



# Financial Information

**HORIBA, Ltd.**

February, 2023

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- 2022 Results
- 2023 Forecast
- Outlines by Business Segment
- Topics - Various activities for target markets
- Shareholder Return
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# Review of 2022

## External Events

- ◆ The tense international situation, including the Ukraine crisis and increased complication of US-China relations
- ◆ Accelerated inflation, including a rise in energy prices, in addition to global procurement difficulties
- ◆ Progress in global structural reform of the semiconductor industry from the economic security perspective
- ◆ Growing interest in hydrogen energy, ammonia, and synthetic fuels
- ◆ Further heightened interest in life science

## Internal Events

- ◆ Accelerated cross-segment activities in three focused fields
- ◆ Business expansion in new markets related to hydrogen energy and life science
- ◆ Expanding applications of process measurement and control in industry
- ◆ Strengthened procurement capabilities through global cooperation within the HORIBA Group

# 2022 Results

(Billions of Yen)

	2021	2022			
	Results	Forecasts (as of Nov. 11)	Results	vs 2021	vs Forecasts (as of Nov. 11)
Sales	224.3	265.0	★ 270.1	+45.8	+5.1
Operating profit	32.0	43.0	★ 45.8	+13.7	+2.8
O.P.%	14.3%	16.2%	17.0%	+2.7p	+0.8p
Ordinary profit	32.0	43.5	★ 46.8	+14.8	+3.3
Net income attributable to owners of parent	21.3	30.0	★ 34.0	+12.7	+4.0
USD/JPY	109.90	133.00	131.62	+21.72	-1.38
EUR/JPY	129.91	138.00	138.14	+8.23	+0.14

# 2022 Results by Segment

(Billions of Yen)

	Sales					Operating profit				
	2021	2022				2021	2022			
	Results	Forecasts (as of Nov. 11)	Results	vs 2021	vs Forecasts (as of Nov. 11)	Results	Forecasts (as of Nov. 11)	Results	vs 2021	vs Forecasts (as of Nov. 11)
Auto	61.2	66.0	67.5	+6.2	+1.5	-0.0	-1.5	-0.6	-0.6	+0.8
P&E	20.2	23.5	★ 22.5	+2.3	-0.9	1.9	2.0	2.1	+0.1	+0.1
Medical	25.8	28.5	★ 29.7	+3.8	+1.2	0.1	0.5	-0.0	-0.2	-0.5
Semi	87.0	112.0	★ 114.0	+27.0	+2.0	28.0	39.5	★ 42.0	+13.9	+2.5
Scientific	29.9	35.0	★ 36.2	+6.2	+1.2	1.9	2.5	★ 2.5	+0.5	+0.0
Total	224.3	265.0	★ 270.1	+45.8	+5.1	32.0	43.0	★ 45.8	+13.7	+2.8

★ : Record-high

# 2022 Results (B/S, CF)

## B/S

- ◆ Total assets were ¥416.7bn, up ¥45.1bn, by increasing inventory
- ◆ Equity ratio: 57.6%

(compared to the end of Dec. 2021)

## CF

- ◆ Operating CF: Cash in ¥33.9bn due to operating profit
- ◆ Investing CF: Cash out ¥10.7bn due to capital investments
- ◆ Financial CF: Cash out ¥22.4bn due to repayments of long-term debt

} Free CF: + ¥23.2bn







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# HORIBA's Assumptions Regarding Market Environment

<p>General</p>		<p>Expect a recovery in economic activities in the “with or post-COVID-19” era. Remain concerned about the impact of global inflation and the complicated international situation.</p>
<p>Automotive</p>		<p>Anticipate accelerated use of hydrogen energy/batteries and digitalization of vehicle. Expect a recovery of demand for R&amp;D investment related to internal combustion engines in preparation for the introduction of new emission gas regulations in Europe.</p>
<p>Process &amp; Environmental</p>		<p>Expect business expansion in the new energy market in response to the decarbonization trend. Environmental regulation-driven demand remains strong; the needs for air and water quality measurement is growing in the semiconductor industry.</p>
<p>Medical</p>		<p>Expect strong sales of medical instrument in Japan and growing markets. Sales of instruments will lead while recovery in sales of reagent may take some more time.</p>
<p>Semiconductor</p>		<p>Capital investment by semiconductor manufacturers is likely to enter an adjustment phase. Anticipate mid-term growth in the semiconductor market and expansion in measurement demand.</p>
<p>Scientific</p>		<p>Demand is strong for measurement and analysis equipment for development and manufacturing processes in various markets. Anticipate an increase in demand in the life science market.</p>

# 2023 Forecasts

(Billions of Yen)

	2021	2022	2023	
	Results	Results	Forecasts	vs 2022
Sales	224.3	270.1	★ 290.0	+19.8
Operating Profit	32.0	45.8	★ 46.0	+0.1
O.P.%	14.3%	17.0%	15.9%	-1.1p
Ordinary Profit	32.0	46.8	45.5	-1.3
Net Income attributable to Owners of Parent	21.3	34.0	★ 35.5	+1.4
Net profit per share (Yen)	505	807	840	+33
ROE	11.2%	15.4%	14.1%	-1.3p

# 2023 Forecasts by Segment

(Billions of Yen)

	Sales			Operating profit		
	2022 Results	2023 Forecasts	vs 2022	2022 Results	2023 Forecasts	vs 2022
Auto	67.5	79.0	+11.4	-0.6	0.5	+1.1
P&E	22.5	★ 25.0	+2.4	2.1	2.5	+0.3
Medical	29.7	★ 31.0	+1.2	-0.0	0.5	+0.5
Semi	114.0	★ 115.0	+0.9	42.0	38.5	-3.5
Scientific	36.2	★ 40.0	+3.7	2.5	★ 4.0	+1.4
Total	270.1	★ 290.0	+19.8	45.8	★ 46.0	+0.1

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# 2022 Results and 2023 Forecasts

(Billions of yen)

## 2022 Results

\*1 Mechatronics  
\*2 Engineering Consultancy & Testing

■ Booking was strong, but the timing of shipments and acceptance inspections was delayed due to procurement difficulties.

【MCT\*1 and ECT\*2】

- Sales increased by capturing demand for vehicle electrification and hydrogen energy.
- Expenses also increased owing to rising materials prices, in addition to increased investment in growth fields such as hydrogen energy and batteries.

## 2023 Full Year Forecasts Medium- to long-term outlook

\*Announced in November 2022

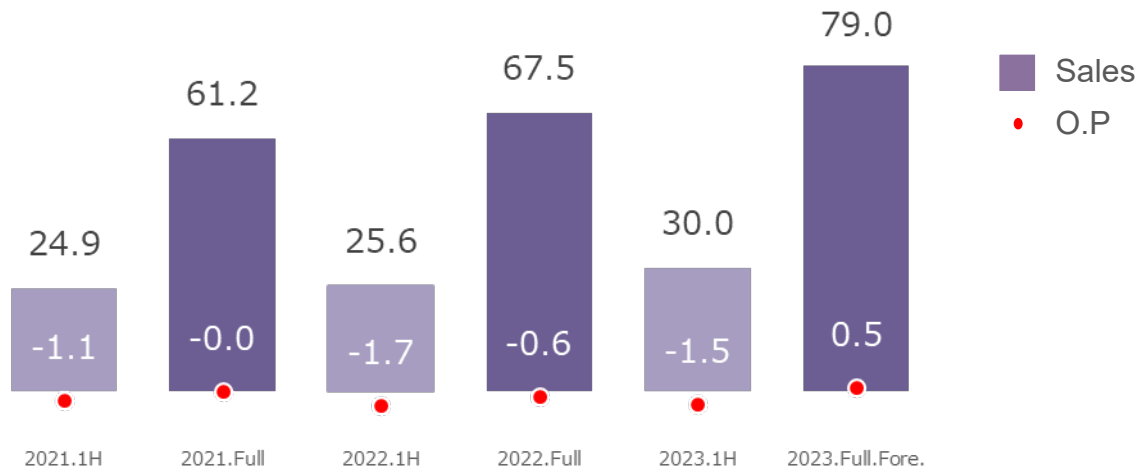
【EMS】

Increase in demand in anticipation of the introduction of new emission gas regulations\* in Europe.

