

Harmonic Drive Systems Inc.

**Presentation on Business Results
for the 1st-Half of Fiscal Year
Ending March 31, 2014**

November 21, 2013



Performance Summary

1st-half consolidated results (versus original forecasts for the period)

(millions of yen)

	Original forecasts (announced May 14)		1st-half FY ending Mar.31,2014		Vs. original forecasts for the period	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate(%)
Net sales	10,000	100.0	10,411	100.0	411	4.1
Operating income	2,040	20.4	2,404	23.1	364	17.9
Ordinary income	2,170	21.7	2,557	24.6	387	17.8
Net income	1,280	12.8	1,629	15.6	349	27.3

1st-half consolidated results (year-on-year change)

(millions of yen)

	1st-half FY ended Mar.31,2013		1st-half FY ending Mar.31,2014		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	9,847	100.0	10,411	100.0	564	5.7
Gross profit	4,188	42.5	4,602	44.2	414	9.9
Operating income	2,216	22.5	2,404	23.1	188	8.5
Ordinary income	2,208	22.4	2,557	24.6	348	15.8
Net income	1,202	12.2	1,629	15.6	426	35.5
EPS (yen)	39.39		53.36		13.97	35.5
Capital investment	393		418		25	6.4
Depreciation costs	506		537		32	6.2
R&D costs	547		595		48	8.8

Capital investment amounts are the amounts of tangible and intangible fixed assets acquired in the term.

Performance of main group companies for 1st-half of fiscal year ending March 31, 2014

(millions of yen)

	Equity stake	Net sales		Net income	
		Amount	Change(%)	Amount	Change(%)
Harmonic Drive Systems Inc.	—	9,089	4.7	1,379	18.7
*1 *4 HD Systems Inc. (Harmonic Drive L.L.C.) (U.S.A.)	100% (51%)	1,616	8.2	*3 87	36.7
Harmonic AD, Inc.	100%	909	4.5	27	▲28.7
*2 *4 Harmonic Drive AG (Germany)	35%	3,934	25.3	714	103.8

Percent change(%) indicates increase or decrease from same period of previous fiscal year.

*1 Exchange rates: Jan. – Jun., 2012 1US\$ = 79.74 yen, Jan. – Jun., 2013 1US\$ = 95.59 yen

*2 Exchange rates: Jan. – Jun., 2012 1€ = 103.45 yen, Jan. – Jun., 2013 1€ = 125.50 yen

*3 Net income of US subsidiaries (consolidated) is after excluding minority interests.

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

1st-half non-consolidated results

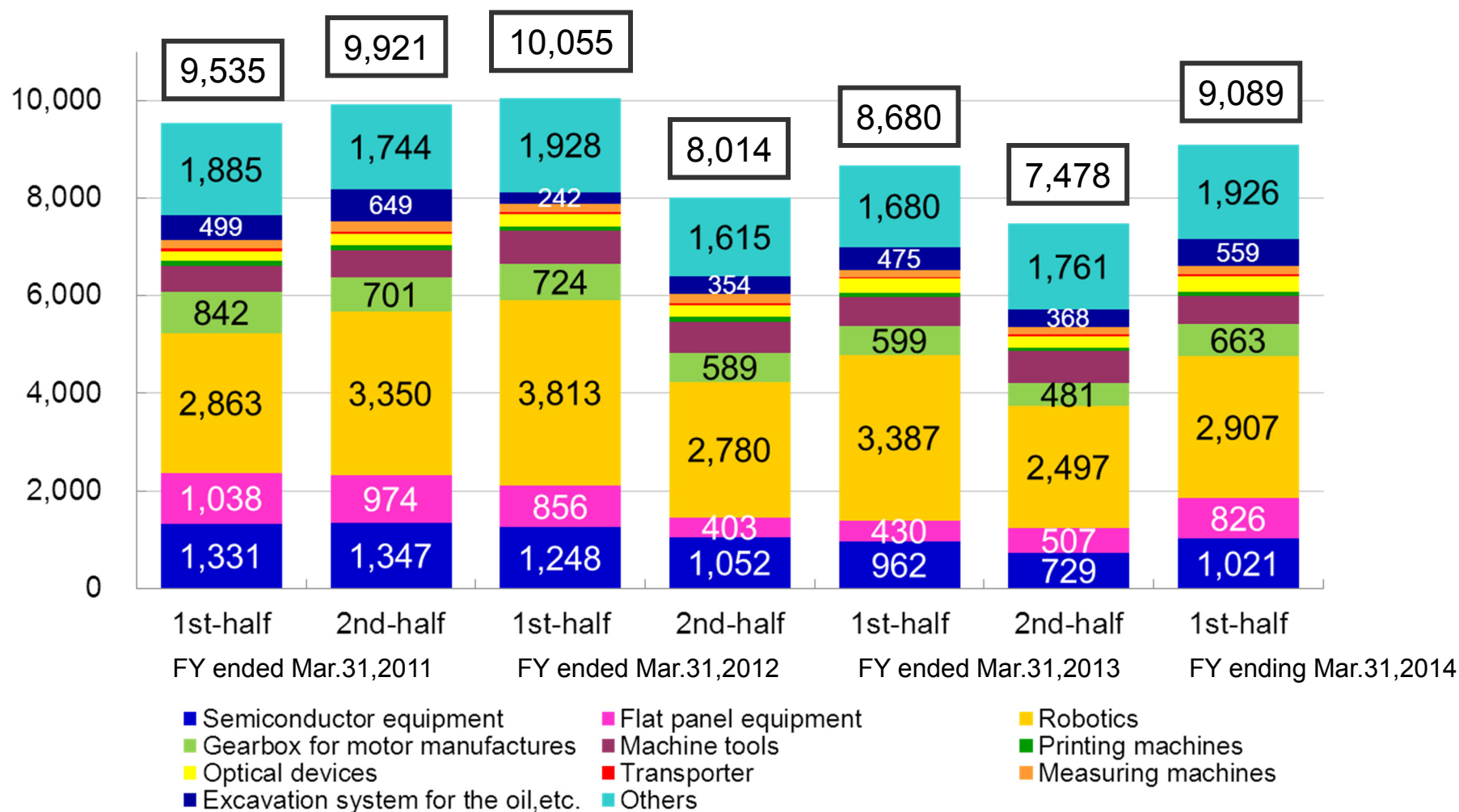
(millions of yen)

	1st-half FY ended Mar.31,2013		1st-half FY ending Mar.31,2014		Year-on-year change	
	Amount	Percent(%)	Amount	Percent(%)	Change	Rate(%)
Net sales	8,680	100.0	9,089	100.0	409	4.7
Gross profit	3,519	40.6	3,733	41.1	213	6.1
Operating income	1,816	20.9	1,969	21.7	152	8.4
Ordinary income	1,991	22.9	2,118	23.3	127	6.4
Net income	1,161	13.4	1,379	15.2	217	18.7
EPS (yen)	38.06		45.17		7.11	18.7
Capital investment	286		235		▲51	▲17.7
Depreciation costs	322		325		3	1.1
R&D costs	592		581		▲11	▲1.8

