

# **JAE Report 2022**



**Technology to Inspire Innovation**

Global Corporate Slogan

# Technology to In

JAE focuses on technological development and product creation that inspire customer

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## Corporate Philosophy

# “Explore, Create and Practice”

In response to the boundless, changing needs of society, our duties are never-ending exploration and creation.

Business enterprise must essentially be like the earth as it spins and revolves through the boundless universe, in the midst of incessant change.

**Exploration** and **creation** are born in an environment of freedom and independence, and raised by relentless quest and actions which vigorously transcend barriers and difficulties.

**Practicing** this principle and further making contributions to society; this more than anything is the goal of our business, and the source of our development.

## Basic Management Policy

JAE has promoted global business expansion based on the consolidated management of the JAE Group including all its subsidiaries; enhancement of global marketing and product development capabilities; and innovation of product quality and product creation, in order to gain a high level of trust as partners with its worldwide customers.

# spire Innovation

s innovation

### Companies covered under the report

Japan Aviation Electronics Industry, Limited and 27 Group companies  
(Of which, 18 are consolidated subsidiaries)

### Reporting period

Fiscal 2021 (from April 1, 2021 to March 31, 2022)

Where required to provide the most recent information or compare with past performance, information pertaining to dates outside the stated period is also included.

### Published

October 2022

### Note

The plans, strategies, results forecasts and targets for the Company and its consolidated subsidiaries noted in this report are forecasts and targets as of the time of publication, and include risks and uncertainties. Note that actual results may differ greatly from the forecasts and targets, etc. based on various factors.

## History

Japan Aviation Electronics Industry (JAE) was founded not long after World War II in 1953, and its name reflects our aspiration to take on challenges in the field of the aviation electronics.

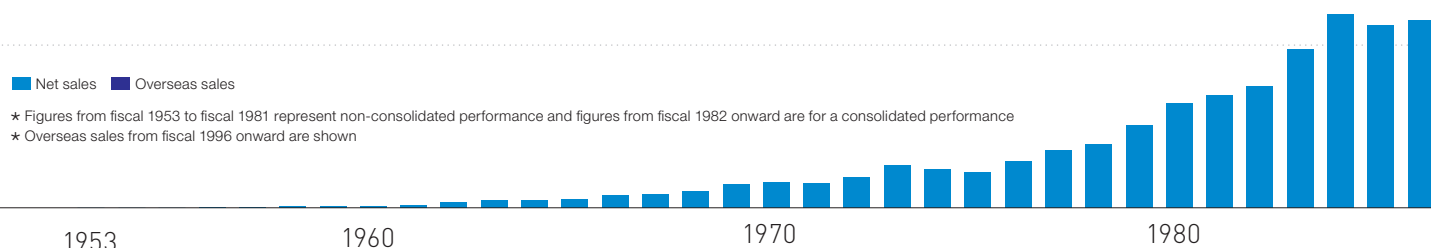
Since that time, we have steadily developed the business by leveraging our commitment to product creation, technology development, and global marketing, guided by our corporate philosophy of “Explore, Create and Practice” and our global slogan of “Technology to Inspire Innovation.”

Going forward we will continue to create innovation to resolve social issues and contribute to achieving a better society.



Founder Minoru Numoto

As the first president of Japan Aviation Electronics Industry, he began the business with an order to repair a single transformer for a fee of five dollars. After the humble beginning, the business went on to win an annual contract in the face of fierce competition, as well as concluding a technology agreement with a major overseas company after he personally attended top-level negotiations. As demonstrated in these and other successes, his foresight and his outstanding ability to action laid the foundation for the company as it is today. As president and as chairman, he took responsibility for the management of the company for more than 20 years, and established its basic approach as a corporation, which was his another significant achievement. On the occasion of the 20th anniversary of our founding, then-chairman Numoto set out the corporate philosophy of “Explore, Create and Practice” with the aim of ushering in the next phase of development for the business, and these concepts have been passed down unbroken to the present day.



### AUG. 1953

Commenced business with the head office in Minato-ku, Tokyo within Nippon Electric Company, Limited (present NEC Corporation)

### AUG. 1954

Factory was built in Kawasaki City, Kanagawa Prefecture (within NEC's Tamagawa Plant)  
Commenced repair and overhaul services for aviation electronics equipment



The factory as it was in 1954 (within Tamagawa Plant)

### AUG. 1955

Commenced manufacturing of connectors and solenoids, under the technical license agreement with US-based Cannon Electric Co.



Connectors

### APR. 1961

Akishima Factory (present Akishima Plant) was completed, and production was transferred from Kawasaki City



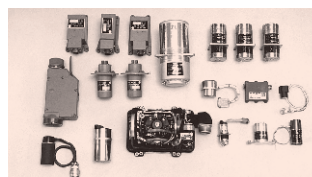
Akishima Plant in 1964

### MAY 1961

Head office moved to Shibuya-ku, Tokyo

### AUG. 1961

Commenced manufacturing of autoflight systems, fuel meters, liquid oxygen quantity indicators, gyro-devices and other equipment for the F-104J under the technical assistance agreement with US-based Honeywell



Gyro components

### DEC. 1963

Developed and started sale of train car coupler for Japanese National Railways' Shinkansen (present JR)

### APR. 1973

JAE stock was listed on the Tokyo Stock Exchange, the Second Section

### MAR. 1977

Established Zet Marketing Company (present JAE Electronics, Inc.) in the US, state of California, as the Company's first overseas subsidiary



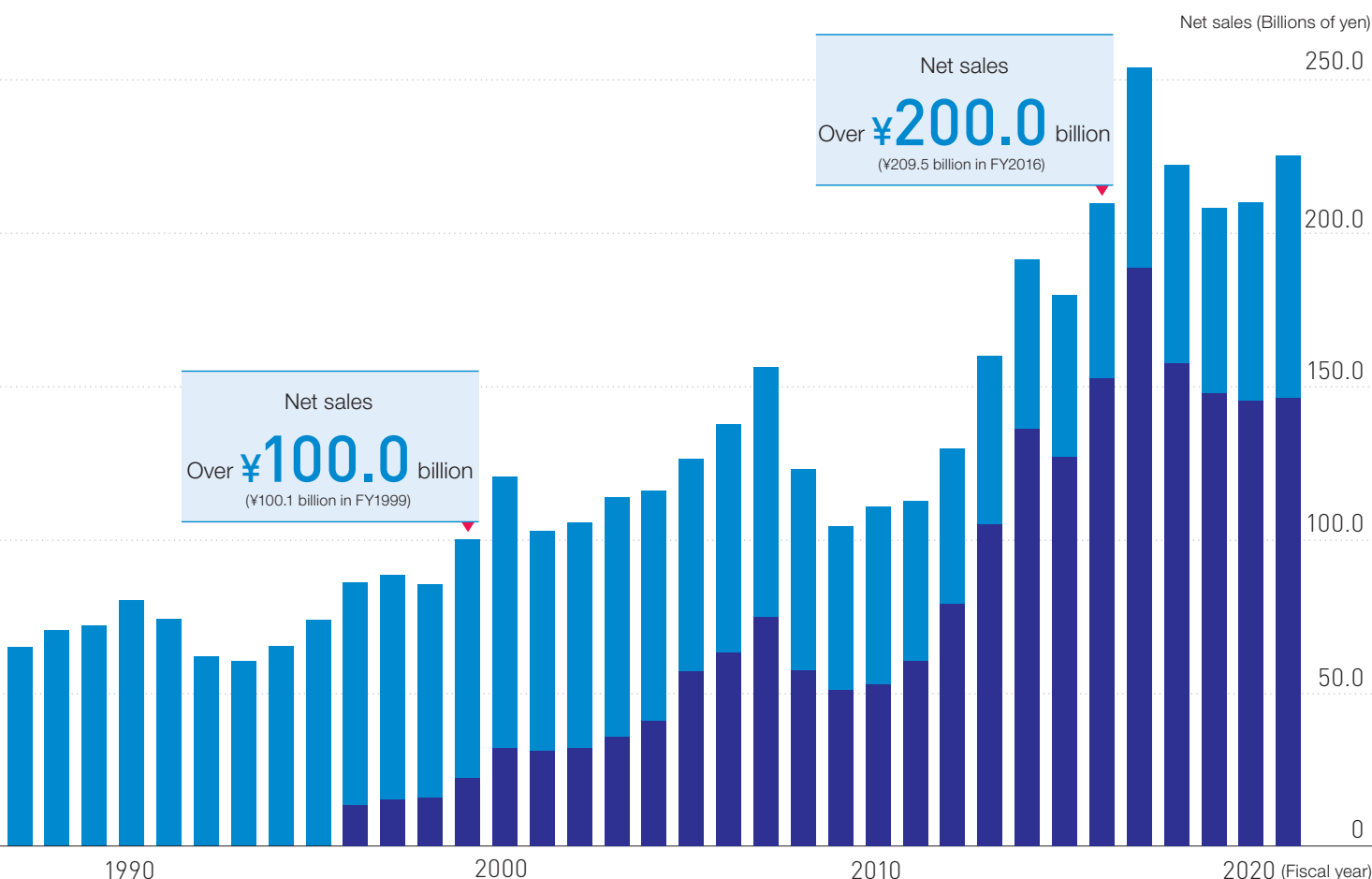
Zet Marketing Company at the time it was established

### SEP. 1980

JAE stock was listed on the Tokyo Stock Exchange, the First Section

### Establishment of overseas bases

The Company expanded globally and established production and sales locations in Taiwan in 1984, in the U.S. (Oregon) in 1988, and in Hong Kong, Singapore, South Korea, the Philippines, the U.K., and China (Wuxi, Wujiang, and Shanghai) from 1994 to 2003.



**JUN. 2004**

Started forestry program,  
"JAE Group Forest"



JAE Group Forest (Okutama Town, Tokyo)

**JAN. 2009**

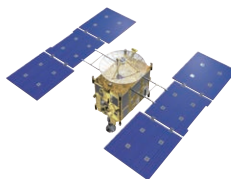
Honored with an Emmy Award for  
contributing to the popularization  
of HDMI™ technology



Emmy award trophy

**JUN. 2010**

Asteroid probe "Hayabusa," which  
adopted our servo accelerometer,  
returned to the earth



Asteroid probe "Hayabusa" ©JAXA

**JAN. 2012**

Developed and started sales of  
"TC230 Series" capacitive touch  
panel for automotive

**APR. 2015**

Developed and started sales of  
"DX07 Series" USB Type-C®  
compliant interface connector



USB Type-C® Connectors

**NOV. 2018**

Received commendation as an "entity  
of distinguished service for Tokyo  
Green Policy" at the 42nd National  
Tree-Planting Festival



Certificate of commendation from  
the National Tree-Planting Festival

**MAR. 2019**

JAE signed agreement with  
Industry-Academia Collaboration  
Research Consortium with Institute of  
Industrial Science, The University of Tokyo

**FEB. 2020**

Named one of the Derwent Top 100 Global  
Innovators (for the third time) in 2020

**APR. 2022**

JAE stock was listed on the Tokyo Stock  
Exchange, the Prime Market

# Creating the future through “CONNECTION” technology

With three major business lines, we remain committed to providing the global market with innovative and creative technology and products.

Net sales (Consolidated)  
¥225.1 billion  
(FY2021 results)

88%

5%

7%

## Connector Business

Connectors are key devices that provide links for electrical and optical signals. We, with advanced and reliable “CONNECTION” technology, support the evolving IoT-oriented society.



### Automotive



Automotive Digital Camera Connectors



Floating Board-to-Board Connectors



### Industrial and Infrastructure



One-Touch/ Screw Mating Compatible Circular Waterproof Connectors



EV Charging and Discharging Connectors



### Mobile Devices



Fully Shielded Board-to-Board Connectors



USB Type-C® Connectors



### Wireless



Compact and High-Performance Antennas



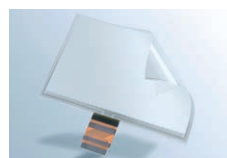
Mounting Image of Compact and High-Performance Antennas

## User Interface Solutions Business

We develop products for “connecting people and equipment” focused on input device technology and provide optimal solutions tailored to users and environments in which they are used.



### Automotive



Capacitive Touch Panel for Automotive (Film Type)



Capacitive Touch Panel for Automotive (Glass Type)



### Industrial and Infrastructure



Teaching Pendant



Panel Unit for Diagnostic Ultrasound System

## Aerospace Business

Since JAE's inception, we have pursued “Motion Sensing & Control (technology to detect and control movement),” and been providing high-precision and high-reliability products that can operate under severe environmental conditions from deep sea to outer space using that technology.



### Industrial, Infrastructure and Automotive



MEMS-IMU



High-Brightness Liquid Crystal Color Display



### Defense and Space



Inertial Measurement Unit for Launch Vehicle



Accelerometer



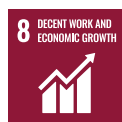
The JAE Group is working to create social value through co-creation with customers in five domains, and contributing to solving social issues through its business activities, while fulfilling its responsibilities as a member of society.

- An introductory video on the Company's vision aiming to contribute to a sustainable society can be found here:  
<https://youtu.be/PLjJ80hllpo>



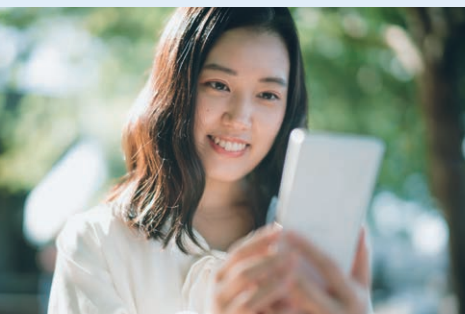
## SUSTAINABLE DEVELOPMENT GOALS

Solution of social issues through business activities



Business activities as a responsible member of society





## CONNECTED SOCIETY



Healthy and comfortable society where the people in the world are connected with each other

- Realization of a world where the people are able to make communication with everybody on the earth, whenever and wherever they like
- Evolution in medical and welfare services friendly with both care-providers and care-receivers



## SAFE MOBILITY



Safe and secure mobility society

- Realization of a zero-car-accident society
- Will increase the transportation means for all the people including the elderly and those with disabilities



## CLEAN ENERGY



Society with environmentally friendly energy

- Promotion of natural energy use
- Realization/spreading of environmentally friendly transportation



## INDUSTRIAL INNOVATION



Efficient and safe production activities

- Release from simple and physically severe labor
- Release from dangerous labor in harsh environments
- Promotion of sustainable industrialization



## AIR, SPACE AND OCEAN



Frontier exploration in air, space and ocean

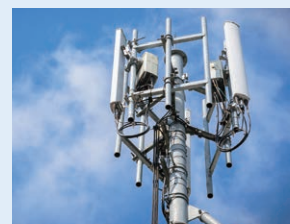
- Sustainable development of space and ocean resources
- Frontier development which supports humanity's relentless exploration spirit



A communication network spreading worldwide supports “connected” society where the people may contact with each other even from a remote place. With the spread of the 5G (5th Generation Mobile Communication System), new experiences are generated by the use of a high speed and low latency communication. JAE is contributing to the progress of a healthy and comfortable society, enabling people to communicate freely when and where they please by providing high speed transmission for communication infrastructure and compact/high density connectors for wearable devices.



Wearable Devices

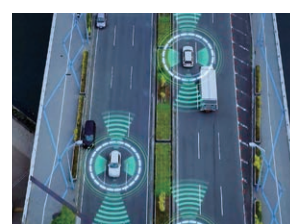


Base Transmission Station

In order to realize “safety and security” of transportation means, which are mandatory for our lives, cars are equipped with many electrical components such as ADAS (Advanced Driver Assistance Systems), airbags, etc., which are linked by connectors which assume an important role. Along with IT introduction, the information handled by CID (Center Information Display) is increasing and the human-car connecting touch panel supports safe and comfortable driving. JAE aim at a society where all the people can move with safety and security.

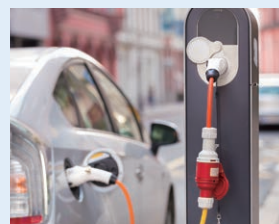


Car Navigation



Safe Driving

JAE's high current and high voltage technology is utilized extensively in solar power generation systems, HEMS (Home Energy Management System) and electrical storage systems, which are introduced widely as environmentally friendly energy. For electric vehicles spreading in a larger scale, high current/high voltage connectors are used in connecting and recharging plugs between battery, motor, inverter. JAE connectors (electrical couplers) and sensors play a crucial role in the railroads which are gathering attention as a transportation means of low environmental load.



