

# Shimadzu Integrated Report 2023



Contributing to  
Society through  
Science and  
Technology



# Editorial Policy

The Shimadzu Integrated Report 2023 is a summary of financial information, management strategies, and non-financial information, such as business activities, for the fiscal year ended March 2023 (FY 2022). This report was prepared to help stakeholders better understand the policies in the new medium-term management plan and measures for increasing corporate value. Shimadzu remains committed to the importance of maintaining a dialogue with stakeholders in order to better satisfy stakeholder views and requests.



**Publishing Dates** Published in September 2023

**Reporting Periods** Financial Information: From April 1, 2022 to March 31, 2023  
Non-Financial Information: As appropriate

**Reporting Organizations** Shimadzu Corporation and Shimadzu Group companies

**Disclosure Policy** This report is provided in an effort to disclose information in a timely manner, in accordance with the Disclosure Policy specified by Shimadzu. For more details, refer to the website.  
[https://www.shimadzu.com/sustainability/approach/stake\\_holder/disclosure.html](https://www.shimadzu.com/sustainability/approach/stake_holder/disclosure.html)



## Notes about Future Prospects

The business plans, strategies, and forecasts stated in this report are based on currently available information and are subject to risks and uncertainties. Please note that actual results may differ substantially from projected results, due to changes in economic conditions, market trends, or other factors.



Information for investors  
<https://www.shimadzu.com/ir/>



Sustainability  
<https://www.shimadzu.com/sustainability/>



The most recent information available is posted on the web pages shown above.

## Recognition from Outside Shimadzu



Shimadzu Corporation is included in the JPX-Nikkei Index 400, which was started by the Japan Exchange Group (JPX), Tokyo Stock Exchange, and Nikkei in 2014 for the purpose of selecting companies that satisfy the various conditions required by global investment standards.



Shimadzu Corporation is included in the S&P/JPX Carbon Efficient Index, which is an indicator for selecting companies with low carbon emission levels per net sales and that disclose sufficient information about carbon emission quantities. The index is also used for evaluation by the Government Pension Investment Fund (GPIF).



Shimadzu Corporation has been selected for inclusion in the MSCI Japan ESG Select Leaders Index and MSCI Japan Empowering Women Index (WIN), which are used as indicators for evaluation by the Government Pension Investment Fund (GPIF).



FTSE Blossom Japan Sector Relative Index

The FTSE Blossom Japan Sector Relative Index, developed by Global Index Provider FTSE Russell, is designed to measure the performance of Japanese companies that have relatively strong Environmental, Social, and Governance (ESG) practices in individual industries or sectors. This index is constructed so that industry or sector weights align with the Japanese equity market. In addition, this index supports the transition to a low-carbon economy by selecting companies with high GHG emissions as constituent stocks only if they have achieved a reduction in GHG emissions based on the TPI Management Quality Score. The FTSE Blossom Japan Sector Relative Index is used by Japan's Government Pension Investment Fund (GPIF) as a benchmark for passive ESG investment management.



For the seventh consecutive year, Shimadzu Corporation is recognized jointly by the Japanese Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi as a 2023 "White 500" company, which recognizes large corporations with outstanding health and productivity management practices.



For the third consecutive year, Shimadzu Corporation is selected as the "Health & Productivity Stock Selection" jointly by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange to represent companies that are strategically pursuing employee health management from a managerial perspective.

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Shimadzu Corporation is included in the Diversity Management Selection 100 list, which is a list of companies selected by the Japanese Ministry of Economy, Trade and Industry to publicize advanced measures by companies that use diversity to achieve better management results.



Shimadzu Corporation has been certified by the Eco-First Program established by the Ministry of Environment as an Eco-First Company, in recognition of Shimadzu's environmental conservation measures.



In September 2019, Shimadzu Corporation became a signatory to the United Nations Global Compact (UNGC) proposed by the United Nations and became a member of Global Compact Network Japan, the local UNGC network in Japan.



Shimadzu Corporation endorses the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and is a participant in the TCFD Consortium.



In October 2022, the FY 2030 Shimadzu Group CO<sub>2</sub> emission reduction targets were validated by the SBT (Science Based Targets) initiative as targets conforming to a level to limit air temperature increases to less than 1.5 °C in comparison to before the Industrial Revolution, in line with the Paris Agreement.



In order to contribute to the realization of a sustainable society, Shimadzu Corporation has joined RE100, a global environmental initiative, and pledged that the Shimadzu Group would use 100 % renewable energy in its business activities by 2050.

The following web page includes information about the topics listed below.  
<https://www.shimadzu.com/sustainability/evaluation.html#06>



Current Initiative Participation by Shimadzu



# Message from the President



## Yasunori Yamamoto

June 2023  
Representative Director,  
President & CEO

### Career Overview

Apr. 1983	Joined Shimadzu Corporation
Oct. 2003	Coordination Manager, Testing Machines Business Unit, Analytical & Measuring Instruments Division
Jun. 2013	President, Shimadzu Europa GmbH (Germany)
Jun. 2014	Corporate Officer
Jun. 2017	Managing Executive Officer
Jun. 2017	In Charge of Manufacturing, Information System, and CS Management
Jun. 2017	Deputy Director in Charge of Technology Research
Apr. 2020	In Charge of Corporate Strategy Planning and Corporate Communications
Jun. 2020	Director, Member of the Board
Apr. 2021	Senior Managing Executive Officer
Apr. 2021	CFO
Apr. 2022	President and Representative Director (current)
Apr. 2022	CEO (current)



# Excellence in Science!

## Achieving a “Society Brimming with Empathy” by Overlaying Shimadzu and Customer Dreams and Investing Hard Work

### Reflecting on the First Year as President

To be honest, the year has flown by. The China lockdown severely affected FY 2022 Q1 results. Subsequently, challenges in parts and materials procurement disrupted manufacturing activities. Furthermore, compliance issues at our subsidiaries in September 2022 significantly inconvenienced many stakeholders.

Amid these circumstances, we successfully acquired Nissui Pharmaceutical as a wholly owned subsidiary (currently renamed Shimadzu Diagnostics Corporation) to

take a major step forward toward generating synergies in healthcare areas. We also established a new medium-term management plan that includes measures to increase corporate value.

Happy memories from the past year include visiting respective subsidiaries outside Japan after my appointment as President. I was invigorated to see local employees energetically working, having returned to pre-COVID routines earlier than our Japan team.

### Accomplishments and Open Issues from the Previous Medium-Term Management Plan

Our previous medium-term management plan witnessed consecutive years of sales and income growth, partly due to favorable exchange rate effects. During the last year of the plan in particular, Shimadzu achieved the officially published performance values despite facing severe headwinds from difficulty procuring parts/materials and the rapid increase in raw material prices, in addition to the resources allocated as investments for future growth. We were also able to establish a foothold in clinical fields by welcoming the reagent manufacturer and sales company Nissui Pharmaceutical into the Shimadzu Group last year. For the past two medium-term management plans, under the banner “Advanced Healthcare,” Shimadzu has been promoting the use of analytical instruments for clinical applications and the integration of analytical instrument technologies with medical systems, but struggled to achieve tangible results. However, I believe that the recent acquisition represents a major step forward toward deploying businesses in the Advanced Healthcare field.

On the other hand, due to the COVID-19 pandemic and other factors, development delays have remained a challenge. Although development of infectious disease-related products proceeded more quickly than expected, redesigning products due to supply difficulties delayed work for existing product lines and new product development work for new application fields. Also, as we continue to expand globally, economic security and geopolitical risks are having a greater impact. Market diversification due to varying regional objectives and the need to respond quickly to customer needs amid rapid changes have brought significant shifts in our business environments. To achieve further growth, we must significantly strengthen activities outside Japan. Our new medium-term management plan focuses on globalizing development, sales, and service operations. Needless to say, we will also strengthen measures for improving Group governance capabilities in order to prevent any compliance incidents from recurring again at Group companies and measures for addressing the major challenge of implementing Digital Transformation measures.

## Message from the President

### Three Missions and Four Domains in the New Medium-Term Management Plan

The new medium-term management plan specifies three missions: "Contributing to Human Life & Well-being," "Contributing to Well-being of the Earth," and "Contributing to Industrial Development and a Safe & Secure Society." These are not new ideas, but rather the measures determined from thinking about which measures we should pursue after I was appointed President. The COVID-19 pandemic particularly underscored the significance of "human life and health." Therefore, I think one major mission of the Shimadzu Group should be making contributions to human life and health. Moreover, not only human health but also the health of the Earth where people reside must be preserved amid climate change. The concept of "Planetary Health" lies at the core of these missions. It is a global concept that recognizes the inseparable connection between human health and the health of the Earth, and pursues the well-being of both. "Planetary Health" aligns perfectly with Shimadzu's management principle established in 1992, which is "Realizing Our

Wishes for the Well-being of Mankind and the Earth." Pursuing "Planetary Health" also requires "industrial development and a safe & secure society," including our sustainable living environment. These concepts are expressed as "missions" in the new medium-term management plan.

Within the context of the three missions, the four domains define the business fields where the Shimadzu Group should deploy those missions. The healthcare domain comprises life sciences (pharmaceuticals and foods) and Med-Tech (clinical and medical care) sub-domains, whereas businesses for contributing to the well-being of the Earth will be deployed in the "green" domain. The businesses important for achieving industrial development and a safe & secure society are businesses in the material and industry domains. The industry domain includes a broad range of business areas, but for the Shimadzu Group it will mainly involve deploying semiconductor-related businesses.



Social Value Creation Domain		Keywords	Social Value Provided
Healthcare	Life Science Field (AMI)	Next-generation Drug Development Food Sustainability Genomics	Human Life & Well-being through AMI and Imaging Transformation (IMX) <ul style="list-style-type: none"> <li>• R&amp;D and manufacturing innovation in drug discovery modalities</li> <li>• Innovation in food-tech</li> </ul>
	Med-Tech Field (AMI), (MED)	AI Hospital Healthcare as a Service	
Green (AMI), (IM)	Bio-economy A Decarbonized Society Next-generation Energy	Well-being of the Earth through AMI and Production Process Control Technologies <ul style="list-style-type: none"> <li>• Global warming countermeasures</li> <li>• Conservation of air, soil and water</li> </ul>	
Material (AMI), (IM)	Circular Economy Development of Advanced Materials Informatics	Material Development & Production Innovation through AMI and Vacuum Technology <ul style="list-style-type: none"> <li>• Developing and manufacturing innovative materials through automation and informatics</li> </ul>	
Industry (AMI), (IM), (AE)	Society 5.0 Next-generation High Integration Quantum Science and Technology	Industrial Development through Precision Machining Technology and AMI <ul style="list-style-type: none"> <li>• TMP, an essential equipment for semiconductor industry - the foundation of a digital society</li> <li>• Hydraulic products for aircraft, logistics, construction machinery, etc.</li> </ul>	

• AMI: Analytical & Measuring Instruments, MED: Medical Systems, IM: Industrial Machinery, AE: Aircraft Equipment

## “Excellence in Science” and “Best for Our Customers” Serve as the Foundation for the New Medium-Term Management Plan

“Excellence in Science” and “Best for Our Customers” serve as the foundation for the new medium-term management plan. “Excellence in Science” was established as the brand statement in 2012. As another way to state our corporate philosophy “Contributing to Society through Science and Technology,” the brand statement expresses our will to achieve an exceptional presence of “excellence” in scientific fields and our willingness to take on all sorts of new challenges in order to achieve that excellence in our pursuit of creating number-one and truly unique products.

“Best for Our Customers” has been a part of our internal slogans since 2007, always reminding us to consider what is best for our customers when we are implementing the new medium-term management plan. It is evident that simply developing and providing good products is not enough. Furthermore, even if we offer instruments, it is not sufficient to provide the data that our customers require; other elements are also necessary.

Even if the Shimadzu Group is able to supply the best products, it cannot deliver data to customers. In other words, we cannot become “Best for Our Customers” with instruments alone. To truly become a company that is “Best for Our Customers,” our Group must provide all the instruments and technologies used in every stage of analysis or measurement by customers, from the preparation stage to the data utilization stage. Therefore, we must become a company that can deliver end-to-end solutions that include instruments, consumables, software, and services. To achieve this, we will enhance our unique technological development capabilities and collaborate with partner companies to strengthen our ability to develop products, pre-processing, automation technologies, instruments, consumables, and analysis software (defined as “social implementation capability”). We aspire to provide number-one and unique products and services to make this vision a reality.

### Business Expansion and Transformation into a Company That Provides Total Solutions Across Divisions



## Strengthening Governance

I want to prioritize strengthening governance as management capabilities above all else. It is crucial for enhancing corporate value, employee engagement, and international competitiveness by strengthening relationships with Group companies.

We have already established the corporate principle and the corporate governance system at the Head Office

required for governance enhancement. Now, as part of organizational reinforcement, we will focus on strengthening organizational systems throughout the entire Shimadzu Group by strengthening governance capabilities, implementing cultural reforms, and building three risk management lines of defense (business divisions, administrative departments, and auditing departments).



## Message from the President

Last year, Group management regulations were established to strengthen governance capabilities throughout the entire Shimadzu Group. This year, we will establish corresponding regulations at Group companies, deploy activities to prepare related detailed rules, and ensure all personnel are properly notified. In terms of company culture reforms as well, starting in the second half of last year we established 240 managers responsible for implementing risk management practices and reassessing business processes at respective organizations. Every week we discuss topics such as the purpose of specific business processes, the status of compliance with laws, regulations, and rules that require compliance, the possibility of implementing better business processes, and so on. Any rules, practices, or administrative procedures that seem inappropriate will be changed. In some cases, the managers can escalate issues to their company management as part of activities for implementing improvements throughout the entire Group. Through these ongoing efforts, we aim to foster an environment where employees understand the significance of their work, comprehend and adhere to the correct procedures and rules, and collaborate to make improvements.

Although the three lines of defense should have been strengthened throughout the entire Shimadzu Group and have already been strengthened at Shimadzu Corporation, unfortunately, preparations are still inadequate at some subsidiaries. Therefore, we will seek assistance from external experts to create systems for ensuring the defense lines are functioning properly throughout the Group. Simultaneously, we also want to strengthen our monitoring capabilities.

In terms of risk countermeasures, creating a risk-sensitive culture is crucial. Shimadzu Group employees strive to perform their jobs each day while keeping in mind compliance requirements. Nevertheless, humans are weak animals. When a weakness accidentally appears, unexpected things can occur. Therefore, it is important to have systems that can provide support if a weakness appears. I want to create a culture where employees can openly report any concerns to their supervisors or reporting channels without hesitation. Our Group employees tend to show respect for others and may be somewhat hesitant, so I hope to increase the number of outspoken employees at Shimadzu so we develop strong support capabilities.

## Becoming a Company that can Help Achieve Dreams

As an individual, I had a dream of achieving nuclear fusion as a way to solve energy supply problems during my student years. After joining Shimadzu, when my job immersed me in the world of materials testing, I dreamed of creating a machine capable of determining all material properties by simply pressing a button. In my position today, I can only fulfill my various dreams by asking employees for help. Therefore, I will work hard to ensure Shimadzu employees can freely share, sympathize with, and achieve each other's dreams without embarrassment. We will support these dreams by investing the financial and organizational resources necessary to achieve them.

I hope we can become that type of company. If we can get customers to feel confident that Shimadzu will listen to them and help them achieve their dreams, then customers would surely also share their dreams. I want Shimadzu to become a company that customers around the world are happy exists.

People live life moving toward the future. No one lives their life moving toward the past. That future includes the hopes and dreams of each person. As Shimadzu, we aim to be a company that sympathizes with people's dreams, works to achieve those dreams, and helps others achieve their dreams.

I ask that all of you involved will continue to offer your understanding and support.



## Fraudulent X-Ray System Maintenance/Inspection Practices at Shimadzu Subsidiary in Japan

Shimadzu Medical Systems Corporation is a Shimadzu Group subsidiary in Japan that is engaged in the sale and maintenance of medical equipment for the Japanese market. Shimadzu Corporation considers the fraudulent practices that occurred at Shimadzu Medical Systems Corporation (hereinafter referred to as "Shimadzu") to indicate both Shimadzu Corporation and Shimadzu Medical Systems Corporation a grave matter and, to ensure similar incidents never occur again, will promptly prepare and implement concrete recurrence countermeasures based on a sincere acceptance of the facts, causes, and proposed recurrence countermeasures certified by the external investigative committee. We deeply apologize to the medical institutions, patients, and all others involved for the considerable inconvenience and worry it caused.

\* The business scope of Shimadzu Medical Systems Corporation is limited to only in Japan. There is no direct relationship with Shimadzu Medical Systems USA or other overseas Group companies.

### 1. Investigation Policies of the External Investigative Committee

After receiving an internal report about inappropriate behavior by a service engineer at Shimadzu Medical Systems, Shimadzu started an internal investigation in May 2022, which revealed past fraudulent practices. To ensure a similar incident never occurs again, an external investigative committee composed of only experts with extensive knowledge and experience investigating corporate fraud cases was established in September 2022 to thoroughly investigate the relevant facts, analyze the causes, and prepare measures for steadily preventing recurrence. To prioritize restoring the trust of stakeholders, the external investigative committee recommended not only directly compensating victims with objective proof and

verified secondary victims, but also voluntarily compensating those for whom the possibility of fraud cannot be dispelled with certainty. Therefore, the committee proposed and Shimadzu approved a policy for investigating compensation eligibility.

Composition of External Investigative Committee  
 Chairman: Yusaku Kurahashi (Lawyer at Nakamura, Tsunoda & Matsumoto)  
 Member: Toshiaki Mori (Lawyer at Toshiaki Mori Law Office)  
 Member: Hiroyuki Nishijima (CPA at KPMG FAS Co., Ltd.)

### 2. External Investigative Committee Investigation Results and Response by Shimadzu

#### Investigation Results

- In five cases between 2016 and 2018, all located within Kumamoto Prefecture, a service engineer who worked at the Kumamoto Sales Office of Shimadzu Medical Systems Corporation attached a commercial timer to the X-ray system starter unit (unit that supplies power from the X-ray system to the X-ray tube) during maintenance/inspection of an X-ray system, intentionally caused a starter error that prevented X-ray emission after a certain period elapsed, so that it appeared to be an X-ray system failure, and then charged the customer to replace the X-ray system component (X-ray tube unit or X-ray high voltage generator).
- In addition to the above five cases, there were also 38 other potential fraud cases (in Kumamoto Prefecture, Miyazaki Prefecture, Kagoshima Prefecture, and Nagasaki Prefecture) with suspicious circumstances and without proof of valid transactions or proof that would contradict the possibility that fraud was committed.

Note: In all these cases, the fraud did not affect the mechanical functions of the X-ray systems and did not endanger the life or physical health of patients. Also, no reports of health effects due to the fraudulent practices above were received from healthcare institutions.

#### Shimadzu Response

- In addition to compensation and other measures for damages incurred by victims in the five verified fraud cases, we will also propose appropriate compensation and other measures for the 38 cases selected by the external investigative committee, in an effort to prioritize restoring the trust of medical institutions, patients, and other stakeholders.

Details from the external investigative committee investigation results are indicated below.  
<https://www.shimadzu.co.jp/sites/shimadzu.co.jp/files/ir/pdf/d0jr/9sluw6oivqlp10z7.pdf>



### 3. Recommended Improvements for Preventing Recurrence Based on the Fraud Cause Analysis

Cause Category	Issues that Inhibit Organizational Health	Recommended Improvements
Motivation	<ul style="list-style-type: none"> <li>• Inadequate assessment systems</li> <li>• Prioritization of achieving results leads to high pressure for achieving unreasonable targets</li> <li>• Insufficiency of the assessment based on processes or non-performance criteria results in dissatisfaction</li> </ul>	<b>Existing system (assessment system) makes it difficult to increase job satisfaction.</b>
Rationalization and Probability of Execution	<ul style="list-style-type: none"> <li>• Insufficient training results in not fostering enough appreciation for the meaningfulness and ethics of service work</li> <li>• Insufficient ethics training sessions increases the risk of fraud by employees maliciously taking advantage of internal control limitations</li> </ul>	<b>Systems (education and educational systems) do not foster appropriate management competence</b>
Opportunity	<ul style="list-style-type: none"> <li>• Sales office managers have too much authority</li> <li>• Internal controls are not effective, due to reasons such as the sales office manager also serving as their own supervising manager</li> <li>• Oversight of decision-making within branch general affairs is not functioning properly (situation that enables executing fraud)</li> </ul>	<b>Organizational systems without constraints</b>

### 4. Recurrence Countermeasures

Short-Term	Recommended Improvements	Improvements	Summary of Countermeasures
	<b>Existing system (assessment system) makes it difficult to increase job satisfaction</b>	Reconsider assessment criteria	<ul style="list-style-type: none"> <li>• Eliminate part sales from service department performance targets (manage as branch/office manager targets)</li> <li>• Reorganize performance assessment and process evaluation systems</li> <li>• Establish target management system (follow up by meeting with supervising manager)</li> <li>• Incorporate in non-performance assessment indicators</li> <li>• Measure the engagement of each person</li> </ul>
	<b>Systems (education and educational systems) do not foster appropriate management competence</b>	Reconsider content of training	<ul style="list-style-type: none"> <li>• Service personnel training (significance and morals)</li> <li>• Management training (improve compliance and leadership abilities)</li> <li>• Internal controls practical training for general manager and higher level managers (including officers)</li> <li>• Management education (foster awareness of morals and increase management skills)</li> </ul>
	<b>Organizational systems without constraints</b>	Establish supervising/monitoring capabilities	<ul style="list-style-type: none"> <li>• Retain evidence of operations</li> <li>• Survey customers after operations</li> <li>• Follow up to check for problems after maintenance/inspection operations</li> </ul>
		Eliminate dual roles	<ul style="list-style-type: none"> <li>• Eliminate block manager position and disperse authority of sales office manager</li> <li>• Monitor internal controls within each office</li> </ul>
		Establish new internal controls department	<ul style="list-style-type: none"> <li>• Have the Internal Controls Group achieve detective controls by monitoring service operations</li> </ul>
		Strengthen the internal reporting function	<ul style="list-style-type: none"> <li>• Share the content of internal reports</li> <li>• Establish systems for reporting within 24 hours</li> <li>• Use e-learning to establish culture of quickly reporting negative information</li> </ul>

Long-Term

#### Improve Execution and Continuity

**Foster an Organizational Culture of Delivering Bad News Fast/First**  
 To promote establishing comfortable working environments within organizations, strengthen organizational robustness by fostering an organizational culture that applauds quick reporting of negative information.

**Become a Company Where Employees Can Achieve Job Satisfaction**  
 To prevent recurrence, increase employee job satisfaction and eliminate motives for fraud.

**Continue Investing in IT**  
 Increase links between various business processing systems, monitor what is happening at local operations in real time, and use that information to analyze management or detect indicators of fraud.

# Story of Sharing Values and Collaboration

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Story of Sharing Values and Collaboration

# Shimadzu's Values



Ever since Shimadzu was established in 1875 based on the corporate philosophy “Contributing to Society through Science and Technology” and management principle “Realizing Our Wishes for the Well-being of Mankind and the Earth,” the Shimadzu Group has used the technologies and expertise cultivated through business activities to earn the trust of customers, shareholders, suppliers, employees, local community members, and other stakeholders by diligently striving to achieve sustainable growth and progress for businesses and society.

In recent years, the Shimadzu Group established a Shimadzu Group Sustainability Charter to achieve a sustainable society through business practices based on the Shimadzu corporate philosophy and management principle. That charter specifies engaging in sustainability management practices to achieve 1) a sustainable global environment and society, 2) sustainability and growth of the Shimadzu Group business activities, and 3) improvements in employee health and engagement.

Shimadzu will remain committed to achieving a sustainable society by working with partners around the world to try to solve challenges of society globally, with an aim to create a bright future and build corporate value.

# History of Creating Value

With its corporate philosophy “Contributing to Society through Science and Technology,” Shimadzu contributes to the realization of a more convenient, safe, and secure society.

Shimadzu has continued to grow and develop by constantly satisfying the challenges faced by customers and solving the challenges of society that underlie those customer challenges.

## Widespread Use and Advancement in Physics and Chemistry Instruments

### Supplied state-of-the-art educational equipment

Published the Science Equipment Catalog List features 110 types of physics equipment.



1882

## Advancement and Widespread Use of Medical Devices

### Completed a medical X-ray device

In 1909, Shimadzu completed the first medical X-ray system made in Japan. Two years later, Shimadzu manufactured large X-ray systems that used an AC power supply, which were delivered to the Japanese Red Cross Otsu Hospital and made Shimadzu the leader in the dawn of medical X-ray systems in Japan.



1909

First in Japan

## Reduction of Radiation Exposure

### Developed a remote-controlled X-ray Fluoroscopy system

By implementing operations in a separate room, we were able to reduce the radiation exposure of physicians and radiologic technologists.



1961

First in the world

## Modernization in the Late 19th Century

- ▶ Introduction of Modern Science from outside Japan
- ▶ Changing to a Modern Lifestyle



## Recovery after World War II

- ▶ Establishment of Medical Infrastructure
- ▶ Advancement of the Petrochemical Industry



1897

## Need for Reliable Power Supplies

### Started industrial production of storage batteries

We were commissioned by Kyoto Imperial University to create prototype storage batteries, as there was a dependence on imported products at that time. In 1904, we successfully produced stationary storage batteries.



1956

## Growth of the Oil Refining Industry

### Developed a gas chromatograph

Shimadzu completed the first gas chromatograph in Japan. The following year, we successfully commercialized it and delivered it to domestic petroleum companies as an advanced product. This equipment was also exhibited at the Chemical Society of Japan, attracting attention and contributing to the development of Japan's burgeoning petrochemical industry.



First in Japan

Established in Kyoto

Formation of limited company

(FY) 1875 1917 1945 1950 1955 1960 1965 1970 1975 1980

Net Sales ※Note: Values are indicated on an unconsolidated basis until FY 1999 and on a consolidated basis from FY 2000.

### Improved Automobile Safety

#### Manufactured our first fatigue testing machine, which was delivered to an automobile manufacturer

We developed a driving simulator in response to the request from an automotive manufacturer. The simulator allowed for accelerated playback of driving data, enabling acceleration tests and contributing to the efficiency of durability improvement tests.



1967

#### Koichi Tanaka Awarded the Nobel Prize in Chemistry

The developed soft laser desorption ionization method enables the ionization of large biomolecules such as proteins without damaging them, allowing for precise mass analysis. This method has been utilized in various applications, including early disease detection and drug development.

2002

### Response to COVID-19 Pandemic

#### Developed a fully automatic real-time PCR testing system and novel coronavirus detection kits

By automating and streamlining the entire process of PCR testing, including sample preparation, measurement, and analysis, we have greatly improved the efficiency and speed of PCR testing workflows.



2020

### Support for Breast Cancer Diagnosis and Dementia Research

#### Developed a TOF-PET System for Head and Breast Diagnosis

It offers a painless examination without compressing the breast, contributing to breast cancer diagnosis and treatment. Additionally, this innovative device can also perform brain scans, making it valuable for cognitive research and studies on dementia.



2021

First in the world

## Economic Miracle

- ▶ Advancement of the Automotive Industry
- ▶ Advancement of the Pharmaceutical Industry through the Enhancement of the Medical Care Insurance System



## QOL Improvements

- ▶ Promoting Science and Technology to Extend a Healthy Life Expectancy



1978

### Safety and Efficacy of Pharmaceuticals

#### Completed a modular liquid chromatograph system

By adopting a new pump technology that was not available in the Japanese market at the time, we were able to significantly improve the analysis accuracy and operability. The adoption of a modular structure enabled us to meet various requirements. This contributed to the pharmaceutical industry's research and development activities in ensuring the safety and efficacy of pharmaceutical products.



First in Japan

2010

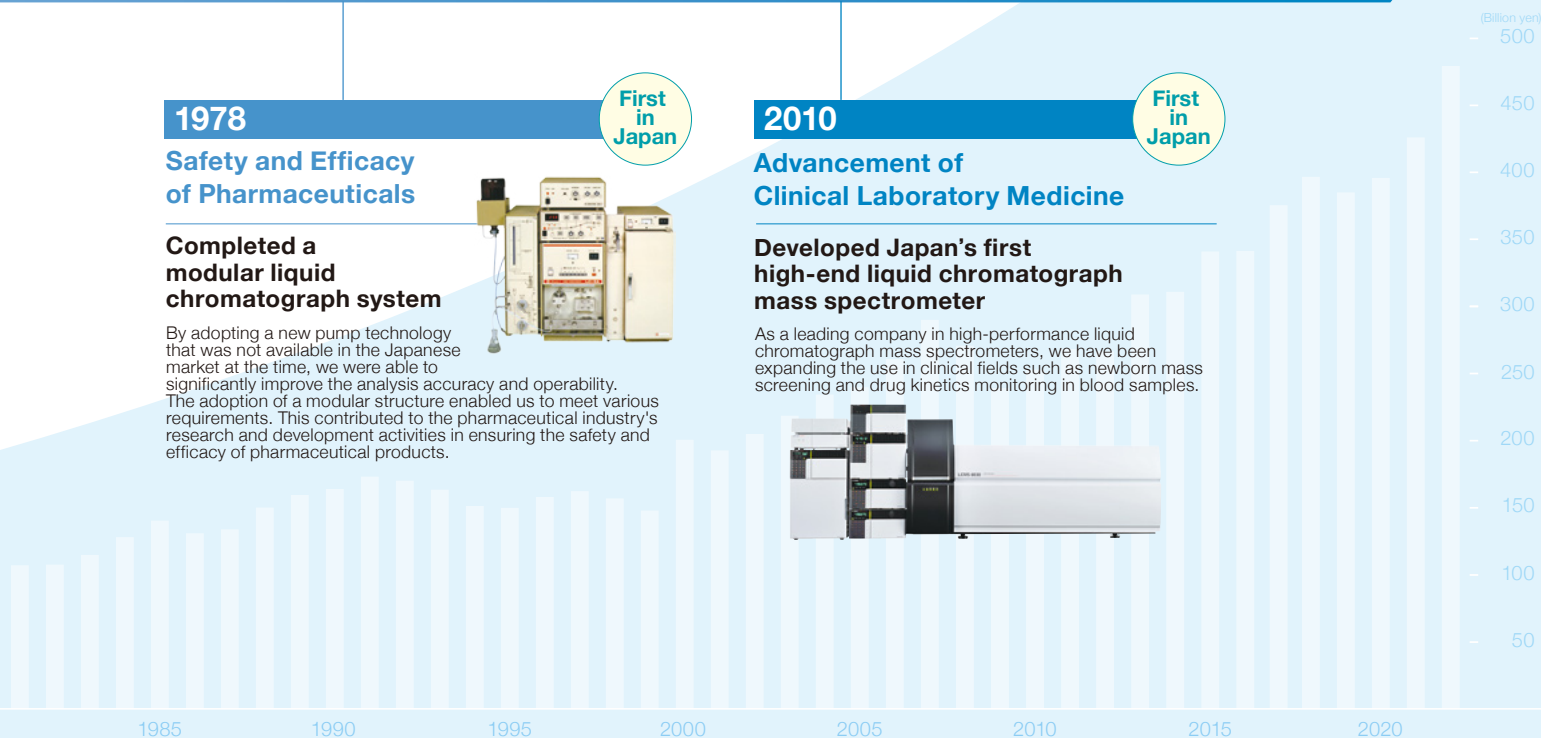
### Advancement of Clinical Laboratory Medicine

#### Developed Japan's first high-end liquid chromatograph mass spectrometer

As a leading company in high-performance liquid chromatograph mass spectrometers, we have been expanding the use in clinical fields such as newborn mass screening and drug kinetics monitoring in blood samples.



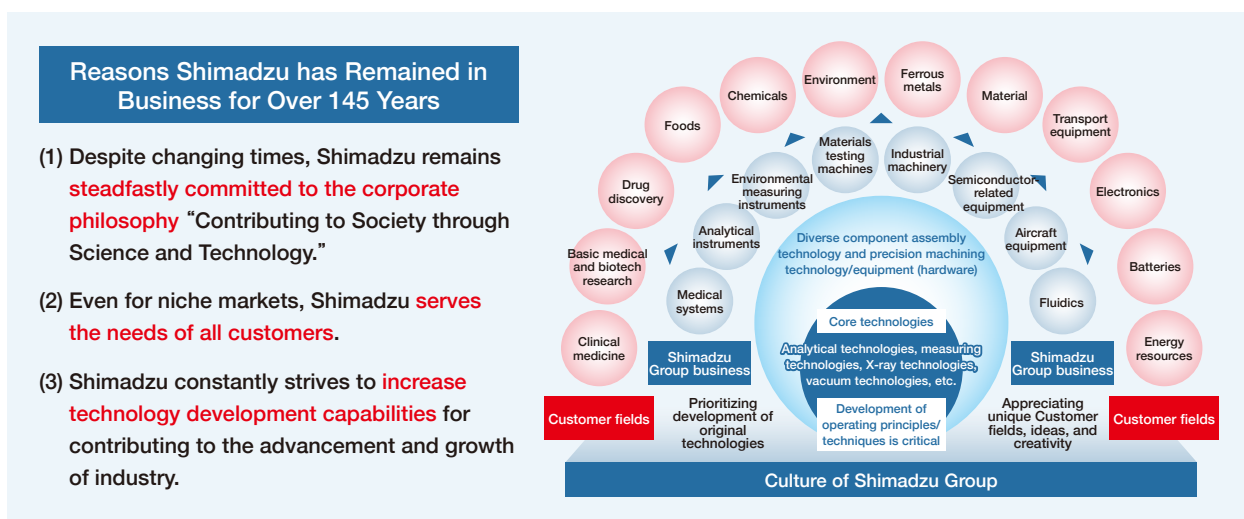
First in Japan





# Cultivated Strengths

Throughout the 148 years since Shimadzu was founded in 1875, we have remained committed to solving the challenges faced by customers and the challenges of society, while facing facts with sincerity to discern their true essence, based on Shimadzu’s corporate philosophy “Contributing to Society through Science and Technology” and management principle “Realizing Our Wishes for the Well-being of Mankind and the Earth.” That process has resulted in establishing an ecosystem within Shimadzu for satisfying customer needs in a variety of fields and for developing new technologies, while also expanding the scope of our business operations with product and technology applications based on even more advanced core technologies. That approach of solving the challenges faced by customers and the challenges of society by confronting them head-on has been an unwavering principle that has served throughout our past, and to this day, as the foundation for the Shimadzu Group corporate culture.



## 1. Steadfast Commitment to Shimadzu Corporate Philosophy

Founder Genzo Shimadzu Sr. engaged in manufacturing physics and chemistry instruments needed during that era, while also learning about the latest technologies. That resolve to supply what customers need is still carried on to this day in our current commitment for using science and technology to meet the needs of society and customers and contribute to a more prosperous, safe, and secure society. Today, science and technology are becoming increasingly important for solving the increasingly diverse and complex challenges of society. Consequently, we will continue contributing to society by working tirelessly to acquire new knowledge and skills for providing solutions based on creating new concepts and achievements unimaginable to date.

**Founded 1875**  
**Widespread Use and Advancement in Physics and Chemistry Instruments**

Genzo Shimadzu Sr. supported science education in Japan by producing educational physics and chemistry instruments made in Japan as an alternative to imported products. He also invested effort in promoting the spread of scientific knowledge throughout Japan, such as by launching a manned balloon, distributing physics and chemistry equipment catalogs, and publishing scientific journals.



Genzo Shimadzu Sr.

**From 1945**  
**From Post-War Rebuilding to Business Development**

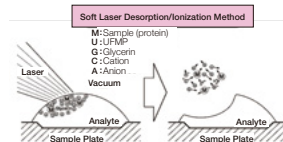
During the difficult period after the war, Shimadzu helped support the post-war recovery by producing products such as coal mining machinery required for increasing production in the critical coal industry, X-ray systems for medical facilities throughout Japan, and spinning pumps and nozzles used in the increasingly important fiber export industry.



Remote-Controlled X-Ray Fluoroscopy System

**From 1996**  
**Raising Technology Levels to New Heights**

The Life Science Research Center was established in 2001 based on a strategy of focusing management resources in biotechnology and other high-growth fields. The following year, Koichi Tanaka, who was working at the center, was awarded the Nobel Prize in Chemistry for developing the soft laser desorption/ionization method used to analyze the masses of biological macromolecules.



Soft Laser Desorption/Ionization Method

**From 2011**  
**Becoming the No. 1 Partner Selected Globally**

Innovation Centers were newly established in four locations around the world. Shimadzu is also investing efforts in developing products that help solve various problems faced by society, such as a food radiation scanner and a woman-friendly dedicated breast PET system.



Shimadzu Tokyo Innovation Plaza

## 2. Serving the Needs of All Customers

Based on our corporate culture of earnestly satisfying the needs of customers and society, Shimadzu has created a wide variety of technologies, products, and services to date. We will continue to create new shared value for society and Shimadzu, by constantly combining new knowledge acquired from open innovation with our technical capabilities cultivated previously to continue solving challenges of an increasingly global and complex society.

### Healthcare Domain

#### Life Science

In the pharmaceuticals field, we are working to offer end-to-end solutions for processes ranging from method development to data analysis. In the food-tech field, we are using our component analysis technology to help "achieve longer healthy life expectancies in society through food," as well as to standardize methods and create a component library.

#### Med-Tech

We are engaged in activities such as clinical diagnostics, microbial testing, and cellular analysis businesses and use AI, IoT, and other technologies to achieve imaging transformation in diagnostic X-ray systems. In the future, we aim to build a clinical testing platform where analytical technologies are used for ultra-early testing and X-ray technologies are used to diagnose, treat, and manage the prognosis of any discovered disease.

### Green Domain

We are offering end-to-end analytical/measuring solutions for applications such as bio-manufacturing, creation/storage of alternative energies, and compliance with environmental regulations, in order to contribute to achieving a carbon-neutral society.



Autonomous Lab System with Robotic, Digital, AI, and Other Technologies for Smart Cell Industry

### Material Domain

We are contributing to the development and manufacturing of innovative materials through automation achieved with our testing machines and other analytical/measuring instruments, and through material informatics that uses a combination of data from both material measurements and component analysis.



AGX-V2 Series Precision Universal Testing Machine

### Industry Domain

We are contributing to semiconductor development and manufacturing by using precision machining and analytical/measuring instrument technologies to increase turbomolecular pump efficiencies, decrease power consumption, and so on. We are also offering hydraulic products for logistics infrastructure, such as for forklifts, which are increasingly being electrified. These products help increase production process efficiency, providing new value.



Turbomolecular Pump

## 3. Increasing Technology Development Capabilities

Shimadzu is researching and developing core technologies for use in creating revolutionary next-generation products, developing new products by improving current products and technologies, and developing broadly applicable shared technologies, including AI, IoT, and robotics technologies. In addition, we are also engaged in developing new businesses and technologies that will be required by society in the future, by quickly responding to changes or new challenges of society with solutions that combine or improve our technologies and expertise.

### Core and Key Technologies

## Advanced and Highly Original Technologies to Serve as Core Elements for Generating New Value

#### Advanced Analysis

The aim of advanced analysis is to contribute to solving challenges faced by customers and society by developing world's-first technologies related to ions (MS), X-rays, light, quantum physics, or other fields.

#### Innovative Biotechnology

The aim of innovative biotechnology is to generate new customer value using innovative biotechnology for preventive medicine, early diagnosis, regenerative medicine, bioproduction, or other applications.

#### Brain/Five Senses

We are developing technologies for measuring a combination of the brain and the five senses using technologies for improving human performance or for supporting mental enhancement.

#### AI

We will offer solutions for challenges faced by customers and society by creating advanced products, services, and new businesses through R&D for AI-based signal processing and image processing technologies.

### Basic Product Technologies

## Base of Technologies for Supporting a Wide Variety of Products

#### Device Control Design

In addition to improving the qualitative characteristics of controlling heavy components or high-speed rotating parts, for example, control systems are designed to improve product safety and robustness by reducing vibration/noise and dampening impacts.

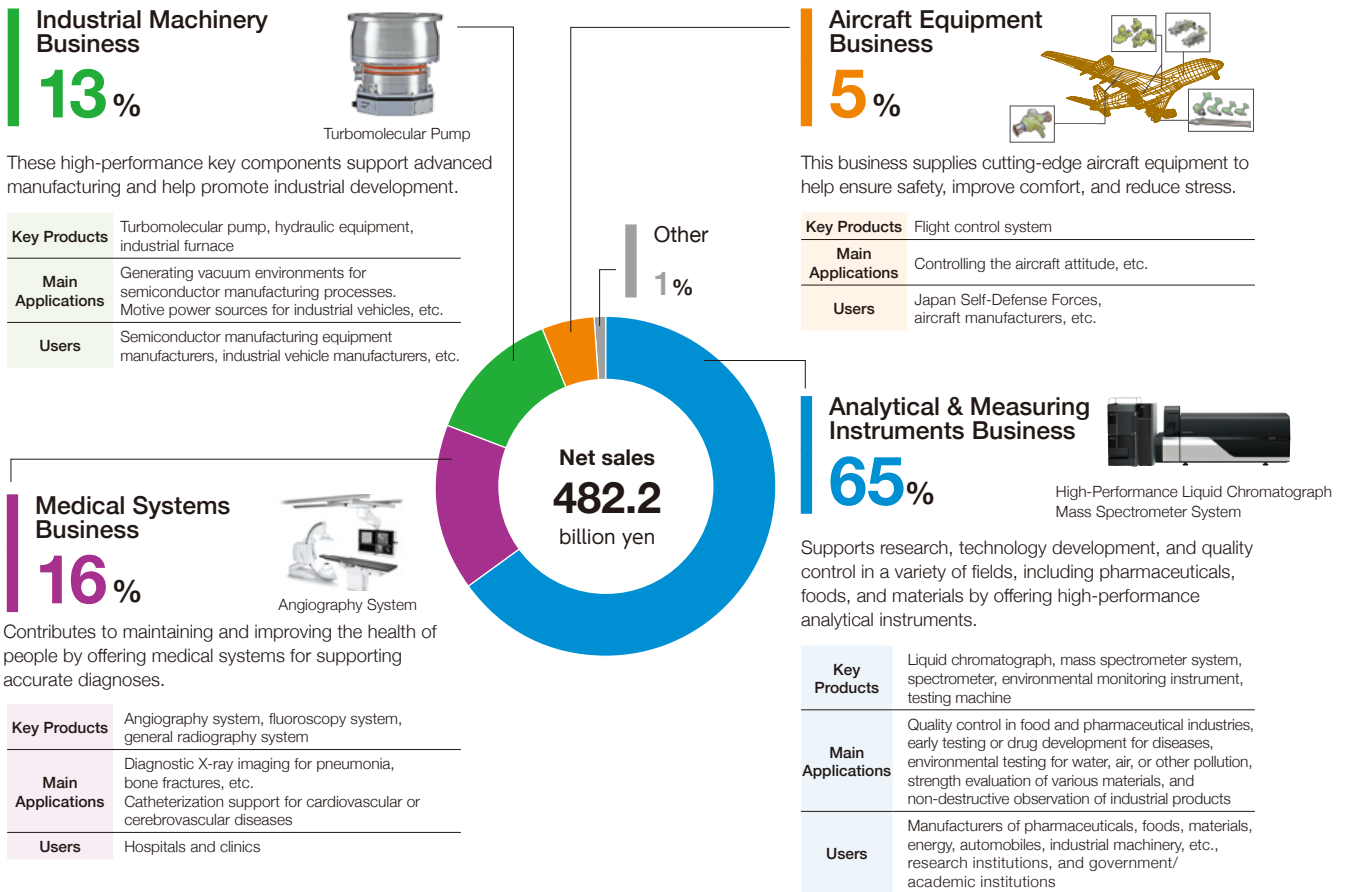
#### System Integration

We are engaged in R&D for providing solutions based on core key technologies, such as thermal, fluid, and optical technologies.

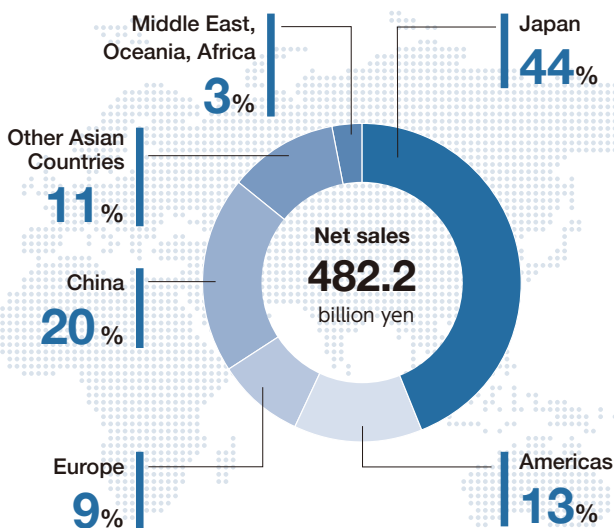
# Business Overview

The Shimadzu Group strives to build a more prosperous society by using exceptional science and technology to contribute to progress in a wide range of industries, such as pharmaceuticals, healthcare, environmental, energy, semiconductors, and materials.

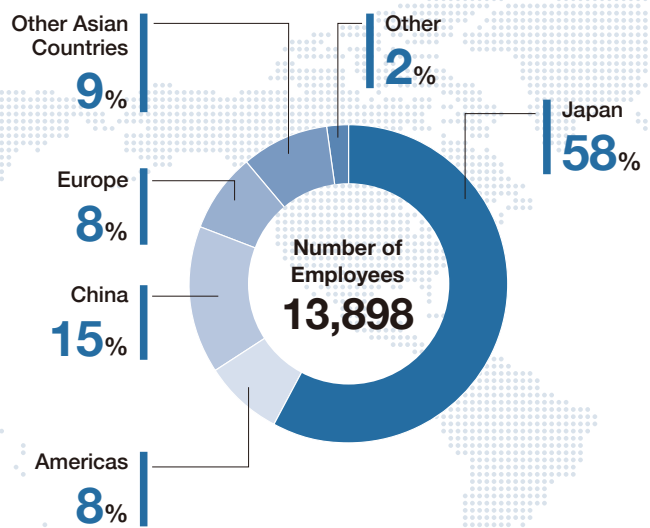
## Ratio of Net Sales by Business Segment



## Ratio of Net Sales by Region



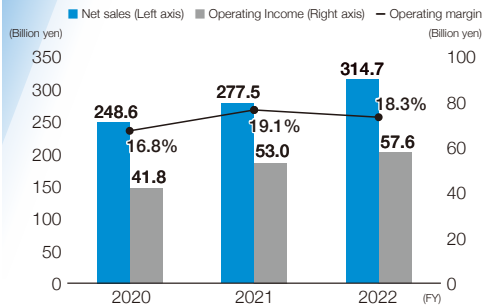
## Ratio of Number of Employees by Region



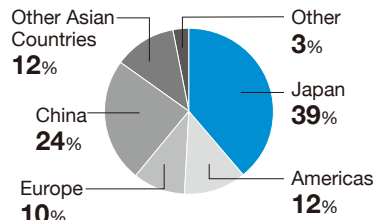


## Analytical & Measuring Instruments Business

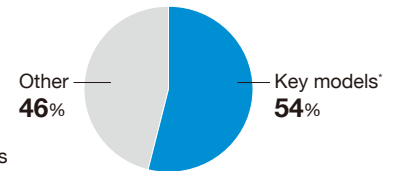
Net Sales/Operating Income/Operating Margin



Sales Ratio by Region



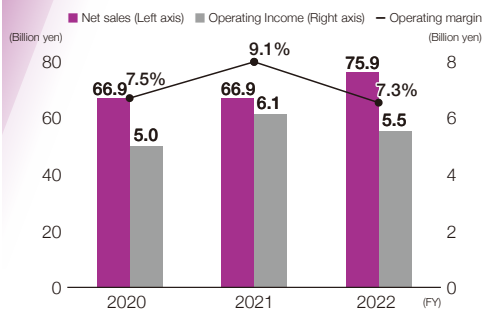
Sales Ratio by Model



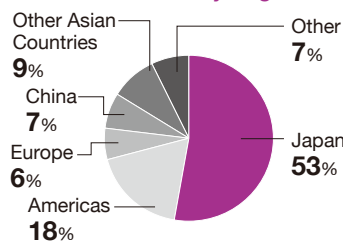
\* Key models: Liquid chromatographs, mass spectrometer systems, and gas chromatographs

## Medical Systems Business

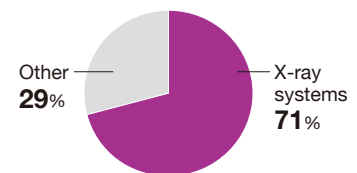
Net Sales/Operating Income/Operating Margin



Sales Ratio by Region

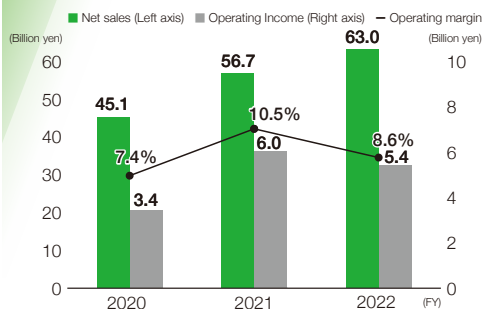


Sales Ratio by Model

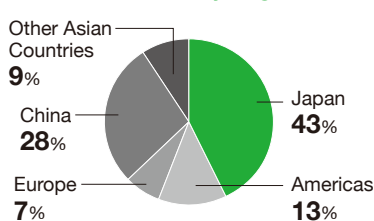


## Industrial Machinery Business

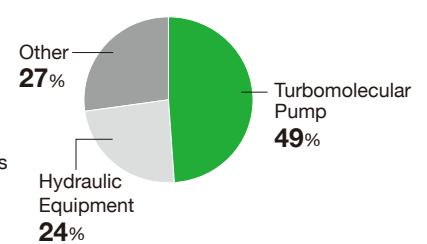
Net Sales/Operating Income/Operating Margin



Sales Ratio by Region

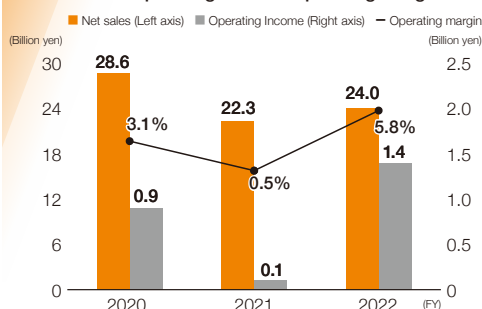


Sales Ratio by Model

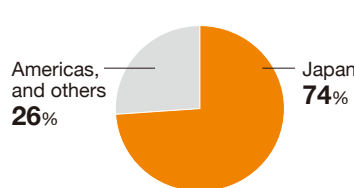


## Aircraft Equipment Business

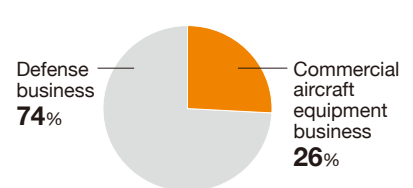
Net Sales/Operating Income/Operating Margin



Sales Ratio by Region



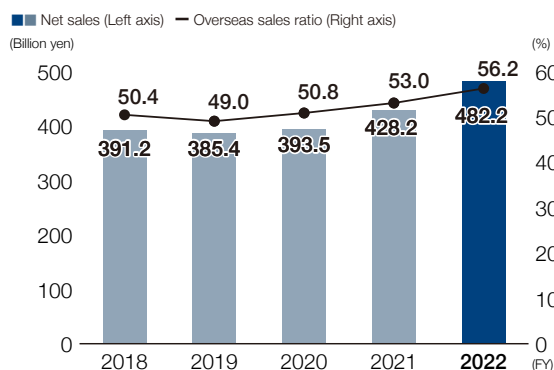
Sales Ratio by Model



# Financial and Non-Financial Highlights

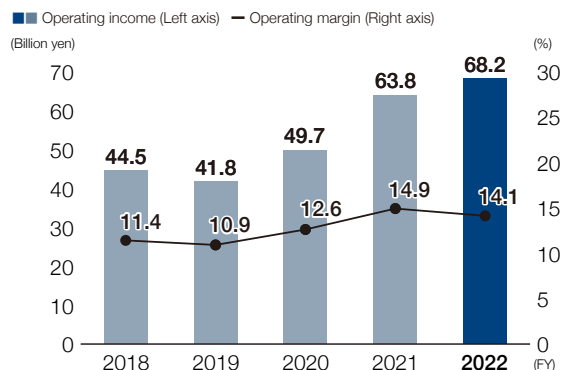
## Financial Information

### Net Sales/Overseas Sales Ratio



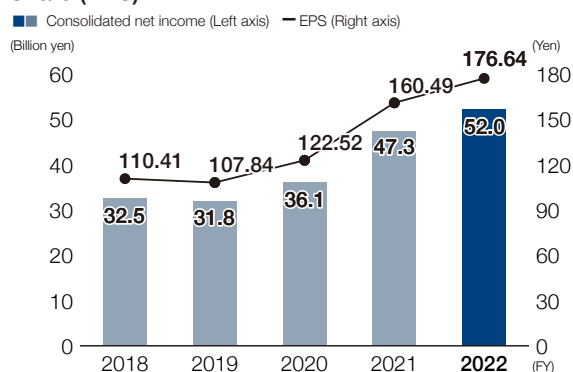
Driven by the measuring instrument business, net sales were a record 482.2 billion yen for the third consecutive year.

### Operating Income/Operating Margin



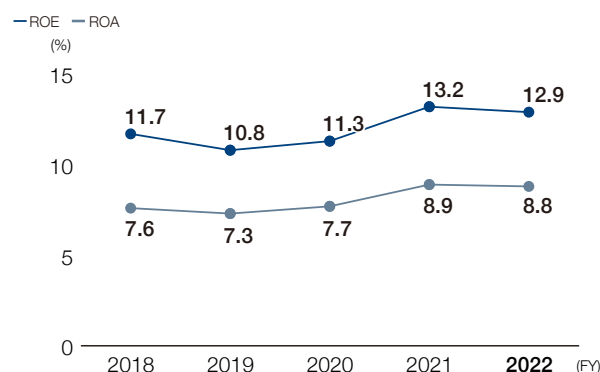
Operating income increased to 68.2 billion yen due to production efficiency improvements, price adjustments, and exchange rate effects, breaking previous records for the third consecutive year.

### Profit Attributable to Owners of Parent/Profit per Share (EPS)



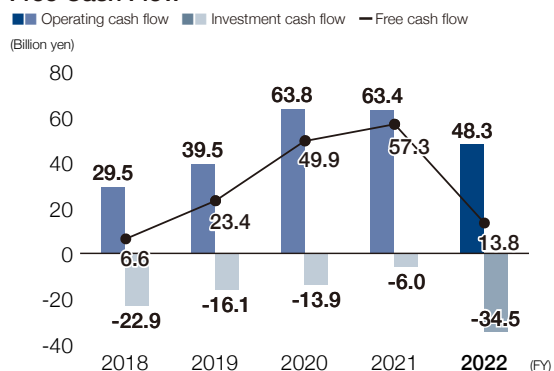
Increased operating income and other factors resulted in record profit of 52.0 billion yen and 176.64 yen per share (EPS).

### ROE/ROA



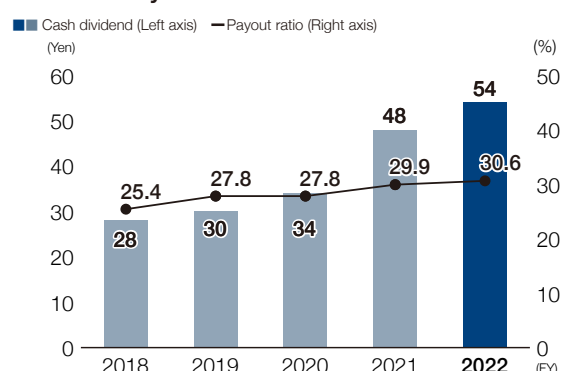
Despite record profit, ROE decreased by 0.3 points (year on year) to 12.9% and ROA decreased by 0.1 points (year on year) to 8.8%.

### Operating Cash Flow/Investment Cash Flow/Free Cash Flow



Cash flow from operating activities decreased by 15.1 billion yen (year on year) to 48.3 billion yen, due to increased inventory levels. Cash flow from investing activities resulted in 34.5 billion yen of expenditures, such as for the acquisition of Nissui Pharmaceutical (trade name changed to Shimadzu Diagnostics Corporation as of April 1, 2023). Consequently, free cash flow was 13.8 billion yen.

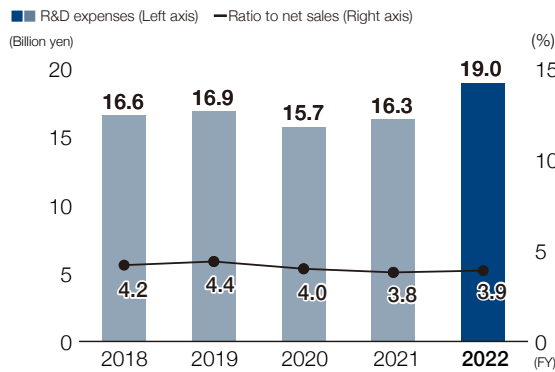
### Dividend/Payout Ratio



FY 2022 cash dividends increased for the ninth consecutive year to 54 billion yen and the payout ratio increased to 30.6%. The basic policy for shareholder returns in the medium-term management plan (FY 2023 to 2025) is to maintain dividend payout ratios of at least 30% with continuing dividend increases.

