

JEOL Ltd. INTEGRATED REPORT

2023

Fiscal year ended March 31, 2023

Seventy-four years supporting scientific technology around the world.

Carrying on the founding principles of “Research and Development,” we will contribute to scientific progress and



# “Creativity” and continue to societal development.

## Company Philosophy

On the basis of “Creativity” and “Research and Development,” JEOL positively challenges the world’s highest technology, thus forever contributing to the progress in both science and human society through its products.

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● Our History of “Creativity” and “Research and Development”

# Creating a Culture for Revealing Microstructures

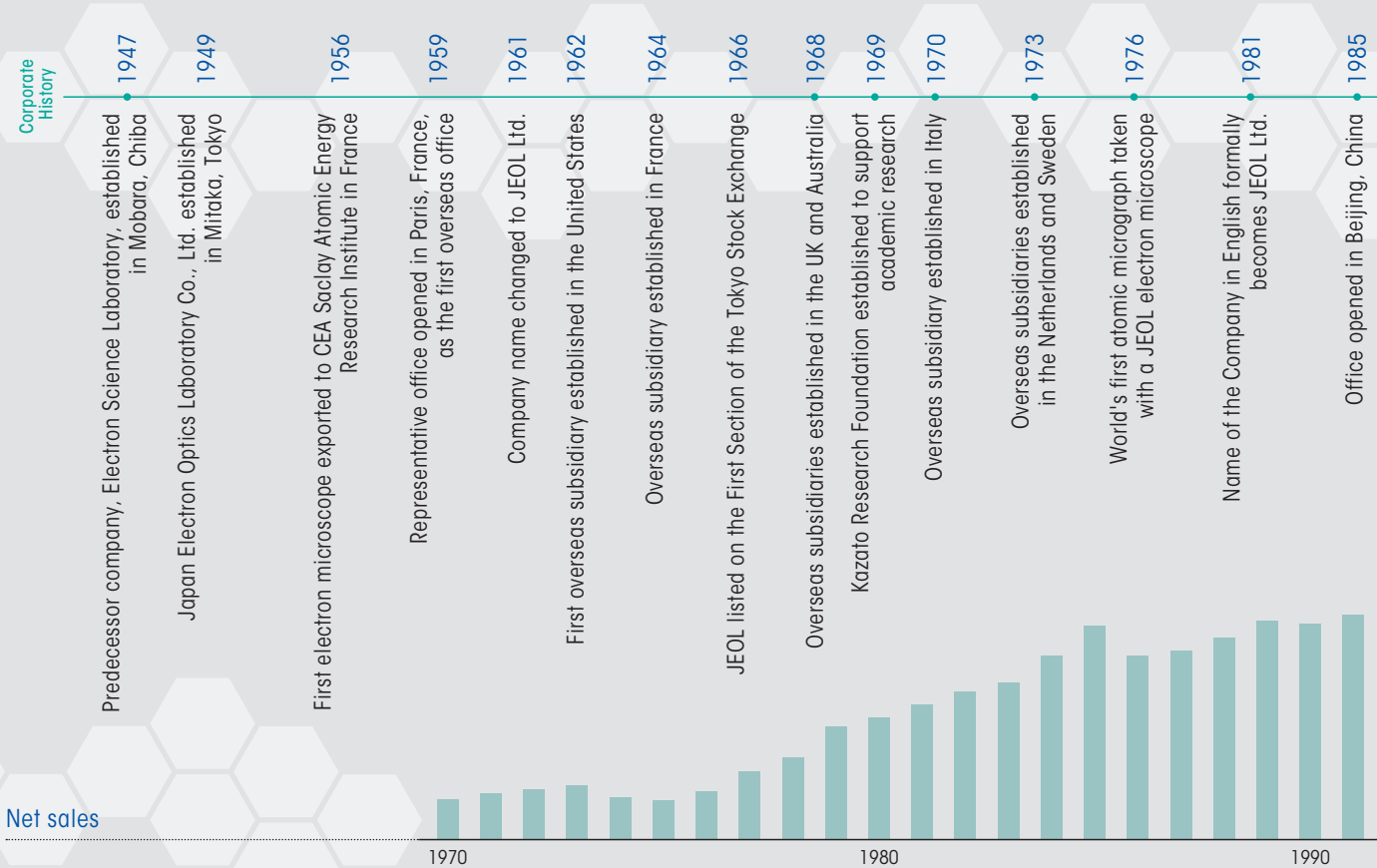
Kenji Kazato  
Founder

Kenji Kazato worked as a researcher at the Japanese Navy Technical Research Center and believed that the promotion of scientific technology would be essential for Japan’s reconstruction following World War II. With this in the background, he was captivated by a specialized book on electron microscopes.

Although he had never seen or touched an electron microscope, he sensed that their ability to allow people to see the microworld, normally invisible to the eye, held enormous potential for scientific advancement.

Recognizing the promise of nanotechnology at an early stage, Kenji Kazato saw that “creating a culture for revealing microstructures” was essential for scientific progress and set out on the path to develop electron microscopes.

In 1947, researchers who shared Kenji Kazato’s belief came together and formed JEOL’s predecessor company, Electron Science Laboratory, with the goal of producing electron microscopes.



## Visits by Nobel Prize winners



1972  
Dr. Shinichiro Tomonaga  
(Physics, Japan)



1980  
Dr. Linus Pauling  
(Chemistry and Peace, USA)



1980  
Dr. Alexander Prokhorov  
(Physics, Soviet Union)



1987  
Dr. Klaus von Klitzing  
(Physics, Germany)

The name JEOL is an acronym for the name of the Company at our founding:  
Japan Electron Optics Laboratory.  
JEOL is now a brand that is known worldwide.

### 1947 DA-1 magnetic field electron microscope

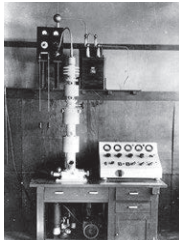
This was the first successful electron microscope developed by our predecessor, Electron Science Laboratory.

Based on the belief that there could be no post-war reconstruction in Japan without progress in science and technology, our founder, Kenji Kazato, and young associates began the development of electron microscopes.

This was a challenge that was almost a shot in the dark in the period of upheaval that directly followed the war. However, the team members were motivated by the spirit to rebuild Japan, so their combined hard work enabled them to complete this development in a short year and a half.

The completion of the DA-1 made national news; Emperor Showa and the Crown Prince (now Emperor Emeritus) came to see the microscope.

In 2010, a milestone in the development of electron microscopes, the National Museum of Nature and Science recognized the DA-1 as an Essential Historical Material for Science and Technology.

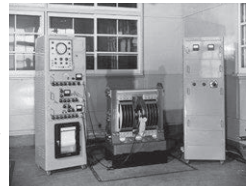


### 1956 JNM-1 nuclear magnetic resonance (NMR) system

The history of NMR goes back to 1944 with the discovery of this phenomenon, for which the scientists received the Nobel Prize in Physics. An overseas manufacturer released the first commercial NMR system in 1950, a time when this was considered a very special type of instrument for research. However, recognizing a highly niche market with few entrants, JEOL began work on NMR development as a new business. In 1956, JEOL launched the JNM-1, the first domestically produced NMR system.

NMR systems analyze molecular structures and physical properties, and today, they are essential in organic chemistry.

Since the release of the JNM-1, we have been working on improving NMR technology. As a result, we are now one of two major suppliers in the world in the high-end NMR market.

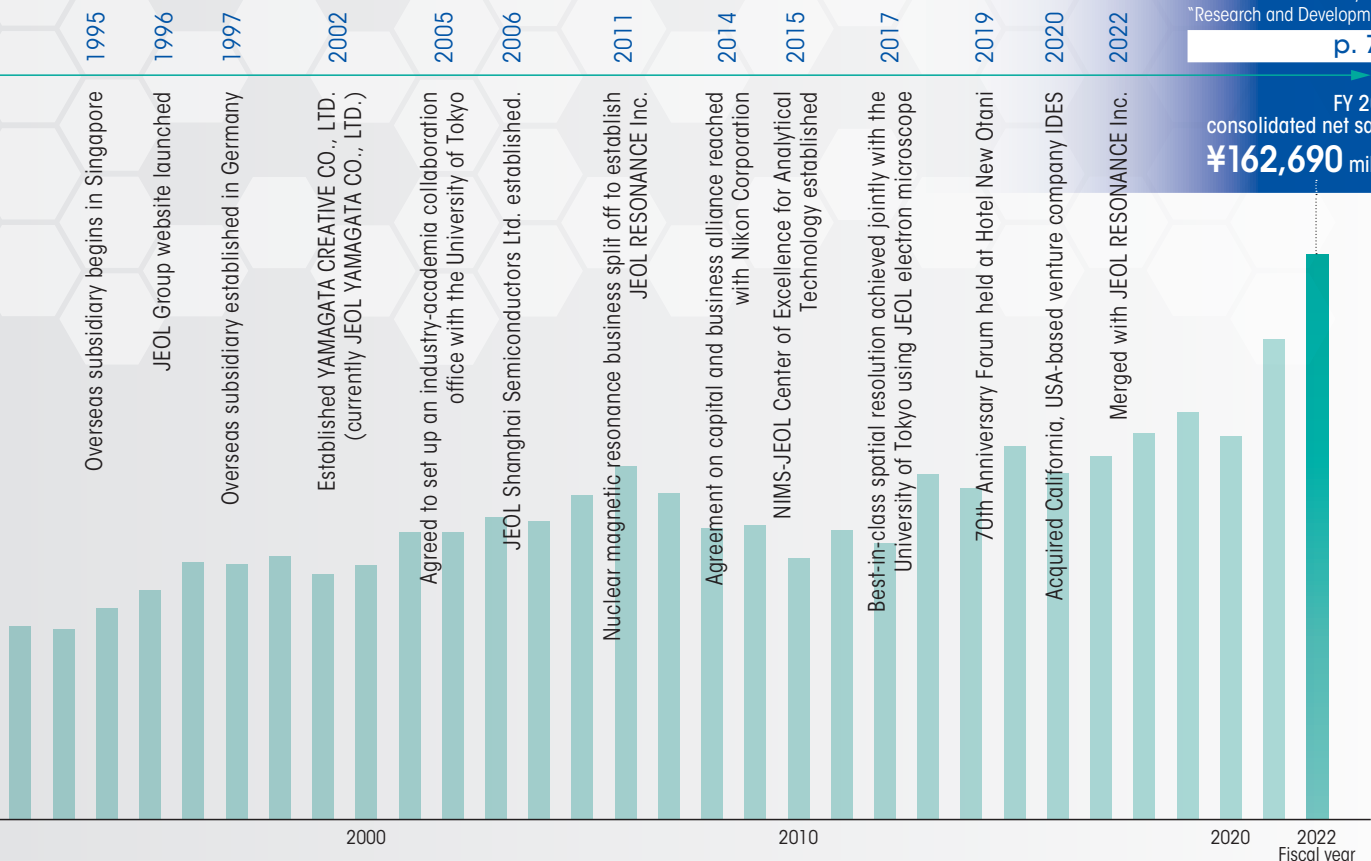


## Evolving in the 70th Year

Toward New "Creativity" and "Research and Development"

p. 7

FY 2022  
consolidated net sales:  
¥162,690 million



Note: Net sales on a non-consolidated basis until fiscal 1976.

1988



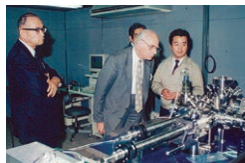
Dr. Kai Siegbahn  
(Physics, Sweden)

1989



Dr. Leo Esaki  
(Physics, Japan)

1991



Sir Andrew Huxley  
(Physiology or Medicine, UK)

1998



Dr. Heinrich Rohrer  
(Physics, Switzerland)

2016 Dr. Ryoji Noyori  
(Chemistry, Japan)

2018 Dr. Richard Henderson  
(Chemistry, UK)

2020 Dr. Yoshinori Ohsumi  
(Physiology or Medicine, Japan)

● Message from the Chairman—on delivering the *Integrated Report*



Gon-emon Kurihara  
Chairman

# Becoming a top niche company supporting science and technology around the world

In the course of our history, corporate management has faced a number of challenges due to unforeseen socio-economic change. In FY 2008, we recorded a loss for the first time in many years following the once in a hundred years global recession triggered by the bankruptcy of Lehman Brothers. We were later impacted by the extreme appreciation of the yen and the Great East Japan Earthquake, and recently by the COVID-19 pandemic. However, with the belief that facing hardship can lead to transformation, the JEOL Group has worked as a team to reform our management, resulting in records for net sales and all profit categories for fiscal 2022, ended March 31, 2023. I have nothing but deep gratitude for the support we have received from an enormous number of people over the years.

With the aim of achieving further growth, we announced a new three-year medium-term management plan in fiscal 2022 called the Evolving Growth Plan. Supporting this plan is YOKOGUSHI, the keyword we have been using since 2013 meaning “promoting innovation through co-creation.” The plan also clearly establishes our business direction: “Becoming a top niche company supporting science and technology around the world.”

The plan adopts Evolving in the 70th Year as our vision, a theme that we have communicated within and outside the Company since 2019, our 70th anniversary. We have also significantly raised our

numerical targets compared with those in the previous medium-term management plans.

While specific strategies for competition and growth are necessary for achieving these targets, we will first focus on developing products, using propriety technologies, that have high barriers to entry for competitors. JEOL already possesses equipment that our competitors cannot match due to extremely high barriers to entry, such as multi-beam mask writers for semiconductor devices and clinical chemistry analyzers in the medical equipment field. We will accelerate the development of these types of equipment, grow our service operations, and increase our profitability through continuing business improvements that keep the wheels turning.

Every company has its own unique history and culture. JEOL started developing electron microscopes with the noble goal of contributing to Japan’s reconstruction through scientific technology in the period shortly after the end of World War II. I believe that we are the company we are today because we have firmly upheld these values. Under Japan’s current policy of becoming a “science and technology nation,” I believe our significance and duty as a company will keep growing.

We look forward to your continued support as we strive to further expand our business.

## ● Toward New “Creativity” and “Research and Development”

The biggest goal of value creation at JEOL is to contribute to scientific progress and societal development, starting from the founding principles of “Creativity” and “Research and Development.” Now, more than 70 years since our founding, we have maintained that founding spirit and put every effort into improving corporate value every day to provide optimal solutions that support our customers’ innovations.

In recent years, science and technology have progressed rapidly, and the roles required of companies are becoming increasingly diverse. We have two strategies that provide a firm base as we take up the challenge of value creation, even as society changes.

In this section, we provide information on our Evolving in the 70th Year vision and our YOKOGUSHI (cross-sectional collaboration) strategy.

### Vision

## Evolving in the 70th Year

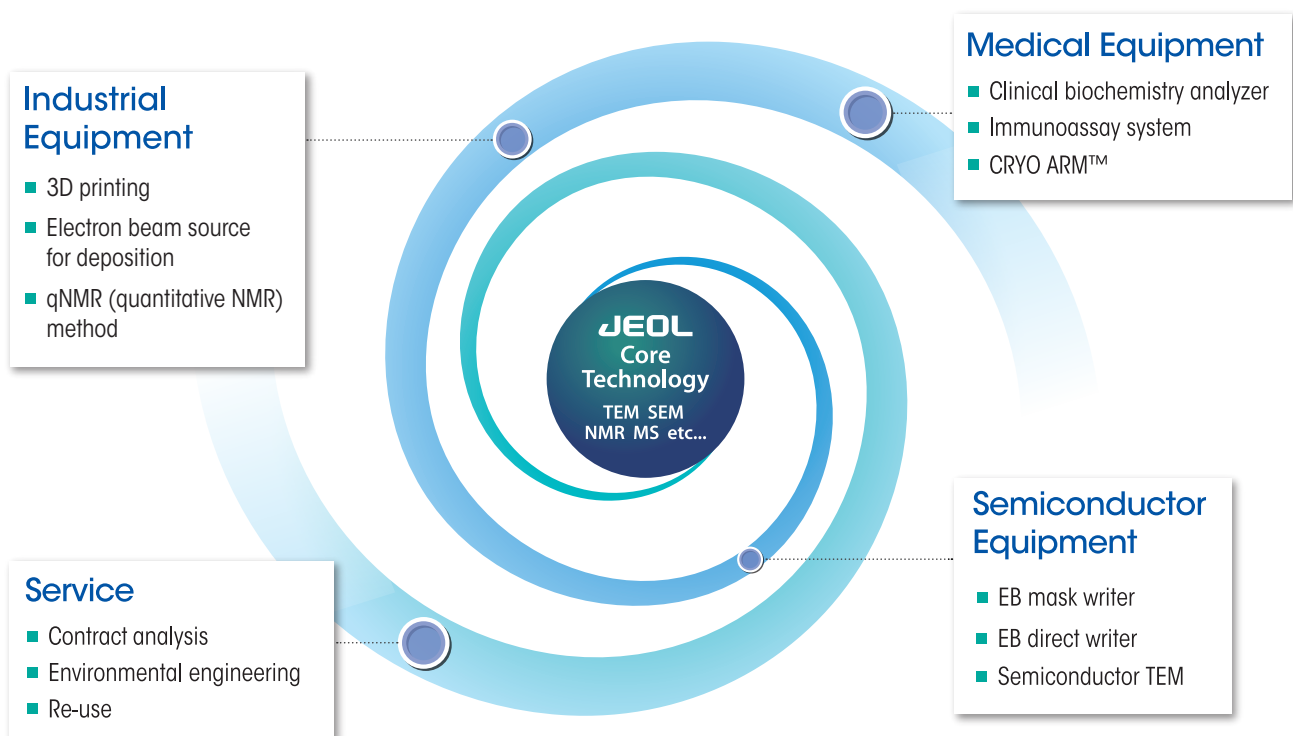
In 2019, the year we celebrated our 70th anniversary, we announced Evolving in the 70th Year as our new growth vision. The main initiatives are improving our core technologies, proactively entering growth markets, and providing total solutions.

The illustration below shows business creation by proactively entering growth markets.

This illustration expresses our approach toward markets expected to grow based on our strengths by starting with the core technologies—built up in the scientific and metrology instruments segment, including electron microscopes and nuclear magnetic resonance systems—and spiraling out from there.

Under our medium-term management plan, Evolving Growth Plan, equipment for semiconductors, industry, and medicine have been defined as our growth markets, and we aim to further improve corporate value by introducing new products and solutions into these markets.

In this way, JEOL will continue to move into new business domains.





## Model of Behavior

# YOKOGUSHI

The YOKOGUSHI strategy is our unique model of behavior for providing solutions in cutting-edge technological fields.

To create products and services that do not currently exist requires new ideas and connections that go beyond conventional boundaries—not just existing methods.

As a leading manufacturer of scientific and metrology instruments, we have provided equipment in a range of fields to meet complex market needs. Because of that, we possess a broad product lineup that you will not find anywhere else. Combining each of these products across categories in an organic way allows us to develop next-generation solutions and applications no one has ever seen before.

The model of behavior for creating these innovations is set out in our YOKOGUSHI strategy.

