



**MEIDENSHA REPORT**  
**2018**

## Meiden Group Corporate Philosophy

### Corporate Mission

It defines the raison d'être and corporate mission

**Illuminating a more affluent tomorrow**

We continue to create value and technologies for the realization of a more affluent and environmentally conscious society.

### Value Provision

It defines the unique value provision and core competence

**For customer peace of mind and satisfaction**

We offer complete environmental consideration and appropriate support for our customers. From product design to commissioning, our highly skilled staff help customers solve various issues and realize their dreams by providing high-quality, socially responsible products and services.

### CSR Definition

Under the Meiden Group's definition of CSR, "Each and every employee shall work to realize the Group's corporate philosophy so that the Meiden Group is needed by society."

### Corporate Code of Conduct

This code defines compliance in conducting our CSR programs and activities.

### President's CSR Policy

This policy sets forth the policy of our CSR programs and activities in the medium term. The Policy asks each Group employee to implement CSR programs and activities in their daily work. We will draw up specifications that reflect the given business climate and CSR challenges under the current stage of the Medium-term Management Plan.

### MEIDEN CYCLE

MEIDEN CYCLE shows the guiding spirits shared by all members of the Group in realizing the Group's corporate philosophy.

## Quality connecting the next

### Corporate Slogan

Expressing the corporate philosophy in a single phrase

The Meiden Group Corporate Philosophy is as follows: "We seek to delight customers by offering high quality products and services to help solve their problems. Through these business activities, we aim to fulfill our corporate social responsibility (CSR) by proactively solving global environmental problems and other social issues and helping achieve a more affluent future. We must continually tackle these challenges."

This is our legacy from Hosui Shigemune, who founded our company as a local factory to manufacture and repair electrical machinery. His will remains our common sense of values, even as these have evolved with the times, and remains at the core of all our business activities. Staying true to this Corporate Philosophy, the Meiden Group aims to grow with society and be indispensable to it. With that as our goal, we continually take the challenge of creating new technologies and value.

### MEIDEN CYCLE



In order to realize our Group Corporate Philosophy, we must identify the direction for each individual employee to aim towards and provide signposts to help them proceed without losing their way. To enable us to do so, we have made these five actions our watchwords. The actions are mutually linked, with one action calling forth the next, creating a cycle of action and growth. Based on this image, we call this the Meiden Cycle.

By sharing and practicing the Meiden Cycle as the ethos underlying our actions, we seek to maximize the growth cycle for each of our employees.

### Editorial Policy

The Meiden Group informs its stakeholders of its attitude and initiatives relating to social responsibility through the two media of the Meidensha Report (print edition and web edition) and the Meiden Group CSR (web edition).

With regard to the content of the reports, we work to collect and analyze information that meets our stakeholders' expectations and is of interest to our stakeholders, and distribute it through regular notices, IR activities, and interviews with each department.

Furthermore, at the Meiden Group, we are working to strategically promote future CSR by conducting communication activities during the process of creating reports to understand changes in the external environment and share future issues and trends, exchanging opinions within the company based on the reports that have been created, and each department reflecting on its own activities, taking into account external perspectives.

### Report Media

#### Meidensha Report print edition and web edition (this document)

A comprehensive collection of financial information concerning the Meiden Group and non-financial information such as initiatives that contribute to improving corporate value and management strategies.



#### Meiden Group CSR web edition (Japanese only)

A simple introduction focusing on specific initiatives to tackle CSR issues that the Meiden Group considers important.



### Reporting Period

This report mainly covers initiatives taken in fiscal 2017 (April 1, 2017 - March 31, 2018)

It also includes some information from prior to fiscal 2017 and until July 2018.

### Subject Organizations

The report mainly covers initiatives of Meidensha Corporation and its affiliated companies. Human resources data applies to affiliated companies in Japan, while environmental reporting data applies to Meidensha and its 37 major affiliated companies (19 in Japan and 18 overseas).

### Publication

- Publication of this report: August 2018
- Next scheduled publication: August 2019

### Guidelines Used as References

- IIRC (International Integrated Reporting Council) "International Integrated Reporting Framework"
- GRI "Sustainability Reporting Standards"
- Ministry of the Environment "Environmental Reporting Guidelines (Fiscal Year 2012 Version)"

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### Disclaimer

In addition to past and current facts about the Meiden Group, this report contains forecasts for the future based on plans, outlooks and business policies and strategies in effect at the time of publication. These forecasts are our assumptions and judgments as based on information available at the time they were stated, and may differ from actual business activity results and events in future owing to changes in conditions.

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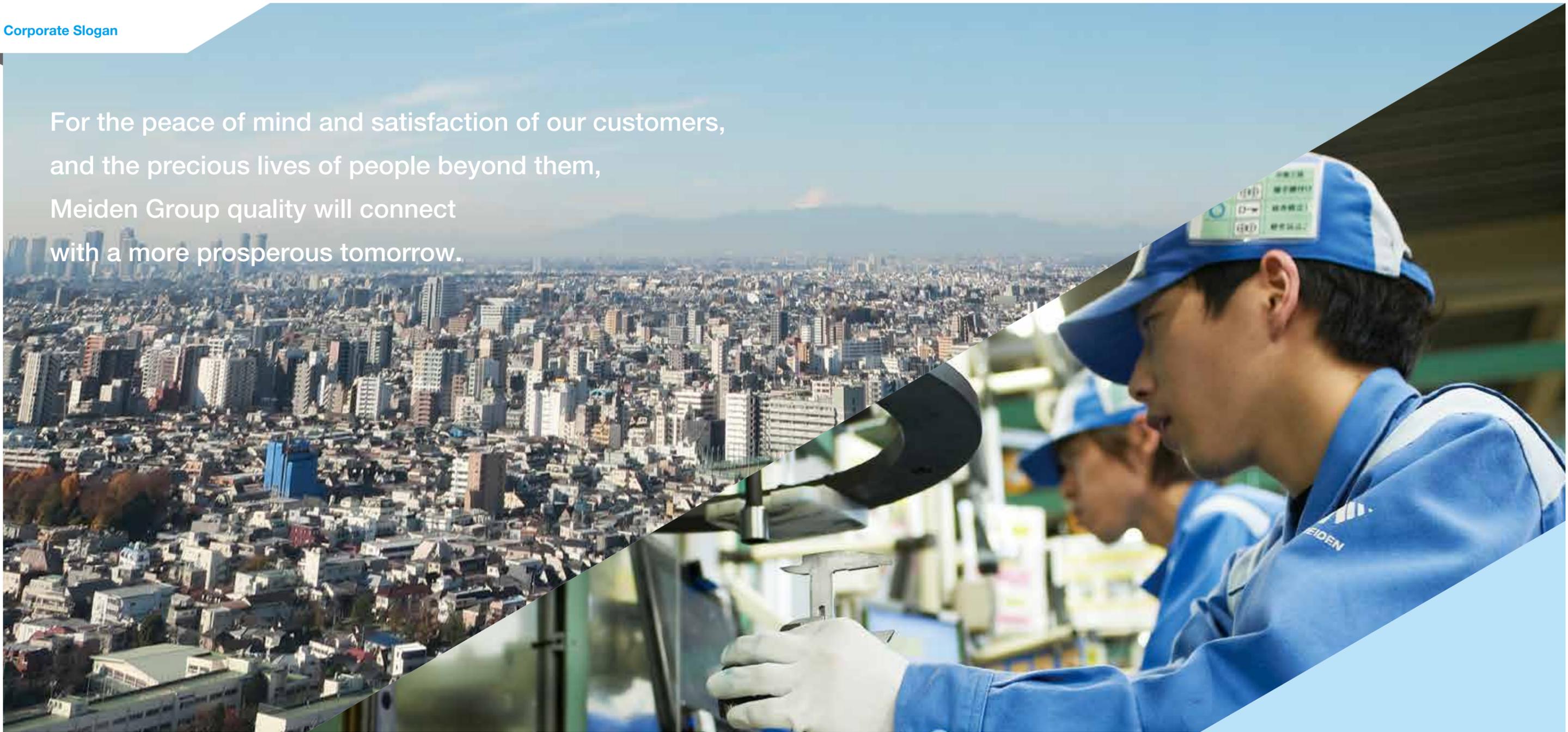
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For the peace of mind and satisfaction of our customers,  
and the precious lives of people beyond them,  
Meiden Group quality will connect  
with a more prosperous tomorrow.



For us, our “quality” is not only about the quality of our products and services. There are two things that make our quality: “people” and “technology”. People at Meiden Group strengthen ties with customers around the world by being truthful and flexible. Meiden Group technology contributes to society with truly original products and reliable services created with expertise. These two attributes make Meiden Group’s unique quality, and create new connections with the future. Making connections with our customers, society, and people living in it. These connections will expand, and the power we have built will become the energy for the next generation.

For the peace of mind and joy of our customers, and the precious lives of people beyond them, Meiden Group quality will connect with a more prosperous tomorrow. This is our never-changing mission.

**MEIDEN**  
Quality connecting the next

# The present of the Meiden Group, which has been involved with the manufacture of heavy electrical equipment and developed businesses in the field of social infrastructure for 120 years

## Seven Meiden Electrical Technologies that Support Our Society

Meidensha Behind Every Electricity Scene

### Create - creating electricity -

Meidensha manufactures equipment for the creation of electricity, or in other words, electricity generation. We have a wide-ranging product lineup, from high-capacity items that are used in power stations, such as large turbine generators, generator equipment that utilizes renewable energy, such as photovoltaic power generation and hydroelectric generation, and emergency generators for use in the event of a disaster, through to portable power equipment.



### Transmit - transmitting electricity -

Electricity generated at power stations passes through electrical equipment such as transmission lines, substations, and feeder lines, where the voltage is incrementally lowered, before being delivered to factories, buildings, and homes. We provide products that are essential to the safe and stable transmission of electricity, such as transformers that change the voltage of electricity and circuit breakers to shut off excess current in the event of an accident.



### Transform - transforming electricity -

Transforming, or power electronics, refers to converting and controlling electricity. Meidensha's power electronics initiatives, which began with mercury-arc valves, are now proving useful in a range of fields, including power supplies, railway facilities, production facilities, EVs, renewable energy, and battery storage systems, while responding to demands such as energy efficiency and increased reliability.



### Moving - moving with electricity -

Meidensha's environmentally friendly transport technology such as motors and automated guided vehicle (AGV) systems that are valuable to increase efficiency at manufacturing plants, environmentally friendly EV/PHEV drive systems, automobile testing systems that contribute to the development process, and elevator systems that enable a powerful yet smooth ride, supports more fulfilling lifestyles.



### Protecting - protecting society -

We continue to protect the peace of mind and satisfaction of our customers and the valuable lifestyles of the people that they serve through comprehensive services to protect equipment, from stable supply of electricity and systems that enable energy-efficient transportation through to installation, preventative maintenance, regular maintenance, and replacement of equipment.



### Supporting - supporting society -

We provide components that support various production equipment and services that support the safety of workplaces. Our mission is to stand alongside our customers and support them to resolve their issues through distinctive products and services.



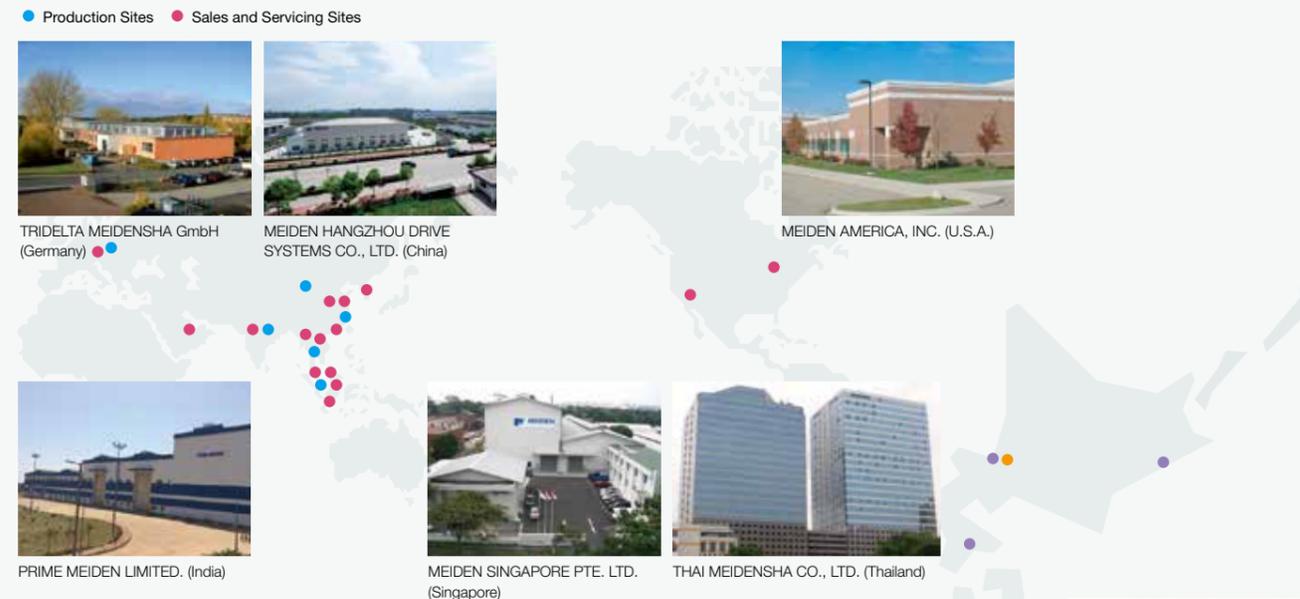
### Connecting - connecting with society -

By connecting our experience and knowhow developed at customers' actual worksites with ICT, we will create efficiency and optimize social infrastructure, leading to stable maintenance. We will create a more connected and vibrant future through the latest IoT and AI technology.

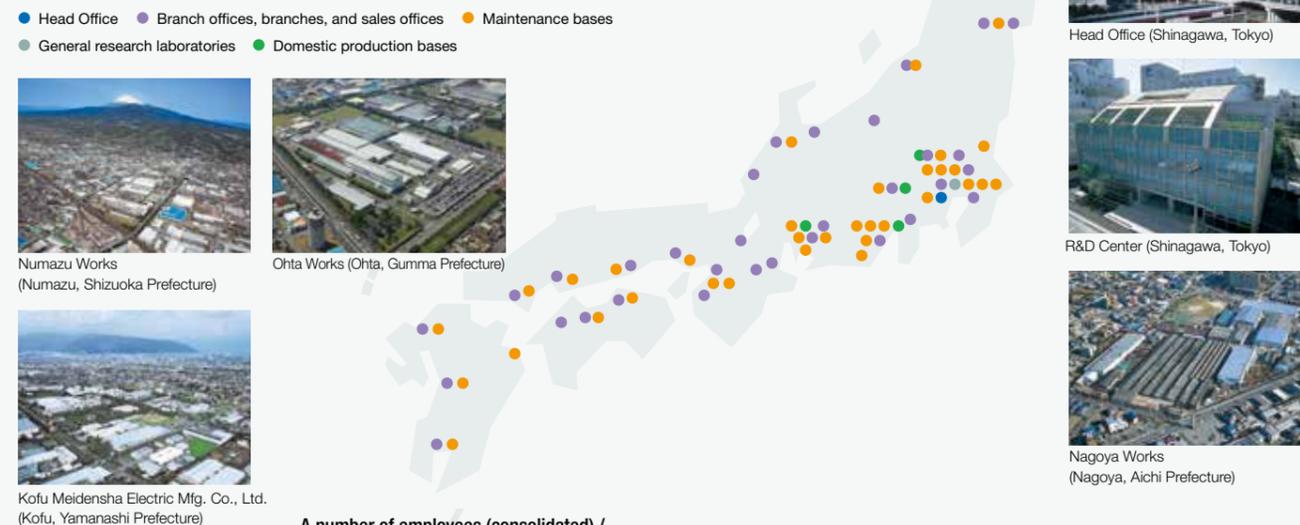


## Overseas Network

The Meiden Group has developed its social infrastructure, industrial systems, and maintenance and servicing businesses in 13 countries.



## Domestic Network



## Features of the Meiden Group

A wealth of technology and manufacturing capabilities Development capabilities to produce environmentally friendly products

High-quality and extensive product lineup and the ability to guarantee quality

Complete maintenance service system

System engineering capabilities to meet our customers' needs

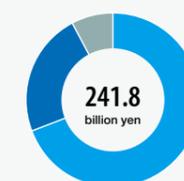
Strong trust relationships with our customers, partners, and employees

A number of employees (consolidated) / A number of employee breakdown by region\*



Japan	79.6%	7,164
Asia	18.7%	1,687
Other regions	1.6%	144

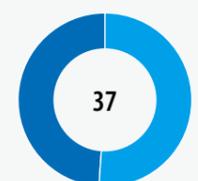
Consolidated net sales (FY2017)



Japan	69.4%	167.6
Asia	23.0%	55.7
Other regions	7.6%	18.4

(billion yen)

Group consolidated subsidiaries\*



In Japan	19
Outside Japan	18

\* As of March 31, 2018

# Supporting social infrastructure for 120 years.

## The Meiden Group's quality will lead to a more affluent future.

A more detailed timeline may be found on our website.  
[http://www.meidensha.com/corporate/corp\\_05/index.html](http://www.meidensha.com/corporate/corp_05/index.html)



Continuing to hone the “Quality” of people and technology in the future, as in the past

### 1897

#### Founding and Birth of “Meiden a Motor Company”

In 1897, our founder Hosui Shigemune started a factory in the belief that one day Japan would build its own electric machinery. Meanwhile, Japan depended on imported products for much of its industrial machinery. His business at that time was mainly repair of electrical equipment and manufacture of switches. However, his efforts to build made-in-Japan motors gave him several new ideas for development of own products.

In 1901, Shigemune successfully developed a three-phase induction motor and sold 18 motors between

1903 and 1904. He continued with research and made prototypes in the desire to develop more products of his own. His efforts led him to devise an induction motor design method in 1905. In the following year, he started production of motors to his own design method.

Meidensha's motor production helped to modernize Japanese industry and became the cornerstone of value-building at Meidensha that still persists today.



### The 1970s -

#### Evolving into “Meiden a Power Electronics Company”

During Japan's postwar economic boom, Meidensha actively expanded into the industrial systems business and contributed to the development of industry in Japan. In about 1970, society was beginning to prize quality over quantity. Likewise, Meidensha switched its management strategy from quantity base to quality base. On the technical side, our aim was to develop new products that made full use of our employees' creativity. At this time, we began to cement our status as a manufacturer of heavy electrical equipment, having developed new products that combined heavy electrical technology (power) with the latest electronics technology.



### The 1980s -

#### Evolving into “Meiden a System Engineering Company”

In the latter half of the 1980s, economic expansion led Meidensha to boost its production capacity at factories and upgrade its production system. We added to our family of Group companies and developed a variety of businesses to make us a stronger enterprise.

We grew to have three core business areas, adding mechatronics and electronics to our existing power electronics field. The integration of technologies from each of these fields to create management, monitoring, and control systems, evolves our Group into a company known as “Meiden a System Engineering Company.”



### The 1990s -

#### Approaching Our Centenary

Meidensha celebrated its 100th anniversary in 1997. Japan's business environment changed drastically after the collapse of the bubble economy, and management had to deal with a time of crisis. However, the legacy we had inherited from our predecessors, technologies and well-developed human resources, became the base for a new era of expansion as we hit the 100-year milestone.

Upon our 110th anniversary in 2007, we christened ThinkPark Tower, a facility combining our head office building with pleasant greenery in Osaki, Shinagawa City, Tokyo, where our company was founded.



### The 2010s -

#### Aiming to Be “Meiden a Global Company”

Today, the Meiden Group is expanding its presence in markets outside Japan, especially in the ASEAN region. As part of this, we transferred to our overseas subsidiaries a stronger regional supervisory role; e.g. building partnerships with enterprises outside Japan, and opening training centers for local staff.

