



Harmonic Drive Systems Inc.

Harmonic Drive Systems Inc.

Disclaimer: This document is an English translation of the original document in Japanese and has been prepared solely for reference purposes. In the event of any discrepancy between this English translation and the original in Japanese, the original shall prevail in all respects.

Financial Results for the Fiscal Year Ended March 31, 2025

May 20, 2025

This presentation contains forward-looking statements relating to expected future performance as of May 20, 2025. Such statements are based on the views and assumptions of company management and involve risks and uncertainties such as changes in the business environment that may cause the actual results to differ materially from expectations.



Performance Summary for FY 2025/3

Consolidated results for FY 2025/3 (versus original forecasts)

The most recent earnings forecast was announced on April 24, 2025, but here we compare it with the figures announced on January 16, 2025.

(millions of yen)

	Forecast (announced Jan 16, 2025)		FY 2025/3 (actual)		Vs. original forecasts	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	54,000	100.0	55,645	100.0	1,645	3.0
Operating income	▲ 400	—	6	0.0	406	—
Ordinary income	▲ 500	—	151	0.3	651	—
Net income	3,600	6.2	3,473	6.2	▲ 126	▲ 3.5
EPS (yen)	37.90	—	36.57	—	▲ 1.33	▲ 3.5

*Net income refers to net income attributable to owners of parent.

Consolidated results for FY 2025/3 (year-on-year change)

(millions of yen)

	FY2024/3		FY 2025/3		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	55,796	100.0	55,645	100.0	▲ 150	▲ 0.3
Operating income	124	0.2	6	0.0	▲ 117	▲ 94.4
Ordinary income	570	1.0	151	0.3	▲ 419	▲ 73.5
Net income	▲ 24,806	—	3,473	6.2	28,280	—
EPS (yen)	▲ 261.00	—	36.57	—	297.57	—
Capital investment	4,955	—	3,765	—	▲ 1,189	▲ 24.0
Depreciation costs	10,362	—	8,023	—	▲ 2,339	▲ 22.6
R&D costs	3,613	—	3,776	—	162	4.5

*Net income refers to net income attributable to owners of parent.

*Depreciation costs include depreciation cost of tangible assets and amortization cost of intangible assets and goodwill.

Performance of main group companies in FY 2025/3

(millions of yen)		Equity stake	Net sales		Net income	
			Amount	Year-on-year change (%)	Amount	Year-on-year change (%)
※2	HD Systems, Inc. (Harmonic Drive L.L.C.) (U.S.A)	100% (100%)	11,641	▲12.5	570	▲67.2
	Harmonic AD, Inc	100%	2,059	7.1	▲45	—
	Harmonic Precision Inc.	100%	3,108	47.4	▲425	—
※3	Harmonic Drive Systems (Shanghai) Co., Ltd.	100%	5,624	30.9	509	20.5
※4	Harmonic Drive SE (Germany)	100%	16,797	0.3	587	▲70.5

*1 For overseas subsidiaries, the fiscal year ends December 31.

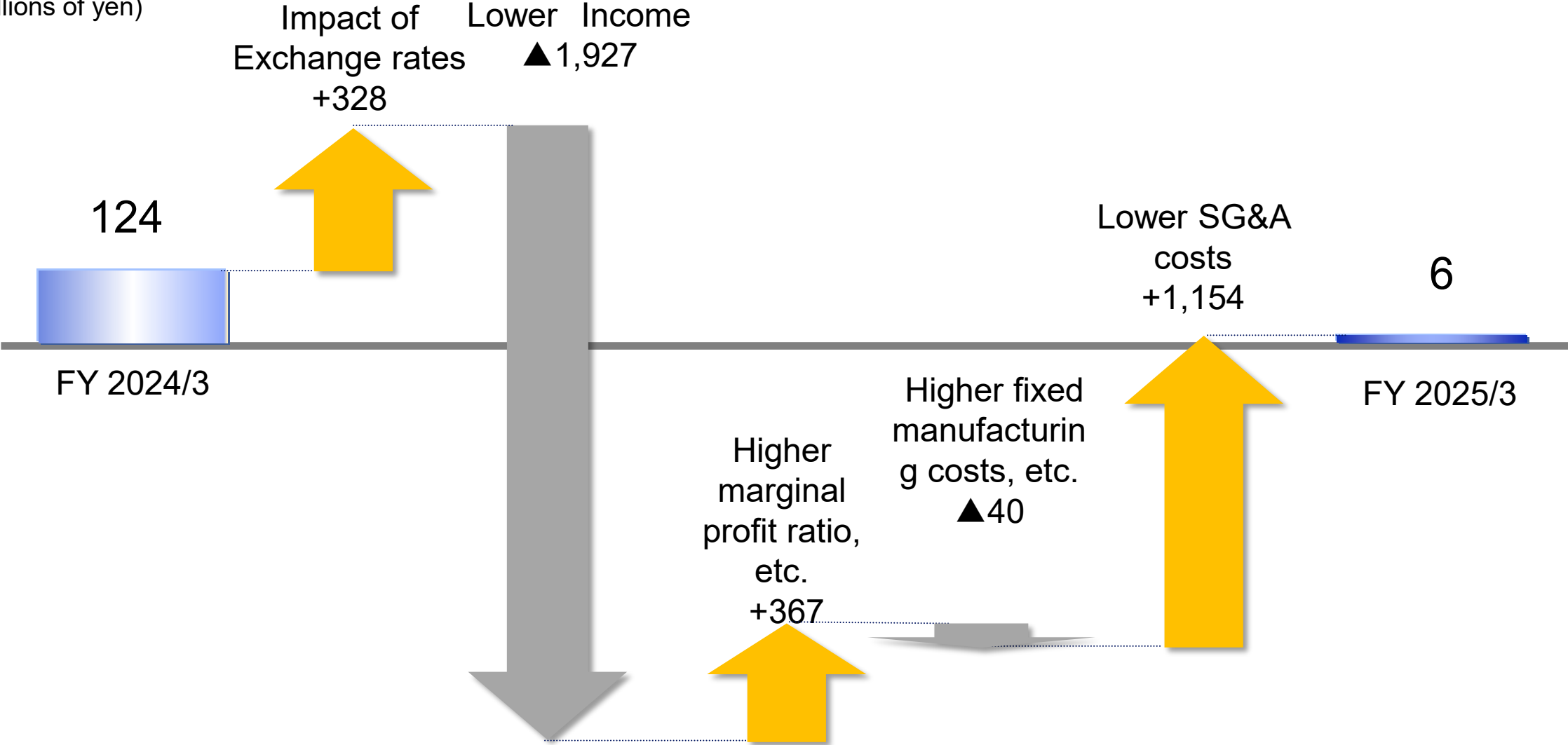
*2 Exchange rates: FY 23/12 1USD = 140.56 yen, FY 24/12 1USD = 151.58 yen

