



## **Harmonic Drive Systems Inc.**

Financial Results Briefing for the Fiscal Year Ended March 2022

May 20, 2022

## Event Summary

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[Company Name]	Harmonic Drive Systems Inc.	
[Company ID]	6324-QCODE	
[Event Language]	JPN	
[Event Type]	Earnings Announcement	
[Event Name]	Financial Results Briefing for the Fiscal Year Ended March 2022	
[Fiscal Period]	FY2021 Annual	
[Date]	May 20, 2022	
[Number of Pages]	38	
[Time]	10:00 – 11:14 (Total: 74 minutes, Presentation: 38 minutes, Q&A: 36 minutes)	
[Venue]	Dial-in	
[Venue Size]		
[Participants]		
[Number of Speakers]	3	
	Akira Nagai	President and Chief Executive Officer (CEO)
	Akira Maruyama	Director, General Manager of Corporate Planning and ICT promotion
	Kazutoshi Kamijoh	Director, Chief Financial Officer (CFO)
[Analyst Names]*	Yuichiro Isayama	Goldman Sachs Japan Co., Ltd.
	Mitsuyuki Oodaira	Tokai Tokyo Research Center Co., Ltd.
	Hirokazu Miyagi	Mizuho Securities Co., Ltd.
	Toshiharu Morota	Okasan Securities Co., Ltd.

\*Analysts that SCRIPTS Asia was able to identify from the audio who spoke during Q&A.

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## Presentation

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**Moderator:** Ladies and gentlemen, we will now begin the financial results briefing for the fiscal year ended March 31, 2022, of Harmonic Drive Systems Inc.

Before the meeting begins, I would like to ask you to do one thing. To prevent feedback, please turn off or move your cell phone or other communication devices away from the phone. If there is severe feedback during the conference, the conference may be interrupted and we may have to contact the relevant participant, with the organizer's approval.

I would like to introduce today's speakers. Mr. Akira Nagai, President and Chief Executive Officer (CEO).

**Nagai:** I am Nagai. Thanks.

**Moderator:** Mr. Akira Maruyama, Director, General Manager of Corporate Planning and ICT promotion.

**Maruyama:** Maruyama. Thank you.

**Moderator:** Mr. Kazutoshi Kamijoh, Director, Chief Financial Officer (CFO).

**Kamijoh:** This is Kamijoh. Thank you.

**Moderator:** Today, Director Kamijoh will give an overview of the financial results for the fiscal year under review and forecast for the current fiscal year, and President Nagai will explain the future outlook.

Now, I'll hand over to Director Kamijoh.

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## Consolidated results for FY 2022/3 (versus original forecasts)

(millions of yen)

	Forecast (announced Nov 12, 2021)		FY2022/3 (actual)		Vs. original forecasts	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	56,500	100.0	57,087	100.0	587	1.0
Operating income	8,200	14.5	8,739	15.3	539	6.6
Ordinary income	8,200	14.5	9,108	16.0	908	11.1
Net income	5,500	9.7	6,643	11.6	1,143	20.8
EPS (yen)	57.14	—	69.02	—	11.88	20.8

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



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**Kamijoh:** I appreciate your taking the time out of your busy schedule to join our financial results briefing today. Now, I would like to explain the summary of the financial results for the fiscal year ended March 31, 2022 and the full-year forecast for the fiscal year ending March 2023, in accordance with the material uploaded on our website today.

Here are the financial results for the fiscal year ended March, 2022. Now, please look at page two.

Consolidated results for the fiscal year ended March 31, 2022, compared to the forecast announced on November 12, 2021, are as you see. Both sales and income exceeded the forecasted amounts.

Sales of automotive speed reducers were lower than expected due to customers' production cutbacks, but this was offset by increases in sales for industrial robots and semiconductor manufacturing equipment.

Income increased due to higher revenues and lower-than-conservatively-expected SG&A and other expenses.

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## Consolidated results for FY 2022/3 (year-on-year change)

(millions of yen)	FY2021/3		FY2022/3		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	37,034	100.0	57,087	100.0	20,053	54.1
Operating income	865	2.3	8,739	15.3	7,873	909.3
Ordinary income	1,366	3.7	9,108	16.0	7,741	566.4
Net income	662	1.8	6,643	11.6	5,981	902.9
EPS (yen)	6.88	—	69.02	—	62.14	902.9
Capital investment	1,959	—	5,690	—	3,730	190.4
Depreciation costs	7,389	—	8,254	—	865	11.7
R&D costs	2,444	—	3,012	—	568	23.3

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.



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Please refer to page three. Here are the consolidated results compared to those for the previous year.

Results for the fiscal year under review showed a significant increase in both sales and income compared to the previous fiscal year. Net sales for the period were supported by a high level of orders received, which continued from the beginning of the period, and increased sequentially from the beginning to the end of the period, as we worked to raise production capacity.

Looking at sales by region, sales in Asia, including Japan, the US, and Europe, increased from the previous fiscal year.

In terms of income, the increase in sales offset higher personnel costs due to an increase in the number of employees to raise production capacity, higher depreciation, and expenses, as the Ariake Plant in Nagano Prefecture began full-scale operations, and higher R&D expenses.

Capital investment increased from the previous year, mainly due to capital investment in the Ariake Plant for automotive parts in anticipation of future demand growth.

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## Performance of main group companies in FY 2022/3

(millions of yen)		Equity stake	Net sales		Net income	
			Amountc	Year-on-year change (%)	Amountc	Year-on-year change (%)
	Harmonic Drive Systems Inc.	—	41,120	69.5	8,358	224.7
*2	HD Systems, Inc. (Harmonic Drive L.L.C.) (U.S.A)	100% (100%)	6,660	29.3	762	136.0
	Harmonic AD, Inc.	100%	2,765	62.0	365	2,463.8
*3	Harmonic Drive Systems (Shanghai) Co., Ltd.	100%	4,039	69.3	265	80.5
*4	Harmonic Drive SE (Germany)	100%	13,293	35.4	1,532	216.3

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

\*2 Exchange rates: FY 20/12 1USD = 106.82 yen, FY 21/12 1USD = 109.80 yen

\*3 Exchange rates: FY 20/12 1CNY = 15.48 yen, FY 21/12 1CNY = 17.03 yen

\*4 Exchange rates: FY 20/12 1EUR = 121.81 yen, FY 21/12 1EUR = 129.89 yen



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Please see page four. Here are the results of our major group companies.

First, our US subsidiary, the second line from the top, reported an increase in both sales and operating income on higher demand for semiconductor manufacturing equipment and surgical assist robots, as the temporary economic stagnation caused by the spread of the new coronavirus infection gradually dissipated.

Harmonic AD, Inc., which manufactures precision planetary gear speed reducers, reported an increase in sales due to an increase in sales of gearheads for motor manufacturers and sales for industrial robots. Profitability, which was at a break-even level in the previous fiscal year, also recovered with the increase in sales.

Next, our sales subsidiary in China recorded a significant increase in sales to European robot manufacturers with development and manufacturing bases in China, as well as to local robot manufacturers.

Finally, our German subsidiary reported an increase in sales due to a recovery in demand for speed reducers for industrial robots, including collaborative robots.

In addition, there was an increase in new small-lot projects and a general recovery in market conditions.

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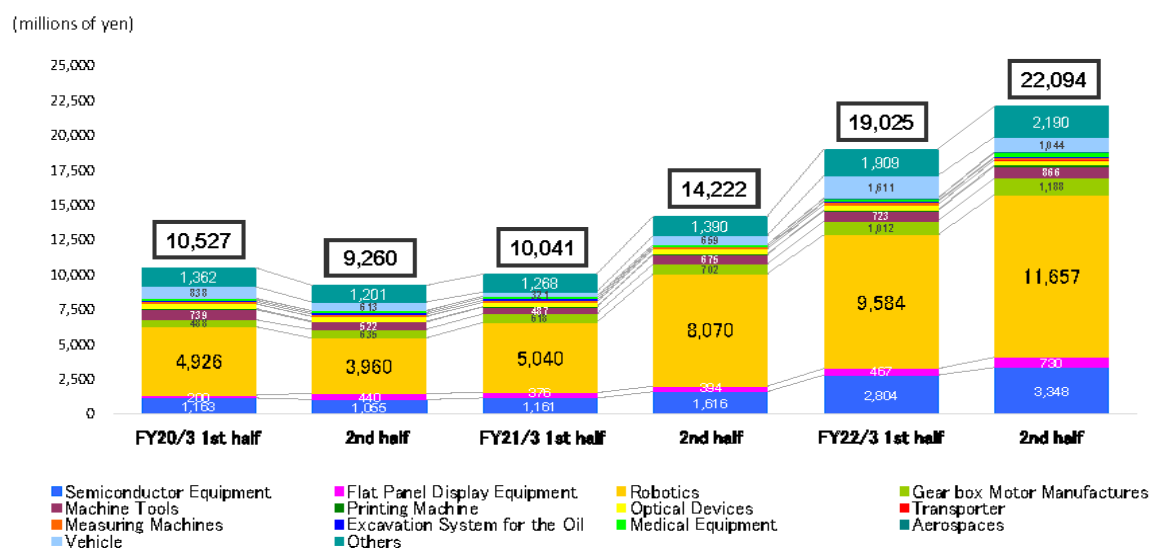


## Non-consolidated results for FY 2022/3(year-on-year change)

(millions of yen)	FY2021/3		FY2022/3		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	24,264	100.0	41,120	100.0	16,855	69.5
Operating income	2,573	10.6	8,358	20.3	5,784	224.7
Ordinary income	2,764	11.4	8,702	21.2	5,938	214.8
Net income	1,868	7.7	6,545	15.9	4,677	250.4
EPS (yen)	19.41	—	68.00	—	48.59	250.4
Capital investment	545	—	4,589	—	4,043	741.3
Depreciation costs	2,872	—	3,502	—	630	22.0
R&D costs	1,807	—	2,251	—	443	24.5

Please refer to page five. As you can see, both sales and income increased on a non-consolidated basis. The factors behind the increase/decrease in sales and income will be explained later in this report.

## Non-consolidated bookings by application (half-yearly)



Next, please see page six. This is the non-consolidated orders received by application on a half-year basis.

