JEOL
Solutions for Innovation

2021

INTEGRATED REPORT

Fiscal year ended March 31, 2021

JEOL Ltd.

JEOL
Solutions for Innovation

Seventy-two years supporting scientific technology around the world.
Carrying on the founding principles of "Creativity" and "Research and Development," we will continue to contribute to scientific progress and societal development.

Solutions for Innovation

Providing optimal solutions to support customer innovations

Period Covered:
April 1, 2020 through March 31, 2021, fiscal year 2020.
Please note that some matters that fall outside this period are also reported. Fiscal years referred to in this report cover the period from April 1 to March 31. FY 2020 refers to the fiscal year ended March 31, 2021.

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.

Guiding Principles for JEOL Staff

On the basis of our company philosophy emphasizing "Creativity" and "Research and Development," we will act up to the following guiding principles, with pride as JEOL staff and realize our responsibilities as members of the society.

1. We will take pride in our work and endeavor to reform our present situation with challenging spirits.
2. We will be grateful to our customers for their support and do our best to offer the best products and service to them.
3. We will keep ourselves in good physical and mental health and create a nice and rewarding working environment.
4. We will understand other's positions and fulfill our responsibilities through good teamwork.
5. We will be constantly cost-minded and utilize time and goods to their best advantage.
6. We will absorb a wide range of knowledge and put it in practice for our own growth.

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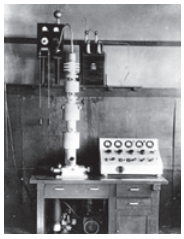
Our History of "Creativity" and "Research and Development"

The name JEOL is an acronym for the name of the Company at our founding: Japan Electron Optics

1947 DA-1 magnetic field electron microscope



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

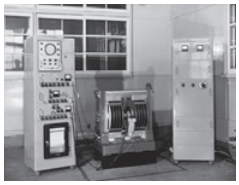
Based on the belief that there could be no post-war reconstruction in Japan without progress in science and technology, our founder, Kenji Kazato, and young associates began the development of electron microscopes.

It was a challenge that was almost a shot in the dark in the days immediately following the end of World War II when both supplies and information were not always available, but the members of the team were passionate about contributing to society through science. They came together and succeeded in completing this development in a year and a half.

At the time, manufacturing electron microscopes was a rarity, so this made national news, and even Emperor Showa and the Crown Prince (later Emperor Akihito) 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



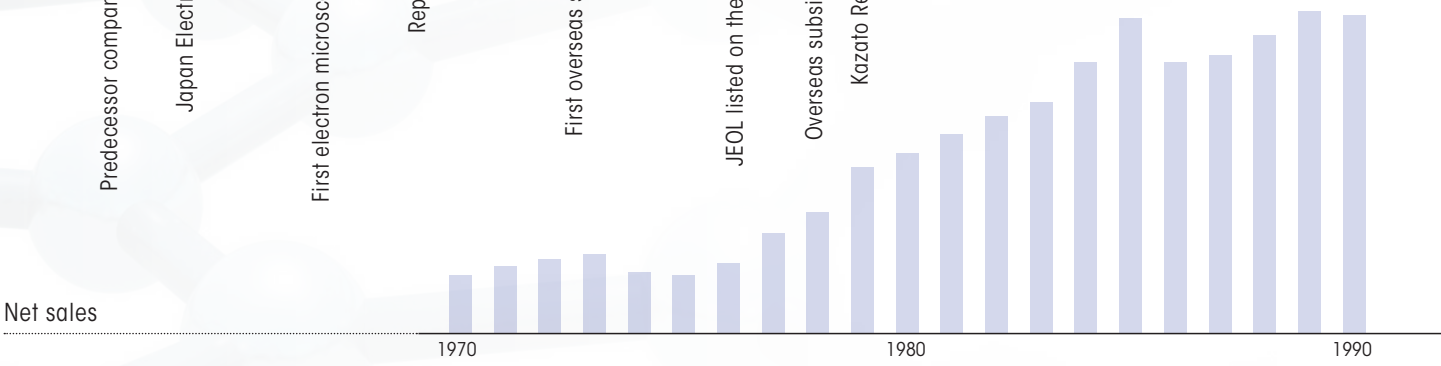
The history of NMR goes back to 1944 with the discovery of this phenomenon, for which the scientists received the Nobel Prize in Physics. In 1950, an overseas manufacturer released the first commercial product. At the time, it was seen as a very special type of equipment for research. However, recognizing that it was 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 observe the molecular structure in substances, and today, they are essential in the world of organic chemistry.

Since the release of the JNM-1, JEOL has contributed to progress in both science and society by continuing to refine our NMR technology. Despite the changing business environment, we have maintained our NMR business out of a sense of social responsibility, and now there are only two companies in the world that manufacture NMR systems, including JEOL.

Corporate History

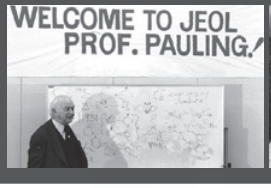
- 1947 Predecessor company Electron Science Laboratory established in Mobara, Chiba
- 1949 Japan Electron Optics Laboratory Co., Ltd. established in Mitaka, Tokyo
- 1956 First electron microscope exported to CEA Saclay Atomic Energy Research Institute in France
- 1959 Representative office opened in Paris, France, as the first overseas office
- 1961 Company name changed to JEOL Ltd.
- 1962 First overseas subsidiary established in the United States
- 1964 Overseas subsidiary established in France
- 1966 JEOL listed on the First Section of the Tokyo Stock Exchange
- 1968 Overseas subsidiaries established in the UK and Australia
- 1969 Kazato Research Foundation established to support the fostering of academic learning
- 1970 Overseas subsidiary established in Italy
- 1973 Overseas subsidiaries established in the Netherlands and Sweden
- 1976 World's first atomic micrograph taken with a JEOL electron microscope
- 1981 Name of the Company in English formally becomes JEOL Ltd.
- 1985 Office opened in Beijing, China



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)

Laboratory. JEOL is now a brand that is known worldwide.

1996 JCA-BM12 clinical chemistry analyzer

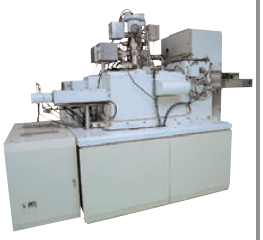
Biochemical analysis is performed to manage people's health and to obtain information necessary for treating diseases. The JCA-BM12 was developed as a new generation clinical chemistry analyzer based on the concept of being faster, more economical, and more reliable.

As the first machine in our BioMajesty series, the JCA-BM12 was released in a bid to break free from conventional technology and to respond to changeable market requirements.

This series greatly reduced the sample volumes and reagent amounts required for testing compared with conventional machines, allowing tests to be performed with one-fifth the sample volume and one-third the amount of reagent. This reduced the workload for those involved in clinical testing and has helped improve medical treatments.

In 2008, we received the Japan Society of Clinical Chemistry Technology Award for our development of the BioMajesty series and for our contribution to clinical testing.

1999 JBX-9000MV electron beam lithography system



This is an electron beam lithography system for fabricating the photo masks that are essential for manufacturing semiconductors.

JEOL was a participant in the Association of Super-Advanced Electronics Technologies, established to boost the competitiveness of the Japanese electronics industry. Applying the research results obtained by this association, we created the JBX-9000MV, a world-class lithography system supporting the contemporary 180 nm / 130 nm process rule.

The global market was dominated by American manufacturers at that time, and the US market was considered impregnable, but the high potential of the JBX-9000MV was recognized, and it made its debut in the US market in 2000.

As a result, our share of the global market for electron beam lithography systems used for fabricating photo masks increased significantly from 7% in 1997 to 33% in 2002.

Evolving in the 70th Year
–Approach to Growth Markets–

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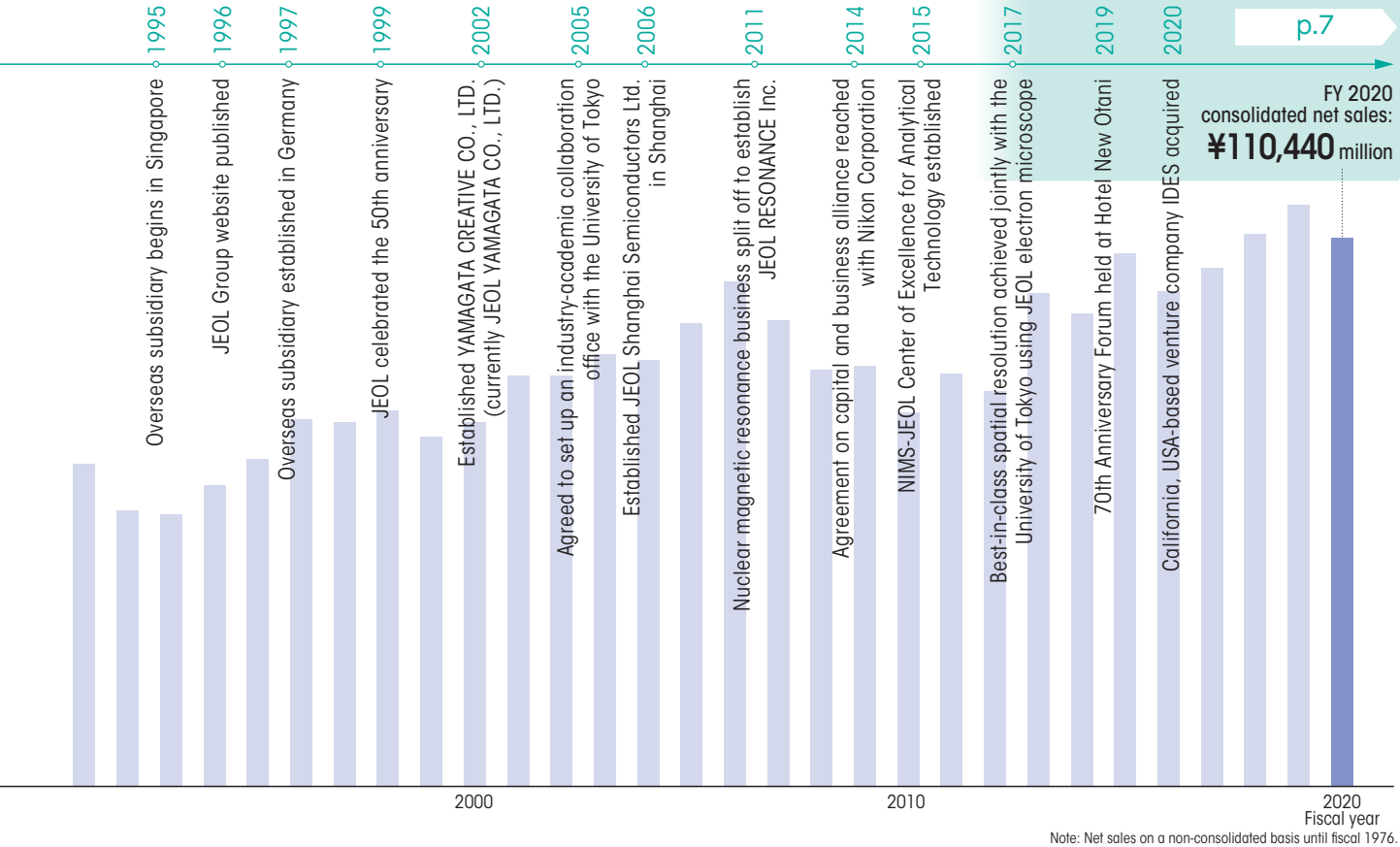


Note: Net sales on a non-consolidated basis until fiscal 1976.

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

We are accelerating business development in new growth markets based on our history of supporting scientific progress around the world since our founding in 1949.

Corporate management is often heavily swayed by uncontrollable external factors such as the COVID-19 pandemic. In the past, we have been put into very difficult circumstances by the global recession triggered by the bankruptcy of Lehman Brothers, the Great East Japan Earthquake, and other similar events. However, we see these as opportunities for making management reforms, and we have been working on improving our corporate structure with the belief that facing disasters can lead to transformation.

In May 2020, we celebrated our 70th anniversary. I have nothing but deep gratitude for the support we have received from an enormous number of people over the years.

JEOL was founded as a developer and manufacturer of electron microscopes in 1949, shortly after the end of World War II. The founder's desire—to contribute to Japan's reconstruction by developing electron microscopes that support scientific progress—has been continued by employees over different generations, and the noble principles of our founding shine brightly.