*3 Exchange rates FY 23/12 1CNY = 19.82 yen, FY 24/12 1CNY = 21.02 yen

*4 Exchange rates FY 23/12 1EUR = 152.00 yen, FY 24/12 1EUR = 163.95 yen

Factors in year-on-year change in consolidated operating income (FY2025/3)

(millions of yen)



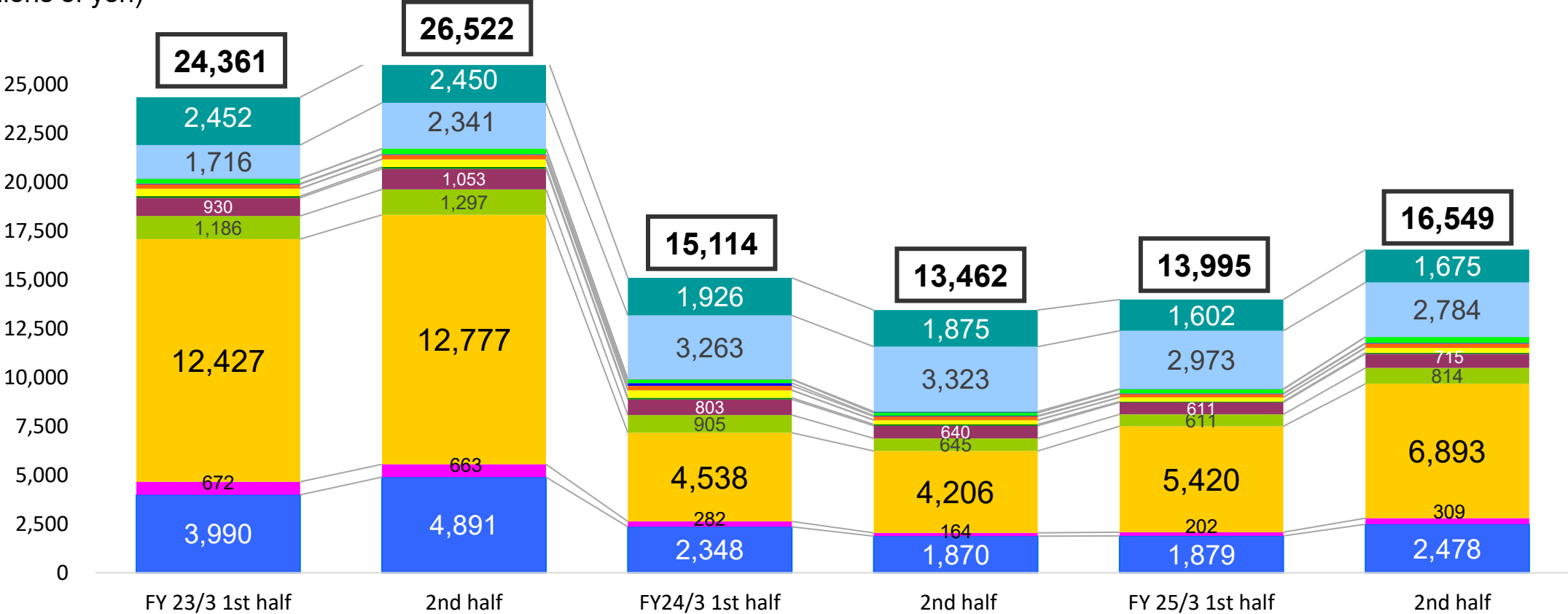
Non-consolidated results for FY 2025/3(year-on-year change)

(millions of yen)

	FY 2024/3		FY 2025/3		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	28,577	100.0	30,544	100.0	1,967	6.9
Operating income	▲542	—	▲187	—	354	—
Ordinary income	2,288	8.0	187	0.6	▲2,101	▲91.8
Net income	▲18,460	—	4,174	13.7	22,635	—
EPS (yen)	▲194.23	—	43.96	—	238.18	—
Capital investment	3,275	—	1,889	—	▲1,386	▲42.3
Depreciation costs	4,761	—	4,504	—	▲257	▲5.4
R&D costs	2,327	—	2,365	—	38	1.7

Non-consolidated net sales by application (half-yearly)

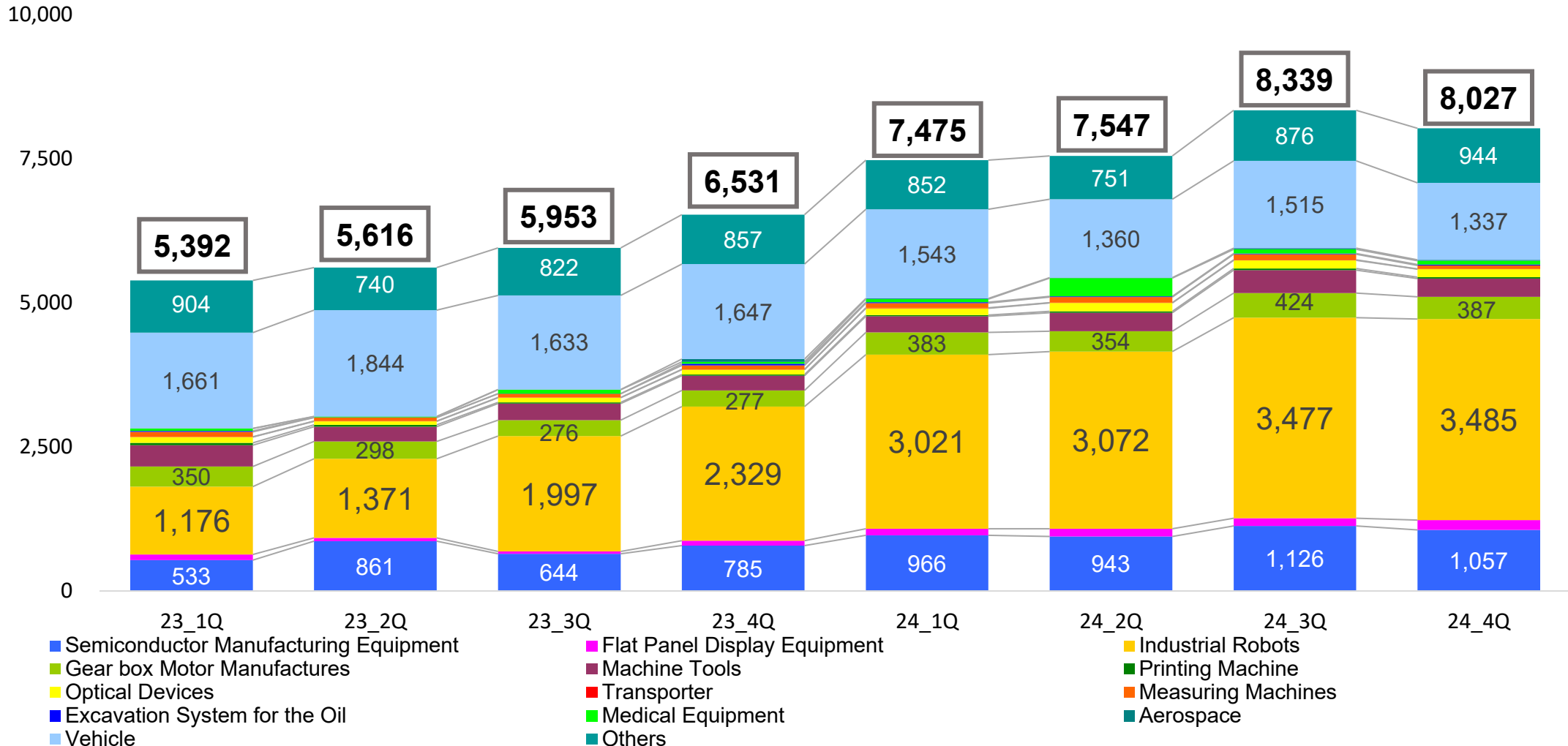
(millions of yen)