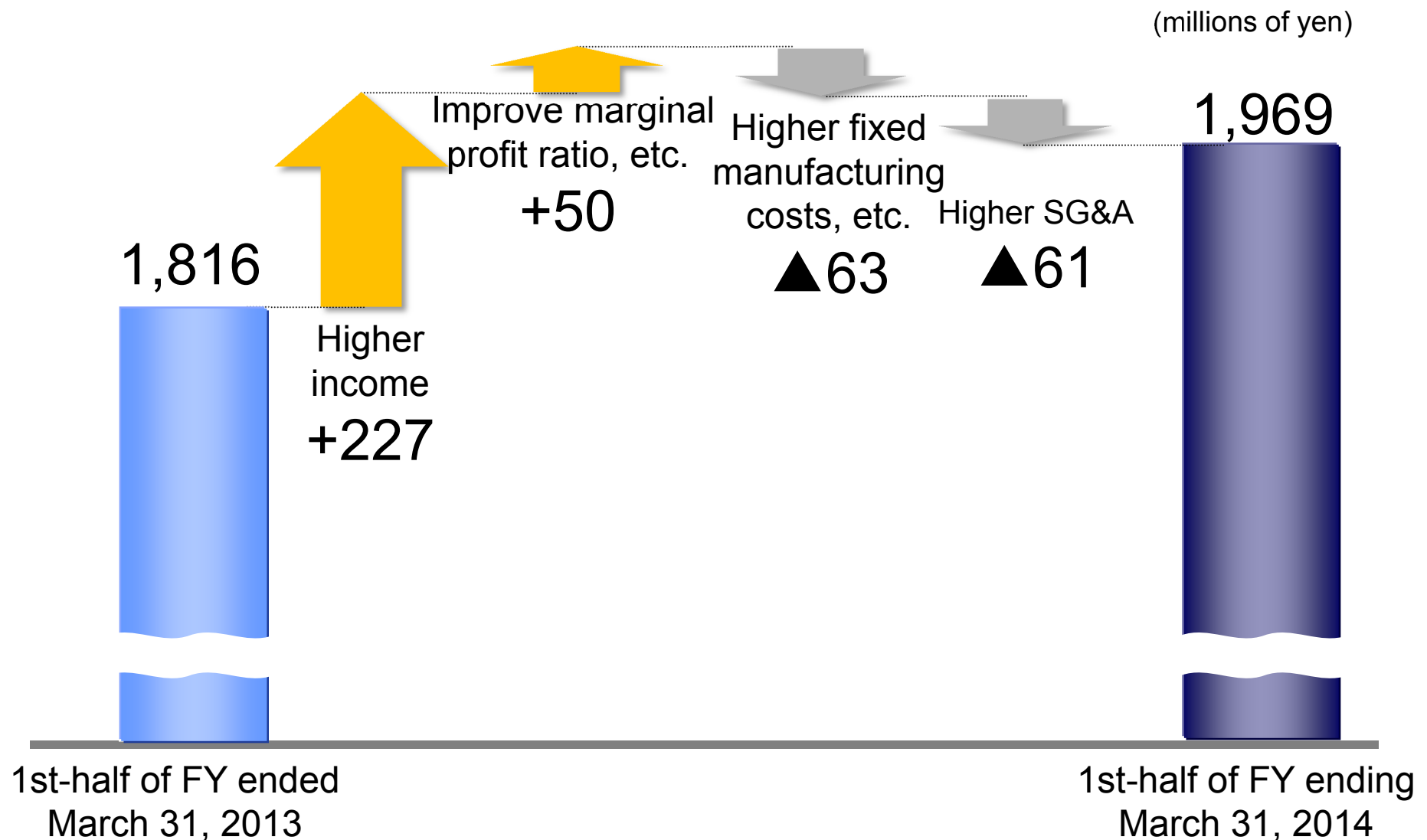
Capital investment amounts are the amounts of tangible and intangible fixed assets acquired in the term.

Net sales by application (non-consolidated)

(millions of yen)

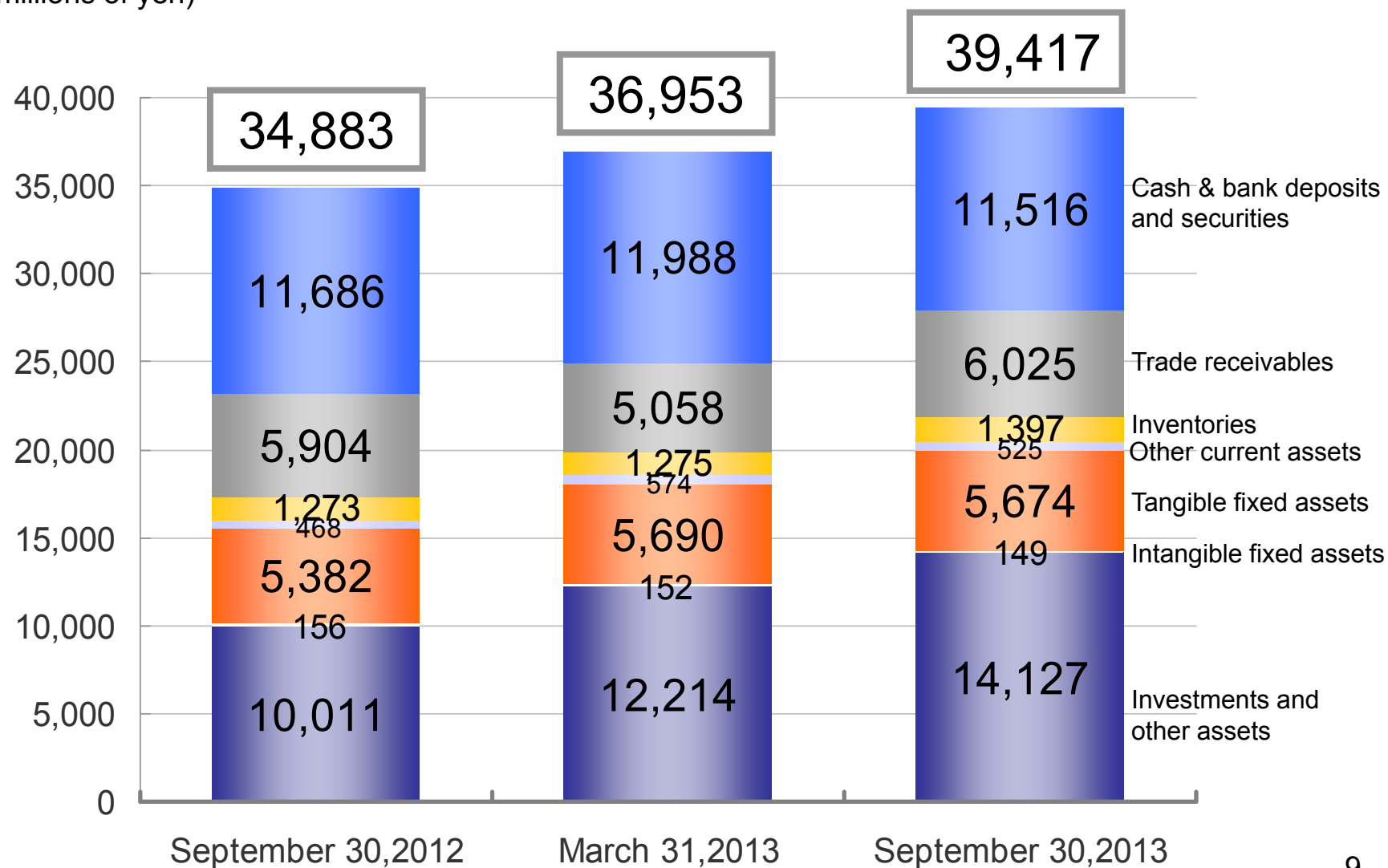


Factors in year-on-year change in 1st-half non-consolidated operating income



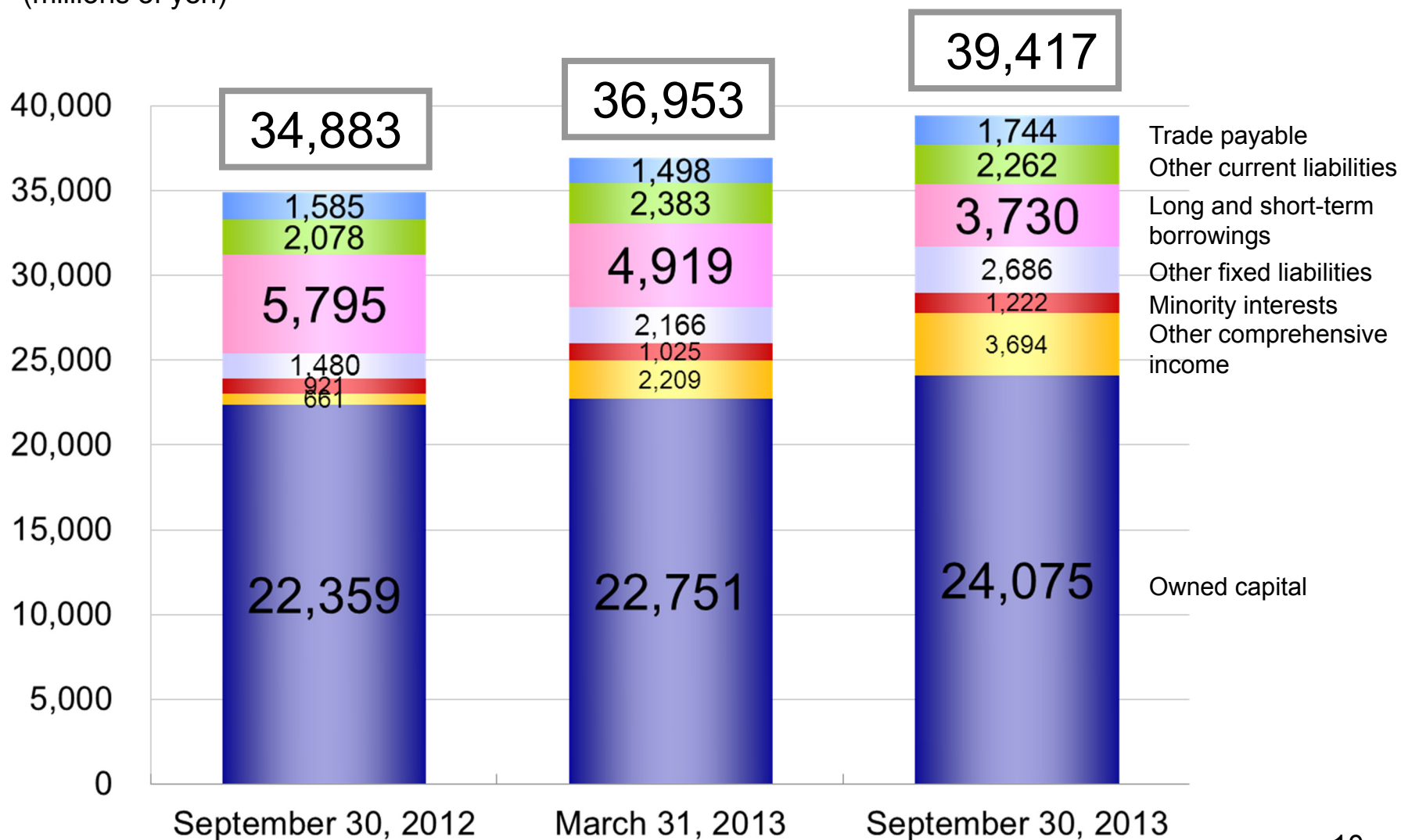
Status of consolidated assets

(millions of yen)