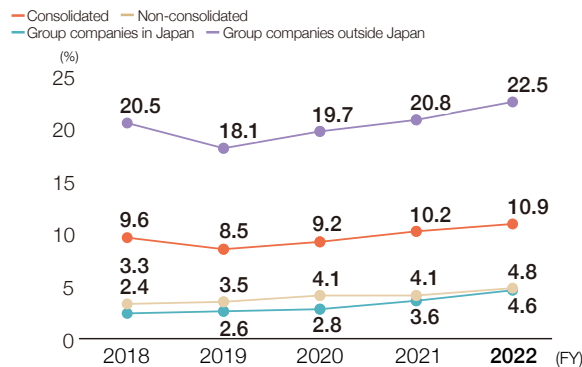
## Non-Financial Information

### R&D Expenses (Testing and Research Expenses + Industrial Application Research Expenses)/Ratio of R&D Expenses to Net Sales



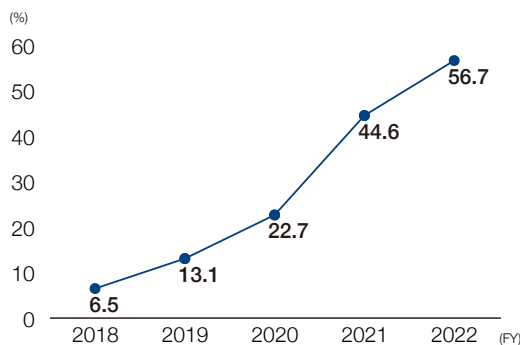
R&D expenses increased by 2.7 billion yen (year on year) to 19.0 billion yen despite impacts from the COVID-19 pandemic. Given that 73.0 billion yen of investments are specified in the medium-term management plan (FY 2023 to 2025), we will continue to actively implement R&D activities in the future.

### Percentage of Female Managers



Through diversity management, we strive to create new social value by hiring talented human resources without regard for nationality or gender and by providing fair support and working environments to create innovation. The percentage of female managers in the consolidated Shimadzu Group increased by 0.7 points (year on year) to 10.9% in FY 2022.

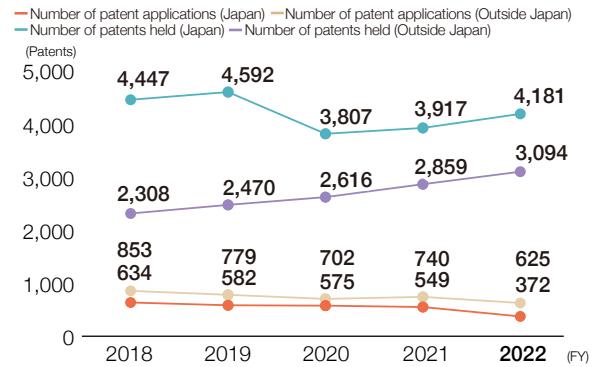
### Percentage of Male Employees Taking Childcare Leave (Non-Consolidated)



One initiative intended to increase the percentage of male employees taking childcare leave is fostering a company culture and work environment that makes it easier to take childcare leave, such as by posting feedback on the intranet from male employees that have taken childcare leave. During the past two years, the percentage of male employees taking childcare leave in non-consolidated Shimadzu Corporation improved from 22.7% in FY 2020 to 56.7% in FY 2022.

Note: "Number of employees who took childcare leave in the fiscal year" / "Number of employees whose spouse gave birth in the fiscal year" (calculated as the ratio of taking childcare leave, etc. under Article 71-4-1 of the "Enforcement Regulations of the Act on Childcare Leave, Caregiver Leave, and Other Measures for the Welfare of Workers Caring for Children or Other Family Members" (1991 Ministry of Labor Ordinance No. 25))

### Number of Patent Applications/Number of Patents Held



The number of patents held increased by 499 to 7,275 patents. In the future, we intend to acquire more patents based on our basic policy of creating new value based on intellectual property generated from research and development.

\*1 The number of patents held temporarily decreased in FY 2020 due to taking stock of patents with low probability of being used in products.

\*2 The basis for the number of patent applications outside Japan was changed from the total number of inventions in FY 2020 to the cumulative number of patent applications in all countries in FY 2021.

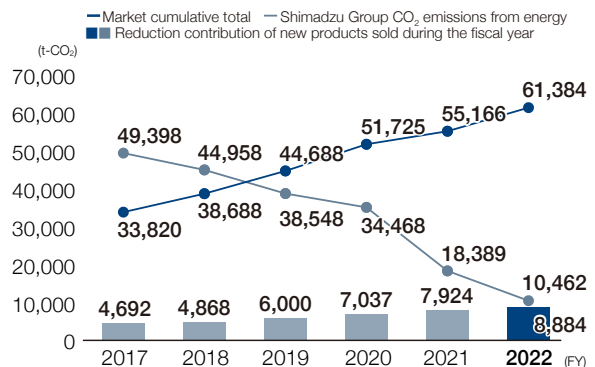
### Wage Difference between Men and Women

	FY 2022	Management	General Employees	Regular Employees	Non-Regular Employees	All Employees
Non-consolidated		100.4%	79.0%	70.7%	43.8%	63.4%
Consolidated		97.2%	75.8%	70.6%	55.3%	67.5%

Wages are determined based on job responsibilities, abilities, and other criteria that are the same regardless of gender.

Note: Wage data includes data from subsidiaries outside Japan. Definitions and calculation methods are compliant with "Act on the Promotion of Women's Active Engagement in Professional Life" (Act No. 64, 2015).

### Shimadzu Group CO<sub>2</sub> Emissions and Contribution to Reduction in CO<sub>2</sub> Emissions



In April 2022, the Shimadzu Group set a new target of achieving net-zero CO<sub>2</sub> emissions from business activities by 2050, as compared to the emissions during FY 2017, and is further strengthening corresponding measures accordingly. Compared to the reference year (FY 2017), CO<sub>2</sub> emissions during FY 2022 decreased by 78.8% to 10,462 t-CO<sub>2</sub>, due to changing electric power supplies to electricity generated from renewable energies.

Note: "Contribution to reduction in CO<sub>2</sub> emissions" is the reduction from previous customer CO<sub>2</sub> emission levels due to using Shimadzu products, calculated as: Contribution to reduction in CO<sub>2</sub> emissions = CO<sub>2</sub> emissions of previous products (tons/year) - CO<sub>2</sub> emissions of new products (tons/year).



# Shimadzu Group Sustainability Management

Due to various infection countermeasures and activity restrictions implemented since the COVID-19 pandemic began in 2019, we have had no choice but to significantly reconsider our previous economic activities and lifestyle habits. Furthermore, the successive emergence of new risks, such as the increase in natural disasters associated with climate change and the rapid price increases for natural resources and energy associated with geopolitical risks, has generated significant interest in how such factors will affect not only the

lives of each individual but also the sustainability of organizations and societies.

Faced with such circumstances, Shimadzu has established a Shimadzu Group Sustainability Charter based on the Shimadzu corporate philosophy and management principle. We remain committed to sustainability management, mainly in terms of solving the challenges of society through our business operations.

## Shimadzu Group Sustainability Charter

Ever since its founding, the Shimadzu Group has remained committed to solving challenges in society through our business activities and engaging in business practices that reflect our responsibilities as a member of society.

Such measures are considered critical for future sustainability management. To achieve those measures, we established the Shimadzu Group Sustainability Charter and announced it within and outside the Shimadzu Group.

### Diverse Challenges in Society



### Sustainability Management Pursued by the Shimadzu Group

#### (1) Sustainability of the Global Environment and Society

Global environmental protection, long and healthy life expectancies for people around the world, industrial development and a safe and secure society

#### (2) Sustainability and Growth of Shimadzu Group Business Activities

Stronger capabilities for supplying social value through business activities, addressing and preventing factors that inhibit business sustainability, stronger value chains that are united with suppliers

#### (3) Improvement in Employee Health and Engagement

Improved health management, diversity management, and employee satisfaction, developing global human resources, increased awareness of the Shimadzu corporate principle and sustainability management practices instilled throughout the company

## Organization for Implementing Sustainability Management

A Group Sustainability Committee, which is chaired by the President and convenes twice a year, was established for promoting sustainability management at Shimadzu. The committee consists of the Shimadzu Chairman, President, administrative corporate executive officers, Audit & Supervisory Board members, divisional general managers, corporate administrative department general managers, representatives from affiliated companies in and outside Japan, and others. It shares important issues relevant to sustainability management within and outside Shimadzu, decides policies and implementation plans for important measures, discusses and monitors the progress of achieving respective KPIs, and so on.

Furthermore, a Risk Management and Corporate Ethics Meeting and Environmental Meeting have been established as sub-committees for discussing and reporting on more specialized issues and topics related to governance, compliance, risk management, and environmental management.

Meeting results are reported to the Board of Directors, and recommendations for promoting and deploying sustainability management practices are provided by members of the Board of Directors and Audit & Supervisory Board.



The following web page includes information about the topic listed below.

<https://www.shimadzu.com/sustainability/concept/index.html>

Shimadzu Group Sustainability Charter



## Reviewing the Shimadzu Group Sustainability Charter to Strengthen Sustainability Management

During the process of developing the Shimadzu Group Sustainability Charter established in 2021 (hereinafter "Charter"), the Shimadzu Group specified 14 materialities in 3 main categories, considering the importance to stakeholders and Shimadzu Group management. However, as the sustainability management measures were being implemented, we realized that there was still room for reconsidering the importance and relationships between respective materialities. Therefore, when preparing the medium-term management plan

for FY 2023 to 2025, the Charter was revised according to the decisions made at the April 2023 Board of Directors meeting, based on discussions about the vision for the future of the Shimadzu Group that should be pursued.

The newly revised Charter is considered a universal value in the Shimadzu Group. Specific measures will be implemented for respective topics and KPI values specified by each department. Note that the Charter will be subject to review as necessary, in response to changes in the business environment.

## Materiality

Ever since Shimadzu was founded, the Shimadzu Group has used the scientific technologies and expertise cultivated over many years to continue contributing to "human life and well-being," "well-being of the Earth," and "industrial development and a safe and secure society" through its business activities and based on its corporate philosophy and management principle.

In order to continue contributing to society through business activities based on those three themes, we need to generate innovation while continuing to make improvements toward achieving progress and advancements in science and technology. As Genzo Shimadzu Jr. said, "Science is a practical endeavor. There is no point in theoretical knowledge if it isn't applied to help people." That means science and technology will only help solve challenges in society if it is actually used in society. Therefore, we will promote the broad use of Shimadzu products and technologies by establishing

systems for using Shimadzu intellectual properties strategically and for promoting the international standardization of Shimadzu methods.

We will also improve our development and manufacturing capabilities by quickly developing new technologies and businesses based on societal challenges identified at the global level and building robust supply chains that can overcome geopolitical risks to supply products that are truly needed.

As the management base for supporting the business activities above, we will further strengthen our organizational systems for risk management and monitoring, including those for ensuring compliance and corporate ethics, in order to strengthen governance throughout the Shimadzu Group. In addition, to support the above measures, we will develop human resources with a global leadership, while expanding the diversity of human resources.

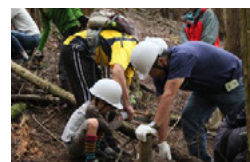
## Instilling Sustainability Management throughout the Shimadzu Group

In order to implement sustainability management, nothing is more important than ensuring each department can act autonomously based on a proper understanding instilled in all departments.

Specifically, in addition to collecting information from within and outside Shimadzu to create content for employees and sharing it via intranets, we are providing opportunities for voluntarily learning about sustainability management through original Shimadzu SDGs badges and e-learning programs that utilize teaching materials. Those SDGs badges are made using materials obtained from forest-thinning activities at the Shimadzu Corporation Forest in Nantan City in Kyoto Prefecture. Made in partnership with the local forestry workers' union, lumber mill, and wood processing plant, the project even enables participation by people with disabilities, which enables Shimadzu to give back more to society the more sustainability management practices are instilled within

Shimadzu Group companies. We recognize that inadequate knowledge about sustainability may pose a risk to our business operations, so we have included these programs as part of the content of corporate risk management team training.

We are providing Shimadzu Group employees throughout the world with basic knowledge about the trends of sustainability management in and outside Japan and letting them understand the relevance to Shimadzu business activities. This helps to increase employee engagement by reminding them about the social significance of measures being implemented by their respective departments or Shimadzu overall.



Original SDGs Badges Made by Shimadzu

# Process of Sharing Values and Collaboration

Shimadzu aims to “pursue the well-being of mankind and the Earth (planetary health)” by “contributing to human life and well-being,” “contributing to the well-being of the Earth,” and “contributing to industrial development and a safe and secure society” based on Shimadzu’s corporate philosophy, management principle, and Shimadzu Group Sustainability Charter.

Input <span style="float: right;">⇒P.23</span>	
<b>Financial Capital</b>	
• Shareholders’ capital	<b>396.4</b> billion yen
• Operating CF	<b>48.3</b> billion yen
• Free CF	<b>13.8</b> billion yen
<b>Human Capital</b>	
• Consolidated number of employees	<b>13,898</b>
	(5,860 overseas and 8,038 in Japan)
<b>Intellectual Capital</b>	
• <b>14</b> main R&D locations	(6 in Japan and 8 overseas)
• R&D investment (cumulative investment during 3-year medium-term management plan period from FY 2020 to 2022)	<b>50.9</b> billion yen
<b>Manufactured Capital</b>	
• <b>17</b> main production locations	(8 in Japan and 9 overseas)
• CAPEX (Total during 3-year medium-term management plan period from FY 2020 to 2022)	<b>53.3</b> billion yen
<b>Social &amp; Relationship Capital</b>	
• Global sales and service facilities	<b>25</b> countries and regions
• Joint research with customers, academia, and others	
<b>Natural Capital</b>	
• Energy usage	<b>1,044,789</b> GJ*
• Water usage	<b>244,000</b> m <sup>3</sup>
* GJ is a unit of energy (gigajoule).	





# Achieving our Vision ⇒P.10

## Output

### Analytical & Measuring Instruments



High-Performance Liquid Chromatograph Mass Spectrometer System LCMS-8060NX



Semi-Preparative Supercritical Fluid Chromatograph System Nexera UC Prep ⇒P.47

### Medical Systems



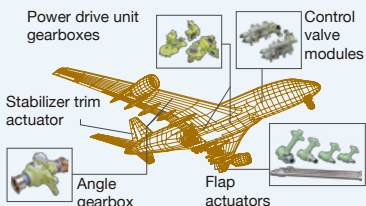
Trinias Angiography System ⇒P.51

### Industrial Machinery



Turbomolecular Pump Hydraulic Gear Pump ⇒P.53

### Aircraft Equipment



Flight Control System that Controls the Lift, Attitude, and Other Aspects of Aircraft during Flight ⇒P.55

## Outcome

### FY 2022 Results

#### Financial Capital

- Net sales **482.2** billion yen
- Operating income **68.2** billion yen
- Operating margin **14.1%**
- ROE **12.9%**
- Dividend increased for ninth consecutive year

#### Human Capital (non-consolidated)

- Average number of years employed **18.4**
- Employee turnover **36** people

#### Intellectual Capital

- Number of patents held **7,275**  
(7.4% increase year on year)

#### Manufactured Capital

- Manufacturing high-quality products
- Engaging in cost-reduction activities  
(gross margin increased by 0 pts (year on year) to 41.7%)
- Strengthening the business base outside Japan  
(Expanding/improving application centers and laboratories and strengthening manufacturing locations)

#### Social & Relationship Capital

- Contributing to solving societal challenges based on close relationships with customers
- Promoting open innovation

#### Natural Capital

- CO<sub>2</sub> emissions from energy usage **10,462 t**  
(78.8% decrease from FY2017 reference year)
- Contribution to reduction in CO<sub>2</sub> emissions **8,884 t/year**  
(+12% year on year)
- Waste recycle rate **99.67%**

### Offering Value in Business Domains

#### Contributing to Human Life and Well-Being



#### Contributing to Well-Being of the Earth



#### Contributing to Industrial Development and a Safe and Secure Society



# Shimadzu Management Resources

The Shimadzu Group shares common values based on the corporate philosophy, management principle, and Shimadzu Group Sustainability Charter. Shimadzu has built its history based on those values, by contributing to solving challenges in society through business activities, striving to fulfill the company’s responsibilities as a member of society, and generating a sense of shared feelings with a large number of customers. The Shimadzu Group endeavors to achieve a sustainable society and business growth while utilizing six types of capital that have been increasing over time.

	Financial Capital	Human Capital	Intellectual Capital
<b>Vision and Policies</b>	We aim to achieve a sustainable society and business growth by making necessary strategic investments while ensuring financial health.	Based on the slogan “leadership and diversity,” we will strive to achieve a sustainable society and business growth by developing or acquiring human resources who can lead innovation for solving challenges in society in collaboration with a diversity of partners.	We will endeavor to achieve a sustainable society and business growth by creating or acquiring intellectual properties for solving customer challenges and the underlying challenges in society.
<b>Shimadzu's Strengths</b>	<ul style="list-style-type: none"> <li>• Solid financial basis for supporting strategic investments DE ratio at end of FY 2022: 0.03 times Rating: A+ (R&amp;I) and AA- (JCR) FY 2022 CF from operating activities: 48.3 billion yen Free CF: 13.8 billion yen</li> <li>• Group funds utilized based on a global cash management system</li> <li>• Dividend increased for ninth consecutive year</li> </ul>	<ul style="list-style-type: none"> <li>• Engage in work with a sympathetic attitude toward corporate philosophy and management principle</li> <li>• Desire to learn specialized knowledge necessary for solving customer challenges</li> <li>• Many employees understand a wide range of customers and have the specialized knowledge and skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Patents and brand strength that protects key models such as liquid chromatograph and mass spectrometer systems, and a broad technical background backed by biological, optical, quantum, AI, liquid handling, and other intellectual properties, provide a robustness for quickly responding to social issues that change with the times.</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• Accelerating strategic investments for achieving sustained growth</li> <li>• Increasing corporate value by improving profitability and ROIC</li> </ul>	<ul style="list-style-type: none"> <li>• Developing the ability to ensure technologies are widely adopted in society and to start new businesses from the ground up</li> <li>• Acquiring specialized knowledge about cutting-edge research topics</li> </ul>	<ul style="list-style-type: none"> <li>• Expanding the scope of businesses or starting new businesses</li> <li>• Acquiring new, important intellectual properties or optimizing intellectual property investments based on the business portfolio</li> </ul>
<b>Strategies and Measures</b>	<ul style="list-style-type: none"> <li>• Focus investments in areas that create social value and that strengthen the base for human capital, development, manufacturing, and DX measures.</li> <li>• Increase profitability and ROIC by building a ROIC tree based on the given business strategy.</li> </ul>	<ul style="list-style-type: none"> <li>• Foster a company culture where employees proactively take on challenges and never stop learning and growing.</li> <li>• Develop human resources needed for strengthening business strategies and the management base.</li> <li>• Implement DE&amp;I measures and establish human resource systems and working environments that enable each employee to realize their full potential as an individual.</li> </ul>	<ul style="list-style-type: none"> <li>• Look for research/business partners outside of the company and start businesses that capitalize on the diversity of value systems.</li> <li>• In addition to investing in intellectual properties for technologies integrated in key models or other products, we will create or acquire intellectual properties for solving customer challenges or the underlying societal challenges.</li> <li>• Use IP landscaping to create business models and develop new businesses with a system for making a profit.</li> </ul>
<b>KPI Values for Strategies and Measures</b>	<b>FY 2025</b> <ul style="list-style-type: none"> <li>• Net sales: 550.0 billion yen</li> <li>• Operating income: 80.0 billion yen</li> <li>• Operating margin: 14.5%</li> <li>• Maintaining a dividend payout ratio of at least 30% and continuing dividend increases</li> <li>• ROIC: At least 11.0%</li> <li>• ROE: At least 12.5%</li> </ul>	<ul style="list-style-type: none"> <li>• Deploy Shimadzu leadership and diversity training</li> <li>• 130 participants in executive management training programs (FY 2025)</li> <li>• 500 advanced specialists (FY 2025)</li> <li>• 1,000 people completed business leader training (FY 2025)</li> <li>• 1,000 people completed DX training (FY 2025)</li> <li>• Percentage of female managers: At least 15% in consolidated Shimadzu (FY 2030)</li> <li>• Non-consolidated employee engagement score of at least 85% (FY 2025)</li> </ul>	<ul style="list-style-type: none"> <li>• Create or acquire intellectual properties for solving customer challenges or corresponding underlying societal challenges. Aim for at least 15 new basic patents per year</li> <li>• Use IP landscaping to create business models and develop new businesses with a system for making a profit. Build 2 IPL and business models in FY 2023, 4 in FY 2024, and 6 in FY 2025.</li> </ul>
	Medium-Term Management Plan→p.29	Human Resource Strategy→p.81	Intellectual Property Strategy→p.67

Manufactured Capital	Social & Relationship Capital	Natural Capital
<p>In order to quickly respond to various changes in external environments or to global issues, we will establish flexible manufacturing capabilities with an aim to achieve a sustainable society and business growth.</p>	<p>We aim to achieve a sustainable society and business growth by transforming Shimadzu into an innovative company that partners with companies around the world to offer customers end-to-end solutions for solving challenges in society.</p>	<p>We aim to achieve a sustainable society and business growth by promoting innovation for building a carbon-free and recycling-oriented society through science and technology and by maintaining a balance between business activities and environmental conservation.</p>
<ul style="list-style-type: none"> <li>• Maintain manufacturing organizations for achieving a diverse product portfolio of both large and small products (from large instruments to reagents) made in large or small production lots (from special-order products to mass-production models).</li> <li>• Maintain various processing and assembly technologies necessary for manufacturing critical instrument components in-house and technologies for manufacturing optical devices, sensors, or other components that are essential for offering solutions to customers.</li> </ul>	<ul style="list-style-type: none"> <li>• Despite changing times, Shimadzu remains steadfastly committed to actions based on the corporate philosophy "Contributing to Society through Science and Technology."</li> <li>• Respond earnestly to customer requirements in a variety of fields, even for niche markets.</li> <li>• Shimadzu constantly strives to increase technology development capabilities for contributing to the advancement and growth of industry.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop products and technologies that will contribute to generating innovation in environmental/energy fields and offer a wide variety of solutions.</li> <li>• Endorse and join international environmental initiatives, such as TCFD, SBT, and RE100, to actively engage in climate change countermeasures, the formation of a circular society, biodiversity conservation, and so on.</li> </ul>
<ul style="list-style-type: none"> <li>• Establishing flexible manufacturing capabilities for quickly responding to issues, such as natural disaster or infectious disease risks, long-term declining populations, or abrupt changes in demand.</li> </ul>	<ul style="list-style-type: none"> <li>• Joint research projects, which have mainly been conducted with academic, research, or industry institutions in Japan, need to be promoted globally.</li> <li>• Developing capabilities for gathering information locally to understand local needs and their background.</li> </ul>	<ul style="list-style-type: none"> <li>• Implementing measures to mitigate climate change and facilitate transition to a circular society, which are the most urgent environmental issues.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Business continuity management (BCM)</b> (1) Strengthen procurement functions. (2) Hold strategic inventories. (3) Expand in-house production.</li> <li>• <b>Strengthen global manufacturing capabilities.</b> (1) Increase capacities: Equip/expand manufacturing locations, increase production capacities, and decentralize production. (2) Improve logistics: Establish new logistics facility in Japan and automate/optimize distribution of materials and products.</li> <li>• <b>Implement DX measures for reforming manufacturing business processes.</b> Reform manufacturing business processes and improve QCD by using automation and IoT technologies to collect and utilize data.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Localize functions for identifying market needs and developing products/technologies for the market, in order to strengthen capabilities for gathering information locally and understanding background circumstances.</b></li> <li>• <b>In particular, strengthen the foundation for business in North America.</b> Establish an R&amp;D center in North America to achieve product development operations close to customers. Establish development centers on the West and East coasts to strengthen application development capabilities in cooperation with partners.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Treat "green" transformations (GX) as a key business field and offer end-to-end analytical/measuring instrument solutions for solving challenges.</b></li> <li>• <b>Implement thorough measures to reduce energy usage and use electricity generated from renewable energy sources, in order to reduce CO<sub>2</sub> emissions from business activities.</b></li> <li>• <b>Expand the line of environmentally friendly Eco-Products Plus products certified by Shimadzu.</b></li> <li>• <b>Develop products in accordance with the Product Design Guideline and work together with suppliers to reduce environmental impacts over the entire product life cycle.</b></li> </ul>
<ul style="list-style-type: none"> <li>• <b>Increase the production capacity of all manufacturing locations by 30% (vs. FY 2022) by the end of FY 2025.</b></li> <li>• <b>Invest 80.0 billion yen in capital expenditures (cumulatively during 3 years from FY 2023 to FY 2025).</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Target sales growth in four regions outside Japan</b> North America Increase sales from actual 51.4 billion yen in FY 2022 to a target of at least 70.0 billion yen in FY 2025, for a CAGR of 10%. Europe Increase sales from actual 38.4 billion yen in FY 2022 to a target of at least 50.0 billion yen in FY 2025, for a CAGR of 8%. China Increase sales from actual 86.3 billion yen in FY 2022 to a target of at least 110.0 billion yen in FY 2025, for a CAGR of 8%. Other Asian Countries Increase sales from actual 47.8 billion yen in FY 2022 to a target of at least 57.0 billion yen in FY 2025, for a CAGR of 7%.  Note: FY 2022 values were converted with FY 2025 exchange rates of 120 yen/dollar and 130 yen/euro. CAGR values are a comparison of FY 2022 and FY 2025 values after exchange rate conversion.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reduction of CO<sub>2</sub> emissions from Shimadzu Group business activities</b> Reduce CO<sub>2</sub> emissions to net-zero by FY 2050. Medium-term targets: 85% reduction by FY 2030 and 90% reduction by FY 2040 compared to FY 2017 levels</li> <li>• <b>Product measures</b> Reduce CO<sub>2</sub> emissions during the use of the products sold by the Shimadzu Group by 30% by FY 2030, compared to FY 2020 levels. Increase the sales ratio of Eco-Products Plus models to 30% by FY 2030.  Note: Eco-Products Plus models are certified by Shimadzu to offer superior environmental performance compared to previous models.</li> </ul>
<p>Expand Global Manufacturing Capabilities→p.73</p>	<p>Medium-Term Management Plan→p.29</p>	<p>Promoting Environmental Management→p.89</p>



# Business Models for Sharing Values and Collaboration

## Examples of Sharing Values and Collaboration

Sharing Values and Collaboration with Academia

### Taking on the Challenge of Social Implementation of Cutting-Edge Healthcare Technologies



#### For Human Life and Well-Being

Interest in human life and well-being continues to increase due to the spread of the COVID-19 pandemic since 2019 and the aging of societies.

However, Shimadzu has been developing and supplying clinical testing equipment based on analytical and measuring instrument technologies, as well as diagnostic X-ray imaging systems, for quite some time. Furthermore, we continue to develop more advanced instruments and systems by incorporating new testing reagents, AI technologies, or other features, in order to improve the quality of healthcare services offered to patients and also to offer solutions with functionality that reduces the burden on physicians. Development and social implementation of such cutting-edge technologies will require conducting R&D based on clinical needs, making successive improvements and gathering evidence through evaluation at clinical sites, and establishing a body of evidence and case studies for promoting social implementation of these technologies.

To accelerate such measures, in December 2021 we signed a comprehensive collaborative agreement with The Jikei University. The university aims to use the results of research and development through collaboration with industry,

academia, and government to give back to society and save more patients. The agreement will result in a five-year partnership aimed at research and social implementation of research findings in the fields of cancer, lifestyle diseases, dementia, neurological disorders, and infectious diseases.

Since the agreement was signed, we have been promoting the initiatives aimed at social implementation of clinical technologies, through the utilization of Shimadzu's analytical/measuring technologies and diagnostic imaging technologies at their facilities, such as the Jikei University School of Medicine, the Jikei University Hospital, and the Center for Preventive Medicine.

On March 15, 2023, we jointly conducted a seminar to share new technologies under the collaboration. During the seminar, both parties presented their latest research findings and the initiatives for social implementation of these findings in the following four fields: laboratory testing, cell and regenerative medicine, medical diagnostic imaging, and health and treatment information systems.

We will accelerate efforts to demonstrate and commercialize the research results in order to give back to society and contribute to "human life and well-being."

#### Stakeholder Feedback

Since its founding, the Jikei University School of Medicine has contributed to patient-centered medical care, based on our founding spirit of "Treat the patient, not the disease." At the same time, we have engaged in research aimed at treating prospective patients, and education to foster even better medical practitioners. Furthermore, in addition to our fundamental mission of education and research, we have established a policy of collaboration with industry, academia, and government (enacted on November 1, 2022), which positions the return of research results to society as our "Third Mission." In the opening remarks of the policy quoted below, "social implementation" is positioned as an important maxim: "We will promote research and development with the aim of social implementation through collaboration with industry, academia, and government. At the same time, we will generate a creative cycle through project evaluation and appropriate support, so that the results of the project can provide the experience and motivation to carry out research and development."

We are very hopeful that our partnership with Shimadzu Corporation, a company involved in mass spectrometry and a wide range of medical and healthcare technologies, will increase the chance for social implementation of research results, in other words, the commercialization of results; as well as their dissemination and establishment. Especially in academia, commercialization is one of our weakest areas, so we certainly welcome Shimadzu's assistance.

Dissemination and establishment of the research results will also require coordination with the government and strategies in line with patients and users, so we would like to see cooperation promoted by both parties.



**Dr. Akira Fukui**  
Assistant Professor in the Division of  
Nephrology and Hypertension,  
Research Promotion Division URA,  
The Jikei University School of Medicine

The following web page includes information about the topic listed below.

[https://www.shimadzu.co.jp/news/press/fpcxx94od83bva\\_p.html](https://www.shimadzu.co.jp/news/press/fpcxx94od83bva_p.html)

Concluded a Comprehensive Collaborative Agreement with the Bank of Kyoto for the Realization of a Sustainable Society

Manufacturers and Financial Institutions Collaborating to Solve Challenges in Society



Sharing Values and Collaborating with Financial Institutions and Suppliers

## Providing Support to Suppliers for Creating Sustainable Regions

### Creating Systems through Cooperation between Manufacturers and Financial Institutions

There are an increasing number of initiatives to address global societal challenges, such as carbon neutrality or SDGs, by acting as a group of companies rather than a single company. The aim is to achieve solutions that involve the entire value chain, by bringing the strengths of a variety of sectors together.

In December 2021, Shimadzu concluded a Comprehensive Collaborative Agreement for the Realization of a Sustainable Society with the Bank of Kyoto, which is also headquartered in Kyoto City. The purpose of the comprehensive agreement between a manufacturer and a financial institution, which is quite rare in Japan, is to achieve sustained growth and revitalization of the region by utilizing the management

resources of both organizations. In the partnership, Shimadzu uses analytical, measuring, and other scientific technologies to offer solutions for technical challenges faced by clients of the Bank of Kyoto, whereas the Bank of Kyoto provides financial products and consulting services to the members of Shimadzu Cooperative Association and other Shimadzu suppliers.

In particular, the Bank of Kyoto provides support and helps strengthen the supply chain in fields where Shimadzu cannot adequately address issues alone, such as management training, assessing energy efficiency of production facilities, and creating sustainability policies.

#### Stakeholder Feedback

Our company is involved in machining metal components installed in Shimadzu analytical and measuring instruments or medical systems. We learned about SDGs at a workshop for companies in the region and were struggling to determine appropriate measures for the future. That is when we heard we could obtain support from the partnership between Shimadzu Corporation and the Bank of Kyoto.

Though we had almost never received support from an outside consultant before that, with the support from the Bank of Kyoto we were able to prepare a sustainability management policy that included numerical targets for years up to 2030. Furthermore, addition of the SDG goals to previous activities of our organization, such as employee training and activities for improving quality and ensuring safety, has stimulated communication within the company and generated a string of new suggestions. We will pursue additional growth by continuing to engage in activities for promoting environmental conservation, promoting employee health, improving quality, and so on, and by using those activities to generate new corporate value.

**Tadayuki Tanaka**  
Tanaka Factory Co., Ltd.  
Representative Director



As part of business support services, the Bank of Kyoto assists our clients in preparing SDGs declaration and sustainability management policies, and offers financial products to support their activities. We met with experienced and inexperienced employees of Tanaka Factory, who will have a central role at the company in the future, to engage in multiple discussions about the impacts of the measures for achieving carbon-free operations and SDGs on corporate management. We also shared how environmental compliance, health management, business continuity planning (BCP), and other measures will help lead to stronger organizational capabilities and company growth. We will further support implementing the various measures specified in the sustainability management policy.

Through our ongoing partnership with Shimadzu Corporation, we will help maintain and improve the competitiveness of regional companies and help strengthen the supply chain to contribute to achieving a sustainable society.

**Yoshimasa Tsuji**  
Acting General Manager,  
Corporate Consulting Dept.,  
Sales Div., Bank of Kyoto



## Business Models for Sharing Values and Collaboration

### Examples of Sharing Values and Collaboration

Sharing Values and Collaboration  
with Overseas Research Institutions

#### Providing an End-to-End Solution for Extending Healthy Lifespan



#### Predicting Brain Diseases with Proteins

With the extension of human lifespan worldwide over the past century, we now face increased risks of developing new diseases. One of the most feared diseases associated with aging is brain diseases. In fact, it is estimated that 1 in 33 individuals aged 65-74 will develop Alzheimer's disease, and this ratio increases to 1 in 3 for individuals aged 85 and above. While the prevalence of Parkinson's disease is lower, it remains a major risk factor associated with aging. The hallmark of neurodegenerative diseases, including these mentioned, is the gradual loss of healthy brain cells.

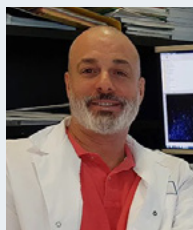
One of the reasons why there are few treatment options for neurodegenerative diseases is that they are often diagnosed too late, when the treatment is no longer effective. Early detection could potentially offer a wider range of options, such as using experimental drugs that may not cure the diseases but could help prevent onset or slow down cell degeneration. In order to achieve such a scenario, Professor Christophe Hirtz from the University of Montpellier (<https://ppcmontpellier.com/index.php/accueil-en/>) has become a partner of the Shimadzu European Innovation Center.

Neurodegenerative diseases are characterized by the abnormal accumulation of specific proteins in brain cells. These proteins can take on various high-order structures (proteoforms), and the presence and ratios of certain proteoforms within cells are believed to reflect pathological conditions. However, clinical samples contain very low concentrations of these proteins, requiring highly sensitive mass spectrometry systems.

Professor Hirtz's research team has conducted studies using Shimadzu's LCMS-8060 mass spectrometry system to detect proteoforms of proteins, and they have identified the potential to distinguish patients with Alzheimer's disease, frontal temporal dementia, and Lewy body dementia based on multiple proteoforms of different proteins. Clinical proteomics using Professor Hirtz's research methodology offers the advantage of being minimally invasive and causing minimal pain, which means that more people could undergo testing before symptoms appear.

#### Stakeholder Feedback

Since that first encounter in 2015, I appreciate Shimadzu's persistence to work together and the partnership has gone well beyond my expectation, leading to a vital partner who offers much more than exceptional technology. The LCMS-8060 is one of the best triple quadrupoles on the market, [but] for me the collaboration with Shimadzu is based on trust and a long-term relationship. This is quite different from other companies. I must say that this is the most fruitful collaboration I have had and still have.



Professor Christophe Hirtz,  
University of Montpellier, France

One of our goals is to identify key opinion leaders and form strong research relationships with them. We see partners, not customers. We work together to maximise their research and the performance of our analytical instruments.



Stephane Moreau,  
Shimadzu Europe



Sharing Values and Collaboration  
with Overseas Research Institutions

## Analytical and Measurement Instruments Supporting Religious Diversity



### 1st Asia Halal Summit 2023 Held

In recent years, there has been a growing awareness of diversity worldwide, including respect for religious diversity such as halal, Kosher, Hindu, and others. Respecting religious diversity is an important element in creating a society that acknowledges diversity, where people of different religions understand and respect each other.

In May 2023, Shimadzu (Asia Pacific) Pte Ltd. (hereafter SAP), which serves as the Asia headquarters for Shimadzu Corporation, together with Brawijaya University and Ditek Jaya, proudly organized the Shimadzu 1st Asia Halal Summit, the first-ever Summit that brought together halal authorities, industry leaders, and scientists to address the latest developments and challenges in the halal landscape.

Halal refers to the dietary and lifestyle norms based on Islamic teachings. Only products that are recognized as halal are permitted for consumption and use in the lives of Muslims. The market for halal products has been expanding globally. For example, pork and pork-derived ingredients, as well as alcohol, are strictly prohibited, and halal products are not allowed to contain these components.

The Summit's theme revolved around "Developing the World Halal Ecosystem," highlighting the exploration of halal authentication techniques, artificial intelligence (AI), and digital technology. As the market for halal ingredients continues to expand, together with the fast-growing demands, the Summit provided a timely and comprehensive discussion on shaping the future of the halal industry. The attendees also had the opportunity to engage in various activities, including the Poster Session, Expo Session, and the highly anticipated Laboratory Tour at Brawijaya University's ISO-17025 Certified Halal Testing Lab. SAP was proud to share our Total Solutions for Food Safety and Halal Integrity Testing, as well as our intuitive method packages designed to simplify the analysis work. For example, the outstanding capabilities of Shimadzu's state-of-the-art instruments such as GC, LCMS, and others.

Shimadzu is fully dedicated to delivering the best value for both customers and society by understanding and promptly responding to the evolving demands and contributing towards a World Halal Ecosystem.

#### Stakeholder Feedback

This is the first-ever Summit to discuss Halal ecosystem in Indonesia, and I hope the event can become an annual program to deliver a positive impact year after year for everyone.

Shimadzu's technologies are important, as we seek easy and user-friendly methods that provide accurate results within a short time. Shimadzu's leading instruments can give the best method for halal authentication.

**Dr. Yuni Kilawati, S.Pi., M.Si,**  
Head of Central Laboratory of Life  
Sciences, Brawijaya University



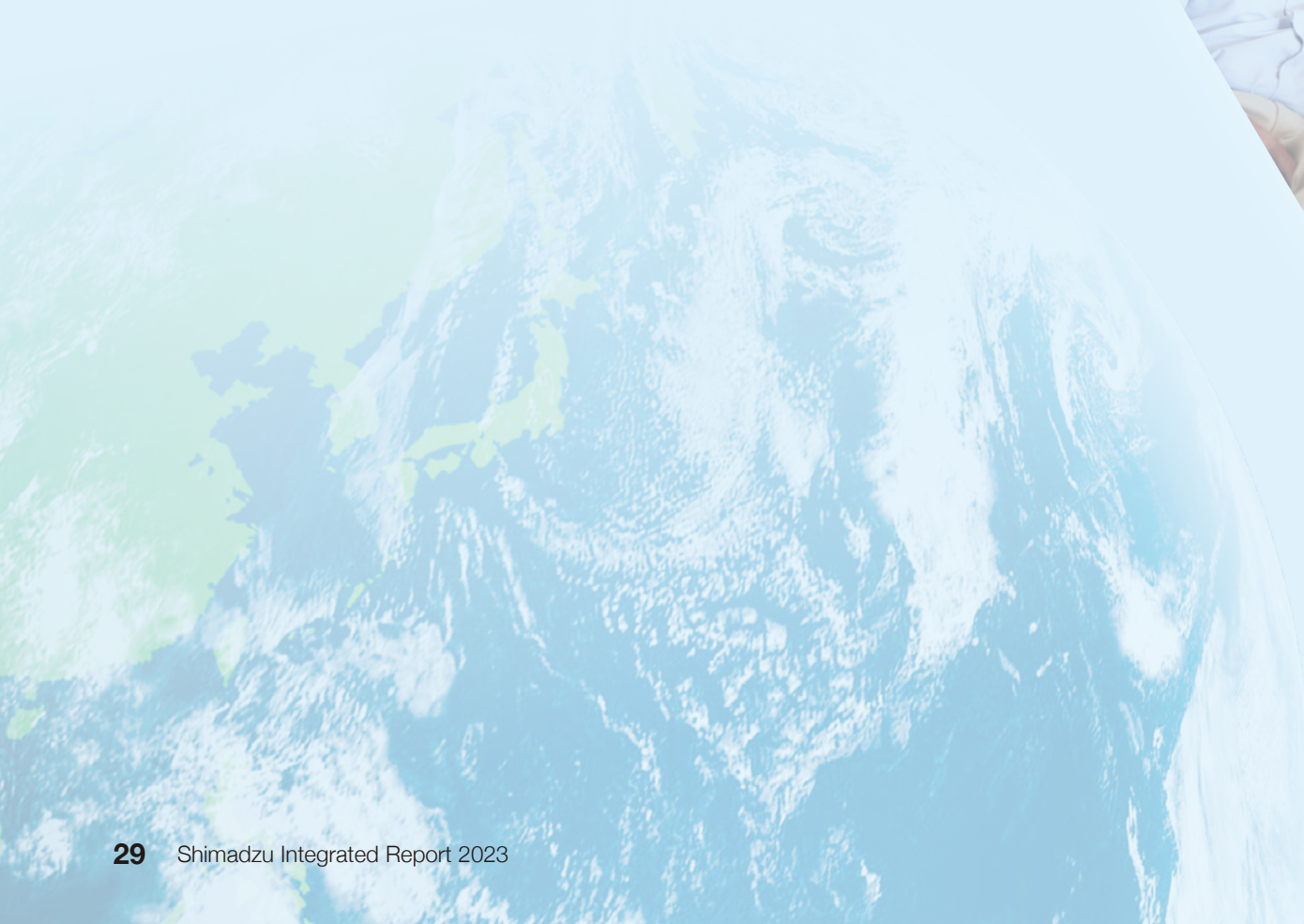
I greatly appreciate Shimadzu for their efforts in organizing this Summit for sharing knowledge and technological expertise.

With Shimadzu's expertise and efforts, they have been instrumental in sharing advanced technologies and solutions for Halal Science. Shimadzu, you are the best. Keep going, and I am keen to collaborate. We can work together towards integrating Halal Science into the Halal certification process.

**Mr. Mohd Noor Noramin,**  
Chairman of Global Haltech



# Medium-Term Management Plan





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# Review of Previous 3-Year Medium-Term Management Plan

We set a medium-term management plan every three years. We aim to share our medium to long-term business strategy with all stakeholders and strive for sustainable growth and improvement in corporate value for the Shimadzu Group.

## FY 2014 to FY 2016

**Become an Innovative Company Contributing to the Growth of Customers Globally**

### Performance Targets and Results

	FY 2016 Targets	FY 2016 Results
Net Sales	350.0 billion yen	<b>342.5</b> billion yen
Operating Income	35.0 billion yen	<b>37.1</b> billion yen
Operating Margin	10.0%	<b>10.8%</b>
Overseas Sales Ratio	At least 50%	<b>49%</b>

### Key Measures

- Established innovation centers and otherwise promoted joint development projects with outside institutions.
- Expanded/improved product lines and focused efforts on growing fields, such as pharmaceuticals and food safety.
- Strengthened manufacturing locations outside Japan, such as by establishing a factory in Malaysia.

## FY 2017 to FY 2019

**Become a Company That Solves Challenges in Society in Collaboration with Partners All Around the World**

### Performance Targets and Results

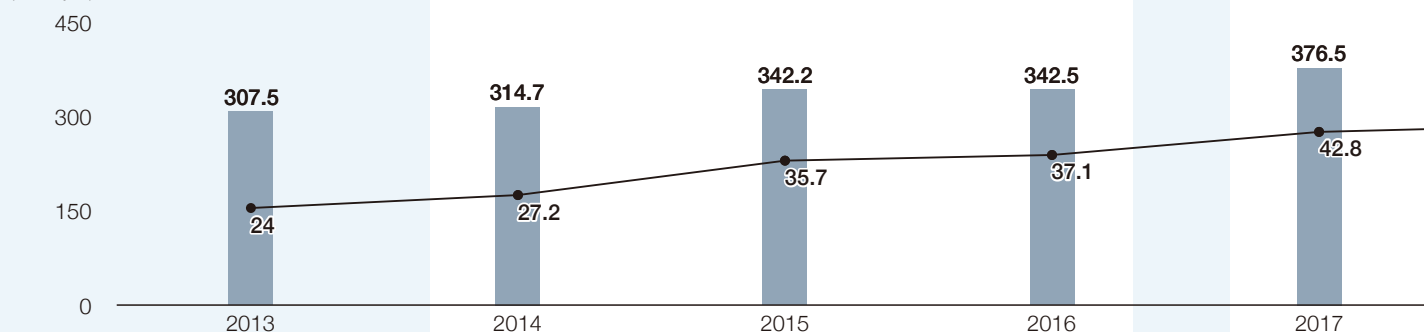
	FY 2019 Targets	FY 2019 Results
Net Sales	At least 400.0 billion yen	<b>385.4</b> billion yen
Operating Income	At least 45.0 billion yen	<b>41.8</b> billion yen
Operating Margin	At least 11.0%	<b>10.9%</b>
Overseas Sales Ratio	At least 50%	<b>49.0%</b>
ROE	At least 10%	<b>10.8%</b>

### Key Measures

- Strengthened collaborations for solving challenges of society, such as by promoting open innovation projects or engaging in joint research with academia or startup companies.
- Strengthened response to local needs at the four Innovation Centers outside Japan.
- Implemented M&A measures.
- Strengthened the R&D base mainly in Japan, such as at the Healthcare R&D Center.
- Expanded/strengthened medical systems, hydraulic equipment, and other manufacturing capabilities.

### Net Sales/Operating Income

■ Net Sales (Left axis)  
— Operating Income (Right axis)





## FY 2020 to FY 2022

### Become a Company That Solves Challenges in Society in Collaboration with Partners All Around the World Creating and Implementing Systems for Solving Challenges in Society

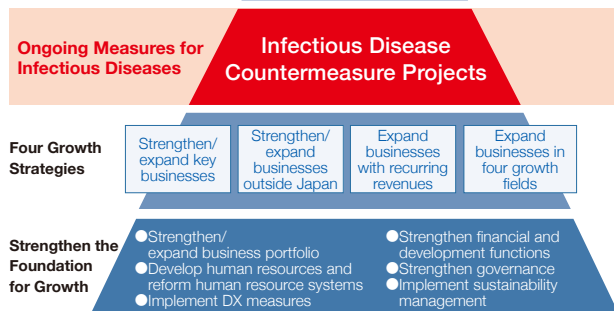
#### Business Targets and Results

	FY 2022 Targets	FY 2022 Actual
Net Sales	470.0	482.2
Operating Income	68.0	68.2
Operating Margin	14.5%	14.1%
Return on Equity (ROE)	10% or above	12.9%

#### Basic Policy

Slogan **Become a Company That Solves Challenges in Society in Collaboration with Partners All Around the World**  
—Creating and Implementing Systems for Solving Challenges in Society—

FY 2022 Performance Targets  
 Net Sales **470.0 billion yen**  
 Operating Income **68.0 billion yen**  
 Operating Margin **14.5%**



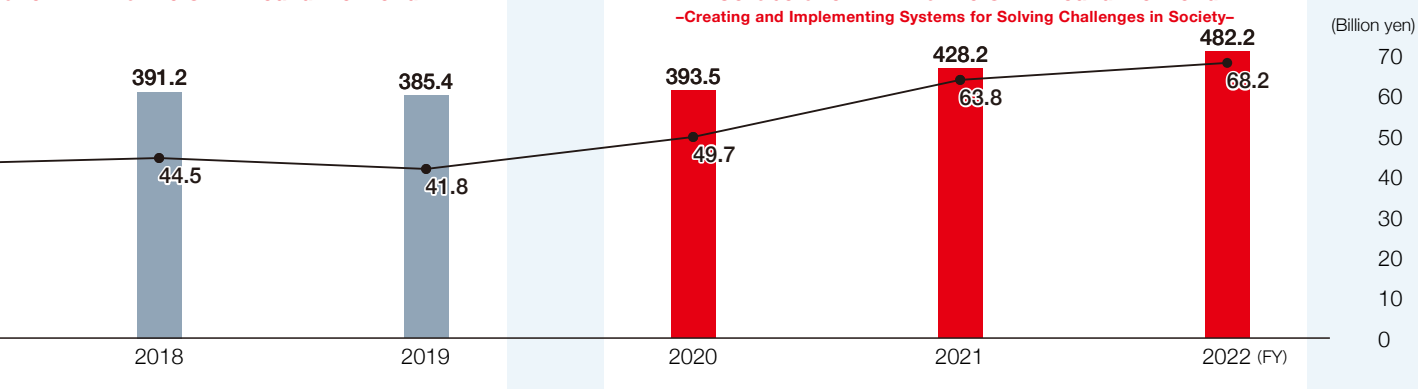
#### Targets Achieved / Missed

- Achieved**
  - **Infectious Disease Control Project**
    - Early development and early social implementation of fully automated PCR testing equipment, reagents for COVID-19 testing
  - **Growth Strategy**
    - LC: Grew with increased demand for drug discovery and homegrown drug production worldwide
    - MS: Q-TOF launched in FY 2022
    - Early access and response to revised information on Pharmacopoeia of the People's Republic of China, Chinese National Standards, etc.
    - Overseas business continued to grow in all regions
    - Expanded consumables and maintenance services
    - M&A of NISSUI PHARMACEUTICAL
- Unachieved**
  - × **Growth Strategy**
    - LC: Expanding business in pharmaceutical fields other than small molecules
    - MS: Introducing apps/software Building a pay-as-you-go business model
  - × **Management Foundation**
    - Achieving rapid development
    - Manufacturing structure responding to geopolitical risks
    - Inventory optimization
    - Strengthening governance (preventing compliance incidents)

#### Summary and Outlook

Despite the difficult business conditions that continued from FY 2020 to FY 2022 during the COVID-19 pandemic, the Shimadzu Group achieved three consecutive years of record-breaking net sales and operating income by implementing the slogan specified in the last two medium-term management plans, which is "Become a Company That Solves Challenges in Society in Collaboration with Partners All Around the World" determined based on our corporate philosophy "Contributing to Society through Science and Technology." In particular, the infectious disease countermeasure projects contributed to society by offering not only products but also systems. Meanwhile, there are still some unachieved targets in terms of growth strategy and management foundation. The new medium-term management plan aims to overcome our challenges thus far and make Shimadzu a "company that offers end-to-end solutions" including data needed by customers. The following pages describe five business strategies and seven measures for strengthening the management foundation.

#### Become a Company That Solves Challenges in Society in Collaboration with Partners All Around the World



# New Medium-Term Management Plan (FY 2023 to FY 2025)

## Basic Policies of the Medium-Term Management Plan

Under the new medium-term management plan, we aim to achieve sustained growth as an innovative company that solves challenges in society together with global partners, by strengthening both technology development and social implementation and offering end-to-end solutions to our customers.

To achieve that, we will implement five business strategies and seven measures for strengthening the management foundation.

The five business strategies are “strengthen key businesses,” “strengthen Med-Tech business,” “expand

overseas businesses & operations,” “strengthen & expand businesses with recurring revenues,” and “develop & create new / future businesses.”

These business strategies are supported by the following seven measures for strengthening the management foundation: “reinforce corporate governance,” “accelerate R&D activities,” “strengthen international standardization and regulatory compliance capabilities,” “expand global manufacturing capabilities,” “promote Digital Transformation (DX),” and implement “human resource strategy” and “financial strategy” to support all the other measures.

### Be an Innovative Company that solves social issues with global partners!

- Achieve Sustainable Growth by Technology Development & Social Implementation -



**KPI****Financial KPI**

Our financial targets are to achieve sales of 550 BJPY, operating income of 80 BJPY, operating margin of 14.5%, ROIC of 11.0% or higher, and ROE of 12.5% or higher in FY 2025, the final year of the medium-term management plan.

		FY 2022 Actual	(Ref.) FY 2022 Actual Converted by 1 USD 120 yen, 1 Euro 130 yen	FY 2025 Plan	'22→'25 Increase (Amount)	'22→'25 CAGR (%)	'22→'25 CAGR (%) w/o Exchange Rate
Performance Targets	Net Sales (BJPY)	482.2	455.7	550.0	+67.8	+4.5%	+6.5%
	Operating Income (BJPY)	68.2	59.4	80.0	+11.8	+5.5%	+10.5%
	Operating Margin	14.1%	13.0%	14.5%	+0.4pt		
	Recurring Sales Ratio	32%	32%	35%	+3.0pt		—
	Overseas Sales Ratio	56%	53%	57%	+1.0pt		

Exchange Rates USD FY 2022: 130 yen, FY 2025: 120 yen  
Euro FY 2022: 135 yen, FY 2025: 130 yen

		FY 2022 Actual	FY 2025 Plan	'22→'25 Increase (Amount)
Investment	Three-year Total R&D Expenses	50.9	73.0	+22.1
	Three-year Total CAPEX	53.3	80.0	+26.7
Capital Efficiency	Return on Invested Capital (ROIC)	11.7%	≥11.0%	—
	Return on Equity (ROE)	12.9%	≥12.5%	

**Non-Financial KPI**

The Group promotes Sustainability Management from the Perspectives of Environment, Society and Governance (ESG) under the Shimadzu Group Sustainability Charter.

E	Climate Action Contribution to CO <sub>2</sub> Reduction > CO <sub>2</sub> Emissions	<b>Reducing CO<sub>2</sub> emissions associated with business activities and product use</b> (FY 2025) (2050) ·Corporate Emissions : 10,000 t-CO <sub>2</sub> ⇒ Zero ·Reduction Contribution <sup>1</sup> : 12,000 t-CO <sub>2</sub>	
	Sustainable Resource Utilization	<b>Adopting sustainable product materials<sup>2</sup></b> 10 or more (FY 2025)	<b>Resource circulation at domestic manufacturing and development sites</b> Maintain at least 99.6% recycling rate (FY 2023 to FY 2025)
S	More Women / Promotion of Active Participation	<b>Ratio of female managers (consolidated)</b> 12% ⇒ 15% (FY 2025) (FY 2030)	
	Promotion of CSR Procurement	<b>Expanding list of suppliers conducting CSR self-assessments</b> 100% (Percentage of orders placed by subcontractors)(FY 2025)	
G	Strengthening Group Governance	<b>Conducting comprehensive internal audits (business audits) on a global basis</b> 100% (coverage of internal audits of Group companies)(FY 2025)	

\* 1 Reduction in customers' CO<sub>2</sub> emissions by using products certified under our company Eco Products Plus system

\* 2 Resin materials derived from bio or recycled sources

## 5 Business Strategies

For our key product lines including liquid chromatographs and mass spectrometer systems, our aim is to offer “end-to-end solutions” based on our unique technologies and capabilities for social implementation.

We will strengthen the competitiveness of core models of liquid chromatographs and mass spectrometer systems. We will also offer end-to-end solutions for pharmaceutical and food-tech applications by automating overall processes

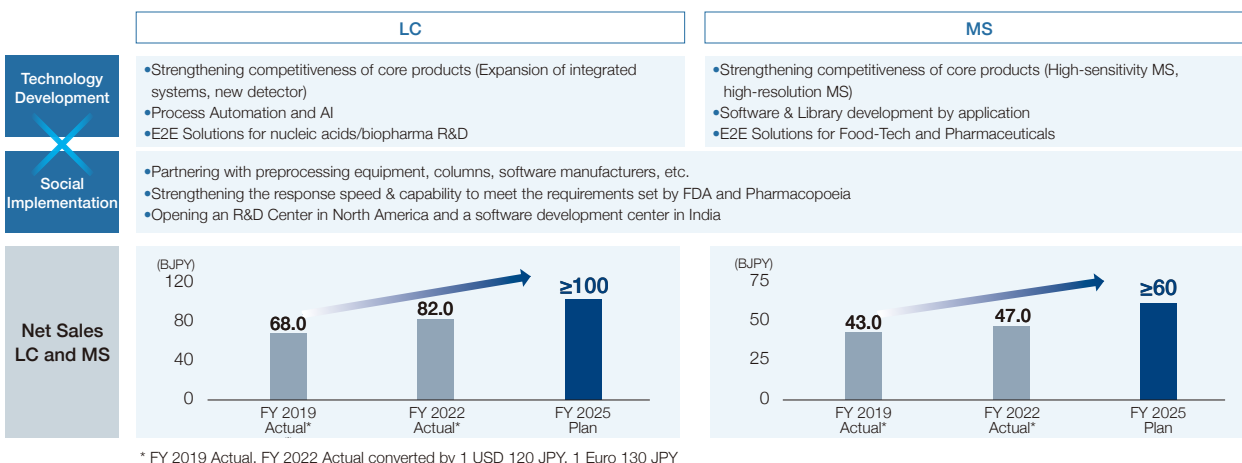
including pretreatment, using AI technology to increase efficiency, and developing application-specific software. (Refer to the next page.)

To improve our ability for social implementation, we will partner with many companies involved in pretreatment systems, columns, and software, and also promote joint research and development with customers with advanced technologies.

### LC and MS - Strategy Overview -

#### Points

1. Providing one-of-a-kind solutions through Automation & AI.
2. Enhancing End-to-End solution proposals for Pharmaceuticals and Food-Tech.
3. Opening an R&D Center in North America to develop hardware, software, and applications with cutting-edge customers.





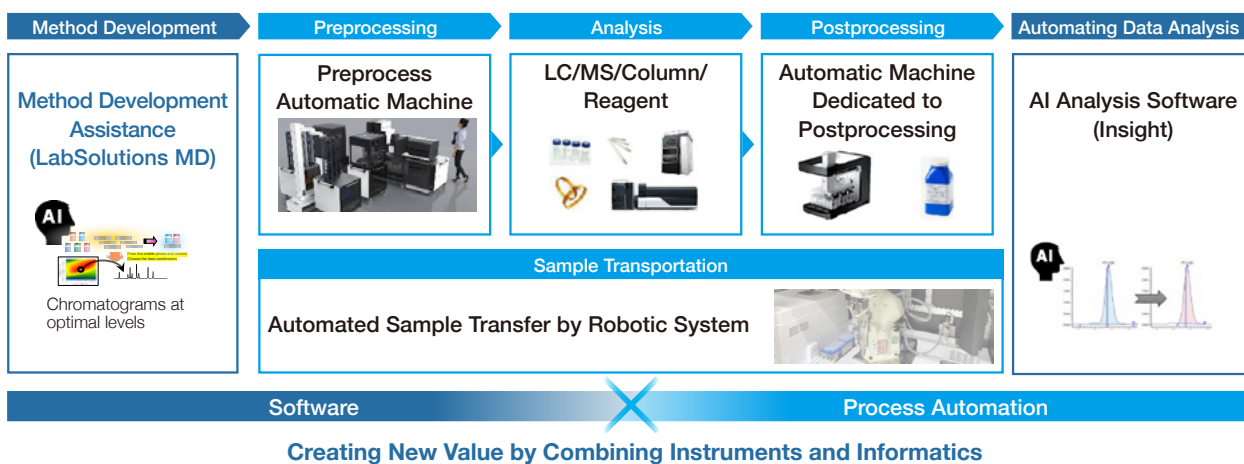
## Liquid Chromatographs and Mass Spectrometry Systems—End-to-End Solutions for Pharma

The general process flow for those involved in pharmaceutical analysis is (1) check an R&D plan, (2) pretreat samples according to the plan, (3) analyze pharmaceutical components, (4) perform post-processing, (5) analyze the data, and (6) develop/improve analysis methods. Although Shimadzu offers LC and MS products and certain reagents, we are not yet able to offer end-to-end solutions for the entire workflow. However, during the new medium-term period, we will offer end-to-end solutions for processes ranging from method development to data analysis.