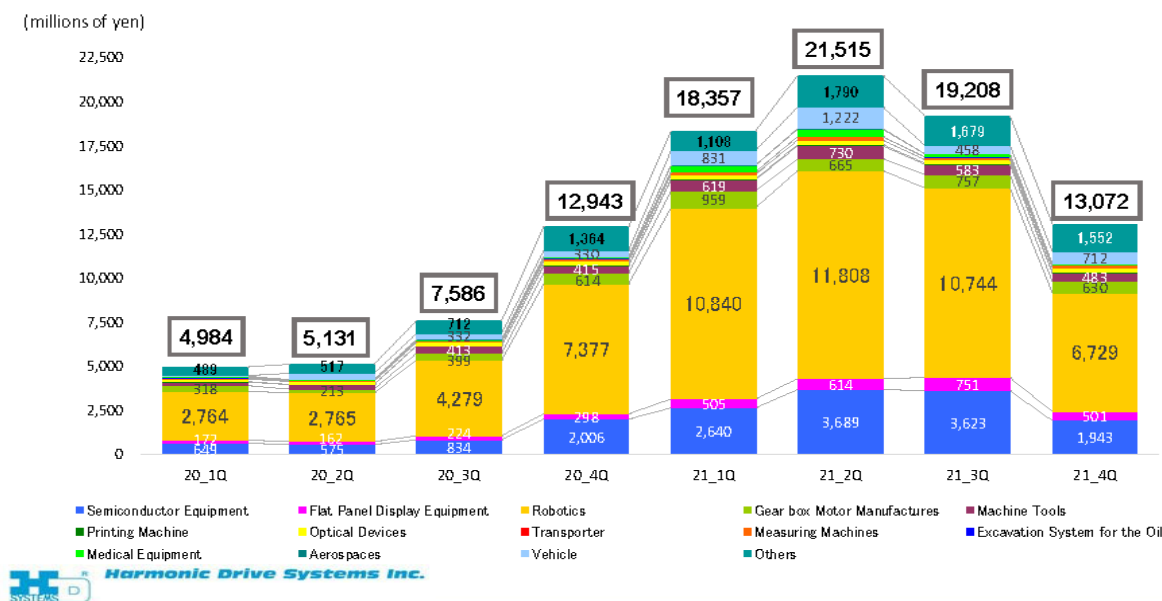
As you can see, the fiscal year under review saw a steady increase in sales from the previous year, and coupled with the increase in production capacity, sales increased for all applications.

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## Non-consolidated bookings by application (quarterly)



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Next, please see page seven. This is the quarterly non-consolidated orders received by application.

As you can see, from the beginning of the fiscal year to the third quarter, orders received were at a record high level, roughly tripling compared to the same period last year. This was mainly due to an increase in orders for all applications, led by those for industrial robots and semiconductor manufacturing equipment.

With regard to industrial robots, demand for speed reducers for collaborative robots as well as small vertical SCARA robots from robot manufacturers, who are our customers, increased.

Demand for speed reducers for robots used in the automotive industry, including those related to EV battery production lines, also increased.

In addition to this increase in demand, customers increased their orders in advance of long delivery times in an attempt to ensure procurement of our products, which further boosted the value of orders received.

Although the number of orders received declined in the fourth quarter, customers' current production activities remain at a high level. We believe this is a healthy adjustment, due to the fact that customers' anticipatory orders, which I just explained, have settled down.

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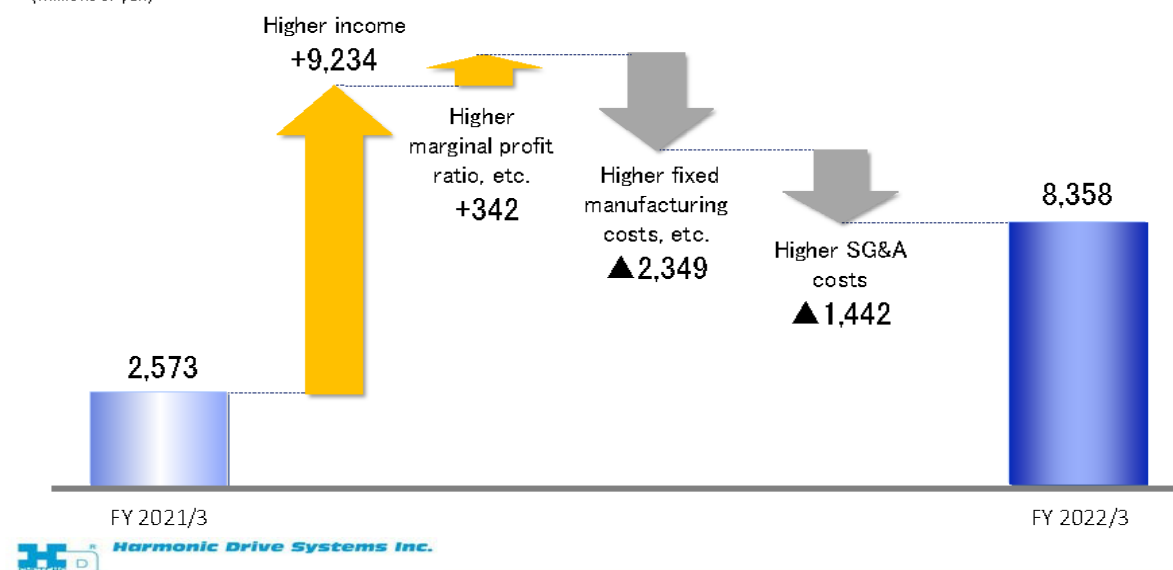
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## Factors in year-on-year change in non-consolidated operating income (FY 2022/3)

(millions of yen)



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Please refer to page eight. Here are the factors behind the increase/decrease in non-consolidated operating income.

The impact of the revenue increase was JPY9.234 billion. Changes in marginal profit margin, inventory changes, and other factors contributed to a JPY342 million.

There were no significant changes in unit prices of products or raw materials, and the main reason for the increase was the effect of changes mainly in inventories of work in process.

Fixed manufacturing costs increased by JPY2.349 billion. This was due to higher personnel costs resulting from increased headcount in the production division, as well as higher general expenses resulting from higher factory operations.

SG&A expenses increased by JPY1.442 billion. This was mainly due to an increase in research and development expenses and higher personnel expenses.

Next, page nine is the consolidated balance sheet. Please check later for details, along with the financial results summary. Page 10 is the same.

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## Status of consolidated cash flows

(millions of yen)	FY 2021/3	FY 2022/3
Cash flow from operating activities	9,555	9,881
Cash flow from investing activities	▲4,180	▲19,490
Cash flow from financing activities	▲3,611	8,123
Effect of exchange rate changes on cash and cash equivalents	▲108	256
Net increase (decrease) in cash and cash equivalents	1,654	▲1,229
Cash and cash equivalents at end of year	19,996	18,767



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Page 11 shows cash flows. Cash outflows from investing activities were high in the fiscal year under review due to making German subsidiary a wholly owned subsidiary.

## Consolidated performance forecast for fiscal year ending March 31, 2023

(millions of yen)	FY2022/3		FY2023/3 forecasts		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	57,087	100.0	75,000	100.0	17,912	31.4
Operating income	8,739	15.3	13,000	17.3	4,260	48.7
Ordinary income	9,108	16.0	13,000	17.3	3,891	42.7
Net income	6,643	11.6	9,000	12.0	2,356	35.5
EPS (yen)	69.02	—	93.49	—	24.48	35.5
Capital investment	5,690	—	14,500	—	8,809	154.8
Depreciation costs	8,254	—	9,500	—	1,245	15.1
R&D costs	3,012	—	3,800	—	787	26.1

※ Assumed exchange rate for FY23/3 forecasts 1USD = ¥123.00 1EUR = ¥133.00 1CNY = ¥19.00

※ 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.



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I would now like to explain our earnings forecast for the current fiscal year ending March 2023. Please refer to page 13. Here is a comparison of the full-year forecast with the previous year's results.

As you can see, we are projecting an increase in both sales and income compared to the fiscal year ended March 2022. Net sales are expected to increase 31.4% from the previous year to JPY75 billion.

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In the current fiscal year, we already have an abundant order backlog of JPY50.3 billion at the beginning of the fiscal year, and we will book sales from this backlog while building up further sales through new orders. We plan to increase sales in all major markets of Japan, China, and Europe.

Operating income is expected to be JPY13 billion. Although we are aiming to return to the 20% level at an early stage, we currently forecast an operating income margin of 17.3% for the current fiscal year, due in part to an increase in fixed costs resulting from upfront investments and higher component prices.

As for capital investment, depreciation and amortization expenses are expected to increase by JPY1.245 billion due to investment in increased production at the Ariake Plant in Nagano Prefecture. In addition, we expect a corresponding increase in personnel and an increase in R&D expenses.

## Forecasts of main group companies for fiscal year ending March 31, 2023

(millions of yen)

	Equity stake	Net sales		Operating income	
		Amount	Year-on-year change (%)	Amount	Year-on-year change (%)
Harmonic Drive Systems Inc.	—	55,000	33.8	11,000	31.8
*2 HD Systems, Inc. (Harmonic Drive L.L.C.) (U.S.A.)	100% (100%)	10,000	50.1	1,200	57.4
Harmonic AD, Inc.	100%	3,000	8.5	400	9.4
*3 Harmonic Drive Systems (Shanghai) Co., Ltd.	100%	5,000	23.8	200	▲24.7
*4 Harmonic Drive SE (Germany)	100%	15,000	12.8	2,500	63.2

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

\*2 Exchange rates: Jan. – Dec., 2021 1USD = 109.80 yen, Jan. – Dec., 2022 forecast 1USD = 123.00 yen

\*3 Exchange rates: Jan. – Dec., 2021 1CNY = 17.03 yen, Jan. – Dec., 2022 forecast 1CNY = 19.00 yen

\*4 Exchange rates: Jan. – Dec., 2021 1EUR = 129.89 yen, Jan. – Dec., 2022 forecast 1EUR = 133.00 yen



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Next, please see page 14. Here are the full-year earnings forecasts for the major Group companies.

For the US subsidiary, sales are expected to increase by 50.1%.

