

熱誠



Issey Hatakeyama
EBARA founder

Founding Spirit of "Netsu to Makoto" (Passion and Dedication)
It was not long after the founding of EBARA that the Company completed a pump of record size, a painstaking task that took place in a small factory with no crane facilities in the Nippori area of Tokyo. Founder of EBARA, Issey Hatakeyama, acted in accordance with his philosophy of approaching daily tasks with passion, dedication, integrity, and ingenuity in order to spur personal and corporate growth, and encouraged employees to adopt the same approach. The founding spirit of "Netsu to Makoto," or Passion and Dedication, has continued to drive EBARA in our efforts to hone our technological prowess and achieve greater levels of reliability. EBARA's growth into a global industrial machinery manufacturer with three core businesses-the Fluid Machinery & Systems Business, Environmental Plants Business, and Precision Machinery Business-is a result of the ongoing commitment to this spirit.

Founding Spirit and Strengths Underpinning Competitiveness



Three Core Businesses



Four Areas of Operation

<p>Water We support water infrastructure worldwide by providing a vast lineup of products, such as water supply pumps for buildings and condominiums, pumping stations that prevent flooding, and pumps for desalination plants.</p>	<p>Air We provide dry vacuum pumps that create clean vacuums, gas abatement systems for treating hazardous gases as well as greenhouse gases (GHG), chillers used for air conditioning, and tunnel ventilation fans to the global market.</p>
<p>Environment We promote efficient resource use and stable energy supply by providing pumps and compressors for energy-related facilities and constructing and maintaining municipal solid waste treatment facilities and biomass power generation plants. In addition, we supply energy-efficient and resource-conserving products in all businesses.</p>	<p>Digital Technologies Aiming to contribute to the realization of a super-smart society in which all things are interconnected, we support the development of cutting-edge technologies by supplying vacuum pumps and various types of semiconductor manufacturing equipment, including chemical mechanical polishing (CMP) systems, that capitalize on the technologies we have fostered in the areas of water, air, and the environment.</p>

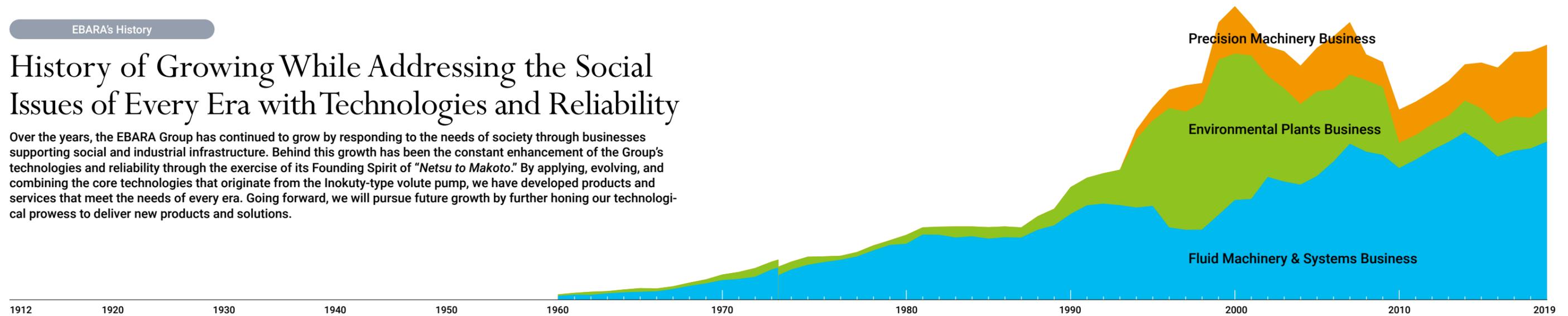
Founding Based on Passion and Dedication

EBARA Corporation was founded in 1912 by Issey Hatakeyama with the aim of spreading use of the Inokuty-type volute pump. Applying the volute pump research of Dr. Ariya Inokuty, a world-renowned professor at the time, EBARA sought to contribute to the modernization of Japan by producing the first domestically manufactured waterworks pumps, installing water infrastructure to prepare for natural disasters, and developing the first water purifiers for waterworks manufactured in Japan. United by this passion, members of EBARA were inspired to fulfill their mission of supplying the products and services that support society, industry, and everyday life. In this manner, EBARA has continued to be driven by its Founding Spirit of "Netsu to Makoto" (Passion and Dedication) since the time of its inception. Over the years, we have continued to accumulate technological capabilities and enhance our reliability as employees exercise this spirit. These assets are the wellspring of EBARA's growth.