**Points**

1. From test-planning to analysis, provide automated & labor-saving operations as End-to-End solutions.
2. With AI technology, support labs struggling to train experts

### End-to-End Analytical Solutions



## Liquid Chromatographs and Mass Spectrometer Systems—End-to-End Solutions for Food-Tech

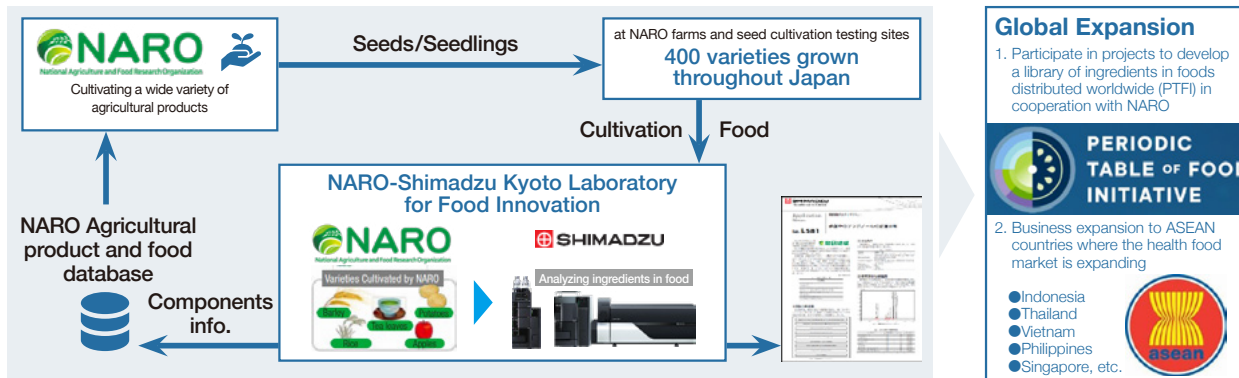
In the food-tech field, we will aim to use our component analysis technology for contributing to “achieving a society with longer and healthier life expectancies.” In Japan, we are currently collaborating with the National Agriculture and Food Research Organization to analyze functionally beneficial components in foods. The project analyzes the data from analytical results, provides data as feedback to commercial farms, measures the health benefits of functionally beneficial components, and supplies data to food and beverage companies.

In addition to standardizing such measures, we will create a component library and deploy businesses in ASEAN countries.

**Points**

1. Providing total solutions to help food and beverage companies develop products
2. Providing End-to-End solutions such as personal health data measurement, food composition analysis, and healthy food proposals
3. Global expansion through standardization

- Realizing a healthy and long-lived society through food based on scientific analysis of functional ingredients -



NARO: National Agriculture and Food Research Organization

Medium-Term Management Plan

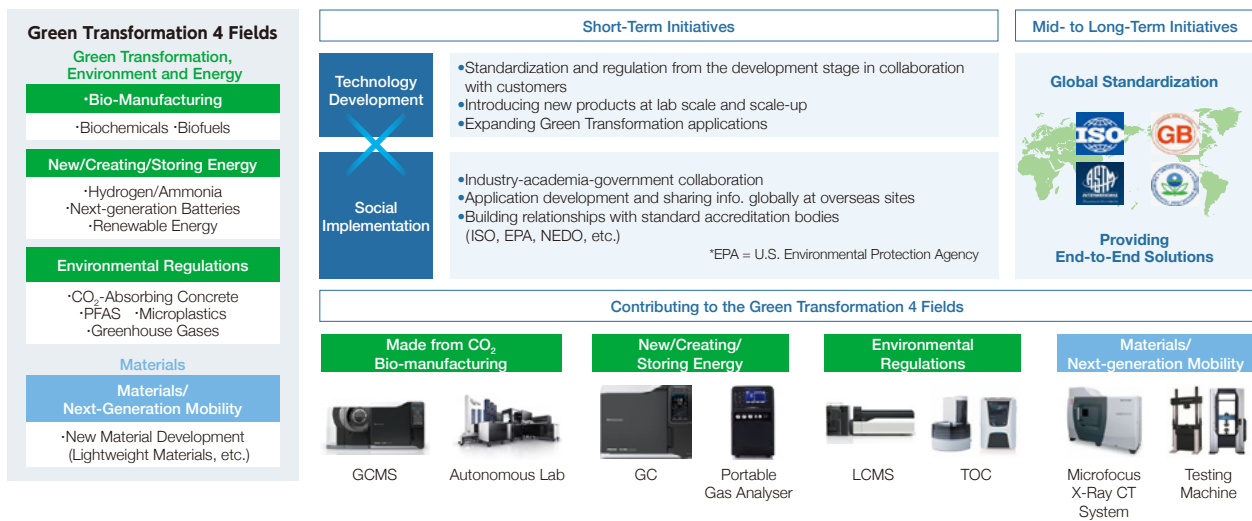
New Medium-Term Management Plan (FY 2023 to FY 2025)

**GX—End-to-End Solutions for Green Domain—**

There are four main fields in the green domain: biomanufacturing, new/creating/storing energy, environmental regulations, and materials.

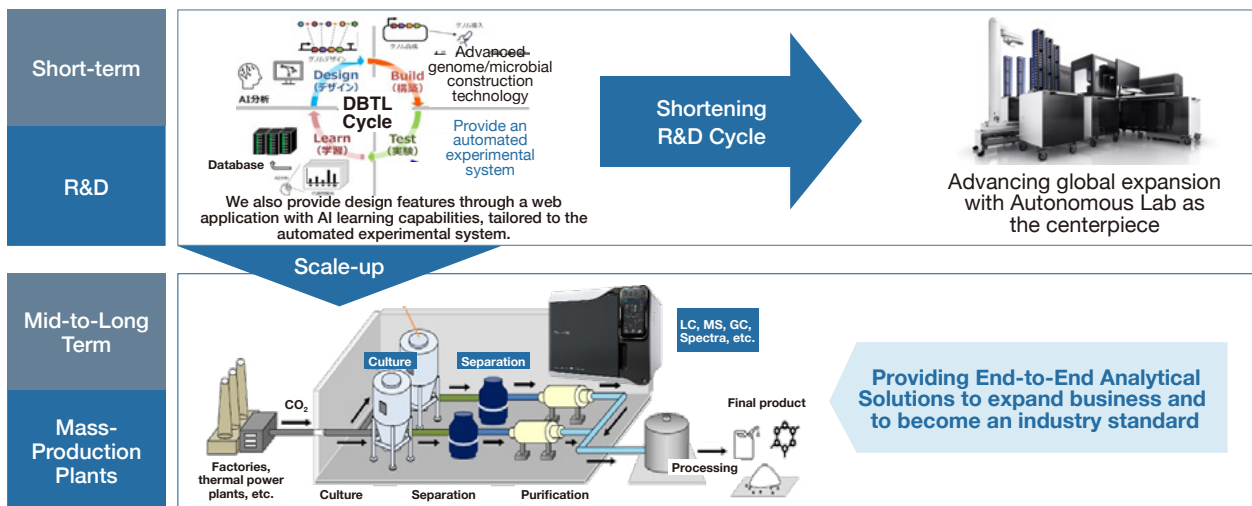
As R&D and social implementation in those four fields are directly linked to the “well-being of the Earth,” we will work closely with government research institutions, academic institutions, and customers in industry to offer end-to-end solutions centering on analytical/measuring instruments such as GC systems and testing machines.

- Points**
1. Providing total analytical solutions in the GX 4 fields and contributing to the realization of a carbon-neutral society
  2. Business expansion from both application and product strategies
  3. Strengthen relationships with NEDO in Japan and EPA and ISO overseas for standardization and regulatory compliance



**End-to-End Solutions for Bio-Manufacturing**

- Points**
1. Short-term: Establish a development base for the ‘DBTL cycle’ from Design (metabolic design/gene design) to Build (host construction) to Test (productivity evaluation/metabolome analysis) to Learn (analysis of experimental results) and standardize analytical methods
  2. Medium- to long-term: Provides End-to-End solutions for measuring instruments such as GC systems in plant processes, process analysis technology, media, consumables, etc.



## Strengthen Med-Tech Business

"Med-tech" has been defined as businesses that use technologies for component analysis, image analysis, and so on, to offer end-to-end solutions in health management, medical examinations, diagnosis, treatment, and prognosis management, in order to achieve longer and healthier life expectancies.

In the med-tech business, we will promote imaging transformations (IMX) and testing (diagnostics) of clinical samples.

IMX refers to imaging transformations that use diagnostic imaging equipment and AI/IoT technologies to offer new added value and reduce the burden on medical personnel and patients.

In terms of clinical sample testing, Shimadzu has mainly been expanding/improving the analytical product line for clinical testing, such as by acquiring the reagent companies Alsachim in France and Shimadzu Diagnostics Corporation (Nissui Pharmaceutical at the time). However, the demand for LCMS-based clinical testing, such as for newborn mass screening<sup>\*1</sup> and therapeutic drug monitoring (TDM)<sup>\*2</sup>, is expected to expand and we need to further strengthen our Med-Tech business. We are preparing to offer end-to-end solutions configured with LCMS products, CLAM-2040 automatic LCMS pretreatment systems, MALDI-8020/8030 matrix-assisted laser desorption/ionization time-of-flight mass spectrometer systems, software from Biomaneio, and reagents from Alsachim and Shimadzu Diagnostics.

Shimadzu's ability to offer both medical equipment and analytical/measuring instruments means we can uniquely differentiate our products from competitors in the Med-Tech field. In terms of the future, we aim to build a clinical testing platform where analytical technologies are used for early testing and X-ray technologies are used to diagnose, treat, and manage the prognosis of any discovered disease.

<sup>\*1</sup> Neonatal mass screening involves taking a tiny quantity of blood from newborns and examining it for any hidden congenital metabolic abnormalities, so that disorders can be prevented. Currently in Japan, all newborns are tested by neonatal mass screening, based on a system of public reimbursement for medical expenses by local governments.

For details, refer to the following.

[https://www.shimadzu.com/sustainability/approach/efforts/activities/2017\\_f1.html](https://www.shimadzu.com/sustainability/approach/efforts/activities/2017_f1.html)



Preventing the Onset or Reducing the Severity of Diseases in Newborns by Measuring Disease Factors in Blood

Boomerang Vol. 26

<https://www.shimadzu.co.jp/boomerang/26/05.html>

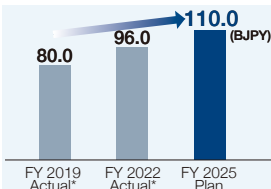
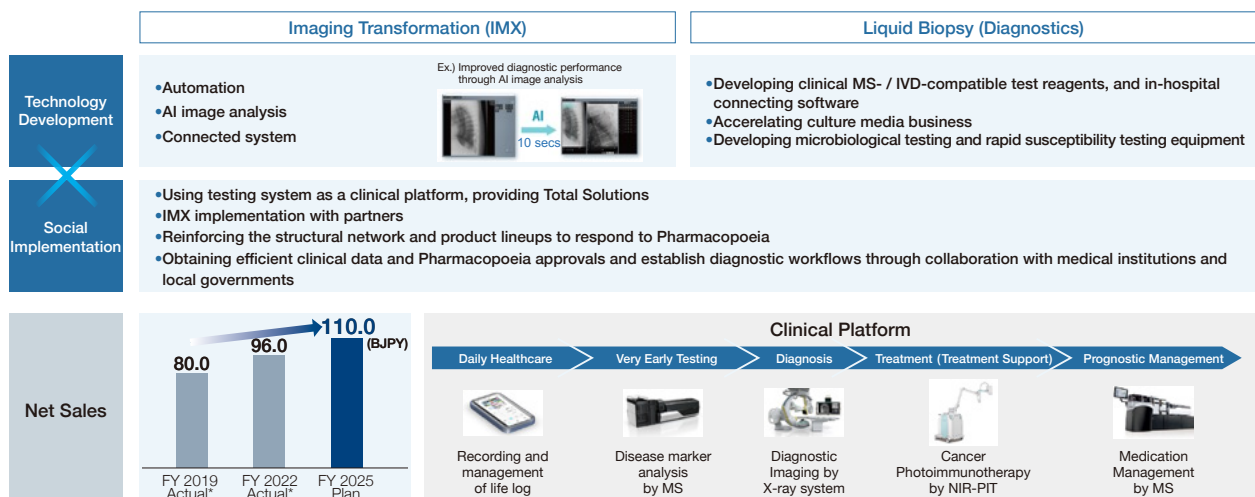


Protecting Even One Additional Child from Harm

<sup>\*2</sup> Therapeutic drug monitoring (TDM): Closely managing the quantities of drugs administered by measuring/monitoring the detailed concentrations of drugs in blood, such as after administering drugs to patients.

### Points

1. Medical Segment: Realize Imaging Transformation (IMX).
2. Diagnostics: Implement a liquid biopsy and expand reagent product lineups.
3. Provide new solutions by a clinical laboratory platform (LCMS and BresTome).



\* FY 2019 Actual, FY 2022 Actual converted by 1 USD 120 JPY, 1 Euro 130 JPY

**Medium-Term Management Plan**

**New Medium-Term Management Plan (FY 2023 to FY 2025)**

**Promoting Imaging Transformation (IMX)**

In the medical systems business, Shimadzu is promoting IMX measures to further contribute to healthcare and achieve innovations in X-ray radiography, by using imaging technologies (image processing, image transmission, and image recognition technologies) and mechatronic technologies cultivated by Shimadzu.

In the future, we will “use automation and AI to improve the workflow of healthcare personnel” and “develop new radiography products to enable new diagnostic and treatment methods” as part of IMX measures and offer end-to-end solutions that reduce the burden on patients and allow physicians to focus on patient care.

**Using AI Technology to Enable All Operators to Achieve Equivalent Image Quality Using Low Exposure Levels**

Shimadzu has released new software that uses AI technology to provide optimal images with a single press of an exposure button, regardless of the operator expertise or skill level. For example, various application software products are available as options for SONIALVISION G4 R/F systems, such as tomosynthesis\* software that can automatically configure recommended parameter settings based on the acquired data and the software that can instantaneously measure the bone

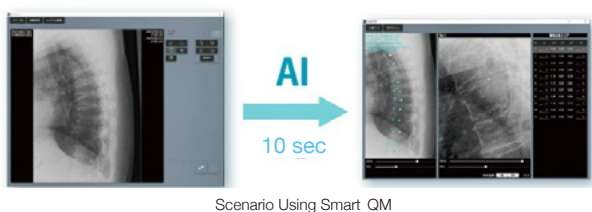
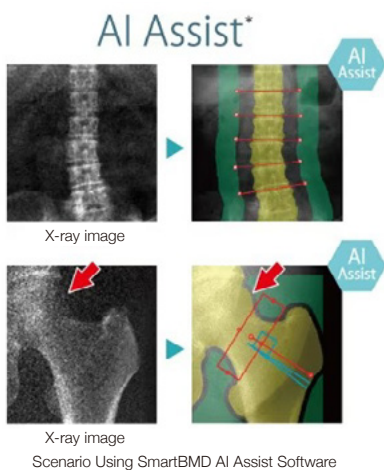
mineral density of lumbar vertebrae using the same operating steps as seasoned veteran operators.

We also partnered with the Jikei University School of Medicine to develop and release an AI-based Smart QM measurement software for diagnosing osteoporosis. Smart QM can quickly and efficiently perform measurements for determining vertebral fractures.

Trinias angiography systems are the world’s first angiography systems to include an AI-based image processing engine. The systems use AI deep learning technology and X-ray exposure parameter optimization functionality to reduce exposure dose by over 40% from previous levels and improve the visibility of medical devices under low-dose conditions.

In the future as well, we will continue to use AI and other technologies to enable consistently high-quality images for achieving environments where X-ray technologists are free to focus on patient care.

\* The term tomosynthesis is a medical term that combines the terms “tomography” and “synthesis.” It refers to technology used to synthesize tomographic cross-sectional images from a series of X-ray images.





## Promoting Broad Use of Shimadzu's Health Improvement Platform in Society

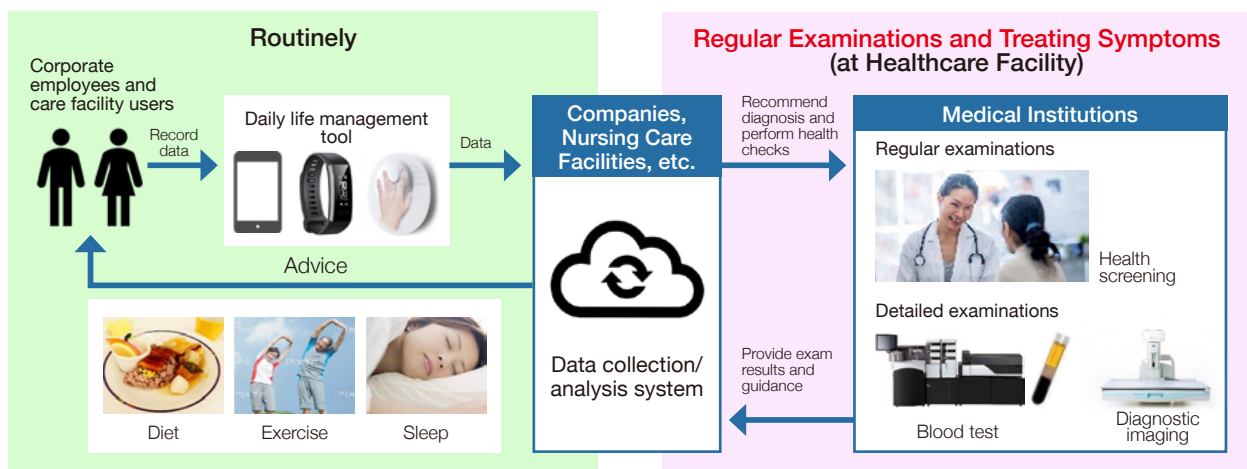
The Shimadzu Group is currently involved in promoting the widespread use of a health improvement platform for preventing lifestyle diseases and health threats. In partnerships with others, the Shimadzu Group will offer a routine health management tool, data collection system, advice, and examinations to companies promoting health management, nursing care facilities, and others. Users will improve their health by using the routine management tool and advice to

manage their own health.

Healthcare institutions will implement more appropriate advice and improvement measures by periodically checking the health status of users to discover diseases at an early stage.

The Shimadzu Group will help extend the healthy life expectancies of people by engaging in research and development with universities and various other partners and ensuring implementation of the R&D results in society, in an effort to build a platform for osteoporosis, dementia, and other health challenges.

### Diagram of Health Improvement Platform



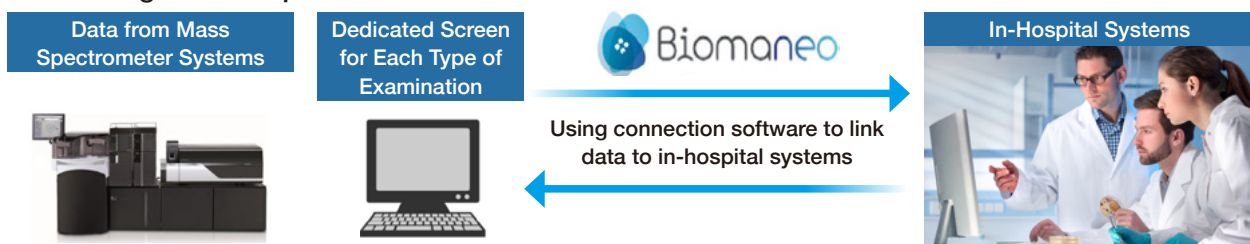
## Strengthening IVDR Compliance

Shimadzu has been engaged in ensuring compliance with the In Vitro Diagnostic Medical Device Regulation (IVDR) in Europe. Therefore, in May 2023 Shimadzu acquired Biomaneó in France, a company with skills for ensuring compliance with IVDR. The experts at Biomaneó will develop IVDR-compliant software for various examinations including therapeutic drug monitoring (TDM), and the software dedicated to reagents made by the Shimadzu subsidiary Alsachim. Due to the widespread adoption of laboratory information systems (LIS) that link examination results, examination time data, and

other information to patient electronic medical records at hospitals in Europe, hospitals are requesting that data from LCMS systems and other examination systems also be linkable to their LIS systems. The new addition of Biomaneó software to the Shimadzu product line will enable data from Shimadzu examination systems to be sent automatically to LIS systems.

By combining Shimadzu clinical analytical instruments with Biomaneó software, Alsachim reagents, and Shimadzu Diagnostics reagents, the Shimadzu Group will be able to offer end-to-end solutions for Med-Tech fields.

## Connecting to In-Hospital Networks

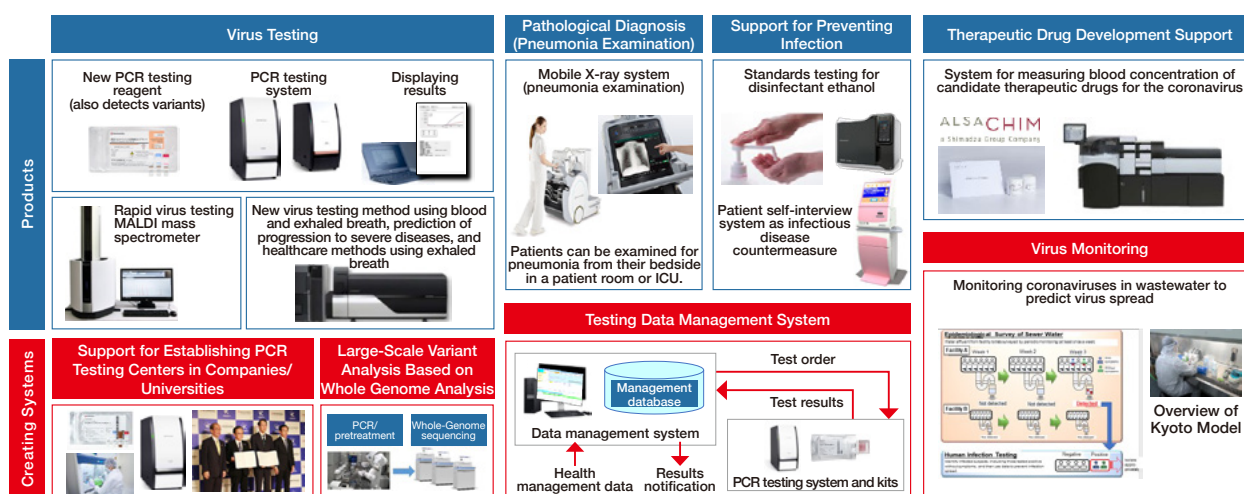


# Measures for Infectious Diseases

## Measures in the Previous Medium-Term Management Plan

Shimadzu launched “infectious disease countermeasure projects” in response to the important urgent challenges presented from the waves of COVID-19 infections surging throughout the world during FY 2020, the first year of the previous medium-term management plan.

To offer solutions for the challenges to society due to the pandemic, Shimadzu worked with universities, healthcare institutions, and other partners to offer new testing-related products and also actively create systems for controlling the spread of infectious diseases.



## Measures for Predicting and Understanding the Spread of Infectious Diseases

### Promoting Wastewater Monitoring

In January 2022, Shimadzu and Shionogi & Co., Ltd. established AdvanSentinel, a joint venture company for engaging in wastewater surveillance. Wastewater surveillance, which involves testing and monitoring viruses in wastewater, can determine the infection levels in the regions that generate the wastewater and also enables determining the presence/absence of infections at specific facilities. Consequently, it can be used to discover threats to people in those regions or specific facilities at an early stage to enable visualization of infection levels and to provide information for ensuring safety and implementing appropriate countermeasures for those threats.

Currently, various Japanese government agencies/ministries, such as the Ministry of Health, Labour and Welfare and the Ministry of Land, Infrastructure, Transport and Tourism, are cooperating to investigate and research wastewater surveillance. In addition, the Cabinet Secretariat conducted a large-scale demonstration project in FY 2022 and posted<sup>\*1</sup> the results on the Cabinet Secretariat website at the end of April 2023. Twenty wastewater treatment facilities throughout Japan, ranging from Hokkaido to Kyushu, participated in the demonstration project and posted examples of various initiatives. For example, the city of Yabu, in Hyogo Prefecture,

used traffic light colors to notify citizens about the concentration level of viruses in the wastewater in an easy-to-understand manner. Other measures of significance included illuminating government buildings to broadcast information to Yabu citizens.<sup>\*2</sup>

However, now that the public health emergency declaration by the World Health Organization has ended and COVID-19 has been classified as a Class 5 Infectious Disease in Japan, people are starting to return to their normal daily lives as they were before the waves of COVID-19 infections surged throughout the world starting from late 2019. On the other hand, the threat from the COVID-19 coronavirus has not been completely extinguished and there are still remaining issues, such as the difficulty of determining actual infection levels in cities when so many cases do not exhibit symptoms.

Therefore, until COVID-19 infections have completely subsided, AdvanSentinel will continue its contribution of supplementing clinical testing with technology that enables visualization of infection levels using wastewater. In addition, AdvanSentinel will use new technologies acquired from experience fighting the current pandemic to predict and understand epidemics in the future, in an effort to further contribute to society.

<sup>\*1</sup> Cabinet Secretariat website: Wastewater Surveillance  
<https://corona.go.jp/surveillance/>

<sup>\*2</sup> Report on the “Project to Demonstrate the Use of Wastewater Surveillance,” an investigative study for validation and adoption of key technologies necessary for realizing a post-pandemic society.  
[https://corona.go.jp/surveillance/pdf/plants\\_report.pdf](https://corona.go.jp/surveillance/pdf/plants_report.pdf)

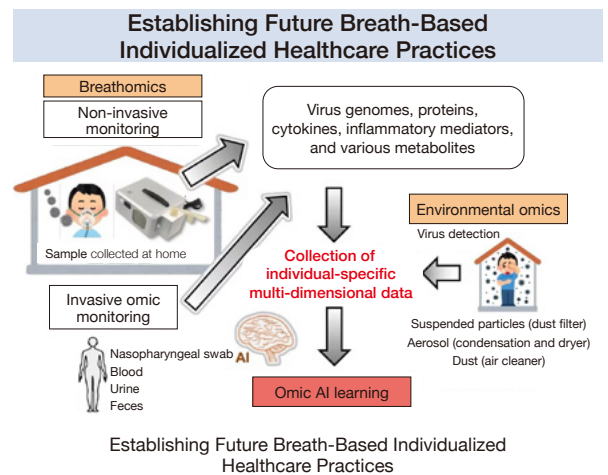
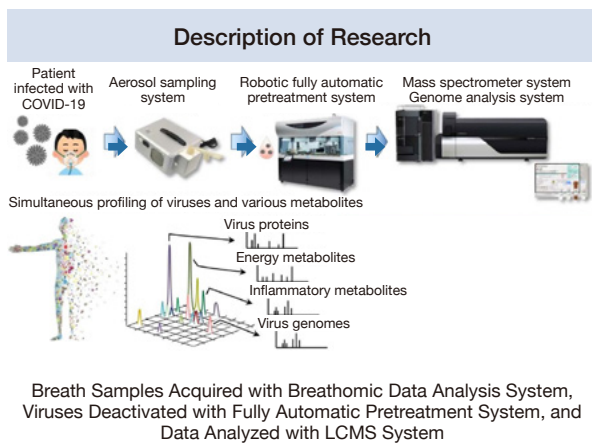
## Deploying Future Breath-Based Medical Practices Using “Breathomics”

In October 2020, joint research by Shimadzu and Tohoku University successfully developed a method for using breathomics to detect coronaviruses in naturally exhaled breath samples. Breathomics is cutting-edge technology for analyzing viruses, biological proteins, and metabolites present in exhaled breath. In addition to detecting the presence/absence of viral infections, breathomics can also be used to acquire information for assessing the stage and conditions of diseases, judging the risk of conditions becoming more severe, and predicting complications.

Furthermore, samples for breathomic testing can be acquired easily from exhaled breath and diagnostic results can

be obtained quickly (within an hour). We are also jointly researching other applications as well, such as the early diagnosis of pneumonia, diagnosis of severity and prognosis, determination of therapeutic effects, rapid identification of virus variants, and analysis of viruses other than novel coronaviruses.

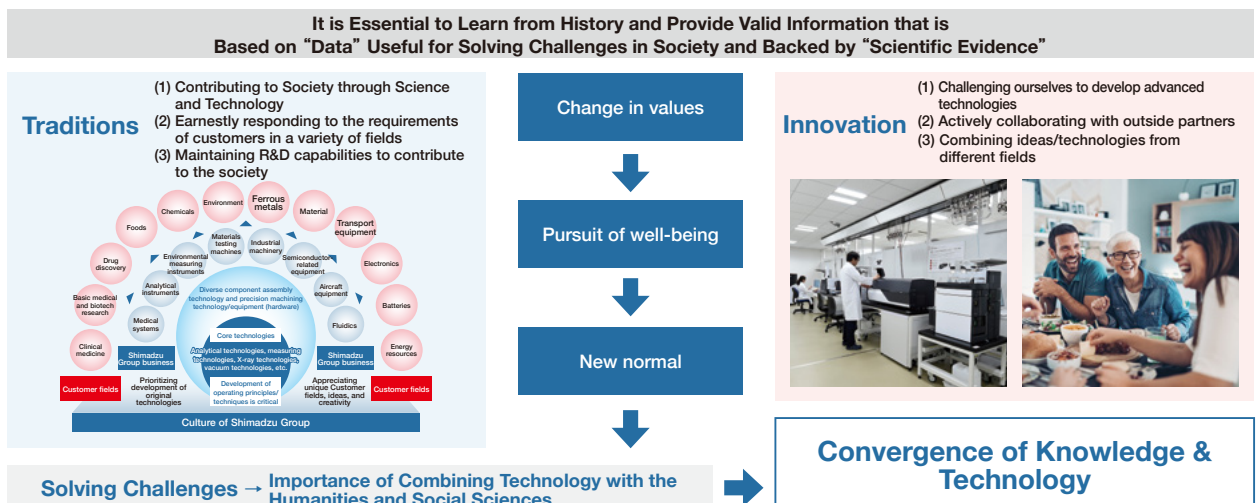
In the future, by expanding the scope of breathomic applications beyond infectious diseases, such as to diagnose other types of diseases or for health screening, we plan to deploy breathomics for use in future breath-based healthcare practices and develop individualized medical applications for presymptomatic, preventive, and longevity care.



## Preparing for the Next Epidemic

Because the COVID-19 pandemic significantly changed people’s sense of value and made the pursuit of well-being newly topical, conventional assumptions are continuing to evolve into what is referred to as the “new normal.” The Shimadzu Group has been earnestly responding to customer requirements in a variety of fields based on our

corporate philosophy “Contributing to Society through Science and Technology,” while also constantly challenging ourselves to implement innovative measures through active collaboration with outside partners. Based on those “traditions” and “innovation,” we will strive to solve challenges related to infectious diseases.

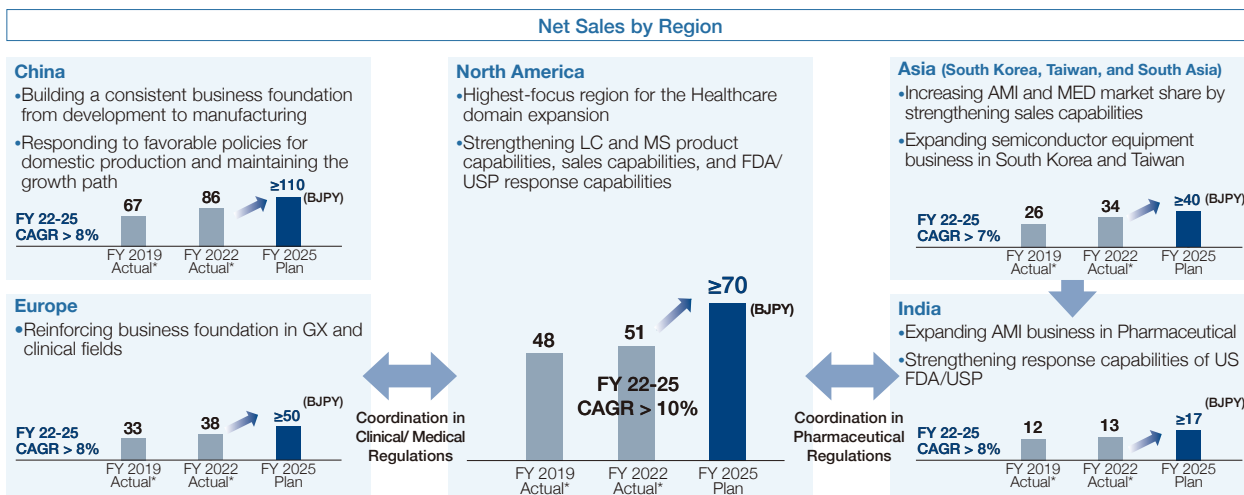


## Expanding Overseas Business

We will focus the most effort on expanding the healthcare business in North America.

However, we will also provide better customer support in other regions for better alignment with regional markets.

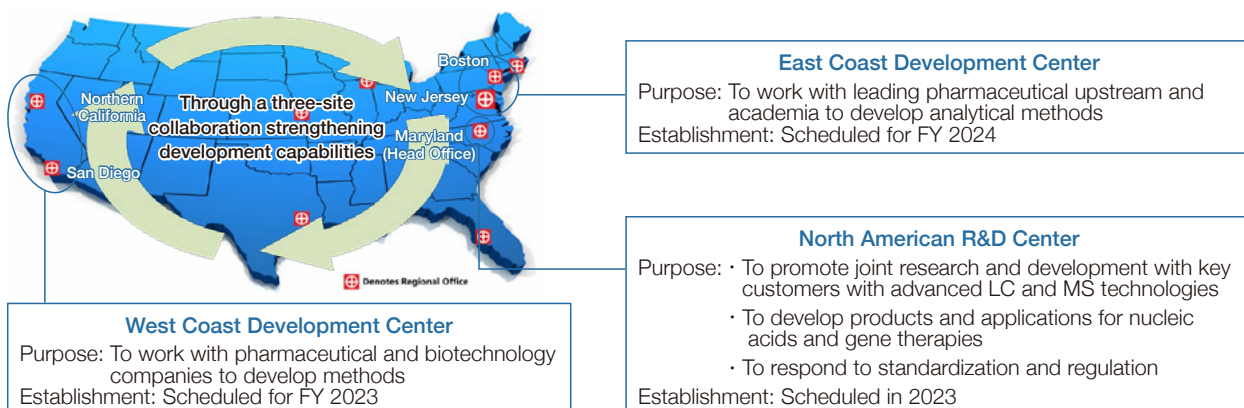
- Points**
1. Provide better customer support for better alignment with regional markets.
  2. Strengthen the development foundation for 4 domains.
  3. Reinforce BCM to respond to geopolitical risks.



## Providing Total Liquid Chromatograph and Mass Spectrometer Systems Solutions in North America

In the North American pharmaceuticals market, which we identified as especially important, we will promote joint research and joint development partnerships with researchers and important customers with advanced liquid chromatograph or mass spectrometer technologies. We will also establish an R&D center in North America to strengthen product and application development capabilities for future modalities, such as nucleic acids and gene therapy drugs. In addition, we will establish pharmaceutical development centers on the East and West Coast to jointly develop analysis methods with pharmaceutical and biotech customers. At those facilities, we will develop products and application software needed by North American customers.

- Points**
1. Enhance business by improving its sales force, strengthening its application development based on customer needs, and establishing an R&D center to develop customer-oriented products.
  2. Open a Pharmaceutical Development Center to understand customer needs and provide feedback for development.





## Message from the President of Shimadzu Scientific Instruments, Inc.



Yoshiaki Maeda  
President, Shimadzu Scientific Instruments, Inc.

### Review of the Previous Medium-Term Management Plan

From the mid-2010s to about 2019, SSI successfully pioneered and increased sales in promising new niche markets for pain management and cannabis. In the previous medium-term management plan, we focused efforts in three fields—pharmaceuticals, clinical testing, and environmental measurement. In particular, we achieved a certain amount of success in the field of pharmaceuticals, with our semi-preparative supercritical fluid chromatograph systems, which employ Shimadzu's best preparative purification technologies. The systems have been introduced in the drug discovery departments at mega pharmaceutical companies.

### Strategies in the New Medium-Term Management Plan

The new medium-term management plan specifies a strategy for expanding businesses in North America based on two approaches: technology development and social implementation.

Not only application development but also the sales, marketing, and service for pharmaceutical companies will be strengthened. Currently, application software is mainly developed at the North American innovation center, so we will extend its functions first. Working in cooperation with our Group personnel in Japan, we want to develop application software mainly for MS and LC systems and



offer end-to-end solutions including consumables, reagents, and pretreatment systems. In terms of sales, we will double the current number of sales personnel for the pharmaceuticals field and actively utilize digital technologies for inside sales.

To strengthen the business foundation, we will establish an R&D center where technologies and products can be quickly developed based on more accurately identified customer needs in North America. Eventually, we want to deploy the technologies and products developed in North America to other regions in the world. For example, unlike in Japan, field engineers must cover very large territories that can often take over 10 hours of travel by car for product installation. After arriving at the site, even one missing part can prevent product installation. Such inconveniences might not be noticed in Japan where parts are immediately available, so we want to propose products that do not require any tools or parts to be procured locally for installation. Furthermore, on the East and West Coast where large pharmaceutical companies are highly concentrated, we plan to establish new pharmaceutical development centers for developing analytical methodology. Those measures will allow us to listen to customer requests directly and help mitigate time zone differences. There is a three-hour time difference between the East and West Coast. If a West Coast customer makes a request at 3 pm, it is already 6 pm at the Maryland head office on the East Coast, which is after normal working hours and prevents responding to the request promptly. Establishing pharmaceutical development centers on the East and West Coast will allow us to respond to customers more promptly, resulting in the acceleration of development.

### Increasing Market Presence in North America by Providing End-to-End Solutions

Given that competitors enjoy a home-field advantage in North America, Shimadzu's current market presence is still rather small in terms of both brand recognition and market share. Nevertheless, I am confident that we can definitely achieve good results by offering end-to-end solutions tailored to customer needs. For example, we started joint development of the Nexera QX high-efficiency multi-stream LCMS system with a major laboratory testing company in 2018. Although we struggled at first, sales to that customer are now 4 to 5 times higher than they were initially. That shows just how strong products can be if they are created based on customer feedback. Strengthening both the business foundation and the functions of SSI and continuing to offer end-to-end solutions that reflect customer needs will surely increase Shimadzu's market presence in North America.

Expect great things ahead from Shimadzu in North America.

## Strengthen & Expand Businesses with Recurring Revenues

In addition to expanding the sales of maintenance and service contracts that offer DX/IoT-based remote monitoring and maintenance functionality, we will promote the AI-based software licensing business.

We will expand businesses with recurring revenues from reagents, culture media, columns, and other consumables.

We will also strengthen development of reagents, culture media, and chromatograph columns through collaboration with other Shimadzu Group companies including Shimadzu Diagnostics Corporation (formerly Nissui Pharmaceutical).

- Points**
1. Strengthen global service structure and expand maintenance parts and contracts.
  2. Develop and increase the consumables such as reagents, columns, and culture media.

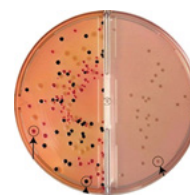
	Maintenance & Service Contracts	Consumables Business		
<b>Technology Development</b>	<ul style="list-style-type: none"> <li>Developing remote monitoring &amp; maintenance by DX and IoT</li> <li>Software development using AI</li> </ul>	<ul style="list-style-type: none"> <li>Accelerating reagent development capabilities</li> <li>In-house development of culture media</li> <li>Column development for chromatographs</li> </ul>		
<b>Social Implementation</b>	<ul style="list-style-type: none"> <li>AMI: Establishing a sales &amp; service system for clinical laboratory reagents</li> <li>Medical: Increasing overseas maintenance contracts</li> <li>Industrial: Reinforcing TMP service organization</li> </ul>	<ul style="list-style-type: none"> <li>Expanding production of reagents &amp; media and promoting column in-house production</li> <li>Expanding contract-analysis business</li> <li>Reinforcing sales structure for reagents and media</li> <li>Accelerating external partnerships</li> </ul>		
<b>Performance Target</b>	<b>Recurring Ratio</b>	<b>FY 2019 Actual</b>	<b>FY 2022 Actual</b>	<b>FY 2025 Plan</b>
	AMI	32%	37%	43%
	Medical	30%	34%	34%
	Consolidated	28%	32%	35%



Shim-pack Scepter Series Column for High-Performance Liquid Chromatograph



Culture Media from Shimadzu Diagnostics Compact Dry



AccuRate Agar Medium

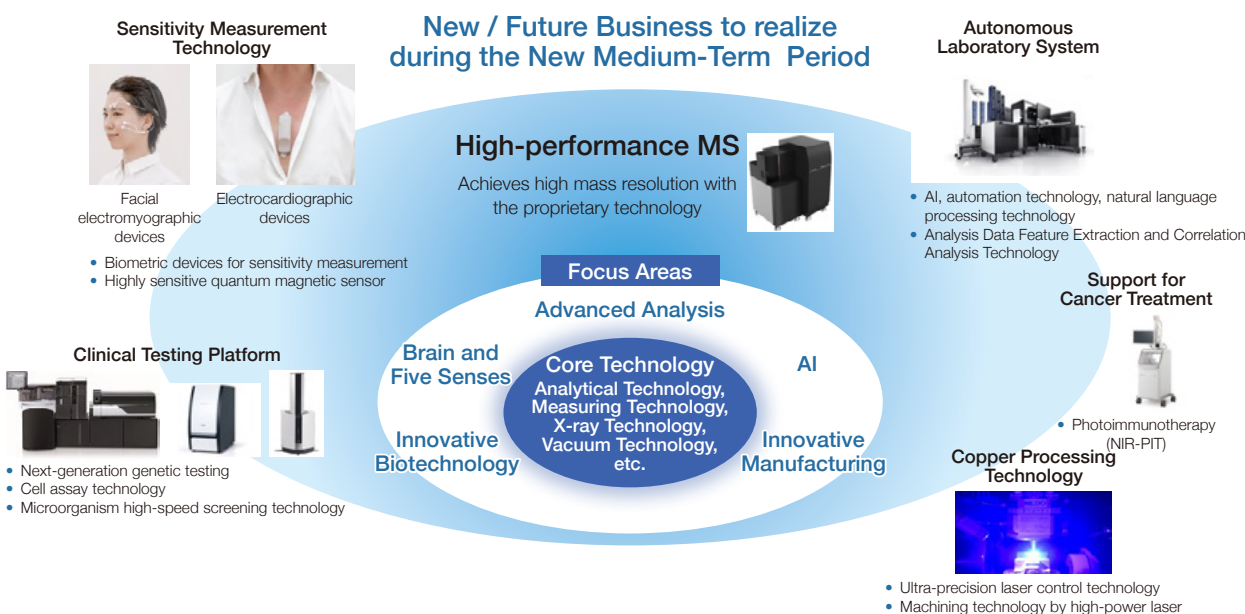


Reagents from Alsachim DOSIMMUNE

## Develop & Create New / Future Businesses

Implementing measures for developing/creating new and future businesses is an extremely important strategy for achieving business growth into the future. The new medium-term management plan specifies using Shimadzu's core technologies, such as analytical/measuring instruments, medical X-ray systems, and vacuum pumps, to deploy new products and new businesses in the key target fields of

advanced analysis, AI, innovative manufacturing, innovative biotechnology, and the brain/five senses. From a long-term perspective, we will also create future businesses that will contribute to achieving a sustainable society and solving challenges in society in the healthcare, green, material, and industry domains.



For more details about the new technologies and new businesses indicated above, refer to the following.

Sensitivity Measurement Technology  
<https://www.shimadzu.co.jp/news/press/fynnvrhbb7hb1de-.html>

October 2020 Press Release: Shimadzu Begins Delivering Prototype HuME Multi-Device Sensitivity Measurement System that Uses Multiple Metrics to Create Sensitivity Value



Autonomous Laboratory System  
<https://www.shimadzu.com/news/gjvtk3d5a3vrd5sw.html>

December 2021 Press Release: Utility of World's First Robotics-Compatible Autonomous Laboratory System with LC and LC-MS Units Verified with Kobe University  
 Shimadzu Released a Prototype for Researchers Interested in Automation



Shimadzu Design  
[https://www.shimadzu.co.jp/research\\_and\\_development/design\\_strategy/design/Q2.html](https://www.shimadzu.co.jp/research_and_development/design_strategy/design/Q2.html)

How can emotional responses of the heart/mind be measured?



Support for Cancer Treatment  
<https://www.shimadzu.com/advanced-healthcare/case/01.html>

Support for photoimmunotherapy research



Clinical Testing Platform  
<https://www.shimadzu.co.jp/cl/index.html>

Clinical sample testing equipment



Copper Processing Technology  
<https://www.shimadzu.co.jp/messe/exhibition/mobility/electric/motor/02.html>

Technology for Welding Copper with Blue Diode Lasers  
 Contributes to Improving EV Manufacturing Precision and Efficiency



# Analytical & Measuring Instruments Business

We contribute to solving challenges in society by using analytical and measuring technologies to support cutting-edge R&D and manufacturing in pharmaceutical, food, and industrial fields, and to provide technologies for testing of infectious diseases and mass spectrometers for cancer screening in life science fields.

Masami Tomita  
General Manager,

Analytical & Measuring Instruments Division



Related SDGs



## Business Environment

- In order to achieve a sustainable society, we are expected to establish a safe and secure society such as by implementing countermeasures for infectious and other diseases and improving public health.
- To achieve a carbon-neutral society, a variety of research has been performed with "global environmental impact" in mind.
- Efforts are being made to implement reforms for research practices, such as by using automation to prevent human errors or using AI/IoT technologies to enable anyone to easily achieve the skill level of an expert.

## Challenges of Society

- Declining birth rates and aging populations are resulting in higher costs for healthcare, social welfare, and other services. Due to growing interest in health, there is also increasing demand for ultra-early diagnosis, prevention, health promotion, and extending healthy life expectancies.
- Diversification of treatment choices, such as antibody drugs, nucleic acid drugs, cell therapy, gene therapy, and gene and cell therapy.
- Achieving a sustainable society through the widespread use of bio-manufacturing and next-generation energy sources such as hydrogen and biofuels.
- Addressing new environmental problems, such as reducing greenhouse gases, microplastics, and per- and polyfluoroalkyl substances (PFAS).
- Developing more advanced functionally engineered materials with lighter weight, better workability, compliance with safety regulations, and with higher reliability.

## Value Provided

### Healthcare Domain

- In the pharmaceutical field, we contribute to new drug development and productivity improvements by providing AI/IoT-based data analysis technologies in addition to advanced technologies for separation analysis and mass spectrometry.
- In the food field, we help ensure the safety and security of food by testing for residual pesticides, evaluating the presence of regulated substances contained in packaging, and ensuring regulatory compliance. In addition, we offer end-to-end solutions that contribute to strengthening the food-tech field. These include analysis and evaluation of meat alternatives and the components with functional properties in food.
- For clinical diagnostic applications, we build a diagnostic platform using mass spectrometers and fully automatic PCR testing systems. We contribute to maintaining people's health by developing technologies for the early diagnosis of diseases, such as dementia, cancer, and lifestyle diseases, and by developing a health management system for managing all stages of healthcare, from medical intervention to prognosis management and nursing care.
- We contribute to preventing the spread of infections by developing and improving PCR testing reagents and virus monitoring.

### Data Integrity

- We offer systems for centralized control of analytical instruments, testing information, and so on, that improve the efficiency of work processes and prevent altering, replacing, or otherwise tampering with data.

### Green (GX) Domain

- We offer end-to-end measuring solutions for the overall supply chain for hydrogen, ammonia, and other alternative energies, such as solutions for analyzing impurities or evaluating the quality of transport/storage infrastructures.
- We contribute to the development of quality evaluation methods for and standardization of bio-manufacturing processes, such as the process for production of biofuels or biochemicals from CO<sub>2</sub>.
- We develop and globally standardize the measurement methods to be used for compliance with new environmental regulations, such as those for microplastics and PFAS substances.

### Material Domain

- For the storage battery and EV markets, we promote application development and contribute to the development of new materials for improved fuel efficiency and enhanced safety.





The following web page includes information about the topic listed below.

<https://www.shimadzu.com/an/>



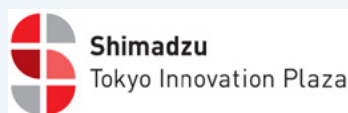
Analytical and Measuring Instruments

## FY 2022 Results Market Conditions/Key Measures and Results

- Despite being affected by shortages of semiconductors and other parts/materials and by sharply higher prices, record net sales and operating income were achieved for the third consecutive year.
- The sales of liquid chromatographs (LC) and mass spectrometers (MS) were strong in pharmaceuticals, contract analysis, and other healthcare fields. This is due to a trend toward domestic production of pharmaceutical ingredients in various countries, in response to pharmaceutical ingredient shortages caused by pandemic-related supply chain disruptions, and also due to promotion of investments in new drug development.
- In Japan, though the sales of pandemic-related products decreased, the sales of gas chromatographs (GC), nondestructive inspection systems, and other products increased in the green domain as well as the sales of MS products in the healthcare domain. The acquisition of Nissui Pharmaceutical (renamed "Shimadzu Diagnostics Corporation" in April 2023) as a consolidated subsidiary also contributed to performance.
- Outside Japan, increasing COVID-19 infections in China impacted our results, but LC sales were strong for pharmaceutical applications and MS sales increased for environmental and clinical regulatory compliance applications. The overseas sales ratio increased by 3 points, year on year, to 56%.
- The aftermarket business sales ratio increased by 1 point, year on year, to 37%, due to the acquisition of Nissui Pharmaceutical and increased service contract sales.
- We released an LCMS-2050 high-performance liquid chromatograph that offers easy operability, high basic performance, and a compact size. In addition to having among the highest basic performance levels in the industry, it offers a space-saving design and energy-saving features for achieving efficient laboratory operations.
- We released the LCMS-9050 Q-TOF high-performance liquid chromatograph mass spectrometer that offers among the world's highest speed levels and enables the simultaneous measurement of positive/negative ions. Compared to the previous models, the time required for analysis has been reduced to about one-half, while the resolution has increased 1.5 times. Using the system in combination with Shimadzu's broad line of other instruments, the system can be expanded flexibly according to customer needs, thus contributing to new drug development in pharmaceutical fields or new material development in chemical fields.
- We released the AGX-V2 series AUTOGRAPH precision universal testing machine equipped with the world's first voice control functionality. Voice instructions can improve testing efficiency and warn operators when operating the machine. For EV and other industries promoting carbon reduction, the AGX-V2 makes contributions by enabling strength testing of parts that are made of new materials or designed with new structures.

### Creating New Value from the Highest Levels of Research in the World

In January 2023, Shimadzu opened the new Shimadzu Tokyo Innovation Plaza intended for generating new technologies and innovation. The facility will strengthen Shimadzu's software R&D capabilities, such as for analytical and measuring instrument applications and for setting analytical conditions. It is located only a 10-minute drive from Haneda Airport. That prime location means the views of more users can be considered when developing solutions that satisfy the needs of frontline users. The site can also be used to develop or jointly research advanced analytical techniques in collaboration with customers throughout the world.



Photograph of Exterior (Located within the King Skyfront International Strategic Zone in Kawasaki City, Kanagawa Prefecture)

### New Products



LCMS-2050  
High-Performance Liquid Chromatograph  
Mass Spectrometer System



LCMS-9050  
High-Performance Liquid Chromatograph  
Mass Spectrometer System



AGX-V2 Series AUTOGRAPH  
Precision Universal Testing Machine

## Analytical & Measuring Instruments Business

### Key Measures for FY 2023

Fighting the COVID-19 pandemic has raised the level of awareness about life and health throughout the world. Also, it has increased public interest in sustainability and made sustainability an important issue for achieving the “well-being of the Earth,” such as by treating the impacts of climate change as a challenge for society. During the new medium-term management plan that started this year, Shimadzu will strengthen relationships with partners around the world in order to create a sustainable society, by focusing efforts on generating social value in mainly the healthcare and green (GX) domains.

#### Strengthen Key Businesses

In the healthcare domain, we aim to offer end-to-end solutions for nucleic acid therapeutics and other biopharmaceuticals or for food-tech, based on our core liquid chromatograph and mass spectrometer products. In addition to strengthening the competitiveness of core products, we will offer LabSolutions MD analysis method development assistance software, Peakintelligence AI data analysis software, and robotic automation systems to achieve higher efficiency and optimize the analytical processes at customer laboratories.

In the green domain, we will expand business by setting strategies for both software applications and new products, in the fields of bio-manufacturing, clean energies such as hydrogen and ammonia, and for compliance with environmental regulations concerning microplastics, organofluorine compounds (PFAS), and so on. In addition, we will strengthen partnerships with domestic and international standard development organizations and implement global strategies for standardization and compliance in order to increase our competitiveness.

In the material domain, we will contribute to the development and manufacturing of innovative materials through automation achieved with our analytical and measuring instruments including testing machines, and through multi-metric data analysis using informatics.

#### Strengthening Clinical Businesses

We will focus efforts in three areas: clinical diagnostics, microbial testing, and cellular analysis. We aim to offer solutions using our component analysis and image analysis technologies. For example, mass spectrometers and fully automatic PCR testing systems could be used for ultra-early detection of diseases and X-ray technologies could be used to diagnose any potential diseases found. Based on a clinical platform established using those technologies, we will expand clinical businesses by actively promoting the development of reagents by Shimadzu Diagnostics Corporation (name changed from Nissui Pharmaceutical in April 2023) and M&A activities.

#### Strengthen Businesses outside Japan

We will expand businesses in regions around the world, but the highest priority will be North America. In North America, we will establish a North American R&D center for the purpose of engaging in joint research and development collaborations with important customers that have advanced liquid chromatograph or mass spectrometer technologies. In addition, we will establish development centers on the East and West Coast and expand/improve their functions so Shimadzu can work with customers in pharmaceutical manufacturing and other fields to jointly develop analysis methods. Furthermore, we will achieve growth by strengthening both our application software development capabilities and service capabilities.

#### Strengthen & Expand Businesses with Recurring Revenues

We will expand service contract sales by developing DX/IoT-based remote monitoring and remote maintenance functions and by expanding/improving products for the AI-based software licensing business. We also aim to expand the consumables business for reagents, culture media, and columns by strengthening our capabilities for developing reagents and other consumables in partnership with our Group companies.

### Life Sciences-Pharmaceuticals and Foods

These instruments can measure the content of active ingredients and impurities in samples and can be used for quality control in a wide range of fields, such as in pharmaceutical, biochemical, food, and environmental fields.



Nexera XS inert  
Ultra-High-Performance  
Liquid Chromatograph



Advanced i-Series  
Integrated Liquid Chromatograph



LCMS-8060NX  
Liquid Chromatograph Mass Spectrometer System



GCMS-TQ8050 NX  
Gas Chromatograph Mass Spectrometer System

## Clinical

By investigating the metabolites, active ingredients, and other components contained in blood or urine, these instruments can be used for applications such as cancer or dementia screening or for verifying the efficacy of drugs.



CLAM-2030  
Fully Automated Sample Preparation Module for LCMS



AutoAmp  
Genetic Analyzer



COVID-19 Variant Strain (L452R)  
Detection Kit R



Matrix-Assisted Laser Desorption Ionization  
MALDI-8030 TOF Mass Spectrometer System

## Green

We provide instruments and services that help ensure compliance with environmental regulations and provide support for alternative energies.



GC-2030  
Gas Chromatograph



Xseeker8000  
Tabletop X-Ray CT System



Autonomous Lab  
Autonomous Lab System

## Materials

These instruments are used to test the strength of a wide variety of items, such as rubber, plastic, or metal materials, or objects such as foods, mobile phones, or automotive parts.



AGX-V2 Series AUTOGRAPH  
Precision Universal Testing Machine



FPD HR Plus  
inspeXio SMX-225CT  
Microfocus X-Ray CT System



AIRsight  
Infrared Raman Microscope



TOC-L  
Total Organic Carbon Analyzer

# Medical Systems Business

With our cutting-edge image processing technologies, we offer easy-to-use medical systems that reduce the stress on patients and contribute to early detection and early treatment of a variety of diseases, such as infectious diseases, cerebrovascular/cardiovascular diseases, and cancers, at medical facilities around the world.



**Kiyohito Sonoki**  
General Manager,  
Medical Systems Division

Related SDGs



**Business Environment**

- In developed economies, society needs to mitigate the risks of injury and illness associated with aging populations, and demands medical care that places less stress on patients.
- Due to the improving health levels in many newly emerging economies and developing countries, they are now increasingly facing aging-related problems and are demanding more sophisticated healthcare technologies and diagnostic imaging systems comparable to those of developed economies.
- Due to a shortage of healthcare workers that has resulted in harsh working environments in the healthcare industry, healthcare facilities are seeking solutions that use AI or IoT technologies to reduce the workload and improve the quality of medical diagnoses.

**Challenges of Society**

- Achieve longer healthy life expectancies, so people can be healthy in their daily life.
- Provide more advanced examination technologies that can detect physical disorders as early as possible and identify the causes of diseases.
- Reduce the workload of each healthcare worker that has increased due to the shortage of healthcare workers.