EV



Railway Vehicles

At production sites, robots and automatic machines are rapidly introduced to improve productivity and quality as well as to save human power. JAE supports efficient and safe production activities by providing the following three elements—connectors that connect equipment in a safe and secure way in the environment exposed to vibrations and shocks, interface products that improve the operability, and linear motors that control the equipment at high speed and accurately. In addition, our sensor technology is contributing to the agriculture and construction industries where new technologies such as remote control and autonomous driving are introduced.



Industrial Robots



Semiconductor Production Equipment

Currently, satellites are used for clarification of natural phenomena, weather forecasts, car navigation, etc. Outer space is becoming familiar to us. The “aerospace electronics technology” that we have built up since our establishment is also mounted on launch vehicles and an asteroid probe “Hayabusa,” contributing to the achievement of various missions such as a space vehicle of transporting satellites and to putting a satellite into the orbit. This technology has also been used for ocean exploration. In the future, JAE's technology will continue to play an active role in ocean, air, and outer space.



Drone



Aircraft



## Value Creation Model

In preparation for achieving an “environmentally friendly mobility and IoT-oriented society” in accordance with its corporate philosophy of “Explore, Create and Practice,” the Japan Aviation Electronics Group is seeking to promote its basic management policy and to achieve the goals of its Medium-term Management Plan (FY2021 - FY2025), in order to contribute to the resolution of social issues in five different domains.

## Inputs

## Business process

## Human capital

Consolidated  
number of employees

**9,427**

(As of March 31, 2022)

## Intellectual capital

R&D expenses

**¥12.4 billion**

(FY2021 results)

Number of patents

**3,058**

(As of March 31, 2022)

## Natural capital

Electricity consumption

**229,684 MWh**

(FY2021 results)

## Financial capital

Equity ratio

**70.0 %**

(As of March 31, 2022)

Total assets

**¥225.3 billion**

(As of March 31, 2022)

## Manufacturing capital

Capital investment

**¥19.0 billion**

(FY2021 results)

## Social/relationship capital

Group companies

**28 companies**

(including JAE)

(As of March 31, 2022)

## Technology to Inspire Innovation

JAE focuses on technological development and product creation that inspire customer's innovation.

## Co-creation

We leverage our resources and abilities to contribute to the customer's innovation

## Product creation

- Productivity innovation through in-house manufacturing, automation and labor saving efforts
- Enhancement of the evaluation and test system to ensure highly reliable products are provided to customers

## Technology development

- Establishment of cutting-edge technology and the promotion of product development through continuous investment in development
- Enhancement of technological capabilities through external cooperation, such as research into next-generation elemental technology via industry-academia collaboration

## Global marketing

- Co-creation based on partnerships with advanced global companies
- Contributions to formulating global standards

Platform to support  
value creation

Charter of Corporate Behavior

Corporate Philosophy

## Social issues

Social change  
due to  
the COVID-19  
pandemic

Digital and remote  
transformation

Transition to  
a recycling-  
oriented society

Progress of decarbonization,  
effective use of resources

Declining  
labor force in  
major countries



By innovating productivity through the comprehensive use of in-house manufacturing, automation and labor saving efforts, and providing unique products through the development of cutting-edge technology to meet customer needs, we work with our customers to achieve innovations that contribute to society, and lead to enhanced corporate value.

## Outputs

### Connector Business

Examples of products in which our technology is utilized

- Smartphones, PCs • Automotive
- Industrial robots

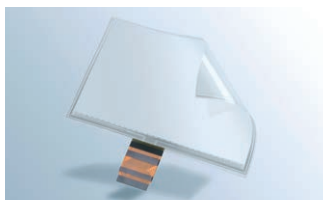


Compact, Low-Profile Automotive ECU Connectors

### User Interface Solutions Business

Examples of products in which our technology is utilized

- Automotive • Industrial equipment
- Medical equipment



Capacitive Touch Panel for Automotive

### Aerospace Business

Examples of products in which our technology is utilized

- Semiconductor production equipment
- Automotive • Aircrafts • Rockets



MEMS-IMU

## Outcomes

### Social value

#### Connected Society

Healthy and comfortable society where the people in the world are connected with each other



#### Safe Mobility

Safe and secure mobility society



#### Clean Energy

Society with environmentally friendly energy



#### Industrial Innovation

Efficient and safe production activities



#### Air, Space and Ocean

Frontier exploration in air, space and ocean



### Economic value

FY2025 goal

Net sales **¥300.0 billion**

FY2025 goal

Ordinary profit **¥30.0 billion**

<https://www.jae.com/en/csr/>

“Explore, Create and Practice”



## Message from the President



**Promoting sustainable management practices focused on global environment and diversity while enhancing technology development capabilities and manufacturing technologies and responding to a changing business environment**

**Tsutomu Onohara**

Japan Aviation Electronics Industry, Limited  
President (Representative Director)

### Looking Back on Fiscal 2021

In fiscal 2021, amid repeated waves of COVID-19 infections, economic activity gradually normalized and demand proceeded to recover, particularly in the markets of automotive, and industrial and infrastructure that the JAE Group is involved in.

That said, in the three focused markets, which include a mobile device market in addition to the two aforementioned markets, we were impacted by our customers' restricted

production activities caused by semiconductor supply shortages, together with the logistics turmoil due to the effect of the COVID-19 pandemic and the soaring prices of raw materials. Throughout the year, these multiple external factors affected our customers' business activities, and the JAE Group's own production activities and product supply.

Amid this environment, in the industrial and infrastructure market, where capital expenditure demand inside and

outside Japan was recovering, we worked to strengthen the production system to respond to the accelerating accumulation of order backlog caused by increased orders from customers. In the automotive market, moreover, I would describe fiscal 2021 as a year where we aggressively implemented various measures, including strengthening production, to respond to the growth in demand and achieve business expansion in the medium term. As part of those efforts, we launched mass production of new products for ADAS-related needs.

We achieved an even larger growth in profit than growth in net sales. While one cause of this was the rebound effect from the previous fiscal year where COVID-19 had a greater effect, a contribution to this significant increase in profit was also our automation at various manufacturing plants carried out to respond to demand in the automotive market and the industrial and infrastructure market, along with steady

achievements in rationalization and cost reductions through improved efficiency across management overall. We are at the halfway mark in our initiatives to improve productivity, and as there still is much room for further improvement in efficiency and rationalization, we expect to continue to achieve improvements next fiscal year and even after.

The business environment has also been changing due to various external factors towards the end of the fiscal year, including the Russia-Ukraine situation, inflation across the world, lockdowns in Shanghai, China, and various supply chain disruptions resulting from the aforementioned. In order to ensure the JAE Group maintains its growth trajectory, it is essential that we continue to respond swiftly to the ever changing environment. Because fiscal 2021 saw such dramatic changes to the business environment, I think it provided us with the opportunity to once again recognize the importance of our capability to respond to such change.

## Medium-term Management Plan

Fiscal 2021 marked the first year of the Medium-term Management Plan. We followed a policy of expanding earnings in the automotive market and the industrial and infrastructure market while maintaining revenue in the mobile devices market, and I think we got off to a good start. One particularly notable achievement for our first year of the plan was to expand the scale of sales for connectors for FA/robots in the domestic industrial and infrastructure market as well as for connectors related to ADAS and EV for automobiles, which have high promise for growth. We can look forward to great innovation in the markets in which we operate, particularly the automotive market. To continue expanding our business, we think it is important to swiftly advance our technological development, and to enhance our manufacturing technologies, which are our strength, while being quick to pick up on market changes.

There are also some challenges requiring renewed awareness as we carry out our business activities. One of these is the importance of supply chain management. The JAE Group supplies products to customers from multiple manufacturing plants inside and outside of Japan, and unexpected circumstances can cause significant effects on the supply chain. If COVID-19 lockdowns occur, for example, we are unable to supply the products we are manufacturing in the lockdown area to our customers. In such situations of emergency, we need to respond with alternative production, for example, but as such alternative production requires

production facilities and equipment, this is something that we must prepare for during ordinary times to ensure we are able to respond swiftly and flexibly in times of emergency. As part of supply chain management, we must create a system that fulfills our responsibilities as a supplier, including making appropriate changes that befit the occasion regarding the flow of procurement, production, delivery and sales and responding quickly to changes by clarifying our approach of risk diversification.

We are also currently experiencing dramatic changes in exchange rates. Although the JAE Group benefits from yen depreciation when exporting products manufactured at domestic manufacturing plants, it also must respond to the increasing cost of raw materials and the cost of manufactured items imported from overseas. Therefore, the recent changes in exchange rates pose a challenge for the JAE Group.

We believe that centralizing information on such risks to business activities and undertaking ways to mitigate and reduce such risks are extremely important management issues. The environment surrounding the JAE Group has been constantly changing. However, while taking such thorough steps in risk management, we will steadily promote business and work to achieve our targets for the Medium-term Management Plan of net sales of ¥300 billion and ordinary profit of ¥30 billion as soon as possible.

## Message from the President

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### Plans for Fiscal 2022

In fiscal 2022, which marks the second year of the Medium-term Management Plan, we will respond to the challenge of strengthening the supply chain management, which emerged in fiscal 2021. In conjunction with these efforts, we plan to strengthen manufacturing plants with the aim of achieving the business growth targeted under the Medium-term Management Plan.

The construction of a new building at JAE Yamagata's 2nd Plant, which we announced in April 2022, will involve floor space expansion to meet the expansion of new demand, such as for connectors that support high currents and high voltages for EVs and connectors for the industrial and infrastructure market. While accumulating production engineering in the new field of high current and high voltage connectors and rolling out this accumulated expertise to other manufacturing plants, assisting in strengthening the global supply chain is one of the future undertaking of the plant.

In addition, the JAE Group established a new site in Düsseldorf, Germany in June 2022. This new office for JAE Europe will function as the site for sales and marketing activities for mainly the European automotive market. The new site also includes a design function called the "European Design Centre (EDC)," and I believe it will develop into a site that is capable of proposing elaborate engineering and providing support from a position that is close to customers. We will continue to expand and enhance overseas sites in other regions as well as the JAE Group develops its business globally.

In fiscal 2022, while securing earnings by capturing the strong demand in each market, we will strengthen our base so that we are capable of responding to business risks and growth opportunities to realize sustainable growth.

### To Realize Sustainability Management

In order to build a strong business foundation, it is essential to establish management practices that provide a sense of purpose and job satisfaction for each employee so that they can strongly identify as a member of the JAE Group. It is from this awareness that we have added an additional pillar of "sustainability management" to the basic strategy of the Medium-term Management Plan.

Our reforms aimed at contributing to a sustainable society and our response to risks that pose a hindrance to growth are essential for achieving continual growth for the Group over the medium to long term. In particular, we are focusing on initiatives to take measures against global warming and promote development of diverse talent.

JAE undertakes various environmental initiatives including energy saving, resource saving, control of water use, and resource recycling. In April 2022, we announced our numerical target to "reduce CO<sub>2</sub> emissions by 55% by fiscal 2030 compared with fiscal 2017" as a global warming countermeasure. As we work toward achieving this target, we are building a strong understanding of our electrical energy consumption in each area through investment in electricity monitoring, and we have begun initiatives to save on energy, beginning at our major plants inside Japan, and we plan to develop these practices globally to all our manufacturing plants and sales sites. At the same

time, we are making a group-wide concerted effort toward size minimization and lower energy consumption for the manufacturing equipment made in-house. In our reform of business processes that started in fiscal 2019, we are promoting efficiency in all processes through visualization of processes, digitalization, switching to paperless systems and various other initiatives, and thanks to the participation of all JAE Group employees, we are achieving significant results. We are broadening the scope of activities concerning saving energy and reducing CO<sub>2</sub> emissions, and are promoting further efforts in which each location takes the initiative while sharing information.

With respect to our human resources, we are undertaking reforms from the perspective of securing diversity, with a particular focus on broadening opportunities for the participation and advancement of women to develop their talents. Specifically, we set the numerical target of "ensuring a ratio of female recruits of at least 25% during the regular recruiting of new graduates by fiscal 2025," and are working to create an environment in which female employees are able to better demonstrate leadership through measures such as holding symposiums attended by all female managers since the second half of fiscal 2021 where ideas are proposed for the advancement of female employees.





## Offering value to society through co-creation based on our corporate philosophy and global slogan

### To Our Stakeholders

In my instruction to new employees at the company entrance ceremony, I always begin with introducing the corporate philosophy “Explore, Create and Practice.” JAE started its business from nothing, expectant of development in the aviation electronics industry. Looking back at such an origin, I think it is important every member of the JAE Group to embrace a spirit of challenging and exploring our future in this era of change. Then, every employee will seek what challenges they can take on to expand the business, and we will aim for further growth as such a vigorous company.

We will also contribute to the unique product development of our customers through the technology we develop. The JAE Group’s global slogan “Technology to Inspire Innovation” expresses our wish to offer value to society through co-creation. We cherish this slogan, which expresses the value the JAE Group wishes to provide, alongside our corporate philosophy.

In recent years, circumstances in society and the business environment have undergone tremendous change, and the outlook continues to be uncertain. Operating under such conditions, the JAE Group will give great importance to our corporate philosophy and global slogan as we continue to expand the business globally based on the consolidated management of the JAE Group while enhancing our technology development capabilities and our innovation of product quality and product creation that support such expansion. By doing so, we aim to improve our corporate value while contributing to solving issues facing society in the five domains of Connected Society, Safe Mobility, Clean Energy, Industrial Innovation, and Air, Space and Ocean. We ask all our stakeholders for their continual support going forward.

## Medium-term Management Plan (FY2021 - FY2025)

The business environment in which JAE operates is in a period of great transformation, as reflected by the progress toward global decarbonization, the penetration of 5G (5th Generation Mobile Communication System) and the various changes occurring in society as a result of the COVID-19 pandemic.

Amid these changes, in April 2021, JAE announced the medium-term management plan ending in fiscal 2025, which commits to contributing to society in its business activities through its products and technology development capabilities and aims to achieve growth as a company.

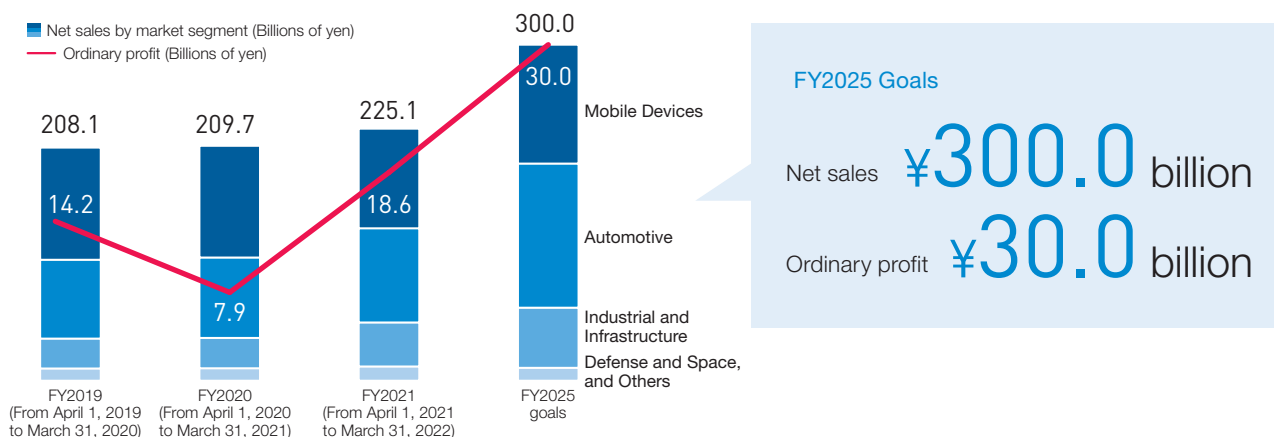
Moreover, in April 2022, the Company added sustainability management to its basic strategies and formulated a target of a 55% reduction in greenhouse gas emissions compared to fiscal 2017 by fiscal 2030.

Basic Strategies	■ Achieve growth by capturing changes in the 3 focused markets and strengthen technology development capabilities and product creation
	■ Plan growth toward 2025 by combination of growth in 3 core businesses and launching of new business domain
	■ Aim for sustainability management and strengthen our foundation for sustainable growth

## Medium-term Management Goals

We will achieve record-high sales and profits\* during the plan, and aim for the fiscal 2025 goals.