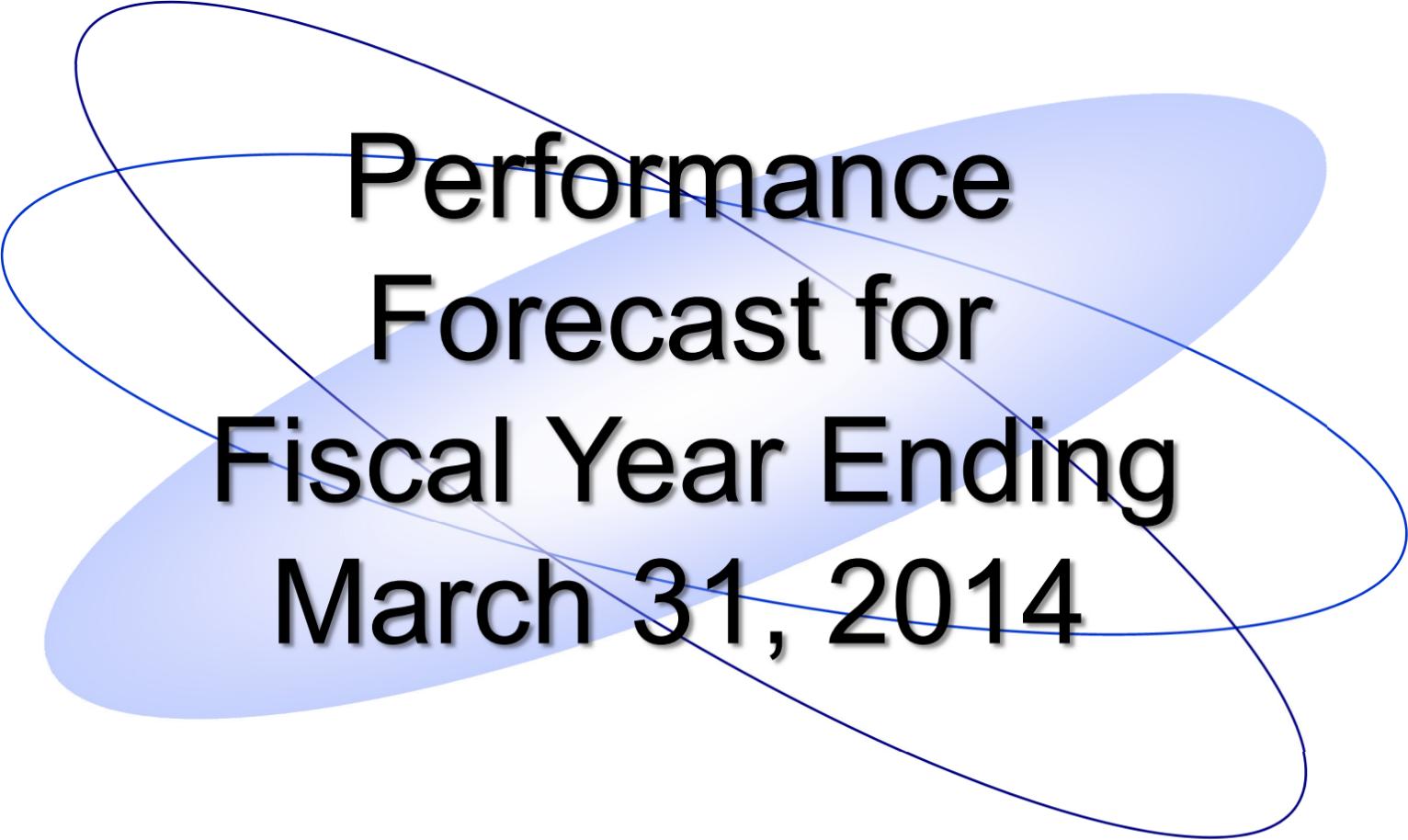
Status of consolidated liabilities and net assets

(millions of yen)



Status of consolidated cash flows

(millions of yen)	1st-half of FY ended Mar.31,2013	1st-half of FY ending Mar.31,2014
Cash flow from operating activities	2,493	1,544
Cash flow from investing activities	2,885	▲449
Cash flow from financing activities	▲1,224	▲1,536
Effect of exchange rate changes on cash and cash equivalents	18	143
Net increase (decrease) in cash and cash equivalents	4,173	▲298
Cash and cash equivalents at end of year	8,353	9,415



**Performance
Forecast for
Fiscal Year Ending
March 31, 2014**

Revised consolidated results forecast for fiscal year ending March 31, 2014

(millions of yen)

	Original forecasts (announced May 14)		Revised forecasts (announced Nov. 12)		Vs. original forecasts	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	21,000	100.0	21,400	100.0	400	1.9
Operating income	4,700	22.4	4,930	23.0	230	4.9
Ordinary income	4,930	23.5	5,130	24.0	200	4.1
Net income	2,900	13.8	3,200	15.0	300	10.3

Consolidated performance forecast for fiscal year ending March 31, 2014

(millions of yen)

	FY ended Mar. 31, 2013		Forecasts FY ending Mar. 31, 2014		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	18,130	100.0	21,400	100.0	3,269	18.0
Operating income	3,436	19.0	4,930	23.0	1,493	43.5
Ordinary income	3,576	19.7	5,130	24.0	1,553	43.5
Net income	1,960	10.8	3,200	15.0	1,239	63.2
EPS (yen)	64.22		104.81		40.59	63.2
Capital investment	1,377		1,050		▲327	▲23.7
Depreciation costs	1,119		1,130		11	1.0
R&D costs	1,146		1,200		54	4.7

Capital investment amount are the amounts of tangible and intangible fixed assets acquired in the term.

Assumed exchange rate for FY ending Mar.31, 2014 forecasts 1US\$ = ¥97.00 1€ = ¥130.00

Forecasts of main group companies for fiscal year ending March 31, 2014

(millions of yen)

	Equity stake	Net sales		Net income	
		Amount	Year-on-year change (%)	Amount	Year-on-year change (%)
Harmonic Drive Systems Inc.	—	18,800	16.3	2,820	48.9
*1 *4 HD Systems, Inc. (Harmonic Drive L.L.C) (U.S.A)	100% (51%)	3,200	15.6	*3 130	20.4
Harmonic AD, Inc.	100%	1,850	7.1	60	46.0
*2 *4 Harmonic Drive AG (Germany)	35%	8,000	26.0	1,050	11.1

Percent change(%) indicates increase or decrease from same period of previous fiscal year.

*1 Exchange rates: Jan. – Dec., 2012 1US\$ = 79.82 yen, Jan. – Dec., 2013 1US\$ = 97.00 yen

*2 Exchange rates: Jan. – Dec., 2012 1€ = 102.63 yen, Jan. – Dec., 2013 1€ = 130.00 yen

*3 Net income of US subsidiaries (consolidated) is after excluding minority interests.

