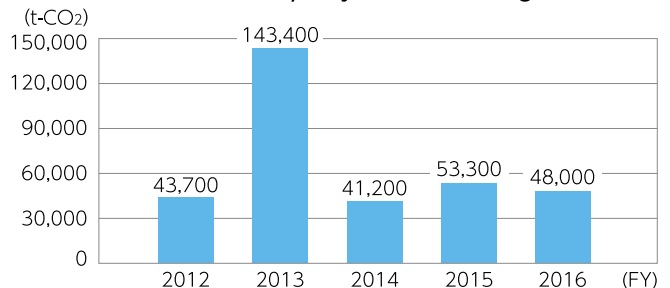
Total amount of CO₂ emissions reductions from HVAC systems that we deliver to our customers

195,200 tons of CO₂
(FY 2016)

Amount of CO₂ emissions reductions due to resource conservation activities at building construction phase

3,600 tons of CO₂
(FY 2016)

● CO₂ emissions caused by major manufacturing activities



▶ Contribution to a society harmonized with nature

We have made the following efforts regarding biodiversity and consideration of the ecosystem

Dissemination and deployment of our own environmental conservation technologies

Wastewater from production sites includes industrial waste and regulated wastewater substances. In order to reduce the environmental load, we are developing a no water discharge flushing method, which is one of our proprietary environmental protection technologies and generates no wastewater, and are working on the expansion of its use.

Company-wide development of participation in corporate forestation

Based on its relevance to our business, we will promote the maintenance and improvement of the public functions of forests, such as carbon dioxide absorption, and contribute to global environmental conservation.

Proposals for and implementation of green procurement

We propose low environmental impact products to our customers (green procurement) and promote the adoption of eco-friendly products.

Contribution to creating a recycling-oriented society

We make the following efforts to treat waste as a precious domestic resource, collect useful resources from it, and effectively utilize them.

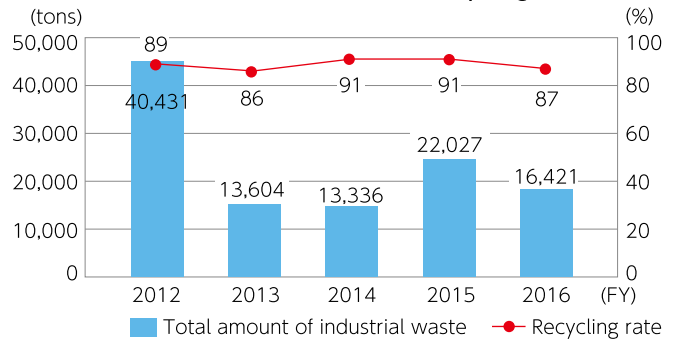
Zero-emissions activities at building construction sites

We make efforts to improve our recycling rate by promoting the sorted collection of waste and the adoption of recyclable items at our building construction sites.

Reduction of ordinary waste at offices

We analyze the use of copy paper, which accounts for the greatest proportion of waste from our offices, and make efforts to reduce the amount of paper used.