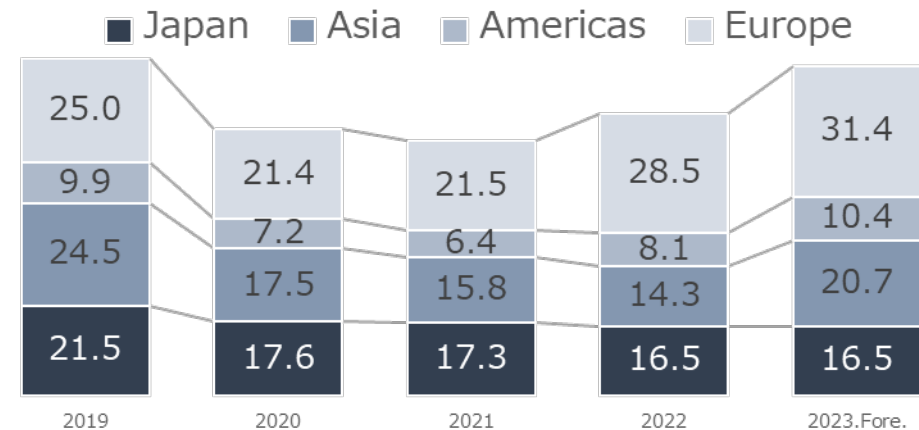
【MCT and ECT】

- Expect sales expansion in the field of next-generation mobility development.
- Expect an increase in sales for the hydrogen energy industry due to steady booking of the related products.
- Aim to improve profitability by shifting to higher-value-added products in the MCT business.

## Sales and O.P. (Half Year/Full Year)



## Sales by Region



# 2022 Results and 2023 Forecasts

(Billions of yen)

## 2022 Results

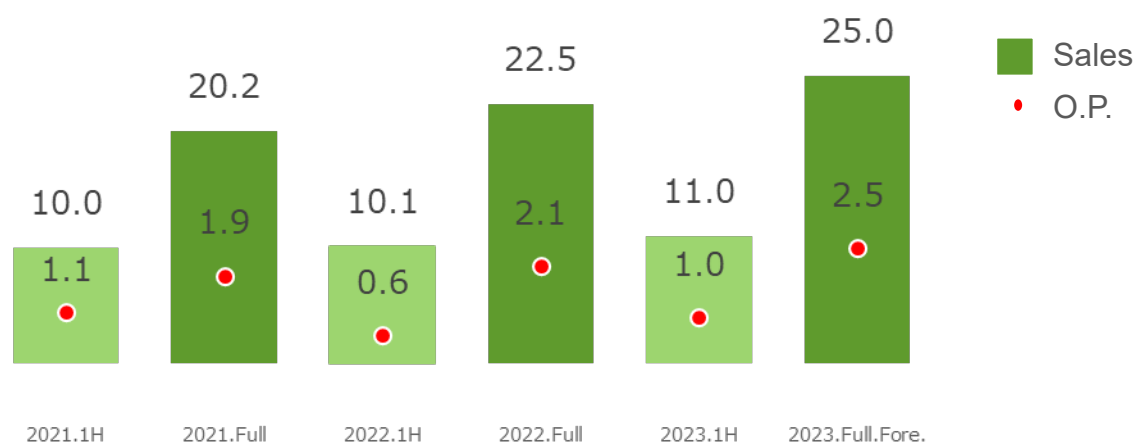
- 【Water quality monitoring】  
Steady demand for water quality measurement equipment used in the manufacturing processes in the electronics industry and in compliance with environmental regulations.
- 【Gas monitoring】
- Sales increased in Asia due to demand related to environmental regulations.
  - Solid measurement-related demand at existing power plants.

## 2023 Full Year Forecasts Medium- to long-term outlook

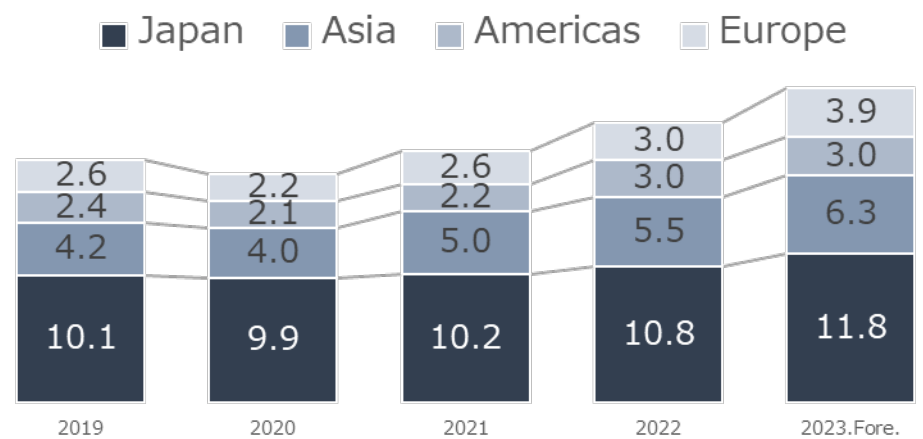
\*1 Total Organic Carbon  
\*2 Carbon dioxide Capture, Utilization and Storage

- Expect an increase in demand for process measurement in the industrial field in addition to environmental regulations.
- 【Water quality monitoring】  
Capture demand for new products such as TOC analyzers\*1 and regulation-related demand.
- 【Gas monitoring】
- Expect an increase in demand for gas measurement in the electronics industry.
  - Expect an increase in demand for new energy and CCUS\*2-related demand.

## Sales and O.P. (Half Year/Full Year)



## Sales by Region



# 2022 Results and 2023 Forecasts

(Billions of yen)

## 2022 Results

- Sales of test reagents remained sluggish due to the lingering impact of COVID-19.

### 【Japan/Asia】

Increased sales of hematology analyzers mainly due to the launch of new products.

### 【Americas】

Increased sales of clinical chemistry analyzers and reagents.

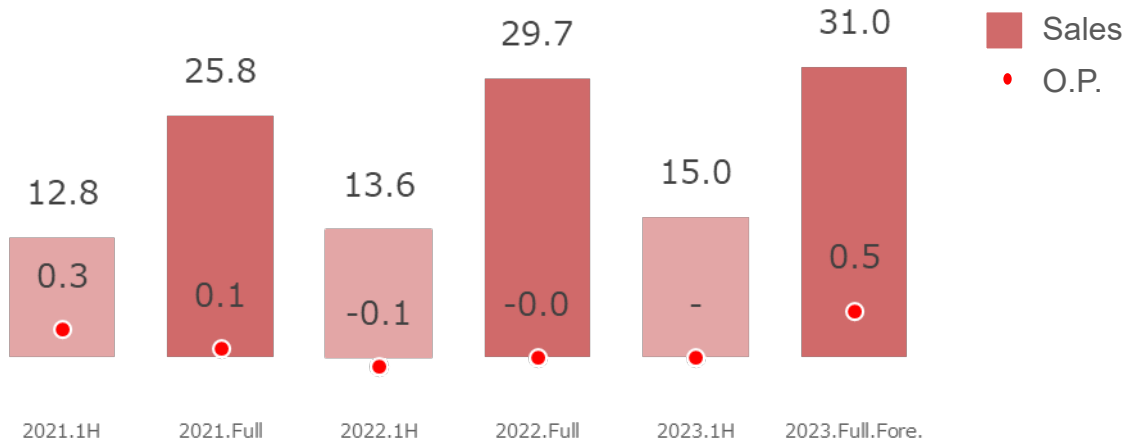
Investment also increased with the aim to expand business in the clinical chemistry field.

