



# Financial Information

**HORIBA, Ltd.**

November, 2021

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- 2021 3Q (Jan.- Sep.) Results
- 2021 Forecast
- Topics – HORIBA's Contribution for Social Issues
- Shareholder Return
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# 2021 3Q (Jan.-Sep.) Results

(Billions of yen)

Increased in sales and profits mainly due to an increase in sales of the Semiconductor segment

	2020	2021	vs 2020	
	9 Months Results (Jan.-Sep.)	9 Months Results (Jan.-Sep.)	Changes	%
★: Record-high				
Sales	129.7	★ 153.9	+24.1	+19%
Operating Profit	10.9	★ 19.8	+8.8	+81%
O.P.%	8.5%	12.9%	+4.4p	-
Ordinary Profit	10.7	★ 19.8	+9.0	+84%
Net Income attributable to Owners of Parent	7.5	★ 13.7	+6.1	+82%
USD/JPY	107.55	108.58	+1.03	
EUR/JPY	120.93	129.87	+8.94	

# 2021 3Q (Jan.-Sep.) Results by Segment

(Billions of yen)

★: Record-high	Sales				Operating profit			
	2020	2021	vs 2020		2020	2021	vs 2020	
	9 Months Results (Jan.-Sep.)	9 Months Results (Jan.-Sep.)	Changes	%	9 Months Results (Jan.-Sep.)	9 Months Results (Jan.-Sep.)	Changes	%
Auto	41.6	37.3	-4.3	-10.4%	-0.0	-1.9	-1.8	-
P&E	12.7	★ 14.5	+1.7	+13.8%	0.7	1.2	+0.5	+69.7%
Medical	15.2	19.1	+3.8	+25.2%	-0.4	0.0	+0.5	-
Semi	41.7	★ 62.6	+20.9	+50.1%	9.8	★ 19.7	+9.8	+99.2%
Scientific	18.3	★ 20.2	+1.9	+10.6%	0.8	0.6	-0.1	-18.7%
Total	129.7	★ 153.9	+24.1	+18.6%	10.9	★ 19.8	+8.8	+81.1%

- <Auto> Declined in sales of emission measurement systems in Japan and Asia
- <P&E> Increased in sales of stack gas analyzers in Asia
- <Medical> Increased in sales of hematology analyzers in Americas and other areas
- <Semi> Sales to semiconductor production equipment manufacturers increased, in response to expansion of semiconductor manufacturers' capital expenditures
- <Scientific> Increased in sales of optical components in Americas; meanwhile increased in R&D expense

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# 2021 Forecasts

(Billions of yen)

Earning forecasts for FY2021 remain unchanged considering impacts from difficulties of material procurement

	2020	2021		Changes	
	Results	Previous Forecasts (as of Aug.10)	Forecasts (as of Nov.11)	vs 2020	vs Previous Forecasts
★: Record-high					
Sales	187.0	220.0	★ 220.0	+32.9	-
Operating Profit	19.6	28.5	28.5	+8.8	-
O.P.%	10.5%	13.0%	13.0%	+2.5p	-
Ordinary Profit	19.3	28.0	28.0	+8.6	-
Net income attributable to Owners of Parent	13.1	18.5	18.5	+5.3	-
USD/JPY	106.76	109.00	109.00	+2.24	-
EUR/JPY	121.88	130.00	130.00	+8.12	-

# 2021 Forecasts by Segment

(Billions of yen)

	Sales					Operating				
	2020	2021		Changes		2020	2021		Changes	
	Results	Previous Forecasts (as of Aug.10)	Forecasts (as of Nov.11)	vs 2020	vs Previous Forecasts	Results	Previous Forecasts (as of Aug.10)	Forecasts (as of Nov.11)	vs 2020	vs Previous Forecasts
★ :Record-high										
Auto	63.9	64.0	64.0	+0.0	-	2.4	1.0	1.0	-1.4	-
P&E	18.3	21.0	★ 21.0	+2.6	-	1.6	1.5	1.5	-0.1	-
Medical	21.0	25.0	25.0	+3.9	-	-0.4	0.5	0.5	+0.9	-
Semi	56.9	81.0	★ 81.0	+24.0	-	14.0	24.0	★ 24.0	+9.9	-
Scientific	26.8	29.0	★ 29.0	+2.1	-	1.9	1.5	1.5	-0.4	-
Total	187.0	220.0	★ 220.0	+32.9	-	19.6	28.5	28.5	+8.8	-

Earning forecasts by segment for FY2021 also remain unchanged.  
Material procurement is getting tight in all segments and its impact on business performance is uncertain.



