Social Issues and EBARA’s History of Ambition

EBARA’s Founding Spirit of “Netsu to Makoto” (Passion and Dedication) is a philosophy of engaging with work with passion and completing tasks with dedication. This Founding Spirit has continued to propel the Group forward throughout its history, driving it to fulfill its mission of contributing to society in the areas of water, air, and the environment since its founding in 1912. The Group’s businesses support social and industrial infrastructure and through this, we have continued to grow while addressing the social issues of the given era.

EBARA was founded by Issey Hatakeyama with the goal of supplying products based on Dr. Ariya Inokuty’s world-renowned volute pump research. EBARA was founded in 1912. The Group’s businesses support social and industrial infrastructure and, through this, we have continued to grow while addressing the social issues of the given era.

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.

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 produced 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.

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 domino and recycling. In addition, technologies accumulated thus far were applied to the development of dry vacuum pumps, resulting in the start of the Precision Machinery Business.

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.

Centennial Anniversary and Pursuit of Future Growth

The Group succeeded in improving its financial base and building a robust business structure through the selection and concentration of businesses. The Group also succeeded in improving its financial base and building a robust business structure through the selection and concentration of businesses. The Group also developed sophisticated, ultra-precise, high-productivity CMP and plating systems.

Pressing Social Issues

Modernization of Japan

- Lack of arable land
- Installation of water infrastructure
- Increased construction of plants overseas

Post-World War II Reconstruction and Japanese Postwar Economic Miracle

- Lack of food and other basic necessities for people of Japan
- Water shortages
- Advancement of heavy and chemical industries
- Increased construction of plants overseas

Development of the Information Society

- Need to realize recycling-oriented society
- Growth of semiconductor market and increased semiconductor demand
- Vacuum depilating, diversification, and advancement of climate change

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 rise resulting from urban heat island phenomenon
- Development of ICT and accelerated advancement of semiconductor technologies

Toward a More Diverse and Inclusive Society

- Digitization driven by proliferation of IoT and AI technologies
- Social pressure for work style reforms
- Increasing expectation for companies to contribute to realizing a sustainable society through rising interest in climate change and ESG issues and the adoption of the United Nations Sustainable Development Goals

Value Creation Process

Creation of Value Based on the “EBARA Way,” Together with Customers

- Note: Graphics are approximate images of real sales over time.

EBARA’s Three Businesses

- Precision Machinery Business
  - Number of support bases and overhaul bases worldwide
  - More than 50
  - Aggregate shipments of CMP* systems
  - More than 2,000

- Environmental Plants Business
  - Waste treatment facilities delivered in Japan
  - More than 300
  - (In 46 prefectures)
  - Number of waste treatment facilities under contracted management
  - More than 80

- Fluid Machinery & Systems Business
  - Organic pumps
  - No. 1 global share
  - Standard pumps
  - No. 1 domestic share
  - Compressors for oil and gas plants (Downstream)
  - Global share of approx. 30%
  - Cooling towers
  - No. 1 domestic share
  - 1912
  - Note: Sales were calculated by EBARA.

Over its century-long history, EBARA has continued its quest to resolve social issues through business activities based on its Founding Spirit of “Netsu to Makoto” (Passion and Dedication). These efforts allowed the Group to accumulate distinctive strengths and capabilities while developing a unique value creation process.

Competitive Advantage

The Evolution of EBARA’s Strengths and Capabilities

- 1912–
- 1940–
- 1980–
- 2000–
- 2010–

Values Creation Process

Creation of Value Based on the “EBARA Way,” Together with Customers

- "EBARA Way," Together with Customers

- 1972–

- 1998 Start of IT bubble

- 2003 Collapse of IT bubble

- 2008 Global financial crisis

- 2017 Irregular nine-month accounting period due to change in settlement date

- Fluid Machinery & Systems Business

- Environmental Plants Business

- Precision Machinery Business

- 1912

- 1960

- 1970

- 1980

- 1990

- 2000

- 2010

- 2018

- Note: Graphs are approximate images of real sales over time.