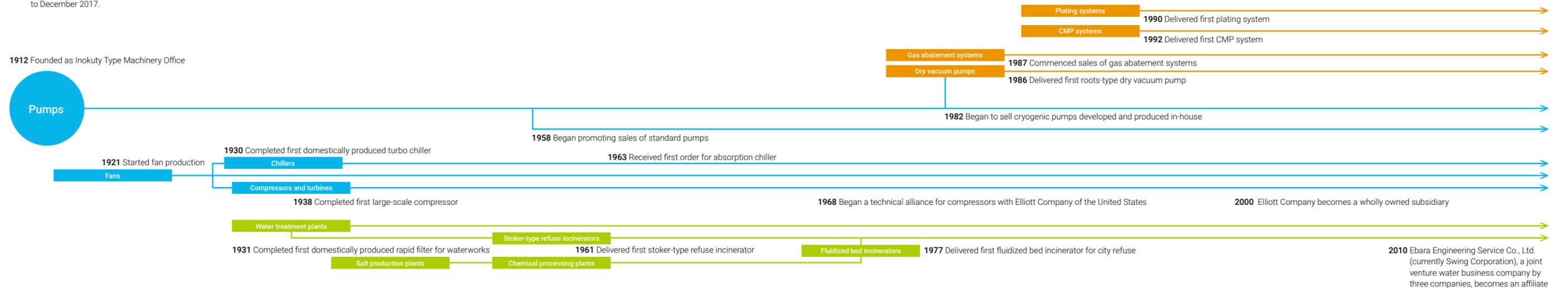
EBARA's History

History of Growing While Addressing the Social Issues of Every Era with Technologies and Reliability

Over the years, the EBARA Group has continued to grow by responding to the needs of society through businesses supporting social and industrial infrastructure. Behind this growth has been the constant enhancement of the Group's technologies and reliability through the exercise of its Founding Spirit of "Netsu to Makoto." By applying, evolving, and combining the core technologies that originate from the Inokuty-type volute pump, we have developed products and services that meet the needs of every era. Going forward, we will pursue future growth by further honing our technological prowess to deliver new products and solutions.



Note: The above graph indicates changes in net sales. As FY2017 was an irregular nine-month accounting period due to the change in settlement date, figures for this period have been restated to encompass the period from January to December 2017.



1912-

Development of the EBARA Group's Foundations

EBARA was founded by Issey Hatakeyama with the goal of supplying products based on Dr. Ariya Inokuty's world-renowned volute pump research. In the years that followed, EBARA continued to contribute to the modernization of Japan by producing the first domestically manufactured waterworks pumps, installing water infrastructure to prepare for natural disasters, developing the first water purifiers for waterworks manufactured in Japan, and undertaking other initiatives ahead of its time.

- Pressing Social Issues
- #### Modernization of Japan
- Installation of water infrastructure
 - Lack of arable land
 - Reconstruction after the Great Kanto Earthquake
 - Widespread industrialization

1945-

EBARA Technologies Responding to Social Demand

EBARA contributed to the stabilization of the lives of people in Japan after World War II by mass producing pumps for increasing food production and for farmland reclamation. In addition, we delivered the first domestically manufactured feed water pump for supercritical pressure power plants to help address power shortages. At the same time, the Group began exporting plant equipment and establishing overseas bases to lay the groundwork for its overseas expansion.

- Pressing Social Issues
- #### Post-World War II Reconstruction and Japanese Postwar Economic Miracle
- Lack of food and other basic necessities for people of Japan
 - Power shortages
 - Advancement of heavy and chemical industries
 - Increased construction of plants overseas

1980-

EBARA Technologies Permeating Society

It was during this time that the Group succeeded in developing and realizing practical application of a gasification and ash melting furnace for use as a next-generation waste treatment facility capable of completely decomposing dioxins and recycling residue. In addition, technologies accumulated thus far were applied to the development of dry vacuum pumps, resulting in the start of the Precision Machinery Business.