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# HORIBA's Contribution to Social Issues

## Cross-segmentation in Response to Various Social Issues

### 1. Market Oriented Business

Energy & Environment

Bio & Healthcare

Materials & Semiconductor

Three Fields

To develop analysis and measurement solutions, utilizing HORIBA's core technologies, in the leading three business fields of the mega trend

### 2. Solution Provider Beyond Life Cycle Management

To support customers' core businesses from all aspects – from product introduction to replacement

### 3. HORIBA Core Values “The Next Stage of Super Dream Team”

Mid-Long Term Management Plan “MLMAP2023”

# Business Expansion in the Energy Field

## Acquisition of BeXema, a manufacturer of power supplies in Germany

- ✓ BeXema supplies power and electronic load devices used in test equipment for fuel cells and battery testing equipment

BeXema

- ✓ HORIBA established the system to provide evaluation and measurement solution technologies for fuel cells, batteries, and water electrolysis

HORIBA

### Acquisition of the power electronics technology



BeXema has supplied power supplies to HORIBA FuelCon for some time.

BeXema's charging-discharging device, converter, and emulator installed in the battery test room of CELL0\*

\*CELL0: a test room that evaluates and analyzes batteries and fuel cells for electric vehicles. It is established in HORIBA BIWAKO E-HARBOR, Biwako Factory

<b>Company Name:</b>	<b>BeXema GmbH</b>
<b>Established:</b>	2014
<b>Sales:</b>	Approx. 250 mln yen (FY2020)
<b>Workforce:</b>	18
<b>Contract date:</b>	July 2, 2021



HORIBA FuelCon GmbH

BeXema GmbH

# Leading the Way to a Sustainable Energy Society

Aiming to develop new technologies and create business in the energy field

## Launch of HORIBA Institute for Mobility and Connectivity<sup>2</sup>



- ✓ A research institute supported by HORIBA opened in July
- ✓ Undertook a standardization project from a public institution

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



- Conduct research on electrochemistry, renewable energy, energy storage, energy grid, etc.
- Achieve connectivity of electric power and mobility

Promote innovation for next-generation mobility and urban energy networks

## Contribution to a hydrogen energy society

### Demand growth for hydrogen generators using water electrolysis



- ✓ HORIBA FuelCon provides equipment that enables to evaluate performance efficiency of water electrolysis cells for hydrogen production; demand is increasing

#### Evaluator EC/ES

Control the temperature and flow volume of water and evaluate the performance and efficiency of water electrolysis cells up to 5000kW.

### Contributing to the early construction of a hydrogen-based society with "measurement" technology

- ✓ Joined the Japan Hydrogen Association in March 2021



【Japan Hydrogen Association】

Established: December 7, 2020

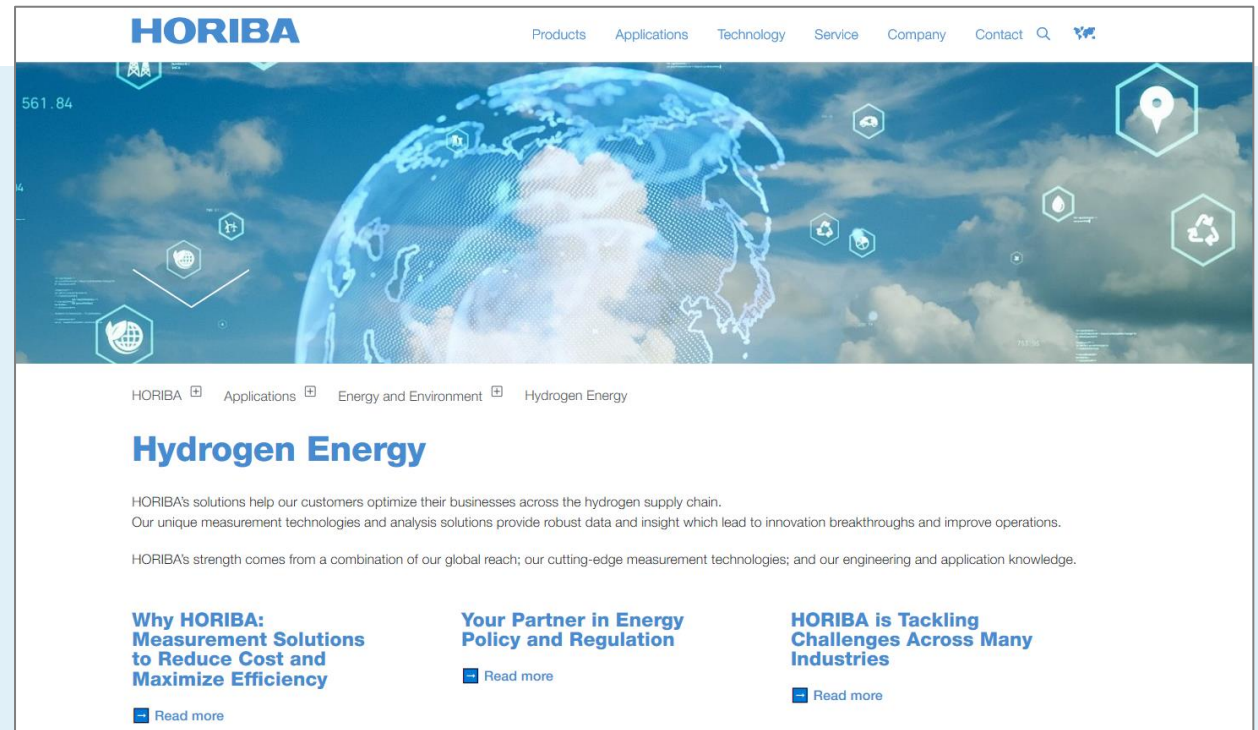
Purpose: As a cross-industry and open organization with a bird's eye view of the entire supply chain, it will support the early creation of a hydrogen society by carrying out social implementation projects."

