

Omoshiro-okashiku  
Joy and Fun



# HORIBA Report

## 2020-2021

Year ended December 31, 2020



Omoshiro-okashiku  
Joy and Fun



The corporate motto of HORIBA is

“Joy and Fun.”

We believe that if we take interest and pride in the work  
that occupies so much of our lives,  
and in the workplaces where many of us spend  
a large part of each day, then our satisfaction in life will increase,  
and we will be able to enjoy our lives  
even more as a result.

# Omoshiro-okashiku Joy and Fun



HORIBA  
HORIBA



**Atsushi Horiba**  
Chairman & Group CEO

## Confront headwinds with continual investment for growth by balanced management

2020 was a year when we were under an extremely difficult business environment due to the global spread of COVID-19. HORIBA responded to this difficult situation with strong and continuous efforts and human resource capabilities, and as a result, an operating income margin of 10.5% was achieved (up 0.1 point from the previous year), which is the almost same result as 2019, despite sales, operating income, ordinary income, and net income, for the fiscal year ended December 2020 not reaching the previous year's results.

HORIBA has achieved growth through balanced management by flexibly utilizing management resources and continually investing in each segment. By owning five business segments in different markets, the group as a whole was able to secure a surplus even in the 2008 global financial crisis, because Scientific and Medical-Diagnostic covered the decline in the Automotive

and Semiconductor segments. The same is true even now when HORIBA is greatly impacted by COVID-19. Many industries are stagnant, and especially the prospect of the automotive industry, which is undergoing a major transformation, is also extremely uncertain. On the other hand, demand for semiconductors is increasing worldwide, and HORIBA's Semiconductor segment also secured significant increases in sales and profits in 2020 and led the performance of the entire group. Targeting various industries in this way is particularly effective in emergency situations. I recognize that changes in the business environments surrounding HORIBA will accelerate and be more intense than ever before, and thus HORIBA will continue to promote balanced management as a way of management that can flexibly respond to changes, even in the face of headwinds.

# Textbooks do not teach everything. Read the current trend with technology and intuition.

2020 was the year when the world was forced to make big changes and, at the same time, we reconsidered what HORIBA's strengths are. Based on the world's top-level basic technology and the ideas and skills of each person who can utilize that technology, HORIBA has begun to create new value in various fields more than ever. We will open up these turbulent times with a sense of crisis and the ability to read changes in the current situation.

CEO **M**ESSAGE

## Our Strengths are from “HORIBA as a provider of technology”

Today, various social issues are emerging, and the world is changing drastically, as shown in digital transformation and the mobility revolution. I recognize these changes in current trends as opportunities. Energy-related issues are an example; HORIBA can provide various solutions, which are brought from all the technologies we possess, in all processes of “generation,” “storage” and “utilization.” In the energy market, it is necessary to think about business development from a new perspective, beyond the boundaries of segments, and it may take time to reach a certain business scale. However, HORIBA’s current main product, the emission measurement systems, was originally developed as a device for analyzing human exhalation, and it was a product that found new value by changing the viewpoint.

Providing products using practical technology born from solid basic research is still HORIBA’s strength. Furthermore, we will not only provide measurement technologies as devices,

but also proactively propose solutions, including the skills possessed by engineers, as a strength. HORIBA Techno Service Co., Ltd., which recently established a new head office building, is participating in the analysis project of samples brought back from the asteroid Ryugu by the asteroid explorer Hayabusa2, but this analysis is by no means easy. In order to identify substances without damaging the sample, high-precision measurement equipment and highly skilled engineers, who can analyze it, are mandatory. I feel honored that HORIBA was invited to this project not only because we possess the technology to manufacture the world’s top level measurement equipment, but also because the abilities of HORIBARNs\* are highly regarded.

By refining our strengths in this way, I am convinced that the markets in which HORIBA can contribute will expand infinitely.

\* HORIBARIANS: All HORIBA workers are regarded as family and called HORIBARIANS as a nickname.





## Flexibility, not simply following textbooks, is necessary to predict changes

One of my concerns is the spread of the perception that “acting according to textbooks is excellent” in the Japanese education field. In such education, it is difficult for students to acquire the ability to think and act creatively based on the knowledge learned. Without the power to think and act on your own, you can only change the model of existing products, and it may be difficult to create unique products from scratch. I think that you can accumulate the power to predict changes and refine your sense of business by building a database of experiences inside yourself from various experiences other than textbooks.

From management’s point of view, I thought the tide of the business environment had changed even before the spread of COVID-19, and thus I was not surprised so much by the change in the current situation. This is because management cannot be controlled according to logic and textbooks. The role of management is to look ahead, set the direction of business and the company, and lead the organization by utilizing the sense and wisdom gained from experiences and learning.

In 2020, physical movement and interactions with people were severely restricted, but we were able to manage group companies globally by utilizing online communication tools introduced in 2019. In Japan, the Good Place work system, which was introduced in 2019 by developing the traditional telecommuting system, also supported us to work flexibly and efficiently in a remote environment. As the top of management, I believe that continual investment in company growth with an eye on the future is important, both in normal times and in difficult business environments.

HORIBA expects diverse human resources to shine in their own places, like stained glass that shines in a variety of ways. HORIBA’s significant power is from human resources who can play their roles by exerting their abilities, such as people who achieve results as a team through management skill and who pursue new technologies thoroughly. The reason why we were able to continue our business, despite the severe impact of the spread of COVID-19, is that HORIBARIANS have been showing leadership in their own responsibility and always aiming for the highest level. Many of them learned that new approaches and challenges, which are not an extension of the past, are necessary when in a crisis, and put that into practice. For example, the semiconductor business, which is currently the sole driver of business performance, had previously experienced a difficult situation in which the semiconductor market itself was temporarily sluggish, and operations were drastically reduced. HORIBA continued to invest in the semiconductor business despite such a severe business situation. We believe that the unconquerable spirit of HORIBARIANS, who endure difficulties, and the trust in the company, which continues to invest even in difficult circumstances, have led to the remarkable progress of the semiconductor business today.

A sense of crisis is what each employee feels seriously when work cannot be done as usual. HORIBARIANS, who can always ask themselves to take new approaches and challenges with a sense of crisis, propose new approaches, and boldly take on challenges, are the driving force to grow HORIBA significantly.



## Go back to the basics because of this turbulent time

While I recognize the advantages of the maneuverability and efficiency of communicating online, I am very interested in the fact that voices from group companies all over the world have been raised stating that face-to-face communication is also important. Casual conversations and exchanges of ideas in post-meeting in-person gatherings, which were held every time before the online meetings were introduced, played an important role in building relationships of trust. It is a great asset for HORIBA that many HORIBARIANS recognize that these occasions are important. By combining the values of both online and face-to-face, I believe that society will

change to an era where  $1 + 1 = 2$  is not the only case, but also the case is to spread to 3 and 4. HORIBA has the foundation to respond to such changes and already implements various activities. In this turbulent time, we will return to the spirit of the corporate motto “Joy and Fun” and create corporate value by leveraging the strengths of HORIBA that we have built up so far. I ask for your continued understanding and support in 2021.

April 2021

**Atsushi Horiba**  
Chairman & Group CEO

- 01 Corporate motto “Joy and Fun”
- 03 CEO message
- 10 Editorial policy
- 11 President message
- 13 HORIBA supports the supply of semiconductors
- 15 Business outline:  
Semiconductor / Scientific /  
Medical-Diagnostic
- 21 Keywords for innovation:  
Diversity and Total Optimization
- 25 Business outline  
Automotive / Process & Environmental
- 29 Promoting business collaboration
- 31 Broadening of our service business
- 33 COO message
- 35 HORIBA’s management  
HORIBA’s value creation cycle  
Technology / Human Resources
- 41 CFO message
- 45 HORIBA and ESG Investing
- 47 Corporate Governance
- 51 List of management members
- 55 Financial Data
- 59 Investors’ Guide

• **Regarding our use of the term “owners” (shareholders)**

HORIBA fully recognizes the importance of its shareholders and frequently refers to them as “owners.”

• **Regarding our use of HORIBA and HORIBA, Ltd.**

In this HORIBA Report, the HORIBA Group of companies is described as “HORIBA” and the parent company as “HORIBA, Ltd.”

• **Market Share**

Market shares stated in this report are HORIBA’s estimates as of fiscal 2020.

• **Change in Revenue Recognition Standard**

HORIBA, Ltd. and its domestic consolidated subsidiaries had formerly recognized revenue mainly on a shipping basis. However, starting from fiscal 2016, HORIBA, Ltd. and its domestic consolidated subsidiaries changed their revenue recognition method to recognize revenue on a completion-date-of-installation or delivery-date basis under the terms and conditions of the relevant contracts. The amounts in or before fiscal 2015 are not retrospectively revised.

• **Disclaimer regarding future plans and forecasts**

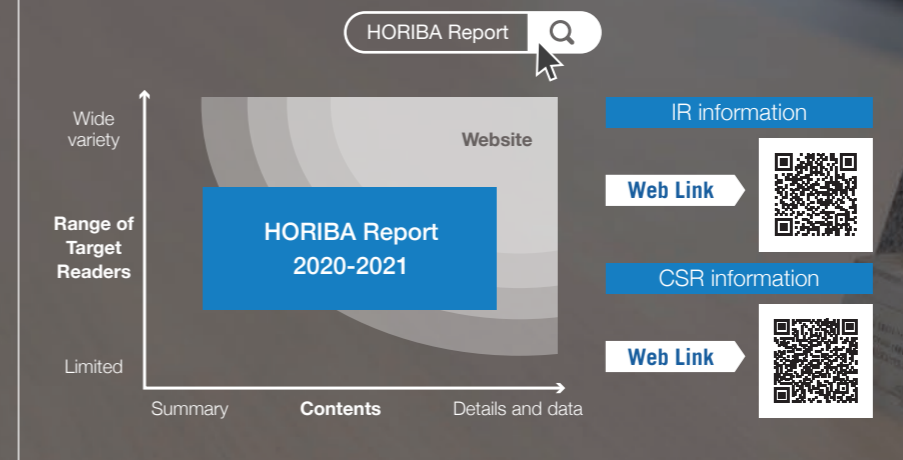
This HORIBA Report contains certain statements describing future plans, strategies, and performance forecasts of HORIBA, Ltd. and its affiliated companies. These statements reflect forecasts estimated on management’s assumptions and beliefs based on the information available as of April 30, 2021. Actual performance may differ due to unforeseen circumstances in the operating environment and other factors.

**Regarding the importance and comprehensiveness of information in the HORIBA Report 2020-2021**

We have selected financial and non-financial information that we believe to be of high importance for inclusion in the HORIBA Report 2020-2021.

For more detailed information, please see our website.

The PDF version of the HORIBA Report 2020-2021 is also available through our website.



# Cross-Segmentation

**HORIBA will provide invaluable solutions to our customers with our cross-segment technologies and customization skills.**

President **M**ESSAG E

**Masayuki Adachi**  
(Doctor of Engineering)

President, HORIBA, Ltd.

**While 2020 was a difficult year for HORIBA in terms of financial results, we carried through our business direction. HORIBA engages in business fields which are essential for the world, and can be expected to grow no matter how our society changes in the future.**

**HORIBA aims to continue providing values to society by applying our full capabilities.**



**We confirmed the progress of “cross segment.”**

COVID-19 has drastically and quickly changed the world. However I believe that the three main fields: Energy and Environment, Materials and Semiconductor, and Bio and Healthcare will not disappear as long as we live on the earth. These three fields are defined in the “Market Oriented Business,” of our Mid-Long Term Management Plan “MLMAP2023.” We will approach these fields with a “cross-segment” initiative to promote businesses by cross-fertilizing the resources of our five business segments. While we had recognized the importance of this approach and put it forward even before we formulated MLMAP2023, I see it penetrating into our organizations deeply along the lines of the radical changes of our business circumstances.

Decarbonization is a clear goal of the society, and attention is focused on the electrification of vehicles. However, it is clear that the electrification cannot be implemented only within the framework of the automotive industry. We need to think about the “generation,” “storage” and “utilization” of energy; in other words, the energy supply-chain from the perspective of overall optimization. HORIBA has been developing various products and technologies which contribute to the deployment of the new energy flow, especially a hydrogen society. Our perspective is not only for the vehicle power sources, but extends to measurement and control for stationary fuel cells and hydrogen generation processes. Our “Energy & Environment” field is based on such concept, and being the form of business we are aiming for with cross-segment initiatives.

**Tough demands from customers are the excellent business opportunities.**

HORIBA continues to focus on “high added value.” We provide solutions that customers can trust and rely on, and do not focus too much on price competition. I believe that HORIBA exists today as a result of pursuing “customization” in order to be close to our customers, and has been able to build relationships of trusts where our customers believe that “HORIBA is inseparable partner.”

The second priority measure of MLMAP2023, “Solution Provider Beyond Life Cycle Management,” aims to further enhance our business model by combining conventional product sales with full time service of the product life span. While responding to the strict demands of our customers, new businesses can be discovered. Cross-segment activities are effective in creating a virtuous cycle through such customization. Since 2020, we have launched various cross-organizational projects such as the Bio/Life Science Project, the Industrial Solution Project and the Hydrogen Energy Project. For example, members of the Bio/Life Sciences Project have been deeply involved in the research field of institutes or companies. Moving their perspective from the research field to the industrial manufacturing can be a culture shock for them. However, such “cultural exchange” expands the solutions we can provide to customers, and eventually creates new value.

Now that social changes are accelerating, we will be left behind if we work on business expansion only by ourselves. Forming alliances with external companies and organizations to leverage our various strengths can be seen as one approach to customization. Regarding industry-industry collaboration between companies, we announced in 2020 a collaboration with Shimadzu Corporation, which is also in Kyoto, to develop and sell “LC Raman” products. The collaboration between HORIBA and Shimadzu, which are often seen as competitors, seems to have had a strong impact on the industry. In fact, the strengths of both companies are clearly complementary, and by combining these, we can provide new solutions.

Regarding industry-academia collaboration, we have established “HORIBA Institute for Particle Analysis in AIST TSUKUBA,” located in the National Institute of Advanced Industrial Science and Technology (AIST), where we aim to develop the world’s highest level of particle analysis. We hope that we will establish a scheme to commercialize technologies from academia, and that industry-academia collaboration, which is active in other countries, will expand further in Japan.

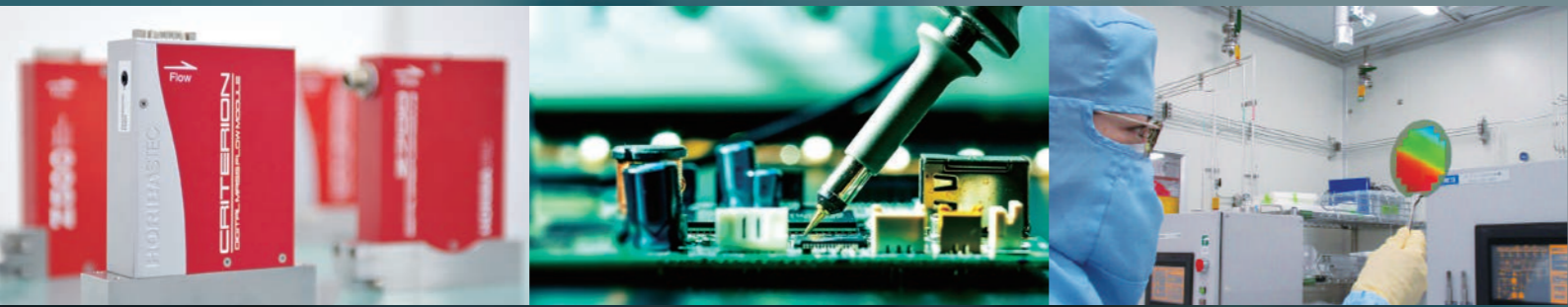
We will continue to meet the expectations of our customers by adjusting to the rapid changes, and providing our value in HORIBA way.

April 2021

# and Customization



# Develop as a new business



Close Up

## HORIBA supports the supply of semiconductors

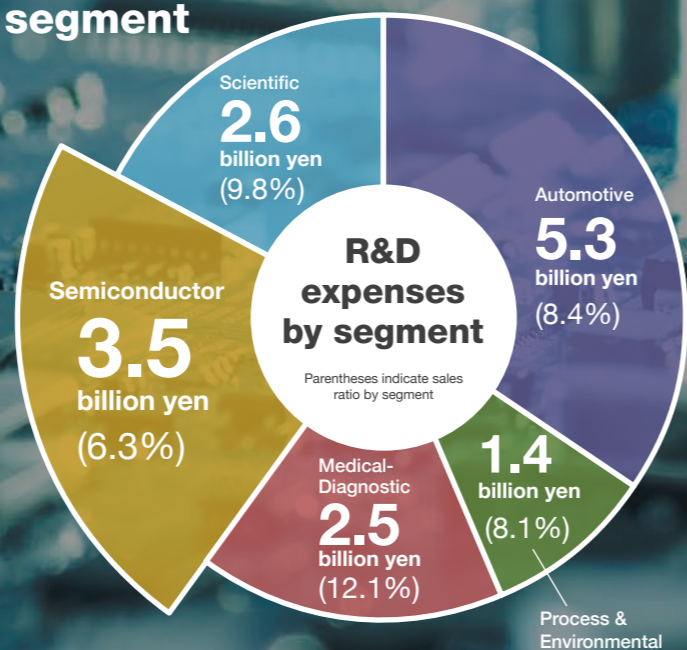
HORIBA develops diverse applications for semiconductor manufacturing processes (dry process, wet process, lithography), R&D, quality control, water quality measurement for the pure water used in processes and wastewater treatment, and more.

As miniaturization and 3D integration progress in semiconductors, more precise measurement and control are required in manufacturing processes.

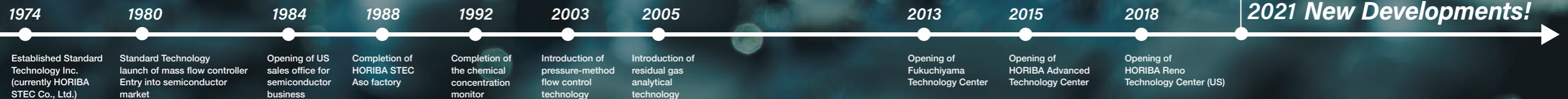
We utilize fluid control, liquid analysis, spectroscopic analysis, and other core technologies to provide chemical concentration monitors, particle detection systems, and mass flow controllers that achieve high-speed, high-precision gas supply.

### HORIBA's balanced management that has nurtured the Semiconductor segment

Even when the business environment is weak in one segment, HORIBA has been able to agilely leverage its management resources to continue investing in each segment and achieve sustainable growth. In the semiconductor industry, with its volatile market, we have continuously maintained and enhanced our competitiveness to grow the sector into a business that is our greatest source of profits.



### History of business in the semiconductor market



#### Mass flow controllers



Global market share\*  
**60%**

\* HORIBA's estimate

Perform precise control of gas and liquid supply lines in semiconductor manufacturing processes

#### Chemical concentration monitors



Global market share\*  
**80%**

\* HORIBA's estimate

Perform highly precise and stable measurement of concentrations of chemicals used in processes and in cleaning in semiconductor manufacturing

Driving growth in business for the semiconductor market

### Concentrating HORIBA's technologies to tackle new areas

At present, the major products of the Semiconductor segment are mass flow controllers and chemical concentration monitors. Under MLMAP2023, we are focusing our efforts on creating a third cornerstone of the business. To accelerate this activity, we established a new project that concentrates HORIBA's technologies and its global human resources across sites and businesses. By utilizing the sensing technologies that we have developed, we will provide solutions for new areas of semiconductor manufacturing processes and will contribute to the development of the semiconductor industry.

### Development of sensing technologies for the semiconductor market

#### Advancing Optical Smart Sensing (OSS) technology

- Point 1 Working to actively utilize the sensing technologies HORIBA holds globally for applications in the semiconductor market
- Point 2 Established a dedicated OSS department in HORIBA STEC, Co., Ltd. a major group company in the Semiconductor segment



#### Perspectives on the utilization of Optical Smart Sensing Technology

- Contribution to productivity improvement in semiconductor manufacturing processes
- Utilization of big data in control process management for semiconductor production equipment

#### In-situ gas analyzers



#### Measurement equipment used in wide-ranging applications







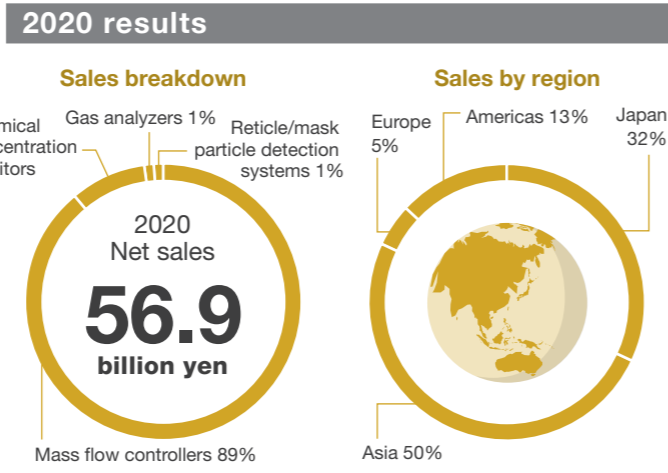
# Semiconductor segment



## Contributing to yield enhancement and technology innovation in semiconductor manufacturing processes with HORIBA's flow control and measurement technologies

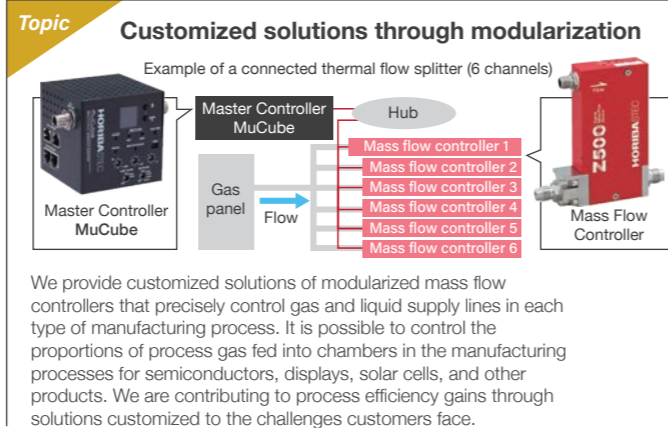
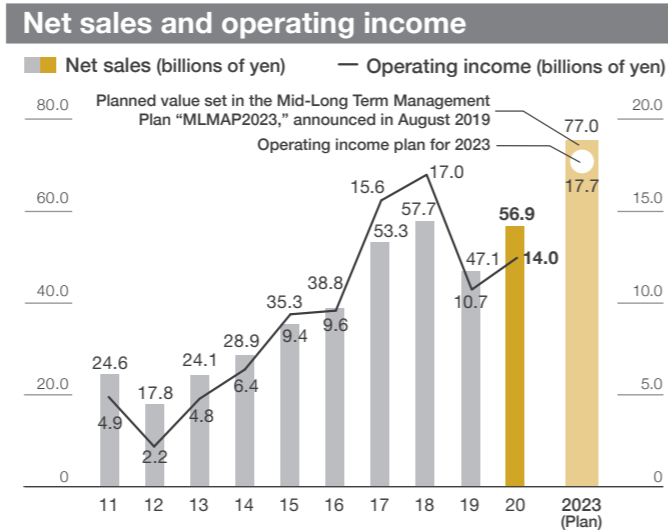
Mass flow controllers, used in the manufacturing process (front-end) of devices such as semiconductors, are a major product of the Semiconductor segment. We have a leading global market share\*, largely on the strength of our flow control technology that enables yield enhancement and miniaturization in the semiconductor manufacturing process. We will provide solutions for responding to technological advances in the semiconductor manufacturing process, in addition to measuring equipment such as chemical concentration monitors, and establish an important position in the growing semiconductor industry.