Having collaborated up to now with companies, organizations, and research institutes (both public and private), we have established a foundation for open innovation. YOKOGUSHI produces strong cross-sectional ties not just within our Company but with outside parties, making it possible to create new value not previously possessed by either party. We already have a track record in several product fields that includes favorable reception by the market for the unique systems we have developed in collaboration with other companies.

Through YOKOGUSHI, we will promote innovations that lead to the future so that we create solutions that completely satisfy our customers.

## YOKOGUSHI Initiatives

### 1 The University of Tokyo-JEOL University-Corporate Collaboration Office

In June 2005, the University-Corporate Collaboration Office was established by the School of Engineering at the University of Tokyo and JEOL Ltd. The aims of the new office are to promote and provide education, both in Japan and overseas, on advanced technology related to characterization and metrology, particularly using an electron microscope. The School of Engineering at the University of Tokyo has a long history of gathering research results and know-how in education and research based on state-of-the-art microscopes and technologies. JEOL has highly advanced applied electron microscope technology and professional support. By combining these specialties, we intend to create a new type of academic and corporate collaboration, focusing particularly on nanotechnology, interdisciplinary research and education, and the promotion of scientific technology. As well, we will encourage activities that contribute to society, locally and globally.

### 2 Osaka University-JEOL YOKOGUSHI Research Alliance Laboratories

This collaborative research institute was jointly established by Osaka University and JEOL Ltd., in April 2018, by integrating the Endowed Research Division of Multi-scale Structural Biology (JEOL), located in the Institute for Protein Research of Osaka University, and the Mass Spectrometry Open Innovation Joint Research Seminar of Osaka University's Graduate School of Science. The institute is intended to be a center for innovation in pioneering the next generation of life science research. The goals of the institute are to drive innovation and improved performance in cryo-electron microscopes, nuclear magnetic resonance spectrometers, and mass spectrometers, as well as to establish easy-to-use, advanced, and fast measurement and analysis methods. This collaborative research institute will enable us to develop globally competitive scientific measuring instruments and related research and development by uniting Osaka University's superior fundamental research with the technological development competencies of JEOL Ltd.

### 3 JEOL-Nikon CLEM Solution Center

In September 2017, Nikon Corporation and JEOL co-founded the JEOL-Nikon CLEM Solution Center within the JEOL headquarters. Correlative light and electron microscopy (CLEM) is an observation and analysis method that links information obtained by optical microscopes as well as electron microscopes and harnesses the advantages of both instruments. By combining Nikon's optical microscope technology with JEOL's electron microscope technology, CLEM will provide innovative solutions.

### 4 Joint Development with Rigaku Corporation

In 2020, we entered into a joint development agreement with Rigaku Corporation, a leading company producing X-ray analysis instruments based in Akishima, Tokyo. Under this agreement, we jointly developed Synergy-ED, the micro electron diffraction (MicroED) platform, launching sales in 2021. By combining Rigaku Corporation's structural analysis technology and equipment, such as their high-sensitivity detectors, with our transmission electron microscopes, we will unite the core technologies of both companies and provide new solutions for single crystal structure analysis using electron diffraction.



# Amid accelerating investment in cutting-edge scientific solutions throughout the world, we will seize the opportunity for even more growth by capitalizing on the niche technologies that we have continued to develop since we were founded

## The new medium-term management plan is off to a strong start with record results

In FY 2022, the first year of Evolving Growth Plan, our medium-term management plan, we faced some difficulties, especially the impact of COVID-19 with lockdowns in China as well shortages in semiconductors and other key components that were worse than we could anticipate. Although orders were strong, the year was characterized by a prolonged period of unsatisfactory levels of production. We faced other headwinds and challenges, including enormous geopolitical risk from Russia's invasion of Ukraine and sharp increases in energy prices. However, despite these headwinds, JEOL's employees throughout the world worked conscientiously, enabling us to achieve record-high financial results. I am deeply grateful to all of our employees, who continued to strive in their work, as well as their family members who supported them, despite being in a decidedly tense environment with many restrictions.

In FY 2022, we posted record-breaking results, including consolidated net sales and consolidated operating income of ¥162.7 billion and ¥24.2 billion, respectively, as well as consolidated ordinary profit of ¥23.5 billion, net income attributable to owners of the parent of ¥17.8 billion, and an ROE of 19.0%, well above our continuing ROE target: 10% or more. For the numerical targets for FY 2024, the final year of Evolving Growth Plan, consolidated net sales are

¥170 billion and consolidated operating income are ¥24 billion. So, we have already exceeded the target for consolidated operating income. Net sales also reached a new record high: up ¥24.3 billion year on year. While this was partly due to the yen being substantially weaker than we anticipated, we believe our net sales amount was a significant achievement given the serious shortages of components and materials.

Our industrial equipment segment, a key revenue driver for the Company, again recorded a significant increase in sales and profits as the market for electron beam lithography systems remained strong while our products continued to be well received. Sales and profit grew for a second consecutive year in the scientific and metrology instruments segment, our "DNA business" that accounts for around 60% of net sales. These results were buoyed by investment in science and technology by governments across the globe and a thriving business environment marked by strong R&D investment in line with advances in more refined and complex semiconductors and batteries. Our initiatives to strengthen competitiveness by launching products and solutions that captured market demand also contributed to the segment's strong results. Sales and profits fell in the medical equipment segment, due mainly to the lockdowns following China's zero-COVID policy.

Our consolidated backlog of orders as of March 31, 2023, came in at ¥95.6 billion, setting a new record. We believe that we made an excellent start in the first year of the Evolving Growth Plan.

Izumi Oi  
President & CEO



**Driving innovation through our unique  
YOKOGUSHI strategy**

On October 1, 2022, we merged with our subsidiary JEOL RESONANCE Inc. (JRI). With increasing investment in leading scientific technology across the globe, there is growing demand in the scientific and metrology instruments field for YOKOGUSHI. In other words, demand is high for value-added research that comes from using a diverse range of scientific and metrology instruments. JRI

was previously a subsidiary responsible for the development and manufacture of nuclear magnetic resonance (NMR) systems. Through this merger, we intend to provide more value to customers by improving harmonization among equipment lines, strengthening our YOKOGUSHI strategy, and promoting integrated operations as a company with a wide range of electron microscopes and other high-end measurement and analytical instruments. We will also work to integrate the common functions of the management divisions to drive efficiency, aiming to strengthen the profitability of the scientific and

metrology instruments segment.

Having now reached my fifth year since being appointed as President & CEO, I have become more deeply aware of the importance of YOKOGUSHI. We will not only strengthen YOKOGUSHI within our company, for instance through the JRI merger, but we will also develop YOKOGUSHI with external partners through, for example, industry-academia and industry-industry collaborations, continuing to be assertive and to encourage open innovation.

This approach is undoubtedly a major catalyst for our growth. In recent years, we jointly developed a multi-beam mask writer with IMS Nanofabrication GmbH (IMS) in Austria and a completely new electron diffractometer, Synergy-ED (see page 8), with Rigaku Corporation. These and other technologies have become a driving force behind our higher corporate value. Our company philosophy and purpose are to “contribute to the progress of both science and society.” However, to continually and gradually realize this goal, we cannot work alone. To achieve our goals, we must collaborate through YOKOGUSHI to engage in co-creation with a wide range of stakeholders, including business partners; partners in industry, government and academia; employees; and residents in local communities.

As one of only a few niche and global companies in our field, JEOL has a lineup of high-end scientific and metrology instruments, such as transmission electron microscopes and NMR as well as advanced electron beam technologies that we have cultivated since our founding. This is a unique advantage that underpins the

diverse forms of YOKOGUSHI. We will keep refining our strengths so that all of our stakeholders will continue to choose to work with JEOL.

**Improving the profitability of the scientific and metrology instruments segment is the key to growth**

For the consolidated operating forecast for FY 2023, the second year of the Evolving Growth Plan, we expect consolidated net sales of ¥167.0 billion and consolidated operating income of ¥21.0 billion, forecasting an increase in sales and a decrease in profit. The main reasons for the decline in profit: we anticipated an exchange rate with a higher yen than in the FY 2022 and sales of our highly profitable multi-beam lithography platforms are expected to slip due to the semiconductor market being in an adjustment phase. On the other hand, net sales are expected to rise as sales are anticipated to grow significantly in the scientific and metrology instruments segment. As this forecast indicates, improving the profitability of the scientific and metrology instruments segment, where sales are projected to grow, is a major theme for our company.

Investment in cutting-edge technologies is gaining momentum in fields such as semiconductors, batteries, and drug discovery, which we are targeting in our growth vision, Evolving in the 70th Year. In each of these fields, we are providing high-value-added products and solutions that are unique to JEOL. In the semiconductor field, the adoption of the JEM-ACE200F (high-throughput analytical



electron microscope) is accelerating as it has been well received by semiconductor-related companies, while the JIB-PS500i (focused ion beam milling and imaging system), a new product developed for sample preparations for electron microscopes, was launched in February and has already been highly appreciated by customers. In the field of batteries, we provide our unique YOKOGUSHI analysis solution that makes it possible to transfer samples between instruments in an air-isolated environment (without exposing the material samples to the air). In the field of drug discovery, Synergy-ED has been highly praised, providing a completely new form of structural analysis that was thought to be impossible. As these examples demonstrate, we have continued to launch products and solutions that deliver added value to meet the needs of customers in each field. To drive growth in the scientific and metrology instruments segment, we will accelerate this course of action and take decisive steps to strengthen our production system, especially the supply chain, in line with sales growth.

### Becoming a top niche company supporting science and technology around the world

The Nature Index is a database that ranks research achievements throughout the world by country and institution. Results are published in *Nature*, a world-renowned scientific journal. In the Nature Index private-sector rankings for Japan, JEOL consistently ranks near the top and has frequently been in the top five companies. For a company of our business size, our rankings in the Nature Index alongside large and well-known corporations is a strong indication that our employees “positively challenge the world’s highest technology” and “contribute to the progress of both science and human society.” The rankings also demonstrate that our customers use our instruments for cutting-edge research.

There are four common factors across semiconductors, batteries, and drug discovery, our target fields. These common factors are: (1) growth markets; (2) fields where new innovations and technologies are continuously emerging; (3) the fact that structures of the newly developed objects in these fields must be observed and measured (you can’t create what you can’t see); and that (4) these objects are generally getting smaller generation

by generation. With talented employees, a strong customer base, and growing business fields, we believe JEOL has the potential to realize significant growth. In the three years of our medium-term management plan, Evolving Growth Plan, we intend to harness this potential and grow even more.

When we announced the Evolving Growth Plan, we clearly defined our business direction as “Becoming a top niche company supporting science and technology around the world.” While currently anyone would recognize us as a “niche company,” to take the next step and become a “top niche company,” we will resolutely execute our growth strategy guided by the Evolving in the 70th Year vision while aiming to achieve the goals of the Evolving Growth Plan.

### To our stakeholders

Our basic policy for profit distribution is to maintain consistent dividends over the long term based on our business initiatives to improve our financial base and our corporate structure. Taking into consideration our business performance and financial condition, we will issue a year-end dividend of ¥36 per share for the fiscal year under review. Added to the interim dividend, this brings the total annual dividend to ¥66 per share. At the 76th Ordinary General Meeting of Shareholders held in June 2023, Yukari Yomo was appointed as a new outside director, becoming the first woman to be a director at our company. While continuing to promote diversity, we will develop our governance system, build an organizational structure to ensure that we can respond swiftly to changes in the business environment, and keep reinforcing our compliance framework.

With FY 2023 marking the second year of the Evolving Growth Plan, our medium-term management plan, the Group’s employees throughout the world will work hard together to achieve the targets for the plan, inspired to keep improving our corporate value. I hope all of our stakeholders will continue to encourage us and follow our progress over the medium to long term. We look forward to your continued support and cooperation throughout this year.

# Evolving Growth Plan

(FY 2022–2024)

## Expanding our business scale and increasing profitability

We will accelerate the growth of our business and achieve higher profitability by continuing to implement Evolving in the 70th Year, the basic vision of the previous medium-term management plan, Triangle Plan 2022 (FY 2019-FY 2021).

Specifically, we will develop our YOKOGUSHI strategy and boost customer satisfaction by strengthening R&D, manufacturing, and service, which in turn will lead to higher business scale and more profitability. We will also look ahead of the new medium-term management plan, continuing to improve and grow our business by implementing the new strategies needed to realize sustained long-term growth.



The illustration above was created for the announcement of the Evolving Growth Plan.

It expresses the meaning and role of Evolving Growth Plan, our medium-term management plan, as well as our Evolving in the 70th Year vision, the company philosophy, and the YOKOGUSHI strategy that supports all of these initiatives.

The illustration represents the Company's commitment to achieving the goals of the Evolving Growth Plan by maintaining our company philosophy and executing the vision of Evolving in the 70th Year with YOKOGUSHI, which has been transmitted for the past 10 years, as the background. In addition, it also clearly states the business direction of the JEOL Group: "Becoming a top niche company supporting science and technology around the world."

## Evolving Growth Plan

### Basic Concept of the Evolving Growth Plan

#### 1 The concept of the growth vision, Evolving in the 70th Year, remains unchanged

Accelerate business growth and achieve even higher profitability based on our unique technologies and networks of people that we have developed since our Company's founding.

#### 2 Strengthen and develop the YOKOGUSHI strategy

Provide more added value to our customers by further developing our YOKOGUSHI strategy not only for product development, but also through business development and the more effective use of data.

#### 3 Strategies for higher profitability

Company-wide initiatives to build barriers to entry, improve profitability, and strengthen business support.

#### 4 Achieve growth in three areas: customer value; employees and human resources; sales and profits.

Achieve well-balanced growth to expand the scale of our business operations.

#### 5 Initiatives for the SDGs

Tackle materiality (important social issues) from two perspectives: business activities and the ESGs.

### FY 2024 target

• Consolidated net sales	¥170.0 billion (¥162.7 billion)	• Consolidated operating income	¥24.0 billion (¥24.2 billion)
• Operating margin	14.1% (14.8%)	• Consolidated ordinary profit	¥24.0 billion (¥23.5 billion)
• Ordinary profit margin	14.1% (14.4%)	• Net income attributable to owners of the parent	¥17.5 billion (¥17.8 billion)

Figures in parentheses are the results for FY 2022

### FY 2013- > YOKOGUSHI <

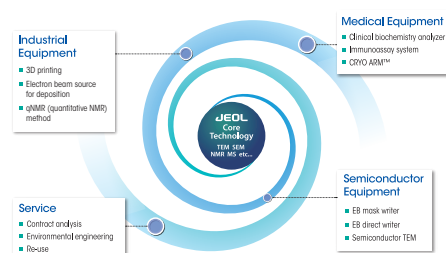
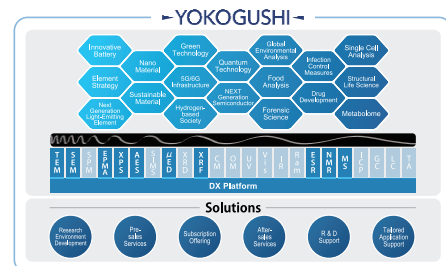
As a company with an extensive product lineup, we will combine our diverse and multifaceted instruments and technologies in an organic and cross-sectional way, implementing our YOKOGUSHI strategy to provide total solutions.

In addition, we will not only take the initiative internally, but will also promote joint R&D by collaborating with outside partners and institutions.

### FY 2019- Evolving in the 70th Year

Guided on our core technologies developed in the academic market, we will enter large markets with growth potential, such as markets where we can capitalize on the strengths our semiconductor equipment and medical equipment.

We will continue to accelerate the growth of our business scale as set out in our Evolving in the 70th Year vision that we developed to mark our 70th anniversary.

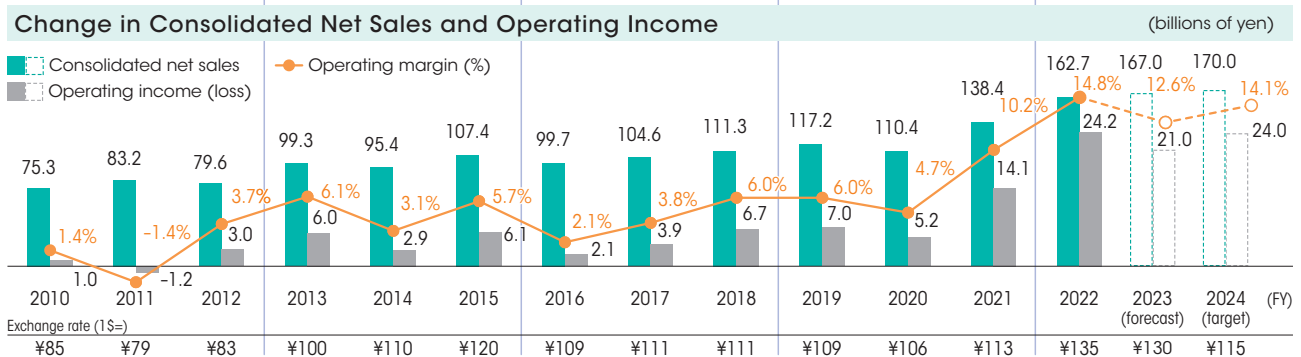


## Reflections on the Medium-Term Management Plan

# Medium-term Management Plan — Evolving Growth Plan (FY 2022–24)

In FY 2022, we posted record-breaking sales and profits, achieving all the numerical targets for the first year of the Evolving Growth Plan.

### Medium-term management plans since FY 2010



### Numerical Targets

FY 2022 results

Consolidated net sales **¥162.7 billion**

Consolidated operating income **¥24.2 billion**

FY 2023 forecast

Consolidated net sales **¥167.0 billion**

Consolidated operating income **¥21.0 billion**

FY 2024 target

Consolidated net sales **¥170.0 billion**

Consolidated operating income **¥24.0 billion**



## Evolving Growth Plan

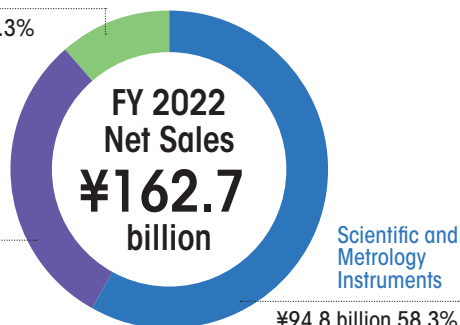
### Overview by Business Segment

#### Medical Equipment

¥18.4 billion 11.3%

#### Industrial Equipment

¥49.5 billion 30.4%



#### Medical Equipment

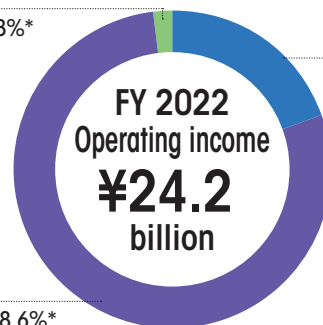
¥0.5 billion 1.8%\*

#### Industrial Equipment

¥23.3 billion 78.6%\*

#### Scientific and Metrology Instruments

¥5.8 billion 19.6%\*

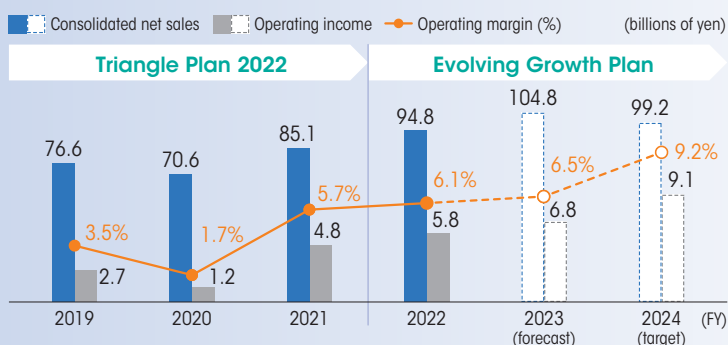


\*Before Company-wide cost allocation (¥5.4 billion)



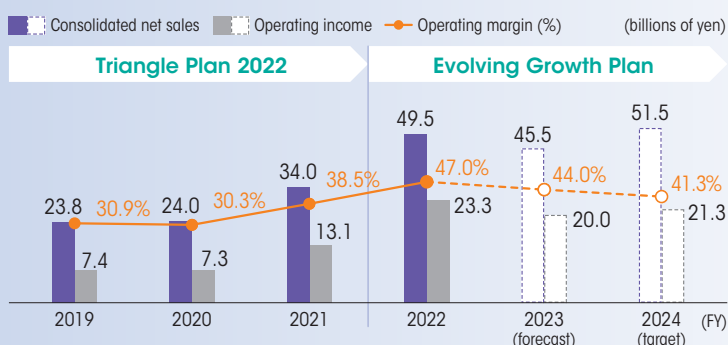
### Scientific and Metrology Instruments

Orders and sales remained strong, driven by active investments in science and technology by governments throughout the world as well as robust demand associated with R&D for semiconductors and next-generation batteries.