# Opened a Special Website for Hydrogen Energy

Introducing the energy market trend from HORIBA's point of view and analytical and measurement solutions to achieve carbon neutrality

✓ **Provide analytical and measurement solutions to generate, store, and utilize energy intelligently**

- Material evaluation and performance evaluation of fuel cells and water electrolysis using hydrogen
- Quality evaluation and measurement of impurities and gases during hydrogen production
- Analysis and measurement related to carbon recycling technology



HORIBA Hydrogen Energy

Search

[https://www.horiba.com/en\\_en/applications/energy-and-environment/hydrogen/](https://www.horiba.com/en_en/applications/energy-and-environment/hydrogen/)

# Contributing to Higher Efficiency of Vehicle Testing

Providing total measurement solutions for vehicle development

## Launch of VULCAN EVO

- ✓ Sales launch of "VULCAN EVO" chassis dynamometer in Japan
  - Easy maintenance to sharply reduce downtime
  - Evaluation testing for vehicle performance and emissions in compliance with international standards for ICEs, EVs, FCVs, PHEVs, etc.



【International standards: WLTP】

- Worldwide harmonized Light vehicles Test Procedure
- WLTP-based measurement of fuel efficiency and electricity efficiency became mandatory in Japan in April 2020

## Full-scale development of STARS SOAK +

- ✓ Measures vehicle conditions and the soak room temperature before emission gas/fuel economy test.
  - Improves test efficiency by preventing human error and ensuring traceability

The status of the vehicle in the soak room can be centrally managed with a tablet terminal.



【Soak Room】

- A room kept at a certain temperature.
- In order to measure the test data accurately, the test vehicle is put in the room in advance

Contributing to reducing the test burden on auto-related manufacturers

# Development of New Technology “IRLAM”

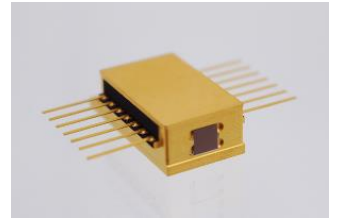
Providing new value with the cutting-edge core technology

## IRLAM: Infrared Laser Absorption Modulation

- ✓ The world's first\*<sup>1</sup> gas concentration calculation algorithm inspired by the concept of data science
- ✓ By downsizing and lengthening the Heliot cell (a container that contains the gas to be measured), high-sensitivity, high-speed measurement is possible
- ✓ In-house manufactured quantum cascade laser (QCL) meets needs for a wide range of gas measurement

\*1: HORIBA estimate

In-house developed laser



## New products with IRLAM technology

### Laser gas analyzer for process monitoring “PLGA-1000”

- ✓ High-sensitivity, high-speed continuous measurement of raw material gas and impurity gas in the petrochemical manufacturing process
- ✓ Optimize productivity



### Adopted for automotive emission measurement systems “OBS-ONE-XL” “XLA-13H” “XLA-11”

- ✓ Gases that were difficult to measure can now be measured with high accuracy

Adopted for OBS-ONE-XL onboard emission measurement system



Built-in!

