Hirata

Security code : 6258
August 2024

# Financial Results Explanatory Materials

## FY2024 (March 2025)
## First quarter

Note : This document has been translated from the Japanese original for reference purposes only. In the event of any discrepancy between this translated document and the Japanese original, the original shall prevail.

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## Table of Contents



※FY2024 represents the fiscal year ending March 31, 2025.

# Company Profile

| | |
|---|---|
| **Company Name** | HIRATA Corporation |
| **Address** | 111 Hitotsugi, Ueki, Kita, Kumamoto, 861-0198 Japan |
| **Representatives** | Yuichiro Hirata, President |
| **Date Established** | December 29, 1951 |
| **Capital** | 2,633 million yen |
| **Our business** | Manufacture and sales of various manufacturing line systems, Industrial robot and logistic equipment |
| **Stock Exchange Listings** | Tokyo Stock Exchange, Prime Market (Symbol:6258) |
| **Employees** | Consolidated 2,439名<br>Non-Consolidated 1,530名 ※As of June 30, 2024 |
| **Plants and office** | 7 bases in Japan(4 bases in Kumamoto 1 each in Tochigi, Shiga, Tokyo) |
| **Subsidiaries** | 3 subsidiaries in Japan(2 in Kumamoto, 1 in Tokyo)<br>9 overseas subsidiaries(America、Mexico、Germany、Singapore、Thailand、Malaysia、2 in China、Taiwan) |

# Ⅰ. FY2024 First Quarter Results (Consolidated)

# Financial Summary ※First Quarter Cumulative Period

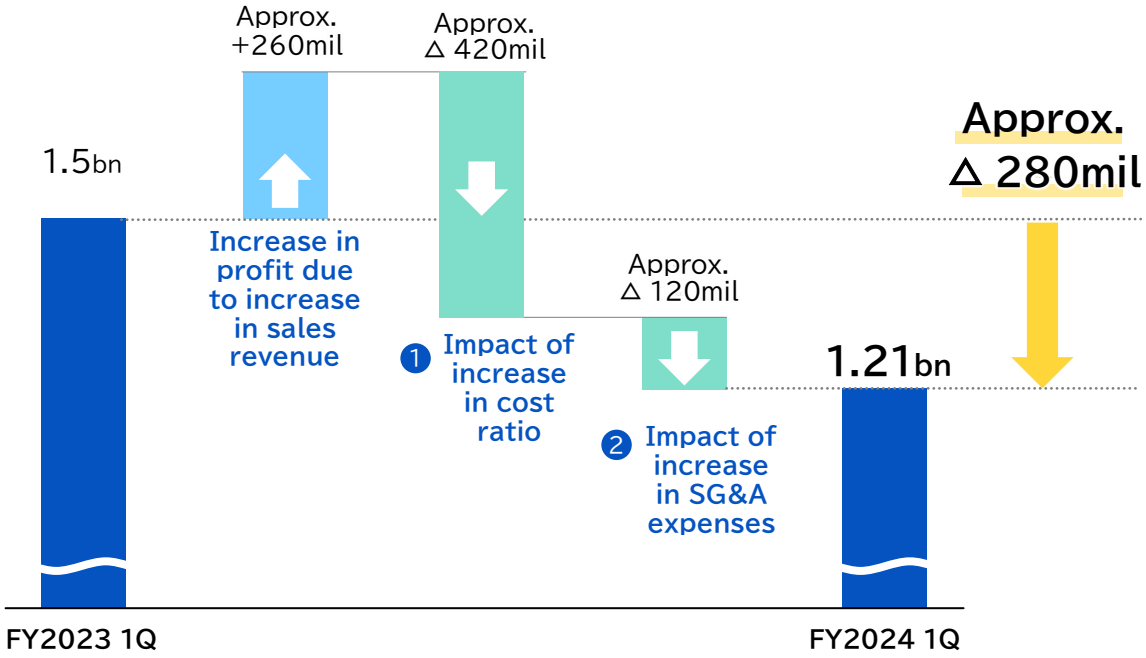
- **Order Received** — Semiconductor-related business has decreased significantly. Additionally, there have been other factors such as delays in customer orders in automobile and other automatic labor-saving equipment, resulting in a decrease in order received compared to the same period last year.
- **Sales** — Due to progress in production of backlogged orders, particularly in the automotive sector, there has been an increase in revenue compared to the same period last year.
- **Operating profit** — The decrease in sales in the high-profit margin semiconductor-related business and the increase in selling and administrative expenses due to base-up initiatives have affected the operating profit, resulting in a decrease compared to the same period last year.

(Units in millions of Yen)

| | FY2023 1Q | FY2024 1Q | YoY Change | |
|---|---|---|---|---|
| | Actual results | Actual results | Amount of +/− | Percentage of +/− |
| Orders Received | 24,567 | 19,892 | ▲4,675 | ▲19.0% |
| Net Sales | 19,155 | 20,368 | 1,213 | 6.3% |
| Operating Profit (Profit ratio) | 1,503 (7.9%) | 1,214 (6.0%) | ▲289 | ▲19.3% |
| Ordinary Profit | 1,580 | 1,279 | ▲300 | ▲19.0% |
| Profit attributable to owners of parent | 1,105 | 722 | ▲383 | ▲34.6% |
| Backlog of Orders | 67,417 | 64,928 | ▲2,488 | ▲3.7% |

# Factor Analysis on Changing Operating Profit

- **Operating profit decreased approximately 280 million yen** from the same period of the previous year.
  - Main factors for increase：Increase in sales
  - Main factors for decrease：Increase in cost ratio and the selling and administrative expenses, etc.




### 1 Impact of increase in cost ratio

Cost ratio 78.4% ⇒ 80.5%

**Main factors for increase in cost ratio**

- Deterioration of cost ratio for certain projects
- Increase in labor and outsourcing costs for manufacturing

### 2 Impact of increase in SG&A expenses

**Main factors for increase in SG&A expenses**

- Increase in labor costs due to wage hikes
- Increase in expenses related to systems
- Increase in miscellaneous overhead expenses due to sales expansion

# Results by Segment

| (Units in millions of Yen) | | FY2023 1Q | FY2024 1Q | Amount of +/- | Percentage of +/- |
|---|---|---|---|---|---|
| Received orders | Total | **24,567** | **19,892** | **▲4,675** | **▲19.0%** |
| | Automobile | 12,355 | 12,307 | ▲48 | ▲0.4% |
| | Semiconductor | 9,223 | 4,828 | ▲4,395 | ▲47.7% |
| | Other Automatic Labor-saving Equipment | 2,406 | 2,176 | ▲229 | ▲9.5% |
| | Others | 582 | 580 | ▲2 | ▲0.3% |
| Net Sales | Total | **19,155** | **20,368** | **1,213** | **6.3%** |
| | Automobile | 8,079 | 9,824 | 1,745 | 21.6% |
| | Semiconductor | 7,765 | 7,055 | ▲710 | ▲9.2% |
| | Other Automatic Labor-saving Equipment | 2,811 | 2,932 | 120 | 4.3% |
| | Others | 498 | 556 | 58 | 11.7% |
| Operating profit | Total | **1,503** | **1,214** | **▲289** | **▲19.3%** |
| | Automobile | 498 | 476 | ▲22 | ▲4.5% |
| | Semiconductor | 1,096 | 920 | ▲176 | ▲16.1% |
| | Other Automatic Labor-saving Equipment | ▲70 | ▲155 | ▲85 | - % |
| | Others(Including elimination) | ▲21 | ▲26 | ▲5 | - % |
| Backlog of orders | Total | **67,417** | **64,928** | **▲2,488** | **▲3.7%** |
| | Automobile | 35,919 | 41,632 | 5,713 | 15.9% |
| | Semiconductor | 23,210 | 17,243 | ▲5,967 | ▲25.7% |
| | Other Automatic Labor-saving Equipment | 7,615 | 5,540 | ▲2,075 | ▲27.3% |
| | Others | 672 | 512 | ▲159 | ▲23.8% |

# Results by Segment : Automobile-related

- Received orders were at a similar level compared to the same period last year. We have received orders for large-scale projects related to battery charging and discharging equipment, and inquiries for EV and internal combustion engines are strong.
- Sales has increased compared to the same period last year. The contribution to sales comes from previously ordered EV-related projects (mainly EDU and battery-related) and internal combustion engine projects from the previous period.
- Operating profit has decreased compared to the same period last year. This is due to the deterioration of cost ratio for certain projects and increase of SG&A and manufacturing costs.

