Results of Operations

for the Second Quarter of the Fiscal Year Ending March 31, 2023

C. Uyemura & Co., Ltd.

Standard Market of the Tokyo Stock Exchange（Stock Code：4966）

November 12, 2022

Updated on November 14, 2022

Overview of Consolidated Financial Results for the Second Quarter of the Fiscal Year Ending March 31, 2023

Period under review

In Japan (2 companies): April–September / Overseas (10 companies): January–June

Surface finishing materials business

- **Both segment sales and profit of mainstay plating chemicals for package PWBs saw year-over-year increases thanks to an increase in demand in 5G and semiconductor markets.**

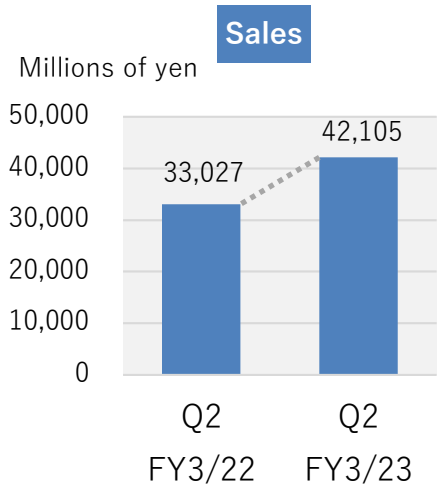
Surface finishing machinery business

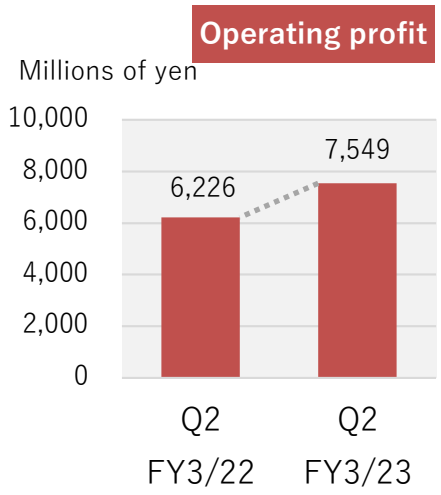
- **Segment sales of the surface finishing machinery business increased year-over-year thanks to the strong demands for the surface finishing machineries for semiconductors and electronic components especially in Japanese and Taiwan markets. However, segment profit decreased year-over-year. This was due to difficulties in procuring components and prolonged lead time to procurement resulting from the global supply shortage of components. In addition, there were also soaring prices of various components used to manufacture the surface finishing machineries such as resin plates, electronic components, and filters.**

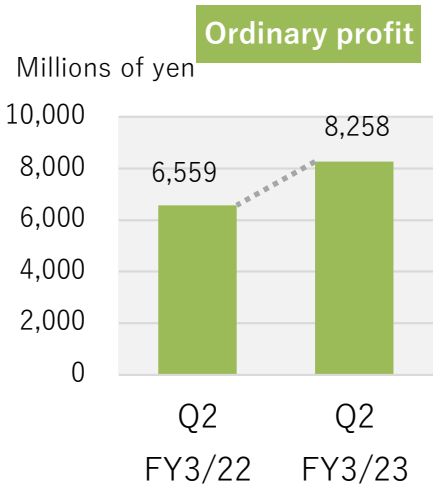
Plating job business

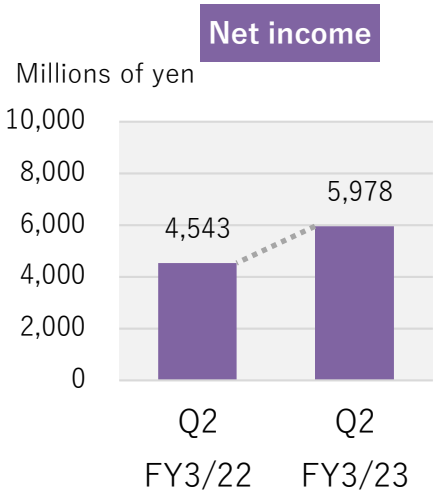
- **Plating job operations for PWBs in Taiwan continued to show strong performance. Plating job operations for the automobile industry in Thailand and Indonesia is in a difficult situation due to a shortage of semiconductors and soaring prices of metals and other materials. Plastic plating job is an important market for passing on our plating technology.**

Q2 FY3/23 Financial Results



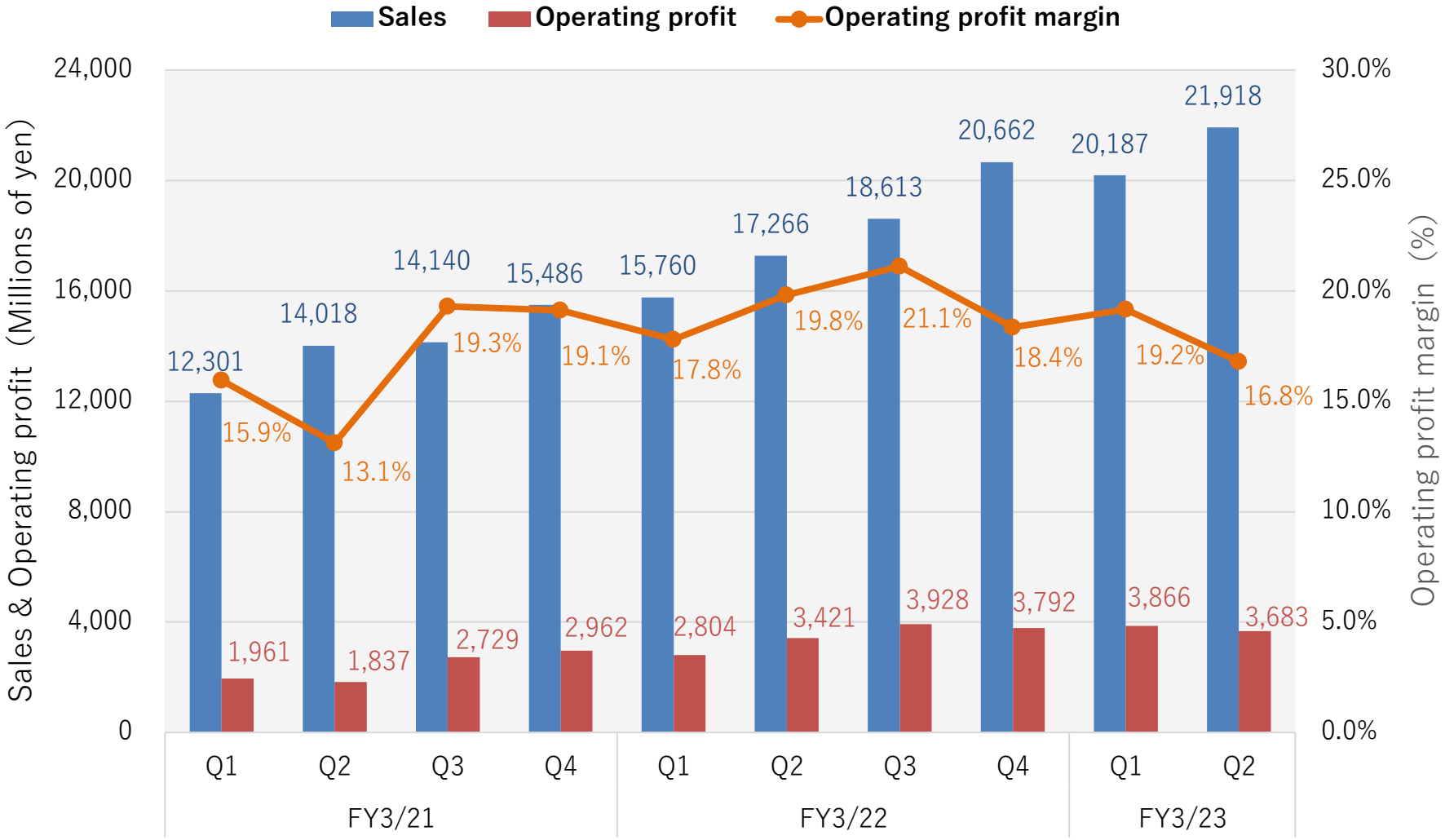




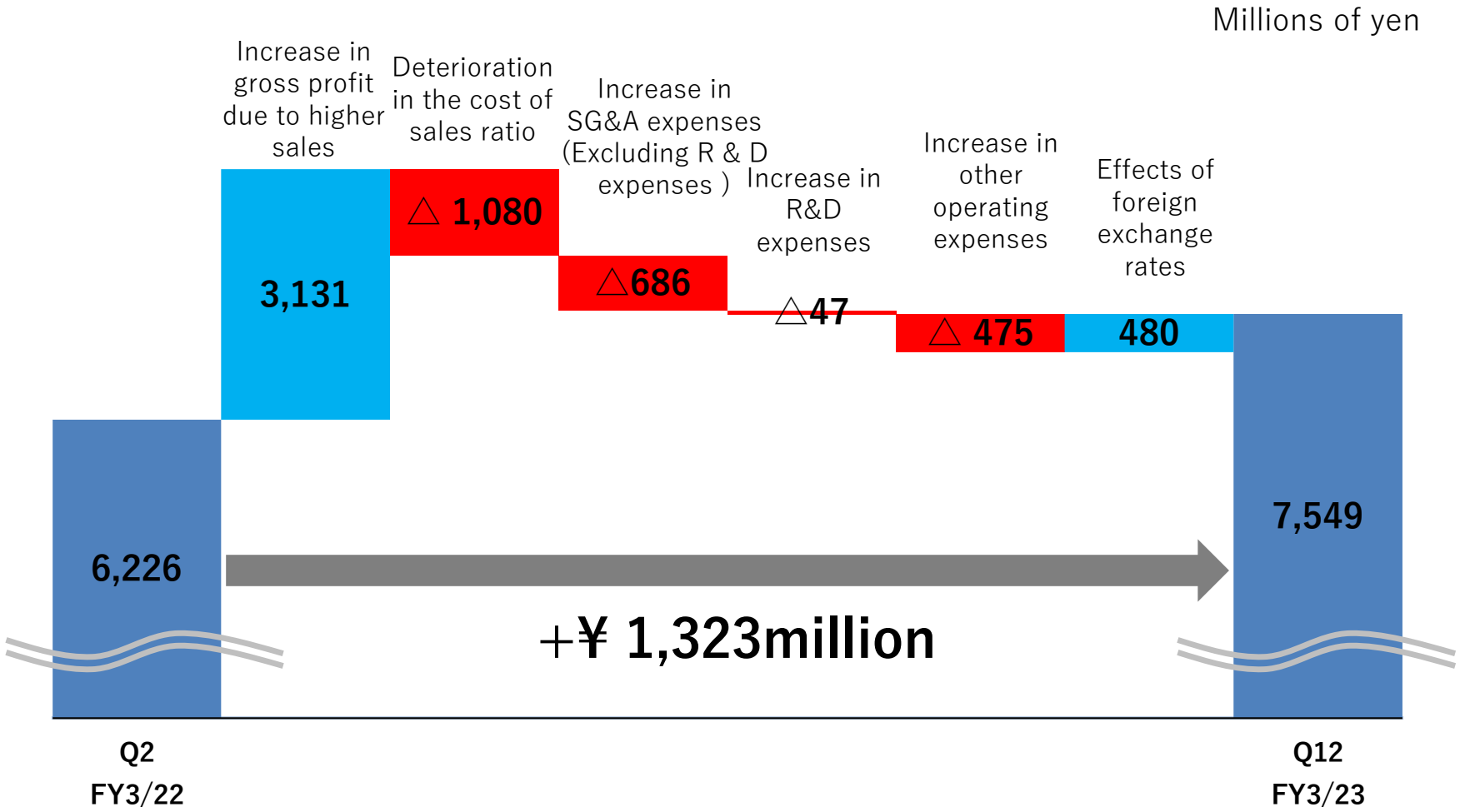


Millions of yen	Q2 FY3/21 Results	Q2 FY3/22 Forecast	Q2 FY3/22 Results	YoY change	Vs. Initial forecast
Sales	33,027	35,300	42,105	+9,078 (+27.5%)	+6,805 (+19.3%)
Operating profit	6,226	6,400	7,549	+1,323 (+21.3%)	+1,149 (+18.0%)
Ordinary profit	6,559	6,700	8,258	+1,699 (+25.9%)	+1,558 (+23.3%)
Net income	4,543	5,500	5,978	+1,435 (+31.6%)	+478 (+8.7%)
Exchange rate: $US	107.82 yen	122.39 yen	123.14 yen	+15.32 yen	+0.75 yen