\* Net sales of ¥253.9 billion in FY2017/Ordinary profit of ¥23.2 billion in FY2014

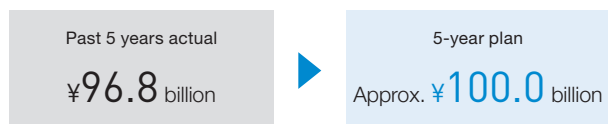


## Investment for Future Growth

Against a medium-term target of growing net sales by a factor of 1.4, we will maintain production facilities investments at about the same level as previously conducted by increasing facility efficiency; while at the same time, we will actively promote investments in production infrastructure to expand existing sites to increase output and to establish a new site to strengthen global supply chains.

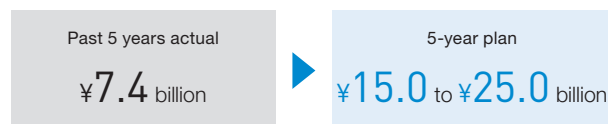
### Production facilities investments

\* Excluding production infrastructure



### Production infrastructure and M&A investments

\* Production infrastructure investments: Plant acquisition / expansion, etc.



## Progress of Medium-term Management Plan

Under the medium-term management plan, we plan to maintain sales in the mobile devices market while achieving double-digit growth in the automotive and industrial markets, aiming for an overall CAGR of 6% in net sales.

Compared to the plan, fiscal 2021 results saw overall sales growth of 7%, as sales to the automotive market grew 17%, and sales to the industrial and infrastructure market grew 45%, surpassing expectations by a large margin, despite a year-on-year decrease in sales to the mobile devices market.

Ordinary profit also expanded in step with growth in net sales, and both net sales and profits made a steady start overall for the first year of the medium-term management plan.

In fiscal 2022, we plan to take further steps towards achieving the medium-term management plan targets by returning to our planned level of sales in the mobile devices market and continuing double-digit growth in sales in the automotive and industrial and infrastructure market.

## Business Overview and Strategy

## Connector Business

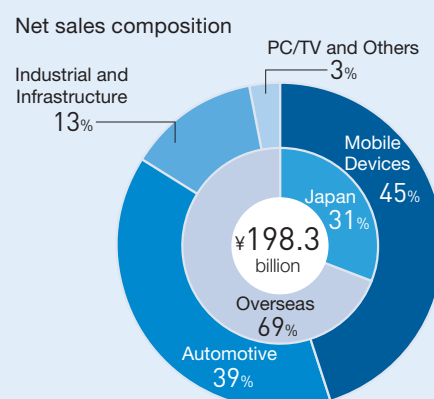
The Connector Business manufactures and sells connectors used in a wide range of fields. These include: products for mobile devices, which center on smartphone components; automotive connectors in infotainment-related applications such as in-vehicle cameras, as well as in body/powertrain areas such as engine ECUs; products for industrial & infrastructure uses such as for machine tools, communications network devices and others; parts for notebook PCs; parts for flat panel televisions.

## Business Results for Fiscal 2021

In the mobile devices field, demand from smartphone manufacturing customers in China increased, but demand for special products that include large numbers of externally procured items declined. In the automotive field, solid demand continued, despite the impact of production cuts on some customers due to semiconductor shortages and other factors. In addition, in the industrial and infrastructure field, sales increased year on year, performing strongly as the Company captured expansion in capital investment demand.

## Competitive Advantage

JAE responds to wide-ranging customer needs by leveraging a comprehensive array of technical capabilities, such as miniaturization technology for internal smartphone connectors that combine reduced size with good workability, or the high level of safety performance required for connectors used in vehicle airbags, or the know-how needed to create waterproof, oil-resistant and vibration-resistant components for industrial equipment used in harsh environments. In addition, we are able to provide a stable supply of high-quality products to customers by utilizing our production engineering accumulated through in-house manufacturing to promote automation and labor-saving in the form of internally developed high-speed automatic assembly equipment, establish high-volume production setups in a short time, and provide integrated in-house manufacturing systems that operate 24 hours a day, seven days a week. Moreover, by actively participating in organizations responsible for drafting various standards, not only have we been able to take a leadership role in standardizing connectors such as USB Type-C® and HDMI™, but we are also able to contribute to innovation by customers through leveraging our global marketing approach to provide proposals at an early stage.



By focusing production on in-house manufacturing, JAE has accumulated internal production engineering, and is proceeding to shift manufacturing inside the company not only for products, but also for the equipment and molds used in production at 11 development/manufacturing sites both in Japan and overseas. JAE has built an integrated production structure that spans the Group as a whole. Group companies Meiyu-Giken Co., Ltd. and JAE Fuji, Ltd. specialize in the manufacture of production equipment and molds respectively, while JAE Hirosaki, Ltd. and JAE Yamagata, Ltd. use these internally sourced equipment, together with high-speed automated machinery, to perform fully automated production of ultra-miniature, high-precision connectors for smartphones.

2021 overall connector  
sales ranking

No. 8 in the world

Automotive market connector  
sales ranking

No. 5 in the world

Telecom/datacom market connector  
sales ranking

No. 4 in the world

Source: Bishop & Associates, Inc.



## Business Overview and Strategy

## Connector Business

## Progress of Medium-term Management Plan

## Automotive

In fiscal 2021, net sales grew 20% year on year, mainly reflecting continued solid demand overall, despite some impact from production cuts due to factors such as semiconductor shortages, as well as favorable performance in advanced driver assistance system (ADAS)-related products for major Japanese affiliated customers and sales of battery management systems (BMS) in China.

Our products have been progressively adopted as we work to achieve the final fiscal year target, and we will therefore take steps that will lead to increased opportunities for business discussions on next-generation models, particularly in ADAS and EVs, aiming to achieve sustainable growth during and after the medium-term management plan period. We are working to increase opportunities for business discussions globally, including those for the Chinese market, which is showing particularly strong growth in the EV market, while in the European market also, we are strengthening our support systems for overseas customers, including the establishment of a new location, the European Design Centre (EDC), as a design function in addition to our sales and marketing functions.

## Industrial and Infrastructure

Net sales in fiscal 2021 increased significantly by 52% year on year, making solid progress towards the medium-term management plan target, due to continued high levels of demand throughout the year, mainly in the domestic factory automation market, as well as due to the production system we have built.

In fiscal 2022, in factory automation-related sales, the Company will work to expand its share of Japanese affiliated customers by leveraging the production capabilities that it enhanced in fiscal 2021. We will also focus on expanding sales with a view to entering the factory automation manufacturer market in China, which is expected to grow.

In EV charging infrastructure, we will capture demand for charging infrastructure in countries worldwide based on our strong lineup centered on CHAdeMO-compliant EV charging plugs, strengthening our production system in Japan and overseas to promote growth.

In the telecommunication infrastructure market, we will continue overseas expansion with a view to increasing sales for 5G O-RAN base stations, and prepare to respond to 6G beyond that by establishing the latest optical and high-speed transmission connector technologies.

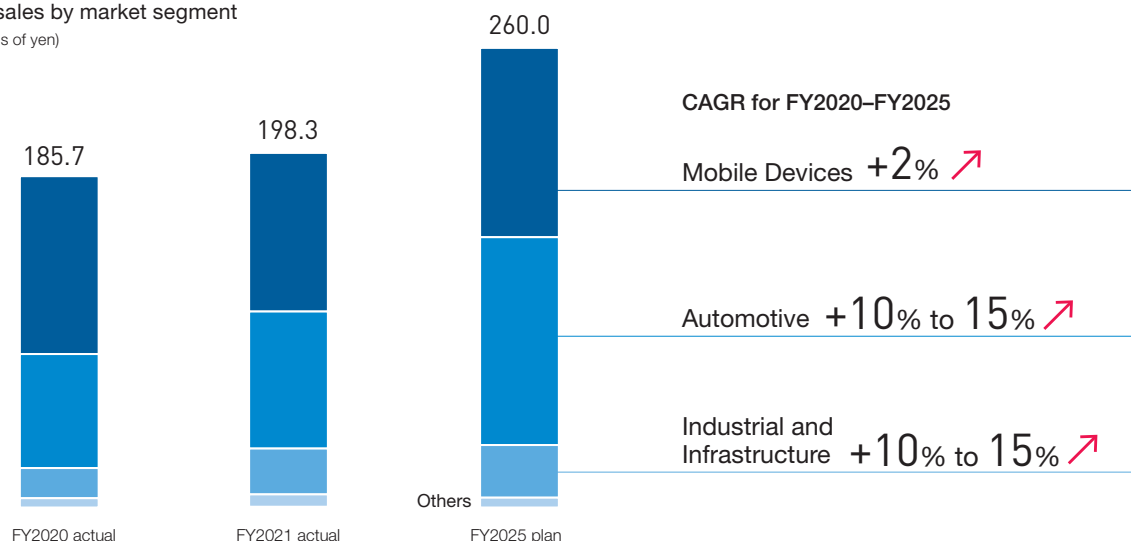
## Mobile Devices

Net sales in fiscal 2021 faced a tough situation, recording a fall of 11% year on year due to a decline in sales of special products. However, sales to smartphone manufacturing customers in China increased year on year, despite a slowdown due to the impact of production adjustments in the second half.

In fiscal 2022, we will work to increase our share of the market for smartphone manufacturing customers in China, while conducting well-timed launches of state-of-the-art products by bolstering and internalizing our manufacturing technologies for internal connectors, which are becoming increasingly difficult to manufacture. Furthermore, we will develop and expand demand in new business domains, such as millimeter-wave antenna connectors, which we began mass producing in fiscal 2021, as we catch up to the medium-term management plan.

## Net sales by market segment

(Billions of yen)





**Masayuki Muraki**  
Director and Senior Vice President  
General Manager of Connector Division

Looking at net sales by market segment for fiscal 2021, sales in the mobile devices market decreased, while sales in the automotive and industrial and infrastructure markets increased significantly, contributing to business growth. On the profit front, profit increased significantly due to the increase in net sales as well as due to the absence of operation restrictions and other special factors that had an impact on profit in the first half of fiscal 2020.

The Company's progress in fiscal 2021 was largely in line with the medium-term management plan targets. Looking ahead, we will work toward the final fiscal year targets of the medium-term management plan by following a growth strategy of maintaining net sales in the mobile devices market while dramatically growing sales in the automotive and industrial and infrastructure markets. Under this strategy, in the mobile devices market, we will increase our market share and look for growth in new business domains. In the automotive market, we will increase sales of ADAS and EV-related products. Meanwhile, in the industrial and infrastructure market, we will expand sales of factory automation-, telecommunications-, and EV charging infrastructure-related devices, and bolster our production capacity.

## TOPICS

### Automotive Connector for ADAS and EV Initiatives

In automotive connectors, we are promoting initiatives for growth particularly in the areas of ADAS and EVs.

In ADAS products, we have made progress on concluding contracts, mainly with major Japanese customers. This business domain will grow significantly through to fiscal 2023. Looking ahead, as demand is expected to grow along with the increase in the number of vehicle models equipped with our ADAS-related products, we will expand production and strengthen our supply chain.

For EVs, we will make strategic inroads in all major areas in every direction, with a particular focus on expanding sales for e-axes and for the Chinese BMS market. Furthermore, as business discussions for high-current, high-voltage connectors progress to specifics, our battery inverter connectors and e-axle docking connectors have been adopted. In the second half of the medium-term management plan period, EV-related sales are expected to drive sales in the automotive market, and we will continue our initiatives to develop this market and increase opportunities for business discussions.

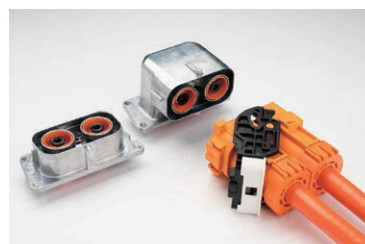
Through these initiatives, in fiscal 2022, we aim to achieve over ¥10.0 billion in ADAS-related sales and ¥7.0 billion in EV-related sales, and to continue sales expansion going forward.



Automotive Digital Camera Connectors

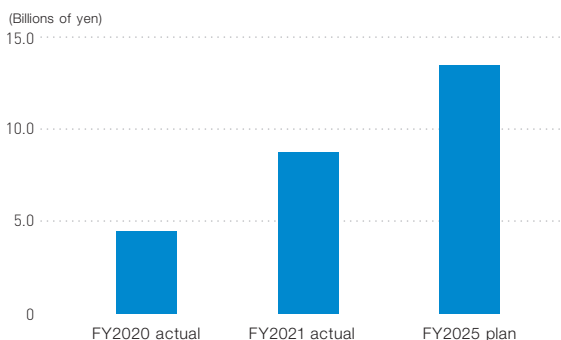


Compact Low-Profile Automotive ECU Connectors

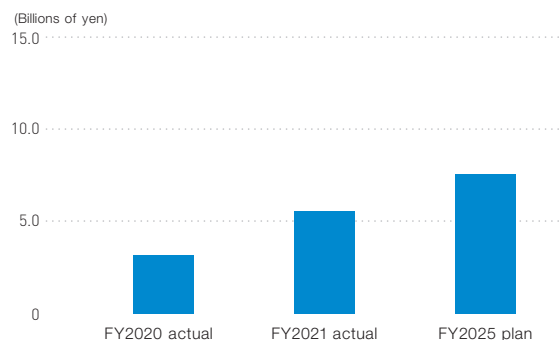


High-Voltage Connectors for EVs/PHEVs

#### Sales of connectors for ADAS



#### Sales of connectors for EV



## Business Overview and Strategy

## User Interface Solutions Business

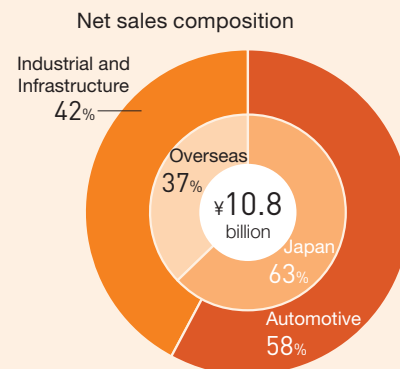
The User Interface Solutions Business manufactures and sells products for automobiles, such as automotive capacitive touch panels, and products for industrial and infrastructure uses, such as various types of touch panel monitors and operation panels for industrial machinery and medical equipment.

## Business Results for Fiscal 2021

Sales increased year on year due to an increase in demand for operation panels for machine tools and industrial robots in the industrial field, despite a decrease in demand in the automotive field due to the impact of production cuts caused by semiconductor shortages and other factors.

## Competitive Advantage

We have worked on the development of capacitive sensors used for “touch input” for many years, progressed in the development of the automotive market ahead of other companies, and contributed to the improvement of the usability of automotive displays. In addition, in response to the increase in size of displays and the diversification of design needs, we developed the “FLEXCONVERT®” brand as a core technology by combining printing, adhesion, etc. technologies with superior materials as represented by film-type metal mesh sensors made using the Company’s proprietary printing methods. We will reform our manufacturing processes through this, and realize a flexible response to user interface needs that will become more diversified and sophisticated in a wide-range of markets.



**Kokichi Sasao**  
Associate Senior Vice President  
(in charge of the User Interface  
Solutions Business)

In fiscal 2021, a decrease in sales in the automotive market was absorbed by sales in the industrial and infrastructure market driven by favorable demand. On the profit front, the Company achieved profit growth through increased productivity in touch sensors and right-sizing of the production system to match demand, among other initiatives.

Our strategy for achieving the medium-term management plan target is to expand sales by differentiating our touch sensors specialized for the automotive and industrial and infrastructure markets, and the equipment they are mounted on. In the automotive market, we will strengthen product competitiveness with high-value-added products that respond to requirements for larger panels; while in the industrial and infrastructure markets, we will expand our business with highly environmentally durable touch panel monitors and teaching pendants for industrial robots. In tandem with this, we will undertake marketing activities, promote the preparation of a mass production system for the industrial market, and work to strengthen our growth foundation.

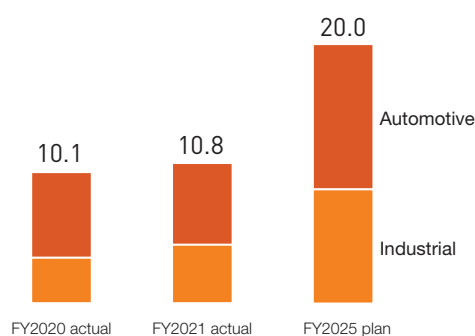
## Progress of Medium-term Management Plan

## Automotive

In fiscal 2021, sales decreased 4% year on year due to the impact of production cuts caused by the impact of semiconductor shortages. Initiatives for fiscal 2022 aimed at achieving the medium-term management plan include strengthening competitiveness by increasing high-added value through measures such as low reflection technology to improve the ease of viewing and use of touch sensors. In addition, we will also expand overseas, aiming to increase opportunities for business discussions overseas by establishing a sales system in China.