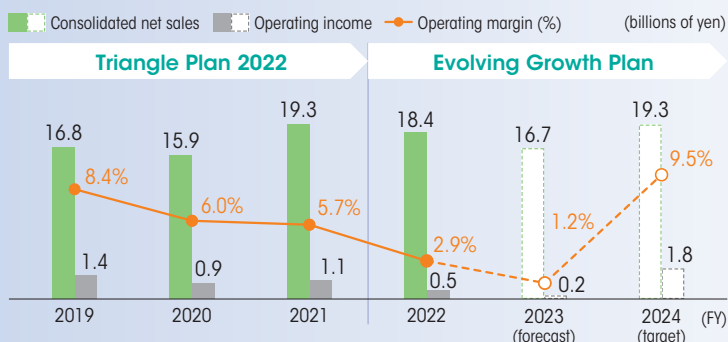
### Industrial Equipment

Sales increased year on year despite orders continuing to be weak for multi-beam mask writers due to the semiconductor market being in an adjustment phase. Single-beam mask writers performed steadily due to demand for power semiconductors.



### Medical Equipment

Inquiries were strong for clinical chemistry analyzers in the Japanese market. However, orders and sales remained at low levels in overseas markets, impacted by factors such as lockdowns due to the zero-COVID policy in China.



## Driving sustainable growth and enhancing corporate value through capital management focused on efficiency and strengthening the earning power of our core businesses

Katsumoto Yaguchi

Director and Executive Officer in charge of Finance,  
IT and Export Trade Control



### Summary of the Fiscal Year Ended March 31, 2023

In the fiscal year ended March 31, 2023, the scientific and metrology instruments segment continued to gather strong interest on a global scale, with solid inquiries and orders driven by advances in refinement and complexity in development fields, such as semiconductors and batteries. Results also benefited from a weaker yen, leading to growth in both sales and profits. The industrial equipment segment played a key role in driving overall performance, seeing a significant rise in sales and profit as the market for electron beam lithography systems remained strong while our products were held in high regard. Sales and profits decreased in the medical equipment segment, which was impacted by lockdowns associated with China's zero-COVID policy. Overall, the Company achieved consolidated net sales of ¥162.7 billion (up 17.5% year on year) and consolidated operating income of ¥24.2 billion (up 70.8%). These results significantly exceeded the operating forecast that was revised upward during the year, marking the second consecutive record-breaking year.

Key indicators were maintained at a high level: the percentage of operating income to net sales was 14.8% (up 4.6 points year on year), while return on equity (ROE) was 19.0% (up 1.1 points), return on invested capital (ROIC) was 16.7% (up 5.6 points), and the price-to-book (P/B) ratio was over 2x. ROE increased year on year due to higher profits in the industrial equipment segment and a gradual improvement in the earning power for the scientific and metrology instruments segment. The scientific and metrology instruments segment is our "DNA business," and improving the profitability of this segment is the core of the Group's growth

strategy. Although the cumulative capital investment is the highest in this segment, profitability is uneven and the business has matured. We intend to build barriers to entry to improve ROE by cutting costs, by developing proprietary technology through selective concentrated investment, and by retaining customers. Conversely, the industrial equipment segment is in a growth phase and profitability remains high. We aim to grow our business by using our management resources aggressively. Although investment could reduce capital efficiency over the short term, we should emphasize the contribution of profits to the entire company.

On a consolidated basis, the shareholders' equity ratio as of March 31, 2023 was 51.1% (up 5.8 points year on year). With our financial condition showing consistent improvement, we will continue to steadily build a strong foundation for strategic investment and to prepare for business risks.

### Capital Policy and Plan for the Fiscal Year ending March 31, 2024

The global economic environment surrounding our company is highly unpredictable. The Russia-Ukraine conflict is having a significant impact on economic growth around the world. The soaring prices of raw materials and energy are causing the international economy to slow and there are increasing inflationary pressures. In addition, the business environment remains unpredictable, affected by factors such as shortages in semiconductor components throughout the world and a restructuring of the global supply chain triggered by heightened geopolitical risk amid economic security concerns involving the United States and China. However, despite this challenging environment, we posted a record-breaking figure for our

consolidated backlog of orders, the leading indicator for the fiscal year ended March 31, 2023. Given this background, sales in the scientific and metrology instruments segment are expected to grow substantially. On the other hand, profits are projected to be down in the industrial equipment segment primarily due to lower sales volumes associated with inventory adjustments for multi-beam lithography systems and cost increases sparked by inflation. Based on these factors, for the fiscal year ending March 31, 2024, we are forecasting consolidated net sales of ¥167.0 billion and consolidated operating income of ¥21.0 billion.

In light of recent shareholder trends, capital policy is also an important theme for our company. To achieve growth while focusing on unique investment opportunities, we will seek the optimum balance over the medium to long term for investments in R&D, personnel, and capital as well as M&As, higher shareholder returns, a strengthened financial base, and control of interest-bearing debt. For shareholder returns, we see the dividend on equity ratio (DOE) as an important indicator for ensuring that we deliver consistent dividends while limiting the impact of fluctuations on short-term financial results. For the fiscal year ended March 31, 2023, the year-end dividend increased to ¥36 from the initial forecasted figure of ¥30 per share. Including the interim dividend, the total annual dividend came to ¥66 per share. For the fiscal year ending March 31, 2024, we plan to issue a dividend of ¥66 for the full year.

### Initiatives for Sustainability in the Evolving Growth Plan

In fiscal 2022, the Group formulated the Evolving Growth Plan, our medium-term management plan that covers from FY 2022 to FY 2024. Guided by this plan, we are focusing on the three growth areas—customer value; employees and human resources; and sales and profits—while investing in human assets, a part of our nonfinancial capital. We have also set targets for diversity and inclusion, human resource development, and health management. We believe promoting

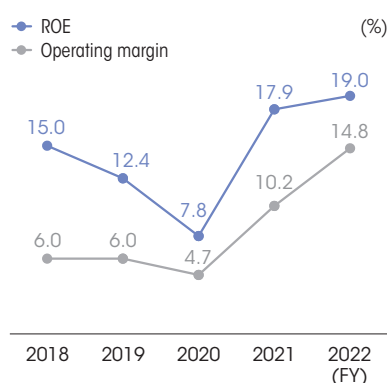
scientific technology is indispensable for achieving the UN's Sustainable Development Goals (SDGs), including addressing environmental concerns such as carbon neutrality, reducing social inequality, and eliminating hunger. Resolving social issues through our business operations is firmly linked to our sustainable growth as a company. We will continue to improve our corporate value through a management approach that emphasizes nonfinancial capital.

### Financial strategy direction Introduction of ROIC management

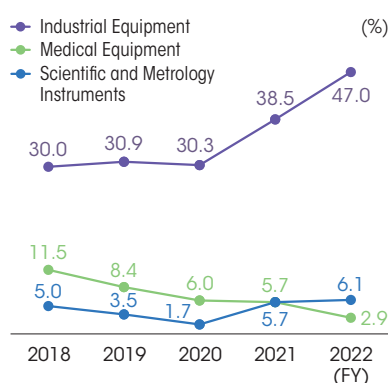
Generally, when using a business management style that focuses on economic indicators that track flow variables such as sales and profits, there is the inherent issue of low accountability to the capital market because less attention is focused on the balance sheet. As our working capital ratio and fixed asset ratios tend to be high due to the nature of our business, we aim to improve our financial condition by streamlining our balance sheet. We will achieve this streamlining by cutting the operating working capital turnover period (mainly by reducing inventories), disposing of nonbusiness assets after reviewing their profitability, and carefully examining policies on cross shareholdings. To build a framework for improving medium- to long-term capital efficiency, since FY 2022 we have worked on introducing the indicator return on invested capital (ROIC) as well as conducting training and raising awareness to encourage the understanding of capital efficiency among all employees. In addition, while holding discussions with each division, we will develop an ROIC tree, set KPIs, and begin monitoring progress this fiscal year. We will continue to maintain an ROIC target of at least 8% above the cost of shareholders' equity.

Looking ahead, we will strive to improve sustainable corporate value and work hard to meet the expectations of our stakeholders by improving capital efficiency and strengthening our financial position.

#### Operating margin / ROE



#### Operating margin by segment



#### Shareholders' equity ratio



## ● Overview by Business Segment

# Scientific and Metrology Instruments

## Business description

With our roots in the development of electron microscopes, the scientific and metrology instruments segment has been nurtured and grown since our founding as a part of our DNA.

By developing the scientific and metrology instruments that are among the best in class in the world, we continue to support top scientists, including Nobel Prize winners, and others working at the frontiers of cutting-edge research.

Our products are used by universities and laboratories in more than 130 countries worldwide, and we provide top-class solutions in various fields, such as nanotechnology, biotechnology, and the life sciences.

As a business that contributes to progress in both science and society, we will continue working on making advances in our core technologies: measurement and analysis.

## Main instruments

### Electron optics instruments and metrology instruments

We are developing many instruments that apply electron beam, ion beam, X-ray, and other technologies, starting with electron microscopes.

We provide instruments that offer robust support for seeing and measuring in the nano world. These include transmission electron microscopes for seeing substances at the atomic level; electron probe microanalyzers that accurately detect elements contained in micro areas on the specimen surface; and multi-beam milling/imaging systems for milling and observation of samples at the nanometer level.

Our business fields are broad-ranging, from cutting-edge academic research to quality control in the manufacturing industry.

### Analytical instruments

While electron optics instruments and metrology instruments approach substances from the outside, analytical instruments examine the nature of substances from the inside. Our main products in this category are nuclear magnetic resonance systems and mass spectrometers.

Nuclear magnetic resonance systems are another one of our core research instruments, as our electron microscopes were the first core research instruments. As these systems analyze the structure of substances from the inside, they are essential in the world of organic chemistry.

Mass spectrometers tell you what a specific substance is made of and in what concentrations. One example is their use in quickly analyzing the presence of substances in food that are harmful to health, such as agrochemical residue, so they contribute to our health and safety.

<b>Main customers</b>	Research institutes, educational institutions, manufacturing industry (chemistry, steel, machinery, food, nonferrous metal, electrical and electronic, etc.), public institutions, and analytical research companies
<b>Main products</b>	Electron microscopes, electron probe micro analyzers, photoelectron spectrometers, Auger microprobes, multibeam systems, X-ray fluorescence spectrometers, nuclear magnetic resonance systems, electron spin resonance spectrometers, mass spectrometers, portable gas chromatographs, and electron diffractometers.



## Business environment

### Academia/ Government

- Continued investment in scientific technology by governments worldwide
- Unique demand in the Chinese market driven by the government's low-interest loan policies
- Inquiries in the US and Europe remain strong

### Private sector (semiconductors)

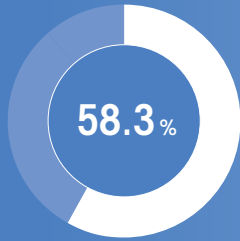
- Strong TEM inquires, particularly from the Far East and China
- Demand growing for electron microscopes (TEM, SEM) with advances in refinement and complexity

### Private demand (other industries)

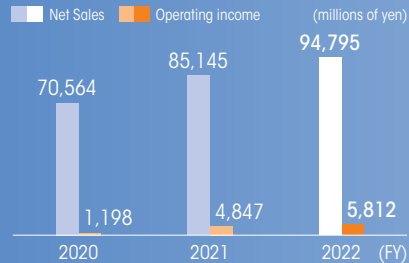
- Capital investment is active overall
- Upward trend in investment for next-generation battery research and development

## Overview of the Fiscal Year ended March 31, 2023

### Net Sales by Segment



### Change of Net Sales and Operating Income



## Topics

### JIB-PS500i FIB-SEM system launch Delivering higher accuracy and resolution

With increasing refinements in advanced material structures and more complex processes, there is growing demand for high resolution and accuracy in evaluation techniques, such as morphological observation and elemental analysis. For this reason, we have developed the JIB-PS500i, a system that integrates focused ion beam (FIB) milling, for extremely accurate sample processing, with scanning electron microscopy (SEM) imaging, which delivers a high resolution. This system was launched in February.



JIB-PS500i  
FIB-SEM system

### Launch of the Cryogen Reclamation System Substantially reducing the evaporation of cryogenics

In April, we launched the Cryogen Reclamation System for a significant reduction in the evaporation of liquid helium and liquid nitrogen, which are essential as cryogenics for NMR superconducting magnets. This product was developed through a collaboration that combined the cutting-edge technologies of our company as a manufacturer of NMR instruments, with Japan Superconductor Technology, Inc., a manufacturer of superconducting magnets, and ULVAC CRYOGENICS INCORPORATED, a company specializing in cryogenic technology.



NMR superconducting magnet  
fitted with the Cryogen Reclamation System

## Aiming for further growth

### From the observation of ever-smaller structures to playing a role as a place for co-creation



Toyohiko Tazawa  
Director & Senior  
Executive Officer

The focus of our company has been on perceiving ever-smaller structures. Our aim has been to contribute to developments in a wide range of fields, from academia to industry. In our own industry, as is often said, you can't create what you can't measure (observe). The act of observing (measuring) during the development stage is one of the foundations of manufacturing.

Up to now, we have devoted ourselves to observations (measurement), but we also hope to play a major role as a place of co-creation for manufacturing to complement our exploratory approach that uses systematic investigative techniques. In other words, we will enable versatile and complementary analysis that increases analytical throughput by combining several methods, making possible multifaceted analyses (YOKOGUSHI strategy) based on single functions.

To become a *place for co-creation* in the post COVID pandemic, in addition to perfecting the individual functions of our equipment, it is important to increase convenience and flexibility. The goal here is to achieve effective throughput in work environments where the advanced utilization of information driven by digital transformation (DX) is required. Our initiative called Analytical Robot = Remote + AI (artificial intelligence) + DB (database), which we have worked on for some time, is at the source of current DX requirements. This initiative aims to develop our scientific and metrology instruments segment as a *place for co-creation* by promoting DX based on advances in analytical robots and the JEOL DATA Highway framework.

# Industrial Equipment

## Business description

In 1952, three years after our founding, we entered the industrial equipment field, starting with an induction hardening system that applied the knowledge we had acquired from the development of electron microscopes. Today, having now developed expertise in electron beam control and RF power supplies—cultivated as core technologies in the scientific and metrology instruments segment—we can now supply the industrial equipment that is essential for fabricating semiconductors, electronic devices, and optical components, such as electron beam lithography systems, electron beam sources for deposition, and RF induction thermal plasma systems.

One of our initiatives to enter a new business segment is R&D for metal 3D printers that apply our electron beam technology. We began sales for these printers in March 2021. We expect them to be used in fields that require high levels of precision, such as aerospace, medicine, and automobiles.

## Main instruments

### Electron beam lithography systems

Electronic devices such as computers, smartphones, and home appliances contain semiconductor components called large scale integrated (LSI) circuits. LSI circuits have extremely fine patterns made possible through progress in refinement and densification. The 5-nanometer fabrication process is used in cutting-edge devices and their patterns are 1/1,000th the diameter of a human hair or smaller.

Precise fabrication of ultrafine circuits like this requires electron beam lithography.

The role of electron beam lithography systems is expected to increase in importance as demand for semiconductors grows due to such factors as the development of an IoT society and the dawn of the 5G era.

Partnering with Austria-based IMS Nanofabrication GmbH (IMS), we are supplying multi-beam electron beam lithography systems with improved throughput ahead of the global competition.

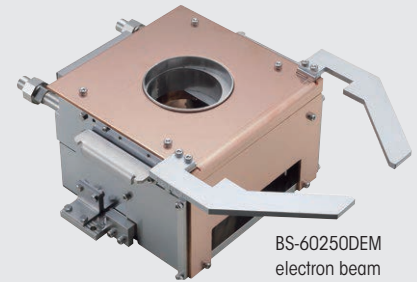


JBX-8100FS  
electron beam  
lithography system

### Electron beam source for deposition

Electron beam deposition is a method of vaporizing metals or oxides in a vacuum using an electron beam so that they adhere to the surface of a lens, circuit board, or other component as a thin film. Our electron beam source is used to heat the material to cause it to evaporate. Because the power density of electron beams is high, they can vaporize various materials, including metals with high melting points.

When a thin film is deposited onto glasses or a camera lens, it creates an antireflective and infrared coating. Electron beam deposition is also used to form electrodes and wiring film for electronic parts, LEDs, and other products. Although you may not see it, electron beam sources for deposition play an active role as a technology that supports everyday life behind the scenes.



BS-60250DEM  
electron beam  
source for  
deposition

<b>Main customers</b>	Manufacturing industry (semiconductors, optical devices, electric machinery, electronic parts, chemistry, etc.) and research institutes
<b>Main products</b>	Electron beam lithography systems, high-power electron beam sources and power supplies, electron beam sources and power supplies for deposition, RF power supplies for plasma generation, built-in plasma sources and power supplies, RF induction thermal plasma systems, and electron beam metal 3D printers

## Business environment

### Lithography systems market

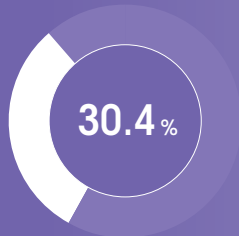
- Softer demand for multi-beam mask writers due to an adjustment phase in the semiconductor market. Single-beam mask writers for legacy node technology performed well due to demand for power semiconductors.