We are using IoT and AI to increase our product competitiveness and system technology. We also enhanced one-stop service business ranging from equipment manufacture to maintenance, inspection, and operations and management.

The world is undergoing vast change, but Meidensha will never stop endeavoring to contribute to the formation of an “affluent future society.”



#### Meiden Group History

- 1897 Company founded as a privately operated factory for electrical machinery
- 1913 Osaki Factory established
- 1917 Private operation incorporated as “Meidensha”
- 1935 Nagoya Works established
- 1937 Shinagawa Works established
- 1939 Nishio Works established
- 1950 Kofu Meidensha Electric Mfg. Co., Ltd. established
- 1955 Technical transfer agreement with AEG for air circuit-breakers and transformers
- 1958 Opened the Head Office in Ohtemachi, Chiyoda-ku, Tokyo
- 1961 Numazu Works established

Technical transfer agreement with ASEA for turbine generators

- 1967 Electronics Device Factory opened in Numazu
- 1968 Technical transfer agreement with General Electric for vacuum interrupters
- 1969 Technical transfer agreement with SEVCON for electrical equipment for forklift trucks  
Technical transfer agreement with AEG for thyristor rectifiers and processing lines
- 1973 Technical transfer agreement with General Electric for high-frequency thyristor inverters
- 1976 Gotanda Office opened
- 1977 Ohta Works established
- 1979 MEIDEN SINGAPORE PTE. LTD. established
- 1987 Technological exhibition held to celebrate the company's 90<sup>th</sup> anniversary
- 1993 R&D Center completed

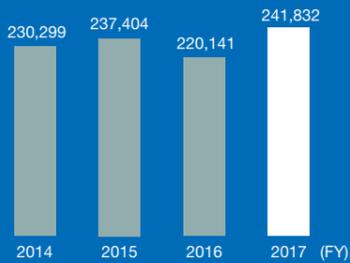
- 1995 Head Office moved to Chuo-ku, Tokyo
- 1997 Celebrated 100<sup>th</sup> anniversary
- 2001 Japan AE Power Systems Corporation established
- 2003 Merger with Meiden Engineering Corporation
- 2005 Work started on a development project near the West Exit of Osaki Station
- 2006 Motor development and manufacturing business merged into Kofu Meidensha Electric Manufacturing Co., Ltd.
- 2007 Our 110<sup>th</sup> anniversary  
ThinkPark Tower completed and the head office moved to Shinagawa-ku, Tokyo

- 2009 Capital and business alliance with Ono Sokki Co., Ltd., for the automotive testing systems business
- 2012 Japan AE Power Systems Corporation joint venture dissolved
- 2013 Dissolved Meiden Foundry Industrial Co., Ltd.
- 2014 Stake acquired in Prime Electric (now PRIME MEIDEN LIMITED.)
- 2015 Maintenance and after-sales service businesses reorganized into Meiden O&M Corporation and Meiden Engineering Corporation  
Tridelta (now TRIDELTA MEIDENSHA GmbH) acquired from Tridelta GmbH  
Formulation of the Medium-term Management Plan V120
- 2017 Our 120<sup>th</sup> anniversary
- 2018 Formulation of Medium-term Management Plan 2020

# Overview by Business Segment in Fiscal 2017

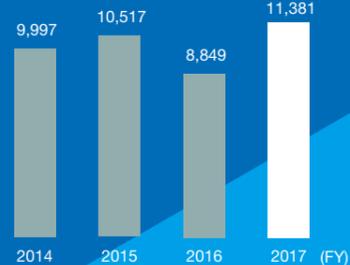
Net Sales (consolidated)

**241,832** millions of yen



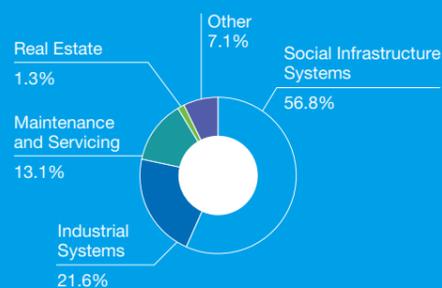
Operating Income\* (consolidated)

**11,381** millions of yen



\* Operating income for fiscal 2014 has been retroactively restated due to a change in presentation. (Starting in fiscal 2015, consolidated Group expenses associated with employees on loan are stated as "operating expenses" instead of "non-operating expenses.")

Segmental Sales Breakdown (FY2017)



## Social Infrastructure Systems Business

We manufacture and sell equipment for emergency and non-emergency power generation, hydroelectric power generation, and power transmission and distribution facilities, to power companies, government agencies, railways, and buildings and factories in Japan and abroad. The product offerings include power quality stabilization systems and power generation systems such as solar power and small and medium-sized hydro power, as well as energy solution services such as smart grid systems. We are also involved in the fields of drinking water and sewerage treatment for local governments in Japan. Our activities include manufacturing and sales of electrical facilities for water processing systems and process control systems and information networks. We also offer solutions services such as contract facility management services for drinking water treatment plants.

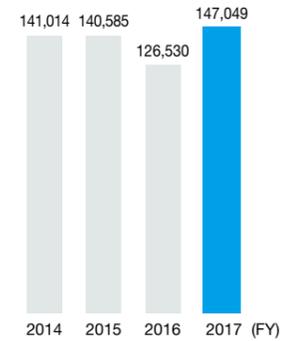
Net sales in the segment rose 16.2% over the previous fiscal year to ¥147,049 million, while operating income grew 23.8% to ¥4,080 million.

In our electric power and social infrastructure system business, although there was a fall in solar power products, products for power companies remained steady and there was a recovery in equipment for Japanese companies' production bases overseas, which resulted in increased revenue year on year.

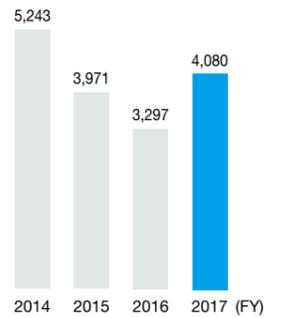
In the railway system business, although there was a trend towards intensifying competition in the domestic market, sales of large overseas rail projects firmed, which resulted in increased revenue year on year.

In the water and environmental system business, amid difficult business conditions, such as lower demand arising from difficulties in implementing regional fiscal policies due to reduced budgets and the declining population, revenue increased year on year due to a rebound in orders for renewal projects due to improvements to proposal-related activities.

Net Sales (Millions of yen)



Net Operating Income (Millions of yen)



## Industrial Systems Business

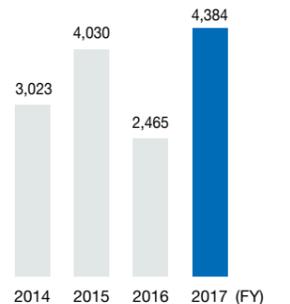
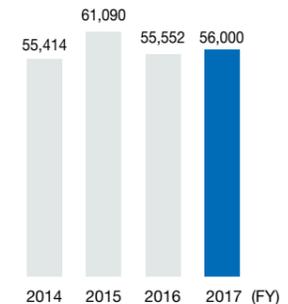
We manufacture and sell motors and inverters for elevators, textile machinery, industrial vehicles, and electric vehicles. Other products include vacuum capacitors and industrial computers for makers of semiconductor manufacturing equipment. We also manufacture and sell dynamometers and other testing systems for automobile manufacturers, and logistics support systems for factories and warehouses.

Net sales in the segment remained steady from the previous fiscal year at ¥56,000 million, while operating income grew 77.8% to ¥4,384 million over the previous fiscal year.

In the motor and drive business, motors and inverters for EVs/PHEVs firmed, resulting in increased revenue year on year.

In the electronic equipment business, against a backdrop of vigorous growth in the semiconductor manufacturing equipment market, vacuum capacitors and pulse power supplies, etc., were especially strong, resulting in increased revenue year on year.

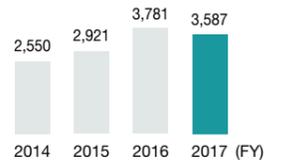
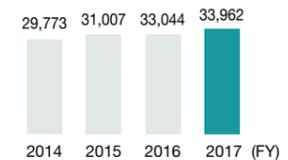
In the dynamometer and logistics systems business, orders are showing signs of recovery due to renewed investment in testing facilities automobile manufacturers, and increased investment in the logistics industry; however revenue was down year on year due to the effect of reduced orders in the previous fiscal year.



## Maintenance and Servicing Business

We provide services relating to the remote management and monitoring of facilities and the proposal of measures for extending the life of facilities, energy conservation, and other services related primarily to the maintenance of products we supply.

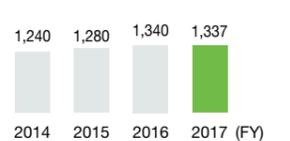
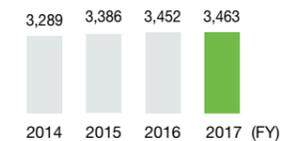
Net sales in the segment rose 2.8% over the previous fiscal year to ¥33,962 million, while operating income dropped 5.1% to ¥3,587 million, due to one-stop service initiatives, conducting diagnostics and making proposals, etc., from walk-throughs of private plants and facilities, and enhancing staff training and R&D to enable this.



## Real Estate Business

We offer property rentals, including office spaces at ThinkPark Tower (Osaki, Shinagawa City, Tokyo).

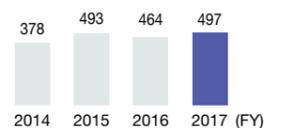
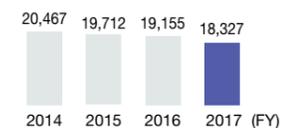
We are engaged in the real estate leasing business, centering on the office and commercial building ThinkPark Tower (Osaki, Shinagawa City, Tokyo). Net sales in the segment remained steady from the previous fiscal year at ¥3,463 million, while operating income was ¥1,337 million.



## Other Business

This sector includes marketing companies that handle a wide range of products, welfare services for employees, and others.

This segment includes categories not included in any of the above segments, such as manufacturing and marketing of electrochemical measuring equipment and electric insulation materials, welfare services for employees, and goods merchandising. Net sales in the segment declined 4.3% from the previous fiscal year to ¥18,327 million, and operating income increased 7.1% to ¥497 million.



# Aiming for sustainable development of the Meiden Group and society

## The Meiden Group

### Strategy

**Medium-term Management Plan 2020 (fiscal 2018 to fiscal 2020)**

- Growth businesses: Overseas business and automobile-related business**
  - Expanding the scale of businesses in line with market growth
- Earnings-base businesses: Public infrastructure business and maintenance and servicing business**
  - Strengthening earnings power through generation of new values
- Strengthening business foundations**
  - Manufacturing, development and business promotion capabilities, human assets fostering and financial strategies

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**The business environment in which the Group operates (anticipated)**

Overseas Market	Domestic Market	Business Key Words
<ul style="list-style-type: none"> <li>Increasing population in developing countries</li> <li>Increased infrastructure demand</li> </ul>	<ul style="list-style-type: none"> <li>Declining population</li> <li>Slumping economic growth rate</li> <li>Difficulty in implementing national and local government fiscal policies</li> </ul>	<ul style="list-style-type: none"> <li>Environmental regulations</li> <li>Automobile electrification and digitalization</li> <li>Development of the IoT and AI</li> </ul>

P13-18

Understanding Diverse Business Risks and Identifying Social Problems



### Customers

Solving social issues by providing value to customers

Electrical power	Energy	Railway systems
Water and environmental systems	ICT production	Automobile testing systems
Logistics	Plant construction engineering	Maintenance

P19-28

Further honing of quality • Challenge to create new technologies and value

### Society

Value provided to society

- Stable supply of electricity
- Energy efficiency
- Safe access to water resources
- Creation of employment
- Shareholder returns

Contribution to the solution of social issues, including Sustainable Development Goals (SDGs), through business activities

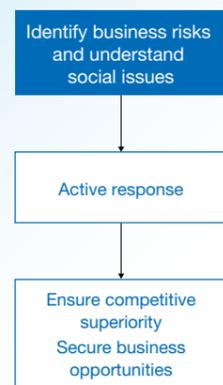
Sustainable Development Goals (SDGs)

P29-30

## Strategy → Optimal Capital Allocation and Strengthening Management Foundations

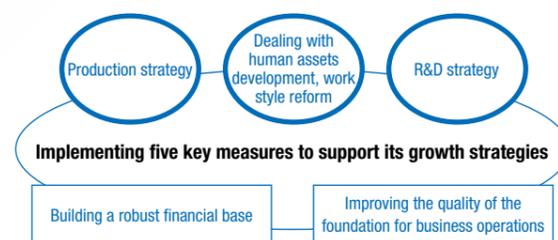
**Formulation of the Medium-term Management Plan that will lead to establishing competitive superiority and securing business opportunities.**

The Meiden Group's business activities are subject to a range of risks and the impact of social issues; however, proactive engagement will lead to establishing competitive superiority and securing business opportunities. We formulated Medium-term Management Plan 2020, which covers fiscal 2018 through to fiscal 2020, with awareness of this. Under Medium-term Management Plan 2020, which has a period of three years, we are now in a phase of taking a “powerful step” for a jump forward in the future, and we are actively investing and strategizing with regard to facilities, human assets, research and development, and strengthening business partnerships, etc.



**Improvement of capital efficiency through optimal allocation of capital, and strengthening the management foundations that support businesses**

Over 120 years, the Meiden Group has ceaselessly continued to adapt, and optimally allocated the various capital that supports business activities, which has been accumulated throughout its history. Medium-term Management Plan 2020 aims to efficiently inject capital to support businesses and achieve financial targets.



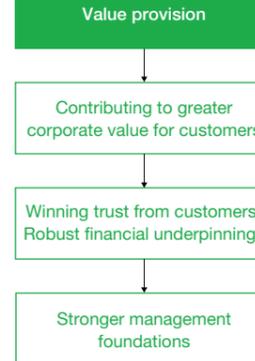
## Business Activities → Providing Value to the Customer → Improving Corporate Value

**Providing value that contributes to improvements in the customer's corporate value**

Consideration for the environment, a comprehensive customer support system, and high-quality services are forms of value that increase a company's value for its customers, and they are also Meidensha's strengths. These forms of value also win trust from customers and generate robust financial underpinnings, creating a virtuous cycle that further strengthens management foundations.



**Value provision**



Enhancing strengths and strengthening foundations

**Contributing to the realization of a sustainable society by providing value to customers**

The Meiden Group's corporate mission is “illuminating a more affluent tomorrow” and we are conducting corporate activities according to the corporate philosophy of “for customer peace of mind and satisfaction.” By continuing to improve the quality of people and technology, which is the driving force behind all of our business activities, we will provide unique products and reliable services, and contribute to society as appropriate for the age and the market. Through this, we aim to provide increased value to the customer by implementing a business strategy that integrates development, production, sale, and maintenance while strengthening our foundations, and achieve sustainable development for both the Meiden Group and society.

## Increasing the Quality of people and technology, supporting the future of social infrastructure and industrial advancement, and creating a better lifestyle for people going forward.

My name is Takeshi Miida, and I took on the role of Representative Director and President in June 2018. Since its establishment in 1897, Meidensha has produced a range of technologies, products, and services and contributed to the development of a sustainable society in its role as a manufacturer. In 2017, it celebrated its 120<sup>th</sup> anniversary. I would like to once more express my gratitude for the many customers that have given Meidensha their trust and their patronage.

Last year, the Meiden Group formulated its new corporate slogan, “Quality connecting the next,” based on the Group’s corporate philosophies of “Illuminating a more affluent tomorrow” and “For customer peace of mind and satisfaction.” We aim to increase the quality of people and technology, support the future of social infrastructure and industrial advancement, and create a better lifestyle for people going forward.

In 2018, we formulated “Medium-term Management Plan 2020” as a “powerful step” for a jump. Amid the changing business environment, we will increase the scale of growing businesses, such as the overseas transformer and railway business and the automobile-related business, and use IoT and AI technology to create new value, with the aim of becoming a company that grows even further.

**Takeshi Miida**

Representative Director and President

三井田 健



**Looking Back on Fiscal 2017**

We worked to strengthen the earnings base of the Group's business in Japan and expand the overseas business, which resulted in sound performance for the Group.

**Looking back on fiscal 2017, how do you think it went?**

Looking back on the previous fiscal year, I feel that it was a year in which the Japanese economy continued its mild recovery, with factors such as improved business performance and increased capital investment. On the other hand, if you look at the global economy, although the outlook is unclear with factors such as US policy and geopolitical risks relating to the Korean Peninsula and the Middle East, the US economic recovery is continuing, and signs of economic recovery can be seen in the Asian region.

Against this backdrop, the Meiden Group has devoted its energy to increasing product competitiveness and thoroughly promoted "strengthening the earnings base of the Group's business in Japan" in the Japanese infrastructure business, and worked towards "expanding the overseas business" in accordance with the growth of developing countries, with an eye to accomplishing the V120 Medium-term Management Plan, which was in its final year.

As a result of the above, the Meiden Group's results were as follows: Consolidated sales amounted to ¥241.832 billion (up 9.9% year on year); operating income amounted to ¥11.381 billion (up 28.6% year on year); ordinary income amounted to ¥9.992 billion (up 21.7% year on year); and net income attributable to owners of parent totaled 7.056 billion (up 22.9% year on year).

In major managerial indicators, compared to the previous period, our equity ratio rose 0.7 points to 30.3%, ROE rose 1.0 points to 9.2%, and ROA based on operating income rose 0.9 points to 4.4%.

**Overview of V120 and the Business Environment**

We were able to thoroughly improve results, based on the basic policies of "enhancing the product competitiveness," "strengthening the earnings base of the Group's business in Japan" and "expanding the growth of overseas business."

**Please give us an overview of V120.**

Under the V120 Medium-term Management Plan (fiscal 2015 to fiscal 2017), we listed "enhancing the product competitiveness," "strengthening the earnings base of the Group's business in Japan" and "expanding the growth of overseas business" as aims, and continuously worked to implement key measures such as "developing new business partnerships" and "giving direction to the business," which led to solidly improved results.

As a result, we have achieved solid growth by creating world-acclaimed products through enhancing product competitiveness, receiving increased orders in the hydroelectric-related business and the maintenance and servicing businesses, promoting partnerships, such as those with Prime Meiden Ltd. in India, and Tridelta Meidensha GmbH in Germany, and achieving an overseas sales ratio of 30% for the overseas business.



**Medium-term Management Plan 2020 (FY2018-2020)**

**Powerful Step for a Jump**



**What do you think about the business environment in which the Meiden Group operates?**

The Group faces various market factors today. In the Japanese market, there has been a steady demand for renewing or extending the lifespan of aging facilities and for installing energy-saving equipment at the existing facilities, while demand for new projects is on the decline owing to the nation's shrinking population and other factors, exerting downward pressure on the prices of products. With regard to the public sector, municipal governments are diversifying how they provide their infrastructure services, such as collaborating with neighboring municipal governments or the private sector to provide such services together.

In the overseas market, demand for infrastructure such as electricity, railways, water supply, and sewerage continued to grow in developing countries, particularly in Asia, due to population growth and urbanization.

Furthermore, global trends such as stricter environmental regulations, the advent of automobile digitalization and electric vehicles, and the advancement of technologies related to the Internet of Things (IoT) and artificial intelligence (AI) present prime opportunities for the Group to expand its businesses. It is necessary for the Group to study how these trends will unfold and respond to them soundly and swiftly.

**Medium-Term Management Plan 2020: A "Powerful Step" for a Jump**

We have designated the current phase as a "powerful step" towards a future "jump" forward, and we are investing in future growth and steadily increasing performance.

**Medium-term Management Plan 2020 has been put in place. Please tell us about the concept behind it.**

Meidensha has now commenced implementing Medium-term Management Plan 2020, which covers the three-year period from fiscal 2018 to fiscal 2020. Under Medium-term Management Plan 2020, which is defined as the phase "powerful step" the Group will proactively invest and take measures to make its facilities, human assets, research and development, and strengthening business partnerships with other more robust parties.