**Value Provided**

**Diagnosis**

- Fluoroscopy systems help maintain bone health through their utilization for diagnosis of osteoporosis or for follow-up examinations after artificial joint surgery. The systems include image processing technology that can achieve both high-resolution images and low radiation dose levels, which improves diagnostic accuracy by clearly showing endoscopic devices and helps reduce the burden on patients.
- Dedicated head and breast PET systems can display high-definition images of brain tumors, epilepsy, breast cancer, and other disorders, and even contribute to Alzheimer's or other dementia research.
- For psychiatric disorders, we offer supplemental support for differential diagnosis of depression using near-infrared light.

- To support efficient radiation therapy, we offer a tumor-tracking system that, when used in combination with a radiation therapy system, can significantly reduce the radiation dose to normal tissues by allowing irradiation only to cancer tissues.
- In addition to X-ray technologies, we also offer near-infrared light-based solutions for supporting surgical procedures in breast surgery, plastic surgery, gastrointestinal, and dermatology departments.

**Other**

- To promote clinical applications for analytical technology, we are improving the practicality of techniques that can be used in the future to predict the risks of a wide variety of diseases from a single drop of blood.
- We provide support for improving the efficiency of healthcare administration, such as by offering returning patient reception systems and treatment fee payment systems to hospitals and electronic medical records systems to clinics.
- We improve the efficiency of radiological processes by including AI functionality or power-assist technologies in products.

**Treatment**

- We offer angiography systems with dynamic image processing software based on cutting-edge AI deep learning technology that helps perform advanced minimally invasive procedures. Complex operations can be executed with a single press of a button. Improved operability can shorten the time required for treatment and reduce the quantity of contrast media injected, thus reducing the burden on patients.

**Diagnostic X-Ray Systems**

Equipped with advanced image processing technology, these easy-to-use medical systems reduce the stress on patients.



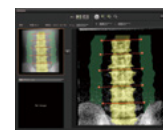
Trinias Angiography System



Fluoroscopy System



Mobile X-Ray System



Bone Mineral Density Measurement



The following web page includes information about the topic listed below.

<https://www.shimadzu.com/med/index.html>

Diagnostic Imaging Systems



## FY 2022 Results Market Conditions/Key Measures and Results

- Capital equipment investment levels at healthcare facilities are recovering after being stifled during the pandemic. The sales of new products resulted in record-breaking net sales. Operating income decreased due to rapid price increases for parts/materials.
- In Japan, the sales of fluoroscopy and angiography systems increased due to a recovery in capital equipment investments at healthcare facilities. Tumor-tracking systems for radiotherapy and the aftermarket business also contributed to sales.
- Outside Japan, the sales of patient-side fluoroscopy systems designed for the U.S. market increased. In China, sales were impacted by the increase in COVID-19 infections, but capital investments were strong and the sales of mobile X-ray systems increased due to government stimulus funds used by healthcare institutions. The overseas sales ratio increased by 3 points, year on year, to 46%.
- Increased sales of BresTome, the world's first TOF-PET system dedicated to imaging of the head and breast, contributed to results.

## Key Measures for FY 2023

### Deploy Imaging Transformation

- Use Shimadzu strengths in imaging and mechatronic technologies to deploy imaging transformation for further contribution to healthcare in the field of radiography.
- Build systems with automated instruments that allow operators to focus on patient care.
- Expand/improve the video imaging functionality to support immediate diagnosis and treatment.
- Offer functionality that uses AI-based diagnostic assistance software to help diagnose patients immediately in emergency care.

### Expand Business for Regionally-Specific Geriatric Healthcare

- Offer end-to-end solutions for geriatric care in East Asian countries with aging populations, such as Japan and China. In particular, offer solutions for extending healthy life expectancies in

terms of orthopedic surgery, cardiovascular disease, and dementia, which are three areas where Shimadzu has particular strengths.

### Develop and Promote Businesses in Growth Fields

- Establish sales and service capabilities in preparation for expansion in target growth fields, such as advanced healthcare and clinical microbial testing fields, and deploy the capabilities globally.

### Improve and Expand the Profitability of Recurring Businesses

- Promote the connection between our products/services and customers on a global scale.
- Utilize IoT for product diagnostics and maintenance.

## DX Examples in Medical Systems Businesses

### World's First Angiography System with Cutting-Edge AI-Based Image Processing Technology

By using AI deep learning technology and optimizing X-ray exposure parameters, the new system reduces exposure dose levels by 40% or more compared to previous models, while also improving the visibility of endovascular treatment devices under low-dose conditions. It is the world's first angiography system that includes an image processing engine equipped with AI technology. With customizable touch panel and monitor screens, the screen layouts can be freely reconfigured based on user needs to optimize operating efficiency for each workplace where it is used. The subscription service regularly updates the software to ensure examinations and procedures are performed using the latest software version.



Trinius Angiography System

### Production Line DX Measures Improve Working Conditions and Reduce Environmental Impacts

The manufacturing subsidiary Shimane Shimadzu Corporation will implement DX measures in the painting process and also increase/improve robotic welding. An IoT-based network will be created using RFID\* technology to fully automate the painting of multiple types of parts within a single production line. In addition, AI will be used to pass or fail parts during paint status inspections. As a result, 70% of the part painting process will be fully automated. Introducing a paint overspray recovery system will also reduce paint waste by 25%, resulting in less environmental impacts.

\* A technology used for automatic identification of parts by electromagnetically reading information from/writing information to IC tags



Shimane Shimadzu (Izumo City, Shimane)

## Solutions for Supporting Healthcare and Improving Healthcare Operating Efficiency



General Radiography System

PET systems are offered for producing high-definition imaging of brain tumors, epilepsy, and breast cancer.



Dedicated Head and Breast PET System

This tumor-tracking system supports radiotherapy by pinpointing X-ray irradiation on tumors in organs that move due to breathing.



Tumor-Tracking System for Radiotherapy

# Industrial Machinery Business

We contribute to industrial development by supplying high-quality and high-performance key components, such as turbomolecular pumps and equipment and parts equipped with sophisticated hydraulic technology.



Masahiko Tanaka  
General Manager,  
Industrial Machinery Division  
and Fluidics Systems Division

Related SDGs



Business Environment

- Although the demand for semiconductors will undergo a temporary adjustment phase, it will continue to increase due to the expansion of IoT technologies and 5G communication networks underlying the increasingly extensive use of information in society, the implementation of DX measures, and other factors. Therefore, in the medium and long term, the market for turbomolecular pumps used in semiconductor manufacturing equipment is expected to expand as well.
- The demand for hydraulic equipment used in forklifts, construction machinery, and agricultural equipment is also expected to expand.
- To contribute to industrial development, we will release new products based on innovative technologies and develop new market fields.

Challenges of Society

- Develop sustainable and resilient infrastructure.
- Implement global measures to achieve a carbon-free society.

Value Provided

- We will promote sustainable infrastructure development by offering key products and manufacturing equipment that contribute to a broad range of advanced manufacturing industries, such as by offering turbomolecular pumps used as key components in semiconductor manufacturing equipment, gear pumps used as hydraulic power sources in forklifts and construction/agricultural machinery, and industrial furnaces for ceramics, expected to be increasingly demanded for use as electric vehicle circuitry heat sinks.
- We contribute to the expansion of renewable energies by supplying glass winders for winding glass fiber used to reinforce wind turbine blades.

## Industrial Machinery

Turbomolecular pumps are vacuum pumps used to create the ultra-high vacuum environment essential for manufacturing semiconductors and panels.



Turbomolecular Pump

These furnaces are used to harden metals, ceramics, or other materials by heat-treating them in a vacuum or pressurized environment.



Industrial Furnace

Glass winders are used to wind up glass fibers used to make electronic circuit boards and wind turbine impellers.



Glass Winder

Balancers measure and provide basic data about how precisely components are balanced (how uniformly mass is distributed throughout rotating bodies and shafts).



Balancer

## Hydraulic Equipment

These hydraulic power sources are used for a wide range of applications, such as forklifts and other industrial vehicles, construction machinery, special-purpose vehicles, and agricultural equipment.



Hydraulic Gear Pump



Power Package



Forklift

Hydraulic Gear Pump

The following web page includes information about the topic listed below.

<https://www.shimadzu.com/industry/index.html>

Vacuum Equipment/Industrial Machinery



The following web page includes information about the topic listed below.

<https://www.shimadzu.com/hydraulic/index.html>

Hydraulic Equipment



## FY 2022 Results Market Conditions/Key Measures and Results

- Driven by turbomolecular pump and hydraulic equipment sales, the industrial machinery business segment achieved record-breaking net sales. However, operating income decreased due to rapid price increases for parts and materials.
- Although the previously strong demand for turbomolecular pumps used in semiconductor manufacturing equipment decreased during the second half of the fiscal year, overall sales of turbomolecular pumps broke previous records due to increased sales for coating applications, such as for coating of glass construction materials and thin-film solar cells.
- Although production adjustments by some customers affected hydraulic equipment sales, overall sales increased due to strong demand for industrial vehicle and construction machinery applications.
- Sales of glass winders increased due to expanding demand for glass fiber used in circuit boards.

## Key Measures for FY 2023

### Expanding the Turbomolecular Pump Business

- Release new energy-efficient models with higher flowrates for use in semiconductor manufacturing equipment and increase their market share before competitors do.
- For turbomolecular pumps used for coating of thin-film solar cells and environmentally friendly glass products, or goods needed to achieve a carbon-free society, we will build a dedicated production line to increase the supply capacity and market share.

### Deploy Businesses in EV Fields

- Establish Shimadzu's reputation for industrial furnaces in ceramics markets by expanding sales in Japan and China.
- Develop new customers with products that offer "intelligence" functionality.

### Improve Profitability and Develop New Markets for Hydraulic Equipment

- Expand sales and develop new markets by supplying low-noise and high-efficiency models in the United States, Europe, and China. Improve profitability in Japan.

### Expand New Businesses

- Commercialize measuring instruments that result in innovative technologies for customer manufacturing lines.

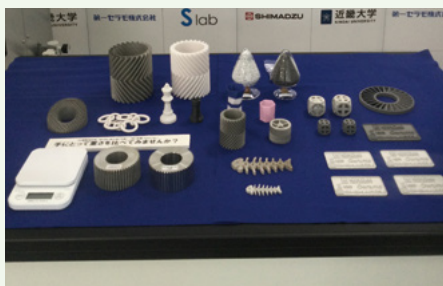
### Expand Service Businesses

- Offer services for increasing product life and saving energy. Strengthen Routine Services.
- Strengthen global service capabilities, such as by training the support personnel and expanding/improving service locations outside Japan.
- Use DX measures to offer monitoring services, such as for checking the operating status of products or predicting failures.

## Measures for Materials Informatics

### Joint Research for Establishing a Truly Made-in-Japan Metal 3D Printing System Started with Three Instrument/Material Manufacturers and Kindai University

- Shimadzu Industrial Systems Co., Ltd., Slab Inc., Dai-ichi Ceramo Co., Ltd., and Kindai University have partnered to jointly research technological innovations for developing metal and ceramic parts using a metal 3D printer by the metal MEX (material extrusion) additive method.
- The fabrication process using the metal 3D printer being developed by the four partners uses a GEM200DG metal 3D printer from Slab to form parts from 3D printing compound material from Dai-ichi Ceramo and then uses a VHS-CUBE compact debinding and sintering furnace from Shimadzu Industrial Systems to sinter the parts. Furthermore, specially appointed professor Hideki Kyogoku from the Kindai University Fundamental Technology for Next Generation Research Institute, who is an authority on metal 3D printers, evaluates and provides guidance on the overall research.
- Given that Shimadzu has been investing significant effort in informatics (information science) R&D, including AI and robotics technologies, Shimadzu will apply materials informatics (using information science for efficiently identifying, researching, and developing new materials) and process informatics (identifying and optimizing methods for manufacturing the new materials identified by materials informatics) to each stage of R&D in order to provide support for development of revolutionary new materials by manufacturers and research institutions.



Parts Formed with 3D Printer



VHS-CUBE Compact Debinding and Sintering Furnace

# Aircraft Equipment Business

We contribute to ensuring a safe and secure society by offering components, parts, and systems that use advanced technologies with sophisticated precision machining technologies.

Susumu Yamamoto  
General Manager,  
Aircraft Equipment Division



Related SDGs



Business Environment

- As we enter the post-pandemic "new normal" around the world, social and economic activity levels are increasing. Border entry restrictions are being eased or eliminated by various countries and steady recovery in air travel demand throughout the world is fueling a recovery in aircraft markets.
- There are significantly stronger needs for achieving the safe and secure transportation of people and goods throughout the world. Therefore, we believe that market needs will increase for the Shimadzu Group's advanced manufacturing technologies and cutting-edge technologies for ensuring safety and security.

Challenges of Society

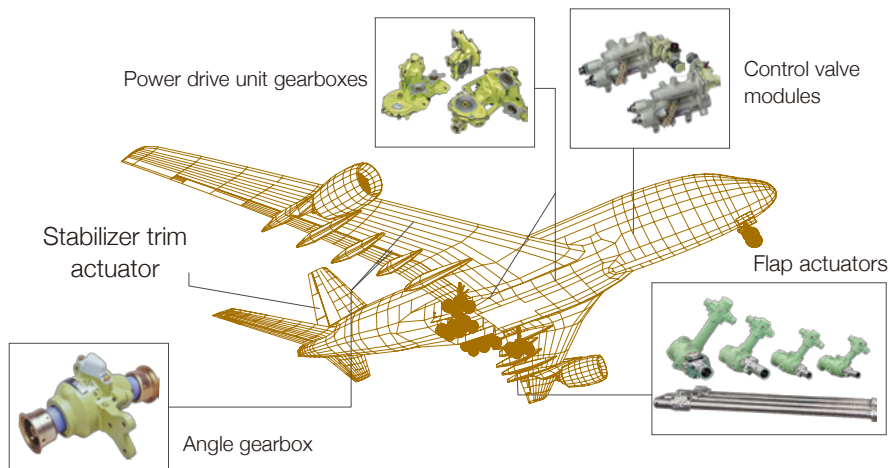
- Improve the resilience of social infrastructure and improve safety, environmental-friendliness, and comfort in the mobility field.

Value Provided

- Technologies for developing smaller, lighter, and electrically powered flight control systems contribute to reducing the environmental impact of aircraft.
- Air management technology used for air conditioning contributes to providing a more comfortable cabin atmosphere.
- Cockpit display technology contributes to improving the safety and reliability of flying.
- Magnetic technology contributes to probing for buried magnetic objects (such as steel pipes, artillery shells, weapons, or submerged ships) and magnetometers contribute to observing magnetic fields emitted by the Earth or other magnetic objects. Magnetic technologies used underwater contribute to improving shipping safety.
- Underwater optical wireless communication technology contributes to development in marine environments, such as by enabling high-speed communication with underwater drones or other unmanned autonomous underwater vehicles (AUV) in the sea.
- Quality control throughout the entire manufacturing and service value chain serves as a key means of ensuring the safety of aircraft.

## Products for Commercial Aircraft and Defense Businesses

The flight control system controls the lift, attitude, and other aspects of aircraft during flight. Its high-quality mechanical technology and highly reliable electronic control technology help ensure flight safety.





The following web page includes information about the topic listed below.

<https://www.shimadzu.com/aircraft/index.html>

Aircraft Equipment/Marine Devices/Magnetometers



## FY 2022 Results Market Conditions/Key Measures and Results

### Defense business

- Sales decreased due to a decrease in service projects and other factors.

### Commercial Aircraft Equipment Business

- Due to the increase in air travel demand, sales have increased to exceed the pre-pandemic levels.

### Improved Profitability

- Despite the severe business conditions, income increased significantly by improving the cost structure and selectively focusing on profitable areas.

## Key Measures for FY 2023

### Ensure Long-Term Stable Growth and Reliable Profitability

- Under the basic policy of "Select and Concentrate," we will continue to implement the measures to improve profitability, with an aim to foster businesses that ensure long-term stable growth and reliable

profitability. We will also use currently available technologies to start new businesses, mainly in mobility and social infrastructure fields, with an aim to help achieve a safe and secure society with these businesses.

### Measures to Commercialize Marine Devices

#### Started Joint Research with Nagasaki Prefecture

In January 2023, Shimadzu signed an agreement with Nagasaki Prefecture and Nagasaki City regarding the site for a research location. Based on the agreement, Shimadzu will establish a Shimadzu-Nagasaki Collaboration Lab within Nagasaki City for the purpose of conducting joint research in three fields: infectious disease countermeasures, marine businesses, and information/security. We aim to create products and services that solve challenges in society.

In terms of marine businesses, there have been increasing needs for offshore wind power generation systems intended to help achieve a carbon-neutral society and also for wirelessly operable unmanned autonomous underwater vehicles (AUV) used to install or inspect underwater infrastructures. However, collecting the data and images

acquired by AUV units conventionally requires pulling the AUV unit out of the water, which risks the safety of personnel involved and is expensive. Shimadzu's underwater optical wireless communication modem uses technology cultivated for magnetic technology to enable high-speed wireless communication underwater, which was previously difficult to achieve. In the future, the Shimadzu underwater optical wireless communication modem will be used in the sea near Nagasaki City to demonstrate the viability of automating the inspection of offshore facilities, such as aquaculture facilities or offshore wind power generation equipment.

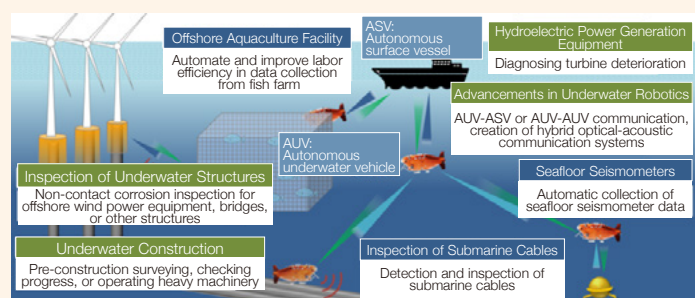
Through research and development of the underwater optical wireless communication modem, we will help solve challenges in society and contribute to marine development fields.



Underwater Optical Wireless Communication Modem

The modem enables high-speed communication using laser light to send and receive data. By installing the modem in multiple underwater robots, it can be used to communicate with other robots or with the mother ship on the water surface. Shimadzu aims to achieve a global digital

transformation (DX) in the field of marine development by providing Wi-Fi communication environments underwater.



Application Examples for Underwater Optical Wireless Modem

### Products for the Defense Business



Air Management System

Air management systems are used to adjust the air temperature and pressure levels inside aircraft. They contribute to ensuring a comfortable environment based on analysis and evaluation technology that continuously optimizes the onboard environment.



Head Up Display

Shimadzu head-up display (HUD) and helmet-mounted display (HMD) systems use sophisticated electronic and optical technologies to display various flight information overlaid on the view outside the airplane. These systems contribute to reducing the burden on pilots and increasing safety.

# Strengthening 7 Management Foundations

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## **(1) Reinforcing Corporate Governance →P.58**

Strengthen Group governance based on the basic policy of “prioritize compliance above all else.” Based on the medium-term management plan, we will strengthen monitoring functions, promote risk management, and achieve effective internal controls.

At Group companies, in particular, we will also use external organizations to strengthen monitoring of internal controls. We will create a policy for auditing business processes and deploy process auditing measures globally.

## **(2) Accelerating R&D Activities →P.61**

Increase development capabilities globally, with stronger product development organizations in respective regions. We will implement development process reforms that add agile development techniques and increase development speed.

## **(3) Strategizing International Standardization/Reinforcing Regulatory Response →P.67**

Promote standardization while cooperating with institutions in respective countries.

## **(4) Strengthening Global Manufacturing Capabilities →P.73**

Increase the resilience of manufacturing continuity by strengthening procurement functions, expanding in-house manufacturing, and increasing/improving manufacturing capacities in Japan, the U.S., China, and Malaysia.

## **(5) Promoting Digital Transformation (DX) →P.75**

Achieve data-driven management by implementing DX measures both within the company and in cooperation with customers.

## **(6) Human Resource Strategy →P.79**

Develop human resources who can lead innovation for solving challenges in society with a diversity of partners. We will instill a solid sense of integrity and compliance in our employees so that they can satisfy the expectations of others based on high standards of corporate ethics and morals. In addition, we strive to develop diverse human resources with specialized knowledge/skills, who are driven to completion and never give up, have the ability to take on new challenges, learn from failures, and achieve personal growth through self-improvement.

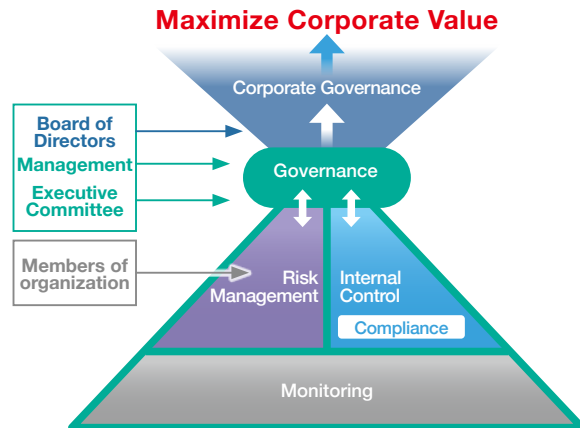
## **(7) Financial Strategy →P.85**

To more aggressively implement strategic investments, we will actively invest in growth in the area of social value creation (four domains) and in strengthening development/manufacturing/DX-related infrastructure. We intend to maintain dividend payout ratios of at least 30% with continuing dividend increases. Furthermore, because return on investment is an important factor for those active investments, ROIC will be introduced as a performance indicator to achieve higher capital efficiency.

Medium-Term Management Plan: Strengthening 7 Management Foundations: Reinforcing Corporate Governance

# Reinforcing Group Governance and Reforming Organizational Culture (Practicing Integrated Risk Management)

As an important part of operating the organizations within the Shimadzu Group, we will promote risk management (countermeasures for risks related to Shimadzu businesses) and compliance/internal controls (mitigation of the risks to execution of duties) in an organic and integrated manner, in order to achieve our management strategies, business objectives, and so on, and maximize our corporate value.



## Ensuring Compliance

### Basic Policy

The Shimadzu Group is committed to obtaining applicable permits and licenses and complying with applicable laws and regulations, such as security trade controls, anti-bribery laws, and competition laws, established by governments in respective regions and countries for Shimadzu’s various businesses deployed around the world.

In addition to compliance with laws and regulations, Shimadzu is also committed to behavior consistent with international norms. We have established the Shimadzu Group Corporate Code of Ethics that specifies ethical standards to be shared and complied with by directors and employees, in accordance with Shimadzu’s corporate philosophy, management principle, and Shimadzu Group Sustainability Charter. We practice the Shimadzu President’s policy of “prioritize compliance above all else.”

- **Security trade controls:** Implementing appropriate import/export controls based on control policies for maintaining international peace and security.
- **Preventing bribery and anti-competitive practices:** Forbidding the bribing of public officials or inappropriate entertainment or gift-giving to suppliers or other relevant parties in the private sector.
- **Ensuring transparency of relationships with medical and other institutions:** Disclosing information about funding provided to medical institutions or others.

### Provision of Corporate Ethics Consultation and Notification Contact Points

To prevent corporate ethics problems, or identify and address them as early as possible, all Shimadzu Group employees (including former employees), temporary personnel, and contractor personnel working within Shimadzu are notified that Shimadzu has established special contact points within and outside the company for consultation and notification regarding corporate ethics issues. To provide a system that is independent from normal executive management channels, “External Hotlines” are provided as contact points outside Shimadzu, where personnel can notify or consult an outside lawyer for investigation by an Audit & Supervisory Board member. In FY 2022, there were 119 cases of the contact points being used for consultation or notification. In addition to protecting whistleblowers, we have also established measures to conduct necessary investigations, implement corrective actions, and prevent recurrence.

### Promotional Activities

The Shimadzu Group has created a Corporate Ethics and Code of Conduct Handbook that summarizes the essential elements of the Corporate Code of Ethics in an easy-to-understand form and prevents compliance problems through group training, e-learning, and other teaching activities to teach and instill the content of the handbook.

### Assessing Awareness of Ethics/Compliance

Periodic questionnaire surveys are conducted by external experts (every 3 years) to assess how mindful personnel are about ethics and compliance in respective organizations and workplaces. Then respective organizations and workplaces will discuss the results from that analysis and implement corresponding improvements. Improvement measures to be applied broadly to all organizations throughout the Shimadzu Group are included within control activities by the departments specifically responsible for the respective risks and various committees.

- Shimadzu Corporation and Group companies in Japan (FY 2021 survey of 25 companies with 90% response rate): Improve workplace teamwork and communication
- Group companies outside Japan (FY 2022 survey of 49 companies with 90% response rate): Consider integrity (sincerity) improvements

### Measures at Respective Workplaces

On the “Shimadzu Group Compliance Day” held every July since 2011, employees reflect on incidents that have occurred during the past year. On that day, employees discuss things they noticed during their daily work in order to identify any issues that could grow into compliance violations and prevent corresponding problems before they occur.

In FY 2022, a learning system was introduced at Shimadzu Corporation and Group companies in Japan. This system is intended to help personnel at each workplace learn the knowledge (methods, regulations, procedures, etc.) and values required to perform their work properly, improve the quality of their work, and build their capacities. With each workplace team learning from teaching materials provided by departments responsible for respective risks, the Shimadzu Group conducted over 14,000 workplace learning sessions in FY 2022. By continuing such learning sessions for many years, we will foster a good culture within Shimadzu Group organizations.

Reinforcing Group Governance and Reforming Organizational Culture  
(Practicing Integrated Risk Management)

**Internal Controls (Addressing Risks to Execution of Job Duties)**

**Basic Policy**

The Shimadzu Group has established internal control systems that ensure executives and other employees perform their job duties appropriately and efficiently in accordance with applicable laws/regulations and Shimadzu Articles of Incorporation. We will continue to strengthen internal control systems by constantly identifying changes in the business environment and making improvements without concern for previous ways of thinking or methods.

**Internal Control Systems**

To ensure business processes are executed appropriately and efficiently, we have established systems for ensuring compliance with all applicable regulations governing business operations, clarified job authority, and established systems for quickly and accurately conveying Shimadzu Group information in order to increase management transparency. If a violation occurs, a description of the violation, disciplinary actions, and other information are quickly shared throughout the Shimadzu Group in an effort to prevent a recurrence of similar violations. Furthermore, while strictly protecting personal and confidential information, relevant information is disclosed outside Shimadzu whenever appropriate, either via public relations, investor relations, the website, or other means.

A Shimadzu Group Management Basic Regulation was specified that summarizes the basic principles for Shimadzu Group governance and corresponding management requirements. By continuously establishing and strengthening the systems for understanding and managing the management circumstances throughout the Shimadzu Group, we ensure the Group is operated appropriately and efficiently.

**Establishing Internal Controls for Financial Reporting**

Based on implementation standards specified by the Japanese Financial Services Agency, the Shimadzu Group has established the "Regulation for Establishing Internal Control over Financial Reporting" to specify a basic framework for internal controls and achieve business objectives by improving the efficacy and effectiveness of business practices, ensuring the reliability of financial reports, promoting compliance with laws, regulations, and other requirements for business activities, and protecting assets.

In recognition of the importance of creating and disclosing appropriate financial reports, establishing and implementing internal controls are considered a company-wide challenge. Furthermore, we are constantly evaluating internal controls to maintain and improve their effectiveness and implement improvements (remedial measures) to resolve any deficiencies identified. In terms of the scope of controls, we focus on the most important companies and business processes to improve effectiveness in actual practice.

**Activities to Expand the Scope of Controls (to Not-Applicable Group Companies)**

After each company has finished assessing risks based on a checklist of the most important risks created by the Internal Audit Department at the Head Office, the Head Office administrative departments conduct interviews with each company to check their assessments. The results are then analyzed to prepare controls for reducing the probability of risk occurrence in an effort to prevent problems.

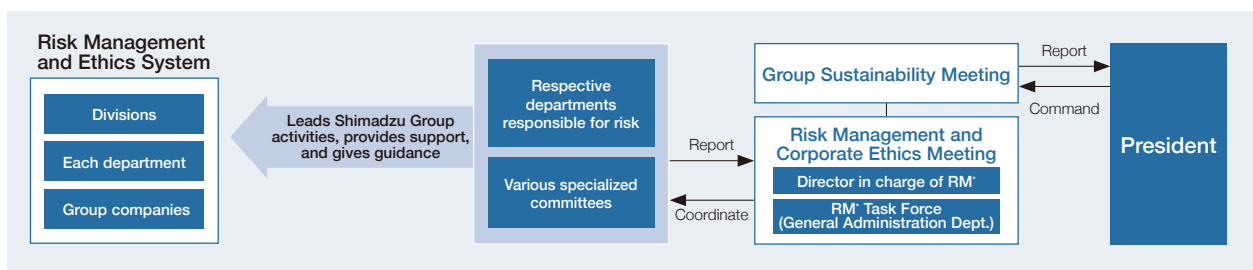
**Risk Management (Risk Countermeasures Related to Businesses)**

**Basic Policy**

Risk management is an indispensable presence necessary for achieving business continuity and progress, while also fulfilling the social responsibilities of the company. Shimadzu Group activities for appropriately managing business risks include preventing risks from occurring, quickly resolving any urgent risk events, minimizing damages, identifying causes, and deploying recurrence countermeasures horizontally throughout the Group as soon as possible. Those activities are specified in the Shimadzu Group Risk Management Regulation.

**Risk Management and Ethics System**

To ensure risks are managed throughout the entire Group, a Risk Management and Corporate Ethics Meeting is convened biannually, chaired by the Shimadzu Corporation President. The officer in charge of risk management coordinates the implementation of board decisions so that they can be implemented independently by each organization and workplace, under the direction and support of the departments or various committees responsible for respective risks.



\*RM: Risk management



Promotional Activities

Prevention Activities

We drive the cycle of RM activities by managing and monitoring risks based on periodic risk identification and assessment results. To prevent serious incidents during Shimadzu Group business activities that might decrease corporate value by violating societal expectations or damaging business operations, mainly management personnel and departments responsible for respective risks engage in identifying, assessing, and ranking the priority order of risks. To ensure each risk is controlled appropriately, Shimadzu is engaged in establishing systems for implementing company-wide risk countermeasures against risks with higher priority.



Responding to Urgent Incidents

An emergency communication system has been established to ensure any urgent incidents are handled appropriately. Based on the general rule to communicate the first report as soon as possible, if necessary a response task force chaired by the President is established for implementing response measures.

I	Identify (understand) risks threatening the Shimadzu Group.
II	Assess the risks identified in Step I (probability of occurrence and potential impact). Decide which risks should be prioritized.
III	The department responsible for the risks prioritized in Step II designs and executes risk reduction measures for reducing the remaining risks.
IV	Assess the remaining risks to confirm the state of risk management. Monitor the overall risk management process.

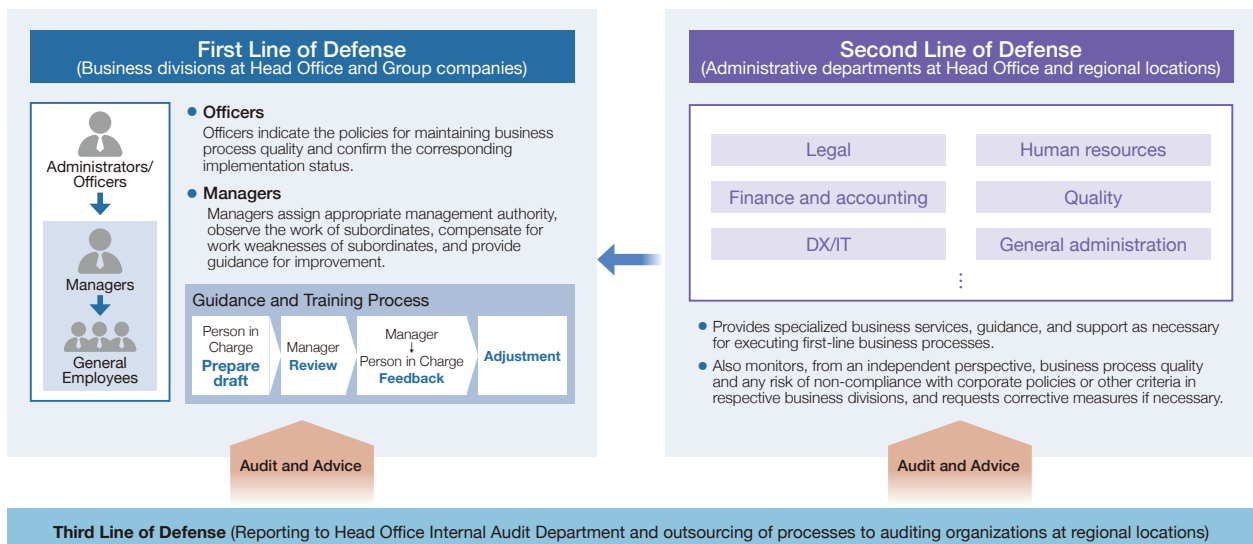
Monitoring

Basic Policy

The Shimadzu Group systematically and continuously reviews and assesses the effectiveness of risk management, internal control, and compliance activities at each level of the three lines of defense, which are business practices, controls, and auditing.

Systems for Strengthening Monitoring

In FY 2023, we established auditing organizations at each of the regional corporate head offices outside Japan (Europe, Americas, China, and Asia) that audit operations based on Head Office business process auditing policies. That will increase the frequency of audits and promote appropriate monitoring of business divisions (first line) and administrative departments (second line) on a routine basis.



# Research and Development Capabilities and Examples

## Innovation Centers

Societal challenges and market needs are becoming increasingly diverse in respective countries and regions of the world. The Shimadzu Group is committed to identifying those challenges and needs and breaking them down into specific research projects so that we can contribute to solving customer challenges.

By collaborating with a variety of partners around the world, we will create new technologies and innovation required to solve those challenges and needs.

Such collaborations are based at innovation centers established in various regions around the world. Our aim is to achieve results as soon as possible by engaging in joint research with partners in respective regions, including the Americas, Europe, China, Japan, and other Asian countries. By sharing those results with the other locations around the world, we offer corresponding value to more people.

### Shimadzu Group Innovation Centers

Contributing to Solving Challenges in Society by Implementing Advanced Results from R&D in Society



## New Shimadzu Tokyo Innovation Plaza: A Space for Creating New Knowledge and Developing Advanced Analytical Techniques through Interaction with Customers

The Shimadzu Tokyo Innovation Plaza was established in January 2023, within the King Skyfront international strategic zone near Haneda Airport, in the Tonomachi district of Kawasaki City. The plaza will be used to develop technologies for analytical and measuring instrument applications, provide technical support to customers, and promote open innovation.

One key feature of the facility is its proximity to customers. The location enables active technical exchanges and joint research activities with the approximately 70 healthcare

research institutions and companies established there in the King Skyfront district in Kawasaki City. The location is not only close to customers in the greater Tokyo metropolitan area, but access via Haneda Airport also enables frequent visits by customers based in various other parts of Japan or the world.

We aim to use the site to develop new application software solutions and products based on a better understanding of customer needs.

Laboratory Area Name	Main Instrument Types Installed	Features
Healthcare Science Laboratory	Liquid chromatograph mass spectrometers and life science-related equipment	Offer solutions for supporting human health, such as solutions for developing/manufacturing pharmaceuticals, searching for disease markers, and testing for residual pesticides or allergens in foods.
Green Science Laboratory	Gas chromatograph mass spectrometers	Develop advanced analytical techniques for supporting people's lives, such as for development/manufacturing in petrochemical and energy fields or for checking hazardous substance levels in air or environmental waters.
Material Science Laboratory	Materials testing machines Nondestructive inspection systems	Measure the physical properties, observe surfaces, and so on, for multifaceted evaluations of metals, plastics, drugs, foods, biological samples, and a wide variety of other materials/products.
Optics Science Laboratory	Spectrometers Elemental analysis instruments	Use core Shimadzu spectroscopy and X-ray technologies to offer solutions for supporting product development, manufacturing, or quality control operations in various fields.

The plaza was established based on the concepts of "fascinate" and "connect." Over 100 instruments are installed in the laboratory areas.

The following web page includes information about the topic listed below. <https://www.shimadzu.com/today/20230417-1.html>

New Shimadzu Tokyo Innovation Plaza Opened  
A Space for Creating New Knowledge and Developing Advanced Analytical Techniques through Interaction with Customers



The following web page includes information about the topic listed below. <https://www.shimadzu.com/today/20220729-1.html>

The SHIMADZU Future Collaboratory was opened at the Technology Research Laboratory to accelerate cutting-edge research through collaborations between researchers



## New Research Building, SHIMADZU Future Collaboratory, Established at the Technology Research Laboratory



Shimadzu has opened the SHIMADZU Future Collaboratory, a new research building within the Technology Research Laboratory site, which is located in the Keihanna Science City (in Seika-cho, Soraku-gun, Kyoto). The purpose of the collaboratory is to promote research and development in the fields of advanced analysis, brain/five senses, innovative biotechnology, and artificial intelligence (AI), in an effort to create new value and solve challenges in society.

With its mission of cultivating core technologies, acquiring new technologies, and creating new businesses for the long-term growth of Shimadzu, the Technology Research Laboratory has contributed significantly to the development of various unique Shimadzu products. To achieve further growth, we need to contribute to solving customer and societal challenges by offering solutions based on “world's-first” technologies. That will require developing more advanced and diverse core technologies for businesses, while also incorporating AI, biotechnology, sensing, and other technologies that continue to evolve at a faster pace.

The SHIMADZU Future Collaboratory consists of the Core

Hub for cultivating core technologies and the Catalyst Hub for generating innovation through interactions and collaborations with others within and outside Shimadzu. The collaboratory includes the rooms for performing advanced analysis and biological testing with large-scale equipment. It is also equipped with rapid prototyping equipment for quickly converting ideas into physical models, a preliminary demonstration area where development personnel can get new ideas from watching users operate prototypes, and an auditorium large enough to deliver lectures/presentations to over 300 people.

Examples of research topics at the collaboratory include discovering biomarkers or evaluating new materials by establishing “whole analysis” technology that uses AI for advanced data analysis of multiple types of data obtained simultaneously from a single analysis, using “organ-on-a-chip” technology to evaluate candidate substances for pharmaceuticals, and using measurements of brain and sensory functions to measure the effectiveness of interventions to mild cognitive impairment or for neuromarketing applications.

Laboratory Area Name	Main Research Topics	Features
Physical Laboratory Zone	X-rays, radiation, light, and other physical systems	<ul style="list-style-type: none"> <li>• Equipped with environments for inhibiting vibration</li> <li>• Equipped with radiation-shielded rooms, absolute darkrooms, etc.</li> </ul>
Human Sciences Laboratory Zone	Human sensations and emotions	<ul style="list-style-type: none"> <li>• Equipped with rooms for observing a variety of simulations</li> </ul>
Biological Laboratory Zone	Cells, microbes, antibody reactions, and other biological systems	<ul style="list-style-type: none"> <li>• Equipped with various equipment and refrigerated rooms corresponding to different biosafety levels</li> </ul>
Chemical Laboratory Zone	Chemical synthesis, chemical analysis, and other chemical systems	<ul style="list-style-type: none"> <li>• Gas supplied safely via a central supply system</li> <li>• Ensures careful control of waste substances and chemicals</li> </ul>

## Research and Development Capabilities and Examples

Healthcare  
Domain

The following web page includes information about the topic listed below.  
[https://www.shimadzu.com/news/2023/bcpiit1z\\_86dn6i2.html](https://www.shimadzu.com/news/2023/bcpiit1z_86dn6i2.html)

Shimadzu Corporation and NARO Provide Technology to Kagome, Hakubaku, and Morinaga Milk Industry  
NARO Shimadzu Testing Laboratory Established to Support the Development of Foods and Beverages that Promote Good Health



### NARO Shimadzu Testing Laboratory Opened for Supporting the Development of Foods and Beverages that Promote Good Health

In March 2023, Shimadzu and the National Agriculture and Food Research Organization (NARO) jointly opened a NARO Shimadzu Testing Laboratory (hereinafter "Testing Laboratory") within the Shimadzu Healthcare R&D Center, for providing research and product development support to food and beverage manufacturers that contribute to health.

The Testing Laboratory can be occupied by researchers from different food and beverage manufacturers for one-month periods per company. It is currently scheduled to be used by Kagome (food and beverage company), Hakubaku (a grain company), and Morinaga Milk Industry (a dairy products and confectionary company).

The lab is equipped with state-of-the-art analytical and measuring instruments, such as LCMS-8060NX and

LCMS-9050 high-performance liquid chromatograph mass spectrometer systems that the researchers can use to search for functionally beneficial components or measure their respective concentrations, or a GCMS-TQ8040NX gas chromatograph mass spectrometer system for evaluating aroma/fragrance/odor components.

Based on their extensive experience and technical capabilities, Shimadzu and NARO will provide support for everything from preparing to executing analysis plans. By accumulating knowledge obtained from the lab, we will provide support for advancements in next-generation food and beverage research, aiming to generate innovation and achieve a society with longer healthy life expectancies through food.

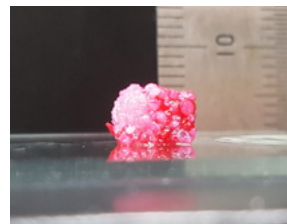


Inside the NARO Shimadzu Testing Laboratory

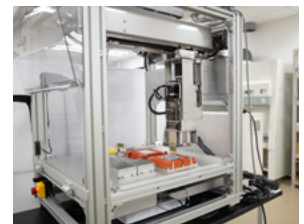
In March 2023, Shimadzu partnered with the Graduate School of Engineering, Osaka University, Itoham Yonekyu Holdings Inc., Toppan Inc., and SIGMAXYZ Inc. to establish the Consortium for Future Innovation by Cultured Meat. The purpose of the consortium is to execute concrete measures for achieving the broad adoption of 3D bioprinting-based technologies for manufacturing cultured meat. Through partnerships with other companies, we will promote the development of applications for 3D bioprinting and establishment of a contiguous value chain that extends from production to distribution. We will also work in coordination with government agencies and private companies to contribute to the establishment of relevant laws/regulations. In addition, the consortium will focus efforts on disseminating information that promotes understanding by consumers, such as by exhibiting the technology at the 2025 World



Exposition in Osaka, in order to establish global leadership in consuming cultured meat. The five parties will use the activities of the consortium to contribute to offering solutions for solving environmental and food supply problems, for improving the health of people, and for the future of food.



Cell-Based Cultured Meat that Simulates the Structure of Wagyu Beef



Automatic Cultured Meat Production System (Prototype)

The following web page includes information about the topic listed below.  
<https://www.shimadzu.com/news/2023/xckp2umzxxujgpqk.html>

Osaka University, Shimadzu Corporation, Itoham Yonekyu, Toppan, and SIGMAXYZ Established the Consortium for Future Innovation by Cultured Meat Research Site Established at Osaka University





The following web page includes information about the topic listed below.  
<https://www.shimadzu.com/news/4h16t4uq2x4apye5.html>

Establishing Japan's First Workflow for the Diagnosis of Dementia Using Blood Biomarkers  
 Shimadzu Corporation, Eisai, Oita University, and Usuki City Medical Association Start Joint Research



Healthcare Domain

## Establishing Japan's First Workflow for the Diagnosis of Dementia Using Blood Biomarkers

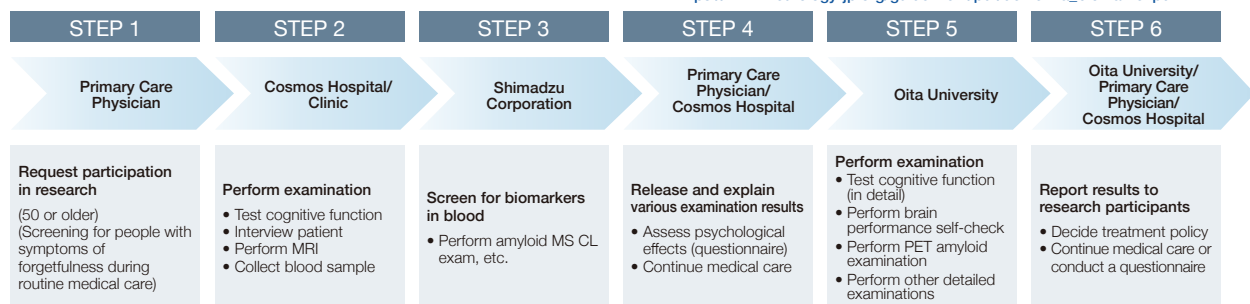
In November 2022, Shimadzu Corporation, Eisai Co., Ltd., Oita University, and the Usuki City Medical Association began a cohort study using Usuki City as a demonstration site. The joint research will attempt to build Japan's first process for diagnosing mild cognitive impairment (MCI) and Alzheimer's disease using blood biomarkers. The aim is to contribute to the early diagnosis of Alzheimer's disease by demonstrating to healthcare personnel, ranging from primary care physicians to dementia specialists in relevant academic fields, the usefulness

of using blood biomarkers in accordance with the "Guidelines for Proper Use of Cerebrospinal Fluid and Blood Biomarkers in Dementia." The widespread use of blood biomarkers is also expected to limit the burden on tested patients.

By building an ecosystem that contributes to the early detection of Alzheimer's disease, the four organizations are committed to establishing public infrastructure that enables patients and their families to live worry-free lives.

\* Published March 31, 2021, by a scientific research group funded by the Ministry of Health, Labour and Welfare  
[https://www.neurology-jp.org/guidelinem/pdf/dementia\\_biomarker.pdf](https://www.neurology-jp.org/guidelinem/pdf/dementia_biomarker.pdf)

### Research Overview Diagram



Note: Recruit about 200 research participation applicants for STEP 1 and have a specialist test cognitive function and interview applicants to select 100 participants for STEP 2.

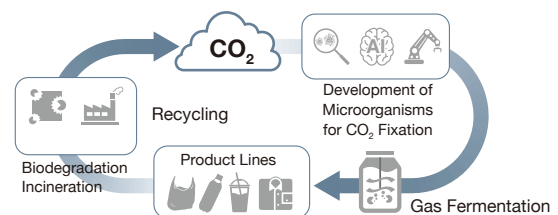
Green Domain

## "Development of Polymer Synthesis Technology by Microorganisms Using CO<sub>2</sub> as Direct Raw Material" Project Selected as a NEDO Green Innovation Fund Project

Shimadzu Corporation, Kaneka Corporation (Kaneka), Bacchus Bio innovation Co., Ltd. (Bacchus), and JGC Holdings Corporation (JGC) jointly proposed a "Development of Polymer Synthesis Technology by Microorganisms Using CO<sub>2</sub> as Direct Raw Material" project (hereinafter "Project") in response to the "Green Innovation Fund Project / Promotion of Carbon Recycling Using CO<sub>2</sub> from Biomanufacturing Technology as a Direct Raw Material" grant advertised by the New Energy and Industrial Technology Development Organization (NEDO). That Project was selected by NEDO for implementation.

The Project is intended to contribute to carbon recycling. The four joint proposal partners aim to establish recycling-oriented bio-manufacturing technology that is not dependent on petrochemical resources, by developing microorganisms that can produce biodegradable biopolymers using CO<sub>2</sub> as a raw material and by developing technologies for corresponding production processes.

### Recycling-oriented Bio-Manufacturing Technology



During the Project period from FY 2023 to FY 2030, the partners will engage in researching the following three topics.

- Establishing a gas fermentation biofoundry that consumes CO<sub>2</sub> as a raw material (in charge: Bacchus and Shimadzu)
- Development and improvement of biopolymer-producing microorganisms, and other substances (in charge: Kaneka)
- Development and verification of manufacturing and other technologies that use microorganisms or other methods to produce substances by consuming CO<sub>2</sub> as a raw material (in charge: Kaneka, JGC, and Shimadzu)

The following web page includes information about the topic listed below.  
<https://www.shimadzu.com/news/2023/xa9c13-dm2nmtu-m.html>

"Development of Polymer Synthesis Technology by Microorganisms Using CO<sub>2</sub> as Direct Raw Material" Project Selected as a NEDO Green Innovation Fund Project



# Message from the CTO

## Hiroto Itoi

Managing Executive Officer  
CTO

### Career Overview

- Apr. 1984 Joined Shimadzu Corporation
- Jun. 1996 Research & Development Department, Analytical Instruments Division
- Apr. 2001 General Manager, MS/GC Business Unit, Analytical Instruments Division
- Jun. 2011 General Manager, MS Business Unit, Life Science Business Department, Analytical & Measuring Instruments Division
- Jun. 2017 Deputy General Manager, Analytical & Measuring Instruments Division and concurrently General Manager, Life Science Business Department
- Apr. 2018 Corporate Officer, Deputy General Manager, Analytical & Measuring Instruments Division and concurrently General Manager, Life Science Business Department
- Apr. 2020 Corporate Officer, General Manager, Technology Research Laboratory
- Apr. 2022 Managing Executive Officer, CTO (current)



## Accomplishments and Open Issues from the Previous Medium-Term Management Plan

Many research and development projects were implemented during the previous medium-term management plan. One major accomplishment from such projects is the Autonomous Lab being developed in joint research with Kobe University. Due to enthusiastic interest from a company that saw the prototype, a system was delivered to that customer on a special-order basis, and Shimadzu has been developing applications and making improvements based on feedback from that customer. That project is a perfect example of the “agile” type of development Shimadzu has been trying to implement and expand. New product development requires making product refinements based on feedback from a customer that actually tries the product, but waiting until product specifications are solidly defined makes it difficult to make changes quickly. It feels like we achieved a successful accomplishment from efforts to promote agile development.

In terms of laying the foundation for research and development, we successfully completed the “SHIMADZU Future Collaboratory,” “Shimadzu Tokyo Innovation Plaza,” and “KYOLABS” facilities to provide locations for open innovation. Now our mission will be to somehow generate open innovation results from utilizing those facilities. We also were able to sign comprehensive partnership agreements with many outside organizations. For example, with academic institutions such as Kyoto University, Nagasaki University, and Osaka University, we were able to

lay the groundwork for not only technical cooperation but also cooperation in training human resources.

Meanwhile, one challenge has been development delays. Although the COVID-19 pandemic was a significant factor, we experienced frequent delays in bringing new products to market. Another issue is that the scope of R&D projects has been skewed toward the healthcare domain. Therefore, we feel development needs to be strengthened for non-healthcare applications specified in the new medium-term management plan, such as “green” innovation, materials, and industry. Furthermore, we feel partnerships with organizations outside Japan should have been promoted more.

## Vision for the New Medium-Term Management Plan

Essentially, the vision is to “create a new platform for researching and developing technology.” First, the plan will build a platform for agile development to address development delays, which have been a problem. The new medium-term management plan will also deploy DX measures, such as digital twin and metaverse technologies, in research and development, in an effort to create a foundation for streamlining operations, ensuring the succession of technical skills, and accumulating data. We will promote automating the typically manual processes involved in prototype design verification to eliminate waste.

We will also establish development capabilities globally. Rather than sending someone from Japan to investigate market needs outside Japan for development in Japan, we will establish local development centers that can quickly commercialize products based on local needs. In terms of regions, we will first establish an R&D center in North America. In India, we will strengthen operations for finding pharmaceutical needs in particular and developing hardware, software applications, and other products designed to satisfy those needs.

## Creating New Businesses in Partnership with Startup Companies

During the previous medium-term management plan, the Startup Incubation Center was established in October 2020. Three products were released, but two of those involved medical device regulations, so in fact we struggled to apply the agile development approach. The new medium-term management plan will address the development delay problems during the previous medium-term management plan by using the agile model for basic development and the waterfall model thereafter, for example.

In terms of corporate venture capital investments, we work in cooperation with Global Brain, an independent venture capital firm, to support startup ventures and obtain strategic returns that lead to growth of Shimadzu products/services or starting new Shimadzu businesses. In addition to businesses, we also aim to develop human resources and future management personnel that can lead innovation. Investing in startups is often considered challenging to achieve success, but we believe that by creating a well-balanced investment portfolio, we can achieve overall positive returns.

\* Development approach that completes each development step, one at a time, before moving on to the next step.

## Long-Term Vision

In the long term, we intend to create solutions that use AI to combine a variety of data analysis modalities, rather than analyze samples separately for different analytical instruments, such as LC, MS, UV, or GC systems. If that can be achieved, we will be able to offer the ultimate in "End-to-End solutions." It may take time to realize, but we intend to implement a variety of measures aimed at achieving that vision. First, we will achieve and start offering Autonomous Lab systems that use AI and robotics technologies to increase laboratory efficiency and reproducibility.

Of course, we will also continue research for the five target fields (advanced analysis, AI, innovative manufacturing, innovative biotechnology, and the brain/five senses) and offer products and services that solve challenges in society.

## Nurturing a Culture of Innovation

As the CTO, what I sense are the changes occurring at Shimadzu. Although we are making some progress in terms of creating new businesses and agile development, we have not reached the point where innovation is taken for granted. Hopefully, we can foster a culture of innovation where taking on risks in order to generate innovation is a routine matter.

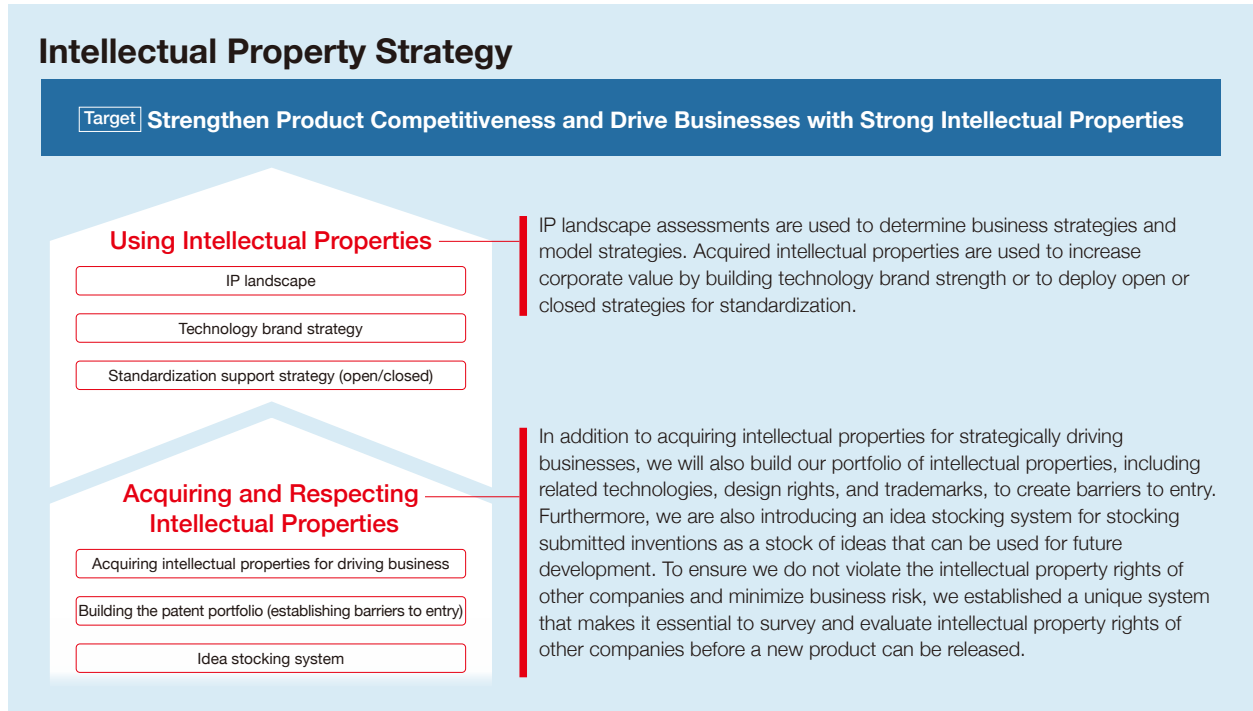
For existing businesses, the product development process must be implemented based on reliable plans for each phase from product planning to development, manufacturing, sales, and service. For new businesses, however, I want to change that to a completely different product development process by boldly taking on a large number of challenges with a sense of adventure and willingness to fail. Therefore, we will introduce a new innovation management system (IMS) that will serve as the foundation for fostering a culture of innovation. The IMS is designed to enable even large companies to do what startup companies do normally. By actively using this type of platform, we intend to build the foundation for promoting the development of new businesses and new technologies.

I also intend to change the way we train personnel. For example, I want to create an environment where employees proactively propose projects, rather than simply working on projects assigned to them by a supervising manager, or where strong-willed employees can gather to exchange views. That may result in various friction between participants, but hopefully it will encourage people to boldly try projects that will lead to future businesses, rather than keeping their ideas suppressed.

Becoming the CTO has increased my opportunities to talk with other CTOs. It seems they are all worried about the same things, such as "How can we promote innovation" and "How should we train human resources, increase the motivation of younger employees, and ensure the succession of technical skills." However, some issues have already been solved by advanced companies. Consequently, I say "look outside the company for solutions." I think proactively maintaining many contacts outside the company, rather than being cooped up, will lead to the first step toward fostering a culture of innovation.

Right now, Shimadzu is definitely changing. Ensuring the changes take hold is the function of the new medium-term management plan and my job. You can count on Shimadzu to continue contributing to society through science, technology, and innovation in the future as well.

# Intellectual Property Strategy



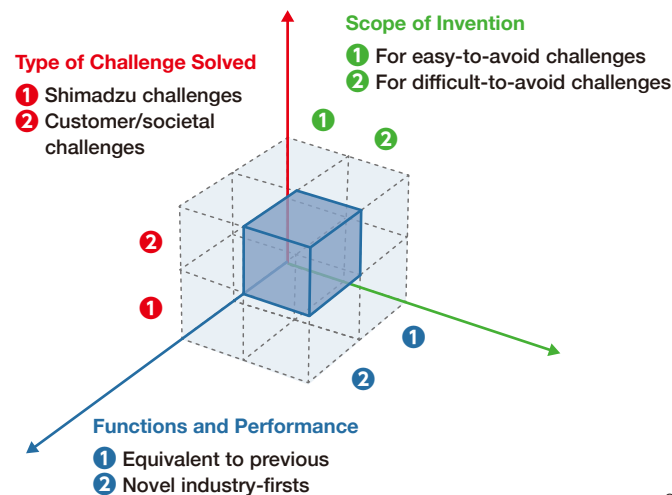
## Acquiring and Respecting Intellectual Properties

### 1. Promoting Creation of Inventions

We have set a target number for invention submissions based on relevant R&D projects and the number of engineers involved, and are implementing activities for creating inventions mainly for important topics. As a result, 794 inventions were submitted in FY 2022. Of those, 15 inventions satisfied the criteria\* for basic patents and 35 were related to technologies in high demand, such as for AI and infectious diseases. These levels are about the same as in typical years.

