

# **Fiscal Year Ending March 2022**

## **FINANCIAL RESULTS BRIEFING**

2022.5.25

**日本電子株式会社**

**JEOL Ltd.**



# Becoming a niche top company supporting science and technology in the world

## Company Philosophy

On the basis of "Creativity" and "Research and Development", JEOL positively challenges the world's highest technology, thus forever contributing to the progress in both Science and Human Society through its products.

## Vision

### “Evolving in the 70th Year”

Accelerate business expansion and achieve even higher profitability based on our unique technologies and human networks which have been developed since the company's founding.

## Mid-Term Management Plan “Evolving Growth Plan”

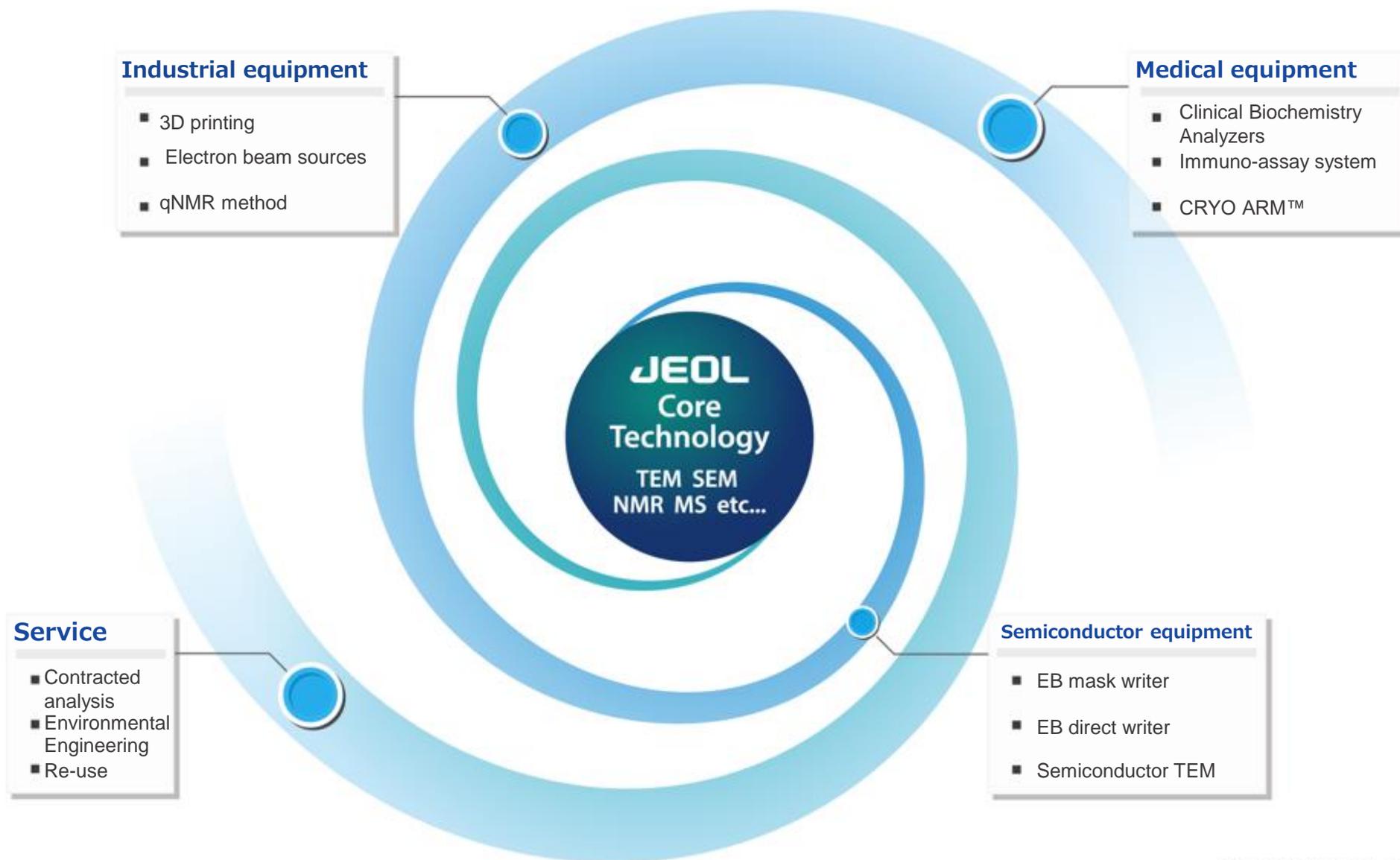
We aim to improve customer satisfaction by enhancing our R&D, manufacturing, and service capabilities.

▶ YOKOGUSHI ◀

Promote Innovation by co-creation

# Growth vision of “Evolving in the 70th Year” remains unchanged

- Expand business scale and achieve higher profitability



# Summary

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<b>FY2021 Results</b>	Recorded the highest sales and profit Achieved the targets of mid-term management plan, “Triangle Plan 2022”
<b>Strong SE Business</b>	Sales of EB lithography system continue to increase
<b>FY2022 Forecast</b>	Net sales 152.5 billion yen, operating profit 19.5 billion yen ordinary profit 18.8 billion yen, net profit 13.7 billion yen
<b>New Mid-Term Management Plan Evolving Growth Plan - Overview</b>	Achieve business scale expansion and even higher profitability by further advancing our growth vision, “Evolving in the 70th Year”
<b>New Mid-Term Management Plan Evolving Growth Plan - Initiatives</b>	<ol style="list-style-type: none"><li>1. Build barriers to entry and improve profitability</li><li>2. Expand business in growing markets such as semiconductors, drug discovery, batteries, etc.</li></ol>

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1. FY2021 Result and FY2022 Forecast
  
2. Overview of New Mid-Term Management Plan  
“Evolving Growth Plan”
  - 2-1. Scientific/metrology instruments
  - 2-2 . Industrial equipment
  - 2-3 . Medical equipment
  
3. Summary

## 1. FY2021 Result and FY2022 Forecast

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# FY2021 Results (P/L)

- Consolidated net sales 138.4 billion yen, Operating profit 14.1 billion yen, Ordinary profit 16.3 billion yen, Net profit 12.3 billion yen

Consolidated figures (P/L)

	FY20 Full Year Result (1)	FY21 Full Year Result (2)	(100 million JPY) Year-on-Year (2)−(1)
1 <b>Net sales</b>	1,104	1,384	280
2 Sales cost	675	830	155
3 (Cost rate)	61.2(%)	60.0(%)	-1.2(%)
4 <b>Gross profit</b>	429	554	125
5 SGA	296	327	31
6 R&D cost	81	85	5
7 SGA total	377	412	36
8 <b>Operating profit</b>	52	141	89
9 Non-operating income	16	24	8
10 Non-operating expenses	3	3	0
11 <b>Ordinary profit</b>	66	163	98
12 Extraordinary income	1	4	3
13 Extraordinary loss	11	1	-10
14 <b>Net profit before tax</b>	56	167	110
15 Corporate taxes	19	44	25
16 <b>Net profit</b>	37	123	85
Exchange rate(1\$=)	¥ 106	¥ 113	
Exchange rate (1€=)	¥ 124	¥ 131	

## Factors for fluctuating ordinary profit (year-on-year)

(100 million JPY)	
<b>(A) Positive factors</b>	125
1. Sales volume increase	89
2. Exchange margin (yen depreciation)	31
3. Improved cost rate, etc.	5
<b>(B) Negative factors</b>	-36
1. Increased SGA	-31
2. Increased R&D cost	-5
<b>(A)+(B)</b>	89

Achieved all "Triangle Plan 2022" targets;  
Consolidated net sales 134 billion yen,  
Consolidated ordinary profit 10 billion yen,  
ROE 10% or higher

## FY2022 Forecast (P/L)

- Consolidated net sales 152.5 billion yen, Operating profit 19.5 billion yen, Ordinary profit 18.8 billion yen/Net profit 13.7 billion yen