- Semiconductor Manufacturing Equipment
- Flat Panel Display Equipment
- Industrial Robots
- Gear box Motor Manufactures
- Machine Tools
- Printing Machine
- Optical Devices
- Transporter
- Measuring Machines
- Excavation System for the Oil
- Medical Equipment
- Aerospace
- Vehicle
- Others

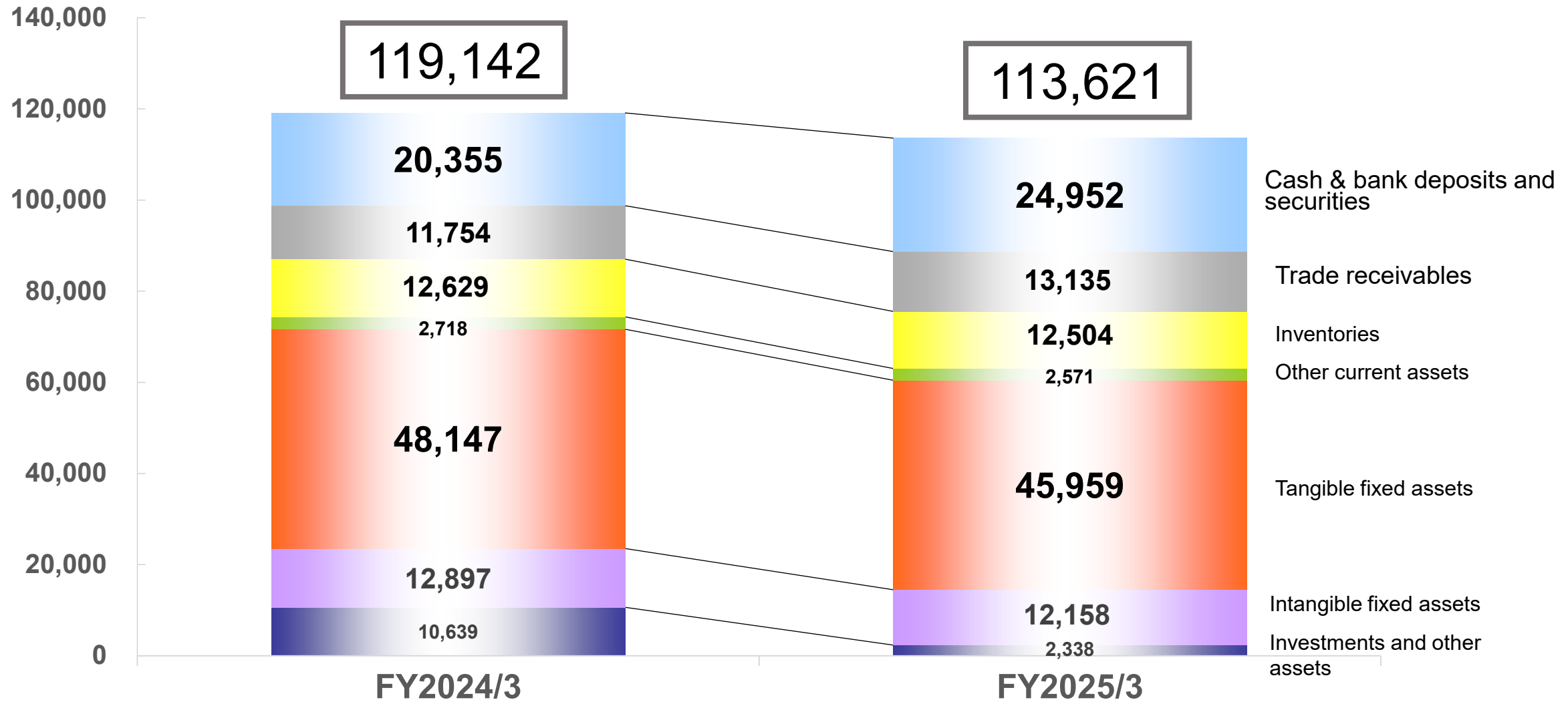
Non-consolidated bookings by application (quarterly)

(millions of yen)