In the future, we will promote the creation of inventions that solve customer challenges or underlying societal challenges.

\* Basic patents must satisfy the following three criteria:

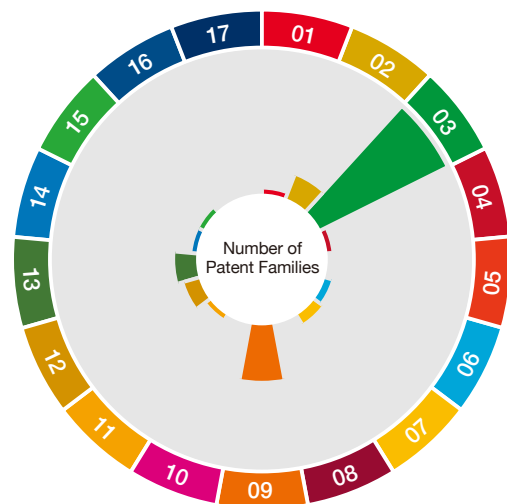


### 2. Optimizing Intellectual Property Investments Based on Business Portfolio

We have established a multifaceted business portfolio for solving challenges in society and are actively engaged in R&D and intellectual property acquisition measures with respect to 13 SDGs, including SDG No.3 “Good health and well-being.”

In the future, we will expand intellectual property investments in green transformation (GX) fields as well.

To protect and advance current businesses, intellectual property investments also depend on the business segment. The number of patent applications registered for the analytical & measuring instruments business increased by 7.7% in Japan and 9.4% outside Japan, compared to FY 2021. Investments are being increased in the North American market, with the



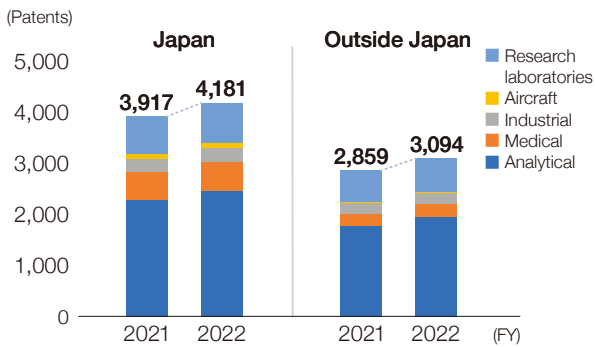
Sectors: SDG Targets (IDs) Sector Size: Number of Patent Families  
\* Prepared by Shimadzu using PatentSight® from LexisNexis®



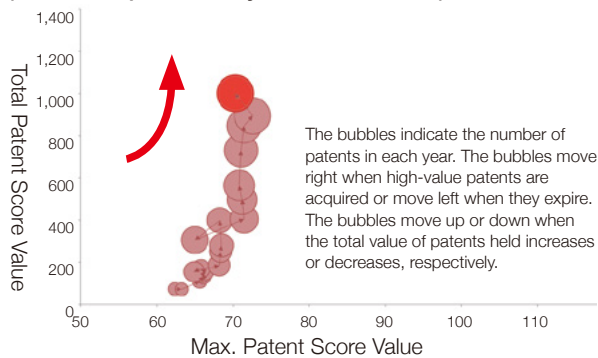
U.S. patent score for mass spectrometry-related patents continuing to increase.

In the future, we will expand intellectual property investments in new businesses while maintaining the policy of focusing on North America.

### Number of Patents Held



### Changes in U.S. Patent Scores over Time (for Mass Spectrometry-Related Patents)

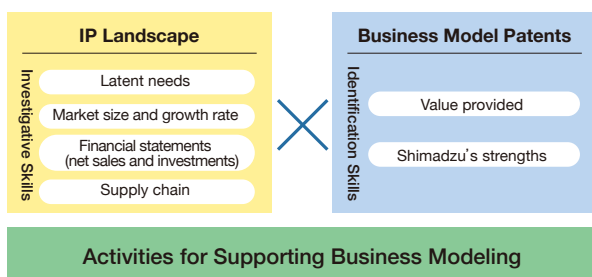


\* Prepared by Shimadzu using PatentSight®

## Using Intellectual Properties

### 1. Utilizing IP Landscapes

IP landscaping was used to propose business strategies, such as to develop markets for Shimadzu's Autonomous Lab or to enter the gene therapy field with analytical instruments. Furthermore, the investigative skills acquired through IP landscaping were used in combination with the skills for identifying the value provided, which were cultivated in an effort to obtain business model patents, to assist with building business models. That approach will be used to develop new businesses with systems for earning profit woven into the business.



### 2. Standardization Support Strategy (Open/Closed)

We propose and execute both open and closed strategies. We release some technologies and intellectual properties for solving challenges of society or creating new markets (open strategy) or establish barriers to entry for differentiating technologies to protect them for use in expanding market share (closed strategy).

In an effort to accelerate the widespread adoption of the dual-level "Kyoto Model" PCR testing system, which is based on testing both wastewater and humans, in FY 2022 we offered free use of relevant patents for COVID-19 testing.

We will continue to implement activities intended to both increase corporate value and ensure economic profitability.

### 3. Intellectual Property Training

In order to acquire strong intellectual property rights and minimize the risk of violating any intellectual properties of other companies, we provide intellectual property training for new employees and mid-career technical personnel. Intellectual property training is also provided in a timely manner for new technologies, such as for business model patents. In FY 2022, a total of 196 people received the training.

Applicable Personnel	Training Name	Description
Newly Hired Employees	New-hire training	Overview of industrial property rights How to create and document inventions
	Search-based checking	How to read search expression
Young to Mid-Career	Screening	How to determine infringement
	Checking patent description	How to read patent application documents

## Awards from outside Shimadzu

A Shimadzu patent (patent number 5205918) for data processing hardware and software was awarded the top prize at the 67th Annual Kyoto Prefecture Awards for Inventions and Other Outstanding Achievements.



Shimadzu Receiving Award at 67th Annual Kyoto Prefecture Awards for Inventions and Other Outstanding Achievements

# Standardization Strategy

## Changes in the Function of Standardization (Establishing Rules)

Thus far, standards have mainly been established to eliminate inferior goods and ensure consistent quality by deciding product specification and performance requirements. However, the applicable scope of standardization has been expanding in recent years, from physical goods to services, social systems, and other areas, and it has been changing to serve the role of establishing rules. Meanwhile, standardization is attracting attention from companies and industries as an important business strategy tool, such as for creating new markets or ensuring a competitive advantage.

Shimadzu has generated many new technologies over the years based on the corporate philosophy “Contributing to Society through Science and Technology.” To increase our contribution to society even more than today, we will be involved in the formation of applicable rules through standardization activities and engage in creating markets for our new products and services, so that our technologies are used by as many people as possible. We will also ensure competitive advantages by using intellectual properties to differentiate our products, and strive to achieve sustained growth by expanding businesses, ensuring profitability, and increasing corporate value.

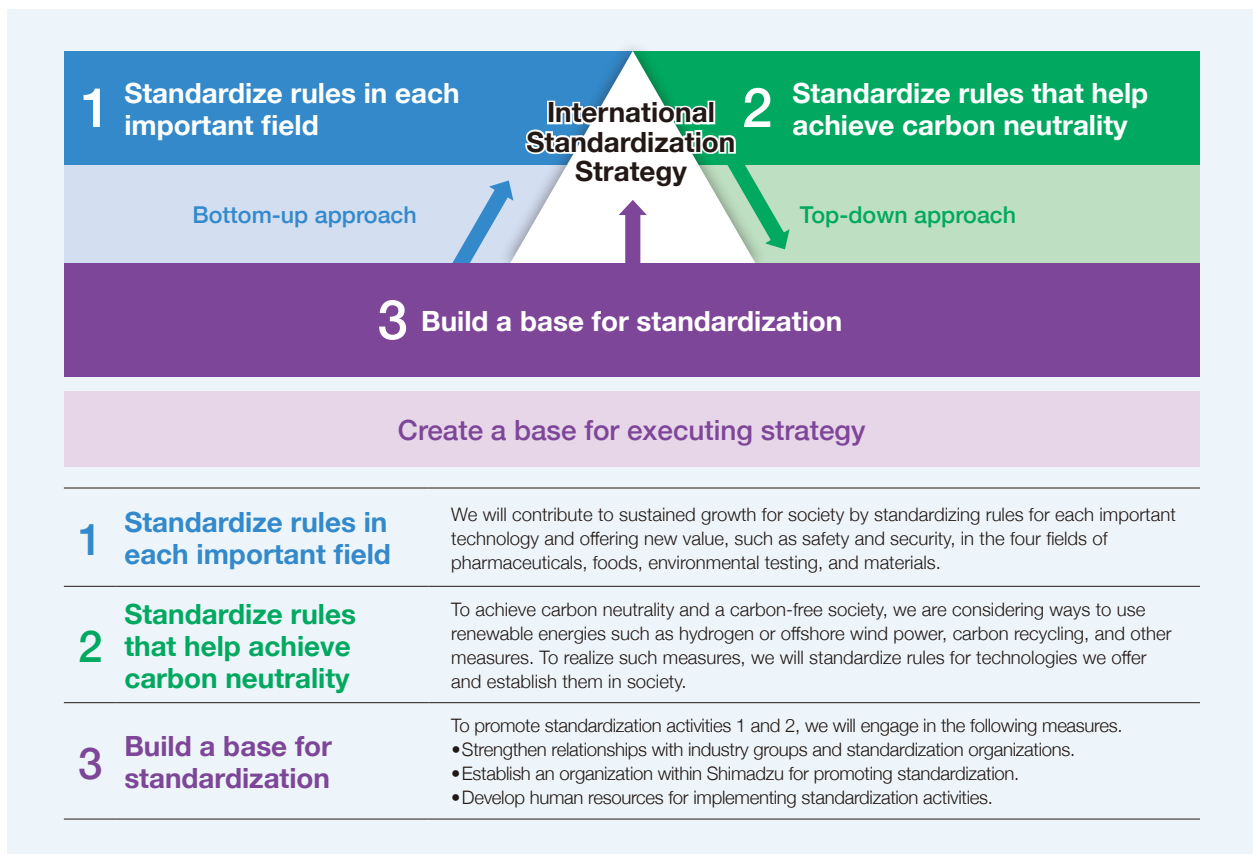
## Standardization Process

We consider the standardization process as an opportunity to contribute to society and also as an important opportunity to create new markets and strengthen competitiveness. Accordingly, the medium-term management plan specifies standardization, including the three corresponding elements shown in the figure below, as one of the “seven measures for strengthening the management foundation.”

## Organizations and Systems

We established an international standardization committee chaired by the Chief Standardization Officer (CSO) to promote standardization activities throughout the Shimadzu Group. In FY 2023, we also launched a dedicated department for promoting international standardization. Furthermore, we have prepared an international standardization assistance program that provides financial assistance for promoting individual measures.

The committee also promotes deeper interactions with organizations in a variety of fields through committee activities of industry groups, such as the Japan Analytical Instruments Manufacturers’ Association (JAIMA). Within that context, we assigned a total of 85 employees in FY 2022 to serve on committees related to standardization that are involved in creating draft proposals or deliberating ISO or JIS standards.



## Examples of Standardization Measures

The following describes some examples of Shimadzu standardization activities.

### (1) Standardization of Analytical Techniques that Contribute to Solving Environmental Challenges in the United States

Shimadzu Scientific Instruments, Inc. (SSI), a Shimadzu subsidiary in North America, is involved in developing analytical techniques for solving environmental challenges, proposing official methods to the U.S. Environmental Protection Agency (EPA), and engaging in standardization activities through participation in organizations such as ASTM International, the largest private sector standards-creating organization in the world.

In one successful case, an analytical method developed by Shimadzu, which uses a triple quadrupole gas chromatograph mass spectrometer system (GC-MS/MS) to analyze dioxins in water, was recognized by the EPA as an appropriate analytical method. Once the applicable government paperwork is completed, we expect it to become an official EPA method. That means that dioxins in water, which were previously analyzed using a high-resolution GC-MS system, will be able to be analyzed using general-purpose models, hopefully allowing a much wider range of organizations to analyze dioxins.

SSI is also developing and standardizing a wide variety of other analytical techniques. We are committed to keep contributing to a safe and secure society by further strengthening partnerships throughout the Group and deploying standardization activities globally.

### (2) Standardization of Techniques for Analyzing Functionally Enhanced Agricultural Products in Partnership with the National Agriculture and Food Research Organization

At the NARO-Shimadzu Laboratory, a joint research laboratory established by Shimadzu and the National Agriculture and Food Research Organization (NARO), Shimadzu is developing techniques for quickly, conveniently, and accurately measuring functionally beneficial components contained in agricultural products and foods.

Due to society's growing interest in health, demand for functionally-enhanced foods and beverages is increasing not only in Japan but also around the world. To better respond to such demand, the Japanese Ministry of Agriculture, Forestry and Fisheries has been promoting the export of agricultural products.

By standardizing techniques and regulations for analyzing functionally beneficial components, Shimadzu will help promote the development and widespread use of functionally enhanced foods and beverages with high added value, contributing to achieving longer, healthy life expectancies in society.

### (3) Standardization of Pharmaceutical Inspection Techniques in Partnership with the National Institute of Health Sciences

The National Institute of Health Sciences, which participates in establishing the Japanese Pharmacopoeia and other official pharmaceutical standards, is involved in developing and establishing standards for evaluation technologies used to ensure safe and reliable supplies of pharmaceuticals for new modalities. Such evaluation technologies are based on accurate measurement and analysis techniques.

For Japan to remain one of the few major drug development countries, it is important to maintain and strengthen Japan's capabilities for developing new drugs that satisfy the healthcare needs of society, including drugs for as-yet-unknown infectious diseases. Shimadzu contributes to the development of internationally leading pharmaceutical inspection techniques by actively supporting regulatory science measures implemented by the National Institute of Health Sciences, including compliance with revisions made to ICH Guidelines for pharmaceutical regulations.

As a specific example, we are engaged in joint research with the National Institute of Health Sciences with the aim of having our analytical techniques, which use fluorescent X-rays to analyze elemental impurities in pharmaceuticals, included in a future edition of the Japanese Pharmacopoeia. The research project entitled "Research on Using X-Ray Fluorescence Spectrometry to Control Elemental Impurities in Pharmaceuticals Included in the Japanese Pharmacopoeia in Accordance with ICHQ3D" is funded by a grant received in FY 2022 for "Research on Japanese Pharmacopoeia Testing Methods, Etc." from the Pharmaceutical and Medical Device Regulatory Science Society of Japan.



## Message from the CSO (Chief Standardization Officer)

### Fuminori Inagaki

Senior Managing Executive Officer  
In Charge of Standardization Strategy (CSO) And Medical  
Regulatory Policy  
Deputy in Charge of Corporate Strategy Planning and Global  
Environmental Management (GX)



#### Career Overview

- Apr. 1982 Joined Ministry of International Trade and Industry
- Nov. 2006 Director, Trade Policy Division, Trade Policy Bureau, Ministry of Economy, Trade and Industry (METI)
- Jul. 2010 Deputy Director General for Policy Evaluation, Minister's Secretariat, METI
- Apr. 2011 Director, Nippon Export and Investment Insurance (NEXI)
- Jun. 2015 Joined Shimadzu Corporation, Managing Executive Officer and Deputy in Charge of Corporate Strategy Planning and Corporate Marketing
- Jun. 2017 Managing Executive Officer in Charge of Global Environmental Management and Deputy in Charge of Corporate Strategy Planning and Corporate Marketing
- Apr. 2021 Managing Executive Officer in Charge of Standardization Strategy (CSO), Global Environmental Management, and Medical Regulatory Policy, and Deputy in Charge of Corporate Strategy Planning
- Apr. 2023 Senior Managing Executive Officer in Charge of Standardization Strategy (CSO) and Medical Regulatory Policy, and Deputy in Charge of Corporate Strategy Planning and Global Environmental Management (GX) (current)

### Standardization is an Important Strategy for Differentiation

Standardization refers to proposing new analytical techniques or other regulatory content to organizations that create regulations, such as the International Organization for Standardization (ISO), in an effort to have the proposals adopted as standardized rules. Competitors in Europe and the United States are actively engaged in creating regulatory rules. Laws and regulations do not mandate or recommend using products from a particular company, but sometimes they name the company that developed the default technique in the comment section of related documents. That makes it naturally easier to use the products or techniques of companies that were involved in creating rules. Furthermore, regulations often cite the analysis method or other standard technique for compliance with the regulation, making compliance with the standard a selling point for selling to users. That is why manufacturers in Europe and the United States invest so much effort on standardization as part of their differentiation strategies.

Shimadzu started focusing efforts on standardization strategies during the previous medium-term management plan and will accelerate those measures during the new medium-term management plan as well.

### Specific Standardization Measures

Although standardization measures are being implemented in various fields, it takes 3 to 5 years for a proposed product or technique to be included in a regulation.

That means activities started during the previous medium-term management plan might bear fruit this year or the next year at the earliest.

Although I cannot mention specifics here, one example in the environmental field is the efforts to unify and standardize the techniques used to pretreat microplastics. Microplastic analysis can result in completely different data depending on the pretreatment technique used. That prevents obtaining internationally comparable data about pollution circumstances using different pretreatment methods for analysis. Therefore, we are involved in internationally unifying analytical techniques, including pretreatment methods, and also developing products and application technologies useful for determining the actual status of microplastics. In addition, we are involved in standardizing the analytical conditions for analyzing PFAS\* pollution in water and cooperating in establishing a variety of regulations for material informatics in material fields or for analyzing components with functional properties in food fields.

In some cases, we have targeted global ISO regulations from the beginning, but obtaining acceptance as an ISO regulation involves a lot of work, because it requires approval by each applicable country and region throughout the world. Therefore, we used a variety of approaches for promoting standardization of various techniques, such as first achieving standardization in JIS or JAS regulations before achieving standardization in ISO regulations.

The new medium-term management plan also specifies implementing "green" transformations (GX). One such GX field is methanation technology for achieving the carbon neutrality of natural gas. Methanation essentially refers to technology for generating methane gas from CO<sub>2</sub> and hydrogen and is being worked on by gas companies





Nexis GC-2030 Gas Chromatograph Used to Analyze Impurities in Hydrogen and Ammonia Gases

around the world. Conventional methane gas products are generated from liquid natural gas (LNG), but that process emits CO<sub>2</sub>. In fact, Japan will prohibit the sale of methane gas generated from LNG starting in 2050. Gas is analyzed using conventional gas chromatographs (GC), but analysis is difficult using existing systems. Consequently, the first company to develop the products, applications, and techniques for analyzing gas components will have a major advantage. Shimadzu currently has the second-largest market share of the global GC market, but developing such techniques before competitors would presumably be a game-changer.

However, considering that various countries and regions are investing the equivalent of trillions or tens of trillions of yen to promote GX technologies, it is unlikely that a single company will capture anything close to 100% of the market. Despite the common misconception, ISO regulations do not specify just one standard. If other scientifically valid and equivalent technologies are available, ISO regulations can specify multiple standards. In the case of GX technologies, for example, I think ISO might end up specifying separate Japanese, European, and American methods. However, if Japan does not participate in the process of establishing international standards, then only the Japanese method will be missing from international standards.

In fields where standardization is difficult for Shimadzu, it is also difficult for competitors. Therefore, once a market is established, we need to promote standardizing techniques as soon as possible to ensure our market share keeps growing in that market.

\* Per- and polyfluoroalkyl substances (PFASs) are artificially synthesized organofluorine compounds.

## Training Human Resources

Previously, standardization efforts at Shimadzu were mainly implemented by taskforce-like organizations. However, now standardization measures are strategically and systematically implemented by the International Standardization Group established in the Research & Development Management Department in April 2023.

Regarding global expansion, our initial focus will be on North America. In fact, our subsidiary in North America includes individuals with previous experience working in U.S. government agencies. Therefore, we are prioritizing standardization in that field, and we have already achieved ASTM (American Society for Testing and Materials) standard in certain areas. Furthermore, we are providing support from Japan for ASTM standard, such as application development. Next, we intend to start deploying similar measures in Europe and Asian regions as well.

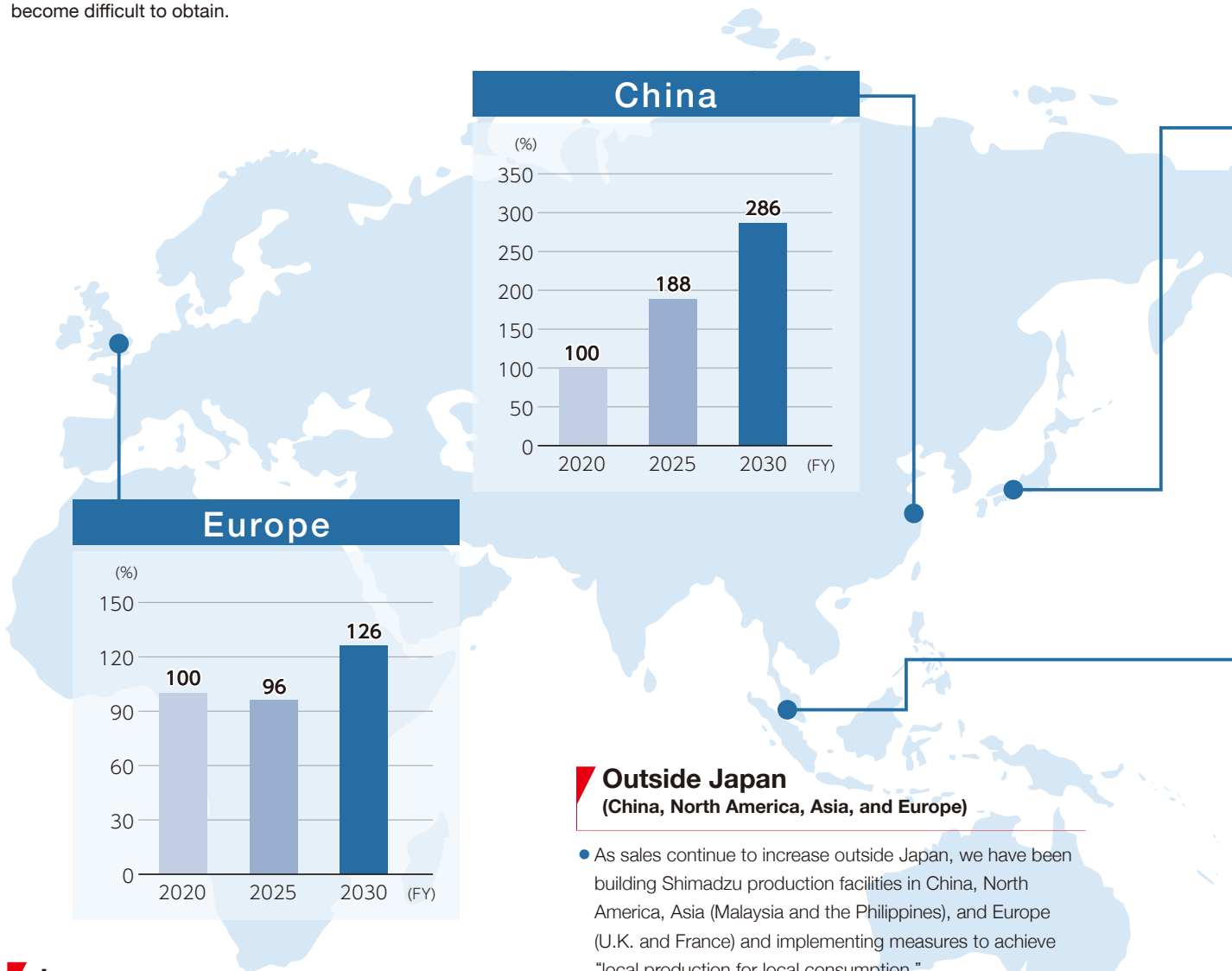
## Expect Great Things from Shimadzu in the Future

For over 30 years I worked in a role of creating regulations and standards at the Japanese Ministry of Economy, Trade and Industry. Those that create regulations and standards create them in cooperation with partners and professionals they can trust. Rather than simply complying with rules, those involved in creating the rules can ensure ideal rules are created and can also enjoy business advantages. Many Japanese think of standards, regulations, and rules in the world only as something created by countries and that must be followed without question. Shimadzu used to share that view as well. Therefore, at first we were unsure whether Shimadzu could really achieve standardization. Creating new standards/regulations can take 3 to 5 years without enjoying any benefits and there is no guarantee cooperation with regulatory bodies will result in actually influencing a regulation or standard. Initially, the divisions would ask us how standardization would contribute to next year's profit. However, after many small successes, standardization is now referred to within Shimadzu as a business strategy.

In the future as well, we intend to continue training standardization personnel and work to accelerate the process from initial development to looking ahead to standardization. Therefore, expect great things from Shimadzu in the future.

# Strengthening Global Manufacturing Capabilities

Our aim is to build flexible manufacturing capabilities for achieving a “society brimming with empathy” by overlaying Shimadzu and customer dreams and adding hard work. We are implementing a variety of measures to ensure we can always supply products to customers from our global manufacturing facilities in five regions (Japan, China, North America, Asia, and Europe), even if demand increases in particular regions or for particular models or even if a natural disaster occurs or parts/materials become difficult to obtain.



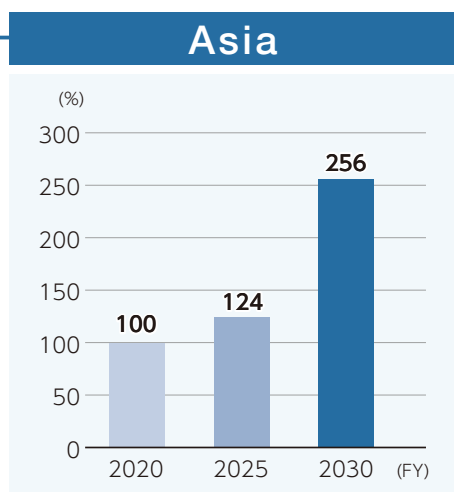
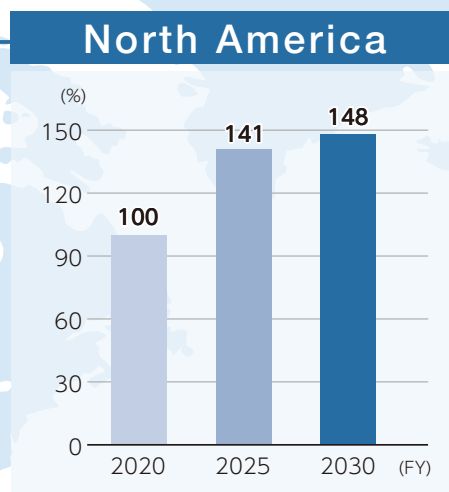
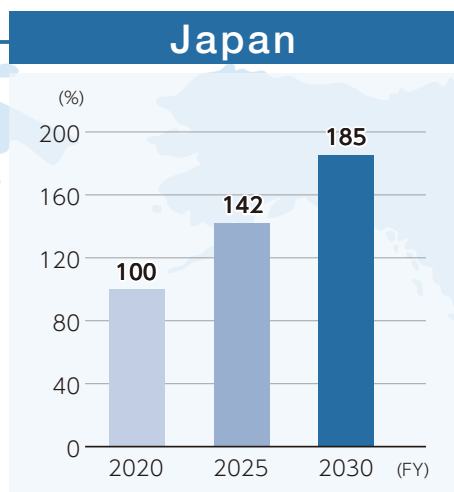
## Japan

- In Japan, Shimadzu manufacturing activities are distributed among Shimadzu Group production plants in Kyoto Prefecture (Sanjo and Murasakino), Shiga Prefecture (Seta), Kanagawa Prefecture (Hadano and Atsugi), Shimane Prefecture (Izumo), Nagano Prefecture (Iida), and Ibaraki Prefecture (Yuki).
- In response to higher demand, Shimadzu has been expanding production capacities and building reliable production systems, such as by building a new facility for painting at the Shimane plant and consolidating logistics for Sanjo Works at the new Shimadzu Logistics Center Kyoto.
- In the future, production will be further distributed to multiple locations and strengthened, including a new plant to be established in Japan.

## Outside Japan

(China, North America, Asia, and Europe)

- As sales continue to increase outside Japan, we have been building Shimadzu production facilities in China, North America, Asia (Malaysia and the Philippines), and Europe (U.K. and France) and implementing measures to achieve “local production for local consumption.”
- During the previous medium-term management plan period, lockdowns occurred in various countries due to the COVID-19 pandemic. We expanded the variety of models produced at each production site and moved production of critical parts in-house. In addition, we promoted the division of the manufacturing process and production at alternative plants on a global scale, so that we could keep supplying products amid the lockdowns. We will further expand the range of models that can be produced at plants in China, Malaysia, and other locations.
- In China and North America, we will build a system in which the local sales, development, and manufacturing functions work in cooperation to produce market-oriented products. Through these efforts, we will establish a foundation for market-oriented businesses in these regions.



Note: The graph shows growth rates normalized to "100" for 2020.

## Increasing Supply Chain Resilience and Integrating New Businesses

- We will build resilient supply chains to mitigate risks such as natural disasters and infectious diseases. Therefore, we will (1) strengthen procurement functions in China and North America, (2) hold strategic inventories, and (3) expand in-house production of critical parts.
- Following the acquisition of Alsachim in 2017, we built a new reagent manufacturing line at Sanjo Works in 2020 and acquired Nissui Pharmaceutical (renamed Shimadzu Diagnostics Corporation) as a wholly owned subsidiary in 2022 to strengthen capabilities for manufacturing reagent products globally. We will continue to develop multiple manufacturing locations and improve resilience in anticipation of further growth.

# Promoting Digital Transformation (DX)

Due to revolutionary advances in online communication technologies, the adoption of automation, AI/IoT, and other technologies at manufacturing plants, and the use of remote working practices, there has been an increasingly rapid transition to digital technologies after the COVID-19 pandemic. In the Shimadzu Group, a new DX/IT Strategy Management Department was established in 2021 to implement digital transformation measures. The purpose is to utilize digital technologies and various types of data in order to satisfy the needs of customers and society and also to increase the efficiency of business processes within the Group.

## DX in the Shimadzu Group

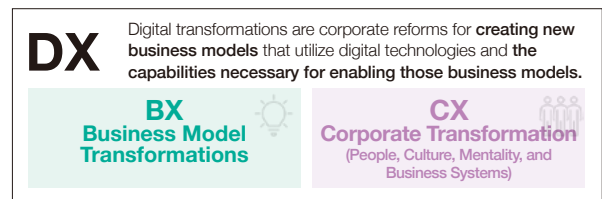
### Reform is the Essence of DX

A report on digital transformation (DX) issued by the Japanese Ministry of Economy, Trade and Industry defines DX as “companies’ efforts to meet rapid changes in business conditions, where data and digital technologies are used to reform products, services, and business models based on the needs of customers and society, as well as to reform business practices, organizations, processes, and corporate culture to establish competitive superiority.”

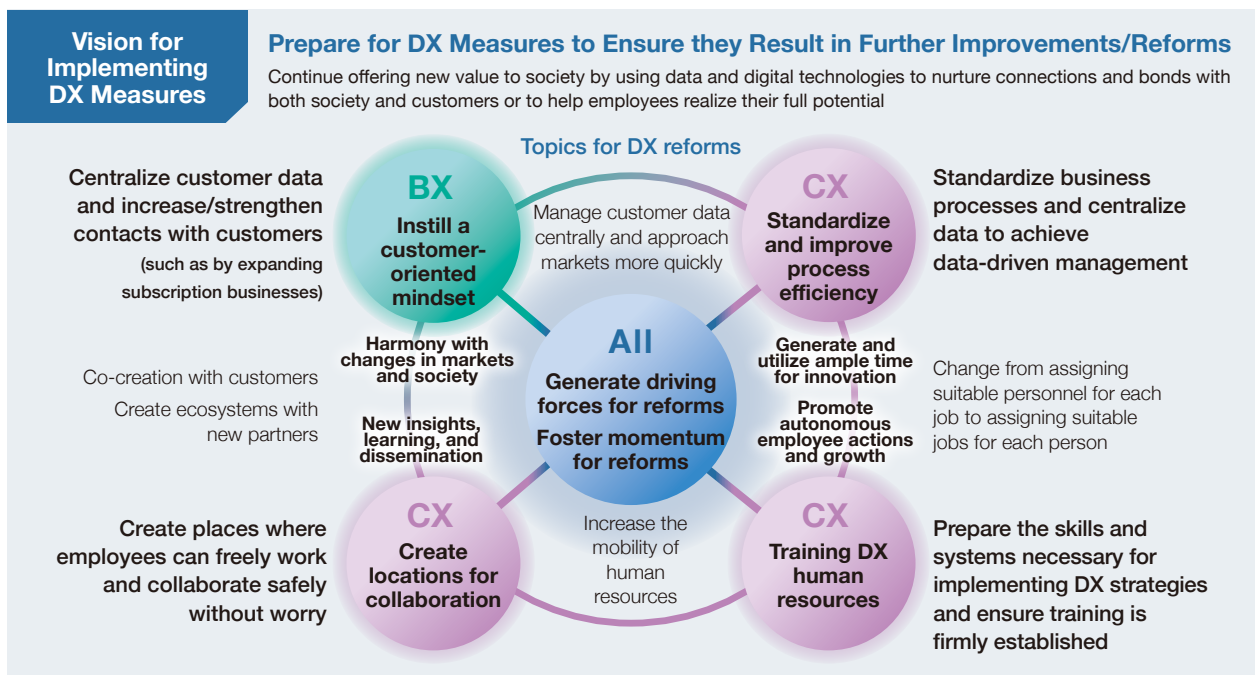
Although manufacturers might use IT measures to centralize data management in one location, automate manufacturing lines, and so on, DX measures are not implemented to simply increase productivity or improve quality. The essential characteristic of DX is to reform (transform) organizations or business models, rather than making immediate improvements to business operations.

The vision for DX reforms within the Shimadzu Group is “continue offering new value to society by using data and digital technologies to nurture connections and bonds with both society and customers or to help employees realize their full potential.” The key factors for achieving the vision are creating new business models that utilize digital technologies

and implementing company reforms that create capabilities for enabling those business models. Creating the new business models refers to implementing business transformation (BX) measures that utilize the latest IT technologies to transform businesses, such as by using digital and subscription-based content to generate recurring revenues. Implementing reforms that enable the new business models refers to implementing corporate transformation (CX) measures that transform the organizational culture, mentality, and operational systems.



To ensure the Shimadzu Group can successfully respond to changes in business conditions, we must learn to continuously implement reforms. Therefore, we will implement four reform topics that will enable business transformations (BX) for creating new business models and corporate transformations (CX) for achieving corporate organizational advancements.





### Generating Synergies

We will create the motive force for driving reforms and foster the momentum of reforms by executing the following four topics.

#### Instilling a Customer-Oriented Mindset

We will centralize customer data and increase/strengthen contacts with customers in order to expand existing businesses by expanding/improving sales channels and to create new businesses.

Information of the customers around the world, which was previously managed separately by respective departments, will be centralized and analyzed so that strategies can be set up based on the analysis of customer actions.

#### Standardizing and Improving Process Efficiency

We aim to standardize business processes and centralize data to achieve data-driven management.

Currently, the Shimadzu Group core computer system has been operated with large amounts of custom functionality (add-ons), which were developed individually for specific purposes, added on to the standard functionality. However, to reduce maintenance and operating costs, we have established a policy of using only standard core system functionality and reconfiguring the system to exclude individual add-ons. We will conduct a fundamental review of business processes in each field to systematically standardize processes and eliminate as many add-ons established thus far to optimize individual processes as possible.

Processes that cannot be adequately accomplished using standard functionality will be reconfigured and handled by standardized administrative department management sub-systems. Establishing a common base for sharing data

#### Creating Locations for Collaboration

We will create places where employees can freely work and collaborate safely without worry.

We will lay the groundwork for achieving a Shimadzu Group culture where issues can be freely discussed, so that the total volume of communication within Shimadzu will be increased and new insights and connections can be generated across departmental boundaries. Voice-activated real-time translation

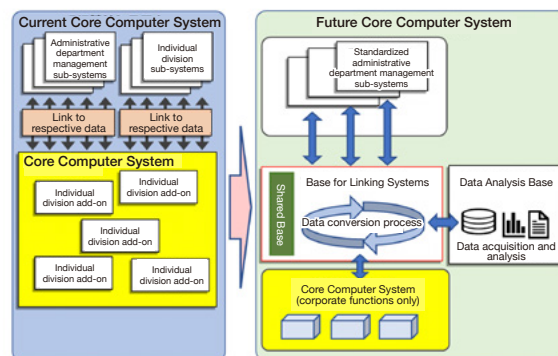
#### Training DX Human Resources

We will prepare the skills and systems necessary for implementing DX strategies and ensure human resource training practices are firmly established.

To reform business processes within Shimadzu organizations, it is extremely important to identify the essential characteristics of challenges and utilize data to solve the challenges. Therefore, in addition to using digital, information, and communication technologies, it will also be essential to foster human resources who have the skills necessary for utilizing data.

We will also focus efforts on expanding subscription businesses by reorganizing previous logistic channels and business models and increasing the scope of subscription businesses. We will specify product categories, such as platforms, services, and software, that Shimadzu can offer on a subscription basis and prepare corresponding rules for pricing and other issues.

between the core computer system and sub-systems will simplify the overall system configuration and help ensure seamless coordination between systems. As a result, IT investments will be shifted from those for maintaining and operating existing systems to those in new systems required for DX reforms.



functionality will be added to our online video conferencing system to promote more active communication. In addition, the data that is applicable to the entire Shimadzu Group (such as management information and non-financial information) will be visualized and shared to provide opportunities for communication.

#### FY 2025 Human Resource Targets

Competent personnel: Employees who are able to use data to propose business reforms and the introduction of new systems.

125

Learning personnel: Employees who can analyze data to form and verify hypotheses.

500

Novices: Employees with knowledge necessary for utilizing data provided.

3,000

# Message from the Director in Charge of Digital Transformations



## Implementing Digital Transformation Measures to Standardize Business Processes and Achieve Corporate Cultural Reforms

### Katsuaki Kaito

Senior Managing Executive Officer  
In Charge of Manufacturing, CS Management, and DX/IT Strategy  
Deputy in Charge of Human Resources

#### Career Overview

- Apr. 1983 Joined Shimadzu Corporation
- Oct. 2000 R&D Manager (Manager), LC Department, Analytical Instruments Division
- Jun. 2003 President, Shimadzu U.S.A. Manufacturing, Inc.
- Oct. 2008 General Manager, Analytical & Measuring Instruments Plant, Analytical & Measuring Instruments Division
- Jun. 2011 Deputy General Manager, Analytical & Measuring Instruments Division and concurrently General Manager, Analytical & Measuring Instruments Plant
- Jun. 2015 President, Shimadzu Scientific Instruments, Inc.
- Jun. 2016 Corporate Officer, President, Shimadzu Scientific Instruments, Inc.
- Apr. 2020 Managing Executive Officer in Charge of Manufacturing, CS, and Information Systems
- Apr. 2021 Managing Executive Officer in Charge of Manufacturing and CS, Deputy in Charge of DX Promotion (current DX/IT Strategy)
- Apr. 2023 Senior Managing Executive Officer in Charge of Manufacturing, CS, and DX/IT Strategy, and Deputy in Charge of Human Resources (current)

## Implementing Corporate and Business Transformations (CX and BX)

During the previous medium-term management plan, Shimadzu faced city lockdowns due to the COVID-19 pandemic and labor shortages due to employee infections. Furthermore, during FY 2022, difficulties obtaining parts such as semiconductors, along with other ongoing challenging circumstances, have made it difficult to maintain production as planned. To be honest, we barely overcame the challenges thanks to employees working labor-intensively as a unified team. I am happy that we made it through the difficulties, but doing so also revealed various issues.

The biggest challenge seems to be our slowness to utilize digital technologies and data. Therefore, for the new medium-term management plan, we will implement DX measures for strengthening our management base. Digital transformations (DX) will require both corporate transformation (CX) measures for transforming the corporate culture and mindset and business transformation (BX) measures for transforming business models.

## Implementing CX Measures for Standardizing Business Processes and Utilizing Data

The main theme of CX is standardizing business processes. Improving, modifying, or updating business systems involves a great deal of work and effort. That is because each department has established systems that are optimized for their own unique workflow, which is an extremely unfortunate situation. If systems are built optimized for a particular department, then only limited benefits can be achieved from improvements. It also makes it difficult to transfer business processes to other personnel.

We therefore intend to make a strong effort to achieve standardization. By standardizing systems and process steps, we intend to establish unified formats and processes that are the same in all departments. Information system departments are not the only departments involved in standardization. By standardizing systems and processes in each department of the entire company, including the manufacturing, sales, and service departments, we will achieve the visibility of all activities based on data.

By reforming manufacturing processes through the use of data, we will achieve improvements in quality, cost, and delivery (QCD). For Quality, we will focus on quality improvement using manufacturing data. For example, whenever there is any deviation in the manufacturing data,

we will promptly investigate the cause and take appropriate actions. By addressing issues early on, we can prevent potential defects and enhance product quality. Regarding Cost, we will drive cost reduction by improving manufacturing quality to reduce loss costs and implementing automation for cost efficiency. In terms of Delivery, we will gather various data about products, such as installation information available from service operations and customer delivery information available from sales operations, to determine when and where customers around the world prefer to have products delivered and installed, and then ensure production quantities are optimized according to the preferred delivery dates.

## Using BX to Collaborate with Partners around the World

For BX, we will use digital services to increase the opportunities for interacting with customers, in order to cultivate deeper relationships with customers around the world in combination with face-to-face meetings. Then the data obtained from digital services and information gathered from face-to-face sales activities will be analyzed and utilized for business purposes. In the future, information obtained from data analysis, AI chat/community sites, and other sources will be provided as feedback within Shimadzu. We intend to expand opportunities for business and collaboration by linking digital and in-person data to capture feedback from partners throughout the world as quickly as possible.

## Training DX Human Resources

Tools are needed for implementing DX measures, of course, but they are wasted unless there are personnel that can fully utilize those tools. We are actively pursuing talent acquisition, including mid-career hiring. However, in the current competitive landscape, IT talent is in high demand, and it is uncertain when we can secure highly skilled individuals due to fierce competition among companies. Since the establishment of the department, we have initiated a program to nurture talent capable of utilizing data. Now, individuals who have completed the program are actively contributing in various departments. We will continue to foster this momentum and ensure that many employees become proficient in data utilization.

## Culture of Improvement

Currently, if asked whether the Shimadzu Group is proficient at digital transformations, the answer would unfortunately be “No.” We are not close to achieving standardization goals yet and some systems are still optimized for particular departments.

However, I am not pessimistic. The reason is that Shimadzu employees are instilled with a culture of improvement. For example, for the past 37 years, the Shimadzu Group has been conducting “Do it Ourselves” (DIO) small-group activities. Recently, the DIO groups have even used robotic process automation (RPA) technology to save labor by automating production line processes. I believe that there are more employees who are willing to attempt problem-solving rather than those who consider improvement to be difficult. Therefore, we intend to implement DX measures based on a culture of thinking for ourselves and ceaselessly making improvements. Shimadzu Group employees should be able to do that.

## Expect Great DX Measures from Shimadzu

Looking back, after joining Shimadzu I was involved in product development for 14 years, manufacturing for 20 years, and sales for 5 years. Through various experiences in different roles, I have come to understand the perspectives of others more easily. In particular, a turning point occurred during my fifth year at Shimadzu, when I was seconded to our German subsidiary to establish a new manufacturing plant. Being involved in all manufacturing processes and interacting with various people within and outside the company also broadened my horizons.

Similarly, I also want other employees to broaden their perspective for implementing DX measures. Doing so will surely make Shimadzu stronger than it is today. Expect great DX measures from Shimadzu as we use them to implement major reforms.

# Training Global Leaders

## Basic Policy for Human Resource Strategy

Human resources are the greatest asset of Shimadzu and the greatest source of competitive strength for the Shimadzu Group. We will strive to continuously increase corporate value by all employees implementing our corporate philosophy “Contributing to Society through Science and Technology” and by solving challenges in society with global partners based on our ability for technology development and social implementation. Based on the slogan “Leadership and Diversity,” the human resources strategy is to engage in the following three activities in an effort to develop or acquire human resources who can be leaders for solving challenges in society through innovation achieved in collaboration with a variety of partners.

- Train all employees with the necessary mentality for acting independently, taking on new challenges, and fostering a culture of constantly learning and growing.
- Define what human resources are needed in order to strengthen business strategies and the management base. Then develop those resources by providing an environment that supports achieving growth through learning and gaining experience.
- Promote DE&I by acquiring a diversity of human resources and by creating human resource systems and work environments that enable each employee to realize their full potential.

## Fostering a Corporate Culture of Acting Independently and Continuously Learning and Growing

We will engage in training human resources needed by the Shimadzu Group, who are defined as having virtuous morals, the ability to think and analyze strategically based on diverse perspectives and areas of expertise, boldly take on challenges, follow things through to completion, and proactively achieve growth.

We are also engaged in fostering our corporate principle by creating opportunities for employees to learn about Shimadzu’s business activities, culture, and history. In the future, we will conduct Shimadzu “Leadership and Diversity” training for all employees to instill the mindset necessary for Shimadzu personnel, an understanding of diversity, and leadership skills that can be used in all sorts of situations. We will also implement initiatives to instill critical skills such as strategic and analytical thinking.

### Human resources needed by Shimadzu



## Developing Human Resources for Achieving Strategies

In order to achieve business strategies and strengthen the management base, we will promote executive management candidate training, advanced specialist training, and business leader training. In addition, we will establish a Shimadzu Academy as a place to gain experience as well as knowledge.

To ensure innovative technologies are actually widely used in society, employees need to develop the ability to supply product, service, and business models as soon as possible and learn from successes and failures. The Shimadzu Academy is scheduled to prepare a curriculum for gaining experience as well as knowledge.

### (1) Developing Executive Management Human Resources

Executive management training is an important issue for executing business strategies and strengthening the management base. Beginning with Management Seminars conducted since 1997, we have been actively engaged in developing executive management candidates who will drive additional Shimadzu growth. In the future, we will reform existing programs and provide executive management candidate training that not only provides knowledge but also promotes growth through actual practice. This can be achieved by sending candidates to other Group and non-Group companies in and outside Japan in order to develop cross-departmental experience.

### (2) Developing Advanced Experts

The following four types of specialists are essential for achieving Shimadzu Group growth. 1. Human resources for generating new technologies and business opportunities in cooperation with advanced specialists throughout the world 2. Human resources with development and design capabilities for generating new, high-quality products 3. Human resources for executing advanced managerial processes 4. Human resources for using data to reform business processes

For example, in April 2021 Shimadzu partnered with Osaka University to jointly start a program to train young engineers and researchers through the university’s doctoral program. Employees were recruited from within Shimadzu to work in multiple research programs at the university. In addition, in 2023 we started a new REACH Project as an industry-academia collaboration to hire students who graduated from masters programs and help them obtain doctoral degrees. Furthermore, we are also engaged in training specialists through our system for promoting the acquisition of special qualifications and through education/training. We will develop specialized human resources throughout the world by expanding the above activities globally.

#### Number of Employees in Doctoral Programs at Osaka University

FY 2021: 1, FY 2022: 3, FY 2023: 3

#### Number of Advanced Experts\*

FY 2022: 324, FY 2025 goal: 500

\* Employees with a doctoral degree, national certification/qualification (professional engineers, patent attorneys, class 1 mechanical design engineers, class 1 and 2 chief electrical engineers, level 4 IT engineers or equivalent, lawyers, certified public accountants, tax accountants, MBAs, etc.)



### (3) Developing Business Leaders

In order to ensure Shimadzu’s advanced technologies are broadly adopted in society, it is increasingly important to develop business leaders who can drive businesses by solving business challenges and leading personnel. Thus far, we have conducted situational leadership training for management personnel at Shimadzu Corporation and subsidiaries outside Japan. We will train some of the employees as in-house instructors to provide such training at Group companies in Japan as well. We are also offering a variety of other business leader training programs, including those for young employees. These programs include training at a Shimadzu location outside Japan, training through working in government ministries and agencies, and global manager training.

### Human Resource Systems and Working Environments that Enable Each Employee to Realize their Full Potential

Shimadzu defines “workplace well-being” as healthy workplaces where a diversity of human resources can feel a sense of job satisfaction and take on new challenges for achieving personal ambitions and growth. To achieve workplace well-being, we will implement a variety of measures so that we can create an organizational culture that promotes the utilization of diversity, establish human resource systems that cultivate a mindset for taking on new challenges, and develop healthy and safe workplaces that practice thorough compliance.

### Acquiring and Utilizing Diverse Human Resources

Shimadzu endeavors to acquire and utilize a diversity of talented human resources, regardless of nationality, gender, or previous experience. We are introducing a variety of hiring practices for acquiring promising human resources, such as strengthening efforts to hire mid-career employees, rather than only new university graduates, and promoting job-based research internships and technical internships applicable for doctoral programs. We also actively hire female employees and are using career planning training to increase the percentage of female managers. To expand the scope of human resources acquired from outside Japan, we have established a system for accepting transferees from many countries and regions where Shimadzu operates businesses.

Parameter	Target for Non-Consolidated Shimadzu Corporation	FY 2022 Results
Percentage of Women in Full-Time Employees	–	20.8%
(percentage of women in employees younger than 30)	–	(31.6%)
Percentage of Women in New-Graduate Hires	At least 30% or more every year	26.9%*
Percent of Childcare Leave Days Used by Women	100% each year	100%
Percent of Women Returning from Childcare Leave	100% each year	100%
Percentage of Women in Management Positions	12% (2030)	4.8%

\* Based on FY 2022 hiring activities

### Flexible Work Systems

To improve productivity and enable working styles that accommodate the childcare, nursing care, and other circumstances of each employee, Shimadzu has introduced flextime and teleworking systems that enable more flexible working schedules.

In the future, flexible work systems will also be deployed at other Group companies in order to acquire and retain more diverse human resources within the Shimadzu Group.

### Human Resource System Reforms and Assessment System Reforms

Shimadzu encourages employees to actively take on new challenges by offering an open job-posting system and various awards such as corporate performance awards.

The open job-posting system launched in FY 2022 includes postings for two types of jobs, one for new appointments and the other for projects. Project-based postings are for new topics, such as for new product development or for new business proposals. We anticipate that the knowledge and skills acquired from participation in projects will be used in the original workplace to activate organizations. We will gradually increase the number of postings to enhance the mobility of human resources.

The Shimadzu Business Performance Awards are awarded annually to individuals and teams at Group companies throughout the world that implemented outstanding measures or achieved exceptional accomplishments in their business activities. In FY 2022, there were 56 entries from the Head Office, 10 entries from Group companies in Japan, and 37 entries from Group companies outside Japan. In FY 2022, those involved in the inter-departmental cooperation for supplying novel coronavirus detection kits and AutoAmp systems were selected for the Gold Prize in recognition of the Group-wide effort made to satisfy the requirements of society.

In the engagement survey conducted since FY 2020, the percentage of positive responses has remained 80% or higher. In the future, we aim to achieve at least 85% by 2025 by making improvements to human resource and assessment systems, instilling a mindset in employees for taking on challenges, in employees, and striving to improve job satisfaction.

#### Internal Job-Postings

FY 2022: 15 (8 appointment-based and 7 project-based)

#### Non-Consolidated Shimadzu Employee Engagement Score (% Positive Responses)

FY 2020: 83.5%, FY 2021: 83.9%

FY 2022: 82.7%

# Promoting Diversity Management

## Basic Approach for Promoting Diversity, Equity, and Inclusion (DE&I)

Shimadzu diversity management is intended to generate new social value through innovation based on acquiring talented human resources without consideration of nationality or gender. Given that diversity management is considered an important strategy for management, we have been promoting D&I so that each employee can achieve their own maximum performance level. In order to strengthen/expand individualized support and empowerment for employees, we will also add "equity" to promote diversity, equity, and inclusion (DE&I). In FY 2022, DE&I activities were expanded to include activities at consolidated Group companies, with DE&I managers designated at each Group company to promote DE&I.

- Combining diverse types of knowledge and senses of value provides a source of new science and technology required by Shimadzu.
- Providing a workplace environment where employees are free to fully utilize their strengths, regardless of differences in gender, nationality, age, gender identity/orientation (SOGI/LGBTQ), disabilities, or other limitations on work practices, leads us to continue to be a company that attracts talented human resources and that is admired by society.
- Each employee feeling like they are a valued member of their workplace provides the foundation for employee trust in the company and sharing corporate value.

## Developing Women Leaders and Supporting Their Careers

In FY 2022, compared to the percentage of female managers throughout the Shimadzu Group (10.9%) and at Group companies outside Japan (22.5%), the percentage was only 4.8% within Shimadzu Corporation and 4.6% within Group companies in Japan. Consequently, increasing the percentage of women in leadership positions has been a significant challenge. In addition to providing environments where women can be successful, we are also strengthening measures to help women improve their careers. In FY 2022, Shimadzu Women Next Career Design training was offered for women employees that were close to reaching management positions. The participants can take a positive approach to improving their careers by hearing the stories of their role models within and outside Shimadzu. We will also continue empowerment training (Shimadzu Women Supporting Women) for women in management and expand the training to other Group companies in Japan.

We believe that providing an environment where a diversity of women can work successfully will result in a positive cycle of improving our hiring capabilities, which will in turn improve the working environment for women.

<b>Training</b>	<ul style="list-style-type: none"> <li>• Shimadzu Women Next Career Design training for women close to being promoted to management</li> <li>• Training at external institutions (Japan Institute for Women's Empowerment &amp; Diversity Management, Kyoto Women's University Recurrent Education, Nomura School of Advanced Management, other universities, etc.)</li> <li>• Ongoing Women Supporting Women (WSW) empowerment training for women in management positions</li> </ul>
<b>Career Support</b>	<ul style="list-style-type: none"> <li>• Introduction of mentoring system for women in department general manager-level positions</li> <li>• E-learning training for management personnel regarding unconscious bias relevant to Shimadzu trends</li> <li>• Using feedback from awareness survey results to cultivate understanding and awareness about supporting the careers of women</li> </ul>

## Initiatives for Supporting the Success of Non-Japanese Employees and Sexual Minorities

In FY 2022, a survey was conducted to determine the satisfaction level of non-Japanese employees within Shimadzu Corporation. The results indicated that satisfaction with working at Shimadzu was rated 4.0 out of 5, but the results also revealed future career issues in terms of networking, promotions, and working locations.

We implemented various measures to promote deeper understanding about sexual minorities (LGBTQ, etc.), such as conducting training and showing videos. In FY 2022, we conducted an LGBTQ awareness survey and invited an LGBTQ lecturer to give us a lecture. We also distributed ALLY stickers and icon rings, and engaged in other measures to expand the scope of people who appreciate relevant issues.

Based on the awareness survey results, we will implement measures to resolve corresponding issues, so that we can support the success of non-Japanese employees and sexual minorities.



Non-Japanese Employee Networking Event WSW Training

## SHIMADZU Diversity and Inclusion Week

During the FY 2022 SHIMADZU Diversity and Inclusion Week, a keynote presentation about promoting DE&I throughout the world was given in English by Piotr Feliks Grzywacz (CEO of Pronoia Group and formerly in charge of human resources at Google). In addition to the Diversity Senryu Contest, diversity art events, which do not require language skills for participation, were held to provide opportunities for all Shimadzu Group employees in and outside Japan to consider DE&I as their own issues. One Group company outside Japan commented that they would like to “continue to actively participate in promotional activities as a member of the Group.” We will establish a system in which Group companies in and outside Japan can proactively participate in these activities, so that DE&I can be promoted in the entire Shimadzu Group.

### Other Key Measures

- Talk sessions for hearing the frank views of management personnel
- Lecture by an LGBTQ lecturer
- Conversations with employees with disabilities
- Offering cuisines from countries around the world (at the Head Office cafeteria)

## Childcare Leave Day Use by Male Employees

The use of childcare leave days by male employees improved from 22.7% in FY 2020 to 56.7% in FY 2022. Although it is becoming more widely accepted as normal for men to use childcare days, an average of only 42 days were used in FY 2022, so we still need to make it even easier to use childcare leave days in the future. Therefore, we posted comments on

the intranet about the experiences of men that actually used the leave days (6 men from Shimadzu Corporation and 3 from Group companies in Japan). Within six months after the comments were initially posted, the comments were accessed 7,400 times, which is almost as many as the total number of employees in Shimadzu Corporation and Group companies in Japan. That large response will help establish a corporate culture where it is easier to use the days.

## Actively Hiring and Supporting Employees with Disabilities

When hiring employees with disabilities, the aim is to ensure the abilities of each employee can be fully utilized in a manner consistent with the characteristics of individual disabilities and personality. We are promoting a deeper understanding and more hiring of people with disabilities by providing opportunities to interact with representatives from academic institutions, special support schools, and job support offices in the community.

In order for colleagues to learn about the characteristics of disabilities and daily care required for employees with disabilities, we recommend attending workshops intended for people who provide support to employees with mental or developmental disabilities or for people who want to learn universal social skills. We will also offer such training within Shimadzu.

New Diversity Management  
Selection 100 Company  
(2019)



Nadeshiko Brand (2017 to 2022)  
Selected as a “Nadeshiko Brand” for six  
consecutive years (2017 to 2022).



### The Birth of the First Overseas Corporate Officer - Shimadzu Asia Pacific Managing Director's Message

I began my journey at Shimadzu (Asia Pacific) as a sales engineer, filled with dreams and ambitions to make a difference. Over the past 28 years, I've seized every opportunity to learn, grow, and sell more. From pioneering the First Global Marketing Meeting to launching Global Summits and establishing the First Marketing Innovation Centre out of HQ, each step has shaped who I am today.