## Industrial

In fiscal 2021, sales increased by 27% year on year following the recovery of the market. In addition to business discussions for touch panel monitors with a major Japanese customer, we also made progress on increasing opportunities for large-scale business discussions for teaching pendants for industrial robots, which we have been working on for some time, aiming to capture solid recovery demand to achieve the medium-term management plan target.

Net sales by market segment  
(Billions of yen)



# Aerospace Business

The Aerospace Business manufactures and sells electronic equipment for defense and space, such as flight control equipment, inertial navigation systems and radar altimeters, and products for industrial machinery, infrastructure and automobiles, such as damping and drive equipment for semiconductor manufacturing equipment, sensor packages for oil drilling and automotive rotation angle sensors.

## Business Results for Fiscal 2021

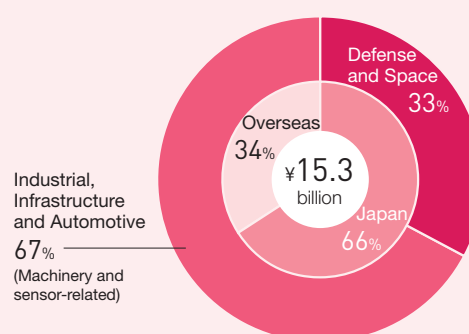
Sales increased year on year as demand for products for semiconductor manufacturing equipment increased, and demand for products for oil drilling recovered following an increase in the price of crude oil.

## Competitive Advantage

We have constantly focused on cultivating aviation space electronics technology since the Company's founding, retained technological capabilities that are top class globally, and produced inertial sensors (gyroscopes, accelerometers), which are key devices, and applied products through our proprietary development.

Furthermore, with our technological capabilities that realize responses in harsh environments, such as those with vibrations, impacts and extreme temperatures, which have been cultivated over many years in the defense and space market, we have created and provided highly accurate and highly reliable products by broadly deploying these technologies even in private demand markets, and flexibly responding to customers' needs.

Net sales composition



Minoru Urano

Director and Executive Vice President  
(in charge of the Aerospace Business)

Breaking down fiscal 2021 net sales by market, sales in the defense and space market were in line with the previous fiscal year; but sales in the industrial and infrastructure market increased significantly overall, driven by an increase in demand related to semiconductor manufacturing equipment in Japan, primarily exposure equipment, and a recovery in market conditions for sensors for oil drilling in Europe and the United States due to an increase in the price of crude oil. As a result, profit also increased.

Our strategy for achieving the targets of the medium-term management plan is to grow by capturing semiconductor capital investment demand and demand for autonomous and remote operation towards realizing a smart society. In machinery products, we will capture capital investment demand, which is firm due to the background shortage of semiconductors, and take steps to expand sales not only for exposure equipment, but also untapped business domains such as post-processing and peripheral equipment, aiming to grow through high-performance linear motors. Moreover, in sensor-related products, we will expand sales to meet private demand, capturing remote operation demand through the release of new accelerometer products. In Japanese-made industrial drones, in particular, we will utilize our expertise in aviation and space to promote the development of flight controllers and radar altimeters, and engage in efforts that lead to business discussions.

## Progress of Medium-term Management Plan

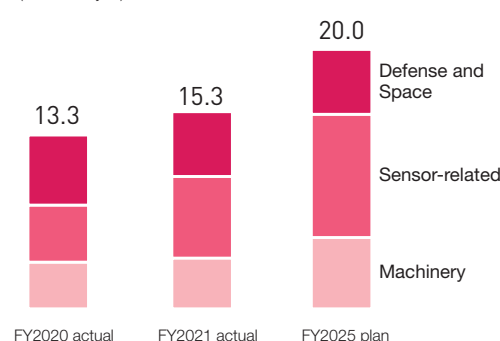
### Machinery

In fiscal 2021, sales increased due to an increase in demand for semiconductor manufacturing equipment in Japan, mainly exposure equipment. We aim to capture solid capital investment demand driven by semiconductor shortages, while also working to expand sales not only for existing Japanese exposure equipment, but also in untapped business domains such as post-processing and peripheral equipment.

### Sensor-related

In fiscal 2021, sales increased, rising through the second half of the year in response to a recovery in market conditions for sensors for oil drilling in Europe and the United States following an increase in the price of crude oil. Looking ahead, in addition to sensors for oil drilling, we expect demand to expand particularly for Japanese-made industrial drones, and we will utilize our expertise in aviation and space to promote the development of flight controllers and radar altimeters, and engage in efforts that lead to business discussions.

Net sales by market segment  
(Billions of yen)



## Research & Development

### JAE Group's Approach to R&D

Based on the corporate philosophy of “Explore, Create and Practice” since the Company's founding, the JAE Group has worked on R&D in order to open new doors that will realize innovation for society and customers as a technology and product creation company. We will contribute to realizing an “environmentally friendly mobility and IoT-oriented society connected by 5G” through our connection technology, which meets the needs for high-speed communication, high currents and a super compact size, user interface technology and motion sense & control technology. Moreover, with regard to fundamental technologies that will support growth, we work on R&D with the aim of shifting toward smart factories and innovating manufacturing technologies.

#### ■ Product Development Center

The Product Development Center carries out R&D for business potential research and planning that aims to develop new business domains, collaborative R&D between departments that contributes to each business department's future business vision, and R&D of fundamental technologies that contribute to strengthening production engineering at existing businesses. For business potential research and planning, we listen to the opinions of future users by actively participating in exhibitions, an academic society, etc., and attempt to create new businesses out of areas that are not growing in existing businesses. For collaborative R&D between departments, we aim to propose new products and to anticipate customer requests by identifying basic research technological issues within problem solving on-site. For R&D of fundamental technologies, we aim to fuse applied research for product creation, which departments have promoted, with scientific knowledge that we have discovered before anyone else in the world.

#### Development of New wearzerO™ Technology to Reduce Wear on Silver Plating of Connectors and Contribute to Resource Recycling and Longer Product Life

We have developed a new technology that effectively eliminates the long-standing issue of wear on the silver plating of the electrical connections in electric vehicle (EV) connectors. The technology forms a special interface structure on the sliding part of the silver plating (the part where the contact points come in contact with one another and cause friction), which restrains adhesion between the connectors that causes wear.

Going forward, we will apply this technology to EV charging plugs and automotive power line connectors and commercialize it.



#### ■ Connector Business

The Connector Business advances research in order to develop connector products that can be used even more comfortably and securely by customers. To accomplish this, the Connector Business conducts research into the acceleration of next-generation communication connectors, the increase of current for EV connectors, the reduction of size and thickness of connectors for mobile devices, the increase of functionality, such as active fiber cables, and the creation of new value, such as smart textile connectors, as well as promotes analysis and evaluation with the principal objectives of extending the life of connectors and increasing reliability, such as through designs resistant to electromagnetic waves and noise.

#### Response to High Speed Transmission and High Frequency

As automobiles become increasingly convenient, with ADAS/autonomous driving and connected functions, automotive network technologies are also evolving. In step with this, various automotive components such as cameras and sensors are also progressing to higher levels of performance. As a result, automotive networks need to be able to handle larger volumes of information data at high speed. We have developed the MX74 Series of automotive Ethernet compatible board-to-cable connectors offering high-quality transmission performance, and we are working on the development of further technologies, such as next-generation automotive high-speed transmission and high-frequency technologies.



Automotive Ethernet standard compatible connector

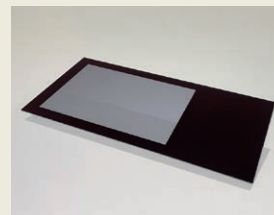
## ■ User Interface Solutions Business

The User Interface Solutions Business matches customer needs with our technology through marketing activities to identify R&D themes and promote R&D activities for switches, sensors and overlays (covers), which are core technologies. In addition, the User Interface Solutions Business will strengthen the core elements of “FLEXCONVERT®,” which is our user interface solution technology brand, through cooperation with the Product Development Center as well as universities and companies that have excellent materials technologies, in addition to our R&D activities that responds to increasingly diversified and sophisticated needs.

### Contributing to Improved Usability of Automotive Touch Panels with Ultra Low Reflection and Improved Fingerprint Resistance

With automotive touch panels being required to offer bright images and deep blacks, we developed low-reflection technology and a technology for improving the attendant issue of visually prominent fingerprints.

By making the sensor section black and optimizing the reflection characteristics, we have reduced the reflectivity of the touch panel. At the same time, we also established methods for quantitative evaluation of the “ease of wiping fingerprints” and “visual prominence,” and then optimized the optical design and material design to reduce both metrics to one third of the conventional level.



Automotive touch panel with ultra-low reflection and improved fingerprint resistance

## ■ Aerospace Business

The Aerospace Business's business domain is “motion sense & control,” and it handles the four core technologies of “highly precise motion sensing,” “highly reliable motion control,” “precise mechatronics” and “resistance to extreme environments.” We carry out R&D that focuses on reliability and environmental resistance in order to play an active role in the defense and space market, semiconductor manufacturing equipment market and oil drilling market in addition to the expanding autonomous driving market for drones, construction machinery, etc. going forward.

### Highly Reliable Flight Controller for Drones

Hailed as an “industrial revolution in the sky,” the full-fledged industrial application of drones is now expected, giving rise to the need for high reliability in drones. To meet this demand, we have utilized our many years of experience in developing and manufacturing flight control equipment for aircraft to develop a highly reliable flight controller for drones, and we have commenced sales.



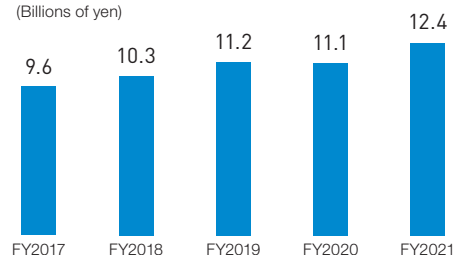
Highly reliable flight controller

## R&D Investment

We actively carry out R&D investment.

Over the past five years, we have allocated around ¥10.0 billion per year for R&D, which has led to the products that will help us grow going forward, such as high-current EV connectors and 5G-compatible connectors. Going forward, we will proactively continue R&D for growth areas.

### Research and development expenses (Billions of yen)



## Cooperative Innovation Project through Industry-Academia Collaboration

In March 2019, we signed an agreement with Industry-Academia Collaboration Research Consortium with the Institute of Industrial Science of the University of Tokyo. Together, we are promoting comprehensive cooperation aimed at promoting joint research to support the realization and advancement of a next-generation mobility and IoT society, and the development of R&D human resources. The agreement is intended to contribute to the realization of innovation and resolution of social issues. At the same time, we are promoting the development of R&D human resources who will play their part in this era through mutual interaction between “academic research” and “technology development” in the industrial world.



Signing ceremony



## Product Creation

### JAE Group's Product Creation

#### Basic Policy of Product Creation

Our production sites in Japan and overseas operate 24 hours a day, seven days a week. In addition, we have established a robust production system through thorough automation, labor-saving, and in-house manufacturing using facilities of our own design.

#### ■ Connector Business

In the Connector Business, we conduct manufacturing centered on in-house manufacturing at each production process following product designs created using simulation and analysis technologies. We fabricate our own molds and press dies in-house using precision machining technologies, and we also use in-house production facilities in the assembly process, based on process design technology and automated assembly machine and jig and tool design technology.

Assembly technology is an important technology that determines quality and cost. For cutting-edge, miniature, low-profile products that require especially detailed and complex processing to be used in small portable devices, such as smartphones, we strive to ensure quality by conducting all processes from assembly to testing and packaging using fully automated assembly machines.

In each of the processes needed for producing connectors, from components processing such as turning, molding, stamping and plating, to product assembly, we are constantly refining our high-level, fundamental technologies and taking on the challenge of “higher processing speed.”



Mold fabrication process



Assembly and inspection process

#### ■ User Interface Solutions Business

In the User Interface Solutions Business, we undertake manufacturing using FLEXCONVERT® manufacturing technology, which uses construction methods such as printing and laminating to draw out the performance and characteristics of materials and create new value. In printing technology, which is one of the converting technologies, we manufacture film sensors for touch panels using conductive ink. Our printing technology creates wiring with a thickness less than one tenth of a human hair, realizing transparent terminals for touch sensors that are invisible to the naked eye.

We are also working in bonding technologies, where we possess technologies that can bond materials with different thermal expansion characteristics, such as plastic and glass, as well as bonding surfaces so that they will not separate even with prolonged use in cold regions or environments with high heat and humidity.



Film sensor printing process

#### ■ Aerospace Business

In the Aerospace Business, we possess production engineering capabilities for realizing high precision machining and assembly necessary for producing high precision motion sensing and motion control products that contribute to the Japanese defense and space industry. Furthermore, we conduct testing to guarantee operation in the field to ensure that minor abnormalities are not overlooked, thereby guaranteeing high reliability and precision of products for use in extreme environments.



Assembly process of an accelerometer

## TOPICS

### Construction of a New Building at JAE Yamagata, Ltd., the Production Site for the Connector Business

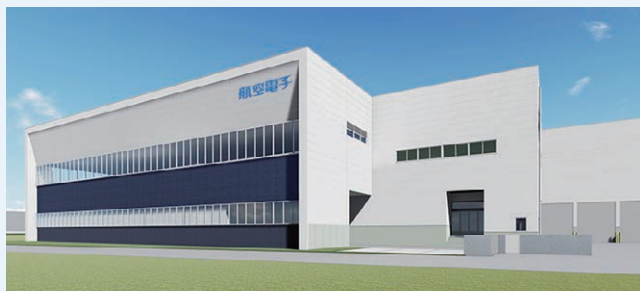
The JAE Group will conduct production infrastructure investments of ¥15–25 billion during the five-year period from fiscal 2021 to fiscal 2025 as part of its medium-term growth strategy. The Group's aim is to increase its production capacity by expanding its plants and so forth. In line with this plan, in April 2022 we started construction of a new building at the 2nd Plant of JAE Yamagata, Ltd., a production site for the Connector Business.

Since its establishment, JAE Yamagata has played a role as a core stamping site for the Connector Business. It has expanded its business to molding and connector assembly and grown as a production site for mainly mobile device and automotive connectors. Meanwhile, JAE Yamagata has enhanced its production system by, among other things, constructing the 2nd Plant in 2006 and the 1st Plant Building D in 2013.

The construction of the new building is intended to enhance our production systems for connectors for the automotive and industrial markets, and to comply with the growing demands for EV (electric vehicle) connectors, as well as to strengthen our supply chain through increased domestic production as part of growth investment for medium-term business expansion.

Furthermore, in the production of high-current, high-voltage connectors required for EVs, we are introducing stamping and molding machines which will be among the largest in our Group to carry out mass production, and by accumulating production engineering, the JAE Yamagata site will lead the Group. We also aim for an “environmentally friendly plant” by moving forward with the introduction of energy-efficient equipment and visualization of electric consumption.

Completion of the new building is scheduled for spring 2023. Its construction will expand the total floor area of the JAE Yamagata plant, including the 1st Plant, to 49,000 m<sup>2</sup>, which is approximately 1.5 times the current size. The JAE Group will strengthen its production systems at production sites in Japan and overseas going forward, aiming to expand its business over the medium term.



Rendering of 2nd Plant B Building, JAE Yamagata

### Community Contribution through Fundamental Technology

As a product creation company, the JAE Group is promoting the improvement and transmission of technologies and skills through initiatives such as incentives for employees to acquire “National Trade Skill Test certificates.” We also aim to contribute to local communities through product creation.

At JAE Hirosaki, Ltd., a major production site for the Connector Business, 325 employees have acquired “National Trade Skill Test certificates,” while seven are registered “Aomori Meisters,” under Aomori Prefecture's system for designating people with excellent skills and technologies supporting fundamental manufacturing technology. Similarly, at JAE Yamagata, Ltd., also a major production site for the Connector Business, 294 employees have acquired “National Trade Skill Test certificates,” while 8 had the outstanding achievement of receiving “Monozukuri Meister” (“production master”) designation at the same time last year as under the designation system for seasoned technicians operated by the Ministry of Health, Labour and Welfare. These “Meisters” serve as technology and skills instructors and teachers communicating the appeal of product creation at local SMEs, schools, and related organizations, contributing to the development of local technicians and the promotion of local industries.