In the "jump" phase that follows the current management plan, the Group aims to attain "high-quality" growth by realizing a balanced composition of different businesses and enhancing the overall profit ratio.

**Please tell us about the basic policies of Medium-term Management Plan 2020.**

As basic policies under the current medium-term management plan, the Group categorizes its business areas into the following three to attain optimal distribution of its resources and will implement necessary strategies for each of them:

The first area is "growth businesses." The Group defines businesses for which markets are expected to grow further, including overseas and automobile-related businesses, as "growth businesses" and will proactively divert resources to these domains to ensure their expansion.

The second area is "earnings-base businesses." The Group defines businesses that serve as a base to generate earnings in a stable manner as "earnings-base businesses," which include the water treatment/public infrastructure, electric power/renewable energy and maintenance/servicing businesses. The Group aims to sharpen its earnings power by revamping its business models and improving its productivity.

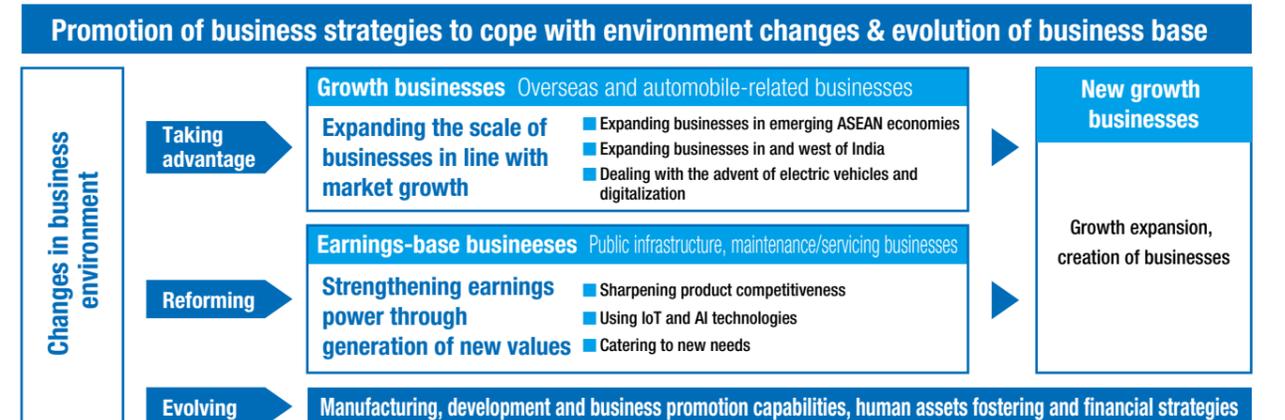
The final area is "new growth businesses." The Group will make investments into businesses associated with semiconductor manufacturing equipment—new growth businesses which are expected to grow further—and try to generate new enterprises.

Based on these policies, we will make proactive investments and work to enhance earning potential with the aim of further increasing corporate value.

**What about the strategies in each business segment?**

**(1) Social infrastructure business segment**

With regard to growth businesses, the Group's strategies in the overseas electric power field are as follows. It will aim to enter the electric power markets in Southeast Asia by further advancing partnerships with local companies in the region—efforts which have been made since the previous medium-term management plan. It will concentrate on expanding the sales of its world-acclaimed products, such as vacuum circuit breakers and surge arresters in European and North American markets. Furthermore, Prime Meiden Limited, an India transformer manufacturer that is now a consolidated subsidiary of the Group, will play a leading role in carrying out the strategies in India, by accelerating efforts to enter local electrical power utility markets and to win contracts for high-speed rail projects. It also aims to enter markets west of India. In the overseas railway field, the Group will steadily carry out large projects, including work to renew facilities that are part of Singapore's MRT North-South and East-West lines. It will also try to strengthen its corporate preparedness to cope with vigorous future demands for urban transportation and high-speed railways.



With regard to earnings-base businesses, the Group will try to reduce the cost of products through discontinuous innovation or drastic changes in design, materials and manufacturing processes and revamp its business models for business operations in water treatment, public infrastructure and electric power/renewable energy. It will aim to attain automation and labor-saving in operational control by pairing its accumulated product data and know-how with IoT and AI technologies. It will also aim to beef up its capability to make proposals and build a corporate structure to better cater to the new needs of municipal governments. Many such entities are now providing infrastructure services together with neighboring municipal governments, engaging in cross-field endeavors in energy and water projects and tying up with the private sector. In its business operations catering to the private sector, the Group will try to ensure that it better meets demands by a drastic reduction in the cost of high-voltage, low voltage switchgear and improved business promotion efficiency through cooperation with the maintenance and servicing business operations.

## (2) Industrial systems business segment

With regard to growth businesses, In the automobile-related field, the Group will aim to win new mass production contracts by making capital investments to cope with increased production of motors and inverters for electric vehicles and strengthened manpower for product development. In the automotive testing systems business, it will strengthen its engineering capabilities that can deal with the proliferation of electric vehicles, digitalization of vehicles and introduction of model-based development by promoting its partnership strategy, while pursuing the synergy effects with its motor and inverter business for electric vehicles.

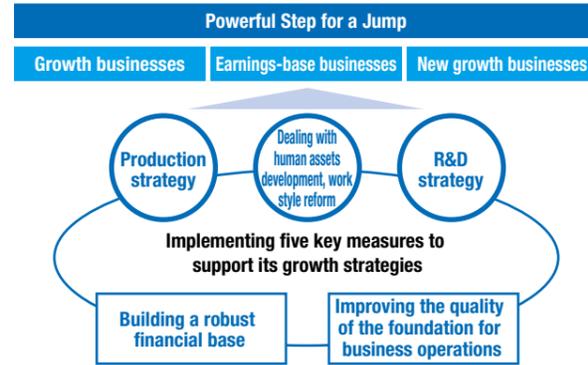
With regard to earnings-base businesses, in the industrial motors and drives business, the Group will boost the earning power of existing products while creating new products through partnerships or other means. In the automated guided vehicle systems business, the Group will collaborate with a system integrator to generate world-acclaimed products for improved earning power.

With regard to new growth businesses, in the field related to semiconductor manufacturing equipment, the Group will continue capital investments to deal with increased production demand, as the market is projected to make steady growth. It will also try to secure growth by developing new products. The Group projects continued growth in the market for ceramic flat membranes, thanks to increased demand for reclaimed water and strengthened environmental regulations. It will aim to expand the business by strengthening its sales structure in collaboration with other companies.

Furthermore, it will aim to create new growth businesses through operations by the Business Development Division, which was established in April 2017, as well as its Silicon Valley Office set up in August 2017.

## (3) Maintenance and servicing business segment

In the maintenance and servicing business, the Group will provide one-stop services based on life cycle engineering. It will also try to develop this business into facility management business at a time when Japan's population is declining and municipal governments are increasingly experiencing financial dire straits. It plans to provide preventive maintenance services through enhanced fault prediction and detection technologies that use IoT and AI, as well as the provision of low-cost, labor-saving, maintenance and servicing operations.



### — Please tell us about key measures.

In order to affect our strategies, we are implementing specific measures in the five key areas of “production strategy,” “human assets development and work style reform,” “research and development strategy,” “building a robust financial base,” and “improving the ‘quality’ of the foundation for business operations.”

#### (1) Production strategy

The Group will make capital investments to expand the scale of operations or to increase production in the growth and new growth businesses. For example, it will introduce automated production for high-volume products and automated inspection processes to enhance its productivity. In the earnings-base businesses, the Group will concentrate on boosting earning power for system products. It will sharpen the competitive edge of its products by building so-called smart plants with the use of IoT and AI, making investments in automated product design, etc. and optimizing the supply chains.

#### (2) Human assets development and work style reform

The Group will further strengthen the development of human assets, as the basis for supporting business development. It will institute improved technological training, use overseas training centers and promote exchanges with national staff members in overseas operations to foster next-generation human assets for the Group.

Firstly, in the “growth businesses”, the Group will concentrate on nurturing national staff members engaged in overseas railway projects or securing or nurturing human assets capable of developing motors and inverters for electric vehicles, whose market is expected to grow. In the “earnings-base businesses”, the Group will build a cross-sectional business promotion regime, develop human assets for business promotion and enhance its capability for making business proposals.

The Group will tackle work style reform by stipulating a new action plan, called “Smart Work 2020.” It will reform the production processes and invest in the streamlining of facilities and increase productivity through the use of robotic process automation, while taking steps to realize diversity in the workplace, including expanded or improved support systems for child rearing and nursing care.

#### (3) Research and development strategy

While reaping the fruits from the “V120”, the Group will further strengthen basic and product technologies with the aim of generating next-generation products and systems.

The Group will concentrate on developing new products by diverting resources to the “growth businesses” related to the overseas power generation and automobile sectors, while boosting its digital technologies associated with IoT and AI, etc.,

to give new added values to the “earnings-base businesses.” In addition, to speed up research and development, the Group will introduce new methods, such as front loading design and model based development. At the same time, the Group will use its Silicon Valley Office and strengthen tie-ups with outside research institutes to promote open innovation.

#### (4) Building a robust financial base

For a further leap forward, the Group will proactively make necessary investments. At the same time, it will realize a robust financial base by enhancing its net worth through improvement of its earning power and by boosting its cash generation capability through the streamlining of its assets to build a foundation for a sustainable growth. In addition, it will diversify fund procurement methods to ensure the Group has a stable financial base.

To realize the above, the Group will set financial targets and make all-out efforts to have a solid financial base to attain these targets.

#### (5) Improving the “quality” of the foundation for business operations

The Group will make continued efforts to improve the quality of products, systems, and services as a corporation that supports social infrastructure. In addition, it will proactively improve the “quality” of activities that serve as the foundation for business operations, such as the eradication of industrial accidents and full implementation of corporate governance.

Furthermore, Goal 13 of SDGs (Sustainable Development Goals) is “climate action,” which we understand is a major management issue facing the Company, and the Group has been promoting environmental conservation by offering eco-friendly products and services at a time when the world faces threats of natural resources depletion and global warming. Going forward, the Group aims to slash the emissions of global warming gases associated with its business operations by 30 percent from the fiscal 2017 level by the end of fiscal 2030 through the eco-conscious operations mentioned above. The Group will aim to materialize ideas infused into its corporate slogan, “Quality connecting the next,” through the aforementioned activities.

#### — What about the financial targets?

The Group will aim to achieve ¥280 billion in net sales, ¥14 billion in operating income, ¥13.5 billion in ordinary income and ¥9.4 billion in current net income attributable to owners of parent in fiscal 2020, the last year in Medium-term Management Plan 2020. It has set the following targets: a return on equity (ROE) of 10%, a return on invested capital (ROIC) of 7% and an operating profit margin of 5%. Achieving these targets, the Group will realize highly efficient management, make investments for a leap forward and build robust financial base.

#### ■ To Our Stakeholders

Aiming to be a company that is trusted and needed by society

#### — Finally, please send a message to our stakeholders.

The resources for value creation, and the strengths of the Meiden Group, are a powerful sense of duty to support the social infrastructure that has been developed through longstanding relationships with our customers, connections such as our customer network and cooperation within the group, and speedy and flexible responsiveness to the wishes and issues of our customers. Going forward, we aim to maximize corporate value by continuing and further developing these three strengths.



We will continue to actively challenge ourselves to create new technologies and new value, in order to contribute to the realization of a more affluent and environmentally conscious society.

#### Financial targets (consolidated)

	(In billion yen)		
	Fiscal 2017 (results)	Fiscal 2018 (forecast)	Fiscal 2020 (targets)
Net sales	241.8	245.0	280.0
Operating income	11.3	11.5	14.0
Ordinary income	9.9	10.8	13.5
Current net income attributable to owners of parent	7.0	7.5	9.4

	(In billion yen)			
	Fiscal 2017 (results)	Fiscal 2018 (forecast)	Fiscal 2020 (targets)	
Social infrastructure	Net sales	147.0	142.0	157.0
	Operating income	4.0	3.5	4.8
Industrial	Net sales	56.0	63.0	77.0
	Operating income	4.3	4.9	5.5
Maintenance and servicing	Net sales	33.9	35.0	39.0
	Operating income	3.5	3.8	4.4
Real estate	Net sales	3.4	3.5	3.5
	Operating income	1.3	1.3	1.3
Others	Net sales	1.3	1.5	3.5
	Operating income	(2.0)	(2.0)	(2.0)
Total	Net sales	241.8	245.0	280.0
	Operating income	11.3	11.51	14.0

#### Profitability

	Fiscal 2017 (results)	Fiscal 2018 (forecast)	Fiscal 2020 (targets)
ROE	9.2%	9.2%	10%
ROIC	—	—	7%
Operating profit margin	4.7%	4.7%	5%

#### Investment Plan

	Fiscal 2017 (results)	FY 2018–2020 Cumulative amount over three years
Capital investment	¥7.5 billion	¥30 billion
Growth investment budget	¥0.5 billion	¥20 billion
Research and development expenditure	¥9.4 billion	More than ¥30 billion

#### Net worth / Dividend ratio

	Fiscal 2017 (results)	Fiscal 2020 (targets)
Net worth	¥80.2 billion	¥100.0 billion
Consolidated dividend payout ratio target	28.9%	Stably at 30.0%

# History of electric vehicles

## -Providing support as a drive system pioneer

### History of Meidensha's automobile-related business

Meidensha has greatly contributed to the development of automobile technology, such as by delivering Japan's first electric dynamometer in 1920, delivering Japan's first chassis dynamometer in 1927, and developing the roller dynamometer, which received the OHM Technology Award in 1985.

Meidensha has delivered numerous testing systems that have contributed to global automobile environmental strategies (fuel consumption reform, gas emission, noise reduction, etc.) focusing on the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of Economy, Trade and Industry, etc., research institutions, and Japanese automobile and parts manufacturers. According to the ever-changing needs of the times, Meidensha has conducted joint development with various automobile manufacturers to evaluate the functions of new automobiles, and has a record of delivering over 3,500 systems, placing it among the leaders of the industry. Furthermore, as a range of regulations concerning

fuel consumption efficiency and exhaust gas have been implemented, Meidensha has been developing and delivering testing equipment in line with these regulations.

At present, labor hours for design and development have been increasing for power trains that have been diversifying due to more advanced functionality of automobiles (electronic control, safety driving support systems, connectivity, etc.) and tightening environmental regulations around the world. Against this backdrop, it has become even more important to shorten development periods while maintaining quality, and in order to deal with this issue, importance has been placed on model-based development (MBD) as an automobile development and evaluation method. MBD is a method to reduce the testing and trial frequency of testing vehicles and parts components and conducting development in an efficient manner, by evaluating functions, etc., through simulations that utilize CAE, etc. By integrating models created with CAE, etc., into the MBD process, Meidensha is working to develop efficient testing systems.

### Technologies and strengths developed since Meidensha's foundation

#### • Motor/Inverter technology and EV drive systems

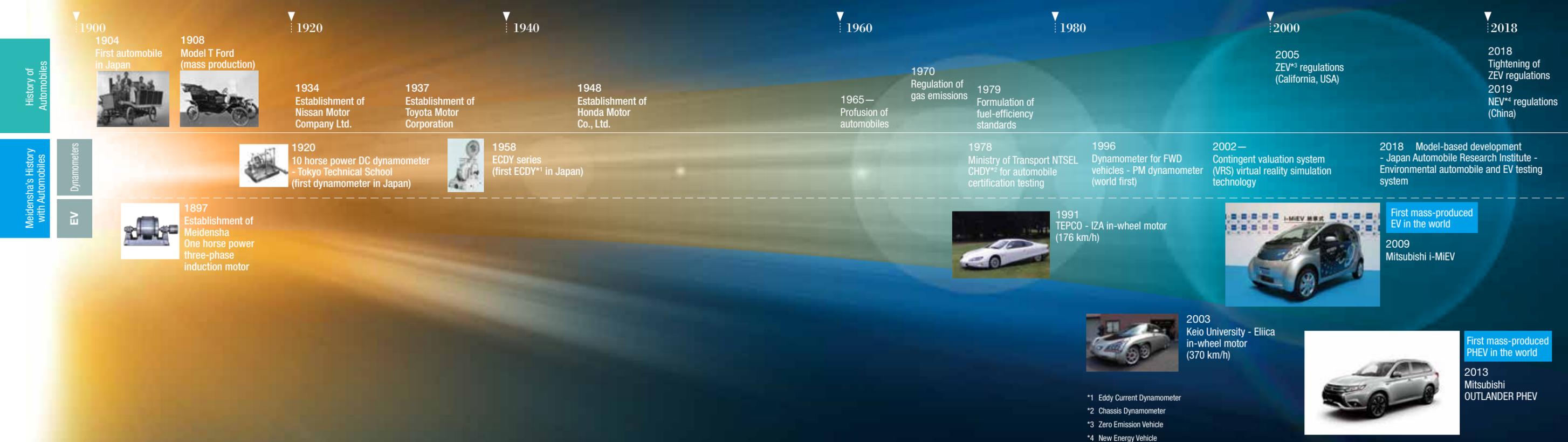
Meidensha's industrial motors and inverters have been adopted for a number of purposes in various locations and environments, and Meidensha has accumulated a range of technologies in the process. Based on these technologies, Meidensha started developing motors and inverters for EVs in the 1990s. Meidensha's motors and inverters have been adopted for a number of concept cars, such as the EV, "IZA," which was jointly developed by Tokyo Electric Power Company, Inc. (now Tokyo Electric Power Company Holdings, Inc.) in 1991. Meidensha currently provides products for the i-MiEV and OUTLANDER PHEV, which are vehicles on the market produced by Mitsubishi Motors Corporation, and has an extensive record of producing over 230 thousand vehicles in total. In addition, incorporating the knowledge gained from this record in our products is the most important source of improved reliability.

From a development perspective, in addition to continuous basic development, which is constantly focused on the future, Meidensha also has a system to develop products that are most appropriate for vehicles under development, by being involved with design from the early stages of the customer's vehicle development. From a production perspective, Meidensha is constantly working towards automation of production lines and quality control, and providing highly reliable products.

#### • Dynamometer systems

Meidensha is able to provide products, systems, and engineering for automobile development, from subcontracting of testing equipment such as for engines, transmission, and completed automobiles, and research and development, through to coordination of products and systems, and construction such as testing buildings, laboratories, and incidental equipment. Furthermore, Meidensha has an integrated production process at its domestic location (Dynamometer System Factory, Ohta City, Gunma Prefecture) that encompasses research, development, and design, through to manufacturing (machinery, control systems, and operation and design equipment, etc.), and it is able to provide customers with high-quality, highly functional products in collaboration with Group companies and partner companies.

Meidensha has testing buildings in two locations: Japan (Ohta, Gunma) and the US (Michigan), where various tests are carried out on commission and research and development of next-generation products is conducted. Through the use of these testing buildings, Meidensha not only conducts joint verification, which contributes to the research and development of customers, but also creates new technologies and new value together with customers and partner companies according to the needs and issues uncovered through testing.



\*1 Eddy Current Dynamometer  
\*2 Chassis Dynamometer  
\*3 Zero Emission Vehicle  
\*4 New Energy Vehicle



## The proliferation of EVs presents a business opportunity

Tackling challenges presented by the accelerating new age of automobiles head on

OUTLANDER PHEV (Mitsubishi Motors Corporation)

### Aiming to further miniaturize motors and inverters

Motors and inverters are integral components of EVs. In order to achieve higher efficiency and lighter weight, as well as achieve vehicles with a flat floor and a roomy interior, there is strong demand for further miniaturization of components.

In order to achieve miniaturization, for motors, we are working to improve the performance of permanent magnets and limit energy loss (iron loss) in the motor core. For inverters, we are working to miniaturize capacitors, which are one of the components used to improve cooling technology. To achieve further miniaturization, units that integrate motors and inverters are under development. By including motors and inverters in a single case, cabling is reduced, required installation space is reduced by 30%, and weight is reduced by 15% in comparison to motors and inverters being installed separately. From 2017, we will be able to display prototypes at exhibitions and commence mass production at will. There are instances in which it is better to install motors and inverters separately; however, if the structure is optimized for integration, the merits of integration are considerable.