EBARA’s History of Ambition

- Pressing Social Issues

- Modernization of Japan

- Lack of arable land

- Installation of water infrastructure

- Increased construction of plants overseas

- Post-World War II Reconstruction and Japanese Postwar Economic Miracle

- Lack of food and other basic necessities for people of Japan

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- Value Creation Process

- Creation of Value Based on the “EBARA Way,” Together with Customers
Our Businesses and Areas of Operation

Three Businesses and Four Areas of Operation

The EBARA Group is a conglomerate comprised of three core businesses: the Fluid Machinery & Systems Business, which supplies pumps, compressors, and other rotating machinery; the Environmental Plants Business, which handles municipal solid waste treatment and resource recycling facilities; and the Precision Machinery Business, which produces equipment and devices related to semiconductor manufacturing. With these three businesses, we are helping resolve social issues and create value in our four areas of operation: water, air, the environment, and digital technologies.

Three Businesses

- Fluid Machinery & Systems Business
- Compressors and Turbines Business
- Chillers Business

Four Areas of Operation

- Water
- Air
- Environment
- Digital Technologies

Fluid Machinery & Systems Business

Net Sales Ratio 60%

Supplies products and services that combine world-class technological capabilities and extensive experience to address customer needs and support social and industrial infrastructure around the world.

- Pumps Business
  - Offers large-scale, high-pressure custom pumps for use in sewage facilities, rainwater drainage systems, petrochemical plants, and other facilities as well as standard pumps for use in high-rise buildings, condominiums, industrial facilities, and others.
- Compressors and Turbines Business
  - Provides compressors and turbines for oil refineries and petrochemical plants.
- Chillers Business
  - Handles chillers, cooling towers, and related systems for use in the air-conditioning equipment of buildings and large-scale commercial facilities.
- Other Businesses
  - Provides fans for use in applications such as tunnel ventilation as well as electricity, telecommunication, and energy control equipment.

Environmental Plants Business

Net Sales Ratio 12%

Uses EBARA’s incinerator and gasification plant technologies to handle the design, construction, operation, and maintenance of municipal solid waste incineration plants and other waste treatment facilities. This business helps support sanitary cities and safe and secure lifestyles.

Precision Machinery Business

Net Sales Ratio 26%

Facilitates the realization of more convenient and comfortable societies by providing products that contribute to the manufacturing processes of semiconductors, flat panel displays, and other devices indispensable to a super-smart society. The products we provide include plating systems, bevel polishing systems, dry vacuum pumps, chemical mechanical polishing (CMP) systems, chillers used for air conditioning, and tunnel ventilation fans to the global market.

Areas in Which EBARA Creates Value

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.

Air

We provide dry vacuum pumps that create clean vacuums, gas abatement systems for treating hazardous gases as well as greenhouse gases, chillers used for air conditioning, and tunnel ventilation fans to the global market.

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.

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 CMP systems, that capitalize on the technologies we have fostered in the areas of water, air, and the environment.
COMPETITIVE ADVANTAGE
The Evolution of EBARA’s Strengths and Capitals

The EBARA Group has continued to adhere to its Founding Spirit of “Netsu to Makoto” (Passion and Dedication) throughout its century-long history. This spirit is the core from which our technological capabilities and reliability have grown from, and these strengths together enable us to respond to the needs of customers and society. Moreover, we strategically utilize and enhance our intellectual capital, human capital, and social and relationship capital while looking to reduce the burden we place on natural capital. In addition, we are reinforcing our manufacturing capital and financial capital, inputs that form the foundation of our operating activities. These different capitals all evolve after being infused with the core EBARA strengths, creating our competitive advantage and allowing us to serve our stakeholders while simultaneously creating distinctive value for society.