Consolidated figures (P/L)				(100 million JPY)
	FY20 Full Year Result	FY21 Full Year Result (1)	FY22 Full Year Result (2)	Year-on-Year (2)-(1)
1 Net sales	1,104	1,384	1,525	141
2 Sales cost	675	830	877	47
3 (Cost rate)	61.2(%)	60.0(%)	57.5(%)	-2.5(%)
4 Gross profit	429	554	648	95
5 SGA	296	327	345	18
6 R&D costs	81	85	108	23
7 SGA total	377	412	453	41
8 Operating profit	52	141	195	54
9 Non-operating income	16	24	5	-19
10 Non-operating expenses	3	3	12	9
11 Ordinary profit	66	163	188	25
12 Extraordinary income	1	4	0	-4
13 Extraordinary losses	11	1	2	1
14 Net profit before taxes	56	167	186	19
15 Corporate taxes	19	44	49	5
16 Net profit	37	123	137	14
Exchange rate(1\$=)	¥ 106	¥ 113	¥ 115	
Exchange rate(1€=)	¥ 124	¥ 131	¥ 130	

### Factors for fluctuating ordinary profit (year-on-year)

(100 million JPY)	
<b>(A) Positive factor</b>	95
1. Sales volume increase	51
2. Improved cost rate, etc.	34
3. Exchange margin (yen depreciation)	10

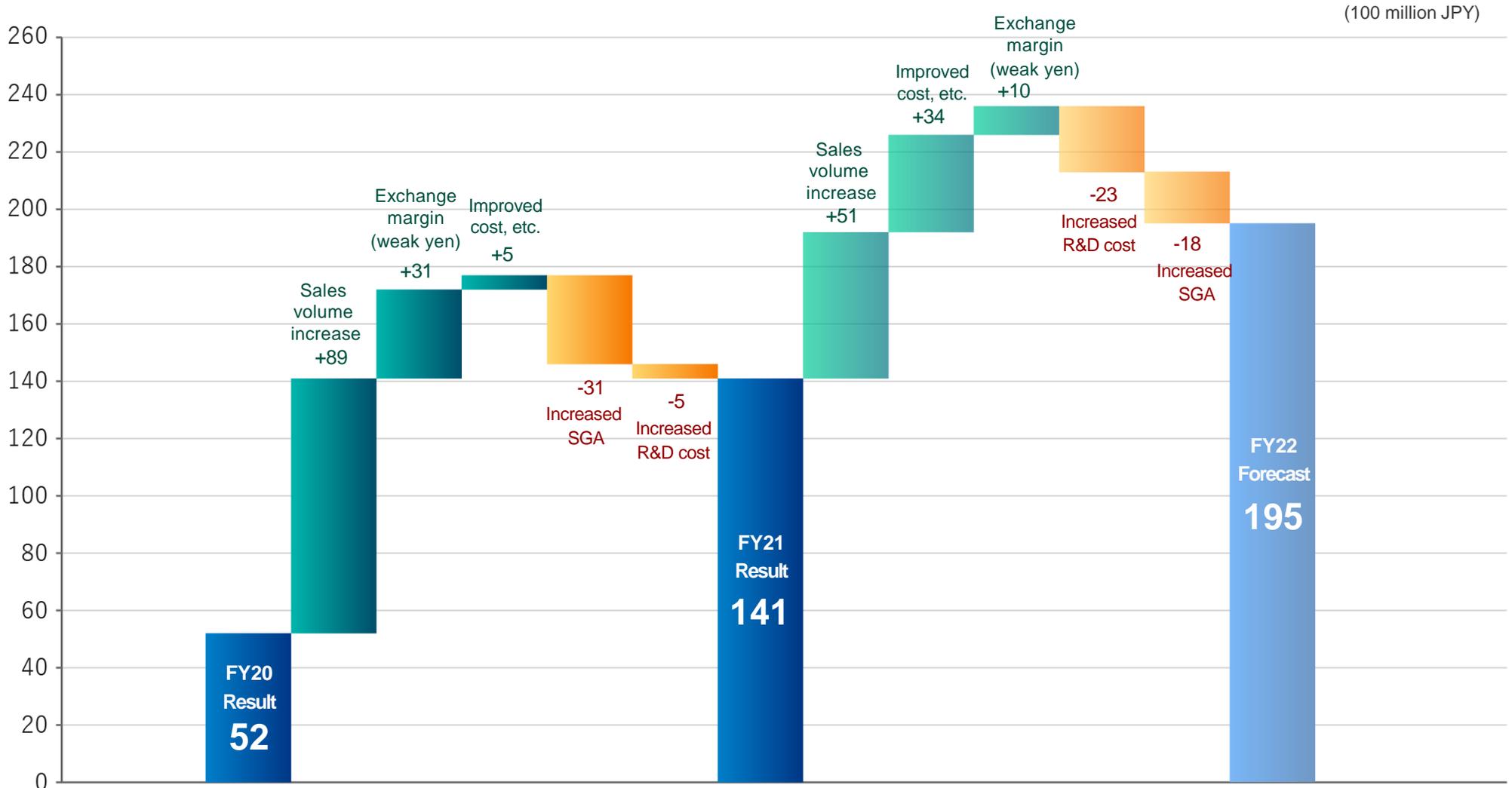
<b>(B) Negative factor</b>	-41
1. R&D cost increase	-23
2. SGA increase	-18

<b>(A)+(B)</b>	54
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# Factors of Increase/Decrease in Profit

## Ordinary profit analysis

(100 million JPY)



## Transition of Consolidated Sales & Operating Profit by Segment (Full-year)

(100 million JPY)

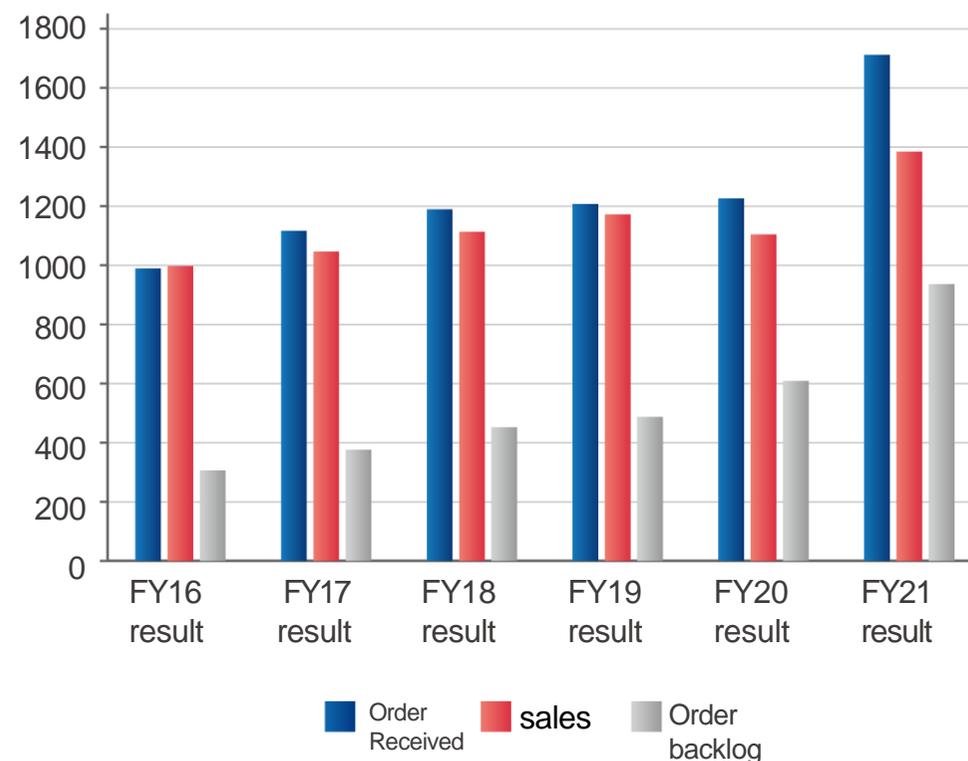
		FY2020 Full-year result	FY2021 Full-year result	FY2022 Full-year forecast
<b>Company Total</b>	Net sales	1,104	1,384	1,525
	Operating profit	52	141	195
	Ordinary profit	66	163	188
	Net profit	37	123	137
<b>Scientific/Metrology Instruments</b>	Net sales	706	851	902
	Operating profit	12	48	56
<b>Industrial Equipment</b>	Net sales	240	340	442
	Operating profit	73	131	180
<b>Medical Equipment</b>	Net sales	159	193	181
	Operating profit	9	11	12
<b>Company Total</b>	Expense	42	49	53
Exchange rate(1\$=)		¥ 106	¥ 113	¥ 115
Exchange rate(1€=)		¥ 124	¥ 131	¥ 130

# Changes in Major Accounts

(100 million JPY)