\* HORIBA's estimates



### • Increase in capital expenditures by semiconductor manufacturers and recovery in demand

Sales and profits increased as sales to semiconductor production equipment (SPE) manufacturers increased in response to a recovery of semiconductor manufacturer's expenditure driven by an increase in demand for semiconductor associated with the expansion of telework, digital business and other factors. During the year, we strove to maintain and grow our market share by launching sales of mass flow controllers tailored to cutting-edge SPE, as well as chemical concentration monitors and other products. In addition, we continued to collaborate with universities and research institutions as part of efforts to expand the range of core technologies that will be essential in the future.



## MLMAP2023 Segment Strategy

# Shape the Market, Sell the Solution

Evolve the company into a comprehensive supplier that provides high-value-added solutions for all semiconductor manufacturing processes, from R&D to aftermarket services.

### 2023 plan

Sales

77.0 billion yen

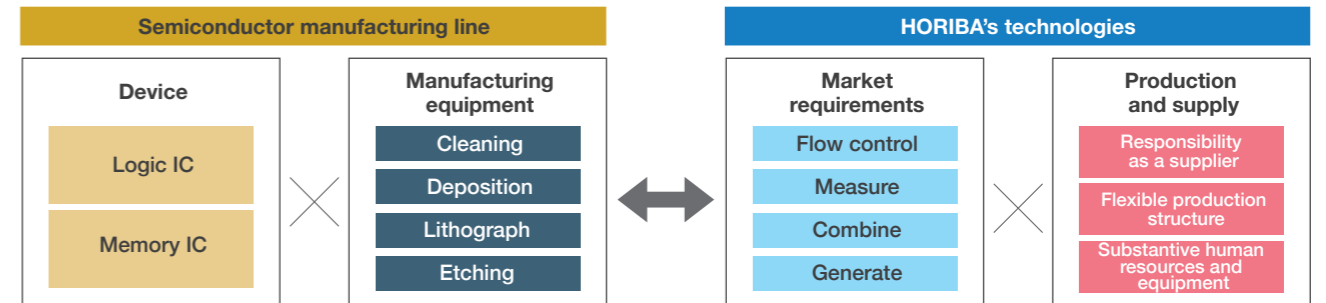
Operating income

17.7 billion yen

Medium-term market trends	Risks and opportunities
An increase in processing volume at data centers and penetration of Artificial Intelligence (AI) and the Internet of Things (IoT) have significantly boosted demand for semiconductors and the range of their use. In addition, advances in technology and production process, such as miniaturization and 3D-integration semiconductor production processes, have significantly impacted demand for SPE. The latest semiconductor manufacturing processes require advanced gas flow control, and demand for highly precise flow control is expected to continue.	Capital expenditure trends for SPE and semiconductor manufacturers may have an impact on business in the Semiconductor segment due to technological changes in semiconductors and semiconductor manufacturing, as well as rapid demand fluctuations for semiconductors. To mitigate these risks, we are putting bases geographically close to customers, collecting the most current information such as the trend of capital expenditure, and building a structure for strengthening development that swiftly tackles market needs.

## BUSINESS TREND

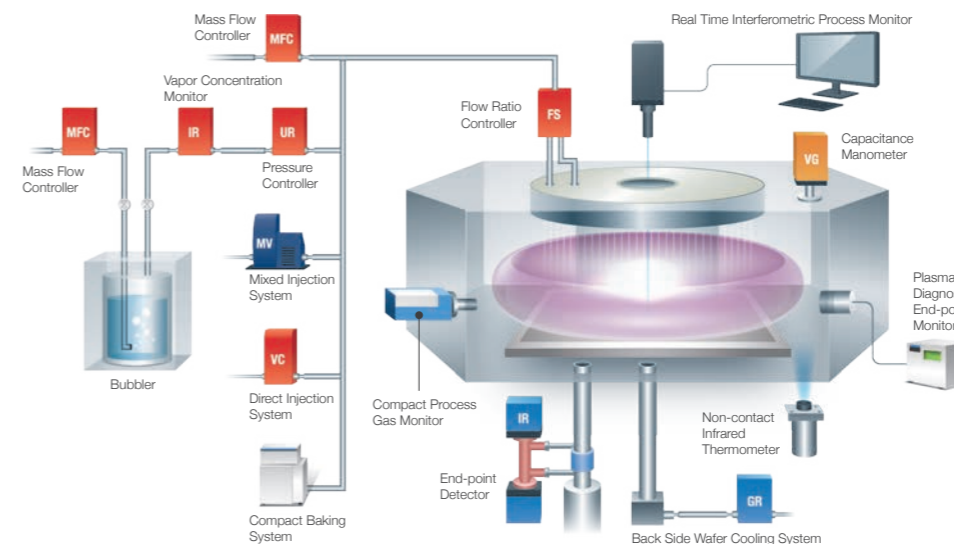
### ▶ Matrix of the semiconductor manufacturing process market and HORIBA's technologies



The growing use of telecommunications by individuals and the spread of the IoT have generated enormous volumes of data, dramatically increasing the demand for information storage and the need for analysis such as machine learning. Against the backdrop of this robust final demand, production volume of the logic ICs needed for information processing and the memory ICs needed for information storage has grown, and the SPE market continues to expand.

As a supplier of key components for SPE, HORIBA believes that our mission is to hone our technologies and provide stable supply, while responding to technological advances in semiconductor manufacturing processes such as miniaturization and 3D-integration. In addition, as a data generator that provides analytical and measurement equipment, we believe that we can contribute to more efficient predictive maintenance in manufacturing processes by creating the data needed for machine learning.

### ▶ Measurement demand in semiconductor process chambers and HORIBA's products



Accompanying the advances in materials and the increasing complexity of semiconductor manufacturing processes due to progress in miniaturization and 3D-integration, demand is growing for measuring and controlling flow, pressure, concentration, plasma, and the like around the process chambers used in semiconductor manufacturing. By supplying components such as mass flow controllers, one of HORIBA's mainstay products, in addition to providing solutions that combine modules and subsystems, we are contributing to productivity improvements and solving other challenges.

Our website has details on products by application. (in Japanese only)

Web Link



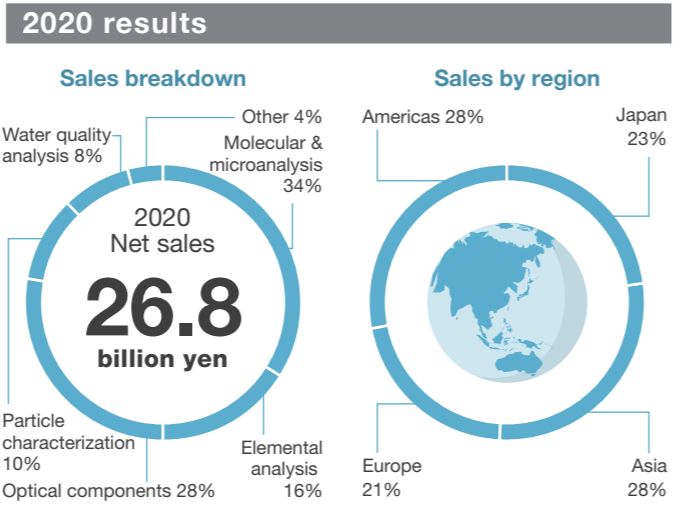


## Scientific segment



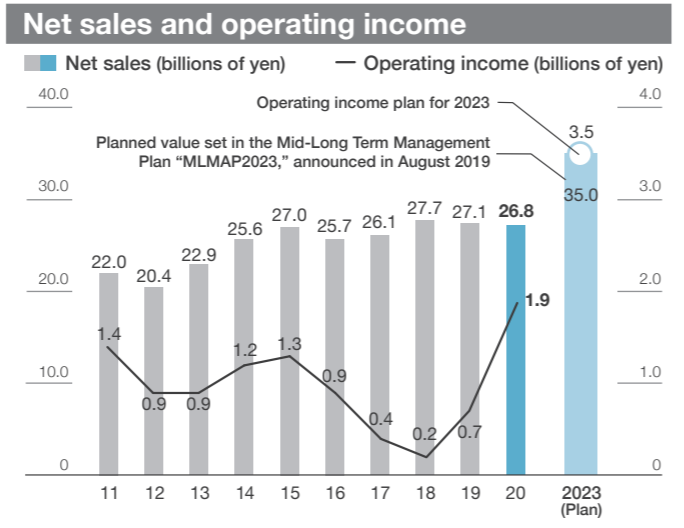
### Supporting HORIBA's core technology and generating the leading edge of scientific technology

HORIBA began its history with the R&D leading to Japan's first glass electrode pH meter. HORIBA's analyzers contribute to R&D activities at the frontline of scientific technology exploring the unknown frontier of science by analyzing gases with infrared light, elements with X-rays, and molecular structures with Raman spectroscopy and Fluorescence spectroscopy. Also, HORIBA's analyzers are widely used in fields such as basic research, forensic science, archaeological surveys, foreign object examination and defect analysis for pharmaceuticals, foods, and electronic components. Additionally, the Scientific segment develops basic measurement methods and core technologies for analytical instruments, which play key roles in providing new technologies to the four other business segments of HORIBA.



- Sluggish corporate R&D investment
- Expanded sales of high-value-added products tailored to customer needs

Sales decreased due to the stagnation of corporate activities affected by the spread of COVID-19; however, profit increased because sales of optical modules for the semiconductor market increased in addition to cost reduction. During the year, we strengthened our external collaboration, including a joint project with Shimadzu Corporation and joint development with the National Institute of Advanced Industrial Science and Technology. Through these efforts, we strove to expand our business areas. Furthermore, by increasing the number of products in the Bio and Healthcare field, we worked to expand new markets.



**Topic** Strengthening development and manufacturing of state-of-the-art spectroscopy technology. Base expansion and relocation in January 2021

Spectroscopy technology development & new manufacturing base (France)

**Major product**

Raman microscope LabRAM Solei™

Against the rising importance for the fields of advanced materials and bio and life science research, demand has been increasing for Raman spectrometers used in applications such as the analysis of components in substances and the analysis of molecular structure. HORIBA will develop and deliver even higher quality products as we lead the market in Raman spectrometers.

### MLMAP2023 Segment Strategy

## Core Technology Provider

Apply the core technology cultivated as a founding business in the megatrend market. Maximize synergy while leading "HORIBA as a provider of technology" in cooperation with other segments.

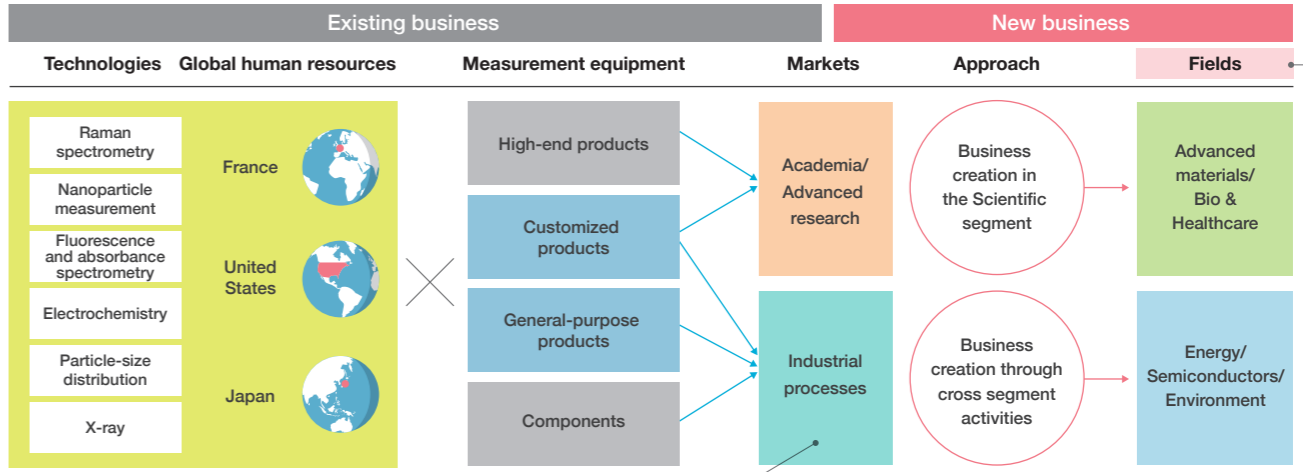
2023 plan	
Sales	35.0 billion yen
Operating income	3.5 billion yen

Medium-term market trends	Risks and opportunities
<p>With global demand for solutions to social issues, expectations are rising for cutting-edge technological R&amp;D in the fields of "Energy &amp; Environment" "Bio &amp; Healthcare" and "Materials &amp; Semiconductors." In addition, as customer needs diversify, we forecast increased demand for customized solutions. We also expect that the role for analytical and measurement equipment manufacturers will expand from supplying devices to delivering data solutions. HORIBA will meet demand quickly along with the changing market environment and provide our diverse products and solutions.</p>	<p>Given that analyzers used in the physical and chemical sciences for R&amp;D, quality control, and similar applications are our mainstay products, demands fluctuate with changes to government and private sector R&amp;D budgets, as well as capital expenditures for manufacturing, all of which have the potential to impact business in the Scientific segment. To mitigate this risk, we are strengthening coordination within the group and providing our diverse analytical and measurement technologies to industries where we expect to grow, namely pharmaceutical manufacturing, semiconductor manufacturing processes and so on.</p>

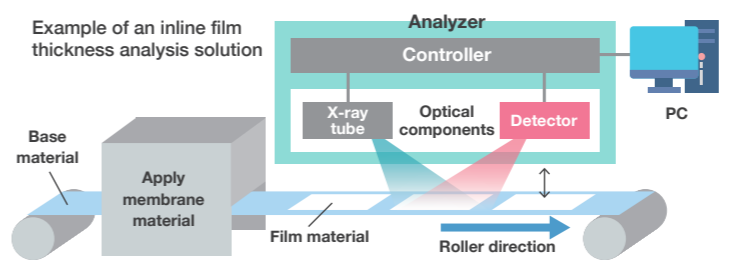
### BUSINESS TREND

#### The Scientific segment's business model

HORIBA is leveraging the core technologies we have amassed globally and providing diverse solutions ranging from industrial fields to cutting-edge high-end research.



#### Inline solutions for industry processes



In the manufacturing processes within various industries, demand is increasing for new solutions that contribute to automation, labor savings and the increasing use of composites. In order to improve production efficiency and detect defective products in manufacturing processes, we leverage our analytical and measurement core technologies, which have been cultivated by the Scientific segment and engineering capabilities from other segments, which are able to respond to various markets, to industrial manufacturing; such as customized in-line solutions to our customers' manufacturing processes.

#### Contributing to target markets

- Batteries** We offer total analytical and measurement solutions, starting from R&D of battery materials to production control, battery performance testing, and support for developing electric vehicles.
- Semi-conductors** We offer analytical solutions covering each aspect of R&D, and quality control, spanning wafers in silicon and compound semiconductors to device development.
- Life Sciences** We offer various analytical and measurement solutions, such as customized technology for evaluation of pharmaceutical processes, to enable high-quality continuous manufacturing.



Health  
Measurement

## Medical-Diagnostic segment

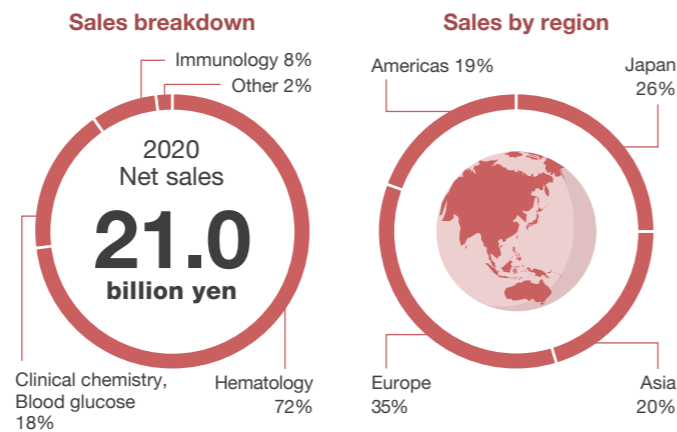


### Contributing to a healthy life through in-vitro diagnostic systems

In the global market of in-vitro diagnostic (IVD) systems, HORIBA provides instruments and reagents for blood sample testing throughout the world. The segment's business model is based on recurring revenues generated from sales of reagents. We aim to ensure stable earnings by expanding our installed base of medical diagnostic instruments. In particular, HORIBA's strength is in small and medium-sized hematology analyzers for point of care testing (POCT)\* in clinics and satellites in hospitals such as operating rooms, as well as small-to medium-sized hospitals and commercial laboratories.

\* Point of Care Testing (POCT): A general term for testing performed at locations close to patients, such as private practitioner offices, diagnostic clinics, hospital wings, and outpatient clinics.

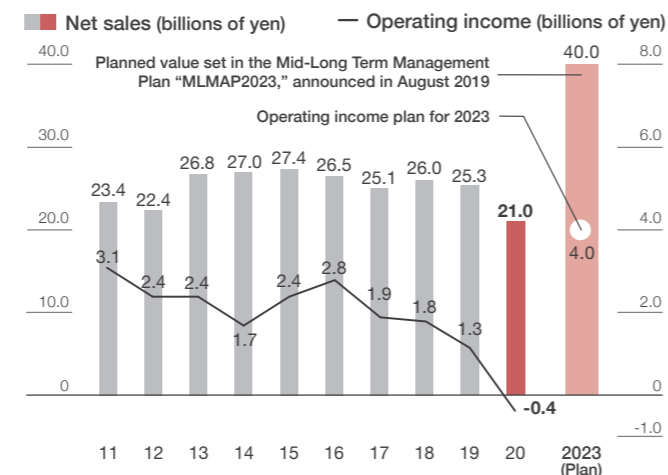
### 2020 results



- Test volume at hospitals decline accompanying the drop in the number of patients who visit hospitals
- Diagnostic systems and test reagents show a trend of gradual recovery

The number of tests performed at hospitals decreased as the spread of COVID-19 led to a decrease in the number of patients who visit hospitals. Consequently, sales fell for diagnostic systems and test reagents, and a sales decline and operating loss were recorded. During the year, we enhanced and expanded our product lineup, strove to expand sales for the micro-blood analysis system business acquired from ROHM Co., Ltd. in 2018, and worked to build up our business inside and outside Japan.

### Net sales and operating income



### Topic Launch of our automated clinical chemistry analyzer in North America

Multi-function and user-friendly, in a compact machine



Yumizen C1200 Automated Clinical Chemistry Analyzer

Clinical Chemistry Analysis is one of the most important disciplines in IVD market. It allows to measure various clinical chemistry components inside the specific specimen such as blood serum, plasma and urine. By entering the market for automated clinical chemistry analyzers, we are able to enhance and expand our lineup of clinical chemistry products and meet the broad range of needs of customers. We plan to accelerate our business efforts in small- and medium-sized hospitals and commercial laboratories, and contribute to testing efficiency.

### MLMAP2023 Segment Strategy

## To be a Preferred Partner

Expand the product portfolio from small-scale analyzers to large-scale ones, and accelerate global business expansion. Realize further business expansion in the field of IVD.

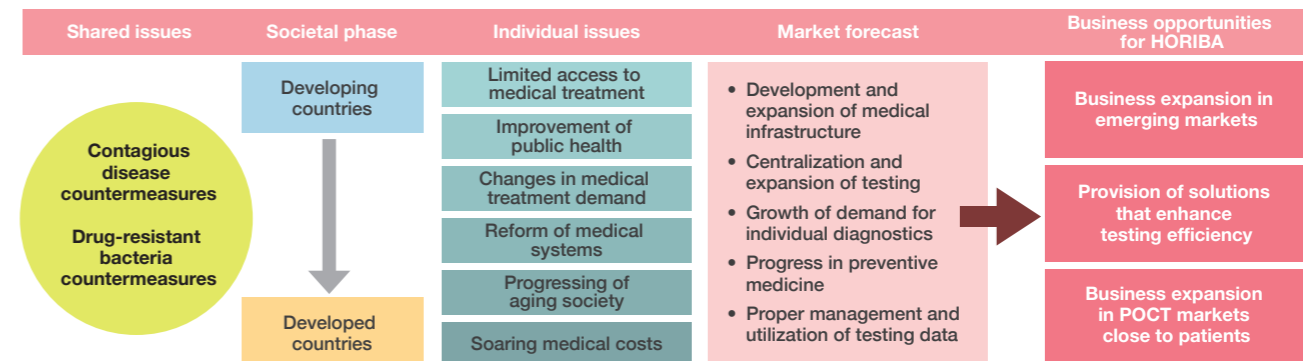
### 2023 plan

Sales
40.0 billion yen
Operating income
4.0 billion yen

Medium-term market trends	Risks and opportunities
<p>Global population rises mainly in emerging countries and healthcare costs are generally getting high. In developed countries, there is an increasing demand for high-precision, efficient medical devices, so as to realize more efficient medical services. Moreover, in Japan and other developed countries, medical cost control and preventive medicine initiatives are moving forward in response to the aging society. There is a centralization of medical treatment at specialized hospitals and at testing centers that collect large numbers of test specimens, as well as decentralization occurring through regional medical treatment. Needs are increasing in each of these directions, and a bipolar division of testing is expected to advance.</p>	<p>Since hematology analyzers are our mainstay products, increasing price competition and other market environment changes may have an impact on business in the Medical-Diagnostic segment. In addition, the spread of COVID-19 has led to a decline in the number of tests performed at hospitals accompanying the drop in the number of patients who visit hospitals, and it is possible that this impact may be prolonged. To mitigate these risks, we are strengthening information coordination within the group and promoting new products and business expansion in response to market demands and the trends of our competitors. Within this context, we differentiate ourselves from our competitors and enhance our competitiveness through efforts to launch products other than our mainstay hematology analyzers as well as continue collaboration with other companies.</p>

### BUSINESS TREND

#### Social issues and business opportunities in the in-vitro diagnostic systems market



Medical infrastructure will expand and change in line with the development of society. In emerging countries, first, new medical infrastructure will be introduced, and it will gradually expand. In developed countries, the testing market is undergoing a bipolar division, with the centralization of testing for greater per-unit efficiency advancing against a backdrop of medical cost reductions occurring at the same time as decentralization and localization of testing for rapid diagnostics and routine handling of chronic illnesses. Patients' needs are diversifying as well, and the provision of medical care tailored to individual patients is expected to progress. HORIBA has strengths in private practitioner-oriented testing equipment used close to patients, while also providing solutions for improving efficiency with large-sized hematology analyzers. We will continue to offer products and services that help resolve issues in society.