In the 2021 autumn conferment of decorations, employees of JAE Hirosaki, Ltd. received the Order of the Sacred Treasure, Silver Rays in recognition of their contribution to developing technicians involved in injection molding at firms in Aomori Prefecture. Encouraged by this award, the JAE Group will continue aiming to be a company with close regional ties as a member of the local community, and to contribute to the community as well.



A lecture provided by a Meister

## JAE Group's Approach to Sustainability Management

### JAE Group Charter of Corporate Behavior

Based on our corporate philosophy, "Explore, Create and Practice," JAE Group will continue to expand efforts to maintain a fair profit, increase corporate value, and contribute to the creation of sustainable growth in society. At the same time, as a good corporate citizen, we will abide by relevant laws and rules, and fulfill social responsibilities toward customers, stockholders and investors, business partners and other related persons in the community at large.

#### 1. Fair and Honest Corporate Activities

JAE Group will develop fair and honest corporate activities, observing laws and rules of the countries or regions where we conduct business based upon fair and open competition. We will also maintain sound and fair relationships with government agencies and political bodies.

#### 2. Pursuit of Customer Satisfaction

JAE Group will offer high quality products and services useful for society by paying careful attention to safety. We will continue to be committed to the development of innovative and creative technologies, aggressively launching new products and exploring new business areas.

#### 3. Disclosure of Corporate Information

JAE Group will continue to enhance the transparency of its corporate activities by conveying corporate information in a timely and cooperative manner.

#### 4. Harmony with the Environment

JAE Group, as a member of society, will respect the natural environment, and through environmentally friendly activities, contribute to the achievement of a recycling-oriented society and promote environmental management.

#### 5. Harmony with Society

JAE Group will respect customs and cultures of all regions and countries, and contribute to community development by recognizing international and regional diversity and differences. We, as a good corporate citizen, will also engage in activities that contribute to society.

#### 6. Respect of Human Rights

JAE Group will respect human rights in every corporate activity and not condone discrimination or the employment of child labor or forced labor in the workplace.

#### 7. Respect for Employees' Individuality and Personality

JAE Group will respect each employee's individuality and personality, and provide workplace environments that allow thorough development of individual capability and ensure safety and comfort.

#### 8. Management of Intellectual Properties and Information

JAE Group will recognize the importance of and properly manage intellectual properties and information.

### Our Approach to Sustainability

The JAE Group will uphold its responsibility as a member of society through business activities based on the JAE Group Charter of Corporate Behavior, thereby contributing to the realization of an abundant and sustainable recycling-oriented society.

Furthermore, to enable the Company's survival and growth over the medium to long term, we believe it is necessary to respond to risks that could hinder our transformation and growth into a company that contributes to a sustainable society.

### SUSTAINABLE DEVELOPMENT GOALS





## Environment

### Approach

To promote sustainability management, the JAE Group has advocated “harmony with the environment” in the “JAE Group Charter of Corporate Behavior” and conducts corporate activities that respect nature and are environmentally friendly.

In addition to taking measures against global warming, we recognize that it is important to grow sustainably while working toward the realization of a recycling-oriented society through various environmental activities. Therefore, we will not just expand our conventional measures, but also take bold action to implement new environmental initiatives in order to realize a prosperous, sustainable society.

For specific reports on environmental activities, please see our Environmental Report.

► Our Environmental Report can be found here: <https://www.jae.com/en/csr/eco/report/>

### Basic Philosophy

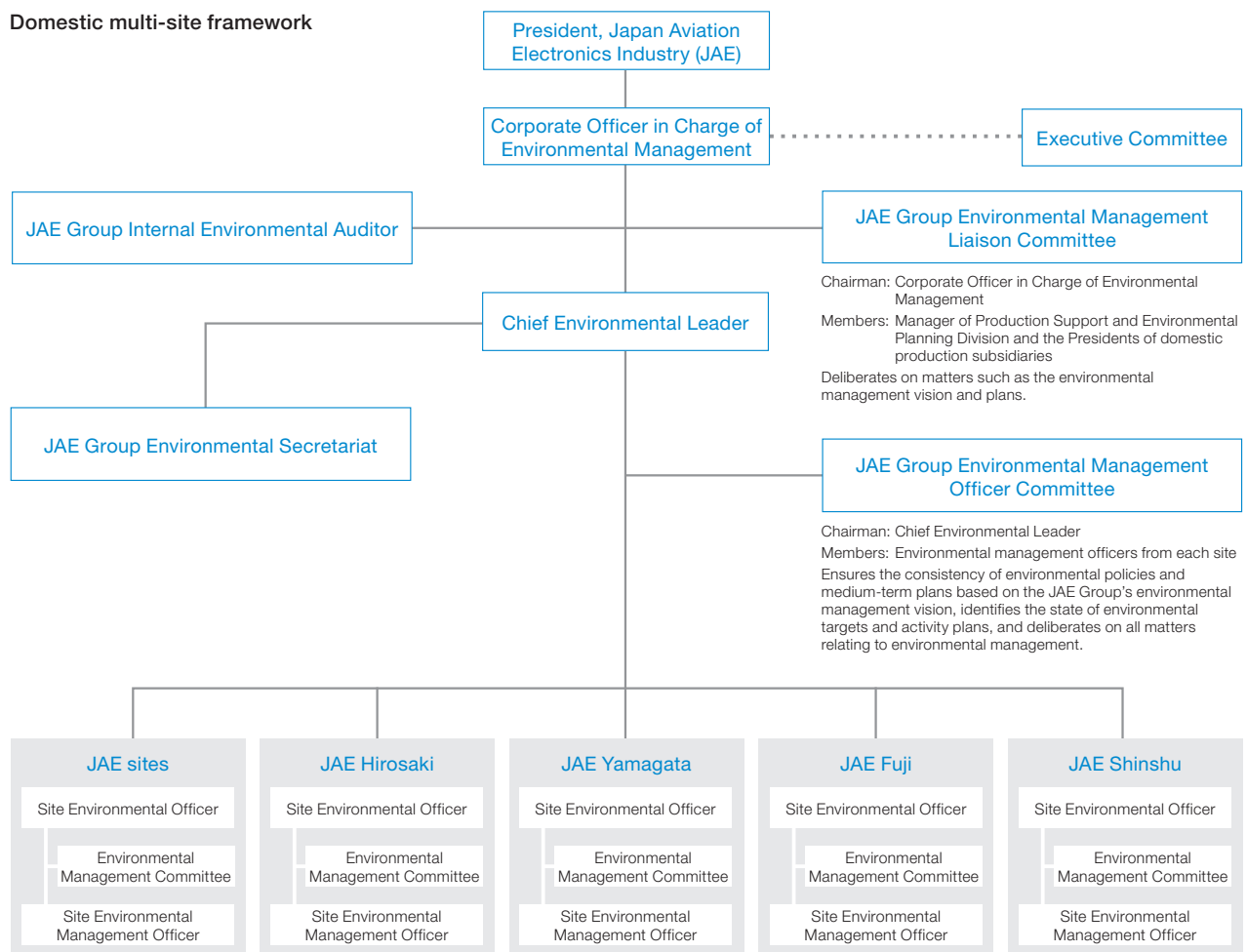
The JAE Group will, as a member of society, contribute to the attainment of a prosperous, sustainable, recycling-oriented society by fulfilling its corporate social responsibility through environmentally friendly business activities and respect for the natural environment and biological diversity.

► Our Basic Guidelines can be found here: <https://www.jae.com/en/csr/eco/policy/>

### Environmental Management System

The JAE Group pushes ahead with its daily environmental conservation activities using an environmental management system built in compliance with the ISO 14001 standard. The acquisition of ISO 14001 certification is being promoted globally, and certification has already been acquired for all domestic multi-sites and overseas production sites.

#### Domestic multi-site framework



## Environment

### Measures against Global Warming

With regard to measures against global warming, the JAE Group views this as the most important issue and has been working steadily on saving energy. Looking ahead, we will continue saving energy while also examining our procurement of electricity, which is the main source of the JAE Group's CO<sub>2</sub> emissions. By giving consideration to using renewable energy and private power generation to find the optimal methods, we decided to begin by introducing renewable energy. Going forward, we aim to become carbon neutral, using science-based greenhouse gas emissions reduction targets (SBT) as our main indicators.

As a measure to save energy to promote global warming countermeasures, JAE Group has set energy saving targets and will centrally manage the status of progress, and so forth, as it works toward achieving them. In regard to specific measures, we are implementing measures according to three main themes. These are environmental awareness training, production-related measures, and measures at plant facilities.

#### ■ Environmental Awareness Training

We provide environmental education to equip employees with the knowledge about the environment needed at each level and function. In addition to this general education, we also offer separate training programs unique to each unit of environmental management activities.

We are also raising awareness through various events (Environment Month, Warm Biz and Cool Biz initiatives, etc.).

#### ■ Production-related Measures

We are carrying out measures such as improving the energy efficiency of molding machines and press machines, and reusing packing trays.

#### ■ Measures at Plant Facilities

As a means of visualizing electricity usage, we renewed the power and air conditioning monitoring systems installed in 2003. The renewed system enables us to ascertain details of the usage status by division, and by major process. This is helpful for discovering energy saving measures and confirming their efficacy.

### Status of response to SBT

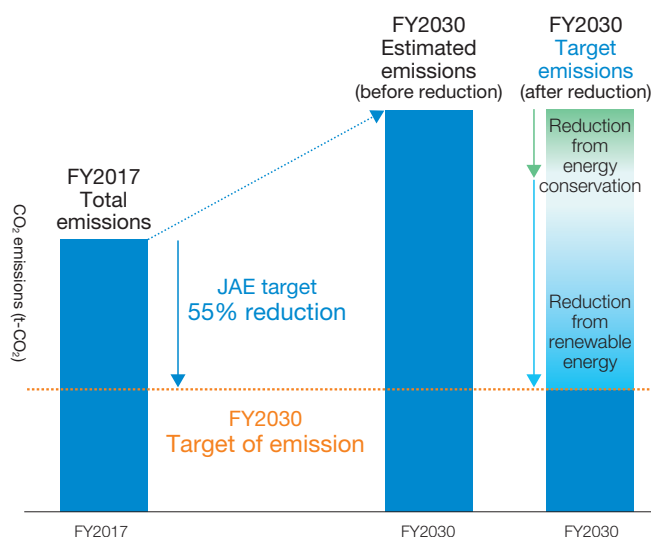
The JAE Group has received SBT 1.5°C certification from SBTi as part of the NEC Group. Moreover, the Group's GHG emissions data (Scopes 1 and 2, FY2021) received third-party verification at JAE Hiroasaki, Ltd. after receiving verification at Akishima Plant in the previous fiscal year.

We will continue to ensure the accuracy of our calculations and improve the efficiency of our calculation methods.

#### Greenhouse Gas Emissions Reduction Target

**55% reduction in GHG emissions by FY2030** (Compared to FY2017)

The Company views environmental issues as an urgent priority and aims to reduce its total CO<sub>2</sub> emissions on a global consolidated basis by 55% from FY2017 levels by FY2030. We expect our total energy usage to increase as production increases going forward. We will work to achieve this target in two ways: by reducing emissions through energy saving and by introducing renewable energy. Thoroughly implementing energy-saving measures will have positive benefits. Not only will it help to reduce greenhouse gas emissions, but will also reduce the amount of more expensive renewable energy to be introduced, even if only by a small amount. In addition, initiatives to reduce greenhouse gas emissions will lead to partnerships with customers and so forth. In July 2022, we introduced renewable energy for 100% of the electricity usage at our main plants at JAE Hiroasaki, Ltd. and JAE Yamagata, Ltd.



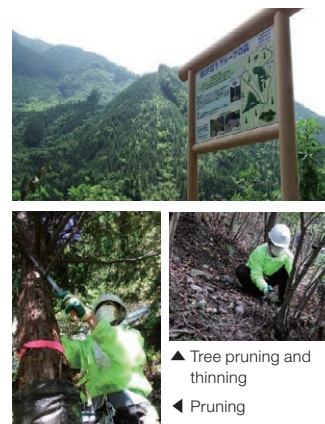
## JAE Group Forest

To restore and preserve forests, we established the JAE Group Forest in fiscal 2004 as a symbol of our environmental management. To help build a prosperous, sustainable society, we are promoting environmental awareness by giving Group employees forest preservation experiences in planting trees and pruning undergrowth\*. It is also a place that contributes to the absorption of greenhouse gas (CO<sub>2</sub>) and replenishment of the watershed.

This activity was picked up by the Tokyo Forestry Support Team of the Tokyo Development Foundation for Agriculture, Forestry and Fisheries, and was featured on the Foundation's website. ("Tokyo Forestry Support Team 'Kimagure Tsushin' (Activity Bulletin) No. 9, which introduced Forestation through Consultation with Tokyo Residents")

Annual CO<sub>2</sub> absorption by Japanese cypress and broadleaf trees: Approx. 5.3t-CO<sub>2</sub>  
Estimated annual watershed replenishment: Approx. 5,320m<sup>3</sup>

\* Thus far, 799 Group employees have planted trees, cleared underbrush where saplings grow, and placed nets to protect against damage from deer. Work was also done to remove vines that were impeding tree growth by clinging to trunks and branches.



▶ The following URL is a video introducing the JAE Group Forest  
<https://youtu.be/10Gdsm5qJJk>

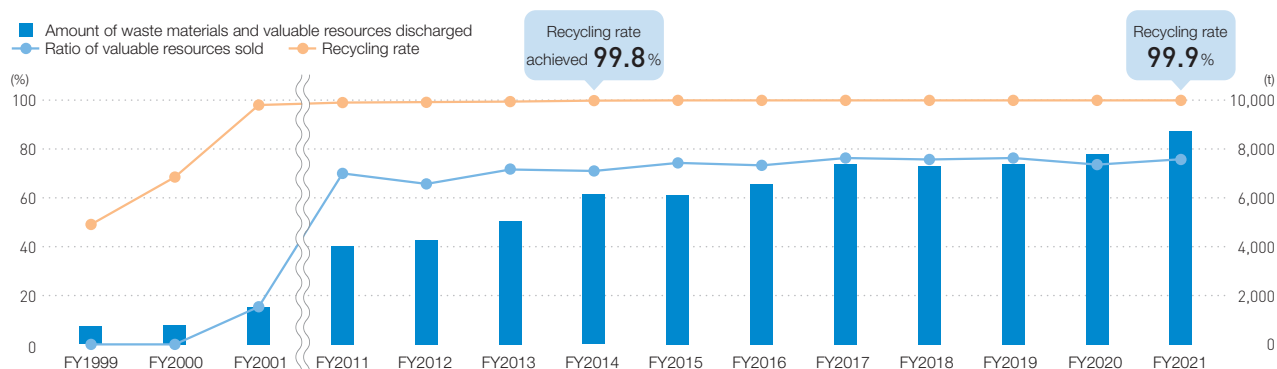


## Effective Use of Resources

The JAE Group makes effective use of resources by reducing general waste through the consumption of less paper, while promoting recycling and sale of valuable resources through the exhaustive sorting of waste, such as scrap plastic and metal.

We achieved our target of a 99% recycling rate in fiscal 2004. Following this, we have continued to advance activities and in fiscal 2014, we achieved a rate of 99.8% and in fiscal 2021, we recorded a rate of 99.9%. We seek to sell valuable waste such as plastic and metal waste and work to reduce costs for waste treatment. The sale of valuable waste contributes to resource saving and the reduction of CO<sub>2</sub> over the life cycle of products. The JAE Group aims to achieve even higher rates of sales.

### Change in Waste Treatment (Japan Aviation Electronics Industry, Limited non-consolidated)



(Note) Valuable resources are not included in the fiscal 1999 and fiscal 2000 figures.

### TOPICS

#### Promoting Conversion of Waste Plastics into Valuable Resources

JAE has been tackling the issues of improving recycling quality and cutting processing costs by thoroughly separating waste according to the different types of waste plastic material, reviewing processing details and the selection of recycling vendors. In June 2021, the Plastic Resource Circulation Act was promulgated (enforced in April 2022), requiring the promotion of plastic resource circulation initiatives (3R + Renewable) by all entities involved from product design through the plastic waste treatment. From the second half of fiscal 2021, the Company launched new initiatives to convert waste plastic into valuable resources, and has achieved a conversion rate of around 20%. (Results for Japan Aviation Electronics Industry, Limited non-consolidated)

## Society

### Respect of Human Rights

JAE Group establishes JAE Group Charter of Corporate Behavior to contribute to the creation of a sustainable growth in society and to fulfill social responsibilities as a good corporate citizen.