## 2023 Full Year Forecasts

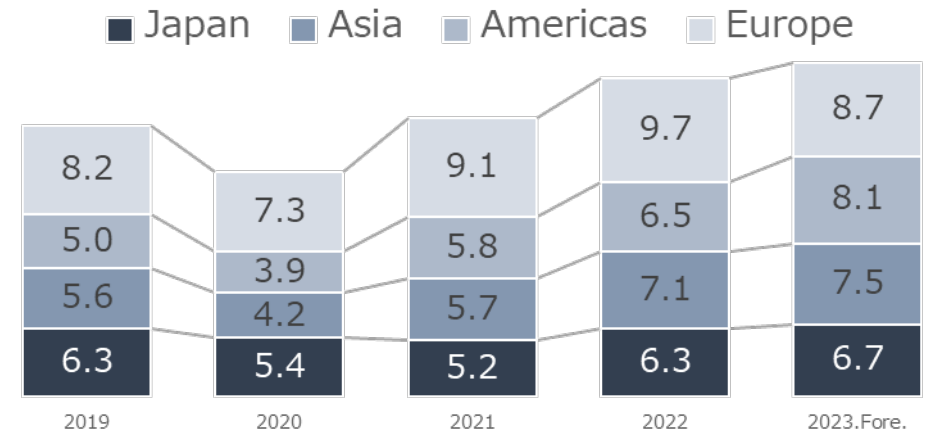
### Medium- to long-term outlook

- Expect a recovery in test reagent sales in the future, as equipment sales are preceding in Japan and growth markets.
- Aim for further business expansion in the fields of immunology and clinical chemistry other than the hematology field.

## Sales and O.P. (Half Year/Full Year)



## Sales by Region



# 2022 Results and 2023 Forecasts

(Billions of yen)

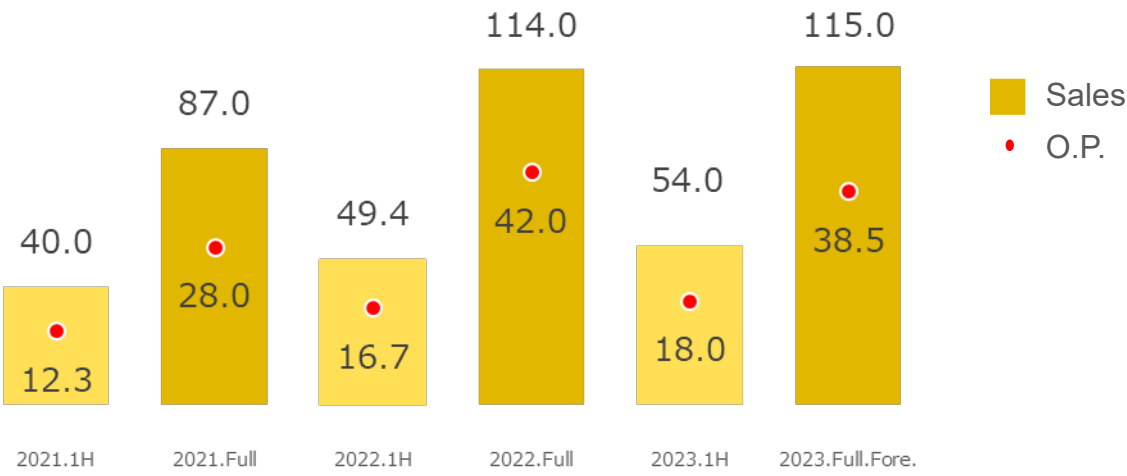
## 2022 Results

- Semiconductor manufacturers further boosted capital investment. Significant increase in sales to semiconductor production equipment manufacturers.
- Expanded business in China and India. Demand for mass flow controllers for production of photovoltaic panels and artificial diamond increased.

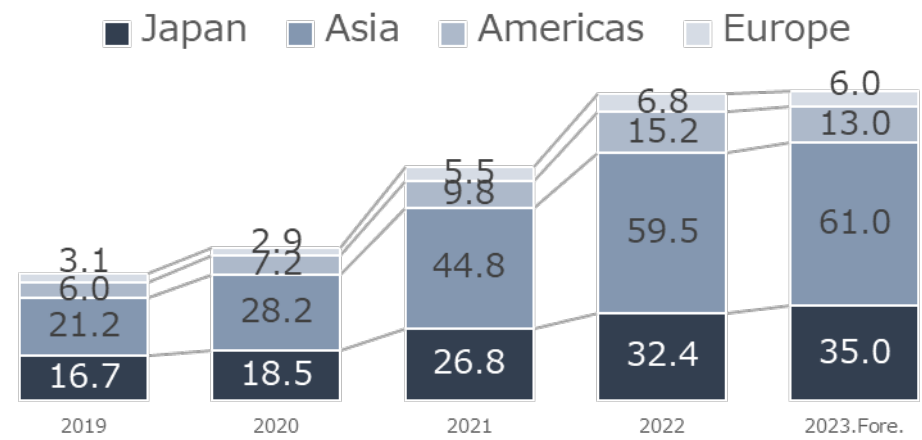
## 2023 Full Year Forecasts Medium- to long-term outlook

- Capital investment by semiconductor manufacturers will be in an adjustment phase through the first half of 2023.
- Demand is expected to expand in the second half as the market recovers.
- In addition to existing main products, aim to expand business fields by utilizing various sensing technologies.

### Sales and O.P. (Half Year/Full Year)



### Sales by Region





# 2022 Results and 2023 Forecasts

(Billions of yen)

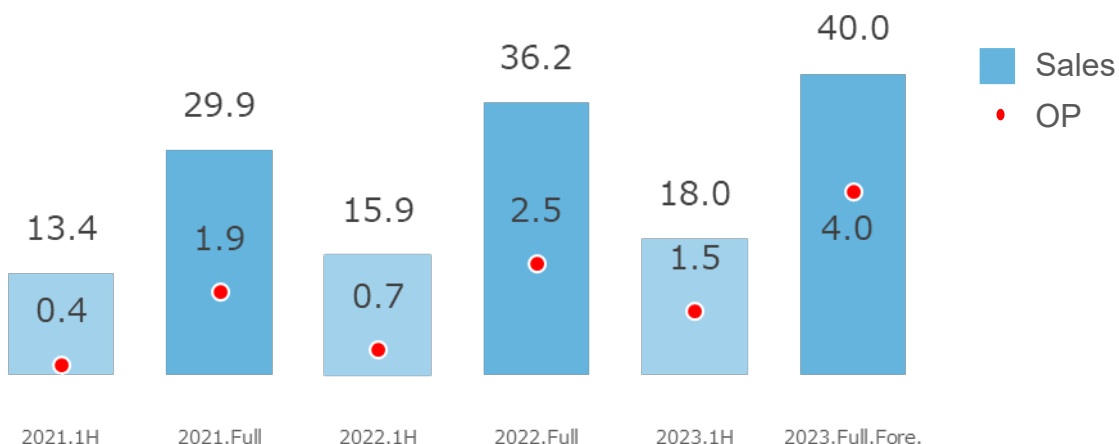
## 2022 Results

- Strong demand for and increased sales of optical components for semiconductor production equipment manufacturers.
- Increased sales of Raman Spectrometers, Particle-size distribution analyzers, X-ray fluorescence analyzers and other devices for the markets related to advanced materials and life science.

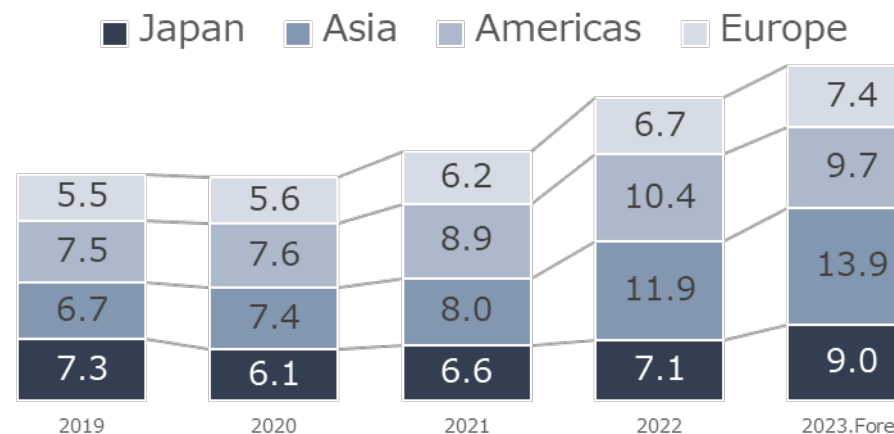
## 2023 Full Year Forecasts Medium- to long-term outlook

- Expand the industrial process monitoring business in parallel with sales expansion of cutting-edge R&D products.
  - Expect an increase in demand for products specialized for industrial processes of the life science field (i.e., pharmaceuticals) and the semiconductor market.
- Expect to reap the benefits from products that have been introduced to the market.