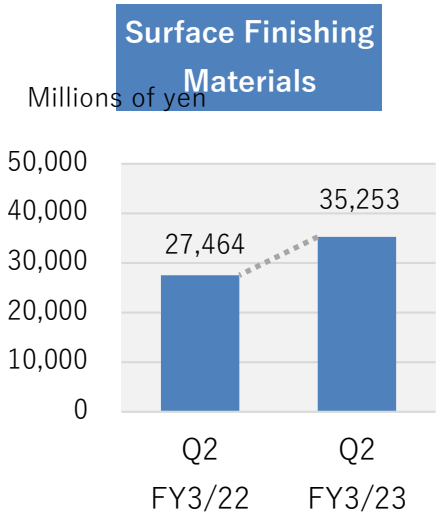
Quarterly Results

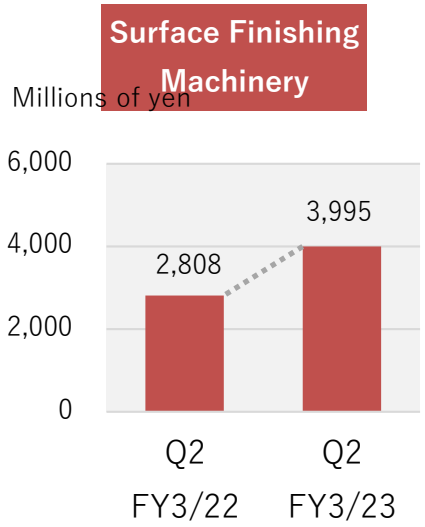


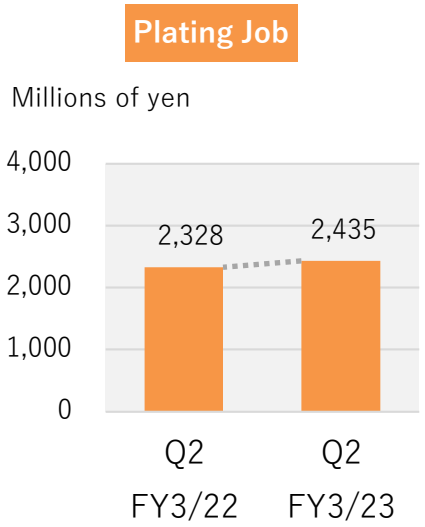
Changes in Operating profit

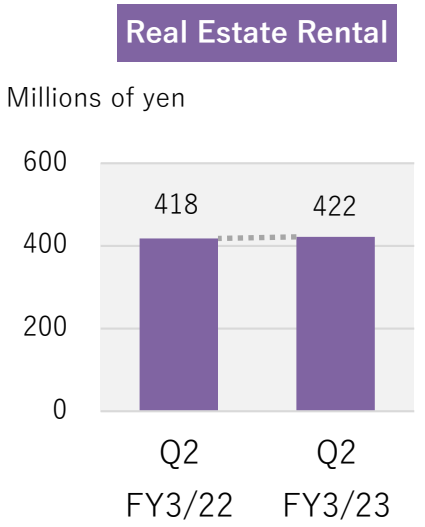


Sales by Business Segment



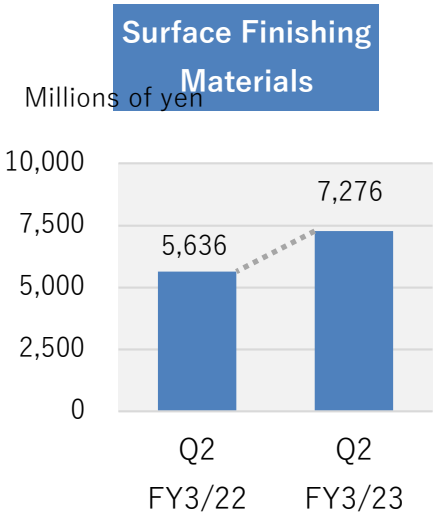


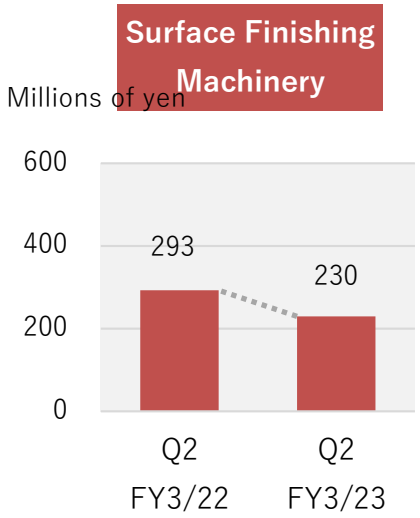


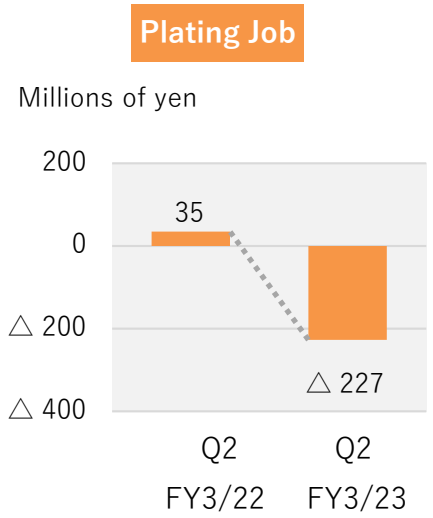


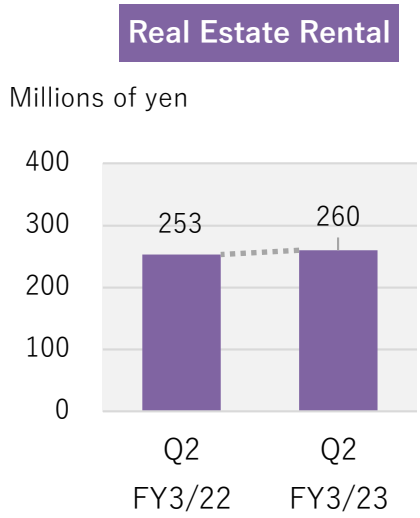
Millions of yen	Q2 FY3/22 Results	Q2 FY3/23 Results	Change	Percentage change
Surface Finishing Materials	27,464	35,253	+7,789	+28.4%
Surface Finishing Machinery	2,808	3,995	+1,187	+42.2%
Plating Job	2,328	2,435	+107	+4.6%
Real Estate Rental	418	422	+4	+1.0%

Operating Income by Business Segment



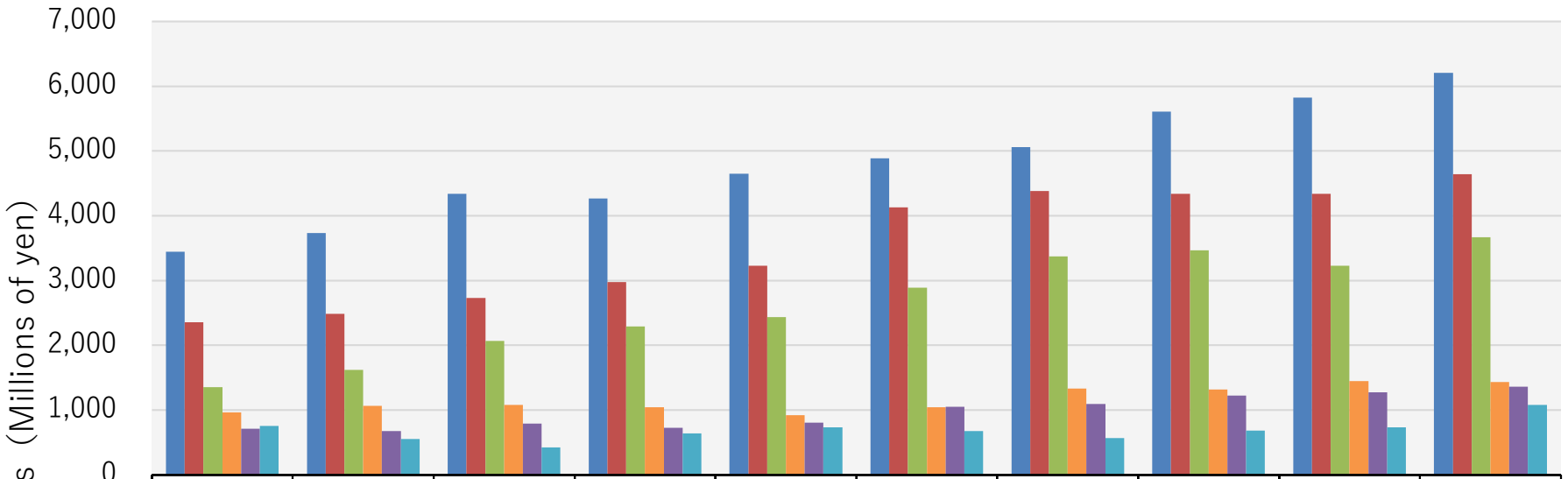






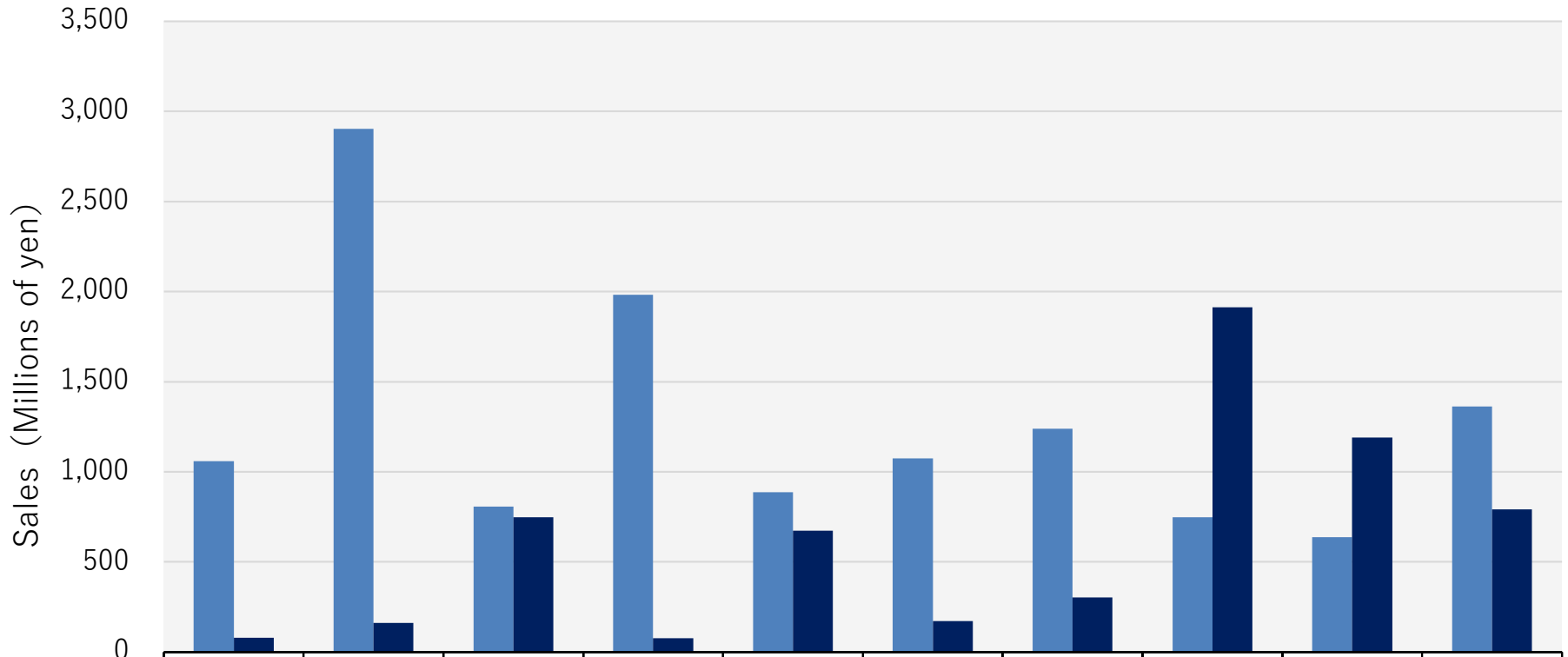
Millions of yen	Q2 FY3/22 Results	Q2 FY3/23 Results	Change	Percentage change
Surface Finishing Materials	5,636	7,276	+1,640	+29.1%
Surface Finishing Machinery	293	230	△ 63	△ 21.5%
Plating Job	35	△ 227	△ 262	-
Real Estate Rental	253	260	+7	+2.8%