(Units in millions of Yen)

| | FY2023 1Q | | FY2024 1Q | | YoY Change | |
|---|---|---|---|---|---|---|
| | Results | Segment composition | Results | Segment composition | Amount of +/- | Percentage of +/- |
| Received orders | 12,355 | - | 12,307 | - | ▲48 | ▲0.4% |
| EV | 11,315 | 91.6% | 8,828 | 71.7% | ▲2,486 | ▲22.0% |
| Others | 1,040 | 8.4% | 3,478 | 28.3% | 2,438 | 234.3% |
| Net Sales | 8,079 | - | 9,824 | - | 1,745 | 21.6% |
| EV | 6,141 | 76.0% | 7,192 | 73.2% | 1,050 | 17.1% |
| Others | 1,937 | 24.0% | 2,632 | 26.8% | 694 | 35.9% |
| Backlog of orders | 35,919 | - | 41,632 | - | 5,713 | 15.9% |
| Operating profit | 498 | - | 476 | - | ▲22 | ▲4.5% |
| Operating profit ratio※ | 6.2% | - | 4.8% | - | - | - |

※Operating profit / Sales

# Results by Segment : Semiconductor-related

- Received orders has decreased compared to the same period last year. Although the market is gradually recovering, it is lower than the previous year's same period when there was an increase in orders other than wafer transport.
- Sales has decreased compared to the same period last year. While there is an increase in wafer transport, other areas such as inspection equipment and PLP are experiencing a decline, which has had an impact.
- Operating profit has decreased compared to the same period last year. This is due to the decrease in sales and increase in SG&A and manufacturing costs.

(Units in millions of Yen)

| | FY2023 1Q | | FY2024 1Q | | YoY Change | |
|---|---|---|---|---|---|---|
| | Results | Segment composition | Results | Segment composition | Amount of +/- | Percentage of +/- |
| Received orders | 9,223 | - | 4,828 | - | ▲4,395 | ▲47.7% |
| Wafer transfer | 5,151 | 55.9% | 4,269 | 88.4% | ▲882 | ▲17.1% |
| Others | 4,072 | 44.1% | 558 | 11.6% | ▲3,513 | ▲86.3% |
| Net Sales | 7,765 | - | 7,055 | - | ▲710 | ▲9.2% |
| Wafer transfer | 4,588 | 59.1% | 4,970 | 70.5% | 381 | 8.3% |
| Others | 3,177 | 40.9% | 2,084 | 29.5% | ▲1,092 | ▲34.4% |
| Backlog of orders | 23,210 | - | 17,243 | - | ▲5,967 | ▲25.7% |
| Operating profit | 1,096 | - | 920 | - | ▲176 | ▲16.1% |
| Operating profit ratio※ | 14.1% | - | 13.0% | - | - | - |

※Operating profit / Sales

# Results by Segment : Other Automatic Labor-saving Equipment

- Received orders has decreased compared to the same period last year. The order amount fell below the previous year's same period, supported by orders for organic EL. This is also due to factors such as customers deferring their investments.
- Sales has increased compared to the same period last year. This is due to the contribution of sales from previously ordered organic EL-related projects from the previous period.
- Operating profit has decreased compared to the same period last year. This is due to the deterioration of cost ratio for certain projects and and increase in SG&A and manufacturing costs.

(Units in millions of Yen)

| | FY2023 1Q | | FY2024 1Q | | YoY Change | |
|---|---|---|---|---|---|---|
| | Results | Segment composition | Results | Segment composition | Amount of +/- | Percentage of +/- |
| Received orders | 2,406 | - | 2,176 | - | ▲229 | ▲9.5% |
| Net Sales | 2,811 | - | 2,932 | - | 120 | 4.3% |
| Backlog of orders | 7,615 | - | 5,540 | - | ▲2,075 | ▲27.3% |
| Operating profit | ▲70 | - | ▲155 | - | ▲85 | -% |
| Operating profit ratio※ | ▲2.5% | - | ▲5.3% | - | - | - |

# Balance Sheet

(Units in millions of Yen)

| Assets | FY2023 | FY2024 1Q | YoY change |
|---|---|---|---|
| Current Assets | 88,554 | 92,376 | 3,822 |
| Cash & deposits | 10,652 | 8,924 | ▲1,728 |
| Trade receivables, etc. | 59,504 | 65,093 | 5,589 |
| Inventories | 14,264 | 14,638 | 374 |
| Others | 4,131 | 3,719 | ▲412 |
| Tangible Assets | 42,233 | 42,245 | 12 |
| Tangible fixed assets | 27,437 | 27,229 | ▲208 |
| Intangible fixed assets | 904 | 1,033 | 128 |
| Investment & other assets | 13,891 | 13,983 | 92 |
| Total Assets | 130,787 | 134,622 | 3,834 |

| Liabilities | FY2023 | FY2024 1Q | YoY change |
|---|---|---|---|
| Current liabilities | 49,864 | 48,522 | ▲1,342 |
| Fixed liabilities | 15,621 | 20,823 | 5,202 |
| Total Liabilities | 65,485 | 69,346 | 3,860 |

| Net Assets | | | |
|---|---|---|---|
| Total net assets | 65,302 | 65,276 | ▲25 |

## Main factors for increase/decrease

- Trade receivables, etc. have increased due to an increase in large-scale projects and long-term-projects.
- Current liabilities have decreased due to the payment of factory expansion expenses and bonuses, resulting in a decrease in accounts payable and accrued expenses.
- Long-term liabilities have increased due to an increase in large-scale projects and long-term projects.

# Ⅱ. FY2024 Full Year Forecasts (Consolidated)

# Full Year Forecast

- **We anticipate an increase in revenue to 100 billion yen and an operating profit of 7.5 billion yen, indicating growth in both sales and profits.** ※The information remains unchanged from the fiscal year 2023 financial statement announcement (May 10, 2024).

(Units in millions of Yen)

| | FY2023 | FY2024 | vs. FY2023 | |
|---|---|---|---|---|
| | Results | Full year forecast | Amount of +/- | Percentage of +/- |
| Net Sales | 82,839 | 100,000 | 17,160 | 20.7% |
| Automobile-related | 36,984 | 50,000 | 13,015 | 35.2% |
| Semiconductor-related | 27,390 | 29,000 | 1,609 | 5.9% |
| Other Automatic Labor-saving Equipment | 16,083 | 19,000 | 2,916 | 18.1% |
| Others | 2,381 | 2,000 | △381 | △16.0% |
| Operating Profit (x) | 6,047 (7.3%) | 7,500 (7.5%) | 1,452 | 24.0% |
| Ordinary Profit (x) | 6,259 (7.6%) | 7,300 (7.3%) | 1,040 | 16.6% |
| Profit attributable to owners of parent (x) | 4,344 (5.2%) | 4,700 (4.7%) | 355 | 8.2% |

# Key Points of Full-Year Forecast (Net Sales)

- **In addition to securing the highest level of order backlog at the beginning of the fiscal year 2024, we anticipate continued strong orders in the EV and semiconductor sectors, and we expect an increase in revenue compared to the same period of the previous year.** ※The information remains unchanged from the fiscal year 2023 financial statement announcement (May 10, 2024).

(Units in millions of Yen)

| | FY2023 | FY2024 | vs. FY2023 | |
|---|---|---|---|---|
| | Results | Full year forecast | Amount of +/- | Percentage of +/- |
| Net Sales | 82,839 | 100,000 | 17,160 | 20.7% |

## <Outlook by segment>

### Automobile-related

- While there is a slowdown in the growth of the EV market in North America, we will leverage our strengths in being able to cater to EVs, internal combustion engines, and hybrids to capture demand effectively.
- We expect an increase in orders by establishing a dedicated department for EV battery charging and discharging-related equipment starting from the fiscal year 2024, and by participating in customer product development from the early stages.

### Semiconductor-related

- We will ensure to capture the expanded demand resulting from increased investment in post-processing equipment for AI manufacturing and power semiconductors for automotive applications.
- We will proceed with establishing a production cooperation system with local subsidiaries in Southeast Asia, in addition to existing ones in China and Taiwan, in order to expand our production capacity.