For our 70th anniversary, we published a message entitled, *Evolving in the 70th Year*. This message expresses our strategy for growing our business operations. Based on our core scientific instrument business segment, we will provide equipment and services to markets, now substantially larger than before, for medical equipment, semiconductors, and other industrial equipment. We will accomplish this growth by capitalizing on the technology and human networks we have cultivated in our scientific and analytical instrument businesses, including the electron microscope business from our founding as well as the market for nuclear magnetic resonance (NMR) systems.

We have been rolling out specific strategies based on three-year medium-term management plans. At the same time, we have been consistently communicating a message, both internally and externally, designed to promote long-term corporate activities. The most important concept behind that message is not to lose the DNA from our founding. Two elements of our DNA are putting the community before yourself and being "born global." Of course, we also intend to maximize our gains, but above that, we are a company that emphasizes social contribution. Moreover, we are a company that was "born global" and that has a strong global network for direct sales and service that we have built up since our founding.

For the past decade, we have been using YOKOGUSHI as our long-term strategy. At first, this was a strategy we intended to use to strengthen our business through cross-sectional operations within the Company, but today it is being used as a strategy for promoting collaborations among industries and between academia and industry, in other words, open innovation.

Today, there are limits to going it alone for business development. It is more important to promote cross-sectional collaboration with other companies, universities, and organizations, so that we can create completely new value.

Since the beginning, JEOL has grown as a company that contributes to scientific progress around the world. While never forgetting our founding principles of "Creativity" and "Research and Development," we will continue to work on growing our business. Thank you for your continuing support.

Gon-emon Kurihara
Chairman & CEO

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, 72 years after our founding, we continue to maintain that founding spirit and put every effort into improving corporate value every day that provides optimal solutions to 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) stratedy.

Growth Vision

Evolving in the 70th Year

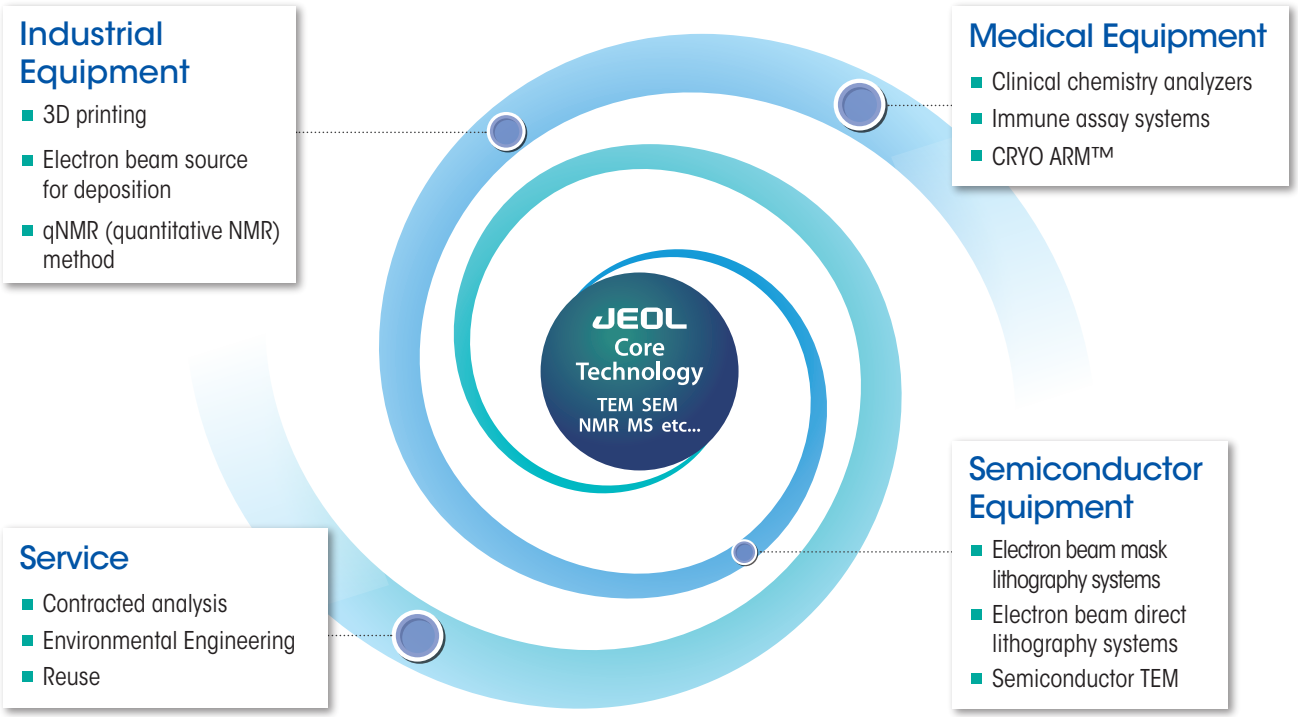
In 2019, the year we celebrated our 70th anniversary, we announced *Evolving in the 70th Year* as our new growth vision. The main intitiatives are improving our core technologies, proactively entering growth markets, and providing total solutions.

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 Triangle Plan 2022, our current medium-term management 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.



Medium-Term Management Plan p.13

Model of Behavior

YOKOGUSHI

The YOKOGUSHI stratedy 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 can provide innovative solutions, and it is expected that this method will improve productivity in industrial fields and accelerate R&D in medicine and biology.

We will improve corporate value and help to resolve social challenges by steadily implementing a growth strategy based on our *Evolving in the 70th Year* vision.

Izumi Oi
President & COO

Facing COVID-19 and Overcoming Difficulties Companywide

In fiscal 2020, we were heavily impacted by the global COVID-19 pandemic. Although there is growing hope that the virus can be beaten now that vaccines are beginning to be widely distributed, scientific technology remains the key to understanding the structure of COVID-19 and creating countermeasures. I believe that the importance of this key idea has been widely affirmed. Our main business segment, scientific and metrology instruments, provides cutting-edge scientific instruments that only two or three companies in the world are capable of developing and manufacturing, and our electron microscopes are being used extensively to analyze the structure of COVID-19. Fiscal 2020 was a year when we fully realized the importance of contributing to scientific progress—our purpose as a company—as well as the importance of increasingly adding more value to equipment and services.

With Japan's declaration of a state of emergency, we set up a taskforce, where I serve as chairperson, for countering COVID-19. Through this taskforce, we formulated and systematically implemented programs and procedures to prevent Group employees from being infected. Although, as a manufacturing company, we maintained a fixed number of Production Division employees that continued to come to the workplace, we also introduced remote working. Our goal was to continue business operations while giving the highest consideration to the safety of our employees. Also, because many exhibitions and seminars were canceled, we held webinars and online user meetings, maintaining communications with our customers by introducing them to new products and solutions. Moreover, by supporting the delivery of products remotely and building a system where customers could participate in online classes, we created a global framework to make it relatively easy to install our equipment, despite the difficulty of taking business trips overseas.

I believe that we were able to operate our business without many problems because of our employees' hard work. While remembering to prevent infections, they successfully carried out their work during the pandemic by using their highly effective skills and by having an awareness of the need for change. I want to express my deepest gratitude to all of our employees who continued to go all-out in their work, as well as their family members who support them, despite being in an environment where stress levels could be high due to constantly needing to be careful of the risk of infection.

Record-Breaking Sales and Profits Expected with a Rich Backlog of Orders

In FY 2020, we exceeded our amended operating forecasts (announced in October 2020), with consolidated net sales and consolidated operating income coming to ¥110.4 billion and ¥5.2 billion respectively, while consolidated ordinary profit reached ¥6.6 billion. Income and profit fell compared with FY 2019, particularly due to a deteriorating market for scientific and metrology instruments as well as medical equipment due to the impact of COVID-19. However, owing to strong orders primarily in the industrial equipment segment, orders received totaled ¥122.6 billion across the company, breaking internal records. In line with this growth, our backlog of orders came to ¥60.8 billion at the fiscal year-end, significantly exceeding the previous record of ¥48.7 billion set in FY 2019. For FY 2021, we are planning for record-breaking sales and profit, including consolidated net sales of ¥126.5 billion, as well as operating income of ¥8.3 billion, ordinary profit of ¥8.5 billion, and ¥6.4 billion in net income attributable to owners of the parent. This forecast is primarily due to growth in the semiconductor industry, particularly now that the market for multi-beam electron beam lithography systems continues to grow. We jointly developed these systems with Austria-based IMS Nanofabrication GmbH (IMS). Another positive factor is a general trend in market recoveries for all business segments due to the likely containment of COVID-19, despite there being differences in progress among regions. The ordinary profit target for this fiscal year is based on an exchange rate of ¥105 per dollar. However, this is equal to an ordinary profit of ¥10 billion based on an exchange rate of ¥110 per dollar—the target in our medium-term management plan, Triangle Plan 2022, which is now in its final fiscal year.

Although the market outlook remains unclear, I believe that we were able to start FY 2021 with strong potential, ready to accomplish the plan for the fiscal year and achieve the goals set out in Triangle Plan 2022.

Driving Further Growth through the *Evolving in the 70th Year* vision and YOKOGUSHI

In May 2019, we celebrated our 70th anniversary, taking the occasion to launch our vision for growth: *Evolving in the 70th Year*. The technology and business relationships maintained by our scientific and metrology instruments segment have been cultivated over many years working in the academic market, and they represent the DNA that flows throughout our company. Although the size of the market for scientific and analytical instruments is not large, with a domestic output of approximately ¥600 billion, it represents an important core segment that is essential for the growth of the JEOL Group. We intend to improve profitability while resolutely investing in R&D in this area. Using the assets we have developed within this core segment, such as our technology and business relationships, we are working to grow our business by turning to considerably larger markets, including those related to semiconductors, medical and industrial equipment, and service industries. The outlook for business growth is promising, with strong orders and sales already occurring in the semiconductor segment for electron beam mask lithography systems, along with increasing international demand for medical equipment backed by an immense global market. To support the expansion of both of these segments, in March last year we acquired a new business location and production plant in Musashimurayama City, both scheduled to begin operating in the second half of this fiscal year.

There was a new initiative in industrial equipment: in March this year, we launched sales of an electron beam metal 3D printer, using the electron beam technology that we have developed over many years. By capitalizing on this electron beam technology, one of our company's strongest technologies, this equipment reliably produces high-quality shapes, despite using high melting-point metals (resistant to being heated), such as titanium. Under a growth trend in the metal 3D printer market, we are striving to grow this area into one of our main business segments and gain a strong reputation within the market for our ability to produce shapes made possible by an electron beam's unique attributes.

Moreover, within our core segment, scientific and metrology instruments, we are continually releasing new products that are unique, adapted to market needs, and able to contribute to improving profitability. The majority of these new products have been developed using our YOKOGUSHI strategy, as well as through collaborations between academia and industry, and through cooperation and open innovation with other companies. One example of these new products is Synergy-ED, an integrated electron diffraction platform announced in June this year and produced via a joint development with Rigaku Corporation. We have been able to create new added value by combining the core technologies of both of our companies.

In January last year, JEOL acquired all the shares of US-based IDES, making it a wholly owned subsidiary. IDES is developing unique, innovative products and applications that use our electron microscopy technology. Going forward, we will continue to accelerate product development based on the YOKOGUSHI strategy to increase profitability.

Answering Societal Challenges with Scientific Technology

With COVID-19 having become a social issue on a global scale, virus research and the development of vaccines and therapeutic drugs have become major themes. Against this background, cryo-electron microscopes have gained attention for their ability to assist in understanding the structure of viruses. It has been widely recognized that these instruments are an extremely effective tool for developing pharmaceutical drugs, and we are keenly aware of the growing market for them. The new cryo-electron microscope model that we announced in January this year further improves throughput and operability. As one of only two companies in the world developing and supplying cryo-electron microscopes, we are mindful of the momentous responsibility that we have.

JEOL's company philosophy has a phrase, "thus forever contributing to the progress in both Science and Human Society." Before the term SDGs (Sustainable Development Goals) was first developed, our company was already engaged in operations linked to creating a sustainable society. Over many years, we have been involved in joint research and collaboration between industry and academia throughout the world—becoming a company that contributes to the development of society and that

helps resolve global challenges. I have a deep conviction that by growing our business based on our *Evolving in the 70th Year* vision, we will be able to contribute to the creation of a sustainable society, improve our long-term value as a company, and gain favor with our stakeholders. I believe that the work of JEOL is directly linked to the achievement of the SDGs.