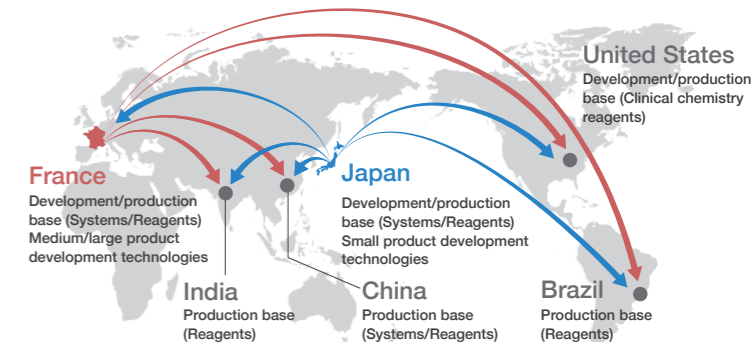
#### Accelerating expansion of the clinical chemistry business



MedTest DX, Inc. and Pointe Scientific, Inc. sites

In January 2021, we acquired MedTest Holdings, Inc. (U.S.), which develops, manufactures, and sells reagents for clinical testing. In the Mid-Long Term Management Plan "MLMAP2023," we aim to increase net sales in the clinical chemistry business to 6.0 billion yen. By establishing a development and manufacturing structure for clinical diagnostic reagents in the U.S., the largest market in the clinical chemistry business, this acquisition will give us a three-base structure (Japan, France, and the U.S.) to strengthen our development capability on a global level.

#### A global network for product development and reagent production



HORIBA has medical business bases in countries around the world and supplies products globally. We have built a reagent production structure that allows us to stably supply test reagents, which are consumables, in regions of large-volume use. We will accelerate new product development to meet market needs and, leveraging our global network, will aim to expand our business in the continually growing IVD market.

# Diversity and Optimization

Special Feature

Keywords for innovation:

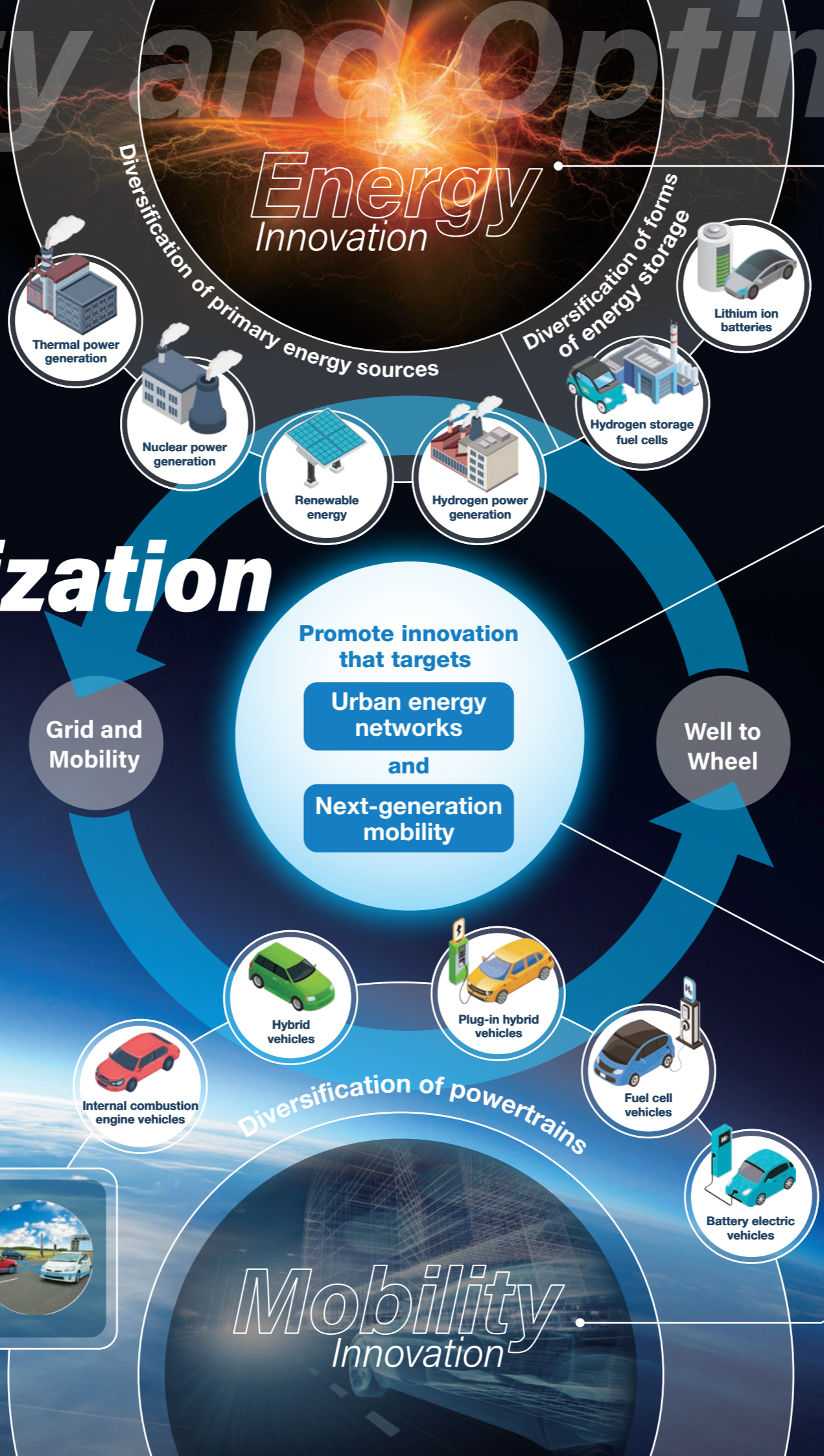
## Diversity and Total Optimization

Today, decarbonization is widely touted and the efficient use of energy is being promoted globally. This movement can be seen as innovation that advances diversification of primary energy sources, which has relied heavily on fossil fuels, in addition to changes in energy consumption methods. In terms of energy consumption, major innovations are also occurring in the automotive industry.

It is important to consider methods that enable optimum energy supply and assemble various power sources as powertrains for mobility. In the midst of the progress of both energy and mobility diversity, the necessity to know the position of total optimization is increasing more than ever.

### Connected/autonomous driving

Another major category of mobility innovation is connected and autonomous driving. An era is coming in which new value is created in mobility through the analysis and utilization of data generated by the connection of numerous vehicles to networks.



In terms of efficient use of energy on a global scale, improving efficiency in every process of energy generation, conversion, storage, and consumption is important.



**HORIBA Institute for Mobility and Connectivity<sup>2</sup>** (HIMaC<sup>2</sup>)

In August 2018, we concluded a support agreement with the University of California, Irvine to establish the HORIBA Institute for Mobility and Connectivity, and it has begun operations in part. Working with this institute at the center, we plan to tackle social issues from the standpoint of next-generation energy networks and of mobility within that area, and will create businesses in the categories of energy efficiency, environment, and safety.

### Three research topics

- (1) Development of Automotives, fuel supply chains, and mobility systems that do not emit pollutants
- (2) Construction of a system that integrates zero-emission vehicles with next-generation power grids incorporating a high ratio of renewable energy
- (3) Creation of next-generation transportation systems that can sense surrounding conditions and communicate with transportation and energy infrastructure

## HORIBA supports building social systems with total optimization



Taking into account stable energy supply and other infrastructure aspects, it is necessary to consider the proper use of powertrains according to tasks and locations.

# Diversity and Optimization

Generate, store, and utilize energy intelligently

## HORIBA supports building social systems with total optimization

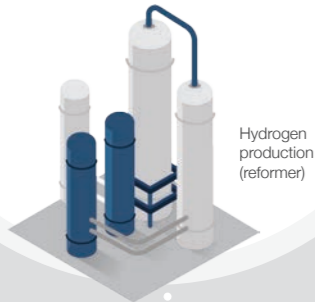
### Generation

In addition to the monitoring of environmental impacts associated with power generation, we also provide measuring equipment used in processes for producing hydrogen, for which consumption is expected to grow

### Hydrogen production

Main roles of HORIBA products

- Monitoring of purity of refined hydrogen in real time
- High-precision measurement of impurities during hydrogen refining



### Utilization

Efficiency of energy consumption is advancing. We will provide data necessary for efficiency improvements through analytical and measurement technologies.

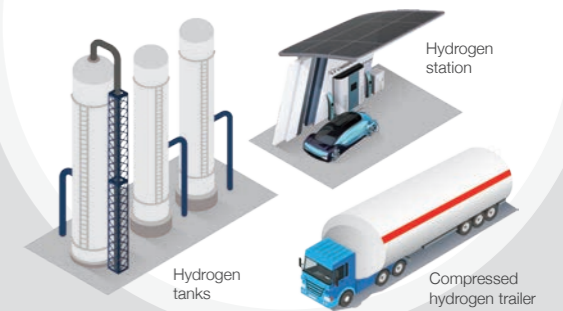
### Storage

R&D of energy storage technologies is accelerating worldwide. We will contribute through measurement technologies focusing on battery material development and evaluation.

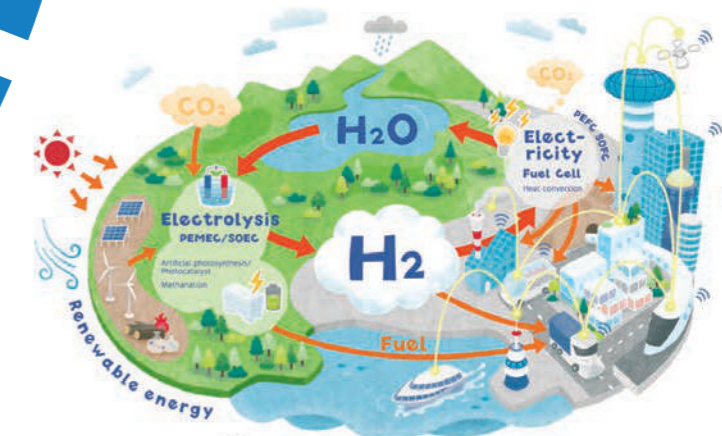
### Hydrogen storage

Main roles of HORIBA products

- Analysis of hydrogen distribution and hydrogen volume that cause embrittlement in metals used for storage

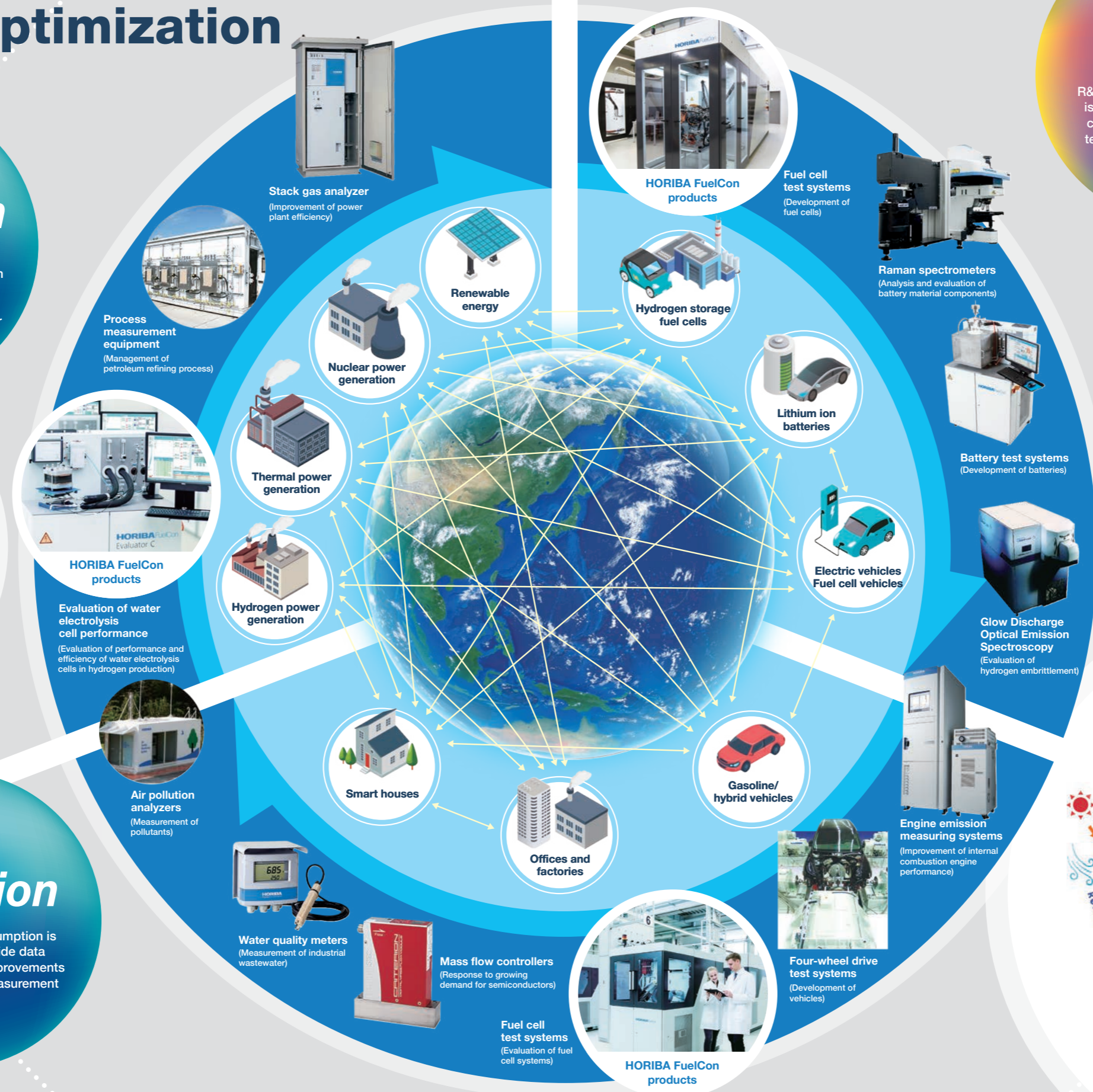


### Building a system for energy that is born from water and returns to water



### Energy system from water to water

HORIBA has various measurement technologies for the wide spread of hydrogen energy, which is spotlighted as clean energy, and supports the realization of a sustainable society.





# Automotive segment

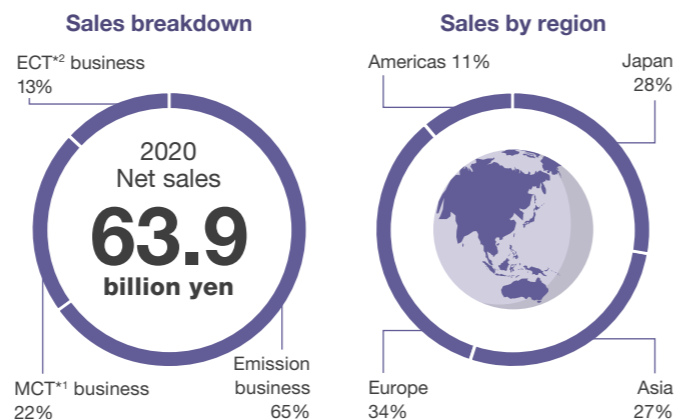


## Providing powerful support for the optimization of vehicle testing and acceleration in automotive development

HORIBA's automotive Emission Measurement Systems (EMS) are used by national certification bodies throughout the world and hold a global market share of 80%\*. HORIBA provides the world's leading automotive manufacturers with complete test and measurement solutions, including test systems for engines, chassis, powertrains, brakes, and catalysis. We are also able to respond to wide-ranging demand in the Engineering Consultancy & Testing (ECT) business, offering a wide variety of products and services ranging from the development of batteries for electrified vehicles to autonomous driving technology, in addition to providing vehicle performance testing and R&D expertise.

\* HORIBA's estimates

### 2020 results

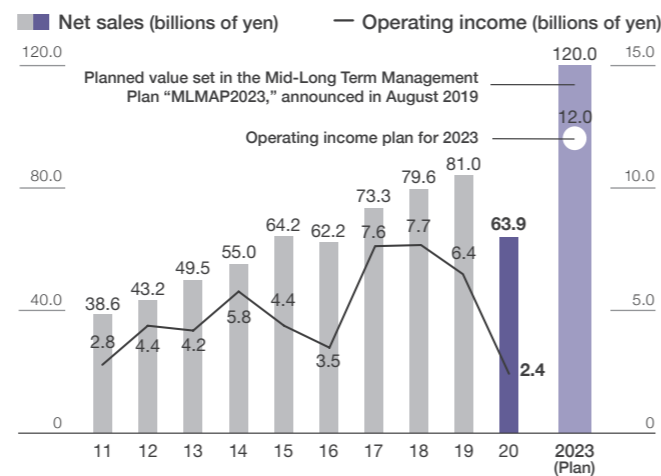


\*1 Mechatronics (MCT): measuring instruments for vehicle  
\*2 Engineering Consultancy & Testing

- Depressed capital expenditures by automotive-related manufacturers
- Pursued efforts to address new regulations and advanced vehicle technology

Sales and profit decreased due to the stagnation of corporate activities affected by the spread of COVID-19. During the year, we launched new applications that respond to RDE (Real Driving Emissions) and contribute to automotive development efficiency. In addition, we proceeded with development including evaluation and testing systems for electrified vehicles and connected autonomous vehicles (CAV), while working to expand new products and services required for next-generation mobility development.

### Net sales and operating income



### Strengthening business to respond to upcoming emission regulations



RDE+, a new application in response to RDE regulations

With HORIBA's proprietary measurement algorithm, on-road tests can be accurately replicated inside chassis test cells and similar facilities. This allows to shorten the development period and eventually to reduce the costs. We will contribute to our customers for the front-load development processes.

### MLMAP2023 Segment Strategy

## Application Driven Business

Provide the best applications in four business\* areas. Establish a position as a vital partner in the automotive development field by solving the challenges that customers face.

\* Emissions, energy efficiency, CAV, data management for overall vehicle-related development

### 2023 plan

Sales
<b>120.0 billion yen</b>
Operating income
<b>12.0 billion yen</b>

Medium-term market trends	Risks and opportunities
Against a background of globally tightening environmental regulations, the automotive industry is moving ahead with development of next-generation mobility that will lead to cleaner cars and social transformation. The measuring instrument market is expected to continue growing to meet technological requirements for emission reduction, electrification, and connected and autonomous driving. Moreover, in response to the increasing burden placed on automotive-related manufacturers by more complex development processes, demand is expected to remain strong for high-precision analytical and measurement equipment and for measurement solutions that offer development efficiency and verification process improvement.	There are possibilities of impacts on the Automotive segment from future changes to emission and fuel economy standards, in addition to fluctuations in R&D by automotive manufacturers. To mitigate these risks, we will continually collect the most up-to-date information released by government agencies, while also working to adapt to regulations and develop and deliver the emission measurement systems required for the development of emission reduction technologies. In addition, against the backdrop of rising global demand for electrified vehicles, we will expand production capacity for battery and fuel cell testing systems, which are expected to see market growth. We will also expand R&D engineering capabilities to offer comprehensive support ranging from engineering of CAV to physical vehicle testing, so as to strengthen our business foundation to respond to wide-ranging demand.

### BUSINESS TREND

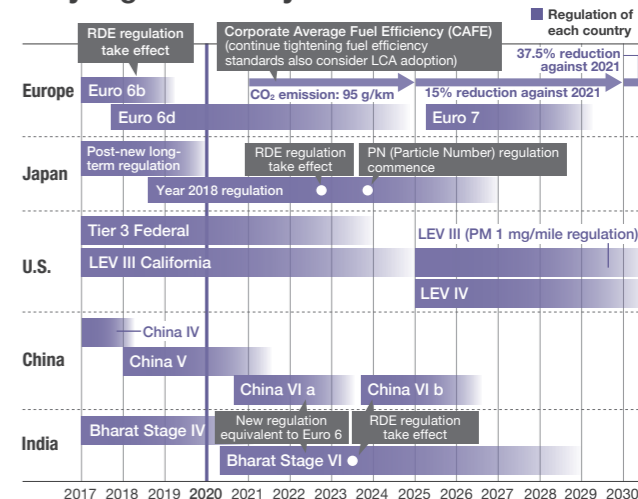
#### Opening a comprehensive testing facility to support CAV development



In 2021, we opened and will expand ASSURED CAV, a comprehensive facility to provide full-scale support ranging from engineering of CAV to physical vehicle testing. The facility enables to carry out evaluation and verification of the vehicle controllability and safety in order to realize autonomous driving technology. Beyond that, this makes it possible to perform not only physical vehicle testing but also simulation tests in virtual space.

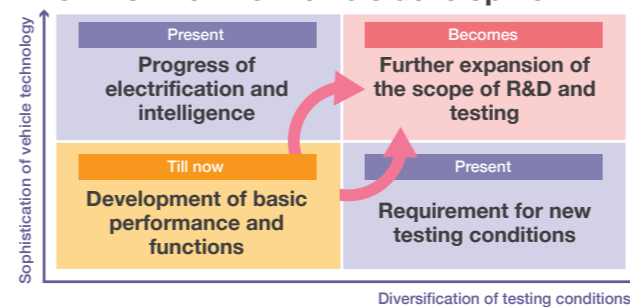


#### Progression of emission standards by region/country



Sources: Graph by HORIBA based on materials of the Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism; Japan Automotive Manufacturers Association Inc.; and others

#### HORIBA's strategies under changes of environment for vehicle development



Emission and fuel economy standards are tightened, electrification is accelerated, and CAV technologies are progressed. Under these circumstances, automotive R&D workplaces are facing the need to solve multiple challenges simultaneously. Furthermore, improvement of efficiency in R&D processes is becoming an urgent issue, alongside the workstyle changes led by the spread of COVID-19.



Using our analytical and measurement technologies, HORIBA is integrating on-road, laboratory and simulation test fields and is providing solutions that expand applications. As a next-generation mobility development partner, we are supporting customers' front-load development and boost the efficiency of development processes.



# Global Environment

# Measurement

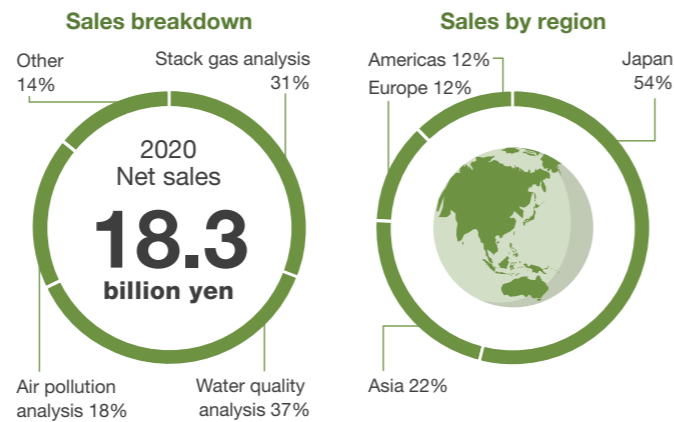
## Process & Environmental segment



### HORIBA helps monitor global environmental preservation, and production and quality management processes

We supply a broad range of analytical and measurement instruments for analyzing air pollution, water quality, and soil quality. We play an important role in gas measurement and monitoring of industrial wastewater in the energy and heavy industries such as electric power, steel, and chemical industries; purified water management for medical and semiconductor use; and water quality monitoring and control for food, as well as cosmetics fields. In essence, HORIBA's analytical and measurement technology contributes to leading technological innovation, which supports public safety, security, and health in addition to global environmental preservation. We contribute to achieving a sustainable society.

