Harmonic Drive Systems Inc.

Presentation on Business Results for the 1st-Half of Fiscal Year Ending March 31, 2015

November 21, 2014

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Performance Summary

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

(millions of yen)

	Original forecasts (announced May 13)		1st-half FY ending Mar.31,2015		Vs. original forecasts for the period	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate(%)
Net sales	12,500	100.0	12,700	100.0	200	1.6
Operating income	3,350	26.8	3,633	28.6	283	8.5
Ordinary income	3,450	27.6	3,886	30.6	436	12.6
Net income	2,250	18.0	2,483	19.6	233	10.4

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

(millions of yen)

	1st-half FY ended Mar.31,2014		1st-half FY ending Mar.31,2015		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	10,411	100.0	12,700	100.0	2,288	22.0
Gross profit	4,602	44.2	6,034	47.5	1,432	31.1
Operating income	2,404	23.1	3,633	28.6	1,228	51.1
Ordinary income	2,557	24.6	3,886	30.6	1,328	52.0
Net income	1,629	15.6	2,483	19.6	854	52.4
EPS（yen）*2	17.79		27.11		9.32	52.4
Capital investment *1	418		807		389	93.0
Depreciation costs	537		596		58	10.9
R&D costs	595		606		11	1.9

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

*2 EPS calculated as if the October 1, 2014 share split (1:3) took place at the beginning of the previous fiscal year.

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Performance of main group companies for 1st-half of fiscal year ending March 31, 2015

(millions of yen)

		Equity stake	Net sales		Net income	
			Amount	Change(%)	Amount	Change(%)
	Harmonic Drive Systems Inc.	—	11,366	25.0	2,214	60.6
*1 *4	HD Systems Inc. (Harmonic Drive L.L.C.) (U.S.A.)	100% (51%)	1,635	1.2	*3 47	▲45.7
	Harmonic AD, Inc.	100%	1,042	14.6	48	74.1
*2 *4	Harmonic Drive AG (Germany)	36.8%	5,072	28.9	874	22.4

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

*1 Exchange rates: Jan. – Jun., 2013 1US$ = 95.59 yen, Jan. – Jun., 2014 1US$ = 102.47 yen
*2 Exchange rates: Jan. – Jun., 2013 1€ = 125.50 yen, Jan. – Jun., 2014 1€ = 140.43 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.

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1st-half non-consolidated results

(millions of yen)

	1st-half FY ended Mar.31,2014		1st-half FY ending Mar.31,2015		Year-on-year change	
	Amount	Percent(%)	Amount	Percent(%)	Change	Rate(%)
Net sales	9,089	100.0	11,366	100.0	2,276	25.0
Gross profit	3,733	41.1	5,018	44.2	1,284	34.4
Operating income	1,969	21.7	3,135	27.6	1,166	59.2
Ordinary income	2,118	23.3	3,406	30.0	1,288	60.8
Net income	1,379	15.2	2,214	19.5	835	60.6
EPS（yen）*2	15.06		24.18		9.12	60.6
Capital investment *1	235		482		247	105.0
Depreciation costs	325		320		▲4	▲1.4
R&D costs	581		591		10	1.8

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

*2 EPS calculated as if the October 1, 2014 share split (1:3) took place at the beginning of the previous fiscal year.

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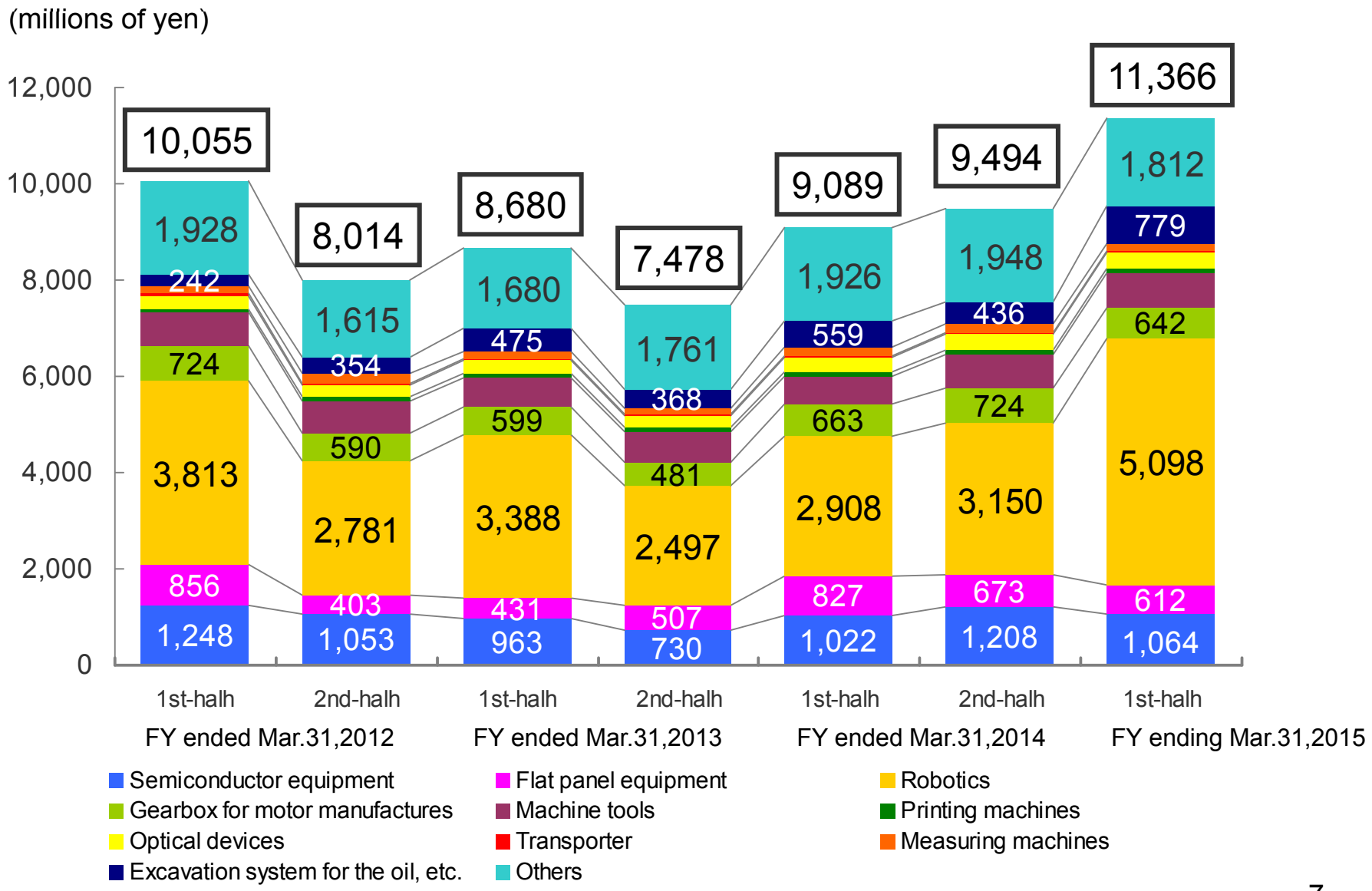
Net sales by application (non-consolidated)