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

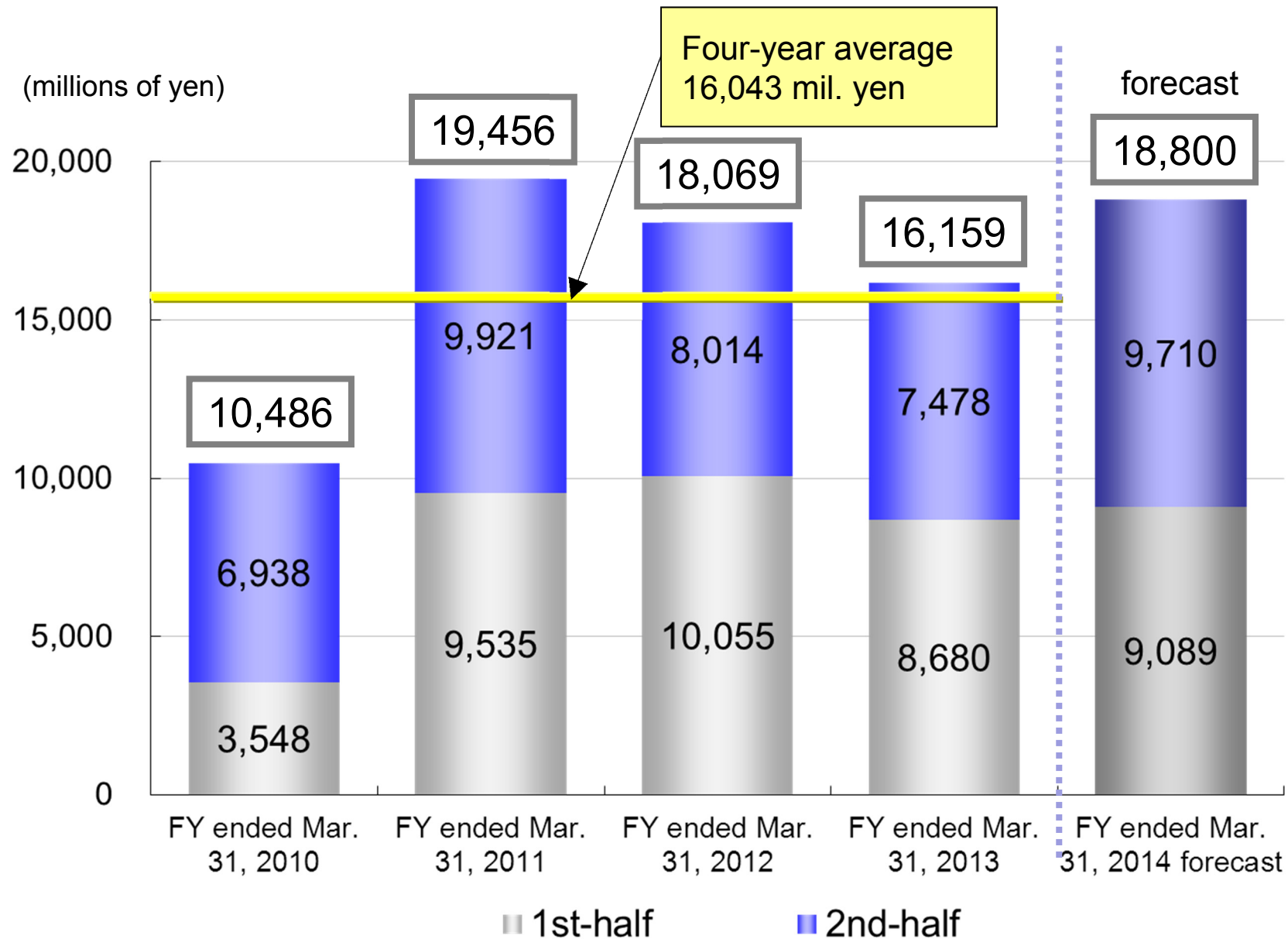
Non-consolidated performance forecast for fiscal year ending March 31, 2014

(millions of yen)

	FY ended Mar. 31, 2013		Forecasts FY ending Mar. 31, 2014		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	16,159	100.0	18,800	100.0	2,640	16.3
Operating income	2,955	18.3	4,200	22.3	1,244	42.1
Ordinary income	3,173	19.6	4,380	23.3	1,206	38.0
Net income	1,894	11.7	2,820	15.0	925	48.9
EPS (yen)	62.04		92.36		30.33	48.9
Capital investment	803		620		▲183	▲22.8
Depreciation costs	711		730		19	2.7
R&D costs	1,129		1,180		50	4.4

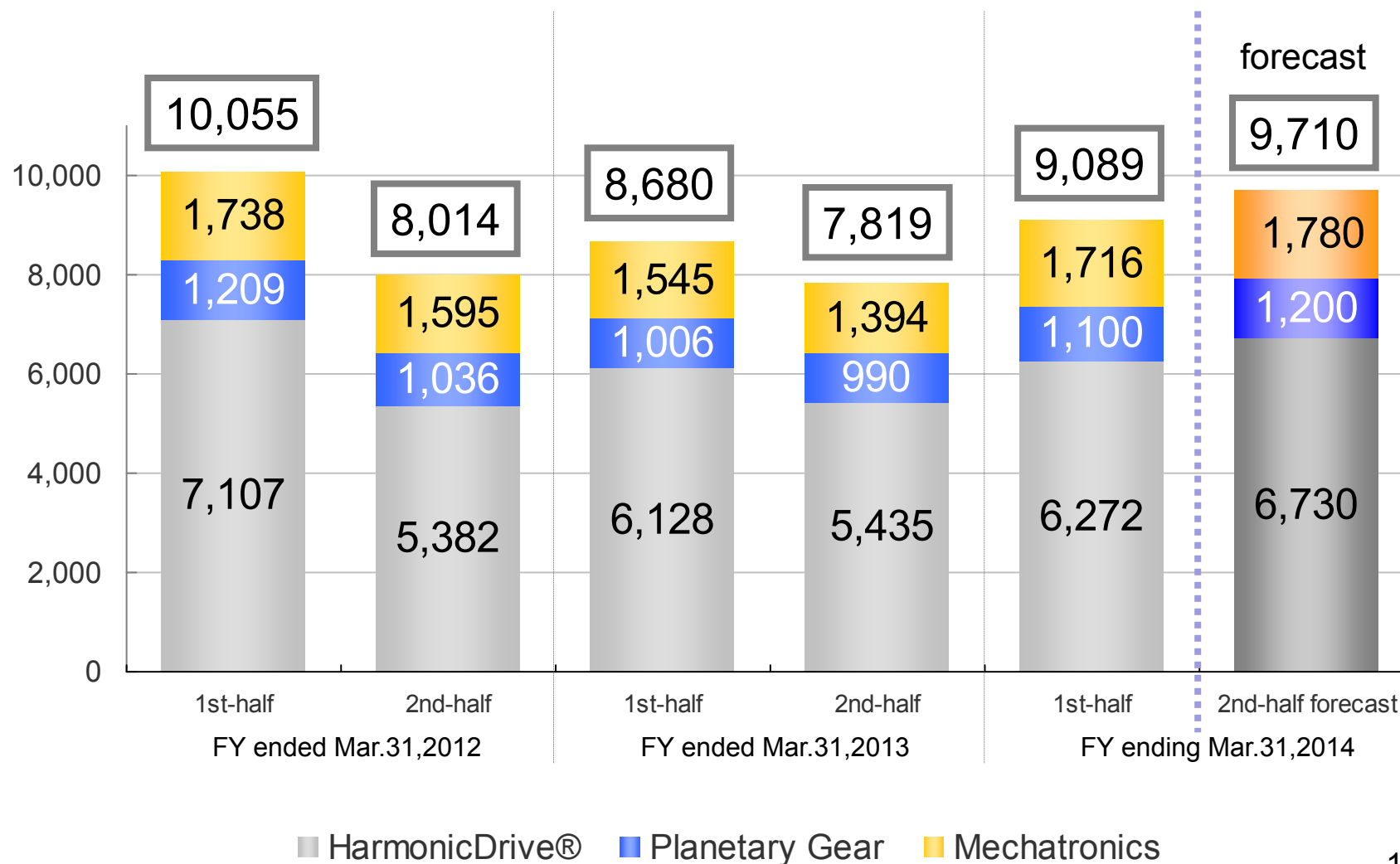
Capital investment amount are the amounts of tangible and intangible fixed assets acquired in the term.
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Sales trend line (non-consolidated)