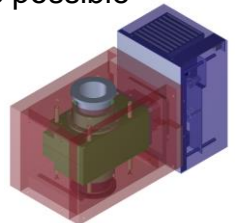


Adopted for MEXA-ONE  
<Measurable gas type>  
XLA-13H: Formaldehyde  
XLA-11: Nitrous oxide

### Semiconductor process monitor (under development)

- ✓ Real-time monitoring in the semiconductor manufacturing process will become possible

Application in semiconductor gas concentration monitors (rendering)



Contributing to next-generation energy development such as hydrogen, industrial process monitoring, and tightening of environmental regulations

# High value-added solutions for semiconductor manufacturing processes

Various applications that contribute to semiconductor manufacturing

## Particle detection systems

### Optical Smart Sensing - Metrology

Semicon. manufacturing processes

HORIBA's response

Reticle/mask manufacturing process

Blank mask inspection

Inspection of three surfaces (Pattern, Glass, Pellicle)

Photolithography/wafer process

Pellicle inspection

Various mask sizes/board inspection

Representative product



### PR-PD3EP

High-accuracy detection of foreign substances on EUV-process pellicles

Strengthen the production line in anticipation of an increase in demand

## New dissolved oxygen meter



### HD-960LR

Highly accurate continuous monitoring of dissolved oxygen in chemicals used in semiconductor manufacturing processes

Expands types of chemicals and contributes to improvement in yields

## Centrifugal nanoparticle analyzer



### Partica Centrifuge

Measure the size of particles from the sedimentation velocity of particles

Contributes to improving abrasive uniformity in flattening processes (CMP) of semiconductor manufacturing



# Business Expansion in the Life Science Field

Expanding applications - from R&D to manufacturing processes

## Cooperation with SHIMADZU: LC-Raman System

"Separate" technology to extract measurement targets from mixed samples

Separation & collection



High Performance Liquid Chromatograph (LC)

Control / analysis / data management



Dedicated software LiChRa™

"Visible" technology to distinguish differences in molecular structure

Qualitative analysis



Raman Spectrometers

A complex system that combines SHIMADZU's LC and HORIBA's Raman with the dedicated software program "LiChRa"

## Rapid Microorganism Detection System Rapica

Coming soon!



- ✓ Rapid detection of the presence or absence of microorganisms by the high-sensitivity ATP method\*
- ✓ Automated protocols such as automatic reagent introduction
- ✓ Possible to manage the trend of data
- Shorter inspection time for raw material arrival and product shipment
- Management of environmental protection and water use
- Investigation at the time of pollution and resumption of production

\* Measure the amount of light emitted by combining ATP which exists in the cells of living organisms with enzymes to emit light.

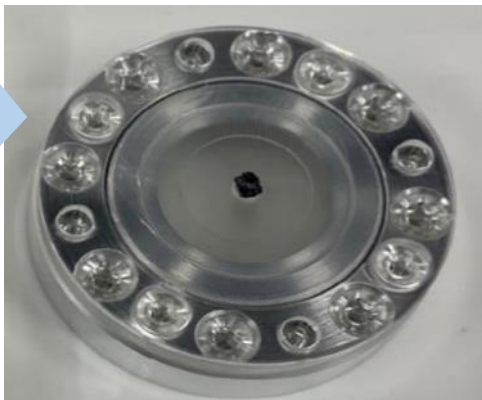
# Participation in the HAYABUSA2 Sample Analysis Project

## HORIBA's core technology for the future



- ✓ Implemented non-destructive, non-contact analysis of elements contained in samples of asteroid Ryugu
- ✓ Advanced analytical and measurement equipment and high skills of technicians are required
- ✓ HORIBA Techno Service, which specializes in high-precision microanalysis, participates

Analyzing the sample with our X-ray fluorescence



Development of a container (cell) dedicated to samples of Ryugu to perform advanced sample handling

## Analytical Solution Plaza has been established to broaden service business



Established in a new building of HORIBA Techno Service



### Analytical Solution Plaza

- ✓ A new "place" for exchange analysis
- ✓ Providing analytical technology through contracted analysis and joint research by analytical engineers

Results of the analysis to be announced by JAXA in December 2021. Check it up!