- Pressing Social Issues
- #### Development of the Information Society
- Ozone depletion, desertification, and advancement of climate change
 - Lack of waste disposal sites
 - Need to realize recycling-oriented society
 - Growth of semiconductor market and increased semiconductor demand

2000-

Frameworks for Future Growth

Energy-efficient, high-efficiency pumps and chillers were developed to help reduce environmental impacts while pump technologies were created for urban rainwater drainage systems. The Group also developed sophisticated, ultra-precise, high-productivity CMP and plating systems.

- Pressing Social Issues
- #### Search for Path to Sustainability
- Increased concern for environmental issues and acceleration of global warming countermeasures
 - Rising demand for energy-saving and highly efficient technologies
 - Extreme rain resulting from urban heat island phenomenon
 - Development of information and communication technologies (ICT) and accelerated advancement of semiconductor technologies

2010-

Centennial Anniversary and Pursuit of Future Growth

The Group began investing in its global competitiveness, following its success in improving its financial base through the selection and concentration of businesses. These investments include strengthening corporate governance, implementing new human resource systems, bolstering overseas service and support (S&S) base network, introducing automated assembly lines powered by Internet of Things (IoT) and artificial intelligence (AI) technologies, and other environmental, social, and governance (ESG) management initiatives.

- Pressing Social Issues
- #### Toward a More Diverse and Inclusive Society
- Digitization driven by proliferation of the IoT and AI
 - Social pressure for work style reform
 - Increasing expectation for companies to contribute to realizing a sustainable society due to rising interest in climate change and ESG issues and the adoption of the United Nations Sustainable Development Goals (SDGs)



Fluid Machinery & Systems Business

No.1

Global Share of Compressors for Downstream Oil and Gas Plants

Our compressors are a central component of oil refineries and petrochemical plants and are used to compress the gases emitted during crude oil and natural gas production. We offer a wide lineup of compressors matched to various customer needs and processes.

Fluid Machinery & Systems Business

TOP

Domestic Share for Standard Pumps and Cooling Towers

To date, EBARA's domestic factories have produced more than 18 million standard pumps. Through the widespread provision of pumps that address diverse needs, such as those pertaining to the supply of the water that is indispensable to our daily lives, we are supporting the development of industry and of comfortable living environments. We also supply equipment for air conditioning in buildings and public facilities and propose optimal solutions to customers through a system integrating everything from manufacturing to maintenance.



EBARA's Presence

Distinctive Presence Underscored by Technologies and Reliability

Fluid Machinery & Systems Business

More than **1,000**

Pumping Stations in Japan Using EBARA Drainage Pumps

EBARA supplies pumping stations across Japan with large-scale drainage pumps that protect cities from flood damage by draining rainwater into rivers and oceans in the event of sudden heavy rains or typhoons. As abnormal weather events increase around the globe, EBARA is ever more committed to protecting people's lives and livelihoods through the provision of drainage pumps and systems.



Fluid Machinery & Systems Business

No.1

Global Cryogenic Pump Share

The primary role of cryogenic pumps is to transport ultralow temperature liquefied natural gas at liquefied natural gas (LNG) liquefaction plants, which require exceptional technological prowess. EBARA boasts an exceptional global delivery track record in this field and has thus earned a position as a recognized global leader.



Environmental Plants Business

More than **80**

Waste Treatment Plants under Contracted Management

EBARA is accumulating insight into the management of daily waste treatment plant operation as it performs management of more than 80 such facilities on a contract basis. Leveraging this insight, we offer technical operation support and optimization support by confirming the operating status of waste treatment plants in real time via remote support centers.



Environmental Plants Business

More than **300**

Waste Treatment Facilities Delivered in Japan

EBARA provides one-stop service for the design, construction, operation, and maintenance of waste treatment facilities, and we have delivered more than 300 waste treatment facilities in Japan, making for a delivery track record of more than 400 facilities when including those delivered overseas. In addition, we contribute to the local production and consumption of energy by returning the power generated through waste incineration to the surrounding communities.

Precision Machinery Business

More than **2,500**

CMP Systems Shipped to Date

Semiconductors are an indispensable component of computers, smartphones, and cloud systems. Increasing the performance of semiconductors requires their circuits to be made more intricate and layered. CMP systems represent a core technology for realizing these advancements. These systems are used to polish semiconductor wafers with nano-level precision, thereby helping meet the high-level demands of semiconductor manufacturing processes while supporting the evolution of semiconductors by accommodating constant technological progress.