### Other Automatic Labor-saving Equipment

- We will specialize in the production of the core components with the scaling up of OLED panels.
- The assembly equipment project for home appliance manufacturers is currently being developed by the customer. We will work to recover from any delays and mitigate the impact.

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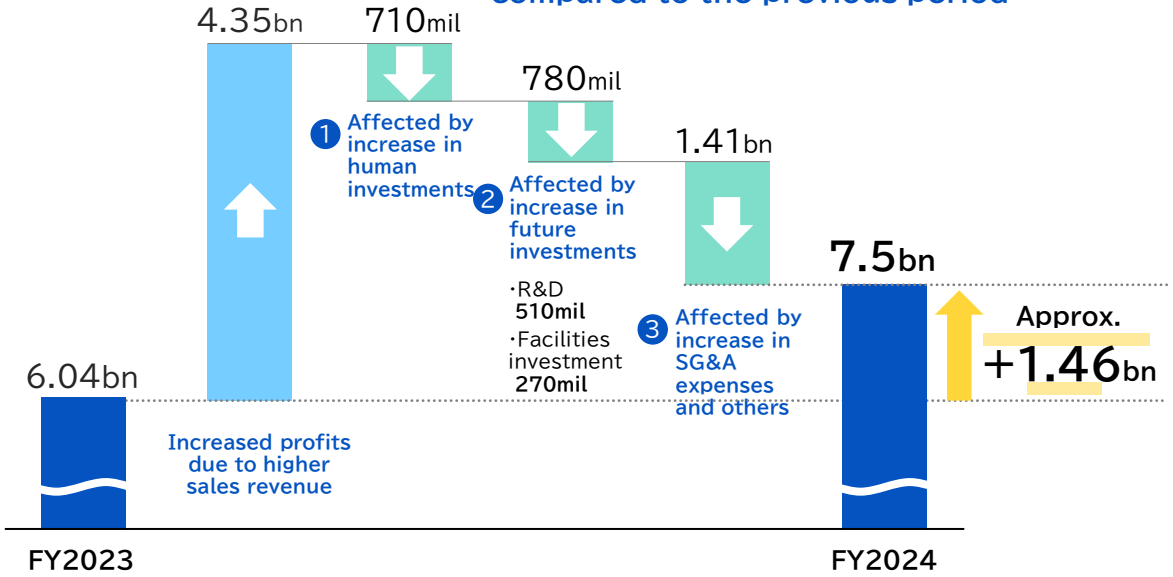
# Key Points of Full-Year Forecast (Operating Profit)

- **We will actively implement investments in human resources and growth to achieve “profitability enhancement” and “strengthening of management foundation” for the next phase of growth.**
- **We anticipate an increase in operating profit compared to the previous period.** ※The information remains unchanged from the fiscal year 2023 financial statement announcement (May 10, 2024).

## Main factors for increase/decrease compared to the previous period




### 1 Personnel investment 710 million yen

- Increase in hiring to meet future demand growth
- Increase in personnel expenses to address the rapid increase in prices and ensure stable talent acquisition, etc.

### 2 Growth investment 780 million yen

- Accelerating the development of next-generation product in existing businesses
- Capital investment for improving productivity, etc.

### 3 Other selling, general, and administrative expenses 1.41 billion yen

- Increase in selling, general, and administrative expenses due to sales expansion
- Increase in procurement cost, etc.

*The impact amount: increase/decrease for full year 2024 compared to full year 2023 results

# Transition and Forecast of Dividends and Dividend Ratio per Share

(Units in Yen)

| | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 | FY2024 forecast |
|---|---|---|---|---|---|---|
| Dividends per Share | 40.00 | 65.00 | 65.00 | 90.00 | 100.00 | 120.00 |
| Dividend Ratio (%) | 23.8 | 16.6 | 25.2 | 21.9 | 23.9 | 26.5 |

Note: Dividend ratio is on a consolidated basis.

## <Our approach to dividends>

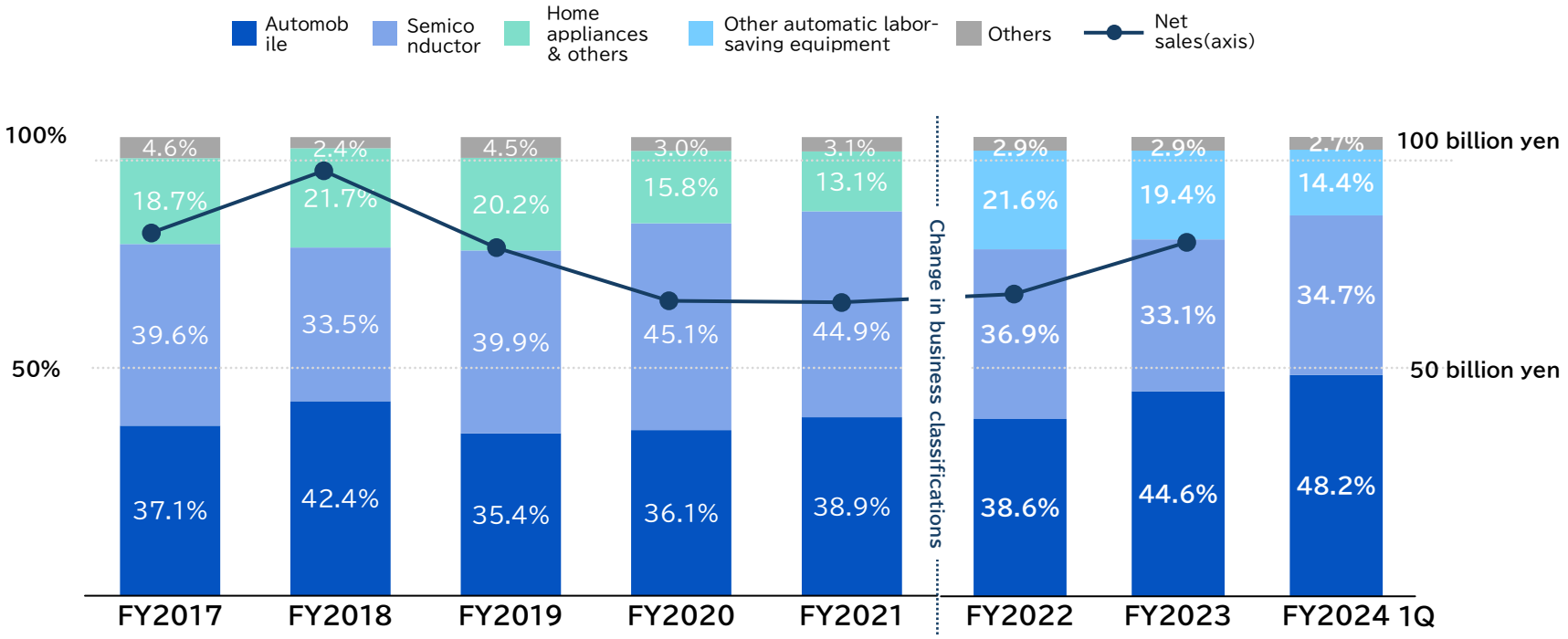
We consider the return of profits to shareholders as one of the most important management challenges and strive to strengthen our financial position. Taking into account our consolidated performance and future business development, we aim for a consolidated dividend payout ratio of 20% or more as a general guideline, and we strive to provide stable and continuous dividends.