As the first Global Corporate Officer in Shimadzu's 148-year history, I am deeply humbled by this opportunity. Shimadzu has transformed globally, embracing diversity and true representation. This promotion to Managing Director is not just a personal achievement; it represents a global promotion and elevation for Shimadzu. I firmly believe in equal opportunities for all who set their hearts and minds to it. Shimadzu will continue to provide opportunities to others like me, who are passionate about their jobs.

Currently, SAP is a regional headquarters of 18 ASEAN and South Asia countries. It contributes 20% of our overseas business through strategic sales capability, optimizing both direct sales and distributor business models. However, we aspire to achieve much more. Serving one-third of the world's population with a 30% market share, SAP can

grow further and attain a 35% market share within the next 3 years.

As we forge forward, SAP will Value Up through global branding, true synergy, and shared values with customers to increase our strong brand value. By realizing the convergence of our innovative technologies and knowledge across four business segments, Shimadzu will become the No.1 Precision Instrumentation Solution Provider from Asia to the World.

Our vision for the future is to move up the customer value chain for sustainability and become the growth engine to lead one TSUYOI Shimadzu. At SAP, we are committed to enriching the lives of our customers and employees, which is our ikigai. With unwavering dedication, we will strive for excellence as One Shimadzu, to Be The Best For Our Customers.



**Palanisamy Prem Anand**  
Corporate Officer  
Managing Director  
Shimadzu (Asia Pacific) Pte. Ltd.

# Message from the Director in Charge of Human Resources

## Yoshino Kajitani

Managing Executive Officer, in Charge of Human Resources, Diversity Management, and Health Management

### Career Overview

- Apr. 1984 Joined Shimadzu Corporation
- Oct. 2007 General Manager, Export Management Department, Shimadzu International, Inc.
- Oct. 2013 General Manager, Export Management Department, Shimadzu International, Inc. and concurrently Senior Manager, Business Process Re-engineering Unit, Business Systems Management Department
- Jan. 2014 Representative Director, President, Shimadzu International, Inc.
- Jun. 2017 Corporate Officer, General Manager, Public Relations Department
- Apr. 2019 Corporate Officer, General Manager, Corporate Communication Department
- Apr. 2021 Managing Executive Officer in Charge of Human Resources, Diversity Management, and Health Management (current)



As we face rapid changes in business conditions, I think “people” are the key to achieving sustained growth and increasing corporate value for Shimadzu. An important role of the Human Resources Department is to create systems and work environments where each employee can work autonomously and fully utilize their individual abilities.

Under the slogan “Leadership & Diversity,” the new medium-term management plan specifies promoting diversity, equity, and inclusion (DE&I) measures for fully utilizing the abilities of each individual and striving to ensure that each employee can provide leadership based on their respective specializations.

### Cultivating the Corporate Culture

Throughout Shimadzu’s long, 148-year history, a culture of heart-to-heart communication was developed based on the Shimadzu corporate philosophy and management principle. Meanwhile, due to factors such as the globalization of business activities, integration of businesses by M&A, and the increase in hiring of employees with previous experience, human resources with a diversity of experiences and values are having an increasingly active role in Shimadzu operations. Consequently, we have renewed our written summary of the mindset that should be prioritized. By instilling that mindset and executing the human resource strategy, I hope to nurture autonomy in employees, cultivate and permanently establish a corporate culture of taking on new challenges and constantly learning and growing.

### Reforming Human Resource Systems

I think human resource systems need to include measures that promote a mindset for taking on challenges and career autonomy. Therefore, the new medium-term management plan includes three system reforms.

- (1) Human resource systems for achieving multiple career paths
- (2) New assessment and compensation systems
- (3) Introduction of a policy for voluntarily delaying retirement until up to age 65

Multiple career paths will be developed not only for management personnel but also to expand one’s expertise and improve training/treatment of advanced experts that can contribute to solving challenges in society. New assessment and compensation systems will be introduced to reward those who make an extra effort, with an aim to promote a mindset of taking on challenges and increase job satisfaction. The voluntary delayed retirement (up to age 65) policy offers veteran employees the choice of diverse working styles for their own careers. By offering the above measures, we will increase the capabilities of Shimadzu personnel.

### Strengthening Human Resource Development

To achieve management and business strategies and strengthen the management base, we will improve training of executive management personnel, advanced experts, and business leaders. For executive management personnel, the aim is to provide any additional knowledge they need and systematically provide training based on their various experiences. We will establish a pool of executive management human resources by selecting candidates from each management hierarchy level and providing training from a company-wide perspective by a human resources training meeting consisting of corporate



officer-level personnel. Furthermore, technical capabilities are crucial for Shimadzu businesses. It is essential to catch up to competitors in new technical fields, keep making an effort to increase and develop more advanced technical abilities, and also expand into new business fields. At the same time, we will deploy programs for training advanced experts to increase their expertise in respective fields, such as DX, legal, and finance, which serve as the foundation for businesses. In addition, we will also train business leaders who can drive businesses forward, such as by stationing them at startup companies to acquire perspectives and know-how not available at Shimadzu. To accelerate the above measures, we will establish a Shimadzu Academy to deploy programs that focus on gaining experience as well as knowledge.

## DE&I Initiatives

With the increasing importance of diversity in human resources, in order to achieve business strategies, it will be essential to ensure diversity not only in gender and nationality but also in experiences, expertise, and values, and to create working environments where diversity is fully utilized. Therefore, we will engage in hiring more diverse human resources by collaborating with joint research partners and other academic institutions and actively recruiting experienced candidates.

The ratio of female managers, which has stalled at 4.8% of management at Shimadzu Corporation in FY 2022, also needs to be increased. In terms of women's initiatives, we offer training for women at specific organizational levels, such as for young female employees or female managers. The programs include discussions of challenges in promoting the role of women and DE&I and encourage the participants to develop solutions on their own. Next, we plan to expand programs that involve men as well. We also need to increase the ratio of women hired. Given that Shimadzu is a technology-based company, about 70% of new graduates hired are from science/technology majors. Although the percentage of female students in science-related majors is commonly indicated as 20%, during our most recent new-graduate recruitment 26.9% of the new hires were women, but our target is at least 30%. Next, we plan to create a global DE&I policy and specify DE&I measures and corresponding KPI values for respective subsidiaries. By implementing such measures, our goal is to increase the FY 2022 ratio of female managers from 10.9% throughout the Shimadzu Group and 4.8% in Shimadzu Corporation, to 15% and 12%, respectively, by FY 2030.

Another challenge is using non-Japanese employees. Currently, we are promoting the use of non-Japanese employees by increasing the number of non-Japanese employees transferred to the Head Office from Shimadzu subsidiaries outside Japan. In the future, we intend to promote using more non-Japanese human resources by developing global employees involved in missions that extend across conventional national or regional boundaries and by posting job opportunities to expand participation in projects. In 2023, a candidate from a Shimadzu subsidiary outside Japan was appointed as a corporate officer at the

Head Office for the first time in Shimadzu Group history. In the future, we intend to increase promotions to the Head Office by deploying executive management candidate training programs globally.

\* From FY 2022 hiring activity results

## Promoting Health Management

In an era of 100-year life expectancies, employee health management is increasingly important for ensuring employees can continue working with vitality. After starting health management measures in 2017, Shimadzu has been recognized as a "Health and Productivity Management Brand" for the third consecutive year and a "White 500 Company with Superior Health Management" for the seventh consecutive year. In the new medium-term management plan, in addition to continuing the current measures, we will also start two major additional initiatives. The first is to deploy health maintenance and improvement activities at Shimadzu Group companies in Japan and throughout the world. The other initiative is to jointly establish the Health & Productivity Management Alliance between eight companies, including Shimadzu and outside partners, in June 2023. The alliance will introduce health management products and services offered by respective alliance members and also engage in the development and verification of new products and services. Shimadzu aims to provide the mammographic PET scanner for breast cancer examinations and MCI screening systems designed for mild cognitive impairment examinations, both of which are currently offered to our employees and to other alliance members. In addition to early detection of diseases, the data obtained from those examinations and opinions from other companies presumably can be used as feedback for improving those products.

## Striving to Build New Relationships between Shimadzu and Employees and Improve Employee Engagement

For sustained corporate growth, conventional lifetime employment and seniority-based promotion practices are being reconsidered. With the relationship between the company and employees changing from one of subservience to something flatter and the relationship of providing safety/security changing to one built on trust, we need to create a relationship where both parties can achieve growth based on mutual responsibility and autonomy. In addition, with the growing diversity in employees' values and an increasing focus on the meaning of work and job satisfaction especially by younger people, we need to reconsider our conventional one-size-fits-all management style. Therefore, in addition to implementing a variety of measures, the new medium-term management plan will also promote building new relationships and creating work environments where employees can achieve job satisfaction and feel free to work vibrantly, thereby increasing employee engagement.

# Message from the CFO

## Akira Watanabe

Director, Senior Managing Executive Officer  
CFO, in Charge of Corporate Strategy Planning  
and Corporate Communications



### Career Overview

- Apr. 1985 Joined Shimadzu Corporation
- Jul. 1999 Transferred to Shimadzu Precision Instruments, Inc.
- Apr. 2007 Deputy General Manager, Sales & Marketing Department, Semiconductor Equipment Division
- Apr. 2009 General Manager, Turbo Molecular Pump Business Unit and concurrently Deputy General Manager, Sales & Marketing Department, Semiconductor Equipment Division
- Apr. 2011 General Manager, Sales & Marketing Department and concurrently General Manager, Turbo Molecular Pump Business Unit, Semiconductor Equipment Division
- Jun. 2013 Deputy General Manager, Semiconductor Equipment Division and concurrently General Manager, Sales & Marketing Department and General Manager, Turbo Molecular Pump Business Unit
- Jul. 2014 Deputy General Manager, Industrial Machinery Division and concurrently General Manager, Sales & Marketing Department
- Jun. 2016 Corporate Officer, General Manager, Industrial Machinery Division
- Apr. 2019 Managing Executive Officer, General Manager, Industrial Machinery Division
- Apr. 2020 Managing Executive Officer, General Manager, Industrial Machinery Division and concurrently General Manager, Fluidics Systems Division
- Apr. 2022 Senior Managing Executive Officer, CFO in Charge of Corporate Strategy Planning and Corporate Communications (current)
- Jun. 2022 Director, Member of the Board (current)

## Reviewing the Previous Medium-Term Management Plan

In April of 2020, the first year of the previous medium-term management plan, we issued a total of 20 billion yen in commercial paper to ensure adequate cash reserves in preparation for a sudden drop in performance due to the COVID-19 pandemic. To also prepare for cash flow problems at subsidiaries, we provided means for supplying necessary operating funds. Despite the headwinds predicted from the pandemic, Shimadzu achieved record-breaking sales and operating income for the third straight year, due to some of Shimadzu's strongest business segments and products being indispensable for society, including for people's health, but also due to Shimadzu employees around the world rallying to meet the challenge. Even cash on hand more than doubled to 150 billion yen, from 70 billion yen at the end of March 2019. That has dramatically improved financial stability over the past three years.

## Executing Strategic Investments

The new medium-term management plan specifies a capital allocation plan for ensuring those cash reserves actually result in growth. Based on a slogan of "Strategic Investments," we will execute strategic investments necessary for sustained growth, while also ensuring financial health. We will strengthen investments for achieving business growth in the area of social value creation and focus efforts on strengthening development/manufacturing/DX-related infrastructure.

The current outlook is that we will be able to secure at least 300 billion yen of operating cash flow for growth investments during the next 3 years. We plan to allocate half of that for strategic investments, 80 billion yen for capital equipment investments, and 73 billion yen for R&D. The acquisition of Nissui Pharmaceutical (currently Shimadzu Diagnostics Corporation) last year was the largest M&A investment by Shimadzu ever, but we plan to act even more aggressively during the coming three years. On the other hand, it is also a fact that Shimadzu has much less M&A experience than competitors who have achieved growth through repeated M&A activities. Therefore, to increase our experience level, such as our ability to identify, assess, and act on opportunities with a sense of speed, in April 2023 we launched a Corporate Venture Capital (CVC) fund in partnership with the venture

capital firm Global Brain. With a total of 5 billion yen in assets available, the scheme enables investments of up to 200 million yen with the approval of the CTO and CFO. The main purpose of the CVC fund is to invest in and support startup companies that have technologies or

knowledge that are highly compatible with Shimadzu, and to ensure the investments result in acquiring technologies needed for achieving additional growth of Shimadzu products or services, for deploying new businesses, or for generating new business opportunities.

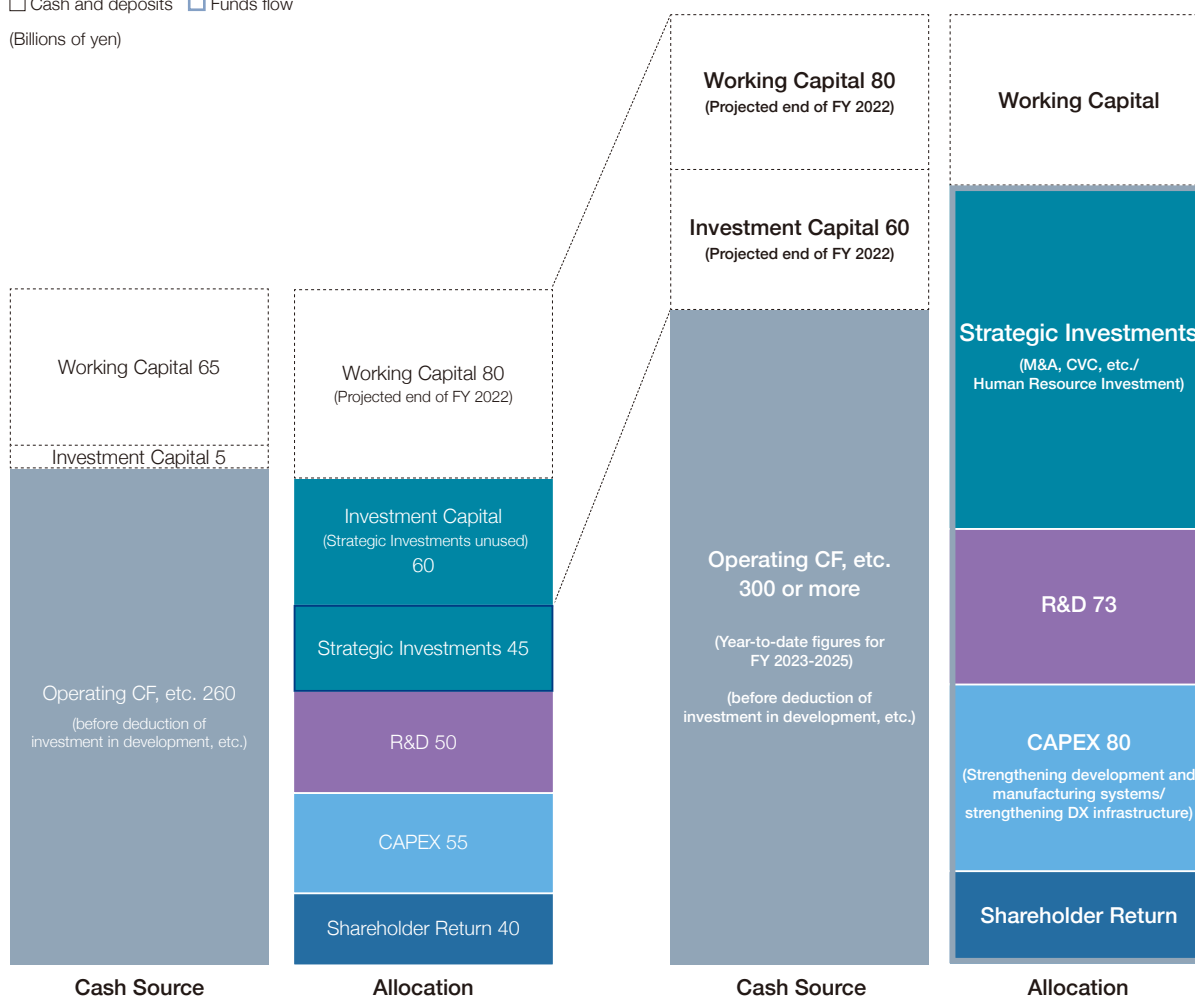
**Make strategic investments necessary for business growth while ensuring financial soundness for sustainable growth**

**Capital Allocation Policy**

1. Focusing on growth investment in the area of social value creation and strengthening development/manufacturing/DX-related infrastructure
2. Maintaining a dividend payout ratio of at least 30% and continuing dividend increases
3. Increasing capital efficiency by introducing ROIC

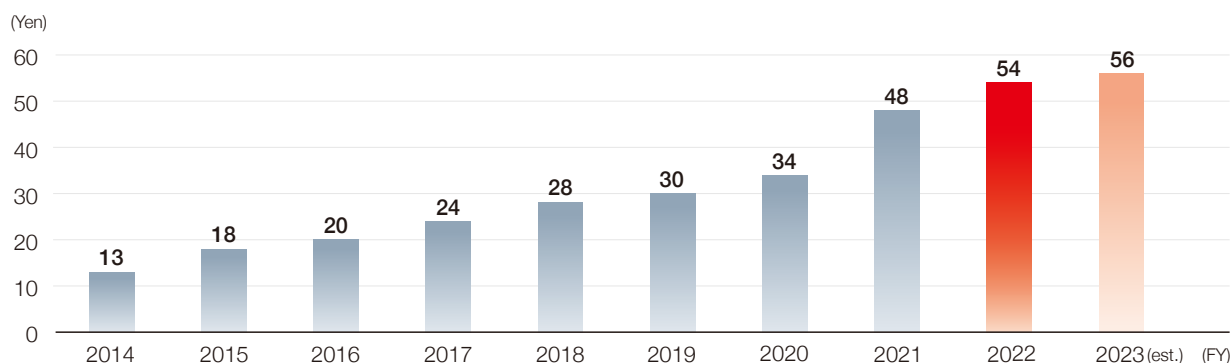
**Previous Mid-Term Plan (FY 2020-2022 Cumulative)**      **New Mid-Term Plan (FY 2023-2025 Cumulative)**

□ Cash and deposits    □ Funds flow  
(Billions of yen)



## Message from the CFO

### Dividends from FY 2014 to 2023 (Est.)



### ROIC Management

The new medium-term management plan also introduces “ROIC management” as a key element of the financial strategy. ROIC (return on invested capital) values indicate how much profit was earned from respective capital investments. Adoption of the ROIC performance indicator has been validated from all sorts of perspectives since the previous medium-term management plan. ROIC values publicly disclosed in financial reports are for consolidated operations, but for the current medium-term management plan, we intend to calculate internal ROIC targets for each division and product business unit (BU), in an effort to strengthen businesses and products from the perspective of capital efficiency. However, there are some problems in introducing ROIC values. For example, ROIC values for smaller BUs are affected just by changing the percentage of expenses borne by the BU. ROIC values will be used to not only improve capital efficiency, such as by reducing assets or resources, but presumably also for investment decision-making. Therefore, we are still trying to determine the best way to use ROIC values so that targets can be specified while maintaining fairness for different sizes of BU. One major role of the Finance and Accounting Department is to instill the importance of making continuous improvements to investment effectiveness.

### Strengthening Internal Controls and Governance

In 2022, a compliance violation (legal/regulatory violation) occurred at a Shimadzu subsidiary. Therefore, thorough measures are being implemented to ensure “compliance is prioritized above all else” throughout the entire Shimadzu Group. Financially, that means using case studies from other companies or other means to analyze variables and indicators in financial data in order to identify any signs of accounting fraud and then establish systems for preventing violations before they occur. Accordingly, we have been reevaluating accounting-related regulations and accounting process rules, which serve as the foundation for compliance in accounting, from the perspective of internal controls and responding to changes in business conditions. The effectiveness of governance will be

improved by ensuring rules are securely integrated into routine practices. In addition, in order to increase financial literacy throughout the Shimadzu Group, we will train human resources with systematically acquired accounting knowledge, station those people in business divisions and key Group companies, and implement other measures to strengthen internal controls and governance.

### Shareholder Returns

Starting with FY 2023, the first year of the new medium-term management plan, we have changed our policy for shareholder returns to “maintaining a dividend payout ratio of at least 30%” and “continuing dividend increases,” while also taking into consideration overall profit and cash flow circumstances.

Meanwhile, many investors have indicated they simultaneously want both “consistent dividend payments” and “business expansion and shareholder returns based on investment in growth.” Therefore, we intend to satisfy shareholder and investor expectations by actively investing profits into growth opportunities to achieve growth and also by increasing the stock price.

For FY 2023, we are planning to increase dividend payments for the tenth consecutive year. However, in order to achieve continuous dividend increases in the future as well, the most important factor will be investing in growth. We would appreciate your understanding and support for that approach.

### Comment to Shareholders and Investors

Our objective is to maximize the Shimadzu Group's corporate value. Although we sometimes receive harsh feedback from shareholders and investors, opinions that can contribute to increasing our corporate value have been widely reported and shared at Board of Directors meetings and elsewhere. We remain committed to actively maintaining a dialogue with shareholders and investors, while also pursuing both sustained growth and increased shareholder value.



# ESG Key Policies

## Promoting Environmental Management

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# Five Commitments for Environmental Management by the Shimadzu Group

Aiming for Sustainable Development and Growth of Society, we are Working to Resolve Various Environmental Issues

According to the Sixth Report of the Intergovernmental Panel on Climate Change (IPCC), extreme weather events such as high temperatures and heavy rainfall are increasing around the world due to global warming and are expected to increase further in the future. Global temperatures have already risen 1.1°C above pre-industrial levels, and further action by countries is required to increase the prospects of limiting global warming to less than 2°C. This will depend on accelerating rapid mitigation efforts after 2030. At the 27th session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP27), the focus was also on strengthening the

implementation of climate change countermeasures across the globe, and concrete plans were formulated to implement such measures. Furthermore, in order to ensure the sustainability of the Earth, the conservation of biodiversity has become an urgent global issue.

The Shimadzu Group is addressing environmental and social changes, such as climate change issues and resource depletion, and is engaged in a variety of activities under the five headings listed below with the aim of achieving sustainable social development and growth.



In November 2022, the Shimadzu Group's CO<sub>2</sub> emissions reduction target for FY 2030 was certified by the SBT Initiative as Science Based Targets (SBT), which is consistent with the Paris Agreement's goal of limiting the temperature increase to less than 1.5°C above pre-industrial levels. We have also signed the United Nations Global Compact, which outlines principles for environmental measures proposed by the United Nations, endorsed the recommendations of the Task Force on

Climate-related Financial Disclosure (TCFD), which calls for the disclosure of the impact of climate change on business operations, and joined the RE100 Initiative in declaring a commitment to use 100% renewable energy for our business activities by 2050. Furthermore, we have begun disclosing information based on the framework announced by the Task Force on Nature-related Financial Disclosure (TNFD). We will continue to work to solve environmental issues.

**Five Commitments**  
for Environmental Management by the Shimadzu Group  
(Eco-First Commitment)

- 1 We will implement measures for addressing climate change.
- 2 We will implement measures for establishing a recycling-oriented society.
- 3 We will develop and supply products and services that promote global environmental conservation.
- 4 We will engage in biodiversity conservation activities.
- 5 We will actively engage in environmental conservation activities involving each employee.

## As an Eco-First Company, Shimadzu Engages in Advanced and Unique Environmental Initiatives

Shimadzu was certified as an Eco-First company in October 2020.

Under the Eco-First Program, the Japanese Minister of the Environment certifies environmentally leading companies operating environmentally progressive and unique businesses that have large spillover effects, and that have declared a commitment to the Minister that they will take initiatives to combat global warming and implement waste and recycling measures to protect the environment. Currently, 66 companies in various industries have been certified as Eco-First companies (as of June 2023).

An "Eco-First Promotion Council" has been created, and Shimadzu's Chairman Ueda has served as its chairperson since April 2022. By taking an active and forward-looking approach to the activities of the Council, Shimadzu will communicate the significance and value of the Eco-First Program to society at large, and contribute to solving society's environmental problems by promoting advanced and innovative approaches and strengthening cooperation and partnerships among the companies.



The following web page includes information about the topic listed below.

<https://www.shimadzu.com/sustainability/approach/environmental/warming.html>

Preventing Global Warming



## 1 Initiatives for Addressing Climate Change

### Initiatives for Building a Carbon-Free Society

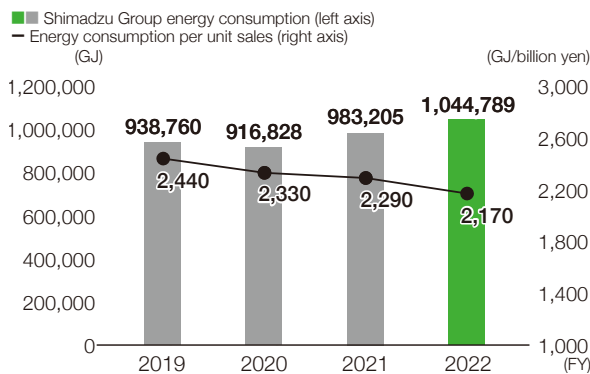
In April 2022, we set a new target to achieve net zero CO<sub>2</sub> emissions from business activities by 2050, and are further strengthening our efforts. Our interim targets are at least 85% reduction in FY 2030 and at least 90% in FY 2040 compared to FY 2017. We have also set a target of reducing CO<sub>2</sub> emissions from the use of Shimadzu products at customer sites, which account for 74% of CO<sub>2</sub> emissions by other companies related to Shimadzu Group activities, by at least 30% in FY 2030 compared to FY 2020. The CO<sub>2</sub> emission reduction target above for FY 2030 was approved as the "1.5°C level" of Science Based Targets (SBT) in November 2022. In March 2021, the Shimadzu Group joined the RE100 Initiative and switched to using electricity generated from renewable energy sources, thereafter renewable energy, at all major Shimadzu locations in Japan. As a result, 86% of the Group's total electricity consumption in FY 2022 was generated from renewable energy sources.

In FY 2022, energy consumption of the Shimadzu Group in Japan and overseas was 1,044,789 GJ, an increase of 7.2% from the previous year, but improved by 5.6% to 2,170 GJ/billion yen in terms of energy usage per unit of sales. This was due mainly to the consolidation of Shimadzu Diagnostics Corporation. On the other hand, CO<sub>2</sub> emissions decreased by 78.8% from the baseline year (FY 2017) to 10,462 t-CO<sub>2</sub> due to the implementation of energy conservation measures such as installing smart meters and diagnosing energy usage, as well as switching to renewable energy for electricity. CO<sub>2</sub> emissions per unit sales were 22 t-CO<sub>2</sub>/billion yen, a 49.5% improvement from the previous year (FY 2021).

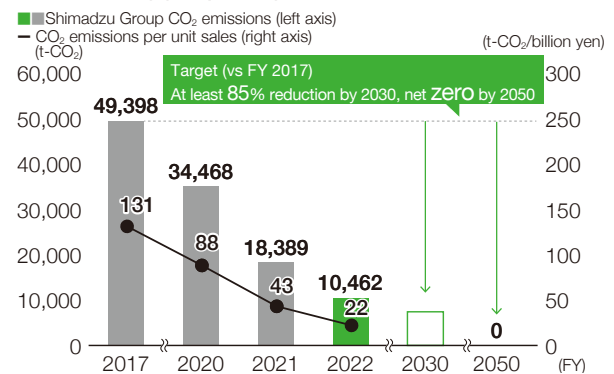
We will continue to contribute toward building a sustainable society and achieving a carbon-free society by installing solar power equipment and taking other thorough measures to reduce energy usage and utilize renewable energies.

- Reduce CO<sub>2</sub> emissions from Shimadzu Group business activities to net-zero level by FY 2050.
- As interim targets, reduce CO<sub>2</sub> emissions from Shimadzu Group business activities by at least 85% by FY 2030 and at least 90% by FY 2040, compared to FY 2017 levels.
- Reduce CO<sub>2</sub> emissions from customers using the products sold by the Shimadzu Group by at least 30% by FY 2030 compared to FY 2020.

#### Energy Consumption (Shimadzu Group in Japan and Overseas) (Scope 1, 2)



#### Energy-Related CO<sub>2</sub> Emissions (Shimadzu Group in Japan and Overseas) (Scope 1, 2)



#### Examples of Locations with Solar Panels

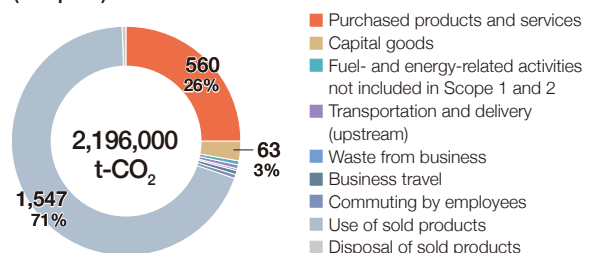


Shimadzu Manufacturing Asia Sdn. Bhd. (Malaysia)



Shimane Shimadzu Corporation (Shimane, Japan)

#### Greenhouse Gas Emissions in the Entire Supply Chain (Scope 3)



## Five Commitments for Environmental Management by the Shimadzu Group

### TCFD Measures for Addressing Climate Change

The Shimadzu Group regards environmental problems as one of its most important management challenges. To address the problem of climate change in particular, we are working to reduce CO<sub>2</sub> emissions generated from our business activities across the entire value chain and offer products and solutions that contribute to creating innovations in the so-called green (GX) environmental domain. We endorse the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and remain committed to disclosing relevant information.



#### Governance

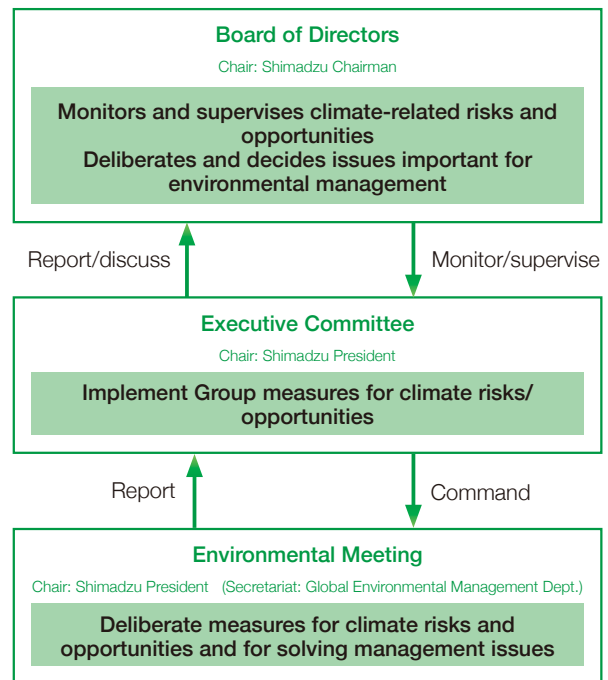
The Shimadzu Group discusses climate-related risks and opportunities, as well as measures to resolve management-related issues, at the “Environmental Meeting” (chaired by the President and held twice a year), a subcommittee specializing in environmental issues.

Discussions are reported to the Executive Committee, and are also reported to and discussed by the Board of Directors, thereby ensuring appropriate monitoring and supervision by the Board. The Board of Directors also deliberates and decides on important matters related to Shimadzu’s environmental management.

#### Risk Management

The Global Environmental Management Department is the main body that identifies individual climate change risks that could affect the Shimadzu Group’s business, strategy, and finances. In assessing the risks, Shimadzu identifies risks that are highly significant to the Group by assessing the degree and timing of the impact with reference to climate change scenarios issued by the IEA (International Energy Agency) and other organizations. The results of the identification and assessment are discussed and confirmed by the Environmental Meeting.

#### Diagram of Climate Change Governance System

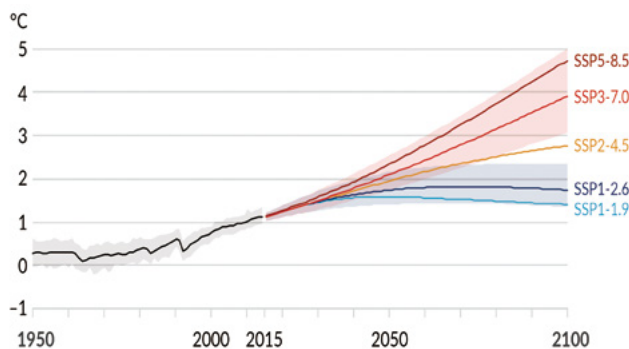


### Strategy for Addressing Climate Change

#### 1. Identify Climate-Change Risks and Opportunities

When identifying climate-related risks and opportunities that could affect Shimadzu Group businesses, strategies, or finances, we identify and organize climate change-induced drivers expected to have a large impact on Shimadzu businesses in each of two global scenarios, one where carbon reduction efforts result in a 1.5°C temperature increase and the other where current global warming trends increase temperatures by 4°C.

Change in Mean Global Temperature Relative to 1850-1900\*



**4°C** Societies fail to implement climate-change countermeasures beyond current levels, resulting in a mean Earth surface temperature in year 2100 that is 4°C higher than during the 1850 to 1900 period.

**1.5°C** Societies transition to a fundamentally carbon-free society with a mean Earth surface temperature in year 2100 that is less than 1.5°C higher than the 1850 to 1900 average.

\* Source: IPCC AR6



Climate Change-Induced Drivers Related to Shimadzu's "Social Value Creation Domains"					Other Climate Change-induced Drivers
Green (GX)	Materials	Industry	Healthcare		
<div style="display: flex; justify-content: space-between;"> <div style="width: 15%; background-color: #f4a460; padding: 10px; border-radius: 10px; text-align: center;"> <p><b>4°C</b> hotter world</p> </div> <div style="width: 85%; padding: 10px;"> <ul style="list-style-type: none"> <li>• More resilient public infrastructure</li> <li>• Increase in infectious diseases due to rising temperatures</li> <li>• Increased frequency and severity of wind and flood disasters</li> </ul> </div> </div>					
<div style="display: flex; justify-content: space-between;"> <div style="width: 15%; background-color: #6699cc; padding: 10px; border-radius: 10px; text-align: center;"> <p><b>1.5°C</b> hotter world</p> </div> <div style="width: 85%; padding: 10px;"> <ul style="list-style-type: none"> <li>• Widespread adoption of fossil-free and CO<sub>2</sub>-free fuels</li> <li>• Increase in the ratio of renewable energy</li> <li>• Shift to electric vehicles</li> <li>• Practical application of CO<sub>2</sub> capture and utilization</li> <li>• Increased use of biomass resources</li> <li>• Lighter and stronger materials</li> <li>• Increased demand for batteries and energy storage systems</li> <li>• Modal shifts in transportation, decarbonization of logistics</li> <li>• Electrification of society and strengthening of digital infrastructure toward carbon neutrality</li> <li>• Introduction and strengthening of carbon pricing</li> <li>• Sharp price increases for products in highly energy-intensive industries</li> <li>• Increased market penetration and demand for environmentally friendly products</li> <li>• Intensified competition in technology development</li> </ul> </div> </div>					

Starting with the climate change-induced drivers above, the main risks and opportunities related to climate change were identified and evaluated in terms of timeframe and impact level based on the International Energy Agency (IEA) climate change scenarios and other factors. The results are summarized in the "Main Risks/Opportunities for Shimadzu Businesses" table below.

### Main Risks/Opportunities for Shimadzu Businesses

Climate Change-Induced Drivers	Timeframe*	Main Risks for Shimadzu	Impact Level	Main Opportunities for Shimadzu	Impact Level	
Transition	Introduction and strengthening of carbon pricing	Medium-term	Carbon pricing occurs and burden increases.	Moderate	Increased demand for energy-efficient products.	Moderate
	Sharp price increases for products in highly energy-intensive industries	Short-term	Procurement costs increase for steel and other materials.	Moderate	-	-
	Widespread adoption of fossil-free and CO <sub>2</sub> -free fuels	Short-term	Decrease in demand for products for the energy industry and power generation-related industries that use fossil fuels.	Moderate	Increased demand for quality control products for hydrogen, ammonia, biofuels, etc.	Large
	Increase in the ratio of renewable energy	Short-term	Decrease in demand for products for the energy industry and power generation-related industries that use fossil fuels.	Moderate	Increased demand for products that contribute to the installation, efficiency improvement, and maintenance of wind power, solar power, wood biomass power generation, etc.	Moderate
	Increased demand for batteries and energy storage systems	Short-term	-	-	Demand increases for products used to improve battery and storage system performance or to develop and evaluate solid-state batteries.	Large
	Practical application of CO <sub>2</sub> capture and utilization	Medium-term	-	-	Increased demand for products related to R&D of CO <sub>2</sub> adsorbents or evaluating chemical products such as methanol from widespread use of methanation.	Moderate
	Increased use of biomass resources	Medium-term	-	-	Demand increases for products related to development, quality control, and evaluation of bioplastic ingredients, biochar, and other biomass resources.	Moderate
	Lighter and stronger materials	Short-term	-	-	Demand increases for material testing machines and products related to surface analysis of new materials used to achieve lighter and stronger transport equipment.	Moderate
	Shift to electric vehicles	Short-term	Demand decreases for products used for gasoline vehicles.	Low	Demand increases for products related to motors and semiconductors installed in electric vehicles.	Moderate
	Modal shifts in transportation, decarbonization of logistics	Medium-term	Demand decreases for products related to aircraft equipment.	Moderate	Demand increases for products related to improving energy efficiency of trains, ships, and large vehicles.	Low
	Strengthened digital infrastructure for electrification of society	Short-term	-	-	Demand increases for products related to semiconductors as semiconductor and information/communications industries grow.	Moderate
	Strong customer preference for environmentally friendly products	Short-term	-	-	Demand increases for Eco-Products Plus products with superior environmental performance.	Moderate
Physical	Intensified competition in technology development	Short-term	Sales opportunities are lost due to failed or delayed development.	Moderate	Competitiveness and profitability increase through continuous investment in R&D.	Moderate
	Increased frequency and severity of wind and flood disasters	Short-term	Losses occur from disasters at a business location or supply chain disruptions.	Moderate	-	-
	More resilient public infrastructure	Short-term	-	-	Demand increases for various testing machines used to reinforce or replace public infrastructure.	Large
	Increased number of patients with diseases and disorders due to rising temperatures	Long-term	-	-	Demand increases for diagnostic imaging and other equipment due to increased vector-borne infectious diseases, etc.	Low

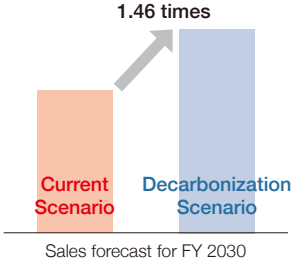
\* Approximate timing of impact on Shimadzu's business. Short-term: Within 3 years; Medium-term: Within 3 to 10 years; Long-term: Over 10 years

**ESG Key Policies: Promoting Environmental Management**

**Five Commitments for Environmental Management by the Shimadzu Group**

**Scenario Analysis of Demand Growth for Analytical and Measuring Instruments**

While it is expected that research and technological development related to carbon neutrality will continue to advance in various industrial fields, we conducted a scenario analysis regarding opportunities in the measuring instrument business (expanded demand for analytical and measuring instruments) using multiple temperature range scenarios.

<p><b>Opportunities for Analysis</b></p>	<p>Opportunities related to analytical and measuring instruments that support R&amp;D in clean energy, batteries, new materials, and other areas. (Items enclosed by dotted lines in the "Main Risks/Opportunities for Shimadzu Businesses" list on the previous page)</p>
<p><b>Analytical Conditions and Methods</b></p>	<p>The analytical and measuring instruments market has a strong correlation with R&amp;D investment in the public and private sectors. Therefore, using climate change scenarios related to investments in R&amp;D, manufacturing facilities, and infrastructure in the public and private sectors, we estimated the related domestic sales of analytical and measuring instruments in FY 2030. * Current Scenario: IEA STEPS (Stated Policies Scenario), Decarbonization Scenario: IEA NZE (Net Zero Emissions by 2050 Scenario)</p>
<p><b>Analysis Results</b></p>	<p>Sales of related domestic analytical and measuring instruments in FY 2030 were estimated as follows.</p> <ul style="list-style-type: none"> <li>Compared to FY 2022, sales will grow in both the "Current Scenario" and the "Decarbonization Scenario."</li> <li>In the "Decarbonization Scenario," where more R&amp;D investment is directed, sales are expected to be 1.46 times that in the "Current Scenario."</li> </ul>  <p style="text-align: center;">Sales forecast for FY 2030</p>

**2. Impact on Shimadzu’s Business, Strategy, and Finances under Climate Change Scenarios**

Results from analyzing the impacts on Shimadzu businesses, strategies, and finances for a carbon-free scenario (1.5°C hotter) and the current scenario (4°C hotter) are summarized below.

**1.5°C hotter world** Demand for Shimadzu products might decrease if energy, power generation, transport equipment, and other industries that use fossil fuels transition to a carbon-free society. At the same time, various industries are investing in R&D related to clean energy, batteries, and new materials, as well as in production facilities and infrastructure, and demand for Shimadzu’s products, including R&D-related analytical and measuring instruments, is expected to grow.

**4°C hotter world** Larger impacts from physical risks are expected to result in a more urgent need to increase the resilience of public infrastructure, which will presumably increase market needs for developing and supplying various testing machines used to reinforce and replace public infrastructure. Changes are also expected in medical market conditions, such as the spread of vector-borne infectious diseases over larger regions due to higher air temperatures. On the other hand, supply chain interruptions caused by physical risks could result in circumstances with negative impacts, such as being forced to stop the company’s business activities.

**Impact on Shimadzu’s Business, Strategy, and Finances under Climate Change Scenarios**

Shimadzu is working to reduce CO<sub>2</sub> emissions in its business activities by actively promoting energy conservation and utilizing renewable energy, and the actual amount of CO<sub>2</sub> emissions in FY 2022 was 10,462 tons. We also provide products and services to a variety of industries, including pharmaceuticals, medical, environmental, energy, semiconductors, and materials, making us unique in that we serve a broad base of client industries. As a result we believe it is very unlikely that a contraction in any particular industry would have a significant impact on Shimadzu finances.

Although opportunities from climate change are expected in various industries and fields in both a "1.5°C hotter world" and a "4°C hotter world," we recognize that efforts to realize a "1.5°C hotter world" will lead to a reduction in risks for society as a whole. Therefore, Shimadzu is working to achieve the 1.5°C target through its business activities. Specifically, Shimadzu designs all its products to be environmentally friendly, such as by making them more energy efficient, and continues to increase the percentage of Eco-Products Plus products that offer particularly high environmental performance. We also continue to invest in the development and supply of products that contribute to climate change mitigation and adaptation.

Overall, we believe that our business, strategy, and finances can remain resilient to climate change by appropriately seizing climate change opportunities and achieving sustainable growth through the actions and initiatives outlined in the transition plan on the following page.

### 3. Transition Plan for Achieving a Carbon-Free Society

#### Mitigation of Climate Change (Achieve 1.5°C Target)

To achieve the 1.5°C target specified by the Paris Agreement, the Shimadzu Group has set a target of net-zero CO<sub>2</sub> emissions from business activities by 2050 and is actively working to reduce CO<sub>2</sub> emissions accordingly. In addition, to reduce CO<sub>2</sub> emissions in our supply chain, we have set a reduction target regarding CO<sub>2</sub> emissions from the use of Shimadzu products at customer sites.

Targets, performance, and progress for these measures are monitored and overseen under the Climate Change Governance system and reviewed and updated on a regular basis.

#### Capitalize on and Maximize Opportunities

We will strategically develop and supply products that contribute to climate change mitigation and adaptation, and support our customers' efforts to decarbonize their businesses, in our efforts to achieve sustainable growth. In addition, Shimadzu will continue to strengthen its development infrastructure and supply system in response to the changing demands for its products. The policies and plans for initiatives in major business areas are as follows.

#### Shimadzu Group's Policies and Plans for Initiatives in Each of its Business Fields to Build a Carbon-free Society

Business Field		Policies and Plans for Shimadzu Group Initiatives
Green (GX)	Bio-manufacturing	We will establish and standardize quality evaluation methods in the field of biofuels, which are expected to drive the shift from fossil fuels. Furthermore, we will establish and standardize evaluation methods for biodegradable plastics and provide related analytical and measurement solutions for the expected increase in the use of bio-based plastics/chemicals and biodegradable plastics.
	Energy	We will offer various types of chromatographs for quality control analysis of hydrogen manufacturing processes and oil production by microalgae. For onshore and offshore wind power generation, we will develop and offer testing, inspection, and safety monitoring instruments for maintaining and managing equipment. We will contribute to wood biomass-based electricity generation by offering moisture analyzers that support efficient operation and X-ray fluorescence spectrometers for investigating the presence of hazardous substances in incineration ash. In response to the growing demand for bioethanol, we will offer gas chromatographs and elemental analysis instruments for quality control.
	Environment and Regulations	We will offer TOC solid sample measurement systems for the development and evaluation of CO <sub>2</sub> -absorbing concrete, and surface analysis and powder evaluation technologies for the research and development of CO <sub>2</sub> adsorbents for CO <sub>2</sub> capture and storage (CCS). In addition, gas chromatographs will be offered for the evaluation of methanol and other substances produced from CO <sub>2</sub> in CO <sub>2</sub> capture, utilization, and storage (CCUS).
Materials	Next-Generation Mobility Materials	We will contribute to the development of all solid-state batteries by offering X-ray evaluation technologies such as non-destructive X-ray systems and fluorescent X-ray analyzers for R&D and quality control, and gas chromatographs for analysis of the gases they generate. As the market for gasoline-powered vehicles shrinks and the number of EVs increases, we will introduce new products for electric vehicles, such as motor balancers. We will support the development of stronger and lighter materials with material testing equipment and surface analysis technology. For bioplastics development, we will offer material testing machines, thermal analyzers, various chromatographs, and elemental analysis instruments for quality control.
Industry	Semiconductors	In response to the expanding markets for screen films for flat panel displays, smart devices and semiconductors, we will develop turbomolecular pumps, which are essential for their manufacture, and prepare adequate production capabilities with the aim of achieving the number-one global market share.
	Industrial Machinery	We will continue to develop glass fiber winders for wind power generation blades. Regarding delivery pumps used in the petrochemical industry, we will release new high-efficiency models designed for biodegradable plastics.

### Indicators and Targets

#### 1. Reducing CO<sub>2</sub> Emissions

The Shimadzu Group intends to reduce CO<sub>2</sub> emissions from business activities to net-zero (carbon neutral) by 2050.

##### FY 2050 Target

- Reduce CO<sub>2</sub> emissions from business activities to net-zero.
- Increase the percentage of renewable energy use to 100%.

##### FY 2040 Target

- Reduce CO<sub>2</sub> emissions from business activities by at least 90% compared to FY 2017.

##### FY 2030 Target

- Reduce CO<sub>2</sub> emissions from business activities by at least 85% compared to FY 2017.
- Reduce CO<sub>2</sub> emissions from the use of products sold by the Shimadzu Group by at least 30% compared to FY 2020 levels.

\* Obtained SBT "1.5°C level" certification for this goal

Shimadzu Group's CO<sub>2</sub> Emission Reduction Targets Receive SBT "1.5°C Level" Certification

[https://www.shimadzu.com/news/9y\\_wri8ctm13xwu5.html](https://www.shimadzu.com/news/9y_wri8ctm13xwu5.html)

#### 2. Development and Promotion of Certified Environmentally Friendly Products

The Shimadzu Group is committed to improving the environmental friendliness of products and minimizing our impact on the global environment. Shimadzu has specified a target of generating 30% of net product sales from "Eco-Products Plus" products by FY 2030. These products are certified to offer significantly higher environmental performance than conventional models. Promoting sales of products with superior environmental performance is viewed as an opportunity for the Shimadzu Group. We will promote carbon neutrality by offering products that help customers reduce CO<sub>2</sub> emissions.

## 2 Initiatives for Establishing a Recycling-Oriented Society

### Initiatives for a Circular Economy

A variety of business models are being explored to shift from a linear economy, based on mass production, mass consumption, and mass disposal, to a circular economy that extends the value of products and resources and minimizes the amount of waste generated. To facilitate the shift to a circular economy, Shimadzu has set up a cross-departmental Sustainable Materials Promotion Committee to promote the

use of sustainable materials in new products and for replacement of existing product parts, thereby enhancing our value as a company that provides solutions to environmental issues. We will promote the adoption of biomass and recycled materials, and work toward the transition to a recycling-oriented society.

### Upcycling Packaging Materials into Polyethylene Containers for Waste Liquid Collection

Shimadzu recycles its waste plastic packaging materials into containers for collecting waste liquids to promote resource circulation and environmental sustainability. This is being done in cooperation with local communities and has been adopted and implemented by the FY 2022 Kyoto Prefecture 3R technology development support project (in the research and technology development field).

In FY 2022 we collected used plastic packaging materials and worked with a partner company to produce 1,000 polyethylene containers made from 30% recycled pellets for in-house use.

This initiative, which was a shift to material recycling to improve the quality of resource recycling, has led to collaboration with academic and research institutions that generate large amounts of liquid waste. We have concluded a “Comprehensive Collaborative Agreement” with Ryukoku University to contribute to the creation of a recycling-oriented society, and the university will participate in this initiative.



In the foreground is a polyethylene container made of 30% recycled pellets

### Reducing Waste by Reusing Packaging Materials

Shimadzu Logistics Service Corporation, which is in charge of the Shimadzu Group’s logistics, is working to reduce the amount of packaging waste. To reduce the amount of stretch wrap film (plastic) used to prevent loads from falling when they are transported between plants, they have started using reusable and efficient Eco Band pallet straps. Other measures include using reusable supplier boxes.

A Group company in the UK is now procuring parts from suppliers and delivering maintenance parts using returnable

boxes, while a Group company in China has created and utilized reusable supplier boxes when transferring processed goods, resulting in improved production efficiency and reduced waste.



Eco Band Straps

Custom-Designed Reusable Supplier Boxes

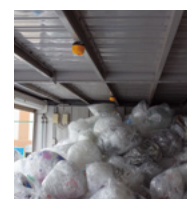
### Waste Plastic Collection System Using IoT Technology

A system to automatically collect and efficiently transport plastic waste generated from plants has been in place since January 2020. The system includes sensors installed at each site for determining the amount of waste plastic stored and communicating the location and amount to a waste management company that collects and transports it. The system can also suggest the most efficient route each time the waste is collected. The aim is to reduce CO<sub>2</sub> emissions associated with transportation.

Currently, the system is in operation at five locations, including the Sanjo Works and Seta Works, which generate large amounts of plastic waste, as well as three other

cooperating plants. The introduction of this system has resulted in a 20% reduction in CO<sub>2</sub> emissions during the collection and transportation of waste plastic. In recognition of this achievement, the Japanese Ministry of the Environment awarded Shimadzu the 2021 Minister of the Environment’s Award for Achievement in Promoting a Recycling-Oriented Society.

A separate liquid waste collection system has also been recently launched and is in operation. We will continue to improve the efficiency of collections, including suppliers.



Sensors Installed in Waste Storage Area



## Recycling Resources

### Promoting Proper Waste Disposal and Recycling

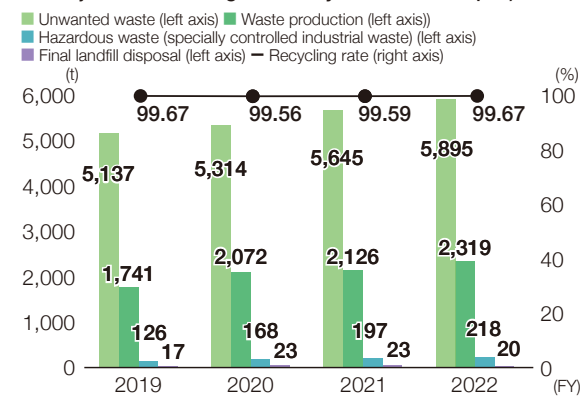
In part due to performance growth in the analytical and measuring instruments and industrial machinery segments during FY 2022, the total amount of unwanted waste (the total of waste materials for disposal and metal scrap and other valuable materials for resale) from key Shimadzu business and research facilities in Japan increased by 4.4% (year on year) to 5,895 tons. The total amount of waste materials for disposal increased by 9.1% (year on year) to 2,319 tons. Of these amounts, industrial waste from products using plastics was 483.3 tons (117% compared to 412.9 tons in the previous year). Although we failed to achieve our goal of reducing waste to below the previous year's level due to the increase in packaging-related waste from higher production, we have been promoting initiatives such as material recycling of plastic packaging materials.

Shimadzu's waste management goal is to achieve a recycling rate of at least 99% (= (amount of unwanted waste - amount of final landfill disposal) / amount of unwanted waste). The recycling rate in FY 2022 was 99.67%, which has been achieved for 13 consecutive years.

The Shimadzu Group is committed to compliance with laws and regulations and the promotion of the 3Rs (Reduce, Reuse, Recycle) in each workplace in order to make effective use of

the Earth's limited resources and contribute to building a recycling-oriented society. We have also established and implemented internal rules and procedures to ensure legal compliance, such as appointing eco/industrial waste leaders at each workplace to promote waste separation and recycling, manage manifests, and conduct investigations, including on-site visits of waste disposal contractors.

### Waste Production and Recycling Rates (Manufacturing, Research, and Major Manufacturing Subsidiary Locations in Japan)



The following web page includes information about the topic listed below.  
<https://www.shimadzu.com/sustainability/approach/environmental/waste.html>

Waste Management



## Water Management

### Reducing Water Usage and Managing Effluent Water Properly

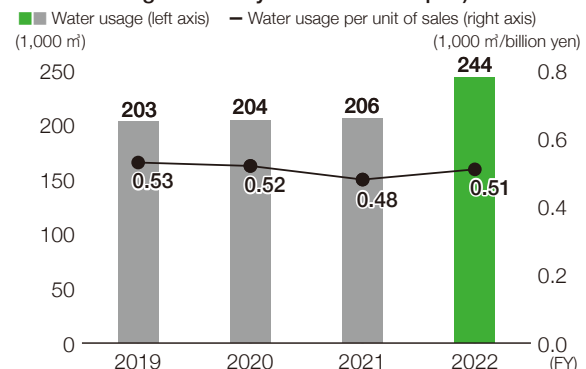
We are committed to reducing water usage by using rainwater to water green areas and by installing water-saving fixtures.

In FY 2022, water consumption at domestic production sites and laboratories increased by 18.7% year on year to 244,000 m<sup>3</sup> due to increased production and other factors, and per unit sales also worsened by 5.4% to 510 m<sup>3</sup>/billion yen.

Although we manage plant effluent under our own voluntary standards, which are stricter than the standards required by current laws and regulations, there was one case at a Shimadzu factory last fiscal year where the effluent standard for n-hexane extract was exceeded.

We will continue to implement measures for using resources sustainably.

### Water Usage (Manufacturing, Research, and Major Manufacturing Subsidiary Locations in Japan)



The following web page includes information about the topic listed below.  
<https://www.shimadzu.com/sustainability/approach/environmental/chemical.html>

Water Management



### Report on Effluent Violation

Shimadzu Corporation's Seta Works (Otsu City, Shiga Prefecture) was notified by Otsu City that n-hexane extract exceeding the standard specified in the Sewerage Act had been detected in effluent discharged on July 25, 2022 (standard 30 mg/L or less, detected 42 mg/L).

As a result of the investigation, the cause was identified as waste water discharged from the kitchen, and (1) a request was made to the


kitchen supplier to take thorough measures to prevent contamination with oil, etc., and (2) measures were taken to clean the pipes in the kitchen system, and the results were reported to the City of Otsu. Subsequent follow-up monitoring has led to the establishment and operation of a monthly cleaning rule for the kitchen, which has rectified the issue.

Five Commitments for Environmental Management by the Shimadzu Group

3 Development and Supply of Environmentally Friendly Products and Services

**Improving the Environmental Friendliness of All Products**

The following web page includes information about the topic listed below.  
<https://www.shimadzu.com/sustainability/approach/environmental/ecoproplus.html>



Eco-Products Plus Environmentally Friendly Certified Products—Designed to Reduce Global Environmental Impact—

**Environmental Considerations in Product Development**

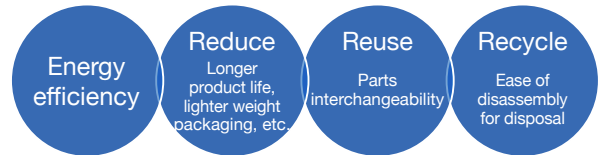
The Shimadzu Group is committed to improving the environmental friendliness of products and minimizing our global environmental impact throughout the supply chain. Our designers and development engineers are improving the environmental friendliness of all products by considering Product Design Guideline requirements and satisfying new product review criteria for achieving lower environmental impact than previous models. In particular, products that achieve especially high environmental performance are offered to customers as certified Eco-Products Plus products. The Eco-Products Plus certification requirements are that the product must meet one or more of the six requirements shown in the figure below.

The amount of CO<sub>2</sub> emissions reduced by the use of Eco-Products Plus products sold to customers during a year is defined as the CO<sub>2</sub> reduction contribution, and this amount in FY 2022 was 8,884 tons. The cumulative CO<sub>2</sub> reduction contribution over the past 10 years was 61,384 tons.

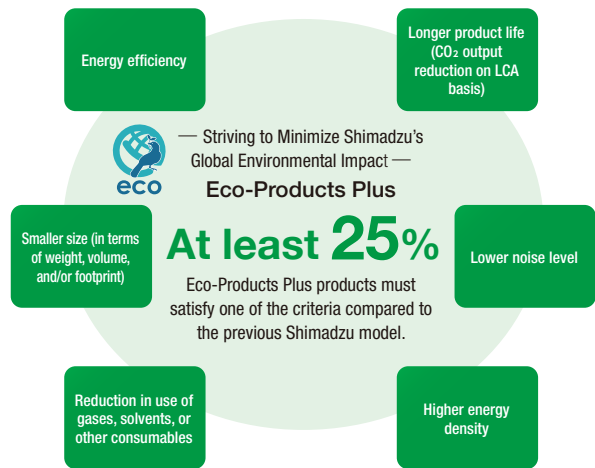
In addition, we have set a mid-term target of increasing the ratio of Eco-Products Plus to product sales to 30% by 2030, and the actual result for FY 2022 was 19%.

Shimadzu will continue to make further contributions to the environment by providing products that are carbon neutral, help create a recycling-oriented society, and improve the working environment.