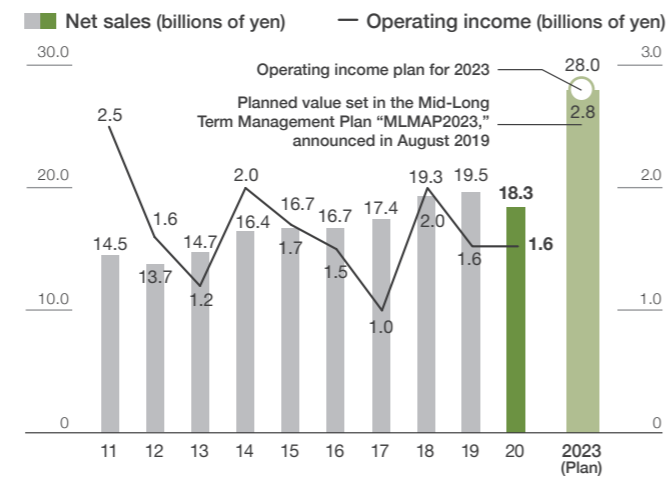
### 2020 results



- Robust demand from environmental regulation, mainly in the public sector
- Capital expenditures were postponed in the private sector

Sales and profit decreased due to the stagnation of corporate activities affected by the spread of COVID-19, despite robust demand for public investment against the backdrop of tightening environmental regulations globally. During the year, we launched new products in the fields of gas analysis and water quality analysis. In addition, we expanded our data management business to contribute to customers' environmental measures by developing software which enables to monitor environmental data collected in real-time.

### Net sales and operating income



### Contributing to efficiency gains at sewage treatment plants



At sewage treatment plants, microorganisms are used to purify water, while equipment, called blowers, is used to supply the large volumes of air needed to break down organic matter. A considerable amount of electric power is required to run these operations; however, using an ammonia nitrogen meter with online connectivity allows for precise control of air supply, which contributes to reducing power consumption and CO<sub>2</sub> generation.

Example of HORIBA's solution in use at a sewage treatment plant  
HC-200NH

### MLMAP2023 Segment Strategy

## HORIBA as a World Player who Analyzes the Entire Earth

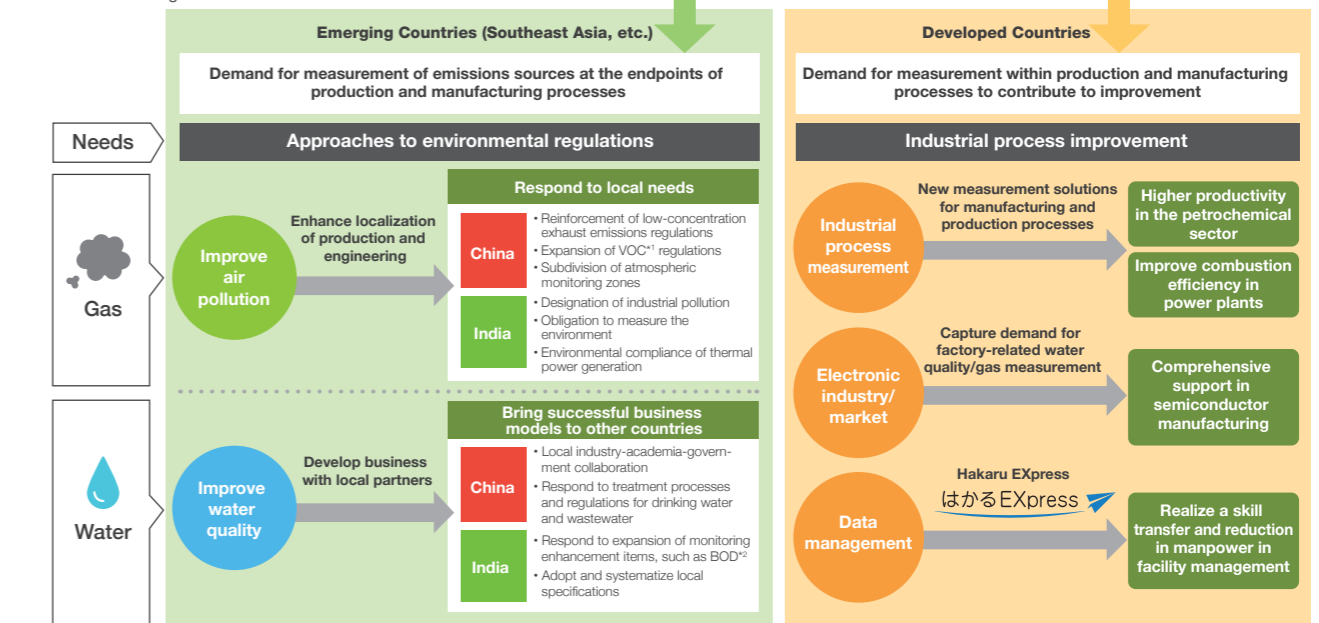
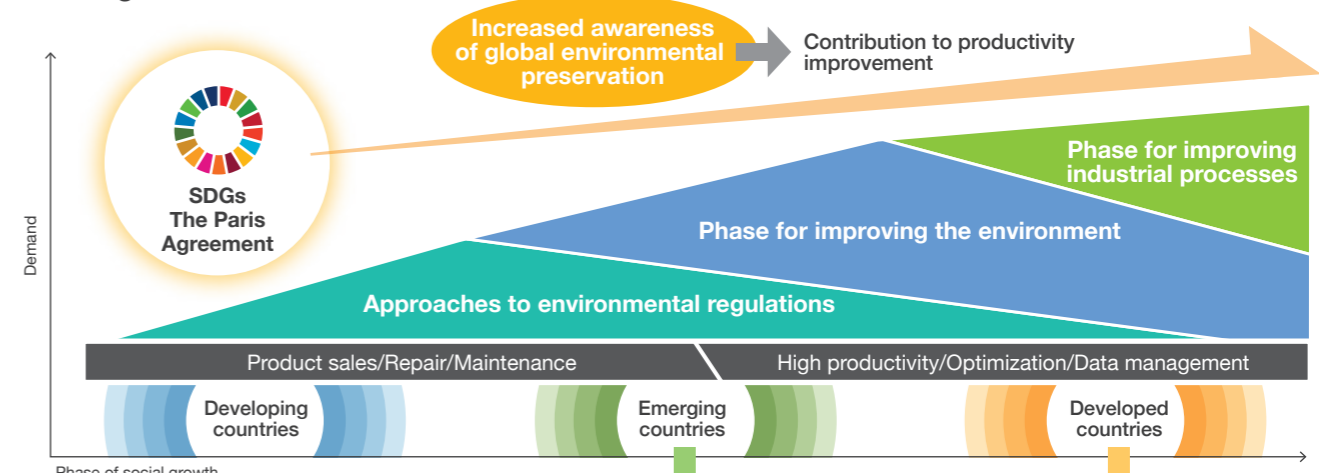
Provide various solutions in the global market ranging from approaches to environmental regulations to improving production efficiency. Aim to grow into an organization that is required for measurements related to the global environment.

2023 plan	
Sales	28.0 billion yen
Operating income	2.8 billion yen

Medium-term market trends	Risks and opportunities
<p>The Paris Agreement on controlling climate change and the Sustainable Development Goals (SDGs) were adopted in 2015. Awareness of environmental conservation is growing on a global scale. Emerging countries are facing requirements to comply with regulations and environmental improvement, and strong demand is anticipated. In developed countries that have mature environmental regulations, there is potential for product replacement demand as well as for growth in the field of manufacturing and production process improvements aimed at improvement of quality and economic efficiency. HORIBA will meet the diverse demand brought about by changes in the growth phases of society.</p>	<p>Since demand for environmental products such as air and water pollution analyzers will increase or decrease due to trends in environmental laws and regulations issued by government agencies and R&amp;D and investment trends of private companies, there is the possibility of an impact on the Process &amp; Environmental segment depending on future demand fluctuations. To mitigate these risks, we are strengthening information coordination within the group and understand global trends in environmental regulations, while expanding our product lineup, such as products used in areas other than the field of environmental regulations.</p>

### BUSINESS TREND

#### Changes in measurement needs



<sup>1</sup> VOC: Volatile Organic Compounds <sup>2</sup> BOD: Biochemical Oxygen Demand

# Promoting business collaboration

A sense of urgency is important in expanding business into the bio-life sciences and other new fields. HORIBA is strengthening industry-academia collaboration and industry-industry collaboration by utilizing the networks built with high-quality research and educational institutions and companies which boast original technological capabilities.



## Active personal contribution to society

Doctor George Gillespie, Senior Corporate Officer of HORIBA and Executive Chairman of HORIBA MIRA Limited (U.K.) has served as President of the Society of Motor Manufacturers and Traders (SMMT) in the U.K. since 2019. He provides leadership across various areas related to mobility and maintains the international competitiveness of the U.K. automotive sector.



**George Gillespie (Doctor of Engineering)**  
Previously held senior roles with Ricardo plc (U.K.) and Schenck AG (Germany), he worked as Vice President in Strategic Product Development at HORIBA Europe GmbH (Germany) and became CEO of MIRA Ltd. (now HORIBA MIRA Limited) in the U.K. in January 2009. He was appointed CEO of HORIBA MIRA Limited in July 2015 and Executive Chairman in 2019. In the same year, he was appointed as GLOBAL ATS BOARD LEADER (currently GLOBAL AUTOMOTIVE BOARD LEADER), which leads the automotive business of HORIBA.

→ Activities of management members outside the company are noted in the list of management members beginning on p. 51.

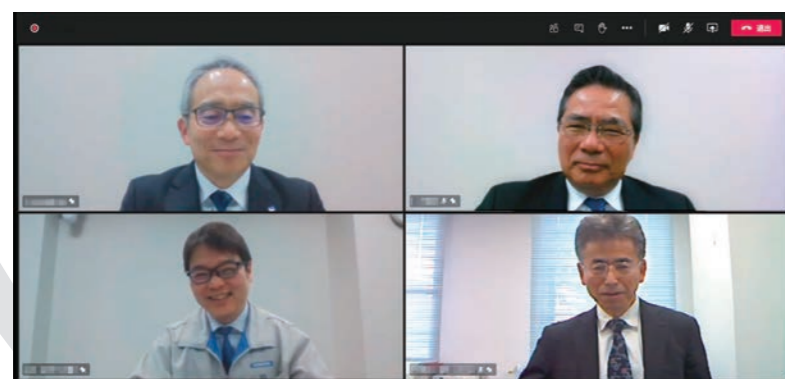


## New Initiatives

### Establishment of HORIBA Institute for Particle Analysis in AIST TSUKUBA (HIPAA)

- Develop airborne particle measurement technology to address the tightening of environmental regulations
- Develop measurement and evaluation systems for advanced nanomaterials that contribute to the strengthening of industrial competitiveness
- Create synergies and develop young human resources for innovation through partnering research laboratories

HORIBA is advancing R&D through open innovation that crosses the advanced analytical and measurement technologies and material evaluation technologies of the National Institute of Advanced Industrial Science and Technology (AIST) and of HORIBA, Ltd. We will undertake the practical application of systems that enable world-class particle measurement, contributing to the resolution of environmental issues to protect the health and safety of people and to the development of the nanomaterials that are expected to underpin innovation.



#### Online exchange of thoughts on open innovation, unstopped by the pandemic

(photo, top right) Kazuhiko Ishimura (President, AIST)  
(bottom right) Takashi Usuda (Vice-President, AIST, Director General, National Metrology Institute of Japan)  
(top left) Masayuki Adachi  
(bottom left) Kentaro Nishikata (General Manager, Research & Development Division, HORIBA, Ltd.)

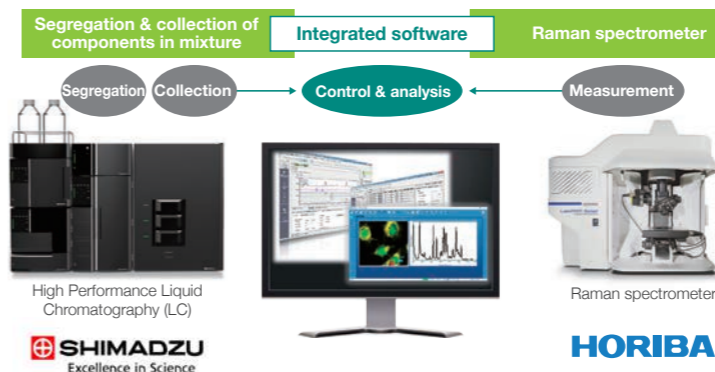
\*Job titles are shown as of 1st Feb., 2021.

## New Initiatives

### Start of collaboration with Shimadzu Corporation



(photo, left) Teruhisa Ueda (President & CEO, Shimadzu Corporation) (right) Masayuki Adachi



HORIBA has concluded a basic contract for the development and sales of LC Raman, a measurement instrument system that combines the High Performance Liquid Chromatography (HPLC) of Shimadzu Corporation and the Raman spectrometer of HORIBA.

#### Expansion of categories that utilize life science technologies



#### Need for new technologies in the categories of materials and energy

## Promotion of collaboration in the Bio/Life Science Project

We established the Bio/Life Science Project in 2020 to strengthen our approach to the bio and life science market. In the same year, we took part in a project which developed a simple and rapid antibody test chip system for COVID-19, and was headed by AIST as the representative institution. Starting with this project, HORIBA will offer its unique technologies to sites engaging in drug development analysis and R&D in order to establish businesses related to bio and life science.



## Supporting the growth of HORIBA

# Broadening of our service business

Providing high-quality services to customers can be seen as the front line of sales, as it helps create a cycle in which customers use HORIBA products continuously.

HORIBA's business is not only to sell products, but also to provide high-value-added supports to customers. This business model will solve various issues of customers, such as field services, contract analysis, joint development, calibration business and testing business using advanced equipment.



### Completion of a new office building for HORIBA Techno Service Co., Ltd.

- Core site of the service business -

We constructed a new office building for HORIBA Techno Service Co., Ltd. under the concept of "Always Here With You," an expression of our aim to stay close to our customers and other stakeholders. We consolidated several functions in the building, including training facilities, calibration facilities, and Analytical Solution Plaza, which plays a part in supporting our service business.

We also expanded functions for quickly responding to customer inquiries, particularly concerning technologies.

From this new office building, we plan to strengthen our field service system across the globe.



We opened the Analytical Solution Plaza where people can freely gather and exchange information on analysis, crossing the boundaries between technical areas. Leveraging the analysis and measurement know-how that we have accumulated since our establishment, we provide a wide range of supports for customers' analysis and measurement, with assured quality based on our abundant track record.

*Always with you*

**MLMAP2023**  
Mid - Long Term Management Plan

Priority measures

## Solution Provider Beyond Life Cycle Management

# Always With You

- Aiming for establishment a business model focused on solution proposals and data management

Mission 01

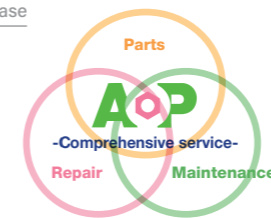
### Maintenance service using operational data

Accurate facility management



We offer solutions that enhance the efficiency of customers' testing facilities overall, including monitoring of product operational data and notification of maintenance scheduling.

Business Case



We provide the "All in One Plan" that comprehensively proposes product maintenance and inspection services for customers in Japan. By installing monitoring kits in equipment, we can monitor the operating status of the equipment all time and to detect anomalies before components fail in order to reduce downtime. We collect information on the usage status of our products into monthly reports, and propose support that is tailored to customers' usage status. This contributes to the improvement of the measurement process, which enables the long-term use of products in their best condition.

Mission 02

### Consulting that utilizes measurement data

Newly offer added-value



HORIBA aims to analyze measurement data itself and provide consulting that proposes solutions to customers.

Business Case

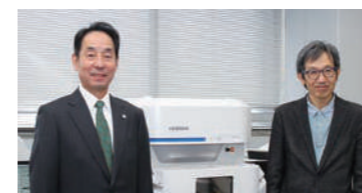
はかるEXpress

Our service "HAKARU Express" collects and manages data and delivers water quality measurement reports on behalf of our customers. Under this service, we install equipment owned by HORIBA in customers' facilities, and subsequently provide total support for everyday management, fixed asset management, annual inspections, preparation of regular reports to administrative agencies, and more, for fixed monthly fees. This business aims to resolve labor shortages and other problems facing modern society through the use of data management. Through it, we will solve on-site issues in environmental management.

## Expect elucidation of the mystery of the origin of asteroids, the birth of the solar system, and the birth of life

### Hayabusa2: Participation in sample analysis project

HORIBA Techno Service Co., Ltd. took part in the initial project to analyze sand, stones, and other samples collected from the asteroid Ryugu by the asteroid explorer Hayabusa2 of the Japan Aerospace Exploration Agency (JAXA). Using our X-ray fluorescence analyzers, we will perform non-destructive and non-contact analysis of the chemical composition of the samples to investigate the origin of Ryugu. By doing so, we will help to turn a new page for humanity.



(photo, from right)  
Hisayoshi Yurimoto (Leader Chemical Analysis Team; Professor, Hokkaido University)  
Hiroo Chihara (President and CEO, HORIBA Techno Service Co., Ltd.)

### The role of HORIBA

HORIBA will use X-ray analytical microscopes to perform elemental measurement and optical observation, and will analyze the samples' component elements and their composition ratios. Along with equipment that enables non-destructive, non-contact handling of minute amounts of samples, we will provide high-precision trace analysis by HORIBA analytical engineers with specialized knowledge.



(Illustration: Akihiro Ikeshita)

### Asteroid Ryugu

- An unknown rock, located 340 million kilometers from the earth.
- Ryugu retains information on the early formation stages of the solar system, and is considered to be an asteroid rich in organic matter and water.
- Hayabusa2 took 5.4 grams of sample from the asteroid.



# HORIBA's Unique

COO MESSAGE

## Our “Headquarters” exist around the world. This is HORIBA's advantage.

2020 was a year when HORIBA was under the situation where physical movement was significantly restricted and was asked how we should be as a Global company in terms of management and communication. HORIBA will continue taking on various challenges for further growth.



**Juichi Saito**

Executive Vice Chairman & Group COO

### The unique global management at HORIBA

The spread of COVID-19 gave HORIBA a chance to think again about how we should be as a global company. Symbols of HORIBA's global management, “Global Strategy Meeting and Global Budget Meeting” at which managements from all around the world gather was forced to be held online in 2020.

As a result, I was pleased that the number of participants of meetings increased compared to previous ones. On the other hand, the volume of information that we gained was limited, because the volume of conversation exchanged other than meeting room decreased. We need to reconsider advantages and disadvantages of online communication. However, as a member of management, I always try to keep my door open in any ways in order to give a helping hand, and at the same time, I want to obtain fresh information to know what is going on the field.

HORIBA's business and technical core bases exist around the world, while most Japanese companies establish both of their Headquarters and these bases inside Japan. It can be said that HORIBA is an aggregation of companies with

a diversity of technologies and strengths under the corporate motto “Joy and Fun.” Consequently, we could recognize that HORIBA has each “Headquarters” in many places like an image of spreading around the world, and this is HORIBA itself with all in one piece. This is HORIBA's unique organizational structure: there are many organizations that can take leaderships and each of them tries to work hard together. Under such circumstances, I think that we need to re-define the role of each group company.

We are expecting that the global business will accelerate and, therefore, we need to increase the number of employees who can communicate not only in English as a common language in the world, but also in local languages. We need to think how we should fit the operations in each region to the site, while headquarters in Japan gains accurate information.

### Creating a stage for HORIBARIANS to feel “Joy and Fun”

With our Mid-Long Term Management Plan “MLMAP2023,” we are trying to create new businesses which go beyond the existing business segments. This is the idea that new business opportunities will emerge by changing the view from a two-dimensional perspective of the business segments to a three-dimensional one called “cross-segment.” In order to achieve this strategy, HORIBARIANS themselves need to have interests in and experience various things not only what they are good at. There are many companies within the HORIBA group, each of them has its own characteristics, and thus it easily enables HORIBARIANS to gain this kind of experience compared to other companies. In order to provide this benefit to everyone, I would like to promote optimal human resources allocation by looking at the entire group of companies from a bird's-eye view and to offer them stages where they can perform at their best.

HORIBA's most important asset is human resources and they are the origin of our strengths. As a member of management, I have emphasized “communication” amongst HORIBARIANS. At the same time, talking to them individually will lead to passing on HORIBA's corporate culture to the next generation.

The way to develop human resources is not one. Management needs to think whether each employee will be responsible for global management or will be a specialist in specific technology and skill. I will continue to take on all kinds of challenges to create organization where HORIBARIANS can truly feel “Joy and Fun” through their work by offering the plan for their career, which fits their life individually.

April 2021

# Global Management

HORIBA's Value Creation Cycle

# Value creation through technology and diversity of human resources

HORIBA supplies products with analytical and measurement technologies, which provide solutions to social issues. Technology and human resources support business. HORIBA will be a partner of customers to contribute to building a better society and generating greater social value.

Creating social value

Creating economic value



Omoshiro-okashiku  
Joy and Fun



## Creating economic value

- High value-added products that gain a top-level market share
- Global business with more than 1,000 products of various kinds
- Profit generation (Maintained an operating income level above 10%)
- ▶ **Business growth supported by continuous investment**



## MLMAP2023 Mid - Long Term Management Plan

- PRIORITY MEASURE 1** **Market Oriented Business**  
To develop analysis and measurement solutions, utilizing HORIBA's core technologies, in the leading three business fields of megatrends  
Three fields • Energy & Environment • Bio & Healthcare • Materials & Semiconductor
- PRIORITY MEASURE 2** **Solution Provider Beyond Life Cycle Management**  
To support customers' businesses from all aspects, from installation to replacement
- PRIORITY MEASURE 3** **HORIBA Core Values "The Next Stage of Super Dream Team"**  
To enhance the organizational structure that fosters resilient human resources, which are the driving force of all business operations

## Creating social value Contributing to the SDGs\*

### Creating value by expanding business that addresses various social issues

SDGs related to the three priority measures

3 GOOD HEALTH AND WELL-BEING	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	14 LIFE BELOW WATER	15 LIFE ON LAND
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	
5 GENDER EQUALITY	8 DECENT WORK AND ECONOMIC GROWTH	10 REDUCED INEQUALITIES

\*"SDGs" refers to the Sustainable Development Goals unanimously adopted by the United Nations General Assembly in 2015.