To Our Stakeholders

Our basic policy for profit distribution is to maintain consistent dividends from a long-term perspective based on our business initiatives to improve our financial standing and our corporate structure. For the fiscal year under review, in light of our business performance and financial condition, the year-end dividend was ¥12 per share. Added to the interim dividend, this brings the total annual dividend to ¥24 per share.

At the 74th Annual General Meeting of Shareholders held in June this year, the number of outside directors increased by one, resulting in a board structure with nine directors, of which three are outside directors. Going forward, we will further develop our corporate governance system by putting in place an organizational structure that can swiftly respond to changes in the business environment, as well as by strengthening our framework for maintaining compliance.

Since starting out in 1949, JEOL has been a company that contributes to scientific progress and societal development. While firmly maintaining our DNA and identity, we aim to improve our corporate value and realize our growth strategy based on our *Evolving in the 70th Year* vision. We look forward to your continued understanding and support throughout this year.

Triangle Plan 2022

(FY 2019–2021)

Basic Approach

JEOL Continues to Move into New Business Domains

Triangle Plan 2022, our medium-term management plan, was launched in 2019, the 70th anniversary of our founding. Based on the direction of the previous medium-term management plan, the Triangle Plan, JEOL will implement the following measures to accelerate growth by "Evolving in the 70th Year" and by taking the next step toward further growth (after the current medium-term management plan). JEOL will provide optimal solutions to support customer innovations with "Solutions for Innovation" as our corporate motto as we aim for continual growth over the long term.

Evolving in the 70th Year

1 Enhance core technologies

We will continue to develop core technologies, the high-end measurement and analysis technologies that are the source of the added value provided to society by the JEOL Group.

2 Proactive entry into growth markets

Based on these core technologies, JEOL will proactively enter into large markets where growth is expected to accelerate (overseas markets as well as those for semiconductor, industrial, biotechnology, and medical equipment).

3 Provide total solutions

JEOL will provide total solutions, including services that lead to improved usability and efficiency, focused not just on equipment, but our customers' entire workflow.

4 Make the required investments and improve profitability

We will make all necessary investments at the opportune time to take advantage of business opportunities as the scale and scope of our business grows. At the same time, we will promote efficiency and constantly improve profitability.

Overview by Business Segment p.19

Triangle Plan 2022 Positioning

Accelerate Growth and Take the Next Steps

Based on the direction of the Triangle Plan, JEOL will implement the following measures to accelerate growth by *Evolving in the 70th Year* and by taking the next step toward further growth (after the current medium-term management plan), with the aim of continuous growth over the long term.

Step 1 (fiscal years 2010 to 2012)
Improve our business foundation
CHALLENGE 5

- **Management structure reforms**
  Reduce the number of employees and other structural reforms
  Restructure Group companies
- **Corporate culture reforms**
  Visualization, PDCA, market reforms
- **Deep cultivation of developing markets**
  Establish local subsidiaries in Brazil, Russia, India, China, and other countries

We will be assertive when developing our solution business targeting markets for nanotechnology, the life sciences, the environment, and quality control. We will review our development system and take decisive action to transform this system into one capable of quickly supplying competitive products.

Step 2 (fiscal years 2013 to 2015)
Shift toward growth strategies
Dynamic Vision

- **Strengthen product developments**
- **Improve manufacturing abilities**
- **Enhance our brand power**
- **YOKOGUSHI strategy full-scale start**
- **Implement capital policies**
  (public offering & Nikon alliance)
- **Convert JRI into consolidated subsidiary**

Our priority strategies will be boosting our strengths in product development and manufacturing, as well as the power of our brand. As the true Only One company that can meet a wide range of needs, we will dynamically promote a growth strategy.

Step 3 (fiscal years 2016 to 2018)
Concrete growth strategy
Triangle Plan

- **Speed**
  Pursue high-throughput functionality and speed up development
- **Difference**
  Launch Only-One JEOL products, inculcate YOKOGUSHI
- **Change**
  Shift from academia to private demand and from physical products to services

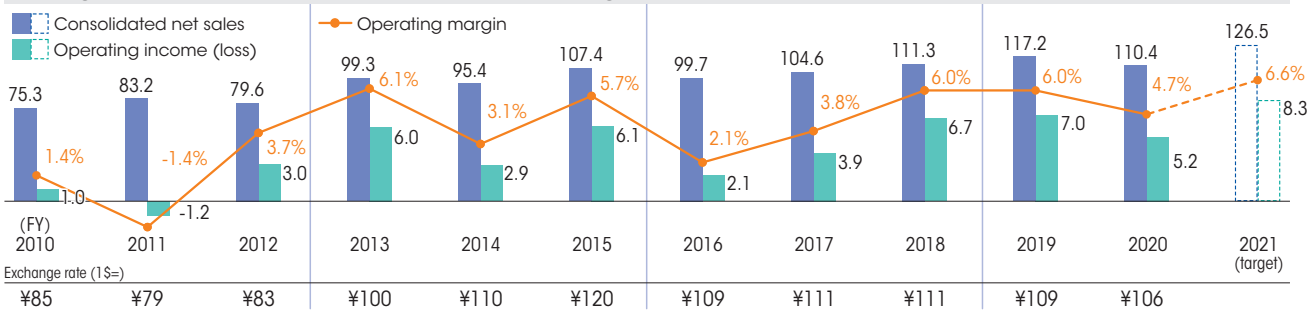
Keeping in mind the three keywords—*speed, difference,* and *change*—our biggest goal is to transform into a highly profitable company capable of generating continual, solid profits by improving and by realizing our growth strategy.

Step 4 (fiscal years 2019 to 2021)
Accelerate growth and take the next steps
Triangle Plan 2022

Based on the Triangle Plan up to now, JEOL will implement the following initatives to accelerate growth by *Evolving in the 70th Year* and by taking the next step toward further growth (after the current medium-term management plan), with the aim of continual growth over the long term.

Change of Consolidated Net Sales and Operating Income

(billions of yen)



Numerical Targets

FY 2021 targets:

consolidated net sales of **¥126.5** billion

consolidated ordinary profit of **¥8.5** billion

Improving corporate value through capital management focused on efficiency and restoring the earning power of our core businesses.

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

Message from the Newly Appointed CFO

At the 74th Annual General Meeting of Shareholders, I was appointed the CFO, the director in charge of finance. In the five years before my appointment, I was the US Managing Director, and worked to strengthen collaboration between the parent company and the US subsidiary. Before that, I worked as the General Manager of Financial Affairs Division, supporting from a financial perspective the realization of the Group's medium-term management plan CHALLENGE 5: Improve our business foundation (fiscal years 2010 to 2012) and the medium-term management plan Dynamic Vision: Shift toward growth strategies (fiscal years 2013 to 2015).

I feel that the CFO's role is to not only be the executive in charge of finance, but also work together with the CEO and COO to continually improve corporate value over the long-term by promoting strategies that strengthen our financial condition, and by conducting risk management that includes setting up internal control systems. By drawing on the experience I have gained so far, I will strive to fulfill my role as CFO.

Summary of the Fiscal Year Ended March 31, 2021

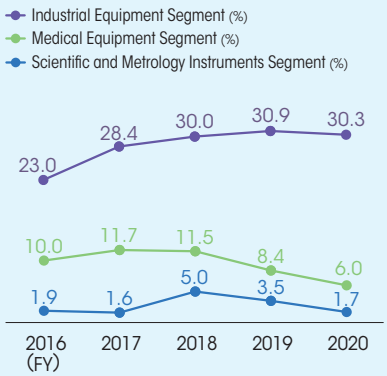
For the consolidated operating results for the fiscal year ended March 31, 2021, the scientific and metrology instruments segment and the medical equipment segment both experienced a decrease in sales and profits due to the impact on the market caused largely by the COVID-19 pandemic. However, the industrial equipment segment maintained the same level of sales and profits as the previous year due to a continuing boom in the semiconductor market. As a result, the Company achieved consolidated net sales of ¥110.4 billion and consolidated operating income of ¥5.2 billion, while consolidated ordinary profit totaled ¥6.6 billion—all three exceeded the operating forecasts announced in October 2020.

The ratio of operating income to net sales was 4.7% (down 1.3 points year on year), while the return on equity (ROE) was 7.8% (down 4.6 points). The decrease in ROE was due to weaker earnings in the scientific and metrology instruments segment and the medical equipment 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 in this segment is the largest, profitability remains at a low level and the business has matured. We intend to build "barriers" 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 using management resources. Although investment may reduce capital efficiency in the short term, we should emphasize the contribution of profits to the entire company.

On a consolidated basis, the shareholders' equity ratio of fiscal year ended March, 2021 was 34.8% (up 1.8 points year on year). Our financial position is steadily improving, and we are working to develop an optimal capital structure, while preparing for business risks and building a foundation for strategic investment, step by step.

Operating margin

Operating margin by segment



Shareholders' equity ratio

Capital Allocation Policy and Plan for the Fiscal Year Ending March 31, 2022

The global economic environment surrounding our company is highly unpredictable. With the ongoing impact of COVID-19, especially in emerging countries, there are concerns that the difficult business environment will continue, due to factors such as a global shortage of semiconductor components and the overhaul of the global supply chain triggered by economic insecurity. However, taking the orders for the fiscal year ended March 31, 2021 as the leading indicator, orders received totaled ¥122.6 billion, while the backlog of orders came to ¥60.8 billion; both were record-breaking achievements. The industrial equipment segment is maintaining strong performance levels this fiscal year, primarily in the semiconductor market. New products and applications that we put into the market in the preceding fiscal years have stimulated demand in the scientific and metrology instruments segment. As well, demand is increasing in the medical equipment segment among developed countries where COVID-19 has been contained. Based on these business circumstances, for the consolidated operating forecasts for the fiscal year ending March 31, 2022, we are planning for record financial results: net sales of ¥126.5 billion; operating income of ¥8.3 billion; ordinary profit of ¥8.5 billion; and ¥6.4 billion in net income attributable to owners of the parent.

Consolidated ordinary profit of ¥10 billion is one of the numerical targets of Triangle Plan 2022, our medium-term management plan that ends this fiscal year. As the business plan for this fiscal year (mentioned above) assumes an exchange rate of ¥105 per dollar, the same level of profit targeted in the medium-term management plan can be achieved if the exchange rate remains in the ¥110 per dollar range.

For capital allocation, we will focus on unique investment opportunities, while considering, from a mid- to long-term perspective, the optimum balance between growth investments, improved shareholder returns, and maintaining a sound financial position. For shareholders' dividends, we are considering steady dividends, taking into account the payout ratio, dividend yield, and points raised in dialogues with investors. For the fiscal year ended March 31, 2021, the year-end dividend was ¥12 per share, in line with our initial plan. Including the interim dividend, the total annual dividend came to ¥24 per share. For the fiscal year ending March 31, 2022, we plan to issue a dividend of ¥28 for the full year.

Direction of the Financial Strategy

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 ratio 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 non-business assets after reviewing their profitability, and carefully examining policies on cross shareholdings. At the same time, we have established an ROE target of at least 10% to build a framework for improving medium- to long-term capital efficiency. We built this framework by assessing the invested capital of the entire Company and each business division, then ensuring that capital efficiency indicators permeate the whole Company.

Going forward, we will strive to improve sustainables corporate value and meet the expectations of our stakeholders by improving capital efficiency and strengthening our financial position.

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

In fiscal 2019, the year we formulated Triangle Plan 2022, our medium-term management plan, we announced 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 would work on.

We will contribute to the realization of a better, more sustainable world, as set out in the SDGs, by tackling materiality 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

STEP 1

Identify those materiality issues that can be resolved through our business activities

Review our lineup of products that contribute to the advancement of science and medicine and then identify issues that can be resolved, while simultaneously supporting business development.

STEP 2

Identify materialities that can be resolved through our ESG initiatives

Identify issues that could be resolved through our unique business activities that focus on the environment, society, and corporate governance.

STEP 3

External communication and gathering information on materiality

We have set up the important initiatives for each materiality and the targets for SDGs, while communicating information externally, beginning with publishing information in integrated reports.