Surface Finishing Materials Business Sales



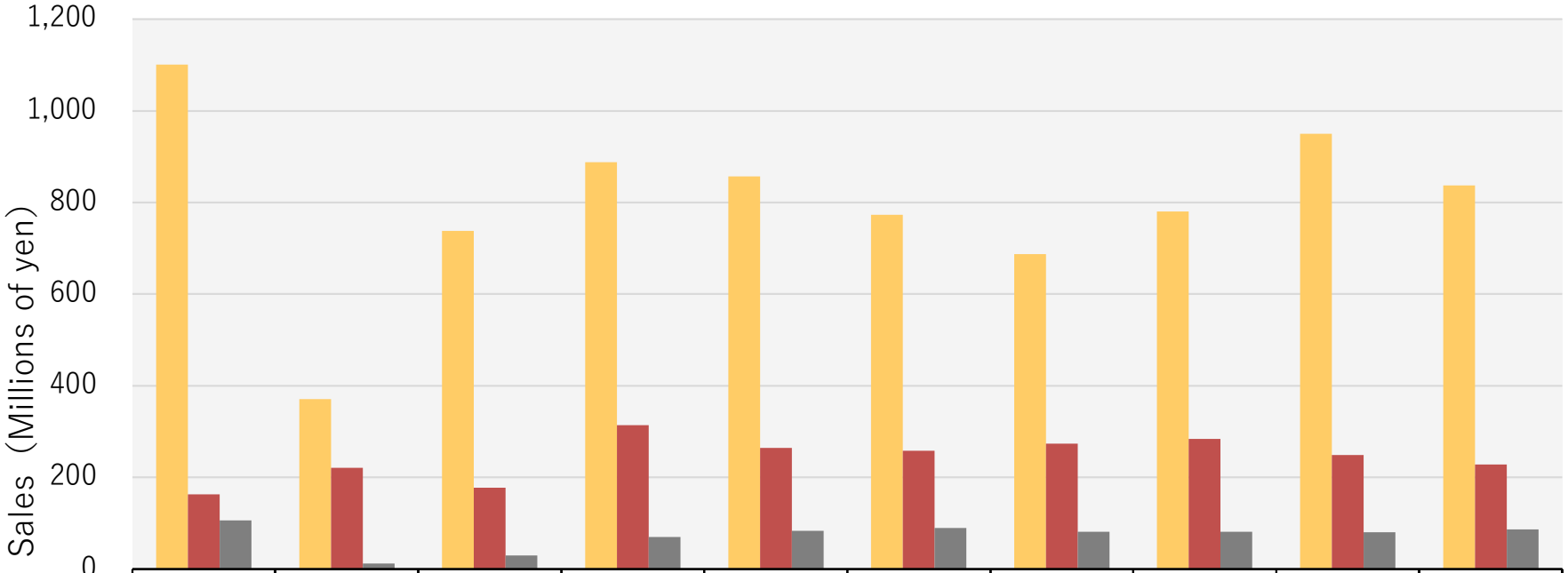
	FY3/2021				FY3/2022				FY3/2023	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Japan	3,448	3,737	4,342	4,270	4,653	4,889	5,062	5,608	5,823	6,209
Taiwan	2,355	2,485	2,728	2,973	3,231	4,133	4,380	4,343	4,341	4,644
China	1,350	1,622	2,064	2,291	2,436	2,887	3,375	3,465	3,232	3,666
US	961	1,062	1,082	1,045	924	1,040	1,333	1,314	1,450	1,431
Korea	714	678	791	726	803	1,054	1,096	1,227	1,277	1,358
ASEAN	753	556	421	642	733	675	564	681	734	1,083

Surface Finishing Machinery Business Sales



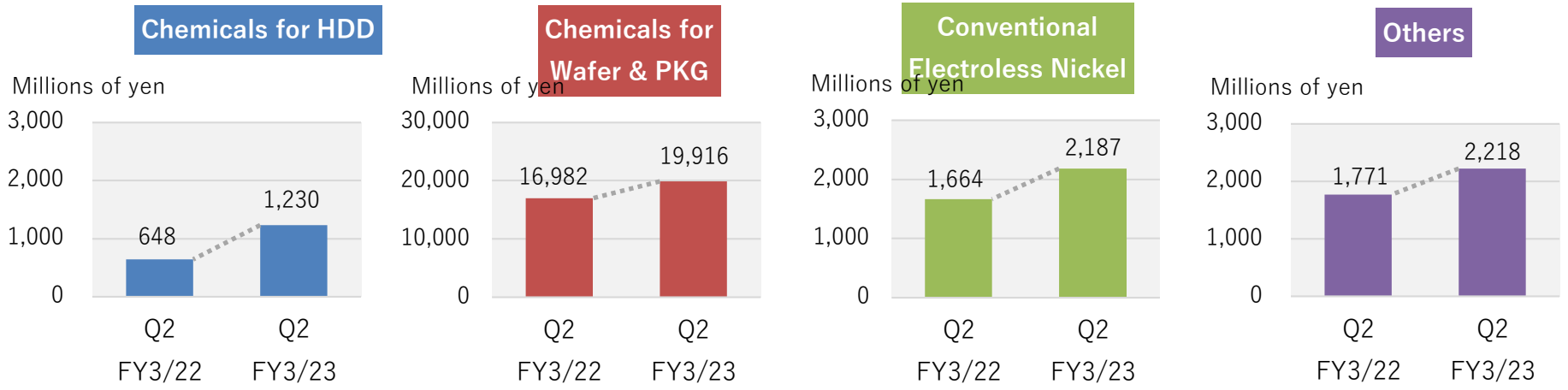
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
	FY3/2021				FY3/2022				FY3/2023	
Japan	1,060	2,903	807	1,983	887	1,075	1,240	747	637	1,363
Overseas	80	160	749	76	673	172	302	1,914	1,191	791

Plating Job Business Sales



	FY3/2021				FY3/2022				FY3/2023	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Thailand	1,101	371	738	888	857	773	687	780	950	837
Taiwan	163	221	177	314	264	258	274	284	249	228
Indonesia	106	12	30	70	83	90	81	81	80	86

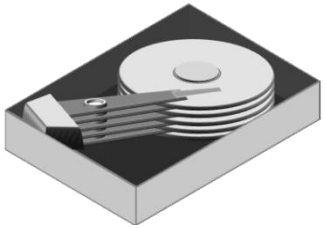
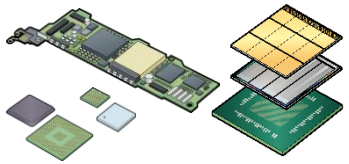
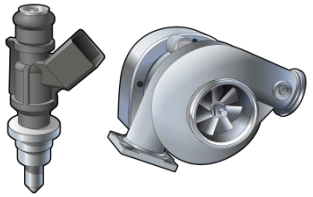
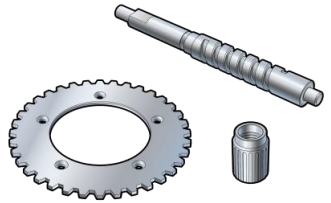
Sales by Chemicals Categories



Millions of yen	Q2 FY3/22 Results	%	Q2 FY3/23 Results	%	Change	Percentage change
Chemicals for HDD	648	3.1%	1,230	4.8%	＋582	＋89.8%
Chemicals for Wafer & PKG	16,982	80.6%	19,916	77.9%	＋2,934	＋17.3%
Conventional Electroless Nickel	1,664	7.9%	2,187	8.6%	＋523	＋31.4%
Others	1,771	8.4%	2,218	8.7%	＋447	＋25.2%
Total	21,066	100.0%	25,554	100.0%	＋4,488	＋21.3%

Sales of chemicals are included in the surface finishing materials business. Chemicals do not include abrasive compounds, industrial chemicals, or metals and the like. *Intersegment sales are included.

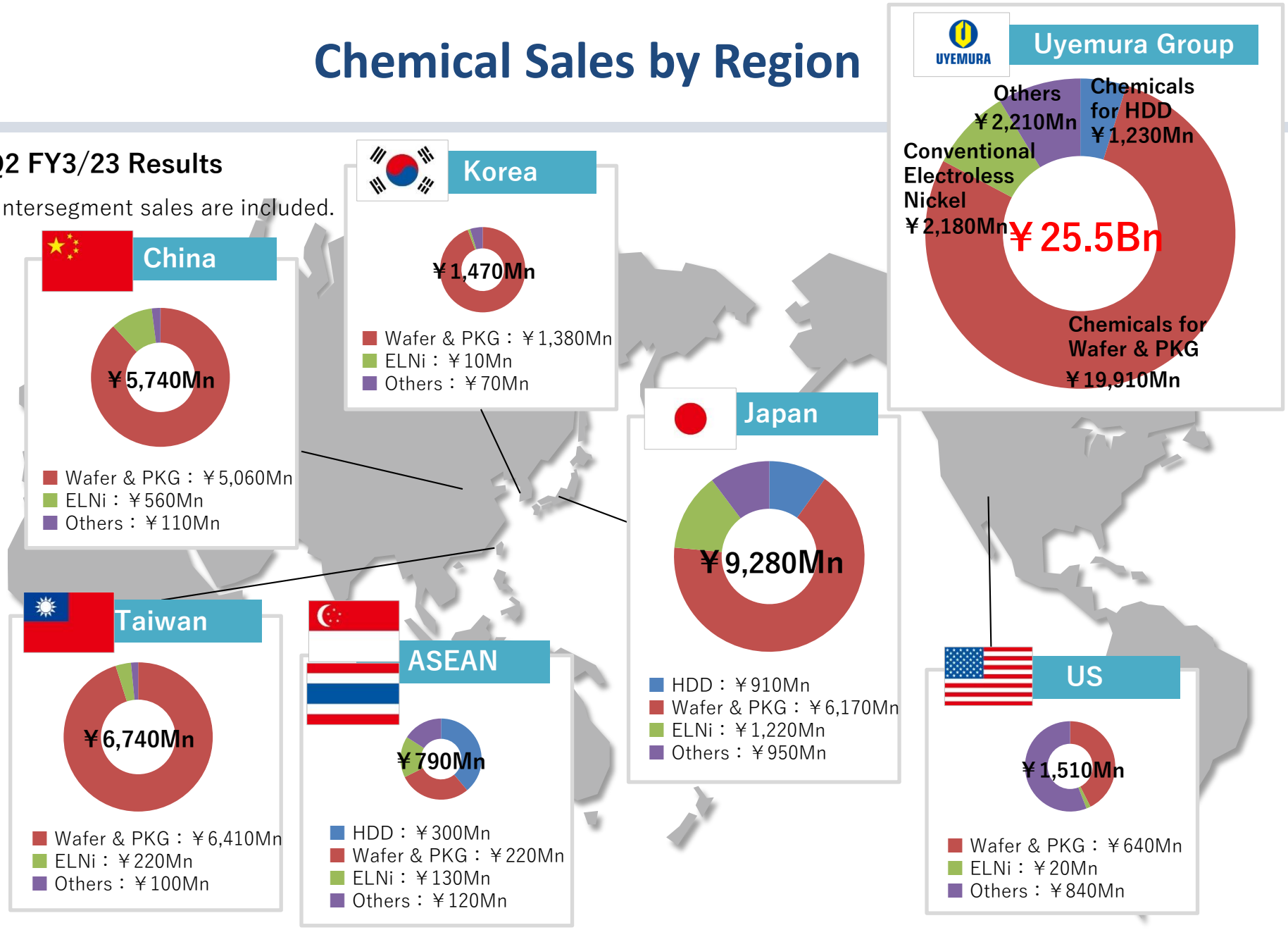
Chemicals Business – From Uyemura to End Users