**For the current fiscal year, we anticipate a year-end dividend of 120 yen.**

**Regarding our future approach to dividends, we will continue to consider it as part of our capital policy, which includes shareholder return strategies.**

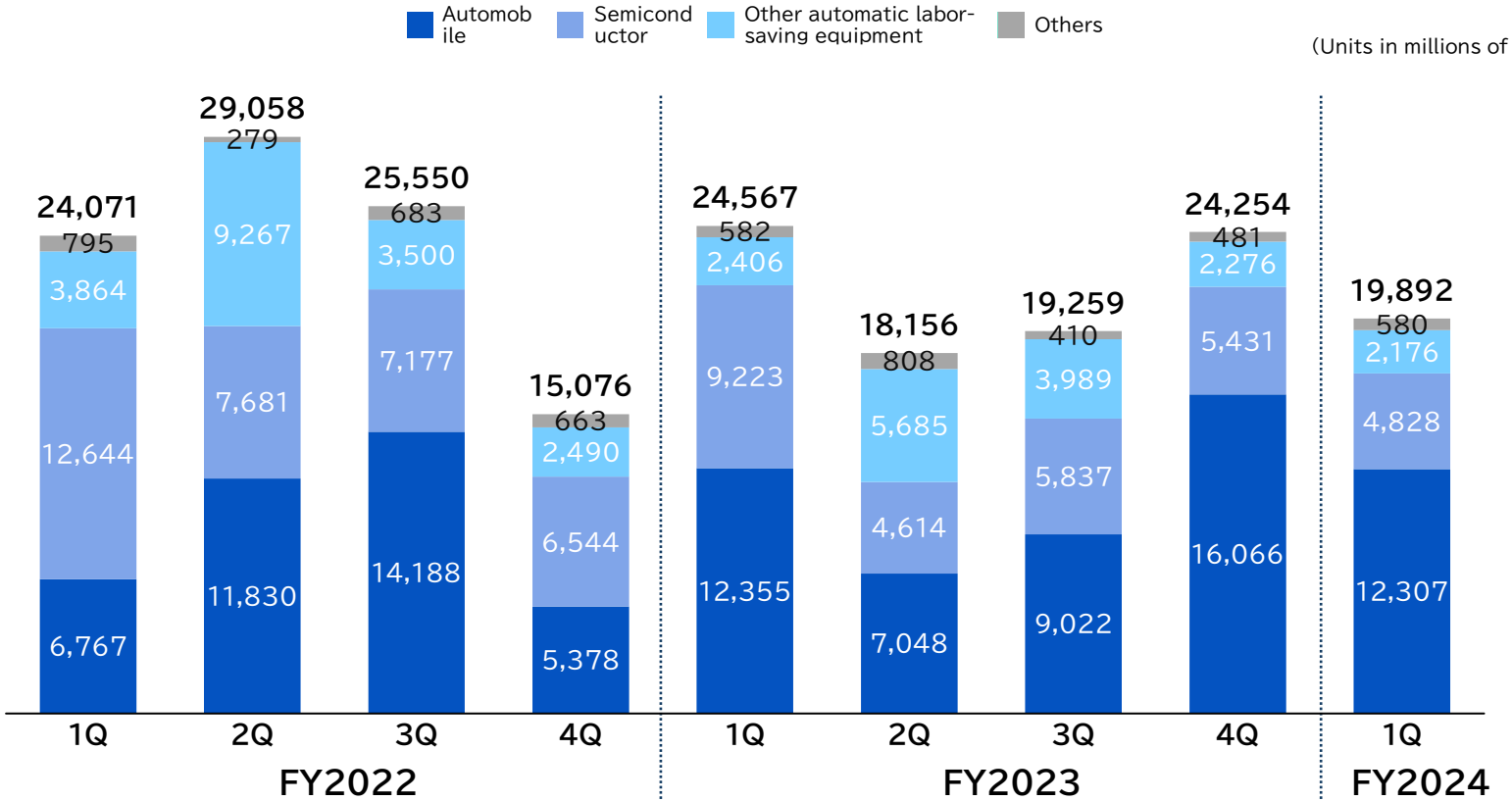
# Ⅲ. Reference Data

# Net Sales Composition Ratio by Business Segment

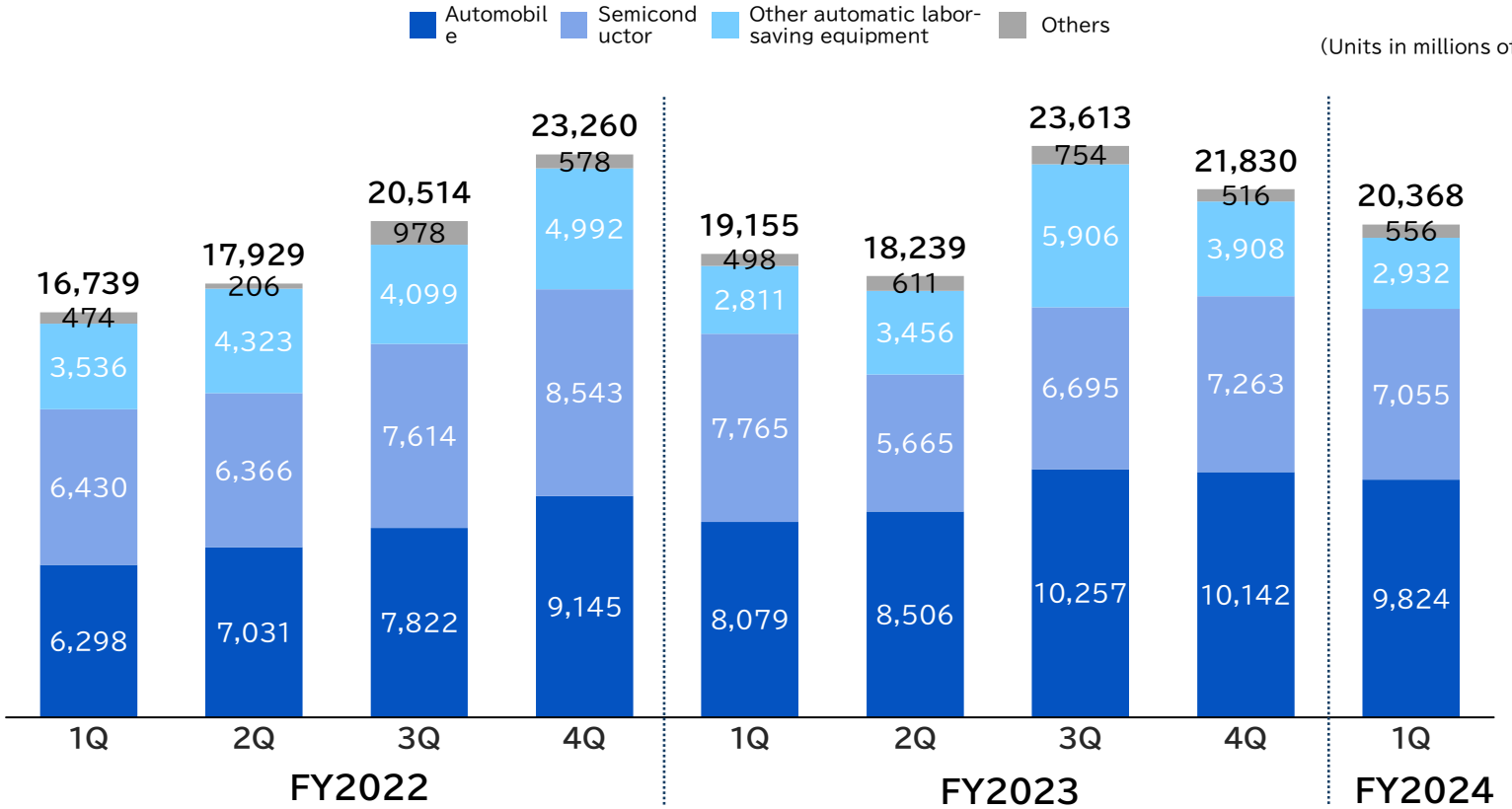



*We changed our business classifications effective from FY2022.