SDGs

The 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 such areas as the economy, industry, and society. Corporations, which lead economic activities, are expected to play an important role as one of the actors responsible for achieving the SDGs.

	Materiality	Key Initiatives	Targeted SDGs
SDGs being addressed through business	Provide products that contribute to people's health, safety, and security	• Provide medical equipment indispensable for the diagnosis and prevention of illness • Provide equipment with high sensitivity and accuracy that can analyze substances harmful to the human body • Provide manufacturing equipment that contributes to the further development of sensing technology	
	Contribute to scientific progress and the sustainable development of society	• Develop world-class scientific instruments supporting advancements in science • Contribute to higher performance semiconductors supporting the communication infrastructure • Create advanced technology by promoting partnerships	
	Contribute to the conservation and sustainability of the global environment	• Provide measuring equipment indispensable for the R&D of green devices • Manage chemicals throughout the supply chain by using green purchasing • Develop equipment that reduces CO_2 emissions by conserving energy	
SDGs being addressed through ESG initiatives	Conduct distinctive activities that contribute to the community and society	• Provide science education support (lessons) using electron microscopes at elementary and junior high schools • Support academic promotions and the fostering of young researchers by donating to public interest incorporated foundations • Promote open innovation in collaboration with domestic and overseas research institutes and universities	
	Contribute to the conservation and sustainability of the global environment	• Streamline electricity use by introducing energy-saving equipment and other initiatives • Reduce CO_2 emissions at business locations throughout the Group • Thoroughly separate, reduce, and recycle waste • Deploy the Don't Litter campaign, a cleanup drive for beautifying the surroundings	
	Develop human resources and respect human rights	• Promote the creation of a workplace where females can more easily develop their careers • Enhance systems to help bring balance to work and family in line with every person's stage in life • Improve the awards program for employees making exceptional achievements	

Implementing Unique Educational Support Programs

We are conducting science education programs 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 intellectual curiosity and the enjoyment of learning. This year is the tenth 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 33 for more information on our science education support programs.

Scientific and Metrology Instruments Segment

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 measuring 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.

JEM-F200 transmission electron microscope

Analytical instruments

While electron optics instruments and measuring 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. Advanced technical capabilities are required for their development and manufacture, so there are only two companies in the world, including JEOL, that are currently doing this.

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.

JNM-ECZ700R nuclear magnetic resonance system

Main customers ····· Research institutes, educational institutions, manufacturing industry (chemistry, steel, machinery, food, nonferrous metal, electrical and electronic, etc.), public institutions, and analytical research companies

Main products ····· 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 gas monitor analyzers.

Market trends

(● Electron optics instruments and measuring instruments ● Analytical instruments)

- ● Using electron microscopes as essential tools for virus research is continuing, while demand for these instruments is growing, particularly in the life science markets of developed countries.
- ● These instruments are essential in a wide range of fields and their market is growing: from basic research to the industrial application of nanotechnology, semiconductors, green technologies, and others.
- ● Nuclear magnetic resonance systems are essential for developing certain materials as well as basic research in fields such as life sciences and drug discovery, and the market growth is being boosted by rising R&D costs in developed and emerging countries.
- ● Mass spectrometers are experiencing significant growth for environmental analysis and the life sciences.

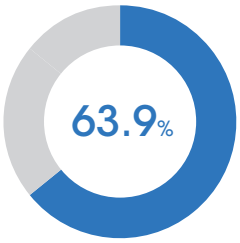
Technology and product strategies

(● Electron optics instruments and measuring instruments ● Analytical instruments)

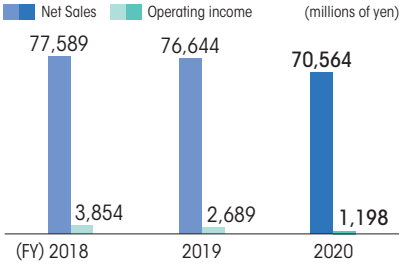
- ● Launched a successor with high throughput for the JEM-Z300FSC CRYO ARM™ 300 cryo-electron microscope, which gained a strong reputation for protein analysis within the biotechnology and drug discovery market.
- ● For their trace element and chemical state analyses, our proprietary soft X-ray emission spectrometers (SXES) have been highly rated for use in a wide range of fields.
- ● Due to its strong performance and quality, the JNM-ECZ series of nuclear magnetic resonance systems has received a tremendous market reception, and overseas sales exposure is continuing to increase.
- ● Launched JMS-T2000GC MultiAnalyzer, a multi-ionization, unknown compound analysis system that can be applied to increasingly complex materials in diverse environments.

Overview of the Fiscal Year Ended March 31, 2021

Net Sales by Segment



Change of Net Sales and Operating Income



Topics

Strengthening development through mergers with subsidiaries and the integration of resources

On April 1, 2021, we completed a full merger with our wholly owned subsidiary JEOL Technics Ltd., (TEC). TEC has contributed to the JEOL Group as a subsidiary that primarily develops and manufactures general-purpose scanning electron microscopes within an accessible price range. We have integrated TEC into our headquarters with the aim of further boosting productivity and improving on TEC's development strengths. By combining our resources, we are promoting the growth of our total electron microscope business.

Former TEC Head Office

Launching Synergy-ED, jointly developed with Rigaku Corporation

In June this year, we launched the sales of Synergy-ED, an ultra-micro electron diffraction (ED) platform created through a joint development (beginning in May last year) with Rigaku Corporation, a leading producer of X-ray diffraction analytical instruments based in Akishima, Tokyo. 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. With structural analysis becoming possible in the previously difficult submicron range, we are hopeful that our technology can be applied in the fields of materials research, chemistry, and drug development.

Aiming for further growth

Toyohiko Tazawa
Director
& Senior Executive Officer

Playing a role as a place for co-creation, based on the observation of ever-smaller structures

The focus of this business has been on perceiving ever-smaller structures. Our aim has been to contribute to R&D across academia and industry. In our industry, as is often said, you can't create what you can't measure (observe). The act of observing (measuring) in R&D settings is one of the basic acts for 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 various methods, making possible multifaceted analyses based on single functions.

To create this place of co-creation while COVID-19 is still active, it is important to increase the convenience and flexibility of our equipment in addition to making it easier to master individual functions to achieve effective throughputs in a remote work environment.

We had already been working on an initiative called the Analytical Robot = Remote + AI (artificial intelligence) + DB (database). For this initiative we will work on further advances in analytic robotics, aiming to create a place of co-creation that works under today's circumstances.

Industrial Equipment Segment

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 this year. 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 with progress on refinement and densification. Today, these patterns are 10 nanometers (1/10,000th the diameter of a human hair) or smaller.

Precise fabrication of ultrafine circuits like this requires electron beam lithography. As demand for semiconductors grows further due to such factors as the development of an IoT society and the dawn of the 5G era, the role of electron beam lithography systems is expected to increase in importance.

Partnering with Austria-based IMS Nanofabrication GmbH (IMS), we are supplying multi-beam electron beam lithography systems with improve 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 to have them 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 glass 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.

Main customers ····· Manufacturing industry (semiconductors, optical devices, electric machinery, electronic parts, chemistry, etc.) and research institutes

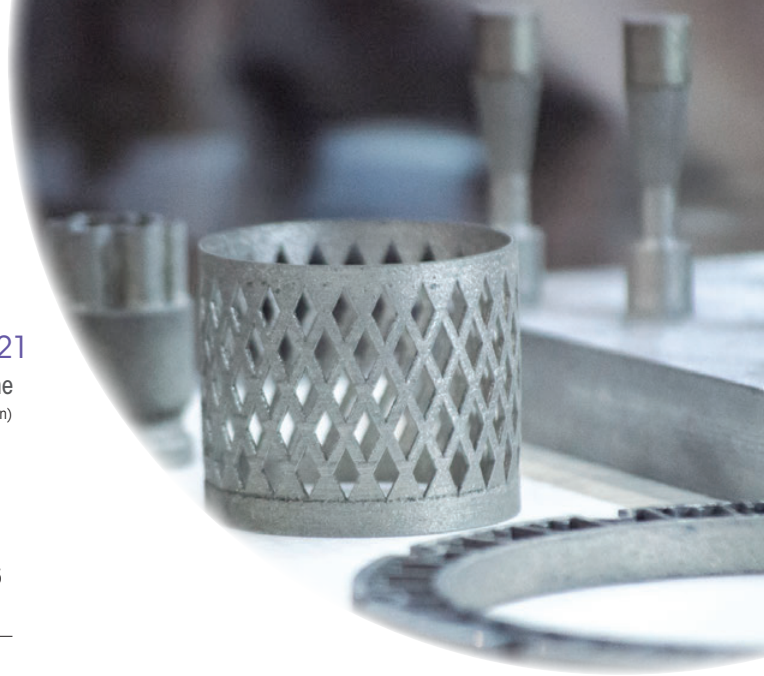
Main Products ····· Electron beam lithography systems, high-power electron beam sources and power supplies, electron beam sources and power supplies for deposition, RF power supplies for plasma generation, built-in plasma sources and power supplies, RF induction thermal plasma systems, and electron beam metal 3D printers

Market trends

- Demand for high-performance optical films for smartphones, in-vehicle cameras, and surveillance cameras is on the rise
- Demand for electron beam lithography systems for manufacturing optical communication devices and millimeter-wave devices is also increasing
- Market size of semiconductor device industry, including 5G-related, 3D memory, and in-vehicle devices is growing

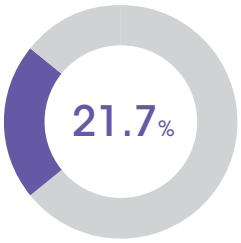
Technology and product strategies

- Launch of low-defect, low-optical-loss bombardment deposition source for infrared cameras and sensors
- Cultivation of markets in collaboration with related companies in new application fields: nanoparticle synthesis and spherical powder using thermal plasma
- Development of market for new state-of-the-art JBX-8100FS spot electron beam lithography system

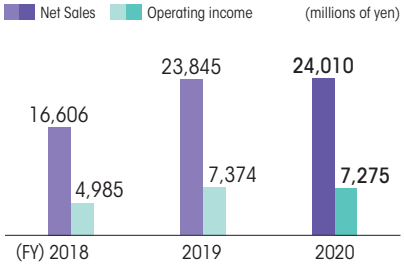


Overview of the Fiscal Year Ended March 31, 2021

Net Sales by Segment



Change of Net Sales and Operating Income



Topics

Launch of production for electron beam lithography systems at the new plant in the second half of this fiscal year

Last year, we announced that a new plant had been acquired to boost our production capacity for products such as electron beam lithography systems, which have seen increasing demand. Preparations for the production system have moved ahead, with production planned to begin in the second half of this fiscal year. Multi-beam lithography systems are also experiencing strong demand, and we will improve our production line to increase the number of units that can be made.

Address: 2-11-1 Inadaira, Musashimurayama-shi, Tokyo

Sales launch for metal 3D printers Achieving high-quality shapes with strong reproducibility

We applied the electron beam technology developed for our scientific and industrial instruments to metal 3D printers and have succeeded in commercializing them. We are employing a system in these 3D printers that uses an electron beam to melt and layer metal powders, such as titanium. Complex shapes can be produced that were difficult to make using conventional production methods. We expect these metal 3D printers to be used in areas with high added value, such as aircraft turbine blades or prosthetic joints in the field of medicine.

Electron Beam Metal 3D Printer
JAM-5200EBM

Aiming for further growth

Tadashi Komagata
Senior Executive Officer

JEOL industrial equipment supports the production of semiconductors and electronic devices

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.

Enormous numbers of electronic devices are necessary in our ultra-high-speed communication society and for the expanding 5G (fifth-generation communications) network. Our products are indispensable for their production, so we will continue to quickly develop and provide systems to meet requirements.

The multi-beam mask writer that we developed jointly with Austria-based IMS is already a leading device for the fabrication of photo masks in the age of extreme ultraviolet (EUV) lithography, bringing a seismic shift from single-beam to multi-beam systems.

Our electron beam metal 3D printer has also at last entered the mass production machinery market. We expect to bring about a revolution in the production of essential components that demand strength and reliability. Through this printer, we are supporting the creation of groundbreaking products not only for aerospace, but for a wide range of industrial fields.

Medical Equipment Segment

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. The 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 needs.

Main instruments

Clinical chemistry analyzers

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

BioMajesty™ JCA-BM6070G

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.