(Consolidated)	FY20 Full-year result	FY21 Full-year result	FY22 Full-year forecast
1 Inventory	573	591	573
2 Interest-bearing debt	327	166	115
3 Total assets	1,464	1,896	1,800
4 Net assets (capital-to-asset)	510 (34.8%)	859 (45.3%)	965 (53.6%)
5 Dividend (JPY)	24	50	60
6 Capital investment	76	69	70
7 Depreciation cost	36	41	46
8 Consolidated Orders received	1,226	1,712	1,750
9 Consolidated Order backlog	608	936	1,161
10 Overseas sales ratio	63.5%	63.4%	65.0%

Transition of Consolidated Orders, Sales and Backlog



# Business Environment

- Orders continue to be strong, and measures are being taken to minimize the impact of parts and materials shortage

		Overview	
Scientific and Metrology Instruments	University and Governmental Demand	○ Good	<ul style="list-style-type: none"> <li>Receiving inquiries due to stimulus budget in FY22 (Japan)</li> <li>Demands in Europe &amp; USA have been recovered</li> <li>Chinese market remains active, but affected by COVID-19 (lockdown in Shanghai)</li> <li>Movement to strengthen research infrastructure in each countries</li> </ul>
	Private Demand (Semiconductor)	◎ Very good	<ul style="list-style-type: none"> <li>Strong inquiries for TEM, especially in Taiwan, Korea and China</li> <li>Higher demands for electron microscopes (TEM, SEM, EPMA) due to miniaturization and complexity of products</li> </ul>
	Private Demand (other industries)	○ Good	<ul style="list-style-type: none"> <li>Overall, capital investment is active</li> <li>R&amp;D investment for next-generation batteries is on the rise</li> <li>Impact of Ukraine-Russia War has not been seen yet</li> </ul>
Industrial Equipment	Lithography System Market	◎ Excellent	<ul style="list-style-type: none"> <li>Demand for multi-beam mask lithography systems increases along with the shift to EUV</li> <li>Market for spot beam lithography systems for production use (e.g., for DFB lasers) is also expanding with the spread of 5G</li> </ul>
	EB Source Market	◎ Very good	<ul style="list-style-type: none"> <li>Significant increase in inquiries for deflector e-beam source</li> </ul>
Medical Equipment	Japan	△ Fair	<ul style="list-style-type: none"> <li>Demand of biochemistry analyzer is recovering</li> </ul>
	Overseas Market	○ Good	<ul style="list-style-type: none"> <li>Orders and sales for Siemens revived</li> <li>Orders and sales for China increased</li> </ul>

## 2. Overview of New Mid-Term Management Plan "Evolving Growth Plan"

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# Basic Concept

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- Accelerate business scale expansion and achieve higher profitability by further implementing the “Evolving in 70th Year”, the basic vision of the previous medium-term management plan, “Triangle Plan 2022”

## 1. The concept of Growth Vision, “Evolving in the 70<sup>th</sup> Year”, remains unchanged

Accelerate business expansion and achieve even higher profitability based on our unique technologies and human networks which have been developed since the company's founding

## 2. Strengthen and develop YOKOGUSHI strategy

Provide higher-added value to our customers by developing our YOKOGUSHI strategy further not only into product development, but also into business development and data utilization

## 3. Approaches for high-profitability

Company-wide efforts to build the barriers to entry, improve profitability, and strengthen business support

## 4. Achieve 3 Growths of value for customers, employees & human resources, and sales & profit

Achieve well-balanced growth to expand business scale

## 5. Commitment to the SDGs

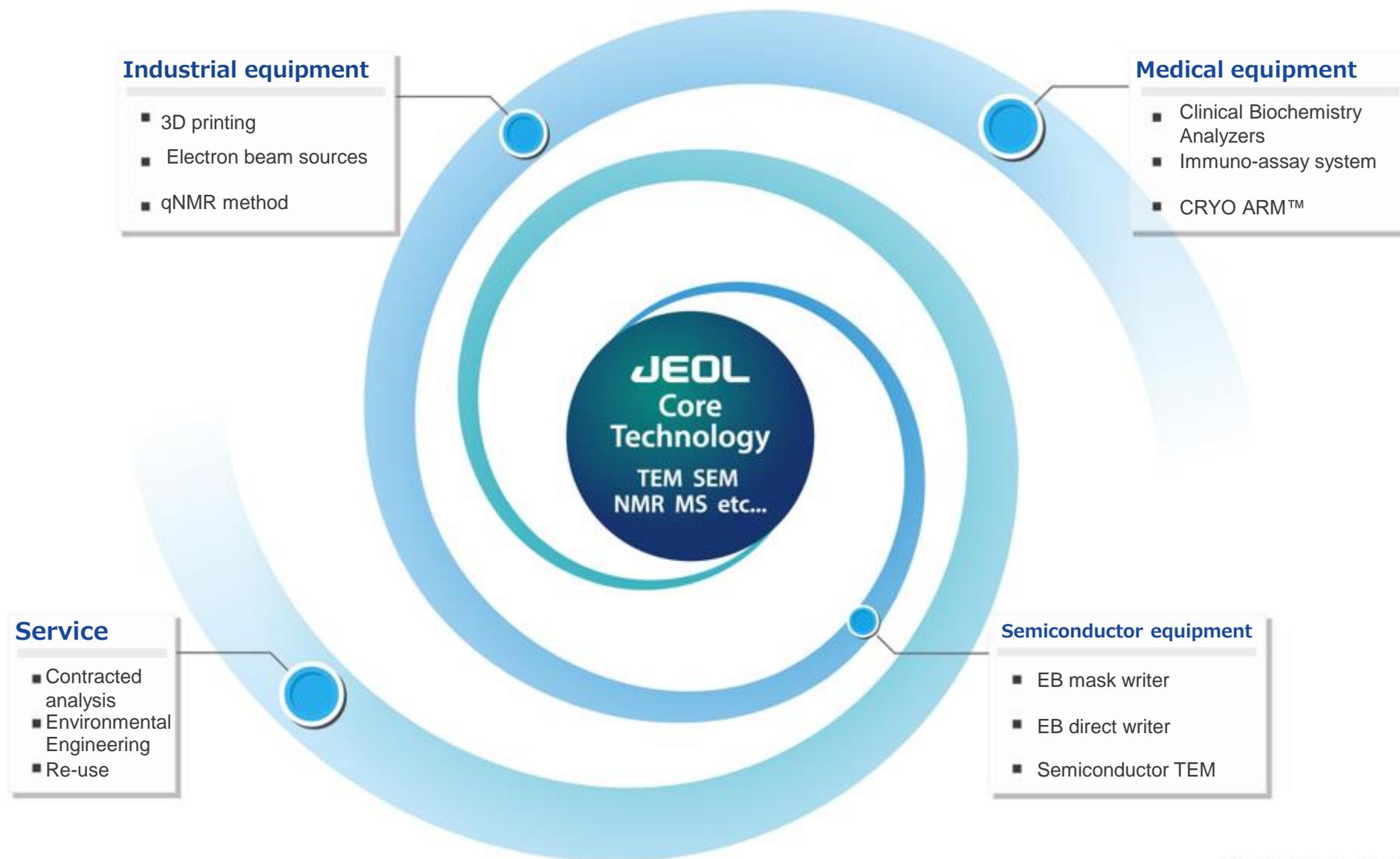
Engage materiality (important social issues) from two perspectives: business activities and ESG activities