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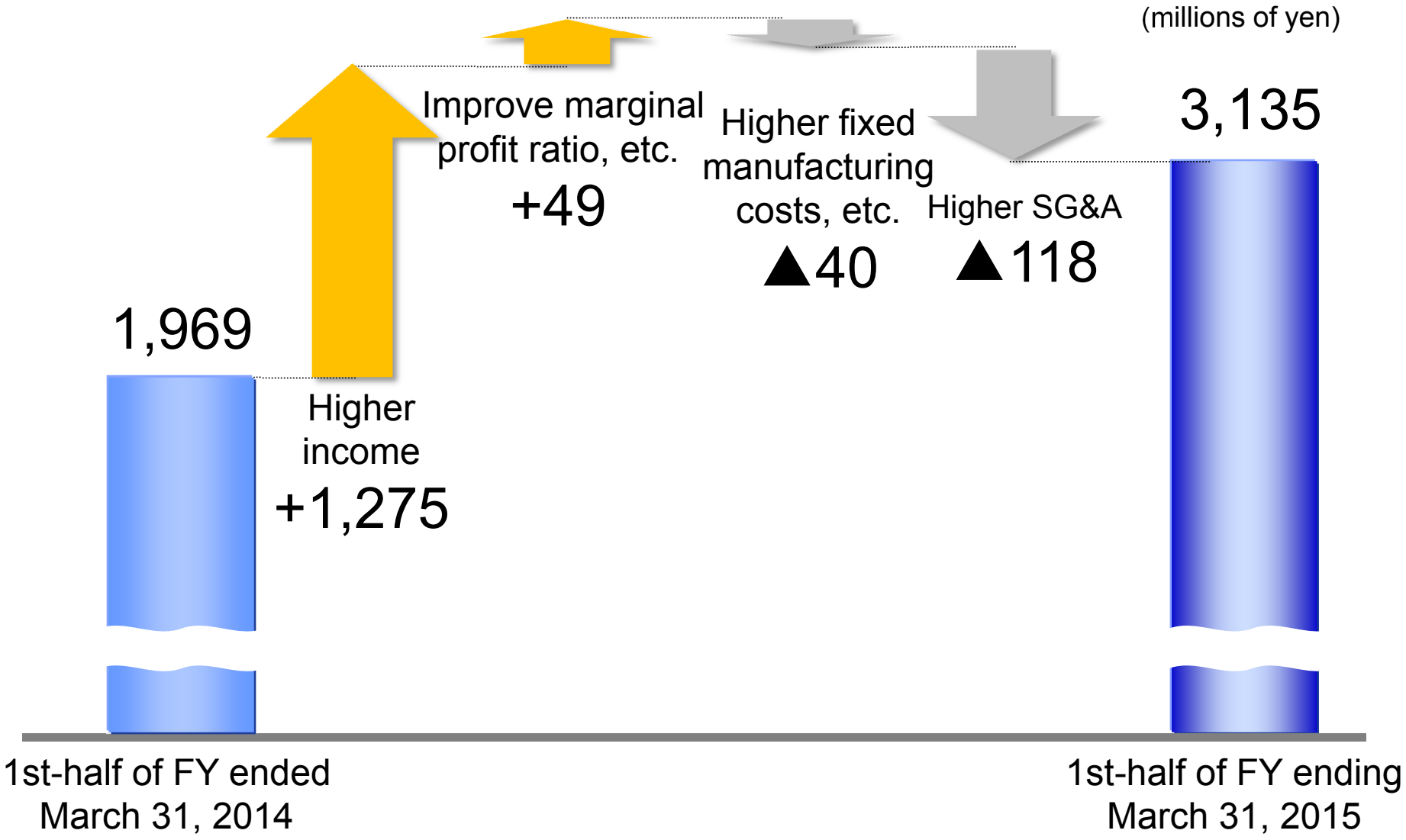
Factors in year-on-year change in 1st-half non-consolidated operating income