**Criteria in Environmental Design Guidelines**



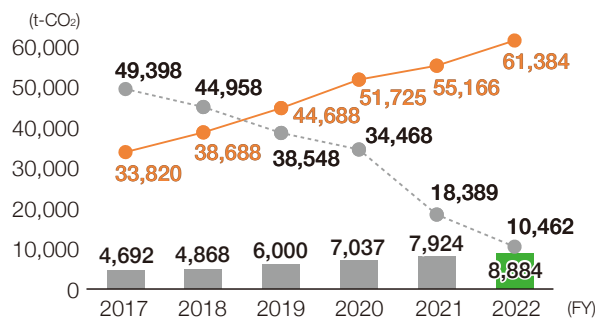
**FY 2022 Contribution to Reducing CO<sub>2</sub> Emissions** **8,884 t-CO<sub>2</sub>**



• For more details, refer to the website.

**Shimadzu Group CO<sub>2</sub> Emissions and CO<sub>2</sub> Reduction Contribution**

■ Reduction contribution of new products sold during the fiscal year  
 — Cumulative market volume — (Reference) Shimadzu Group CO<sub>2</sub> emissions



\* CO<sub>2</sub> reduction contribution: The amount of CO<sub>2</sub> emissions reduced by customers through the use of our products. Calculated using the formula "CO<sub>2</sub> reduction contribution = CO<sub>2</sub> emissions from conventional products (tons/year) - CO<sub>2</sub> emissions from new products (tons/year)"

**Certified Eco-Products Plus Products**

**LCMS-9050**

Electricity: 50% ↓  
 Consumables: 50% ↓

**FLEXAVISION F4**

Electricity: 30% ↓

**TMP-B70**

Electricity: 62% ↓  
 Volume: 59% ↓

**SRP300**

Noise reduction  
 Energy density: 62% ↑

## 4 Activities to Conserve Biodiversity

### Contributing to the Conservation of Biodiversity

The following web page includes information about the topic listed below.

<https://www.shimadzu.com/sustainability/approach/environmental/biodiversity.html>



Conservation of Biodiversity

### Biodiversity Conservation Activities Rooted in Local Communities

The "Shimadzu Forest," an 8,000 m<sup>2</sup> site developed within the Head Office and Sanjo Works (Kyoto City, Kyoto Prefecture), is planted with approximately 1,000 plants and trees, and is used as an area for customers and employees to relax.

In 2015, we became the first manufacturing company in western Japan to win the maximum AAA rating awarded by the Ecosystem Conservation Society-Japan under the Japan Habitat Evaluation & Certification Program (JHEP), a system that objectively evaluates and certifies efforts to conserve and restore biodiversity. The certification was renewed in 2020 and we maintained our AAA rating. In FY 2019, we introduced the method that uses "SOFIX (Soil Fertility Index)" for soil fertility diagnosis, and are promoting soil cultivation based on the use of science and technology.

We are also committed to preserving biodiversity by protecting local native species and contributing to local communities by better understanding and passing on traditional culture. Fourteen thousand Futaba Aoi leaves are used in the annual festivals at

Kamigamo Shrine and Shimogamo Shrine, and in the Aoi Matsuri, one of Kyoto's three major festivals. In recent years, due to environmental changes and damage caused by deer, wild boars, and other animals, the number of native plants has become scarce, so since 2017 Futaba Aoi has been planted in the Shimadzu Forest and dedicated to Kamigamo Shrine. The donated Futaba Aoi plants are grown in the Hollyhock Forest at the Kamigamo Shrine for use in Aoi Matsuri during the following year and later. Starting in FY 2022, we also begin growing Futaba Aoi at the homes of our volunteer employees, with the aim of offering them for dedication. We will continue to promote biodiversity conservation activities that are firmly rooted in the local community.



Shimadzu Forest within Sanjo Works in the Head Office Grounds



Dedicated Futaba Aoi plants

## 5 Actively Engaging in Environmental Conservation Activities Involving Each Employee

### Engaging in Activities that Help Shimadzu Contribute to Environmental Conservation

Shimadzu volunteers and others have been participating in the "Shimadzu Forest Planting Project" (Nantan City, Kyoto Prefecture) on an ongoing basis since 2008 in support of the activities of the Kyoto Model Forest Association. Overseas groups are also promoting similar activities. In the Philippines, we are participating in a river cleanup project in the Philippine Special Economic Zone. In China, we have been supporting the "Mother River Conservation Project" since 2010, and have conducted afforestation activities to protect water and soil and restore vegetation in the Yellow River and Yangtze River Basins, as well as afforestation activities sponsored by the Suzhou New District Government. In India and Uruguay, we also contribute to local environmental conservation by participating in local afforestation activities.

An Eco-Club environmental activities group develops educational materials about the environment, teaches lessons about the environment at elementary schools and other locations, and dispatches instructors for environmental seminars.



The following web page includes information about the topic listed below.

<https://www.shimadzu.com/sustainability/approach/environmental/support.html>



External Support Activities

## TNFD Commitment to Natural Capital and Biodiversity

### What is TNFD?

In June 2021, the Taskforce on Nature-related Financial Disclosure (TNFD) was established. This is an international organization that establishes a framework for private companies and financial institutions to appropriately assess and disclose risks and opportunities related to natural capital and biodiversity, including air, water, minerals, soil, plants and animals. The TNFD was conceived at the 2019 World Economic Forum Annual Meeting in Davos as a follow-up framework to the Taskforce on Climate-related Financial Disclosures (TCFD). It aims to establish a disclosure framework for nature-related risks in order to transition to a "nature-positive" society, where the flow of financial funds is directed toward halting and restoring the loss of natural ecosystems.

Our economic activities depend on benefits (ecosystem services) obtained from natural capital such as air, water, minerals, soil, plants and animals. Examples range from material supplies such as water, metals, etc., to pollination by bees, to benefits from tourism resources such as coral reefs. In particular, a state of balance among various living organisms is essential for stabilizing the quality and quantity of benefits produced by plants and animals. Therefore, reducing the impact on natural capital, including biodiversity, is important from the perspective of corporate sustainability.

The Shimadzu Group has identified "contribution to biodiversity conservation" as a key issue (materiality) in the Shimadzu Group Sustainability Charter. In a society that is shifting to become "nature-positive," we are working on disclosure in line with the TNFD to assess and manage risks and opportunities in our business activities and to improve our resilience as a company.

The final version of the TNFD is scheduled for publication in September 2023, so the current effort is based on the guidance provided in beta version v 0.3. In working on TNFD, we reference the LEAP approach.\*

### Governance

The Shimadzu Group deliberates on nature-related risks and opportunities, as well as measures to resolve management issues, at the Environmental Meeting (chaired by the President and which meets twice a year), a subcommittee focused solely on environmental issues. Discussions are reported to and discussed by the Executive Committee, which oversees the execution of these deliberations.

### Risk and Impact Management

The Global Environmental Management Department is the main body that identifies individual nature-related risks that could affect the Shimadzu Group's business, strategy, and finances. In making our assessment, we use the TNFD framework as a reference to assess the degree and timing of impacts to identify risks that are of high significance to the Shimadzu Group. The results of the identification and assessment are discussed and confirmed by the Environmental Meeting.

### Strategy

#### 1. Identification of Nature-Related Risks and Opportunities

This year, under the theme of water pollution, Shimadzu identified nature-related risks and opportunities for its direct (manufacturing steps) and downstream (usage of products sold) operations.

As for future trends related to water pollution, which is a prerequisite for the identification of risks and opportunities, the

2030 Target 7 of the Kunming-Montreal Global Biodiversity Framework calls for the reduction of pollution from excess nutrients, pesticides, highly toxic chemicals, plastics, etc. that run off into the environment. In addition, to achieve Goal 6 of the SDGs, "Clean Water and Sanitation," Target 6.3 in particular calls for halving the proportion of untreated effluent and improving water quality through recycling in order to reduce water pollution.

The following table summarizes the nature-related drivers and the Shimadzu Group's nature-related risks and opportunities that arise based on the changes in the external environment described above.



\* The LEAP approach consists of Assessment Scoping, Locate (finding points of contact with nature), Evaluate (diagnosing dependencies and impacts), Assess (evaluating significant risks and opportunities), and Prepare (preparing to respond and report), in relation to business activities and nature. It is an effective method for identifying risks and opportunities considering critical areas, dependencies and impacts.



**Table: Main Risks/Opportunities for Shimadzu Businesses (Theme: Water Pollution)**

Nature-Related Drivers	Direct Operations	Downstream	Main Risks for Shimadzu	Impact Level	Timeframe	Direct Operations	Downstream	Main Opportunities for Shimadzu	Impact Level	Timeframe
Stricter effluent regulations	●	—	Increased sewage treatment costs to comply with stricter effluent regulations	Low	Medium-term	—	●	Increased demand for water quality analyzers to comply with stricter effluent regulations	Moderate	Medium-term
Increase in population served by sewer treatment plants	—	—	—	—	—	—	●	Growing demand for water quality analyzers for sewage treatment plants	Low	Medium-term
Increased compliance awareness in the private sector	—	—	—	—	—	—	●	Increased demand for water quality analyzers for more sophisticated self-regulated effluent treatment	Low	Medium-term

\* Timeframe : Approximate timing of impact on Shimadzu's business. Short-term: Within 3 years; Medium-term: Within 3 to 10 years; Long-term: Over 10 years

**2. Downstream Opportunities (Usage of Sold Product) Impacts on Business, Strategy and Finances**

Regarding the reduction of water pollution, more stringent effluent regulations and pollution load reduction plans may be developed in the future in order to become “nature-positive.” To reduce untreated effluent, new sewage treatment plants are expected to be built in emerging countries such as China due to the increase in the population served by sewer treatment plants, while in developed countries such as Japan, more advanced treatment is expected to spread in existing sewage treatment plants. Furthermore, it is expected that the private sector will set voluntary effluent standards, not only to comply with regulations, but also to introduce more advanced treatment.

In Shimadzu's mainstay analytical and measuring instruments business, water quality analyzers are used to analyze effluent from sewage treatment plants and factories. Demand for these products is expected to increase as effluent regulations are tightened and more facilities and pollutants are subject to such regulations. In addition, as advanced treatment becomes more widespread, the need to analyze not only the effluent but also the water quality during the treatment process is expected to increase.

**Response Strategy**

- Understand the trends of existing regulations and chemical substances (microplastics, PFAS, etc.) that may become subject to new regulations.
- Strengthen relationships with NEDO, EPA, ISO, and other standards accreditation organizations in order to develop new measurement methods.
- Establish a consistent business system from development to manufacturing in order to respond to the preferential policy for domestic production in China.

In particular, we will pay close attention to regulatory trends in areas where environmental standards have not been met or where sewage treatment plants are not widely available, as well as to additional demand for water quality analyzers due to the introduction of voluntary control standards and advanced treatment in private companies.

**3. Risks in Direct Operations (Manufacturing Steps) Impacts on Business, Strategy and Finances**

Effluent from Shimadzu's main sites is connected to the sewage system and is treated at sewage treatment plants. However, there are some public water bodies where treated sewage is discharged that do not meet environmental standards for environmental water\* quality. If effluent standards are tightened in these areas in the future as we move toward becoming “nature-positive,” Shimadzu may be required to discharge at lower concentrations than the current regulatory standards, even if our sites are connected to the sewage system. Although the cost of sewage treatment, such as updating treatment facilities, is expected to increase in order to comply with such stricter regulations, the financial impact in this risk assessment is estimated to be limited.

**Response Strategy**

- Set voluntary standards that are stricter than legal standards.
- Proper management of chemical substances.
- Since we are keeping a close watch on the trends of existing regulations and chemical substances that may become subject to new regulations, we will also reflect this information in our risk management.
- For sites located in areas where environmental standards have not yet been fulfilled, understanding not only the regulations, but also the true state of the natural environment will be important.

**Indicators and Targets**

Since this is a pilot project, we will consider the indicators to be disclosed in the future based on the final recommendations to be published by the TNFD.

\* Environmental water refers to river water, lake water, seawater, groundwater, etc.



# Health Management

## Basic Policy on Health Management

Since its founding, Shimadzu has created many technologies under the corporate philosophy "Contributing to Society through Science and Technology." We will continue to contribute to people's health as we approach the era of 100-year lifespans, based on our management principle of "Realizing Our Wishes for the Well-being of Mankind and the Earth."

To this end, we believe that it is important for every employee to take an interest in their own health and the health of their colleagues and to create a caring and energetic workplace where they can maintain their physical and mental health.

Shimadzu Group will create an environment where employees can manage and promote their health together with their peers. We aim to be a company that grows together with our employees and their families by sharing our own technologies, products, and services related to healthcare.

The company is implementing health management measures, including health promotion events and opportunities for employees to undergo dedicated breast PET scans and mild cognitive impairment (MCI) screening tests based on in-house technology. These measures have earned us a Health and Productivity Management Brand award, and 2023 is the third consecutive year to be recognized in this way. In the future, we will work on health promotion activities in cooperation with overseas offices, using health promotion apps and holding various events to improve the well-being of our employees.

We will also participate in the "Health & Productivity Management Alliance" (established in June 2023) as one of the 8 steering committee members in order to promote the creation of health management models and the co-creation of solutions based on healthcare data, and to promote their widespread use amongst businesses.

### Health Declaration

The health and safety of each employee and their ability to work positively and with vitality serve as the basis for achieving Shimadzu Corporation's management principle "Realizing Our Wishes for the Well-being of both Mankind and the Earth." Accordingly, we declare that we will strive toward realizing our wishes for health.

#### 1. Ensuring Health

We will be highly mindful of our health and engage in independently maintaining our own health. In addition, together with our colleagues we will endeavor to create a secure, safe, and comfortable workplace.

#### 2. Sustaining Businesses Through Health

We will uphold the company spirit of promoting employee health, which has continued since the company was founded in 1875. In addition, by supplying leading-edge scientific technologies and services, we will help ensure the health of employees and society and promote the growth and prosperity of our businesses.

#### 3. Contributing to Future of Society Through Health

We will grow together with society and strive to help create a prosperous future for mankind based on ensuring the health of our employees and their families, who are at the core of our business operations, and based on our corporate philosophy "Contributing to Society through Science and Technology."

October 2017

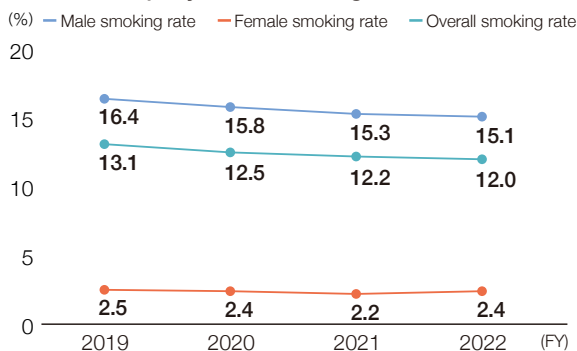
## Key Initiatives

We have established initiatives in five key areas with the aim of maintaining employee health, promoting mental and physical well-being, and balancing work and medical treatment. These areas are exercise, diet, sleep, mental health, and quitting smoking. We focus on employee health management based on the percentage of employees with optimal body weight, the percentage of non-smokers, and the percentage of employees

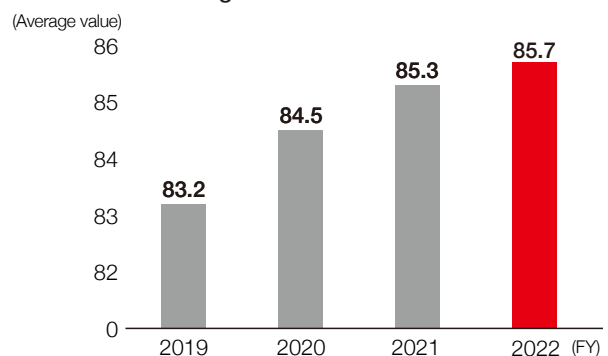
registered on the Shimadzu health web service as key performance indicators (KPI).

Shimadzu provides healthy menus in the employee cafeteria, supports sleep apnea testing, and promotes activities to prevent passive smoking and encourage employees to quit smoking. On-demand exercise videos are distributed to Group companies worldwide to raise health awareness throughout the Group.

### Trends in Company-Wide Smoking Rate



### Shimadzu Health Checkup Challenge Health Score Average\*



\* Calculated based on a proprietary formula from indices such as body composition, blood pressure, blood lipids, and smoking habits. The maximum score is 100.

### Recognized as a Health and Productivity Management Brand and a White 500 Company

In March 2023, Shimadzu was selected as a Health and Productivity Management Brand for the third year in a row. Shimadzu was also recognized as a "White 500" company with outstanding health and productivity management practices for the seventh consecutive year since the system was started.



Based on the "Population approach," in which everyone is aware of their own health checkup results and aims to make improvements to their health on their own, we launched the "Health Checkup Challenge" in 2021. This is open to all employees who receive regular health checkups. The health checkup results are scored on nine items, including blood pressure and triglycerides, to visualize changes in health status. Shimadzu's overall average health score increased from 84.5 points in FY 2020, before the initiative began, to 85.7 points in FY 2022.

Mental health, which is one of the five priority items and has recently become an important health issue, is a particular focus. We are working to improve our in-house professional (licensed psychologist) consultation system, as well as various training and e-learning programs. We provide balanced mental health programs from primary to tertiary prevention, including counseling and support for returning to work.

### Mental Health Initiatives

Four Types of Care	Self-Care	Line Care	Care Using In-House Resources	Care Using Off-Site Resources
<b>Key Points to Strengthen in FY 2022</b>	Acquisition and utilization of proper knowledge about self-care	Appropriate initial management response and creation of a workplace where employees can easily seek advice	Expansion of in-house counseling services	Strengthen cooperation with external EAP and medical institutions
<b>Main Measures</b>	<ul style="list-style-type: none"> <li>Conduct stress checks.</li> <li>Provide self-care training as part of new employee training, resilience training, etc.</li> <li>Offer e-learning.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct line care training.</li> <li>Mental Health Management Certification</li> <li>Improve the workplace environment following stress checks.</li> </ul>	<ul style="list-style-type: none"> <li>Establish an in-house consultation system (create a system that makes it easy to seek advice, etc.).</li> <li>Publicize the consultation service and strengthen communication activities.</li> </ul>	<ul style="list-style-type: none"> <li>Provide support for returning to work with industrial physicians, public health nurses, and certified psychotherapists.</li> <li>Conduct follow-ups to prevent recurrence.</li> </ul>

### Started Subsidizing the Cost of Tests to Determine the Risk of Developing Mild Cognitive Impairment

Starting in June 2022, we began subsidizing the cost of the MCI Screening Test Plus test. This determines the risk of developing mild cognitive impairment (MCI), a precursor to Alzheimer's disease, for employees aged 40 and over (approximately 2,600 employees). The subsidy amounts to about 25,000 yen.

Blood analysis using Shimadzu's liquid chromatograph mass spectrometer classifies MCI risk into four levels based on blood proteins related to nutrition, lipid metabolism, and immunity. After the examination, an occupational health nurse provides advice on lifestyle habits such as diet, exercise, and sleep to those who wish to receive it.

### In-House PCR Testing Room Established

In cooperation with Medical Corporation Chionkai, we established a system for subsidizing the cost of obtaining a breast cancer examination using a Shimadzu Elmammo Avant Class dedicated breast PET system. The subsidy system was

established to promote the detection and early treatment of breast cancer by increasing the ratio of women receiving breast exams. Female employees or spouses of male employees aged 40 or older were eligible for the examination.

### Introducing Health Web Service

Kencom, a health web service, has been introduced and used by each employee to raise health awareness and develop healthy behavioral habits (83.1% of employees subscribed as of March 2023). In addition to using it for daily health management such as keeping track of steps and weight, the

company also promotes exercise and encourages communication among employees through "walking" events held twice a year.



# Health & Productivity Management Alliance

As Japan faces the challenges of an aging population and declining birth rate, promoting “health and productivity management (H&PM)” has become one of the key agenda items for management in practicing “human capital management.” It is an approach of perceiving employees as company assets along with corporate productivity enhancement and streamlining of health expenditure. The industrial community is faced with the challenges of helping their employees promote health, achieving fiscal reform for their health insurance societies, and contributing to the government’s campaign to curb health expenditure. To address these social challenges, eight Japanese companies from different sectors, Ajinomoto Co., Inc., SCSK Corporation,

OMRON Corporation, Kirin Holdings Company, Limited, Shimadzu Corporation, JMDC Inc., Nippon Life Insurance Company, and Sumitomo Mitsui Banking Corporation have established the Health & Productivity Management Alliance (hereinafter, the “Alliance”) on June 30, 2023.

The Alliance will take data-driven approaches to identify issues, implement solutions, and evaluate measures thus taken by promoting health collaboration between companies and the societies. By consistently implementing the PDCA cycle based on a data health plan, the Alliance intends to design a model for H&PM, co-create solutions to make it work, and implement them in the industrial world.

## Challenges facing companies

Now that it is no longer rare for one to live to be 100, Japanese industries need to address the three challenges below:

### 1 Promotion of employees’ health

According to the Ministry of Health, Labour and Welfare (MHLW), 10.1%<sup>\*1</sup> of the business establishments reported that one or more of their employees took administrative leave or resigned due to mental health disorders between 2020 and 2021, which represents an increase of approximately one percentage point from the previous year. While Japanese society is beginning to allow people to work longer if they want to, many companies are confronted with such issues as rising health expenditures and their employees taking long administrative leave or resigning due to diseases whose risks can be predicted and prevented.

<sup>\*1</sup> Special Survey on Industrial Safety and Health, 2021, MHLW

### 2 Achieving fiscal soundness of health insurance societies

According to the National Federation of Health Insurance Societies (KENPOREN), 740 (53%) out of 1,388 health insurance societies reported deficits in fiscal 2021, with the total deficits being estimated at 82.5 billion yen<sup>\*2</sup> primarily

owing to an increase in contributions to medical care for the elderly. When the premium rate exceeds the average premium rate of the Japan Health Insurance Association (Association Kempo) (10%), which is predominantly used by employees at small- and medium-sized enterprises, the benefit of having company-run health insurance societies is diminished. The premium rate of about 20% of the total (around 300 health insurance societies) is already either equivalent to or above 10%. This being the case, the fiscal position of health insurance societies is hardly sound.

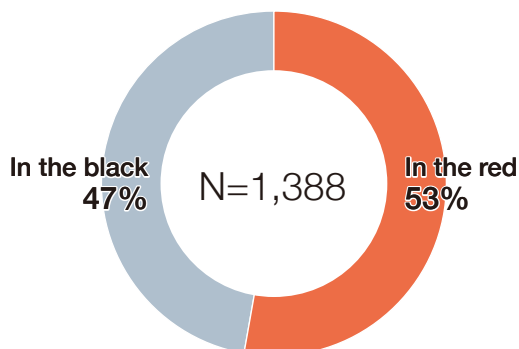
<sup>\*2</sup> Prospects of Account Settlement of Health Insurance Associations, 2021

### 3 Contribution to curbing health expenditure

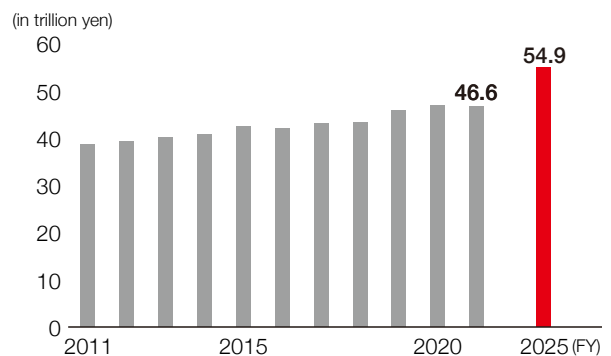
Health expenditure in Japan has been exposed to increasing financial stringency, with medical benefits expected to rise to approximately 55 trillion yen in 2025 from the current level of approximately 46 trillion yen<sup>\*3</sup> in 2021. It is thus expected that working to restore the fiscal soundness of company-run health insurance societies will eventually cap the rapid increase in medical benefits from the government.

<sup>\*3</sup> Changes in Health Expenditure, Social Security, Etc. (Reference Material), Ministry of Finance

% of deficit-ridden health insurance societies



Change in Health Expenditure



<sup>\*</sup> Numbers for FY 2019-FY 2021 are on a budget basis.



### Health & Productivity Management Alliance

<b>Name</b>	Health & Productivity Management Alliance
<b>Establishment</b>	June 30, 2023
<b>Purpose</b>	To design a model for H&PM, co-create solutions to make it work, and implement them in the industrial world
<b>Main activities</b>	<p><b>1. Designing evaluation indicators for H&amp;PM</b> To design key performance indicators (KPIs) for properly evaluating H&amp;PM initiatives and their results, thus contributing to corporate value enhancement.</p> <p><b>2. Develop an H&amp;PM assessment framework based on data analysis</b> We are currently developing a framework for “H&amp;PM Assessment” that contributes to identify and visualize health issues by utilizing the analysis of health check-up results, receipt data, employee questionnaires, etc. We aim to help promote collaborative health with our members' health insurance and labor affairs staffs.</p> <p><b>3. Build an information platform for various types of solutions</b> The Alliance accumulates information on various types of solutions needed to produce results for H&amp;PM. A database will be built based on participating companies' /organizations' experiences in introducing solutions and the verification results of their effects so that participating companies can share information based on which they can choose a solution that matches their own issues. Trial and error may have limited efficacy if performed by individual companies/organizations, but collective knowledge among many companies/organizations will increase the speed of learning about the implementation of a solution.</p> <p><b>4. Organize workshops/seminars</b> The Alliance organizes workshops and seminars for management members and people in charge of human resources and health insurance societies to enhance their literacy and skills concerning H&amp;PM. (Topics Example) (1) Initiatives for H&amp;PM in human capital management (2) Utilization of data for H&amp;PM (3) Fostering of corporate culture for spreading H&amp;PM and approaches to employees (4) Examples of companies' practices for solving their issues</p>
<b>Roadmap</b>	<p><b>FY 2023</b> Launch practices by lead managing companies, member companies/ organizations, etc. (Target participation: 300)</p> <p><b>FY 2024</b> Verify effects at companies already practicing H&amp;PM and increase their number</p> <p><b>FY 2025</b> Ensure continued participation/Increase the number of companies practicing H&amp;PM and create markets for health promotion and preventing serious illness</p>
<b>Lead managing companies (8)</b>	Ajinomoto Co., Inc., SCSK Corporation, OMRON Corporation, Kirin Holdings Company, Limited, Shimadzu Corporation, JMDC Inc., Nippon Life Insurance Company, Sumitomo Mitsui Banking Corporation
<b>Member companies/ organizations</b>	Enterprises (corporations), government agencies, academic institutions (universities and research laboratories), concerned bodies 140 in total (as of June 30, 2023)



(from left to right)  
Executive Officers from the 8 lead managing companies, who announced the establishment of the “Health Management Alliance.”  
Our company’s Chairman, Teruhisa Ueda, is the third person from the left.

\* Positions are as of the press conference held on March 10, 2023.

# Customer Satisfaction (CS)

## Basic Policy

We shall offer products and services with superior quality at reasonable prices that provide maximum value to customers.

### General Policy

#### (1) Pursuing Customer Satisfaction

We shall offer safe and secure products and services with high added value that prioritize customer value.

#### (2) Creating New Value Jointly with Customers

We shall create new value by sincerely considering customer views and wishes.

#### (3) Ensuring Thorough Quality Control and Safety Management

Should a quality control or safety management problem occur, we shall strive to solve the problem quickly and implement thorough measures to prevent recurrence.

## Initiatives to Maintain and Improve the Quality of Products and Services

Based on our corporate philosophy and management principle, we have established the Basic Quality Assurance Policy to systematically maintain and improve quality and provide quality that satisfies our customers in all our products and services.

### Basic Quality Assurance Policy

Let's all work hard to provide quality that satisfies our customers around the world at every stage of the product life cycle\*.

\* The product life cycle is a 12-stage process that encompasses (1) marketing and market research, (2) product design and development, (3) process planning and development, (4) purchasing, (5) production, (6) verification, (7) packaging and storage, (8) sales and delivery, (9) installation and start-up, (10) technical support and ancillary services, (11) post-sale surveys, and (12) disposal or recycling at the end of product's useful life.

## Product Safety Training

We are strengthening safety technology training for engineers. In addition to in-house training on various safety standards, we are working to further strengthen product safety by encouraging employees to obtain external certification as Safety Sub-Assessors\* and requiring participation by certified personnel in safety evaluations and risk assessments during the product development process (as specified in internal regulations).

\* Safety certification that recognizes employees' knowledge and ability in machine safety based on international safety standards (certified by Japan Certification Corporation). A total of 80 Shimadzu Group employees were certified by FY 2022.

## Ensuring Safety for Customers and Gaining their Trust

We aim to fulfill our social responsibilities and earn customers' trust by providing them with safe products. Specifically, we have established a Basic Policy for Product Safety to clarify the Shimadzu Group's stance on product liability (PL) and other issues.

### Basic Policy for Product Safety

The entire Shimadzu Group will act with the safety and trust of customers as our top priority.

### Guidelines for action

1. Comply with laws and regulations
2. Implement safe designs
3. Prevent improper use
4. Ensure product safety throughout the product life cycle
5. Disclose information related to product safety
6. Respond to product accidents
7. Improve quality assurance system

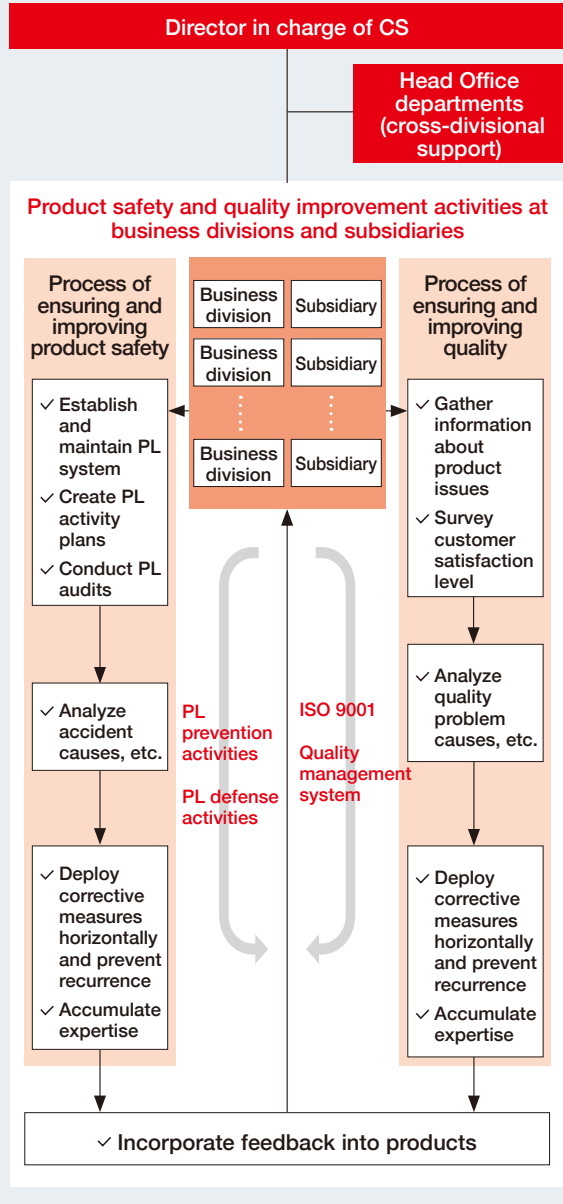
We conduct risk assessments for all products following our Basic Policy for Product Safety.

- (1) We verify that the product is designed to ensure safety by considering various customer usage scenarios.
- (2) We have verified through environmental tests and durability tests that even if the product is subjected to changes in temperature and humidity or to shock during transportation, the functionality will not be affected and that customers will be able to continue to operate the product reliably and safely.

To ensure customers can use our products with peace of mind, we provide information on correct usage and precautions in the instruction manuals. We also attach globally standardized caution and warning labels directly to the products to alert customers when the product is being used.

The director in charge of CS leads the Company-Wide Quality Assurance Meeting and the Product Liability (PL) Committee, which discusses product safety and quality issues. The committee shares and disseminates information on activities and know-how unique to each business unit and subsidiary to the entire Group and implements strategic initiatives to realize quality targets, thereby maintaining and improving quality and safety.

### Corporate Quality Assurance Meetings and PL Committee Meetings



## Quality Management System (QMS)

Shimadzu Corporation’s Sanjo Works has obtained ISO 9001 certification, the international standard for quality management systems (QMS) since 1994. They have also obtained ISO 13485 certification required for medical devices and JIS Q 9100 certification required for the aircraft equipment industry. QMSs are also introduced at relevant subsidiaries in Japan and other countries. As of March 2023, 23 subsidiaries in Japan and 33 subsidiaries outside Japan have obtained certification. Among them, 19 subsidiaries in Japan are working on improving the management level of the Shimadzu Group in addition to obtaining ISO 9001 certification. These QMSs are used to assess the effectiveness of measures and processes for ensuring product quality and safety based on the Basic Quality Assurance Policy established by the Shimadzu Group. Then the PDCA cycle is repeated to achieve further improvements. In this way, we are engaged in improving customer satisfaction through constant improvements at each stage of the product life cycle.

## Improving Customer Satisfaction

At each stage of the product life cycle, we have put in place mechanisms and systems to respond to market and customer requirements and their changes, leading to improved customer satisfaction (CS). For example, to improve the quality of Shimadzu Group products, systems, and services from the customer’s perspective, we regularly conduct “CS surveys” to listen to customer feedback. The opinions and requests we receive from customers are valuable. We share these among all concerned parties and take measures to improve customer satisfaction. We have also set up a call center to handle opinions and requests from customers as needed and respond to them promptly.

### Quality Center Dedicated to the Pursuit of the Highest Quality

In order to improve quality from the development and design stage to manufacturing, as well as to enhance and quickly improve quality in the marketplace, we have established the Quality Center, a quality facility for the Shimadzu Group, at our Head Office site. The Center is designed to provide six functions, including material analysis, physical property evaluation, safety testing, and EMC measurement\*.

Like other companies, Shimadzu was forced to change the components used in our products due to the global shortage of electronic components. At the Quality Center, we were able to rapidly carry out safety tests, EMC tests, and other product evaluations for products that had been redesigned to incorporate alternative components, thus ensuring that product quality was maintained. We will continue to ensure the reliability of Shimadzu products so that they can be trusted by our customers.



Quality Center’s 10-Meter Method Anechoic Chamber

\* EMC measurement: Electromagnetic compatibility (EMC) test to confirm that the electromagnetic waves emitted by a system do not affect surrounding equipment and that the system is tolerant enough not to malfunction due to electromagnetic interferences from the surrounding environment

# Supply Chain Management

## Basic Policy

The Shimadzu Group procures items globally and from many suppliers. We view procurement as supporting the foundation of our business activities. Shimadzu is committed to fair trade, building partnerships with suppliers, and promoting CSR procurement based on the principles of symbiosis and EQCD (environment, quality, cost, and delivery).

We also make every effort to respect human rights and reduce environmental impact throughout our entire supply chain.

## Establishment of CSR Procurement Guidelines

In recent years, interest in corporate social responsibility (CSR) has been growing worldwide, and from the perspective of corporate management, non-financial initiatives such as human rights protection, compliance with laws and regulations, environmental conservation, and community contributions are becoming increasingly important.

Based on our corporate philosophy of “Contributing to Society through Science and Technology,” we have been working to solve various challenges that we face in order to contribute to the realization of a sustainable society. In order to continue to meet the diverse demands of our stakeholders, it is essential that we not only work independently but also receive cooperation from our business partners in the supply chain.

Therefore, in January 2022, we established the Shimadzu CSR Procurement Guidelines as action guidelines related to the Shimadzu Group Sustainability Charter and Procurement Policy. These guidelines define the items that Shimadzu and its business partners must address together to fulfill our social responsibilities in the five areas of “human rights and labor,” “health and safety,” “environment,” “ethics,” and “business continuity plan (BCP),” areas that we believe need to be addressed to deal with growing social concerns and tighter regulations in the future. We will utilize these guidelines to promote our CSR activities.

### Shimadzu CSR Procurement Guidelines

- 1. Human Rights and Labor**  
Respect for human rights and diversity, elimination of child labor and forced labor, guaranteed freedom of association, employment of non-Japanese workers, etc.
- 2. Health and Safety**  
Industrial hygiene, emergency preparedness, employee health management, etc.
- 3. Environment**  
Certification, reduction of environmental impact and CO<sub>2</sub> emissions, promotion of energy conservation, and management of materials used
- 4. Ethics**  
Compliance, export control, information security, conflict minerals, harmony with local communities, etc.
- 5. BCP (Business Continuity Plan)**  
Existence of a plan and status of training and preparation for implementation

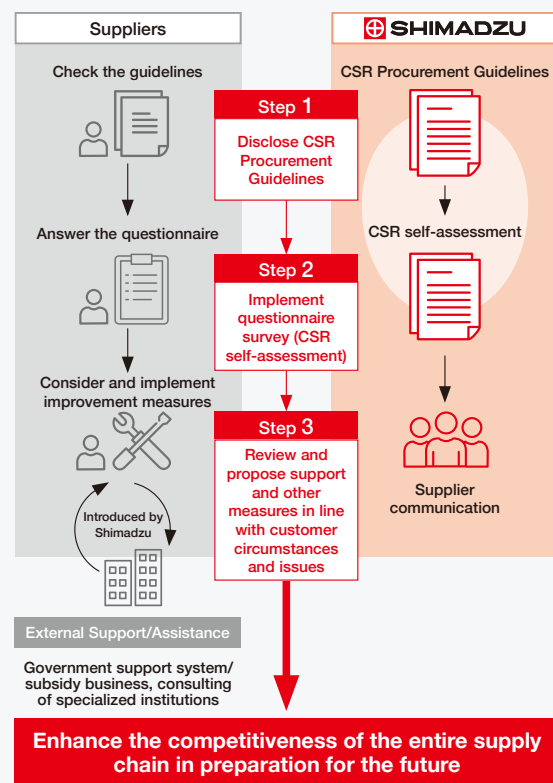
## Sustainable Procurement Activities through the Use of Guidelines

We changed the name of the annual Green Procurement Briefing to the Sustainability Procurement Briefing to further deepen our business partners’ understanding of Shimadzu’s CSR procurement concepts and initiatives. The first Sustainability Procurement Briefing was held in November 2022 with 671 participants from 490 suppliers.

After the briefing, we expanded the scope of the CSR Self-Assessment survey that had been done previously with 117 major domestic suppliers and conducted a CSR Self-Assessment survey with 219 domestic partner companies based on the Shimadzu CSR Procurement Guidelines.

We also expanded our domestic efforts to overseas business partners, and through our overseas IPOs (International Procurement Offices), we explained our CSR Procurement Guidelines to a total of 14 companies in China, 4 Asian countries, and India, and conducted CSR self-assessments. For those suppliers identified as having issues based on the survey results, we will work together to improve the level of their operations by introducing and providing specific support measures to them through interviews. Going forward, we will deepen communication with our suppliers and work with them to build a supply chain that supports a sustainable society.

### Process for Promoting CSR Procurement (Overall)

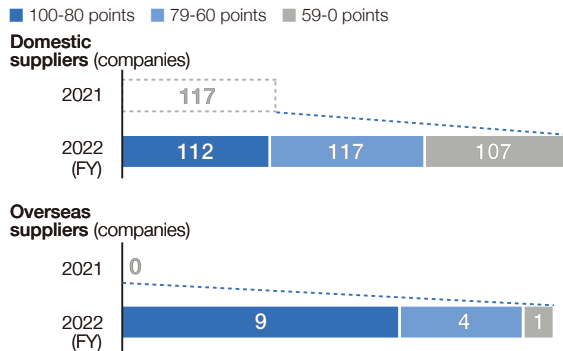




The following web page includes information about the topic listed below.  
[https://www.shimadzu.com/sustainability/approach/social/supply\\_chain/index.html](https://www.shimadzu.com/sustainability/approach/social/supply_chain/index.html)  
 Basic Stance, Principles, and Efforts (Promotion of CSR Procurement, Conflict Minerals Initiatives, Compliance with the Modern Slavery Act 2015, Green Procurement Initiatives)



### CSR Self-Assessment Survey Results



## Human Rights Measures

In accordance with the Shimadzu Group Policy Regarding Conflict Minerals\*, if any part or raw material used in Shimadzu products is found to contain a conflict mineral, we will consult with the supplier and take appropriate actions, such as immediately discontinuing their use. We are implementing measures to promote understanding of conflict minerals and avoid their use throughout the entire supply chain, such as by managing transactions in accordance with the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance and investigating smelters using the Conflict Minerals Reporting Template to ensure they are managing conflict minerals in accordance with the Responsible Minerals Initiative (RMI).

We also publish an annual statement on the UK's Modern Slavery Act 2015 (Modern Anti-Slavery Act). New business partners are required to sign a basic contract for business transactions that includes provisions for responding to human rights violations.

\* Conflict minerals refer to four minerals (gold, tin, tantalum, and tungsten) that have been identified as sources of funding for armed groups.

## Promoting Supply Chain CO<sub>2</sub> Emission Reductions

Two Shimadzu suppliers have been selected for the "Supply Chain Decarbonization Support Project" promoted by the Kyoto Prefectural Government. Under this project, Kyoto Prefecture will support companies in the Prefecture that intend to decarbonize their supply chains by helping them develop emission reduction targets and plans to introduce renewable energy in line with internationally recognized certifications such as SBT. Shimadzu will continue to work actively with its business partners to decarbonize the supply chain.

In addition, we will carry out energy-saving assessments for 83 major domestic partner companies by 2025, set reduction targets for each company in 2026, and aim to achieve the reduction targets by 2030. As of March 2023, we have conducted energy-saving assessments for 22 companies.

Shimadzu is supported by a large number of business partners, and we need to consider the environmental impact of the entire supply chain, not just our own operations. We will promote the reduction in environmental impact in cooperation with our suppliers, who have close ties with our business activities in a variety of fields.

## Green Procurement Initiatives

To comply with the laws and regulations of various countries, such as regulations on chemical substances contained in products, we are actively engaged in green procurement, which prioritizes the purchase of raw materials with a low environmental impact. Specifically, we are implementing a three-pronged approach: obtaining non-inclusion certificates, conducting supplier RoHS\* audits, and analyzing samples of procured materials.

Since September 2019, we have been participating in the Supply Chain Subcommittee of the Global Compact Network Japan to keep abreast of the latest information and share information with other companies to further improve our efforts. Furthermore, for member companies of the Shimadzu Cooperative Association, we also offer seminars on environmental management or SDGs and promote supplier environmental activities, such as jointly collecting waste plastics or assessing energy savings. In addition, we monitor the green procurement rate of office supplies on a monthly basis.

\* RoHS is a European Union directive concerning restrictions on the use of specific hazardous substances in electronic and electrical equipment.

<b>Number of domestic suppliers audited (RoHS audit only)</b>	777 of 820 (95% implementation rate) (Breakdown) 506 of 549 purchasing suppliers (92% implementation rate) 271 of 271 partner companies (100% implementation rate) Note: The denominator is the number of applicable companies.
<b>Percent of Non-Inclusion Guarantees Obtained</b>	90% (for about 300,500 items) Note: For items subject to the RoHS directive for prohibition of 10 substances

## Analyzing Procured Parts, Materials, and Other Items for Substances Banned by RoHS

Randomly sampled RoHS-compliant parts, assemblies, and indirect materials procured from suppliers are analyzed in Shimadzu's RoHS laboratory to confirm the content of substances banned by the RoHS directive. In order to comply with the U.S. TSCA regulations, the RoHS analysis laboratory also started analysis of PIP (3:1), a regulated substance, in December 2022.

<b>Number of Samples Analyzed</b>	For 6 RoHS-prohibited substances: Approx. 12,000 items For 4 additional banned substances: Approx. 11,000 items
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Note: Total as of end of FY 2022. About 77,000 applicable items are regularly sampled by the system and tested for 10 RoHS-banned substances.

# Corporate Governance Policy

## Basic Policy

The Shimadzu Group is working to establish and improve systems for ensuring corporate governance, which is considered a core basis of corporate management. Corporate governance provides a basis for achieving management transparency and fairness, and enabling quick and bold decision-making and measures to increase the vitality of management.

The Corporate Governance Policy (hereinafter “CG Policy”) was established in December 2015 as a declaration of Shimadzu’s stance regarding actually implementing the Corporate Governance Codes (hereinafter “CG Codes”) in practice.

In addition to improving corporate governance measures, Shimadzu is also committed to improving the effectiveness of governance practices by periodically reviewing the CG Policy with respect to changes in the circumstances of such measures or external conditions.

### Corporate Governance Policy

1. Appropriate Cooperation with Stakeholders
2. Securing the Rights and Equal Treatment of Shareholders
3. Ensuring Appropriate Information Disclosure and Transparency
4. Dialogue with Shareholders
5. Responsibilities of the Board of Directors, etc.

## Corporate Governance Measures

With regard to the CG Code, we continue to be fully compliant with all Basic Principles, Principles, and Supplementary Principles, including items applicable only to the prime market.

Shimadzu’s major corporate governance initiatives for FY 2022 are as follows.

CG Policy  
<https://www.shimadzu.com/ir/governance/policy.html>

CG Report  
<https://www.shimadzu.com/ir/governance/report.html>

### Implementing Sustainability Management Initiatives

Under the Shimadzu Group Sustainability Charter and the Sustainability Management Implementation Policy, KPIs have been set for each department, and the Group’s sustainability management initiatives have begun to be fully implemented.

As part of these efforts, in May 2022, we revised the existing Corporate Code of Ethics and established the Shimadzu Group Corporate Code of Ethics as common rules for the entire Group in order to ensure thorough legal compliance and further improve corporate ethics

throughout the Shimadzu Group. Shimadzu has also compiled a “Shimadzu Group Corporate Ethics Code of Conduct Handbook” that outlines the code of conduct that all Shimadzu Group employees must follow in their day-to-day work in order to spread awareness of corporate ethics and compliance throughout the Group.

Furthermore, in June 2022, we established the Regulation for Sustainability Management of SHIMADZU Group to clarify the framework and organizational structure for promoting initiatives related to sustainability management.

The Shimadzu Group Sustainability Conference is now positioned as the highest deliberative body for sustainability management and promotes Shimadzu Group-wide efforts for sustainability management, including the existing Risk Management and Corporate Ethics Board and Environmental Meeting.

### Expanded Goal-Setting for Diversity

With respect to ensuring diversity of core human resources, targets have been set and announced for foreign nationals and mid-career hires in addition to the previously announced targets for female managers. Target values for each item are as follows.

#### Ensuring Diversity among Core Human Resources (Managers) (Non-Consolidated Targets)

	FY 2026	FY 2030
Female	More than 6% or more than 60 people	More than 12% or more than 90people
Foreign investors	3 or more	5 or more
Mid-career hires	More than 20% or more than 180 people	More than 23% or more than 200 people

### Strengthening Group Governance

In February 2023, we established the “Shimadzu Group Management Basic Regulation” to set forth our basic approach to group management and guidelines to be followed. In this way, the Shimadzu Group is working together to establish a system that ensures appropriate and efficient group management for sustainable growth.

The following web page includes information about the topic listed below.  
<https://www.shimadzu.com/ir/governance/organization.html>  
 Corporate Governance System



# Corporate Governance

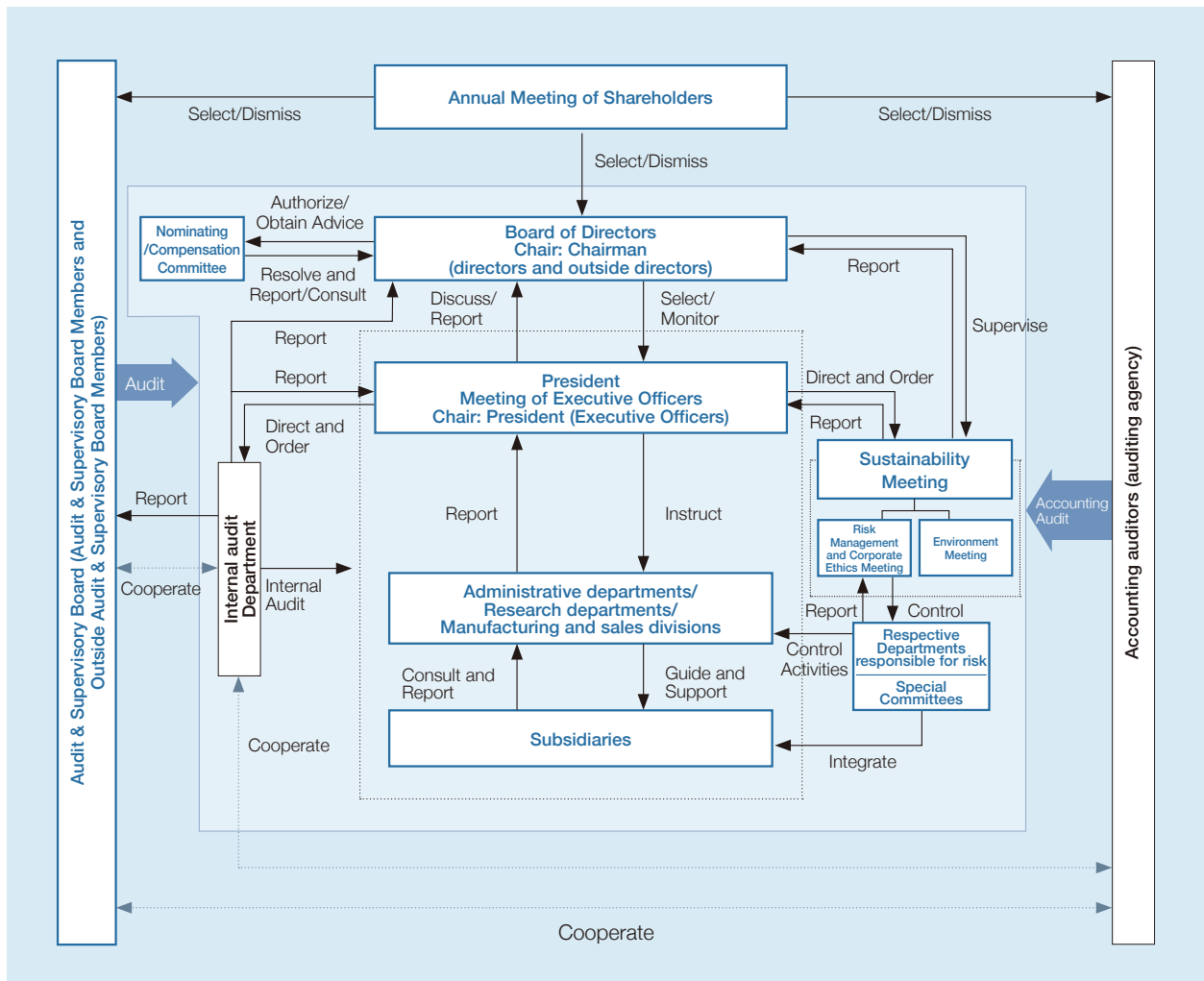
## Corporate Governance System

One-half (four) of the eight members of the Board of Directors are outside directors, which increases management transparency and objectivity.

Inside directors, familiar with business operations and circumstances within the company, and outside directors, who have extensive experience, knowledge, abilities, and insights, discuss issues from various perspectives, so that decisions can be appropriately made and monitored regarding strategies and policies for increasing medium- and long-term corporate value. Outside directors are mainly appointed from candidates with extensive corporate management experience in a wide range of industries. Women and others with diverse backgrounds are also appointed as outside directors in order to provide more diversity.

A system of corporate auditors is used to audit the legality and appropriateness of management operations, with two internal and two outside Audit & Supervisory Board members. The Audit & Supervisory Board and its members attend Board of Directors meetings, where they proactively execute auditing functions, such as by expressing their opinions or exchanging views with directors or administrative corporate executive officers. The President, administrative corporate executive officers, and the Executive Committee are designated as the agencies for appropriately and quickly executing administrative processes based on decisions made by the Board of Directors.

### Corporate Governance System



**Profiles of Directors and Audit & Supervisory Board Members** (As of June 28, 2023)



**Directors**



**1** Representative Director, Chairman of the Board  
**Teruhisa Ueda**

Chair of the Board of Directors

Apr. 1982 Joined Shimadzu Corporation  
Jun. 2007 Corporate Officer  
Jun. 2007 Deputy General Manager,  
Analytical & Measuring Instruments Division  
Jun. 2011 Director, Member of the Board  
Jun. 2011 General Manager, Analytical & Measuring  
Instruments Division  
Jun. 2013 Managing Executive Officer  
Jun. 2014 Senior Managing Executive Officer  
Jun. 2015 President and Representative Director  
Jun. 2015 CEO  
Apr. 2022 Chairman and Representative Director (current)  
Apr. 2022 Chairman of the Board (current)

**2** Representative Director, President  
**Yasunori Yamamoto**

CEO

Apr. 1983 Joined Shimadzu Corporation  
Oct. 2003 Coordination Manager, Testing Machines Business Unit,  
Analytical & Measuring Instruments Division  
Jun. 2013 President, Shimadzu Europa GmbH (Germany)  
Jun. 2014 Corporate Officer  
Jun. 2017 Managing Executive Officer  
Jun. 2017 In charge of Manufacturing, Corporate Information &  
Communications Technology, and CS Management  
Jun. 2017 Deputy in charge of Corporate Research and Development  
Apr. 2020 In charge of Corporate Strategy Planning and  
Corporate Communications  
Jun. 2020 Director, Member of the Board  
Apr. 2021 Senior Managing Executive Officer  
Apr. 2021 CFO  
Apr. 2022 President and Representative Director (current)  
Apr. 2022 CEO (current)



### 3 Director, Senior Managing Executive Officer **Akira Watanabe**

CFO, in charge of corporate strategy planning and corporate communications

- Apr. 1985 Joined Shimadzu Corporation
- Apr. 2009 General Manager of Turbo Molecular Pump Business Unit and concurrently Deputy General Manager of Sales & Marketing Department, Semiconductor Equipment Division (currently Industrial Machinery Division)
- Apr. 2011 General Manager of Sales & Marketing Department and concurrently General Manager of Turbo Molecular Pump Business Unit, Semiconductor Equipment Division
- Jun. 2013 Deputy General Manager of the Semiconductor Equipment Division, concurrently General Manager of Sales & Marketing Department and General Manager of Turbo Molecular Pump Business Unit
- Jun. 2016 Corporate Officer
- Jun. 2016 General Manager, Industrial Machinery Division
- Apr. 2019 Managing Executive Officer
- Apr. 2020 General Manager, Industrial Machinery Division and concurrently General Manager, Fluidics Systems Division
- Apr. 2022 Senior Managing Executive Officer (current)
- Apr. 2022 CFO and in charge of Corporate Strategy Planning and Corporate Communications (current)
- Jun. 2022 Director, Member of the Board (current)

### 4 Director, Senior Corporate Executive Officer **Shuzo Maruyama**

In charge of risk management and global environmental management (GX)

- Apr. 1982 Joined Shimadzu Corporation
- Oct. 2004 Coordination Manager, LC Business Unit, Analytical & Measuring Instruments Division
- Apr. 2009 General Manager, LC Business Unit, Life Science Business Department, Analytical & Measuring Instruments Division
- Dec. 2011 President, Shimadzu Scientific Instruments, Inc.
- Jun. 2013 Corporate Officer
- Jun. 2015 General Manager, Analytical & Measuring Instruments Division
- Jun. 2015 Managing Executive Officer
- Apr. 2019 Senior Managing Executive Officer
- Apr. 2021 Managing Director, Shimadzu (Hong Kong) Ltd.
- Apr. 2023 Senior Corporate Executive Officer (current)
- Apr. 2023 In charge of Risk Management and Global Environmental Management (GX) (current)
- Jun. 2023 Director, Member of the Board (current)

### 5 Outside Director **Hiroko Wada**

Representative of Office WaDa  
Outside Director of Coca-Cola Bottlers Japan Holdings Inc.

- Apr. 1977 Joined Procter & Gamble Sunhome Co., Ltd. (currently Procter & Gamble Japan)
- Jan. 1998 Vice President, in charge of Corporate New Venture, Asia, Procter & Gamble Company (U.S.)
- Mar. 2001 President, Dyson Limited
- Apr. 2004 President and CEO, Toys "R" Us, Japan
- Nov. 2004 Established Office WaDa (current)
- May 2009 Outside Director, Aderans Holdings Company (currently Aderans Company Limited)
- Apr. 2016 Advisor, Nutraceutical Business, Otsuka Pharmaceutical Co., Ltd.
- Jun. 2016 Director, Member of the Board, Shimadzu Corporation (current)
- Mar. 2019 Outside Director (Audit & Supervisory Committee Member), Unicharm Corporation
- Mar. 2019 Outside Director, Coca-Cola Bottlers Japan Holdings Inc. (current)

### 6 Outside Director **Nobuo Hanai**

Outside Director of Perseus Proteomics Inc.

- Apr. 1976 Joined Kyowa Hakko Kogyo Co., Ltd. (currently Kyowa Kirin Co., Ltd.)
- Jun. 2006 Executive Officer, Kyowa Hakko Kogyo Co., Ltd.
- Apr. 2009 Managing Executive Officer, Kyowa Hakko Kirin Co., Ltd.
- Jun. 2009 Director of the Board, Managing Executive Officer, Kyowa Hakko Kirin Co., Ltd.
- Mar. 2010 Director of the Board, Senior Managing Executive Officer, Kyowa Hakko Kirin Co., Ltd.
- Mar. 2012 Executive Director of the Board, President and Chief Executive Officer, Kyowa Hakko Kirin Co., Ltd.
- Mar. 2018 Executive Director of the Board, Chairman and Chief Executive Officer, Kyowa Hakko Kirin Co., Ltd.
- Mar. 2019 Director of the Board, Chairman, Kyowa Hakko Kirin Co., Ltd.
- Jun. 2020 Director, Member of the Board, Shimadzu Corporation (current)
- Mar. 2021 Outside Director, Perseus Proteomics Inc. (current)

### 7 Outside Director **Yoshiyuki Nakanishi**

Outside Director of The Japan Steel Works, Ltd.  
Outside Director of IHI Corporation

- Apr. 1978 Joined Dainippon Ink and Chemicals, Incorporated (currently DIC Corporation)
- Apr. 2010 Executive Officer, DIC Corporation
- Jun. 2011 Director, DIC Corporation
- Apr. 2012 Representative Director, President and CEO, DIC Corporation
- Jan. 2018 Chairman of the Board of Directors, DIC Corporation
- Jun. 2020 Outside Director, The Japan Steel Works, Ltd. (current)
- Jun. 2020 Outside Director, IHI Corporation (current)
- Jan. 2021 Director, DIC Corporation
- Mar. 2021 Advisor, DIC Corporation
- Jun. 2021 Director, Member of the Board, Shimadzu Corporation (current)

### 8 Outside Director **Nami Hamada**

Cofounder and Managing Director, Mile High Capital Inc.  
Outside Director (Audit & Supervisory Committee Member), Coca-Cola Bottlers Japan Holdings Inc.  
Outside Director (Audit Committee Member, Nomination Committee Member, Compensation Committee Member), MetLife Inc.