**We will achieve sales of 170 billion yen, operating profit of 24 billion yen in FY2024**

# Growth vision of “Evolving in the 70th Year” remains unchanged

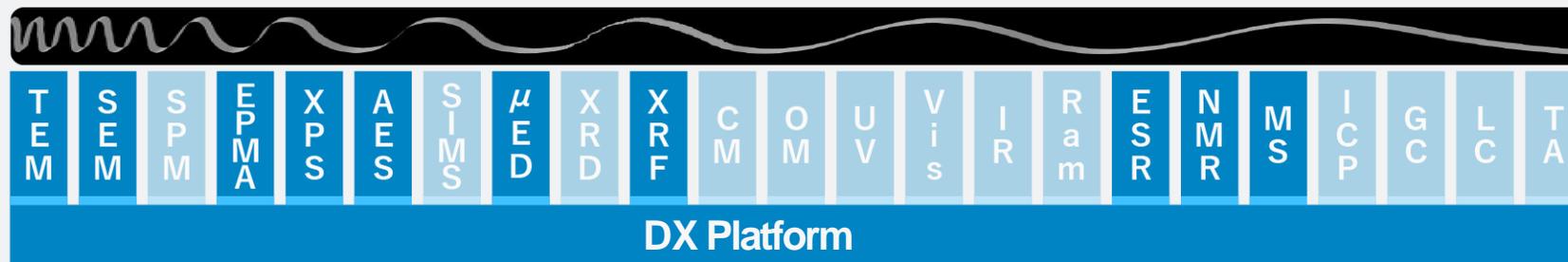
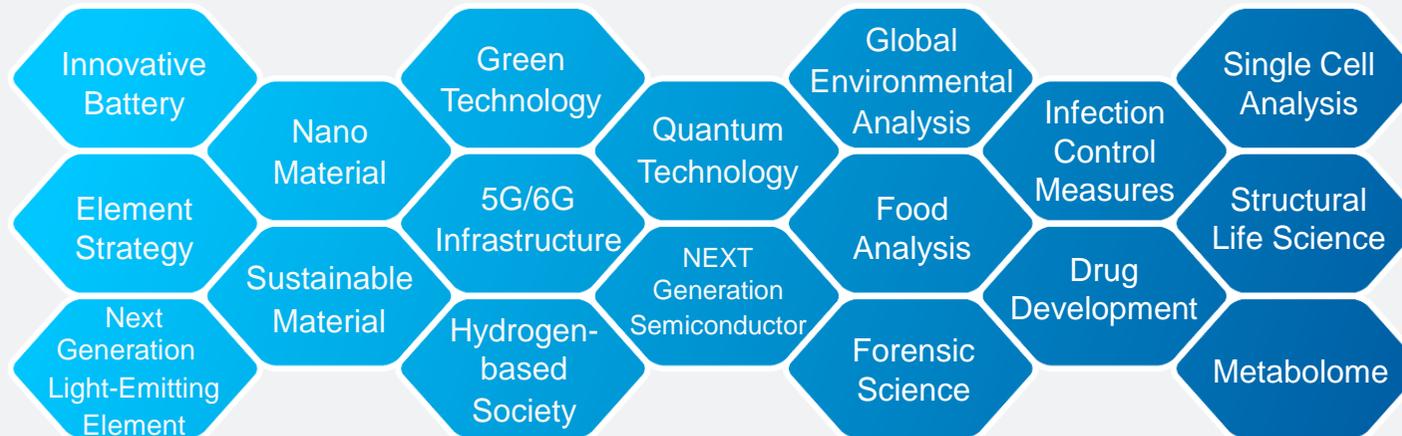
- Expand business scale and achieve higher profitability



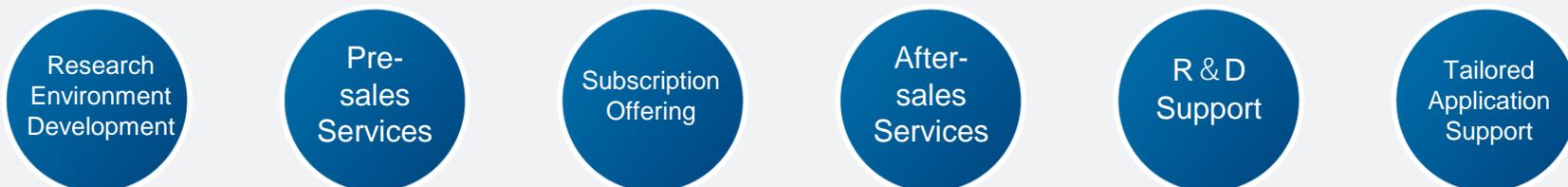
# Strengthen and develop YOKOGUSHI Strategy

- Improve and strengthen for higher profitability

## YOKOGUSHI



## Solutions



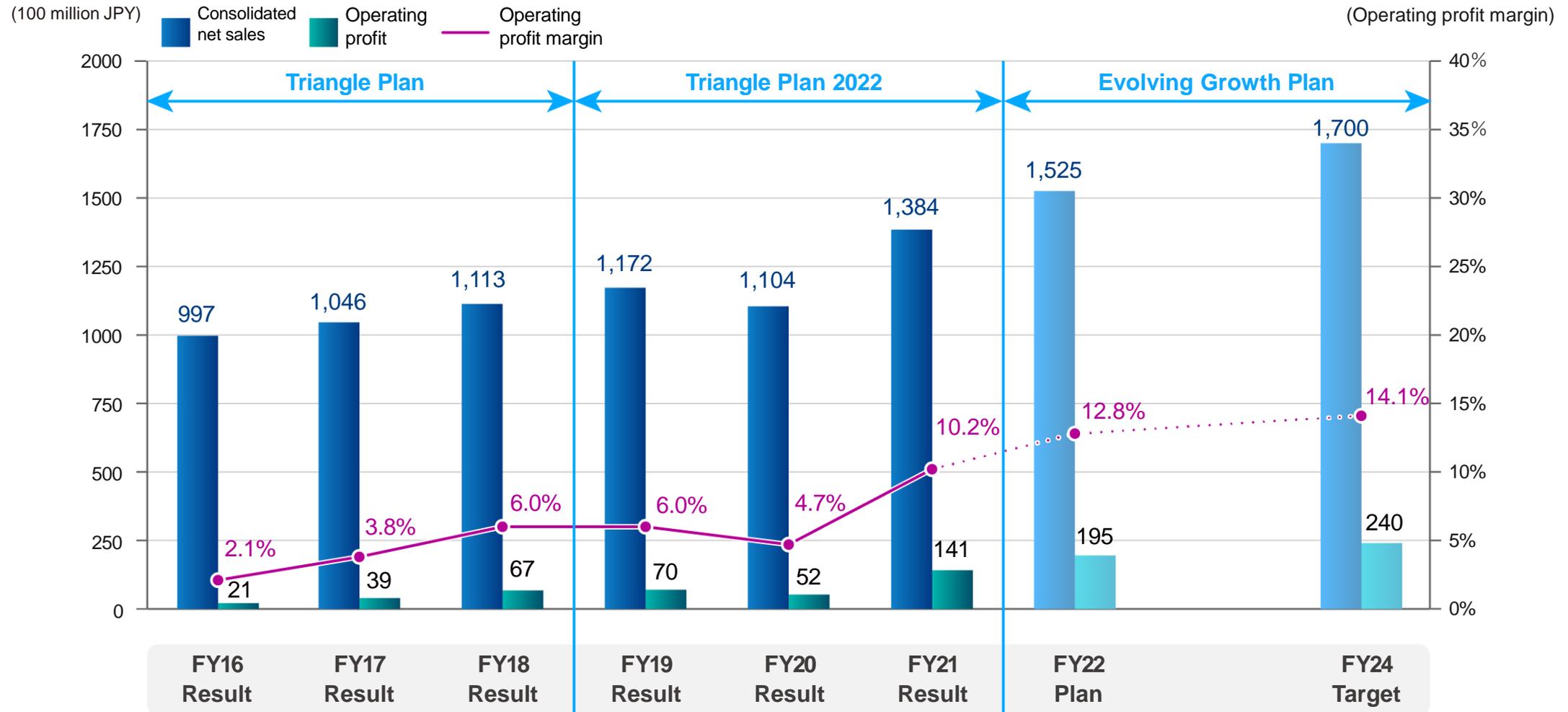
## Consolidated Target

- 170 billion yen in sales, 24 billion yen in operating profit, and 14.1% in operating profit margin
- ROE of 10% or higher

		FY 2021 Result	FY2022 Plan	FY2024 Target
PL Items	Net Sales	138.4 billion yen	152.5 billion yen	170 billion yen
	Operating profit (Operating profit margin)	14.1 billion yen (10.2%)	19.5 billion yen (12.8%)	24 billion yen (14.1%)
	Ordinary profit (Ordinary profit margin)	16.3 billion yen (11.8%)	18.8 billion yen (12.3%)	24 billion yen (14.1%)
	Net profit attributable to owners of the parent	12.3 billion yen	13.7 billion yen	17.5 billion yen
	Exchange rate assumption	1 \$ =113 Yen	1 \$ =115 Yen	1 \$ =115 Yen

# Transition and Target

Net Sales/Operating Profit Transition



Exchange rate (1\$=Yen)

¥ 109

¥ 111

¥ 111

¥ 109

¥ 106

¥ 113

¥ 115

¥ 115

# Target by Segment

(100 million JPY)

			FY 2021 Result	FY 2022 Forecast	FY 2024 Target
<b>Scientific and Metrology Instruments</b>	PL Item	Net sales	851	902	992
		Operating profit※ (Operating profit margin)	48 (5.7%)	56 (6.2%)	91 (9.2%)
<b>Industrial Equipment</b>	PL Item	Net sales	340	442	515
		Operating profit※ (Operating profit margin)	131 (38.5%)	180 (40.7%)	213 (41.3%)
<b>Medical Equipment</b>	PL Item	Net sales	193	181	193
		Operating profit※ (Operating profit margin)	11 (5.7%)	12 (6.6%)	18 (9.5%)

※Before allocation of corporate expenses

<b>Corporate Expenses</b>	<b>49</b>	<b>53</b>	<b>57</b>
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※Separate strategy expense of 2.5 billion yen is expected in FY2024.