JAE Group Charter of Corporate Behavior states that "JAE Group will respect human rights in every corporate activity and not condone discrimination or the employment of child labor or forced labor in the workplace." Specifically, JAE Group is committed to observing the principles and rules stated below.

1	Elimination of Discrimination and Inhumane Treatment	4	Appropriate Working Hours
2	Prohibition of Child Labor	5	Proper Wages
3	Prohibition of Forced Labor	6	Freedom of Association

► Our initiatives regarding human rights can be found here:

[https://www.jae.com/en/csr/human\\_rights/](https://www.jae.com/en/csr/human_rights/)

### Employee-friendly Work Environments

We work on providing flexible work environments where employees are able to choose their own workstyles to maximize work-life balance and to create a workplace worth working for.

#### ■ Work System

We introduce a flextime system and a remote work system to improve work efficiency and productivity and ensure a work-life balance for employees. Employees can make use of the flextime system to enable them to work flexibly to suit their individual lifestyles. In addition, for the remote work system, we are promoting an information and communication technology (ICT) environment that enables employees to work in any place as a new workstyle option.

#### ■ Work with Childcare and Nursing Care

We provide various systems that help employees balance work with childcare and nursing care, such as shortened working hours for childcare and nursing care, special leave that can be taken when an employee's child is ill or injured or when a family member needs nursing care, and childcare and nursing care leave systems.

### Employee Health and Safety

We strive to realize safe, employee-friendly work environments, and securing the health and safety of employees has been positioned as one of the Company's management priorities.

#### ■ Safety Measures

We have built a comprehensive health and safety management system and work to advance health and safety measures at each workplace and to share information. As part of our safety measures, we protect our employees and properties by carrying out safety training for every employee and a mandatory assessment every time new equipment is installed.

#### ■ Health of Our Employees

In order to maintain and enhance the health of employees, we have established a Health Care Center, which provides active follow-up on the results of regular health checks and health consultations by physicians and health nurses.

We are also focusing on mental health and in addition to providing a physician for consultations, we have also introduced a service by an external specialist company to create a framework where employees can receive counseling at any time. Furthermore, in response to COVID-19, we worked to firmly establish basic infection countermeasures, such as avoiding closed spaces, crowded places, and close-contact settings, and using hand sanitizer, conducted workplace vaccinations and promoted initiatives aimed at creating work environments with an awareness of employee safety and health.



## Human Resources Development

Our basic view on human resources development is to “grow as a company by ensuring each individual can fully demonstrate their capabilities and to enable each employee to create an enriching life.”

### ■ Self-Assessments and Training Systems

Through two-way management, in which employees declare their own work goals and ability-improvement goals and express their commitment to their superiors, we are working to develop human resources by raising the spirit of taking on challenges and motivation for self-development of each employee.

### ■ Training Systems

We offer programs such as training by job level that provides knowledge tailored to an employee's experience and role, as well as training for different skills, which deepens specialist knowledge. We strive to provide participation-type training in which participants can train in practical skills and have discussions. These programs aim to maximize an individual's skills.

We also use e-learning systems that fit to diverse workstyles as well as establish learning environments to enable live classes to be taken online.

#### JAE Group training system

Level	Training by level	Specialized education by function	Global internationalization education	Self-development support
Managers	Management training Business strategy training	Acquisition of National Trade Skill Test certificates DX promotion training	Elective English language training and foreign culture training TOEIC Test	Correspondence education and e-learning/Self-development workshops
Assistant managers/ team leaders	Leadership training	Technology training Sales training		Life planning training
Mid-level employees Young employees	Business skills basic training	Training for management methods IT literacy training		
New employees	New employee training		Intensive English language training	

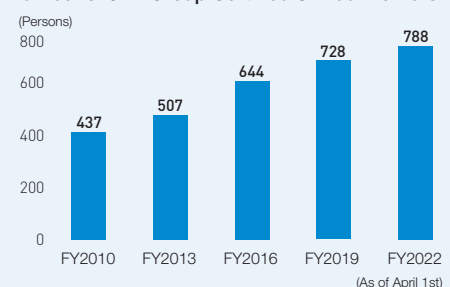
#### TOPICS

##### Financial Incentive System for Acquiring National Trade Skill Test certificates

The JAE Group is promoting human resource development to strengthen its manufacturing technologies. In particular, at JAE itself and all of the production Group companies in Japan, we have been providing support and practical guidance to help employees acquire “National Trade Skill Test certificates,” which are national qualifications.

In 2013, we introduced a new system that provides financial incentives to employees for acquiring “National Trade Skill Test certificates.” The system has further motivated employees, leading to a large number of new technicians becoming qualified each year.

##### Number of JAE Group Certified Skilled Workers



## Society

## Diversity

We are promoting efforts to realize a work environment where diverse human resources can participate, regardless of age, gender, nationality, or disabilities.

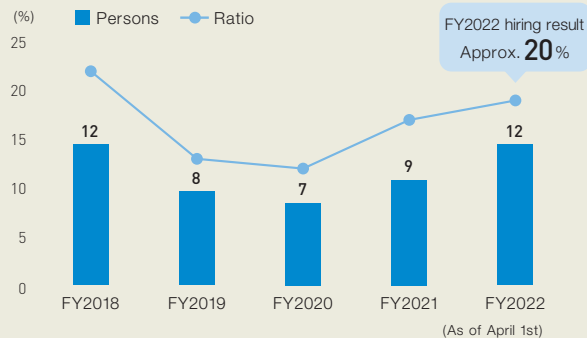
### Promotion of Women's Participation and Advancement in the Workplace

JAE has taken various measures to support the balancing of work with childcare and as a result, many women are returning to work following childbirth and childcare leave. The average length of service for women is 16.2 years, roughly the same as for men, and we are building environments that enable employees to continue working with the Company.

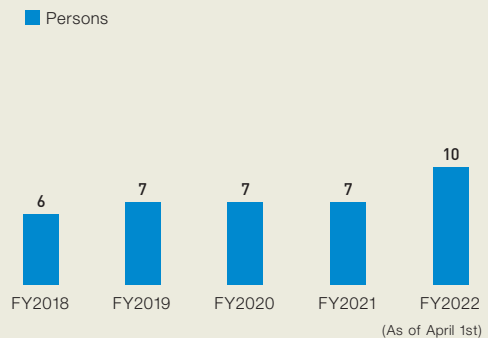
Currently, the ratio of women among all employees is low, and there are also few female managers. However, to increase the ratio of female employees, we are steadily raising targets for the ratio of female recruits during the regular recruiting of new graduates and actively recruiting women, aiming for a target of 25% or higher by fiscal 2025.

Moreover, we have been conducting selection-based training for female employees aimed at appointing female managers, as well as strengthening hiring of experienced female managers.

#### Ratio and Number of Women among Regular Recruitment of New Graduates



#### Number of Female Managers



As an initiative to prepare the working environment, we hold round table meetings for all female managers at which we come up with ideas to enable female employees to participate and reflect them in measures, and facilitate the creation of networks through which female employees can consult one another.



Round table meeting of female managers

### Persons with Disabilities

We strive to make work fulfilling for employees with disabilities by considering the circumstances of each individual's disability and employing them in a field where they can excel, and by establishing employee-friendly work environments.

As a company, we will continue to actively employ people with disabilities and fulfill our social responsibilities by expanding employment opportunities.

### Global Human Resources

We have overseas production bases and work with customers all over the world, which requires us to recruit globally minded human resources.

We are diversifying our workforce to strengthen operations by actively recruiting diverse personnel regardless of nationality, particularly in technical, sales, and business staff divisions.

## CSR Procurement

In order to respond to the demands of society, we believe it is necessary to cooperate with business partners and speedily develop CSR initiatives throughout the supply chain. The JAE Group published the first edition of its CSR Procurement Guidelines in March 2015. Due to the increasing trend for risks related to conflict minerals, in September 2021, we published the fifth edition, with an updated section on “Response to responsible minerals procurement.”

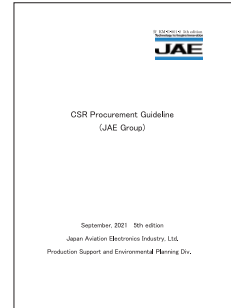
- ▶ Our CSR Procurement Guidelines can be found here:

<https://www.jae.com/en/corporate/materials/csr/>

Moreover, in addition to recent earthquakes and abnormal weather events, the JAE Group faces a range of risks, including pandemics such as COVID-19 and difficulty in obtaining resources associated with the situation in Ukraine. It is becoming increasingly important to have a business continuity plan (BCP) to prepare for such risks in advance. The JAE Group prepared the first edition of its Supply-Chain BCP Guidelines in September 2021, based on cooperation with customers and suppliers.

- ▶ Our Supply-Chain BCP Guidelines (in Japanese only) can be found here:

<https://www.jae.com/corporate/materials/bcp/>



### TOPICS

## Announcement of the Declaration of Partnership Building

The Company announced its Declaration of Partnership Building on March 2, 2022, having agreed with the Declaration of Partnership Building created by the “Council on Promoting Partnership Building for Cultivating the Future,” whose members include the chairman of the Keidanren, the chairman of the Japan Chamber of Commerce and Industry, the president of the Japanese Trade Union Confederation, and relevant government ministers.

The Declaration of Partnership Building is made in the name of company representatives, as a commitment to building new partnerships by promoting links, co-existence, and co-prosperity with business partners in the supply chain and business operators working to create value.

The Company will continue to build supply chains with its suppliers based on the CSR Procurement Guidelines, and to create value for customers and society.

- ▶ JAE’s “Declaration of Partnership Building” can be found here (in Japanese only)

<https://www.jae.com/files/user/topics/2022/partnership.pdf>

## Donations to Contribute to Social Education Projects

With a view to contributing to society, the JAE Group makes donations to local government organizations that have provided various guidance and support to its business activities over the years.

As part of this, in fiscal 2021 the Group made a donation to Hirosaki City, Aomori Prefecture, where JAE Hirosaki, Ltd. is located, to help enhance a social education-related project. The donation is to be allocated to the renewal of the Hirosaki Culture Center’s planetarium.

In addition, at JAE Yamagata, Ltd., a donation made by the Group was used to install large monitors and PCs at all elementary and junior high schools and compulsory education schools in Shinjo City, Yamagata Prefecture.

The JAE Group will continue its activities for contributing to local communities.



Donation presentation ceremony

## Governance

### Corporate Governance

#### ■ Basic views

We believe that corporate governance means abiding by relevant laws and rules and fulfilling our social responsibilities to stakeholders, including shareholders, customers, business partners, and communities, with the aim of maintaining fair profits, increasing corporate value, and contributing to the creation of sustainable growth in society through corporate management based on our corporate philosophy of “Explore, Create and Practice.”

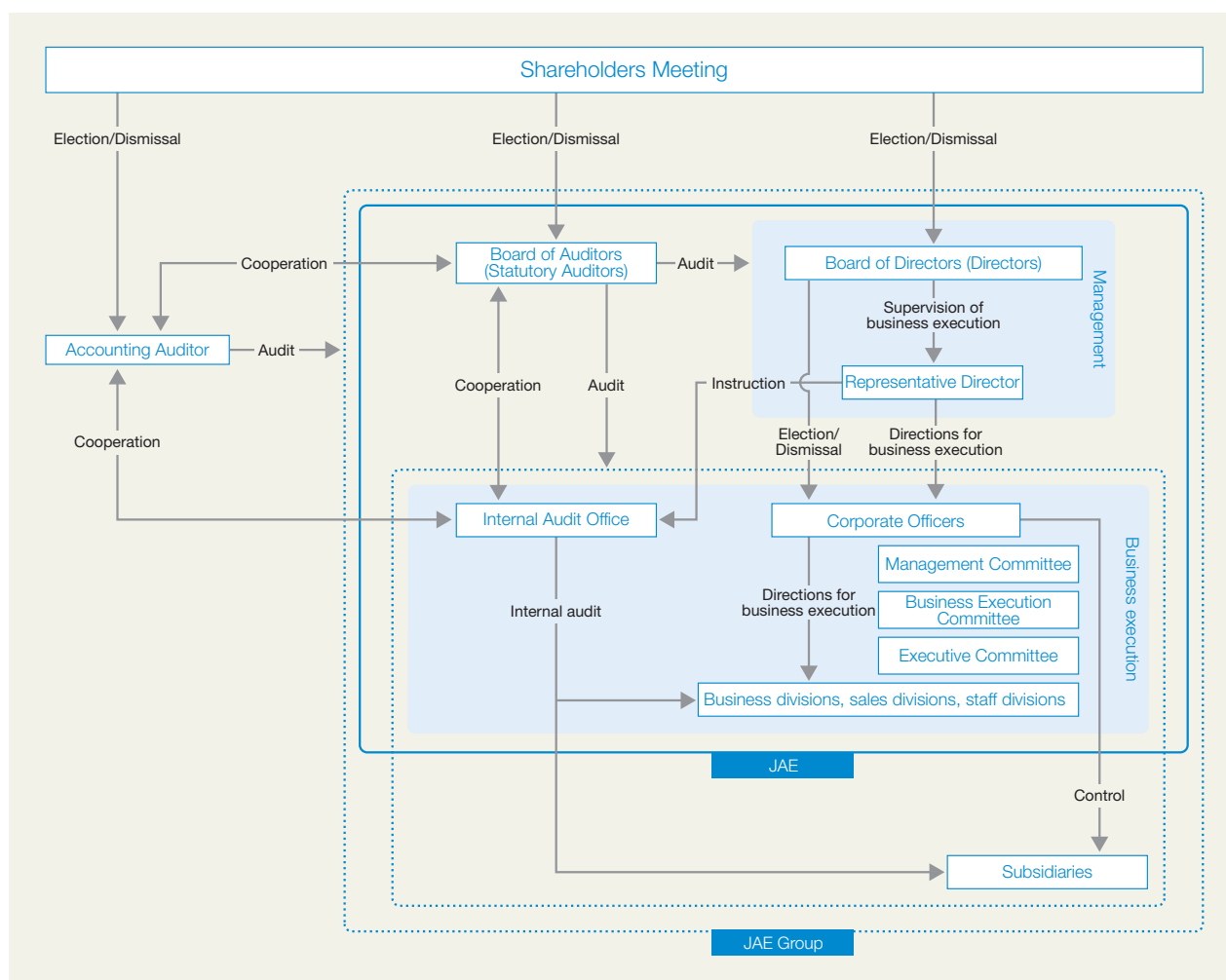
#### ■ Transition to the Prime Market

We have achieved growth in global markets focusing on our 3 core businesses, where approximately 70% of the businesses are overseas, and going forward, we must further promote global business expansion based on the consolidated management of the JAE Group including all its subsidiaries, which is one of the goals of our Basic Management Policy. In addition, if we exclude our controlling shareholder NEC Corporation, the Company's shareholder composition includes foreign shareholders who hold nearly 50% of the number of shares owned and we receive investments from global capital markets.

Given the above reasons, the Company selected the Prime Market in conjunction with the Tokyo Stock Exchange's market restructuring and transitioned to the Prime Market on April 4, 2022.

#### ■ Corporate governance framework

We have built a corporate governance framework that enables swift decision making and agile management by establishing a Board of Directors comprising nine Directors (including five Directors who also serve as Corporate Officers and four non-executive Directors, three of whom are outside Directors), Management Committee mainly comprising five Directors who also serve as Corporate Officers, and the Business Execution Committee and the Executive Committee comprising Corporate Officers and executive members. These management structures serve as a body for making management decisions and carrying out business execution and internal controls. We have also adopted a Board of Auditors system comprising two full-time Statutory Auditors and two outside Statutory Auditors and we have established an Internal Audit Office (six staff members) as an internal controls division.





## Policy and Process for Nominating Officers

Regarding Directors and Statutory Auditors, as our policy, we nominate candidates who possess outstanding character and insight based on abundant experience and a track record and who can fully carry out the roles and responsibilities of a Director or Statutory Auditor, regardless of whether they are from inside or outside the Company. Regarding inside Directors, we nominate candidates who have abundant knowledge and experience concerning our business field. Regarding outside Directors, we nominate candidates who are highly knowledgeable of their professional field. Regarding Statutory Auditors, we nominate candidates who have appropriate knowledge related to areas such as law, finance, and accounting. Based on this policy, candidates for Directors and Statutory Auditors are decided on by the Board of Directors from candidates proposed by the Representative Director, following an advance explanation to independent outside Directors and after obtaining the consent of the Board of Auditors regarding candidates for Statutory Auditors.