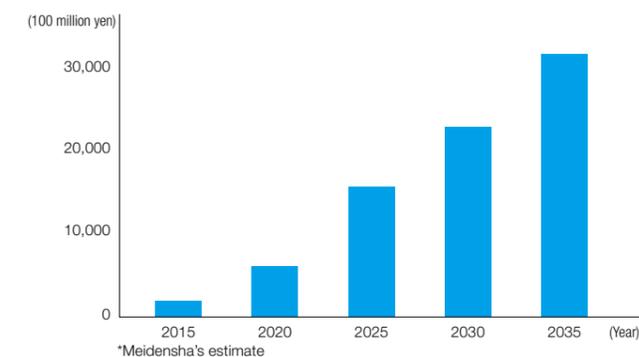
Through these measures, we plan to increase the output volume of inverters to five times the level of 2009 by 2020. By 2025, we aim to increase the output volume to 15 times that of 2009 by replacing the current silicone (Si) power semiconductors used for inverters with silicone carbide (SiC).

### The environment surrounding the automobile industry and future technological trends

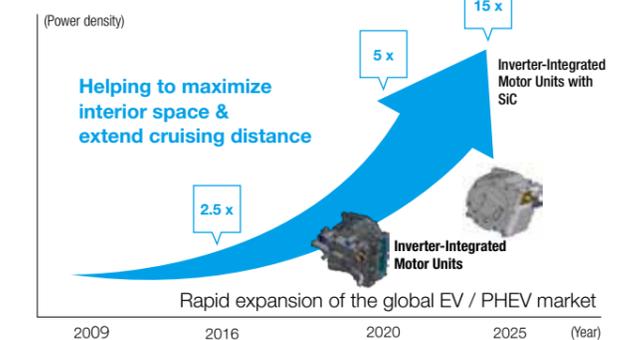
The accelerating shift from gasoline and diesel vehicles to EVs has been labeled a once in a hundred-year upheaval. The tide of electrification of automobiles is rising around the world, such as the future prohibition of sales of gasoline and diesel vehicles in Europe, and China promoting EVs/PHEVs on a national level. From a technological perspective, there have been improvements in battery performance, and we are gradually creating the foundation for the rapidly expanding electric vehicle market.

In this environment, (1) miniaturization, (2) improved output density, and (3) reduced cost are required for future EV drive systems. It is important to work towards miniaturizing and lightening components and minimizing loss in order to extend the range per charge. Furthermore, because the cost of electric vehicles is higher than gasoline-powered vehicles, the national government is providing subsidies. In order to make the cost of electric vehicles on par with gasoline-powered vehicles, it is necessary to work to reduce the cost of EV drive systems.

Market size prediction for motor inverters for EV drive system (EV and PHEV)



Future technological developments (increasing power density)



# Once in a hundred-year automobile revolution

Aiming to transform into an engineering manufacturer for the EV age



## What testing systems are required in the electric and digital age?

The automobile is undergoing a once in a hundred-year upheaval, and we are increasing investment in next-generation technology with a focus on CASE<sup>\*1</sup>, in medium to long-term preparation for the electric and digital age. With this in mind, research and development initiatives are also necessary for testing equipment, in order to respond to new needs.

The first of these initiatives is “model-based development.” Model-based development is a method that shortens development lead time and increases efficiency by conducting development through simulations, without manufacturing actual prototypes if possible. The second is “improving the performance of high-speed dynamometers, battery simulators that mimic batteries, and testing equipment for electric vehicles, such as charge-discharge devices to evaluate batteries, etc.,” as electrification accelerates. The third is “enhancing engineering capabilities.”

Speed is becoming even more important in order to respond to an environment in which these kinds of technology and products are becoming more widespread and complex. Therefore, we will enhance our business partnership strategy, which includes companies in the same industry as well as those in other industries.

<sup>\*1</sup> CASE: Connected Autonomous Shared Electric

## Creating new value through the merger of products and testing equipment

Meidensha is the only company in the world that has both a product business and testing equipment system business for EV/ PHEV motors and inverters, making us a pioneer in the field. Medium-term Management Plan 2020 designates automobile-related businesses as growth businesses, and aims to ensure the expansion of both businesses by proactively investing resources.

In the future, the global market for automobile electrification is expected to grow rapidly, and Meidensha considers automobile electrification to be important for global environmental conservation, safety measures such as reducing road deaths to zero, and solving social issues to achieve a mobile society where all people can move freely.

The history of EV/PHEV-related testing devices is approximately 10 years. In 2009, sales commenced for the EV and HEV testing system EVREVO. In 2011, Meidensha installed an anechoic chamber and a dynamometer system for testing EV drive systems (Numazu Works, Shizuoka), and in 2013, Meidensha added a testing building at Kofu Meidensha Electric Mfg. Co., Ltd.

In addition, in 2011, Meidensha announced testing technology that used the Mitsubishi Motors i-MiEV (joint announcement with Ono Sokki Co., Ltd. at the Society of Automotive Engineers of Japan, Inc.), and we are working on measurement and testing of sound and vibration, etc., to

further improve the quality of motor and inverter products for EVs and PHEVs.

In 2018, Meidensha delivered EV testing systems that can test whether electric vehicles and environmental automobiles that have undergone the WLTP<sup>\*2</sup> for the Japan Automobile Research Institute meet environmental standards. Going forward, we aim to expand the scale of our businesses by speeding up research and development at Meidensha’s product businesses and further improving quality and mass-production technology capabilities, through improved performance and enhanced engineering, centered on simulation and analysis.

<sup>\*2</sup> WLTP (Worldwide harmonized Light vehicles Test Procedure): International standard for testing methods to calculate gas emissions and fuel efficiency

## Towards enhanced development of the social infrastructure business and creation of new businesses

The Medium-term Management Plan 2020, designates the overseas business as a growth business, and aims for expansion of the scale of businesses in the fields of railways, electric power companies, and the private sector, in accordance with the growth of the respective markets. Demand for infrastructure such as power plants, railways, water supply, and sewage treatment continues to grow in emerging countries, mainly in Asia, due to population growth and urbanization. In addition, new social demands are appearing, such as heightened environmental awareness around the globe, and accelerated innovation due to new technologies such as the IoT and AI technology.

In response to this situation, Meidensha is accelerating implementation of its global strategies to strengthen partnerships with its subsidiaries based in 13 countries around the world and local companies in Southeast Asia, to participate in urban transit projects and high speed rail projects which are rapidly increasing, and to enter new markets and new businesses.

We will introduce these strategies below, along with our fiscal 2017 results.

### Policies by region

- Strengthen expansion of social infrastructure businesses, taking advantage of increased demand for infrastructure due to population increase and urbanization, etc., in emerging countries, particularly in Southeast Asia.
- Create new businesses that address new social trends such as heightened environmental awareness around the globe, and accelerated innovation due to new technologies such as the IoT and AI technology.

**India:**  
**High economic growth**

Strengthen the business expansion of PRIME MEIDEN LIMITED. by responding to vigorous infrastructure investment against a backdrop of high economic growth.

**China:**  
**Stable growth of an enormous market**

Expand the industrial systems business, by responding to demand for electrification and labor-saving solutions.

**North America:**  
**Environment and innovation**

Acquire environmental and cutting-edge technologies and create new business fields.

**ASEAN:**  
**Advancing population growth and urbanization**

Strengthen the social infrastructure business focusing on electric power and railways by responding to increasing demand for infrastructure due to advancing urbanization.

### Development of new businesses

#### Establishment of the Silicon Valley Office

In August 2017, Meidensha established the Silicon Valley Office in San Jose, California, as a business site for its subsidiary, MEIDEN AMERICA INC., in order to expand its business in the North American market. To date, MEIDEN AMERICA INC. has mainly been selling dynamometer systems for automobile-related companies, semiconductor-related products such as vacuum capacitors, and ceramic membranes for water supply, wastewater, and

industrial wastewater treatment, etc., primarily in Michigan. By establishing an office in the Silicon Valley region, where there are many semiconductor-related customers, many leading companies, universities, and research institutes from around the world, Meidensha aims to collect cutting-edge information about rapidly advancing ICT and environmental technology, etc., and create new business models based on its unique social infrastructure technology developed over many years.

### Strengthening partnerships

#### First delivery of a 400kV transformer to an Indian state power company



In July 2017, PRIME MEIDEN LIMITED., a transformer manufacturer and engineering company, delivered a 400kV 315MVA transformer to India's Transmission Corporation of Andhra Pradesh Limited (APTRANSCO).

This product is the highest voltage transformer manufactured by the Meiden Group. Meidensha expects further business expansion into the Indian electric power market.

PRIME MEIDEN LIMITED., which had previously focused on the production of medium-size transformers, has shifted toward the production of large-size 400kV transformers to expand business in India, where demand for substations is expected to increase rapidly. The 400kV transformer for APTRANSCO represents the first supply to a state-owned power company for PRIME MEIDEN LIMITED. and the second supply of large-size transformers in India, following a 270MVA transformer that had been supplied to a power generating company in March 2017, which has opened the way for further orders of ultra-high voltage transformers.

Currently, major international as well as local manufacturers are dominating the global transformer market. Meanwhile,

Meidensha has increased its share capital in PRIME MEIDEN LIMITED. and taken over the control of the company to make the best use of the company's geographical advantage and accelerate its business expansion. Meidensha expects sustainable growth in the substation business in India as well as potential opportunities for export to Africa and ASEAN countries through the Meiden Group's network.



### Executing large-scale overseas railway projects

#### Orders received for power supply systems for Singapore's MRT\* North-South and East-West lines



In February 2018, MEIDEN SINGAPORE PTE. LTD., a Singapore subsidiary of Meidensha, received an order for power supply systems for Singapore's MRT North-South and East-West lines from Singapore's Land Transport Authority.

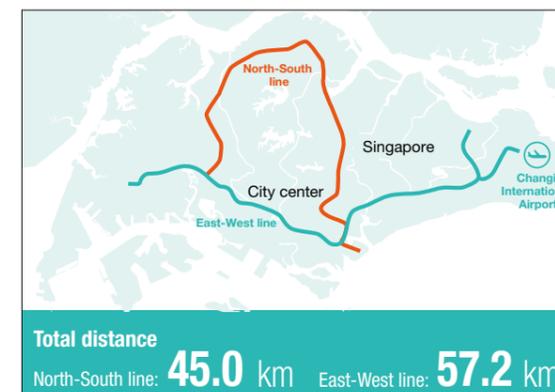
The MRT North-South and East-West lines are extensions of the first urban railway opened in Singapore. Since Meidensha supplied the power supply system for the line opened in 1987, the company has been renewing feeding substations to deal with increasing train traffic. This time, MEIDEN SINGAPORE PTE. LTD. received a package contract for electrical system design, supply of equipment (feeding transformers, railway distribution panels, AC circuit breakers, surge arresters, etc.), renovation of existing equipment, and on-site installation and testing, for the 75 existing substations on the MRT North-South and East-West lines.

Since the initial construction was completed in 1988, the MRT has progressively been extended, and it has become an important means of transport for residents, connecting

downtown residential areas, industrial areas, and the airport, from north to south, east to west. The Meiden Group has continuously been conducting maintenance and replacement for the North-South line and the East-West line since the MRT commenced operation.

Just like thirty years or so ago, there was fierce competition for this project from other bidders from Europe, the US, etc. However, MEIDEN SINGAPORE PTE. LTD. received the order due to the Meiden Group's highly-evaluated track-record and engineering capabilities. The Meiden Group has delivered electrical power equipment for many projects both in Japan and overseas. We will leverage our track-record and knowhow accumulated over many years to respond to the growing demand for railway infrastructure, particularly in the ASEAN region, and contribute to the growth and development of various countries and regions by providing safe and reliable equipment and facilities.

\* MRT: Mass Rapid Transit



# Enhancing profitability through increased productivity and changes to the business model

## Social infrastructure businesses

### Enhancing product competitiveness through a new production strategy

Designing and manufacturing products efficiently is important to solidify the market dominance of our social infrastructure business, which mainly undertakes production of order-made products.

Under the Medium-term Management Plan 2020, the Meiden Group aims to conduct capital investment for increases in business scale and production, improve production efficiency, such as by automating production and automating inspection processes for mass produced products, and thereby increase profitability. We will now showcase enhancements to product competitiveness through production strategies such as smart factories that utilize IoT and AI technology and automation of design.

#### Aiming for enhanced product competitiveness through the introduction of the IoT to create smart factories

Meiden Plant Systems Corporation aims to reduce estimate costs by 50% by the end of 2020, through greatly reduced lead times and increased production due to revisions to production mechanisms, through improvement and transparency of production processes, such as through utilization of the IoT.

**Target:**  
 Estimate costs  
**50% reduction**

Although Meiden Plant Systems Corporation carries the Meiden brand, it is responsible for the manufacture and sale of low-cost high and low voltage control boards. In terms of improvements to production processes through the introduction of the IoT, we have increased efficiency by discovering and eliminating unnecessary tasks by introducing a real-time positional detection system that is capable of checking flow and work status by fitting ID tags to workers' helmets and products. Through this system, we have achieved improved work efficiency by increasing transparency of the history of workers and conducting improvements, by applying the system to component defects, design flaws, and tasks other than assembly, to which distribution of parts cannot keep up. We have achieved distribution on a paperless basis for each engineering code and each level, and thereby increased work efficiency, through the introduction of distribution trolleys, kit boxes, and parts distribution tablets on a per engineering code basis.



ID tag inside a worker's helmet

Other than the introduction of the IoT, we are conducting improvements such as by changing factory layout with awareness of the workflow of the manufacture of a single switchboard and the introduction



Display of work conditions

of a *mizusumashi* (fixed-course pick-up) system, and creating transparency of work progress by changing assembly from the batch method to the cell method. Our target is to reduce the amount of time it takes to complete each product by 40% through these process improvements, including the introduction of the IoT. Going forward, we plan to successively convert our 8 main domestic factories to smart factories.



Introduction of a *mizusumashi* system

**Target:**  
 Time to completion of product  
**40% reduction**

#### Optimization of the supply chain through creation of a design database

Meidensha is greatly improving efficiency of design tasks and optimizing the supply chain by centrally managing and creating a database of design information that is exchanged in vast quantities during the production process.

Until now, correspondence between design and manufacturing staff has mainly occurred by paper; however it is now possible to conduct digital correspondence through centralized management and creation of a database for design information. Furthermore, by creating a master of each component, linking those masters with design information, and centrally managing them, it is possible to reduce costs through bulk purchase of components, stay on top of the status of insufficient components such as if procurement of components is difficult due to a disaster, and consider replacements. Going forward, we will utilize product lifecycle management, which utilizes design databases even more effectively (utilization for operation and maintenance), as well as AI technology, to create design assistance mechanisms. We will also implement new design methods such as modular design, standardized design, automated design (design that follows patterns and rules), and cellular design.

## Maintenance and servicing business

### Expanding the business to include facility management to meet the needs of customers

As the environment undergoes dramatic changes, such as labor shortages as the working population declines, the aging workforce, and difficulties for local governments to implement fiscal policies, there are many private factories that are 30 to 40 years old, and dilapidation of facilities is becoming a more pressing issue. However, in the public sphere, inter-municipal projects and municipal amalgamation are increasing, and there is a trend to outsource maintenance, inspection, operation, and management to private companies as a package.

We provide preventative maintenance services that utilize sophisticated diagnostic technology that incorporated IoT and AI technology and labor-saving, low-cost operation in response to our customers' needs such as "wanting to use equipment for as long as possible," "wanting to manage symptoms and remaining life to prevent issues from occurring," and "wanting to know optimal operation conditions and operate equipment in an energy-efficient manner." Going forward, we aim to further enhance our one-stop service centered on lifecycle engineering, and expand the business to include facility management.

#### Improvement of maintenance utilizing AR (augmented reality)

In order to achieve efficient maintenance, we aim to increase efficiency and ensure accuracy through the introduction of AR. AR is mostly used in the three areas of "daily inspections," "periodic inspections," and "emergencies." By overlaying inspection locations, inspection history, and work procedures, etc., on an image of the equipment on a tablet, maintenance can easily be conducted by a worker who is not a specialist in the relevant equipment or by an inexperienced worker. In an emergency, it is expected that increasing accuracy and efficiency, such as by communicating with a remote maintenance specialist and sharing information written on the tablet screen, will lead to quick restoration of function.



**Daily inspections:**  
 An arrow indicates the locations to inspect



**Periodic inspections:**  
 Dismantling procedures are shown with a 3D animation



**Emergencies:**  
 The screen is shared with a remote maintenance specialist

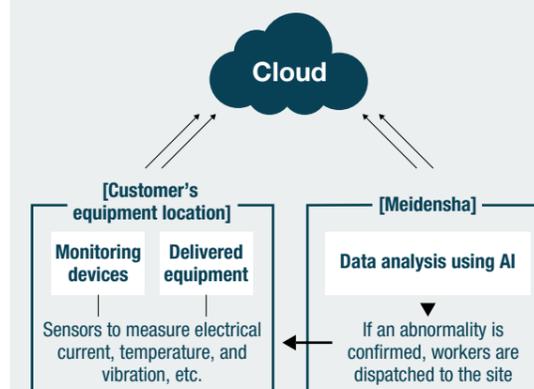
#### Prediction of failures through remote monitoring and diagnostics of the equipment location through the IoT and AI

By sending data from existing monitoring devices installed by Meidensha and sensors affixed to equipment to Meidensha's cloud system, and gathering and analyzing that data, we are developing failure prediction technology to prevent emergency shutdowns of equipment.

We aim to visualize the status of the customer's equipment, run diagnostics on operational efficiency and failure risk, improve equipment availability, and reduce maintenance costs, etc., by collecting multiple forms of data in the cloud, such as electrical current, temperature, and vibration data collected by sensors, and analyzing it using AI. Furthermore, if we are able to understand past failures and abnormalities, we expect to be able to quickly dispatch maintenance staff to the site to minimize the impact of any abnormality.

As the number of veteran engineers declines, it is essential to rapidly establish high-precision equipment diagnostic technology. Going forward, we aim to proceed with the introduction of remote monitoring and diagnostic services for local governments, reduce costs and labor, create transparency of energy usage, and provide optimal solutions.

#### Diagram of Meidensha's remote monitoring and diagnostic services



# ESG

## ESG at the Meiden Group

ESG initiatives are the foundation of sustained growth at the Meiden Group and the very embodiment of the Meiden Group Corporate Philosophy.

### The Meiden Group's Approach to Strengthening ESG

The Meiden Group Corporate Philosophy is as follows: "We seek to delight customers by offering high quality products and services to help solve their problems. Through these business activities, we aim to fulfill our corporate social responsibility (CSR) by proactively solving global environmental problems and other social issues and helping achieve a more affluent future. We must continually tackle these challenges."

The President's CSR Policy Statement sets out three key issues for the Meiden Group to address: environment, society, and human assets (resources). By taking on these three key issues, with initiatives built on the fundamental management

elements of "compliance," "corporate governance," and "risk management," we ensure our sustained growth and offer value to society through our business.

By carrying out the President's CSR Policy Statement, we help solve social issues and achieve a more prosperous future.

### Reasons Why ESG Initiatives Increase Corporate Value

Increased corporate value leads to sustained growth and is a positive thing for all stakeholders. Employees are treated better and thus more satisfied, while other outcomes are good relations with business partners, greater customer satisfaction, and returns to our shareholders and investors.

- Increase in sales and profits / Reduction in costs
- Creation of business opportunities
- Business risk avoidance and reduction
- Strengthening trust in stakeholder relationships / brand image improvement
- Increase employee loyalty / Build up technology, experience and expertise

### Relevance of Meiden Group Business Activities to the SDGs

At the UN Sustainable Development Summit in 2015, the world adopted common goals known as the Sustainable Development Goals (SDGs). The SDGs are challenges the international community is addressing over the 15 years from 2016 to 2030.