## Sales and O.P. (Half Year/Full Year)



## Sales by Region



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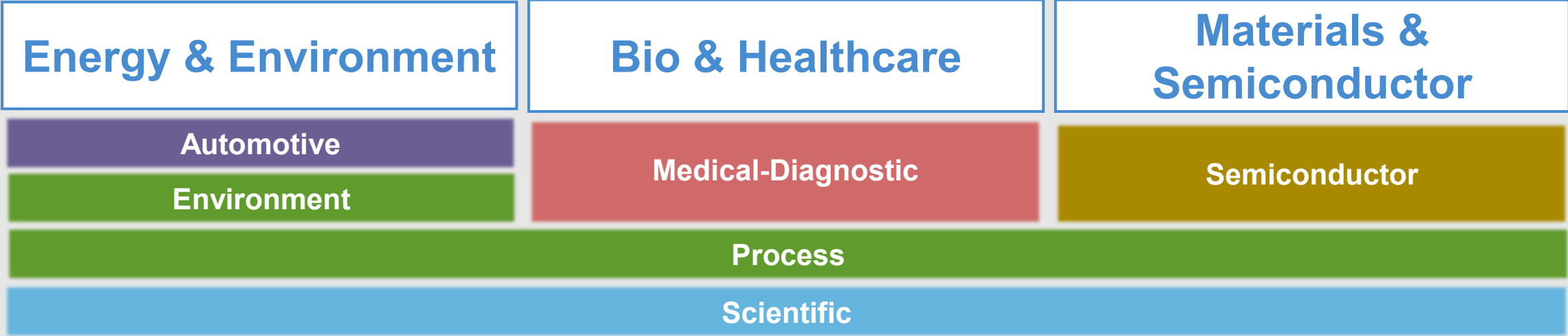
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# Various activities for target markets - final year of MLMAP2023

Mid-Long Term Management Plan "MLMAP2023"

## Market Oriented Business

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



## Solution Provider Beyond "Life Cycle Management"

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



# [Energy & Environment] Hydrogen Business

The entire HORIBA Group is involved in expansion of hydrogen business

Started mass production of water electrolyzers that produce hydrogen, in Europe

The Evaluator series is comprised of electrolyzer development evaluation systems and production inspection systems.

The HORIBA Group responds to growing needs

Supply chain & Ecosystem



INNOPLATE  
A Schaeffler Symbio Hydrogen Company

HORIBA



【SYMBIO】  
Hydrogen/fuel cell  
joint venture  
between Michelin  
and Faurecia

- ✓ Booked evaluation equipment orders for fuel cells from SYMBIO.
- ✓ At their giga factory commencement ceremony HORIBA was introduced as an indispensable partner for fuel cell production..

SYMBIO



Left: HORIBA FuelCon's electrolyzer evaluation systems



HORIBA eHUB

Right: HORIBA France



- ✓ HORIBA France received an order for the project.
- ✓ Plan to also provide electrolyzer evaluation systems of HORIBA FuelCon (Germany) and scientific products of other HORIBA Group companies.

HORIBA

# [Energy & Environment] CO<sub>2</sub> Fixation and Capture

Contributing to the realization of a carbon neutral society

Carbon recycling technology (fixation and capture)

The chemical absorption method using amine solution is widely used in processes of CO<sub>2</sub> fixation and capture.

✓ Monitor various exhaust gases generated in processes using the chemical absorption method.

Monitor exhaust gas

Monitor amine solution

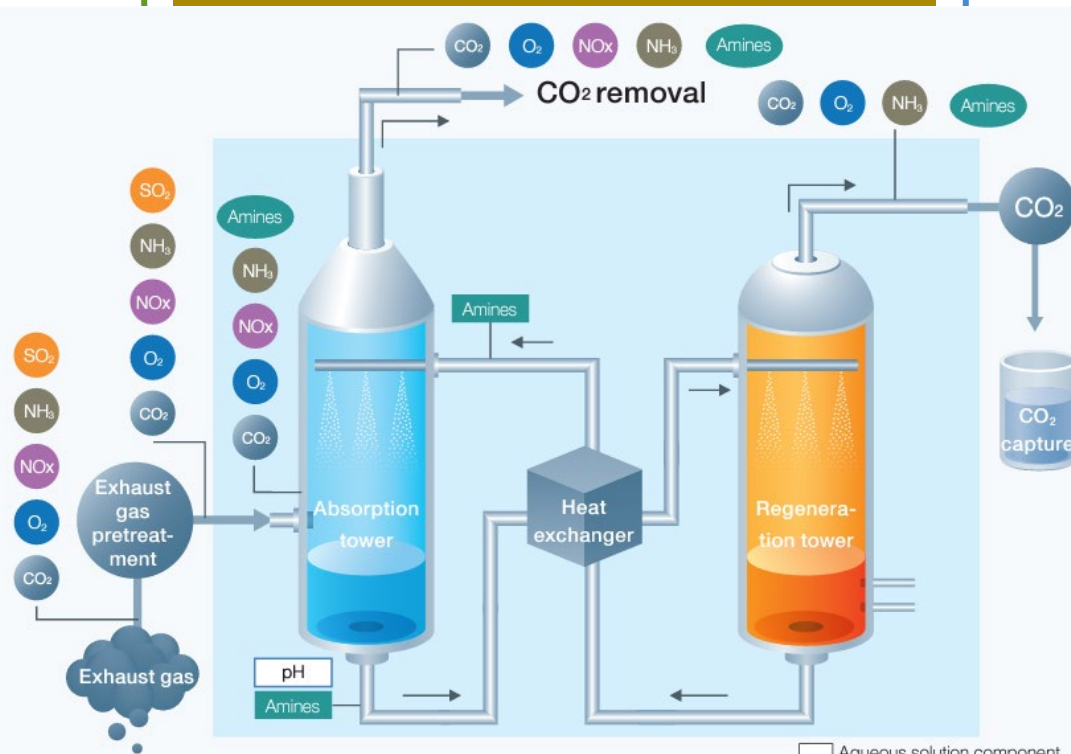
✓ Monitor amine solution to determine timing of replacement/additional injection.



High concentration gas monitoring  
Multi-component gas analyzer



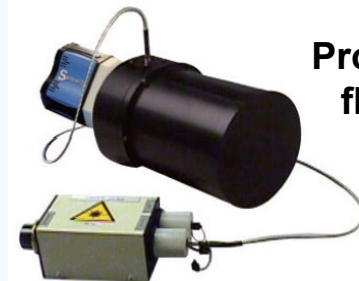
Low concentration gas monitoring  
Trace gas analyzer



Outdoor type  
pH/electrical  
conductivity  
analyzer



Process Raman,  
fluorescence  
analyzer





# [Energy & Environment] Mobility Solution Business #1

Providing a range of R&D solutions in the new automotive field

HORIBA MIRA, with close partnerships with automotive manufacturers worldwide, supports their development efforts

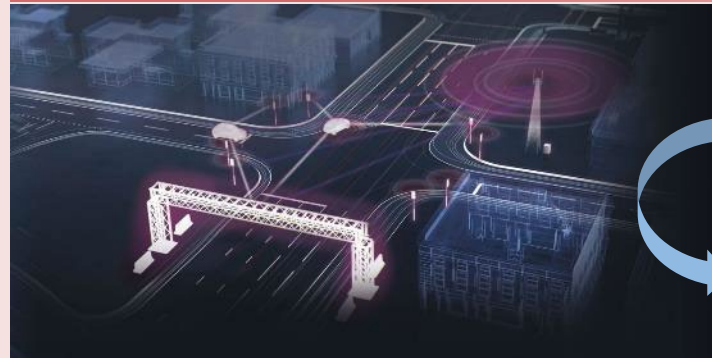
Customers of HORIBA MIRA	Engineering	Certification and standard testing	Local specification testing	Benchmark testing	Location
UK-based automotive companies	✓	✓			✓
Non-UK-based automotive companies	✓	✓	✓	✓	
Automotive start-ups	✓	✓		✓	
Automotive suppliers	✓	✓	✓	✓	
Material manufacturers	✓			✓	



## ASSURED CAV

- A comprehensive development engineering facility that supports work from design to actual vehicle verification started full operation in 2022.
- Received the “Test Facility of the Year” award from UK's Vehicle Dynamics International magazine in 2022.

