



mitsubishi heavy industries environmental & chemical engineering co., ltd.

Yokohama Blue Avenue Bldg., 4-4-2, Minatomirai, Nishi-ku, Yokohama, Kanagawa 220-0012, Japan
Phone +81-45-227-1280 (Main/General Affairs & Personnel Department)
<https://www.mhi.com/group/mhiec/>



Website



YOKOHAMA

COMPANY PROFILE



OUR MISSION & VISION

Building a Thriving Decarbonized Society



Municipal Solid Waste-to-Energy Plant



Sewage Sludge Treatment Plant



Recycling Treatment System



Industrial Waste-to-Energy Plant



Marine Growth Preventing System

Our Mission

To build clean, healthy communities
as we always have,
and always will

Since 1976,
we have taken on
all kinds of waste treatment challenges.
We will continue leveraging
the advanced technologies of MHI Group
to strive for better lives in
a cleaner world.

Our Vision

Challenge for Change
Exploring a New World of
Resource Recovery

Conventions change.
Waste treatment is evolving,
going from disposal to resource recovery.
To create innovative value,
we break new ground
beyond preconceived notions,
making waste into
a brighter tomorrow.

Mitsubishi Heavy Industries
Environmental & Chemical Engineering Co., Ltd.

OUR STAGE

Protecting the Beautiful of Our Planet

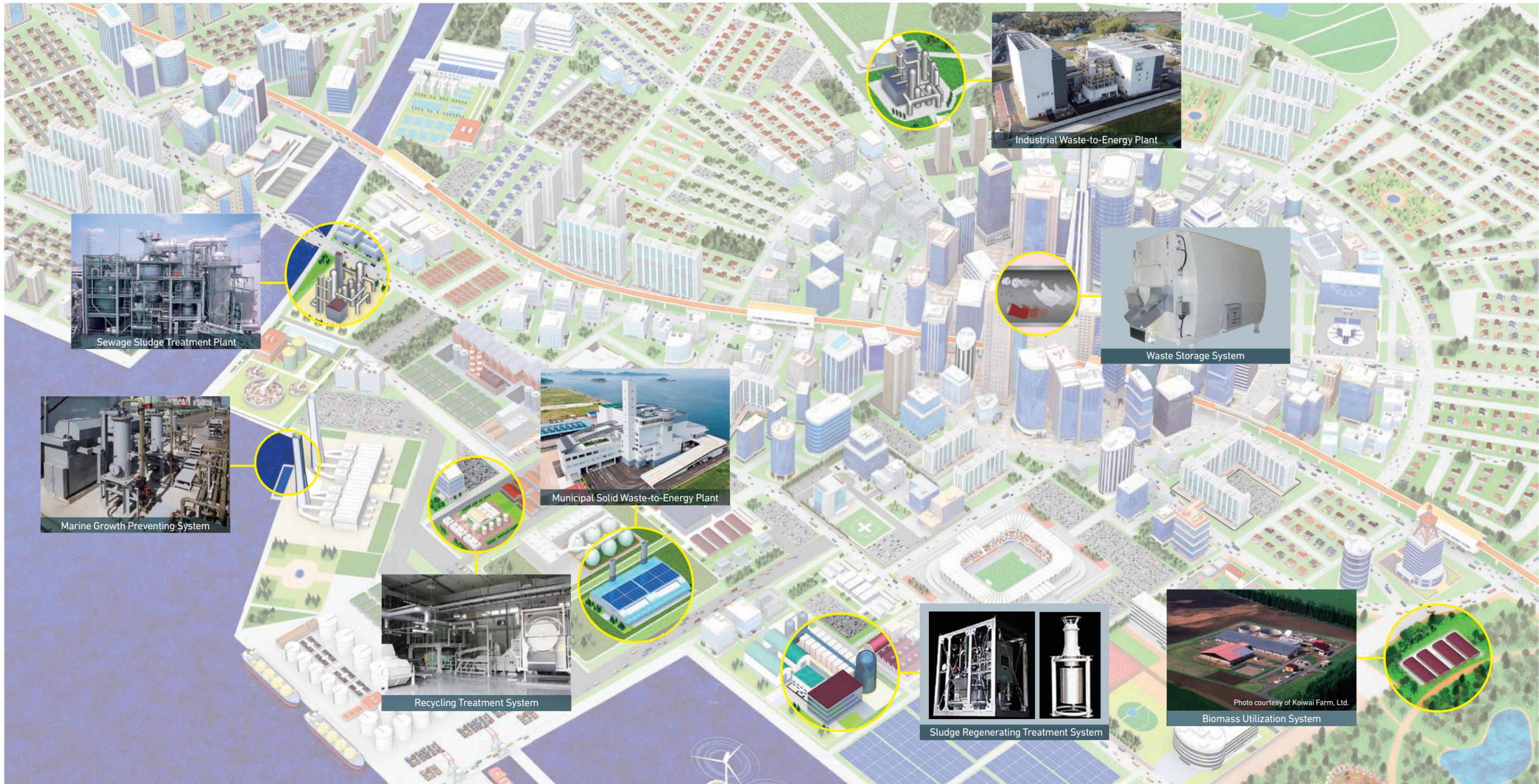


We are a comprehensive engineering company with capabilities in plant construction, operation, maintenance, and business management, along with a wide variety of advanced environmental technologies. Drawing on these strengths, we have been committed to protecting living environments and helping to create a more livable and prosperous society.

As our society matures, there is a growing demand for sustainable development, rather than a singular focus on economic growth. Environmental consideration, protection, and countermeasures are increasingly prioritized, and we are fully committed to meeting our customers' needs and expectations regarding our technologies, products, and services.

Since the environment has no borders, we are expanding globally beyond Japan. By leveraging the collective strengths of the Mitsubishi Heavy Industries Group, we will continue to develop new technologies, products, and businesses, contributing to the protection of our beautiful environment as a sustainably developing company.

YOSHIHIRO NOGUCHI, President & CEO