The targets of the SDGs are very compatible with the President's CSR Policy Statement and business activities of the Meiden Group. They include many areas where we can contribute to a solution with technologies and expertise we have cultivated over the years. Thus, to really learn and take advantage of the opportunities and challenges presented by the SDGs, we laid out the effects that our business activities have on the environment and society. This process considered the entire value chain and issues specific to the countries where we do business. It even included any negative impacts of our business activities.

The Meiden Group will continue to pursue manufacturing excellence that benefits society, create value, and help solve social issues that include those addressed by the SDGs.

Goal	Relevance	Major business activities contributing to solution
	★	<ul style="list-style-type: none"> <li>Transformer business and railway system business in Southeast Asia (Thailand, Indonesia, etc.): Through these businesses, we contribute to the development of the rail and transformer industries, increase access to railroads for the impoverished, and help build resilience</li> </ul>
	★★★★	<ul style="list-style-type: none"> <li>Workplace safety and health: We actively work to prevent workplace accidents and harm to health, for example by offering hands-on safety experience training (to increase sensitivity to hazards) using VR technology within and beyond the Group</li> <li>Electric power/energy: We contribute to electric power supply stability with, for example, cogeneration systems for medical facilities</li> </ul>
	★★	<ul style="list-style-type: none"> <li>By donating school facilities (Thailand) and endowing courses (Thailand and India), we help create educational opportunities for young people</li> <li>We hold "manufacturing workshops" and science teaching sessions and support education with internships for university and technical college students</li> </ul>
	★★★★	<ul style="list-style-type: none"> <li>We create positive working environments by considering human rights and labor (including practicing fair employment, honoring diversity, and giving training on human rights and diversity)</li> </ul>
	★★★★	<ul style="list-style-type: none"> <li>We contribute to safe water supplies by providing one-stop service for water supply and wastewater infrastructure, from equipment manufacturing to maintenance, inspection, maintenance management, and operation management. Specific examples include the substation equipment and monitoring and control systems essential to water supply and wastewater infrastructure, cloud services to support operation management, and flat-sheet ceramic membranes with outstanding filtering performance</li> </ul>
	★★★★	<ul style="list-style-type: none"> <li>We help build a carbon-free society by manufacturing, selling, and supplying power generation systems for renewable energy sources like solar power and small-to-medium size hydro power</li> <li>We contribute to the electrification of automobiles by manufacturing and selling motors and inverters for electric forklifts, PHEVs, and EVs</li> </ul>
	★★★★	<ul style="list-style-type: none"> <li>We practice work style reform and make work more efficient by implementing RPA*</li> </ul>
	★★	<ul style="list-style-type: none"> <li>We help achieve leading-edge technology and contribute to the development of a prosperous society through technological innovation in semiconductor and FPD manufacturing equipment components (vacuum capacitors, industrial controllers, pulse power supplies, etc.)</li> <li>We contribute to technological innovation in the automobile industry with our industry-academic-government partnerships, by developing and selling test devices for automobile research institutes, universities, and manufacturers of automobiles and auto components</li> </ul>

Goal	Relevance	Major business activities contributing to solution
	★★★	<ul style="list-style-type: none"> <li>We appoint local staff to management positions at overseas affiliates</li> </ul>
	★★★★	<ul style="list-style-type: none"> <li>We prevent equipment breakdown by diagnosing the early signs of irregularities in large motors, generators, transformers, and switchgears and make optimal equipment upgrades</li> <li>We help make communities resilient to disaster with mobile power supply cars, building power generators, and other emergency power generation equipment</li> </ul>
	★★★★	<ul style="list-style-type: none"> <li>We promote eco-friendly design by making products smaller and more efficient, controlling chemical content, practicing life cycle assessment (LCA), etc.</li> <li>We provide 24-hour support of customer equipment operation (troubleshooting, responding to inquiries, remote monitoring service)</li> </ul>
	★★★	<ul style="list-style-type: none"> <li>We provide eco-friendly products and services and contribute to reducing GHG emissions</li> <li>We help build disaster prevention platforms for local governments and support disaster prevention through our urban flooding monitoring service (flash flood countermeasures using manhole antennas)</li> </ul>
	★★	<ul style="list-style-type: none"> <li>Water treatment systems: We provide clean water with our water treatment plants and prevent water pollution with our wastewater treatment plants</li> </ul>
	★	<ul style="list-style-type: none"> <li>We reduce the use of printing paper and ink by implementing managed print services (e.g., increasing the number of multi-function printers)</li> </ul>
	★★	<ul style="list-style-type: none"> <li>We communicate the principles of CSR (including prohibitions on child labor, corruption, bribery, and other acts) and the Meiden Group's CSR approach to our business partners and conduct supplier evaluations</li> </ul>
	★★	<ul style="list-style-type: none"> <li>We promote partnerships with local businesses in Southeast Asia (transformer business, switchgear business, etc.)</li> <li>We provide sustained water supply service that is both good and inexpensive through public-private partnerships</li> </ul>

\* RPA (robotic process automation): The use of robots to make work more efficient. Programming robots to do white color work and other tasks that humans have always done helps to automate typical, repetitive tasks. By teaching robots a set of rules, it is possible for them to do work that includes decision-making based on certain standards. Software robots are being used to automate typical PC operation without changing existing systems.

# E NVIRONMENT

## Environment

### Initiatives to Enhance Corporate Value

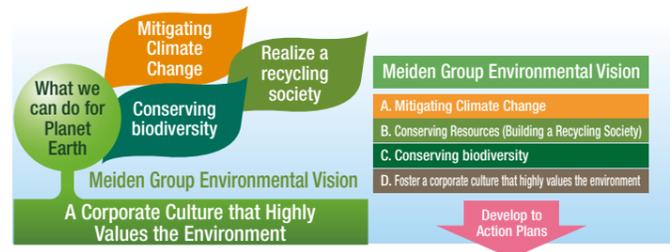
Major aspects of corporate value enhanced	Increase in sales and profits / Reduction in costs	Creation of business opportunities	Business risk avoidance and reduction	Strengthening trust in stakeholder relationships / brand image improvement	Increase employee loyalty / Build up technology, experience and expertise
Expansion of products' contribution to the environment		●		●	●
Reduction in the environmental impact of business operations	●		●	●	●
Promotion of environmental management	●		●	●	●
Improvement of employees' environmental awareness	●		●	●	●

### Environmental Vision

As a medium-term guideline to assist us in advancing environmental management, the Meiden Group has formulated an Environmental Vision that indicates the stance that we should adopt and the appropriate direction for our environmental activities. We seek to contribute to the realization of a sustainable society by means of the reduction of the environmental impact resulting from our business activities and the deployment of the businesses, products and technologies that we have developed to date in the fields of energy and water treatment to support social infrastructure.

Our Environmental Vision identifies the mitigation of climate change, the building of a recycling society, and the conservation of biodiversity as the missions of a 21st century company, and establishes targets for how we should perform in our business activities and what we should aim for in our products. We work to implement environmental management with a corporate culture that highly values the environment as the foundation that helps us to achieve these targets.

### Deployment of Action Plans



### Medium-term Management Plan 2020, an Action Plan for Fiscal 2018–Fiscal 2020

Strategic Targets	Actions	Corresponding "Environmental Vision"
1. Contribute to environment through products and services	1) Expand businesses that contribute to the environment	A. Mitigating Climate Change
	2) Promote environmentally conscious design	
	3) Manage chemicals in products	
2. Reduce the environmental impact of business operations	1) Reduce greenhouse gas emissions	B. Realize a recycling society
	2) Manage chemicals properly	
	3) Promote the 3Rs (reduce, reuse, recycle)	C. Conserve biodiversity
	4) Maintain water resources	
	5) Maintain biodiversity	
3. Promote environmental communication	1) Disclose information, conduct PR	D. Foster a corporate culture that highly values the environment
	2) Contribute to sustainable society	
4. Improve employees' environmental awareness	1) Strengthen management of Meiden Group companies	
	2) Strengthen value chain management	
5. Reform environmental awareness	1) Develop environmental management personnel	
	2) Conduct environmental training and awareness raising	

### Targets that Express Our Environmental Vision

#### A. Mitigating Climate Change

- Contribute to the reduction of CO<sub>2</sub> emissions through the sale of energy-related products and systems (i.e., products for renewable energy resources, etc.)
- Promote environmentally conscious product design and reduce CO<sub>2</sub> emissions in the product life cycle.
- Reduce CO<sub>2</sub> emissions in our production activities.

#### B. Conserving Resources (Building a Recycling Society)

- Promote the 3Rs (Reduce, Reuse and Recycle) of waste materials in the various stages of the product life cycle.
- Promote zero emissions of waste products from our production activities.

#### C. Conserving biodiversity

- Contribute to securing water resources through our water processing systems business.
- Conduct risk management on chemical materials and promote the reduction of very risky hazardous chemical materials, as well as initiatives to find alternative materials on a basis to reduce or replace harmful chemicals.

#### D. Foster a corporate culture that highly values the environment

- Promote environmental communication: Actively disclose our environmental activities and results and promote two-way communication with our stakeholders.
- Foster environmental awareness: For mitigating Climate Change, increase environmental literacy to promote environmentally conscious R&D and product development and cultivate the Group's individuals who actively perform local community and social contribution programs by acting on their own initiative.

### Strategic Environmental Management

#### Fiscal 2018 Environmental Targets (Japan)

Strategic Targets	Actions	Fiscal 2018 Environmental Targets (Japan)
Contribute to environment through products and services	Promote environmentally conscious design	Contribute a 800,000 t/year reduction in CO <sub>2</sub> emissions by ECBS
		Increase percentage of Green Products (as measured by Meidensha's standards)
Reduce the environmental impact of business operations	Reduce greenhouse gas emissions	Total emissions (Scope 1+2): -1% (compared to FY2017)
	Manage chemicals properly	VOC emissions: 80 tons or less
	Promote the 3Rs	Total wastes: -1% (compared to FY2017) Zero emissions*1 at 9 sites*2
	Maintain water resources	Measure and analyze water data: 4 main manufacturing sites*3
	Maintain biodiversity	Survey of ecosystems (plants, etc.): 4 main manufacturing sites*3
Promote environmental management	Strengthen value chain management	Green procurement rate (as measured by Meidensha's standards): 80% or greater

\*1 Meiden Group definition of zero emissions: To achieve a non-recycling rate of less than 1.0% of the total volume of waste (including industrial waste, general waste, and saleable waste, but excluding construction sludge, etc.).

\*2 Scope of zero emissions initiatives: manufacturing sites in Japan (Numazu Works, Ohta Works, Nagoya Works, Kofu Meidensha Electric Mfg. Co., Ltd., Meiden Chemical Co., Ltd. (Sagami Works), Hokuto Denko Corporation (Atsugi Works)), Engineering Service Business Units and Construction Service Business Units

\*3 Main four manufacturing sites: Numazu Works, Ohta Works, Nagoya Works, and Kofu Meidensha Electric Mfg. Co., Ltd.

### Risk Management

The Meiden Group has appointed a Group-Wide Risk Management Committee (RMC) to respond cross-organizationally to risks to the survival of our businesses. Working through the RMC, the Meiden Group Environmental Committee collaborates with various other committees concerned with compliance, security trade control, information security, quality, product technology, safety and health, pandemics, and more.

The Meiden Group identifies environment-related risks and opportunities and implements a variety of initiatives.

#### Responding to Environmental Risks and Opportunities

Phenomena (issues) related to environment	Risks	Opportunities	Carrying out initiatives	
Government (political) Laws and Regulations	<ul style="list-style-type: none"> <li>Revision of Feed-in Tariff Scheme for Renewable Energy</li> <li>Deregulation of electric power industry, revision of power supply structure</li> <li>Flow of processes to implement carbon pricing</li> <li>Energy conservation regulations &amp; standards (business operations, products)</li> <li>Stronger regulations on hazardous chemical substances</li> </ul>	<ul style="list-style-type: none"> <li>Short-term cost increases                             <ul style="list-style-type: none"> <li>Rising cost of energy increases our costs (procurement, shipping, manufacturing, scrapping, etc.) directly and indirectly.</li> </ul> </li> <li>Decline of product competitiveness                             <ul style="list-style-type: none"> <li>It will get harder to sell products that do not meet environmental regulations and standards.</li> <li>We will lose share if we cannot meet the needs of a market looking for environmentally conscious products.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Growth of new markets                             <ul style="list-style-type: none"> <li>Markets for products and services related to renewable energy and energy conservation are growing.</li> </ul> </li> <li>Differentiation with environmentally conscious products                             <ul style="list-style-type: none"> <li>Being among the first to bring products that meet regulations, etc., to market and offering low-environmental impact products and services make us more competitive.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Expand products' contribution to the environment                             <ul style="list-style-type: none"> <li>Expand sales of products related to renewable energy and energy conservation (wind, hydroelectric, and solar power equipment, EV/PHEV electric equipment, transformers, motors, inverters, etc.)</li> <li>Develop environmentally conscious products, implement new technologies (which are more compact, lightweight, efficient, energy-conserving, etc.)</li> </ul> </li> <li>Reduce the environmental impact of business operations                             <ul style="list-style-type: none"> <li>Promote energy conservation (capital investment, visualization, etc.)</li> <li>Promote the 3Rs, eliminate harmful chemicals</li> <li>Maintain water resources, consider biodiversity</li> </ul> </li> <li>Promote environmental management                             <ul style="list-style-type: none"> <li>Promote business risk management</li> <li>Strengthen value chain management</li> <li>Practice environmental communication (information disclosure, etc.)</li> </ul> </li> <li>Deploy infrastructure-support products during disaster                             <ul style="list-style-type: none"> <li>(emergency power supply equipment, mobile power supply cars, UPSs, remote monitoring systems, etc.)</li> </ul> </li> </ul>
	Economy	<ul style="list-style-type: none"> <li>Expanded ESG investment</li> <li>Price competition (low cost, premium pricing)</li> </ul>	<ul style="list-style-type: none"> <li>Better business performance through environmental management                             <ul style="list-style-type: none"> <li>By running businesses that help solve environmental issues, we can enhance our corporate value and business performance.</li> </ul> </li> <li>Responding to natural disasters                             <ul style="list-style-type: none"> <li>Demand for flood control and disaster prevention and response (e.g., securing the power supply) is rising.</li> </ul> </li> </ul>	
Society	<ul style="list-style-type: none"> <li>Spread of responsibility to entire value chain (upstream and downstream)</li> <li>Improvement of employment / labor conditions</li> </ul>	<ul style="list-style-type: none"> <li>Decline of corporate value                             <ul style="list-style-type: none"> <li>Our image, evaluations (credit ratings, etc.), and share prices will decline if our business is not seen as environmentally conscious.</li> </ul> </li> <li>Increase of local disasters                             <ul style="list-style-type: none"> <li>Flooding and other disasters can stop operations and cut the supply chain.</li> </ul> </li> </ul>		
Technology	<ul style="list-style-type: none"> <li>Enhanced efficiency of electric power conversion</li> <li>Advancement of ICT, IoT technology</li> <li>Development of new energy / alternative energy technology</li> </ul>			
Reputation / Needs	<ul style="list-style-type: none"> <li>Demand for information disclosure (accountability)</li> <li>Lifestyle changes (ecology-oriented)</li> </ul>			
Natural Environment	<ul style="list-style-type: none"> <li>Changes of temperature and precipitation volume</li> <li>Increase of local disasters (sudden downpours, tornadoes, etc.)</li> <li>Ecosystem irregularities (increase of organisms that carry infectious disease)</li> </ul>			

### Fiscal 2017 Initiatives

Following is a summary of how well we achieved our targets for fiscal 2017, the final year under the V120 Medium-term Management Plan.

We are examining further measures based on our target achievement status and will incorporate this information into future plans.

#### Fiscal 2017 Environmental Target Achievement Status (Japan)

Legend: ○ Achieved △ Not achieved (better than previous year) × Not achieved

Strategic Targets	Actions	V120 Targets (Fiscal 2017 Targets)	Fiscal 2017 Results	Achievement
Contribute to environment through products and services	Expand products and businesses that contribute to the environment	Contribute a 800,000 t/year reduction in CO <sub>2</sub> emissions by ECBs	733,000 t/year	×
		Disclose LCA data in each product category	Conduct LCA evaluation	○
Reduce the environmental impact of business operations	Reduce greenhouse gas emissions	Energy consumption per unit of production (against that of fiscal 2014): reduce by 3%	2.0% worse	△
		Total energy consumption (against that of previous fiscal year): reduce by 1%	5.1% reduction	○
		SF <sub>6</sub> emissions (against purchased volume): less than 3%	3.6%	×
	Promote reduction of waste discharge by the 3Rs (Reduce, Reuse, and Recycle)	Zero emissions**1 at 9 sites**2	Achieved at all 9 sites	○
		Waste emissions per unit of production**3 (against that of fiscal 2014): reduce by 8%	Reduced 0.2%	×
Eliminate hazardous chemical substances in products	VOC emissions: 80 tons or less	91.8 tons	×	
Respond to water risks (drought, flooding, pollution, etc.)	Conduct water conservation initiatives: four main manufacturing sites**4	Conducted at all 4 sites	○	
Promote environmental management	Promote value chain management	Support our suppliers to acquire EMS certifications: an accumulated total of 70 companies have acquired certifications	74 suppliers certified cumulatively	○
	Promote maintenance of biodiversity and management of green zones	Manage green zones giving due consideration to biodiversity: at the 4 main manufacturing sites**4	Conducted at all sites	○

\*1 Meiden Group definition of zero emissions: To achieve a non-recycling rate of less than 1.0% of the total volume of waste (including industrial waste, general waste, and saleable waste, but excluding construction sludge, etc.).

\*2 Scope of zero emissions initiatives: manufacturing sites in Japan (Numazu Works, Ohta Works, Nagoya Works, Kofu Meidensha Electric Mfg. Co., Ltd., Meiden Chemical Co., Ltd. (Sagami Works), Hokuto Denko Corporation (Atsugi Works)), Engineering Service Business Units and Construction Service Business Units

\*3 Waste emissions per unit of production is the amount of waste disposed (t) divided by a unit value of production (million yen)

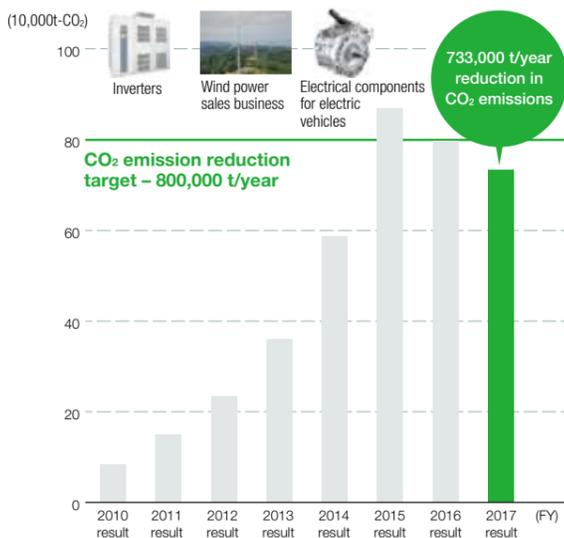
\*4 Main four manufacturing sites: Numazu Works, Ohta Works, Nagoya Works, and Kofu Meidensha Electric Mfg. Co., Ltd.

### Promoting Business that Contributes to the Environment (“Eco-contributing Businesses” (ECBs))

The Meiden Group aims to benefit the environment by using renewable energy like solar, wind and hydroelectric power and by supplying products and services that are more efficient and thus energy saving.