# Overview of “Evolving Growth Plan”

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## Scientific and Metrology Instruments

- Provide highly competitive solutions based on YOKOGUSHI strategy for growing markets (semiconductor, drug discovery, battery, etc.)
- Increase added value to customers through integrated operation of sales and service

## Industrial Equipment

- Expand business by meeting market demands for mask lithography systems and spot beam lithography systems, which continue to grow along with the growth of the semiconductor industry
- Continue to provide competitive solutions in cooperation with IMS, our business partner

## Medical Equipment

- Continue to expand business by focusing on overseas market development
- Improve cost ratio by implementing IoT system and through cost reduction activities

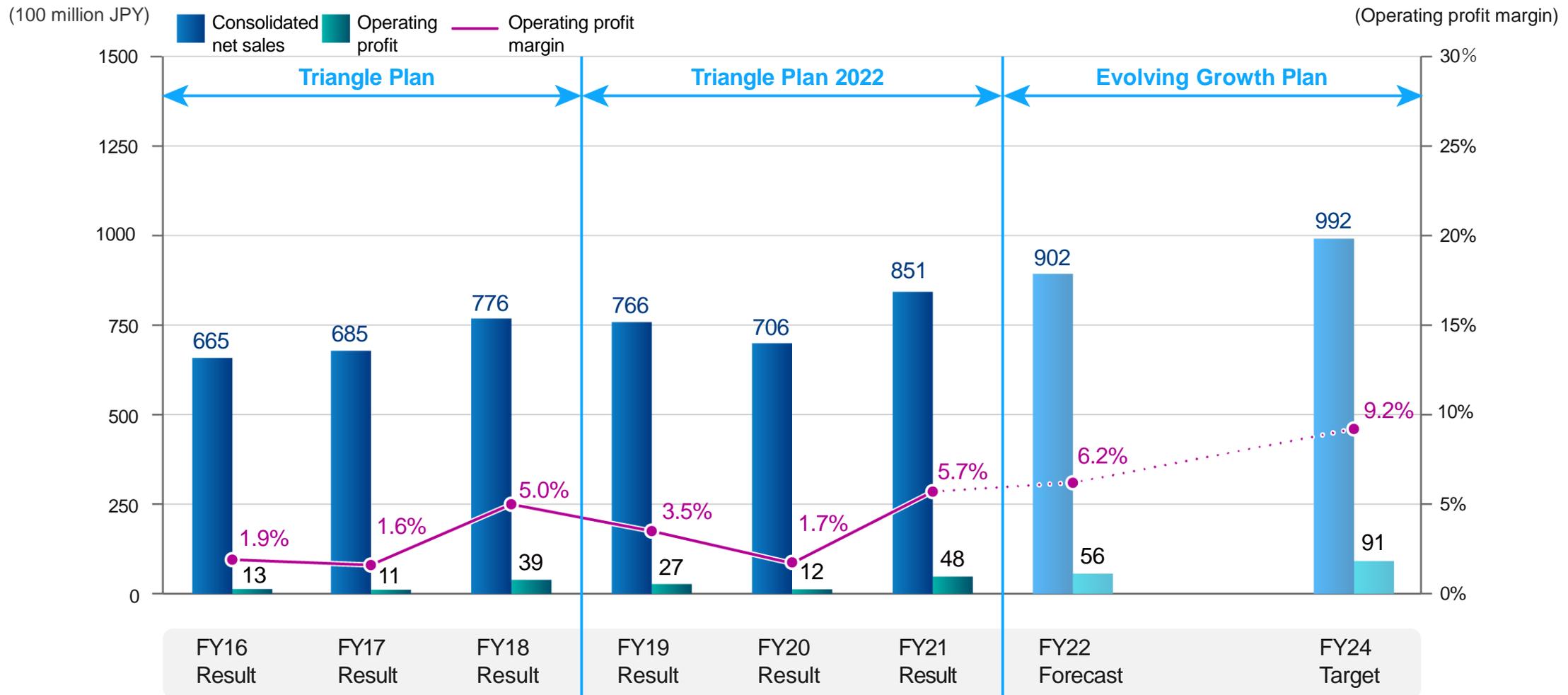
## 2-1. Scientific and Metrology Instruments

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# Transition and Target: Scientific and Metrology Instruments

Net Sales/Operating Profit Transition



Exchange rate (1\$= Yen)

¥ 109

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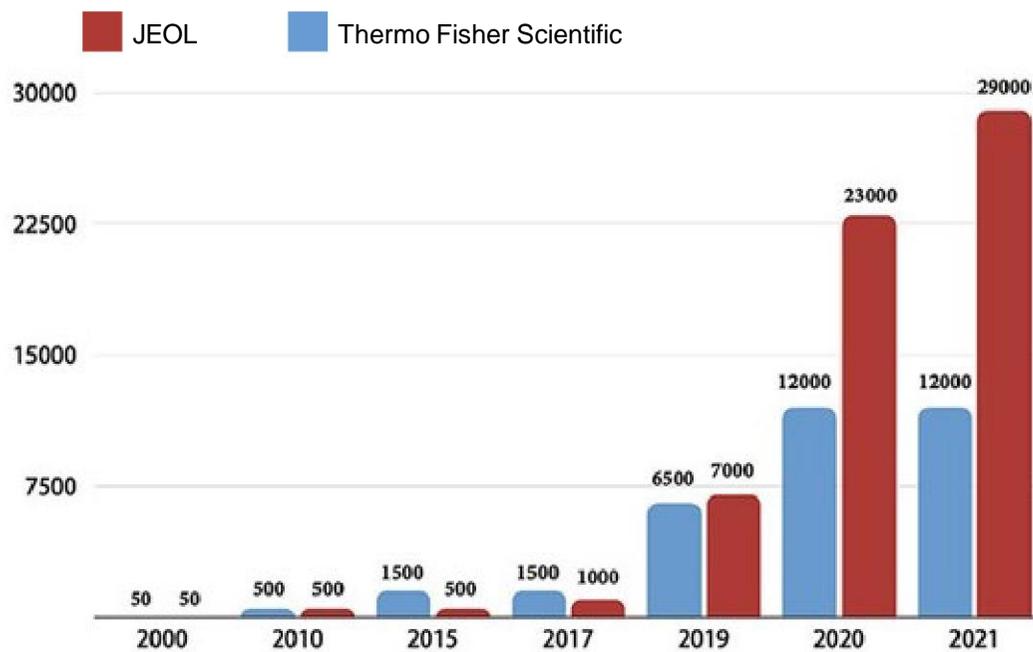
¥ 115

¥ 115

# Great Improvement of Cryo ARM™ Throughput

- "Recent progress and future perspective of electron cryomicroscopy for structural life sciences" by Dr. Keiichi Namba, a professor at Osaka University was published in 'Microscopy Volume 71, Issue Supplement (2022),' which introduced the significant improvement in throughput of CryoARM™.