# 2021 Masao Horiba Awards (Award ceremony held on Oct. 19, 2021)

## Masao Horiba Awards

Support young researchers and engineers worldwide and contribute to accelerating innovation

Established in 2003 from the thought of the founder, Dr. Masao Horiba;  
"I would like to encourage researchers who are trying to establish the basics in the field of analysis and measurement and clarify advanced analytical technologies."

### 【Theme of 2021】

Optical/spectroscopic analysis and measurement technologies for life science

- ✓ Focus on analysis and measurement technologies that contribute to R&D and production of new drugs, including antibody drugs
- ✓ Received record-high 51 entries worldwide and selected three Masao Horiba Award winners and one honorable mention.
- ✓ Aim to realize research results and lead to business expansion in the life science field by strengthening relationship with award winners and research institutions.



The award ceremony was held at Techno Plaza in the new office building of HORIBA Techno Service (Oct. 19, 2021)

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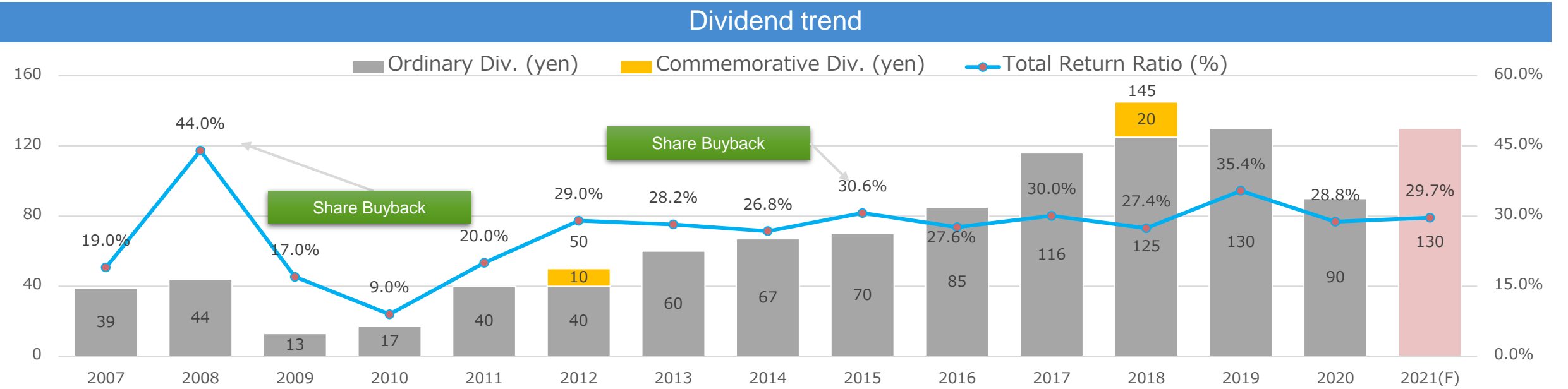
# Shareholder Return

## Basic Policy

- Dividend payment + Share buyback = 30% of Consolidated net profit to be targeted
- Remaining earnings are retained internally for strategic investment (i.e. facilities, M&A)

### Dividends per share and Share buybacks

- 2019 Results: 130YEN [Interim 50yen / Year-end 80yen]
- 2020 Results: 90YEN [Interim 30yen / Year-end 60yen]
- 2021 Forecast: 130YEN [Interim 50yen / Year-end 80yen]