By application, demand for semiconductor manufacturing equipment is expected to remain strong, while demand for medical and service robot applications is also expected to remain strong. In terms of expenses, we expect an increase in income, although there will be a commensurate increase in fixed costs and an increase in depreciation expenses for the new plant.

Next, for Harmonic AD, Inc., demand for precision planetary gear speed reducers is also expected to remain strong, and sales are expected to increase from the previous fiscal year. In line with the increase in sales, we expect an increase in income.

Our Chinese subsidiary is currently affected by the lockdown in Shanghai, but we expect that our customer robot manufacturers will gradually recover their production, and therefore, we anticipate a YoY increase in sales for the full year. Operating income is expected to decrease slightly due to the impact of product mix and higher marketing costs.

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As for our German subsidiary, we expect an increase in sales due to steady demand from robot manufacturers, machine tool manufacturers, and other customers. Although there are expected to be some cost increases, such as higher electricity costs, we expect the increase in revenue to compensate for these increases, and expect an increase in income.

## Non-Consolidated performance forecast for fiscal year ending March 31, 2023

(millions of yen)	FY2022/3		FY2023/3 forecasts		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	41,120	100.0	55,000	100.0	13,879	33.8
Operating income	8,358	20.3	11,000	20.0	2,641	31.6
Ordinary income	8,702	21.2	11,200	20.4	2,497	28.7
Net income	6,545	15.9	7,500	13.6	954	14.6
EPS (yen)	68.00	—	77.91	—	9.91	14.6
Capital investment	4,589	—	11,500	—	6,910	150.6
Depreciation costs	3,502	—	4,500	—	997	28.2
R&D costs	2,251	—	2,500	—	248	11.1

※ Assumed exchange rate for FY23/3 forecasts 1USD = ¥123.00 1EUR = ¥133.00 1CNY = ¥19.00  
 ※ Depreciation costs include depreciation cost of tangible assets and amortization cost of intangible assets and goodwill.



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The next page, 15, shows the non-consolidated earnings forecast.

The order backlog on a non-consolidated basis is approximately JPY39 billion, most of which is expected to contribute to sales in the fiscal year ending March 31, 2023.

The Nagano plant is currently operating at full capacity, and we expect a 33.8% increase in sales by raising production capacity through capital investments scheduled to be made in the summer.

Since many of our customers, both robot manufacturers and semiconductor production equipment manufacturers, expect their production plans to remain high and increase in the future, we will promote appropriate shipments in conjunction with our customers' production plans.

Increase in depreciation expenses will amount to approximately JPY1 billion.

R&D expenses are expected to increase by JPY250 million.

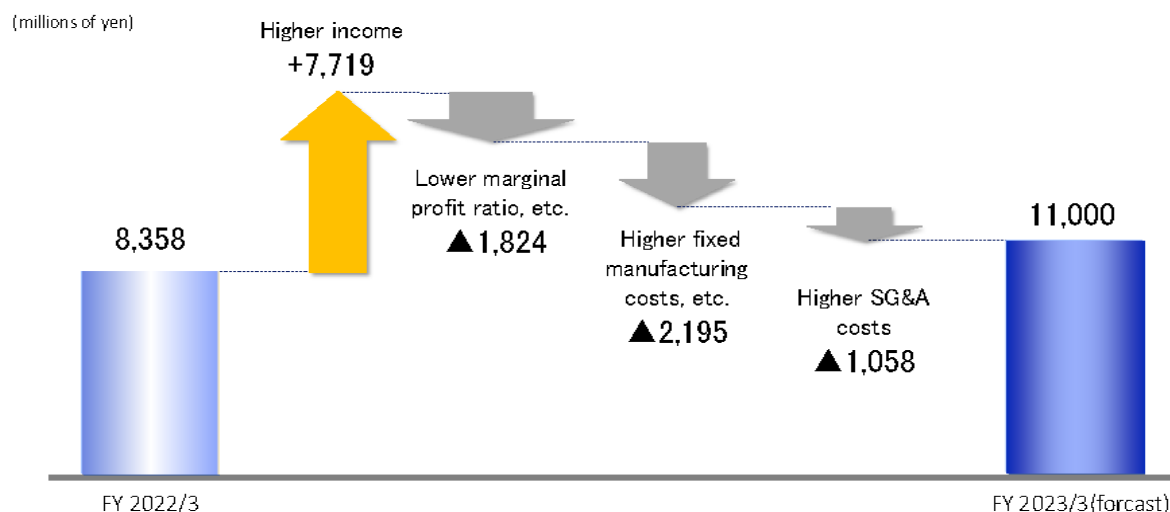
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## Factors in year-on-year change in non-consolidated operating income (fiscal year ending March 31, 2023 forecast)



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Finally, please refer to page 16. This is an analysis of the factors that may cause a YoY increase or decrease in non-consolidated full-year operating income.

The effect of the increase in sales is expected to be JPY7.719 billion. The marginal profit margin and other factors are expected to have a negative impact of JPY1.824 billion.

Approximately JPY1 billion of this amount reflects the higher procurement costs of semiconductors and other electronic components that are incorporated into mechatronics products.

In addition, we have factored in a cost increase of approximately JPY300 million, due to a decrease in inventories, since we expect to proceed with the consumption of inventories for in-vehicle applications, which were strategically built up in the previous fiscal year. No significant change in selling prices is expected.

Fixed manufacturing costs are expected to increase by JPY2.195 billion. This was mainly due to an increase in personnel expenses resulting from an increase in the number of manufacturing personnel and performance-linked bonuses, as well as an increase in depreciation expenses associated with the installation of additional automated lines.

SG&A expenses are also expected to increase by JPY1.058 billion due to higher personnel costs and increased R&D expenses.

This is the end of my explanation. Thank you very much for your kind attention.

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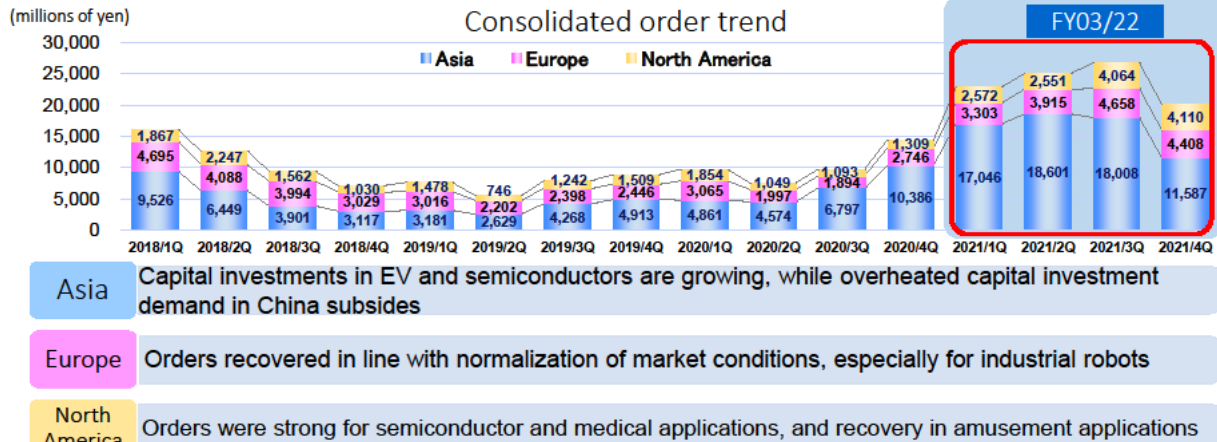
## 1-1. Demand for HDSI's products

### Outlook

- Robust investments in automation and enhancements
- Customers' production and scale continue to expand

### Concerns

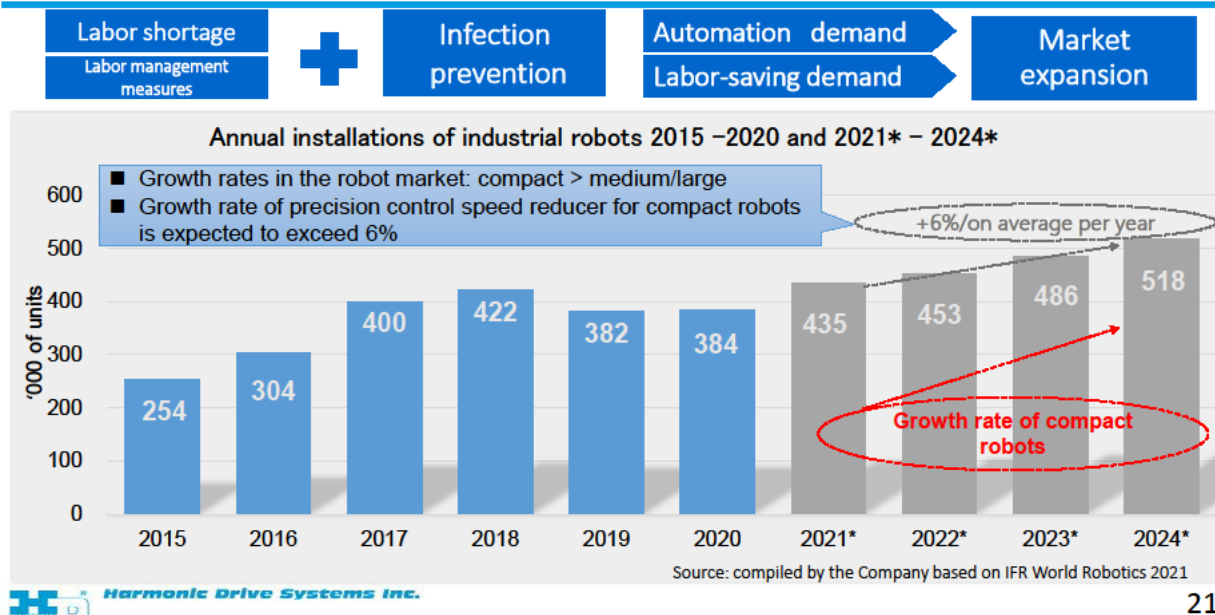
- Shortages in components, rapid increase in raw material prices
- Delays and slowdown in capital investments



**Nagai:** I would like to explain our future prospects. Please skip pages 17 and 18 to page 19.

In terms of the environment surrounding our company, we believe that demand for automation and capital investment will remain strong, but there are concerns about delays and stagnation in capital investment, due to soaring raw material prices and the effects of the lockdown in China.