Main customers ····· Hospitals, clinical testing centers, and reagent manufacturers
Main products ····· Clinical chemistry analyzers, laboratory information systems, fully automatic amino acid analyzers

Market trends

- Demand has fallen for new clinical chemistry analyzers and immune assay systems due to a reduction in blood tests being performed for medical checkups as a result of the impact of COVID-19

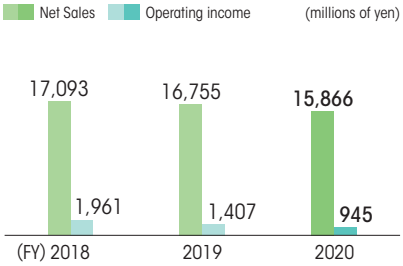
Technology and product strategies

- Launch of flagship BioMajesty™ JCA-BM6070G model offering IoT support and improved reliability, functionality, and safety
- Assigning some of our staff to a Belgian subsidiary and installing demonstration machines to promote overseas expansion via our own brand and distributors
- Promoting steady profits by further strengthening solutions businesses (sales of reagents, consumables, services, etc.)

Overview of the Fiscal Year Ended March 31, 2021

Net Sales by Segment

Change of Net Sales and Operating Income



Topics

Accelerating business expansion in the European medical equipment market

Further growth in healthcare is expected from the European medical equipment market, against the backdrop in Europe of high standards for medical care and a mature market. Growth is also expected in other regions, given the development of a medical infrastructure in tandem with economic growth and growing populations in regions such as the Middle East, Eastern Europe and Russia. To strengthen our sales and services in these regions, we have established a new showroom and warehouse for our Belgium subsidiary JEOL (EUROPE) B.V. Three new models have been installed in the showroom, and in addition to giving demonstrations of our equipment, we are providing fast, effective training for our distributors, with the aim of promoting sales. We are also reducing delivery times for products through new warehousing and logistics strengths, hoping to further boost customer satisfaction.

Showroom of JEOL (EUROPE) B.V. (Zaventem, Belgium)

Aiming for further growth

Kiyotaka Fujino
Corporate Officer

Recognizing the importance of medical care and providing solutions that protect people's health

With COVID-19 having spread now for one and a half years, few people would have expected its impact to have reached such a level throughout the world. Our company has once again recognized the importance of protecting people's health, and we are striving to strengthen our efforts toward helping to achieve Goal 3 of the 17 SDGs: Good Health and Well-Being.

There are many health risks today. Medical treatments are becoming increasingly complex as we understand the causes and mechanisms behind infectious diseases and the three major lifestyle-related diseases. Solutions for accurate diagnosis and the equipment and materials needed to provide diagnostic information to medical professionals are crucial, and greater speed is also being asked for. If a one-stop solution for these processes can be provided, it will assist in the early detection of diseases as well as earlier treatment. We will employ IoT and digital transformation (DX) to swiftly provide findings and analyze quantities of test data that would be difficult to process manually. As automation tends to diminish communication with medical professionals, we are proactively providing information and conducting seminars for them. A support system for medical institutions is also essential in light of the increasing risk from disasters, such as earthquakes, and damage from storms and floods. By providing support not just in Japan, but on a global scale, we intend to fully achieve the SDGs goal of Good Health and Well-Being.

New Services

Promoting the wider use of technology in society

Online

The number of companies and organizations encouraging employees to work from home is increasing in response to the COVID-19 pandemic. Currently face-to-face sales and interactions at exhibitions and other events are difficult, so there is demand for solutions that make full use of the Internet. To prevent customer research and analytical operations from falling behind, we are expanding our online support and working to maintain customer relations via the Internet.

1 Online demonstrations

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

2 Online exhibitions

Many exhibitions and academic conferences have been canceled or postponed to prevent the spread of COVID-19. We publish the panel discussions, catalogs, technical material, and more that we had planned for these events on our website, where they can be viewed from anywhere at any time. We are also working on publishing videos of the seminars and lectures that were planned so that they can be watched 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. Additionally, we are actively 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 the knowledge and technology we have cultivated and to promote learning even when it is difficult to leave home. This includes publishing *JEOL NEWS*, which summarizes the latest research results, 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. With 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 burden 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.

Through our sharing service, we will build a new business model by proposing value in keeping with the current trend in a

Contracted Services

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

2 Observed analysis

Our customers can come to us and consult with expert operators on site 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

New!

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 the requirements for analysis.

5 Customized lectures/sample preparation lectures

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

shift from products to services and addressing diverse needs on the frontlines 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.

Accreditation of Partnership on Research Assistance Service (A-PRAS) logo

Equipment available via sharing service

JNM-ECZ600R/JNM-ECZ800R
nuclear magnetic resonance systems

JEM-ARM200F
NEOARMex atomic resolution analytical electron microscope

JAMP-9510F
field emission Auger microprobe

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.

Policy

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

Quality and Environmental Policy

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.

Commitment to Quality

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

Commitment to 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 evaluates risks for basic, quality, and environmental policies. 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 a 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 limited to improvements in a specific division, but are deployed horizontally across the Company.

Publication of International Certifications

Headquarters and 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: 4380808 2.0

ISO 14001: 4380809 2.0

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 this issue in 2006. The CSR Committee, headed by the president and advised by JEOL's attorney, meets quarterly. 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.

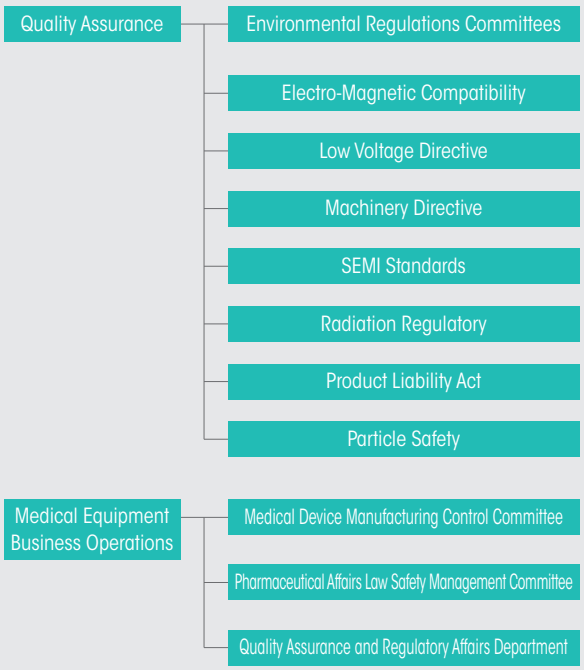
All departments related to products, including sales, development, design, procurement, manufacturing and service, participate and are working on legal compliance. Laws and regulations change over time.

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.

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, RA (Regulatory Affairs), along with QA (Quality Assurance) is responsible for the ME quality assurance within the Medical Equipment Division, and for ensuring compliance with the various rules and regulations throughout the world.



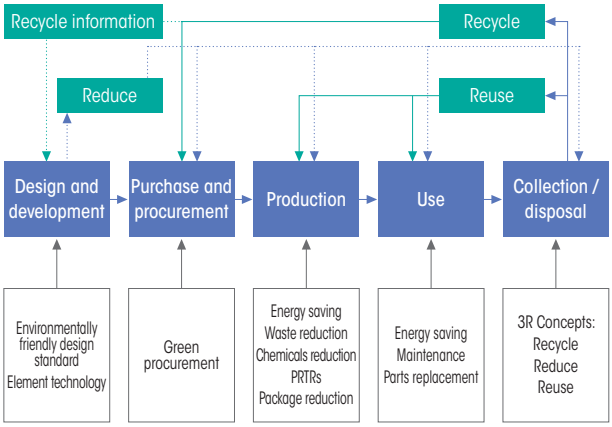
Together with the Environment

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_2 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_2 emissions with 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 strive to reduce the environmental impact of these instruments during disposal but 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.

Atomic Resolution Analytical Electron Microscope (JEM-ARM300F2 GRAND ARM™2)

To both counter global warming and for economic viability, it is essential to conduct R&D aimed at improving the performance and reducing the size of energy devices, including rechargeable batteries; light-emitting devices, such as LEDs and OLEDs; and semiconductor devices, such as CPUs and IoT sensors. Analysis at the atomic level is necessary for the development of innovative materials for that purpose. JEOL's Atomic Resolution Analytical Electron Microscope has the performance and quality to meet these R&D needs.

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.

JMS-TQ4000GC

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 improvement in a wide range of fields, such as research into the decommissioning of nuclear reactors and research for the exploration of natural resources.

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.

JAM-5200EBM

Green Purchasing

The JEOL Group communicates our environmental policies to our 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]*1
Version 5 (June 2010)

The JEOL Group is committed to activities to 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 as 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 directive 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.

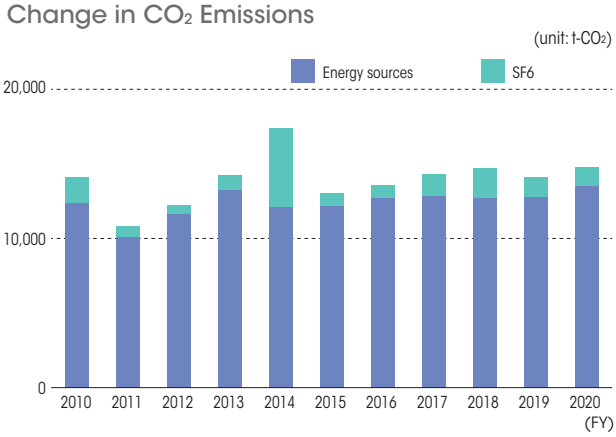
Going forward, the Group will continue to work on the development, production, and supply of products that contribute to the environment and that are environmentally conscious by complying with the RoHS Directive in an increasing number of countries worldwide. At the same time, we are reducing our environmental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

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_2 emissions to help attain the Sustainable Development Goals (SDGs) and carbon neutrality in the future.

Change in CO_2 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.

Solar system on roof of Building 3 at the head office

Companywide initiatives aimed at reducing energy consumption include 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 a target of 1% or more annually on average. This 1% or more target—required by the Act on the Rational Use of

*1 Visit JEOL site for the entire document https://www.jeol.co.jp/corporate/envi/activity/ (Only available in Japanese)
*2 Visit JEOL site for more details on our environmental projects https://www.jeol.co.jp/en/corporate/envi/report/

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 (May 1 to Dec. 31, 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 sixth consecutive year, we also earned an "S" under an evaluation system that ranks businesses that reflect the results of METI's 2020 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 premises 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.

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 Metropolis of Tokyo

One of the certified reporting companies: JEOL Ltd.

(Unit: kg / year)

Substance/fiscal year (amount used)	FY 2018	FY 2019	FY 2020
1) Methanol	100	110	—
2) Acetone	—	100	—
3) Isopropyl alcohol	—	100	110
4) Sulfuric acid	100	—	—

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 of fluorescent lamp ballasts took place in February 2020, marking the end of treating PCB waste.

Verification of Waste Material Processing and Processing Results

For waste materials, the main issue is to improve the rate of recycling, which we achieve by completely separating waste products by the type of material, by improving the rate of recycling of waste plastics, and by adopting reusable packing crates and materials.

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 grounds. 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 on-site checks to confirm that the disposal of waste materials is being conducted properly.

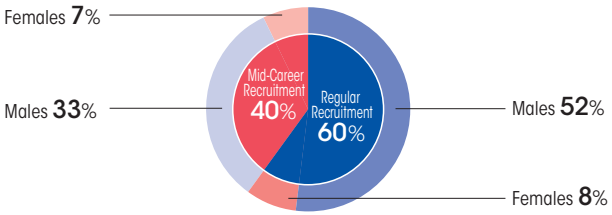
Together with Employees

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.

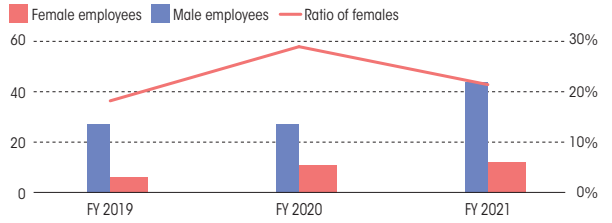
Recruitment and Human Resource Development

We continue to cultivate the DNA that we have built up over more than 70 years by hiring new graduates, while bringing in mid-career workers with diverse backgrounds. The open and mutual exchange of ideas between these two groups serves to challenge the ever-evolving world of science and technology.