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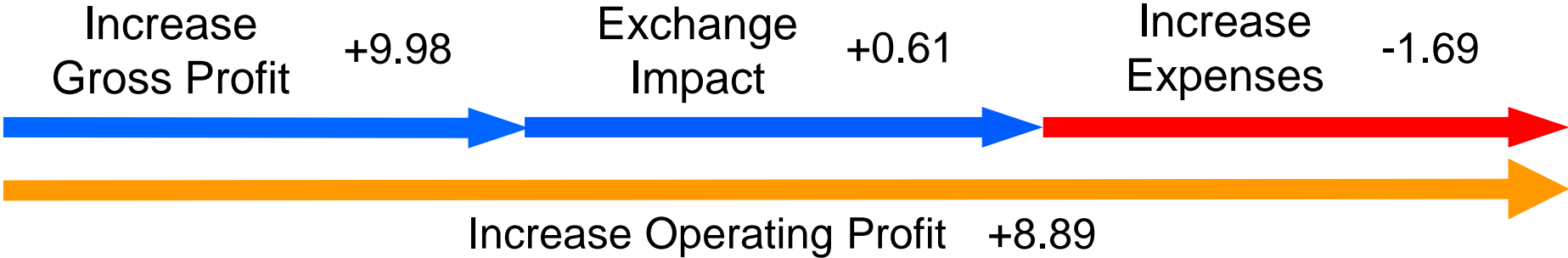
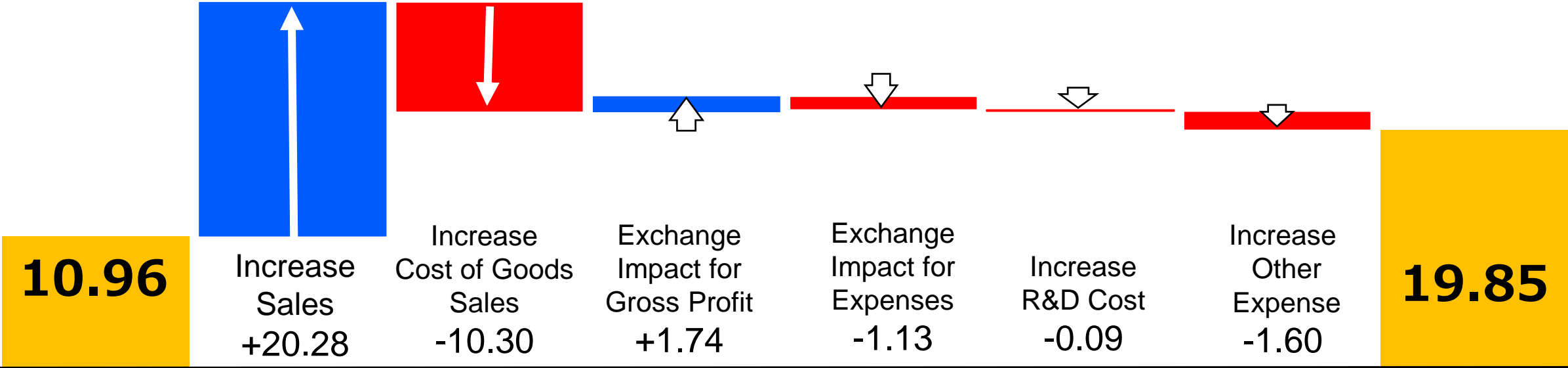
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# Operating Profit Analysis (vs 2020 Jan. – Sep.)

(Billions of Yen)

2020  
Jan. – Sep.

2021  
Jan. – Sep.



# Impact of Fluctuation in Foreign exchange

(Billions of Yen)

## Exchange rate impact for 2021 Jan. - Sep. (vs 2020 Jan. - Sep.)

Increase Sales	+3.87
Increase Cost of Goods Sales	-2.12
Impact to Gross Profit	+1.74
Increase Expenses	-1.13
Impact to Operating Profit	+0.61

(Yen)	2020 Jan - Sep	2021 Jan - Sep	Diff.
USD	107.55	108.58	+1.03
EUR	120.93	129.87	+8.94

## Exchange rate impact for 2021 Forecast 1 yen impact of Sales and O.P. (Yen appreciation)

	Sales	Operating Profit
USD	-0.55	-0.26
EUR	-0.30	-0.00

(Yen)	2021 Forecast
USD	109.00
EUR	130.00



# Capital Investment, Depreciation, R&D

(Billions of Yen)

	2020	2021			2021
	Results	Previous Forecasts (as of Aug.10)	Forecasts (as of Nov.11)	Diff.	Actual Jan. - Sep.
Capex	15.1	16.5	16.5	-	8.7
Depreciation and amortization	9.6	10.5	10.5	-	7.6
R&D expenses	15.5	17.0	17.0	-	12.0
to net sales(%)	8.3%	7.7%	7.7%	-	7.8%

## 2021 Topics

### PP&E:

Continuation: investment to HORIBA FuelCon's new facility, a new facility in China, etc.  
New: enhance the base of global production

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# Five Business Segments & Major Products