Precision Machinery Business

More than **50**

Support Bases and Overhaul Bases Worldwide

The EBARA Group is augmenting its proposal capabilities by developing support bases and overhaul bases worldwide. Leveraging cutting-edge technologies to deliver even higher-quality S&S, we offer assistance for customers' business activities.

Note: Shares were calculated by EBARA.

EBARA's Value

Social Value Created by EBARA

EBARA products are amalgamations of the technologies it has accumulated thus far. These products are used under a variety of circumstances in our everyday lives, supporting social infrastructure around the world and contributing to safe, secure, and fulfilling lifestyles.

1. Water Supply Units Supplying water for everyday use to buildings and condominiums

Water supply units are a crucial element of the facilities of buildings, condominiums, factories, and other structures for realizing a stable supply of water for everyday use.

2. Agricultural Pumps Watering crops in fields

Agricultural pumps reliably supply water for agricultural purposes as an important component of irrigation equipment. These pumps are also used to drain water to prevent damage from flooding due to heavy rains.

3. Water Drainage Pumps Protecting against typhoons and concentrated heavy rains

Water drainage pumps are used to protect residential areas, agricultural land, and other areas against flood damage from heavy rains by redirecting rainwater into rivers with less risk of flooding or the ocean.

4. Seawater Circulation Pumps Efficiently transporting seawater

Equipped with thermosetting resins, EBARA's seawater circulation pumps boast superior anti-erosive properties, enabling them to be used with fluids that would even erode stainless steel articles, such as acid and seawater. They are thus ideal for circulating seawater inside of aquarium tanks. Our seawater circulation pumps can also be used for transporting and circulating hot spring water and chemicals.

5. Fans Ventilating tunnels

EBARA fans are delivered for installation in tunnel ventilation equipment. By achieving highly precise ventilation control, these fans help appropriately maintain the air environments of tunnels while securing evacuation routes in the event of a tunnel fire.