Seamlessly conduct digital simulation and feasibility tests (digital-twin)



# [Energy & Environment] Mobility Solution Business #2

As a partner, developing solutions matched to customers' issues

Real-world simulation system for autonomous driving/ADAS sensor evaluation

- ✓ Reproducing rainfall conditions on public roads with a focus on environmental recognition performance in bad weather
- ✓ Quantitative and efficient evaluation of the performance limits of sensors



1

- ✓ Environment simulator that reproduces five levels of rainfall, from fog to heavy rain\*

\* Rainfall of 20-100mm/h

2

- ✓ Equipment to put a test vehicle into an actual driving state to operate ADAS (steerable 4-wheel constant velocity bench)

Delivered the products to NTSEL\* (of the National Agency for Automobile and Land Transport Technology)

\* National Traffic Safety and Environment Laboratory

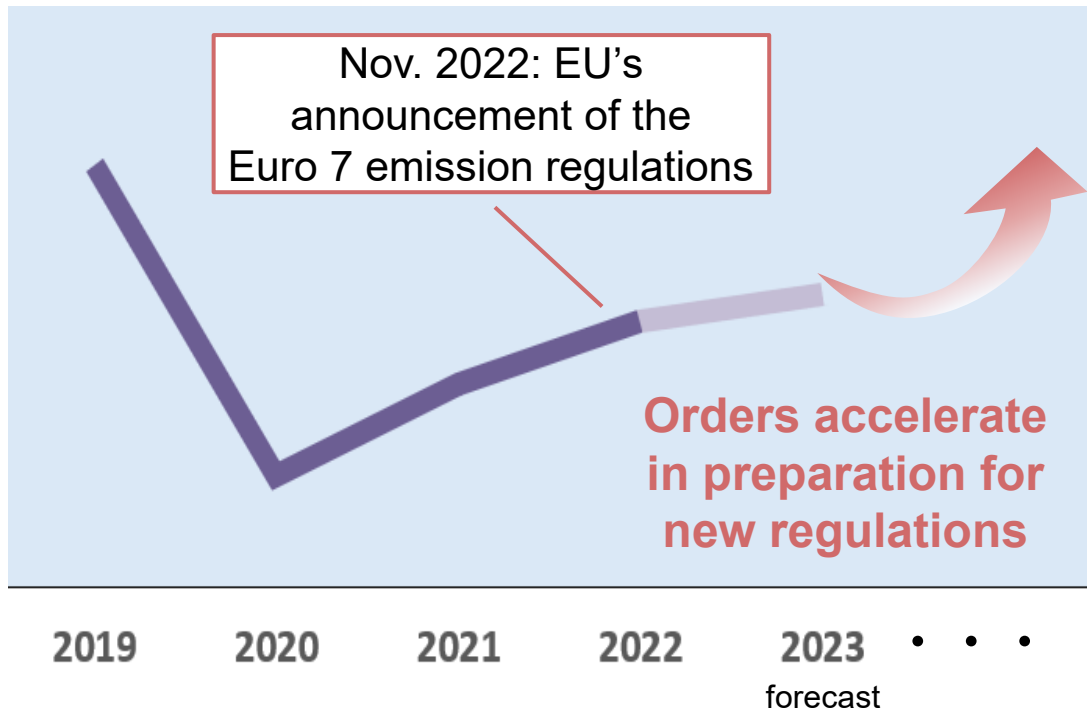
# [Energy & Environment] Conventional Energy

"HORIBA will Never Stop Combustion Measurement"

## Ensure the operating rate of automotive development labs

- ✓ Support customers' utilization of HORIBA's existing emission measurement systems and development work at labs, in response to their demand for new vehicles in the transition period of vehicle electrification.

### Emission measurement business order trends



### Multi-faceted approach

#### [Upgrade]

Upgrade to the latest equipment to respond to new regulations. Introduce equipment with latest specifications.

#### [Prolong product life]

Maintain functions with a prolonged life plan. Add new functions.

#### [Recycle]

Remove parts. Manage stock parts for repair.



About 8,000 delivered units of HORIBA's MEXA series are still in active operation.



# [Bio & Healthcare] Products for Pharmaceutical Manufacturing Process

Expanding business in the pharmaceutical industry

Pharmaceutical business process

Pharma company  
—R&D—

Contract development and manufacturing organization (CDMO)

Pharma company  
—Marketing and sales—

Pharma market

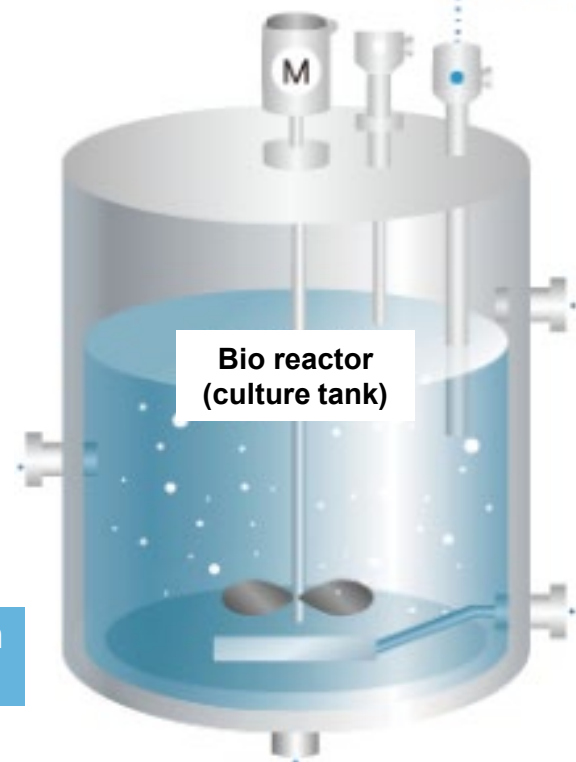
Provide high-end analyzers and measuring devices such as Raman spectrometers

HORIBA's products enable real-time monitoring and contribute to improving yield rates



TOC analyzer

Total organic carbon measurement



Bio reactor (culture tank)