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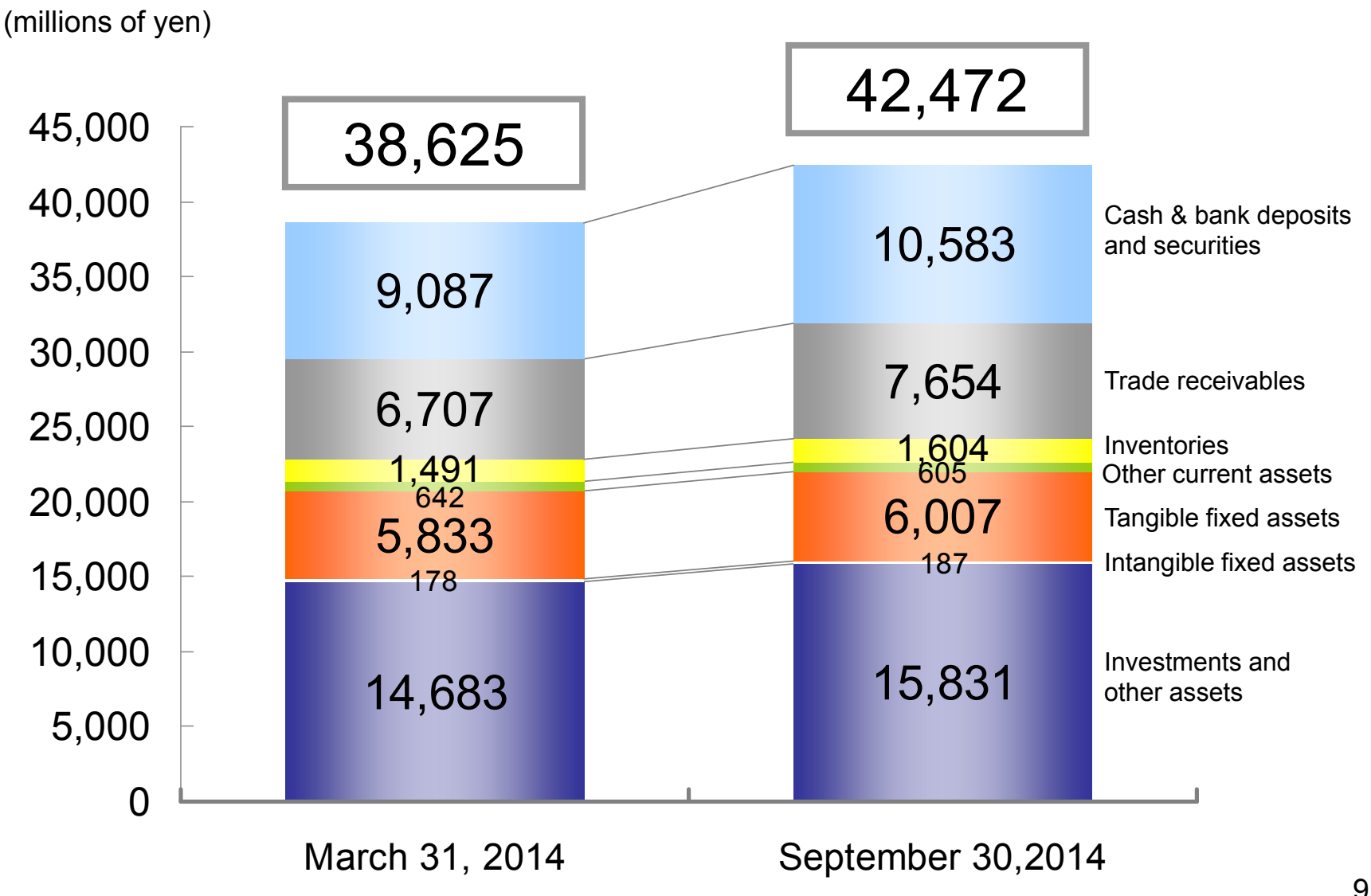
Status of consolidated assets



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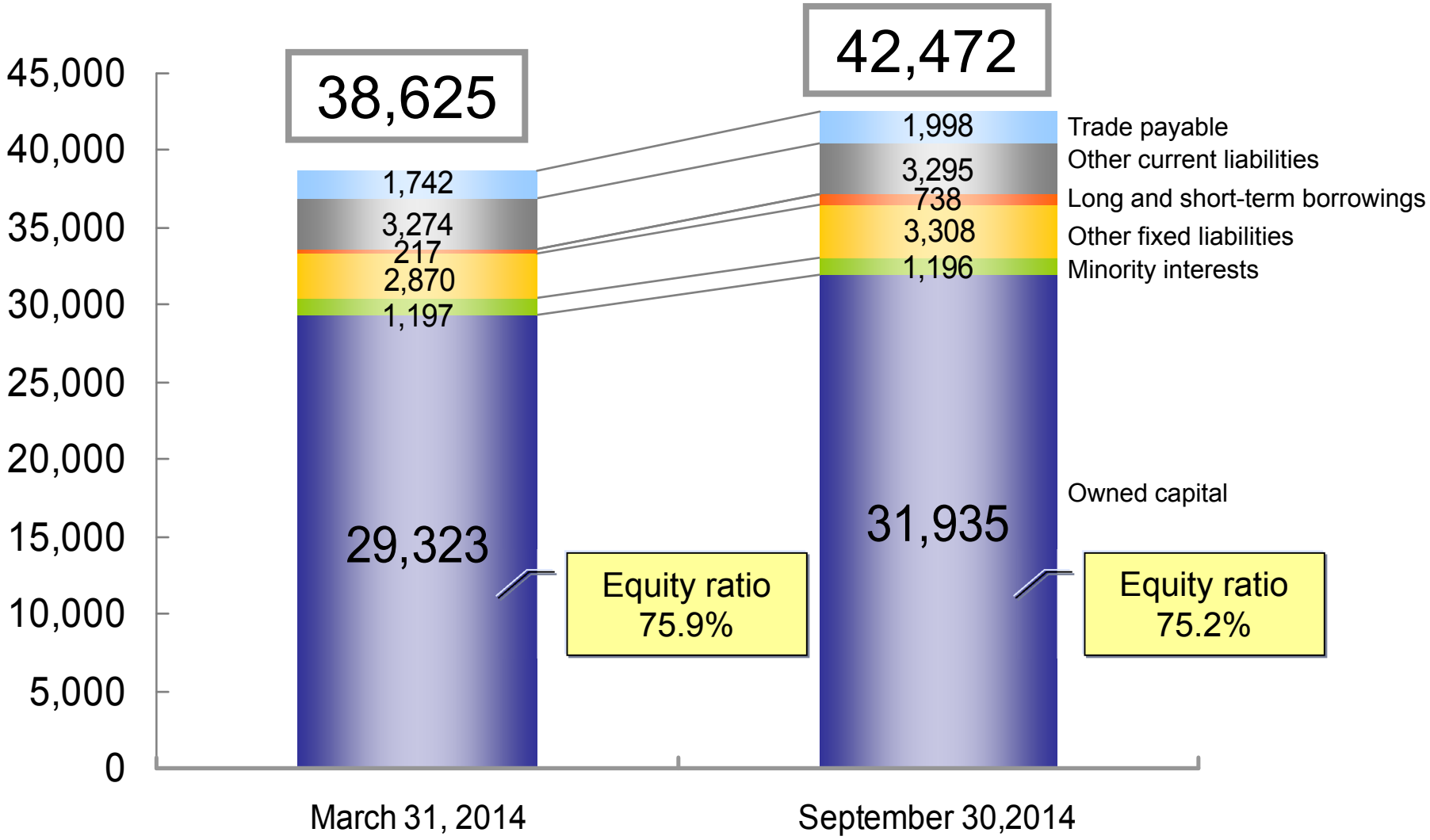
Status of consolidated liabilities and net assets



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Status of consolidated cash flows

(millions of yen)	1st-half of FY ended Mar.31,2014	1st-half of FY ending Mar.31,2015
Cash flow from operating activities	1,544	2,397
Cash flow from investing activities	▲449	▲639
Cash flow from financing activities	▲1,536	23
Effect of exchange rate changes on cash and cash equivalents	143	▲45
Net increase (decrease) in cash and cash equivalents	▲298	1,737
Cash and cash equivalents at end of year	9,415	8,621