In fiscal 2017, we aimed to provide environmental contribution (the expected curbing effect of CO<sub>2</sub> emissions from products sold) of about 800,000 t/year. However, emissions were reduced by 733,000 t/year of CO<sub>2</sub>, in part because shipments of products like solar power conditioners and hydroelectric power equipment were not as great as planned.

#### Reducing CO<sub>2</sub> Emissions Caused by Products



### Development of Environmentally Conscious Products

Any time we develop a new product, we evaluate it for energy and resource conservation, recyclability, environmental safety, and more as based on our Product Environmental Assessment Standard. If a product meets those standards, we certify it as a Meiden Green Product.

#### A Meiden Green Product registered in fiscal 2017

Product: **THYFREC VT350 high-function general industrial inverter**

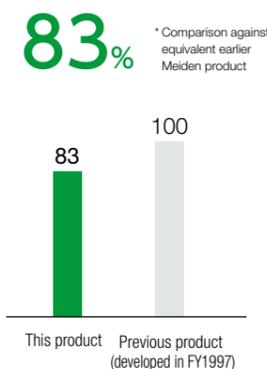
This industrial inverter is used on steel manufacturing lines and the like. It has enhanced vector control and the flexibility to work with a variety of system configurations.

Following are features of this product, with comparisons to an earlier Meiden product, the THYFREC VT310.

- Main circuit power modules and control system revised, reducing energy consumption 25% (compared at 80 kVA capacity)
- Meets RoHS Directive



#### Life Cycle CO<sub>2</sub> Emissions



### Overview of Environmental Impacts by Our Business Activities (Fiscal 2017)

Our rate of use of major resources (INPUT) and our environmental impacts from our business activities (OUTPUT) are shown below.

#### INPUT

	Energy		Water		Chemical substances		Greenhouse gases							
	Japan	Overseas	Japan	Overseas	Japan	Overseas	Japan	Overseas						
Electricity	52,528	12,045	MWh	57	38	1,000m <sup>3</sup>	VOC	425	48	t	SF <sub>6</sub>	20,953	10,450	kg
Fuel oil	1,265	156	kL	78	15	1,000m <sup>3</sup>								
Fuel gas	2,746	134	1,000m <sup>3</sup>	1,068	-	1,000m <sup>3</sup>								
Heat	3,589	-	GJ											

Meiden Group

#### OUTPUT

	Release to air		Release into public water area		Wastes		Transportation								
	Japan	Overseas	Japan	Overseas	Japan	Overseas	Japan	Overseas							
CO <sub>2</sub> (energy)	34,669	8,344	t-CO <sub>2</sub>	Wastewater	1,914	53	1,000m <sup>3</sup>	Amount not recycled	61	159	t	Product weight	50,003	47,321	t
CO <sub>2</sub> (automobile fuel)	1,977	778	t-CO <sub>2</sub>	BOD	6,404	-	kg	Amount recycled	7,069	1,706	t	CO <sub>2</sub> release by transportation	2,027	1,900	t-CO <sub>2</sub>
VOC	92	48	t					Construction sludge	65	-	t				
SF <sub>6</sub>	759	167	kg												
SOx	0.3	-	t												
NOx	5.8	-	t												

### Climate Change Countermeasures

#### Medium- to Long-Term Environmental Targets at the Meiden Group

The Meiden Group seeks to reduce GHG emissions from our business activities by 30% (compared to fiscal 2017) by fiscal 2030. We are starting by aiming for a 4% reduction by fiscal 2020 under the Medium-term Management Plan 2020, and will reconsider our targets periodically going forward.

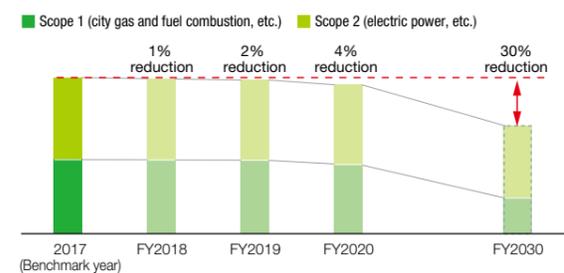
We chose this target taking account of the Paris Agreement\*1 and its Science Based Targets (SBT) of 2°C.\*2 We work with stakeholders in the Meiden Group's supply chain, including customers and business partners, to set common objectives for the challenges we share.

Under the Medium-term Management Plan 2020, our targets for fiscal 2018, fiscal 2019, and fiscal 2020 are reductions of 1%, 2%, and 4%, respectively (compared to emissions in Japan in fiscal 2017). These steps were decided to help us achieve our aims for 2030.

\*1 Paris Agreement: A new framework for tackling global warming from 2020, adopted by the 21st Conference of the Parties (COP21) to the UN Framework Convention on Climate Change.

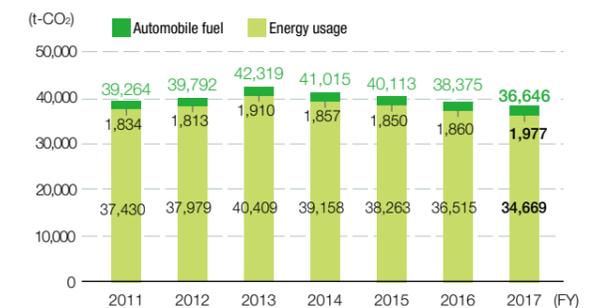
\*2 2°C target: The target of keeping the increase in average temperatures to within 2°C of what they were before the Industrial Revolution.

#### Amount of GHG emissions from business activities



To address emissions stemming from energy consumption, we are working thoroughly to conserve energy through production streamlining, capital investments, etc., and converting to renewable energy. In addition, we are practicing strict control and making technological innovations to address direct emissions of GHGs like SF<sub>6</sub> gas.

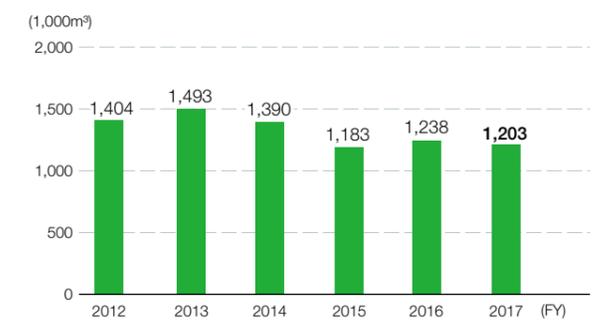
#### Trends in CO<sub>2</sub> Emissions (Japan)



\* The electric power CO<sub>2</sub> coefficient used was the CO<sub>2</sub> emissions coefficient proposed by the Electric Power Council for a Low Carbon Society. For figures through fiscal 2016, we used the adjusted factor for each fiscal year; for fiscal 2017, we used the adjusted fiscal 2016 factor.

### Reducing Water Consumption

We are concerned about the possibility of water leaks from buried water supply pipes and wells on factory grounds as our facilities age. We are systematically updating pipes and placing more pipes above ground for easy maintenance and inspections.



## Human Resources Management

### Initiatives to Enhance Corporate Value

Major aspects of corporate value enhanced Initiatives	Increase in sales and profits / Reduction in costs	Creation of business opportunities	Business risk avoidance and reduction	Strengthening trust in stakeholder relationships / brand image improvement	Increase employee loyalty / Build up technology, experience and expertise
Promoting diversity management	●	●		●	●
Work style reform	●		●	●	●
HR development	●	●		●	●
Occupational safety and health	●		●	●	●

### Basic Approach

As issues facing our customers and society as a whole become increasingly complicated and unclear, it is important to have personnel with the abilities to think flexibly and act courageously, creating the value necessary to solve these issues in order to enhance corporate competitiveness. For this reason, we are determined to achieve sustainable growth by focusing on employing and developing competent personnel and creating an environment where each person can derive pride and fulfillment from their work.

In order for the employees to maximize their abilities, it is important to promote diversity management and create a workplace in which a diverse range of employees can participate with a healthy mind and body. Specifically, by engaging as a group in initiatives such as achieving a work-life balance, and improving occupational health and safety, we will enhance the corporate value for the entire group.

### Promotion of Respect for Human Rights

Based on a fair and just employment system, we are creating workplaces that are conducive to work, and where each of the Meiden Group's employees showcase their abilities as much as possible.

Furthermore, we are conducting staff education in consideration of "protection of freedom of association and the right to collective bargaining," "prohibition of forced labor," "abolition of child labor," and "elimination of discrimination in respect of employment and occupation," which are among the ILO's\* core labor standards.

\* ILO (International Labor Organization): A UN organization that gives recommendations and guidance to national governments with regard to improving labor conditions and social welfare.

### Promoting Diversity Management

#### Diversity vision

**A company that continues to innovate by gathering the experiences, ideas, and individuality of diverse personnel with different attributes for "a more prosperous tomorrow" and "for customer peace of mind and satisfaction"**

In order to fulfill our business strategy, we will promote diversity as a contribution to the attainment of the Group's business strategy and the improvement of corporate competitiveness through the optimal allocation of human resources and the operation of various systems that leverage the individuality inherent in diversity.

<b>Basic Policy</b>	Removing bias towards organizations and people with differences, and granting equal opportunities for personnel to challenge themselves rather than giving preferential treatment
<b>Aims</b>	<ol style="list-style-type: none"> <li>① We aim to be a company that allows contributions from diverse personnel</li> <li>② We aim to be a company that evaluates people based on ability rather than personal attributes</li> <li>③ We aim for a group of people that will overcome global competition</li> </ol>

#### Three reasons to promote diversity

There are three reasons why the Meiden Group promotes diversity. The first is to "accelerate the implementation of global management." As global competition increases, there are increasing opportunities for technological collaborations with other companies, foreign and domestic, as well as working with people who have different viewpoints or abilities. Diverse abilities and viewpoints must be integrated for increased corporate performance, and the Meiden Group must perform at its best in order to compete in the global market.

The second is a "declining working population." It is said that the working age population (ages 15 to 64) will drop to approximately 50% (45.95 million people) by 2055 due to the declining birth rate and aging population. We must allow

contributions from women, the elderly, and foreigners, rather than focusing on male Japanese employees as we have done in the past. In order to do this, we must create a workplace environment by introducing a new personnel system and changing the workplace culture, so that all employees can utilize their abilities.

The third is the "diversifying customer base and consumer market." In the heavy electrical equipment industry, there is an increasing number of overseas customers, and a contraction of infrastructure in the Japanese market, so both customers and markets are changing significantly from those in the past. In order to achieve further growth in the global market, we must provide services that meet the needs of customers and create new values; we believe that promoting diversity is essential to this end.

### Promotion of opportunities for and participation by female personnel

We have systems in place, such as "expansion of taking accumulated leave in half-day or quarter-day increments," "expansion of people eligible for childcare leave," "expansion of the infertility treatment leave system," and "establishment of the system of shortened work hours for infertility treatment" in order to achieve an environment where diverse workers such as those who require childcare, nursing care, or infertility treatment, irrespective of gender, can choose from a number of work styles according to their employment needs and life-cycle, etc.

Going forward, we will formulate an action plan in accordance with the intent of the Act on the Promotion of Women's Participation, and promote policies such as the promotion of accessing childcare leave for men and actively hiring and training female technology-related staff.

### Work Style Reform

#### Rolling out "Smart Work V120"

##### - Working towards a reduction in annual total hours worked -

An employee survey showed that many employees have strong opinions concerning matters that relate to long working hours, such as "insufficient number of staff," "consciousness-reform," and "operations review." As such, we have identified the issue of long working hours as a business challenge. With that in mind, during the three-year period of the V120 Medium-term Management Plan (fiscal 2015 to fiscal 2017), we have developed the working hours reduction plan "Smart Work V120," which sets a target of reducing the annual total hours worked in fiscal 2017 to less than 2,000 hours.

Based on the basic policies of Smart Work V120, we are engaged in initiatives to reduce the annual total hours worked, including the improvement of business efficiency through work-style reforms, and increasing the rate of paid leave taken, in addition to promoting and advancing employee health, as well as enhancing the hiring of mid-career staff.

#### Basic policies of "Smart Work V120"

- ① Take the issue of long working hours as a business challenge and address it in all the departments working together
- ② Uncover root causes by understanding the current work operations in the workplace, and then implement specific measures to deal with them
- ③ Reform the mindset by moving away from the thinking, culture, and attitudes of the past, which accepted overtime as a matter of course

Specifically, we conducted a campaign to promote leaving work at the designated time and accessing of paid leave as an awareness raising exercise, we implemented a number of initiatives, such as a company-wide enhancement of management, with the aim of having no workers that work more than 80 hours of overtime per month as a means to manage work hours, and we established the Office for the Promotion of Work Style Reforms in fiscal 2017 to further promote reforms.

Also, in order to reward employees' successes and efforts under Smart Work V120, we used the funding to reduce overtime to provide smart work bonuses, which were added to the 2018 first half bonuses to increase employee motivation.

Under the new medium-term management plan, we will enhance initiatives aimed at production efficiency, such as increasing business efficiency through RPA (Robotic Process Automation), etc., and revising production processes, under the banner of "Smart Work 2020."

### HR Development

We implement many training programs to encourage employee growth in different aspects as employees, members of society, and professionals.

In fiscal 2017, we enhanced technical education by adding upskilling training and training to develop leaders among technicians to the product foundational technology training that was already in place, in order for employees to acquire even deeper knowledge about products. Furthermore, we held voluntary training sessions, which were attended by 114 employees, with the themes of problem solving and strategy implementation. We offer a full range of training to support employee development where each employee directs their own learning. We train personnel to be able to implement and promote our business strategy.

#### Data concerning professional development

Item	FY2016	FY2017
Total education and training expenses*	84,108 thousand yen	92,473 thousand yen

\* Excludes personnel expenses for trainers and operational expenses for training facilities.

### Occupational Safety and Health

The Meiden Group develops the "President's Safety and Health Management Policy" each year, and globally rolls out occupational health and safety activities based on this.

In fiscal 2016 we introduced "VR Hands-on Safety Experience Equipment" that allows people to experience mock workplace accidents through virtual reality (VR) with CG content, and we conduct safety experience education in locations around Japan using this and other safety experience content. In fiscal 2017 we newly developed five experiential programs for VR safety education for factory-related work, including forklift operation and work in high places, in order to raise the level of experiential training.



Hands-on safety experience education using VR



Hands-on safety experience truck

## Quality Management

### Initiatives to Enhance Corporate Value

Major aspects of corporate value enhanced Initiatives	Increase in sales and profits / Reduction in costs	Creation of business opportunities	Business risk avoidance and reduction	Strengthening trust in stakeholder relationships / brand image improvement	Increase employee loyalty / Build up technology, experience and expertise
Initiatives to improve quality	●	●	●	●	●
Understanding customers' needs	●	●	●	●	●
Training programs for quality management technology as well as workmanship and technical skills				●	●

### Basic Approach

The Meiden Group must continue contributing to the solutions of customers' problems by providing high-quality products and services at all times, in order to continue to be relied on and chosen by customers and society. To do this, it is important that we implement the following three things: "initiatives to improve quality," "understanding our customers' needs," and "training programs for quality management technology as well as workmanship and technical skills." As our customers' partner, the Meiden Group aims for all employees to listen to customers, act quickly, and improve quality, in order to increase customer satisfaction.

### Initiatives to Improve Quality

In Meidensha, we have determined items to be managed from each viewpoint of "not letting in" "not creating" and "not letting out" defects, in order to improve quality and we conduct activities accordingly. We improve the quality of product development and designs through mechanisms to incorporate quality into designs, as well as multifaceted design reviews (DR).

In particular, we are strengthening activities relating to the quality of such development and design that has the risk of a defect with potential widespread influence.

#### DR

Activities ○ = Particularly relevant	Meidensha		
	Partner companies	Development, design and manufacture	Testing and inspection
	Do not let in	Do not create	Do not let out
3H measures		○	○
DR quality improvement		○	○
Backlog management		○	○
Applying lessons from past defects		○	
Implementing and complying with standards and procedures		○	○
Auditing and instructing	○	○	○
4M-change management	○		
⋮			

### Understanding Our Customers' Needs

In order to provide products and services that satisfy our customers, we are gathering and analyzing the needs of our customers on a daily basis, including information and requests provided by customers, complaints, and market trends, and implementing activities that lead to concrete actions such as proposing solutions, developing new products, and engaging in servicing and various improvement activities.

In development, sales, engineering, manufacturing, and local construction departments that have contact with customers, we work to improve our activities through the PDCA cycle, by reviewing and evaluating tasks being conducted at each department, creating a plan for the next fiscal year in each fiscal year, and conducting self-evaluation of the results of activities.

### Training Programs for Quality Management Technology as well as Workmanship and Technical Skills

At the Meiden Group, we believe that it is important for each employee to have a fundamental knowledge of quality management in order to provide high-quality products and services. Therefore, we implement training programs for quality management technology at each level, such as for new employees, young employees, and mid-level leaders. These training programs are also conducted for staff who are not directly involved with work at manufacturing departments.

At the technology center adjacent to Numazu Works, we conduct training programs for workmanship and technical skills maintenance engineers. We raise engineers who contribute to the stable, safe, and efficient operation of customers' equipment through practical training using real equipment. The curriculum is formulated to allow participants to touch and experience actual equipment, such as extra high-voltage and high-voltage receiving substation equipment, computers, power converter equipment, generators, and rotating machinery. Maintenance training is conducted each year for customers to whom Meidensha's products have been supplied.



Technical training (protective relays)

## Supply Chain Management

### Initiatives to Enhance Corporate Value

Major aspects of corporate value enhanced Initiatives	Increase in sales and profits / Reduction in costs	Creation of business opportunities	Business risk avoidance and reduction	Strengthening trust in stakeholder relationships / brand image improvement	Increase employee loyalty / Build up technology, experience and expertise
Promotion of CSR activities that involve the entire supply chain and minimization of procurement risks	●		●	●	
Communication with business partners		●	●	●	
Enhancing group procurement systems			●		●

### Basic Approach

It is important to build equal and fair relationships that allow for mutual growth with suppliers, in order to provide better products and services to customers consistently. On the other hand, while procurement risks in the supply chain become greater as globalization of businesses and business activities continues, it is necessary to identify potential risks in advance and to minimize them.

The Meiden Group is working to build good partnerships with suppliers and a sound and strong supply chain, by promoting "CSR activities involving the entire supply chain with a minimization of procurement risks," "communication with business partners," and "enhancing group procurement systems."

### Promotion of CSR that Involve the Entire Supply Chain and Minimization of Procurement Risks

The Meiden Group practices CSR to maintain equal and fair relationships that allow for mutual growth for material procurement. Based on CSR that are promoted throughout all business activities, the Meiden Group requests that its business partners and their suppliers promote CSR, including such issues as "human rights, labor, health and safety, and the environment." In order for them to understand our approach to CSR supply chain management, we have prepared the "Meiden Group Supply Chain CSR Promotion Guidebook"<sup>\*1</sup> and distributed it to approximately 1,800 of our business partners in Japan.

We provide the Supply Chain CSR Promotion Guidebook to all new business partners (100%) at the time of the first transaction, and we request that it is disseminated and applied.

To promote CSR procurement, we also request for our business partners to cooperate in responding to a CSR survey (including environmental activities survey) so that we can understand their CSR activities and environmental activities and eventually can minimize procurement risks.

<sup>\*1</sup> The Meiden Group Supply Chain CSR Promotion Guidebook is based on the Supply Chain CSR Deployment Guidebook produced by the Japan Electronics and Information Technology Industries Association (JEITA) (published in August 2006)

### Promoting Communication with Business Partners and Activities to Reduce Environmental Impact in the Supply Chain

We believe that sharing awareness concerning CSR with cooperating business partners and working together with them with the aim of promoting CSR activities throughout the supply chain will lead to mutual prosperity. The Meiden Group invites its main business partners to biannual meetings held at each manufacturing site to explain our production plans, where we provide information on the plans and current statuses of our businesses on both company and departmental levels.