	Chemicals for HDD	Chemicals for Wafer & PKG	Conventional Electroless Nickel	Others
Uyemura's chemicals	• Electroless nickel (high phosphorus type) ≥ 12 wt% P content NIMUDEN HDX	• Surface finishing chemicals Electroless nickel/gold plating Electroless nickel/palladium/ gold plating, etc. • Electroless copper plating/ copper electroplating	• Electroless nickel (medium phosphorus type) 8–11 wt% P content NIMUDEN SX, DX, KTY, EL801 (boron type)	• Decorative plating (nickel/chrome, zinc plating, plastic plating) • Solder plating • Composite plating chemicals containing PTFE
Role	• Non-magnetic properties etc.	• High frequency characteristics • Soldering reliability etc.	• Corrosion resistance, • Wear resistance etc.	• Decorativeness, corrosion resistance • Wear resistance etc.
Intermediate product manufacturers	Aluminum magnetic disk manufacturers 	Package PWBs manufacturers Semiconductor manufacturers 	Various parts manufacturers 	Various parts manufacturers 
End products	Hard disks (Servers, PCs, etc.) 	Products that use semiconductors and electronic components 	Automobiles, OA equipment, etc. 	Automobiles and others 

Chemical Sales by Region

Q2 FY3/23 Results

*Intersegment sales are included.



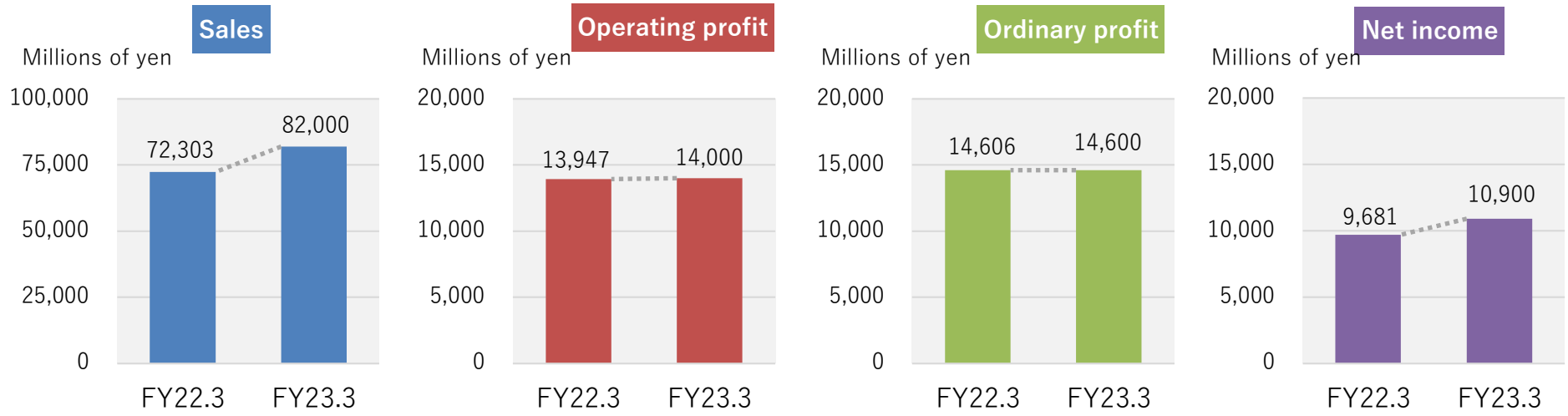
Revisions to the Consolidated Forecast

Millions of yen	Previous forecast	Revised forecast	Amount change	Percentage change
Sales	75,000	82,000	＋7,000	＋9.3%
Operating profit	14,000	14,000	0	-
Ordinary profit	14,600	14,600	0	-
Net income	10,900	10,900	0	-
Net income per share for the period	630.03 yen	658.25 yen		

<Reasons for the revision to the forecast>

Net sales for the fiscal year ending March 31, 2023 are expected to exceed the previous forecast given the consolidated operating results for the first half of the current fiscal year. However, the forecast for the profit figures are left unchanged although they are susceptible to change. This is because of the soaring prices of metals and precious metals caused by the weak yen, the soaring prices of raw materials resulting from the COVID-19 pandemic, supply constraints resulting from the Russia-Ukraine conflict, as well as the effects of possible production adjustments in some package-related businesses until the first quarter of the next fiscal year.

FY3/23 Consolidated Forecast



Millions of yen	FY3/22 Results	FY3/23 Forecast (Revised on Nov.11,2022)	Change	Percentage change
Sales	72,303	82,000	＋9,696	＋13.4%
Operating profit	13,947	14,000	＋52	＋0.4%
Ordinary profit	14,606	14,600	△6	△0.0%
Net income	9,681	10,900	＋1,218	＋12.6%
Exchange rate: $US	109.90 yen	133.28 yen	＋23.38 yen	

FY3/23 Consolidated Forecasts

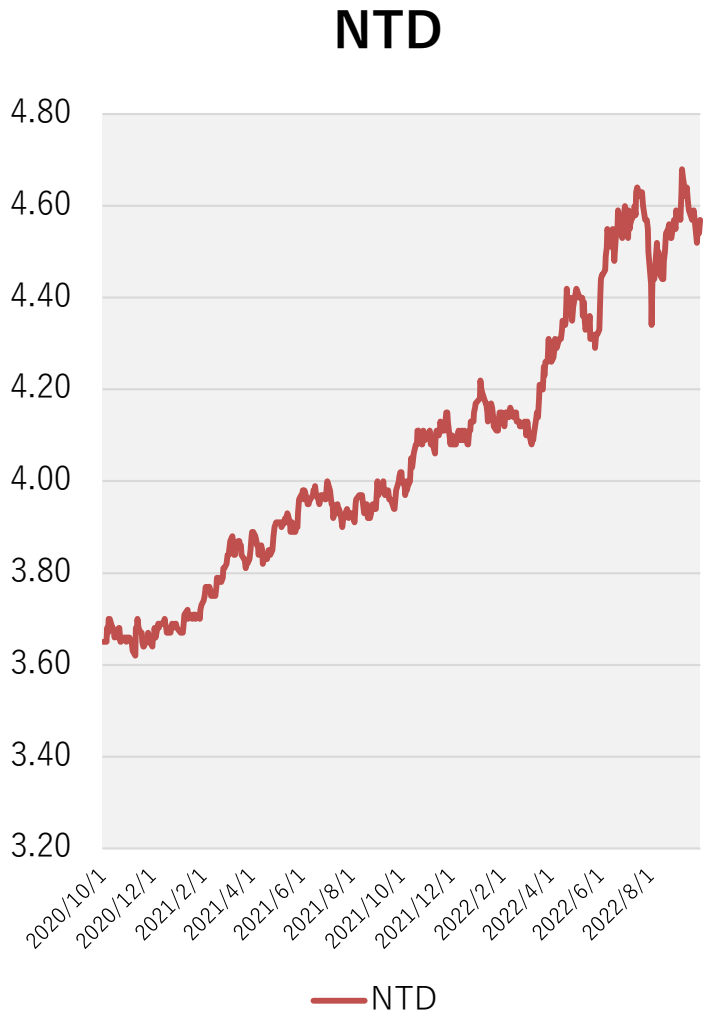
● Sales & Operating profit by Business Segment

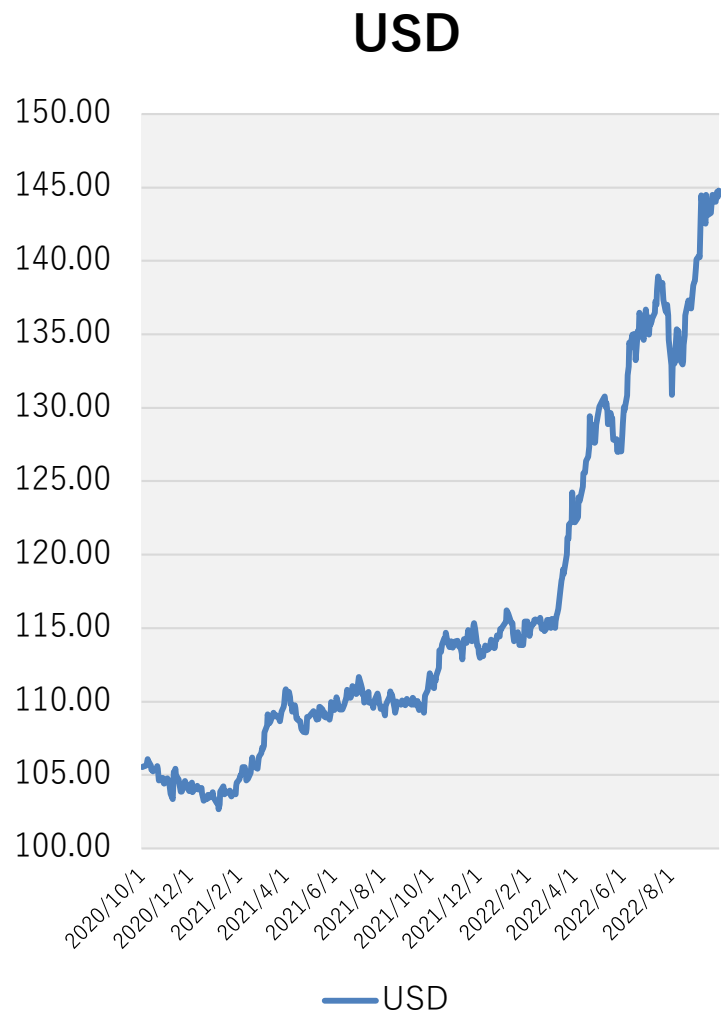
Millions of yen	Sales				Operating profit			
	FY3/22 Results	FY3/23 Forecast (Revised on Nov.11,2022)	Q3 FY3/23 Results	Progress against forecast	FY3/22 Results	FY3/23 Forecast (Revised on Nov.11,2022)	Q3 FY3/23 Results	Progress against forecast
Surface Finishing Materials	59,920	69,500	35,253	50.7%	12,717	13,500	7,276	53.9%
Surface Finishing Machinery	7,013	6,900	3,995	57.9%	680	400	230	57.6%
Plating Job	4,518	4,800	2,435	50.7%	29	△ 400	△ 227	-
Real Estate Rental	834	800	422	52.8%	503	500	260	52.1%