### Electron beam source market

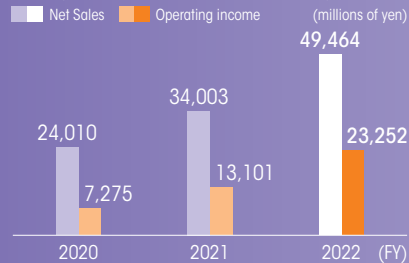
- △ Inquiries for deflection electron beam sources declined with a softening of smartphone demand

## Overview of the Fiscal Year ended March 31, 2023

### Net Sales by Segment



### Change of Net Sales and Operating Income

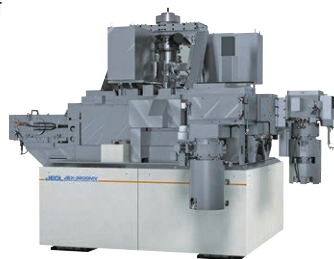


## Topics

### Strong performance from single-beam mask lithography systems and spot beam direct lithography systems

Single-beam mask lithography systems for legacy node technology performed well, particularly in China, due to demand for power semiconductors. Spot beam direct lithography systems were also strong, supported by a robust market for semiconductor lasers and optical communications, as well as higher R&D budgets for semiconductors.

We will continue to employ methods to improve overseas service, for instance by installing clean rooms and training back-up machines at overseas service bases.



JBX-3200MV  
single-beam mask lithography system  
for mask and reticle making of  
28 nm to 22/20 nm nodes

### Multiple orders for electron beam metal 3D printers

We have received multiple orders for the JAM-5200EBM electron beam metal 3D printer in Japan. In the US, we entered into a business alliance agreement (for installing the demonstration machines) with, Cumberland Additive, a contract manufacturer for additive manufacturing and computer numerical control (CNC) processing. We will also accelerate sales campaigns in the US and Europe by installing demonstration machines.



JAM-5200EBM

## Aiming for further growth

### JEOL industrial equipment supports the production of semiconductors and electronic devices



Tadashi Komagata  
Senior Executive Officer

In the industrial equipment segment—based on applied electron beam technology developed with electron microscopes at the core—we develop, manufacture, and sell electron beam lithography systems used in the fabrication of semiconductor chips, the electron beam deposition equipment necessary for coatings on optical components, as well as related components.

Incredible volumes of electronic devices are needed to meet the rapid advancement in digital technology in recent years. Our products are used in the production processes for these devices, and we will continue to speedily develop and provide equipment that fulfills the requirements of each generation.

Multi-beam mask writers (multi-beam electron beam lithography systems) are essential for fabricating the photo masks used in extreme ultraviolet (EUV) lithography. Having jointly developed this equipment with Austria-based IMS and putting them into the market, they are now being introduced at advanced plants of the world's leading semiconductor manufacturers, contributing to the mass production of cutting-edge devices.

Our electron beam metal 3D printer has also entered the global market. We expect to bring about a revolution in the production of essential components that demand strength and reliability. With this printer, we are supporting the creation of groundbreaking products in a wide array of industrial fields, particularly aerospace and medicine.

## ● Overview by Business Segment

# Medical Equipment

### Business description

In 1972, we released the first clinical chemistry analyzer by applying the measurement technology we acquired during the development of analysis and inspection systems for the medical field. This series was called Clinalyzer, and by expanding the lineup and developing products matching requirements, these analyzers became more common, and we contributed to medical progress and helped maintain people's health.

In 1996, this was replaced by the BioMajesty™ series featuring an enhanced analysis method, better economic efficiency, and improved processing. This series remains available today.

As part of our YOKOGUSHI strategy, we partnered with FUJIREBIO Inc. to link our system with theirs, providing integrated immunological and biochemical testing. In this and other ways, we address increasingly diverse clinical testing requirements.

### Main instruments

#### Clinical biochemistry analyzer

Measuring sugar, cholesterol, protein, and other components in blood, urine, or other fluid samples is useful for discovering diseases and managing health. In recent years, services have been made available for individuals where blood samples are taken at home and mailed to a lab for results. The evolution of clinical chemistry analyzers has greatly contributed to blood testing becoming a familiar routine.

Our BioMajesty™ series of clinical chemistry analyzers has been delivered to small and medium-sized hospitals, testing centers (private companies specializing in analysis), and large hospitals, such as university hospitals. Using a proprietary method for diluting samples, we now minimize sample volume and reduce the amount of reagents required. This alleviates the physical stress placed on patients and contributes to lowering running costs for medical institutions.

Through ultra-micro volume measuring and ultra-high-speed processing technology, the BioMajesty™ series supports medical progress.

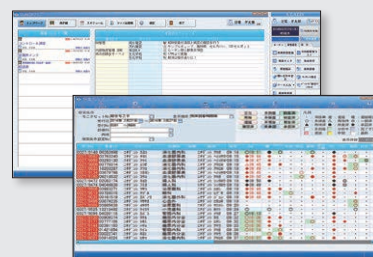
#### Laboratory information systems

This information solution helps increase efficiency and introduces IT to the frontlines of medicine by linking and managing all the data involved in clinical chemistry analyzer operations. The centralized management of everything from receiving samples to testing and reporting by the system allows for fast and accurate processing.

All the data from testing, including when the test was performed, who made the request, which device was used for registration, and who approved it, is stored by item, ensuring traceability in clinical testing.



JCA-BM6070G  
Clinical Biochemistry Analyzer BioMajesty™



JCS-60L CLALIS™ Laboratory Information System

**Main customers** Hospitals, clinical testing centers, and reagent manufacturers  
**Main products** Clinical chemistry analyzers and laboratory information systems

### Business environment

**Japanese market** ○ Demand increased for clinical biochemistry analyzers, mainly for clinical testing centers.

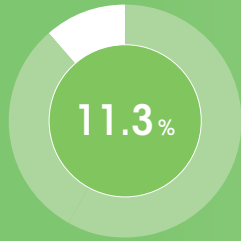
**Overseas market** △ Inquiries and orders decreased due to the impact of lockdowns from the zero-COVID policy in China.



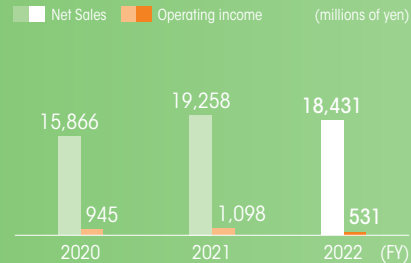


## Overview of the Fiscal Year ended March 31, 2023

### Net Sales by Segment



### Change of Net Sales and Operating Income



## Topics

### Medical Equipment Business Operations Moved to New Location

To meet the growing demand for our products, we have acquired new land and a building near the head office. The new plant, Musashimurayama Works, was opened in October 2021 to increase production capacity and improve efficiency. We have moved departments related to the Medical Equipment segment, such as technical development, production, and business management, from the head office to Musashimurayama Works. This plant features a new exhibition room for clinical chemistry analyzers and laboratory information systems to further strengthen sales. At the exhibition room, we demonstrate new equipment and distribute information through catalogs, display panels, and presentations on our reagents used for analysis.

We will fast-track business development in the medical equipment segment by responding to the increasing number of inquiries for clinical chemistry analyzers.



Musashimurayama Works



Clinical biochemistry analyzer exhibition room

## Aiming for further growth

### Aiming for medical care that is always there for people by providing solutions that protect people's health



Kiyotaka Fujino  
Executive Officer

Though COVID-19 was reclassified as a Class 5 disease on May 8 this year, we must continue to be vigilant. In our medical equipment segment, we are continuing our activities based on this theme: "How can we provide useful information for medical care, particularly diagnosis?"

While medical professionals respond to challenges everyday by administering medications and treating patients, it is now necessary for them to handle more duties than in the past, and this is impeding their ability to do their primary work. One example is complying with various measures for COVID-19. We recognize the importance of protecting people from new diseases, and we are striving to improve the health and well-being of everyone, which is the third of the UN's SDGs.

With the aging of society, preventive medical care has also become increasingly important. To strengthen preventive care, it is essential to secure medical professionals and to process massive amounts of information. JEOL offers solutions for medical diagnosis. By providing data in a visible form using IoT (the Internet of things), we reduce the burden on medical institutions through solutions for ISO compliance and with the requirements of the Medical Act, conceivably resulting in a significant workload. We will continue to contribute to preventive medical care by researching testing methods for previously challenging fields and by developing techniques that clarify cause and effect.

## ● New Services

Promoting the wider use of technology in society



### Online

As a countermeasure to prevent the spread of COVID-19, we have implemented new workstyles, such as remote work and online meetings. Activities that once relied solely on person-to-person interaction, like sales events and exhibitions, are now expected to include online elements as well. To support the diverse workstyles of our customers, we are holding events in person and increasing opportunities for online interactions to provide information without constraints on place or time.

#### 1 Online demonstrations

We introduce systems and provide operating instructions over the Internet to customers considering their adoption. These Web conference-based sessions allow two-way discussions without needing to visit our company.

#### 2 Online exhibitions

Although many exhibitions and academic conferences were cancelled or postponed during the height of COVID-19, we posted our scheduled seminars and technical materials digitally on our website to ensure that they could be seen. To enable people to access the latest information without having to travel, we are holding some exhibitions and academic conferences online, while also conducting some as hybrid events (both offline and online).

#### 3 Webinars

We provide live streams of seminars (webinars) where we provide information useful for research and analysis, including operating our equipment, analytical know-how, and information on the latest technologies and products. After the webinars, we focus on follow-up with participants, including online question and answer sessions. We are also putting together an archive of recordings from past seminars.

#### 4 Web content

We are working to improve our online educational content to give back to society by sharing our cultivated expertise and technology while ensuring equal access to learning opportunities for everyone, regardless of constraints on place or time. This includes publishing *JEOL NEWS*, a summary of the latest research results, as well as glossaries explaining academic and technical terminology related to scientific and metrology instruments, and on our website, we publish *Introduction to JEOL Products*, easy-to-understand explanations of the principles and application of our products for beginners.

### Sharing

Moving from ownership to use of analytical instruments. Through our sharing service, we promote the use of high-end equipment.

As science progresses, demand is on the rise for using the high-end scientific and metrology instruments required for cutting-edge research, including nanotechnology and material analysis. On the other hand, there are many challenges when it comes to universities, companies, and public research institutes purchasing and maintaining high-end equipment on their own with limited budgets.

In response, we launched a metered rate sharing service in 2018 that allows use of our equipment on an as-needed basis, reducing the burdens of initial investment and running costs.

By providing the best analysis via sharing to customers that had previously given up on adopting high-end equipment due to budget constraints, we are capturing demand and continually strengthening relationships with customers.

With various plans, contracts are flexible, including remote operation plans offered over the Internet so that customers do not need to come to our facilities, and concierge services are provided by our expert staff.

## Contract Services

We provide the experience and results we have cultivated over our more than 70 years through a contract analysis service.

We address varied needs with the latest equipment and analytical know-how, as only a manufacturer can.



### 1 Contracted analysis

We measure, observe, and analyze samples provided by customers. Our comprehensive support of customer research includes everything from recommendations on methods of analysis to advice on the results of analyses.

### 2 Observed analysis

Our customers can come to us and consult with expert operators onsite as they conduct analyses according to their requirements. Customers can specify where to observe and what conditions to use for analysis on the spot while checking the status.

### 3 Online remote analysis

Customers can connect with expert operators via the Internet. Conditions for observation and analysis can be specified while checking the status in real time via video without visiting our facilities. The data obtained is delivered quickly and safely via online storage.

### 4 Sample preparation

Preparation of high-quality samples is essential for obtaining good analytical data. Our experienced staff use the latest equipment to prepare samples on behalf of the customer according to their requirements.

### 5 Customized lectures/sample preparation lectures

We offer lectures according to customer requests as well as person-to-person lectures on sample preparation.



Accreditation of Partnership on Research Assistance Service  
 文部科学省認定 研究支援サービス  
 Accreditation of Partnership  
 on Research Assistance Service  
 (A-PRAS) logo

Equipment available via sharing service



JAMP-9510F  
field emission Auger microprobe



JNM-ECZ400R / JNM-ECZ800R  
nuclear magnetic  
resonance systems



JEM-ARM200F NEOARMeX  
atomic resolution analytical  
electron microscope

Through our sharing service, we will build a new business model by proposing value in keeping with the current trend in a shift from products to services and addressing diverse needs on the front lines of research.

Since fiscal year 2019, our sharing service was awarded with the Accreditation of Partnership on Research Assistance Service certificate by the Ministry of Education, Culture, Sports, Science and Technology.

# Human Capital Management



To ensure that we live up to our company philosophy for sustainably, we are striving to secure outstanding employees that have diverse understanding and perspectives. As well, we will provide an environment for them to maximize their abilities. In addition, we are working to maintain and improve our business activities by creating an environment in which employees can work safely and in good health, and that enables a variety of workstyles.

Under our medium-term management plan, Evolving Growth Plan, we are working to achieve the growth of three values, one of which is for employees and human resources. Here, we are actively investing in our human resources and setting specific goals as we work to realize this growth.

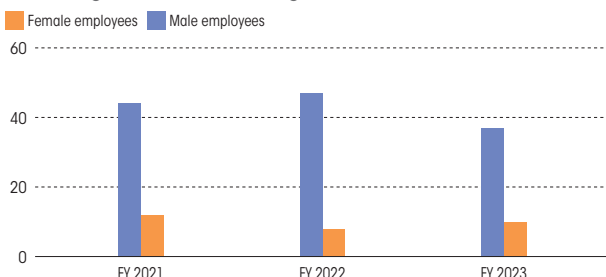
### Securing exceptional employees

We recruit mid-career talent in addition to new graduates. By integrating their diverse backgrounds with our DNA cultivated over 70 years of history, we continue to meet the challenge of ever-advancing technology and society. We are particularly focused on recruiting and empowering women, posting information on our recruiting website highlighting the Roundtable Discussion for Women with Science Backgrounds. We will continue to actively increase the number of female colleagues and support their career development.



Photo: Roundtable Discussion for Women with Science Backgrounds, posted to our website

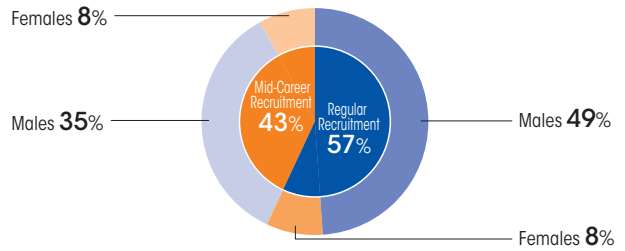
### Percentage of Females among New Graduates Recruited



	FY 2021	FY 2022	FY 2023
Male employees	44	47	37
Female employees	12	8	10
Percentage of females	21.4%	14.5%	21.3%

### Regular and Mid-Career Recruitment

(as of March 31, 2023)



### Cultivating Employees' Capacity

In order to develop employees who think and act by themselves, we have improved the existing position- and qualification-based education system and have introduced a new learning management system (LMS) to build an education system that utilizes e-learning (online learning). We are also employing language courses as part of our employee education to cultivate global human resources. By using online courses, we will create company-wide programs that increase learning opportunities for employees and establish an education system for more employee growth. This includes reskilling programs available to all employees, including seniors.

As stated in our Company Philosophy, we have been challenging the most advanced technologies in the world since our founding. We are engaged in an array of initiatives for educations, including cultivating talented engineers.

- 1 In our Advanced Technical Specialist Program, we evaluate and help develop highly skilled engineers. Every year, these skilled engineers are certified as special researchers and are provided with a two-year special research grant to boost their motivation.
- 2 Through our Doctoral Degree Recognition Program, we encourage employees to acquire doctorates. As of October 1, 2022, the number of employees holding PhD degrees reached 113. Going forward, we will provide more institutional support to boost the number of employees with PhDs, the core of our research and development teams.
- 3 In our Special Appointment Advanced Specialist Program, we further enliven and motivate our engineers by providing special appointments to non-line managers with particularly advanced skills.

### Employee Engagement

We have employing a wide range of initiatives to increase employee engagement. The President's Award, established in 2010, is designed to motivate employees by the President personally recognizing and awarding employees who have

worked to solve problems on their own initiative. We will continue to improve these programs and survey our employees to further boost engagement. By recognizing issues and implementing effective and continual personnel initiatives, we are creating an environment where employees can work with more satisfaction than ever before.

	FY 2020	FY 2021	FY 2022
President's Award winners (cumulative)	56	91	81

### Promoting diversity and inclusion (D&I)

JEOL recruits people regardless of their gender, nationality, age, or disability to create an organization where everyone can play an active role. Through our support of the work-life balance, we have been focusing on empowering women and promoting childcare guided by government acts for women's empowerment and child raising. These initiatives earned us Eruboshi certification (3rd level) in August 2023 and Kurumin certification in November 2022, both from the Ministry of Health, Labour and Welfare.



In addition, the percentage of female employees who take childcare leave and return to work is close to 100%. Many employees make use of a shortened work hour system, etc. after returning to work following childbirth and childcare. Our return-to-work system—helping employees who have left for reasons such as childcare or nursing care—has spread throughout the Company. We are now seeing more employees take advantage of this system and return to work. The hourly paid leave program, introduced in January 2021, has also been widely used by employees as a way to effectively balance work and family life.

We have also been focusing on raising the percentage of eligible male employees taking childcare leave, which rose significantly: to 45% in FY 2022. We will continue working to achieve our target of 50% in FY 2024. The percentage of female employees in management positions increased to 4.1% in FY 2022, but this requires improvement. We will continue to work to achieve our target of 5.0% in FY 2024.

We will also continue providing support for balancing work and family life, aiming to create an environment that makes possible a strong work-life balance for our employees.

### Health Management Initiatives

We believe that the mental and physical health of employees are important management issues. We have engaged in health management initiatives since FY 2021 and have been certified under the Health and Productivity Management Outstanding Organization Recognition Program 2023 (large enterprise category) for the second consecutive year.

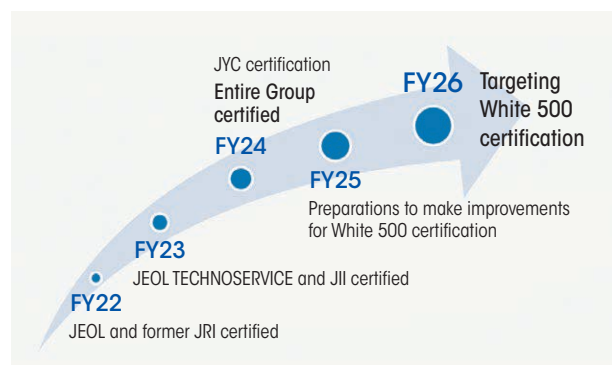
In FY 2022, our wide range of activities encouraged better health among Group employees, including an exercise-themed walking event, as well as other events for better eating, sleep, and smoking cessation.

Almost every employee received a medical exam in FY 2022. Our resident industrial physician pays close attention to the daily health of employees. Further, over 90% of employees undergo stress checks every year to help prevent mental health problems. We have also established multiple points of contact to provide counseling and support, which includes talking with an industrial doctor specializing in mental health or getting advice from people outside the Company via telephone or email.

We will make every effort to gain certification for the entire Group in FY 2023.