## Composition of Officers

### ■ View on the appropriate balance between knowledge, experience and capabilities and on diversity of the members of the Board of Directors as a whole

The Board of Directors, from the perspective that extensive insight is necessary to make important decisions regarding the Company's management and fulfill the responsibility of supervising the overall execution of business, has identified the skills that its members should have and created a skill matrix that lists those skills, and selects candidates for Director considering the appropriate balance between knowledge, experience and capabilities and the diversity of the members of the Board of Directors as a whole.

### ■ Officer skill matrix (at the conclusion of the 92nd Annual General Meeting of Shareholders held on June 23, 2022)

Name	Title	Corporate management	Global	Accounting and finance	Legal and compliance	Technology and manufacturing	Sales and marketing	Human resources development and personnel affairs
Tsutomu Onohara	President (Representative Director)	●	●			●		
Minoru Urano	Director	●	●			●		
Tetsuya Nakamura	Director	●		●	●			●
Masayuki Muraki	Director	●	●			●		
Masahiro Matsuo	Director		●				●	
Shiro Hirohata	Director (Outside Director)				●			
Shuichi Kashiwagi	Director (Outside Director)				●			
Reiichiro Takahashi	Director (Outside Director)		●					
Motoo Nishihara	Director (Part-time Director)		●			●		
Yasutoshi Ogino	Statutory Auditor (Full-time Statutory Auditor)	●	●	●				
Tatsuo Shibuya	Statutory Auditor (Full-time Statutory Auditor)		●	●				
Jin Takeda	Statutory Auditor (Outside Statutory Auditor)				●			
Keiji Kabeya	Statutory Auditor (Outside Statutory Auditor)			●				

### Definitions of each skill

Skill	Skill definitions
Corporate management	Knowledge and experience as a member of the top management of a company
Global	Knowledge and experience concerning international affairs, overseas business and international transactions
Accounting and finance	Knowledge and experience concerning accounting and finance
Legal and compliance	Knowledge and experience concerning legal and compliance
Technology and manufacturing	Knowledge and experience concerning technology and manufacturing that will expand and develop the Company's business
Sales and marketing	Knowledge and experience concerning sales and marketing that will expand and develop the Company's business
Human resources development and personnel affairs	Knowledge and experience concerning human resource strategy, such as human resource development, which includes diversity, as well as personnel affairs and labor

## Evaluation of the effectiveness of the Board of Directors

With the aim of improving the effectiveness of the Board of Directors, the Company conducted a survey of all members of the Board of Directors (Directors and Statutory Auditors) and analyzed and evaluated the aggregate results after they were reported to and deliberated by the Board of Directors.

### [Overview of the results of the analysis and evaluation for fiscal 2021]

Based on the following survey items and perspectives, the effectiveness was evaluated at the meeting of the Board of Directors held in May 2022 and it was determined that the overall effectiveness of the Board of Directors is sufficiently ensured.

- Composition of the Board of Directors
- Roles of the Board of Directors
- Deliberations in the Board of Directors
- Operation of the Board of Directors
- Support structure for Directors

However, there were some opinions received for individual items, including the composition and roles of the Board of Directors, further strengthening of risk management, and further enhancement of materials for matters to be discussed and provision of information in advance.

The Board of Directors will continue to make efforts to further improve its effectiveness in light of these results, opinions, etc.

## Governance

### Officer Remuneration System

Our policy for determining the content of remuneration, etc. for individual Directors, (the “Determination Policy”) has been set as follows. The Determination Policy was decided by a resolution of the Board of Directors.

#### 1. Basic policy

When determining remuneration for individual Directors, as the Company's basic policy, we take into consideration appropriate level based on the position and performance of each Director. Specifically, remuneration for Directors comprises remuneration to be paid monthly as fixed remuneration, director bonuses as performance-linked remuneration, and share acquisition rights as share option remuneration (“Share Options”). However, remuneration for non-executive Directors (part-time), including outside Directors, only comprises monthly remuneration.

#### 2. Policy regarding the setting of amounts for basic remuneration, etc. (monetary remuneration) for individual Directors

(Includes policy for timing and conditions for paying remuneration, etc.)

Monthly remuneration for Directors is paid as a fixed amount set in consideration of appropriate levels and based on standards including whether said Director has representation rights, their position, and other factors, within the scope of a total monthly remuneration amount that has been approved at the Shareholders Meeting. Additionally, a portion of monetary contribution for the shareholding association has been set as part of the monthly remuneration for Directors (full-time) based on a resolution of the Board of Directors. A set amount of money is contributed to the association in accordance with position as remuneration for the purpose of purchasing the Company's shares.

#### 3. Policy regarding the determination of the content of and methods for calculating amount of performance-linked remuneration and non-monetary remuneration

(Includes policy for timing and conditions for paying remuneration, etc.)

For director bonuses, which have been positioned as performance-linked remuneration, performance results such as consolidated ordinary profit and consolidated net profit for the relevant fiscal year have been set as standards with a view to reflecting performance over a single fiscal year. The overall amount, which is determined in consideration of factors such as the number and position of Directors, is proposed to and approved by the Shareholders Meeting. The amount allocated to individual Directors is decided based on each Director's position and performance in their area of responsibility. It is paid at a set time each year. Share Options are awarded within the scope of the annual remuneration amount that has been approved at the Shareholders Meeting. The number to be awarded is determined in accordance with each Director's position with the purpose of raising morale and motivation to improve performance of the Company and awarded at a set time each year.

#### 4. Policy regarding the determination of the ratios of the amount of monetary remuneration, amount of performance-linked remuneration and amount of non-monetary remuneration for each individual Director's remuneration

Monthly remuneration, director bonuses, and Share Options are calculated based on the policies outlined above within the scope that has been approved at the Shareholders Meeting.

#### 5. Matters regarding the determination of the content of remuneration, etc., for individual Directors

The determination of the allocation of monthly remuneration and director bonuses within the amount of remuneration for each Director has been entrusted to the Representative Director at a meeting of the Board of Directors on the precondition that it will be determined based on the policies outlined above. For Share Options, the number to be awarded is determined by the Board of Directors based on the policies outlined above.

Remuneration, etc. for Statutory Auditors comprises monthly remuneration only. The amount is determined through discussion among Statutory Auditors within the scope of a total monthly remuneration amount that has been approved at the Shareholders Meeting. Additionally, a portion of monetary contribution for the shareholding association has been set as part of the monthly remuneration for Statutory Auditors (full-time). The remuneration includes a set amount of money to be contributed to the association as remuneration for the purpose of purchasing the Company's shares.

### Relationship with NEC Corporation and Protecting the Rights of Minority Shareholders

NEC Corporation (“NEC”) effectively holds 50.9% of the Company's voting rights. NEC is our parent company.

The Company receives supervision and advice from three independent outside Directors and audits from two independent outside Statutory Auditors for whom there is no risk of a conflict of interest with minority shareholders.

In addition, in the memorandum of understanding made by the Company and NEC when NEC made a takeover bid for the Company, it was agreed that the Company's shares shall remain listed, the Company shall carry out independent management as a listed company, NEC shall hold no more than 51% of voting rights of the Company, and that NEC shall give full consideration to the exercising of rights by minority shareholders of the Company. This was made clear in the Company's announcement of expression of opinion concerning the takeover bid by NEC issued on November 28, 2016.

Moreover, if the Company's Board of Directors finds there are material transactions or actions that create a conflict between the interests of NEC and those of minority shareholders, such matters will be brought before the Board of Directors and dealt with in principle only after the agreement of all independent outside Directors is obtained in advance.

At present, the monetary sum to which transactions between the Company and NEC amount is immaterial. Conditions of transactions are decided by negotiation on a case-by-case basis, and they are given the same treatment as other business counterparties are given.

The Company takes these measures to protect the interests of minority shareholders are upheld.

## Compliance

### ■ Legal Compliance Initiatives

1. We have formulated the JAE Group Charter of Corporate Behavior and Code of Conduct to ensure thorough compliance with laws, regulations, and the Articles of Incorporation. The President also gives a speech on the “Compliance Day.”
2. We have established an internal reporting system as a whistle-blowing system for instances in which action that violates laws, regulations, or the Articles of Incorporation is discovered.
3. The Company has built a system to ensure financial reports are created in an appropriate manner in accordance with laws, regulations, etc., and the trustworthiness of these reports, and this system is continuously evaluated and corrected when necessary.
4. In regard to undue demands from antisocial forces, we ensure the safety of directors and employees by dealing with these demands as an entire organization and in cooperation with external experts. We resolutely refuse any connections, including business dealings, with such antisocial forces.

## Risk Management

### ■ Initiatives

The JAE Group has established a committee that conducts risk management for the overall group and the management of specific risks that could lead to losses is carried out by the respective divisions responsible in accordance with the type and nature of said risks. Each responsible division formulates rules for the management of risks that could lead to losses, builds a management structure, and carries out education and other initiatives.

The Internal Audit Office evaluates the severity of risks that could lead to losses, as well as the effectiveness of the management structure and other preparations by each division, and strives to detect and prevent such risks.

### ■ Management of Group-wide Risks

The JAE Group takes a broad overall perspective when organizing the risks affecting the entire group, and has established the Risk Management Committee as a risk management structure to implement measures before risks manifest. The Risk Management Committee is chaired by the President, and its members consist of the Corporate Officers in charge of each business group, the general managers of the staff divisions, the general manager of the Internal Audit Office, and the full-time Statutory Auditors also attend as observers. The committee is held four times annually and it identifies, evaluates and formulates countermeasure policies for risks.

The first role of the Risk Management Committee is to share information on risk events (risks that have manifested), revise the measures taken to prevent such risks, and thereby strengthen recurrence of such risk events. Information concerning operational audits, internal controls, etc. are shared in the committee and countermeasures are discussed.

The second role of the committee is to identify the priority risks that the JAE Group needs to be vigilant against. The committee assesses the probability and severity of potential risks as determined by each department, the status of such risk management and the countermeasures put in place.

### ■ Business Risks

Among the matters concerning the overview of business, financial information, etc., the following key risks that are recognized by the management as having the potential to exert material impact on the financial position, operating results, and cash flows of consolidated companies.

- Impact of COVID-19
- Global semiconductor shortage
- Impact of the competitive environment and price decreases
- Disposal of production equipment and facilities
- Information security
- Incidental impacts on overseas development
- Fluctuation in mobile devices market
- Prices and availability of raw materials
- Securing of human resources
- Impact of natural disasters, etc.

## Governance

## ■ Directors, Statutory Auditors and Corporate Officers (As of June 23, 2022)

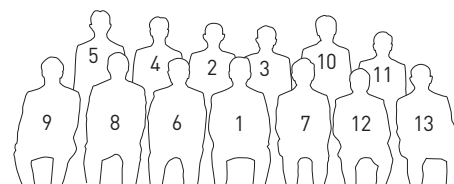


## Directors

- |  |  |  |
|--|--|--|
| 1 Tsutomu Onohara<br>President (Representative Director) | 2 Minoru Urano<br>Director                           | 3 Tetsuya Nakamura<br>Director                     |
| 4 Masayuki Muraki<br>Director                            | 5 Masahiro Matsuo<br>Director                        | 6 Shiro Hirohata<br>Director (Outside Director)    |
| 7 Shuichi Kashiwagi<br>Director (Outside Director)       | 8 Reiichiro Takahashi<br>Director (Outside Director) | 9 Motoo Nishihara<br>Director (Part-time Director) |

## Statutory Auditors

- |  |   |
|--|---|
| 10 Yasutoshi Ogino<br>Statutory Auditor<br>(Full-time Statutory Auditor) | 11 Tatsuo Shibuya<br>Statutory Auditor<br>(Full-time Statutory Auditor) |
| 12 Jin Takeda<br>Statutory Auditor<br>(Outside Statutory Auditor)        | 13 Keiji Kabeya<br>Statutory Auditor<br>(Outside Statutory Auditor)     |



## Corporate Officers

President	Executive Vice President	Senior Vice President	Senior Vice President	
Tsutomu Onohara*	Minoru Urano*	Tetsuya Nakamura*	Masayuki Muraki*	
Associate Senior Vice Presidents				
Kokichi Sasao	Toru Kono	Takashi Kosaka	Tsuneo Hashimoto	Masahiro Matsuo*
Shunichi Naganuma	Noritaka Hiyama	Yasuhiro Nose	Kazuhiko Aoki	Shingo Nanao
Noriyuki Konishi	Yoshifumi Kubota	Takayuki Koike		

Directors are indicated by an asterisk (\*)



## Message from Outside Directors

Since my appointment as outside Director of the Company, I have had lively and frank discussions with the other directors and participated in the Company's management decision making, from the point of view of compliance which is a fundamental part of our business activities.

In order for a company to be able to operate its business on an ongoing basis it is important to have a sustainable organization as the foundation of those business activities. The Company's objective to conduct sustainability management is set forth as a basic policy in the Medium-term Management Plan announced by the Company last year. Amid a climate of increasing uncertainties in the external environment, I believe I can respond to the wishes and risks of society by utilizing my experience up until now in risk management and compliance.

I will continue to provide supervision and advice regarding the Company's business execution from an objective and neutral standpoint and contribute to the further development of the Company.

I was appointed as an outside Statutory Auditor of the Company in 2017, and served in that role until I was appointed last fiscal year as an outside Director. In my involvement in the aforementioned capacity in the Company's management, I believe that I have leveraged my insight as a lawyer with over forty years' experience along with my specialist knowledge and experience in fields such as corporate law, corporate governance, risk management, and international business in the management of the Company. In April 2022, the Company's stock listing was moved to the Prime Market as part of reorganization of the Tokyo Stock Exchange. As a listed company in the Prime Market, we are expected to uphold governance and compliance systems that are of a higher than ever quality. To ensure we do so, while we conduct measures in line with the approach of Japan's Corporate Governance Code, we are giving thought to the necessity of executing initiatives aimed at the improvement of effectiveness of the Board of Directors based on the recognition that we have challenges concerning initiatives for the development of human resources and improvements in diversity to achieve sustainable growth. While recognizing these challenges, I wish to leverage my experience on the board and in various auditing roles at various organizations and companies and my insight as a lawyer to contribute to enhancing the Company's corporate value while cooperating with my fellow outside Directors.

I have been providing supervision and advice regarding the Directors' performance of duties as an outside Director of the Company since last year. In the Board of Directors meetings, I have exchanged my view on improving corporate value and achieving sustainable growth from the viewpoints of international affairs and economics based on in particular my long-standing overseas experience.

Last fiscal year, the Company took great efforts to recover from the COVID-19 pandemic and made a steady start toward achieving the Medium-term Management Goals. However, in the space of one year, the business environment has changed considerably and the degree of uncertainty in the outlook has increased. While we conduct global business activities under such circumstances, it is important that we maintain an up-to-date grasp of world affairs and respond to these changes.

I will use my experience to date to fulfill my role to observe from an outside perspective focused in particular on international affairs and economy and to contribute to highly transparent governance.