● Sales by Chemicals Categories

Millions of yen	FY3/22 Results	FY3/23 Forecast (Revised on Nov.11,2022)	Q3 FY3/23 Results	Progress against forecast
Chemicals for HDD	1,419	2,400	1,230	51.3%
Chemicals for PWB・PKG	36,722	40,640	19,916	49.0%
Conventional Electroless Nickel	3,630	4,080	2,187	53.6%
Others	4,205	4,630	2,218	47.9%
Total	45,977	51,750	25,554	49.4%

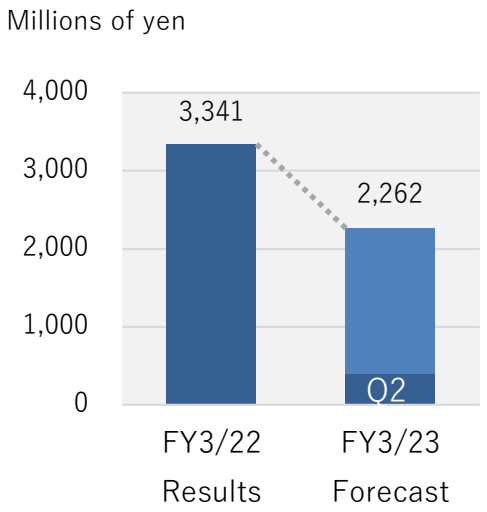
Exchange Rates



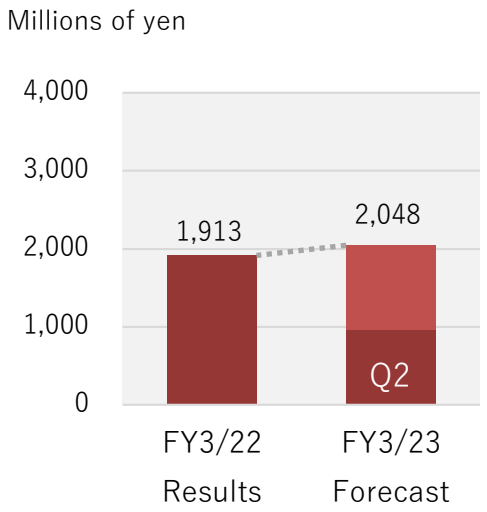


Capital Expenditure, Depreciation and R&D Expenses

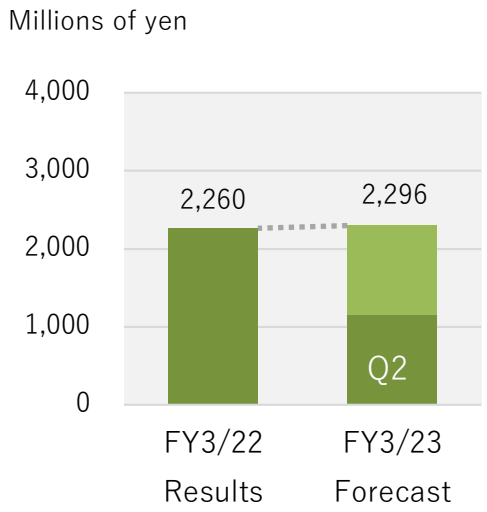
Capital Expenditure



Depreciation



R&D Expenses



Millions of yen	FY3/22 Results (Full-year)	Q2 FY3/23 Results	FY3/23 Forecast (Full-year)
Capital Expenditure	**3,341**	**406**	**2,262**
Depreciation	**1,913**	**965**	**2,048**
R&D Expenses	**2,260**	**1,147**	**2,296**

Capital Policy

We are working on a capital policy in view of the basic policy of securing a stable management base and improving the return on shareholders' equity.

Goal: 50%for the total return ratio on a consolidated basis and 8.5% ROE

Flexible acquisition of shares worth 6 billion yen during the 3-year period from FY3/2022 to FY3/2024

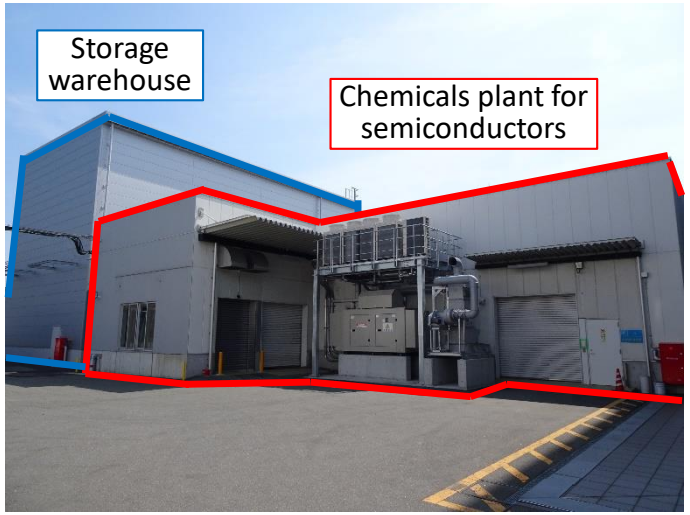
Target for 10% ROE in the medium- to long-term

- **Realization of stable dividends and flexible acquisition of treasury share based on a total return ratio**
- **Flexible acquisition of treasury shares considering economic conditions, financial conditions, etc.**
- **Securing internal reserves for fields and regions where future growth is expected, new technology acquisition, M&A transactions, unexpected events, and natural disasters**

* We hold a certain amount of our shares in treasury to be used as a reward to motivate our executives and employees to achieve sustainable corporate value creation as well as to implement our M&A strategy (M&A transactions, business and capital alliances, etc.).
* If we do not implement our M&A strategy, we will consider cancelling treasury shares that exceed 10% of total number of shares outstanding.

Topic: Reconstructing Hirakata Plant (Hirakata, Osaka Prefecture)

- **Construction of a chemical plant for semiconductors and a storage warehouse**



- Completed in December 2021 (now in operation)
- Total investment: approx. 0.83 billion yen (for building, analytical equipment, etc.)
- Degree of cleanliness: Class 100*
- Compatible with high-mix low-volume production and traceability requirements

* Less than a hundred 0.5 µm particles per cubic foot

- **Relocation of the machinery plant to a nearby area**

(Rendering image)

- Scheduled to be completed in October 2023 (now under construction)
- Total investment: approx. 3.2 billion yen (for land, buildings, etc.)
- Site area: approx. 4,978 square meters
- The factory has a dedicated area for manufacturing plating equipment for semiconductors
- Basic design in line with SDGs and carbon neutrality

Topic: Capital Investment Projects of Overseas Affiliates

Uyemura (Shanghai) Co., Ltd.

- Going to establish Shanghai Technical Center (relocated to Shanghai following the closure of Suzhou Technical Center)
- Purchased an optical microscope (to support customers)

Uyemura (Malaysia) Sdn. Bhd.

- Established Penang Office (to support customers)
- Renewed a factory-site lease contract (with the lease term extended to 30 years starting from 2027)

Uyemura International Corporation

- Introduced wafer plating equipment for trial purpose (to support customers)

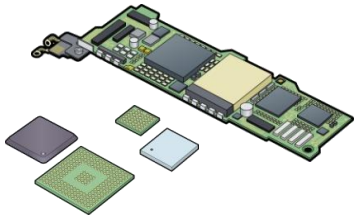
Reference

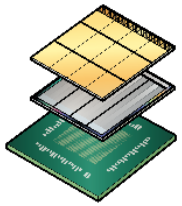
Basic Strategy for Sales

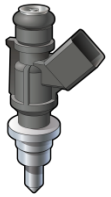
We aim for higher customer satisfaction
We are committed to action with sincerity

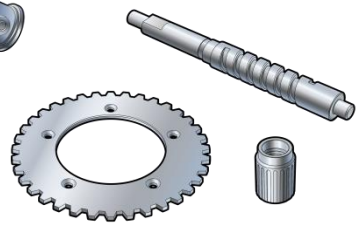
- Sales and development strategies that accelerate the growth of our share in markets where it is already high
- Sales and development strategies that increase our share in markets where it is still low
- Manufacturing strategy aligned with market trend
- Provision of total solutions including chemicals, machines and control systems

Basic Strategy for Sales









Plating chemicals

Total Solutions for Plating Technologies

Control systems

Plating equipment

Capability of analyzing all kinds of plating chemicals

Wafer plating equipment for power devices

Business Environment

➢ Current market condition

(1) Domestic market: Signs of slowing down in telecommunications, servers, and PC-related businesses

Relatively strong demand for automobiles, despite the impact of semiconductor and COVID-19 issues

(2) Overseas market: Almost similar trend as the domestic market including demand for automobiles.

Slowing demand for telecommunications and PWBs, affected by reduction in automobile production

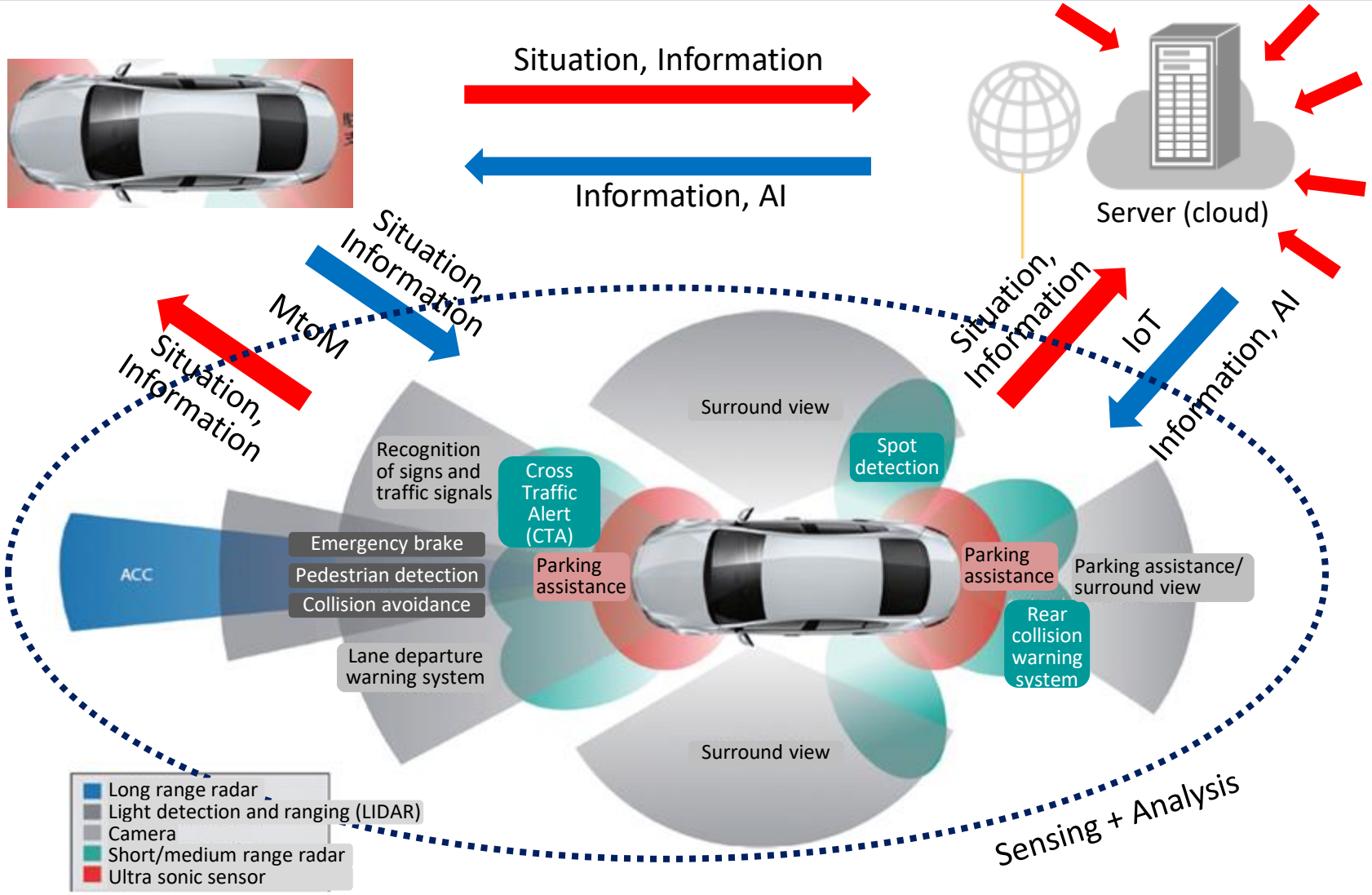
➢ Technologies we are currently focusing on