Figures are the sales composition ratio for FY 2020

**Automotive  
(34%)**



**Emission Measurement  
Systems**



**Process &  
Environmental  
(10%)**



**Stack Gas Analyzers**




**Medical  
Diagnostics  
(11%)**




**Automatic Blood Cell  
Counters plus CRP**




**Semiconductor  
(31%)**




**Mass Flow Controllers**



**Scientific  
(14%)**



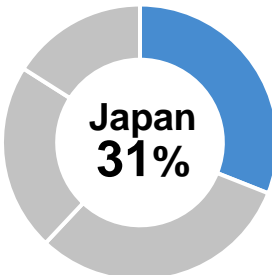
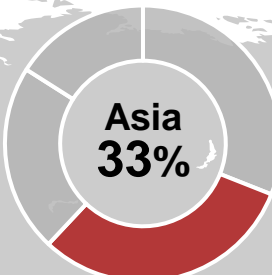
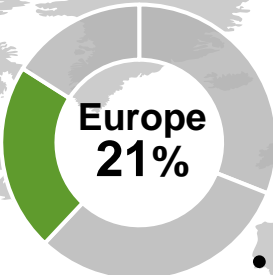
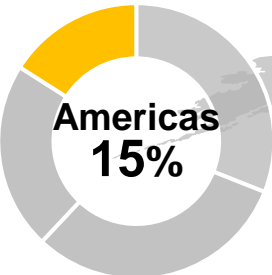
**Raman Imaging Device**



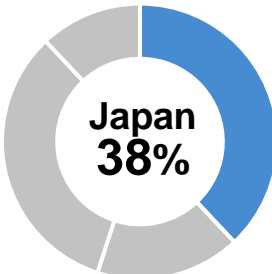
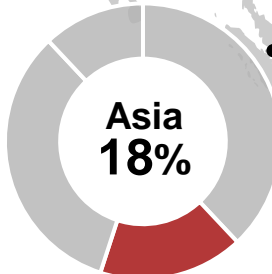
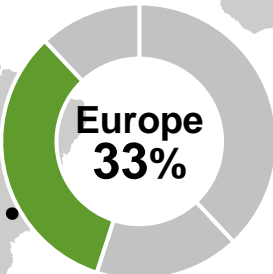
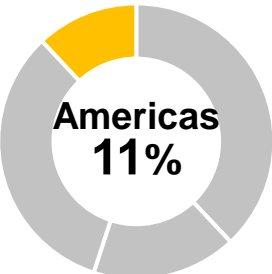
# Global Network

## Sales by region (as of Dec 2020)

● : Major business hubs



## Employee headcount by region (as of Dec 2020)



Number of companies  
(as of Dec 31, 2020)

**49**



Overseas sales ratio  
(as of Dec 2020)

**69%**



Foreign employee ratio  
(as of Dec 31, 2020)