● Total amount of industrial waste and recycling rate



Goals and results of environmental activities in FY 2016

✓: Achieved →: Not achieved / efforts still being made

Goals of activities	Description of Activity		Control Items	Control Standard	Actual result	Evaluation
Contributing to the realization of a low carbon society	Proposing energy savings at design and construction stages	Proposing energy savings in design	$\frac{\text{Amount of energy saved}^{*1}}{\text{Baseline}^{*2} \text{ energy consumption}}$	30%	36%	✓
		Reducing equipment capacity in construction	$\frac{\text{Amount of energy saved}^{*3}}{\text{Energy consumption in original design}}$	10%	11%	✓
	Saving energy at offices	Reduce energy usage at head office, mainbranches, sales branches, and R&D center	$1 - \frac{\text{Amount of energy consumed in current FY}}{\text{Amount of energy consumed in previous FY}}$	5%	4%	→
	Introducing fuel efficient vehicles	Introducing fuel efficient vehicles as company-owned vehicles	$\frac{\text{Number of fuel efficient vehicles}}{\text{Total number of vehicles}}$	70%	89%	✓
	Reducing amount of construction materials	Reducing volume of piping, ductwork, and equipment scaffolding in construction	$\frac{\text{Reduced volume of materials}}{\text{Materials used for ductwork, piping, and scaffolding in original design}}$	10%	16%	✓
Contributing to a society harmonized with nature	Implementing and proposing green procurement ^{*4}		$\frac{\text{Number of sites at which proposals were made}}{\text{Number of potential sites}}$	90%	100%	✓
	Implementing green purchasing of office supplies		$\frac{\text{Green purchasing volume}}{\text{Total potential purchasing volume}}$	90%	100%	✓
	Participating in local environmental activities	One or more activities per branch		100%	100%	✓
		Rate of participation of individuals		30%	33%	✓
	Commercializing and deploying technologies that contribute to biodiversity		Testing deployment of the no water discharge flushing method	$\frac{30 \text{ technologies adopted during the year}}{39 \text{ technologies adopted during the year}}$	30%	39%
Contributing to the building of a recycling-oriented society	Implementing zero-emissions activities ^{*5} for industrial waste at construction sites		$1 - \frac{\text{Recycling rate}}{\text{Final disposal volume}} \div \text{Total waste volume}$	85%	87%	✓
	Reducing amount of general office waste		$1 - \frac{\text{Amount of copy paper used per person for current fiscal year}}{\text{Amount of copy paper used per person for previous fiscal year}}$	10%	3%	→
	Thoroughly managing industrial waste manifests		$\frac{\text{Number of implementing sites}}{\text{Total number of contracting sites}}$	100%	100%	✓
	Thoroughly managing CFC collection process manifests		$\frac{\text{Number of sites at which CFC collection process manifests are managed}}{\text{Total number of sites at which CFC collection is implemented}}$	100%	100%	✓

*1 New buildings designed by the Company of a certain scale (new construction and refurbishment) *2 The baseline value is the energy consumption for the year or the amount defined for a specific project, equivalent to the baseline in the Act on the Rational Use of Energy. *3 Contracts of a certain scale (new construction and refurbishment) *4 Prime contracts of a certain scale (new construction and refurbishment) *5 All prime contracts *6 The target is 30% reduction of the baseline value, stipulated in the Act on the Rational Use of Energy.

Realization of Employee Satisfaction

We have made efforts for systematic and organized human resource development that can realize our management policy, "contribution to society through personal harmony and creativity." In addition, we strive to create an environment in which employees can work actively and safely.

▶ Development of human resources and promotion of opportunities for them to flourish

Basic policy on human resource development

As a pioneer in the field of air conditioning installation and associated fields, we have made various efforts toward the creation of the best quality and technological development using our creativity along with human resource development, which makes these kinds of activities possible in accordance with our management policy, "contribution to society through personal harmony and creativity."

In line with our philosophy that "people are our most important assets" in our Basic Policy for Human Resource Development, we conduct employee education in a systematic and organized manner and strive to create an organizational culture that fosters inventive ingenuity.

Educational Programs Based on Individual Career Stages

In light of our mission to create new value, the Company places great importance on the development of human resources. In order to nurture creative personnel that can provide high value-added technologies and solutions at the front line of a project, we have established an educational scheme to provide



New employee training at Fuji Education Training Center

practical and multifaceted training programs based on OJT (on-the-job training) combined with OFF-JT (off-the-job training). Specifically, we conduct training that covers a range of stages from the time of joining the company to retirement, and individuals seek to acquire the skills, visions, and ethics necessary for each stage. In FY 2016, we focused on management capabilities, implemented General Manager Seminars for managers and Transformative Manager Seminars for management candidates, and established bases that allowed them to sufficiently demonstrate their individual abilities corresponding to their roles and responsibilities. Furthermore, starting in FY 2016, we have dispatched mid-career employees to a graduate school of business administration to acquire MBA degrees aiming for the prompt development of the next generation of management.