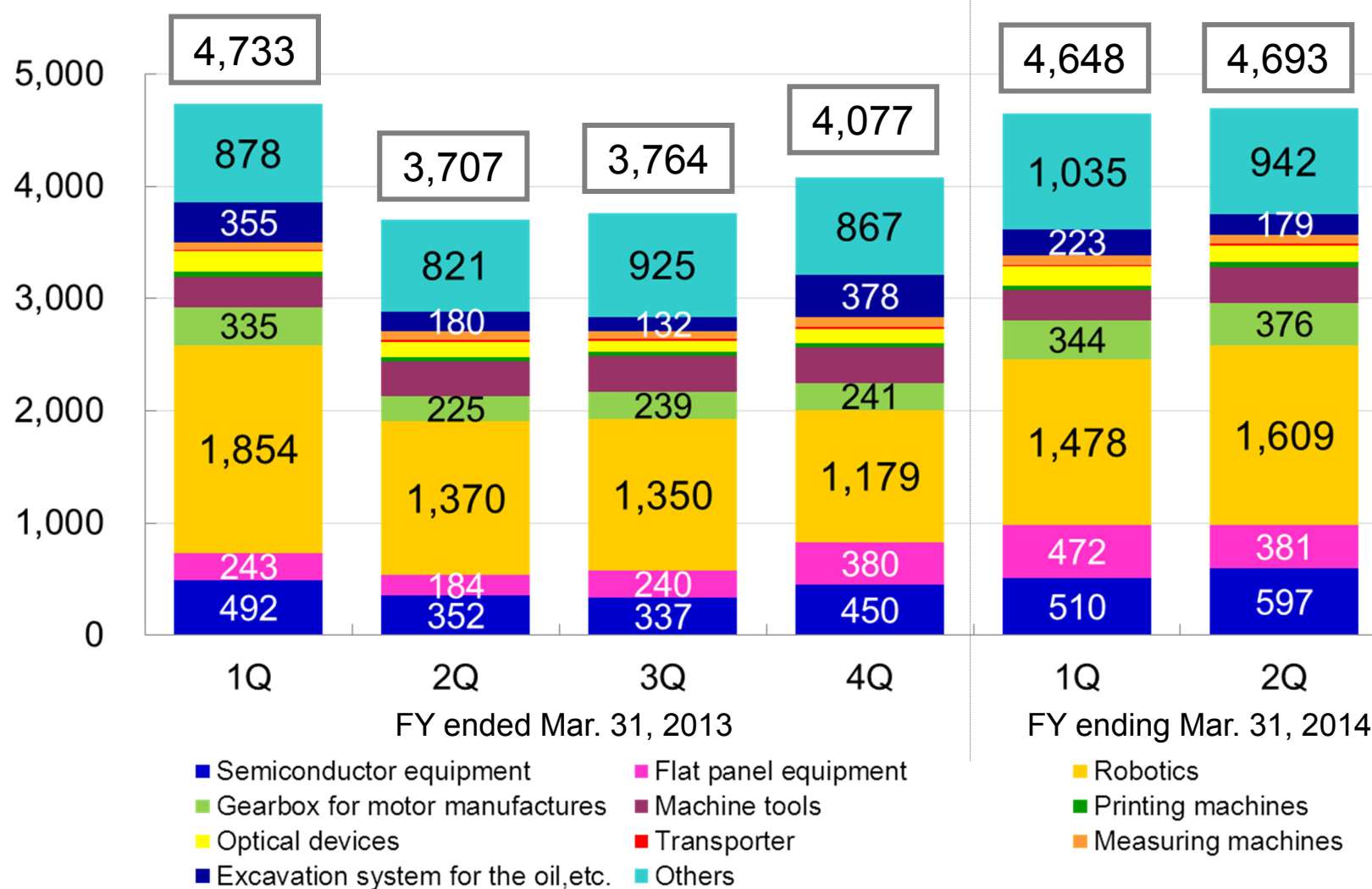
Sales trend line by product (non-consolidated)

(millions of yen)



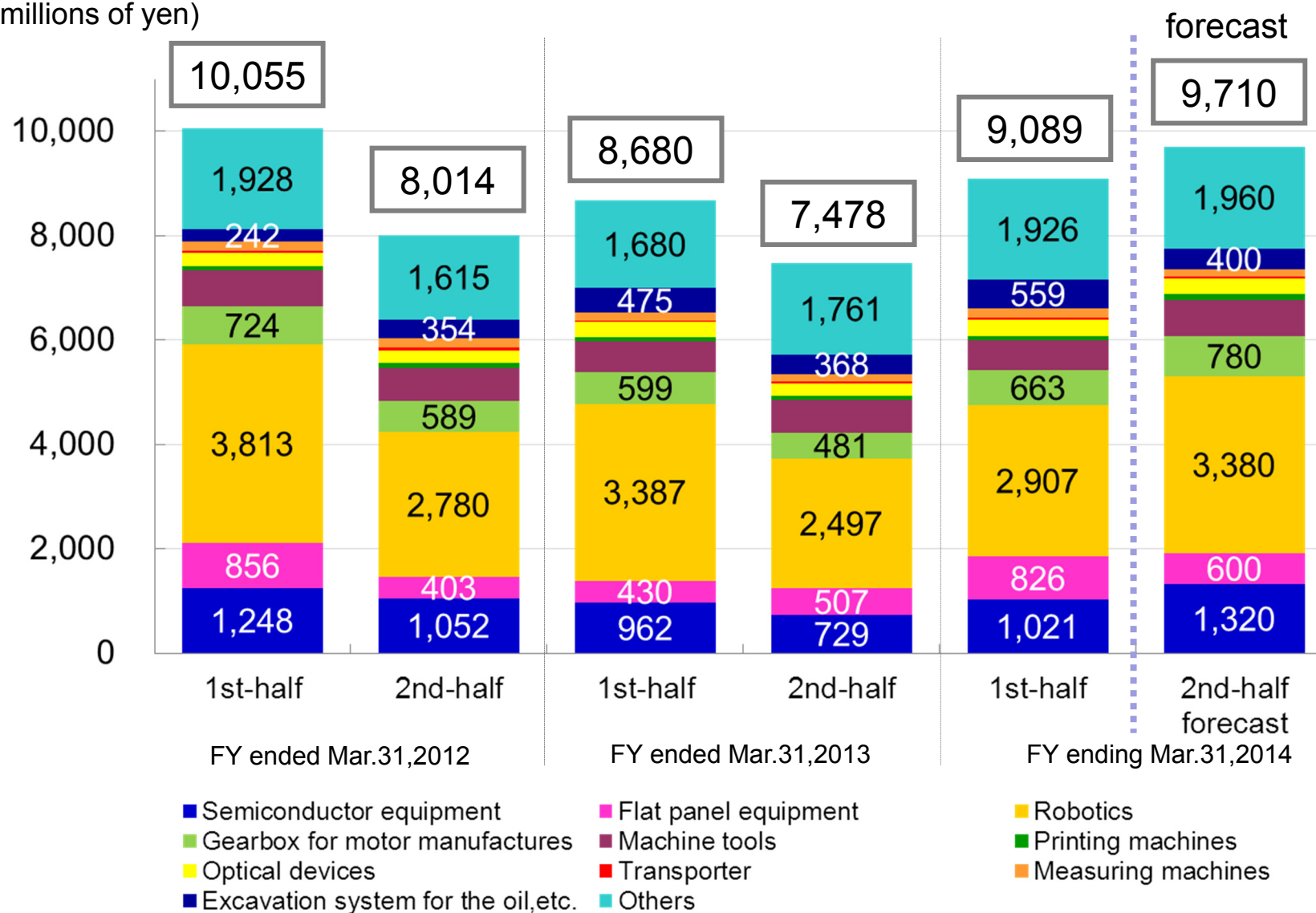
Non-consolidated bookings by application (quarterly)

(millions of yen)