## 2-1. Factory automation robot market forecast



Next, please refer to page 21. This is the market trend related to FA robots, which we have indicated in the past. We believe that the demand for robots will continue to grow at least 6% per year, and the growth rate of small robots will be larger.

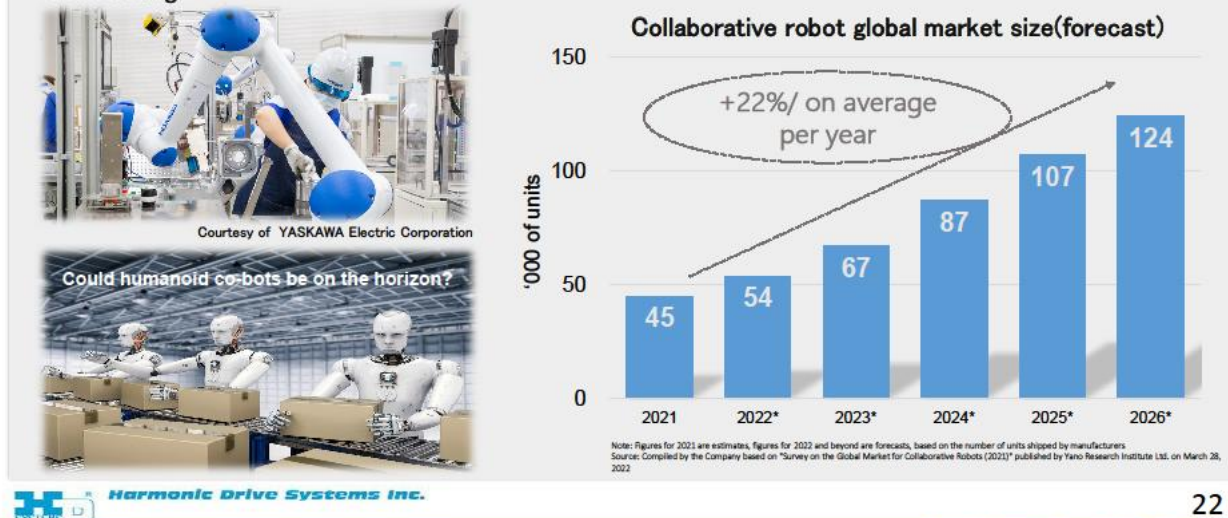
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## 2-2. Collaborative robot market forecast

- Demand is accelerating for co-bots as a solution for non-contact demand and labor management
- Growth in applications as key robot manufacturers make a full-scale entry into the field ➡ Market expansion is accelerating



Next, please refer to page 22.

The growth rate of collaborative robots, which we have been talking about for some time, is much faster than that of general industrial robots, and we expect it to grow at an annual rate of 22%, or at least at the 20% level.

Furthermore, when it comes to collaborative robots, HarmonicDrive®, which are characterized by their compact and lightweight, are used for almost all of the six axes.

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## 2-3. Semiconductor manufacturing equipment and Vehicle

### Semiconductor manufacturing equipment

- Global shortage of semiconductors driven by the surge in data demand
- ➡ Large-scale investment by major semiconductor companies to continue beyond 2023
- ➡ Governments to support the semiconductor industries of their respective countries
- Foundries set to accelerate investment in cutting edge technologies
- Domestic semiconductor production will accelerate in China.
- ➡ Production capacity expansion will lead to higher sales of semiconductor manufacturing equipment.



### Vehicle: Used in variable compression ratio (VCR) engines

- Achieved improvements in ease of installation, fuel economy, and quietness at high speeds
- This will become the center of Nissan's next-generation engines
- Also used for e-POWER in exclusive power generator engines
- Production down due to semiconductor shortage
- ➡ No change in total demand



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Next, please refer to page 23. Semiconductor manufacturing equipment and automotive.

As for semiconductor manufacturing equipment, as reported in newspapers and other media, it is said that large-scale capital investment will continue worldwide for at least two more years, including this year.

Inquiries from semiconductor production equipment manufacturers are as strong as ever.

As for the vehicle-mounted products, there was a change in Nissan's plan, which was one of the reasons for the sales adjustment in the fiscal year under review. This is also due to the shortage of semiconductors, which has caused a drop in production not only at Nissan, but also at automobile manufacturers in general.

There is no change in total demand.

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## 3-1. Medical care and health care

### Surgical robots

- Diverse manufacturers in Japan, the US, and Europe use our products
- Providing total motion control with highly integrated Harmonic Drive®, planetary gear speed reducers, and mechatronics products
- Treatment fields expanding + More companies joining the field

Full-scale adoption



### Examples of healthcare applications



Medical equipment • Specimen analysis/test equipment/PCR test applications



Assisted suits

- Moving into a phase of practical adoption with expanded insurance coverage and subsidies



Electric wheelchairs

- Autonomous driving enhances convenience



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Next, please refer to page 25.

As we look to the future, new applications, some of which are already in operation, are increasing in the medical and healthcare fields.

Other applications include assistive suits and electric wheelchairs, in which our products are not simply used for driving parts, but rather for autonomous driving, which requires precision in the steering part.

There are venture companies that are considering our products.

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## 3-2. Amusement

### Animatronics

- Harmonic Drive® helps to realistically replicate the movements of people, animals, and fictional creatures
- Major amusement companies are restarting investments with a view toward society "With COVID" and "Post-COVID"
- Animatronics products for attractions and shows are actively developed and invested



Source: Harmonic Drive SE website

Please refer to page 26. This is the animatronics we have been introducing for some time.

These are robotized versions of characters seen in theme parks, etc. These are not just dolls that move, but also require very detailed internal movements to reproduce a form that is as close to reality as possible, reproducing a human or a creature as close to reality as possible. A significant number of HarmonicDrive® and actuators are used there as well.

The theme parks were temporarily closed due to the spread of the new coronavirus, but they have reopened and the projects are now underway again.

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## 3-3. Aviation and Space

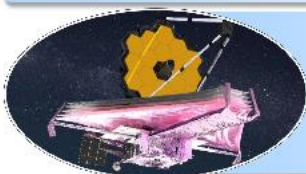
### eVTOL (flying car)

- Electrification of aircraft ➡ CO2 emission reduction, quieter operations
- Our compact and lightweight products are suited to these needs
- Top players in eVTOL have entered the commercialization stage
- What about large aircraft?



### Space industries

- Commercial opportunities expand as private companies enter the space field
- Harmonic Drive®, which has a proven track record in space applications, will expand its areas of business
- HDSI's activities were introduced on BS TV Tokyo's "Japan Takes on the Challenge! New Space Business" (December 2021)



### James Webb Space Telescope

- Successor to the Hubble Space Telescope (scheduled for launch this December)
- One NIRCам (infrared camera) unit and two antenna units use Harmonic Drive®

Credit: NASA GSFC/CIL/Adriana Manrique Gutierrez



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Please see page 27. Aerospace and aviation.

While NASA has been involved in this field for some time, the electrification of aircraft, which are known as flying cabs and flying cars, has been gaining momentum, and the number of small vertical takeoff and landing aircraft is expected to increase dramatically.

Space has been only a testing site for the Company as well; however, space has become much more familiar to us through the removal of space debris and space travel by private companies, and we recognize that commercial opportunities are emerging.

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### 3-4. Barrier-free

#### Step/gap eliminators between train platforms and cars

(West Japan Railway Company / Komatsu Seisakusho Co., LTD. (Matsumoto City))

- Several HDSI planetary gear reducers are being used in each unit
- Adopted in prototypes based on recognition of outstanding safety, performance, and unique suitability in outdoor applications
- Enables wheelchair users to board and disembark trains without assistance
- ➡ Contributes to a barrier-free society

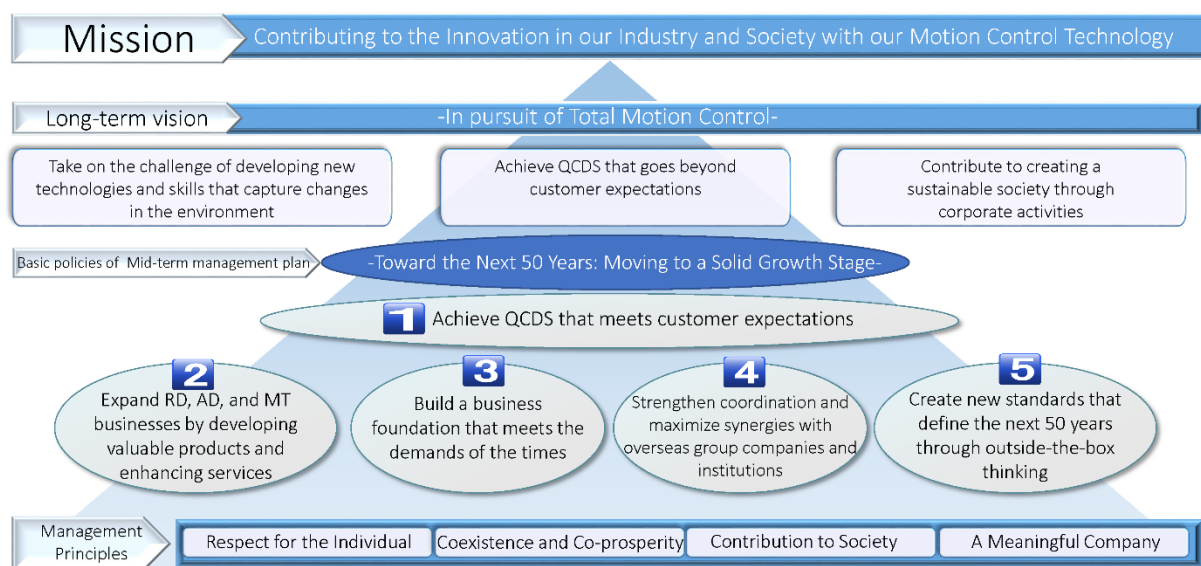


Source: Komatsu Seisakusho Co., LTD.

Next, please refer to page 28.

Under the barrier-free category, we are currently discussing the use of our HarmonicPlanetary® in a device to eliminate the gap between the station platform and the train.