In fiscal 2017, the Eco-Action 21 environmental management system study group (greening program) for small and medium-sized enterprises without environmental management systems, which is endorsed by the Ministry of the Environment, has been held in the Meiden Group's five regions, and we promoted and supported certification and registration. As a result, 26 participating trading partners received certification, and we held a ceremony to confer certification and registration certificates at each production location.

Continuing from last year, we conducted an education program for the 49 companies that had received certification up to 2016, and created opportunities for exchange of opinions and sharing of information that include educators. We will continue providing support for our business partners in relation to Eco-Action 21 certification and registration activities, and aim to spread environmental management systems and environmental improvements throughout the entire value chain.



Certification ceremony in the Numazu district

### Enhancing Group Procurement Systems

We conducted educational programs for internal procurement divisions at all sites to ensure compliance and risk management, following the implementation of the revised basic purchasing agreement in fiscal 2014. We hold periodic Meiden Group Procurement Meetings as a forum to share information, including actual cases of assessment purchasing and centralized purchasing by Meidensha, and affiliates' CSR initiatives, thus forging cooperation among different sites to achieve global and domestic expansion and enhance compliance.

# G OVERNANCE

## Corporate Governance

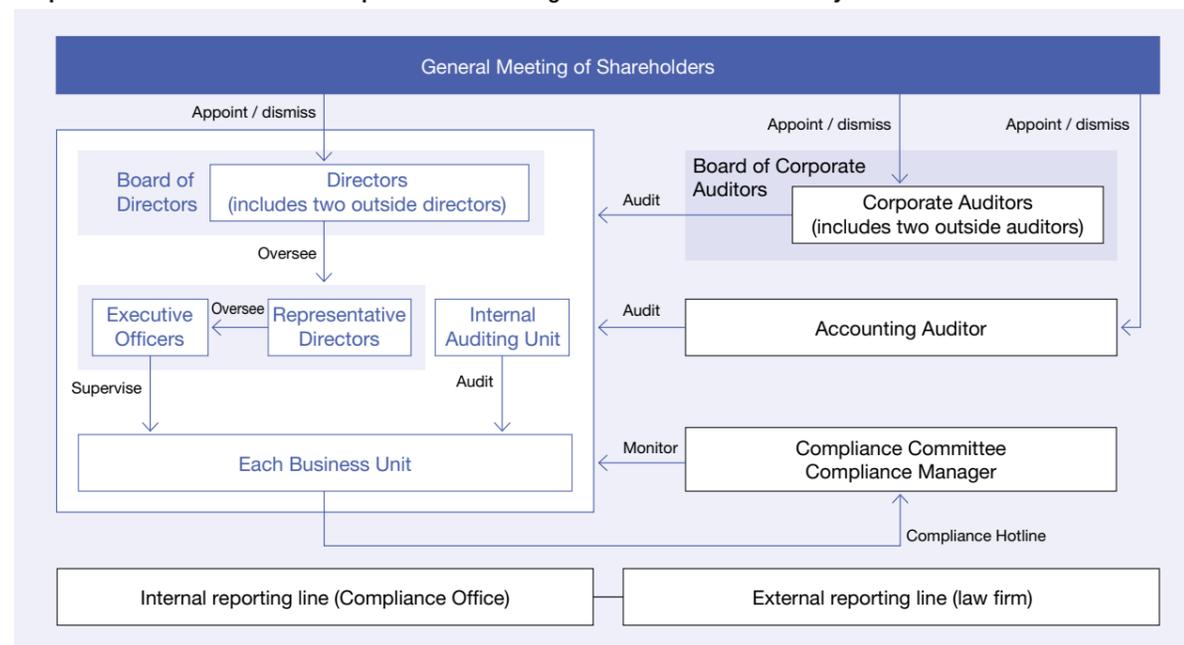
### Basic Approach

Under our corporate mission of “illuminating a more affluent tomorrow” and our corporate philosophy of providing the value “for customer peace of mind and satisfaction,” our group of companies takes the basic stance that we maintain fair and steady business activities with respect for people and the global environment, operate businesses focusing on profit while constantly pursuing new technology and high quality, and endeavor to contribute to prosperity of society. In order to

implement this basic stance, we formulated the “Basic Policy to Improve the Governance to Secure Fair Business Practices” at the regular Board of Directors meeting held in May 2006 (this basic policy was later amended at the regular Board of Directors meeting held in May, 2015, to reflect the revision of the Companies Act).

The Company will work to further improve the efficiency and fairness of management by promoting initiatives to enhance corporate governance in accordance with the Corporate Governance Code.

### Corporate Governance Structure: Supervision and Management and Internal Control System



### Corporate Governance Structure and Initiatives

Meidensha clearly separates important management decision-making and operational decision-making in the rules of the Board of Directors and the rules of internal approval procedures, and ensures flexible executive functions.

The executive committee, comprised of representative directors and executive officers, has been instituted for executive decision-making, and the committee decides matters stipulated by the rules of internal approval procedures, as well as matters that require discussions from a company-wide perspective.

Also, we have established a management committee as an advisory body that operates separately from the decision-making committee structure. The management committee is comprised of the representative directors, who discuss and consider matters relating to all aspects of management.

### Outline of Corporate Governance Structure

Form of organization	Company with corporate auditors
Directors	Number of directors (outside directors): 10 (2)
Corporate auditors	Number of corporate auditors (outside corporate auditors): 4 (2)
Number of independent officers	4 (2 outside directors and 2 outside corporate auditors)

### 1 Features of Institutional Design

#### ① Executive Officer System

Meidensha introduced an executive officer system in June 2003 in order to streamline the Board of Directors so as to “speed up corporate decision-making and enhance its supervisory function.” At the same time, we strengthened the functions

of the Board of Directors and separated the “decision-making and supervisory functions” and the “executive functions” that the Board of Directors used to have. The former functions were assigned to the Board of Directors and the latter to the representative directors and executive officers to whom the duties were delegated by the representative directors.

Executive functions for business operations are carried out according to resolutions and decisions of the executive committee, which is a decision-making body for executive functions, and the executive directors and executive officers, who have the authority to carry out executive functions, under the supervision of the Board of Directors. In this way, business operations are executed autonomously, flexibly, and swiftly.

Furthermore, with the Board of Directors having broadly assigned authority to conduct executive functions to the executive officers, directors and executive officers in charge of operations are required to submit status reports on the execution of operations to the Board of Directors at least once every three months in order to ensure that the supervisory function of the Board of Directors properly works.

### ② Composition of Directors

There are currently ten directors, and we believe that this number is appropriate to ensure thorough consideration to make appropriate and swift decisions to address the drastically changing business environment.

Furthermore, two of the ten directors are outside directors who carry out a supervisory function for execution of operations in order to strengthen corporate governance.

Meidensha’s outside directors satisfy the requirements of independent directors as stipulated in the rules of the Tokyo Stock Exchange.

### 2 Effectiveness Evaluation of the Board of Directors

Meidensha has a mechanism in place to conduct an analysis and evaluation of the effectiveness of the Board of Directors in order to strengthen the supervisory function of the Board of Directors.

With regard to the activities of the Board of Directors in fiscal 2017, all the directors and auditors, including the outside directors and outside corporate auditors, conducted an effectiveness evaluation of the Board of Directors and a self-evaluation, and the following discussions took place at the meeting of the Board of Directors in May 2018.

#### i. Items Evaluated

Composition and operation (resolution and deliberation methods, etc.) of the Board of Directors, effectiveness of the Board of Directors, self-evaluations, other opinions

#### ii. Outline of Analysis and Evaluation Results

The results of the evaluation of each director and corporate auditor were collected, and after deliberation by the Board of Directors, it was determined that the quality of operation and deliberation is sufficient, sufficient opinions and advice have been received from outside directors and outside corporate auditors, and the effectiveness of the Board of Directors is currently secure.

There were people of the opinion that they would like to have more of an opportunity to exchange opinions apart from meetings of the Board of Directors, and we are giving

consideration to holding a meeting to exchange opinions as described below and further expanding the content of introductory sessions, etc.

### Training of Directors and Corporate Auditors

Legal training is conducted for officers on an annual basis, for the purpose of improving the effectiveness of the Board of Directors and internal control. In fiscal 2017, we promoted risk management at each department and conducted training relating to monitoring for our officers as part of internal control activities conducted at all companies. The Meiden Group conducted training on the Companies Act for new officers of Meidensha and affiliated companies.

### 3 Initiatives to Utilize Outside Directors

Meidensha seeks active participation in management by outside officers, in order to enhance the supervisory function of the Board of Directors. As such, we are conducting the following initiatives to ensure free and active debates.

#### ① Initiatives at the Board of Directors

##### i. Circulation of Board of Directors Meeting Materials in Advance

Meidensha distributes meeting materials to the board members in advance so that they are able to check the agenda prior to participating in Board of Directors meetings.

We accept questions, etc., in advance, if any are relating to the agenda and prepare an explanation to be given at the meeting of the Board of Directors.

##### ii. Timely and Appropriate Sharing of Information

Besides the agenda for the meeting, Meidensha provides briefings on current topics relating to the company at meetings of the Board of Directors, with the aim of timely and appropriate sharing of information with outside directors, so that they can share the status of the Company in a timely fashion.

#### ② Initiatives Outside of the Board of Directors

##### i. Introductory Sessions

Primarily for newly appointed outside directors and outside corporate auditors, we provide opportunities for them to understand the Company’s business.

The officers or general managers in charge of each business explain their business and Meidensha’s governance system to the outside officers, answer their questions and exchange opinions with them. In fiscal 2017, we organized five introductory business sessions and one factory tour.

##### ii. Meeting for Exchange of Opinions

Besides legally-required board meetings, we organize monthly meetings for an exchange of opinions in order to best use the knowledge of the outside directors and outside corporate auditors.

In these meetings, participants vigorously exchange opinions, mainly concerning matters relating to corporate governance and the Company’s management issues and strategy. The meetings also serve as preliminaries to discuss matters prior to passing resolutions at the Board of Directors.

#### 4 Corporate Auditors and the Board of Corporate Auditors

Meidensha is a company with corporate auditors. Each corporate auditor (two of the four corporate auditors are outside corporate auditors) performs his assignment of duties in accordance with the auditing policies and the auditing rules for corporate auditors stipulated by the Board of Corporate Auditors. They communicate with directors, the internal auditing department, and other relevant departments, attend meetings of the Board of Directors and other important meetings, and investigate the business and financial conditions, in order to audit the execution of directors' duties.

The Company also has Internal Auditors Office to assist the Board of Corporate Auditors under the direct control of the Board.

#### 5 Internal Auditing System

We have an internal auditing division under the direct control of the President. The Internal Auditing Division conducts internal audits to check the effectiveness and efficiency of business operations, the reliability of financial reporting, the status of compliance with laws and regulations, and the maintenance of assets, covering the Company and all Group companies at home and abroad.

In fiscal 2017, we instituted CSA (control self-assessment) and promoted initiatives to maximize and enhance auditing functions, with the aim of achieving group-wide risk management.

#### Officers' Remuneration

##### Policy for Determining Remuneration

In fiscal 2017, we established a voluntary Remuneration Committee comprising two outside directors (independent officers) and two inside directors, chaired by an outside director, in order to increase the transparency of the content of officers' remuneration and decision-making processes.

In fiscal 2018, we are revising the remuneration system (annual wages) in order to further clarify the management responsibilities of directors. Directors' remuneration comprises basic remuneration and incentives. Of these types of remuneration, incentives comprise remuneration that is linked to business performance as a short-term incentive and stock as a medium to long-term incentive.

The Remuneration Committee confirms and considers the content of the remuneration system and the amount of remuneration from an objective perspective (remuneration is calculated in accordance with the standards of the new remuneration system, and it is within the total limit determined by the General Meeting of Shareholders) prior to determination by the Board of Directors.

#### Amount of Remuneration for Directors and Corporate Auditors in Fiscal 2017

Position	Number	Remuneration (million yen)
Directors (outside directors)	10 (2)	375 (12)
Corporate auditors (outside corporate auditors)	5 (2)	52 (8)

Notes 1. The amount of the above remuneration, etc., includes directors' bonuses of 65 million yen.

2. The amount of remuneration paid to directors that concurrently serve as employees does not include the amount of remuneration paid to them as employees.

#### Composition of the Remuneration Committee

Name	Position	Chairman
Yuji Hamasaki	Representative Director, Chairman	
Takeshi Miida	Representative Director, President	
Hiroyuki Takenaka	Director (Outside/Independent Officer)	○
Junji Yasui	Board Director (Outside/Independent Officer)	

#### Dialogues with Shareholders and Investors

##### Basic Approach and IR System

When any shareholders wish a dialogue with the Company that will contribute to medium to long-term improvement of the Company's corporate value, it is Meidensha's policy that the Company's management conducts the dialogue to the extent reasonably possible.

A system is in place where a representative director is placed in charge of IR matters and an IR-specialist department conducts activities to enhance constructive dialogue with shareholders, including institutional investors and strengthens external communication.

##### Results Briefings

We hold results briefings twice a year in May and November. We also hold business briefings in conjunction with the results briefings, in order for participants to deepen their understanding of the Company's business. For each occasion, we select one business and conduct a briefing on the outline of that business, its future prospects, etc.

We will continue to work to ensure an even fuller disclosure of information through results briefings, individual IR sessions, conferences, the website, and this report, etc., and continue to engage in dialogue with shareholders and investors.

#### Main IR Activities in Fiscal 2017

Individual sessions	Number
Japanese investors	49
Foreign investors	45
<b>Total</b>	<b>94</b>

The materials for the results briefings and business briefings are available for viewing. Please visit "Fact Sheet for Account Settlement Briefing Session" under "Investors" on the Corporate website.

[http://www.meidensha.com/ir/ir\\_04/ir\\_04\\_03/index.html](http://www.meidensha.com/ir/ir_04/ir_04_03/index.html)

## Board of Directors & Executive Officers as of July, 2018

#### Representative Directors



Yuji Hamasaki

[Record of Attendance]  
Board of Directors' Meetings:  
100% (14 out of 14)



Takeshi Miida

[Record of Attendance]  
Board of Directors' Meetings:  
100% (14 out of 14)



Koza Masaki

[Record of Attendance]  
Board of Directors' Meetings:  
100% (14 out of 14)



Tadayoshi Machimura

[Record of Attendance]  
Board of Directors' Meetings:  
100% (14 out of 14)



Masamichi Kuramoto

[Record of Attendance]  
Board of Directors' Meetings:  
100% (14 out of 14)

#### Director and Senior Managing Executive Officers



Nobutoshi Ohashi

(Newly appointed in June of 2018)



Norio Takekawa

(Newly appointed in June of 2018)



Nobuaki Tamaki

(Newly appointed in June of 2018)



Hiroyuki Takenaka

[Record of Attendance]  
Board of Directors' Meetings:  
100% (14 out of 14)



Junji Yasui

[Record of Attendance]  
Board of Directors' Meetings:  
100% (14 out of 14)

#### Outside Director

#### Senior Corporate Auditors



Taketora Ito

[Record of Attendance]  
Board of Directors' Meetings:  
100% (11 out of 11)  
Audit & Supervisory Board Meetings:  
100% (11 out of 11)



Seiji Kato

(Newly appointed in June of 2018)



Yoshiaki Shin

[Record of Attendance]  
Board of Directors' Meetings:  
92.9% (13 out of 14)  
Audit & Supervisory Board Meetings:  
83% (5 out of 6)



Mitsuru Nawata

[Record of Attendance]  
Board of Directors' Meetings:  
85.7% (12 out of 14)  
Audit & Supervisory Board Meetings:  
100% (6 out of 6)

#### Outside Corporate Auditors

#### Managing Executive Officers

Kazumi Ikarashi     Satoru Kameyama  
Michihiko Kato     Masayuki Iwao  
Tomoyasu Hachiro     Tatsuki Mochizuki

#### Executive Officer

Kazuhiro Furukawa     Hiroshi Toke     Kuniake Yasukawa  
Teruhisa Abo     Masahiko Suzuki     Norio Mizutani  
Noritaka Matsushita     Minoru Kaneda     Hideki Miyazawa  
Isamu Suto     Hisahiro Murashima     Akio Ikemori  
Akio Inoue     Satoshi Momenya

## Compliance

### Compliance Policy and System

Meiden Group Code of Conduct (COC) defines that we shall strive to ensure compliance with applicable laws and regulations of our business-related matters, other applicable laws and regulations at home and abroad, social and ethical norms, and its underlying spirit, and we shall conduct our businesses with strong corporate ethics and good social common sense.

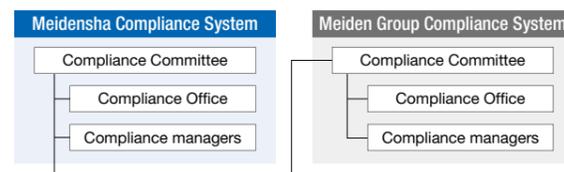
Under this policy, the Meiden Group aims to sincerely engage in activities to live up to the trust of customers and society. Directors, executive officers, and general managers of Meidensha and each Group company, play a central role in promoting compliance in each of their workplaces, in accordance with the Meiden Group Compliance Promotion Rules.

Besides such workplace schemes, we also have a Compliance Committee set up in place, which lays down policies concerning compliance activities, organizes compliance training, handles whistleblowers, and expresses opinions and provides solutions to problems relating to a range of compliance issues that may arise.

Furthermore, in order to enhance the communication and reporting system, we appointed a Compliance Manager in each workplace to serve as a link between the Compliance Committee and the workplace by reporting to the Committee issues discussed and problems found in the workplace. Thus, we are engaged in activities that promote compliance, while ensuring communication among the Meiden Group companies.

In fiscal 2017, we created a system in accordance with the revisions to the Consumer Affairs Agency's Guidelines for Whistleblower Systems, drafted and revised regulations and manuals, and conducted awareness activities using the Group's internal media as group-wide compliance initiatives. Also, in order to enhance overseas compliance, we are continuing to promote the implementation of internal control systems at overseas group companies through the leadership of our controlling companies in China and the ASEAN region.

#### Meiden Group Compliance System



### Anti-Corruption Policy

The Board of Directors has passed a resolution that forbids providing unfair advantage and business activities in contravention of the Anti-Monopoly Act as three strictly prohibited matters. From now on, the Compliance Committee will receive reports concerning the status of activities to ensure compliance.

### Whistleblower System on Compliance

Meidensha has a whistleblower system on compliance. This is to prevent illegal actions or misconduct and to solve problems as early as possible if such illegal action or misconduct occurs. For this whistleblower system, there are two routes: an internal hotline system for compliance violations (Internal Hotline System) and a whistleblower hotline for public interests (Public Whistleblower System). The Internal Hotline System is an internal measure to receive anonymous whistleblower reports from employees, through a dedicated phone line, letters, or emails to a dedicated address. The Public Whistleblower System handles external communications at a law firm as well as internal communications, and may be used by employees of the Meiden Group (including retirees), temporary staff and subcontractors, and suppliers.

The Compliance Committee studies information that is brought to the above points of contact, and, if necessary, consults with a lawyer before resolving issues. We are working to increase the dependability of management of information, such as the names of whistleblowers, of and the whistleblower system as a whole, in accordance with national guidelines, to ensure that whistleblowers are not disadvantaged by using the system. In fiscal 2017, the Meiden Group received 66 reports and consultations, of which we thoroughly confirmed which cases required a response and dealt with them accordingly. The system undergoes internal audits by the Auditing Unit. Furthermore, in fiscal 2017, a local whistleblower hotline was established in China by an external party as overseas compliance was in the process of being tightened.