**62%**

# Achieving Sustainable Growth Through M&A

## Major M&As

**1996**  
**ABX** (France)  
 [Medical]



**1997**  
**Jobin Yvon**  
 (France)  
 [Scientific]



**2005**  
**SCHENCK DTS**  
 (Germany)  
 [Automotive]



**2015**  
**MIRA** (UK)  
 [Automotive]

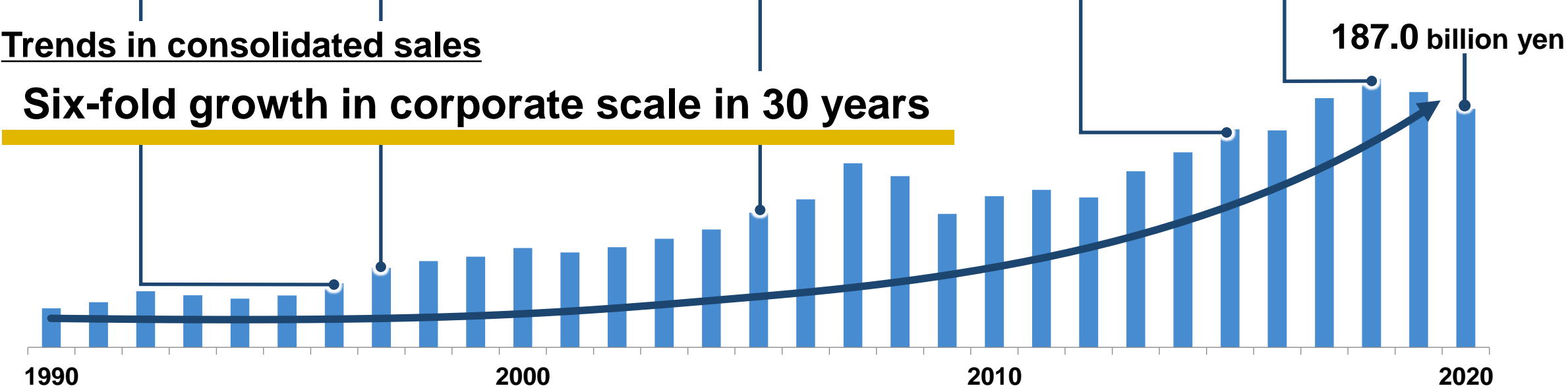


**2018**  
**FuelCon**  
 (Germany)  
 [Automotive]

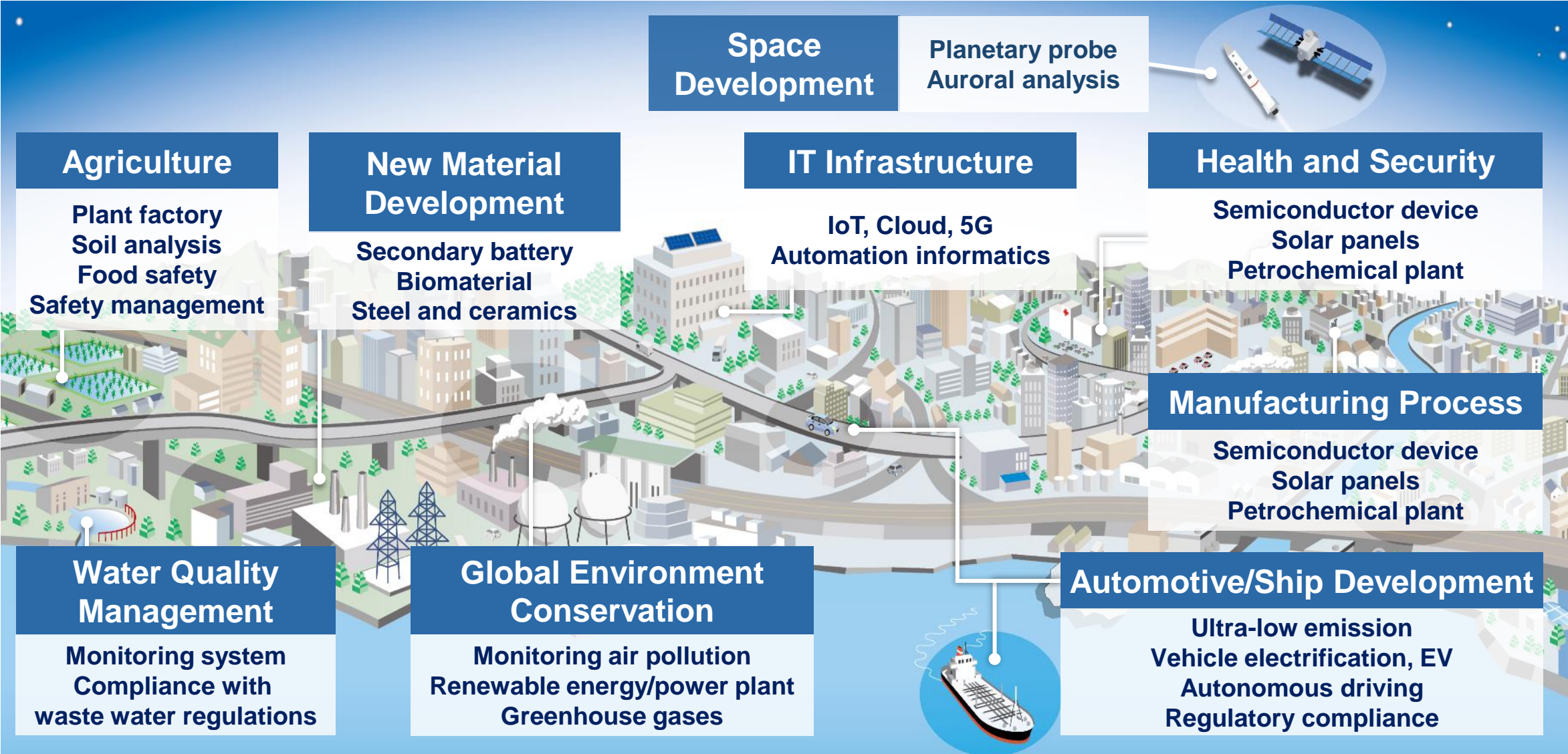


## Trends in consolidated sales

**Six-fold growth in corporate scale in 30 years**



# HORIBA's Business Domain



Omoshiro-okashiku  
Joy and Fun



**THANK YOU**

Terima kasih  
谢谢  
Gracias  
Σας ευχαριστώ πάρα πολύ  
धन्यवाद  
شُكْرًا  
Danke  
Tack ska du ha  
Grazie  
ขอบคุณครับ  
Обольшое спасибо  
ありがとうございました  
Cảm ơn  
Dziękuję  
Merci  
감사합니다