	FY 2020	FY 2021	FY 2022
Health checkup participation	99%	100%	100%
Stress check exam	94%	93%	94%



### Encouraging the Active Participation of Senior Employees

Our clear position is that senior employees, aged 60 and above, are powerful assets. To ensure that these richly experienced employees can demonstrate their capabilities to the fullest, we are working to build an environment that helps them become highly motivated.

For this motivation, we have restructured our reemployment (back to work) system and created an internal project to studying ways to structure employee compensation that recognizes contributions and results.

## Driving employee and human resource growth and enhancing human capital by addressing five priority issues



Atsushi Seki  
Director & Executive Officer  
In charge of General Affairs

In our medium-term management plan, Evolving Growth Plan, we established our direction of “Becoming a top niche company supporting science and technology around the world”—a goal that we work towards every day. Here, one of our primary aims is to achieve growth in three key areas: customer value, employees and human resources, and sales and profits. It is clear that the development of employees and human resources is an indispensable and critical management issue for corporate growth.

For this reason, we are working on five priority issues, aiming to make certain that every employee can reach their full potential.

### 1 Securing exceptional human resources

We proactively recruit both new graduates and mid-career hires with the goal of securing diverse, exceptional employees. To recruit more women, we are currently targeting a female hiring percentage of 25% using initiatives including posting feature articles on our website called *Women's Workstyles* and *Roundtable for Women with Science Backgrounds*. We are seeing a clear rise in the number of women in sales and technical positions, where entries were previously quite low, and this is yielding positive results.

We are working to create a comfortable working environment for women to ensure they can easily serve as many years as men. We will continue to proactively increase recruiting women while bolstering support for their careers.

### 2 Skill development and training

While increasing engagement, we are training employees to

think independently and to act with initiative. We have introduced a learning management system (LMS) and have created a training system utilizing e-learning. By adding more training content and improving online training, we will increase learning opportunities for employees, foster on-the-job training (OJT), bolster employee support, and encourage self-development.

In addition, to increase employee engagement, we give out President's Awards, our quarterly program for internal recognition. Under this program, the President selects and awards individual employees and teams who have worked with independence and have shown initiative to resolve problems. We provide opportunities for mid-level employees to regularly have direct discussions with management, making sure that the Company's vision and mission are shared through dialogues.

### 3 Encouraging the active participation of senior employees

In an age when life expectancy is approaching 100, we encourage the active participation of senior employees because supporting the full participation of senior employees is important. We have many employees over the age of 60 who demonstrate a high level of skill and performance. We are carrying out reforms to enable these employees to pass on their skills and for them to support the development of young employees while utilizing their extensive networks of contacts and experience.

We will also have reskilling programs for middle and senior employees. In addition to providing reskilling, these programs enable employees to identify how they can better

achieve results and contribute to the Company. This reskilling must have job details and career paths that are visible and easily understood.

#### 4 Promoting diversity and inclusion (D&I)

We will create new value and drive growth by employing human resources with a diverse range of backgrounds and values. Through initiatives that support a work-life balance, we will continue to create a comfortable working environment.

Based on the Act on the Promotion of Women's Active Engagement in Professional Life and the Act on Advancement of Measures to Support Raising Next-Generation Children, we are taking the initiative to empower women in the workplace and provide better childcare support. To recognize our achievements, we were given Kurumin certification in 2022 and Eruboshi certification (3rd level) in 2023. The percentage of eligible male employees taking childcare leave increased sharply to 45% in the previous fiscal year. While the percentages of women being recruited and women in management positions remain fairly low, 21.3% and 4.1% respectively, we will continue to empower more women.

#### 5 Improving the working environment

We intend to create a positive corporate culture and workplace that is fulfilling and rewarding for every employee. Recognizing that the mental and physical health of employees is an important management issue, we communicated our Health Management Declaration internally and externally and are promoting health management. In recognition, we were

certified as a 2023 Certified Health & Productivity Management Outstanding Organization. We will continue to improve programs for better health, while promoting the integrated management of data related to healthcare.

Fostering a strong corporate culture is vital for the growth and development of our company. We established the KF Committee (Corporate Culture Committee) back in 1985 with the aim of building a better corporate culture. At that time, our management policy was "As a company is supported by its people, the fostering of a positive corporate culture and atmosphere is the key to successful management." Based on this approach, we established guiding principles for action and later launched our Don't Litter Campaign (see page 40 for more detail) so employees could participate in cleanup drives along their commuting routes near the Company.

KF activities are mainly for young employees who are selected from a wide range of workplaces. Transcending organizational boundaries, these employees exchange opinions and work based on their own ideas. As levels of expertise increase, unseen organizational barriers can easily arise between departments. To address this issue, we work to foster vitality within our organization through YOKOGUSHI.

Human capital management has been drawing increasing attention. Under this approach, employees are not regarded as just management resources but rather as human capital whose worth is improved through investment. Securing and assigning employees is not the final step; instead, employee strengths are maximized through assessments and training.

By rejuvenating human capital, we will continue becoming a company that embodies our philosophy of "contributing to the progress of both science and human society."



## Contributing to the Achievement of the SDGs through Business Development that Leverages JEOL's Advantages

In Triangle Plan 2022, our medium-term management plan that we launched in FY 2019, we declared that we would contribute to the achievement of the SDGs as an entire Group, and we highlighted the SDGs that we would prioritize in our activities.

Further, in our *2020 Integrated Report* we identified our priority social issues (materiality) and clearly stated the initiatives that we would continually use to help

resolve these challenges. We also added and arranged priority SDGs that we will work on.

We will contribute to the realization of a better, more sustainable world, as set out in the SDGs, by tackling material issues in both our business and ESG activities and by expanding our unique business operations that embody the spirit of JEOL.

### Process for Identifying Materiality



### SDGs

The UN's Sustainable Development Goals (SDGs) refer to global objectives to create a better, more sustainable world by 2030. They were adopted at the United Nations Summit in September 2015 and are included in the 2030 Agenda for Sustainable Development.

The SDGs consist of 17 goals and 169 targets. These goals and targets deal with issues in areas such as the economy, industry, and society. Corporations, the leaders of economic activity, are expected to play an important role as one of the main actors responsible for achieving the SDGs.





	Material Issues	Key Initiatives	Targeted SDGs
SDGs being addressed through business operations	Provide products that contribute to people's health, safety, and security	<ul style="list-style-type: none"> <li>Provide medical equipment indispensable for the diagnosis and the prevention of illness</li> <li>Provide equipment with high sensitivity and accuracy that can analyze substances harmful to the human body</li> <li>Provide manufacturing equipment that contributes to the further development of sensing technology</li> </ul>	 
	Contribute to scientific progress and the sustainable development of society	<ul style="list-style-type: none"> <li>Develop world-class scientific instruments supporting advancements in science</li> <li>Contribute to higher performance semiconductors supporting the communication infrastructure</li> <li>Create advanced technology by promoting partnerships</li> </ul>	 
	Contribute to the conservation and sustainability of the global environment	<ul style="list-style-type: none"> <li>Provide measuring equipment indispensable for the R&amp;D of green devices</li> <li>Manage chemicals throughout the supply chain by using green purchasing</li> <li>Develop equipment that reduces CO<sub>2</sub> emissions by conserving energy</li> </ul>	  
SDGs being addressed through ESG initiatives	Conduct distinctive activities that contribute to the community and society	<ul style="list-style-type: none"> <li>Provide science education support (lessons) using electron microscopes at elementary and junior high schools</li> <li>Support academic promotions and the fostering of young researchers by donating to public interest incorporated foundations</li> <li>Promote open innovation in collaboration with domestic and overseas research institutes and universities</li> </ul>	 
	Contribute to the conservation and sustainability of the global environment	<ul style="list-style-type: none"> <li>Streamline electricity use by introducing energy-saving equipment and other initiatives</li> <li>Reduce CO<sub>2</sub> emissions at business locations throughout the Group</li> <li>Thoroughly separate, reduce, and recycle waste</li> <li>Deploy the Don't Litter campaign, a cleanup drive for beautifying the surroundings</li> </ul>	  
	Develop human resources and respect human rights	<ul style="list-style-type: none"> <li>Promote the creation of a workplace where women can more easily develop their careers</li> <li>Enhance systems to help bring balance to work and family in line with every person's stage in life</li> <li>Improve the awards program for employees making exceptional achievements</li> </ul>	 



## Implementing Unique Educational Support Programs

We are conducting science classes for elementary and junior high schools as part of our unique approach for contributing to local communities and society. We are visiting schools to give lessons on using portable electron microscopes; children operate the microscopes themselves to observe plants and insects. By allowing students to experience the microworld, normally invisible to the human eye, the classes encourage curiosity and the enjoyment of learning. This year is the twelfth time (every year since 2011) that we have carried out these programs in elementary schools throughout Tohoku as part of our contributions to support the revitalization of the region following the Great East Japan Earthquake. Please see page 39 for more information on our science education support programs.



## ● International Standards Compliance for the Environment and Quality

### ■ Unique Management System JGMS

JGMS (JEOL Group Management System) is a management system that defines the actions that JEOL must take to meet the requirements for ISO 9001:2015 and ISO 14001:2015 certifications from an outside certification authority. The ISO 9001 standard sets the requirements that help to improve customer satisfaction and the quality of products and services; ISO 14001 defines environmental requirements, including those for monitoring and reducing waste and other environmental factors, as well as compliance with environmental laws and regulations. The JGMS contains the rules, standards, and procedures that specifically define the operations that integrate these requirements with company management.

### ■ Policies

Our quality and environmental policies are clearly communicated both internally and externally through media such as our website.

#### Quality and Environmental Policies

In support of our Corporate Philosophy, we are offering advanced products and services to users of scientific and metrology instruments, semiconductor equipment, industrial and medical equipment, and contributing to the development of a sustainable, recycling-based society.

#### Policy for Quality

- In support of our mission, the JEOL Group is committed to being a total solution provider, providing high quality products and well-organized services to best serve our clients.
- Continually improve products and services using a cross-departmental approach.
- Promote quality control initiatives through execution and continual improvement of our quality management system in compliance with international standards.

#### Policy for Environmental Protection

- Product development and process control that is environmentally friendly.
- Never-ending environmental quality improvement at every step of our business from development to production to service.
- Compliance with laws and regulations as a socially responsible global corporation.

- Promote environmental control initiatives through execution and by continually improving our quality management system in compliance with international standards.

### ■ JGMS Operations

Senior management assesses the conditions, issues, and needs—in and outside the Company—and then uses our policies to evaluate basic risks as well as quality and environmental risks. Then precise guidance is provided to the people responsible in the divisions. Every division then sets the goals and plans for their departments based on this guidance and develops, manages, and evaluates them, making continual improvements so that the PDCA\* cycle can be implemented throughout the Company. In this way, senior management guidance permeates all levels of the organization. These activities are managed as one JGMS system to ensure better products and services and to protect the global environment.

\* PDCA: plan, do, check, act cycle (continual improvements)

### ■ Audits

#### External Audits

The activities of the JEOL Group are regularly audited by an external audit company, and the audit company provides an evaluation of the continuing certification, including assessment of the effectiveness and conformance with international standards and JGMS. The issues that are pointed out in the audits are regarded as opportunities for improvement, and we make full use of them as a tool for making our business operations better.

#### Internal Auditing

Two internal auditing periods are scheduled every year so that the JGMS activities conducted in every division can be independently audited. Internal auditing is done objectively from a neutral perspective by certified internal auditors who have completed education and training and who meet certification standards.

Recommendations made for improving operations during internal audits are not confined to improvements in a specific division, but are deployed horizontally across the Company.

## ■ Publication of International Certifications

JEOL Group companies obtained the first certifications for ISO 9001 in December 1995 and ISO 14001 in December 2002. Since then, the certifications have been updated and the JEOL Group companies have complied with the newest standards: ISO 9001:2015 and ISO 14001:2015. ISO certification information is shown at the right. You can always see up-to-date information on the JEOL website.

### Certification authority

Bureau Veritas Certification Holding SAS-UK Branch

### Registration numbers

ISO 9001: 4705112 1.0

ISO 14001: 4705114 1.0

## Compliance

### CSR Committee

Recently, corporations are being required to comply with regulations concerning pollution control, reduced use of chemicals, and quality/environmental control as part of their corporate social responsibility (CSR).

JEOL organized a committee to address these issues in 2006. The CSR Committee, headed by the president and advised by an external attorney, meets twice a year. The committee's purpose is to promote JEOL's activities to continually improve and reinforce compliance, quality control, social contribution, corporate ethics, and risk management.

### Environmental Regulations Committees

Environmental Regulations Committees have been established to handle issues of environmental regulations that apply to JEOL products, starting with the RoHS directive.

All departments related to products, including sales, development, design, procurement, manufacturing and service, participate and are working on legal compliance.

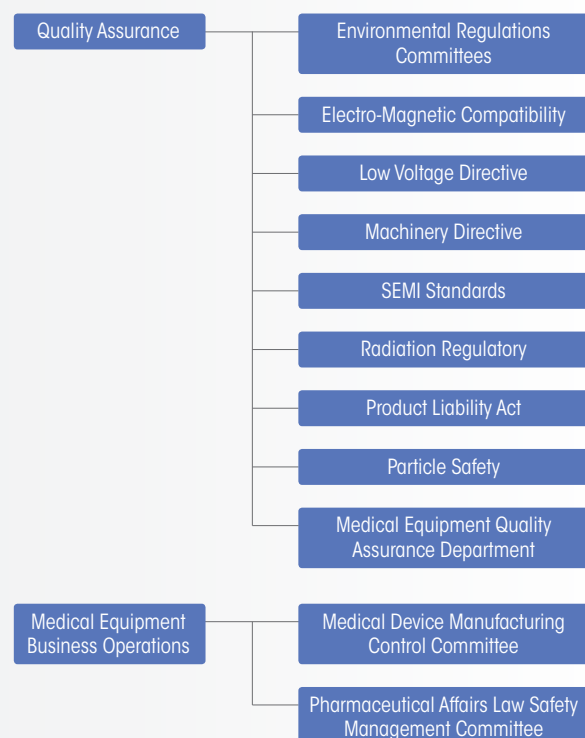
### Technical Regulation Committees

To respond effectively to the laws and regulations in every country, we have established special committees within the Quality Assurance Division and are taking effective action. Every committee considers all items related to product technical regulations and the latest trends in laws.

Laws and regulations change over time. Any provisions affecting the JEOL Group are discussed in the committee

specializing in that area, and a review is quickly distributed among all concerned through the Quality Assurance Division.

For medical equipment, the Medical Equipment Quality Assurance Department of the Quality Assurance Division is responsible for quality assurance (QA) as well as the regulatory affairs (RA) that cover compliance with rules and regulations throughout the world.



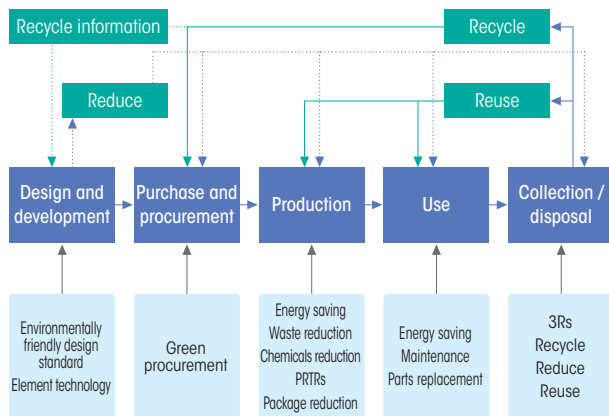


## Environmental Protection through Products

### Initiatives for Product Lifecycles That Are Environmentally Conscious

JEOL is implementing initiatives that incorporate the concept of reducing environmental impact in every part of the product lifecycle, from purchasing, production to distribution, through to operations, disposal, and recycling. During development and design, we not only comply with environmental laws and regulations but we also include the reduction of CO<sub>2</sub> emissions as a design goal. When purchasing materials, we ask component manufacturers to comply with our environmentally preferable (green) purchasing requirements and to use effective environmental management. In the production phase, we strive to reduce CO<sub>2</sub> emissions in the whole plant as well as to ensure that waste materials are disposed of in the correct way. When our instruments are being used, we ensure their stable operation through maintenance and inspections. We work hard to reduce the environmental impact of these instruments during disposal by comprehensively following the 3Rs.

Scope of JEOL product assessment



### Environmental Contribution through Products

JEOL's key products are ones that stimulate environmental improvements, and they include tools that are fundamental for R&D, instruments that improve production processes, environmental analysis equipment, and 3D printers.

#### Field Emission Electron Probe Microanalyzer (JXA-iHP200F)

Analysis of trace components contained in materials is critical for the development and quality control of structural materials, including high-tensile steel, which can save energy by reducing the weight of automobiles. The JXA-iHP200F Field Emission Electron Probe Microanalyzer meets the requirements for the high-speed, high-precision

analysis of trace components. In addition, this analyzer contributes to environmental improvements in a wide range of fields, such as research into the decommissioning of nuclear reactors and research for the exploration of natural resources.

#### High Throughput Triple Quadrupole Mass Spectrometer (JMS-TQ4000GC)

Triple Quadrupole Mass Spectrometers can detect harmful substances in food, water, and the environment with a high degree of accuracy and speed. JEOL's Triple Quadrupole Mass Spectrometer can analyze many harmful substances at high speed and enhances the efficiency of analysis for pesticide residues.

#### Electron Beam Metal 3D Printer (JAM-5200EBM)

Metal 3D printers are expected to play an innovative role in boosting energy efficiency and reducing the weight of parts for automotive vehicles and aircraft engines; components used in the space industry; and generator turbines. Our metal 3D printers use an electron beam system that can print difficult-to-process materials, such as titanium alloys, to make high-quality products.



### Instruments for battery development

To realize carbon neutrality, we must reduce power demand and switch to electric power, such as that used in electric vehicles. To achieve this goal, it is essential to improve the performance and quality of rechargeable batteries. Our products are being used in R&D for these batteries.



We publish application notes that introduce case studies where cross-sectional analysis of batteries has been performed using our instruments.

## Green Purchasing

The JEOL Group communicates our environmental policies to clients and business partners and asks for their cooperation in complying with environmentally preferable (green) purchasing requirements.

JEOL Group companies promote the development and design of products that do not contain certain chemical substances.

Our suppliers, provide services without adding specified chemicals, and deliver goods that do not contain the specified chemical substances, in accordance with the terms of their contracts with us. Working with our partners based on a "green contract," JEOL Group companies provide, to their business partner companies, information related to chemical regulations and help them with analysis of chemical substance to achieve specific targets.

### JEOL Group Green Purchasing Requirements [excerpts]<sup>1</sup>

Version 5 (June 2010)

The JEOL Group is committed to activities that encourage environmental protection throughout the business cycle from material purchasing, product delivery, service, maintenance, and disposal.

We form an alliance with our clients, vendors, and partners to establish environmentally preferable purchasing worldwide. To insure green purchasing from our supply chain, we have defined a set of rules called the JEOL Group Green Purchasing Requirements.

## RoHS Compliant Products

Since 2017, the JEOL Group has been providing instruments that comply with the European RoHS Directive, a regulation that limits harmful substances used in making electrical and electronic products. In addition, the number of regulated harmful substances increased from six to ten in July 2021, so the Group is making every effort to ensure that our products remain compliant.