Next-generation PKG, substrate technology for telecommunication, car electronics, and environment-related technologies

➢ Technologies we should focus on toward the future

Fine line technology for substrates, bump and wiring technology for semiconductors, surface finishing treatment for next-generation bonding materials, and development of environment-friendly products

Autonomous Driving and High-Speed Communications



Participation in the NEDO* Project

List of Results of Adoption for Project for Research and Development of Enhanced Infrastructures for Post-5G Information and Communications Systems: R&D Item (2) Developing Technologies for Manufacturing Leading-Edge Semiconductors

	Development theme	Implementation structure (plan)
1	(b1) Mounting Technology for High Performance Computing	**TSMC Japan 3DIC R&D Center, Inc.** (Joint implementation partners, sub-contractors, etc.) National Institute of Advanced Industrial Science and Technology (AST), IBIDEN CO., LTD., and numerous other materials and manufacturing equipment manufacturers, as well as universities and research institutes in Japan (See Summary of Adopted Themes for the name of companies and institutions)
2	(b2) Mounting Technology for Edge Computing	**Research Association for Advanced Systems (RaaS)** (Joint implementation partners, Association members, etc.) National Institute of Advanced Industrial Science and Technology (AST), SCREEN Holdings Co., Ltd., DAIKIN INDUSTRIES, LTD., FUJIFILM Corporation, Panasonic Smart Factory Solutions Co., Ltd., the University of Tokyo
3		**Sony Semiconductor Solutions Corporation**
4	(b3) Common Platform Technology for Mounting	**Showa Denko Materials Co., Ltd.** (Joint implementation partners, sub-contractors, etc.) Ajinomoto Fine-Techno Co., Inc., C. Uyemura & Co., Ltd., EBARA CORPORATION, SHINKAWA LTD., SHINKO ELECTRIC INDUSTRIES CO., LTD., Dai Nippon Printing Co., Ltd., DISCO Corporation, TOKYO OHKA KOGYO CO., LTD., TOWA CORPORATION, NAMICS CORPORATION, Panasonic Smart Factory Solutions Co., Ltd., Yamaha Robotics Holdings Co., Ltd.
5		**Sumitomo Bakelite Co., Ltd.**

Source: Website of the Ministry of Economy, Trade and Industry
List of Results of Adoption for "Project for Research and Development of Enhanced Infrastructures for Post-5G Information and Communications Systems: Developing Technologies for Manufacturing Leading-Edge Semiconductors (Subsidized)"
Excerpt from
https://www.meti.go.jp/press/2021/05/20210531002/20210531002-1.pdf
https://www.meti.go.jp/press/2021/05/20210531002/20210531002.html

* NEDO stands for New Energy and Industrial Technology Development Organization, which is a national research and development agency that creates innovation by promoting technological development necessary for realization of a sustainable society.

Research and Development Plan

(b3) Common Platform Technology for Mounting

Excerpt from page 11 of Research and Development Plan for Research and Development Project of the Enhanced Infrastructures for Post-5G Information and Communications Systems (https://www.meti.go.jp/press/2021/05/20210531002/20210531002-3.pdf) https://www.meti.go.jp/press/2021/05/20210531002/20210531002.html

<Development target>

- The following technologies required to be newly developed or to improve performance significantly among common platform technologies that support mounting technology for leading-edge semiconductors for high-performance computing and edge computing – Mounting materials (including package substrates, encapsulants, heat dissipation materials, and polishing agents)
  - Materials constituting mounting materials (including core materials, insulation materials/films, bonding materials)
  - Manufacturing and assembly technology for mounting components (e. g., package substrate manufacturing technology, etc.)

<Development objectives>

- To develop platform technology equipped with basic performance required for the mounting technology for leading edge semiconductors (5nm node and beyond) and to evaluate and verify practicability with an eye to the application to commercial manufacturing lines for 3D packaging (Verification of practicability shall be made for components and materials and manufacturing equipment and not necessarily for commercial manufacturing lines of leading-edge semiconductors.)

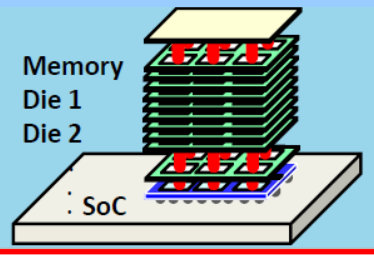
In the implementation of the project, in order to maximize the project results, open innovation will be promoted to the extent possible by promoting joint development and other collaborations with semiconductor equipment and component manufacturers, academic institutions, etc. In addition, as necessary, the tasks of the project includes evaluation and verification by utilizing pilot lines, etc. to be established under this project, collaboration with user companies and institutions, promotion of international collaboration, creation of synergy effects through collaboration with other government budget projects, and holding of results briefing sessions and workshops.

Overview of the Adopted Themes

[Reference] Summary of Adopted Themes (2) to (5) for Development of Technology for Leading Edge Semiconductor Manufacturing Process (Back-end Process)

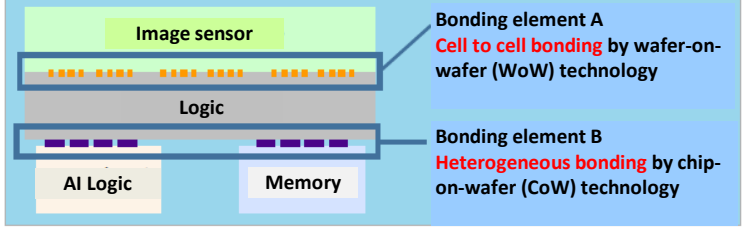
(2) Implementer: Research Association for Advanced Systems (RaaS)[*1]

- Project theme: Development of direct bonding 3D-stack technology (Development of equipment and process for WoW and CoW bonding technologies)
- Project outline: To establish wafer on wafer (WoW) and chip on wafer (CoW) bonding technologies by low temperature hybrid Cu-Cu bonding



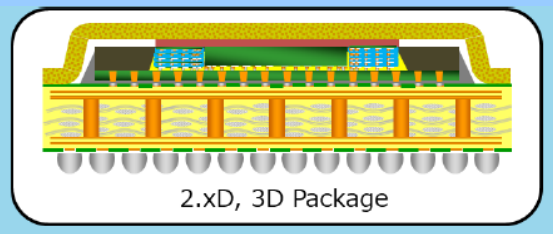
(3) Implementer: Sony Semiconductor Solutions Corporation

- Project theme: Development of 3D device stacking technologies for edge computing semiconductor devices in post-5G era
- Project outline: To establish element technologies for robust semiconductor manufacturing process by defining basic characteristics of stack module and annually setting a target of pitch size that enables to obtain reliability



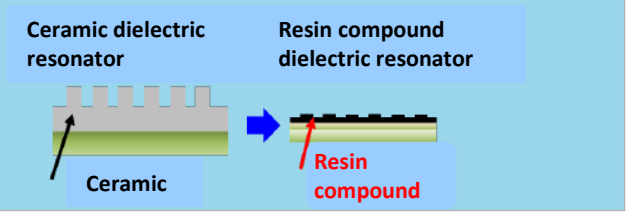
(4) Implementer: Showa Denko Materials Co., Ltd. [*2]

- Project theme: Creation of advanced package evaluation platform
- Project outline: To develop evaluation technology, substrate, equipment and materials for next-generation semiconductor package by creating a consortium consisting of substrate, equipment and material manufacturers and an evaluation platform



(5) Implementer: Sumitomo Bakelite Co., Ltd.

- Project theme: Development of advanced packaging materials for next-generation information and communications system
- Project outline: To develop technologies to enable fine pitch for encapsulants for wafer level PKG, encapsulants for antenna element, and photosensitive materials for rewiring, which will become critical to improve 3D packaging density



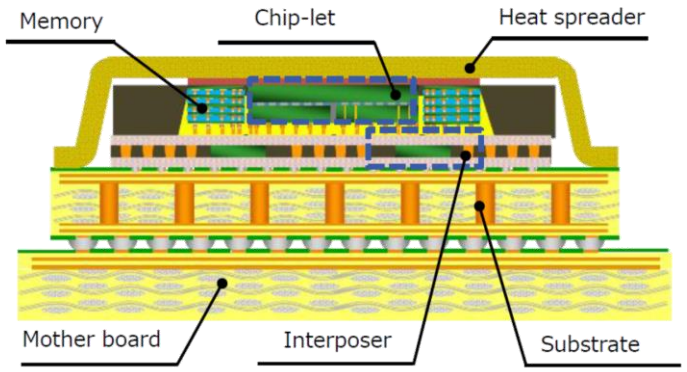
*1 Joint implementation partners, Association members, etc.: National Institute of Advanced Industrial Science and Technology (AST), SCREEN Holdings Co., Ltd., DAIKIN INDUSTRIES, LTD., FUJIFILM Corporation, Panasonic Smart Factory Solutions Co., Ltd., the University of Tokyo

*2 Joint implementation partners, sub-contractors, etc.: Ajinomoto Fine-Techno Co., Inc., C. Uyemura & Co., Ltd., EBARA CORPORATION, SHINKAWA LTD., SHINKO ELECTRIC INDUSTRIES CO., LTD., Dai Nippon Printing Co., Ltd., DISCO Corporation, TOKYO OHKA KOGYO CO., LTD., TOWA CORPORATION, NAMICS CORPORATION, Panasonic Smart Factory Solutions Co., Ltd., Yamaha Robotics Holdings Co., Ltd.