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Performance Forecast for Fiscal Year Ending March 31, 2015

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Revised consolidated results forecast for fiscal year ending March 31, 2015

(millions of yen)

	Original forecasts (announced May 13)		Revised forecasts (announced Nov. 12)		Vs. original forecasts	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	24,500	100.0	26,000	100.0	1,500	6.1
Operating income	6,400	26.1	7,350	28.3	950	14.8
Ordinary income	6,600	26.9	7,730	29.7	1,130	17.1
Net income	4,200	17.1	4,900	18.8	700	16.7

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Consolidated performance forecast for fiscal year ending March 31, 2015

(millions of yen)

	FY ended Mar. 31, 2014		Forecasts FY ending Mar. 31, 2015		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	21,083	100.0	26,000	100.0	4,916	23.3
Operating income	4,668	22.1	7,350	28.3	2,681	57.5
Ordinary income	4,822	22.9	7,730	29.7	2,907	60.3
Net income	2,993	14.2	4,900	18.8	1,906	63.7
EPS（yen）*2	32.68		53.50		20.82	63.7
Capital investment *1	1,304		2,450		1,146	87.9
Depreciation costs	1,170		1,250		80	6.8
R&D costs	1,235		1,300		65	5.3

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

*2 EPS calculated as if the October 1, 2014 share split (1:3) took place at the beginning of the previous fiscal year.

*3 Assumed exchange rate for FY ending Mar.31, 2015 forecasts 1US$ = ¥105.00 € = ¥139.00

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Forecasts of main group companies for fiscal year ending March 31, 2015

(millions of yen)

		Equity stake	Net sales		Net income	
			Amount	Year-on-year change (%)	Amount	Year-on-year change (%)
	Harmonic Drive Systems Inc.	—	23,000	23.8	4,250	52.2
*1 *4	HD Systems, Inc. (Harmonic Drive L.L.C) (U.S.A)	100% (51%)	3,300	3.6	*3 100	▲23.4
	Harmonic AD, Inc.	100%	2,100	11.2	90	63.9
*2 *4	Harmonic Drive AG (Germany)	36.8%	9,300	18.8	1,350	47.6

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

*1 Exchange rates: Jan. – Dec., 2013 1US$ = 97.65 yen, Jan. – Dec., 2014 1US$ = 105.00 yen

*2 Exchange rates: Jan. – Dec., 2013 1€ = 129.68 yen, Jan. – Dec., 2014 1€ = 139.00 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.

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Non-consolidated performance forecast for fiscal year ending March 31, 2015

(millions of yen)

	FY ended Mar. 31, 2014		Forecasts FY ending Mar. 31, 2015		Year-on-year change	
	Amount	Percent (%)	Amount	Percent (%)	Change	Rate (%)
Net sales	18,584	100.0	23,000	100.0	4,415	23.8
Operating income	4,180	22.5	6,300	27.4	2,119	50.7
Ordinary income	4,375	23.5	6,600	28.7	2,224	50.9
Net income	2,792	15.0	4,250	18.5	1,457	52.2
EPS（yen）*2	30.49		46.40		15.91	52.2
Capital investment *1	617		1,650		1,033	167.4
Depreciation costs	712		720		8	1.1
R&D costs	1,224		1,290		66	5.4

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

*2 EPS calculated as if the October 1, 2014 share split (1:3) took place at the beginning of the previous fiscal year.

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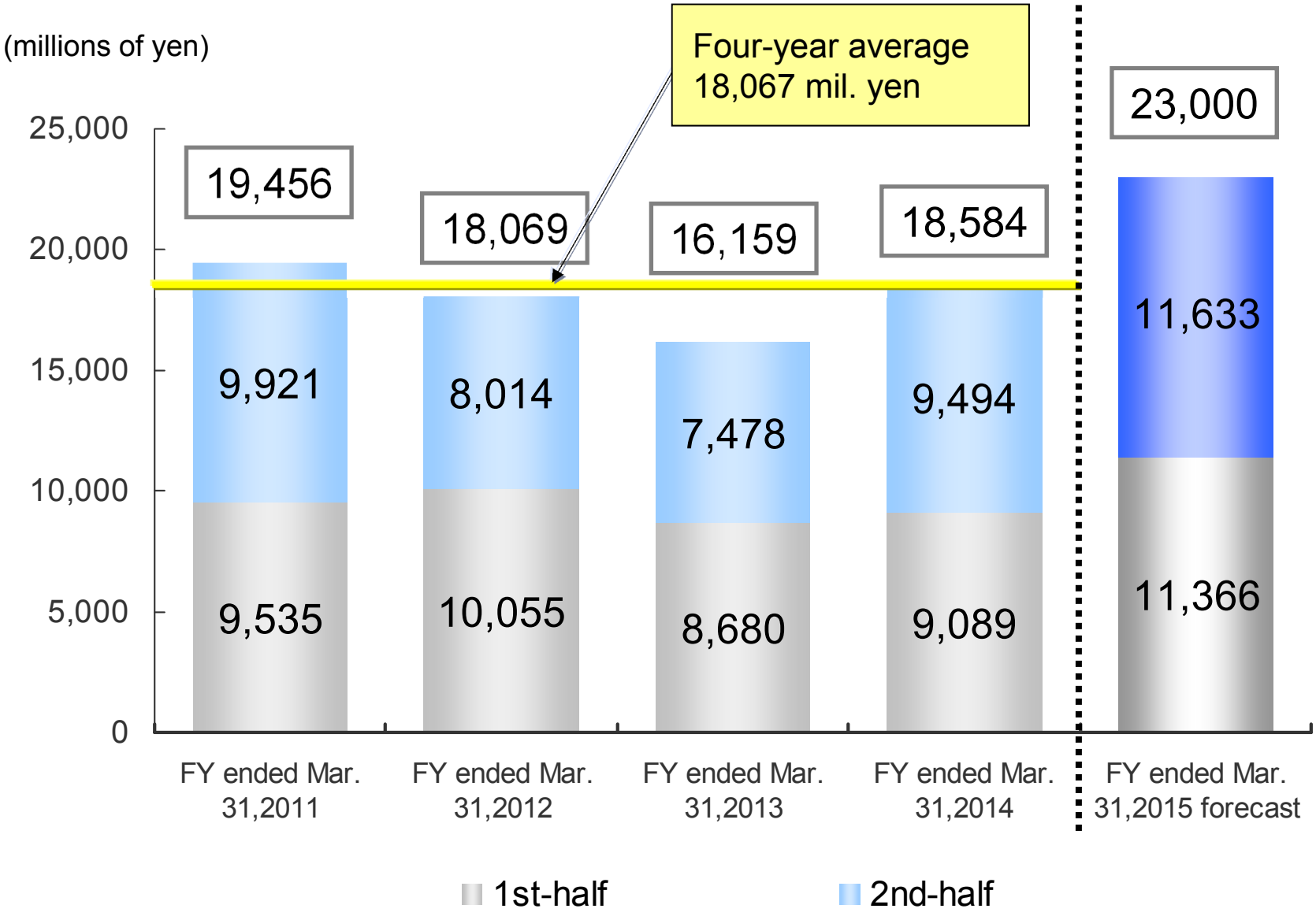
Sales trend line (non-consolidated)