Process Raman, fluorescence analyzer

Medium component monitoring



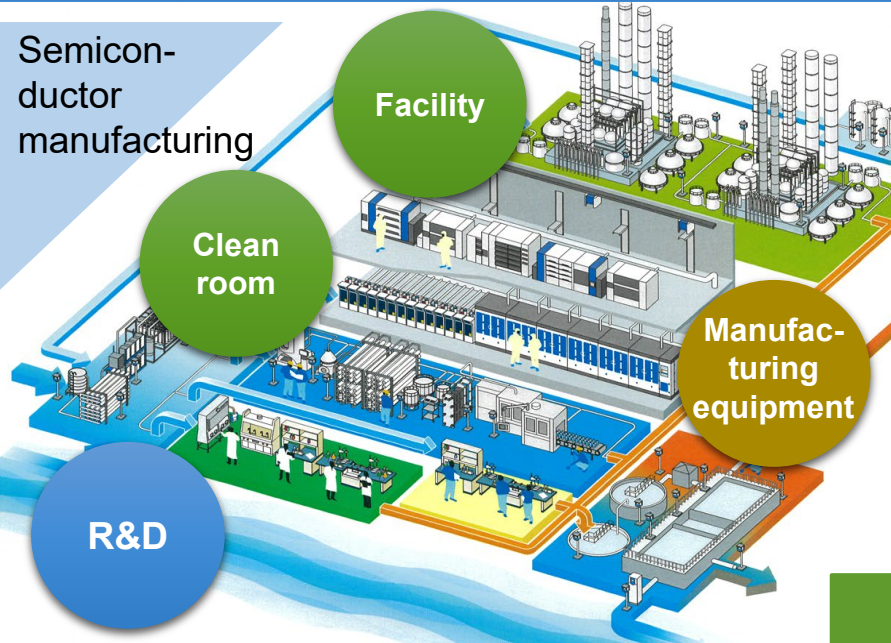
Trace sampling pH analyzer

pH control

# [Materials & Semiconductor]

## Cross-segment Activities to Expand Opportunities

From R&D to manufacturing: Use of HORIBA's analyzers and measuring devices



### Manufacturing equipment

### Key components and devices in semiconductor manufacturing



Mass flow controller



Chemical concentration monitor



Plasma emission monitor



Radiation thermometer



Reticle/Mask particle detection system

### Clean room

### Facility

### R&D

#### Film thickness evaluation and CMP slurry evaluation



Spectroscopic ellipsometry



Centrifugal nanoparticle analyzer

#### Monitoring Airborne Molecular Contamination (AMC) in clean room



AMC monitoring system

#### Real-time monitoring for smart factories



Highly-sensitive silica monitor



Non-refill self-cleaning pH electrode



Process laser gas analyzer

# [Materials & Semiconductors] MFC in Various Fields

Mass flow controllers (MFC) contributing to the production of solar panels and artificial diamonds

## Expand booking for MFCs for general industry, mainly in China and India



### Booking for MFCs for general industry



Booking in 2022 reached 10 billion yen

MFCs installed in manufacturing equipment for solar panels, artificial diamonds, and power semiconductors

HORIBA Precision Instruments in Beijing manufactures MFCs for general industry



HORIBA Precision Instruments (Beijing) Co., Ltd. (Beijing)

Will start production of MFCs for general industry in India in the first half of 2023



HORIBA India Private Limited (Pune)



# Full-scale operation of HORIBA C-CUBE, a new base in China

A new base to meet the needs of the Chinese market

- ✓ A new base in China where operations of all HORIBA's segments have been brought together
- ✓ HORIBA's largest base engaged in integrated operations from development and production to after-sales services



## 厚立方 HORIBA C-CUBE

发音 (Pin Yin): Hou Li Fang



### HORIBA INSTRUMENTS (SHANGHAI) CO., LTD.

Location: Jiading District, Shanghai  
Headcount: 144 (Dec. 2022)  
Construction cost:  
9 billion yen (in total)

Located in the key area for new energy vehicle development in China's largest automobile industry district

# Sale of part of MIRA UGV's shares

- HORIBA MIRA Limited (MIRA), sold part of the shares of MIRA UGV Limited (UGV) owned by MIRA to Iveco Defence Vehicles S.p.A. (Italy) (IDV).
  - ✓ For nearly 30 years, MIRA has provided Unmanned Ground Vehicle development engineering services for the defense industry
  - ✓ Transfer part of the shares of UGV to IDV, in order to concentrate on field of consumer vehicles such as passenger cars and heavy-duty vehicles
  - ✓ Approximately 6,200 million yen of impact on profit and loss related to the share transfer, and the transferred amount is expected to be recorded as an extraordinary gain for the first quarter of FY2023.

## Future developments

- IDV concluded a contract with MIRA for tenant lease agreement of MIRA Technology Park and the long-term engineering contract
- MIRA will provide engineering services and jointly develop technologies with IDV



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# Shareholder Return

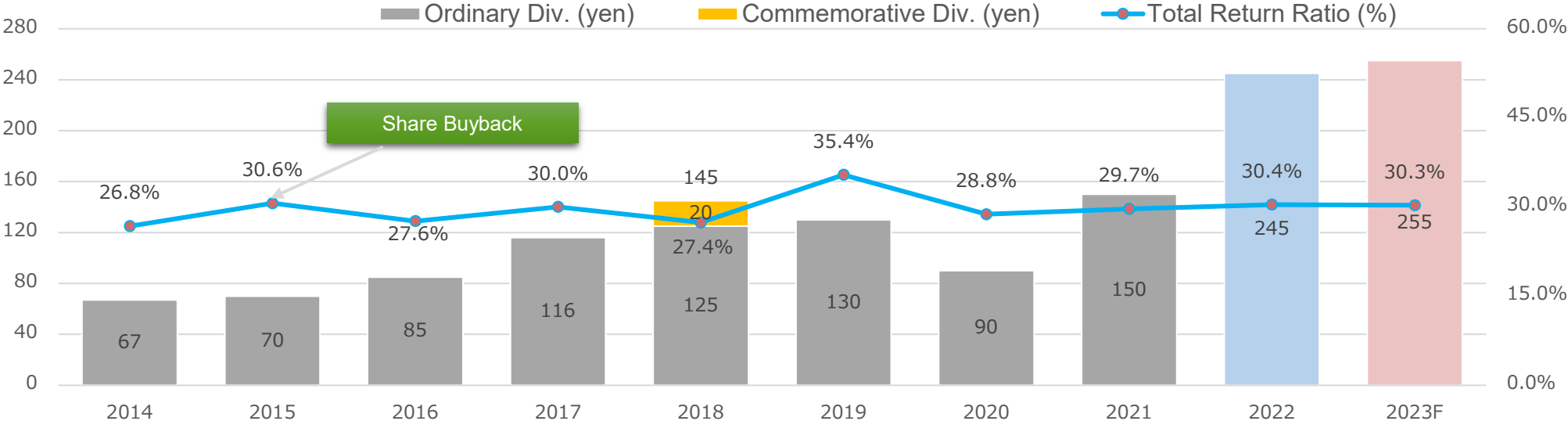
## Basic policy

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

- 2021 Results 150yen [Interim 50yen/Year-end 100yen]
- 2022 Results 245yen [Interim 65yen/Year-end 180yen]
- 2023 Forecast 255yen [Interim 80yen/Year-end 175yen]