Build, Sustain, Renew: Comprehensive Engineering Across the Complete Lifecycle of Waste Treatment Systems

MHIEC's strength lies in its comprehensive approach that includes proposals for improvements/modifications across the entire lifecycle of waste treatment plants from economic feasibility assessment at the planning stage to facility and equipment design, procurement, construction, commissioning, operation, maintenance and inspection, and energy conservation measures. With the technology and know-how cultivated as a team of plant engineering experts, we offer environmentally superior plants.

What We Do

From planning during plant construction to after-maintenance, we take a comprehensive approach to facilities and provide attentive support. We provide customized solutions for our clients, offering long-term comprehensive services that include operation management, maintenance, and procurement of utilities over extended periods, as well as life extension projects through asset management to help your facilities last longer.

Initiatives for a Circular Society

We are working to promote a circular society by utilizing our expertise in facility development and operations to achieve efficient operations such as high-efficiency power generation and resource recycling.

LCC (Life Cycle Cost) Reduction

We offer solutions based on years of expertise to optimize the substantial costs of operation and maintenance over approximately 20 years, not just the initial construction costs.

Initiatives as Regional Disaster Prevention Centers

Beyond treatment facilities, we also develop facilities that serve as regional power sources by combining waste-to-energy with solar power generation and storage batteries, as well as regional disaster prevention centers through earthquake-resistant design and securing water supplies.

Post-Construction Operational Management

In addition to facility construction, we also address operational needs through comprehensive operational services via methods such as DBO (Design, Build, Operate) and operational management.



Operational Management by Our Group Companies

Jukan Operation Co., Ltd.

Through high technical capabilities and close coordination with MHIEC, Jukan Operation achieves safe and stable operations while supporting efficient management. The company also contributes to local communities by hiring locally.