## HORIBA's measurement technology

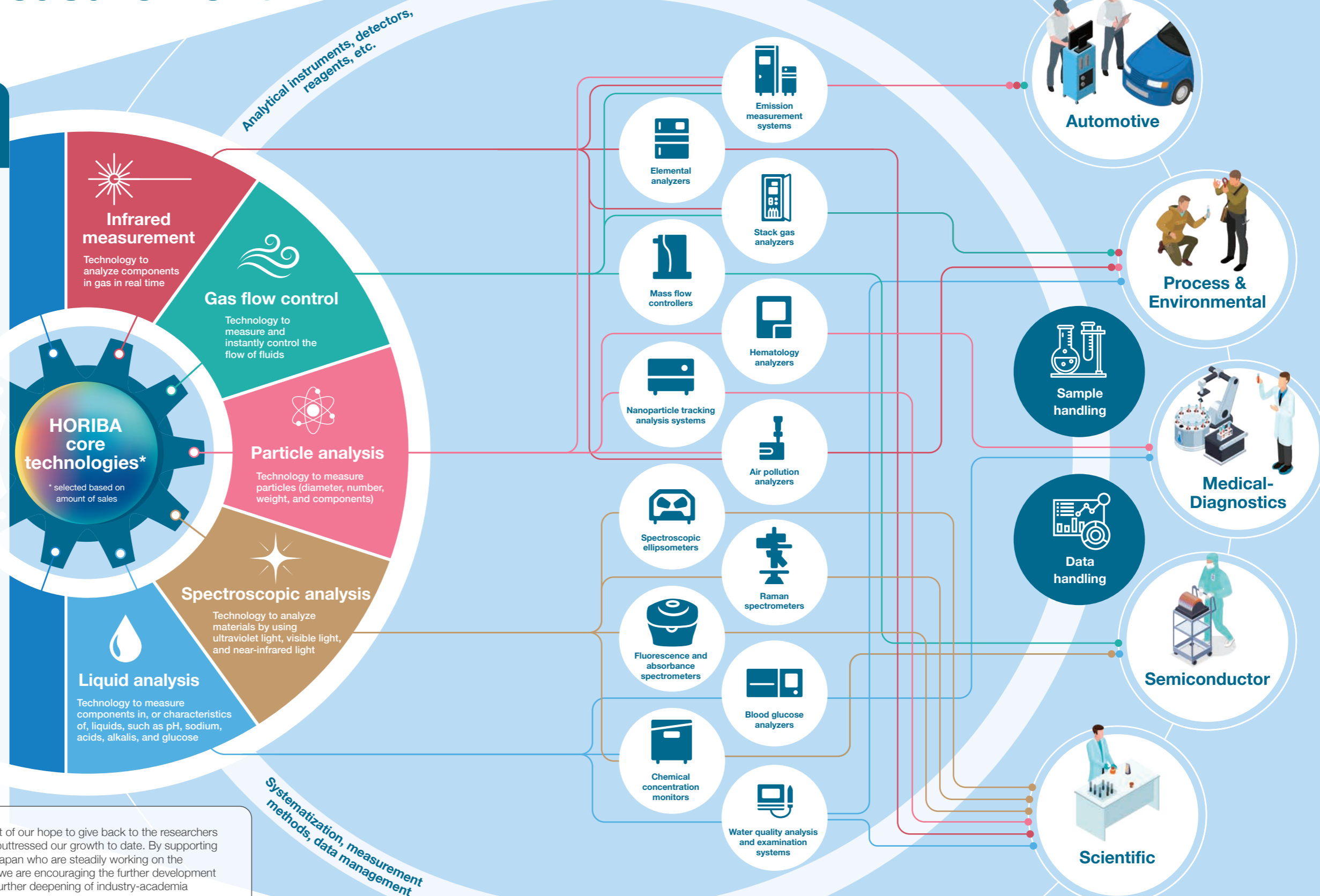
### A wide range of technologies and their development

HORIBA's measurement technologies began with electrochemistry-based pH meters. Since then, we expanded the scope of analysis of our products including liquids, gases, and solids while we accumulated various analytical technologies that use infrared rays, X-rays, and the like. During this time, the analytical and measurement needs of the market changed and expanded, from measurements at production sites to areas such as global environmental conservation, efficient usage of energy, health care, and the pursuit of safety and security. In response to these changes, HORIBA has developed and provided the analytical and measurement instruments required by the times, backed by the core technologies we have established.

Since the establishment of HORIBA, and up to today, collaboration with universities and research institutes has supported the development of our technology.

HORIBA continues to strengthen and pass down core technologies within the company and promote collaboration with external parties, in order to realize open innovation and proactively create new technologies and businesses.

→ Our approach to business collaboration is also introduced on page 29



We founded the Masao Horiba Awards in 2003 as part of our hope to give back to the researchers in the analytical and measurement industry that have buttressed our growth to date. By supporting young researchers and engineers inside and outside Japan who are steadily working on the creation of analytical and measurement technologies, we are encouraging the further development of this research field, which in turn contributes to the further deepening of industry-academia collaboration and the acceleration of innovation.

Recent themes for the Masao Horiba Awards	Year	Theme
	2021	Optical/Spectroscopic Measurement Technologies for Life Science
	2019	Advanced Analytical and Measurement Technologies for an Efficient Control System to Maximize the Performance of Electric Power and Battery Usage
	2018	Advanced Analytical and Measurement Technology in the Semiconductor Manufacturing Process

\* Due to the spread of COVID-19, the Masao Horiba award in 2020 was postponed to 2021

HORIBA's technology has grown while always facing the thought (*omoi*) of "how can we develop something that benefits people and the Earth?" Starting with the first electrochemical-based glass electrode pH meter made in Japan, HORIBA developed mass flow controllers and emission measurement systems, both of which have large market shares. In other words, we have developed products and applications required by society, as if a tree grows branches and leaves with the core technology of analysis and measurement as roots and trunk. Going forward, we will continue to strengthen the synergies of the resources we hold in our five businesses. Also we will transform into a company which accelerates innovation with measurement technologies, while utilizing acquisitions centered on technology and human resources, and industry-academia-government / industry-industry collaboration.

## Initiatives for the human resources that drive growth

The strength of people is the driving force to achieve business growth. At HORIBA, we use the phrase "talents" to convey that our employees are our most important assets. As represented by our BlackJack Project and Stained Glass Project, we have continuously striven to maximize the individuality and skills of our employees. Going forward, through unique HORIBA human resource strategies, we are committed to putting our corporate motto of "Joy and Fun" into concrete practice, while also building structures that allow each and every employee to shine.

Measure  
**01**



Fostering "omoi" and have it flower globally

### Measures to foster human resources

Aiming to produce more global leaders, HORIBA is promoting the Global HORIBARIAN Exchange (GHE) Program as the foundation of our human resource development measures. HORIBARIANs from around the world, who have "omoi," seek opportunities to take on challenges and expand their activities by experiencing diverse cultures and environments.



Keegan McWilliams-Ward of HORIBA Instruments Incorporated (U.S.) has been in Japan on the GHE program since 2020. By leveraging his opportunity to take on challenges in the R&D sector in Japan where interactions occur free from segment limitations, he continues to grow into a person who drives the development of next-generation products.

Measure  
**02**



Supporting robust organizational strength

### The BlackJack Project

HORIBA launched the BlackJack Project in 1997 with the purpose of changing employee awareness and behavior. To date, more than 11,000 project themes have been registered. Employees themselves decide on themes from many questions and issues, such as improving work efficiency, developing human resources, and strengthening organizational capabilities, set the ideal form, and work on organizational reform. We believe that this method of "bringing out behavioral changes and establishing them" will be a part of HORIBA's corporate culture.

Since 2007, we hold Blackjack World Cup annually to select the best themes of projects from each country and provide a venue to report the results and the motivations behind them to the management team. In 2020, the event was held remotely for the first time, and a U.S. project won first place. In the midst of the spread of COVID-19, project members changed their awareness and behavior, and contributed to a significant increase in production and quality improvements for detectors for medical equipment manufacturers. Those who participated in the activity are proud of what they accomplished in their activities, which assisted hospitals and helped save many lives, and have fostered the HORIBA spirit.



Measure  
**03**



Helping diverse personalities and abilities shine

### The Stained Glass Project

Along with our promotion of changes in work styles, such as the Good Place Work System (remote work system) introduced to all Group companies in Japan in 2019, on-site working group members make proposals to top management on diversity issues and continue activities to realize these proposals. We will help our diverse human resources demonstrate their individual strengths and will pursue job satisfaction and comfortable working environments, represented by our corporate motto, "Joy and Fun."



Web Link



The dedicated website for the Stained Glass Project provides details of HORIBA's unique approaches to supporting our human resources.

## Provide a stage for HORIBARIANs to be active through three coordinated measures

### Basic human resources policies

#### Open and Fair

We ensure that important information and rules are shared openly so that there is free communication within the company. We provide fair opportunities for uniquely individual and diverse human resources to challenge themselves.

#### Point-added policy

HORIBA's point-added policy doesn't confer any points, even if there is no failure, unless an employee takes on challenges. Points are conferred for taking on challenges. If successful, further points are conferred. This system supports and recognizes ambitious human resources, while valuing the start-up mindset.

#### Two-way communication

Information is not conveyed, but rather it is shared. In order to remove the barriers of executives and organizations, and achieve true reciprocal communication in the process, we employ various systems, such as global gatherings where ideas are directly voiced to management, as well as birthday gatherings for employees.

### HORIBA's five pillars of "omoi"

For each and every employee to personally attain our company motto of "Joy and Fun," we firmly hold and implement five *omoi*:

- To be a part of a collaborative community, at the forefront of new ideas and creations.
- To achieve goals and make life memorable by fostering the highest intellectual potential.
- To reach across the globe to expand learning that captures key business developments, wherever they occur.
- To be proud of sharing what I do and what HORIBA delivers.
- To be helpful to the world and its people.

\* The Japanese word "omoi" is used to engender shared values among global employees.

### External evaluation

We have been selected as a Nadeshiko Brand, which is jointly decided by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange, for the third consecutive year since 2019. In addition, for the fifth year in a row, we were recognized as a "2021 Certified Health & Productivity Management Outstanding Organizations Recognition Program (White 500)," which is jointly promoted by the Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi.



Nadeshiko Brand

With regard to our initiatives to promote diversity, we received high marks in the categories of integrating diversity into corporate strategy, governance, improvement of company-wide environments and rules, and change in behavior and awareness of employees.



2021 Certified Health & Productivity Management Outstanding Organizations Recognition Program (White 500)

In 2012, HORIBA's top management issued its Physical and Mental Health Promotion Declaration. Inclusion in the 2020 Health and Productivity Stock Selection Program was granted out of recognition for various initiatives conducted in pursuit of this declaration's goals.





# HORIBA is maximizing corporate value through investments with long term perspective and initiatives to improve asset efficiency.

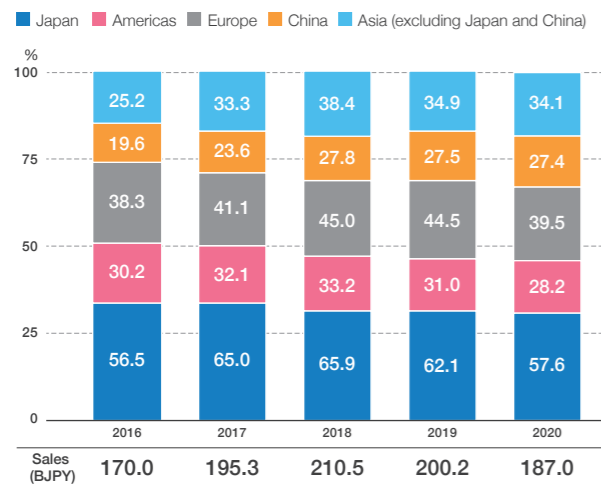
**Masao Okawa**  
 Managing Director and  
 General Manager of General Administration Division

## Results of HORIBA Group – Looking back on the year ended December 31, 2020 –

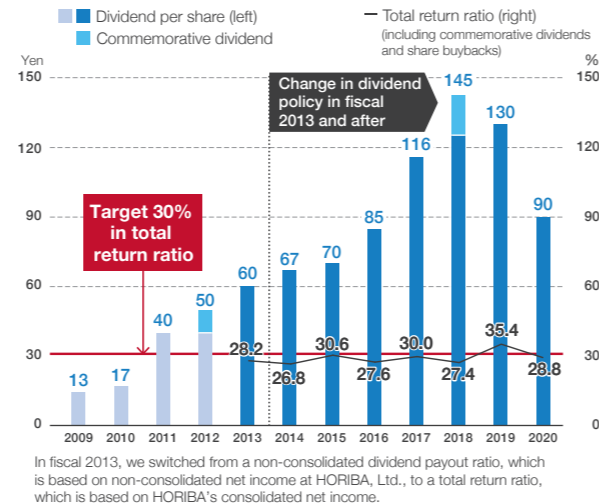
In fiscal 2020, sales decreased 13.1 billion yen to 187.0 billion yen (down 6.6% year-on-year). Sales to semiconductor production equipment manufacturers increased in response to a recovery of semiconductor manufacturers' capital expenditures; however, sales decreased in the Automotive segment, mainly due to the stagnation of corporate activities affected by the spread of COVID-19. On the profit side, operating profit decreased 1.2 billion yen to 19.6 billion yen (down 5.8% year-on-year) due to decreased sales, although we implemented some measures to save expenses.

In accordance with these results, it was decided that a dividend of 90 yen per share as shareholder returns for the fiscal year ended December 31, 2020. HORIBA has adopted a policy of setting its total shareholder return ratio, which includes dividends and share buybacks, to about 30% of consolidated net income. We intend to increase corporate value through business growth and continually provide returns to all of our owners (shareholders).

### Change in the geographical sales mix



### Dividend payments and total return ratio



## Balanced management – diverse business portfolio

HORIBA started its business as an R&D oriented start-up company, and we promote balanced management which consists of a portfolio of five business segments which use our wide variety of technologies. By developing business in various markets, HORIBA is able to generate steady profits, even if business risks materialize in a specific segment which faces a down-cycle of demand or economic stagnation. In addition, we would like to utilize our core technologies and sales channels to meet market needs more by going beyond existing business segments and country borders.

We recognize that the negative effects from the spread of COVID-19 have not come to an end yet, and that the world economy is still in some sense in a “crisis mode.” It is important to increase liquidity of cash in order to be ready for crisis management and retain funds to make strategic investments timely. We will maintain our financial resilience that makes it possible to support business proactively and sustainably under the market environment which is undergoing complex and rapid changes.

### Basic capital policy

**Point 1**

**Maintain high ROE**

As stated in our MLMAP2023, HORIBA aims to achieve ROE at 10% or more in 2023. ROE is one of our most important management metrics.

**Point 2**

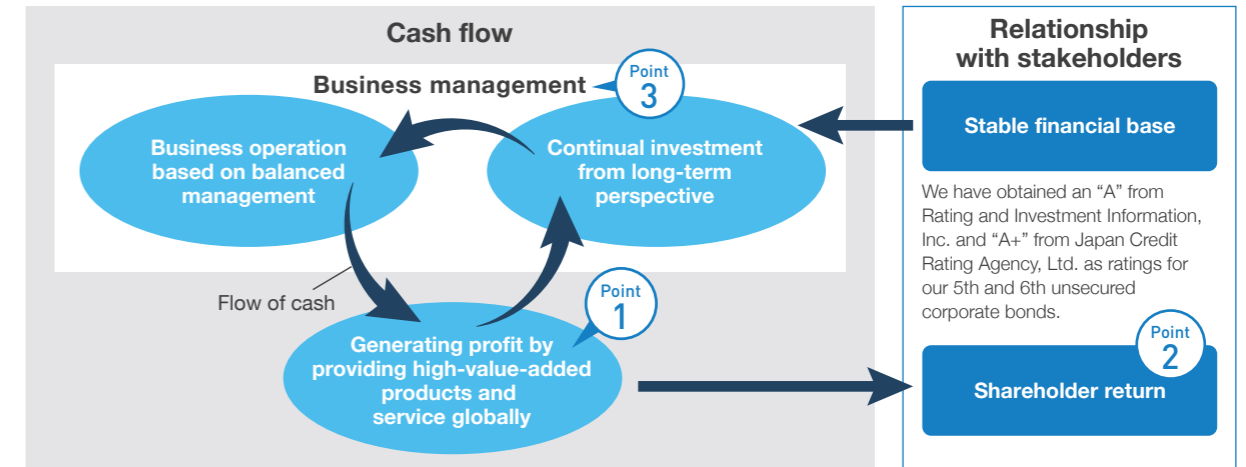
**Link shareholder return to earnings growth**

We set total return (the combination of dividend payments and share buybacks) to shareholders as approximately 30% of consolidated net income. This payout ratio reflects due consideration given to ensuring stable management and retaining earnings as capital for aggressive business development.

**Point 3**

**Improve capital efficiency to maximize corporate value**

We conduct proactive investment, which is expected to result in creating future corporate value. Additionally, each group company and each business segment sets and manages its own capital efficiency targets to maximize HORIBA's corporate value.



### Approach to continual investment

**Investment in R&D**

We have invested 10% of sales in R&D continually, even in recessions where many companies reduce their investment, and that has allowed us to increase market share when demand recovered. We believe that continual R&D investment is the source of our competitiveness.

**Capital expenditure**

Regardless of short-term declines in asset efficiency, we invest for the future from a medium- to long-term perspective. While high-level investments continue to respond to changes in the market environment, we aim to maximize return on investment in the next few years, taking the asset turnover ratio and cash flow for each investment project into account.

**Approach to M&A**

From a long-term perspective, we are making friendly acquisitions of entities that have unique technologies, which complement, or have potential synergies with, HORIBA's technology portfolio. Internal department of legal, intellectual property, and finance functions are actively involved in investment processes such as due diligence.

## Progress of investment for mid-term growth

In the mid-long term management plan MLMAP2023, we aim to expand business in growing markets. While we faced a difficult situation in 2020, we continued to make aggressive investments for the future. We implemented large strategic investments, such as the new office of HORIBA Techno Service Co. Ltd. as the headquarters of our service business, a new facility in China to strengthen local engineering capabilities, and expansion of the HORIBA FuelCon GmbH factory in Germany to respond to increasing demands for battery and fuel cell test systems. We will utilize these investments utmost and will contribute to generating cash flows and expanding profits.

On the other hand, we have reviewed of our investments in more detail and, if necessary, adjusted in such a way to reduce unnecessary cost. When we face headwinds, we need to focus more on projects which will contribute to future growth and invest intensively in them. The responsibility of the finance function has been increasing.

### Major investments in recent years

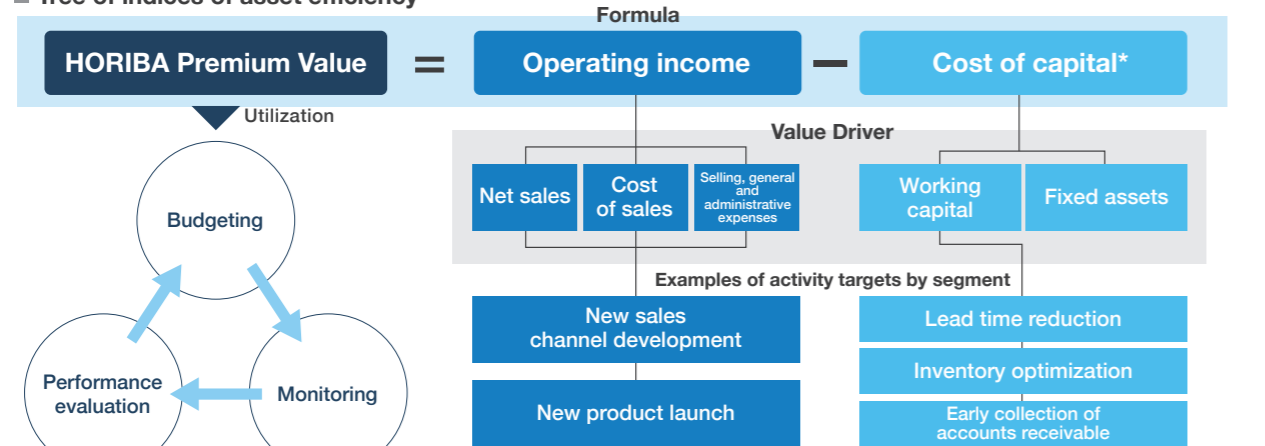
Energy & Environment	Materials & Semiconductor																		
<p>Investing in R&amp;D and facilities in order to respond to demand for new automotive technologies, such as electrification, autonomous driving, and so on. Also, strengthening local engineering capabilities to fulfill demand for environmental measurement in emerging countries.</p> <table border="1"> <tr><td>Investments</td><td>2015</td><td>Acquired ECT* (U.K.) business for the Automotive segment</td></tr> <tr><td></td><td>2018</td><td>Acquired battery and fuel cell testing system business and expanded the factory (Germany)</td></tr> <tr><td></td><td>2021</td><td>Established comprehensive verification facilities to support autonomous vehicle development (U.K.)</td></tr> </table> <p><small>*ECT: Engineering Consultancy &amp; Testing</small></p>	Investments	2015	Acquired ECT* (U.K.) business for the Automotive segment		2018	Acquired battery and fuel cell testing system business and expanded the factory (Germany)		2021	Established comprehensive verification facilities to support autonomous vehicle development (U.K.)	<p>Investing in production facilities to supply products with stable quality and deliver them in a timely manner while responding to volatile demands from the semiconductor market, and also investing in R&amp;D to follow the quick changes in semiconductor production technologies.</p> <table border="1"> <tr><td>Investments</td><td>2015</td><td>Established HORIBA Advanced Technology Center (Japan)</td></tr> <tr><td></td><td>2017</td><td>Expanded the Aso factory of HORIBA STEC Ltd. (Phase 5) (Japan)</td></tr> <tr><td></td><td>2018</td><td>Transferred Optical Spectroscopy Center to strengthen R&amp;D and production (U.S.)</td></tr> </table>	Investments	2015	Established HORIBA Advanced Technology Center (Japan)		2017	Expanded the Aso factory of HORIBA STEC Ltd. (Phase 5) (Japan)		2018	Transferred Optical Spectroscopy Center to strengthen R&D and production (U.S.)
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Bio & Healthcare	Corporate																		
<p>Investing in R&amp;D and facilities to enhance our market position in the bio and healthcare fields. Also, investing in the IVD (in-vitro diagnostics) area to expand business.</p> <table border="1"> <tr><td>Investments</td><td>2019</td><td>Acquired nanoparticle tracking analysis system business (U.S.)</td></tr> <tr><td></td><td>2020</td><td>Transferred and expanded the factory for Raman spectroscopy meters (France)</td></tr> <tr><td></td><td>2021</td><td>Acquired clinical chemistry reagent business (U.S.)</td></tr> </table>	Investments	2019	Acquired nanoparticle tracking analysis system business (U.S.)		2020	Transferred and expanded the factory for Raman spectroscopy meters (France)		2021	Acquired clinical chemistry reagent business (U.S.)	<p>Investing to develop from a business model centered on equipment sales to one providing services such as instrument maintenance and data management. Also investing in entities in emerging markets.</p> <table border="1"> <tr><td>Investments</td><td>2015</td><td>Launched ERP systems at all group companies</td></tr> <tr><td></td><td>2021</td><td>Built new office which is the headquarters of the service business (Japan)</td></tr> <tr><td></td><td>2021</td><td>Building a new facility in Shanghai (China)</td></tr> </table>	Investments	2015	Launched ERP systems at all group companies		2021	Built new office which is the headquarters of the service business (Japan)		2021	Building a new facility in Shanghai (China)
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## HORIBA Premium Value

In order to improve asset efficiency, we utilize HORIBA Premium Value, which is incorporated into organizational KPI processes, such as budgeting, monitoring, and evaluating business performance. In case HORIBA Premium Value is negative for an affiliate or a segment, we analyze the factors and reasons behind it, implement measures and policies to improve HORIBA Premium Value, and monitor and follow it up vigilantly.