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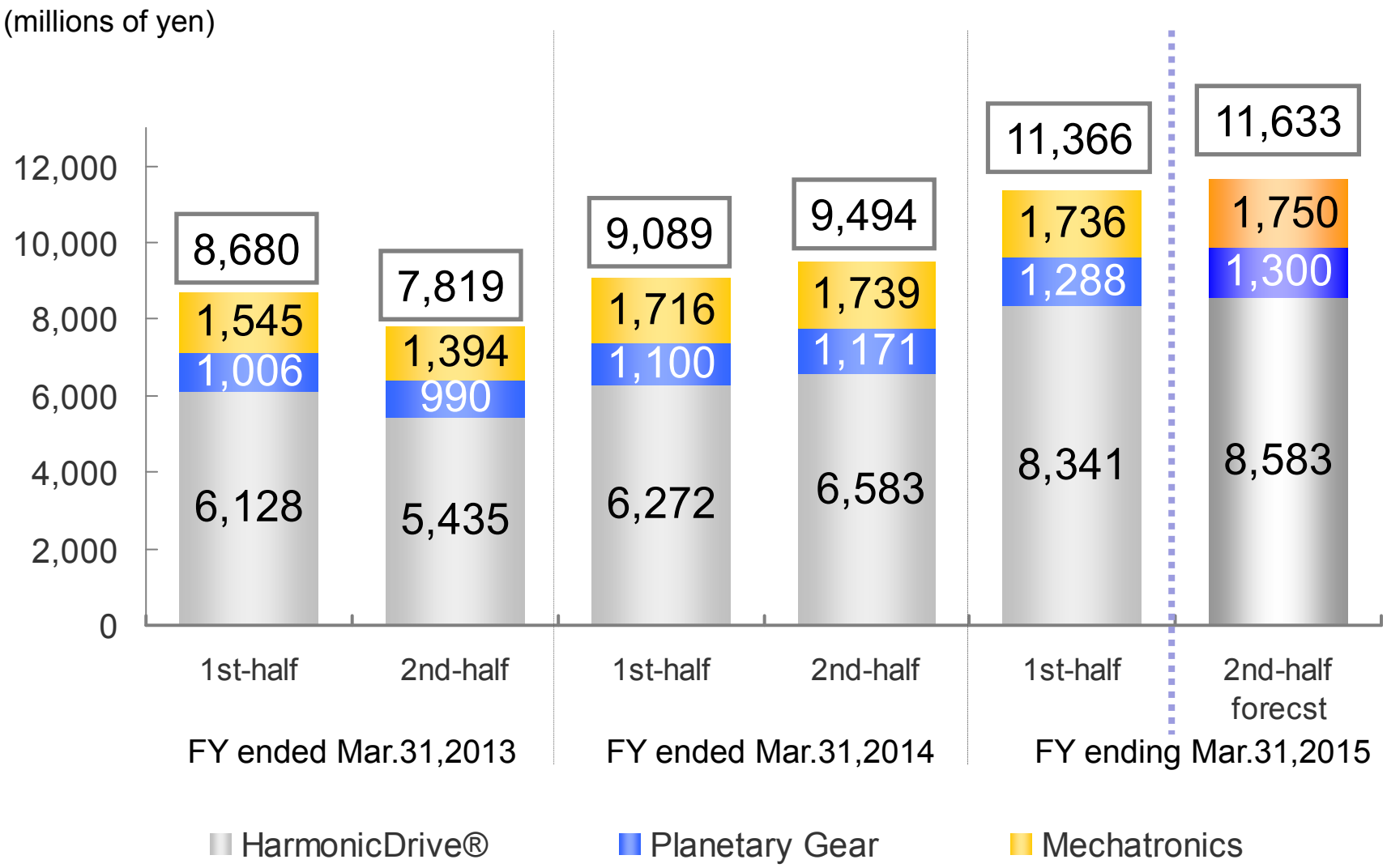
Sales trend line by product (non-consolidated)