Support for acquisition of qualifications

We actively support bold efforts for acquiring public qualifications in order to encourage employees to study by themselves at all times and to pursue self-transformation. When employees obtain a preferred qualification, the employees will be reimbursed for expenses including the exam fee, registration fee, and tuition fees. The Company also offers grants for certain qualifications and assistance for learning outside of the Company.

Operation of a fair personnel evaluation system

Our philosophy in our human resources assessment system comprises the ideas of fairness and equity.

Specifically, we inform individual employees of the expected objectives and the results for each employee's goals with respect to their abilities by actually showing them the relevant documents, and evaluate the results through interviews with a supervisor twice a year, and therefore the system is highly transparent. We operate a highly valued evaluation system upon which both the evaluator and the evaluated can easily agree.

In addition, we regularly conduct training for evaluators, in an attempt to improve the level of evaluations.

In an evaluation, we also consider individual capabilities, not just the results, to raise the employees' motivation and to create an environment in which they can demonstrate their potential as well as possible.



Head of Working-Style Reform Promotion Office,
Director and Managing Executive Officer

Shinji Nishimura

Regarding working-style reform, it has been taken up in a big way by the media including newspapers, and it is becoming an important challenge affecting the future of the Japanese economy.

We established the Working-Style Reform Committee to promote the *strengthening of our capabilities at the workplace and the building of workplace environments that allow a work-life balance*, which are priority action items in the new medium-term business plan, "iNnovate on 2019".

The Committee conducts activities to examine and implement concrete implementation measures for reform with themes such as overtime working issues, productivity improvement, operational efficiency, and the promotion of opportunities for women to flourish. Keeping in mind that the leading characters are our employees, we made a slogan, "To fill our company with *lively employees* and *prompt employees*," considering our desire to increase the number of lively employees who can work in ways that are healthy and lively both in mind and body, and *prompt employees* who can work efficiently by reviewing work and improving.



▶ Respect for human rights and diversity

Employee satisfaction survey

In order for employees to be motivated and carry out their jobs vigorously, it is important to provide an environment to support this. We have conducted our Employee Satisfaction Survey since FY 2014, and we analyze the results of the survey to understand the outcomes and issues and to make the working environment more comfortable based on such work.

Stricter Measures to Tackle Issues of Harassment

To prevent sexual and power harassment from occurring, we have set up consultation counters on and off the company premises to address this matter.

Furthermore, we carry out training and educational programs for employees at the management level, with an eye to raising employees' awareness about health monitoring, stress reduction, and harassment prevention.

Furthermore, by conducting regular questionnaire surveys that focus on the *perspectives of other people*, we check for the presence or absence of harassment in the workplace and try to prevent acts that worsen the environment in the workplace.



Harassment training provided by Japan EAP Systems, Inc.

Promotion of opportunities for women to flourish

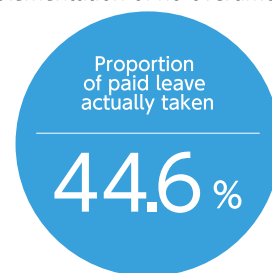
In order to support the Act on Promotion of Women's Participation and Advancement in the Workplace (Act on Promotion of Women's Participation), enacted in August 2015, the Company published an action plan, establishing a policy of working to enhance career-building for female employees, with a view to *hiring more women, increasing the number of sites where women can work, and enhancing in-house programs*. In employing new graduates, we actively provide information, and in FY 2016, we employed 172% more graduates than we did the previous fiscal year.



▶ Improvement of work-life balance

Vacation/leave system

In addition to the legally designated annual paid leave, we have established a system of bereavement leave, prenatal and postpartum leave, a refreshing vacation after the receipt of awards for long-time service, and a summer vacation (promoting full use of available paid leave). In addition, we make it possible for employees to use paid vacation after its expiration date in case of the need to leave due to work injury or illness. We also strive to create an environment where employees can obtain vacations and rest with peace of mind, by means such as promoting consecutive holidays after the completion of construction at a site, and the full implementation of no-overtime days once a week.