## Per-share dividend



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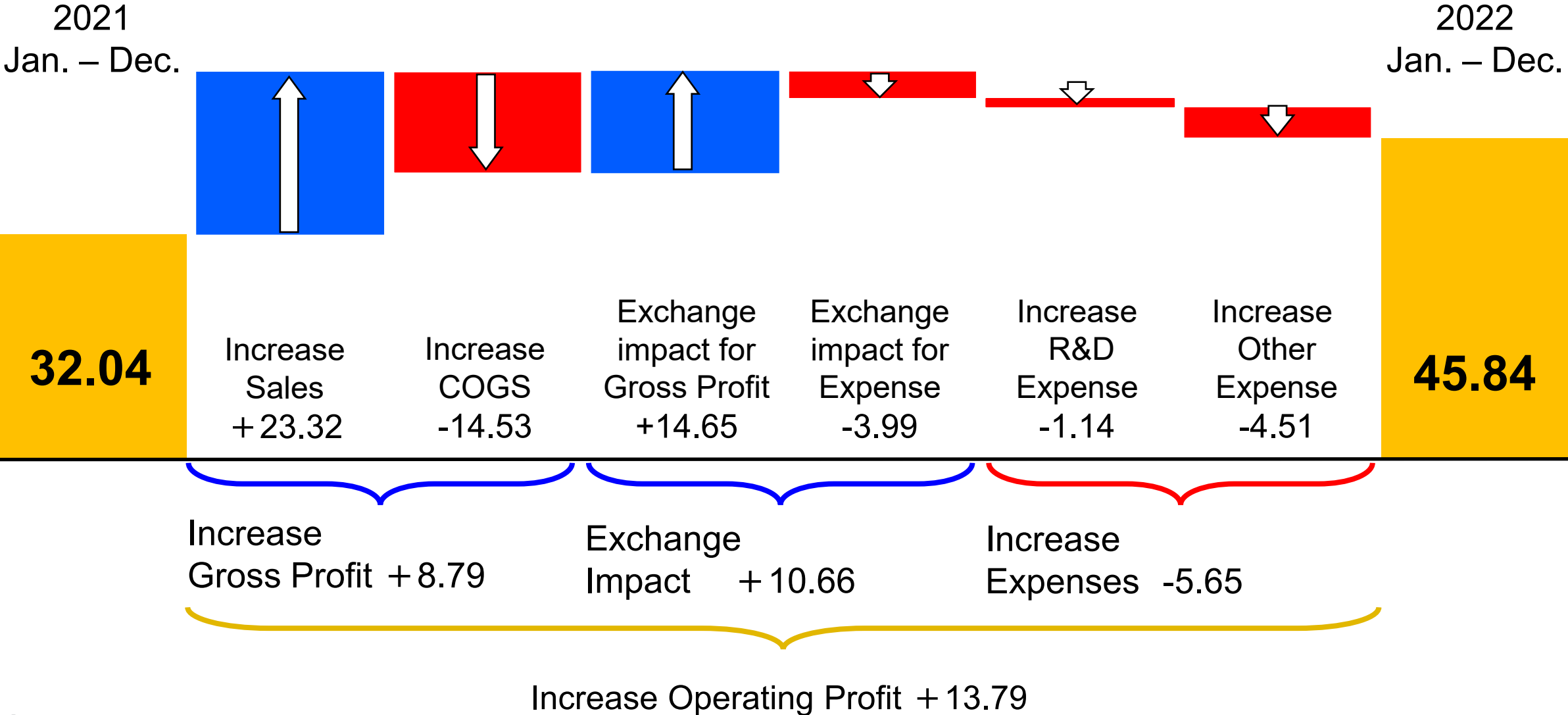
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# Operating Profit Analysis (vs 2021)

(Billions of yen)



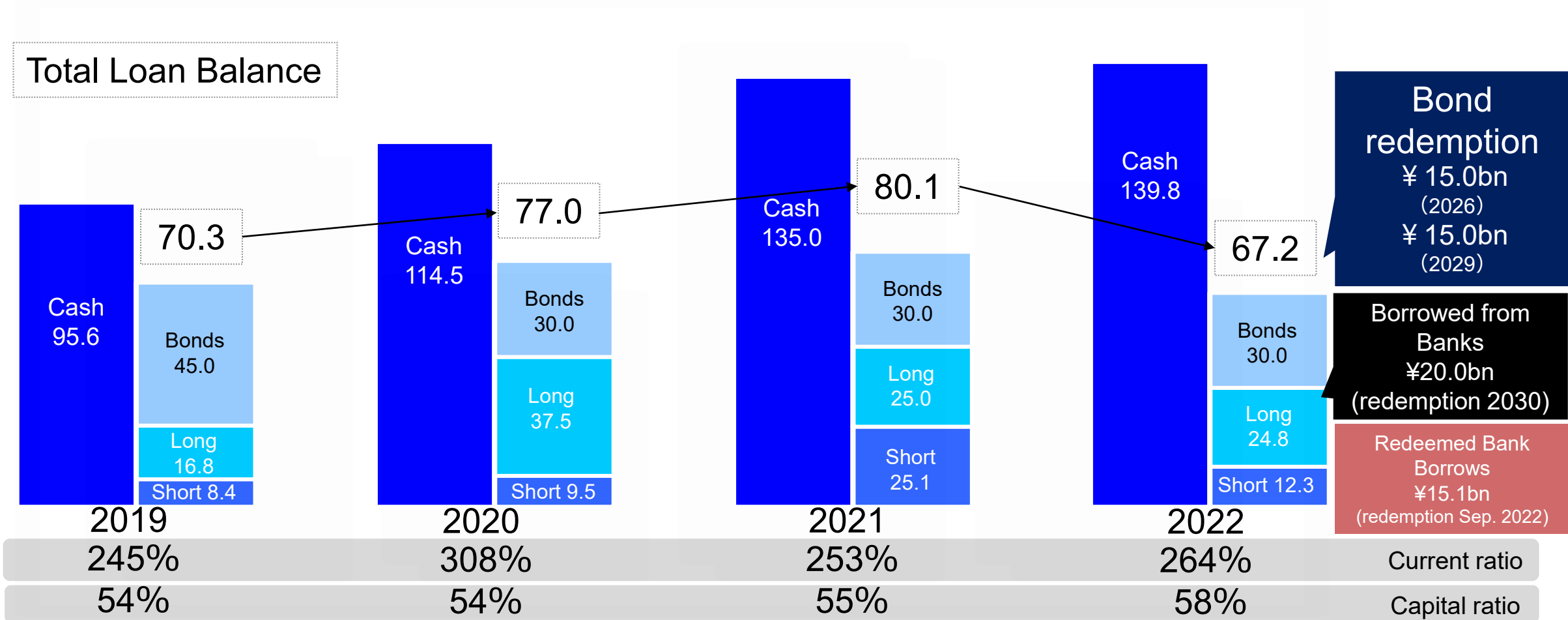
# Consolidated Cash Flows

(Billions of Yen)

	2022	2021	Variation
Cash flows from operating activities	+33.9	+35.2	-1.3
Cash flows from investing activities	-10.7	-14.6	+3.9
Cash flows from financing activities	-22.4	-4.0	-18.4
Cash and cash equivalents at end of year	138.7	133.9	+4.8
Free cash flows	+23.2	+20.6	+2.6

# Cash Balance

(Consolidated basis, each end of period)  
(Billions of Yen)



• Recent issuer rating: R&I “A” (Sep. 2022), JCR “A+” (Sep. 2022)

# Exchange Rate Trend / Forecasts / Impacts

	2021	2022	2023	
	Annual	Annual	Forecasts	vs 2022 (Annual)
USD	109.90	131.62	130	-1.62
EUR	129.91	138.14	140	+1.86

## Exchange rate impact for 2022 (vs 2021)

Increase sales	+22.49
Increase cost of goods sales	-7.83
Impact to gross profit	+14.65
Increase expenses	-3.99
Impact to operating profit	+10.66

## Exchange rate impact for 2023 Forecasts 1 yen impact of Sales and O.P. (Weak yen)

	Sales	Operating profit
USD	+0.78	+0.43
EUR	+0.38	+0.01

# Capital Investment, Depreciation, R&D

(Billions of Yen)

	2021	2022				2023	
	Actual	Previous Forecasts (as of Nov. 11)	Actual	vs 2021	vs Previous Forecasts	Forecasts	vs 2022
Capex	12.4	13.5	12.5	+0.0	-0.9	14.0	+1.4
Depreciation and amortization	10.4	11.0	11.3	+0.9	+0.3	12.0	+0.6
R&D expenses	16.7	19.0	18.5	+1.8	-0.4	22.0	+3.4
to net sales(%)	7.4%	7.2%	6.9%	-	-	7.6%	-

## 2023 Topics

### PP&E:

investment in semi and automotive-related facilities, enhancement of global bases

[Consider urgency and priority and make investment decisions](#)

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# Five Business Segments & Major Products