Environmentally Responsible Performance and Economic Efficiency Next-Generation Plant Engineering to Support a Sustainable Society

Waste treatment plants must be capable of first-class performance, but should also demonstrate a high level of environmentally responsible performance and economic efficiency. MHIEC provides plant engineering with excellent sustainability while maximizing the comprehensive strengths of the Mitsubishi Heavy Industries Group.



■ Municipal Solid Waste-to-Energy Plant

MHIEC offers two types of incinerators: stoker furnaces and gasification melting furnaces. By arranging equipment efficiently, we incinerate and detoxify waste effectively. We also implement various automation systems to enable easy operational management with minimal staffing. While implementing robust environmental measures such as reducing ash volume after incineration, clean treatment of exhaust gases, and recycling slag, we also accommodate various forms of waste heat utilization.



■ Sewage Sludge Treatment Plant

The sewage sludge treatment plant stably and hygienically processes sewage sludge generated from wastewater treatment plants. We design, manufacture, construct, and provide after-service based on knowledge accumulated over many years and product development in sludge dewatering machines and sludge incinerator technologies. In recent years, there has been an increased demand for energy conservation and generation in addition to safety and security. Through energy-saving low-power centrifugal dewatering machines and energy-generating sludge incinerators with power generation, we contribute to environmental protection and conservation not only in sewage treatment but throughout society.



■ Industrial Waste-to-Energy Plant

The industrial waste-to-energy plant primarily incinerates high-calorie industrial waste from businesses, reducing volume, detoxifying, and stabilizing it. In recent years, as complex waste recycling facilities, we have been actively engaged in proper treatment and recycling of various wastes, as well as CO2 reduction through energy recovery and promotion of waste-to-energy. Some facilities equipped with incineration ash recycling equipment sell detoxified ash as recycled products.



■ MGPS® Marine Growth Preventing System

MGPS® is a system used in facilities that utilize large amounts of seawater, such as power plants, seawater desalination plants, and LNG terminals. It works by electrolyzing natural seawater to generate sodium hypochlorite, which is then injected into intake channels to prevent the attachment of shellfish and algae to pipes, condensers, and vaporizers that come in contact with seawater. With years of proven performance, it enables stable operation with minimal issues and demonstrates excellent economic efficiency through our proprietary high-performance electrodes.

Our Experience

Drawing on our extensive delivery track record both domestically and internationally, as well as our technical and operational expertise, we offer solutions tailored to regional needs.

Solutions

Combustion Technology

Based on our accumulated experience and technology over many years, we propose optimal combustion technologies for various materials to be processed. Recently, we have developed the V-type stoker system, which efficiently utilizes radiant heat by shaping the incinerator in a V-shape, enabling high-efficiency incineration and volume reduction of diverse wastes in a compact combustion area, along with low air ratio and low NOx combustion technology. We are focusing on technological development to meet our customers' wide-ranging needs.

Piping and Spatial Design Technology

Within the limited space of a plant, we design piping systems suited to various process conditions to satisfy functions such as process flow and maintainability. We also provide highly reliable designs by simulating complex plant equipment spatial configurations in integrated 3D plant models.

Life Extension Technology for Waste Treatment Facilities

In recent years, due to various social reasons and backgrounds, there has been an increasing demand for extending the service life of existing facilities. Based on the maintenance status of each facility, we leverage our accumulated expertise in facility improvement to propose life extension and core renovation options tailored to our customers' facilities.

AI-Enhanced Smart Plants

In modern society, where uncertainty is increasing due to unexpected situations such as natural disasters and pandemics, stable facility operation and sustainability assurance are required. To address these social challenges, we have developed MaiDAS®, a plant integrated operation system that combines AI and IoT. Through automatic operation with advanced control logic, equipment condition monitoring using AI, and remote monitoring and operation support technology, we achieve labor savings while contributing to stable facility operation and improved sustainability.

Results

We have delivered more than 30 waste treatment facilities to countries and regions worldwide, primarily in China and Southeast Asian nations.