History of improvement in CryoEM data collection throughput



Year	CryoTEM	Detector	Data collection method
2000	JEM3000SFF	Photographic film	Manual
2010	JEM3200FSC	TVIPS F415mp	Manual
2017	CRYO ARM 200 (prototype)	GATAN K2	JADAS
2019	CRYO ARM 300	GATAN K3	SerialEM
2020	CRYO ARM 300	GATAN K3	SerialEM & PyJEM
2021	CRYO ARM 300 II	GATAN K3	SerialEM & PyJEM & Zero-fringe

Source: JEOL news Vol.54 No.1, 2022

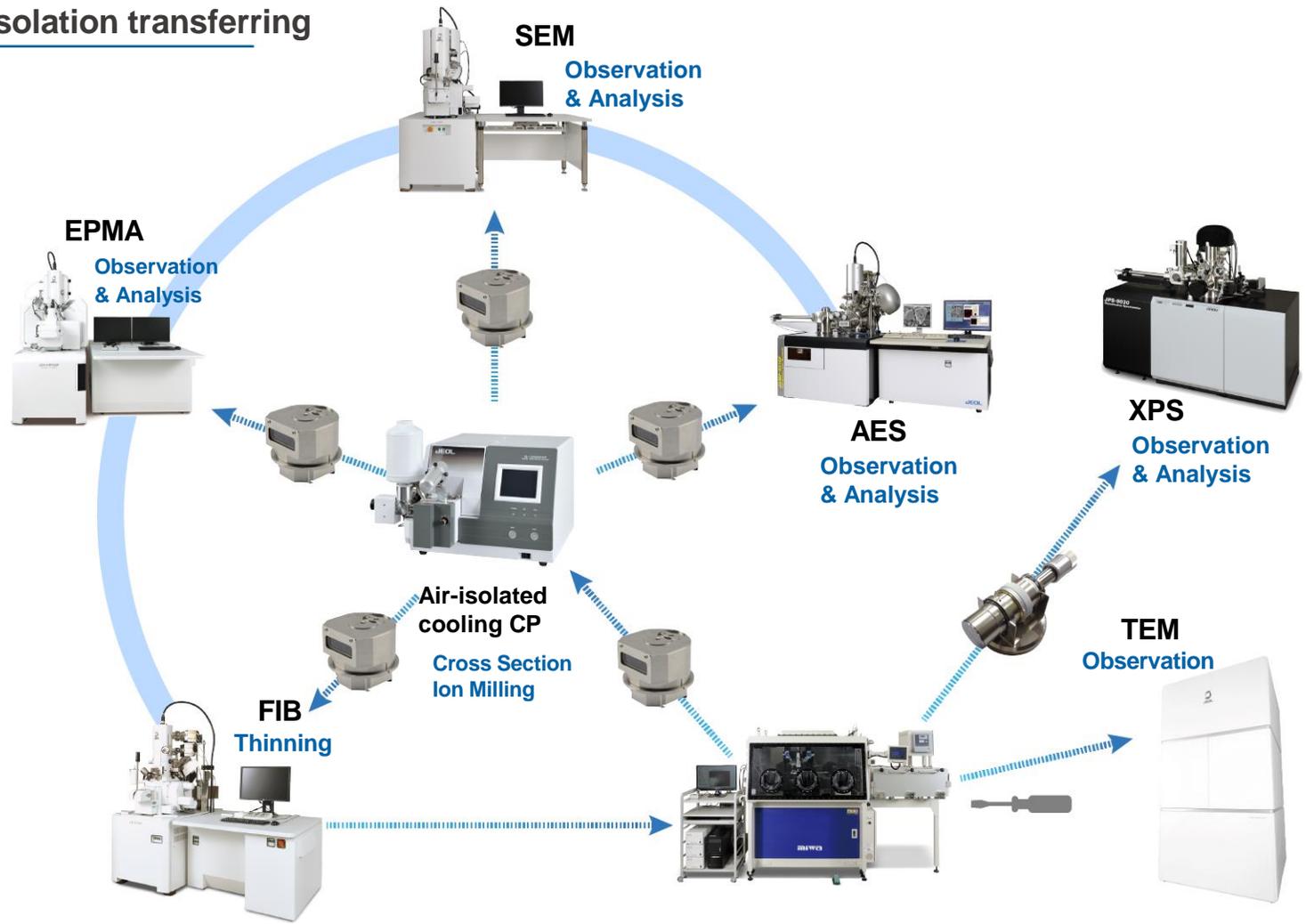
[https://www.jeol.co.jp/en/download\\_jeolnews.html](https://www.jeol.co.jp/en/download_jeolnews.html)



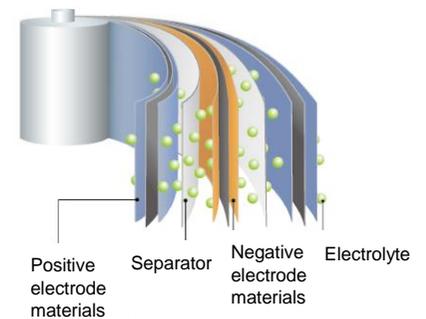
# Next Generation Battery ▶ YOKOGUSHI ◀ Analytical Solutions

- Observation & analysis with electron microscope requires disassembling battery, but they provide more material information.
- Batteries using sulfide solid electrolytes contain lithium and sulfur require to handle without air exposure to avoid alteration of materials. JEOL microscopes and sample preparation equipment allow to enable transfer of specimens without air exposure.

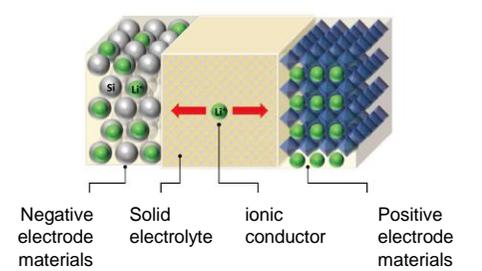
## Air-isolation transferring



Lithium Ion Battery Basic Structure



Solid-State Battery Basic Structure

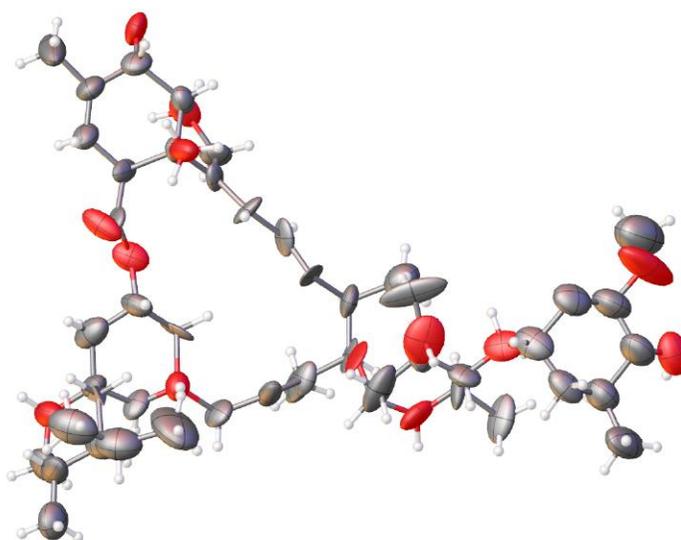


## Start shipping Synergy-ED (Electron Diffractometer)

- The first unit was installed at Omura Satoshi Memorial Institute, Kitasato University in Japan. Inquiries have been strong.



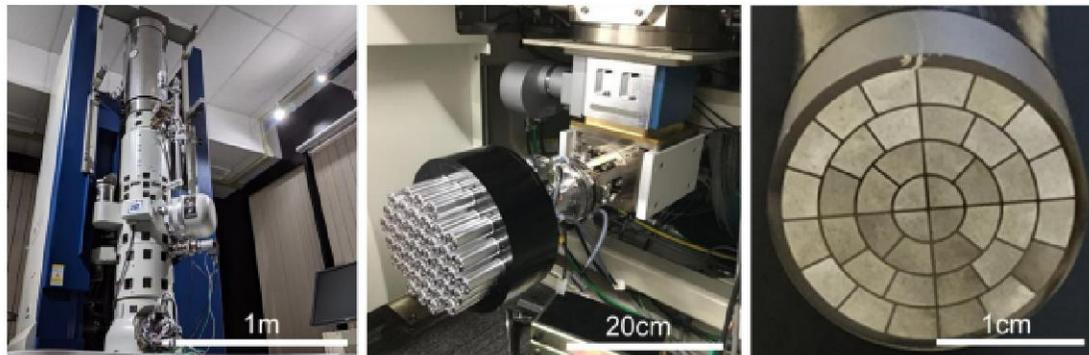
Successful structural analysis of Ivermectin by using Synergy-ED



# Successful observation of “Magnetic Field of Atom” for the first time with new electron microscope

- Direct observation of magnetic field generating around an atom, the origin of magnetism, was extremely difficult.
- Direct observation of atomic magnetic fields has been successfully achieved with the newly developed atomic-resolution magnetic field-free electron microscope.
- This new measuring technology is expected to strongly promote basic research on clarification of magnetism indicated by substance and research and development of the most advanced materials including magnets, steel, semiconductor devices, and quantum technology.