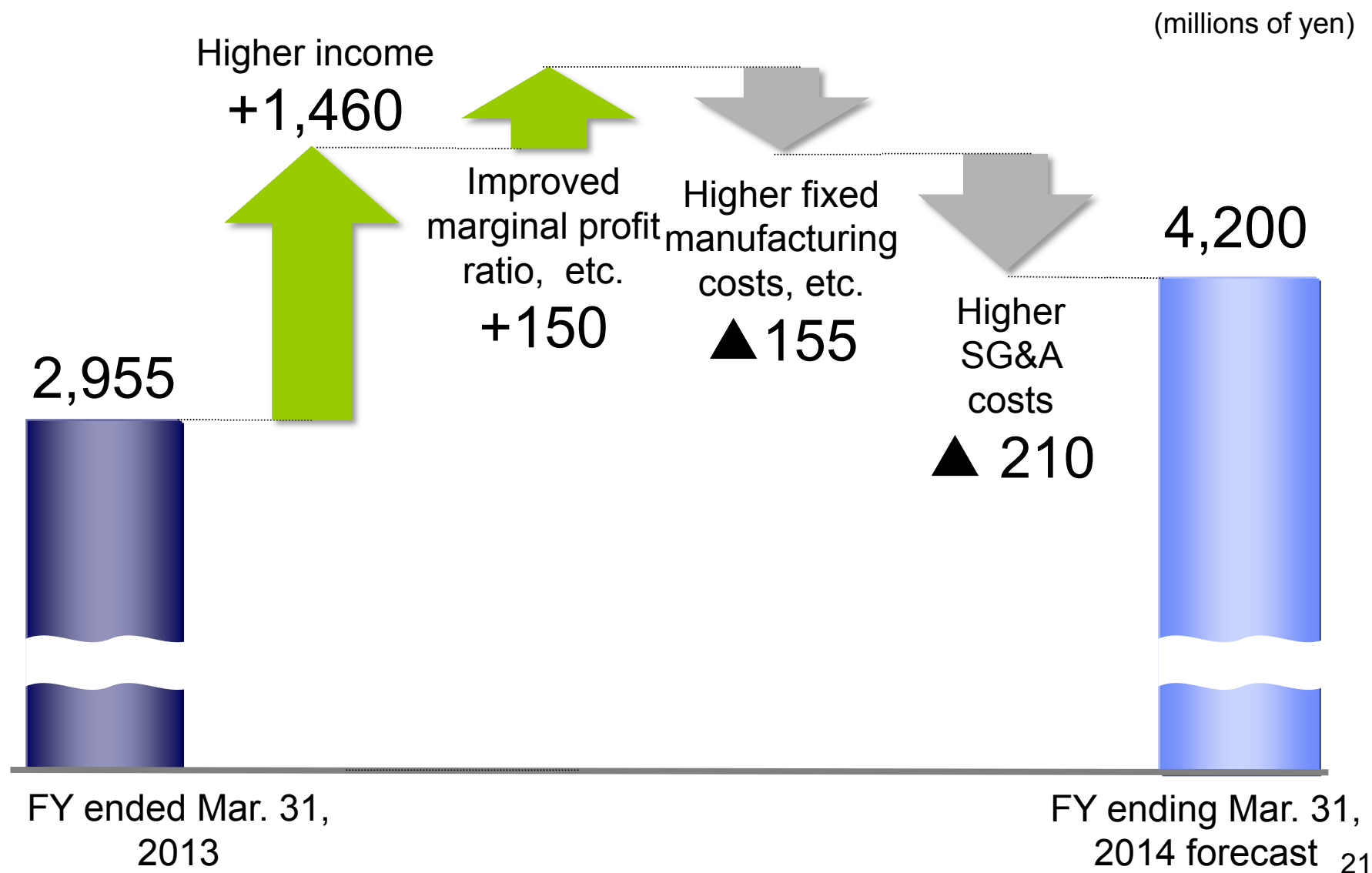


Non-consolidated net sales by application (premise for 2nd-half forecasts)

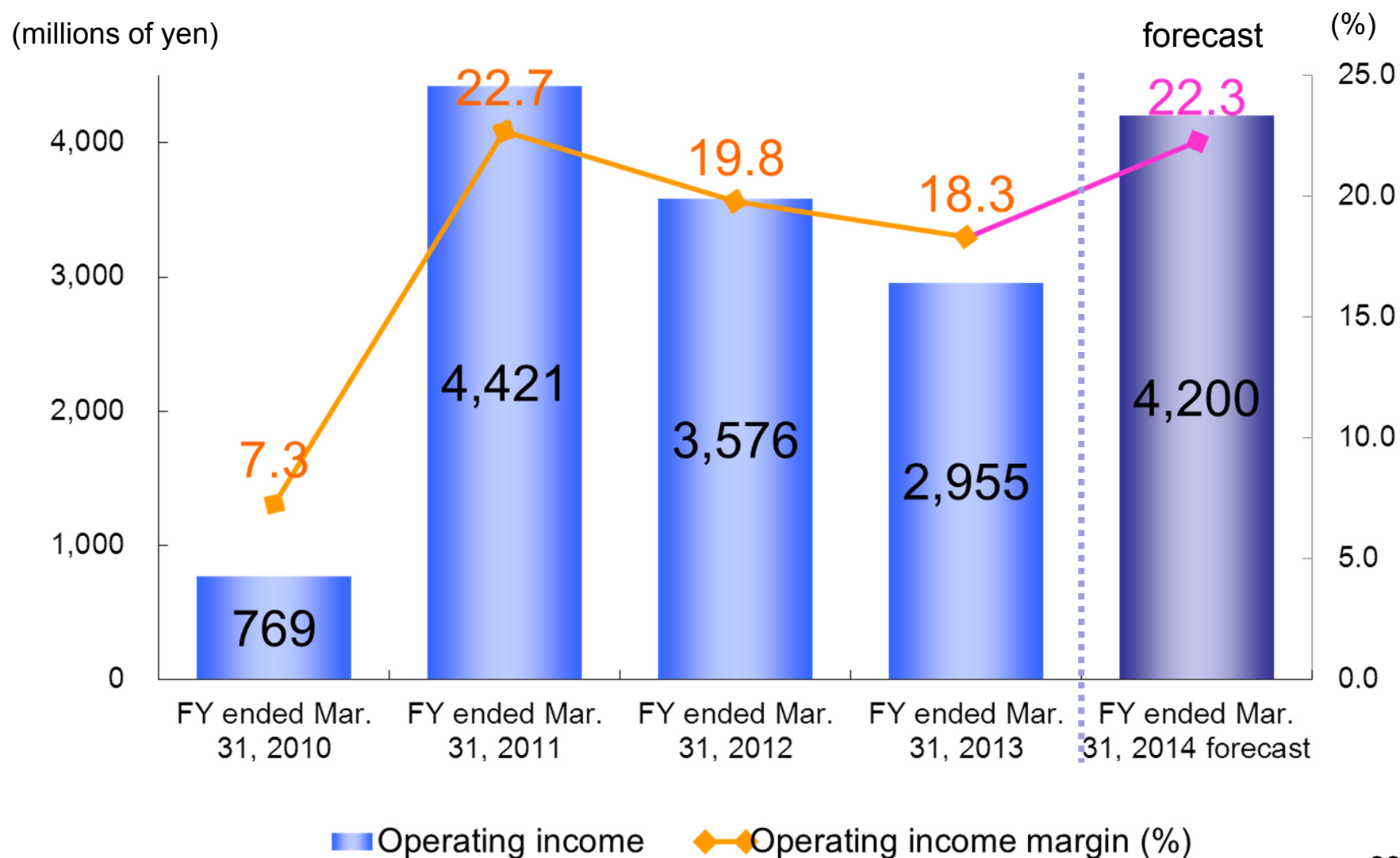
(millions of yen)



Factors in year-on-year change in non-consolidated operating income (fiscal year ending March 31, 2014 forecast)



Trends in operating income (non-consolidated)