Figures are the sales composition ratio for FY 2022

**Automotive  
(25%)**



**Emission Measurement  
Systems**



**Process &  
Environmental  
(8%)**



**Stack Gas Analyzers**



**Medical  
(11%)**



**Automatic Blood Cell  
Counters plus CRP**



**Semiconductor  
(42%)**



**Mass Flow Controllers**



**Scientific  
(14%)**



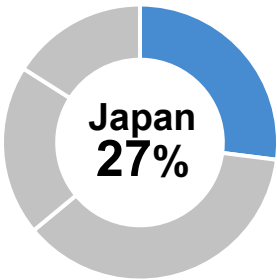
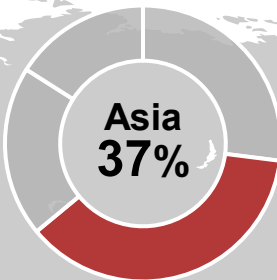
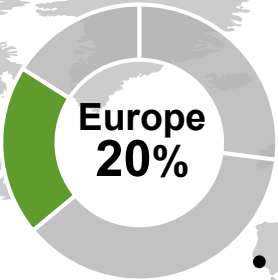
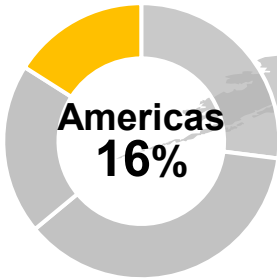
**Raman Imaging Device**



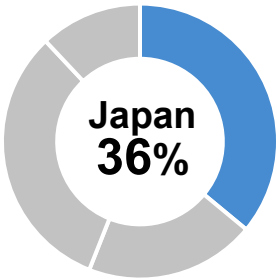
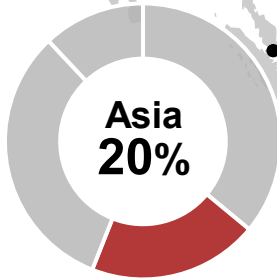
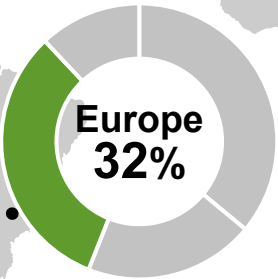
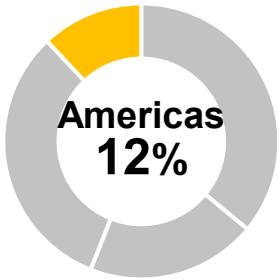
# Global Network

## Sales by region (as of Dec 2022)

● : Major business hubs



## Employee headcount by region (as of Dec 2022)



Number of companies  
(as of Dec 31, 2022)

**49**



Overseas sales ratio  
(as of Dec 2022)

**73%**



Foreign employee ratio  
(as of Dec 31, 2022)

**64%**



# 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】

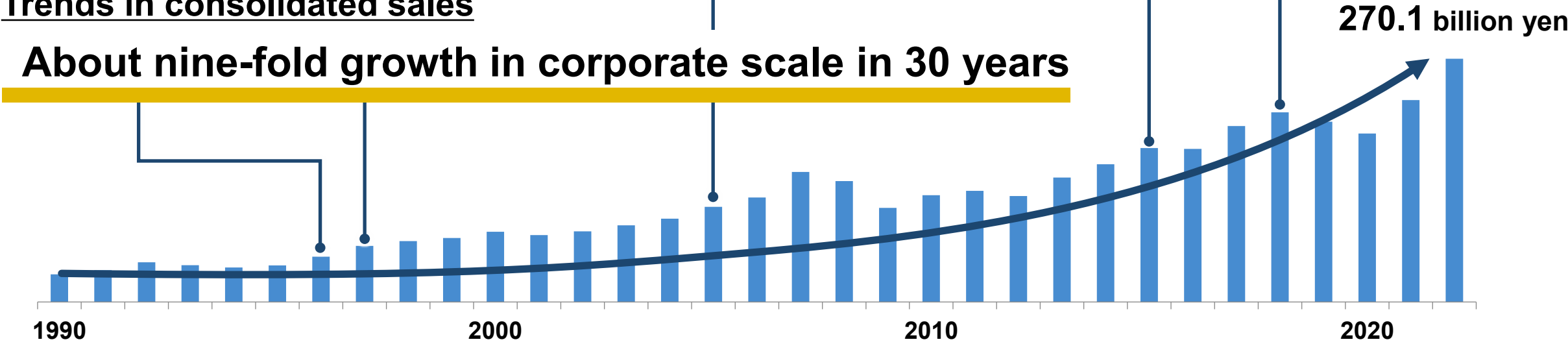


**2018**  
**FuelCon**  
 (Germany)  
 【Automotive】

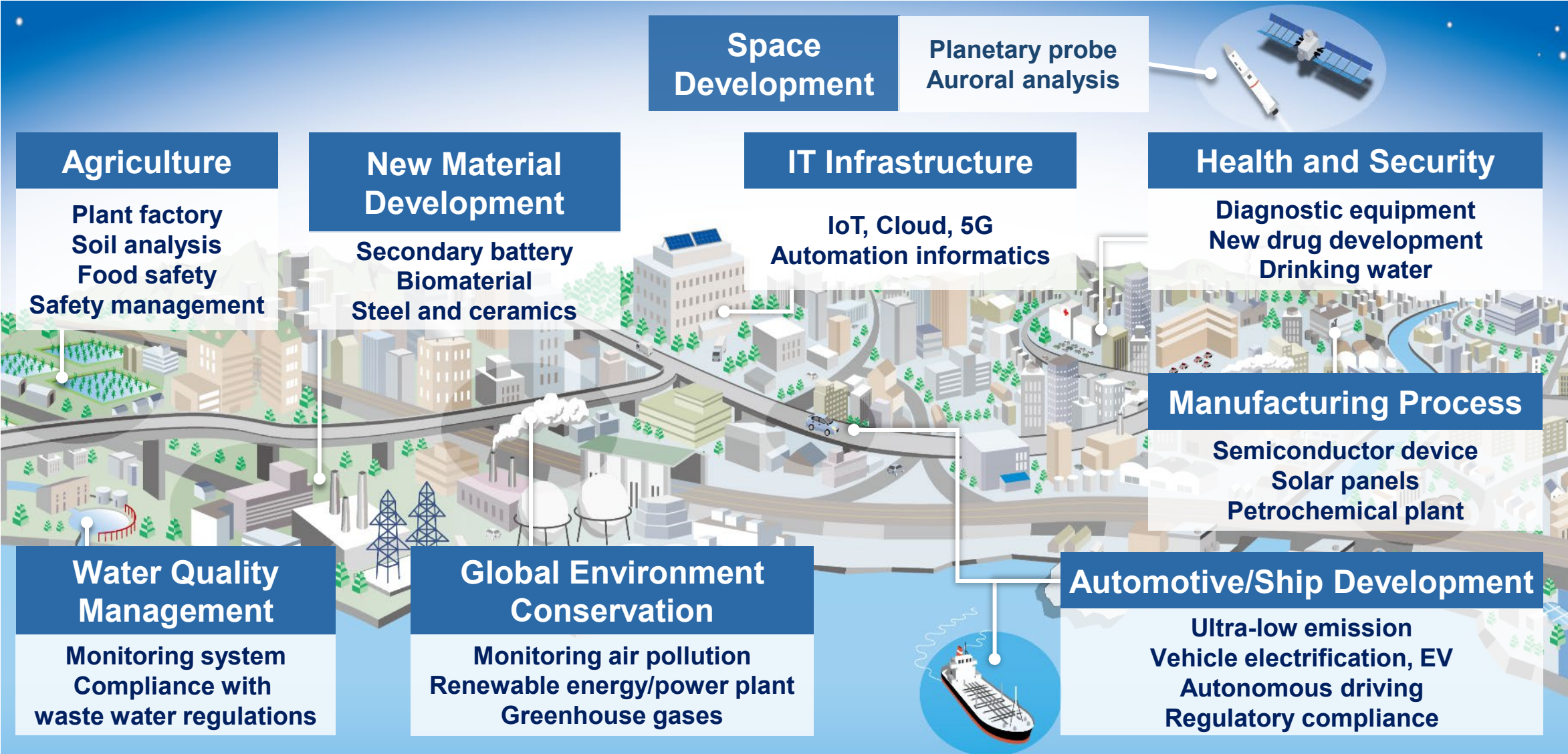


## Trends in consolidated sales

**About nine-fold growth in corporate scale in 30 years**



# HORIBA's Business Domain



Omoshiro-okashiku  
Joy and Fun



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