In the meantime, we are in the phase where investment has to be implemented in order to respond to the drastic changes in the market. Even if the HORIBA Premium Value is negative in the short term, we aim to increase HORIBA Premium Value in the medium- to long-term. We put priority on long-term sustainable developments and, as such, we take reasonable consideration for that the introduction of HORIBA Premium Value will not hamper investment.

### Tree of indices of asset efficiency

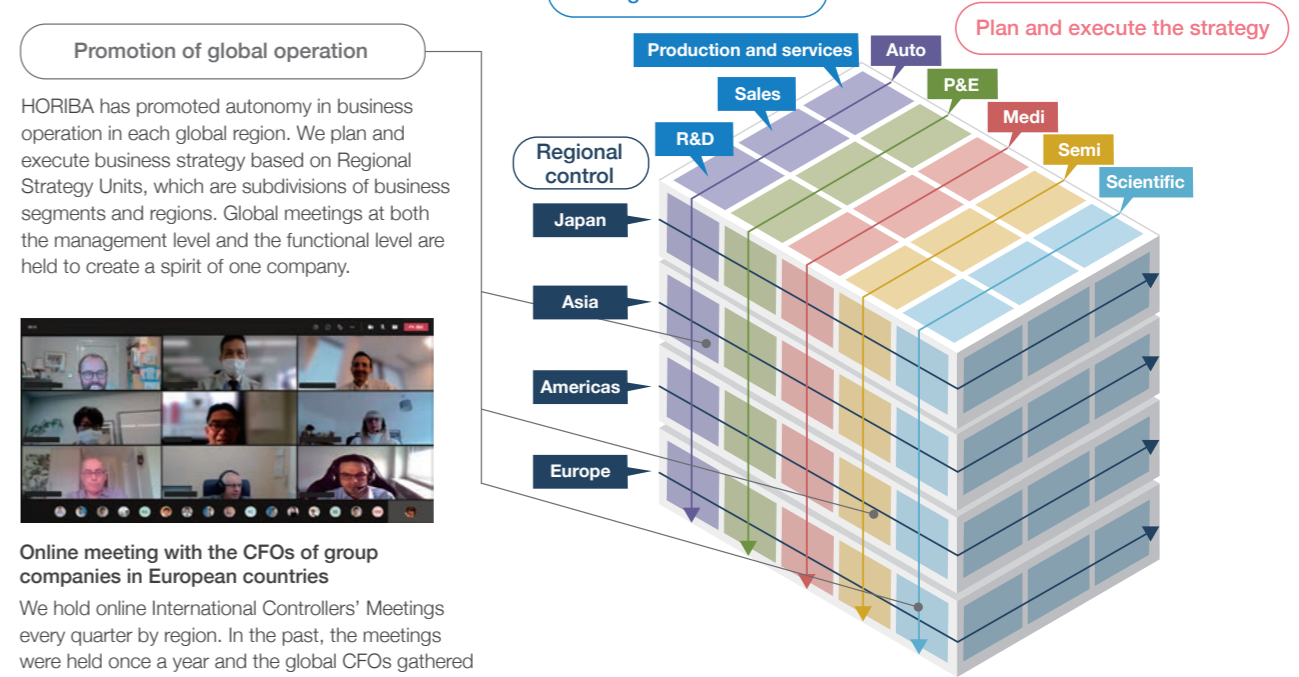


\* Cost of capital: Invested capital × In-house rate of cost of capital. We apply an original benchmark that is based on HORIBA's WACC and comparable with operating income in connection with our cost of a capital target. Currently, evaluation is conducted by applying the same rate to all regions and businesses and monitoring degrees of improvement.

## Region-centric operation

HORIBA's global operation is region-centric and respects independence in each affiliate. Local CFOs are hired there, and we build regional organizations rooted in the local area and enable them to operate autonomously. Region-centric operation becomes more important under the spread of COVID-19. We think the structure which HORIBA has built so far has worked effectively in terms of investment management or so. Regarding communication with headquarters, we utilized the online communication tools that we had introduced. At the same time, we followed up on important regional issues by monitoring KPIs carefully. In addition, we strengthened credit risk management and control in the regions where bankruptcies or so have increased.

### HORIBAs' global matrix management



## Aim to increase corporate value sustainably

I think that the purpose of HORIBA is "Joy and Fun," which is our corporate motto. HORIBA respects the diversity and independence of each HORIBARIAN, and each HORIBARIAN works with the spirit of "Joy and Fun," so that great products, instruments and services will be developed. At the same time, through analysis and measurement, our products, instruments and services create economic value and contribute to global environmental protection and social development. It is vital to develop and sustain the above mentioned positive cycle, and to increase our corporate value sustainably. We also recognize that it is an important responsibility of the company to offer rewarding works, to facilitate comfortable working environments, and to pursue work styles that suit the various circumstances surrounding HORIBARIANS, such as infectious disease control, eldercare, and childcare. At the same time, we need to manage risks from the point of view of health and safety as well as to respect human rights.

In January 2021, we articulated "Code of Ethics," which is established as the global rule. This stipulates the missions and responsibilities of all HORIBARIANS in the world, including respect for the fundamental human rights and voluntary and proactive efforts for environmental issues. The Code was drafted in English to encourage deeper understandings globally, so as to unify the "omi" of diverse human resources.

We aim to increase corporate value sustainably by implementing various policies and through investments with long-term perspective and initiatives to improve asset efficiency.

April 2021

# HORIBA and ESG Investing

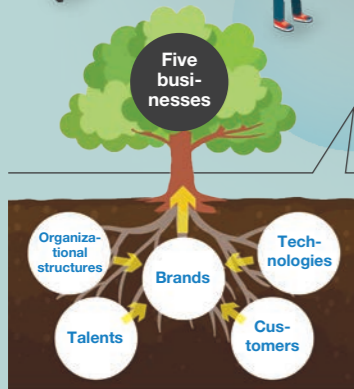
In order to meet the expectations of our stakeholders, all HORIBARIANS implement various activities to achieve business growth in each field under the corporate motto “Joy and Fun,” while understanding the concepts of ESG investment and the Sustainable Development Goals (SDGs) proposed by the United Nations.

The various stakeholders of HORIBA can be benefitted from our growth.

HORIBA has proactively disclosed not only financial information but also non-financial information, which is “invisible values.” We believe that both types of information will bring value to ESG investors and the many people who expect companies to respond to the SDGs.



Omoshiro-okashiku  
Joy and Fun



## Invisible values

If we are to achieve on-going corporate growth, we must aim to improve financial metrics such as net sales and profits, while at the same time taking care of our non-financial values, such as talents and technologies. HORIBA considers its brands, organizational structure, talents, technologies, and customers to be invisible values and invests in them continuously.

Detailed information regarding HORIBA's CSR activities can be found on our website:

Web Link



## Establishment of Code of Ethics

The HORIBA Group set forth the “HORIBA Corporate Philosophy” as its basic position on corporate activities, under the corporate motto “Joy and Fun.” Based on these, HORIBA introduced the original “Code of Ethics” as a guiding standard to assist the company in realizing sustainable development, going forward. Then, HORIBA reviewed and refreshed the “Code of Ethics” from the perspective of the challenges that we should take on a global organization.

### Main points of the new “Code of Ethics”:

- a standard for behaving as a “good corporate citizen” with leadership by top management
- compliance with laws, regulations, etc.
- contributing to society by providing excellent products and services
- creating rewarding and amenable workplaces
- respect for human rights of all people
- formulated in English to help deepen understanding on a global, group-wide basis



Omoshiro-okashiku  
Joy and Fun

Code of Ethics

Web Link



HORIBA Corporate Philosophy

Web Link



## Project Colors - Activities of HORIBA Advanced Techno



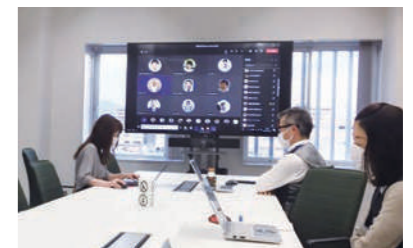
HORIBA Advanced Techno, Co., Ltd., which conducts water quality measurement-related business, has “Protect water quality around the world” as its mission statement. In 2020, we held web seminars from April to May for all 300 employees to further promote this mission within the company and to think about how we can contribute to the SDGs.

The seminar was an opportunity for us not only to recognize how much our current products contribute to the environment, but also to gain a deep insight into what we need to do to differentiate ourselves, such as by making our products and business style with more environmental consciousness. About 30 people who agreed with this purpose started a project named “Project Colors,” and five teams and one special team were formed. They hold 30 workshops a year and promote activities based on each theme below.



### Project Colors - Team themes

- (1) Internal educational activities: “fostering” awareness of the SDGs
  - (2) Activities through education: fostering children's interest in water and increasing partners
  - (3) Creating concept models and worldviews for a splendid future: environmentally-conscious manufacturing
  - (4) Going paperless: eliminating all paper
  - (5) Promotion of joyful recycling: cradle to cradle
- In addition, the special team worked on the theme of “Water cycle game - let's learn about water with ‘Joy and Fun’”



## Signatory to international initiatives

### United Nations Global Compact (UNGC)

HORIBA, Ltd. supports the initiatives of the United Nations Global Compact since we became a signatory in 2012 through the agreement of top management.

WE SUPPORT

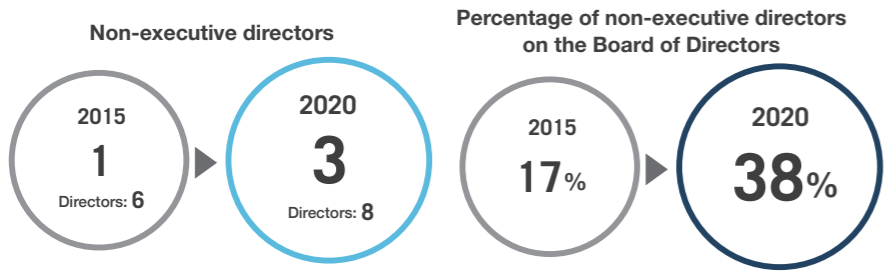
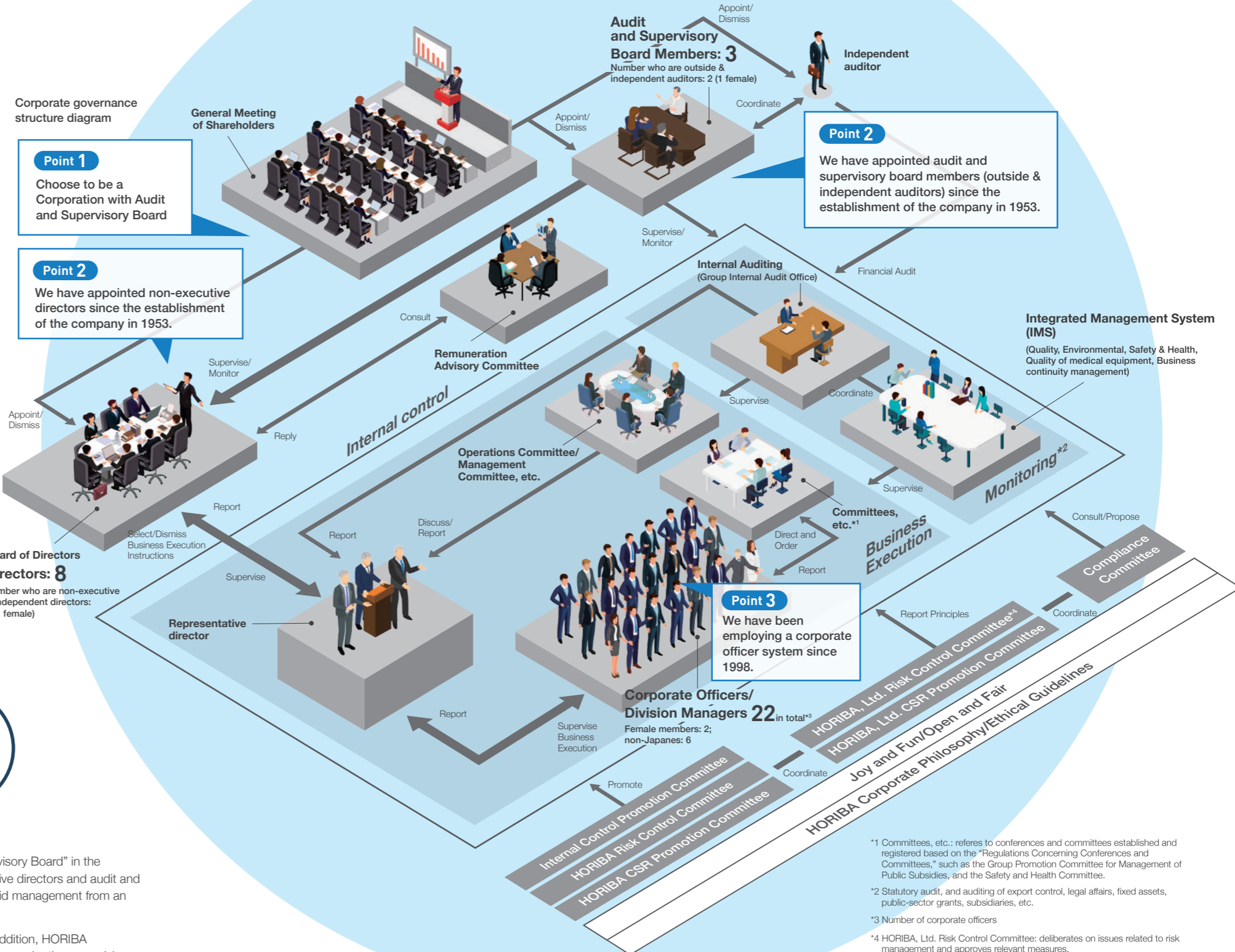




# Corporate Governance

## Basic Policy on Corporate Governance

Based on the corporate philosophy of “Open and Fair,” HORIBA has pledged to (1) establish an organizational structure that promptly responds to changes in the business environment, (2) improve its managerial monitoring of performance, and (3) enhance compliance-related arrangements. These objectives have the aim of establishing a world-class governance structure. At the same time, we are committed to establishing good relationships with all stakeholders, including owners (shareholders), customers, employees, and local communities. In addition to proper information disclosure, we seek to promote constructive dialogue with our owners, contributing to our sustainable growth and medium- to long-term improvement in corporate value.



## Corporate governance system

HORIBA has adopted the type of organization defined as a “Corporation with Audit and Supervisory Board” in the Companies Act. Based on this organizational design, HORIBA, Ltd. has appointed non-executive directors and audit and supervisory board members (outside & independent auditors) since its founding in 1953 to avoid management from an introverted approach.

In 2020, the Board met 12 times, had energetic discussions, and made prompt decisions. In addition, HORIBA introduced a corporate officer system in 1998 to make smooth and agile execution of operations under the supervision and guidance of directors.

The Audit and Supervisory Board performs objective and appropriate auditing and monitoring of the work of the Board of Directors, in cooperation with independent auditors, internal auditing (Group Internal Audit Office, which is positioned directly under Executive Vice Chairman & Group COO), and the non-executive directors.

### Strengths of HORIBA's Board of Directors

Leadership	Management strategies	Industry knowledge	Global business	Sales and marketing	Technology and R&D	Governance	Legal affairs	Finance and accounting
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## Appointment of non-executive directors

New non-executive directors were appointed at the General Meeting of Shareholders in March 2021.

Non-executive director (Reappointment)	Non-executive director	Non-executive director
<b>Sawako Takeuchi</b> Doctor of Engineering, Doctor of Economics	<b>Haruyuki Toyama</b>	<b>Fumihiko Matsuda</b> Doctor of Medicine
<b>Reasons for appointment</b> She has been appointed again in order for the management of HORIBA to benefit from her specialized knowledge in management engineering and international experience in Europe, an important base for HORIBA business operation.	<b>Reasons for appointment</b> He was newly appointed in order for the management of HORIBA to benefit from his expert knowledge as a corporate lawyer, together with his extensive experience and expertise in the fields of international banking and financial affairs.	<b>Reasons for appointment</b> He was newly appointed in order for the management of HORIBA to benefit from his accumulated specialized knowledge in viruses, immunity, genomes and other areas of the medical field, extensive management skills through Chief Advisor to the President for Academic Affairs and international experience in France.

\*1 Committees, etc.: refers to conferences and committees established and registered based on the “Regulations Concerning Conferences and Committees,” such as the Group Promotion Committee for Management of Public Subsidies, and the Safety and Health Committee.  
 \*2 Statutory audit, and auditing of export control, legal affairs, fixed assets, public-sector grants, subsidiaries, etc.  
 \*3 Number of corporate officers  
 \*4 HORIBA, Ltd. Risk Control Committee: deliberates on issues related to risk management and approves relevant measures.

## Evaluation of the Board of Directors' effectiveness

From December 2020 to January 2021, we distributed to all eight directors and to all three audit and supervisory board members a questionnaire concerning the Board of Directors' effectiveness, and received responses from all eleven persons.

The questionnaire contained questions regarding the three roles and responsibilities of the Board according to Basic Rule 4 of the Corporate Governance Code. Most responses evaluated these matters as "Adequate" or higher. In addition, matters discussed by the Board and composition of the Board (number of members, diversity in terms of gender and nationality, knowledge, experience, ability, etc.) were evaluated as no problem at present. A number of opinions were also received concerning briefings held before and after Board of Directors meetings. These included "I think opportunities, which non-executive directors can ask persons in charge of departments about current issues and proposals before the Board of Directors meetings, are effective to fulfill their duties" and "I think the advance briefings and explanations of industry trends for non-executive directors and audit and supervisory board members (outside & independent auditors) are useful for us to understand the content of discussions, so I hope these will continue."

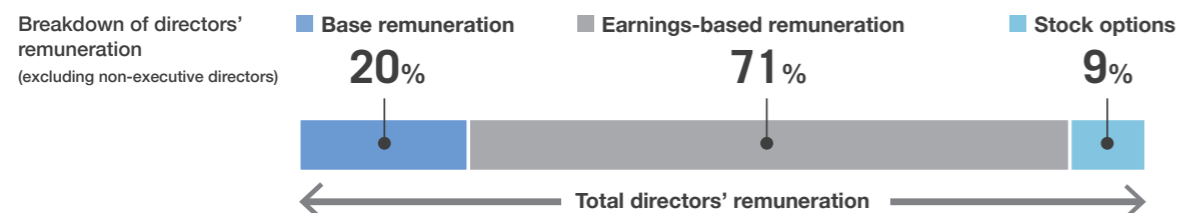
The results were compiled, analyzed, evaluated, and reported to the Board of Directors for discussion.

## Directors' Remuneration

Remuneration for directors consists of base remuneration (periodic fixed-amount salary), earnings-based remuneration linked to the earnings results of each fiscal year, and stock options linked to medium- to long-term earnings performance. The percentage of each remuneration is set after the maximum limits of remuneration is resolved at the general meeting of shareholders. The amount of remuneration for each director is determined by the Board of Directors in accordance with the position and the scope of the director. Remuneration for non-executive directors, however, consists strictly of base remuneration (fixed-amount salary), that, given the nature of their assignment, is not linked to earnings performance.

Remuneration for directors (not including non-executive directors) for 2020 was 690 million yen in total.

Regarding directors' remuneration from fiscal 2021 onward, we established the Remuneration Advisory Committee with independent management members as its main constituent members (three non-executive directors), so that we obtain advice from an independent standpoint in order to improve objectivity and transparency in the decision-making procedures of the Board of Directors.



## Main agenda items in Board of Directors meetings

With the appropriate involvement of and advice from non-executive directors, the Board of Directors freely discusses and exchanges opinions on matters for resolution and reporting, as well as matters that contribute to the long-term improvement of corporate value.

The progress of matters resolved by the Board of Directors is reported on a regular basis, and mechanisms are in place by which directors can monitor the status of their implementation.



### Major matters resolved at and reported to Board of Directors meetings in 2020

- Investment projects
- Corporate alliances
- Financing
- Cross-shareholdings
- Decisions on executive personnel matters and remuneration
- Resolution on dividends
- Analysis and evaluation of the Board of Directors' effectiveness
- Implementation of the Masao Horiba Awards
- Strengthened export control regulations
- Product quality improvement
- Payment of invention rewards
- Status of group company management

### Matters regularly reported throughout the year

- Progress on matters for resolution by the Board of Directors
- R&D schedules and achievements
- Status of sales/production/quality
- Organizational restructuring/major personnel changes
- Business performance

## Relationships with owners (shareholders) and investors

### Open general meeting of shareholders

Since its initial stock listing in the second section of the Osaka Securities Exchange in 1971, HORIBA has held the annual general meeting of shareholders on a Saturday so that a large number of owners are able to attend the gathering, and an informal gathering event with management is held afterwards. Regarding the 2021 general meeting of shareholders, we called upon shareholders to refrain from attending, and did not hold the informal gathering due to the spread of COVID-19. Instead, we streamed the meeting online to maintain transparency.

### The philosophy behind the shares we hold for strategic purposes other than pure investment

HORIBA believes that collaboration with other companies is necessary for us to grow sustainably. Toward that end, we make determination on the holding of shares after comprehensively considering matters including business strategy, the strengthening of relationships with business partners, and the maintenance of relationships with local communities. Every year, the Board of Directors confirms whether the amount of shares we hold for strategic purposes other than pure investment is appropriate. In addition to that, the conformity of holding individual shares are verified, by confirming whether they are appropriate for the purpose of holding and whether the benefits and risks associated with them are commensurate with the cost of capital. When shares we hold are recognized as inappropriate for retention, we will review response measures such as share curtailment.

### Anti-takeover measures

HORIBA has not adopted anti-takeover measures. We reviewed the "Basic policy on the persons to control decision making over the financial and business policies of HORIBA," which was announced in our Corporate Governance Report.

### Constructive dialogue

HORIBA abides by the "Basic Policy for Constructive Dialogue with Shareholders" as announced on our website. We make efforts to explain our corporate policy, financial condition, and corporate culture to our owners based on the perspective of "fair disclosure," and ask for their understanding and continued support.

### Status of IR-related activities

- |   |   |
|---|---|
| <b>For analysts and institutional investors</b> | ■ Financial results briefing: held four times per year                  |
|   | ■ Visitations and individual interviews (within Japan): about 250 times |
| <b>For individual investors</b>                 | ■ Visitations and individual interviews (overseas): about 80 times      |
|   | ■ Held about two times per year   |



Please see our website for more details regarding our Corporate Governance Report. (in Japanese only)

Web Link



Please see our website for more details regarding our "Basic Policy for Constructive Dialogue with Shareholders." (in Japanese only)

Web Link



## Risk management and compliance

HORIBA stably executes its business through the appropriate management and control of risks related to operations. We have built a risk management system that sets the preservation of managerial resources and the increase of corporate value as key issues for management.