Comparison of Regular Recruitment and Mid-Career Recruitment (as of March 31, 2021)



Ratio of Females among New Graduates Recruited



	FY 2019	FY 2020	FY 2021
No. of male employees	27	27	44
No. of female employees	6	11	12
Ratio of females (%)	18.2%	29.0%	21.4%

Promoting Diversity

JEOL recruits people regardless of their gender, nationality, age, or disability to create an organization where everyone can play an active role. The fact that JEOL is a company where people can work with peace of mind for a long time is reflected in our low turnover rate in recent years.

In July 2019, JEOL received Eruboshi certification (2nd level) from the Ministry of Health, Labor and Welfare in recognition of our accomplishments in advancing women in the workplace. We emphasize the hiring of females, and in recent years female workers have accounted for approximately 20% of new employees. In addition, the rate of 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. We also established a job return system in January 2019. We support a work and family life balance by introducing a return-to-work registration system targeting employees who need to stop work for reasons such as childcare or nursing care.

	FY 2018	FY 2019	FY 2020
Job Turnover Rate	1.4%	1.3%	1.2%

Initiatives to Safeguard Health

We believe that the mental and physical health of employees are important management issues, so JEOL practices effective health management, including promoting our Health Management Declaration both inside and outside the Company.

Almost every employee receives a medical exam every year. 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.

	FY 2018	FY 2019	FY 2020
Health checkup participation rate	99%	99%	99%
Stress check exam rate	92%	91%	94%

Initiatives for New Workstyles

JEOL encourages all employees to take paid leave to reach a balance between their work and their private life. In fiscal 2020, all employees took the five days of paid leave required by the national government, with the average number of days of paid leave being taken reaching 11 per employee. Further, in January 2021, a "paid leave by the hour" system was introduced to respond to flexible working hours and to suit diverse lifestyles.

Together with Local Communities

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, science demonstrations for students took place at nearby elementary schools, but this has since grown to include teachers, and is now being conducted at a variety of sites, not just elementary schools. Through FY 2020, 602 demonstrations have been performed over 359 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.

Examples of program locations include:
Musashimurayama City Raizuka Elementary School (Tokyo)
Iwakuni City Micro Life Museum (Yamaguchi Prefecture)
Student Workshop with Researchers Involved in Cutting-Edge Technology (Hiroshima Prefecture)
Akiruno City Masuko Elementary School (Tokyo)
Hamura City Shorin Elementary School (Tokyo)
Akiruno City Higashi Akiru Elementary School (Tokyo)

In 2020, there were also visits to two elementary schools in Ishinomaki City and two in Kesennuma City to work with children affected by the Great Eastern Japan Earthquake, as well as a visit to an elementary school in an area affected by the recent heavy rains in the Tohoku region.

In the future, we hope that the everyone, 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 City. JEOL Group instructors use NeoScope™ benchtop scanning electron microscopes to hold science education support classes. In 2020, one elementary school and one junior high school in Hino city were visited (12 classes with 448 students) giving the children a chance to experience the microworld using an electron microscope.

Science Education Support Class in Tohoku

Electron microscope experience at Higashi Akiru Elementary 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 other related instruments, as well as applied research using these instruments (for medical science, biology, physics, chemistry, materials science, nanotechnology, and other disciplines). The 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 2020.

Kazato Prize

Takeshi Noda
(Professor, Institute for Frontier Life and Medical Sciences, Kyoto University)
"Elucidation of virus replication mechanisms by using electron microscopy"

Yuki Kimura
(Associate Professor, Institute of Low Temperature Science, Hokkaido University)
"In-situ observation of dynamics of nucleation from ionic liquid solution by transmission electron microscopy"

Kazato Research Encouragement Prize

Yongchan Lee
(Postdoctoral Fellow, Max Planck Institute of Biophysics, Department of Structural Biology)
"Structural pharmacology of amino acid transporters by cryogenic electron microscopy"

Shingo Hirashima
(Lecturer, Department of Anatomy, Kurume University School of Medicine)
"Three-dimensional ultrastructural analysis of heterologous cellular network associated collagen fiber and bone using array tomography"

Rintaro Takahashi
(Assistant Professor, Graduate School of Engineering, Nagoya University)
"In-situ observation of polymersome formation in an ionic liquid"

Takehito Seki
(Associate Professor, School of Engineering, The University of Tokyo)
"Development and application of ultra-high sensitive atomic-resolution imaging using a high-speed segmented STEM detector"

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 cleanups 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 activity 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 2021, this organization grew to include 36 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 2020, all the while promoting 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 2019, 260 visitors from 14 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 Yamagata City elementary school

Management Team (As of June 25, 2021)

Gon-emon Kurihara ①

Chairman & CEO

Apr. 1971	Joined the Company
Apr. 2000	General Manager of Medical Sales Division
Jun. 2002	Director
Apr. 2004	Assumed the position in charge of sales
Jun. 2004	Managing Director
Apr. 2005	Head of Sales Division
Jun. 2005	Senior Managing Director
Apr. 2006	Assumed the position in charge of analytical instruments
Jun. 2006	Director and Senior Executive Officer
Jun. 2007	Executive Vice President
Jun. 2008	President
Apr. 2012	Assumed the position in charge of overall management (to the present) and Corporate Planning & Strategy Office
Jun. 2019	Chairman and Chief Executive Officer (CEO) (to the present)

Izumi Oi ②

President & COO

Apr. 1986	Joined the Company
Apr. 2012	General Manager of Management Strategy Planning Office
Jun. 2013	Corporate Officer of the Company
Jun. 2015	Director and Corporate Officer of the Company
Jun. 2016	Director and Executive Officer of the Company
Apr. 2019	Assumed the assistant position in charge of overall management
Jun. 2019	President and Chief Operating Officer (COO), in charge of overall management (to the present)

Koichi Fukuyama ③

Director & Senior Executive Officer

Apr. 1982	Joined the Company
Apr. 2005	General Manager of Management Strategy Planning Office
Apr. 2006	General Manager of Internal Auditing Division
Jun. 2006	Corporate Officer
Jun. 2009	Director and Corporate Officer
Jun. 2011	Director and Executive Officer
Apr. 2016	Assumed the position in charge of sales (to the present) and the position in charge of brand strategy
Jun. 2016	Director and Senior Executive Officer (to the present)
Apr. 2017	Assumed the position in charge of brand communication
Apr. 2018	Assumed the position in charge of the Business Operation Center (to the present)

Satoshi Nagakubo ⑦

Outside Director

Jun. 2001	Executive Officer of Nissho Iwai Corporation (currently Sojitz Corporation)
Jun. 2003	President and Representative of Nissho Iwai Plant Equipment Co., Ltd. (currently Sojitz Machinery Corporation)
Jun. 2009	Director and Chairman of Sojitz Machinery Corporation
Oct. 2012	Corporate Adviser of the Company
Jan. 2015	Representative Director and President of HR Consultant Co., Ltd. (to the present)
Jun. 2016	Outside Director of the Company (to the present)

Koji Nakao ⑧

Outside Director

Jun. 2007	Director and Senior Managing Executive Officer of Terumo Corporation
Jun. 2010	Director and Executive Vice President of Terumo Corporation
May 2011	Chairman of the Board of Terumo Corporation
Apr. 2013	Chairman of The Japan Federation of Medical Devices Associations
Feb. 2017	Representative of Art Management Shimanami (to the present)
Jun. 2018	Outside Director of the Company (to the present)
Nov. 2019	Advisor to Biodesign Japan (to the present)

Ryuji Kanno ⑨

Outside Director Recently appointed

Nov. 1999	President of Yokogawa Analytical Systems Inc. (currently Agilent Technologies Japan, Ltd.)
Feb. 2007	Vice President and Representative Director of Agilent Technologies Japan, Ltd.
Feb. 2008	President of Human Metabolome Technologies, Inc.
Jun. 2018	Nonexecutive Director of Rigaku Corporation (present position)
Sep. 2019	Chairman of the Board of Human Metabolome Technologies, Inc.
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 (to the present)

Toyohiko Tazawa ④

Director & Senior Executive Officer

Feb. 1984	Joined the Company
Apr. 2009	General Manager of SA Business Unit
Jun. 2011	Corporate Officer
Apr. 2013	Assumed the position in charge of Advanced Fundamental and Core Technology Center (to the present) Peripheral Equipment, SA, SM, & IB Business Units, in charge of SA & SM Design & General Manager of IB Business Unit
Jun. 2013	Executive Officer
Apr. 2014	Assumed the position in charge of MS Business Unit (to the present) and EM Business Unit
Apr. 2015	Assumed the position in charge of R&D Management Center (to the present), Scanning System Business Operations, Design Management, and Cost Center
Apr. 2016	Assumed the position in charge of Application Management Department and 3D Additive Manufacturing Business Project (to the present)
Jun. 2016	Director and Executive Officer
Apr. 2018	Assumed the position in charge of administration of development technology and intellectual property (to the present)
Jun. 2018	Director and Senior Executive Officer (to the present)
Apr. 2019	Assumed the position in charge of EX Business Unit (to the present)

Atsushi Seki ⑤

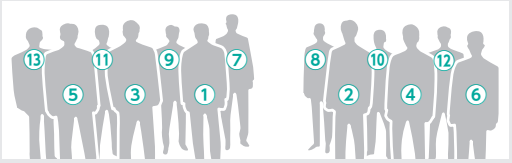
Director & Executive Officer

Apr. 1983	Joined the Company
Oct. 2009	Assistant General Manager of General Affairs Division, General Manager of Human Resources Dept., and Manager of Recruitment and Training Group
Apr. 2012	General Manager of General Affairs Division
Jun. 2014	Corporate Officer
Apr. 2015	Manager of Internal Auditing Division (to the present)
Apr. 2018	Assumed the position in charge of General Affairs (to the present)
Jun. 2018	Director and Executive Officer (to the present)

Katsumoto Yaguchi ⑥

Director & Executive Officer Recently appointed

Apr. 1982	Joined the Company
Jun. 2011	Corporate Officer, General Manager of Financial Affairs Division
Apr. 2016	Corporate Officer, Managing Director of JEOL USA
Jun. 2016	Executive Officer, Managing Director of JEOL USA
Apr. 2021	Executive Officer, second in charge of finance, IT, and export trade control, Managing Director of JEOL USA
Jun. 2021	Executive Officer, in charge of finance, IT and export trade control (to the present)



Kazunori Fukushima ⑩

Audit & Supervisory Board Member

Mitsuru Takahashi ⑪

Audit & Supervisory Board Member Recently appointed

Akifumi Goto ⑫

Outside Audit & Supervisory Board Member

Norio Kuroiwa ⑬

Outside Audit & Supervisory Board Member

Kazuyuki Nakanishi

Substitute Audit & Supervisory Board Member

Senior Executive Officers

Atsumi Nakamura
Tadashi Komagata

Executive Officers

Yoshihiro Ohkura
Hiroaki Fukuda
Yasuo Hijikata
Akihiro Kobayashi

Corporate Officers

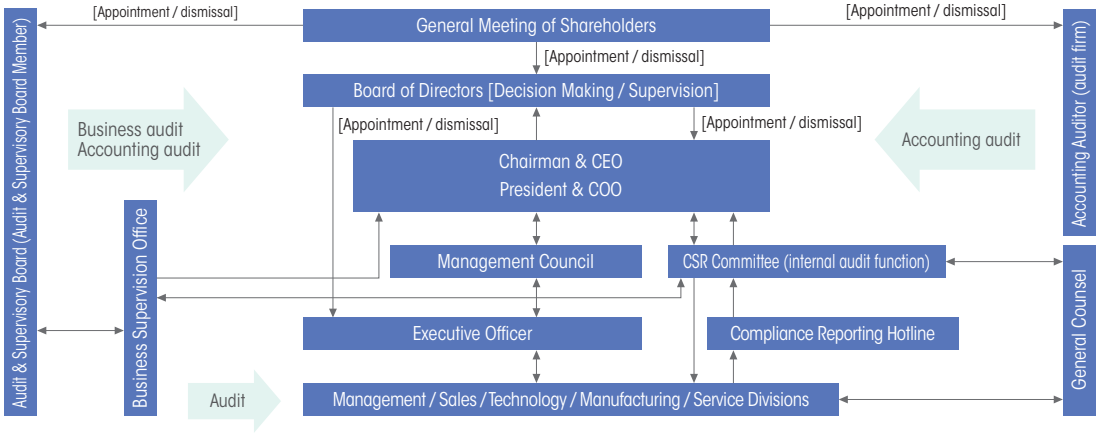
Tadashi Okubo
Shintaro Yazuka
Kiyotaka Fujino
Toshikatsu Kaneyama
Osamu Wakimoto
Masayuki Kobayashi
Hirohisa Yoshida
Toshihiko Kanayama
Chikato Teramoto

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 shareholders and all other stakeholders.