EBARA’s Core Strengths and Significant Capitals

Passion and Dedication

Technological Capabilities

Since our founding, we have continued to act in accordance with our philosophy of contributing to the resolution of social issues through our business activities providing the products and services desired by customers and society. Over our century-long history, we have accumulated the technologies necessary to offer support across the entirety of our product lifecycles while broadening the scope of our business. EBARA’s technologies are capable of realizing finely tuned responses to customer needs and thus support the growth of our business.

Reliability

The passion and dedication all employees exercise in their work and the tenacity they exhibit in the face of adversity have won EBARA a strong reputation for reliability among its customers. We continue to build upon this reputation by remaining true to our spirit of passion and dedication and by proactively solving issues customers may be facing. Strengthening our trust-based relationships with customers and other stakeholders will unlock new possibilities for EBARA.

EBARA’s Competitive Advantage

The driving force behind EBARA’s Creation of Distinctive Value

Passion and Dedication

‘Netsu to Makoto’ (Passion and Dedication) was the motto of EBARA founder Issey Hatakeyama, and he was constantly advocating these principles to employees. This spirit lives on in the EBARA Group of today, forming the foundation for attitudes toward the work ethic and behavior of our people. When we go about our work with passion, exercise originality and ingenuity, and maintain a dedication to completing the task at hand, our technological capabilities and reliability grow stronger.

Social and Relationship Capital

Strong partnerships for creating new value

Natural Capital

Environmental management advanced through concerted Group-wide efforts

Financial Capital

Stable financial base

Credit rating

[Rating and Investment Information, Inc.]

See P.31–36 for more information on intellectual capital management.

See P.41–42 for more information on natural capital management.

See P.43–44 for more information on social and relationship capital management.

See P.27–30 for more information on financial capital management.

See P.60 and throughout the report for examples of investment in manufacturing capital.

See P.36 for more information on intellectual capital management.

See P.41 and throughout the report for examples of investment in manufacturing capital.

See P.60 for more information on financial capital management.
The EBARA Group believes that improving its social value, environmental value, and economic value through its business activities is essential for improving its overall corporate value. We therefore engage in co-creation with valued partners aimed at developing products and services that contribute to the realization of a safer, more secure, and comfortable society as described in the Management Policy.

### VALUE CREATION PROCESS

**Creation of Value Based on the “EBARA Way,” Together with Customers**

Deciding on Issues to Be Addressed and Strategies

- **EBARA Way**
- Social and Community Issues
- Identification of Issues through Filter of the "EBARA Way"
- Material ESG Issues (Action Policies)
- Management Policy
- Medium-Term Management Plan (E-Plan 2019)

Business Activities

- Competitive Advantage = Evolution of Core Strengths and Significant Capitals
  - Passion and Dedication

Business Process

- Planning / Consultation / Proposals
- Development / Design
- Manufacturing / Installation
- Operation / Inspection / Repair / Modification

Output

- Products
- Service & Support
- Value Creation from Customer Activities

**OUTCOME**

Social Issues Addressed in the Management Policy and Value Created by EBARA Group

### Social Issues Addressed in the Management Policy

<table>
<thead>
<tr>
<th>Social Issues Addressed in the Management Policy</th>
<th>Value Created</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effective utilization of water resources</td>
<td>Optimization of energy use</td>
</tr>
<tr>
<td>Treatment of waste</td>
<td>Realization of a super-smart society</td>
</tr>
</tbody>
</table>

**Value Created**

- **Social Value**
  - Sustainable development of industries
  - Stable supplies of energy and water
  - Construction of resilient social infrastructure
  - Realization and development of a super-smart society

- **Environmental Value**
  - Provision of products that use less energy and fewer resources
  - Recycling of resources
  - Eco-friendly production activities

- **Economic Value**
  - Realization of stable economic cycles

### Sustainable Development Goals (SDGs) Highly Relevant to Business Activities

- Economic Value
- Safer, More Secure, and Comfortable Society
- Realization of Management Policy

### Corporate Governance

- **Input**
- **Output**