Global Expansion of Municipal Waste Incineration Facilities

Singapore



Among the four existing plants in Singapore, our company has delivered three (Senoko Waste-To-Energy Plant, Tuas South Incineration Plant, and TuasOne Waste-To-Energy Plant). Of these, TuasOne Waste-To-Energy Plant, which was constructed and is operated under a Public-Private Partnership (PPP) contract form, is one of the world's largest municipal waste incineration facilities (3,600 tons/day) applying the latest technologies such as high-temperature and high-pressure boilers and operation control with AI functionality. Our group has undertaken a 25-year operation and maintenance (O&M) contract for this facility.

Taiwan (New Taipei City)



We have delivered seven plants in Taiwan, among which the Xindian-Shulin Project was delivered on a full turnkey basis, where we were responsible for everything from design to construction, commissioning, and warranty obligations for what was then one of the largest plants in Taiwan. We also undertook a one-year operation and maintenance (O&M) contract after the handover of the plant.

China (Xiaogan City)



In rapidly growing China, there is increasing interest in waste-to-energy businesses, and our company boasts numerous plant delivery achievements. For the project in Xiaogan City, Hubei Province, we delivered our V-type stoker system, which offers high efficiency and environmental performance and received the METI Minister's Award, the highest award at the Outstanding Environmental System Awards hosted by the Japan Society of Industrial Machinery Manufacturers.

Macau



In Macau, where economic growth is progressing with the development of the tourism industry, our company undertook not only the Phase 1 construction (3 furnaces) in 1992 but also the Phase 2 expansion work (3 furnaces) planned to double the processing capacity. This facility has handled Macau's waste treatment for over 30 years, making a significant contribution to the city's development.