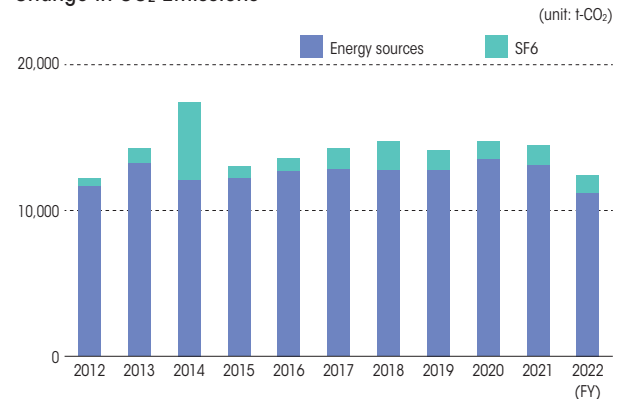
Going forward, the Group will continue to work on the development, production, and supply of products that contribute to the environment and that are environmentally conscious by complying with the RoHS Directive in an increasing number of countries worldwide. At the same time, we are reducing our environmental impact.<sup>2</sup>

## Protecting the Environment through Business Activities

### Reducing Greenhouse Gases (GHGs)

Through the Energy Saving Committee, the JEOL Group is continuing with initiatives that reduce CO<sub>2</sub> emissions to help attain the Sustainable Development Goals (SDGs) and carbon neutrality in the future.

## Change in CO<sub>2</sub> Emissions



## Improving Efficiency of Energy Use

JEOL is working to improve energy efficiency, starting with electricity and fossil fuels. Specific examples of these improvements: upgrading to energy-saving air-conditioning systems; introducing separate air conditioners; upgrading cleanroom equipment; adopting LED lighting; introducing ice storage air conditioners for more effective nighttime use of electricity; installing light-shielding sheets and films on buildings to reduce the burden on cooling in summer; and using heat-shielding coatings. In July 2020, a solar power system with over 100 kW of generating capacity was installed on the roof of Building 3 at our head office to reduce greenhouse gases (GHGs) as well as to promote clean energy and renewable power. Some of the power generated has been used for production. In FY 2023, we will fast-track the introduction of renewable energy by completing the installation planned for Building 6 at the head office.



Solar system on roof of Building 3 at the head office

Companywide initiatives aimed at reducing energy consumption include the Cool Biz and Warm Biz campaigns for office clothing as well as managing the amount of electricity used in every building.

In February 2020, JEOL improved the energy consumption rate (index for measuring efficient use of energy) by 4.2% on average over a five-year period against

<sup>1</sup> Visit the JEOL website for the entire document <https://www.jeol.com/sustainability/environment/green.php>

<sup>2</sup> Visit the JEOL website for more details on our sustainability projects <https://www.jeol.com/sustainability/environment/index.php>

a target of 1% or more annually on average. This 1% or more target—required by the Act on the Rational Use of Energy and overseen by the Energy Saving Committee—is primarily achieved by conserving energy day to day. We also garnered the highest rank of “S” for energy savings for four consecutive years in a system implemented by the Ministry of Economy, Trade and Industry (METI) that evaluates businesses every year. Also, we have been recognized for other achievements: the Kanto Region Electricity Usage Rationalization Committee awarded us the top prize for four consecutive years, from fiscal 2015 to 2018, for our effective use of electricity as well as for promoting energy conservation and we received an award for being an excellent energy conservation business from the Kanto Bureau of Economy, Trade and Industry under METI for the first year of the Reiwa era (FY 2019).

Our energy conservation initiatives were highlighted in the November 2020 issue of Energy Conservation in an essay entitled “Document: Challenge Energy Conservation.” This monthly is published by the Energy Conservation Center, Japan.

For the eighth consecutive year, we also earned an “S” under an evaluation system that ranks businesses that reflect the results of METI’s 2022 periodic assessments.

#### Measures at JEOL Yamagata Co., Ltd.

JEOL Yamagata Co., Ltd. is a production base of the JEOL Group located in Tendo City, Yamagata Prefecture.

Employees of several companies on the same site perform all the production tasks, from parts assembly to final production. This is part of our initiative to develop environmentally friendly manufacturing processes. In this way, we are reducing and/or eliminating the need for packaging materials to transfer parts and materials between companies as well as reducing our fuel consumption and the exhaust gases usually associated with transportation.



JEOL Yamagata Co., Ltd.

#### Measures at JEOL (GERMANY) GmbH

JEOL (GERMANY) GmbH is an overseas subsidiary of the JEOL Ltd. As a company that operates globally, we have installed solar panels on the roof of the company to further our efforts to conserve the global environment at our overseas bases. The panels, which began operating from FY 2023, are expected to generate 60,000 kWh annually. We will continue to contribute to the realization of a sustainable society by using renewable energy.



JEOL (GERMANY) GmbH



Solar panels on the roof

#### Management of Chemical Substances

- JEOL protects employees and prevents the illegal distribution or leaks of chemical substances used in the production process and during R&D. We also introduced a chemical management system in October 2019 aimed at effectively managing daily use and inventories. Through the chemical management system, we educate managers on the correct use of chemical substances as well as effective ways to manage storage locations and amounts, and to ensure best management practices for chemical substances received and used.
- PRTR Law (Pollutant Release and Transfer Register) and Tokyo Metropolitan Environmental Preservation Code  
JEOL uses specific chemical substances that require reporting.

Reporting to the Tokyo Metropolitan Government as one of the certified reporting companies: JEOL Ltd.

(Unit: kg / year)

Substance/fiscal year (amount used)	FY 2020	FY 2021	FY 2022
1) Methanol	—	—	—
2) Acetone	—	—	—
3) Isopropyl alcohol	110	—	130
4) Sulfuric acid	—	—	—

### Storage and Disposal of PCB Waste

Although the JEOL Group stored PCB waste (used in high-voltage capacitors, transformers, and stabilizers), we regularly treated both high-concentration and low-concentration waste. Processing fluorescent lamp ballasts took place in February 2020, marking the end of treating PCB waste.

### Verification of Waste Material Processing and Processing Results

We introduced an electronic manifest system for waste materials in FY 2021 to comply with laws and regulations and to monitor the disposal of waste material in real time. The main reason for reducing waste materials is to improve the rate of recycling by completely separating waste products by the type of material, as well as by recycling more plastics, and by using packing containers and materials that are reusable.

For the disposal of waste materials, we make every effort to monitor the final disposal method, even for those items that are handled outside the Company's sites. We do not rely solely on the control manifests for industrial waste. Waste materials disposal managers ensure compliance with the requirements of Japan's Wastes Disposal and Public Cleansing Act, as well as those of local regulations. We also perform onsite checks to confirm that waste materials are handled properly.

## ■ Response to Climate Change

### Information Disclosure

We employ environmentally preferable (green) purchasing and provide products that comply with the RoHS Directive in addition to initiatives for product lifecycles that are environmentally conscious, as we contribute to the environment through our products. Our other initiatives for the environment include helping to reduce greenhouse gases and we are improving the efficiency of our energy consumption. We disclose information on our environmental initiatives in our integrated report and on our website.

### Participation in Frameworks

To contribute to carbon neutrality, our actions include responding to the questionnaire of the Carbon Disclosure Project (CDP). Going forward, we will improve the quality and quantity of our disclosures based on the Task Force on Climate-related Financial Disclosures (TCFD), an international disclosure framework, as well as other similar frameworks in order to help mitigate climate change.



## Contributions to Society

### Science Education Support Classes

The Science Education Support Class program was started in October 2007 as part of the commemoration of the JEOL Group's 60th anniversary. Initially, this took place at elementary schools near our headquarters, but this program has since grown to include the Greater Tokyo Area, and is now being conducted at a range of sites, not just elementary schools. Through FY 2022, 738 demonstrations have been performed over 457 days.

Science Education Support Class programs are mainly held in classrooms by demonstrators sent from the JEOL Group. Using a NeoScope™ benchtop scanning electron microscope, students are able to observe pollen, insects, and the mechanisms of the body in detail. Students seeing electron microscope images for the first time display a lot of interest, making comments such as, "It was so interesting to see the bugs so clearly and the different pollen shapes," and "I really liked being able to see what goes on inside the human body in the microworld." By participating in local community events and workshops for elementary and junior high school teachers, we hope to provide many people with the opportunity to become more familiar with the microscopic world.

Some examples of where these events have been held include Akiruno Maeda Elementary School (Tokyo), Tokyo Metropolitan Mitaka Secondary School (Tokyo), the 17th Kawasaki Science Challenge (Kanagawa), the 52nd Akishima Industrial Festival (Tokyo), Chiba University Summer Science Seminar (Chiba), and Institut Culturel Franco-Japonais (Paris, France). In 2022, we also visited four elementary schools in Ishinomaki City to hold special classes for the children affected by the Great East Japan Earthquake.

In the future, we hope that everyone who takes part, including teachers, students, and the general public, will become more interested in science.

Starting in fiscal 2015, the JEOL Group collaborated with universities and other businesses to increase the number of children with an interest in math and sciences through a two-year special support program organized by the Tokyo Board of Education. After the end of the Tokyo Board of Education program in 2017, JEOL continued activities through a Math & Science Special Support Program organized in Hino, Tokyo. JEOL Group instructors use NeoScope™ benchtop scanning electron microscopes to hold the Science Education Support Classes. In 2022, classes were held at seven elementary and junior high schools in Hino City, enabling students to experience the

microworld via online remote control of a benchtop scanning electron microscope installed at our company.



Electron microscope class at Akishima Haijima 2nd Elementary School



Electron microscope class at Tokyo Metropolitan Hibiya High School

### Support for the Kazato Research Foundation

The Kazato Research Foundation was established in 1969 to commemorate the 20th anniversary of JEOL Ltd. The foundation is supported by a contribution from Kenji Kazato, the founder of JEOL Ltd. The purpose of this organization is to promote the research and development of electron microscopes and related instruments, as well as applied research using these instruments (for medical science, biology, physics, chemistry, materials science, nanotechnology, and other disciplines). This foundation has helped many young researchers over the years, and JEOL continues to support the foundation's activities with annual donations. (<https://www.kazato.org/english/>)

The young researchers below received awards in FY 2022.

#### Kazato Prize

**Yuki Ohsaki**  
(Professor, Department of Anatomy I, School of Medicine, Sapporo Medical University)  
Biogenesis and physiological functions of nuclear lipid droplets

**Ryo Ishikawa**  
(Project Associate Professor, Institute of Engineering Innovation, The University of Tokyo)  
Three-dimensional imaging of atomic defects in crystal by using atomic resolution STEM

#### Kazato Research Encouragement Prize

**Hirota Nagai**  
(Assistant Professor, Division of Pharmacology, Graduate School of Medicine, Kobe University)  
Elucidation of mechanisms of stress-induced brain function changes by three-dimensional electron microscopy

**Kazuki Kato**  
(Project Lecturer, Research Center for Advanced Science and Technology, The University of Tokyo)  
Visualizing the molecular evolution of enzymes using CRISPR-Cas9

**Ryotaro Aso**  
(Associate Professor, Faculty of Engineering, Kyushu University)  
Analysis of nanoscale electric field by high sensitivity electron holography

**Takafumi Ishida**  
(Assistant Professor, Institute of Materials and Systems for Sustainability, Nagoya University)  
Development of a high-speed direct electron detector using SOI technology

Prize winners are expected to play active roles in the fields of materials research and life sciences.



## Local Communities

### Don't Litter Campaign (Commuter Route Cleanup Drive)

The Don't Litter Campaign is a volunteer community service that JEOL employees have been performing since 1994, and it has become a regular part of our routine. About once every two months, employees take part in these cleanup drives during their morning commute.

Employees will continue these activities, never forgetting the original spirit and enthusiasm that prompted the start of the Don't Litter Campaign.

*"It was depressing to see cigarette butts and other trash littering the sidewalks around the company, and along the paths to the train station. Believing that there must be something that we could do, something that we should do, we began to regularly clean the commuting routes. The name given to this cleanup drive is the Don't Litter Campaign."*



Don't Litter Campaign rally

### Participation in the Akishima Environment Consideration Enterprise Network

The activities of the Akishima Environment Consideration Enterprise Network started in April 2005, with 16 member organizations. By April 2022, this organization grew to include 34 member enterprises. JEOL has been involved as an executive member since the inception of this network.

During a restructuring of the organization between FY 2009 and FY 2010, JEOL chaired the network, continued in the role of vice-chair for FY 2011 and FY 2012, and as executive secretary in FY 2020, all the while participating in environmentally friendly activities and practices in collaboration with network members.

The network's activities are low profile, and we intend to keep promoting environmentally friendly practices in local communities.

### Activities at JEOL Yamagata Co., Ltd.

JEOL Yamagata Co., Ltd. has earned the goodwill of the people of nearby Tendo City, Yamagata Prefecture. To continue doing business for many years to come, the following initiatives are being undertaken.

- 1 We are accepting on-the-job trainees from high schools and colleges every year and provide factory and carrier experiences to assist the development of human resources and professional awareness.
- 2 Factory tours are offered to provide opportunities to see the products being produced. In FY 2022, 24 visitors from four organizations visited our site.
- 3 Crossing guards and patrols are provided on the roads around the company during the traffic safety campaigns in the spring and autumn. The goal is not only to prevent traffic accidents during the commute to school by the young students, but also to improve the behavior in traffic of our employees.
- 4 We participate in local festivals, social gatherings and events. In particular, for the local Autumn Festival, a benchtop scanning electron microscope was prepared at the festival site to allow visitors to see magnified images of insects and other objects.



Traffic safety on school commuting routes



Students from a Yamagata City elementary school

● Management Team (As of June 28, 2023)



**Gon-emon Kurihara 1**

**Chairman**

- Apr. 1971 Joined the Company
- Apr. 2000 General Manager of Medical Sales Division
- Jun. 2005 Senior Managing Director
- Jun. 2006 Director and Senior Executive Officer
- Jun. 2008 President
- Jun. 2019 Chairman and CEO
- Jun. 2022 Chairman (present position)

**Izumi Oi 2**

**President & CEO**

- Apr. 1986 Joined the Company
- Apr. 2012 General Manager of Management Strategy Planning Office
- Jun. 2013 Corporate Officer
- Jun. 2015 Director and Corporate Officer
- Jun. 2016 Director and Executive Officer
- Jun. 2019 President and COO
- Jun. 2022 President & CEO (present position)

**Toyohiko Tazawa 3**

**Director & Senior Executive Officer**

- Feb. 1984 Joined the Company
- Apr. 2009 General Manager of SA Business Unit
- Jun. 2011 Corporate Officer
- Jun. 2013 Executive Officer
- Jun. 2016 Director and Executive Officer
- Jun. 2018 Director and Senior Executive Officer (present position)

**Responsible for:**

Administration of Development Technology, Production, Intellectual Property Strategy Division, R&D Management Center, NM Business Unit and MS Business Unit

**Ryuji Kanno 7**

**Outside Director**

- Feb. 2007 Vice President and Representative Director of Agilent Technologies Japan, Ltd.
- Jun. 2018 Nonexecutive Director of Rigaku Corporation
- Sep. 2020 Senior Advisor at Human Metabolome Technologies, Inc. (present position)
- May 2021 Advisor at SAMURAI Biotech Association (present position)
- Jun. 2021 Outside Director of the Company (present position)

**Kaoru Terashima 8**

**Outside Director**

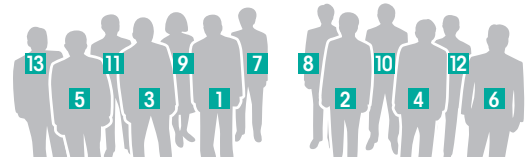
- Apr. 2011 General Manager of IVD Innovation Division, Medical Systems Business Division, FUJIFILM Corporation
- Jan. 2017 Executive Officer, Deputy General Manager of Medical Systems Business Division, overseeing IVD Innovation Division, FUJIFILM Corporation
- Jun. 2020 Fellow, FUJIFILM Corporation
- Jun. 2021 Consultant, FUJIFILM Corporation
- Jun. 2022 Outside Director of the Company (present position)

**Yukari Yomo 9**

**Outside Director**

**Recently appointed**

- Oct. 2011 Director in charge of Human Resources, GlaxoSmithKline K.K.
- Apr. 2012 Director, Japan Association of Corporate Executives
- Oct. 2016 Advisor & Consultant, Human Resources (present position)
- Jun. 2021 Outside Director, JALUX Inc.
- Jun. 2023 Outside Director of the Company (present position)



### Atsushi Seki **4**

#### Director & Executive Officer

Apr. 1983 Joined the Company  
 Apr. 2012 General Manager of General Affairs Division  
 Jun. 2014 Corporate Officer  
 Apr. 2015 Manager of Internal Auditing Division (present position)  
 Jun. 2018 Director and Executive Officer (present position)

**Responsible for:**  
 General Affairs

### Katsumoto Yaguchi **5**

#### Director & Executive Officer

Apr. 1982 Joined the Company  
 Apr. 2011 General Manager of Financial Affairs Division  
 Jun. 2011 Corporate Officer  
 Jun. 2016 Executive Officer  
 Jun. 2021 Director and Executive Officer (present position)

**Responsible for:**  
 Finance, IT, and Export Trade Control

### Akihiro Kobayashi **6**

#### Director & Executive Officer

Apr. 1984 Joined the Company  
 Apr. 2014 General Manager of Business Operations for Scientific and Metrology Instrument Sales  
 Jun. 2016 Corporate Officer  
 Apr. 2020 Executive Officer  
 Jun. 2022 Director and Executive Officer (present position)

**Responsible for:**  
 Sales, Demand Generation Division, Business Operations Center, Scientific and Metrology Instruments Service Business

### Koichi Fukuyama **10**

#### Audit & Supervisory Board Member

### Akihiko Minato **13**

#### Outside Audit & Supervisory Board Member

#### Senior Executive Officer

Tadashi Komagata

#### Executive Officers

Hiroaki Fukuda  
 Jun Nagatsuka  
 Kiyotaka Fujino

### Mitsuru Takahashi **11**

#### Audit & Supervisory Board Member

### Kazuyuki Nakanishi

#### Substitute Audit & Supervisory Board Member

Toshikatsu Kaneyama  
 Osamu Wakimoto  
 Masayuki Kobayashi

### Akifumi Goto **12**

#### Outside Audit & Supervisory Board Member

#### Corporate Officers

Shintaro Yazuka  
 Hirohisa Yoshida  
 Toshihiko Kanayama  
 Chikato Teramoto  
 Shoji Shiota

Rikio Inuma  
 Hidetaka Sawada  
 Syunji Deguchi  
 Kiyohito Takahashi  
 Yasuo Takemitsu

## ● Board of Directors and Audit & Supervisory Board

### ■ Skills Matrix: Board of Directors and Audit & Supervisory Board

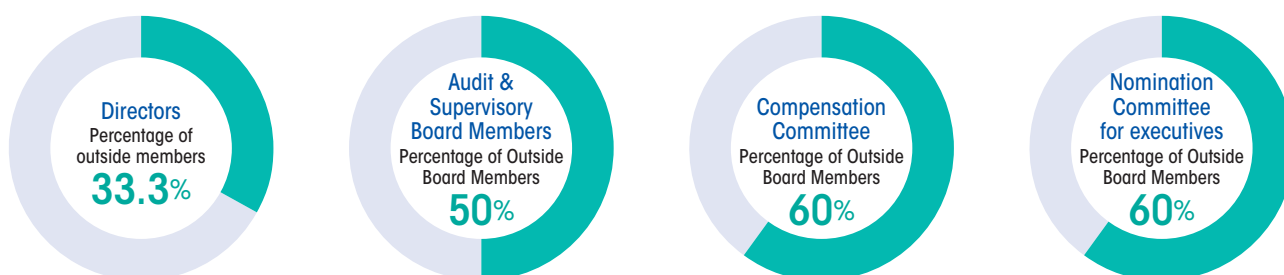
The skills matrix and composition of the Board of Directors and Audit & Supervisory Board are presented below.