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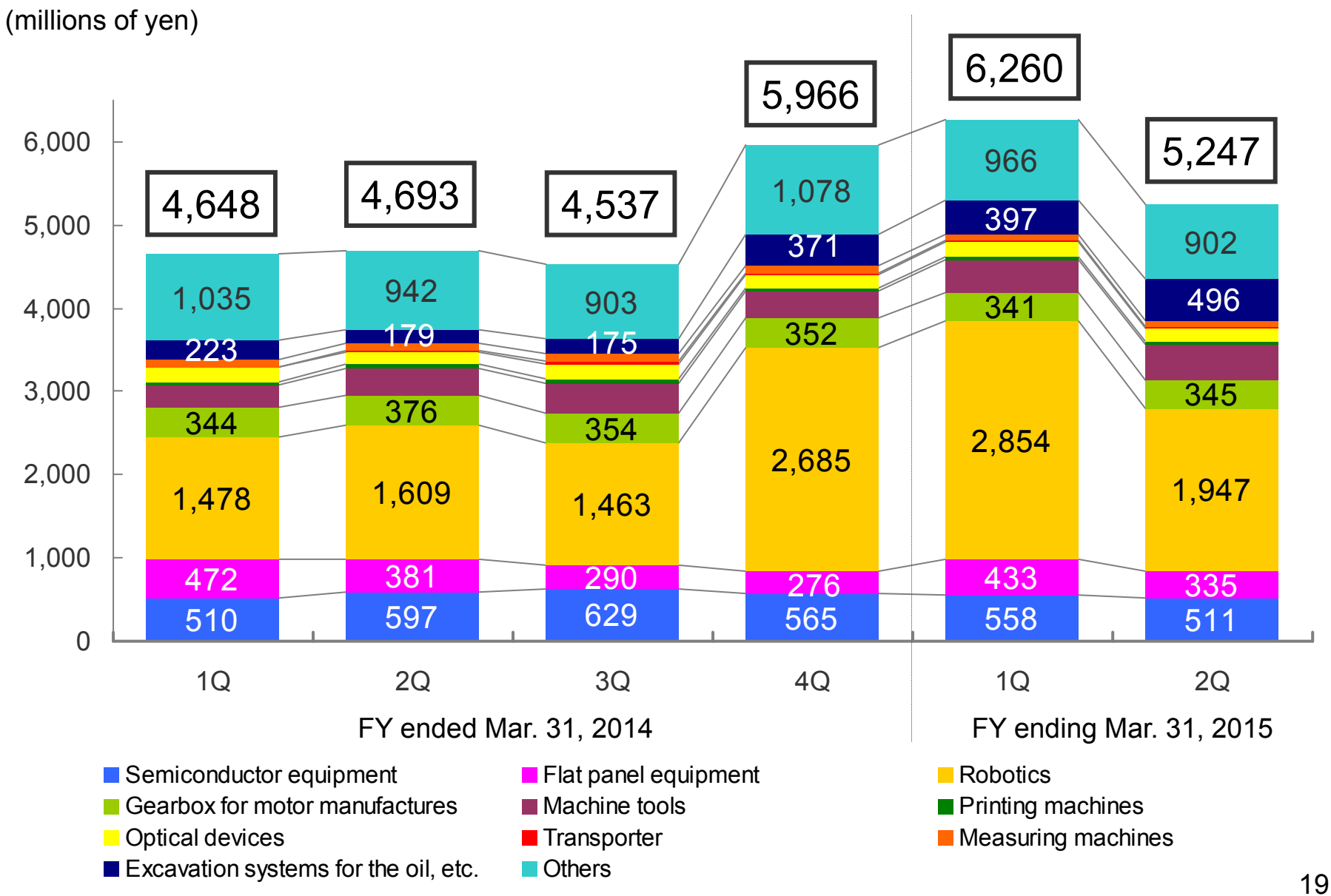
Non-consolidated bookings by application (quarterly)



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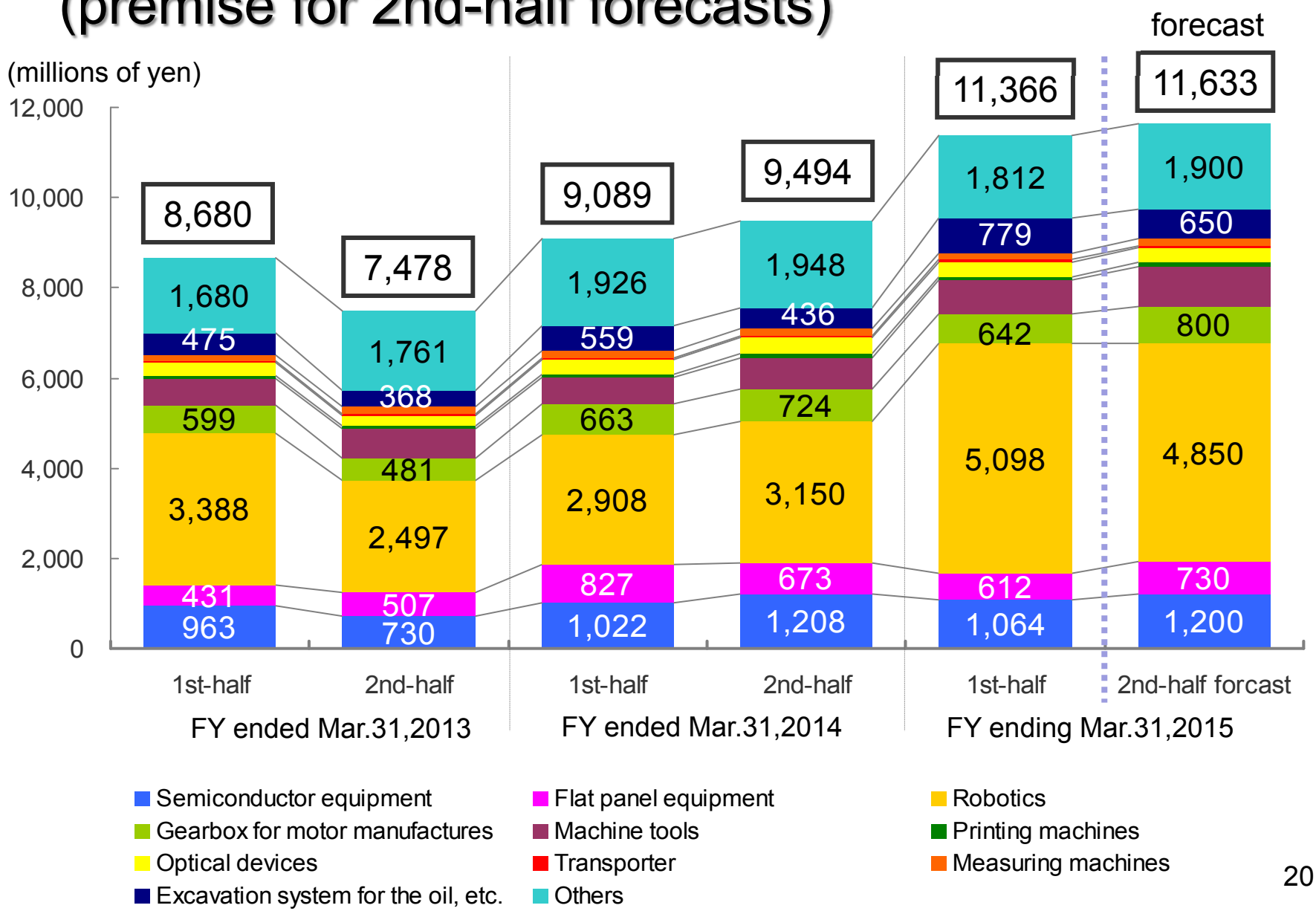
Non-consolidated net sales by application (premise for 2nd-half forecasts)