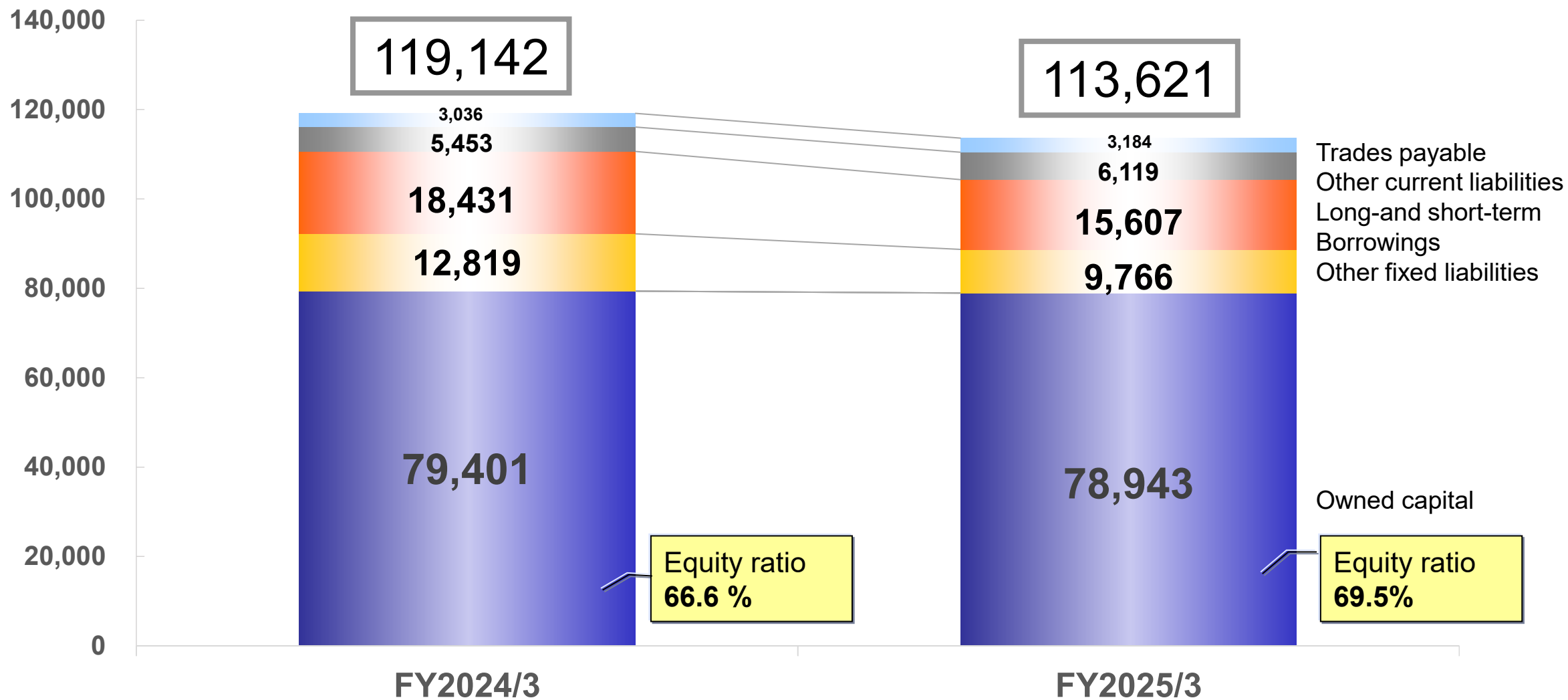
Status of consolidated assets

(millions of yen)



Status of consolidated liabilities and net assets

(millions of yen)



Status of consolidated cash flows

(millions of yen)

	FY2024/3	FY2025/3
Cash flow from operating activities	12,728	7,516
Cash flow from investing activities	▲5,950	1,480
Cash flow from financing activities	▲8,122	▲5,874
Effect of exchange rate changes on cash and cash equivalents	363	859
Net increase (decrease) in cash and cash equivalents	▲980	3,981
Cash and cash equivalents at end of year	18,941	22,923

Performance Forecasts for FY 2026/3

Performance Forecasts for FY2026/3

Full-year forecast remains undecided; only 1H forecast disclosed

- Impact of U.S. tariff policy on 2H performance is difficult to reasonably estimate
 - ◆ We expect limited impact from increased tariffs, as approximately 70% of products sold in the U.S. are manufactured at our local production sites.
 - ◆ However, it is difficult to forecast the potential indirect impact of U.S. tariff policy on 2H orders and sales, resulting from changes in demand for products sold by customers.

The full-year forecast will be announced promptly once it becomes possible to make calculations, following a careful assessment of tariff trends and other developments.

Consolidated results for 1H FY03/26 (Vs. original forecasts)

(millions of yen)	1H FY03/25		1H FY03/26 (forecast)		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	26,559	100.0	27,000	100.0	440	1.7
Operating income	▲637	—	300	1.1	937	—
Ordinary income	▲828	—	200	0.7	1,028	—
Net income	▲850	—	300	1.1	1,150	—
EPS (yen)	▲8.95	—	3.16	—	12.11	—
Capital investment	2,403	—	3,656	—	1,252	52.1
Depreciation	3,936	—	3,345	—	▲590	▲15.0
R&D expenses	1,936	—	1,921	—	▲15	▲0.8

*Assumed exchange rate for 1H FY03/26 forecasts: 1USD = ¥140.00 1EUR = ¥155.00 1CNY = ¥20.00

*Interim net income (loss) refers to Interim net income (loss) attributable to owners of parent.

*Depreciation includes depreciation of tangible assets and amortization of intangible assets.

Non-consolidated performance forecasts for full-year FY03/26

(millions of yen)	FY03/25		FY03/26 (forecast)		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	13,995	100.0	15,500	100.0	1,504	10.8
Operating income	▲727	—	100	0.6	827	—
Ordinary income	▲699	—	0	0.0	699	—
Net income	▲701	—	100	0.6	801	—
EPS (yen)	▲7.38	—	1.05	—	8.43	—
Capital investment	1,343	—	2,647	—	1,303	97.1
Depreciation	2,175	—	1,856	—	▲319	▲14.7
R&D expenses	1,186	—	1,271	—	84	7.1

*Assumed exchange rate for 1H FY03/26 forecasts: 1USD = ¥140.00 1EUR = ¥155.00 1CNY = ¥20.00

Performance forecasts on main group companies for 1H FY03/26

(millions of yen)

	Equity stake	Net sales		Operating income	
		Amount	Year-on-year Change(%)	Amount	Year-on-year Change(%)
※2 HD Systems, Inc. (Harmonic Drive L.L.C.) (U.S.A)	100% (100%)	5,321	▲8.1	101	▲59.9
Harmonic AD, Inc.	100%	1,165	19.1	14	—
Harmonic Precision Inc.	100%	1,658	9.7	25	—
※3 Harmonic Drive Systems (Shanghai) Co., Ltd	100%	2,092	▲30.4	139	▲57.9
※4 Harmonic Drive SE (Germany)	100%	7,782	▲4.5	493	94.1

*1 For overseas subsidiaries and affiliates , the fiscal year ends December 31.