Our Profile

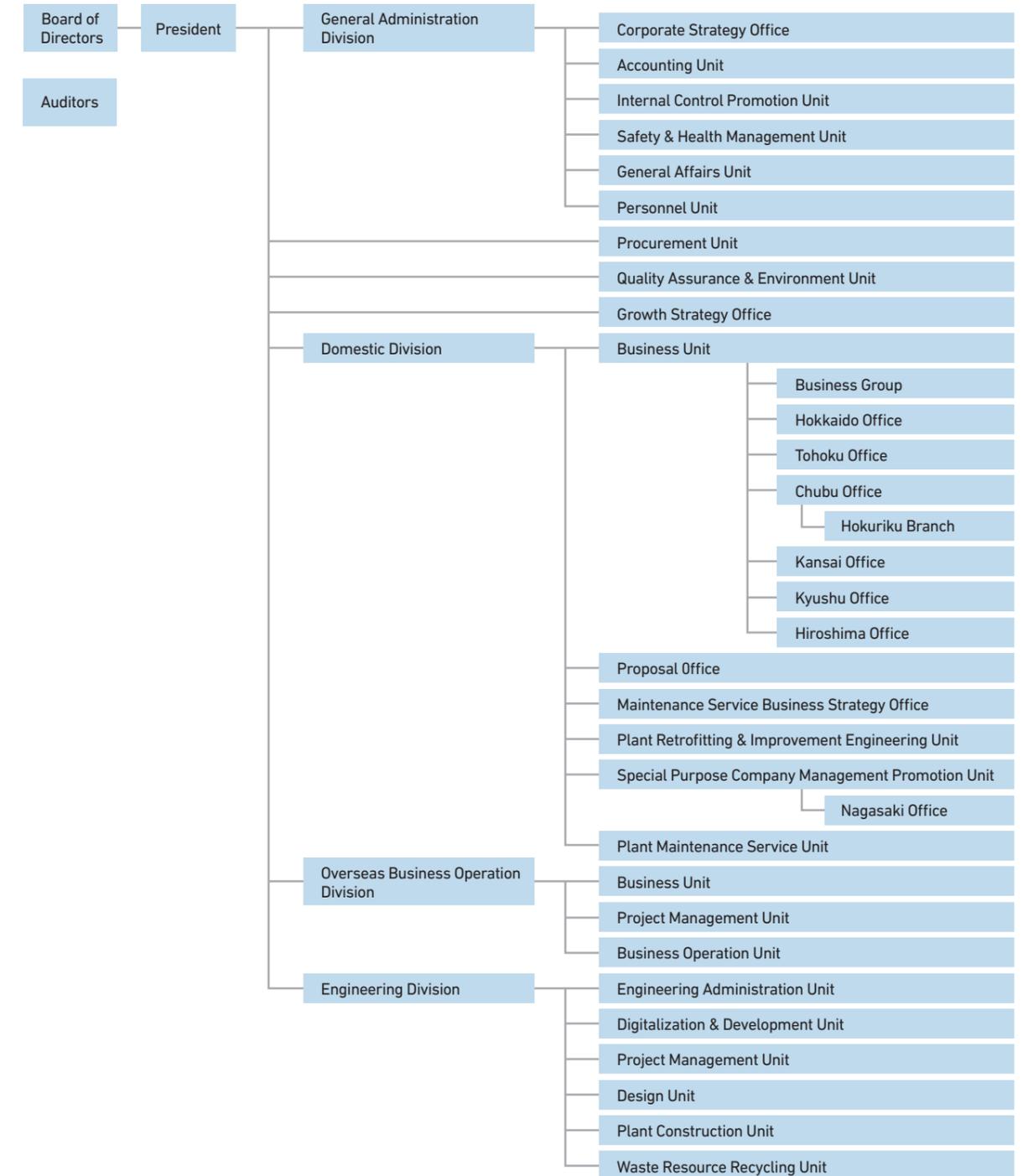
Corporate Overview

Company Name	Mitsubishi Heavy Industries Environmental & Chemical Engineering Co., Ltd. (MHIEC)
Head Office	Yokohama Blue Avenue Bldg., 4-4-2, Minatomirai, Nishi-ku, Yokohama, Kanagawa 220-0012, Japan
Phone	+81-45-227-1280
Foundation	February 2, 1976
Capital	3,450 million yen (as of March 31, 2024)
Employees	650 (as of April 1, 2025)

History

1958	Mitsubishi Heavy Industries, Ltd. (MHI) began developing environmental equipment products.
February 1976	Jyuko Kankyo Service Co., Ltd. was established as a company specializing in after-sales service and operational maintenance of environmental equipment products of MHI.
August 1987	Company name changed to Mitsubishi Heavy Industries Environmental Engineering Co., Ltd.
January 2006	Took over business for new installations of sludge treatment equipment (sludge incineration, sludge treatment, and water treatment systems), marine growth preventing systems, vacuum waste collection systems, and waste transfer stations from MHI.
April 2007	Succeeded the electrostatic precipitator installation business from MHI through a corporate split.
April 2008	Succeeded the waste treatment equipment (municipal waste incinerators, industrial waste incinerators, etc.) installation business from MHI through a corporate split.
October 2009	Split off businesses including electrostatic precipitators, water pollution prevention equipment, solvent recovery systems, and solar power generation systems to Mitsubishi Heavy Industries Mechatronics Systems, Ltd. Merged with Ryowa Engineering Co., Ltd., an engineering company for petrochemical plants, etc., and changed the company name to Mitsubishi Heavy Industries Environmental & Chemical Engineering Co., Ltd. (MHIEC).
April 2012	Split off the engineering operations for petrochemical plants to MHPS Engineering Co., Ltd. as part of business restructuring.
April 2016	Split off the domestic after-sales service business for flue gas desulfurization equipment to Mitsubishi Hitachi Power Systems Environmental Solutions, Ltd. as part of business restructuring.