#### 4-1. Mission, Long-term vision and Basic policies of Mid-term management plan



Please refer to page 29. I will report on our ongoing mid-term management plan. Please refer to page 30. We consider our medium-term management plan to be fixed and do not revise it every year. Accordingly, there are no changes to the mission, vision, or mid-term management plan figures.

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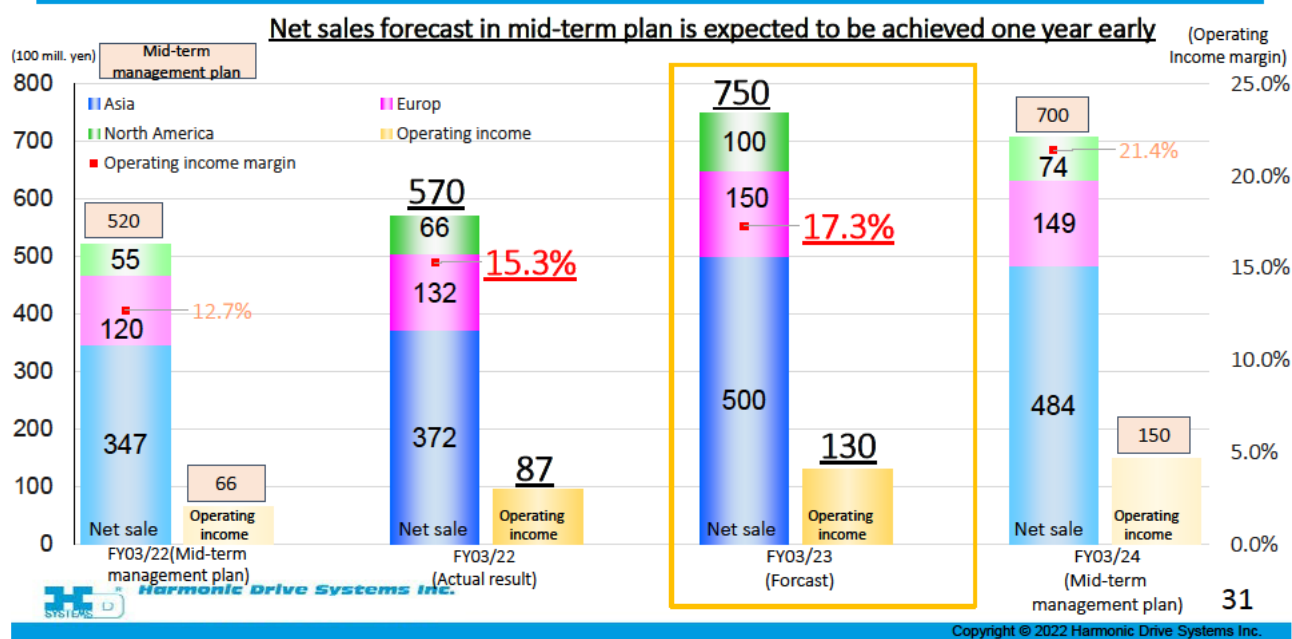
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The management principles at the bottom -- respect for the individual, coexistence and co-prosperity, contribution to society, and a company with a reason for being -- are not themes we newly have set forth. Our philosophy has remained unchanged since our founding.

#### 4-2. Consolidated sales and Operating income of Mid-term management plan (FY03/22 - FY03/24)



Please refer to page 31. These are consolidated sales and operating income.

First, the leftmost bar graph shows the planned values for the first year.

The second dark-colored bar graph shows actual results. As you can see, we exceeded the plan, albeit slightly, with a result of JPY57.3 billion.

For the interim year, FY2022, we originally did not give a forecast, but as Kamijoh explained earlier, we plan to post sales of JPY75 billion.

We have already announced JPY70 billion for the final year of the medium-term plan, and fortunately, we expect to achieve the goal this fiscal year without waiting for the final year of the plan.

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## 4-3. Increasing Production Capacity ①The Ariake Plant

Basic Policies

### 1 Achieve QCDS that meets customer expectations

- Established a production system with capacity of total 200,000 units/month at the Hotaka Plant and the Ariake Plant, as laid out in the previous mid-term plan (2018–2020)
- Construction of a highly automated production line
- Delivery and installation from March to August 2022
- Digitize various data and promote introduction of IoT
- Delivery and installation scheduled from March to August 2022



Increased production capacity

Additional 70,000 units  
(Industrial: 40,000 units;  
Automotive: 30,000 units)

Improve **stable supply capacity**

Increased productivity

Improve automation  
and save labor

Increase **cost performance**



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Next, please refer to page 32.

One of the important factors that will enable us to achieve our current plan is to increase our production capacity, which has been an issue for us.

We are now steadily investing in facilities to achieve a production capacity of 130,000 units of HarmonicDrive® for general industry alone.

We have also engaged consultants and are steadily preparing for the Ariake Plant to further improve productivity compared to the existing Hotaka Plant; or to be more specific, to automate the production process.

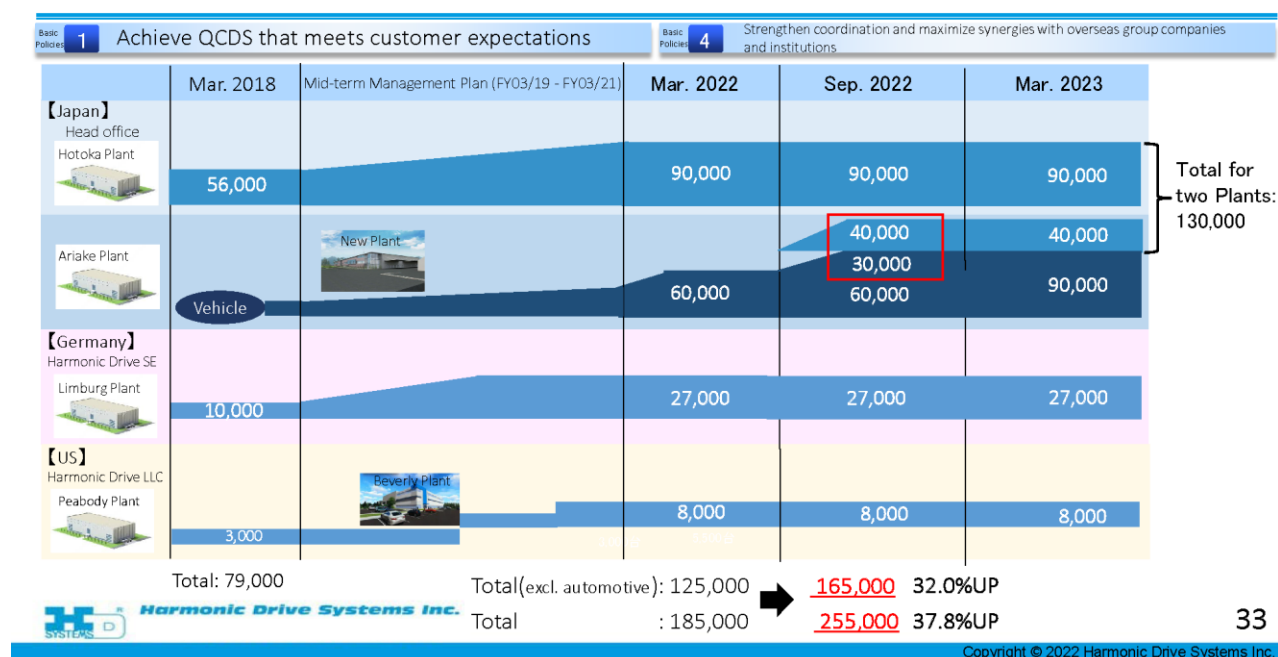
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### 4-3. Increasing Production Capacity ②Production capacity of Group companies



Please refer to page 33. This is a summary of what I have just said.

In particular, the two blue rows above are the numbers for the Hotoka and Ariake plants.

The two plants are expected to achieve a monthly production volume of 130,000 units, excluding those for automotive applications, as indicated on the far right-hand side.

In addition, we are steadily preparing for in-vehicle applications.

As I mentioned earlier, while we have not yet reached full production, we are building a system capable of producing 90,000 units in response to the stagnation of Nissan Motor's vehicle production volume.

The German and US plants are also increasing their production, albeit in small quantities.

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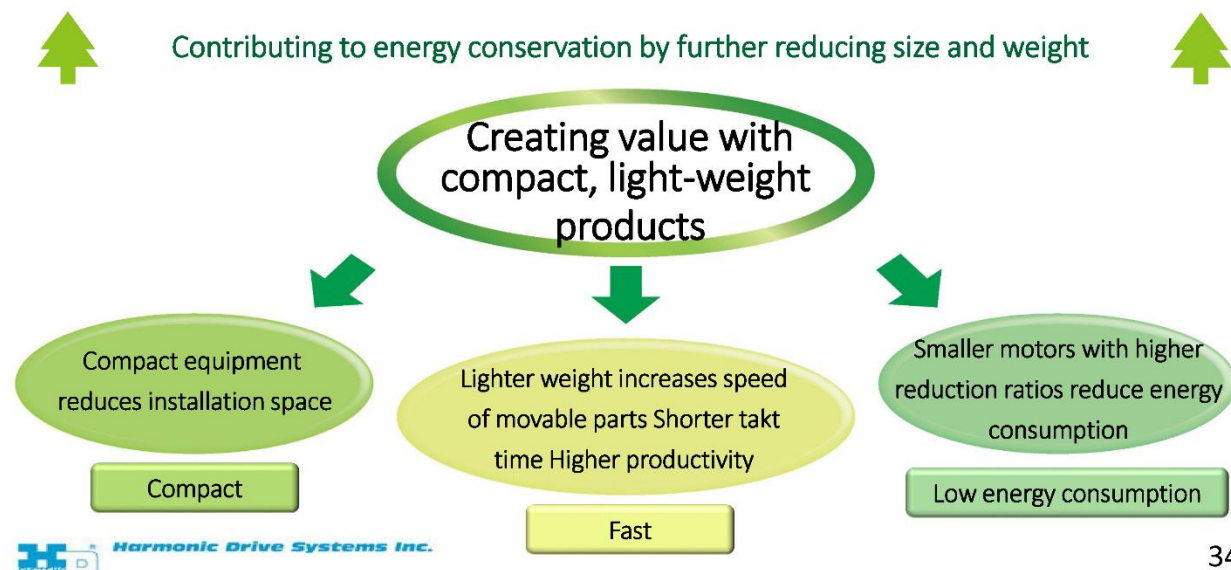
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## 4-4. Contributing to energy conservation

2 Expand RD, AD, and MT businesses by developing valuable products and enhancing services



Please refer to page 34.