# Quarterly Trends by Business Segment【Received Orders】

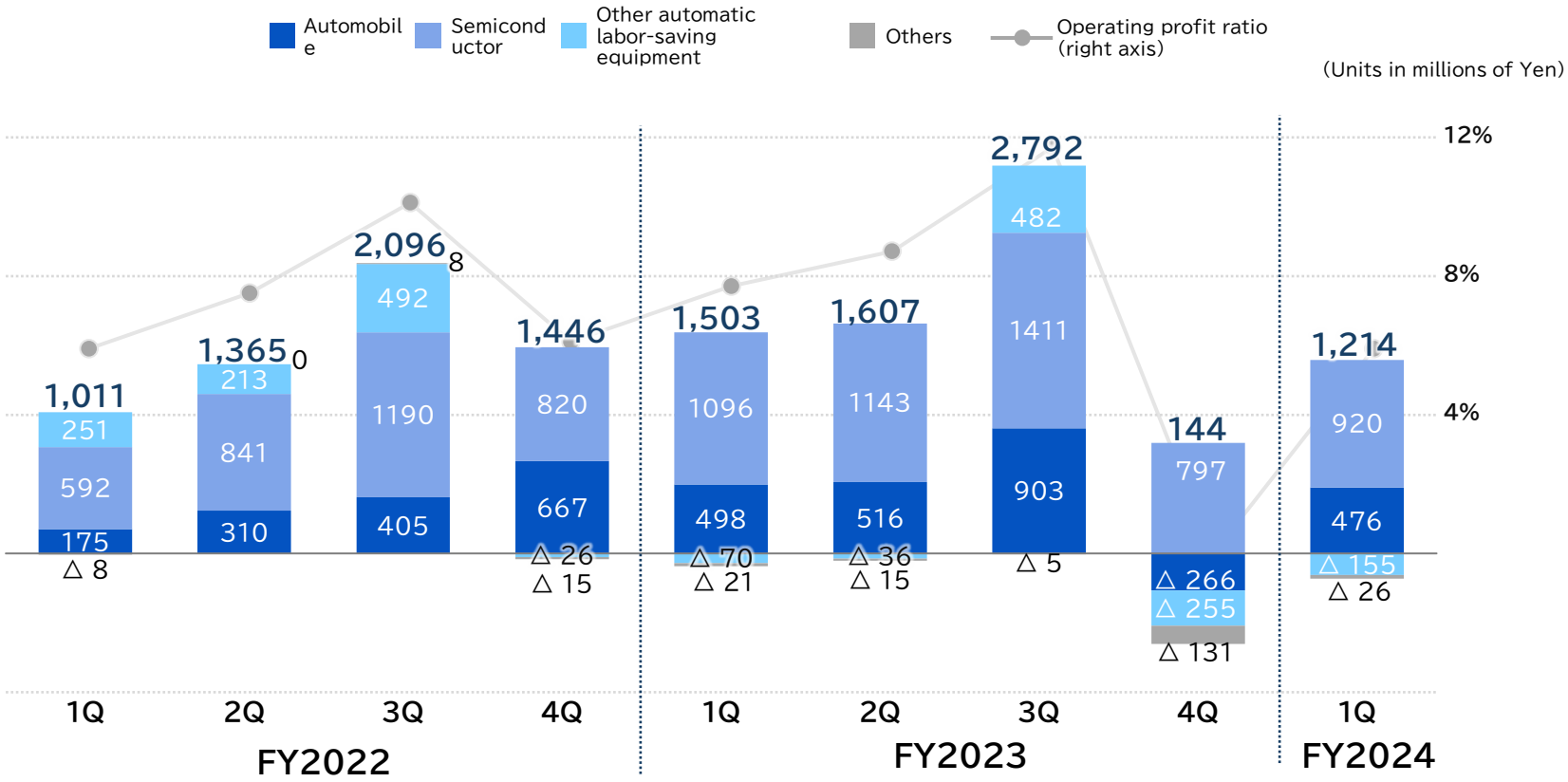


# Quarterly Trends by Business Segment【Net Sales】

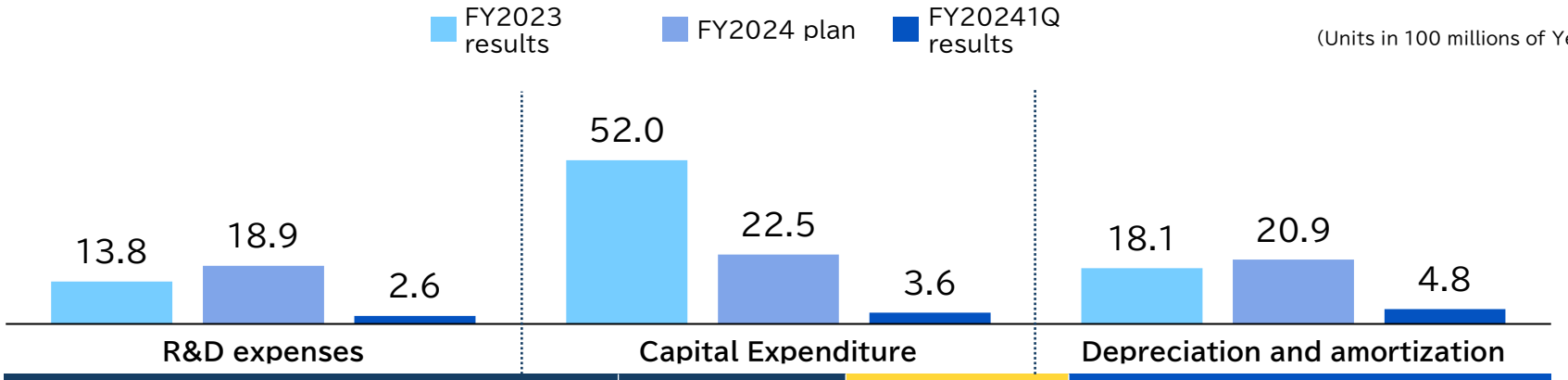


# Quarterly Trends by Business Segment【Operating Profit】

*Others includes elimination.



# R&D, CAPEX, Depreciation and Amortization

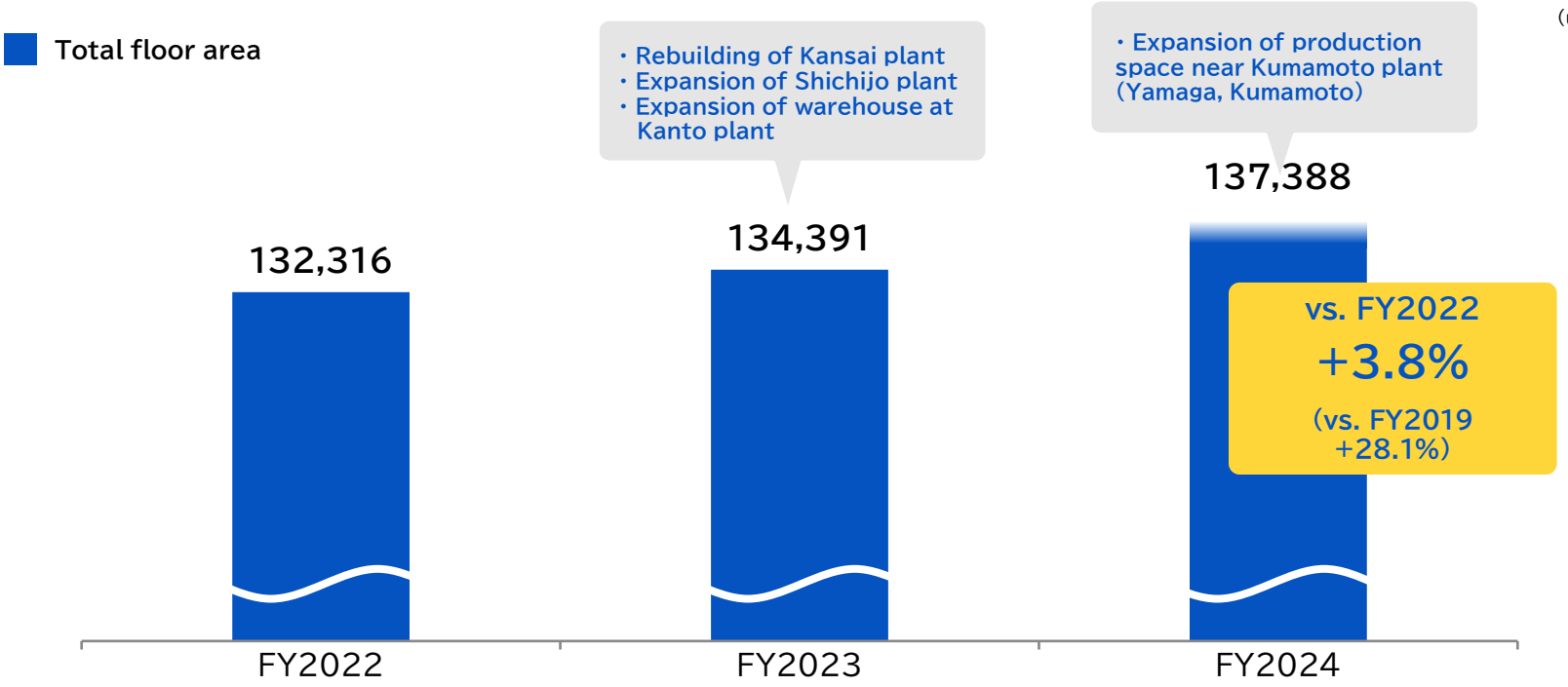



| Main investments | | FY2023 Results | FY2024 plan | Reasons for increase/decrease |
|---|---|---|---|---|
| R&D expenses | Next generation product development in existing businesses | Approx. 9.2 | Approx. 12.3 | Promoting development of mass-produced products |
| | Plant genetic resource related business | Approx. 4.5 | Approx. 6.6 | Increased in depreciation and personnel expenses |
| Capital investment | Plant rebuilding and expansion | Approx. 22.6 | Approx. 3.6 | Large-scale rebuilding and expansion have temporarily halted until the previous period. |
| | Plant genetic resource related business | Approx. 15.3 | Approx. 0.1 | The introduction of major equipment was completed by the previous period. |
| | Information system related | Approx. 2.1 | Approx. 1.8 | The implementation of the next-generation core system has been ongoing since the previous fiscal year. |
| | Others | Approx. 12.0 | Approx. 17.1 | There is a gathering of small-scale investments, among other things, for the purpose of improving productivity. |