Organization Chart



As of April 1, 2025



Sales Offices and Engineering Offices

Hokkaido Office	10th fl., Sapporo Center Bldg., 6-2-2, Kitagojo Nishi, Chuo-ku, Sapporo, Hokkaido 060-0005, Japa Phone: +81-11-222-2501	Kansai Office	7th fl., Mitsubishijuko Osaka Bldg., 1-3-20, Tosabori, Nishi-ku, Osaka 550-0001, Japan Phone: +81-6-6446-4080
Tohoku Office	8th fl., Ichigo Kakyoin Bldg., 2-1-65, Kakyoin, Aoba-ku, Sendai, Miyagi 980-0013, Japan Phone: +81-22-212-3971	Kyushu Office	6th fl., Dai-16 Okabe Bldg., 8-27, Hakataeki Chuogai, Hakata-ku, Fukuoka 812-0012, Japan Phone: +81-92-471-7823
Chubu Office	4th fl., Aioi Nissay Dowa Sompō Nagoya Meieki Bldg., 2-22-9, Meieki, Nishi-ku, Nagoya, Aichi 451-0045, Japan Phone: +81-52-541-2801	Hiroshima Office	9th fl., Green Tower Bldg., 1-2-16, Matobacho, Minami-ku, Hiroshima 732-0824, Japan Phone: +81-82-262-7311
Hokuriku Branch	3-1, Waridashi-machi, Kanazawa, Ishikawa 920-0062, Japan Phone: +81-76-254-5980	Nagasaki Office	Meiji-Yasuda Seimei Nagasaki Kozenmachi Bldg., 2-21, Kozenmachi, Nagasaki 850-0032, Japan Phone: +81-95-825-6515

Mitsubishi Heavy Industries Asia Pacific Pte. Ltd. (MHI-AP)
150 Beach Road, #29-00 GATEWAY WEST, Singapore 189720, Republic of Singapore
Phone: +65-6305-5200

Mitsubishi Heavy Industries (Shanghai) Co., Ltd. (MHISH)
26th Floor, HSBC Tower, 1000 Lujiazui Ring Road, Pudong New Area, Shanghai, 200120, China.
Phone: +86-21-6841-3030

Domestic Group Companies

Jukan Operation Co., Ltd.

Operation, maintenance and management of waste treatment facilities, sludge recycling treatment facilities and water treatment facilities

Foundation June 1983
Capital 90 million yen
Head Office 2-21, Kozenmachi, Nagasaki, Nagasaki 850-0032, Japan
Phone: +81-95-825-6381
Yokohama Head Office 14th fl., Yokohama Blue Avenue Bldg., 4-4-2, Minatomirai, Nishi-ku, Yokohama, Kanagawa 220-0012, Japan
Phone: +81-45-227-1250

MHI Airport Environment Co., Ltd.

Collection, transportation, sorting, crushing, incineration treatment, and delivery of recycled resource products of general waste generated within Kansai International Airport

Foundation February 1994
Capital 10 million yen
Head Office 1, Senshu Kuko-Minami, Sennan, Osaka 549-0021, Japan
Phone: +81-72-456-6185