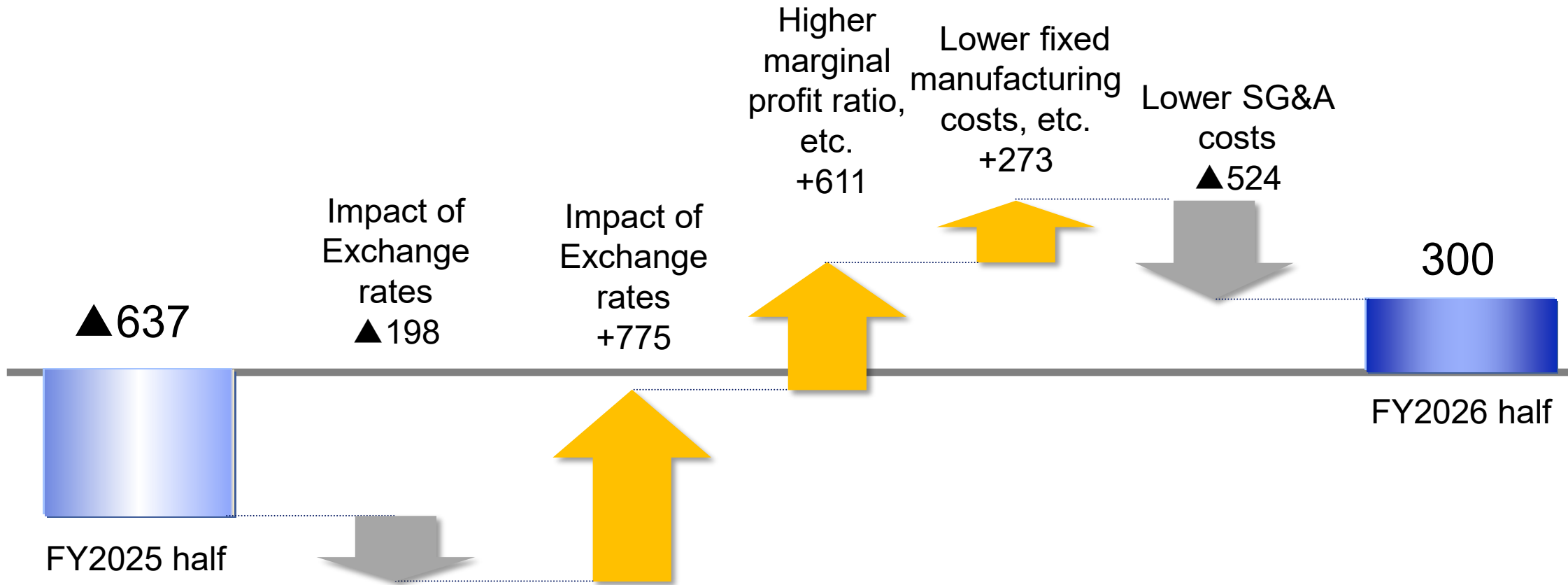
*2 Exchange rates: Jan–Dec 2024 1USD = ¥151.58, Jan–Dec 2025 1USD = ¥140.00

*3 Exchange rates: Jan–Dec 2024 1CNY = ¥21.02, Jan–Dec 2025 1CNY = ¥20.00

*4 Exchange rates: Jan–Dec 2024 1EUR = ¥163.95, Jan–Dec 2025 1EUR = ¥155.00

Factors in year-on-year change in consolidated operating income (1H FY2026/03 forecasts)

(millions of yen)



Future Outlook

1. Review of Demand Trends for FY2024

1-1. Consolidated Bookings Status by Region

North America

While there were bulk bookings from some customers in Q2 and Q4, inventory adjustments continued at semiconductor-related customers

Europe

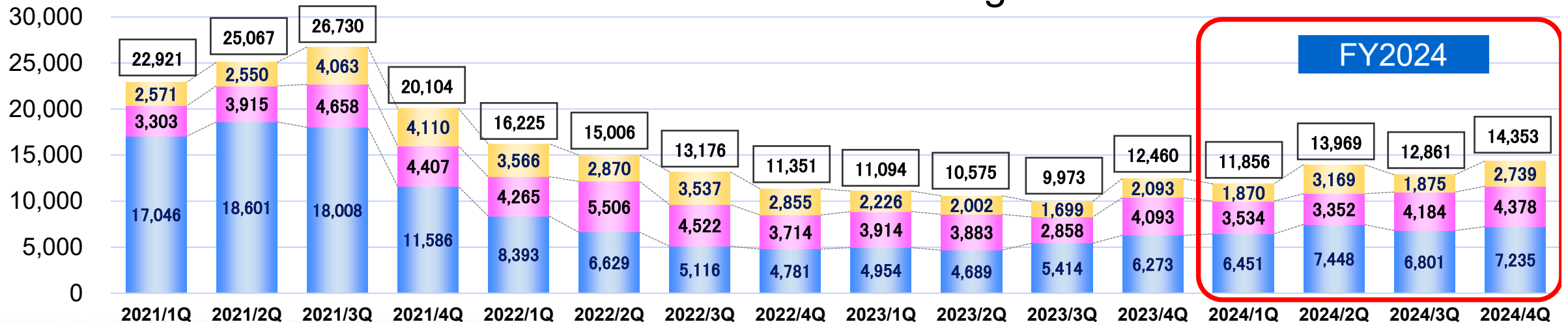
Bookings were robust, despite a stagnation in the European economy

Asia

Bookings recovery has lagged behind expectations due to weak end-market demand in China and Europe, but customers are steadily optimizing inventory levels of our products

(millions of yen)