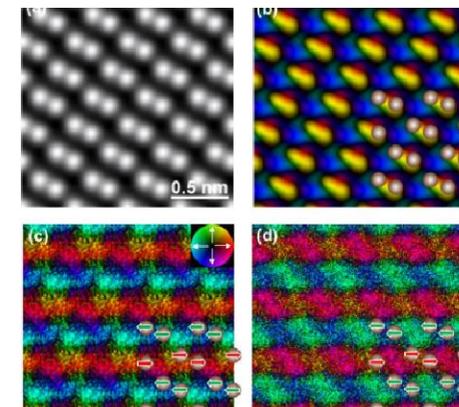
Joint development by the University of Tokyo and JEOL Ltd. funded by the JST Development of Advanced Measurement and Analysis Systems program



**Newly developed ultra-sensitive, high-speed, split-type detector**  
 (left) Atomic resolution magnetic-field-free electron microscope  
 (center) New detector equipped beneath the electron microscope  
 (right) Detected surface divided into 40 detection areas



Appearance of hematite ( $\alpha\text{-Fe}_2\text{O}_3$ ) crystal, and schematic diagram of atomic structure and Fe atom magnetic moment (arrow) at room temperature.



Atomic structure image and magnetic field image of hematite ( $\alpha\text{-Fe}_2\text{O}_3$ )

# NJ Biopharmaceuticals LLC and JEOL Ltd. Are Excited to Announce Their Collaboration to Bring Innovative Drug Discovery Platform Solutions Using JEOL's 800 MHz NMR

- Received order of 800MHz NMR with our cryo probe from NJ Biopharmaceuticals LLC (NJ Bio)
- NJ Bio is a U.S. contract research organization (CRO) that has earned a strong reputation for its research services involving the latest modalities, including winning the Best Contract Research Provider Award at the 2021 Annual World ADC Awards. Developing a platform for the optimization of targeted protein degrader (TPD), particularly using structural information from NMR.



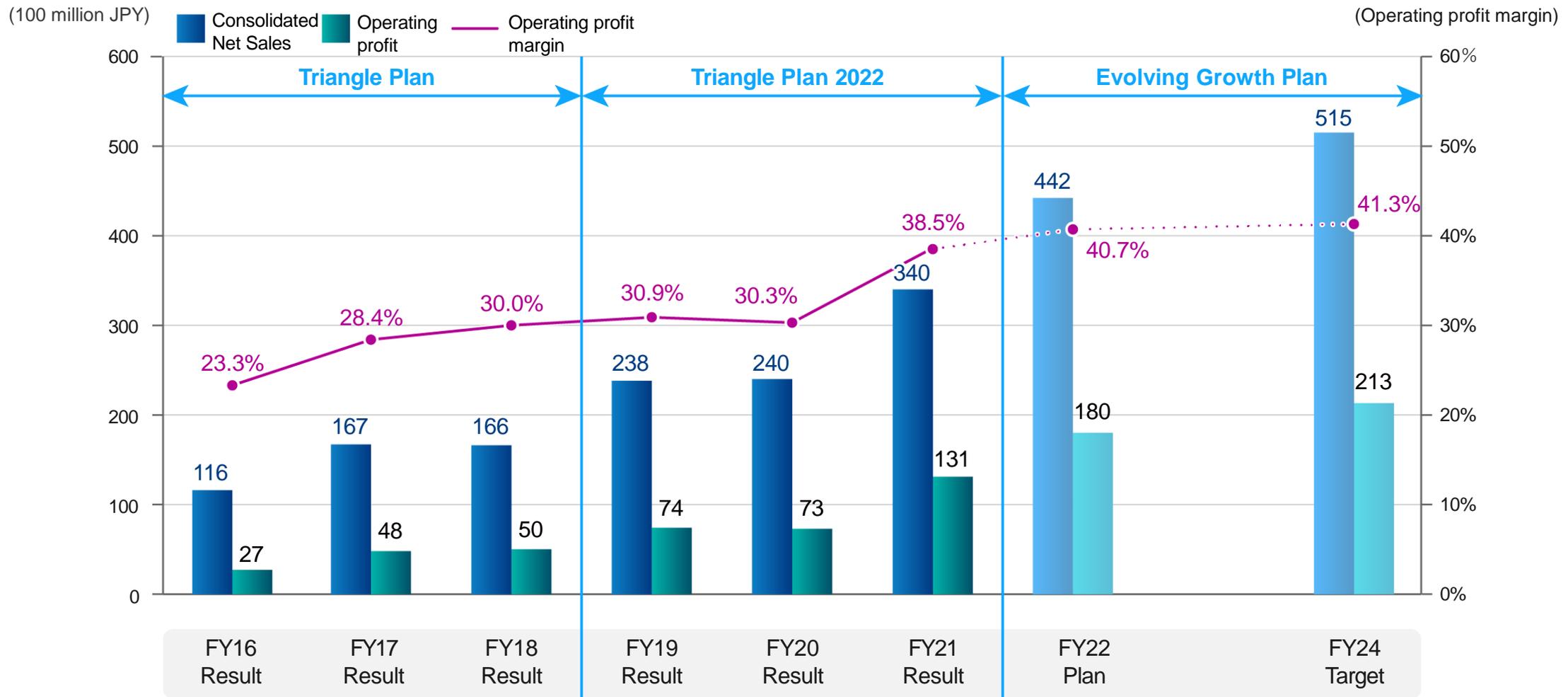
## 2-2. Industrial Equipment

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# Transition and Target: Industrial Equipment

Net Sales/Operating Profit Transition



Exchange rate(1\$= Yen)

¥ 109    ¥ 111    ¥ 111    ¥ 109    ¥ 106    ¥ 113    ¥ 115    ¥ 115

# Start shipping MBMW Platform manufactured at Musashimurayama Works

- First shipment of multi-beam mask writer platform which is manufactured in Musashimurayama Works took place in May



## Maximum production capacity of multi-beam mask writer



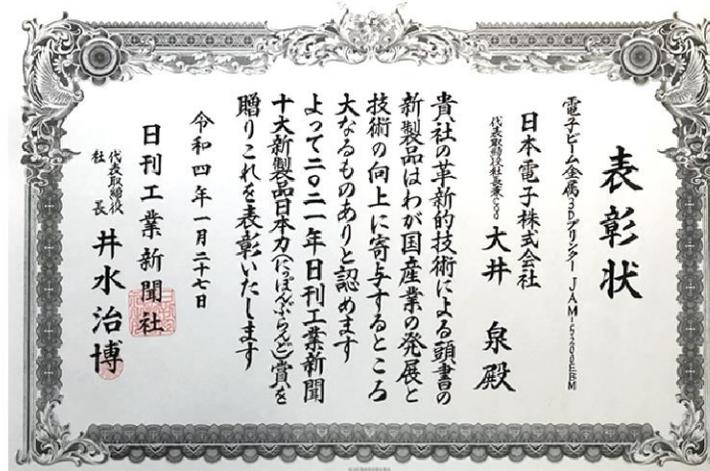
Responding to growing demand for multi-beam mask writer



Support for production of single-beam mask writer and spot beam lithography equipment which demand is strong as well

# Next Generation 3D Printer for Industrial Application

- Many inquiries have been received. The first equipment will be installed at the university in Japan.
- Our Electron Beam Metal 3D Printer receives the Japan Power Award at the 64th Ten Greatest New Products Awards



Left: Mr. Haruhiro Imizu,  
a president of THE NIKKAN KOGYO SHIMBUN, LTD.  
Right: Mr. Izumi Oi, President & COO of JEOL Ltd.  
(Photo courtesy of NIKKAN KOGYO SHIMBUN, LTD.)