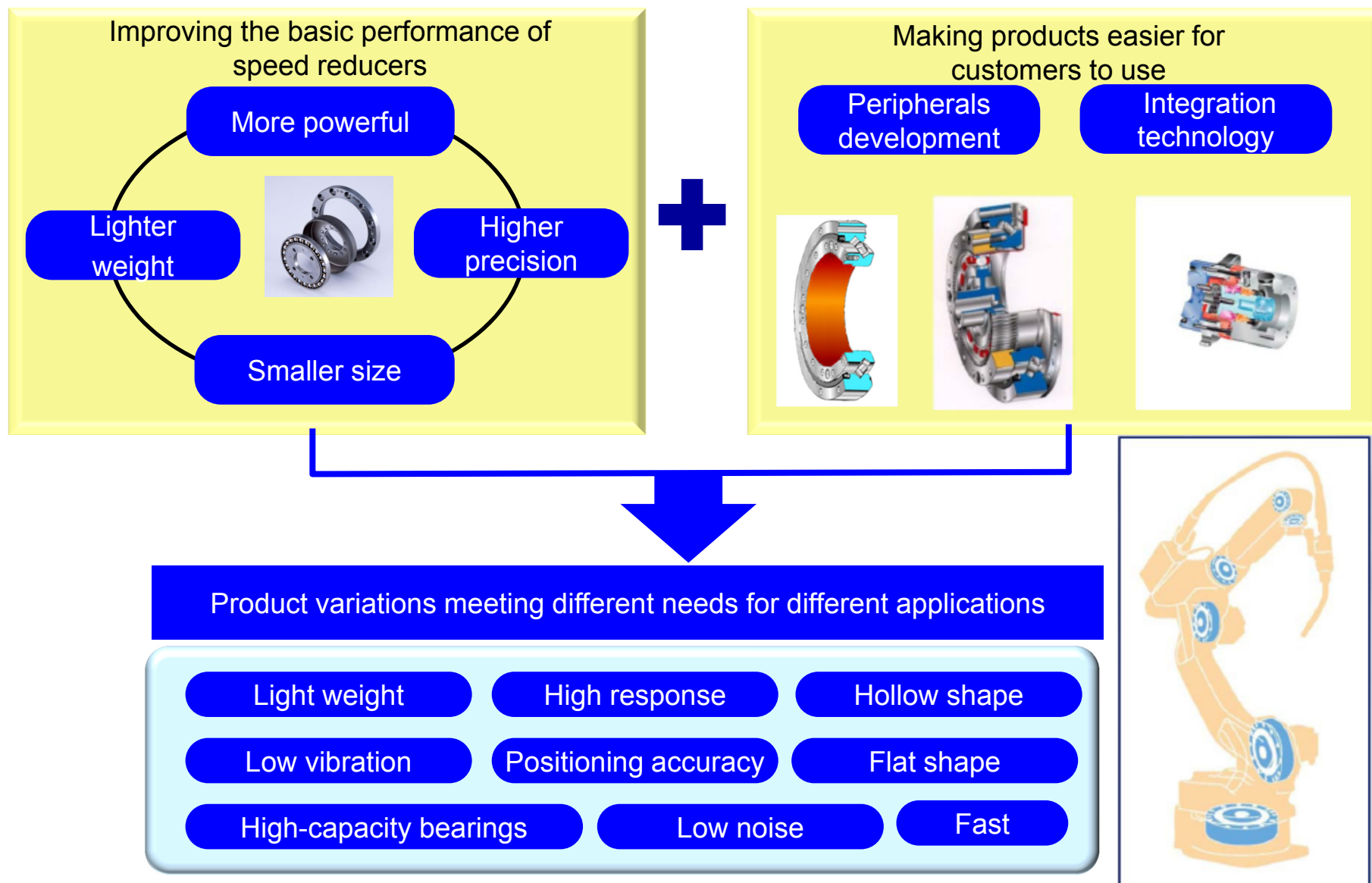
Future Outlook

Trends in Main Application Areas

Area	Industry Trends	Technology Trends
Semiconductor manufacturing equipment	<ul style="list-style-type: none"> • Growing oligopoly of device makers • Restructuring of manufacturing equipment vendors 	<ul style="list-style-type: none"> • Miniaturization • Flash memory 3D stacking • Larger wafer sizes
Industrial robots	<ul style="list-style-type: none"> • Growing robot demand in emerging countries • Expanding robot production in China • Expectations for robots that collaborate with people • Expectations for application to food and pharmaceutical use • Progress in developing robots that think and adapt to changing situation 	<ul style="list-style-type: none"> • Expansion of small robot market • Multiaxial, dual-arm robots • Faster, greater precision • Parallel-link robots • Advances in sensor technology • Advances in hand technology

Diversifying and expanding needs for motion control

Core technology and wider choice of product variations



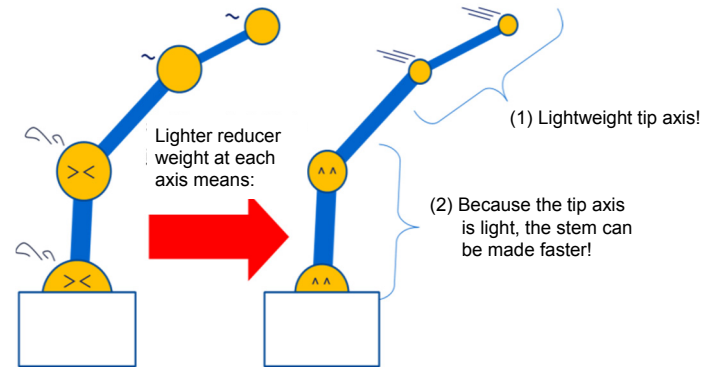
Cultivating Markets by Launching New Products: HarmonicDrive®

HarmonicDrive®

Place lightweight unitary type products on the market



1. Helping make robots faster



2. Helping boost robot load capacity

3. Contributing to lighter robots that are easier to install and relocate

- Adoption in newly developed vertical robots (meet needs for compact size and high speed)
- Adoption in hand axes of large robots (meet need for improved load capacity)

Cultivating Markets by Launching New Products: Mechatronics Products

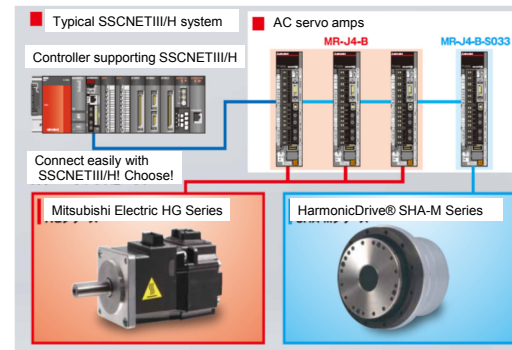
Mechatronics Products

- Collaboration with servo motor manufacturers
- Addition of AC servo actuator models and expanded options



Link with control systems of other vendors

Connect using Mitsubishi Electric SSCNETIII/H communication



HDS actuator can be driven by Mitsubishi Electric AC servo amp.

(before)

Mitsubishi amp
+
Mitsubishi motor
+
HDS reducer

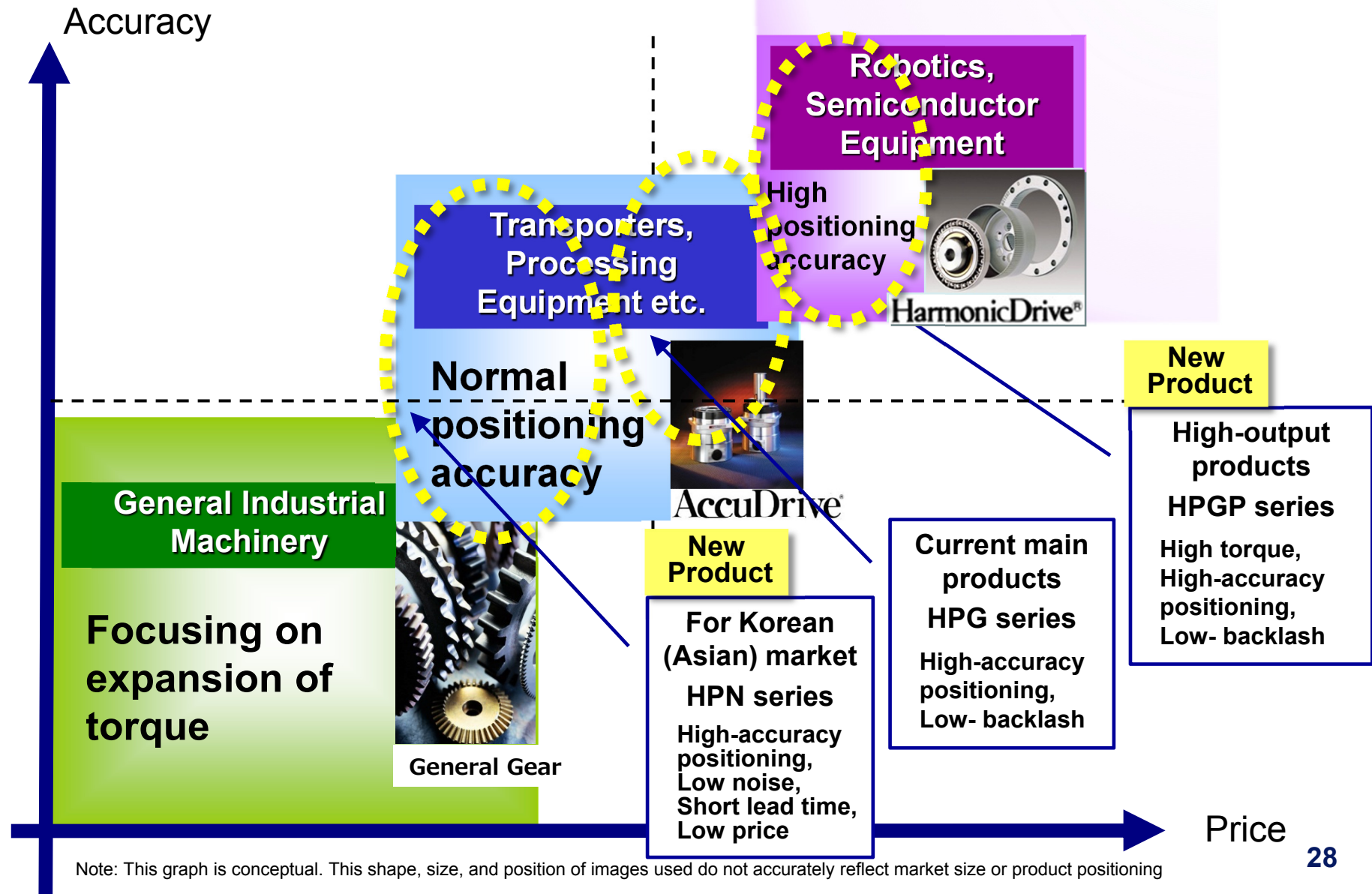


(now)

Mitsubishi amp
+
HDS actuator

HDS mechatronics products are adopted in equipment built around Mitsubishi Electric control system