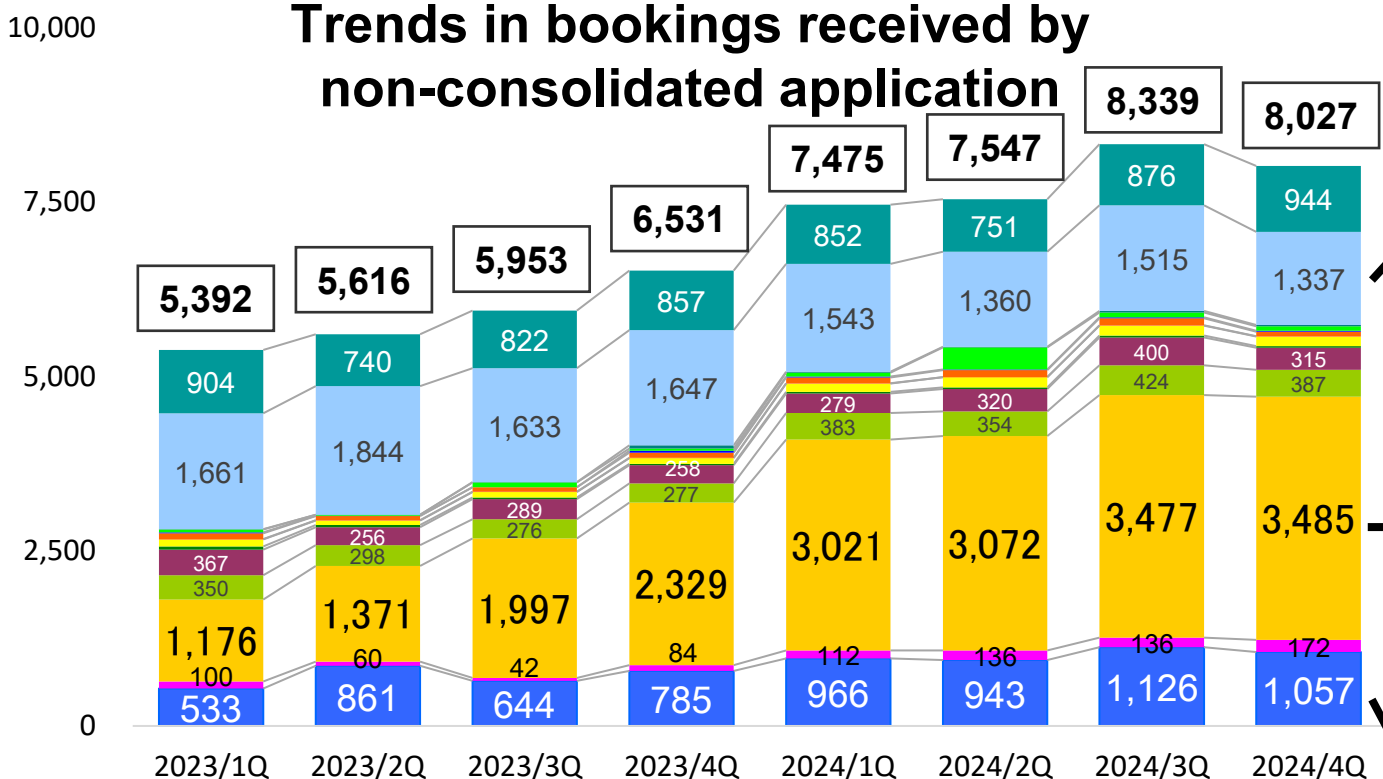
Consolidated Bookings Trend



Harmonic Drive Systems Inc.

1-2. Bookings by non-consolidated application

(millions of yen)



- Semiconductor Manufacturing Equipment
- Industrial Robots
- Machine Tools
- Optical Devices
- Measuring Machines
- Medical Equipment
- Automotive
- Flat Panel Display Equipment
- Gear box Motor Manufactures
- Printing Machine
- Transporter
- Excavation System for the Oil
- Aerospace
- Others

Status for FY2024

Automotive

- Declined due to the sluggish sale of the Japanese auto manufacture in the Chinese and North America market

Industrial Robots

- New projects involving AI and humanoid robots, along with the increasing preference for high-end products among local Chinese robot manufacturers, contributed to bookings growth
- Despite steady progress in inventory optimization of our products at existing core customers, overall market recovery has been slower than anticipated

Semiconductor Manufacturing Equipment

- Advanced semiconductors, particularly those related to AI, are driving demand, but the market has yet to fully recover
- Demand for our products for semiconductor manufacturing equipment remains sluggish

2. Initiatives for 2024

2-1. Mid-term Management Plan for fiscal years 2024–2026

Take on the challenge of “value creation and transformation”

① What do we aim to achieve?

Sustainable growth of all businesses with an emphasis on profitability

② What is necessary to achieve this?

Strengthen management resources (people, things, money, information) that can adapt to changes in the environment

③ Sustainability

Initiatives to enhance corporate value that will continue into the future

2-2. Initiatives for 2024

① Sustainable growth of all businesses with an emphasis on profitability

➤ Develop new drivers for growth

- Developed relationships with players related to AI and humanoid robots
- Expanded market share in China (9.3% in 2023 to 12.1% in 2024)
Source: "2024 China Precision Reducer Market Analysis Report" by M.I.R. Co., Ltd.
 - Supported by demand from local Chinese robot manufacturers
- Began collaboration with other companies to develop new technologies

➤ Achieve QCDS that goes beyond customer expectations

- Launched a new company-wide cost innovation project
 - Improved operating profit by approximately ¥300 million in FY2024 amid high prices and rising labor costs
- Expanded local assembly in China

② Strengthen management resources

➤ Factory IoT adoption

- Improved operational efficiency through MES implementation at the Ariake Factory
 - Expand to other factories in FY2025 and beyond
- (Estimated effect: reduction of indirect man-hours by approx. 16,000 hours/year)

➤ Efficient allocation of production sites

- Completed transfer of mechatronics product manufacturing operations to Harmonic Winbel Inc.

③ Initiatives to enhance corporate value that will continue into the future

➤ Activities based on our Basic Sustainability Policy

- Selected as an A List company in CDP Water Security 2024 by CDP, a global nonprofit leading environmental disclosure
- Formulated the group human rights policy
- Implemented supplier risk assessments
- Reduced cross-shareholdings (approx. ¥8.5 billion)
- Established a voluntary Nomination and Remuneration Committee

3. Future Trends

3-1. Emergence of local manufacturers in Chinese robotics market

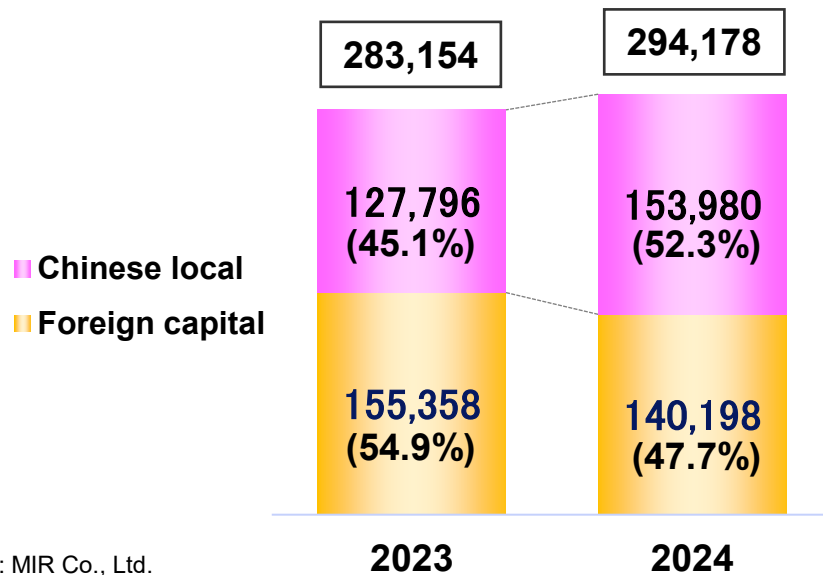
■ Rising market share of local manufacturers in Chinese robotics market

- The share of local manufacturers for collaborative and small-sized robots has expanded rapidly