# Production space (Non-consolidated ・End of period)

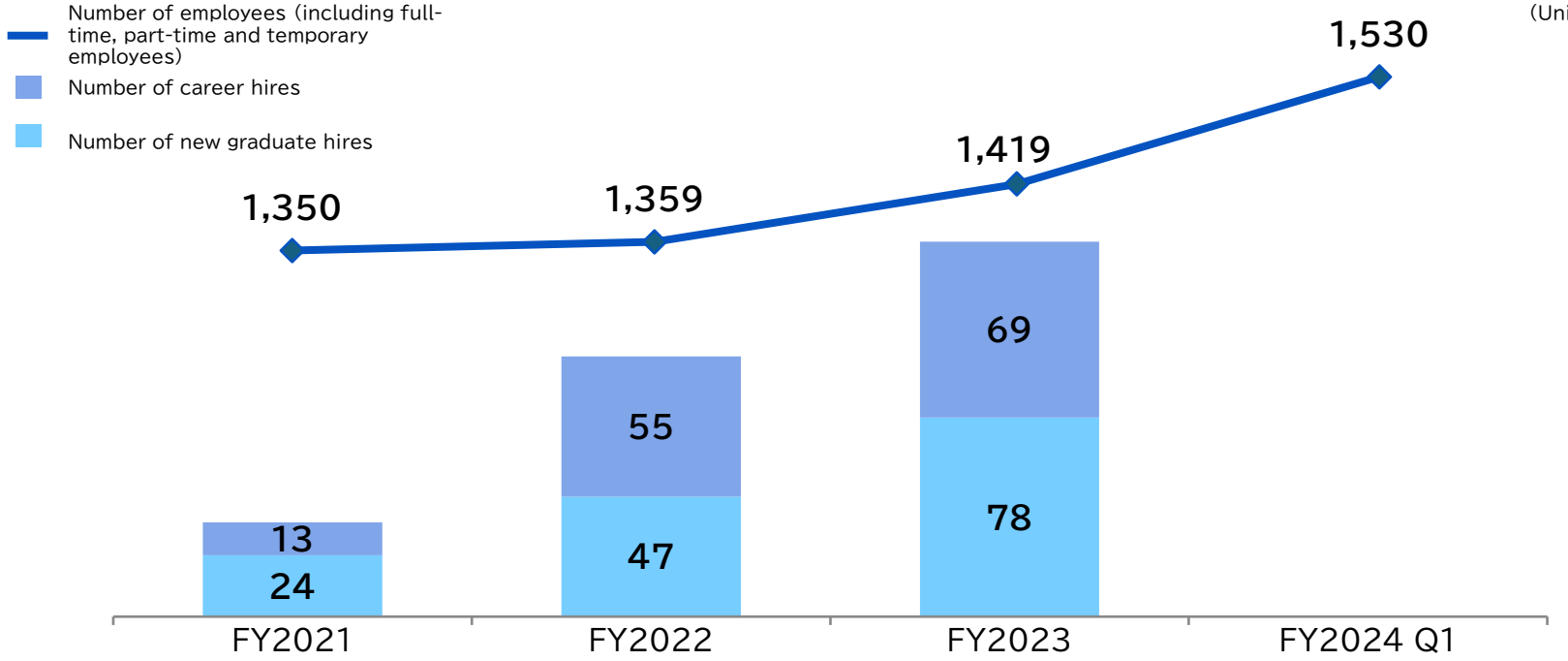
- We are actively working on the continuous expansion of production space to increase our production capacity.
- We will secure additional production space in Yamaga City, which is adjacent to Kumamoto City, for the fiscal year 2024 as well.

(units in ㎡)



# Number of recruits・employees (Non-consolidated・End of period)

- In anticipation of business expansion, we are committed to ensuring a continuous supply of talented professionals.
- We are working on talent retention through various measures such as wage improvements, workstyle reforms, enhancing employee benefits, and providing quality education and training opportunities.



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# Potential opportunities/risks from the main external environment and countermeasures

| Assumed main external environment | Assumed opportunities / risks | Main countermeasures |
|---|---|---|
| **Strengthening countries' efforts to decarbonize and become carbon neutral** | Opportunity: Increase in demand related to EV and semiconductor related business<br>Risk:<br>• Actions taken to reduce GHG emissions (cost increase)<br>• Missed orders due to lack of production capacity and human resources | • Improvement of QCD to obtain continuous inquiries from existing customers<br>• Positioning EVs and semiconductors as growth areas and concentrating resources<br>=Upfront investment in human resources and production capacity in anticipation of increased orders<br>(Increase in personnel, Kansai plant reconstruction, Shichijo plant expansion, etc.)<br>• Establishment of GHG emission reduction targets and study of optimal target achievement measures |
| **Slowdown in environmental-related investments due to change of government in North America** | Risk: Decreased capital investment by customers due to EV market contraction | • Understand capital investment trends through close information exchange with customers<br>• Securing new customers and projects by expanding the areas of service<br>• Diversify core businesses and optimize resource allocation |
| **Mass-production of new type batteries** | Opportunity: Expanding business opportunities through the pursuit of new technologies and the ability to mass-production<br>Risk: Deterioration in profitability due to the burden of development factors | • Participating from the research and development stage of our customers and developing and proposing that meet their requirements<br>• Reducing R&D expenses through external sourcing/procurement |
| **Proliferation of generative AI** | Opportunity: Increase in demand related to semiconductor related business<br>Risk: Missing orders due to lack of production capacity and human resources | • Improvement of QCD to obtain continuous inquiries from existing customers<br>• Resource investment in semiconductor field<br>=Pre-investment in human resources and production capacity in anticipation of an expansion in orders. |
| **Concentration of semiconductor-related industries in Kumamoto and Kyushu** | Opportunity: Increase in demand related to semiconductor related business<br>Risk: Shortage of human resources due to competition of talent acquisition | • Improvement of QCD to obtain continuous inquiries from existing customers<br>• Resource investment in semiconductor field<br>=Pre-investment in human resources and production capacity in anticipation of an expansion in orders.<br>• Recruiting new talent actively<br>• Implementing wage revisions and retention measures taking into account societal trends. |

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# Potential opportunities/risks from the main external environment and countermeasures

| Assumed main external environment | Assumed opportunities / risks | Main countermeasures |
|---|---|---|
| Escalation of tensions in the Middle East | Risk: Soaring of crude oil prices, cost increases in transportation and procurement | • Incorporating estimates for increased transportation costs and procurement costs, as well as implementing price revisions<br>• Developing new suppliers<br>• Reduction in the number of required parts and materials through standardization |
| Increase in personnel expenses based on social demands | Risk:<br>• Deterioration in profit margin<br>• Decrease in competitiveness due to sales price increase | • Incorporating estimates for increased labor costs and implementing price adjustments to pass on the costs<br>• Establishing competitive advantages other than price |
| Soaring and stagnating raw materials and component prices | Risk:<br>• Deterioration in profit margin<br>• Decrease in competitiveness due to sales price increase | • Incorporating estimates for increased procurement costs and implementing price adjustments to pass on the costs<br>• Developing and launching high-value-added products<br>• Developing new suppliers<br>• Reduction in the number of required parts and materials through standardization |
| Shortage of parts and materials | Risk: Decreased sales, deterioration in cost ratio, and increased inventory assets due to production schedule delays and prolonged lead times | • Securing parts inventory by making advance arrangements<br>• Developing new suppliers<br>• Reduction in the number of required parts and materials through standardization |
| The logistics “2024 problem” | Risk:<br>• Increased procurement costs due to rising transportation fees<br>• Prolonged lead times for procurement and shipment | • Incorporating estimates for increased procurement costs and implementing price adjustments to pass on the costs<br>• Reduction in the number of required parts and materials through standardization<br>• Logistics arrangements anticipating prolonged lead times |
| Exchange rate (Rapid appreciation of the yen) | Opportunity:<br>• Decrease in the actual procurement price of overseas procured goods such as raw materials and parts<br>Risk:<br>• Decreased price competitiveness relative to competitors | • Securing competitive advantage through value-added improvements<br>• Promoting local production overseas |