As part of the theme of the mid-term plan, which is to provide valuable products, HarmonicDrive® are compact and lightweight, which allows for space-saving and compact design of equipment.

In addition, since our reducers themselves are light in weight, you can design a robot with a certain degree of speed of its movements, for example, which in turn increase the speed of the equipment, and thus improve productivity.

We would like to emphasize here again that compact and lightweight means low power consumption, making it a green product.

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## 4-4. Contributing to energy conservation ①Development of MINI-MICRO products

2 Expand RD, AD, and MT businesses by developing valuable products and enhancing services

Advanced medicine,  
amusement



Palm sized robots



[www.mecademic.com](http://www.mecademic.com)

Courtesy of Mecademic Inc.

Small collaborative robots,  
semiconductor manufacturing  
equipment



Courtesy of Techman Robot Inc.



Industry's smallest  
Φ5mm



CSF micro series  
Starting from Φ10mm



CSF mini series  
Starting from □ 20mm



CSF-2UP series  
Starting from □ 50mm



CSF-U.W series  
Starting from Φ54mm

- Highly-competitive and unmatched products made possible through our Group's unique strengths
- Secure a position as the industry standard in a rapidly growing market



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Please refer to page 35.

As a continuation of the previous point, in order to contribute to energy conservation, we are developing even more compact products, for which we are involved in marketing activities, with a focus on MINI-MICRO.

As we have shown to some analysts and investors on several occasions, it is as small as the tip of a ballpoint pen, as you see the picture of it being pinched with a finger. Next to that, quite a few of the JPY1-coin-size products are already used in the internal mechanism for the animatronics mentioned earlier.

### Support

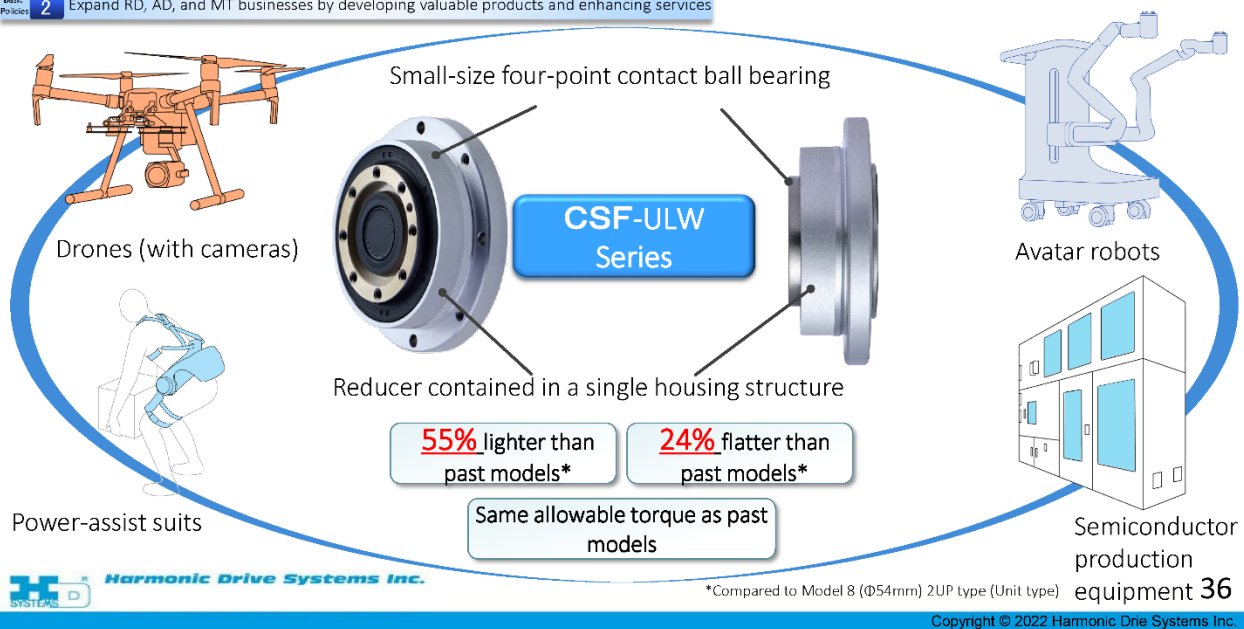
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## 4-4. Contributing to energy conservation ②Pursuit of light weight and flatness

Basic Policies 2 Expand RD, AD, and MT businesses by developing valuable products and enhancing services



Next, please refer to page 36.

In addition to being lightweight, we are also working to make them flat in order to save space. We have been developing the ULW, Ultra-Light Weight, series for the past two years, which is used for drones, surgical robots, which are also a type of avatar robot, semiconductor manufacturing equipment, and assist suits.

For semiconductor manufacturing equipment, there may not be much of a problem in the case of new factories, but in existing factories, semiconductor equipment manufacturers are demanding smaller, thinner, and lighter products. This is because the size of clean rooms is fixed to a certain extent, and in order to increase the density of semiconductor products they manufacture, they need to make even higher density machines within the same space.

For this reason, we are required to make each component smaller, thinner, and lighter. This is why we believe that our products will be increasingly appreciated.

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## 4-4. Contributing to energy conservation ③Introducing MINI-MICRO Micromotion GmbH

Basic Policies 2 Expand RD, AD, and MT businesses by developing valuable products and enhancing services

### ■ Micromotion GmbH

- Sub-subsidiary of HDSI
- Development, manufacture, and sales of ultra-compact gearboxes and actuators using the LIGA process\*

\*A micro-processing technology using chemical treatment (German acronym for lithography, electroplating, and molding)







Typical Applications

Space	Optical instrument
Medicine	Testing equipment
Semiconductor	

### ■ About Products

- Ultra-compact wave gears
- Ultra-compact planetary gear speed reducer
- Outer diameter: 6mm or more
- Reduction ratio: 1/40 to 1/1000
- Zero backlash



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Next, please refer to page 37. The products on a finger in the picture are made by a subsidiary of the German subsidiary, a sub-subsidiary, using the LIGA process. It isn't made by cutting, but made by chemical processing. This is also used in the very minute driving parts of inspection devices for semiconductors.

## 4-5. Next 50 years

Basic Policies 5 Create new standards that define the next 50 years through outside-the-box thinking

R&D	Production	Sales
<p>Joint research with SRI and others (new principles and peripheral technologies)</p>	<p>Acquire technologies from other industries</p>	<p>Seek out partnerships that lead to meaningful collaborations</p>
<p>Joint research with Japanese and overseas venture companies (new materials and technologies)</p>	<p>Implement low-cost operation and horizontal rollout</p>	<p>Work with overseas partners to cultivate Asian markets</p>



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Next, please refer to page 38.

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We believe that we will be able to achieve most of the goals of this medium-term management plan in terms of numbers, and that we will be able to increase the number of applications of MINI-MICRO and our targeted fields in qualitative terms as well.

We will continue our efforts in research and development, production, and sales for the next 50 years.

As I have mentioned in the past, we continue to work with SRI and universities on materials and new principle gears. Production is not limited to conventional cutting, of course, but new production technologies are now being deployed.

In terms of sales, our collaboration with Nabtesco has come to an end, but we believe that there are still partners with whom we can collaborate in various ways. As a manufacturer of only a single part, we are limited in what we can do, so we will build our sales capabilities by forming partnerships or alliances.

In Asia, our sales network and local subsidiaries in China cover the region to a certain extent, but it would be difficult for us to cover the inland areas of China and other parts of Asia, or even the entire Asian region excluding Japan, by our own efforts.

Therefore, we are in the process of exploring ways to collaborate with overseas partners.

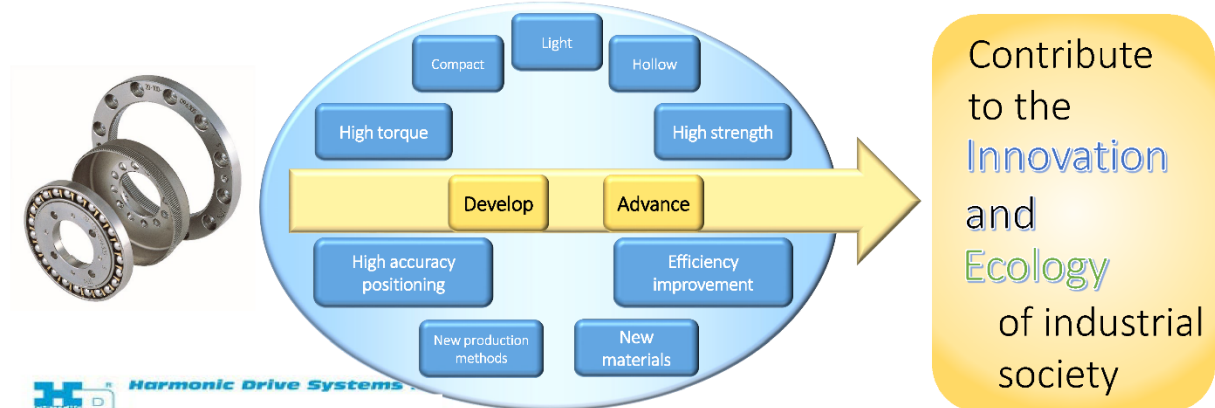
## 4-6. Our sustainability initiatives

We will continue to develop and advance **Strain Wave Gearing**, which is a unique and awesome invention

Basic Policy of Sustainability (approved on March 25, 2022.)

As a technology and skills-based organization in pursuit of Total Motion Control, the HDS Group aims to enhance corporate value and realize a sustainable society by contributing to technological innovation for the betterment of society. We intend to achieve these goals based on our management philosophy comprising four pillars: **Respect for individuals, be a meaningful company, coexistence and co-prosperity, and contribution to society.**

### Our mission



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Please see page 39. This is our sustainability, which we have been introducing since last November.

Just recently, on March 25, we posted our basic sustainability policy on our website.

As written here, our mission is to further deepen and evolve this rare invention of HarmonicDrive®.