Source: Website of the Ministry of Economy, Trade and Industry
Excerpt from the Summary of Adopted Themes
https://www.meti.go.jp/press/2021/05/20210531002/20210531002-2.pdf
https://www.meti.go.jp/press/2021/05/20210531002/20210531002.html

Plating Technology Required for 2.5D/3D Packaging

Image for 2.5D/3D package

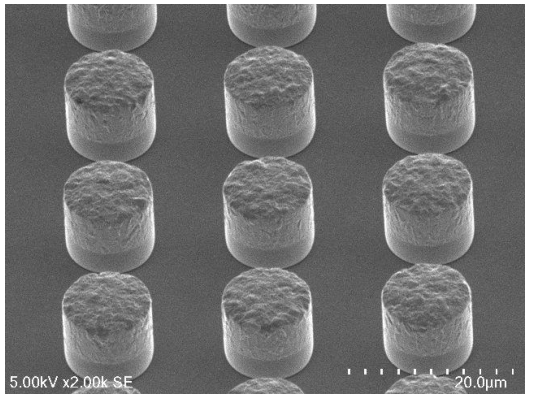


UYEMURA

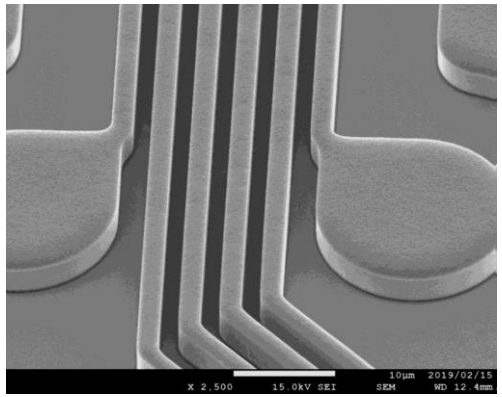
Plating chemicals

Equipment for plating

Bump formation

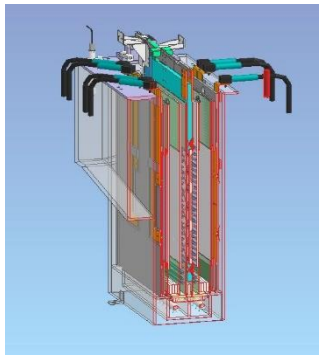


Circuit formation



Plating equipment

Plating cell design



Exhibiting at Trade Shows

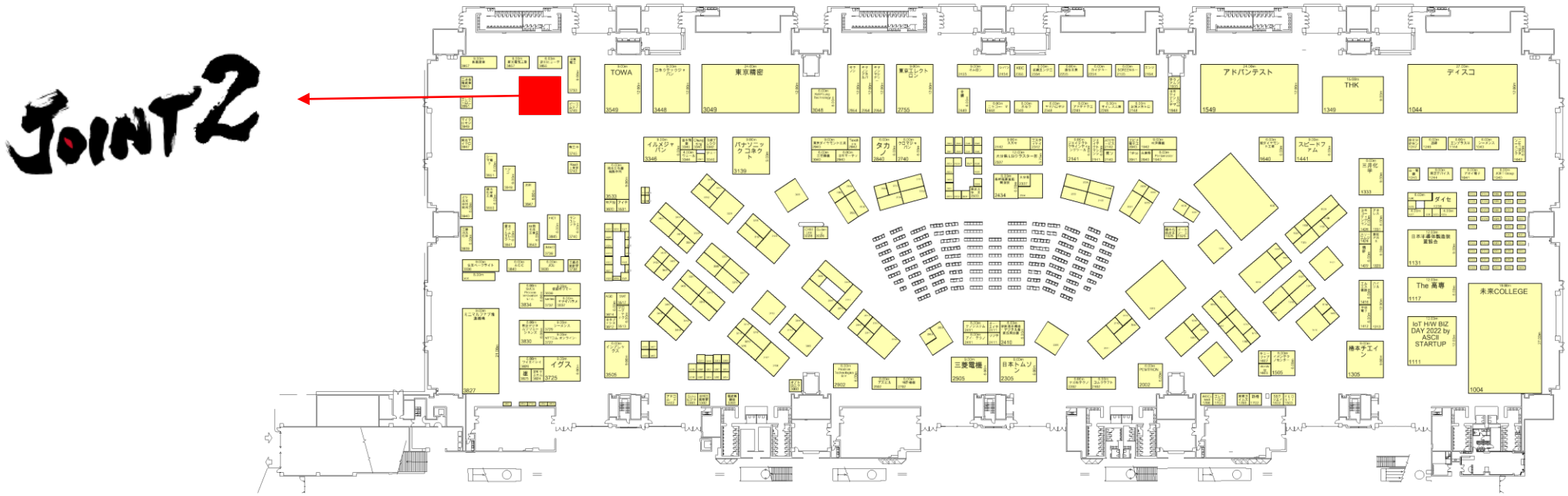
We will exhibit as a “JOINT2” exhibitor at SEMICON Japan 2022.

Date and time: 10:00 a.m. - 5:00 p.m., Wednesday, December 14 - Friday, December 16, 2022

Venue: Tokyo Big Sight (East Exhibition Hall)

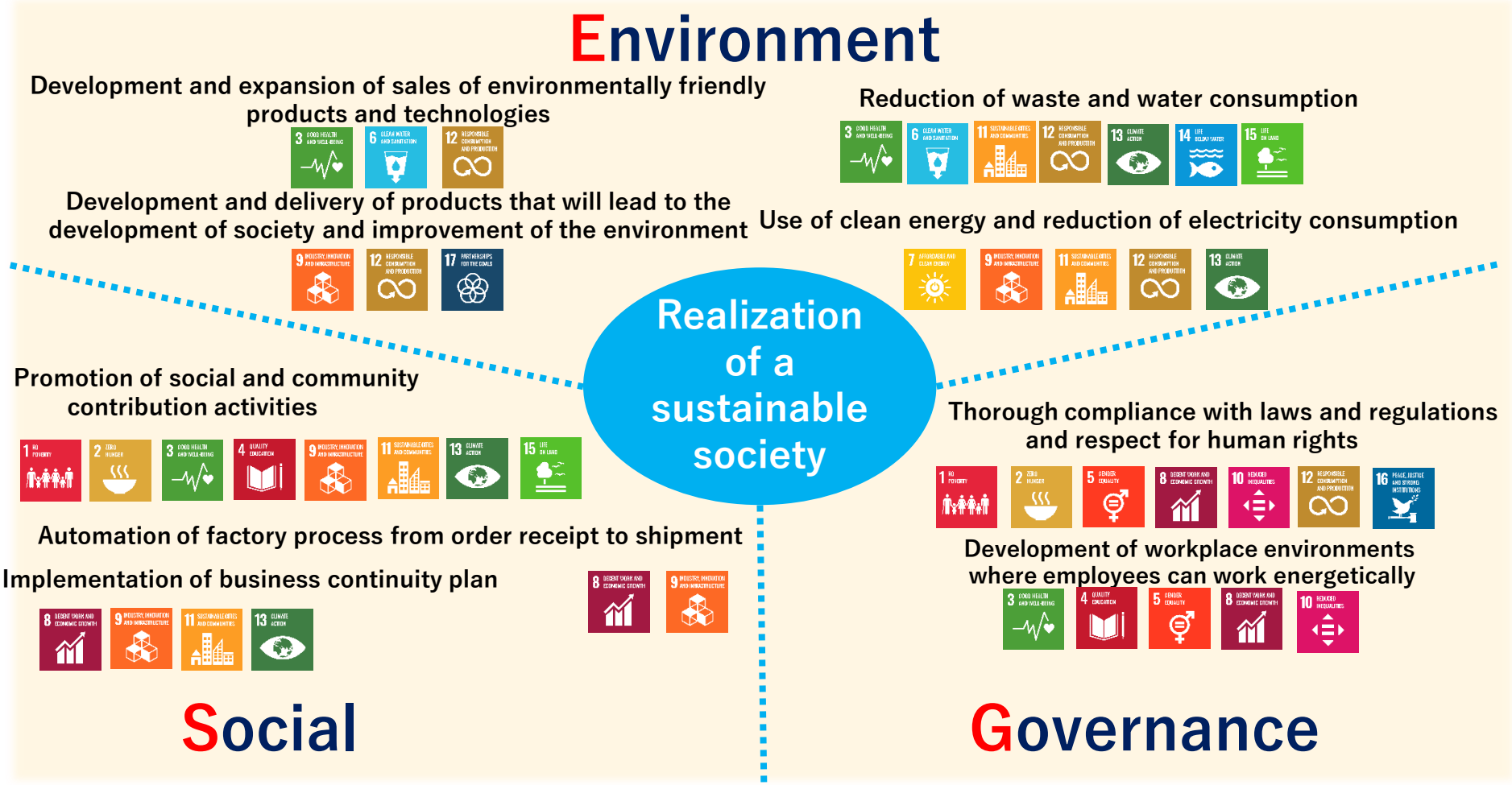
Booth number: 3853

SEMICON® JAPAN



Initiatives related to ESG and SDGs

Under the Uyemura Group slogan "Growing together with (:You)," our aims are to grow and prosper together with our stakeholders and to be a company that is able to contribute to society.



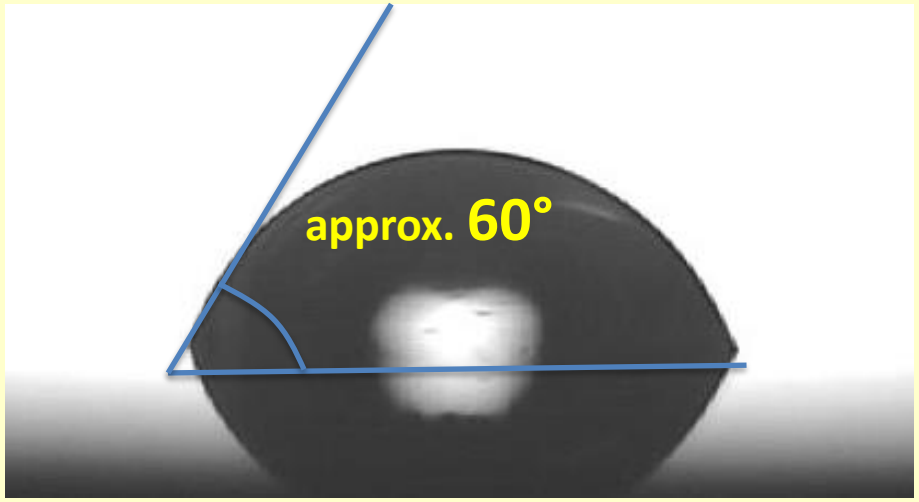
Environmentally Friendly Products: Proactive approach to SDGs

1. Pd-free plating bath
   - Already launched for electroless Ni plating bath, mainly for conventional bath.
   - Pd-free electro Sn plating bath, already launched for pure Sn and Sn-Ag bath, for electronic parts
2. Cyan-free bath
   - Developing and launching for cyan-free electroless and electro Au plating bath, for wafer and electronic parts.
   - Developing cyan-free electro Ag plating bath, for electronic parts.
3. Formalin-free bath and process without the usage of formalin
   - Developing and launching for direct plating on resins (without electroless Cu bath), for substrates.
   - Developing formalin-free electroless Cu bath, for wafer
4. PFOS-free bath and PFOA-free bath → Now subject to regulations
   - Developing and launching for PTFE composite plating, mainly for automobile parts
5. Wastewater treatment
   - Electroless Ni wastewater recycling unit

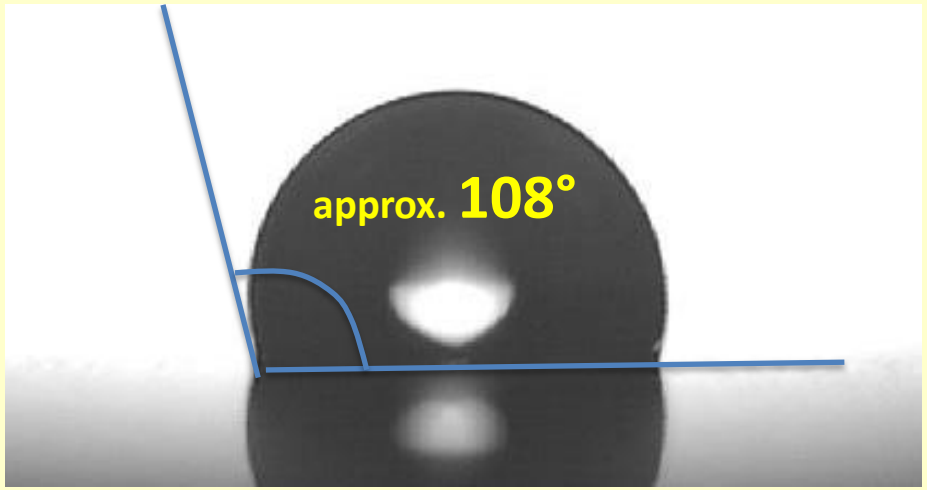
PTFE Composite Plating (Nimuflon)

Water repellent (contact angle)

- Ni-P film

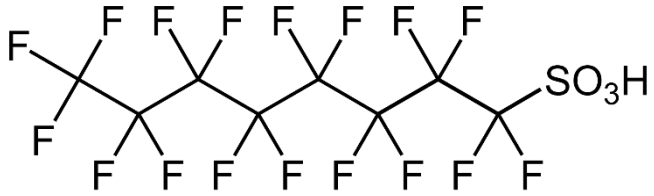


- Nimuflon® (23 vol.%) film



Environmentally Friendly Products

PFOS : perfluorooctanesulfonic acid



PFOA : perfluorooctanoic acid

PFOS/PFOA: Very stable and difficult to break down ⇒ Making them persist in the environment

PFOS

Since June 27, 2008, placing on the market of PFOS products containing more than the specified content (0.005 wt.%=50 ppm) has been prohibited in the EU region.