Enhancement of childcare and nursing care system

Having in mind *harmony between work and life*, we have established a system concerning *childcare leave* and *nursing care leave* so that employees can motivate themselves at work. In FY 2015, we revised the Work Time Shortening Measures System, and now employees who are raising children under the age of 10 are eligible for relevant benefits while before the revision they were only available to those with children under the age of 3, and similarly, the period for which employees can be involved in nursing care has now been increased to a maximum of 3 years while there was a maximum of 18 months previously, making the system friendlier for employees who are rearing children or are involved in nursing care.

In addition, we have established a nursing leave and nursing care leave system, and we have developed a system that can respond to changes in the family environment of our employees and make efforts for employees to balance their work and lives.

● Utilization status of childcare leave in recent years

(FY)	2012	2013	2014	2015	2016
Number of persons who used the benefit	13	6	9	11	11

▶ Occupational health and safety

Basic policy

In 2000, we established our safety and health philosophy, "Safety is the top priority in carrying out all business tasks," and under this philosophy, based on the basic policy "The employees working for Takasago Thermal Engineering and their families must never suffer from accidents at construction sites," we make efforts for health and safety activities at building construction sites.

Analysis and identification of risks, and countermeasures

We have introduced risk assessment for safety and health management.

At building construction sites, we thoroughly prepare and observe safety and health work procedures. In response to serious accidental falls that have been occurring in recent years, we have made the slogan "eradication of accidents involving falling objects" a priority policy, and we are implementing countermeasures such as the utilization of a safety and health work procedures manual, thorough safety and health management activities for employers, and raising safety awareness levels.

The Safety/Quality Management Group, which was established for the purpose of strengthening safety and health activities, evaluates the results of our activities to achieve focused targets every quarter, plans and manages measures related to the shared securement of quality for all offices, and understands and provides instructions on the status of the management of construction sites by patrolling the sites managed by each office.

In addition, we raise awareness of safety and health activities through the Company-wide Safety and Health Conference held every spring.



Company-wide Safety and Health Conference

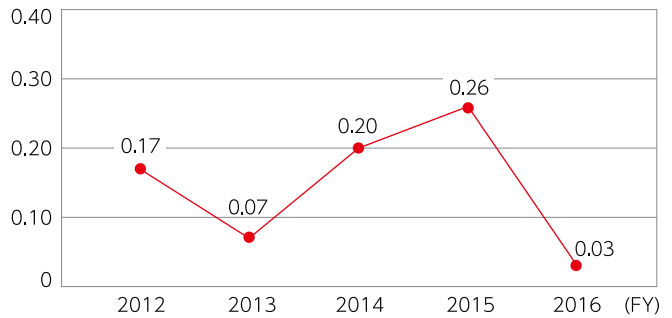
Education and follow-up

The implementation rate for the safety and health management check items listed among the safety priority targets set by the Safety/Quality Management Group in FY 2016 exceeded our target of 90% throughout the year. Going forward, we aim to achieve an implementation rate of 100%, and we will implement adequate education and follow-up.

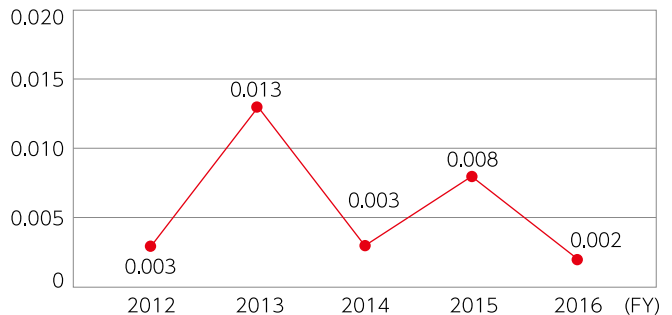
Trends in safety performance and eradicating accidents

In FY 2016, we were able to achieve the priority goals of the Safety/Quality Management Group in all four quarters. However, 35 cases of accidents occurred (1 lost-time injury and 34 non-lost-time injuries), and unfortunately our intensity targets have not been reached. Having the following safety activity goals for FY 2017, which had been established two fiscal years before and which are the *eradication of accidents involving falling objects* and the *eradication of accidents involving heavy objects*, which would directly lead to serious disasters, in addition to the *eradication of accident occurrences caused by unskilled persons*, we will work towards the prevention of accidents.