We believe that our mission is to advance the compact, lightweight, hollow, and thin products I repeatedly mentioned. We define our ultimate goal as contributing to innovation and ecology in the industrial world.

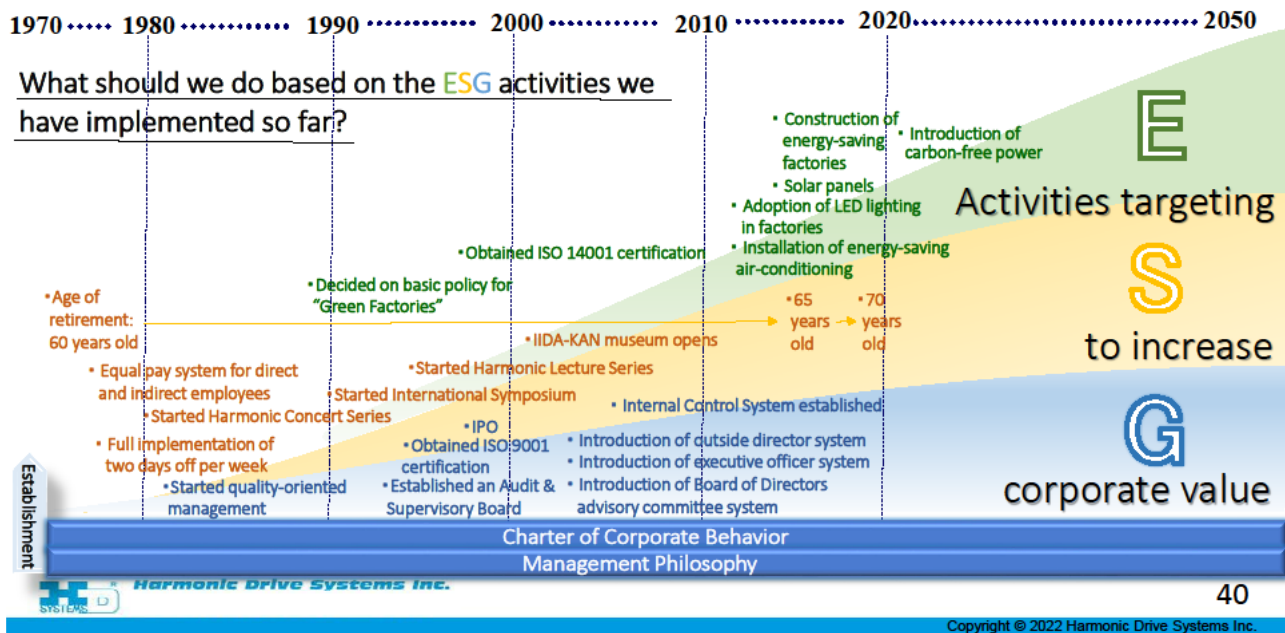
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## 4-7. Our path to sustainability



Please see page 40.

The two blue lines at the bottom show our management philosophy from the time of our establishment and the Charter of Conduct based on it. We are proud to say that we have been doing things to some extent, even before society demanded sustainability these days.

Here is a brief summary, which I hope you will take a look at.

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## 4-8. Activities borne from strong employee awareness

Basic Policies 3 Build a business foundation that meets the demands of the times

**Each division undertakes “grass-roots” activities with an awareness of ESG × SDGs**

### FY2021: Outcomes in ESG × SDGs

#### Gen. Affairs

**Ariake Plant: Complete transition to CO2-free electricity generated by using water from Azumino City (from April 1, 2022)**



#### Sales

**Formed a partnership with DOYA INC., which supports employment and education in Africa. We wore the company's shirts at trade shows.**



#### Accounting

**Capital investments in Ariake Factory certified under METI's tax incentive system for investments in carbon neutrality.**



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Next, please refer to page 41.

Having said that, we are aware that ESG and SDGs must be addressed in earnest as a company these days. However, we do not really believe that something such as SDGs can be imposed by management from above to achieve any results.

We have long had an internal improvement suggestion system, which is based on ISO standards, and we believe that we should move in a similar manner. In conjunction with this improvement proposal, we are thinking of doing [small things] in our daily lives, through SDG proposals from employees.

Specifically, last year we completely switched the electricity used at our plant to Azumino CO2 Free electricity, which is a brand of Chubu Electric Power Co., Inc.

At the INTERNATIONAL ROBOT EXHIBITION 2022 in March, we partnered with a company that creates education and employment in Africa and used their products for amenities and uniforms.

In addition, the Ariake Plant's capital investment was approved as a carbon neutral investment promotion tax incentive by Ministry of Economy, Trade and Industry.

We would like to achieve the SDGs by accumulating such small efforts.

That's all from me.

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## Question & Answer

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**Moderator [M]:** The first question is from Mr. Isayama of Goldman Sachs Japan.

**Isayama [Q]:** My name is Isayama of Goldman Sachs Japan. Thank you very much. I would like to ask you three questions briefly. The first is about trends in orders, and the other two are about the medium-term plan.

First of all, as for trends in orders received, is the result of JPY13 billion in the fourth quarter the level in line with current actual demand? As Mr. Kamijoh explained, for the past three quarters, there were advance orders, so I am wondering if the reaction to those orders will appear this year.

I don't think sales will be a problem at all, but in order to consider how long it will take for orders to come back again, please tell us what the current level of orders is in line with actual demand. Do you think that there will be a phase where the BB ratio will return to about one by the end of the year, since the customer's advance orders will run their course in the second half of the year when your company's capacity is increased?

I would like to ask for your thoughts on order trends. Thank you.

**Maruyama [A]:** Okay, I, Maruyama from Corporate Planning, will answer your question. As there were many advanced orders last year, we also feel that the trend in orders received is very difficult to read.

From a firsthand experience, I have the impression that the amount of JPY13 billion in the fourth quarter on a non-consolidated basis, as you just pointed out, is probably in line with actual demand. This factors in the customer's current state of production, etc.

As for demand trends, we are aware that demand will probably rise again in the second half of the year and beyond, and we are now receiving a large number of advance orders for this purpose. We are investing toward it and will increase our production capacity.

We are also anticipating that the number of orders will be a little lower than the current level for the time being due to the extremely high level of advance orders, and we are planning our business operations based on this expectation.

However, there are different views within the Company on the timing of the BB ratio returning to 1 or higher, etc. It is difficult to say when it will happen at this time, but at least, we are of the opinion that the order received will probably return at a relatively early stage, as demand itself remains strong. That's all from me.

**Isayama [Q]:** Thank you, Mr. Maruyama, for your very clear answer. In the previous cycle, there were some double orders or cancellations. Since you have specified the cancel charges and mentioned that you are being very careful this time, I assume that there has been no negative chain reaction, and that you have an accurate grasp of what is really going on. Is this correct?

**Maruyama [A]:** Yes. Basically, you are right. The President will provide additional information.

**Nagai [A]:** I have recently had the opportunity to speak with a very large robot manufacturer, and it is very bullish. It seems that the sales forces of the robot manufacturer are telling the production side to provide them robots, and the robot production side is having a lot of trouble coping with this.

The last time, our products were the bottleneck, but this time, we were clearly told that the reason of the production delay is not our products, but because of the unavailability or delay of other parts and materials.

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Therefore, we understand that the current slowdown in orders is due to the fact that robot manufacturers do not see much point in rushing to secure our products at this time. I believe that when the time is right, we will see a considerable recovery in orders.

**Isayama [Q]:** Thank you very much, President Nagai.

My second question. Although you did not mention it in your presentation, I think that there have been some positive changes, or rather, actions, with regard to shareholder returns, and that there have been some changes in the management team, such as Mr. Maruyama becoming the new Representative Director and Chairperson Ito stepping down from the position of Representative Director.

Since we are here, I would like to ask you again what you are thinking about in terms of shareholder returns. I believe this is the first buyback in this form, so I would like to get your message again. Also, since Chairman Ito has stepped down from the position of representative director, I would like to hear about any changes in new Harmonic Drive Systems. Thank you.

**Kamijoh [A]:** I would like to respond to the first question regarding shareholder return. Our basic policy for returning profits to shareholders is to maintain a payout ratio of 30%, and we have not made any changes to this policy.

Our self-perception is that we are a growing company, and we are still in the stage where we can raise our corporate value by reinvesting the funds we have received, so our basic policy is to give priority to such upfront investments.

However, in light of the unfortunate decline in the share price, we have decided that the current share price is undervalued. We will continue to implement a flexible capital policy when such an opportunity arises.

**Nagai [A]:** As for Chairperson Ito stepping down as Representative Director, even before the spread of the new coronavirus, I and others had been talking about the generational change, and it just so happened at the moment because we couldn't do some things due to the spread of the new coronavirus.

**Isayama [Q]:** Understood. Thank you very much. Finally, I would like to discuss the competitive environment. Mr. Kamijoh reiterated that there is no problem at all regarding the selling price, and I think you are right that there will not be much change in the actual market share in the robot industry.

However, Nidec and Leaderdrive in China are entering in the market. The technology, which President Nagai mentions on page 36, is very interesting, but how many technological hurdles are there for them, and can we assume that the gap is still wide? Since you are talking about spending money again, I feel that it is time for your company to make [Inaudible] solid, and I feel that you should be concerned about it.

I would appreciate any in-depth comments on other companies in this current and prospective competitive environment. This is the last question. Thank you.

**Nagai [A]:** As for the performance of competing manufacturers' products, as I have told you in the past, it is perfectly possible with today's science and technology to imitate our current form exactly. Therefore, I believe that the appearance of our company can be imitated. However, the current state of our products is filled with past failures, which I believe are not reflected in the competition.

Harmonic speed reducers will work no matter who builds them. However, it is a fact that depending on how they are used, they will break in no time, or they will work for some period of time even if they are not made by us.

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Because of this, I believe that the answer to this question will come in a few more years, maybe within five years, and that the answer will be that the HarmonicDrive® made at the Hotaka Plant is different from that of competitors. For the time being, we are not entirely uninfluenced since they are offering a very absurd price, but the real answer will be given two to three years later.

**Isayama [M]:** Very clear. Thank you very much.

**Moderator [M]:** The next question is from Mr. Oodaira from Tokai Tokyo Research Center.

**Oodaira [Q]:** This is Oodaira from Tokai Tokyo Research Center. Thank you for your support. I have two questions. I think both points are on page 19. The first is regarding the semiconductors and EVs. Can you comment on whether the forecast from customers has changed or not compared to the six months ago?