Special Purpose Companies

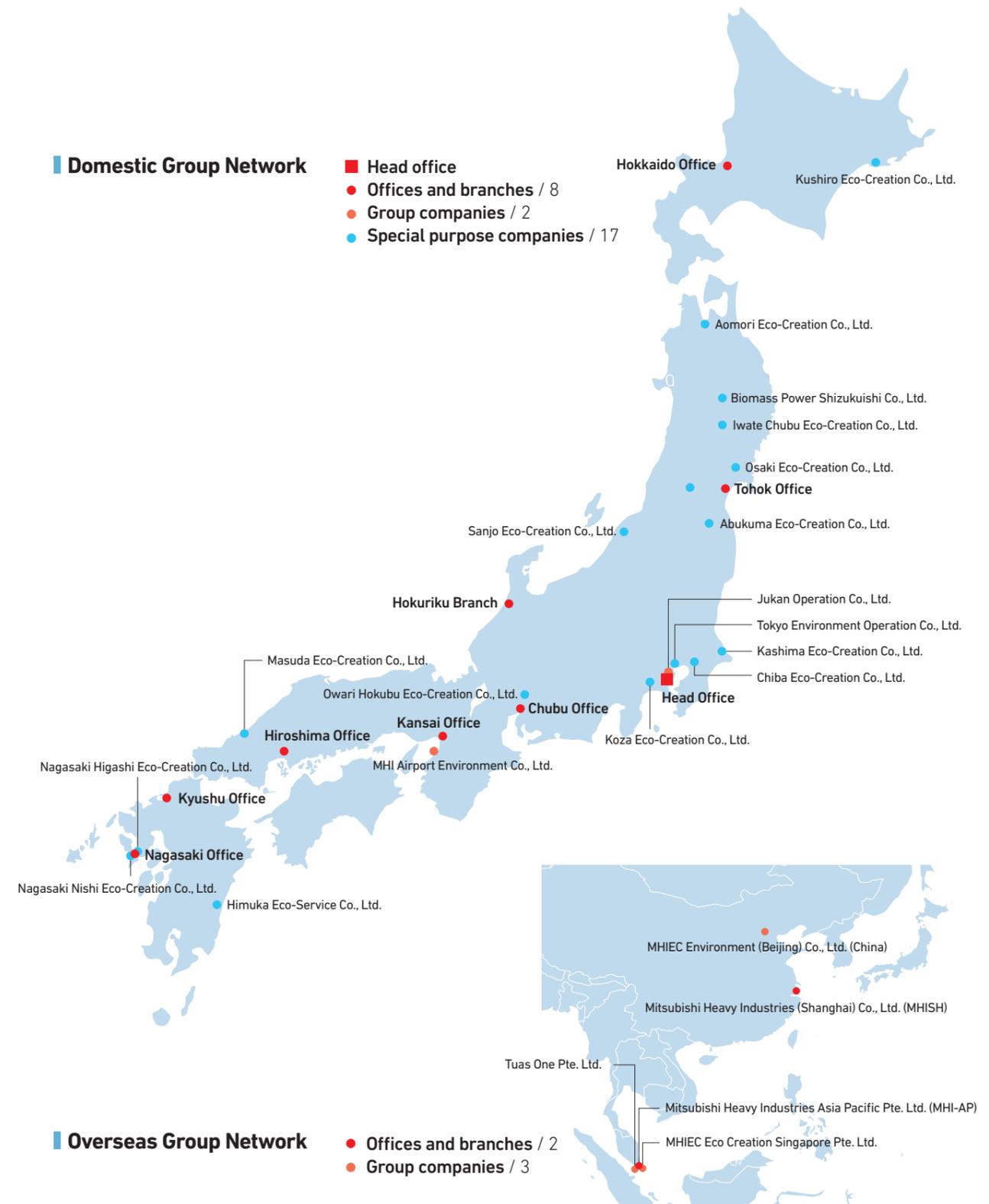
Kushiro Eco-Creation Co., Ltd.	Kashima Eco-Creation Co., Ltd.	Nagasaki Higashi Eco-Creation Co., Ltd.
Aomori Eco-Creation Co., Ltd.	Chiba Eco-Creation Co., Ltd.	Nagasaki Nishi Eco-Creation Co., Ltd.
Iwate Chubu Eco-Creation Co., Ltd.	Koza Eco-Creation Co., Ltd.	Himuka Eco-Service Co., Ltd.
Osaki Eco-Creation Co., Ltd.	Sanjo Eco-Creation Co., Ltd.	Biomass Power Shizukuishi Co., Ltd.
Yamagata Eco-Creation Co., Ltd.	Owari Hokubu Eco-Creation Co., Ltd.	Tokyo Environment Operation Co., Ltd.
Abukuma Eco-Creation Co., Ltd.	Masuda Eco-Creation Co., Ltd.	

Overseas Group Companies

MHIEC Environment (Beijing) Co., Ltd. (China)
Tuas One Pte. Ltd. (Singapore)
MHIEC Eco Creation Singapore Pte. Ltd. (Singapore)

Domestic Group Network

- Head office
- Offices and branches / 8
- Group companies / 2
- Special purpose companies / 17



Overseas Group Network

- Offices and branches / 2
- Group companies / 3