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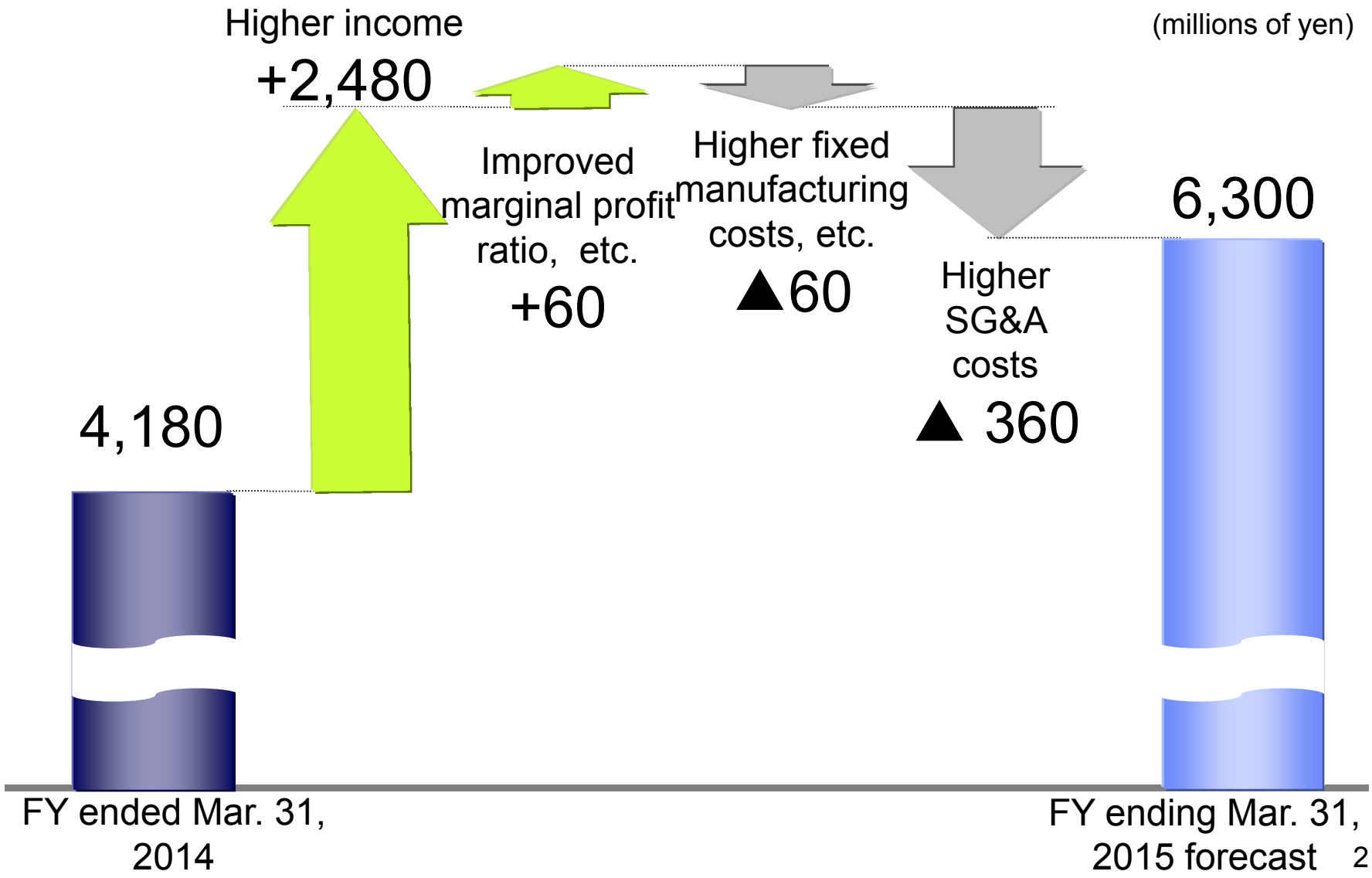
Factors in year-on-year change in non-consolidated operating income (fiscal year ending March 31, 2015 forecast)



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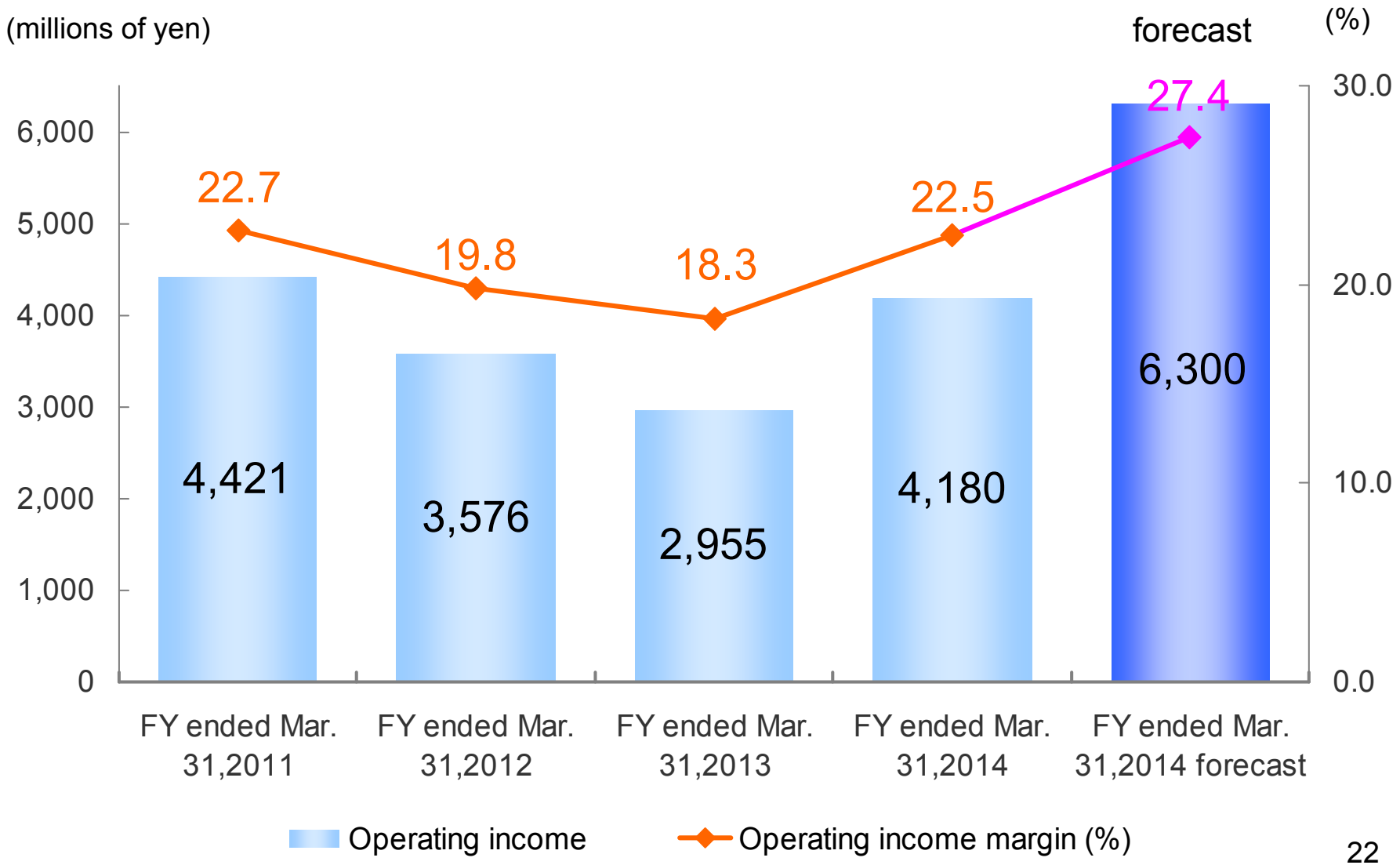
Trends in operating income (non-consolidated)