**Nagai [A]:** As you know, it is not easy to receive forecasts from semiconductor manufacturers. Semiconductor production equipment manufacturers give us a certain amount of expectation, but they suddenly ask us to bring products or cancel the order. As with the robotics, there is a situation where even semiconductor equipment manufacturers are having trouble obtaining motors and semiconductors for their equipment. However, so far there have not been any problems such as delivery delays caused by our parts.

In addition, since EVs are automobiles, the production plans of major industrial robot manufacturers that are manufacturing for automobile manufacturers include figures for EVs, so I believe that our production is sufficiently under control.

**Oodaira [Q]:** Is it difficult to obtain forecasts of robot manufactures as a whole?

**Nagai [A]:** As an effect of 2017, as a blessing in disguise, everyone thinks it is a good idea to share information with HarmonicDrive®. We now have robot manufacturers' production plan figures for the next three months, which we use as a reference for material procurement.

**Oodaira [Q]:** Perhaps there is no choice for the current situation because of the developments in China and the shortage of materials by your customers, but in the long run, does the production plan remain the same?

**Nagai [A]:** It has not changed.

**Oodaira [Q]:** OK. I understand. Secondly, President Nagai, when you were explaining on page 19, you made a comment about delays in capital investment by customers as a risk. Are there currently any delays?

**Nagai [A]:** I think there are some delays due to the lockdown in China. As you know, more than 35% of global robot sales are in China, but logistics are in arrears. In addition, there are European robot manufacturers with production bases in China whose employees are unable to come to work. Naturally, the manufacturers who use the robots also cannot introduce robots, because their employees cannot come to work. Due to such quite short-term factors.

However, at the time we prepared this document, we were not sure that the Shanghai lockdown would be lifted by next month, and as long as China adopts a zero-tolerance COVID-19 policy, even if the Shanghai lockdown is lifted, we do not know where it will occur, such as Shenzhen or Shenyang. So, we should keep this in mind as a risk factor.

**Oodaira [Q]:** Can I understand that the lockdown causes postponements of investments, but doesn't lead to cancellations?

**Nagai [A]:** No, it does not.

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**Oodaira [M]:** I understand. That's all from me. Thank you.

**Moderator [M]:** The next question is from Mr. Morota from Okasan Securities.

**Morota [Q]:** I am Morota from Okasan Securities. I would like to ask three brief questions.

The first question, which slightly overlaps the question of the first person, is regarding the cycle. I believe you answered that the current level of non-consolidated orders of JPY13 billion is roughly based on actual demand. If this is the case, I think the peak ratio fell to about 15% in the last cycle. This time the peak ratio is about 60% now. I would like to know whether you think the bottom is at the JPY13 billion level, or at least at a point where it does not fall below JPY10 billion?

**Maruyama [A]:** As I mentioned earlier, we do not have any negative factors in the demand environment. It is difficult to make a definitive statement, but we are hoping that the demand stays around 50% of the peak level.

**Morota [Q]:** Is it difficult to make some kind of estimation from inquiries?

**Maruyama [A]:** Our investment has also helped to dispel some of our customers' concerns about the procurement lead time. It is very difficult for us to control our customers' production plans. Also, since we are continuing to receive a steady stream of orders and inquiries, I would like to ask for your understanding that it is possible that the number of orders received, rather than demand, could slightly fluctuate.

**Morota [Q]:** An addition to this question. Last time the orders received declined and I think it bottomed out around the fourth quarter. They have already declined for two quarters this time. If it is the same as last time, I think that they will decline for about two more quarters. Is that not the case this time or could it be shorter than that?

**Maruyama [A]:** As for the possibility, it is difficult to mention. It is natural that this may be a possibility, and it is difficult to give you a definitive answer. I appreciate your understanding.

**Morota [Q]:** I understand. It's fine. I would like to ask my second question. When President Nagai explained the collaborative robots on page 22, he mentioned that your products will be used almost exclusively for all six axes. Do you mean that your company is a pioneer or anything like that, or that there is some kind of technical barrier for other companies that is unique to collaborative robots?

In connection with this, Nidec-Shimpo seems to be saying that the difference between your company and it is that it mainly focusing on collaborative robots, and that it has torque sensors in its speed reducers. It would be helpful if you could also explain whether these things are technically difficult to do in the first place.

**Nagai [A]:** To begin with, a collaborative robot is a robot that can be used without a fence. Yesterday and the day before yesterday, I saw a similar white collaborative robot at a major robot manufacturer's new product exhibition, although not the one shown in this photo. The joints of the robot must have a function to stop gently if the robot bumps something, and therefore, robot makers are putting torque sensors in the joints and making various other efforts.

Also, the work to be done will be light work. Naturally, heavy speed reducers would be a bottleneck, so as I mentioned earlier, our lightweight products are used almost exclusively on the six axes. Nidec-Shimpo also targets this area and have introduced one with torque sensor.

However, we have been studying this field for many years, and we are currently in discussions with a robot manufacturer about the use of a torque sensor. It depends on what kind of movement the customer's

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engineers have in mind. In some cases, products without torque sensor are all right, if customers prepare something on their own.

Therefore, it is not correct that just because a new product is announced, it will be universally used in the joints of any robot manufacturer. The speed reducer to be used and the functions associated with the speed reducer are determined by the robot designer's needs. I think it is safe to say that the announcement of the new product will not cause any sudden erosion of our market share.

**Morota [Q]:** I understand. In terms of the technical aspects of collaborative robots, your company has been able to reduce the weight and has grasped the detailed needs of robot makers. You are leading a bit in that area. Is that correct?

**Nagai [A]:** Naturally, since Shimpo is a latecomer in the field of wave speed reducers, engineers at robot manufacturers are designing their robots based on our speed reducers. However, if it approaches with the price, material departments of robot manufacturers will naturally ask why they do not use the product, so I believe they thinking about the product.

As I mentioned earlier, there are some products that can be used well enough for certain purposes, but a true comparison of A and B gears will not be answered until about five years have passed. We have past results that the life of our reducers is longer than the life of robots, so I don't think we will lose market share so easily.

**Morota [Q]:** I heard that Shimpo's prices are very competitive, at about 70% of yours. Or is it offering even lower prices?

**Nagai [A]:** I hear it is 40% or 30% lower.

**Morota [Q]:** I understand. What is the life-span of your speed reducers?

**Nagai [A]:** It turns almost forever. Theoretical.

**Morota [Q]:** So, you don't know if Shimpo's product will bite the dust in five years or not until about five years later?

**Nagai [A]:** I think so.

**Morota [Q]:** Thirdly, you will almost achieve the mid-term plan this year, but could you tell us whether you are thinking of revising this mid-term plan in the near future?

**Maruyama [A]:** As the president mentioned at the beginning of the meeting, our medium-term plan is fixed for three years and will not be revised. Indeed, as was the case in the previous mid-term, the third-year target will already be exceeded in the second year. However, we will not change the medium-term management plan itself, so that we can compare the plan we created three years ago with our current results and look back to see what has changed. That's all from me.

**Morota [Q]:** Excuse me, Mr. Maruyama. I think you said that the bottom would be around 50% of the peak, but conversely, how will be the next peak compared to the JPY21.5 billion this time?

**Maruyama [A]:** The peak ratio is just my personal wishful thinking, not an official comment. As for the next peak, advance orders received with long delivery times have considerably increased the peak orders. We would like to produce products on an order basis in line with our investment. We will definitely increase our orders in line with demand.

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**Morota [M]:** I understand. Thank you very much.

**Moderator:** It is almost time for the scheduled closing time, so the next person's question will be the last one. The next question is from Mr. Miyagi of Mizuho Securities.

**Miyagi [Q]:** I am Miyagi of Mizuho Securities. Thank you very much. Sorry, time is running out. I have two questions.

The first point is a comparison with the mid-term plan. While the sales plan will be exceeded one year ahead of schedule, the operating income target for this fiscal year is JPY13 billion compared to the mid-term plan target of JPY15 billion. I would like to ask you the reason of the gap between net sales and operating income.

**Kamijoh [A]:** The major point is the capital investment in the Ariake Plant that was scheduled for this summer. Originally, the medium-term plan assumed that capital investment would be made in the first year of the next medium-term plan, so it was assumed that fixed costs, including amortization expenses, would rise from the next medium-term plan. This was a major factor. In addition, the cost of materials for parts and components, which was not included in the mid-term plan, increased.

**Miyagi [Q]:** I understand. Thank you very much. Secondly, on the slide for the next 50 years, it says that you are looking for partners and deepening the market with overseas partners only in the area of sales. Could you tell us which business category specifically do you image?

For example, are there other FA equipment manufacturers or Sler who may not be in direct competition? What kind of partner is the most likely possibility? Are you seeking a new capital alliance partner that will replace Nabtesco? Please tell us a little more about your partner strategy, as far as you can tell us.

**Nagai [A]:** As you pointed out, there is no point in forming an alliance with a company from a completely different field, so we have an image of other companies from different business category but in the same industry, such as those that mainly serve customers in the factory automation industry and robot manufacturers, as we do.

We are not suddenly looking for a new partner because Nabtesco made dissolution of cooperative relationship with us. When we talk with other manufactures at an exhibition or other opportunities, we often find that they have more information than us, or conversely, they don't have information that we have. So, we will start by exchanging business information, and if there is a real need, we will consider capital tie-ups.

Nabtesco was also under pressure from investors, and they felt that it would not be very healthy to hold only shares without any synergies, so if there is cooperation in terms of actual operations, of course, a capital tie-up is possible.

**Miyagi [Q]:** I understand. Again, of course there are companies with knowledge in the FA industry, but is my understanding correct that you image a manufacturer, not a Sler or a trading company?

**Nagai [A]:** Yes. From trading companies, information is always available in many ways.

**Miyagi [M]:** I understand. Thank you very much. That's all from me.

**Moderator [M]:** Now we will conclude the question-and-answer session. Thank you very much for watching until the end.

This concludes the conference call for the financial results for the fiscal year ended March 31, 2023 of Harmonic Drive Systems. Thank you very much for taking time to join us today.

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