# Topic：Receipt of large project orders

## The list of large-scale purchase order projects we disclosed starting from FY2023 and onwards

| Business segment | Disclosure date | | Outline of the equipment | Amount |
|---|---|---|---|---|
| Automobile -related | 2023 | June | EDU assembly equipment for EVs | **More than 8 billion yen** |
| | 2024 | January | Battery charging and discharging related equipment for EVs | **More than 4 billion yen** |
| | | February | Engine assembly equipment for internal combustion engines | **Approximately 13 billion yen** |
| | | May | Battery charging and discharging related equipment for EVs | **Approximately 2.5 billion yen** |

**Orders record of battery charging and discharging related equipment for EVs**

The cumulative order amount since the fiscal year 2022 has **exceeded 9 billion yen.(7 lines)**

- Regarding the battery charging and discharging related equipment, we have started full-scale orders from the fiscal year 2022. (Orders for two lines until December 2023 amount to approximately 2.5 billion yen).
- Our ability to handle large-scale projects and the track record of delivering battery charging and discharging related equipment for EVs have been highly evaluated, leading to continuous order acquisition.

# Strengthening our efforts in ESG management

| | | |
|---|---|---|
| 2022 | Oct. | Human Rights Policy is formulated and Procurement Basic Policy is revised. |
| 2023 | Apr. | The Sustainability Promotion Committee is established.<br>Sustainability page is established in our web page and the dissemination of ESG information is been strengthened. |
| | Sep. | We signed the UN Global Compact. |
| | Oct. | Human rights due diligence is implemented. |
| | Nov. | We express our support for the Keidanren's "Corporate Code of Conduct." |
| 2024 | Jan. | Code of Conduct of the Hirata Group is established.<br>Human Rights Respect Working Group within the Sustainability Promotion Committee is established. |
| | Jun. | Hirata has been selected as a constituent stock for the followings:<br>「FTSE Blossom Japan Index」<br>「FTSE Blossom Japan Sector Relative Index」 |

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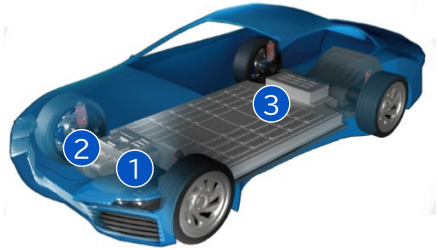
# Business Overview：Main products of automobile-related business

- Continued orders from North American automakers (big three), North American emerging EV manufacturers, domestic electronic components manufacturers, focusing on EV related

## Main/Expansion Fields of EV-related business

**Production equipment handled by Hirata**




*Completed product image

**1 EDU assembly equipment** Main field

Manufacturing EV-drive parts assembly equipment called EDU (ELECTRIC DRIVE UNIT) combined with in-vehicle motors and gearboxes

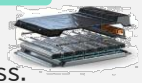

**2 IGBT･Inverter assembly equipment** Main field

Manufacturing of in-vehicle electronic components mounted on EVs and transmissions such as IGBT and inverters


**3 Battery-related assembly equipment** Expansion field

**(Cell charging / discharge process)**

Manufacturing of conveying equipment for charging and discharging processes that are part of the battery cell progress.




## Main customers, competitors, superiority

**EDU assembly equipment**

North America

**Customers**

・North American automakers (Big Three)

・North American emerging EV manufacturers

**IGBT･assembly equipment**

Japan

**Customers**

Domestic electronic components manufacturers

**Battery-related assembly equipment**

(cell charging/discharging process)

Japan

**Customers**

Domestic battery manufacturers

### Hirata's superiority

- Ability to handle large facilities, some of which exceed 1 km in total length, solely in-house
- A vast factory that allows us to build the customer's production line in our factory and install it on site after verifying the production capacity and quality
- Integrated system from development to production and maintenance
- Engineering ability to respond to customer requests

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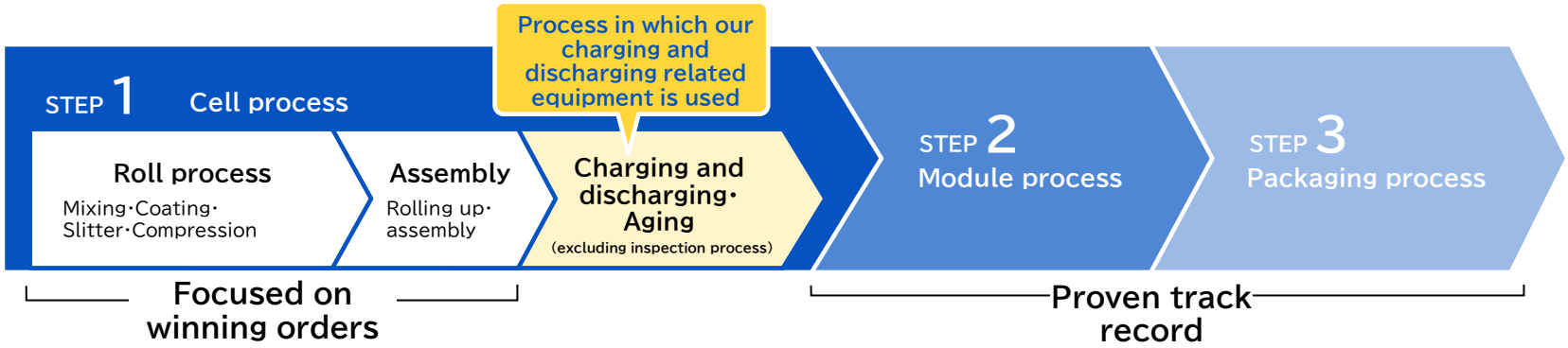
# Business Overview：Charging and discharging related equipment

- We have charge and discharge equipment that handles the final process of cell manufacturing, which is the “charging and discharging” process.
- We have a competitive advantage in systematization utilizing conveyance and stocking technologies.

## Battery manufacturing process




## Our products: Charging and discharging related equipment

- The process of activating a assembled cell (battery) by repeatedly charging and discharging it to give it the functionality of a battery
- We deliver the system to the customer by incorporating the charging and discharging machines procured from external suppliers into the transport lines and automated warehouses manufactured by us.

| | |
|---|---|
| Transport system | This system provides optimal transfer between processes according to recipes (process procedures). |
| Warehouse system for aging | The system performs tests in high-temperature environments and measures the performance of cell voltages after a certain period of time in an automated warehouse. |
| Warehouse system for charging and discharging | It is used in a process in which a full charge and discharge are repeated several times. It takes several hours to set the charging capacity, charging speed, and number of repetitions. |

# Business Overview：Main products of semiconductor-related business

- Continuing orders mainly for wafer transport devices for domestic device manufacturers and handling devices between inspection devices

## Main/Expansion Fields of Semiconductor-related business

**Main field**

### Wafer transport device


EFEM


Load port

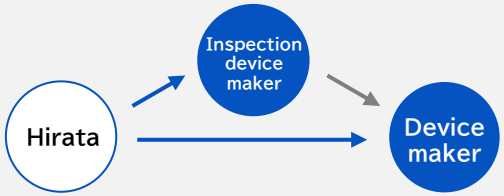

Transfer robot

Manufacturing road port that incorporates silicon wafers into various treatment devices, wafer transport robot that can support the air and vacuum environment, and an integrated EFEM


**Main field**

### Transport device between inspection device

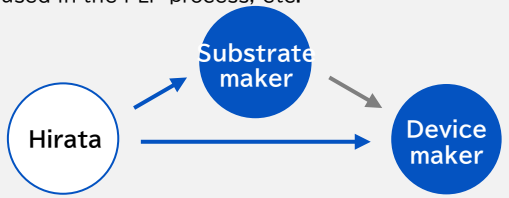
Manufacturing handling equipment that transports the finished IC chips and inspection device to another tray




**Expansion field**

### PLP

Manufacturing of EFEM, load port, and wafer transfer robots for panel substrate transfer and transfer equipment for panel manufacturing used in the PLP process, etc.