Corporate Governance Structure

Corporate governance system



Number of Major Meetings Held during the Fiscal Year 2020

Board of Directors	15
Management Council	51
Executive Officers' Meeting	8
Audit & Supervisory Board	20

Internal Control System

Internal Control System Status

Listed below are the systems that ensure that the execution of duties by directors adhere to all laws, regulations, and the Articles of Incorporation as well as other systems (internal control systems) that ensure the appropriateness of operations by the Company and the corporate Group, comprising the Company and all subsidiaries.

Internal Control System Overview

1. System for storing and managing information on the execution of duties by directors
2. Rules and other systems for risk management to prevent loss
3. System for ensuring the efficient execution of duties by directors
4. System for ensuring that the execution of duties by directors and employees complies with all laws, regulations, and the Articles of Incorporation
5. System for ensuring the appropriateness of operations in the corporate Group comprising the Company and all subsidiaries
6. Matters related to the employees who support the duties of Audit & Supervisory Board members when those members request their assistance
7. Matters related to the independence of the employees from directors (stated in the preceding item) and ensuring the effectiveness of instructions given by Audit & Supervisory Board members to employees
8. System for reporting to Audit & Supervisory Board members by directors, etc. and other systems relating to reports to these members
9. System for making sure that people who have made reports, as provided in the preceding item, will not be treated unfavorably after making a report
10. Matters related to policies for the procedure of payments made in advance or reimbursement of expenses in the execution of duties by Audit &

Supervisory Board members and for other treatment of expenses and liabilities associated with the execution of these duties

⑪ Other systems for checking that audits performed by Audit & Supervisory Board members are conducted effectively

Collaboration between the Audit & Supervisory Board Members and Internal Audit Departments

Audits at affiliated companies (guided by the Internal Audit Rules for Domestic Affiliated Companies) are conducted to ensure full legal compliance within the Company and at affiliated companies and to improve management efficiency. For operations overseas, Tokyo meetings are held twice a year to achieve mutual understanding through dialogue. In addition, internal auditing has been strengthened and a business supervision office (consisting of four members) has been established to supervise our head office and affiliated company operations, as well as to assist and coordinate with corporate auditors.

Evaluating the Effectiveness of the Board of Directors

Since fiscal 2017, 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 2020 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 2020 (April 2020 to March 2021). The results were reported at the Board of Directors meeting held on Tuesday, August 31, 2021.

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, 17 evaluation items out of 18 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 Reviewing the scope of items to be discussed and reported on.
② Further summarizing and simplifying explanatory materials.
③ Distributing materials to outside officers more quickly and providing them with thorough explanations prior to meetings and discussions.

Measures Taken for Issues Recognized in the Fiscal 2019 Questionnaire

- A review will be conducted of the Board of Directors agenda standards and report content in order to focus on the most important issues.
- Opportunities will be created to deepen discussions on medium- to long-term management issues.
- Measures will be taken to more quickly distribute materials to outside officers.

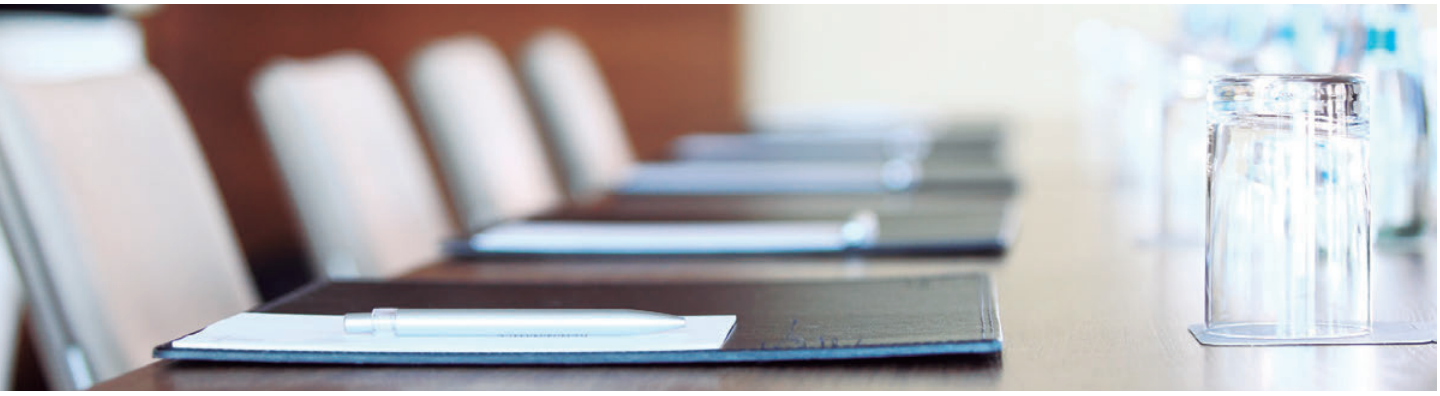
Measures to Be Taken for Issues Recognized in the Fiscal 2020 Questionnaire

- Summaries will be provided in reports.
- Report items will be reviewed, and the focus will be narrowed.
- Complete explanations will be provided to outside officers prior to meetings and discussions.

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 operating income, (2) consolidated ordinary profit, (3) non-consolidated operating income, (4) ROE). Note that 1 point is equivalent to 0.5 shares 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.

Status of the 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 and business continuity plan (BCP), initiatives that will be promoted throughout the entire Group.

*Medical Devices Quality Management System

Initiatives to prevent the spread of COVID-19

To counter the risk from the COVID-19 pandemic, we held meetings of the Crisis Committee, chaired by Atsushi Seki (Director and Executive Officer), and we have been working to build an effective management system for preventing the spread of infections. When the government of Japan declared a state of emergency, the Crisis Committee was reformed into the Task Force for Countering COVID-19, where the President & COO, Izumi Oi, serves as the Chairperson. In addition to intensifying our countermeasures, we are implementing the following initiatives.

- **Prohibited employees from taking domestic and overseas business trips, in principle**
- **Prohibited holding and participating in events, such as exhibitions and seminars**
- **Reduced contacts among employees in staff restaurants by staggering lunchtimes**
- **Promoted work from home and staggered work hours**
- **Recommended holding Web (virtual) meetings**
- **Implemented mask wearing, alcohol-based sanitizing, and temperature checks**
- **Granted special leave for employees raising children of elementary school age or younger, or a child attending a special needs school.**

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 as stipulated in the Companies Act and the criteria for independence as stipulated in 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 2021, Ryuji Kanno 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).

Creating a JEOL loved even more by stakeholders

Ryuji Kanno
Outside Director

This fiscal year, I was appointed as an outside director. I will strive to provide a diverse range of advice, particularly from a customer perspective. I will do this by using my wealth of experience gained through many years of working with companies in the same industry, and by drawing on my experience at a highly marketing-oriented overseas-based company and my most recent experience in the life sciences.

As an outside director, there are two key roles that I hope to fulfill. First, I will work to further improve our corporate governance system so that it can adapt to changes in the times and the business environment. Second, I will encourage transparent and rational decision-making across multiple aspects of our business by offering constructive advice from the standpoint of our stakeholders. In particular, I feel it is important that we value the views of our customers and act from the perspective of managing risk to ensure that business opportunities are not lost.

Based on the principles in our company philosophy of "Creativity" and "Research and Development," JEOL positively challenges the world's highest technology, forever contributing to the progress of both science and society through our products. To continue the sound operation of our business, guided by this corporate philosophy, it is vital to further improve our corporate governance system for responding to changes in the environment. It is also essential to make effective investments in strategic technology and research, as well as to promote business development and initiatives that directly and indirectly help to achieve the SDGs.

Currently, despite having hardworking and outstanding staff who have unique and advanced technological skills, our profitability is relatively low and there is still room for improvement. Over the medium to long term, I believe that it is important to refine our technological strengths and our products that have overwhelming performance advantages. These refinements can be achieved by broadly improving our profitability at a time when the industrial equipment business segment is performing strongly and by using the funds generated to further increase investments in technology, research, and business development. If we succeed in this, I believe that we can transform other segments into high-value-added businesses, including the industrial equipment segment, and we can create new highly profitable businesses. To accomplish these tasks, I will advise JEOL to build and continually implement a process for developing innovative businesses that add value to our products and services, so that we can capitalize on our technology. If we can support higher profitability, we can maintain highly technological development skills and contribute to scientific progress and societal development.

By offering the support described above, I will strive to meet stakeholders expectations and help to create JEOL that is loved even more than ever.

Reason for Appointment

Due to his wealth of experience and knowledge, as well as his ability to make firm assessments 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, to assist in improving our corporate value.

Taking a Leap Forward from Science to Industry

Satoshi Nagakubo
Outside Director

Five years have passed since I was appointed as an outside director. In that time, an open atmosphere has been created under the leadership of the Chairman of the Board, with discussions becoming increasingly active each year.

As Japan recovered from the devastation of World War Ⅱ, JEOL established a company philosophy of "Creativity" and "Research and Development" We have grown as a company with a keen focus on using the power of electron microscopy to allow things impossible to see with the human eye to become visible. The Company now plays an indispensable role in advanced scientific fields in Japan and around the world, and provides support to Nobel Prize laureates from behind the scenes.

On our 70th anniversary, with a view to entering into the industrial market, we took on the opportunity to turn toward the total solutions business that not only provides exceptional products but also provides every service that customers need, as well as by further strengthening internal and external collaboration through the YOKUGUSHI strategy. With this combined approach, we intend to take the next leap forward. Against this backdrop, although the Board of Directors has been seen as operating effectively to a degree, it is now necessary to keep the organization in tip-top condition to further improve corporate value over the medium to long term. This can be achieved through continuing discussions on the effective appointment and dismissal of directors; a succession plan for the next president; the creation of a suitable compensation system for executive officers; M&As; new product and business development; as well as the cultivation of new markets and corporate culture. As a member of the Board of Directors, I intend to keep providing effective advice at the right time, based on the knowledge I have gained over approximately 50 years of being in business.

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, Satoshi Nagakubo was appointed as an outside director under a process that emphasized objectivity and impartiality.

Supporting the Handling of Difficult-to-See and Medium- to Long-Term Issues by Leveraging a Third-Party Perspective

Koji Nakao
Outside Director

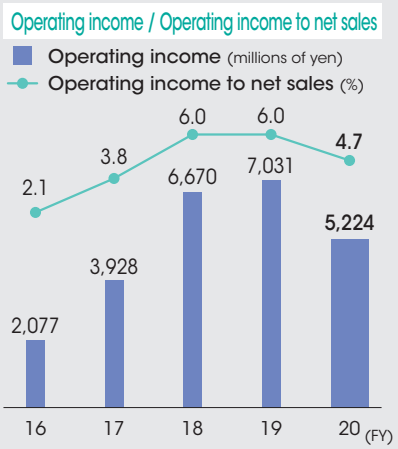
Among my many duties of an outside director, I consider corporate governance as a primary theme. In Japan, guidelines and policies are changing radically every year in this field. Amid these changes, I will do my best to increase my understanding of the Company's operations, particularly of the functions of the Board of Directors; the duties of the CEO, COO, and internal directors; and the organizational structure. I will do this from the perspectives of transparency, fairness, clear ethics, sustainability, and profitability, and I will exchange opinions and offer recommendations on medium- to long-term business issues, while continually examining the situation from a third-party standpoint and by applying my own managerial experience.