### Shiro Hirohata

Outside Director



#### Career summary

Apr. 1976 Joined National Police Agency  
Jan. 1999 Chief, Tochigi Prefectural Police Headquarters  
Jan. 2003 Chief, Fukuoka Prefectural Police Headquarters  
Sep. 2006 Director-General, Kinki Regional Police Bureau  
Jul. 2007 Retired from National Police Agency  
Sep. 2007 Director, Japan Road Traffic Information Center  
Apr. 2012 Vice Chairman  
Jul. 2013 Advisor, Meiji Yasuda Life Insurance Company  
Jun. 2014 Outside Director of the Company (current position)  
May 2015 Chairman, UTMS Society of Japan

### Shuichi Kashiwagi

Outside Director



#### Career summary

Apr. 1980 Qualified & Registered as Attorney-at-Law in Japan (Daini Tokyo Bar Association)  
Oct. 1999 Board Member, Japan Commercial Arbitration Association  
May 2007 Vice Chairman, Japan Federation of Lawyers Cooperatives  
Jan. 2009 Managing Partner, KASHIWAGI SOGO LAW OFFICES  
Jun. 2010 Outside Audit & Supervisory Board Member, NAIGAI CO., LTD.  
Apr. 2016 Auditor of Daini Tokyo Bar Association  
Apr. 2016 Outside Director (acting as Audit and Supervisory Committee Member), NAIGAI CO., LTD.  
Jan. 2017 Outside Statutory Auditor of the Company  
Jun. 2021 Outside Director (current position)  
Jun. 2022 Auditor, Japan Commercial Arbitration Association (current position)

### Reiichiro Takahashi

Outside Director

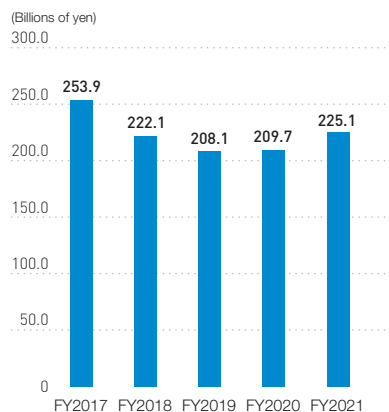
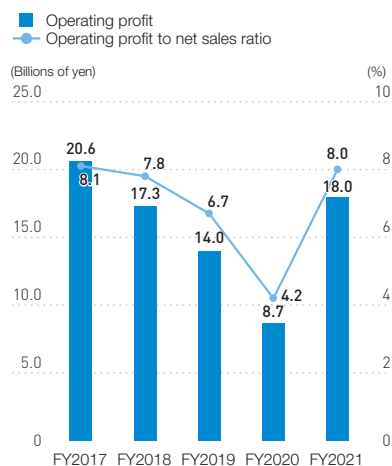
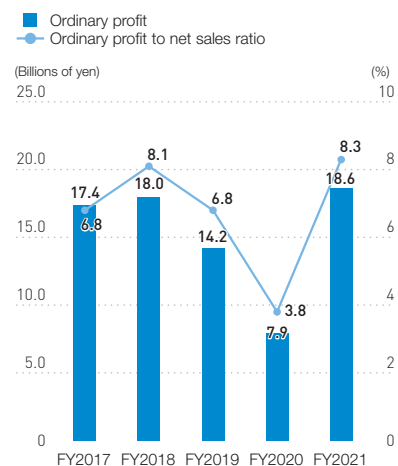
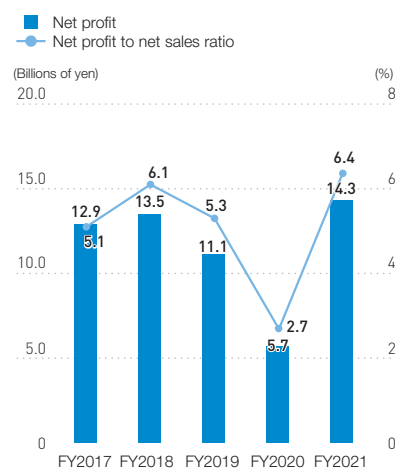
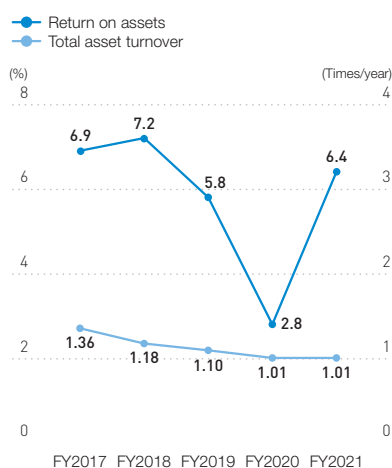


#### Career summary

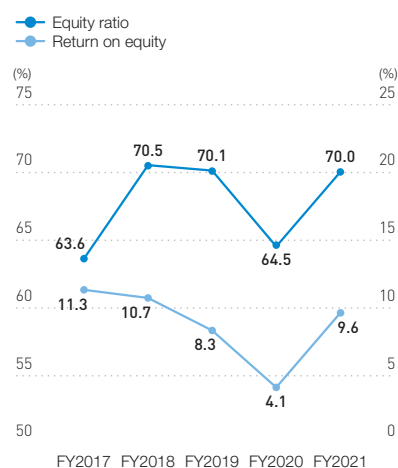
Apr. 1980 Joined Ministry of Foreign Affairs  
Nov. 2007 Minister, Deputy Chief of Mission, Embassy of Japan in Korea  
Jan. 2011 Ambassador Extraordinary and Plenipotentiary to Afghanistan  
Sep. 2012 Director-General of the International Peace Cooperation Headquarters, Cabinet Office  
Jan. 2015 Consul-General of Japan in New York (Ambassador)  
Dec. 2018 Ambassador Extraordinary and Plenipotentiary to Australia  
Jan. 2021 Retired from Ministry of Foreign Affairs  
Mar. 2021 Advisor, HAZAMA ANDO CORPORATION (current position)  
Jun. 2021 Outside Director of the Company (current position)

## Financial and Non-financial Highlights

Net sales

Operating profit/  
Operating profit to net sales ratioOrdinary profit/  
Ordinary profit to net sales ratioNet profit/  
Net profit to net sales ratioReturn on assets/  
Total asset turnover

Equity ratio/Return on equity

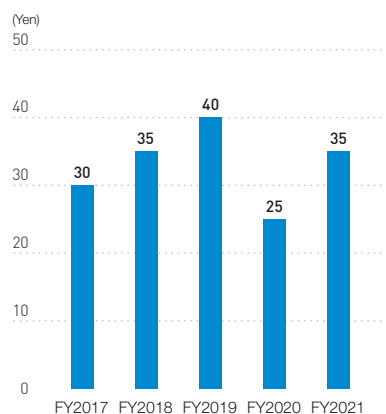


The figures for fiscal 2017 are presented after retrospective application as the Company has applied the following accounting standard, etc. from fiscal 2018.

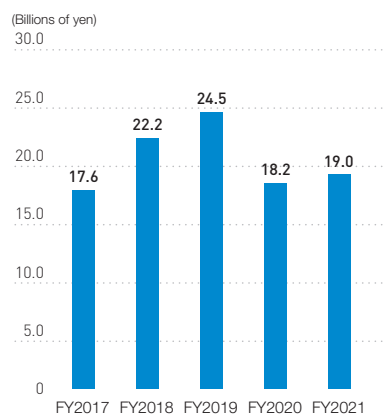
"Ministerial Order Partially Amending the Regulation for Enforcement of the Companies Act and the Regulation on Corporate Accounting" (Ministry of Justice Order No. 5 of March 26, 2018) issued in accordance with the "Partial Amendments to Accounting Standard for Tax Effect Accounting" (Accounting Standards Board of Japan (ASBJ) Statement No. 28, February 16, 2018)

With regard to changes in the calculation method of retirement benefit obligations, changes to the accounting method were carried out from fiscal 2020, so figures for fiscal 2019 are presented after retrospective application.

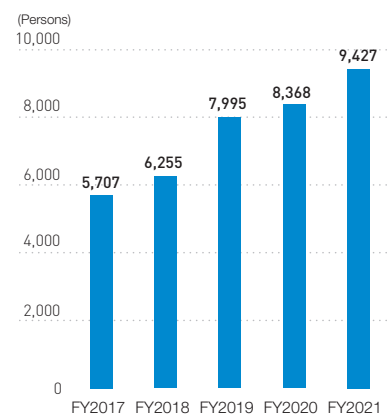
### Dividends per share



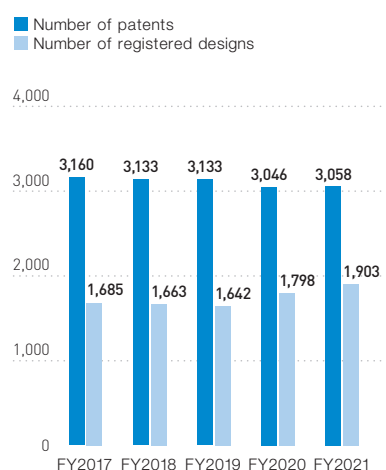
### Capital investment



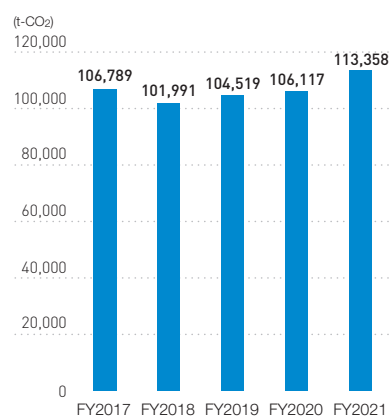
### Number of employees



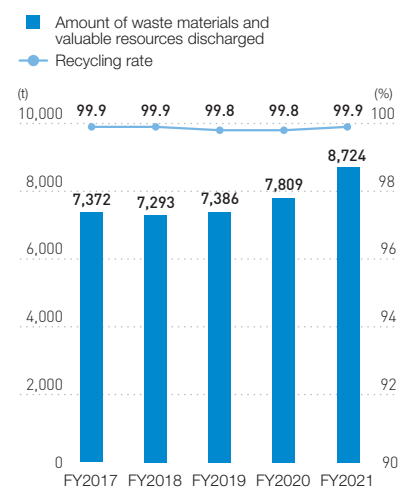
### Number of patents/ Number of registered designs (Non-consolidated)



### Greenhouse gas emissions (5 companies in Japan, 6 companies overseas)\*



### Waste emissions/Recycling rate (Non-consolidated)



\* Greenhouse gas emissions are the total amounts for Japan Aviation Electronics Industry, JAE Hiroasaki, JAE Yamagata, JAE Fuji, JAE Shinshu, JAE Taiwan, JAE Wuxi, JAE Wujiang, JAE Philippines, JAE Oregon and JAE Tijuana.



## Corporate Data

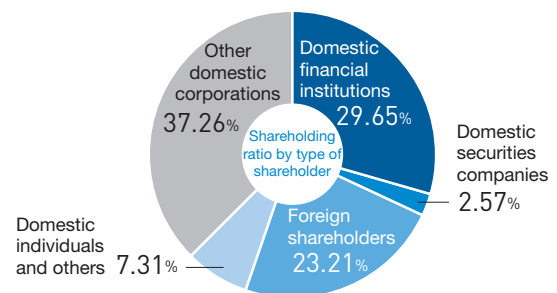
### Company Outline

Company Name	Japan Aviation Electronics Industry, Limited
Establishment of Business	August 20, 1953
Head Office	21-1, Dogenzaka 1-chome, Shibuya-ku, Tokyo
Capital	¥10.69 billion
Stock Exchange Listing	Tokyo Stock Exchange, Prime Market Securities Code: 6807
Main Business	Manufacturing and sales of connectors, user interface solutions (touch panels, touch panel monitors, panel units), and aerospace equipment (electronic devices, parts, and applied products for air and spacecraft).

### Shares of the Company (as of March 31, 2022)

Total number of shares authorized	350,000,000 shares
Total number of issued shares (including 1,309,945 treasury shares)	92,302,608 shares
Number of shares per share unit	100 shares
Number of shareholders	5,498

Shareholdings by Type of Shareholder



### Major shareholders (top 10 shareholders)

Name of shareholder	Equity investment in the Company	
	Number of shares held (shares)	Shareholding ratio (%)
NEC Corporation	32,491,671	35.71
Custody Bank of Japan, Ltd. (NEC Corporation Retirement Benefit Trust Account re-entrusted by Sumitomo Mitsui Trust Bank, Limited)	13,800,000	15.17
The Master Trust Bank of Japan, Ltd. (Trust account)	6,630,400	7.29
THE CHASE MANHATTAN BANK, N.A. LONDON SPECIAL ACCOUNT NO.1	4,625,200	5.08
Custody Bank of Japan, Ltd. (Trust account)	3,530,200	3.88
GOLDMAN SACHS INTERNATIONAL	2,008,724	2.21
JPMorgan Securities Japan Co., Ltd.	1,972,793	2.17
CHARLES SCHWAB FBO CUSTOMER	995,200	1.09
MSIP CLIENT SECURITIES	994,790	1.09
STATE STREET BANK AND TRUST COMPANY 505103	877,056	0.96

(Notes) 1. The Company also holds 1,309,945 treasury shares which have been excluded from the list of major shareholders and calculation of shareholding ratios shown above.

2. The 13,800,000 shares held by Custody Bank of Japan, Ltd. (NEC Corporation Retirement Benefit Trust Account re-entrusted by Sumitomo Mitsui Trust Bank, Limited) are trust assets held in a trust established by NEC Corporation at said bank. Voting rights for said shares are held by NEC Corporation in accordance with the trust contract.

## Global Subsidiaries

### Head Office/ Bases in Japan

■ Development and manufacturing ■ Manufacturing ■ Sales ■ Services/Others

#### Head Office

21-1, Dogenzaka 1-chome, Shibuya-ku, Tokyo

#### Head Sales Office

1-19, Aobadai 3-chome, Meguro-ku, Tokyo

#### Plants/ Branch Offices/ Sales Offices

##### ■ Akishima Plant

1-1, Musashino 3-chome, Akishima-shi, Tokyo

##### ■ Osaka Branch Office

9-1, Edobori 1-chome, Nishi-ku, Osaka-shi, Osaka

##### ■ Chubu Branch Office

25-18, Nishi-machi 4-chome, Toyota-shi, Aichi

##### ■ Sendai Sales Office

3-10, Honcho 2-chome, Aoba-ku, Sendai-shi, Miyagi

##### ■ Utsunomiya Sales Office

1-7, Higashi Syukugo 3-chome, Utsunomiya-shi, Tochigi

##### ■ Fukuoka Sales Office

1, Gokusho-machi 1-chome, Hakata-ku, Fukuoka-shi, Fukuoka

#### Subsidiaries in Japan

##### ■ JAE Hirosaki, Ltd.

5-1, Oaza Seinofukuro 5-chome, Hirosaki-shi, Aomori

##### ■ JAE Yamagata, Ltd.

4102-6, Aza Takadaishinden, Oaza Izumita, Shinjo-shi, Yamagata

##### ■ JAE Fuji, Ltd.

8154-35, Uenohara, Uenohara-shi, Yamanashi

##### ■ JAE Shinshu, Ltd.

800, Kamikatajiri, Matsukawa-machi, Shimoina-gun, Nagano

##### ■ Meiyu-Giken Co., Ltd.

2-1, Katayama-cho, Fukui-shi, Fukui

##### ■ JAE Hakko, Ltd.

1-1, Sakae-cho 6-chome, Tachikawa-shi, Tokyo

##### ■ Nikko Logistics, Corp.

10-40, Musashino 2-chome, Akishima-shi, Tokyo

##### ■ Hirosaki Hakko, Ltd.

##### ■ JAE Business Support, Ltd.

##### ■ JAE Foods, Ltd.

### Overseas bases

■ Development and manufacturing ■ Manufacturing ■ Sales ■ Services/Others

#### Asian Area

##### ■ JAE Taiwan, Ltd.

No.35, 20th, Rd., Industrial Park, Taichung, 40850, Taiwan

##### ■ JAE Wuxi Co., Ltd.

33 Xiqin Road, Xinwu District, Wuxi City, Jiangsu, 214028 P.R.China

##### ■ JAE Wujiang Co., Ltd.

859 Pangjin Road, Wujiang Economic and Technological Development Zone Suzhou, Jiangsu, 215200 P.R.China

##### ■ JAE Shanghai Co., Ltd.

8F, Jin Hong Qiao Business Building, No.8, 555 Gubei Road, Chang Ning District, Shanghai, 200051 P.R.China

##### ■ JAE Hong Kong Ltd.

Units 1810-1813, Level 18, Tower 1, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong

##### ■ JAE Dongguan Service Co., Ltd.

Rm801, 8/F, Changan Taishang Bldg., Dezhengzhong Road, Changan Town, Dongguan, Guangdong, 523850 P.R.China

##### ■ JAE Philippines, Inc.

JAE Philippines Building, Linares Extension, Gateway Business Park, Javalera, General Trias, 4107 Cavite, Philippines

##### ■ JAE Singapore Pte Ltd.

33 Tannery Lane, #02-01 Hoesteel Industrial Building, Singapore 347789

##### ■ JAE Korea, Inc.

5F, Korea Sanhak Foundation B/D, 329, Gangnam-daero, Seocho-gu, Seoul 06627, Korea

#### North American Area

##### ■ JAE Oregon, Inc.

11555 S.W. Leveton Drive, Tualatin, OR 97062, U.S.A.

##### ■ JAE Tijuana, S.A. de C.V.

Calle Cerro Colorado 16650 Int. 1 y 2. Colonia Niños Heroes Este. Tijuana, Baja California, C.P. 22120, Mexico

##### ■ JAE Electronics, Inc.

142 Technology Drive, Suite 100, Irvine, CA 92618-2430, U.S.A.

##### ■ JAE Houston, LLC

1100 W. Park One Dr., Sugar Land, TX 77478-2578, U.S.A.

#### European Area

##### ■ JAE Europe, Ltd.

Royal Pavilion, Tower 3, First Floor, Wellesley Road, Aldershot, Hampshire, GU11 1PZ, UK

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