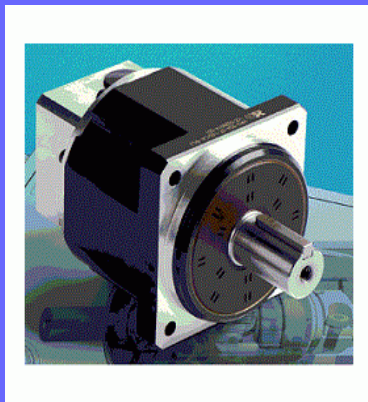
Enhance product lineup Planetary Gear



Cultivating Markets by Launching New Products: Precision Planetary Gear Reducers

Precision Planetary Gear Reducers

Launching for Asian markets



1. Start of production in South Korean subsidiary
SAMICK ADM Co., Ltd. (S. Korea)



Production starting in this term, using production technology transferred from Japan

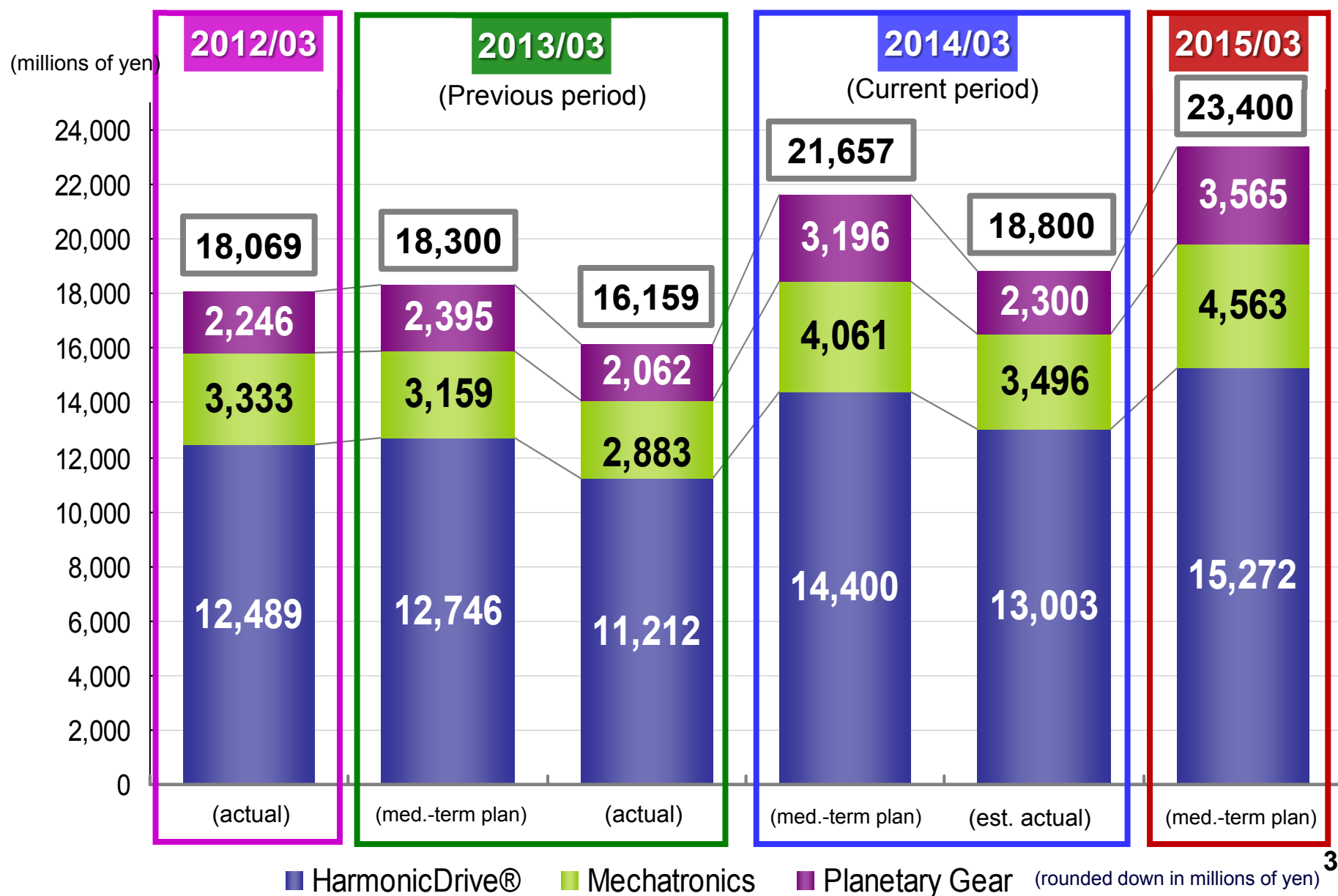
2. Buildup of sales capability in South Korea and China markets
 - Expand sales agent network
 - Enhance product lineup

Working with Korean partner to develop new markets and establish production base



Basic Approach and Directions

Situation after initial year of medium-term business plan



Basic approach in medium-term business plan

Keys to medium-term growth

1. Management giving top priority to quality and safety
2. Strengthening of core technologies
3. Wider choice of product variations
4. Stepped up sales expansion in Asia

Basic approach unchanged from when plan was first drawn up

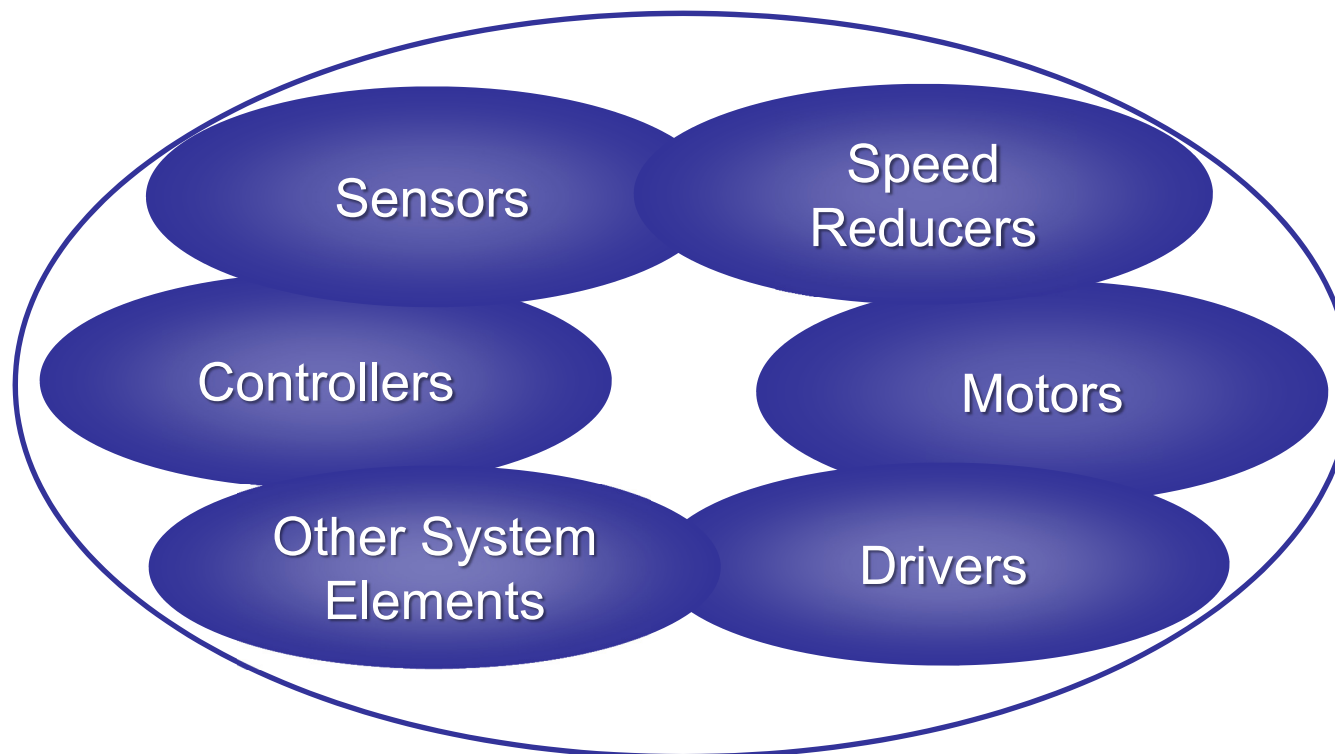
Total Motion Control

Business
domain



Providing the value of Total Motion Control
in precision control fields

Schematic Concept of Total Motion Control



The performance targets and other numerical data presented herein are forecasts based on information available to the HDS Group at the time this material was prepared, and are subject to the influence of uncertainties including those in the economic and competitive environment. Actual performance may therefore differ materially from the forecasts given in this material.

Harmonic Drive Systems Inc.

For more information:

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