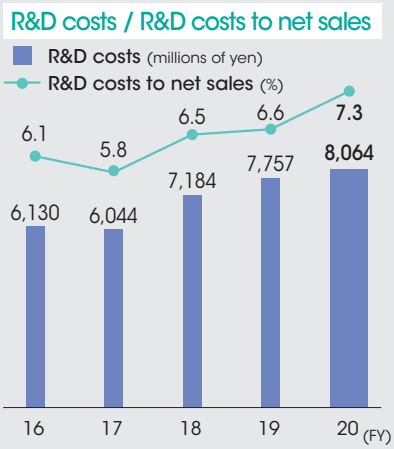
As a listed company, JEOL has an exceptional corporate culture. I feel strongly that the Company is pursuing ever-higher levels of technology and making a solid contribution to advanced science. So, I think that these efforts and attitude are reflected in JEOL's history and achievements. On the other hand, looking at the evolving times, technology, and competition, there are aspects of the corporate culture that should be changed, in addition to aspects that should be maintained. I fundamentally believe that corporate culture forms the bedrock of corporate governance. I hope to provide support so that the Company can develop and reach the next level, while also offering advice and pointing out areas related to the corporate culture that are perhaps difficult to see from an insider's standpoint as well as areas that are more visible, such as financial data and aspects of the organizational structure.

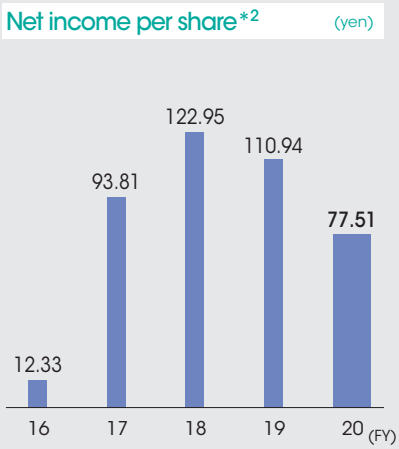
Reason for Appointment

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, Koji Nakao was appointed as an outside director under a process that emphasized objectivity and impartiality.

Consolidated Five-Year Summary







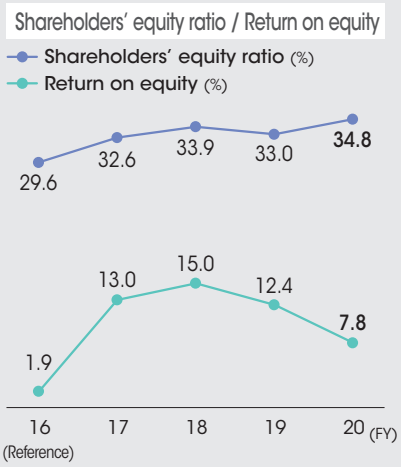
(JEOL Ltd. and consolidated subsidiaries)

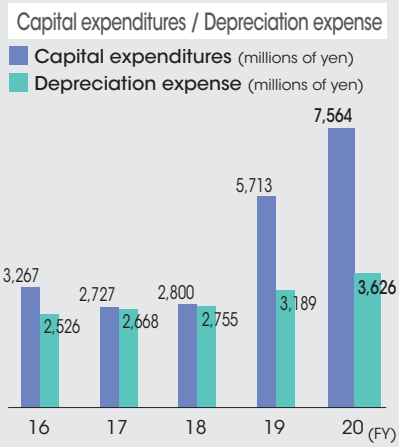
For the fiscal year ended March 31 (millions of yen)	2021	2020	2019	2018	2017
Net sales	110,440	117,244	111,289	104,570	99,699
Scientific and Metrology Instruments	70,564	76,644	77,589	68,480	66,510
Industrial Equipment	24,010	23,845	16,606	16,708	11,565
Medical Equipment	15,866	16,755	17,093	19,383	21,624
Selling, general and administrative expenses	37,669	37,834	35,761	33,562	32,798
Operating income (loss)	5,224	7,031	6,670	3,928	2,077
Ordinary profit (loss)	6,551	7,203	7,440	4,363	1,724
Net income attributable to owners of the parent	3,745	5,360	5,940	4,532	596
Capital expenditures and Metrology Instruments	7,564	5,713	2,800	2,727	3,267
Scientific and Metrology Instruments	2,418	3,658	1,943	1,939	2,735
Industrial Equipment	4,530	1,360	517	354	178
Medical Equipment	176	303	134	284	188
Eliminations/Corporate	440	392	205	150	166
Depreciation expense and Metrology Instruments	3,626	3,191	2,755	2,668	2,526
Research and development costs	8,064	7,757	7,184	6,044	6,130
Scientific and Metrology Instruments	5,283	5,164	4,599	4,185	4,404
Industrial Equipment	1,770	1,654	1,674	1,125	787
Medical Equipment	1,011	939	910	734	939

At year-end*1 (millions of yen)					
Total assets	146,388	136,788	122,665	114,629	109,045
Total equity	51,000	45,080	41,593	37,387	32,285

Per share data*2 (yen)					
Net income attributable to owners of the parent	77.51	110.94	122.95	93.81	12.33
Total equity	1,055.50	933.07	860.90	773.84	773.84
Cash dividends					
Common stock	24.00	24.00	21.00	16.00	14.00

Value indicators (%)					
Return on equity (ROE)	7.8	12.4	15.0	13.0	1.9
Return on assets (ROA)	2.6	3.9	6.3	4.0	0.5





*1 "Partial Amendments to Accounting Standard for Tax Effect Accounting" (ASBJ Statement No. 28, February 16, 2018) and related guidance have been applied from March 2019. Management indicators and other data reflect the retroactive application of these revised accounting standards.

*2 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 2017.

Overview of the Fiscal Year Ended March 31, 2021

In the consolidated fiscal year under review, the economic conditions in Japan continued to be highly uncertain, with no end in sight for the ongoing spread of COVID-19.

Under these circumstances, the JEOL Group made an all-out effort to tackle the strategic priorities outlined in Triangle Plan 2022, our medium-term management plan for the fiscal years 2019 to 2021. This plan was aimed at boosting corporate value, creating a more robust management base, and bringing in more orders and sales.

Net sales for the consolidated fiscal year under review were ¥110,440 million (down 5.8% compared with ¥117,244 million in the previous year). Looking at profit and loss, operating income was ¥5,224 million (down 25.7% compared with ¥7,031 million in the previous year), ordinary profit was ¥6,551 million (down 9.1% compared with ¥7,203 million in the previous year) and net income attributable to owners of the parent was ¥3,745 million (down 30.1% compared with ¥5,360 million in the previous year).

Overview of the Financial Position

Total assets at the end of the consolidated fiscal year under review came to ¥146,388 million, up ¥9,600 million from the end of the previous consolidated fiscal year. The main factors for this rise were a ¥4,075 million increase in inventories and higher investment securities by ¥2,697 million.

Total liabilities were ¥95,388 million, up ¥3,680 million from the end of the previous consolidated fiscal year. The main factor behind this rise was an increase in long-term borrowings of ¥7,510 million, despite a ¥1,886 million decrease in corporate bonds outstanding and a ¥773 million decrease in short-term borrowings.

Total equity grew by ¥5,919 million, to ¥51,000 million, reflecting the recording of ¥3,745 million in net income attributable to owners of the parent. As a result, the shareholders' equity ratio as of March 31, 2021, rose 1.8 percentage points, to 34.8%.

Overview of Cash Flows

For the fiscal year ended March 31, 2021, cash and cash equivalents ("cash") came to ¥14,482 million at the end of the fiscal year, up ¥449 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 ¥3,359 million, compared with ¥3,741 million provided in FY 2019. This was mainly due to higher income before income taxes and inventories.

Cash flow from investing activities

Net cash used in investing activities was ¥6,989 million, compared with a net cash outflow of ¥4,172 million in FY 2019. The main reasons for this decline included purchases of property, plant and equipment.

Cash flow from financing activities

Net cash provided in financing activities was ¥3,296 million, compared with ¥5,395 million provided in FY 2019. Proceeds from long-term borrowings was the primary reason.

Outlook for the Next Fiscal Year

Looking to the future, due to the global spread of COVID-19, we expect that our outlook will remain uncertain. Given these conditions, we will solidly promote initiatives in line with our medium-term management plan Triangle Plan 2022 (FY 2019 to FY 2021), and secure orders and sales, while steadily implementing the cost improvements needed to realize this plan.

For the consolidated operating forecasts for the fiscal year ending March 31, 2022, we expect ¥126,500 million in net sales (up 14.5% year on year), ¥8,300 million in operating profit (up 58.9%), ¥8,500 million in ordinary income (up 29.8%), and ¥6,400 million in net income attributable to owners of the parent (up 70.9%).

Corporate Outline (As of March 31, 2021)

Corporate Name	JEOL Ltd.
Address	1-2, Musashino 3-chome, Akishima, Tokyo 196-8558, Japan TEL: +81-42-543-1111 FAX: +81-42-546-3353
Establishment	May 30, 1949
Capital	¥10,038 million
Number of Employees	Consolidated: 3,198 Non-consolidated: 1,950

Head Office and Branch Offices

Head Office: Factory	Nagoya Branch
Tokyo Office	Osaka Branch
Tokyo Second Office	West Japan Solution Center
Tokyo Branch	Hiroshima Branch
Sapporo Branch	Takamatsu Branch
Sendai Branch	Fukuoka Branch
Tsukuba Branch	

Domestic Subsidiaries and Affiliated Companies

JEOL TECHNICS LTD.	JEOL RESONANCE Inc.
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, 2021)

Stock Information

Authorized shares	100,000,000
Issued shares	48,857,800
Number of shareholders	5,240

Major Shareholders

Shareholders	Number of shares (thousand)	Percentage of total shares held (%)
Nikon Corporation	4,300	8.8
The Master Trust Bank of Japan, Ltd. (Trust account)	3,943	8.1
Custody Bank of Japan, Ltd. (Trust account)	3,240	6.6
SSBTC Client Omnibus Account	2,824	5.8
MUFG Bank, Ltd.	1,504	3.1
JPMorgan Chase Bank 380055	1,306	2.7
Custody Bank of Japan, Ltd. (Trust account 4)	1,258	2.6
JEOL Mutual Prosperity Association	1,190	2.4
JEOL Group Employee Stock Ownership Association	1,044	2.1
Nippon Life Insurance Company	1,042	2.1

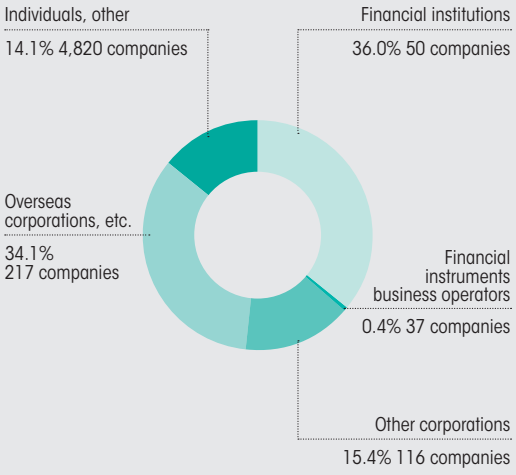
Ownership ratio is calculated by subtracting treasury stock.

Overseas Subsidiaries

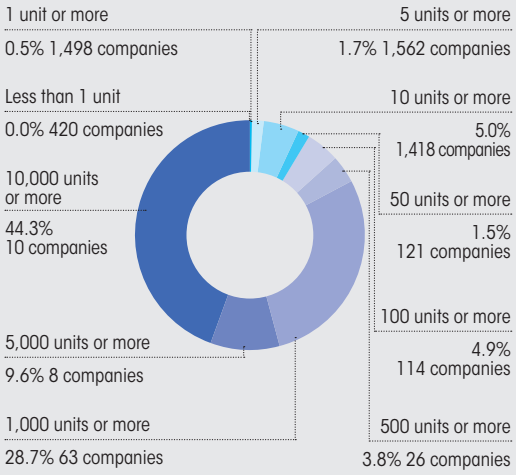
- Ⓐ JEOL USA, INC. [USA]
- Ⓑ JEOL (EUROPE) SAS [France]
- Ⓒ JEOL (U.K.) LTD. [U.K.]
- Ⓓ JEOL (EUROPE) B.V. [the Netherlands]
- Ⓔ JEOL (GERMANY) GmbH [Germany]
- Ⓕ JEOL ASIA PTE. LTD. [Singapore]
- Ⓖ JEOL TAIWAN SEMICONDUCTORS LTD. [Taiwan]
- Ⓗ JEOL (AUSTRALASIA) PTY. LTD. [Australia]
- Ⓘ JEOL DE MEXICO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

Breakdown of Shares

By type of shareholders



By number of shares owned



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