## Main customers, competitors, superiority

**Wafer transport device**

Japan

**Customers**

Domestic manufacturing equipment manufacturers

**Transport device between inspection device**

North America, Japan

**Customers**

- North American device makers
- Domestic inspection equipment manufacturers

**PLP**

North America, Europe, Japan

**Customers**

- North American device makers
- Domestic/European substrate manufacturers

### Hirata's superiority

- A wealth of component lineup
- Knowledge technology required for customization and optimization to meet customer requirements
- Integrated system from development to production and maintenance
- Engineering ability to respond to customer requests

# Business Overview ：Wafer transport device

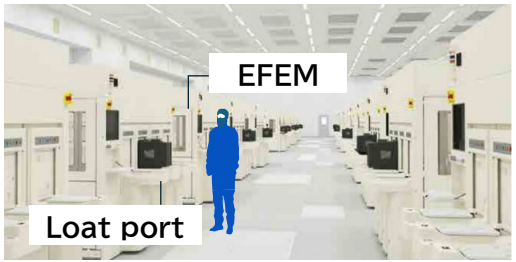
- Manufacturing of load ports that take wafers into various processing equipment mainly used in the front-end process of semiconductor manufacturing, wafer transfer robots that transfer wafers, and EFEMs that integrate them

## Semiconductor manufacturing process

Process in which our PLP is primarily used

| Design | Front-end process | Back-end process |
|---|---|---|
| • Design for circuit and pattern<br>• Photomask creation | • Wafer creation<br>• Circuit pattern creation<br>・Oxidation of wafer surface<br>・Thin film formation<br>・Pattern transcription of photomask<br>・Ion implantation | • Dicing<br>• Die bonding<br>• Wire bonding<br>• **Packaging**<br>• Commercialization and final inspection |

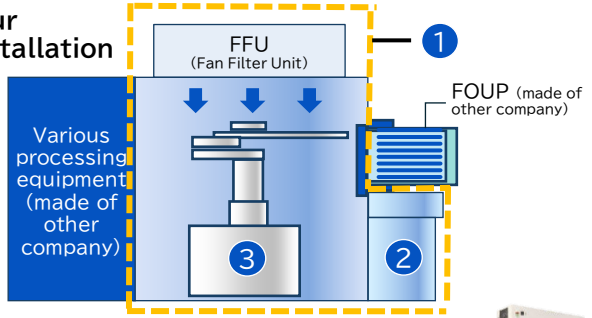
### Image of our product installation




Multiple EFEM/load ports are used on a single line because EFEM/load ports are installed at each processing unit.

## Our main products

Image of our product installation




**1 EFEM** (Equipment Front End Module)
It is placed for each processing unit, with a wafer transfer robot inside and a load port on the front.

**2 Load port**
It opens and closes the lid on the back side of the FOUP ※, a device that makes up the EFEM, but is also sold as a stand-alone item.

**3 Wafer transport robot**
Wafers are removed from the FOUP and transferred to the processing equipment. After processing, the wafers are stocked back in the FOUP. It is a device that makes up the EFEM, but is also sold as a stand-alone item.

※**FOUP**：It is a container for wafers that holds multiple wafers and moves them between processes.

# Business Overview：PLP

- Designing and manufacturing conveyance equipment used in PLP, an advanced packaging technology that is expected to expand

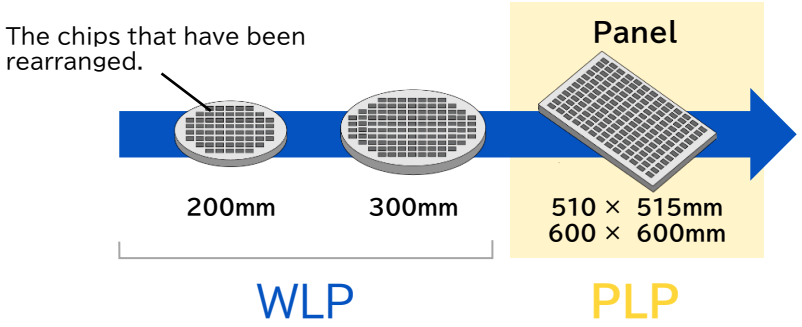
## Semiconductor manufacturing process

Process in which our PLP is primarily used

| Design | Front-end process | Back-end process |
|---|---|---|
| • Design for circuit and pattern<br>• Photomask creation | • Wafer creation<br>• Circuit pattern creation<br>·Oxidation of wafer surface<br>·Thin film formation<br>·Pattern transcription of photomask<br>· Ion implantation | • Dicing<br>• Die bonding<br>• Wire bonding<br>• Packaging<br>• Commercialization and final inspection |

## Difference of packaging process

| | |
|---|---|
| Conventional packaging | Circuits are formed on wafters, and after cutting the chips into smaller pieces, they are individually bonded and encapsulated onto substrates to complete the product. |
| WLP (Wafer Level Package) | After cutting the chips individually, only the good chips are rearranged on the wafer, and then they are bonded and encapsulated onto the substrate while the chips are still on the wafer. They are then cut individually. |
| PLP (Panel Level Package) | After cutting the chips individually, only the good chips are rearranged on a square-shaped panel, and then they are bonded and encapsulated onto the substrate while the chips are still on the panel. They are then cut individually. |




## What is PLP (Panel Level Packaging) about?

- The packaging process involves rearranging numerous chips that have been individually cut after circuit formation onto thin, square-shaped substrates and then collectively molding them. This is a packaging technology called “PLP”.
- In PLP, panel substrates larger than the standard 300mm wafer size, such as 510x515mm square, are commonly used.
- The panel substrate uses printed circuit boards, glass substrates for LCD panel manufacturing, and copper plates.

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# Business Overview：Other Automatic Labor-saving Equipment

- Manufacturing products for various industrial fields such as organic EL vapor equipment, assembly equipment for home appliances, and medical･physics and chemical equipment

## Main/New Fields of Other Automatic Labor-saving Equipment

Main field

**Medical physiology and chemical equipment**

Manufacturing a system for sample tests (pathological tissue specimen device and fully automatic continuous thinning device)

Main field

**Assembly equipment for home appliances**

Manufacturing all equipment, including motor assembly equipment built into high-performance home appliances

**Organic EL Vapor Equipment**

Contracted the manufacturing of vacuum vapor equipment for organic EL panels

New field for monetization

**Focused ultrasound therapy equipment**

- Focused ultrasound therapy equipment for Pancreatic Cancer Under Development with SONIRE Therapeutics Inc. (Headquarters: Shinjuku-ku, Tokyo, SONIRE, hereinafter, Sonia)
- Aiming for non-invasive cancer treatment that fuses SONIRE's Ultrasonic Technology with our robot technology
- Started clinical trials in a person and started developing the next mass production device

## Main customers, competitors, superiority

**Medical physiology and chemical equipment**

Japan
**Customers**
Domestic medical specialty manufacturers

**Assembly equipment for home appliances**

Asia
**Customers**
Asian home appliance manufacturers

**Organic EL Vapor equipment**

Japan
**Customers**
Domestic manufacturing device manufacturers

### Hirata's superiority

- Extensive knowledge and expertise in production facilities and equipment in various fields
- Integrated system from development to production and maintenance
- Engineering ability to respond to customer requests

# Cautionary statement with this document

Please be aware that the performance forecasts and future predictions mentioned in this document are based on the information available to us at the time of its creation. They are subject to potential risks and uncertainties, such as changes in economic conditions, competition with other companies, and exchange rates. Therefore, please note that actual performance may significantly differ from the future outlook mentioned or described in this document due to various factors, including changes in the business environment.