● Frequency rate over the past 5 years



● Intensity ratio over the past 5 years



▶ Basic policy

The Company's basic philosophy on social contributions is to "fulfil our social responsibility as a *good corporate citizen* by engaging voluntarily in activities that contribute to society." We pursue harmony with local society by informing all executives and employees of our basic policy and being actively involved in initiatives such as support for activities related to the local environment and arts and culture.

▶ Initiatives for activities that contribute to society

Supporting *corporate forestation* as promoted by the national government / prefectures, from the opening of a natural forest called the Takasago Thermology Forest in Gunma Prefecture, to our participation in the Kyoto Model Forest Movement and the Miyagi No Sato Cooperative Revival Project, we are actively involved in the nationwide deployment of support, including participating in support projects and promoting activities in Hiroshima Prefecture and Aichi Prefecture. In addition, regional cleanup activities in various parts of the country are continuing.



Forest volunteer experience

Cumulative number of people who have participated in forest conservation activities

290 people
(FY 2016)



Shinjuku Cleanup Activities

Cumulative number of people who have participated in community cleanup activities

1,121 people
(FY 2016)

▶ Sponsorship and support for cultural and artistic activities

We sponsor and support festivals, ceremonies, and organizations that conduct various activities for the promotion of culture and art. In FY 2016, we continued to sponsor and support mainly classical music and the performing arts. In addition, we continue to sponsor the light festival Tokyo Michi Terrace in the area around the Tokyo Station.

- Sponsoring the Seiji Ozawa Matsumoto Festival (Hosted by: Saito Kinen Foundation)
- Sponsoring the Orchard Ballet Gala (Sponsored by: Tokyu Bunkamura)
- Sponsoring - Lighting the Future, Celebration of Light - Tokyo Michi Terrace 2016 (Organized by: Tokyo Michi Terrace 2016 Executive Committee)
- Supporting the activities of the New National Theater Foundation
- Supporting the activities of the NHK Symphony Orchestra
- Supporting the activities of the Tokyo Philharmonic Orchestra
- Supporting the activities of the Nagoya Philharmonic Orchestra
- Sponsoring the performances of the Kansai Philharmonic Orchestra
- Sponsoring the performances of the Osaka Philharmonic Orchestra
- Sponsoring the 54th Osaka International Festival 2016 (Hosted by: Asahi Shimbun Foundation)

Number of culture/ art programs/ associations we supported

9

(FY 2016)

▶ Support for human resource development in emerging countries

Based on our agreement on comprehensive collaboration with MJIIT (Malaysia-Japan International Institute of Technology),* we established the Takasago Education and Research Fund in 2015. It is contributing to engineering education in ASEAN countries including Malaysia (especially in the fields of renewable energy and energy conservation technology).

* MJIIT is an academic research institution that carries out Japanese-style engineering education in Malaysia and was established in September 2011 based on an agreement between the leaders of Japan and Malaysia agreed in 2001.



Signing ceremony for the establishment of the Takasago Education and Research Fund

Introduction of Executives

Chairman and Representative Director, CEO



Atsushi Ouchi

Representative Director, Senior Managing Executive Officer



Choichi Takahara
Chief Executive Officer
of Business in Japan Headquarters

Executive Director and Senior Managing Executive Officer



Takuya Matsuura
Sales & Marketing

Executive Director and Managing Executive Officer



Jun Tabuchi
Chief Executive Officer
of International
Business Headquarters



Yoshiyuki Hara
Chief Executive Officer
of Corporate
Operations
Headquarters



Hiroshi Yamawake
Chief Executive Officer
of Business Innovation
Headquarters

Executive Directors



Kazuo Matsunaga
(Outside Director)