- Jul. 1992 Joined Shearson Lehman Brothers Holdings Inc.
- Oct. 1996 Vice President, Lehman Brothers Holdings Inc.
- Jun. 1999 Senior Vice-President, Lehman Brothers Holdings Inc.
- May 2004 Representative Director, HDH Advisors Japan Ltd.
- Dec. 2006 Principal, HDH Capital Management Pte. Ltd.
- Mar. 2009 Cofounder and Managing Director, Mile High Capital Inc. (current)
- Aug. 2017 Director, Ecoplexus Japan K.K.
- Feb. 2019 Chief Operating Officer, Vesper Group Japan K.K.
- Mar. 2019 Outside Director (Audit & Supervisory Committee Member), Coca-Cola Bottlers Japan Holdings Inc. (current)
- May 2020 Outside Director (Audit Committee Member), MetLife Inc.
- Jun. 2022 Outside Director (Audit Committee Member, Nomination Committee Member, and Compensation Committee Member), MetLife Inc. (current)
- Jun. 2022 Director, Member of the Board, Shimadzu Corporation (current)

## Audit & Supervisory Board Members

### 9 Senior Audit & Supervisory Board Member **Hiroyuki Fujii**

Outside Corporate Auditor of Dai Nippon Toryo Co., Ltd.

- Apr. 1981 Joined Shimadzu Corporation
- Apr. 2005 General Manager, Human Resources Department
- Jun. 2007 Corporate Officer
- Jun. 2009 Director, Member of the Board
- Jun. 2009 In charge of Human Resources and Global Environmental Management
- Jun. 2011 In charge of Public Relations (current Corporate Communications)
- Jun. 2012 General Manager, Legal Department
- Jun. 2013 Senior Audit & Supervisory Board Member (current)

### 10 Audit & Supervisory Board Member **Makoto Koyazaki**

- Jan. 1991 Joined Shimadzu Corporation
- Apr. 2011 General Manager, Business Planning Department, Shimadzu International Trading (Shanghai) Co., Ltd. (currently Shimadzu (China) Co., Ltd.)
- Jun. 2012 General Manager, Corporate Strategy Planning Department, Shimadzu Corporation
- Apr. 2016 President and Representative Director, Shimadzu GLC Ltd.
- Apr. 2019 Senior Manager, Audit & Supervisory Board Members' Office, Shimadzu Corporation
- Jun. 2019 Audit & Supervisory Board Member (current)

### 11 Outside Audit & Supervisory Board Member **Tsuyoshi Nishimoto**

Partner of Hibiya Park Law Offices  
Outside Director (Audit & Supervisory Committee Member), Enigmo Inc.  
Statutory Auditor of Broadleaf Co., Ltd.

- Oct. 2000 Registered as attorney-at-law
- Dec. 2002 Joined Hibiya Park Law Offices (current)
- Jan. 2011 Statutory Auditor of Enigmo Inc.
- Mar. 2018 Statutory Auditor of Broadleaf Co., Ltd. (current)
- Jun. 2020 Audit & Supervisory Board Member, Shimadzu Corporation (current)
- Apr. 2022 Outside Director (Audit & Supervisory Committee Member), Enigmo Inc. (current)

### 12 Outside Audit & Supervisory Board Member **Yuka Hayashi**

Representative of Hayashi CPA Office  
Vice President and Representative Director, Hayashi Management Consultant Co., Ltd.  
Outside Director (Audit & Supervisory Committee Member), Harima Chemicals Group, Inc.

- Sep. 1985 Joined Minato Audit Corporation (now Ernst & Young ShinNihon LLC)
- Apr. 1991 Registered as a Certified Public Accountant
- Aug. 1998 Joined Century Audit Corporation (now Ernst & Young ShinNihon LLC) (currently Partner)
- Jul. 2010 Senior Partner (currently Partner), ShinNihon LLC (now Ernst & Young ShinNihon LLC)
- Sep. 2015 Member of the Governance Council, Ernst & Young ShinNihon LLC
- Sep. 2019 Member of the Audit Committee, Vice-Chair of the Governance Council, Ernst & Young ShinNihon LLC
- Jul. 2022 Representative, Hayashi Certified Public Accountant Office (current)
- Jul. 2022 Executive Vice President and Representative Director, Hayashi Management Consultant Co., Ltd. (current)
- Jul. 2022 Outside Director (Audit & Supervisory Committee Member), Harima Chemicals Group, Inc. (current)
- Jun. 2022 Audit & Supervisory Board Member, Shimadzu Corporation (current)

Corporate Governance

**Profiles of Corporate Officers** (As of June 28, 2023)

**Executive Officers**



Representative Director,  
Chairman of the Board  
**Teruhisa Ueda**

Chair of the Board of Directors



Representative Director,  
President  
**Yasunori Yamamoto**

CEO



Director, Senior Corporate  
Executive Officer  
**Shuzo Maruyama**

In charge of Risk Management  
and Global Environmental  
Management (GX)



Director, Senior Managing  
Executive Officer  
**Akira Watanabe**

CFO, in charge of Corporate  
Strategy Planning and  
Corporate Communications



Senior Managing  
Executive Officer  
**Fuminori Inagaki**

In charge of Standardization  
Strategy (CSO)  
In charge of Medical  
Regulatory Policy  
Jointly in charge of Corporate  
Strategy Planning and Global  
Environmental Management (GX)



Senior Managing  
Executive Officer  
**Katsuaki Kaito**

In charge of Manufacturing and  
CS Management  
In charge of DX/IT Strategy  
Deputy in charge of  
Human Resources



Managing Executive Officer  
**Koki Aoyama**

Managing Director, Shimadzu  
(Hong Kong) Ltd.



Managing Executive Officer  
**Yoshino Kajitani**

In charge of Human Resources  
and Diversity Management  
In charge of Health Management



Managing Executive  
Officer  
**Hiroto Itoi**

CTO



Managing Executive Officer  
**Shigenori Aoyama**

In charge of Legal Affairs,  
General Administration, and  
Internal Control  
Deputy in charge of  
Risk Management



Managing Executive  
Officer  
**Shunei Matoba**

In charge of  
Corporate Marketing  
General Manager,  
Tokyo Office



Managing Executive  
Officer  
**Masami Tomita**

General Manager,  
Analytical & Measuring  
Instruments Division



Managing Executive  
Officer  
**Kiyohito Sonoki**

General Manager,  
Medical Systems Division

## Corporate Officers



Senior Corporate Officer  
**Yoshiyuki Fujino**

President of Shimadzu Analytical (India) Pvt. Ltd. and President of Shimadzu Medical (India) Pvt. Ltd.



Corporate Officer  
**Yoshiaki Maeda**

President, Shimadzu Scientific Instruments, Inc.



Corporate Officer  
**Susumu Yamamoto**

General Manager, Aircraft Equipment Division



Corporate Officer  
**Naomi Okazaki**

Deputy General Manager, Analytical & Measuring Instruments Division (in charge of SCOE)



Corporate Officer  
**Masahiko Tanaka**

General Manager, Industrial Machinery Division  
General Manager, Fluidics Systems Division



Corporate Officer  
**Wataru Tajima**

General Manager, Corporate Strategy Planning Department



Corporate Officer  
**Shigeki Morimoto**

General Manager, Business Strategy Department



Corporate Officer  
**Komei Arakane**

General Manager, Finance and Accounting Department



Corporate Officer  
**Yoshiaki Hirao**

President, Shimadzu Europa GmbH



Corporate Officer  
**Takeaki Inoue**

Deputy General Manager, Analytical & Measuring Instruments Division (in charge of technology) and General Manager, Research & Development Department



Corporate Officer  
**Kazuya Suzuki**

Deputy General Manager, Medical Systems Division (in charge of Sales, Marketing, and Service) and General Manager, Global Marketing Department



Corporate Officer  
**Palanisamy Prem Anand**

Managing Director, Shimadzu (Asia Pacific) Pte. Ltd.

## Messages from Outside Directors



**Hiroko Wada**

Outside Director,  
Member of the Board

Term as Board Member: 7 years

### Promote Corporate Department Reforms to Boost Innovation

Now that the COVID-19 pandemic, which tormented society and caused stagnation, is finally abating, liveliness has been returning to the streets. It is wonderful that Shimadzu has achieved record results for three consecutive years, but last year's results were saved by the weak yen and actual performance should be viewed with a sense of urgency.

We outside directors regularly meet to exchange views, point out important management issues to executive management, and urge them to resolve or focus efforts on those issues as soon as possible. Ironically, however, something happened last year that demonstrated the validity of our suggestion. Unfortunately, it resulted in the Board of Directors spending a great deal of time resolving the issue. Although Shimadzu's long history represents an admirable achievement, it does not guarantee Shimadzu's future success. Considering Shimadzu's current position and growth potential, we think Shimadzu should not try to remain fixated on past performance or the way things have been. Shimadzu will clearly face major obstacles unless it creates new systems to resolve important challenges, such as establishing Group governance that breaks from previous practices and developing more diversity among human resources. Even if R&D and M&A measures intended to achieve business growth are implemented smoothly, the approach of reforming corporate functions after those measures have been implemented will prevent fully capitalizing on opportunities for business growth generated by those measures. We intend to increase the effectiveness of the Board of Directors, provide necessary guidance for executing policies, and promote changing corporate behavior to adopt a greater sense of speed and to behave in a manner more appropriate for a global company.





## Nobuo Hanai

Outside Director,  
Member of the Board

Term as Board Member: 3 years

## Generate Revolutionary New Products by Breaking Away from Self-Sufficiency

Shimadzu launched a corporate venture capital (CVC) fund in April of this year. Considering that Shimadzu produced an employee who won a Nobel Prize, the level of R&D capabilities within Shimadzu Corporation is unquestionably high. I myself am regularly reminded of those high technical capabilities every time I have an opportunity to interact with researchers or engineers focused on developing new products or technologies at the Technology Research Laboratory located in the Keihanna Science City. However, to put it simply, the success of corporate research and development activities is determined only by whether or not superior products are completed sooner than competitors. For example, competitors of the Analytical & Measuring Instruments Division immediately come to mind, but if asked whether Shimadzu is winning the competition with such companies, the answer is not necessarily "yes." The main reason is a difference in product development speed. Based on my career in the pharmaceuticals industry, I think the reason Japanese pharmaceutical companies lagged so far behind Pfizer and Moderna in developing a coronavirus vaccine was because Japanese pharmaceutical manufacturers are too self-sufficient. Pfizer and Moderna were successful because they extensively utilized an ecosystem that involved startup companies. I think Shimadzu's CVC fund should focus on that factor. Of course, it will be important to invest in startup companies with emerging new technologies in order to expand the scope of technologies we can offer and deepen our own technologies. However, I think what Shimadzu currently lacks most is product commercialization speed. For some stages of product commercialization, it may be more expedient to rely on startups. Therefore, to accelerate product commercialization Shimadzu should definitely use CVC to acquire external ecosystems as well. Since Shimadzu's current performance is experiencing a reliably upward trend, it is times like these when Shimadzu should be cultivating several candidates that might become Shimadzu's key products of the future.

## Messages from Outside Directors



**Yoshiyuki Nakanishi**

Outside Director,  
Member of the Board

Term as Board Member: 2 years

### Solid Group Governance and Flexible Business Portfolio Management

Although FY 2022 results benefited from a tailwind provided by the weak yen, performance was nevertheless quite strong, with record results achieved for the third consecutive year in terms of net sales, operating income, and net profit. On the other hand, the discovery of inappropriate maintenance and inspection business practices at a subsidiary in Japan triggered a scandal that has deeply shaken public confidence in what was assumed to be a healthy governance system. This case has exposed the fragility of Shimadzu Group governance effectiveness and has highlighted the importance and urgency of properly managing not only subsidiaries in Japan, of course, but also the business operations outside Japan, or in other words overseas subsidiaries, which account for over half of consolidated Group earnings. Although corresponding measures have already been started, one effective way to ensure proper management, particularly of operations outside Japan, is to accelerate the establishment of regionally integrated organizations and systems by assigning responsibility and authority to those in the respective regions of Europe, North America, Asia, and China. Preparing for that future will require not only developing global human resources but also actively engaging in identifying competent local personnel, headhunting, and other personnel management measures within each region.

Another important issue is managing the business portfolio in order to achieve sustained growth. The business environments in which Shimadzu businesses operate are changing from day to day. Rather than simply reconfiguring the portfolio in form only, Shimadzu needs to refine its own unique strengths by managing the portfolio flexibly based on appropriate KPIs such as ROIC. Hopefully, that is an issue that the Board of Directors will continue to keep discussing. In addition to my important role of properly monitoring the risk-taking involved in executing businesses, I will try to give positive suggestions so that Shimadzu can use more dynamic strategies to refine its strengths and achieve additional growth.

**Nami Hamada**

Outside Director,  
Member of the Board

Term as Board Member: 1 year

## Strengthening the Management Base is Essential for Achieving Sustained Growth

It has now been about one year since I was appointed as an Outside Director for Shimadzu. The Board of Directors has included an equal number of internal and external directors since last year, which has resulted in a greater diversity of members. I feel a variety of issues were actively discussed at Board of Directors meetings, such as the content of the medium-term management plan announced in March for operations up to FY 2025, the governance of Nissui Pharmaceutical which was acquired as a wholly owned subsidiary, and countermeasures for preventing future scandals. A variety of perspectives expressed during those discussions are now reflected in management targets.

Shimadzu has successfully overcome challenges presented by the global financial crisis in 2008 and the pandemic in 2020 and has been steadily increasing corporate value, but to achieve sustained growth in the future as well it will be essential for Shimadzu to strengthen its management base during the current medium-term management plan. Therefore, Shimadzu needs to be united in reviewing Group governance practices, training human resources, managing risks, and engaging in other activities, with the Board of Directors monitoring the level of that progress. Shimadzu appointed a non-Japanese corporate officer for the first time this year, but considering that more than 56% of Group sales occur outside Japan, the company needs to achieve even more diversity. I believe that increasing diversity throughout the entire organization will make Shimadzu even stronger.

While there are many challenges in society that Shimadzu would like to take on in order to achieve Shimadzu's mission of "pursuing the well-being of mankind and the Earth (planetary health)," Shimadzu must strive to maximize its impact by determining the needs and growth potential of each market and the fields in which Shimadzu excels. Beginning this year, Shimadzu will introduce ROIC as a management indicator to focus more attention on return-on-investment and total EBITDA for each division, rather than considering only the operating margin and ROE. The importance of paying attention to capital efficiency is recognized by the Board of Directors. I will offer a variety of proposals for promoting more efficient capital allocation for our growth while ensuring financial soundness and for achieving higher medium and long-term corporate value and shareholder returns.



## Directors' Skill Matrix

Shimadzu is expanding its four business segments (Analytical & Measuring Instruments, Medical Systems, Aircraft Equipment, and Industrial Machinery) globally based on the corporate philosophy "Contributing to Society through Science and Technology." By integrating technologies from both Analytical & Measuring Instruments and Medical Systems, we are working to create new businesses that leverage our strengths in the healthcare field, among others. Shimadzu's Board of Directors is also working to optimize the overall balance of knowledge and experience, diversity, and the number of Board members in order to strengthen monitoring and supervision of our business activities and to deliberate on strategies for increasing corporate value over the medium to long term.

For this reason, we have defined the knowledge and experience we consider particularly important for Shimadzu's Board of Directors using a Skill Matrix. The matrix consists of "corporate management," "international experience," "technology and IT," "marketing and sales," "finance and accounting," "compliance and risk management," and "human resources and human resource development." The Board of Directors will then be composed of people with appropriate levels of knowledge and experience in these areas. The knowledge and experience that are important to our Board of Directors will be reviewed from time to time in light of management policies and the business environment.

	Name	Knowledge/Experience of Directors						
		Company Management	International Experience	Technology/IT	Marketing/Sales	Finance/Accounting	Compliance/Risk Management	Personnel/Human Resources Development
Directors	Teruhisa Ueda	●	●	●	●			
	Yasunori Yamamoto	●	●	●		●		
	Akira Watanabe		●		●	●		
	Shuzo Maruyama		●	●				
	Hiroko Wada <small>Outside Director</small>	●	●		●			●
	Nobuo Hanai <small>Outside Director</small>	●	●	●				
	Yoshiyuki Nakanishi <small>Outside Director</small>	●	●		●			
	Nami Hamada <small>Outside Director</small>	●	●			●		●
Audit & Supervisory Board Members	Hiroyuki Fujii			●			●	●
	Makoto Koyazaki		●		●			
	Tsuyoshi Nishimoto <small>Outside Director</small>		●				●	
	Yuka Hayashi <small>Outside Director</small>					●	●	

Note: The above is not intended as a complete list of knowledge and experience held by members of the Board of Directors and Audit & Supervisory Board.

### Reasons for Appointing Outside Directors and Audit & Supervisory Board Members and Description of Main Activities





Outside Director and Audit & Supervisory Board Member	Category	Independent Director and Audit & Supervisory Board Member	Name	Reasons for Appointment and Overview of Duties with Respect to Expected Role	Attendance during FY 2022
Outside Director	Reappointed	Independent Director and Audit & Supervisory Board Member	Hiroko Wada	Based on her extensive global business experience as a director of a multinational company and CEO of a Japanese corporation and her broad knowledge about marketing, human resource development, and diversity, she actively expresses views and offers recommendations that strengthen the decision-making and supervisory functions of the Board of Directors. Also, as a member of the Appointment and Compensation Committee, she participates in discussions about improving the transparency and fairness of director appointment/removal and compensation decisions. She was appointed because of her anticipated role in contributing to sustaining growth and increasing the corporate value of the Shimadzu Group.	<ul style="list-style-type: none"> <li>Attended 13 of 13 Board of Directors meetings</li> <li>Attended 6 of 6 Appointment and Compensation Committee meetings</li> </ul>
	Reappointed	Independent Director and Audit & Supervisory Board Member	Nobuo Hanai	Based on his extensive management experience as a CEO of a major Japanese pharmaceutical company and global knowledge about R&D and the pharmaceutical industry in Japan and throughout the world, he actively expresses views and offers recommendations that strengthen the decision-making and supervisory functions of the Board of Directors. Also, as a member of the Appointment and Compensation Committee, he participates in discussions about improving the transparency and fairness of director appointment/removal and compensation decisions. He was appointed because of his anticipated role in contributing to sustaining growth and increasing the corporate value of the Shimadzu Group based on his knowledge of major markets.	<ul style="list-style-type: none"> <li>Attended 13 of 13 Board of Directors meetings</li> <li>Attended 6 of 6 Appointment and Compensation Committee meetings</li> </ul>



**Reasons for Appointing Outside Directors and Audit & Supervisory Board Members and Description of Main Activities**

Outside Director and Audit & Supervisory Board Member	Category	Independent Director and Audit & Supervisory Board Member	Name	Reasons for Appointment and Overview of Duties with Respect to Expected Role	Attendance during FY 2022
Outside Director	Reappointed	Independent Director and Audit & Supervisory Board Member	<b>Yoshiyuki Nakanishi</b>	He has extensive management experience as a top executive of a global chemical company and extensive knowledge of the chemical industry, management strategy, manufacturing, sales and marketing, etc., both in Japan and abroad, which enables him to make proactive comments and proposals that contribute to strengthening the decision-making and supervisory functions of the Board of Directors. Also, as a member of the Appointment and Compensation Committee, he participates in discussions about improving the transparency and fairness of director appointment/removal and compensation decisions. He was appointed because of his anticipated role in contributing to sustainable growth and increasing the corporate value of the Shimadzu Group based on his knowledge of major markets.	<ul style="list-style-type: none"> <li>• Attended 13 of 13 Board of Directors meetings</li> <li>• Attended 6 of 6 Appointment and Compensation Committee meetings</li> </ul>
	Reappointed	Independent Director and Audit & Supervisory Board Member	<b>Nami Hamada</b>	She has extensive knowledge of finance and accounting, including management of a finance consulting company, as well as extensive experience as a corporate manager of a Japanese subsidiary of a foreign securities company, and her human resource development and global business expertise enable her to make proactive comments and proposals that contribute to strengthening the decision-making and supervisory functions of the Board of Directors. Also, as a member of the Appointment and Compensation Committee, she participates in discussions about improving the transparency and fairness of director appointment/removal and compensation decisions. She was appointed in anticipation of her valuable advice regarding Shimadzu Group management based on her extensive knowledge of finance, accounting, and other areas and to serve the role of appropriately supervising the execution of business operations.	<ul style="list-style-type: none"> <li>• Attended 10 of 10 Board of Directors meetings</li> <li>• Attended 5 of 5 Appointment and Compensation Committee meetings</li> </ul> (After assuming office as a Shimadzu director)
Outside Audit & Supervisory Board Member	Retained	Independent Director and Audit & Supervisory Board Member	<b>Tsuyoshi Nishimoto</b>	As a lawyer, he has accumulated a great deal of experience in general corporate legal affairs, and among them, he has a high level of expertise and a wealth of experience in areas such as overseas legal affairs, corporate acquisitions, system development, and crisis management, which are effective for auditing the Shimadzu Group's expanding global operations. Based on his experience and accomplishments, we believe that he is qualified to serve as an Audit & Supervisory Board Member and have elected him to this position.	<ul style="list-style-type: none"> <li>• Attended 13 of 13 Board of Directors meetings</li> <li>• Attended 16 of 16 Audit &amp; Supervisory Board meetings</li> </ul>
	Newly appointed	Independent Director and Audit & Supervisory Board Member	<b>Yuka Hayashi</b>	As a certified public accountant, she is engaged in corporate accounting audits and has a wealth of experience and insight in accounting. She has also served as an outside director (audit & supervisory committee member) of other companies, and can be expected to play a role in auditing and advising on business execution systems and measures to address management issues from the standpoint of a corporate accounting expert.	-

**Activities of Outside Directors and Outside Audit & Supervisory Board Members**

Visit to Solutions Center of Excellence	Exchange of Opinions with Senior Management of Overseas Subsidiaries	Director Hamada Exchanges Opinions on M&A with Corporate Strategy Planning, Finance, and Analytical & Measuring Instrument-Related Departments
<p>In June 2022, outside directors and outside corporate auditors visited the Solutions Center of Excellence, which is responsible for application development based on marketing of measuring instruments and collaboration with partners, and exchanged opinions with relevant personnel. Each of the outside directors and outside corporate auditors commented that they gained a deeper understanding of the measuring instrument business through the tour of actual products and sites, and expressed their expectations for further strengthening collaboration with partners in Japan and overseas to quickly lead to successful case studies aimed at practical implementation in society.</p>   <p>Visiting Solutions Center of Excellence</p>	<p>In February and April 2022, outside directors met with senior management of subsidiaries in North America and Asia to exchange opinions on the medium-term management plans for each region. Shimadzu's new medium-term plan began in April 2023, and one of our priority measures is to expand our overseas business, especially in North America, and to strengthen our product development system to better understand local customers' needs and facilitate the development of new products. The outside directors offered advice on how to expand overseas business.</p>  <p>Exchanging Opinions with Subsidiary Executives</p>	<p>Director Hamada, newly appointed as an outside director in June 2022, has extensive knowledge and experience in finance and business strategy. Since her appointment, she has held discussions with relevant parties on various topics, and in February 2023, she and others from the corporate strategy planning, finance, and analytical &amp; measuring instrument-related departments exchanged views on the implementation of M&amp;A related to Shimadzu's priority business fields.</p>  <p>Exchanging Views with Staff from the Measuring Instrument-Related Departments</p>



## Board of Directors

### Activities of the Board of Directors

The Board of Directors discusses, resolves, and reports on important matters in accordance with laws and regulations, the Articles of Incorporation, and the rules of the Board of Directors. The following is a summary of specific matters

considered by the Board of Directors during the fiscal year under review, other than items related to the Companies Act and the Corporate Governance Code.

#### Major Matters Discussed by the Board of Directors during the Last Fiscal Year

- Review of performance targets for the Medium-Term Management Plan (FY 2020-FY 2022)
- Formulation of the new Medium-Term Management Plan (FY 2023-FY 2025)
- Acquisition of Nissui Pharmaceutical Co., Ltd.
- Shimadzu's response to the report from the external investigative committee on the inappropriate conduct of Shimadzu Medical Systems Corporation in relation to the maintenance and inspection of X-ray systems
- Establishing Regulation for Sustainability Management of SHIMADZU Group
- Establishing Shimadzu Group Management Basic Regulation
- Disclosure of human capital information
- Shimadzu's business in Russia
- Impact of limited availability of parts and materials

## Evaluating the Effectiveness of the Board of Directors

Every year, we analyze and evaluate the effectiveness of the directors and auditors who make up the Board of Directors. For this year's evaluation we conducted individual interviews with all directors and corporate auditors in cooperation with an external research organization, as well as the traditional questionnaire survey.

Based on these results, the Board of Directors held discussions focusing on areas in need of improvement. The following is a summary of the results of the effectiveness evaluation based on discussions at the Board of Directors meetings.

### Summary

The findings were generally positive. The Board of Directors takes necessary and sufficient action to engage in deliberations on medium-term management plans and M&A projects. In addition, a notable strength of Shimadzu's Board of Directors that deserves special mention is that it maintains an atmosphere in which outside directors can freely express their opinions and discuss issues from a variety of perspectives.

On the other hand, since expectations for the Board of Directors are increasing significantly under the Corporate Governance Code, there are challenges in the selection of materials and agenda items to ensure effective discussions, and efforts to improve this will continue.

### Results from Evaluating the Effectiveness of the Board of Directors

Criteria for Evaluating Effectiveness	FY 2022 (Applicable year: FY 2021)
<b>Composition of the Board of Directors</b>	Although the size of the Board of Directors (12) and its composition (half being outside directors) were positively rated, we will continue to discuss the composition of the Board so that it will contribute to monitoring strategy and strengthening governance. In addition, we will increase opportunities for discussion between our Executive and Board members in order to deepen the Board's discussions and better facilitate business operations.
<b>Operation of Board of Directors Meetings</b>	The evaluation showed that there is room for improvement in the allocation of time for discussions. There is a need to ensure effective discussion based on concise materials that clarify the discussion points, and to allow more time to discuss important items on the agenda.
<b>Roles and Responsibility of the Board of Directors</b>	The evaluation showed that the roles and responsibilities of the Board of Directors are being adequately fulfilled. Monitoring of business strategy and M&A deals, group governance, and risk management were identified as themes that require continued focus. We will continue to work on these as important themes.
<b>Self-Assessment by Directors</b>	All directors were aware of their expected roles and engaged in lively discussions, drawing on their diverse backgrounds, resulting in a positive rating.
<b>Support for and Cooperation with Directors and Audit &amp; Supervisory Board Members</b>	Adequate sharing of information and awareness between outside directors and corporate auditors is being carried out appropriately. Opportunities for candid exchange of opinions between outside directors and accounting auditors, which was an issue last year, have been improved, and cooperation with the internal audit department was also assessed positively.
<b>Dialogue with Shareholders and Investors</b>	The assessment indicated that there are issues in providing information to outside directors regarding the company's dialogue with institutional investors. We will promote the sharing of information on IR activities on the executive side and ensure that outside directors and institutional investors have opportunities to meet.
<b>Review of Issues and Efforts to Address Last Year's Items of Concern</b>	Cooperation between outside directors and accounting auditors has improved. The medium-term management plan was evaluated positively after careful discussion of the phases of the plan. In the future, we will work to prepare materials with clear talking points for more efficient discussions.

## Appointment and Compensation Committee

Shimadzu established the Appointment and Compensation Committee as an optional advisory body to the Board of Directors for the purpose of strengthening the independence, objectivity, and accountability of the Board of Directors.

This committee resolves and deliberates on matters related to appointments and compensation in accordance with the committee rules. During the fiscal year under review, the committee's specific deliberations included the items in the table below.

The committee met six times during FY 2022.

### Main Activities of the Appointment and Compensation Committee during the Last Fiscal Year

<b>Appointment Activities</b>	<ul style="list-style-type: none"> <li>• Policy for the next structure of corporate officers</li> <li>• Succession Plan for the next president and CEO</li> <li>• Candidates for outside directors</li> <li>• Executive changes</li> </ul>
<b>Compensation Activities</b>	<ul style="list-style-type: none"> <li>• Fixed compensation and short-term performance-linked compensation for the current fiscal year</li> <li>• Executive compensation matters and revisions</li> </ul>

### Evaluating the Effectiveness of the Appointment and Compensation Committee

In addition to evaluating the effectiveness of the Board of Directors, a survey about the effectiveness of the Appointment and Compensation Committee has been conducted annually since 2019, the year after the committee was established.

Survey questions primarily involve (1) training plan for CEO successors, (2) Incentives for managers, (3) committee operation, and (4) Implementation of expected roles and responsibilities of the Committee. Evaluation results have been generally positive.

### Composition of Appointment and Compensation Committee

The Appointment and Compensation Committee is composed of Representative Directors and Outside Directors, with a majority of the members Outside Directors. In principle, the chairperson is an independent outside director, thereby enhancing independence regarding appointment and compensation.

Name	Appointment and Compensation Committee
<b>Outside Directors</b>	4
<b>Internal Directors</b>	2
<b>Members</b>	6

### Members of the Appointment and Compensation Committee

Chairman: Hiroko Wada (Outside Director)  
 Members: Nobuo Hanai (Outside Director)  
 Yoshiyuki Nakanishi (Outside Director)  
 Nami Hamada (Outside Director)  
 Teruhisa Ueda (Representative Director, Chairman of the Board)  
 Yasunori Yamamoto (President & CEO)

## Criteria for Independence of Outside Directors and Audit & Supervisory Board Members

If none of the following apply, Outside Directors and Outside Audit & Supervisory Board members (including candidates) shall have independence from Shimadzu, with no risk of a conflict of interest with general shareholders.

- (1) Major supplier of Shimadzu (a company that received payments from Shimadzu equivalent to 2% or more of their annual consolidated sales revenue during the previous fiscal year) or an executive officer of that company
- (2) Major customer of Shimadzu (a company that paid Shimadzu the equivalent of 2% or more of Shimadzu's annual consolidated sales revenue during the previous fiscal year) or an executive officer of that company
- (3) Consultant, accounting expert, or legal expert (including persons affiliated with a corporation, association, or other organization that received applicable assets) who receives any large monetary or asset compensation from Shimadzu other than the designated director compensation (monetary or asset compensation

equivalent to 10 million yen or more, excluding the director compensation, received during the previous fiscal year)

- (4) Persons for which any of the conditions (1) to (3) applied within the past year
- (5) Relatives within a second-degree kinship to a person indicated in 1. to 3. below (excluding those without significance).
  1. A person indicated in (1) to (4)
  2. An executive officer of a Shimadzu subsidiary (including directors who are not executive officers when Outside Audit & Supervisory Board members are assigned as independent directors)
  3. A person that served as an executive officer indicated in 2. or as a Shimadzu executive officer within the last year (including directors who are not executive officers when Outside Audit & Supervisory Board members are assigned as independent directors)



## Policy on Method for Deciding Director and Audit & Supervisory Board Member Compensation

Shimadzu's executive compensation regulations stipulate the procedures for determining the compensation of directors, Audit & Supervisory Board members, and executive officers with specific duties, as well as the compensation structure. In addition, a "Policy on Method for Deciding Director and Audit & Supervisory Board Member Compensation" is also established upon resolution by the Board of Directors based on the deliberations and reports of the Appointment and Compensation Committee.

Compensation for Directors and executive officers with specific duties is decided by Appointment and Compensation Committee members appointed by the Board of Directors within the range decided at the Annual Shareholders' Meeting. The results are then reported to the Board of Directors. Compensation for Audit & Supervisory Board members is decided through discussion with the Audit & Supervisory Board members.

## Director and Audit & Supervisory Board Member Compensation System

Compensation for directors (excluding outside directors) and executive officers with specific duties (collectively referred to as "Director or Officer" below) comprises a fixed base compensation amount plus a variable amount linked to variations in short-term performance and stock compensation linked to variations in medium-/long-term performance, while also taking into consideration the management duties of the Director or Officer with respect to expanding our business results during each fiscal year

and increasing medium- and long-term corporate value.

Compensation for Outside Directors only includes a fixed compensation amount, and compensation levels are decided based on the expected roles and duties of each Outside Director.

Compensation for Audit & Supervisory Board members only includes a fixed compensation amount decided based on their expected roles and duties.

Classification	Directors (Internal)	Outside Directors	Audit & Supervisory Board Members	Remarks
Fixed Compensation	○	○	○	From the perspective of deciding compensation based on objective information, while also providing a level that is sufficient to enable recruiting talented human resources, compensation is decided based on the candidate's current position and intended role, using the compensation offered by similar companies (group of benchmark companies of a similar size and in a similar type of business), to be determined by a survey performed by an outside specialist company, as an important reference level.
Short-Term Performance-Linked Compensation	○	-	-	Compensation is decided based on overall consideration of the year-on-year growth rate of consolidated net sales and operating income, an evaluation of the performance of the specific department the executive officer with specific duties is in charge of, and a personal evaluation.
Medium-/Long-Term Performance-Linked Stock Compensation	○	-	-	For directors, for example, the number of shares provided for each position is decided in the final year of the medium-term management plan based on the degree to which specified performance targets were achieved. Compensation can vary within the 50 to 200% range, given the target achievement degree is determined based on target values for consolidated net sales and operating income as performance indicators. If a director or other employee commits a serious violation of their job duties or company regulations, they will forfeit their right to benefit from scheduled issues of stock and a system is established to charge a monetary amount equivalent to the stock value provided.

### Director and Audit & Supervisory Board Member Compensation Status (FY 2022)

Classification	Number of Applicable Directors and Audit & Supervisory Board Members	Fixed Compensation (million yen)	Compensation Linked to Performance (million yen)		Total (million yen)
			Compensation Linked to Short-Term Performance	Stock Compensation Linked to Medium-/Long-Term Performance <sup>2</sup> Recorded as Expense	
Directors (Internal)	6	197	167	8	372
Audit & Supervisory Board Members (Internal)	2	53	-	-	53
Outside Directors	4	46	-	-	46
Outside Corporate Auditors	2	20	-	-	20
<b>Total</b>	<b>14</b>	<b>316</b>	<b>167</b>	<b>8</b>	<b>492</b>

1. The above includes compensation paid to two directors who retired on June 28, 2022 (excluding outside directors).

2. The system for stock and non-monetary compensation linked to medium/long-term performance is intended to provide a quantity of stock every three years based on the extent to which the performance targets for the final year of the medium-term management plan were achieved. However, implementing the system requires recording that stock compensation as an expense each year. The compensation above is based on the recorded expense calculated by multiplying the number of points attributable to directors (excluding outside directors) for the given fiscal year by the market stock price, assuming a trust purchased Shimadzu stock.

3. Employee salaries for officers concurrently serving as employees are not listed as there is nothing applicable.



## Executive Sessions

To provide an opportunity to periodically meet and freely discuss issues, exchange views, share circumstances, and so on, executive sessions are held between Outside Directors and Outside Audit & Supervisory Board members, or between Outside Directors and Audit & Supervisory Board members after Board of Directors meetings are finished.

For the purpose of the sessions to provide information to executive management and the Board of Directors, Outside Directors and Outside Audit & Supervisory Board members express their respective views on Shimadzu issues and exchange views with an Accounting Auditor about improving internal controls.



Outside Directors and Outside Audit & Supervisory Board Members Exchanging Opinions

Recent meetings for exchanging views are indicated below.

### Status of Recent Meetings for Exchanging Views

<b>Meetings between Outside Directors and Outside Audit &amp; Supervisory Board Members</b>	<ul style="list-style-type: none"> <li>Exchanging opinions at a meeting with President &amp; CEO</li> <li>Exchanging opinions on Group governance</li> <li>Sharing issues facing the company with newly appointed outside directors</li> </ul>
<b>Meetings between Outside Directors and Audit &amp; Supervisory Board Members</b>	<ul style="list-style-type: none"> <li>Sharing opinions at a meeting with financial statement auditors</li> </ul>



Outside Directors, Audit & Supervisory Board Members, and Financial Statement Auditors Exchanging Opinions

## Cross-Shareholdings

### 1. Policy on Cross-Shareholdings

Shimadzu holds stocks that Shimadzu judges will result in increasing medium- and long-term corporate value, from a management strategy perspective. Each year, the Board of Directors verifies the appropriateness of holdings, by confirming whether the overall scale of cross-shareholdings is appropriate and then confirming whether the holdings of individual stocks are appropriate for the given objectives for holding the respective stocks and whether the benefits and risks from holding the stocks are commensurate with the corresponding cost of capital and other factors. Holdings of stocks not consistent with the cross-shareholding policy will be reduced.

During the Board of Directors meetings held during FY 2022, the board confirmed the qualitative significance of holding each stock and quantitative aspects of each stock, such as a comparison of total shareholder return versus cost of capital. As a result of this verification, the Company sold those stocks for which the significance of holding was deemed as not necessarily sufficient during the fiscal year ended March 31, 2023.

### 2. Stocks Held by Shimadzu for Reasons other than Net Investment Purposes

As of March 31, 2023, the number of stocks held for purposes other than net investment was 1.9% of consolidated total assets and 2.8% of consolidated net assets. The number and value of stocks included on the consolidated balance sheet are indicated below.

### Number of Stocks

(Stock types)

	FY 2019	FY 2020	FY 2021	FY 2022
<b>Unlisted Stocks</b>	30	30	30	30
<b>Stocks Not Unlisted</b>	36	30	24	22

### Value of Stocks Included on Balance Sheet

(Million yen)

	FY 2019	FY 2020	FY 2021	FY 2022
<b>Unlisted Stocks</b>	525	519	612	1,530
<b>Stocks Not Unlisted</b>	10,418	11,907	11,405	10,426

### 3. Shareholder Voting Criteria

Shimadzu exercises voting rights for all cross-shareholdings subject to a vote if it is judged that doing so would increase shareholder value. To ensure we exercise our voting rights appropriately, we check the content of each proposal being voted on based on decision criteria specified for each proposal, such as appropriation of retained earnings, appointment of directors or Audit & Supervisory Board members, or establishment of measures to defend against a takeover. For issues involving particularly serious concerns, such as a social scandal, we consider our vote very carefully.

# Key Financial Data over the Past 11 Years

	FY 2012	FY 2013	FY 2014	FY 2015
<b>Fiscal Year</b>				
Net sales	264,048	307,532	314,702	342,236
Gross profit	96,030	117,959	127,028	140,385
Selling, general and administrative expenses	83,913	93,940	99,838	104,683
R&D expenses*	12,660	13,965	13,610	13,995
Operating income	12,116	24,018	27,189	35,701
Capital equipment investment	9,147	16,163	13,571	12,098
Depreciation and amortization	7,909	8,050	7,951	9,425
Profit attributable to owners of parent	7,578	9,724	18,445	23,899
<b>Cash Flows</b>				
Cash flows from operating activities	12,028	(5,870)	40,245	32,348
Cash flows from investing activities	(7,899)	390	(15,678)	(13,101)
Free cash flows (from operating and investing activities)	4,128	(5,480)	24,566	19,246
Cash flows from financing activities	(2,401)	15,363	(33,197)	(11,689)
<b>Year-End Values</b>				
Total assets	300,259	340,715	339,832	349,798
Cash and cash equivalents	33,842	43,929	38,422	43,508
Outstanding interest-bearing debt	30,509	53,860	24,668	19,150
Shareholders' capital	178,174	180,449	195,912	214,734
<b>Per-Share Information</b>				
Profit	25.69	32.97	62.55	81.05
Net assets	587.53	616.50	711.38	745.13
Dividends	9.00	9.00	13.00	18.00
Payout ratio (%)	35.0	27.3	20.8	22.2
<b>Key Financial Performance Indicators</b>				
Gross margin	36.4	38.4	40.4	41.0
Operating margin	4.6	7.8	8.6	10.4
ROE (Return on equity)	4.5	5.5	9.4	11.1
ROA (Return on assets)	2.6	3.0	5.4	6.9
Equity ratio	57.7	53.4	61.7	62.8
Price-earnings ratio (x)	26.1	27.8	21.4	21.8
Overseas sales ratio	43.0	46.5	49.8	50.9

\* The above R&D expenses are the testing and research expenses in the securities report plus manufacturing expenses.

							(million yen)
FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	<b>FY 2022</b>	
342,479	376,530	391,213	385,443	393,499	428,175	<b>482,240</b>	
136,409	149,833	157,169	152,430	156,192	178,615	<b>200,959</b>	
99,319	107,011	112,688	110,584	106,450	114,809	<b>132,739</b>	
14,597	15,536	16,555	16,890	15,672	16,257	<b>18,970</b>	
37,089	42,822	44,480	41,845	49,742	63,806	<b>68,219</b>	
12,876	17,187	21,711	17,676	14,471	16,357	<b>22,512</b>	
9,546	10,591	11,506	13,256	15,536	16,205	<b>17,524</b>	
26,473	29,838	32,523	31,766	36,097	47,289	<b>52,048</b>	
29,608	41,215	29,454	39,509	63,801	63,367	<b>48,303</b>	
(12,304)	(11,072)	(22,897)	(16,062)	(13,860)	(6,044)	<b>(34,509)</b>	
17,303	30,142	6,557	23,447	49,941	57,323	<b>13,794</b>	
(7,294)	(7,902)	(10,819)	(26,185)	(13,033)	(15,658)	<b>(19,418)</b>	
375,354	418,548	437,190	437,618	497,459	560,528	<b>618,869</b>	
52,762	75,090	70,842	66,683	106,855	155,319	<b>153,734</b>	
18,611	18,636	17,537	2,112	1,743	1,709	<b>1,532</b>	
235,342	258,464	282,962	305,395	323,267	359,073	<b>396,415</b>	
							(yen)
89.79	101.26	110.41	107.84	122.52	160.49	<b>176.64</b>	
818.56	908.76	977.35	1,027.87	1,138.67	1,293.60	<b>1,437.19</b>	
20.00	24.00	28.00	30.00	34.00	48.00	<b>54.00</b>	
22.3	23.7	25.4	27.8	27.8	29.9	<b>30.6</b>	
							(%)
39.8	39.8	40.2	39.5	39.7	41.7	<b>41.7</b>	
10.8	11.4	11.4	10.9	12.6	14.9	<b>14.1</b>	
11.5	11.7	11.7	10.8	11.3	13.2	<b>12.9</b>	
7.3	7.5	7.6	7.3	7.7	8.9	<b>8.8</b>	
64.3	64.0	65.9	69.2	67.4	68.0	<b>68.4</b>	
19.7	29.5	29.0	26.4	32.7	26.4	<b>23.4</b>	
48.6	50.2	50.4	49.0	50.8	53.0	<b>56.2</b>	

# Key Non-Financial Data over the Past 6 Years

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
<b>Non-Financial Data (Consolidated)</b>						
Number of employees	11,954	12,684	13,182	13,308	13,499	13,898
Number of employees outside Japan	4,805	5,187	5,485	5,549	5,692	5,860
Percentage of women in management positions	8.5	9.6	8.5	9.2	10.2	10.9
Wage difference between men and women (women/men*100)						
All employees					65.7	67.5
Management					88.4	97.2
General employees					74.9	75.8
Percentage of male employees taking childcare leave <sup>1</sup>					28.6	45.1
Number of patents held	6,549	6,755	7,062	6,423	6,776	7,275
<b>Non-Financial Data (worldwide Shimadzu Group)</b>						
Energy usage (GJ)	924,651	958,643	938,760	916,828	983,205	1,044,789
Energy usage per unit of sales (GJ/billion yen)	2,456	2,450	2,436	2,330	2,295	2,167
CO <sub>2</sub> emissions (t-CO <sub>2</sub> )	49,398	44,958	38,548	34,468	18,389	10,462
CO <sub>2</sub> emissions per unit net sales (t-CO <sub>2</sub> /billion yen)	131	115	100	88	43	22
<b>Non-Financial Data (Non-Consolidated)</b>						
Percentage of female employees (%)	17.1	18.5	19.3	20.0	20.7	20.9
Percentage of managers and above who are female (%)	2.2	3.3	3.5	4.1	4.1	4.8
Percentage of general managers and above who are female (%)	1.5	2.6	3.1	4.3	4.6	7.9
Number of new graduate hires <sup>2</sup>	98	118	140	124	85	96
Percentage of new graduate hires who are female (%)	30.6	33.9	37.1	31.5	25.9	24.0
Number of mid-career hires	33	53	31	22	29	51
Percentage of mid-career hires who are female (%)	21.2	39.6	58.1	90.9	55.2	41.2
Number of employees who left the company	26	25	34	37	34	36
Average number of years employed (years)						
Male	18.4	18.6	18.8	19.0	19.3	19.4
Female	16.6	15.9	15.0	14.8	14.8	14.8
Average monthly overtime (hours)						
Management positions	39.3	31.7	29.4	30.3	30.6	31.7
Labor union members	7.1	8.0	6.8	2.4	5.0	7.4
Percentage of employees who telecommute (%)				31.0	28.0	25.0
Percentage of annual leave taken <sup>3</sup> (%)						
Management positions	69.9	72.7	72.7	66.0	68.0	75.7
Labor union members	40.0	48.9	50.1	47.0	45.8	52.8
Labor union members	78.4	79.3	78.8	70.8	74.6	82.2
Percentage of male employees taking childcare leave <sup>1</sup> (%)	7.3	6.5	13.1	22.7	44.6	56.7
Percentage of female employees taking childcare leave <sup>4</sup> (%)	95.2	100.0	100.0	100.0	100.0	100.0
Rate of female employees returning from childcare leave <sup>5</sup> (%)	100.0	96.4	95.7	96.9	100.0	100.0

<sup>1</sup> "Number of employees who took childcare leave in the fiscal year" / "Number of employees whose spouse gave birth in the fiscal year" (calculated as the ratio of taking childcare leave, etc., under Article 71-4-1 of the "Enforcement Regulations of the Act on Childcare Leave, Caregiver Leave, and Other Measures for the Welfare of Workers Caring for Children or Other Family Members" (1991 Ministry of Labor Ordinance No. 25))

<sup>2</sup> Actual number of new graduates hired on April 1 of each fiscal year

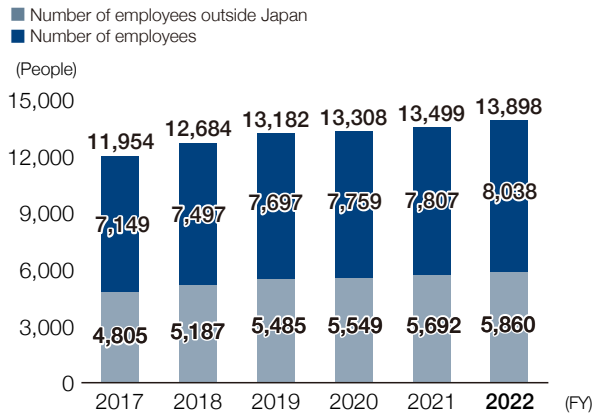
<sup>3</sup> Number of days of annual leave taken in the fiscal year divided by the number of days granted in the fiscal year

<sup>4</sup> Percentage of employees who started childcare leave by the end of the fiscal year among those who gave birth during the year prior to the applicable fiscal year

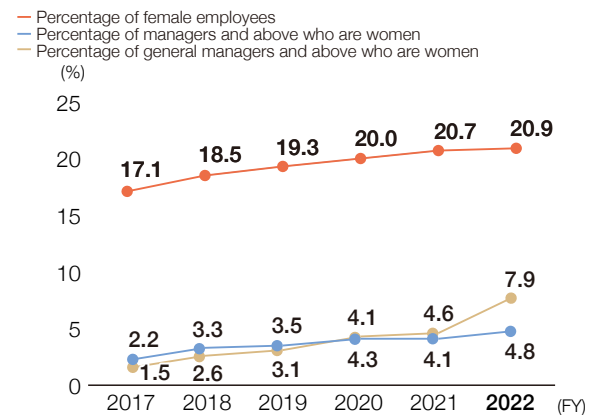
<sup>5</sup> Percentage of employees who actually returned to work among those who had completed childcare leave and were scheduled to return to work during the year prior to the applicable fiscal year



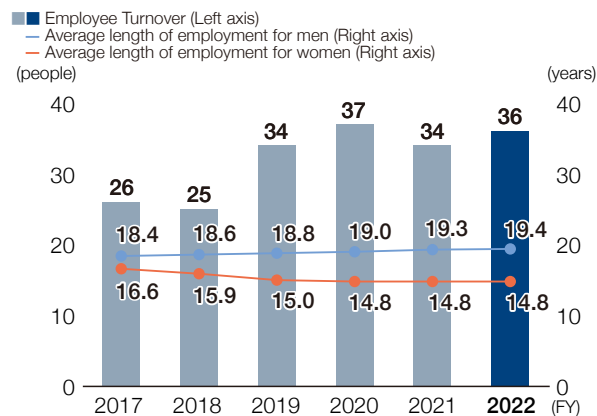
### Number of Employees (Consolidated)



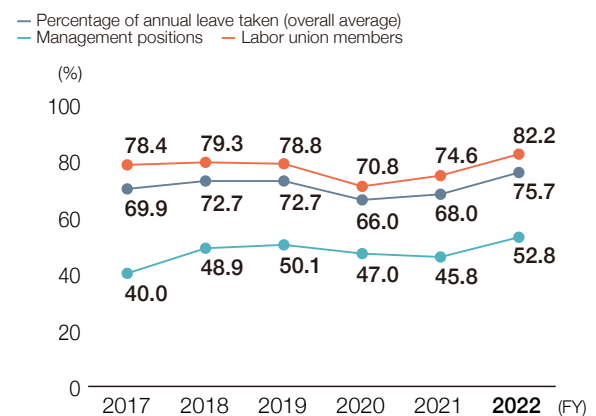
### Percentage of Women (Non-Consolidated)



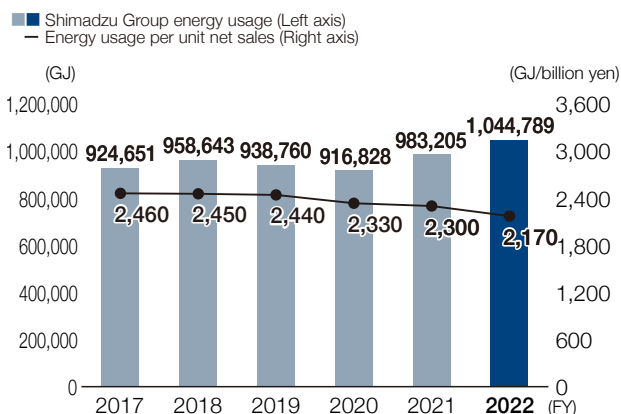
### Employee Turnover and Average Years of Employment by Gender (Non-Consolidated)



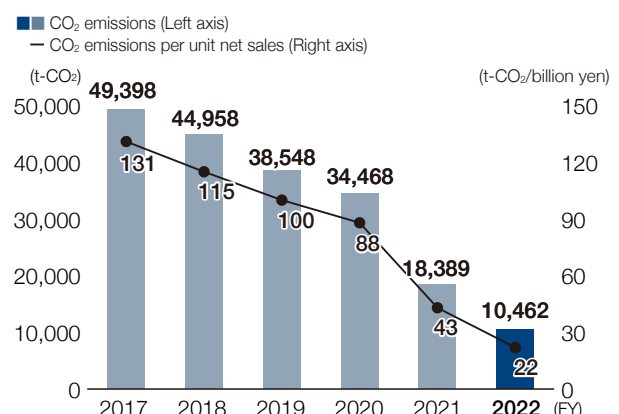
### Percentage of Annual Leave Taken (Non-Consolidated)



### Energy Usage (Shimadzu Group in Japan and Overseas)



### CO<sub>2</sub> Emissions (Consolidated)



# Corporate Profile

The following web page includes information about the topics listed below.  
<https://www.shimadzu.com/about/profile.html>



Corporate Profile

## Corporate Outline (as of March 31, 2023)

Name	Shimadzu Corporation
Founded	March 1875
Formation of Limited Company	September 1917
Address of Head Office	1 Nishinokyo Kuwabara-cho, Nakagyo-ku, Kyoto 604-8511, Japan Phone: +81-75-823-1111
Capital	26,648,899,574 yen
Number of Employees	3,541 (non-consolidated) 13,898 (consolidated)
Number of Consolidated Subsidiaries	23 (in Japan) 55 (outside Japan)

## Major Business Offices

Head Office	1 Nishinokyo Kuwabara-cho, Nakagyo-ku, Kyoto
Offices	Tokyo and Kansai (Osaka)
Branches	Sapporo, Tohoku (Sendai), Tsukuba, Kitakanto (Saitama City), Yokohama, Shizuoka, Nagoya, Kyoto, Kobe, Hiroshima, Shikoku (Takamatsu City), and Kyushu (Fukuoka)
Plants	Sanjo and Murasakino (Kyoto City), Atsugi (Atsugi City), Hadano (Hadano City), and Seta (Otsu City), Shimadzu Logistics Center Kyoto (Muko City)
Research Laboratories	Technology Research Laboratory (Seika-cho, Soraku-gun, Kyoto), Koichi Tanaka Mass Spectrometry Research Laboratory (Kyoto), Healthcare R&D Center (Kyoto City), SHIMADZU Future Collaboratory (Seika-cho, Soraku-gun, Kyoto Prefecture), Shimadzu Tokyo Innovation Plaza (Kawasaki City)

# Stock Information

The following web page includes information about the topics listed below.  
<https://www.shimadzu.com/ir/stock/>



Stock Information

## Status of Stocks

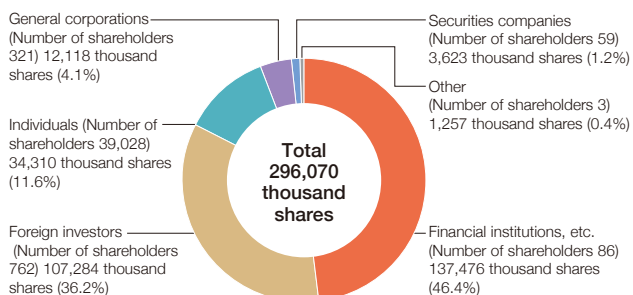
Total Number of Common Stock Authorized	800,000,000
Total Number of Common Stock Issued	296,070,227
Number of Shareholders	40,259
Stock Listing	Tokyo Stock Exchange
TSE Code	7701
Shareholder Registry Administrator	Mitsubishi UFJ Trust and Banking Corporation
Accounting Auditor	Deloitte Touche Tohmatsu LLC

## Major Shareholders (10 Largest)

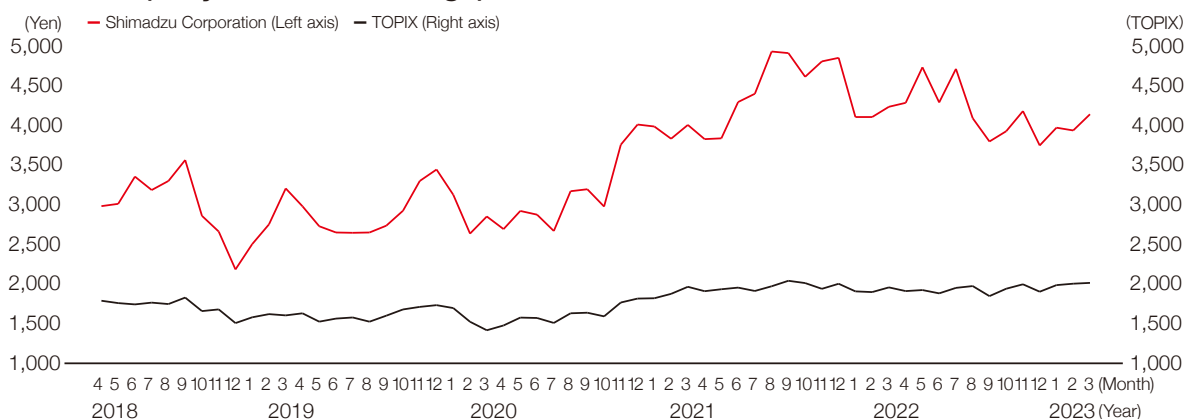
Shareholder Name	Number of Shares Owned (Thousands of Shares)	Shareholding Ratio (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	43,277	14.68
Meiji Yasuda Life Insurance Company	20,742	7.04
Custody Bank of Japan, Ltd. (Trust account)	13,962	4.74
STATE STREET BANK AND TRUST COMPANY 505223	12,737	4.32
MUFG Bank, Ltd.	7,672	2.60
Taiyo Life Insurance Company	7,411	2.51
Tokio Marine & Nichido Fire Insurance Co., Ltd.	6,287	2.13
The Bank of Kyoto, Ltd.	4,922	1.67
National Mutual Insurance Federation of Agricultural Cooperatives	4,384	1.49
Mitsubishi UFJ Trust and Banking Corporation	4,205	1.43

\* The indicated shareholding ratio was calculated excluding treasury stock (1,253,847 shares).

## Ratio of Shares by Shareholder Type



## Stock Price (Tokyo Stock Exchange)



# Information about Group Companies

The following web page includes information about the topics listed below. <https://www.shimadzu.com/links/location.html>



Location

## Main Locations outside Japan

### Sales and Service Organizations

- Regional Headquarter
- Sales and services



### Manufacturing and R&D Organizations

- Application development
- Manufacturing
- Research and development
- ★ Innovation centers



# Shimadzu Corporation

<https://www.shimadzu.com/>