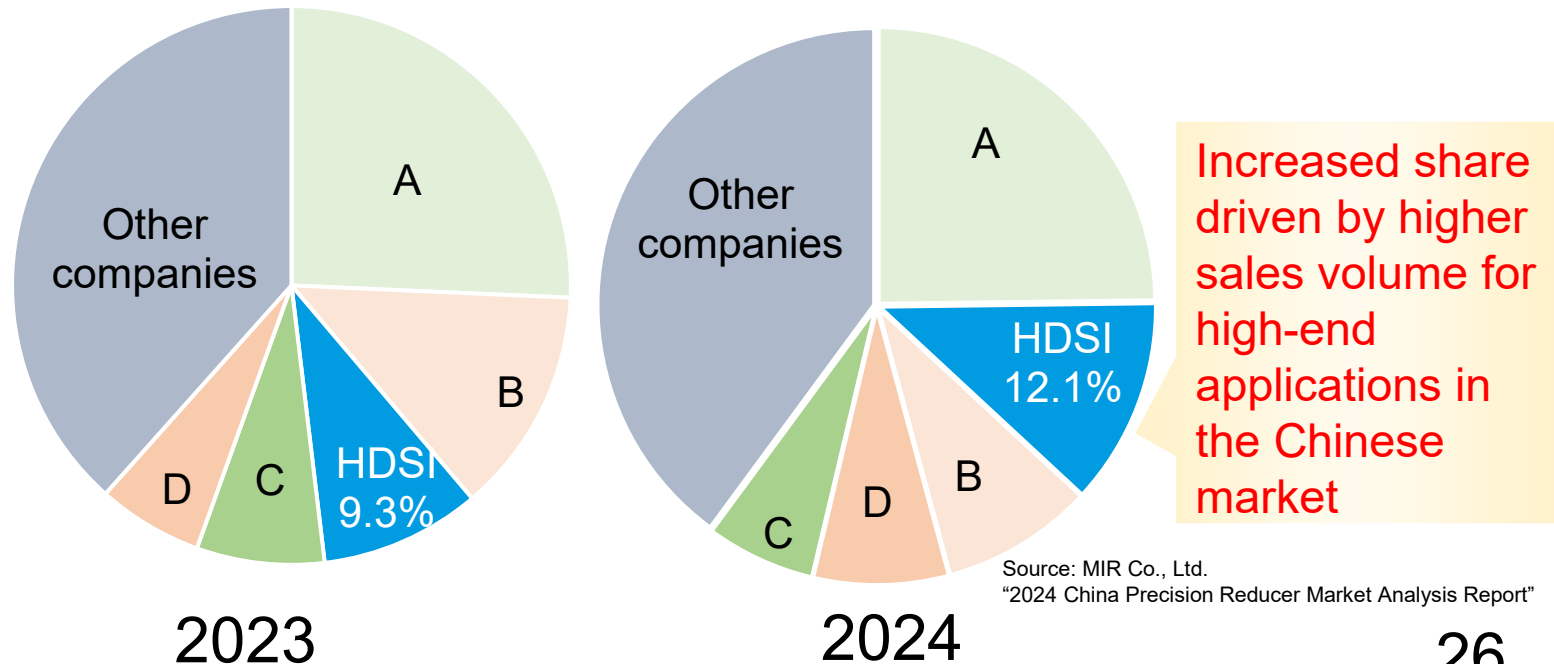
■ Growing preference for high-end products by local robot manufacturers in China

- Major players are focusing on enhancing reliability and securing stable procurement to strengthen their international competitiveness
- ➔ Expanding opportunities for adoption of our products

(1) Shipment volume of industrial robots in China



(2) Market share by shipment volume in the Chinese strain wave gearing devices market



Source: MIR Co., Ltd.
 "2024 China Industrial Robot Market Data Analysis Report"

Source: MIR Co., Ltd.
 "2024 China Precision Reducer Market Analysis Report"

3-2. Semiconductor equipment and Automotive

Semiconductor equipment

■ Bookings from the Group's semiconductor-related customers are expected to gradually increase

- Sales of semiconductor manufacturing equipment for AI semiconductors used in server were robust
- Logic foundries and DRAM: overall strong, but some variation
- Uncertainty over the outlook due to U.S.-China tariff trends



Automotive

■ The impact of weak sales of the Japanese auto manufacturer was offset by increased adoption of our products in new vehicle models

- Sales were sluggish in China and North America
- Expansion of installation in new vehicle models in North America
- Flexible response to demand trends in automotive production lines

4. New Applications

4-1. History of our company and humanoid robots

Adopted for the first time in a humanoid robot



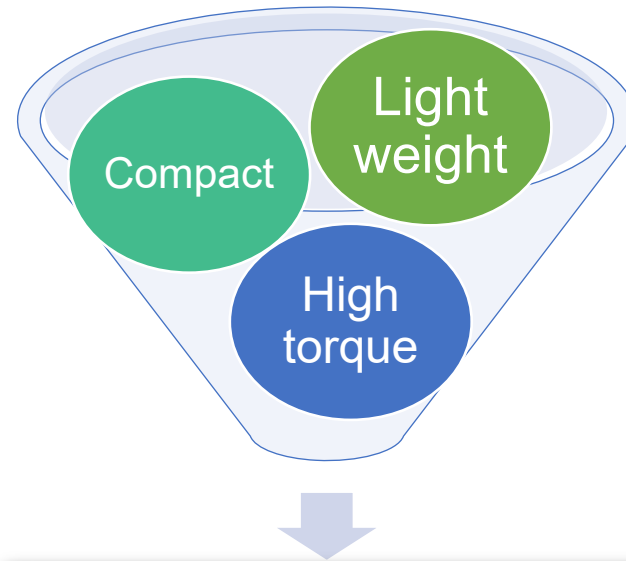
Provided by Honda Motor Co., Ltd.



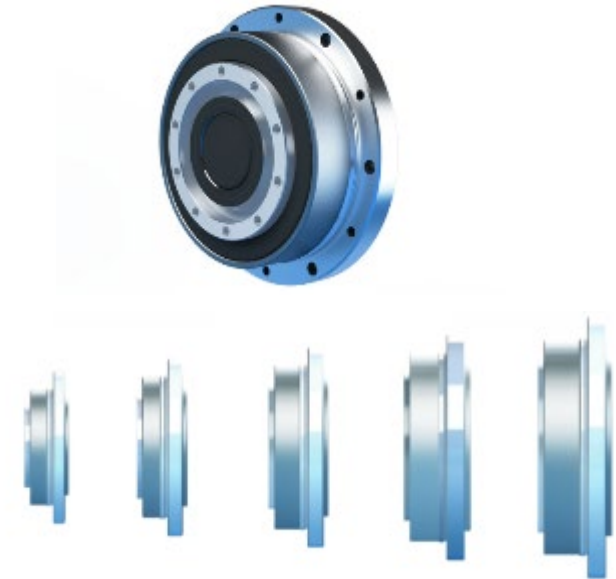
Harmonic Drive Systems Inc.

Continuous improvement

Thinner and lighter



Optimal for humanoid robots?