## Recent modeling results



Heat sink  
(material: pure copper)



Impeller  
(Material: Nickel-based superalloy 718)



Impeller with shroud  
(Material: Nickel-based superalloy 718))

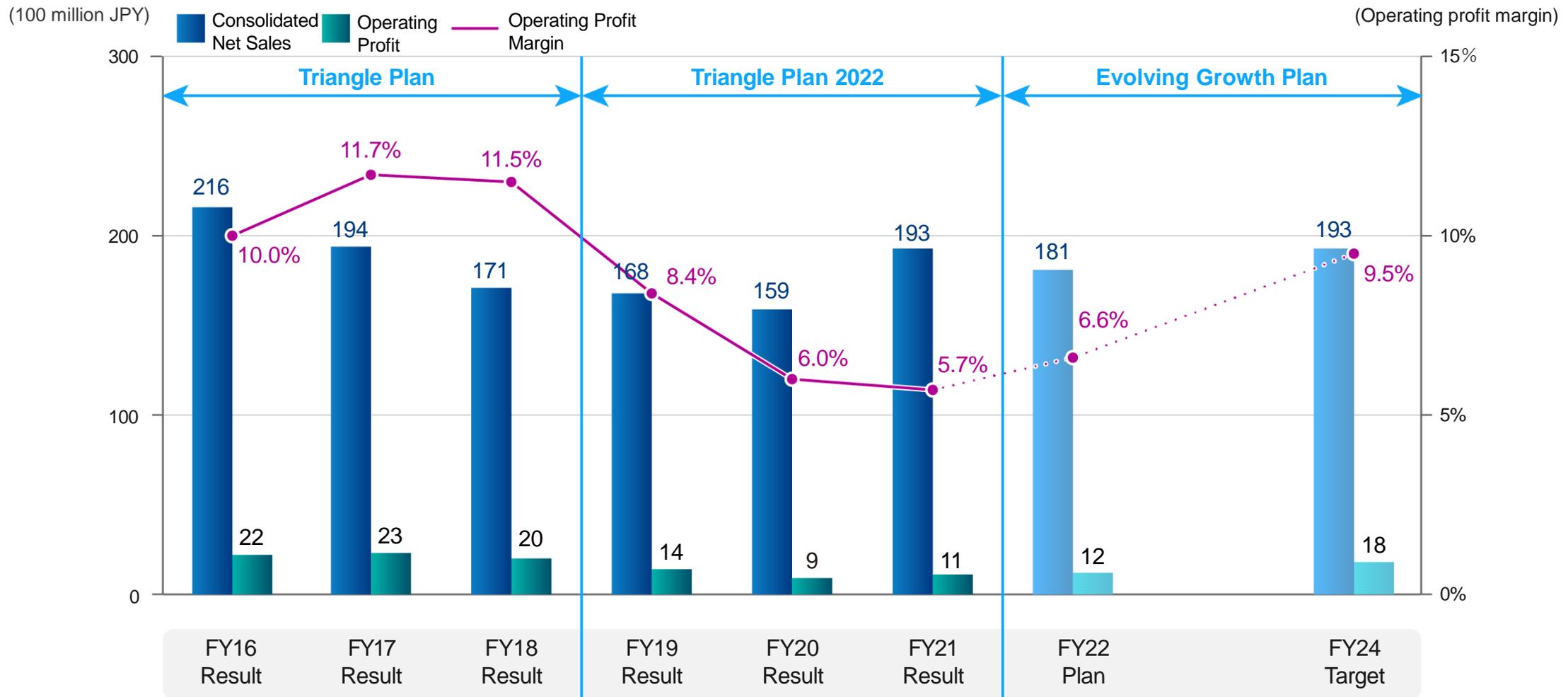
## 2-3. Medical Equipment

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# Transition and Target: Medical Equipment

Net Sales and Operating Profit Transition

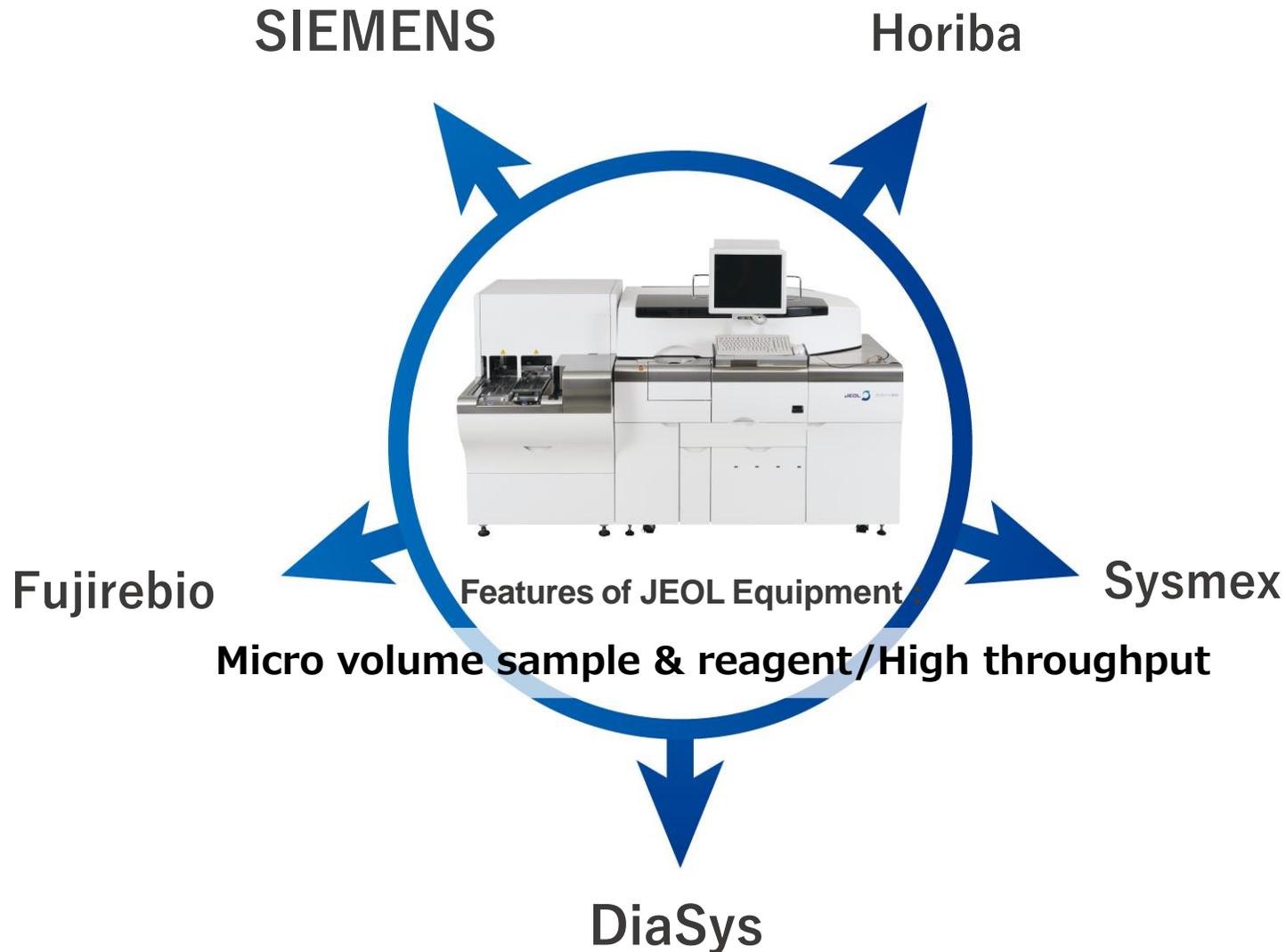


Exchange rate(1\$=Yen)

¥ 109    ¥ 111    ¥ 111    ¥ 109    ¥ 106    ¥ 113    ¥ 115    ¥ 115

## Expansion of overseas market

- Continue to expand into global markets, especially emerging countries



### 3. Summary

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## Becoming a niche top company supporting science and technology in the world

▶ YOKOGUSHI ◀

### Company Philosophy

On the basis of "Creativity" and "Research and Development", JEOL positively challenges the world's highest technology, thus forever contributing to the progress in both Science and Human Society through its products.

▶ YOKOGUSHI ◀

### Vision

#### "Evolving in the 70th Year"

Accelerate business expansion and achieve even higher profitability based on our unique technologies and human networks which have been developed since the company's founding.

▶ YOKOGUSHI ◀

▶ YOKOGUSHI ◀

Promote Innovation by co-creation

### Mid-Term Management Plan "Evolving Growth Plan"

We aim to improve customer satisfaction by enhancing our R&D, manufacturing, and service capabilities.

**Note on document handling**

Information provided by this document and presented orally by our representative contains assumptions and beliefs based on data currently available.

Readers should be aware that actual results could differ materially from this outlook due to various known and unknown factors that impact our performance such as economic trends, upturn or downturn in the semiconductor industry, and changes in R&D spending.

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