The Board of Directors, Management Committee, Operations Committee, and HORIBA Risk Control Committee discuss issues related to risk management and approve measures to mitigate these. The latter committee includes members from primary group companies in Japan and aims to strengthen systems for risk management and compliance. We have also established a Compliance Committee that cooperates with the Risk Control Committee and is responsible for raising awareness of compliance and deliberating related matters, as well as adjudicating internal reports, responding to these, and issuing corrective recommendations.

HORIBA established a "HORIBA Corporate Philosophy" and, in January 2021, "Code of Ethics" as the one of the global rules, and strengthens the risk management system and compliance system for the entire group. Regarding risks related to each business segment, development and manufacturing, and finance, we have established rules such as the Board of Directors rules, group risk management basic rules, group compliance management rules, and group company management rules, in order to clarify the risk management system and its responsibilities in the event of a crisis, and are implementing detailed risk management. The group company management rules clarify decision-making authority when making strategic investments including acquisitions both domestically and internationally, as well as responsibilities for reporting when legal, financial, human resource, and other management risks become apparent, and this enables us to monitor this area closely.

To facilitate early detection and correction of illegal acts, we also established an internal reporting system that includes a lawyer consultation service, as well as an internal e-mail reporting system. In addition, to mitigate and prevent risks that involve personal information protection, export controls, and other laws and regulations related to business, and to strengthen our crisis response systems, we implement varied education and training as necessary, and work to enable people from top-level managers to employees to recognize their own roles and act appropriately with responsibility.

**Board of Directors**  
**Audit & Supervisory Board Members**  
**Corporate Officers**  
 (As of April 1, 2021)

## Board of Directors



**Atsushi Horiba**  
 Chairman & Group CEO

In 1971, Atsushi Horiba joined OLSON-HORIBA Incorporated, a U.S. joint venture of HORIBA, Ltd. In 1977, he returned to HORIBA, Ltd. after received master's degree on Electronic Engineering from Graduate School of University of California, Irvine. He was appointed to President in 1992, and concurrently served as Chairman, President and CEO since 2005. In 2018, he was appointed to Chairman and Group CEO.

He has been invited to serve as a member of official government committees, including the Ministry of Economy, Trade and Industry's Industrial Structure Council and Manufacturing Industry Committee, and the Cabinet Office's Advisory Panel on the Modalities of Government and Administration. He also devotes himself to realizing industry and the local economy by serving as Chairman of the Japan Electric Measuring Instruments Manufacturers' Association, President of the Japan Analytical Instruments Manufacturers' Association, Vice Chairman of the Kansai Economic Federation, and Vice Chairman of the Kyoto Chamber of Commerce and Industry.

In recognition of his contribution to the development of science, technology, and industry in France, he was awarded the L'Ordre National du Mérite (Officier) in 1998 and the L'Ordre National de la Légion d'Honneur (Chevalier) in 2010 by French government. He was also awarded Doctor Honoris Causa degree by the University of Montpellier, France in 2015 and received the Order of the Rising Sun, Gold Rays with Neck Ribbon in 2019 by Japanese government.



**Juichi Saito**  
 Executive Vice Chairman & Group COO

Juichi Saito joined HORIBA, Ltd. in 1982. After a few years of experience designing automotive exhaust gas test system as an electrical engineer, he was transferred to the U.S. operation where he served as an applications engineer, service engineer and project engineer for Semiconductor and Automotive fields in Silicon Valley and Michigan. Then he was assigned as a new products planning for Scientific and Process & Environmental fields at the U.S. headquarters in Irvine. Upon his return to Japan in 1992, he served several important management positions including General Manager of Automotive R&D. In 1998, he moved to the U.S. again and became responsible for the U.S. operation. In 2004 he moved to HORIBA STEC Co., Ltd. and became the leader of Semiconductor segment of the group. In 2010 he returned to HORIBA, Ltd., appointed as Executive Vice President in 2013, Executive Vice Chairman and Group COO in 2018.

He serves Vice Chairman of the Japan Electric Measuring Instruments Manufacturers Association and the Japan Scientific Instruments Association.



**Masayuki Adachi**  
 (Doctor of Engineering)  
 President & COO

Masayuki Adachi joined HORIBA, Ltd. in 1985. He worked on the development of new products for the Engine Measurement Systems Division. He served as General Manager and Corporate Officer, and subsequently moved to the U.S. in 2007 as president of HORIBA International Corporation (present HORIBA Instruments Incorporated) where we tackled against the difficulties of the Global Financial Crisis in the U.S. After he returned to Japan in 2011, he was appointed to General Manager of R&D Division, which steers the R&D department of all segments. He was appointed to the member of the board in 2014, and after serving as President of HORIBA Jobin Yvon SAS (present HORIBA FRANCE SAS) and Senior Managing Director of HORIBA, Ltd., he was appointed to President & CEO in 2018.

As Vice President of the Japan Analytic Instruments Manufacturers' Association, Chairman of the Japan Environmental Technology Association, and Fellow of the Society of Automotive Engineers International, he has contributed to the advancement of science and technology related to analysis and measurement, and to the promotion of science and technology as well as industrial and economic development.



**Masao Okawa**  
 Managing Director

Masao Okawa joined HORIBA, Ltd. in 2017. He has designed global financial strategies as well as has enhanced compliance and corporate governance, leveraging his global experience and expertise of finance and governance.

Previously, he served for almost 30 years at the Bank of Japan, including the General Manager of Kyoto Branch, the Head of Legal Division, and the Chief Representative of Frankfurt Office.

He also serves as a director of the Kyoto Association of Corporate Executives and as a director of the Tokyo Scientific Instruments Association, actively contributing to the industrial and regional societies.



**Takashi Nagano**  
 Director

Takashi Nagano joined HORIBA, Ltd. in 1985. He engaged in software development for the Engine Measurement Systems Division. After serving as Manager and General Manager of the Engine Measurement Planning & Development Department, he moved to Germany in 2003 as President of HORIBA Europe GmbH. He was appointed to Corporate Officer in 2005, Senior Corporate Officer in 2006. After returning to Japan in 2011, he was appointed to General Manager of the Sales Division, which oversees the sales departments of all segments. He was appointed to as a Director in 2016 after serving as CEO of HORIBA Europe GmbH and President of HORIBA KOREA Ltd. Since 2018, he has been a member of the GLOBAL AUTOMOTIVE BOARD, which oversees the automotive business. In this way, he has contributed to the international automotive industry for many years.

## Board of Directors (Non-executive)



**Sawako Takeuchi**  
(Doctor of Engineering,  
Doctor of Economics)

Director (Non-executive), Independent Director

After completing her doctoral studies at the University of Paris, Sawako Takeuchi served for six years as Deputy Director of the Master of International Business Graduate Program at Ecole Nationale des Ponts et Chaussées, one of the oldest and most prestigious Grandes Ecoles in France. After returning to Japan, she worked as Chief Economist at the Long-Term Credit Bank of Japan, Research Institute. In 1998, she moved to the School of Engineering at the University of Tokyo as an Associate Professor, where she earned two doctorates in engineering and in economics, and made research achievements in the fields of industrial engineering and urban development. Later, she was appointed as Invited Professor at Kyoto University. In 2011, she was requested by the Ministry of Foreign Affairs of Japan to become the President of the Japan Cultural Institute in Paris, where she played a role in cultural diplomacy.

Since 2016, she has been an Non-executive Director of HORIBA, Ltd. She was also appointed as an Outside Director of SAXA Holdings, Inc in 2019. By utilizing her deep knowledge of music and western civilization, she teaches liberal arts as an Invited Professor at Tokyo College of Music. She was awarded the Ordre National du Mérite (Chevalier) and Ordre des Arts et des Lettres (Chevalier). Besides, she was acknowledged the professional license of Urasenke Sado (Japanese way of tea).



**Haruyuki Toyama**

Director (Non-executive), Independent Director

Haruyuki Toyama joined the Bank of Japan in April 1982. He graduated from the University of California School of Law (LL.M.) in 1988 and became a Visiting Scholar at Harvard Law School in 1989. He served as the Alternate Executive Director for Japan of the International Monetary Fund (IMF) from 2000, and subsequently held a number of other positions at the Bank of Japan, including General Manager of the Okayama Branch, Associate Director-General of the Payment and Settlement Systems Department, Director-General of the Financial Markets Department, General Manager for the Americas, and Director-General of the International Department. During his tenure at the Bank, he was involved in a number of international activities, including secondments to the U.S. Federal Reserve Board (FRB) and the European Commission (EC), and serving as a member of the Bank for International Settlements (BIS) Committee on Payments and Market Infrastructure and Markets Committee. He also served as a lecturer on Financial Laws at the Graduate School of Hokkaido University. After leaving the Bank in 2014, he registered as a lawyer in 2015. In the same year, he became an Outside Director of Hitachi Construction Machinery Co. Ltd. He joined Iwata Godo law office in 2009 and brings a wealth of knowledge and experience in the field of international finance. In 2021, he was appointed as Non-executive Director of HORIBA, Ltd.



**Fumihiko Matsuda**  
(Doctor of Medicine)

Director (Non-executive), Independent Director

Professor Fumihiko Matsuda obtained his Ph.D. in medicine from Kyoto University Graduate School of Medicine in 1990. After working as an assistant professor at Center for Molecular Biology and Genetics and Faculty of Medicine, Kyoto University, he joined Centre National de Génotypage (CNG) in Evry, France, as the head of gene identification. Since holding a joint appointment as a professor of Kyoto University Graduate School of Medicine in 2003, he divided his activities between Kyoto and Paris for his research in genomic medicine to the end of 2007. In 2008, he became the director of Center for Genomic Medicine at Kyoto University Graduate School of Medicine. Professor Matsuda created two spin-off bio-venture companies, GenoConcierge Kyoto, Inc. in 2018 and RADDAR-J for Society Inc. in 2020, and serves as a Director (Chief Advisor) of these two companies, contributing to active collaborations between academia and industry. He was appointed as Non-executive Director of HORIBA, Ltd. in 2021.

He also devotes himself to cultural exchange between Japan and France through involvement in cultural and art activities. In recognition of his achievements, contributions, and efforts to date, he was nominated the Chevalier de l'Ordre National du Mérite of the French Republic in 2021.

## Corporate Officers

### Executive Corporate Officer

**Jai Hakhu** (Doctor of Engineering)  
Chairman of HORIBA Instruments Incorporated (U.S.)  
President of HORIBA ABX SAS (France)  
Chairman of HORIBA India Private Limited (India)

### Senior Corporate Officers

**Hideyuki Koishi**  
President of HORIBA STEC Co., Ltd. (Japan)

**George Gillespie** (Doctor of Engineering)  
Executive Chairman of HORIBA MIRA Limited. (U.K.)  
Automotive Board Leader

**Hiroo Chihara**  
President of HORIBA Techno Service Co., Ltd. (Japan)

**Dan Horiba**  
President of HORIBA Advanced Techno Co., Ltd. (Japan)

### Corporate Officers

**Tadao Nakamura**  
Chief Director & President of HORIBA INSTRUMENTS (SHANGHAI) CO., LTD.  
Chief Director & President of HORIBA (China) Trading Co., Ltd.  
Chief Director & President of HORIBA Technology (Suzhou) Co., LTD.

**Arnaud Pradel**  
General Manager of HORIBA ABX SAS (France)

**Toshiya Higashino**  
President & COO of HORIBA Instruments Incorporated (U.S.)

**Yasuo Yamashita**  
Deputy General Manager of General Administration Division

**Dale Poole**  
Executive Vice President of HORIBA Instruments Incorporated (U.S.)

**Hiroshi Nakamura** (Doctor of Engineering)  
President of HORIBA Europe GmbH (Germany)

## Audit & Supervisory Board Members



**Atsushi Nakamine**

Audit & Supervisory Board Member  
(Standing Auditor)

Atsushi Nakamine joined HORIBA, Ltd. in 1978. He was engaged in accounting, corporate finance department worked in HORIBA Europe GmbH in Germany. In 2001, he became Executive Vice President & COO of ABX S.A. (present HORIBA ABX SAS (France)). He was appointed as Corporate Officer of HORIBA, Ltd. in 2002, In 2005, he became President & CEO of ABX S.A. and President of the newly established HORIBA Europe Holding SASU in 2008. After returning to Japan, he served as General Manager of Group Production Management and Division Manager of the IT & BPR Center of HORIBA, Ltd., and has been a Substitute Audit & Supervisory Board Member since 2018. He was appointed to an Audit & Supervisory Board Member in 2020.



**Keiji Yamada**

Audit & Supervisory Board Member  
(Outside & Independent Auditor)

Keiji Yamada joined the Ministry of Home Affairs (present the Ministry of Internal Affairs and Communications) in 1977. He retired after serving as Director of the Cabinet Legislation Bureau, Director of the Kyoto Prefecture General Affairs Department, and Vice Governor of Kyoto Prefecture. He served four terms as Governor of Kyoto Prefecture from 2002 and four terms as President of the National Governors' Association from 2011. He has been a Professor at the Department of Interdisciplinary Studies in Law and Policy, Faculty of Law and Advisor to the President (present Special Advisor to the President) at Kyoto Sangyo University since 2018, and a member of the Board of Directors since 2021. He was appointed as an Outside Director of Kawasaki Kisen Kaisha, Ltd. in 2019 and was appointed as an Audit & Supervisory Board Member of HORIBA, Ltd. in 2020. He is the President of the Kyoto Culture Foundation and is engaged in financing and enlightenment activities related to the protection of cultural properties with the aim of contributing to the creation and development of affluent Kyoto culture, which is positioned in the center of Japanese culture.



**Tomoko Tanabe**

Audit & Supervisory Board Member  
(Outside & Independent Auditor)

Dr. Tanabe graduated from the Kyoto Prefectural University of Medicine (KPUM) in 1996. After completing a one-year internal medicine internship at the University Hospital at KPUM, she became licensed to practice medicine in the U.S. where she moved to in 1997. In New York she completed her medical residency in addition to serving as chief resident at the Beth Israel Medical Center. She then pursued a fellowship in medical education at the Perelman School of Medicine of the University of Pennsylvania. In 2004 she held the dual position of assistant professor in general internal medicine, and associate clerkship director at the University of California San Diego School of Medicine. Upon her return to Japan in 2008, she joined the Shinyukai Medical Group where she was first put in charge of women's health at Oike Clinic and became a member of the board of the Shinyukai Holdings in 2010. In 2018, she became the president at Kyoto Medical Club. In 2021, she was awarded the title of visiting professor by the Kyoto Prefectural University of Medicine. Dr. Tanabe was appointed as Audit and Supervisory board member of HORIBA, Ltd. in 2020.

Dr. Tanabe believes strongly in holistic approach to clinical medicine, primarily focusing on preventive medicine and continuity of care. She also has a keen interest in promoting the careers of female physicians and researchers. In 2010, she was one of the five founding members of the Center for the Promotion of Gender Equality at the Kyoto Prefectural School of Medicine.

### Junior Corporate Officers

**Narihiro Oku**  
Responsible for Next IVD Technology Project, Medical Business Division

**Hitoshi Motokawa**  
General Manager, General Administration Division  
Responsible for Financial Control

**Hideyuki Nishibun**  
General Manager of Global Business Strategy Division of HORIBA Techno Service Co., Ltd. (Japan)

**Masashi Nishimura**  
General Manager, Production Division, HORIBA Advanced Techno Co., Ltd. (Japan)

**Haruko Nozaki**  
Principal of HORIBA COLLEGE, CSR

**Tsukasa Satake**  
Research & Development Division, Tokyo based

**Yuko Kimura**  
Administration Division, Responsible for China business

# Financial Data

Eleven-year summary

HORIBA, Ltd. and consolidated subsidiaries

		2010.12	2011.12	2012.12	2013.12	2014.12	2015.12	2016.12	2017.12	2018.12	2019.12	2020.12
<b>Profit and Loss</b>												
Net sales	(Millions of yen)	118,556	123,456	117,609	138,136	153,065	170,898	170,093	195,399	210,570	200,241	187,080
Operating costs and expenses	(Millions of yen)	106,256	108,549	105,857	124,402	135,851	151,526	151,593	168,565	181,731	179,325	167,385
Operating income	(Millions of yen)	12,299	14,906	11,751	13,733	17,214	19,372	18,499	26,834	28,838	20,916	19,694
Ratio of operating income to net sales	(%)	10.4	12.1	10.0	9.9	11.2	11.3	10.9	13.7	13.7	10.4	10.5
Net income attributable to owners of parent	(Millions of yen)	7,927	8,664	7,396	8,999	10,589	12,882	12,962	16,281	22,313	15,481	13,188
Ratio of net income attributable to owners of the parent	(%)	6.7	7.0	6.3	6.5	6.9	7.5	7.6	8.3	10.6	7.7	7.0
<b>Financial Position</b>												
Total assets	(Millions of yen)	137,290	144,649	153,836	189,269	207,335	231,032	239,657	265,920	277,368	315,133	328,068
Liabilities with interest	(Millions of yen)	17,128	18,358	18,083	24,577	28,412	45,227	47,153	42,496	44,516	73,889	80,376
Shareholders' equity	(Millions of yen)	84,019	90,232	99,248	114,209	123,924	129,581	132,654	150,282	161,362	170,953	177,964
Shareholders' equity ratio	(%)	61.2	62.4	64.5	60.3	59.8	56.1	55.4	56.5	58.2	54.3	54.3
<b>Cash Flows</b>												
Cash flows from operating activities	(Millions of yen)	11,964	6,954	13,395	15,076	11,455	14,770	15,871	28,287	19,536	26,638	32,253
Cash flows from investing activities	(Millions of yen)	-2,821	-6,145	-7,891	-8,111	-9,875	-30,642	-10,427	-13,167	-11,029	-12,367	-14,016
Free cash flow	(Millions of yen)	9,143	809	5,504	6,965	1,580	-15,872	5,444	15,120	8,506	14,271	18,236
Cash flows from financing activities	(Millions of yen)	-1,028	855	-3,304	2,324	-273	12,843	-451	-9,044	-3,240	19,215	843
<b>Investments, etc.</b>												
Capital expenditures	(Millions of yen)	4,033	4,670	7,882	7,680	11,001	16,309	13,796	11,639	10,239	12,834	15,165
Depreciation and amortization	(Millions of yen)	4,523	4,146	3,743	4,279	4,905	6,110	6,816	7,534	7,240	8,794	9,619
R&D expenses	(Millions of yen)	9,480	10,060	10,092	10,774	11,986	12,341	12,933	13,911	15,183	16,254	15,594
R&D expenses to net sales	(%)	8.0	8.1	8.6	7.8	7.8	7.2	7.6	7.1	7.2	8.1	8.3
<b>Per Share Information</b>												
Net income	(Yen)	187.46	204.88	174.87	212.76	250.28	305.73	307.74	386.30	529.24	367.09	312.58
Net assets	(Yen)	1,986.77	2,133.44	2,346.45	2,699.88	2,928.82	3,078.40	3,148.70	3,565.00	3,826.44	4,053.30	4,217.45
Cash dividends	(Yen)	17.00	40.00	50.00	60.00	67.00	70.00	85.00	116.00	145.00	130.00	90.00
<b>Other Indicators</b>												
Return on equity	(%)	9.7	9.9	7.8	8.4	8.9	10.2	10.0	11.5	14.3	9.3	7.6
Return on assets	(%)	5.9	6.1	5.0	5.2	5.3	5.9	5.5	6.4	8.2	5.2	4.1
Consolidated dividend payout ratio	(%)	9.1	19.5	28.6	28.2	26.8	22.9	27.6	30.0	27.4	35.4	28.8
Nonconsolidated dividend payout ratio	(%)	30.3	30.5	37.5	48.9	38.5	35.1	46.7	53.8	50.7	46.4	52.3
Overseas sales ratio	(%)	63.8	60.3	61.1	64.9	69.0	69.3	66.8	66.7	68.7	69.0	69.2
<b>Human Resources</b>												
Number of employees	(People)	5,202	5,448	5,530	5,787	5,965	6,831	7,149	7,399	7,943	8,288	8,269
Ratio of overseas employees	(%)	55.7	56.6	57.0	57.9	58.4	62.3	62.0	61.6	62.3	62.5	62.4

Notes: The Japanese Yen amounts are rounded down to the nearest million.

1. HORIBA, Ltd. and its domestic consolidated subsidiaries had formerly recognized revenue mainly on a shipping basis. However, starting from fiscal 2016, HORIBA, Ltd. and its domestic consolidated subsidiaries changed its revenue recognition method to recognize revenue on a completion date of installation basis or a delivery date basis under the terms and conditions of the relevant contracts. The amounts in or before the fiscal 2015 are not retrospectively revised.

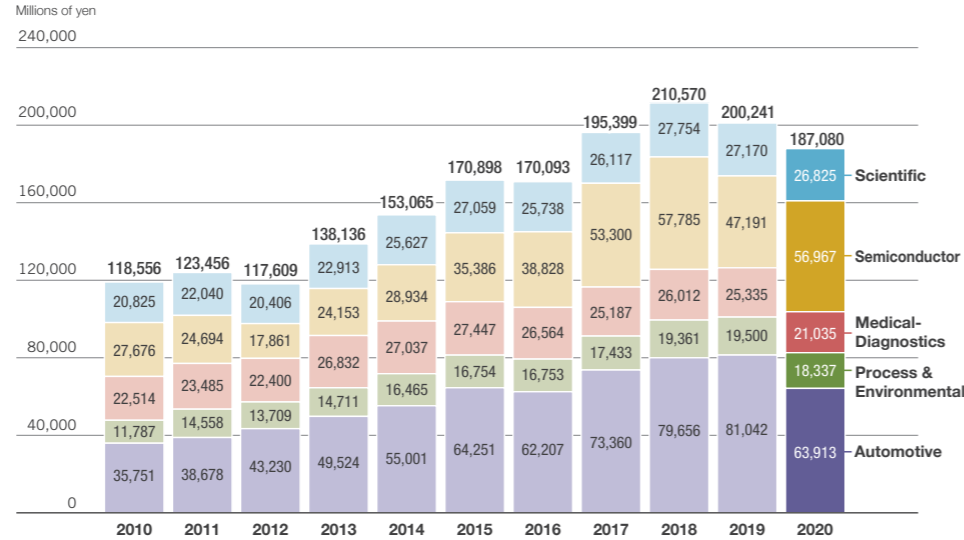
2. As of beginning of the fiscal year 2019, HORIBA, Ltd. and its consolidated subsidiaries apply the Partial Amendments to Accounting Standards for Tax Effect Accounting (ASBJ Statement No. 28, February 16, 2018). These accounting standards applied retroactively for figures prior to the fiscal year 2018. The amounts in or before the fiscal year 2017 are not retrospectively revised.