April 2010, PFOS products were designated as a Class I Specified Chemical Substance under the Act on the Regulation of Manufacture and Evaluation of Chemical Substances in Japan and their manufacture and importation were banned in principle

PFOA

April 2020, use of PFOA products could be restricted in Japan under the Act on the Regulation of Manufacture and Evaluation of Chemical Substances.

Since July 2020, manufacture and placing on the market of chemicals and components that exceed the limit values have been prohibited in accordance with the REACH Regulation in EU.

Following PFOS's, manufacture and use of PFOA's have been regulated.

Nimuflon® PTFE composite plating bath has already been compliant with the regulations.

Uyemura Group Companies

Company name	Foundation	Location	Business
C.Uyemura & Co., Ltd.	1848 (Establishment) 1933 (Incorporated)	Japan	Sales, R&D, Chemical Production, Machinery Production, Real Estate Rental
Sumix Corporation	1963	Japan	Real Estate Rental
Uyemura International Corporation	1985	US	Sales, R&D, Chemical Production
Uyemura International (Hong Kong) Co., Ltd.	1986	China (Hong Kong)	Sales
Taiwan Uyemura Co., Ltd.	1987	Taiwan	Sales, R&D, Chemical Production, Machinery Production, Plating Job
Sum Hitechs Co., Ltd.	1987	Thailand	Sales, R&D, Chemical Production, Plating Job
Uyemura (Shenzhen) Co., Ltd.	1988	China (Shenzhen)	Sales, R&D, Chemical Production, Machinery Production
Uyemura International (Singapore) Pte Ltd	1992	Singapore	Sales
Uyemura (Malaysia) Sdn. Bhd.	1996	Malaysia	R&D, Chemical Production
Uyemura (Shanghai) Co., Ltd.	2002	China (Shanghai)	Sales
Uyemura Korea Co., Ltd.	2010	Korea	Sales, Chemical Production
PT.Uyemura Indonesia	2012	Indonesia	Sales, Plating Job

Sales **R&D** **Chemical Production** **Machinery Production** **Plating Job** **Real Estate Rental**

Forecasts of future performance in this report are based on assumptions judged to be valid and information currently available to the Company, but are not promises by the Company regarding future performance. Actual results are affected by various factors and may differ substantially.

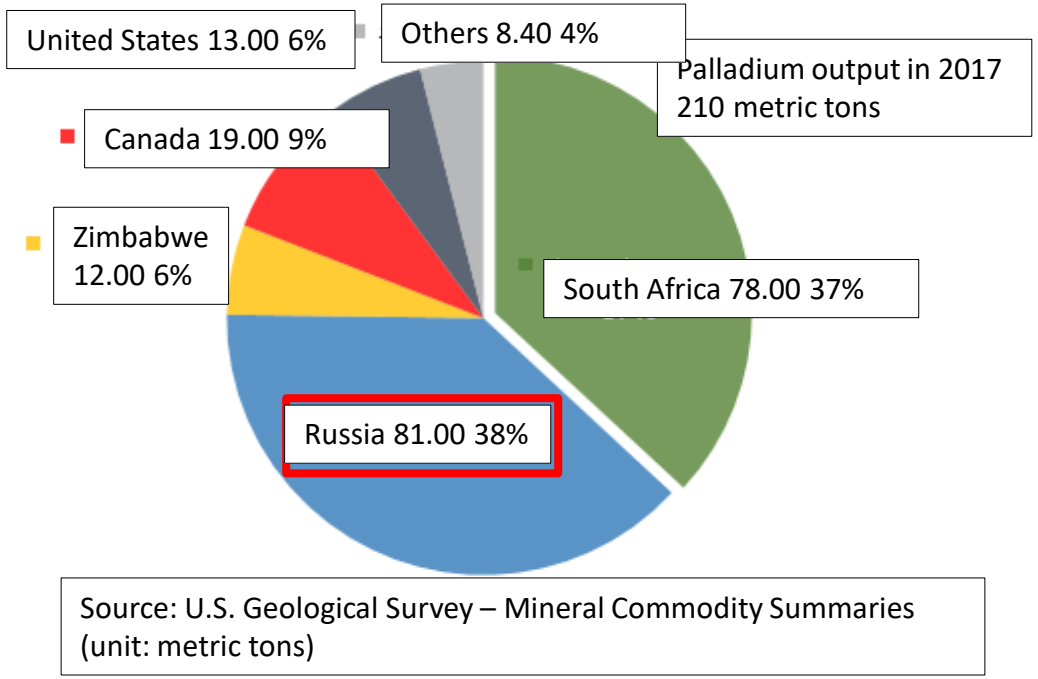
Growing together with

Uyemura Group Companies

• Japan	C.Uyemura & Co., Ltd.	• Taiwan	Taiwan Uyemura Co., Ltd.
	Sumix Corporation	• Korea	Uyemura Korea Co., Ltd.
• USA	Uyemura International Corporation	• Singapore	Uyemura International (Singapore) Pte Ltd
• Hong Kong	Uyemura International (Hong Kong) Co., Ltd.	• Malaysia	Uyemura (Malaysia) Sdn. Bhd.
• Shenzhen	Uyemura (Shenzhen) Co., Ltd.	• Thailand	Sum Hitechs Co., Ltd.
• Shanghai	Uyemura (Shanghai) Co., Ltd.	• Indonesia	PT. Uyemura Indonesia

Alternative Technology to Cope with Skyrocketing Raw Material Price (Palladium)

As of November 8



Source: U.S. Geological Survey – Mineral Commodity Summaries (unit: metric tons)

Palladium price has been escalating like other various raw materials, and the supply may become extremely tight due to the Ukraine issue.

Main usage of palladium is for three-way catalysts of gasoline vehicles, accounting for 70% to 80% of total consumption. (For domestic use, almost even consumption for automobiles; for dental use; and for electronic parts, others, and decoration use combined.)

Palladium for Plating Use

Palladium used for surface finishing treatment

Plating catalyst

Metallization on resins (for plastic plating and electroless Cu for PWBs)

For electroless Ni plating on Cu

Palladium plating

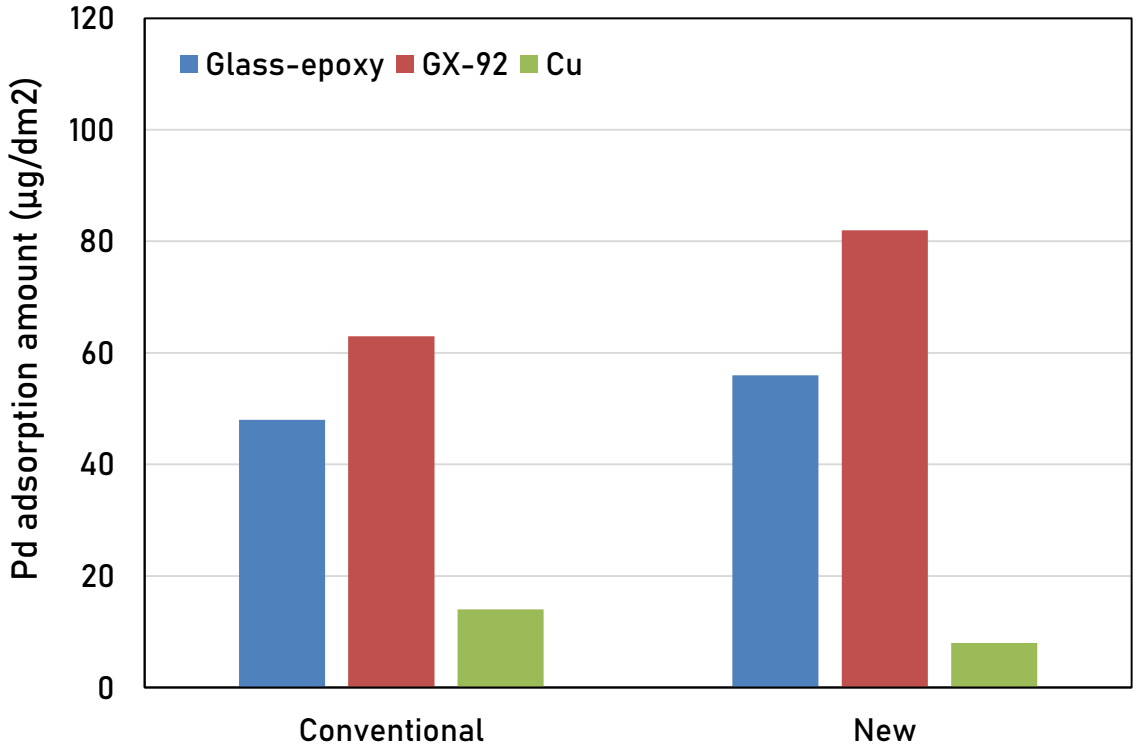
Ni/Pd/Au plating → Ni/Pt/Au etc.

Electro Pd, Pd alloy plating (connectors, etc.)

It is challenging to establish alternative technologies, and we continue research and development centering around the reduction of palladium usage.

Catalyst Processing Solution for Electroless Copper for PWBs

Developed a process to reduce Pd absorption amount by 75% from 200mg/L to 50mg/L in a bath of activator via compounding additives in acid rinse process before activator.



No issues are detected for the adhesiveness and reliability after plating by reducing Pd concentration in the bath.

Catalyst Processing Solution for Electroless Nickel Plating on Copper Substrates

Cleaner

Etching

Acid rinse

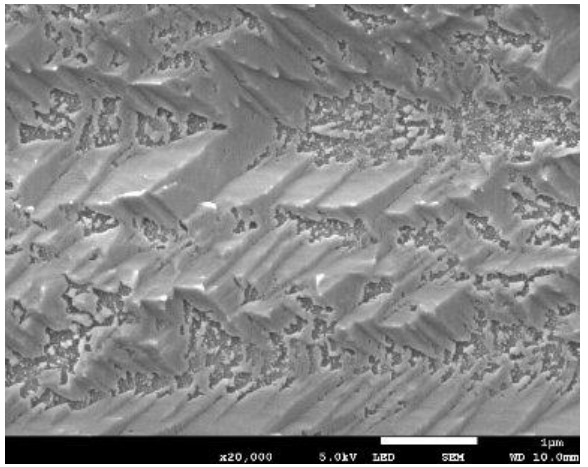
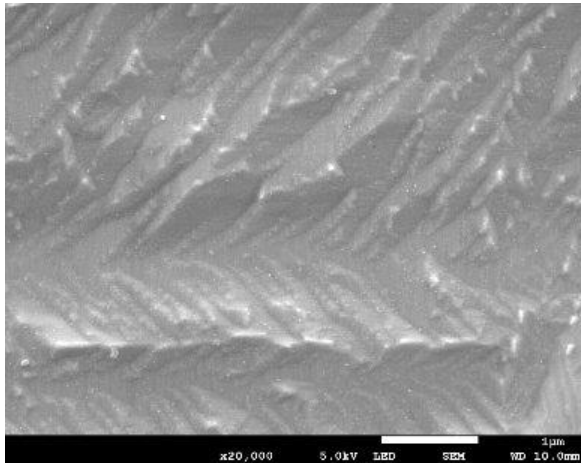
Pre-dip

Pd activator

Electroless Ni

Alternative technology

Pd-free activator

	Conventional product [Pd]	Pd-free activator
Copper surface after activator process		
Fine pattern at application on substrates