6. Chillers Maintaining comfortable temperatures in buildings, large-scale commercial facilities, and factories

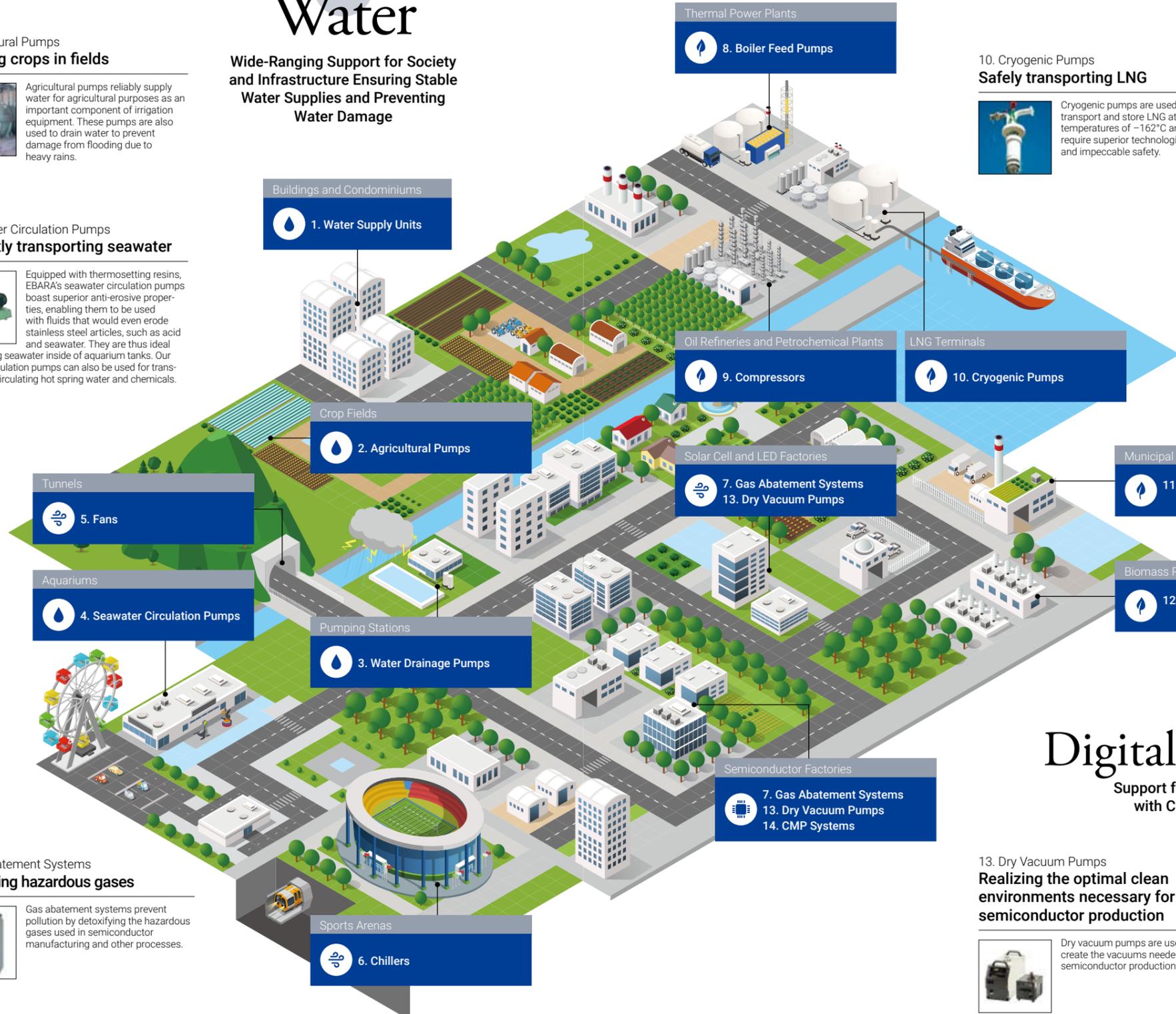
Our chillers supply cold water for use in the air-conditioning equipment of large-scale commercial facilities and factories to be utilized for cooling or heating entire structures. Other benefits of our chillers include reduced costs through optimization of cooling and heating equipment as well as lower energy consumption and CO₂ emissions.

7. Gas Abatement Systems Detoxifying hazardous gases

Gas abatement systems prevent pollution by detoxifying the hazardous gases used in semiconductor manufacturing and other processes.

Water

Wide-Ranging Support for Society and Infrastructure Ensuring Stable Water Supplies and Preventing Water Damage



8. Boiler Feed Pumps Offering "behind-the-scenes" support for power generation

Thermal power plants generate electricity through generators directly attached to turbines, which are rotated using high-pressure steam. Boiler feed pumps supply high-temperature water to boilers to create this high-pressure steam.

9. Compressors Playing a central role in power plants and oil refineries worldwide

Compressors play a central role in oil refineries and petrochemical plants by compressing the gases produced from crude oil and natural gas.

10. Cryogenic Pumps Safely transporting LNG

Cryogenic pumps are used to transport and store LNG at temperatures of -162°C and thus require superior technologies and impeccable safety.

Environment

Contributions to a Sustainable Society by Promoting Effective Energy and Resource Usage

11. Municipal Solid Waste Treatment Plants Supporting safe and reliable plant operation

We provide one-stop service for municipal solid waste treatment plants ranging from engineering to construction, operation, management, and maintenance to support reliable operation. We also contribute to the local production and consumption of energy by returning the power generated through waste incineration to the surrounding communities.

12. Biomass Power Generation Plants Generating power using woody biomass fuel

We offer construction, operation, and management services for biomass power generation plants that leverage the characteristics of internally circulating fluidized-bed boilers designed to use woody biomass as fuel and capable of achieving reliable combustion of a diverse range of fuel sources. Through these services, we are contributing to the popularization of renewable energy and the prevention of climate change.

Air

Creation of Comfortable Environments While Combating Climate Change

Digital Technologies

Support for the Evolution of Lifestyles with Cutting-Edge Technologies

13. Dry Vacuum Pumps Realizing the optimal clean environments necessary for semiconductor production

Dry vacuum pumps are used to create the vacuums needed in the semiconductor production process.

14. CMP Systems Supporting semiconductor production with nano-level-precision polishing technologies

CMP systems polish the surface of semiconductor wafers with nano-level precision using polishing solutions.