### Compliance Education

The Compliance Committee conducts compliance training at our business locations throughout Japan, in order to maintain and improve awareness of compliance and internal control systems while collecting opinions from workplaces. Compliance training aimed at employees, including Compliance Managers at each company in the Meiden Group, provides updated information and education on compliance activities, and an opportunity to exchange opinions with the Compliance Committee. In fiscal 2017, we conducted compliance training at locations around Japan, with 1,342 participants. The Committee made reports concerning the status of compliance activities at the company as a whole, and the Legal Affairs Department gave further training using case-studies aiming at sales and manufacturing activities in compliance with the Anti-Monopoly Act, and the Subcontracting Act. In addition, in fiscal 2017, the Sales Department conducted education concerning compliance with the Construction Business Act and the HR Department conducted education concerning harassment, and we are working to increase awareness of a broad range of compliance issues. Also, we are conducting group-work education for executive officers and managers in order to enhance internal control at the divisional levels. During such educational sessions, the Committee received opinions, requests, and many questions from participants concerning the state of their workplaces, which we will reflect on during the Committee's activities in this fiscal year to make further improvements to our compliance activities.

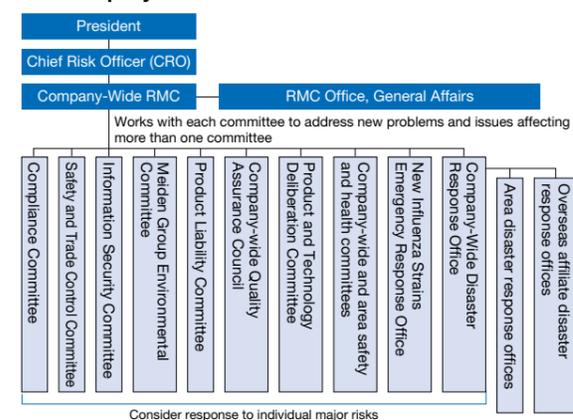
## Risk Management

### Operation of the Company-Wide Risk Management Committee

The Meiden Group has a system in place to control risk management. The Chief Risk Officer (CRO) and Company-Wide Risk Management Committee (RMC) are appointed to respond to major cross-organizational crises. The RMC works with each working group committee (WGC) and meets, as a rule, at least twice a year to maintain countermeasures to critical risks threatening the business continuity. They perform risk surveys to discover new risks and study measures against them.

1. Establishing basic policies on major and cross organizational risks
2. Encouraging measures to prevent crises before they happen
3. Deciding company policies on the crises that are actually happening

#### The Company-Wide RMC



### Priority Initiatives in Fiscal 2018

#### 1. Formulation of Business Continuity Plans (BCPs) for All Group Companies:

We aim to complete BCPs for all Group companies under Medium-term Management Plan 2020, based on the formulation and analysis of the BCP for a model business, which was conducted as part of the Group-wide Risk Management Committee's activities, and our knowhow for consideration of social infrastructure BCPs. In developing BCPs, we are focusing on ensuring effectiveness, conducting training for implementation, and incorporating mechanisms for evaluation and improvement.

As the main activity for fiscal 2018, we will establish the BCM committee as a body to promote BCPs, and we aim to establish specific systems for emergencies.

#### 2. Increasing Effectiveness of BCPs:

We are working to improve the effectiveness of measures to be taken in the event of disasters with the aim of increasing the resilience of all Group employees.

In fiscal 2018, we will work to ensure that we are able to respond to disasters as they occur by rewriting internal regulations and manuals relating to response to disasters such

as wind, flood, snow, or fire damage, distributing disaster cards, etc., and conducting education through e-learning, etc.

### Strengthening Information Security Management

The Meiden Group understands that ensuring the security of the information we handle is a most critical issue. We therefore protect information assets from disasters, accidents, criminal acts, errors, and other threats. We also maintain and enhance information management to prevent leaks, tampering, or theft.

In fiscal 2018, we are continuing to implement initiatives to reinforce information security for the entire Meiden Group.

#### 1 Analysis of Incidents and Countermeasures for Each Cause

We conducted analyses and implemented measures to cover both aspects of hardware/software and human factors: the former includes data protection from unauthorized logins, virus infections from suspicious emails, targeted email attacks, etc. as well as and the latter theft, loss, or mishandling of information devices.

#### 2 Sustainable Information Security Measures

We had previously conducted initiatives based on "defense," but we are now working to implement sustainable security measures in the areas of "prediction," "defense," "detection," and "response."

With regard to "detection," in fiscal 2017, we introduced the SOC (Security Operation Center), and instituted a system to constantly monitor networks and devices 24 hours a day, 365 days a year and detect and analyze cyber-attacks.

Furthermore, we are continuing to strengthen hardware and software measures, such as computer encryption, limiting USB device connections, thin client implementation, IT resource management, and continuing to conduct human measures, such as information security education and suspicious email drills. We are rolling out both proactive and reactive measures on a group-wide basis for information security.

### Group Corporate Code of Conduct Aimed at Globalization

The Meiden Group has the "Meiden Group Corporate Code of Conduct" in place and is working to ensure compliance with laws and other social norms. In addition, in fiscal 2016, we compiled the corporate philosophy system and guidance into a booklet in three languages in preparation for globalization.

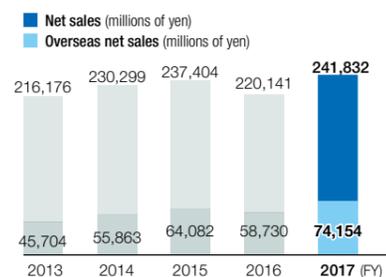
Furthermore, we have released the Bribery Prevention Policy and Fair Competition Policy in three languages, as guidelines to supplement the aforementioned code of conduct, in order to observe laws and regulations relating to bribery prevention and competition.

These standards and policies can be viewed on the Group's portal.

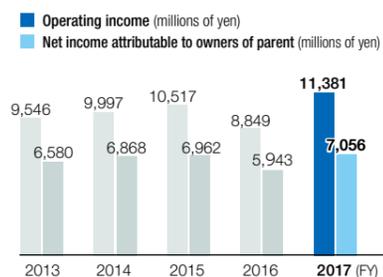
Meidensha Corporation and Consolidated Subsidiaries

Financial indicators	FY2013	FY2014	FY2015	FY2016	FY2017
Net sales (millions of yen)	216,176	230,299	237,404	220,141	241,832
Operating income (millions of yen)	9,546	9,997	10,517	8,849	11,381
Ordinary income (millions of yen)	7,790	10,502	10,595	8,209	9,992
Net income attributable to owners of parent (millions of yen)	6,580	6,868	6,962	5,743	7,056
Overseas net sales (millions of yen)	45,704	55,863	64,082	58,730	74,154
Overseas sales ratio (%)	21.1	24.3	27.0	26.7	30.7
Net assets (millions of yen)	248,379	255,519	255,024	247,646	264,457
Total assets (millions of yen)	60,607	67,405	68,771	74,312	81,229
Net assets per share (yen)	262.50	291.35	297.64	322.80	353.65
Net income per share (yen)	29.00	30.27	30.68	25.31	31.10
Return on equity (%)	24.0	25.9	26.5	29.6	30.3
Cash flows from operating activities (millions of yen)	18,239	11,165	22,597	11,840	17,975
Cash flows from investing activities (millions of yen)	(11,316)	(8,772)	(10,530)	(12,031)	(7,582)
Cash flows from financing activities (millions of yen)	(3,873)	(5,282)	(5,847)	(3,767)	(11,230)
ROE (%)	11.3	10.9	10.4	8.2	9.2
Operating-income-based ROA (%)	4.0	4.0	4.1	3.5	4.4
Dividend payout ratio (%)	20.7	23.1	26.1	31.6	28.9

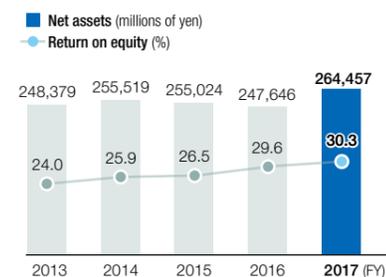
Notes: 1. Operating income for fiscal 2014 has been retroactively changed due to a change in how this number is calculated. (Starting in fiscal 2015, consolidated Group expenses associated with employees on loan are included in as "operating expenses (sales costs and selling, general and administrative expenses)" instead of "non-operating expenses.")  
 2. Starting in fiscal 2015, we show "net income attributable to owners of parent," instead of "net income."



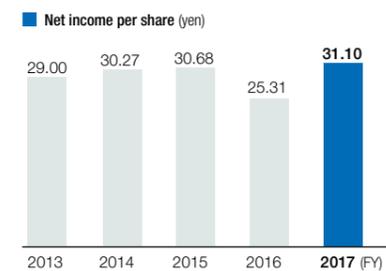
Net sales increased 9.9% year on year. The proportion of overseas net sales was 30.7% due to the firming of overseas electric markets such as Singapore, and large overseas rail projects, etc.



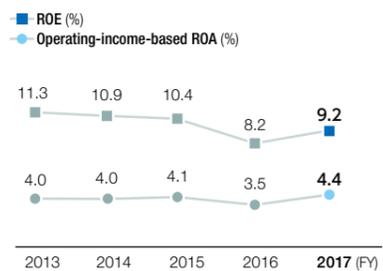
Operating income increased 28.6% year on year and ordinary income increased 21.7% year on year, with net income attributable to owners of parent and orders received both at record highs.



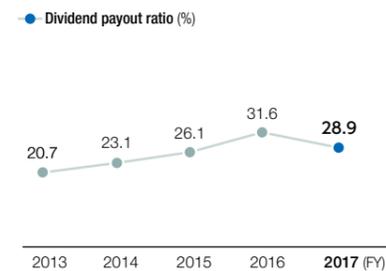
Net Assets increased 6.8% year on year. Return on equity rose 0.7 points due to improvements in free cash flow.



Net income per share increased by 5.79 yen year on year to 31.10 yen.



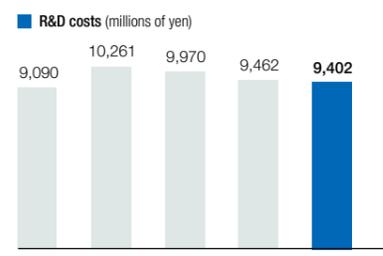
ROE rose by 1 point year on year, and operating income-based ROA rose by 0.9 points year on year.



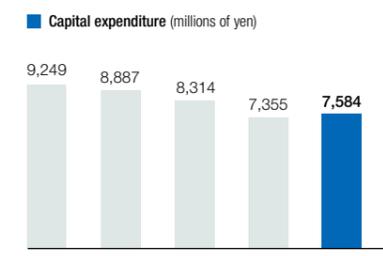
We aim to achieve a 30% consolidated payout ratio in the medium and long term, and paid an annual dividend of 9 yen, including a commemorative dividend of 1 yen as part of our year-end dividend.

Non-financial indicators	FY2013	FY2014	FY2015	FY2016	FY2017
Number of consolidated subsidiaries	42	39	39	38	37
Japan	25	21	19	18	19
Outside Japan	17	18	20	20	18
R&D costs (millions of yen)	9,090	10,261	9,970	9,462	9,402
Capital expenditure (millions of yen)	9,249	8,887	8,314	7,355	7,584
Number of employees	8,047	8,173	8,408	8,474	8,995
Of which, local staff	1,096	1,147	1,499	1,354	1,316
Total actual annual working hours (hours/year/employee)	2,090	2,078	2,083	2,016	2,002
Percentage of female employees in executive positions (%)	-	2.05	2.47	2.7	3.3
Rate of lost-worktime injuries	0.14	0.59	0.44	0.96	0.29
CO <sub>2</sub> emissions (Japan) (kt-CO <sub>2</sub> )	42	41	41	39	37
Reduction of CO <sub>2</sub> emissions caused by products (kt-CO <sub>2</sub> )	360	587	870	800	733
CSR spending (millions of yen)	26	22	19	32	28

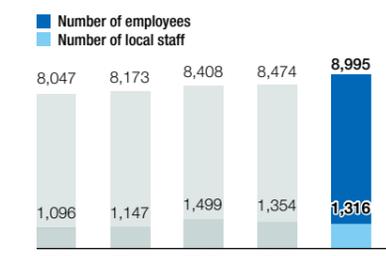
Notes: 3. Figures for employee numbers exclude those employees on temporary contracts.  
 4. Total actual annual working hours are the actual working hours calculated by subtracting leave hours from the sum of official working hours and overtime hours (averaged per employee).  
 5. The percentage of female employees in executive positions refers to the percentage calculated by dividing the number of female employees in executive positions by the total number of executive positions.  
 6. The CO<sub>2</sub> emission coefficients suggested by the Electric Power Council for a Low-Carbon Society (ELCS) were used as the CO<sub>2</sub> emission coefficient for electricity. The adjusted factor for fiscal 2016 was used for fiscal 2017, while that for the respective fiscal year was used for those fiscal years up to fiscal 2016.  
 7. With the dissolution of the joint venture Japan AE Power Systems Corporation, the Japan AE Power Systems Corporation Numazu Works (AE Power Numazu) was incorporated into the Meiden Group as Meiden T&D Corporation in April 2012.  
 8. Reduction of CO<sub>2</sub> emissions caused by products is the expected reduction of such emissions caused by products sold.  
 9. CSR spending includes donations and sponsorship funding.



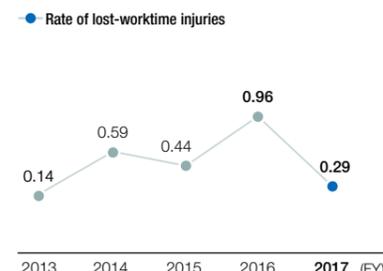
R&D costs remained largely unchanged year on year. Initiatives focused on enhancing product competitiveness and the fundamental technology that supports it.



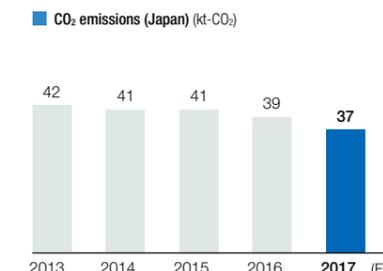
We have focused on investment in production facilities in order to improve the competitiveness of our products. We have conducted investment to achieve rationalization of production, such as by increasing the transparency of switchboard production processes using the IoT.



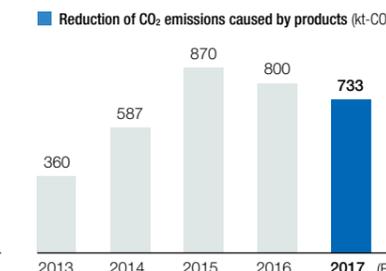
The number of employees increased year on year; however, the number of overseas local staff decreased.



There was a decline year on year as a result of enhancing health and safety patrols by the Production Engineering and Management Group, site-visit education, and new admission education, etc.



Promoting measures to increase the energy efficiency of air conditioners and other measures to increase energy efficiency such as operation improvements for compressors led to a decline year on year.



Reduction of CO<sub>2</sub> emissions only amounted to 733 kilotons per year due to the effect of the failure to accomplish shipment, etc., of solar PCS and hydroelectric generators, etc., as planned.

## Corporate Data as of March 31, 2018

<b>Corporate Name</b> MEIDENSHA CORPORATION	<b>Capital</b> ¥17,070 million
<b>Established</b> June 1, 1917 (Since December 22, 1897)	<b>Consolidated Sales</b> ¥241,832 million
<b>Representative Director, President</b> Takeshi Miida	<b>Consolidated Number of Employees</b> 8,995
<b>Head Office</b> ThinkPark Tower, 2-1-1, Osaki, Shinagawa-ku, Tokyo, 141-6029 Japan	<b>Consolidated Subsidiaries</b> 37 (19 in Japan, 18 overseas)

## Consolidated Subsidiary Companies as of March 31, 2018

Area Code	Company Name	Capital	Business Entity
Japan	Kofu Meidensha Electric Mfg.Co.,Ltd.*1	¥400 million	Manufacturing and sales of motors
Japan	Meiden Plant Systems Corporation	¥400 million	Construction services
Japan	Meiden Engineering Corporation	¥400 million	Manufacture, sale, lease, installation, wiring and provision of maintenance services (maintenance and inspection, modification, repair, etc.) for electrical equipment, machinery and devices
Japan	M WINDS Co., Ltd.	¥330 million	Development, design, manufacturing, and testing of wind-turbine generator systems as well as related consulting
Japan	MEIDEN SHOJI Co., Ltd.	¥300 million	Sales of electric components
Japan	MEIDEN KOHSAN CO., LTD.	¥100 million	Sales of products and materials, and agent services of insurance
Japan	Meiden O&M Corporation	¥100 million	Strategic proposal and comprehensive management of manufacture, sale, lease, installation, wiring and provision of maintenance services (maintenance and inspection, modification, repair, etc.) for electrical equipment, machinery and devices and provision of related education
Japan	MEIDEN CHEMICAL CO., LTD.	¥95 million	Insulating varnish and molded instrument transformer
Japan	Meiden System Manufacturing Corporation	¥90 million	Manufacture and sale of switchboards, control panels, and their components
Japan	Meiden System Solution Corporation	¥50 million	Software development, design, production, sale, and rental, and maintenance and management of computer systems and networks

Area Code	Company Name	Capital	Business Entity
Singapore	MEIDEN ASIA PTE. LTD.*1	S\$35.0 million	Regional headquarter in ASEAN; formulation of business strategies for the ASEAN region; legal affairs; human affairs; IT; maintenance; technical engineering services; materials; R&D
Singapore	MEIDEN SINGAPORE PTE. LTD.*1	S\$25.0 million	Manufacture and sale of transformers, switchboards, and circuit breakers, maintenance and after-sale service of electrical equipment, electrical engineering and import/export operations, and overseas procurement
Thai	THAI MEIDENSHA CO., LTD.	TB30.0 million	Electrical engineering, technical consulting, after-sale service, and import/export operations
U.S.A.	MEIDEN AMERICA, INC.*1	US\$21.0 million	System engineering, sales, technical consulting, and after-sale service of dynamo products
China	MEIDEN HANGZHOU DRIVE SYSTEMS CO., LTD.*1	US\$19.0 million	Manufacture of PM motors and other specialist electrical devices, general purpose inverters, and assembly units for automatic guided vehicles
Germany	TRIDELTA MEIDENSHA GmbH	€78 thousand	Manufacture and sale of electric power / electric railroad lightning arresters and lightning arrester accessories
India	PRIME MEIDEN LIMITED.*1	INR 1,161 million	Manufacture and sale of transformers, and engineering

\*1. Specified subsidiary

Another 20 companies

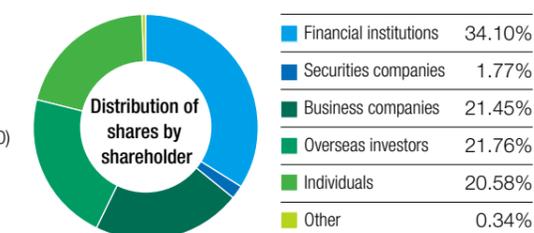
## Share data as of March 31, 2018

Stock Listing Tokyo Stock Exchange, Nagoya Stock Exchange

Total number of authorized shares 576,000,000

Total number of issued shares 227,637,704 (Including treasury shares of 766,790)

Number of shareholders 14,957



## Major Shareholders

Names of Shareholders	Number of Shares Held (1,000 shares)	Shareholding Ratio (%)
Sumitomo Electric Industries, Ltd.	13,156	5.80
Japan Trustee Services Bank, Ltd. (account in trust)	12,160	5.36
Sumitomo Mitsui Banking Corporation	11,209	4.94
NEC Corporation	8,730	3.85
Sumitomo Mitsui Trust Bank, Limited	7,500	3.31
The Master Trust Bank of Japan, Ltd. (account in trust)	6,024	2.66
Sumitomo Life Insurance Company	5,307	2.34
Meidensha Employees Stock Ownership Group	4,714	2.08
EVERGREEN	3,317	1.46
Japan Trustee Services Bank, Ltd. (account 9 in trust)	3,277	1.44

(Note) The shareholding ratio excludes treasury shares.



# MEIDENSHA CORPORATION

ThinkPark Tower, 2-1-1, Osaki, Shinagawa-ku, Tokyo 141-6029 Japan

[www.meidensha.com](http://www.meidensha.com)



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