Cup-type design realizes compactness and light weight while maintaining torque

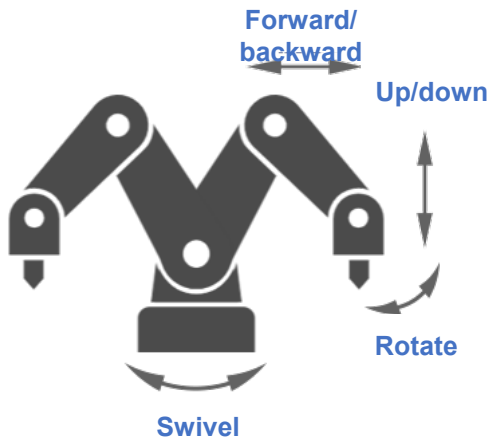
We are currently doing business with several companies

4-2. Expected applications

Typical number of reducers required

Dual arms (Speed)

Four main movements of a dual-armed robot

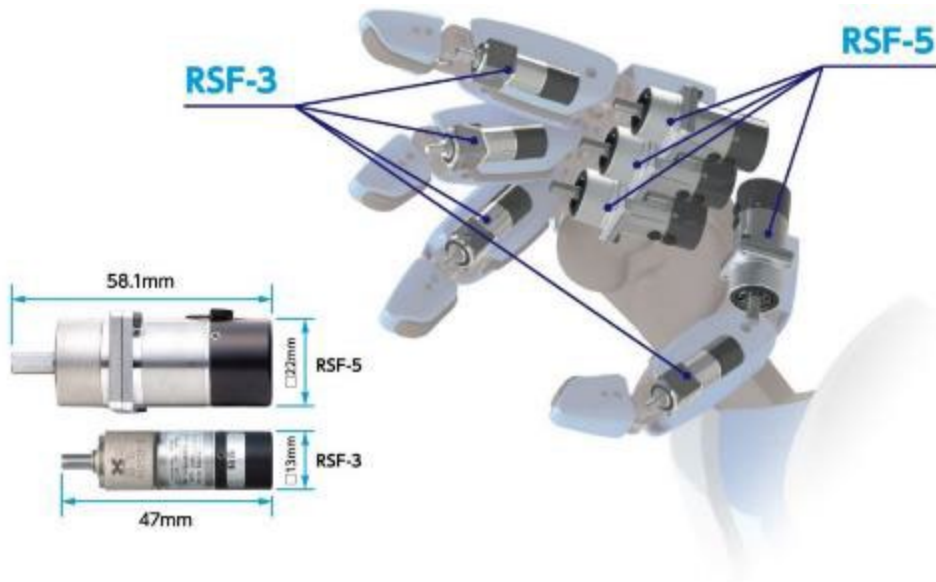


1. Swivel motion
2. Forward and backward motion
3. Up and down motion
4. Rotational motion

Lightweight, compact, hollow

Dual arms × 6 axes = approx. 12 axes

Humanoid hand (Gripping force and dexterity)



Compact and high precision

5 fingers × 3 axes = approx. 15 axes

Lower limbs (Efficient and low power consumption)



High efficiency
Unconstrained by weight

Both legs: minimum of 8 axes

4-3. Our current relationships with AI and humanoid robot developers

■ Mass production phase

Mass production supply confirmed for multiple companies, including venture firms

■ Development phase

Began collaborations with leading companies exploring entry opportunities in the humanoid robot field, which we believe will shape a new market

- Development of distinctive actuators incorporating each company's strengths
- Joint development of robotic hands with gripping force

 **Development of robotic arms compatible with AI and advanced software**

4-4. Space

Broadening of our applications as human activity extends into space

➤ Optical Satellite Communication

- Laser Communication System is a method of communication between artificial satellites and the ground using laser light.
- Our group's products are adopted for TESAT 's OPTICAL Communication Terminal
- Highly praised for its high precision and long life in space



Source: Tesat-Spacecom GmbH & Co.KG

➤ Manned and unmanned activities in space

Present

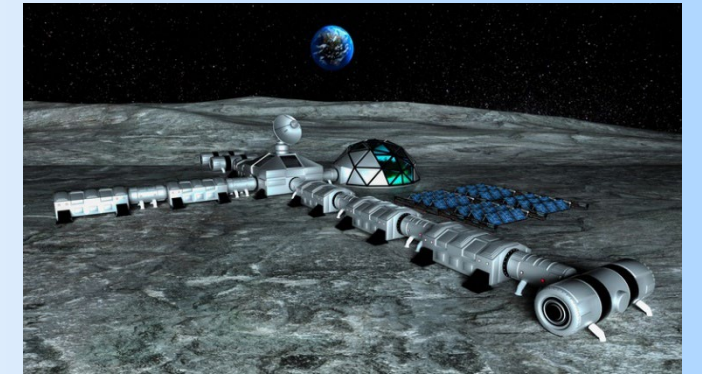


Provided by JAXA (Japan Aerospace Exploration Agency) and Toyota Motor Corporation

Exploration



Construction



An operational domain for AI and humanoid robots

4-5. e-Mobility

➤ eVTOL (Electric Vertical Takeoff and Landing vehicle)

- To support the launch of customers' commercial operations in late 2025 or early 2026, we have begun preparations for the mass production of speed reducers for eVTOLs
- Demonstration flight scheduled for the Osaka-Kansai Expo



➤ Urban compact EVs

- Lean Mobility
- Realize safe and exhilarating driving through state-of-the-art sensing and control technologies
- Our products are integrated into active lean technology, which optimally controls vehicle tilting during a drive
- Accelerating toward market launch in late 2025 to early 2026



Source : Lean Mobility Inc.

5. Initiatives for 2025

5-1. Initiatives for 2025

① Sustainable growth of all businesses with an emphasis on profitability

- Develop new drivers for growth
 - Deepen our focus on AI and humanoid robot applications and strengthen ties with major local robot manufacturers in China
 - Market launch of actuators that anticipate future needs
 - Pursue new manufacturing methods to reduce costs
- Achieve QCDS that goes beyond customer expectations
 - Expand and deepen the company-wide cost innovation project (target: ¥1 billion)
 - Propose highly competitive products to customers from their perspective

② Strengthen management resources

- Factory IoT adoption
 - Improve operational process efficiency through DX promotion
- Growth investment with a focus on capital efficiency
 - Expand collaboration through strategic partnerships
 - Optimal equipment selection and utilization of idle equipment, considering investment cost reduction, space minimization, and productivity

③ Initiatives to enhance corporate value that will continue into the future

- Activities based on our Basic Sustainability Policy
 - Strengthen the information disclosure system
 - Strengthen sustainable procurement
 - Implement human rights due diligence
 - Enhance stakeholder engagement



Harmonic Drive Systems Inc.

Sustainability Topics for 2024~2025

April: Hold the 38th Harmonic Concert (Azumino City)

May: Sponsored the Robotics Summit 2024 (Boston)

May: Hold the 22nd Harmonic Lecture (Matsumoto City)

May: At the 47th Aerospace Mechanisms Symposium
Announcement of joint research with JAXA

June: Sponsored Shinshu Azumino Half Marathon as Gold Partner

Feb: Selected as an A List company in CDP Water Security 2024 by CDP