The skill categories represent the knowledge and experience required for directors as well as the fields where the Company expects them to make exceptional contributions and apply their expertise and insight to the fullest extent are designated with a “●” mark.

Name	Position	Knowledge and Experience Expected by the Company							
		Corporate Management	Global Business	Technology/R&D	Sales/Marketing	Finance/Accounting	Human Resources/Training	IT/Digital Technology	Legal/Risk Management
Gon-emon Kurihara	Chairman	●			●				
Izumi Oi	President & CEO	●	●						
Toyohiko Tazawa	Director & Senior Executive Officer	●		●				●	
Atsushi Seki	Director & Executive Officer	●					●		●
Katsumoto Yaguchi	Director & Executive Officer	●				●		●	
Akihiro Kobayashi	Director & Executive Officer	●	●		●				
Ryuji Kanno	Outside Director	●	●	●					
Kaoru Terashima	Outside Director	●		●	●				
Yukari Yomo	Outside Director	●	●				●		
Koichi Fukuyama	Audit & Supervisory Board Member		●		●	●			
Mitsuru Takahashi	Audit & Supervisory Board Member					●			●
Akifumi Goto	Outside Audit & Supervisory Board Member								●
Akihiko Minato	Outside Audit & Supervisory Board Member					●			●

Note: The above table shows the knowledge and experience that the Company emphasizes for the skills of every director and Audit & Supervisory Board member.

### Percentage of Outside Board Members



### ■ Ensuring the Effectiveness of the Board of Directors

JEOL requires that directors have extensive work-related expertise and knowledge as well as advanced management skills and the ability to effectively carry out their duties as a director, regardless of nationality, gender, employment history, or age. Directors are selected to ensure that the Board of Directors includes members who possess an effective balance of knowledge, experience, and abilities that will enable the Board to fulfill its role and

responsibilities. The Audit & Supervisory Board members are appointed based on their knowledge of finance or accounting or the law.

For the purpose of analyzing and evaluating the effectiveness of the Board of Directors as a whole, we conduct a survey targeting all directors and Audit & Supervisory Board members and disclose a summary of the results. Please see page 48 for details.

## ● Messages from Outside Directors

JEOL introduced an outside director system in fiscal 2012. When appointing outside officers, the Company makes sure every candidate meets the requirements for objectivity required by the Companies Act and the criteria for independence required by the Financial Instruments and Exchange Act, after considering the appropriate number of officers and their diversity. These appointments are made from the perspective of maintaining sound corporate governance through checks of corporate management by an outside third party.

In June 2023, Yukari Yomo was appointed as an outside director, bringing the percentage of outside directors in the Board of Directors to 33.3% (three out of nine directors).

# To achieve the Evolving Growth Plan, we are supporting a faster business transformation

Ryuji Kanno  
Outside Director

Two years have passed since I was appointed as an outside director. Through dialogue with our top management team, tours of laboratories and plants, and exchanges with employees, I have come to develop a deeper understanding of where JEOL excels and where we can improve.

One area where JEOL excels is the ability to develop, produce, and sell electron microscopes with advanced technologies, which has earned us a superior track record and strong brand recognition in Japan. JEOL has developed near-impenetrable barriers to entry within Japan, including with our support systems. We have also passed the business continuity test for market needs; our technologies are indispensable in growth areas such as semiconductors, batteries, and drug discovery.

The second area is our involvement in the business segment for multi-beam electron beam lithography systems, which is generating significant profits. I believe that this is a successful model; JEOL has applied developed technology in business segments ranging from analytical instruments to semiconductors. Since this is being done for EUVs (extreme ultraviolet), and the miniaturization of semiconductors is critical long term, I am confident that JEOL's business continuity will be secured by our continuing technological innovations and by keeping an eye on our competitors.

Third, given that transparency and diversity are critical for effective corporate governance, I believe that JEOL is taking the right steps. Last year, JEOL established the Nomination Committee for executives, following the advice of the Compensation Committee. In addition, JEOL's first female director was appointed in the most recent fiscal year.

In the meantime, the challenges facing JEOL and the opportunities for business growth are coming into clearer focus. In my view, JEOL's challenges are having too much inventory and low profit margins in the scientific and

metrology instruments segment, while the opportunities for business growth come from delays in promoting globalization and lagging business development. A number of these issues and opportunities for business growth are already being addressed, and I believe that the Evolving Growth Plan will help us to continue growing.

I feel that one of my roles as an outside director is to speak up, without delay, if I have a concern about boosting corporate value by improving the corporate culture, rules, strategy, and policies that form the common consensus in the Company. I am aware that the Board of Directors meetings have an open atmosphere that allows me to freely express my opinion. Corporate culture is something that is slowly built up over many years and for those within the organization this will seem like common sense. This process of continuing certain behaviors could seem strange to people outside the Company. I believe that prompting change is an essential responsibility of outside directors.

I will strive to meet the expectations of all stakeholders and to become an even more beloved JEOL.

### Reason for Appointment

Due to his wealth of experience and knowledge, as well as his ability to make firm judgments on the appropriateness of decisions by the Board of Directors, Ryuji Kanno was appointed as an outside director under a process that emphasized objectivity and impartiality. We are confident that he will offer direction and advice on all aspects of business management, from an independent standpoint, and to assist in improving our corporate value.



# The opportunity for being reborn as a Company that pioneers a new era

Kaoru Terashima  
Outside Director

One year has passed since I was appointed as an outside director. My time with JEOL has helped me to understand the Company's strong technological capabilities, wide product lineup, and the significant contributions to advanced science and technology. I have also found the seriousness and dedication of JEOL's employees to be a great advantage.

President & CEO Izumo Oi took his position in the previous fiscal year, and I expect his leadership in our growth, with his particular "flavor" of management in the coming fiscal year.

As an outside director, I am expected to use my experience and, from a third-party viewpoint, work to strengthen corporate governance and deepen stakeholder engagement. At meetings of the Board of Directors, I will contribute to ensuring the effectiveness of the Board's decision-making by providing helpful suggestions and expressing my opinion on a wide range of subjects concerning the Company's management. However, this is the normal role of an outside director. I believe that I have also been tasked with making recommendations for the changes necessary for the Company's continuous development.

JEOL possesses outstanding technological strengths at a global level and has created numerous unique product lines that stand out from those of other companies. However, despite having such highly competitive product lines, the Company is not maximizing profits, something that is essential for survival as a company. Determining why this is happening will reveal the key for the enormous future development of JEOL. The way forward will naturally reveal itself by having deep foresight; executing business with a firm understanding of the advantages of competitors; understanding the state and needs of target customers; by being price competitive (without selling too cheaply); and by mitigating risk.

How JEOL can ensure keeping up with the future direction of global business will be key. To contribute to society and to continually go forward, the Company must

clearly determine the state of the wide and numerous product lines, then clearly define which ones are to be continued and which ended.

From now on, I would like to do my best to advise and help employees focus on the differences between JEOL's culture and way of thinking and the world around them, to ask their own questions, and to work as one to make changes by clearly establishing places where improvements are needed, while making more progress in areas where JEOL is already strong.

It is especially important that JEOL uses this period of strong performance—from a vibrant semiconductor market and weak yen—as an opportunity to make opening moves for building a stronger future. For this reason, I will make every effort to help JEOL employees have a true sense of change through becoming a more diverse, energetic company that is bringing in external human resources.

## Reason for Appointment

Due to his wealth of experience and knowledge, as well as his ability to make firm judgments on the appropriateness of decisions by the Board of Directors, Kaoru Terashima was appointed as an outside director under a process that emphasized objectivity and impartiality. We are confident that he will offer direction and advice on all aspects of business management, from an independent standpoint, and to assist in improving our corporate value.



# Evolving in the 70th year for more corporate growth

Yukari Yomo  
Outside Director

I have recently been appointed as an outside director at JEOL. My work with a number of global companies in a range of industries has primarily been focused on organizational and human capital management as well as the evolution of corporate culture. To continually develop business operations, companies must flexibly adapt to changes in society, accelerate at a faster pace than ever before, and help customers resolve their issues. The corporate departments supporting these initiatives must lead the organization and take action to execute strategies, while meeting today's challenges. Particularly in human resources, it is becoming increasingly important to acquire talented employees, domestically and internationally, as well as to continuously cultivate these resources using up-to-date best practices.

While I have become JEOL's first female director, the Company's diversity in human resources remains in the early stages. Specific strategies and milestones will be required to create an environment where we can move beyond simply equating women with diversity and by bringing together different employees from diverse backgrounds, including age groups, who work hard and support each other.

The Company is filled with employees who perform their work diligently every day and take pride in helping customers. That is the source of JEOL's performance. It is my hope that the knowledge and past experience that I have as a human resources (HR) manager will help create a rewarding work environment that supports the personal and career growth of JEOL's current and future employees. It is essential for a good corporate climate and culture to employ mechanisms and systems that are current for the times and today's environment.

I believe that there are several characteristics of a strong company that is evolving, and one of these is *openness*. Regardless of someone's position or years of service, a culture with openness is one where people feel free to express their opinions, even if that opinion is about something outside their department, and a culture where they are encouraged to be open. We give frank feedback on

excellence and new challenges, telling others they are great when they are, while simultaneously making sure to include advice on how they can do even better. This holds true even when dealing with those in higher positions, such as a superior or a member of top management. I believe that appreciating and listening to this kind of feedback is much more effective than classroom training to create quality work and a strong organization.

Evolving in the 70th Year is a key phrase that symbolizes the Company's drive to transform. This evolution calls for specific action in all of JEOL's departments and teams, and I will do my part as an outside director to help these actions bring about a better JEOL.

## Reason for Appointment

Due to her wealth of experience and knowledge, as well as her ability to make firm judgments on the appropriateness of decisions by the Board of Directors, Yukari Yomo was appointed as an outside director under a process that emphasized objectivity and impartiality. We are confident that she will offer direction and advice on all aspects of business management, from an independent standpoint, and to assist in improving our corporate value.

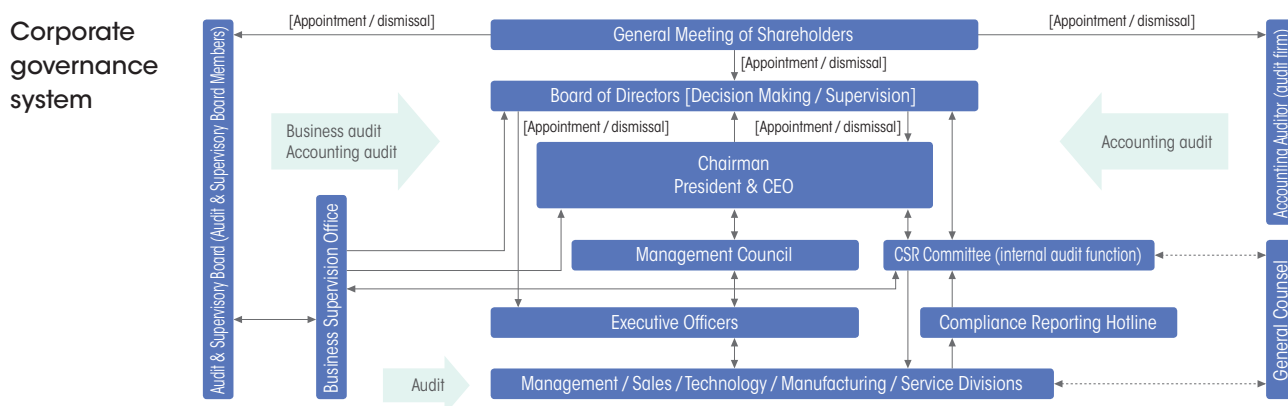


# ● Corporate Governance

## ■ Basic Approach

JEOL's basic approach to corporate governance is to build a stable profit structure and to realize basic management policies that focus on enhancing corporate value while achieving future-oriented development and growth. These goals will be reached by implementing various measures, including setting up an organizational management structure with efficient, highly transparent management that upholds our responsibility to respect the position of stakeholders. In addition, we will respond to change, constantly pursuing an approach to corporate governance that is suited to the times.

## ■ Corporate Governance Structure



### Governance System

The Company has adopted a corporate audit & supervisory system, with the Board of Directors and the Audit & Supervisory Board overseeing and auditing business execution.

JEOL has introduced an executive officer system to quickly respond to changes in the business environment with the aim of streamlining management using an optimal number of board members (the maximum number is limited by the Articles of incorporation) and to facilitate rapid decision-making and efficient business execution.

The Company's governance structure has a mechanism for effective supervision by corporate auditors consisting of an Audit & Supervisory Board whose members have considerable knowledge of finance and accounting. This board, which audits the execution of duties by Board members, includes outside corporate auditors who are independent of management to supervise affiliated companies and branches. This board also participates in meetings of the Board of Directors.

In April 2006, as part of the revisions to management meetings, the Executive Committee has been converted to a Management Council following the adoption of a system that enables more effective and immediate business operations.

The CSR Committee—chaired by the president and includes participation by outside lawyers—was established to promote and strengthen social contributions, compliance, and risk management with an emphasis on corporate social responsibility. The CSR Committee, in response to reports from the Committee on Internal Control and Risk Management, the Internal Audit Department, as well as the JEOL Group Management System (JGMS) and Medical Devices Quality Management System (MDQMS) departments, provides consultation and proposals on CSR activities that are then reported to the Board of Directors.

In addition, internal auditing, excluding those related to JGMS and MDQMS, has been consolidated into the Internal Auditing Division.

### Number of Major Meetings Held during Fiscal Year 2022

Board of Directors	16
Management Council	49
Executive Officers' Meeting	11
Audit & Supervisory Board	23



### Audit & Supervisory Board Audits

The Audit & Supervisory Board consists of four members (including two outside Audit & Supervisory Board members), with an internal Audit & Supervisory Board member serving as the Chairperson.

Guided by the audit policy, schedule, and responsibilities outlined in the first meeting of the Audit & Supervisory Board, every Audit & Supervisory Board member monitors and supervises the status of the Board of Directors' business execution from an independent perspective by attending meetings of the Board of Directors and other important meetings, examining important documents, and conducting audits.

### Internal Auditing

The Company established the Internal Auditing Division and consolidated internal audit functions into the Division, excluding those related to JGMS and MDQMS. For the development and evaluation of internal control relating to financial reports, the Internal Auditing Division carries out audit activities together with the Japanese Sarbanes-Oxley Act (J-SOX) Audit Committee, sharing information with accounting auditors and engaging in mutual cooperation.

In addition, to ensure full legal compliance and increased management efficiency among affiliate companies, we work to deepen communication through question-and-answer sessions conducted at meetings for Japanese affiliate companies held once a year and the Tokyo Meeting for overseas affiliate companies held twice a year. These internal auditing activities are regularly reported to the JGMS and the MDQMS Departments as well as the CSR Committee, before finally being reported to the Board of Directors.

### Accounting Audits

The Company, having fully considered the expertise, quality control system, independence, and global auditing capabilities essential for auditing, has selected Deloitte Touche Tohmatsu LLC as the accounting auditor.

## Evaluating the Effectiveness of the Board of Directors

JEOL has analyzed and evaluated the efficiency of the Board of Directors to make certain that it is functioning effectively. Based on the results of this analysis and evaluation, we intend to improve the overall effectiveness of the Board of Directors through an ongoing process of identifying and improving on issues and by further strengthening the Board.

The results of the Board of Directors' analyses and evaluations in fiscal 2022 have been compiled and are disclosed below.

### Evaluation Method

Self-assessment questionnaires evaluating the effectiveness of the Board of Directors were completed by all directors and Audit & Supervisory Board members at the Board of Director meetings held during fiscal 2022 (April 2022 to March 2023). The results were reported at the Board of Directors' meeting held on Tuesday, May 30, 2023.

### Evaluation Items

Evaluation items were categorized into three areas:

- 1 Board composition
- 2 Management of the Board of Directors
- 3 Providing information to outside officers

### Summary of Evaluation Results

After reviewing the self-evaluation questionnaires for all directors and Audit & Supervisory Board members, all 19 evaluation items were found to be above average and the overall effectiveness of the Board of Directors was found to be generally maintained.

### Issues and Major Initiatives for Evaluating the Board of Directors

#### Issues Raised by Questionnaire Results

- 1 Further improvement of materials for the Board of Directors meetings
- 2 Maintenance and strengthening of the internal auditing system

#### Measures Taken for Issues Recognized in the Previous Questionnaire

- 1 Simplification and summarization of materials for the Board of Directors' meetings
- 2 Quicker distribution of materials to outside directors

#### Future Responses

The Board of Directors will respond to issues based on the results of these evaluations and will continue to make evaluations and analyses to improve their efficiency.

## ● Executive Compensation System (Design)

The JEOL Basic Policy on Directors Compensation is outlined below.

### ■ Basic Policy on Executive Compensation

JEOL's executive compensation helps to motivate management to achieve our management goals, in turn raising awareness of contributions to boost performance through medium- to long-term improvement of our corporate value. Our compensation system is designed to promote profit awareness among shareholders and to raise awareness of shareholder-oriented management.

### ■ Compensation Composition

Compensation for directors consists of basic compensation (monetary reward) and performance-linked stock compensation. However, outside directors who are responsible for supervision and non-executive directors receive only fixed basic compensation in view of their jobs.

### ■ Basic Compensation

JEOL establishes incentives for improving business performance after considering the business environment surrounding the Company, the salary level of others, and salary levels at other companies in the same industry.

### ■ Determining Basic Compensation

Basic compensation is determined based on a compensation table for every position and performance achievement, which is prepared using the basic policy for determining compensation. The table helps to determine the standard compensation for every director position. This amount can vary from 85% to 115% of the standard amount according to the degree of achievement of key performance indicators (KPIs). KPIs include those for achieving the goals for (1) consolidated net sales and (2) consolidated operating income. However, outside directors and non-executive directors are not paid performance compensation, and their basic compensation is set after considering the business environment surrounding the Company, the salary level of employees, and salary levels at other companies in the same industry.