# Financial Data

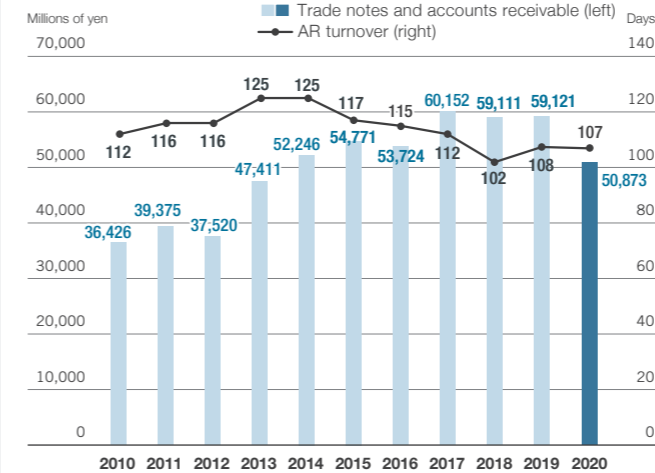
## Eleven-year summary

### Net sales by segment

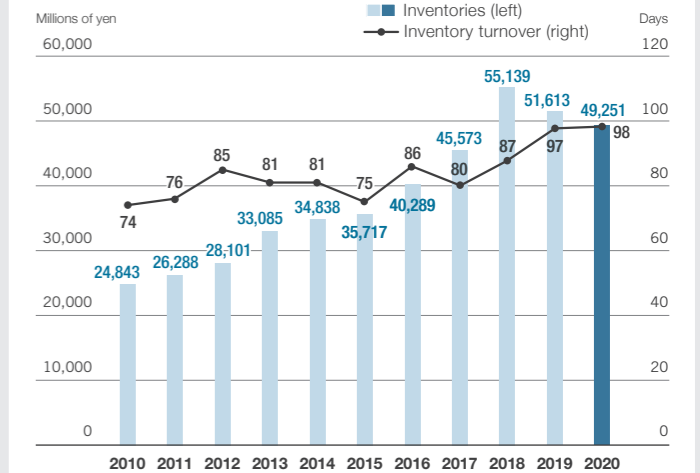
We saw sales decline for the second consecutive year in the year ended December 31, 2020. This was due to a decrease in sales in businesses other than the Semiconductor segment, whose sales increased in response to expansion of semiconductor manufacturers' capital expenditures.



### Accounts receivable (AR) and AR turnover (days)

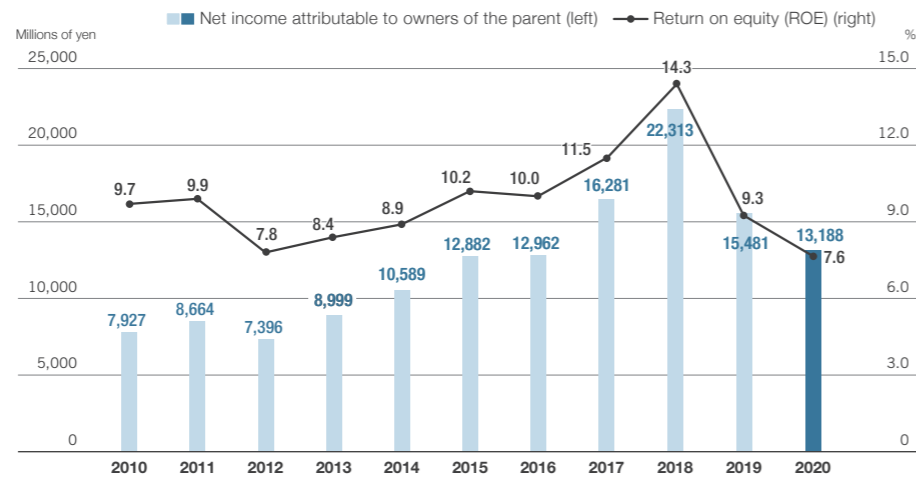


### Inventories and inventory turnover (days)

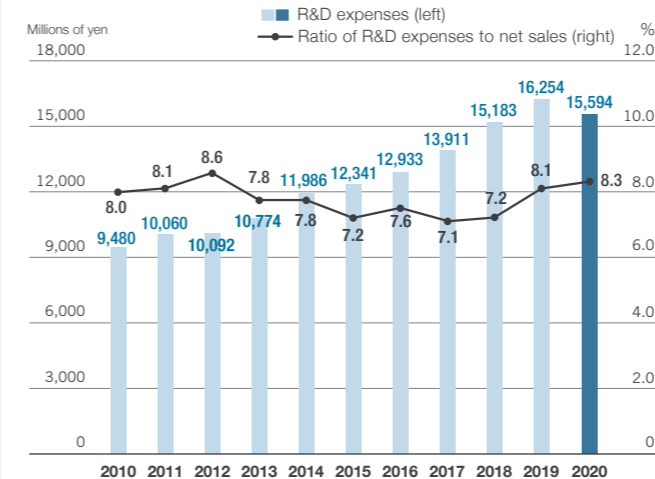


### Net income attributable to owners of the parent and ROE

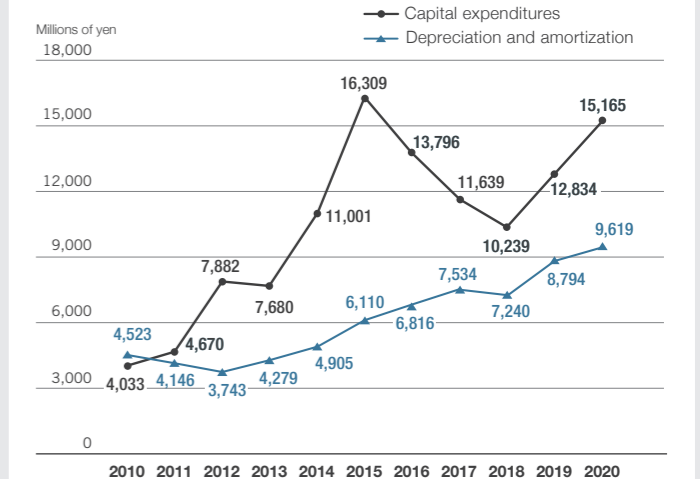
We saw net income attributable to the parent decrease for the second consecutive year for the year ended December 31, 2020, mainly owing to a decline in sales and operating income. ROE finished at 7.6%.



### R&D expenses and R&D expenses to net sales

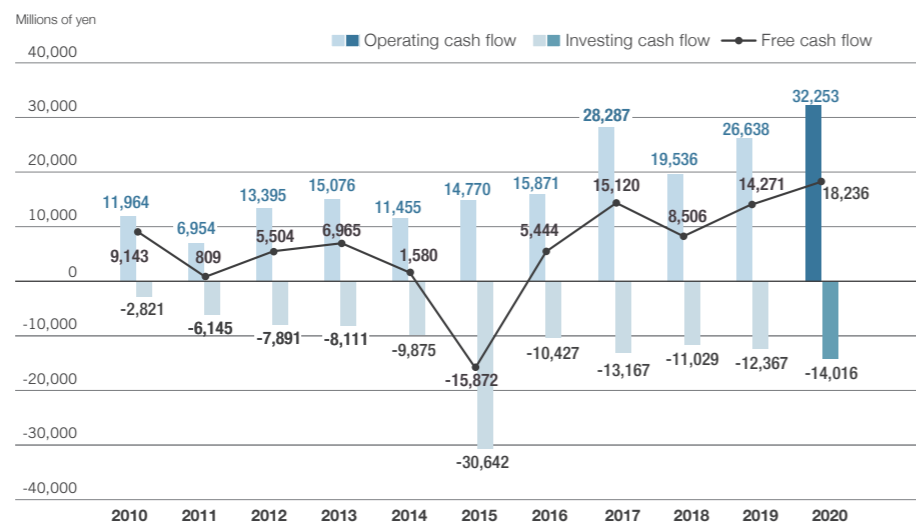


### Capital expenditures and depreciation and amortization

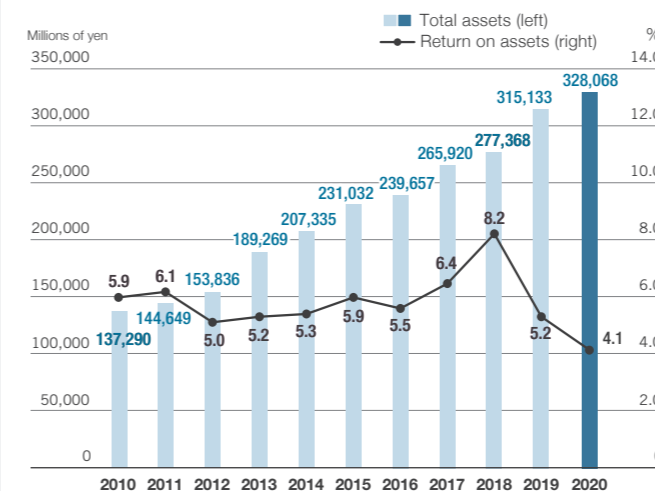


### Cash flows

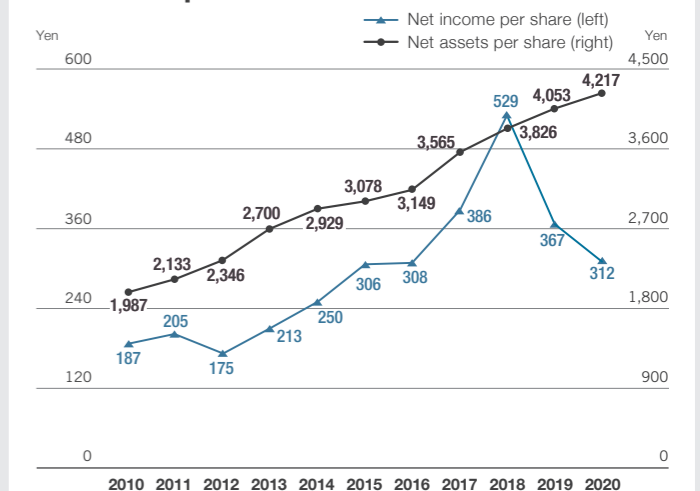
In the fiscal year ended December 31, 2020, we pushed ahead with investments in areas that we position as drivers of medium- to long-term growth, including the construction of a new building at a core base of our service business, the construction of a new facility in China, and the expansion of our plant for electric vehicle measurement-related equipment. During this period, there was a year-on-year increase in operating cash flow, mainly due to the collection of trade receivables, and free cash flow amounted to a positive 18.2 billion yen.



### Total assets and return on assets



### Net income per share and net assets per share



HORIBA's five measurement businesses



Automotive segment



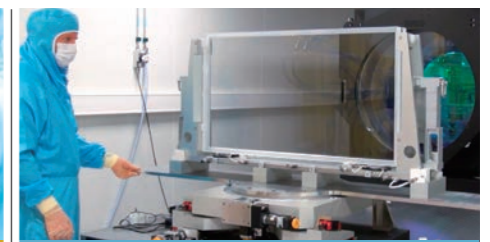
Process & Environmental segment



Medical-Diagnostic segment



Semiconductor segment

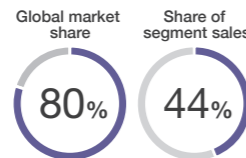


Scientific segment

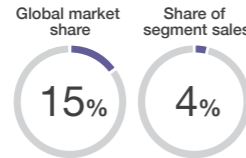
Major products and market shares

Note: Market shares quoted are HORIBA's estimates.

› Emission measurement systems

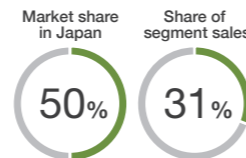


› Driveline test systems

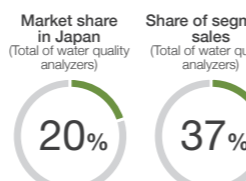


- Automotive emission analyzers
- Onboard emission measurement systems
- Engine test systems
- Brake test systems
- Fuel cell test systems
- Battery test systems
- Vehicle development engineering
- Testing engineering
- Lease and management of R&D facilities

› Stack gas analyzers

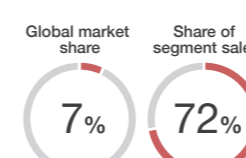


› H-1 series of industrial water quality analyzers



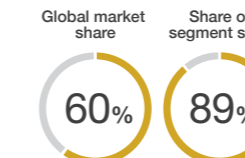
- Water quality analysis and examination systems
- Air pollution analyzers
- Environmental radiation meters
- Process measurement equipment

› Hematology analyzers

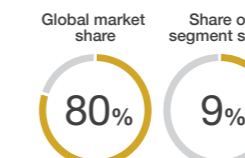


- Hematology and CRP analyzers
- Hematology analyzers
- Immunology analyzers
- Clinical chemistry analyzers
- Blood glucose analyzers

› Mass flow controllers

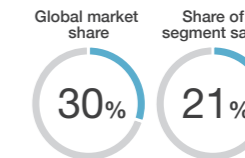


› Chemical concentration monitors

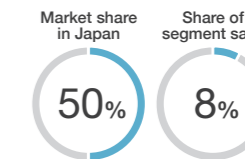


- Reticle/mask particle detection systems
- Residual gas analyzers
- Vaporizers

› Raman spectrometers



› pH meters



- pH meters
- Particle-size distribution analyzers
- X-ray fluorescence analyzers
- Elemental analyzers
- Fluorescence spectroscopy/fluorescence lifetime spectroscopy
- Optical components; spectrometers and detectors
- Gratings

Major customers

- Automotive manufacturers
- Automotive component manufacturers
- Government agencies

- Electric power companies
- Government agencies
- Manufacturers

- Medical testing centers
- Small-to medium-sized hospitals
- Physicians in private practice

- Semiconductor production equipment manufacturers
- Semiconductor device makers

- Manufacturers/Research institutions
- Universities/Government agencies
- Electric power companies

Product applications

- Development of new gasoline, diesel, and hybrid powertrains
- Certification and quality control of completed vehicles
- Inspection of in-use vehicles

- Measurement of wastewater and gaseous emissions
- Monitoring of environmental pollution

- Diagnostic testing
- Medical checkup

- Controlling flow of gases and liquids, monitoring of cleaning fluid concentrations in semiconductor manufacturing processes
- Quality control inspections of semiconductors and LCDs

- R&D
- Product quality testing
- Criminal forensics

Major risks and opportunities

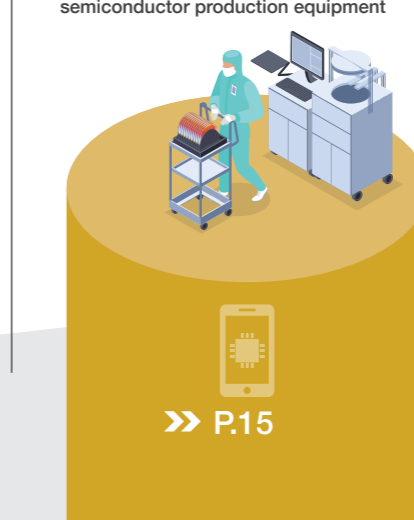
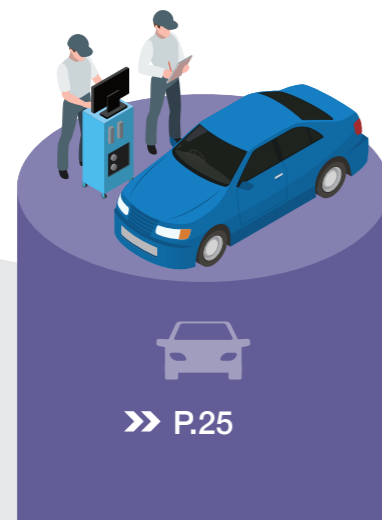
- Changes in emission gas regulations
- The automotive industry's capital spending and R&D investments

- Changes in environmental regulations by government agencies
- Developments in energy efficiency improvement at factories and power generation plants

- Changes in total healthcare expenditures caused by changes in populations and other factors
- Changes in medical insurance systems in different countries

- Capital spending of semiconductor manufacturers and others in association with fluctuating demand for semiconductors
- Production trends of manufacturers of semiconductor production equipment

- Changes in R&D budgets at government agencies, universities, and research institutions
- Changes in the private sector's R&D spending and capital spending for production



## The origins of HORIBA

As the World War II came to a close in 1945, our founder, Masao Horiba, established HORIBA Radio Laboratory with the aim of continuing the research he had done at university. Later, in 1953, he established HORIBA, Ltd. on the strength of the success of manufacturing Japan's first glass electrode pH meter. Started in Kyoto as a student startup, HORIBA began as an R&D-oriented company that pursued unique technology and emphasized expertise, and has since rolled out a wide variety of products in the market.



1945  
HORIBA RADIO LABORATORY was established.



1950  
HORIBA pioneers the first glass electrode pH meter manufactured in Japan.

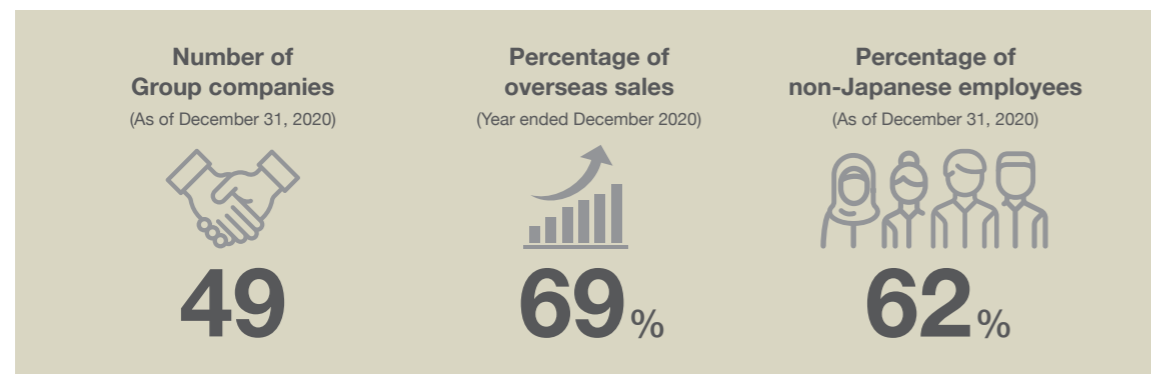


2015  
Acquired MIRA, Ltd. (now HORIBA MIRA Limited.) in the U.K.

Globalization has progressed greatly since Atsushi Horiba became president in 1992, and today, more than 8,000 people have gathered at HORIBA, over 60% of whom are non-Japanese, under the corporate culture represented by the corporate motto "Joy and Fun." The entrepreneurship, which has prevailed since HORIBA's founding, has been passed down globally, and the company has built relationships of mutual support and trust even overseas, where the backgrounds and cultures are completely different from those of Japan.

## Business characteristics

HORIBA operates its business in five segments: Automotive, Process & Environmental, Medical-Diagnostics, Semiconductor, and Scientific, and has over 1,000 products in various markets. HORIBA's business is characterized by a variety of products in small quantities and global expansion. We have a top-level global market share for emission measurement systems, which are indispensable for automobile development; mass flow controllers, which are necessary for semiconductor manufacturing; and Raman spectroscopic analyzers, which are used in many academic institutions and laboratories. We grow our business by providing customized analytical and measurement instruments and services to our customers based on a wide range of core technologies.



## Corporate data

### Corporate information

<b>Head office</b>	2 Miyahigashi, Kisshoin, Minami-ku Kyoto 601-8510 Japan	
<b>Founded</b>	October 17, 1945	
<b>Incorporated</b>	January 26, 1953	
<b>Net sales</b>	187,080 million yen (Consolidated)	Fiscal 2020
<b>Paid-in capital</b>	12,011 million yen (Consolidated)	As of December 31, 2020
<b>Number of employees</b>	8,269 (Consolidated)	As of December 31, 2020
<b>Fiscal closing date</b>	December 31, annually	
<b>Annual Meeting of Shareholders</b>	Held in March	
<b>Transfer agent</b>	Sumitomo Mitsui Trust Bank, Limited	
<b>Stock listings</b>	Tokyo Stock Exchange, First Section Securities Code: 6856	
<b>Independent auditor</b>	KPMG AZSA LLC	

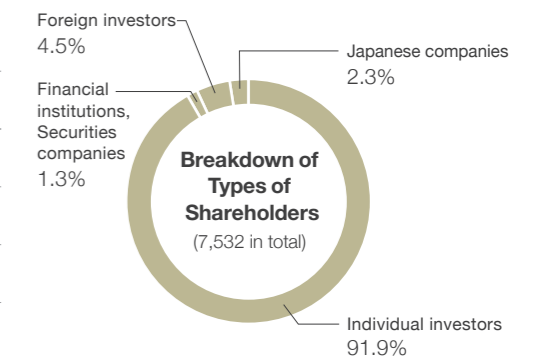
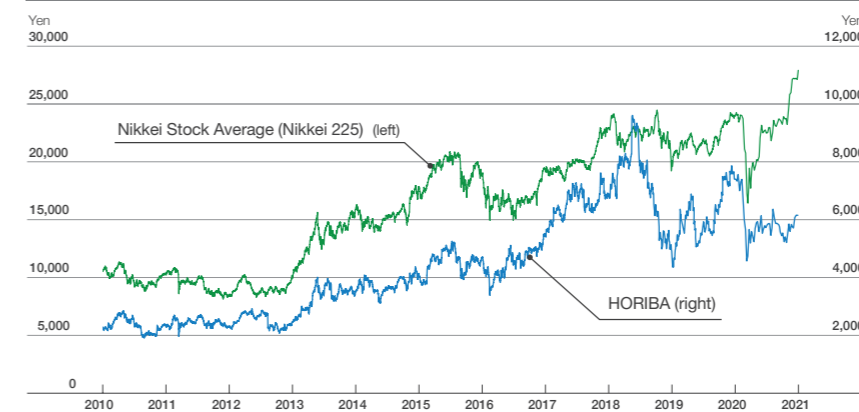
### Major shareholders

As of December 31, 2020

Name of shareholders	Shares (Thousands)	Percentage* (%)
The Master Trust Bank of Japan, Ltd.	3,463	8.21
Custody Bank of Japan, Ltd.	3,048	7.22
National Mutual Insurance Federation of Agricultural Cooperatives	1,682	3.99
Atsushi Horiba	1,041	2.47
THE KYOTO CHUO SHINKIN BANK	830	1.97
The Bank of Kyoto, Ltd.	828	1.96
HORIBA Raku-Raku Kai	827	1.96
HORIBA Employee Shareholding Association	743	1.76
SSBTC CLIENT OMNIBUS ACCOUNT	687	1.63
Dan Horiba	641	1.52

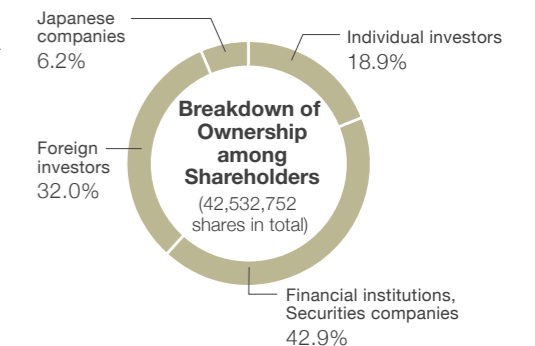
\* Percentages of shares are calculated by deducting own shares (335,478 shares).

### Stock Price Trend



### TSR\*

Investment period	1 year	3 years		5 years	
	Cumulative / Annual Rate	Cumulative	Annual Rate	Cumulative	Annual Rate
HORIBA	117.0%	148.9%	103.0%	166.3%	140.9%
TOPIX (including dividends)	98.1%	117.5%	96.6%	111.2%	116.6%



\* Total Shareholders' Return: Total return on investment that combines capital gains and dividends



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Kyoto 601-8510 Japan  
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**[https://www.horiba.com/en\\_en/](https://www.horiba.com/en_en/)**