Mitoji Yabunaka
(Outside Director)



Shuma Uchino
(Outside Director)

Full time Corporate Auditors



Yukitoshi
Yamamoto



Kunihiro Kondo

Corporate Auditors



Tetsuo Ito
(Outside
Corporate Auditor)



Masahiro Seyama
(Outside
Corporate Auditor)



Makio Fujiwara
(Outside
Corporate Auditor)

Senior Managing Executive Officer

Keisuke Kamisugi
In charge of Special Mission

Managing Executive Officer

Shinji Nishimura
Head of Working-Style Reform
Promotion Office

Fumiaki Okano
Deputy Chief Executive Officer
of Business
in Japan Headquarters

Toshio Fujimori
Deputy Chief Executive Officer
of Business
in Japan Headquarters

Soji Ueno
Osaka branch
General Manager

Harutoshi Yasuhara
Nagoya Branch
General Manager

Nobuhiro Mita
Tokyo Branch
General Manager

Executive Officer

Shuhei Kuwayama
In charge of Sales & Marketing
for Business
in Japan Headquarters

Akira Nakayama
In charge of Sales & Marketing
for Business
in Japan Headquarters

Hiroshi Tanaka
In charge of Sales & Marketing
for Business
in Japan Headquarters

Yoshiyuki Maki
Kyushu Branch
General Manager

Masanori Kurata
Special Business
Project Manager

Toshihiro Mitsui
In charge of Sales & Marketing
for International Business
Headquarters

Kenji Suzuki
Head of Internal Audit Office

Akira Tsukada
In charge of Sales & Marketing
for Business in Japan
Headquarters

Yukio Enkaku
Nagoya Branch
Deputy General Manager

Takashi Imai
Nagoya Branch
Deputy General Manager

Kazuto Yamamoto
KanShinetsu Branch
General Manager

Shiro Okazaki
General Manager
of Sales & Marketing Management
Division of Business
in Japan Headquarters

Hirokazu Tanaka
Deputy General Manager
of Business Innovation
Headquarters

Masatoshi Murata
In charge of Sales & Marketing
for Business
in Japan Headquarters

Masato Nakamura
Deputy Chief Executive Officer
of International Business
Headquarters

Norinaga Tsuchiya
Tokyo Branch
Deputy General Manager

Kazuhito Kojima
Yokohama Branch
General Manager

Masato Takayama
President
Nihon Setsubi Kogyo Co., Ltd.

Stock information (as of March 31, 2017)

Large shareholders (top 10)

Names of shareholders	Number of shares held (1000 shares)	Salient ratio (%)
Nippon Life Insurance Company	4,560	6.17
Dai-ichi Life Insurance Company, Limited.	4,231	5.73
Employee stock ownership of Takasago Thermal Engineering Co., Ltd.	3,585	4.85
The Master Trust Bank of Japan, Ltd. (Trust Account)	2,755	3.73
Bank of Tokyo-Mitsubishi UFJ, Ltd.	2,346	3.17
Takasago Kyoekai	2,264	3.06
Mizuho Bank, Ltd.	2,177	2.94
Japan Trustee Services Bank (Trust Account)	2,155	2.91
CBNY-GOVERNMENT OF NORWAY	1,232	1.66
Japan Trustee Services Bank (Trust Account 5)	1,134	1.53

- (Note) 1. The number of shares held is shown by rounding down to the nearest thousand shares.
2. The shareholding percentage is calculated based on the total number of the issued shares excluding the number of treasury stock (8,952,000 shares).
3. The shareholding percentage is indicated by rounding off to two decimal places.

Situation of shares

•Total number
of authorized shares
200,000,000 shares

•Total number
of issued shares
73,813,508 shares
(excluding 8,952,260 shares
of treasury stock)

•Number of shareholders
5,812
(Reduced by 159 persons
compared to the end of
the previous business year)