### ■ Determining Performance-Linked Stock Compensation

In determining performance-linked stock compensation, directors are awarded points that are calculated by multiplying the position-based points (based on the basic policy for determining compensation) by a performance-linked coefficient (50% to 170%). The coefficient is calculated from the degree of achievement against target KPIs: (1) consolidated net sales, (2) consolidated operating income, and (3) ROE. Note that one point is equivalent to one share of the Company. However, if an event occurs for which point adjustments are considered justified, such as stock splits and reverse stock splits, the number of shares per point will be adjusted based on the split ratio, reverse split ratio, etc. For directors living overseas, monetary compensation equivalent to the number of points is paid to them.

### ■ Structure of Director Compensation

Guided by the basic policy for determining compensation, the ratio of basic compensation to performance-linked stock compensation is determined with a target of 80% for basic and 20% for performance-linked stock compensation. However, outside directors and non-executive directors are not eligible for performance-linked stock compensation, receiving only fixed basic compensation that does not consider their performance.

### ■ Policies on the Compensation Payment Period and Conditions

The amount of basic compensation for a given year and the number of points to be granted in the performance-linked stock compensation (including the amount of monetary compensation paid equivalent to the number of points to be granted to directors living overseas) are determined at the Board of Directors meeting held after the conclusion of the Annual General Meeting of Shareholders each year. The payment period of the basic compensation and amount of monetary compensation paid equivalent to the number of points to be granted to directors living overseas is one year from July, the month following the meeting of the Board of Directors, to June of the following year. In addition, for performance-linked stock compensation, upon the retirement (excluding retirement due to death) of a director eligible for payment, the Company will deliver shares of the Company's stock and monetary compensation equivalent to the cash proceeds from the disposition of the

Company's stock. In the event of the death of a director eligible for payment, the Company's shares corresponding to the number of points granted at that time are converted into cash and an amount equivalent to the conversion price is then delivered to the beneficiary of that director's estate. In the event that a director eligible for payment is to move overseas due to overseas assignment prior to his or her retirement, the shares of the Company corresponding to the number of points granted at that time are converted into cash and an amount equivalent to the conversion price is delivered to the director.

### ■ Method for Determining Compensation Content

The Compensation Committee (an advisory body to the Board of Directors), chaired by an outside director and consisting of a majority of outside directors, deliberates on the content and amounts for the individual director's

compensation, and after reporting the results to the Board of Directors, the Board of Directors make a resolution regarding the content and amounts due to the director for compensation.

### ■ Other Important Items

With respect to performance-linked stock compensation, a malus clause will be established so that the person in question will not receive Company shares or be paid proceeds from the sale when there is a serious breach of duties or a serious violation of internal regulations prior to the date of vesting of the beneficiary right or other similar circumstances

(Note) Due to the reverse stock split on October 1, 2018, where two shares of the Company's stock were combined into one share, points granted prior to June 1, 2022 in the performance-linked stock compensation plan are multiplied by 0.5, and, for the resulting total number of points, one point is treated as one share of the Company's stock.

## ● Risk Management

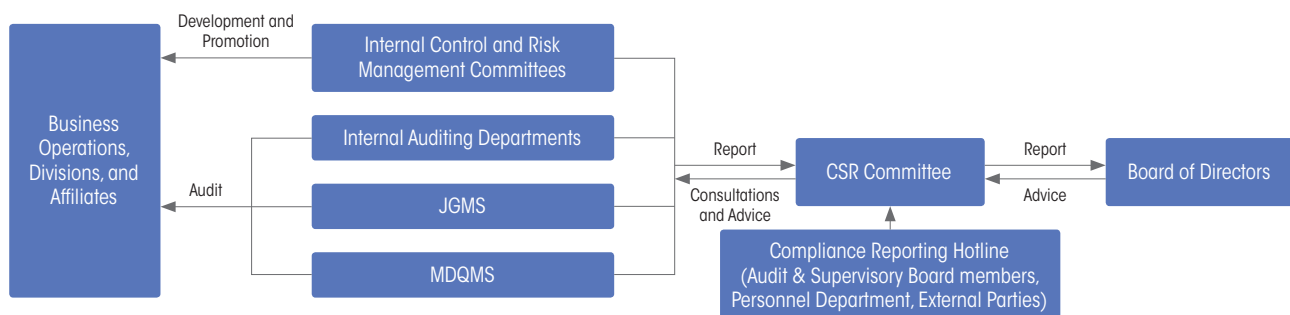
### ■ Risk Management System

JEOL's risk management system complies with all laws and regulations, and there is close cooperation among the Management Strategy Planning Division, Internal Auditing Division, Security Export Trade Control Division, General Affairs Division, Financial Affairs Division, IT Division, Intellectual Property Strategy Division, Quality Assurance Division and other divisions. Related committees collaborate to educate and raise awareness within the Company.

The CSR Committee is also responsible for internal control and risk management committees as well as

internal audit departments, and in response to reports from JGMS and MDQMS, consults and makes proposals on CSR activities and reports to the Board of Directors.

JEOL formulates Company rules and creates committees in line with Group management, including establishing Compliance Management Rules, the JEOL Corporate Ethics Code of Conduct, and the protection of personal information by observing our information security policy. We also established a compliance reporting hotline (BCP), initiatives that will be promoted throughout the entire Group.

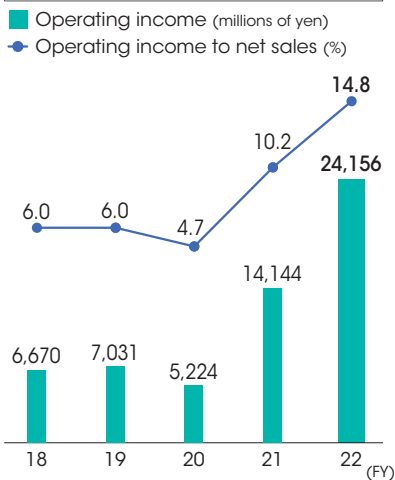


To thoroughly implement the Action Guidelines / to instill corporate ethics / to develop KF activities (activities aimed at generating a good corporate culture)

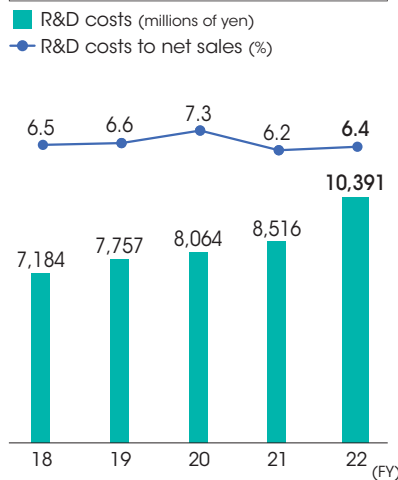
# Consolidated Five-Year Summary

JEOL Ltd. and consolidated subsidiaries  
 Figures are the results for the fiscal years ended March 31, 2019, 2020, 2021, 2022, and 2023.

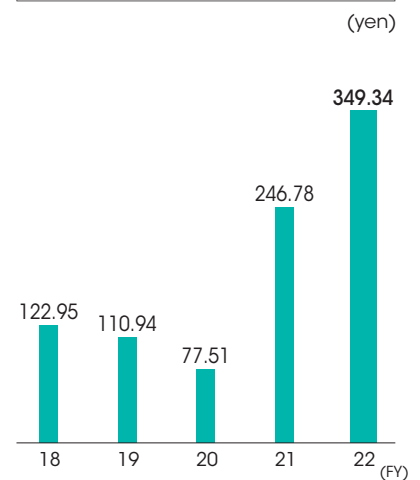
## Operating income / Operating income to net sales



## R&D costs / R&D costs to net sales



## Net income per share\*



(millions of yen)	2022	2021	2020	2019	2018	(FY)
Net Sales	162,690	138,408	110,440	117,244	111,289	
Scientific and Metrology Instruments	94,795	85,145	70,564	76,644	77,589	
Industrial Equipment	49,464	34,003	24,010	23,845	16,606	
Medical Equipment	18,431	19,258	15,866	16,755	17,093	
Selling, general and administrative expenses	48,546	41,221	37,669	37,834	35,761	
Operating income	24,156	14,144	5,224	7,031	6,670	
Ordinary profit (loss)	23,501	16,313	6,551	7,203	7,440	
Net income attributable to owners of the parent	17,831	12,279	3,745	5,360	5,940	
Capital expenditures	3,665	6,893	7,564	5,713	2,800	
Scientific and Metrology Instruments	2,534	2,149	2,418	3,658	1,943	
Industrial Equipment	523	3,541	4,530	1,360	517	
Medical Equipment	159	1,035	176	303	134	
Eliminations/Corporate	449	168	440	392	205	
Depreciation expense	4,673	4,106	3,626	3,191	2,755	
Research and development costs	10,391	8,516	8,064	7,757	7,184	
Scientific and Metrology Instruments	6,921	5,634	5,283	5,164	4,599	
Industrial Equipment	1,782	1,489	1,770	1,654	1,674	
Medical Equipment	1,689	1,393	1,011	939	910	

## At fiscal year end (millions of yen)

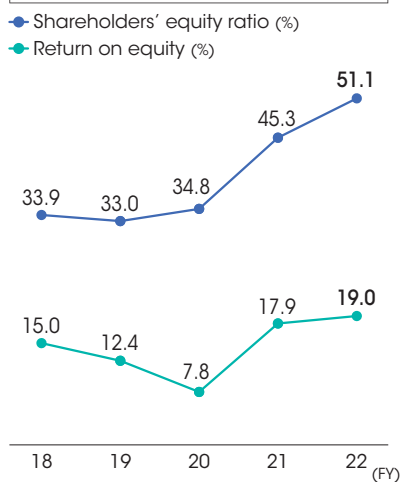
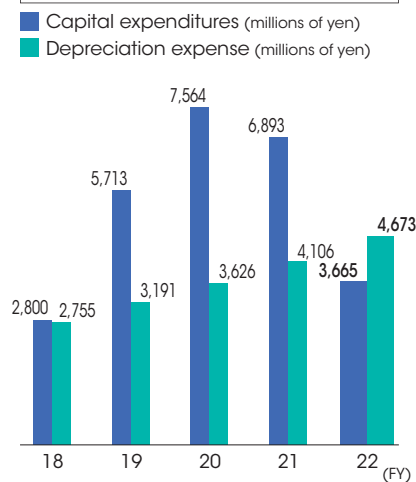
	2022	2021	2020	2019	2018
Total assets	199,280	189,562	146,388	136,788	122,665
Total equity	101,896	85,904	51,000	45,080	41,593

## Per share data\* (yen)

	2022	2021	2020	2019	2018
Net income attributable to owners of the parent	349.34	246.78	77.51	110.94	122.95
Total equity	1,995.55	1,684.08	1,055.50	933.07	860.90
Cash dividends					
Common stock	66.0	50.00	24.00	24.00	21.00

## Value indicators (%)

	2022	2021	2020	2019	2018
Return on equity (ROE)	19.0	17.9	7.8	12.4	15.0
Return on assets (ROA)	8.9	6.5	2.6	3.9	6.3

**Shareholders' equity ratio / ROE****Capital expenditures / Depreciation expense**

\* Effective on October 1, 2018, the Company conducted a share consolidation that changed a share unit from two shares to one share.

Data for one share (net income attributable to owners of the parent, net assets, and annual dividends) are shown here assuming the stock consolidation occurred at the beginning of the fiscal year ended March 2019.

**Overview of the Fiscal Year ended March 31, 2023**

In the consolidated fiscal year ended March 31, 2023, the economy of Japan showed signs of socioeconomic recovery due to the easing of restrictions for COVID-19. However, the economic outlook remains uncertain due to a surge in infections caused by mutant strains, sharply fluctuating exchange rates, soaring raw material and energy prices due to a prolonged Russia-Ukraine conflict, as well as heightened geopolitical risks, such as tensions between the United States and China.

Given these circumstances, the JEOL Group made an all-out effort to tackle the strategic priorities outlined in Evolving Growth Plan (FY 2022–FY 2024), our medium-term management plan. Under this plan, we intend to secure orders and sales while boosting corporate value and creating a more robust management base.

Net sales for the consolidated fiscal year under review were ¥162,690 million (up 17.5% compared with ¥138,408 million in the previous year). Looking at profit and loss, operating income was ¥24,156 million (up 70.8% compared with ¥14,144 million in the previous year), ordinary profit was ¥23,501 million (up 44.1% compared with ¥16,313 million in the previous year) and net income attributable to owners of the parent was ¥17,831 million (up 45.2% compared with ¥12,278 million in the previous year).

**Overview of the Financial Position**

Total assets at the end of the consolidated fiscal year under review came to ¥199,280 million, up ¥9,718 million from the end of the previous consolidated fiscal year. The main factors behind these results were an increase in inventories of ¥9,643 million and an increase in notes and accounts receivable–trade, and contract assets of ¥9,208 million, despite a fall in cash and deposits of ¥9,972 million.

Total liabilities were ¥97,385 million, down ¥6,273 million from the end of the previous consolidated fiscal year. The main factors behind this fall were a decrease in long-term borrowings of ¥4,739 million, a decrease in contract liabilities of ¥3,701 million, and a decrease in other current liabilities of ¥3,546 million due to lower accounts payable–facilities, despite a higher electronically recorded obligations–operating of ¥3,709 million and higher notes and

accounts payable–trade of ¥1,760 million.

Total equity came to ¥101,896 million, up ¥15,991 million compared with the end of the previous consolidated fiscal year, primarily due an increase in retained earnings. As a result, the shareholders' equity ratio as of March 31, 2023, rose 5.8 percentage points, to 51.1%.

**Overview of Cash Flows**

For the fiscal year ended March 31, 2023, cash and cash equivalents ("cash") came to ¥32,005 million at the end of the fiscal year, down ¥10,346 million from the previous fiscal year-end.

Cash flow activities in the consolidated fiscal year under review are shown below.

**Cash flow from operating activities**

Net cash provided by operating activities was ¥3,352 million, compared with ¥22,603 million provided in FY 2021. This was mainly due to higher profit before income taxes and an increase in contract liabilities, despite a rise in trade receivables.

**Cash flow from investing activities**

Net cash used in investing activities was ¥5,734 million, compared with a net cash outflow of ¥649 million in FY 2021. The major reasons for this decline included purchases of property, plant and equipment.

**Cash flow from financing activities**

Net cash used in financing activities was ¥8,733 million, compared with ¥5,517 million provided in FY 2021. This was mainly attributed to repayment of borrowings and the payment of dividends.

**Outlook for the Future**

The outlook remains uncertain for the economy due to soaring raw material and energy prices resulting from the protracted Russia-Ukraine conflict and heightened geopolitical risks, such as the tensions between the United States and China. Under these circumstances, the JEOL Group will take concerted action, guided by Evolving Growth Plan (FY 2022–FY 2024), our medium-term management plan, to achieve the plan by securing orders and sales as well as by ensuring cost improvements.

## ● Corporate Outline (As of March 31, 2023)



Corporate Name	JEOL Ltd.
Address	3-1-2, Musashino, Akishima, Tokyo 196-8558, Japan TEL: +81-42-543-1111 FAX: +81-42-546-3353
Establishment	May 30, 1949
Capital	¥21,394.18 million
Number of Employees	Consolidated: 3,351 Non-consolidated: 2,259

Head Office and Branch Offices	Head Office: Factory	Tsukuba Branch
	Akishima Second Works	Nagoya Branch
	Musashimurayama Works	Osaka Branch
	Tokyo Office	West Japan Solution Center
	Tokyo Branch	Hiroshima Branch
	Tokyo Second Office	Takamatsu Branch
	Sapporo Branch	Fukuoka Branch
	Sendai Branch	

Domestic Subsidiaries and Affiliated Companies	JEOL Technoservice Co., Ltd.	SYSTEM IN FRONTIER INC.
	JEOL Yamagata Co., Ltd.	Micro Denshi Co., Ltd.
	JEOL INSTRUMENTS INC.	CeSPIA Inc.

## ● Stock Information (As of March 31, 2023)

Stock Information	Authorized shares	100,000,000
	Issued shares	51,532,800
	Number of shareholders	20,674

Major Shareholders	Shareholders	Number of shares (thousand) Percentage of total shares held (%)	
		Number of shares (thousand)	Percentage of total shares held (%)
	The Master Trust Bank of Japan, Ltd. (Trust account)	6,661	13.0
	SSBTC Client Omnibus Account	2,902	5.6
	Nikon Corporation	2,300	4.5
	Custody Bank of Japan, Ltd. (Trust account)	1,790	3.5
	Custody Bank of Japan, Ltd. (Trust account 4)	1,262	2.5
	MUFG Bank, Ltd.	1,125	2.2
	JEOL Mutual Prosperity Association	1,116	2.2
	Nippon Life Insurance Company	1,042	2.0
	MLI for Client General Omni non collateral non treaty-PB	1,036	2.0
	JEOL Group Employee Stock Ownership Association	885	1.7

Ownership ratio is calculated by subtracting treasury stock (119,862 shares).

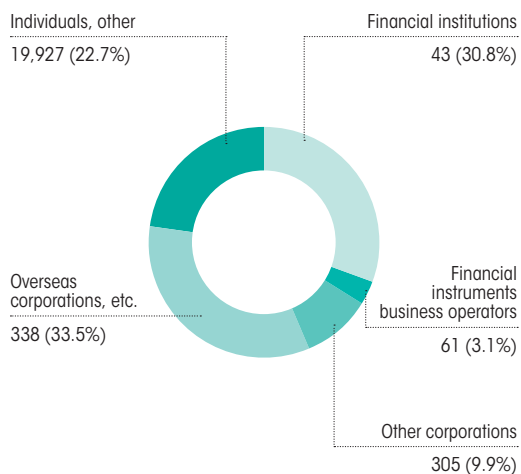
## Overseas Subsidiaries

- A JEOL USA, INC. [USA]
- B JEOL (EUROPE) SAS [France]
- C JEOL (U.K.) LTD. [U.K.]
- D JEOL (EUROPE) B. V. [the Netherlands]
- E JEOL (GERMANY) GmbH [Germany]
- F JEOL ASIA PTE. LTD. [Singapore]
- G JEOL TAIWAN SEMICONDUCTORS LTD. [Taiwan]
- H JEOL (AUSTRALASIA) PTY. LTD. [Australia]
- I JEOL DE MEXICO S.A. DE C.V. [Mexico]
- J JEOL CANADA, INC. [Canada]
- K JEOL (Nordic) AB [Sweden]
- L JEOL (ITALIA) S.p.A. [Italy]
- M JEOL Shanghai Semiconductors Ltd. [China]
- N JEOL SEMICONDUCTORS KOREA Co., Ltd. [Korea]
- O JEOL (MALAYSIA) SDN. BHD. [Malaysia]
- P JEOL DATUM Shanghai Co., Ltd. [China]
- Q JEOL BRASIL Instrumentos Cientificos Ltda. [Brazil]
- R JEOL (BEIJING) CO., LTD. [China]
- S JEOL (RUS) LLC [Russia]
- T JEOL INDIA PVT. LTD. [India]
- U JEOL GULF FZCO [UAE]
- V JEOL ASIA (THAILAND) CO., LTD. [Thailand]
- W JEOL KOREA LTD. [Korea]
- X Integrated Dynamic Electron Solutions, Inc. [USA]



## Breakdown of Shares

## By type of shareholders



## By number of shares owned