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Future Outlook

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Robot Industry Classification

Type		Use	Reducer requirements
I. Industrial Robots	Manufacturing robots for automobiles, smart phones, etc.	Prefabrication on the factory floor	High precision, high reliability
	Work robots	Light work on the factory floor	(items above)＋ light weight Low cost?
II. Service Robots	Professional robots	Healthcare, nursing care, rehabilitation, logistics, resource extraction, aerospace	Specifications designed for each use
	Consumer robots	Consumer appliances, hobbies, toys	Low Cost

Source: Prepared by the company based on IFR and KDDI Research Institute.

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Work Robots

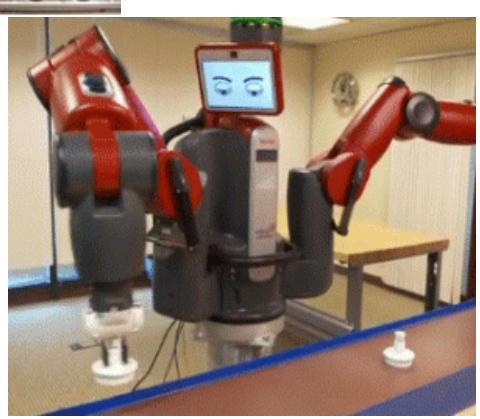
Can work in line with people

Do not require safety barriers

Easy configuration

Portable

Source: Life Robotics Inc. home page.



Source: Rethink Robotics, Inc. home page.

Spread use for light work to cover personnel shortages

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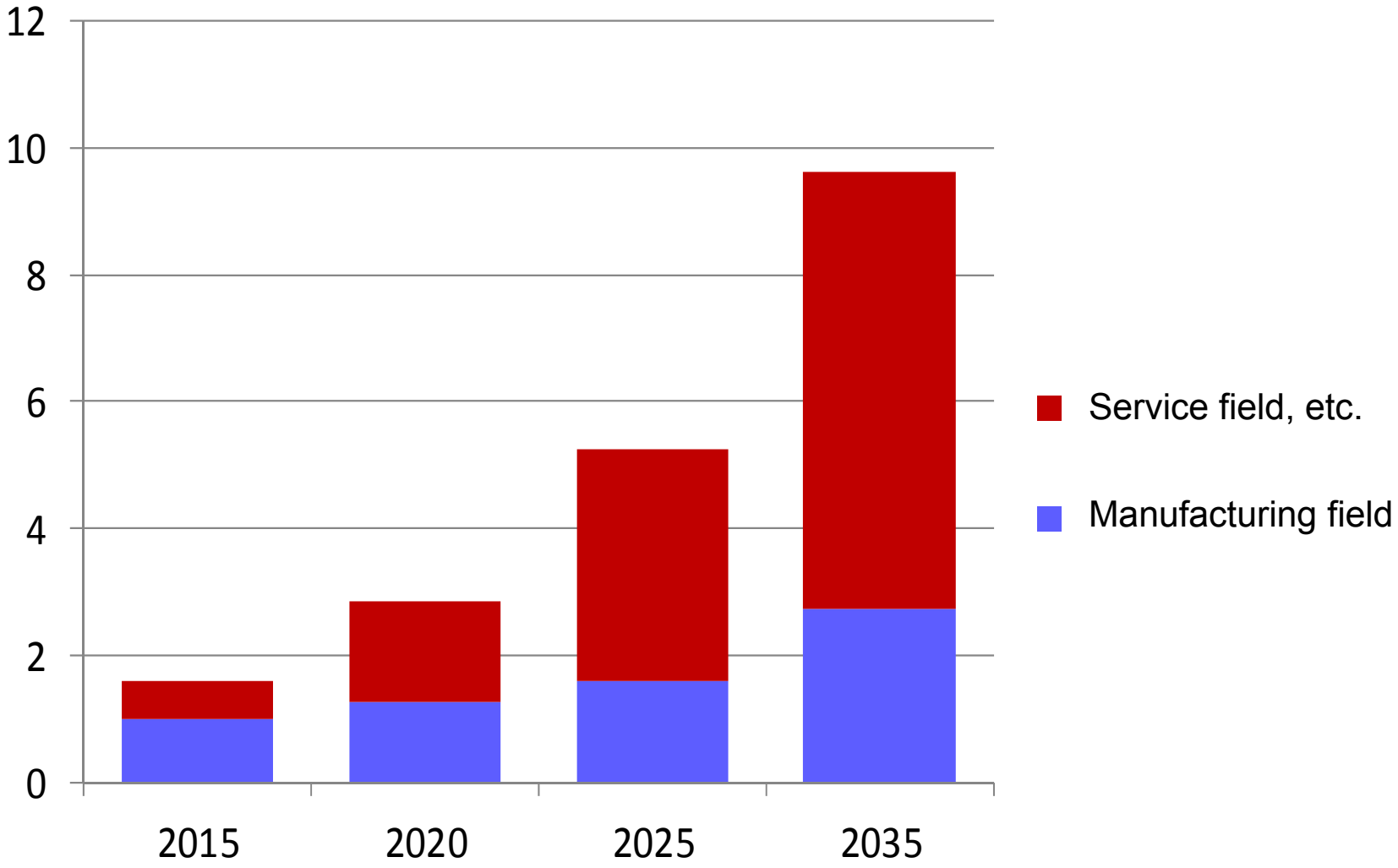
Robot Industry Growth Projection

(Unit: ¥trillion)



FY2010 METI/NEDO Future Robot Industry Market Survey

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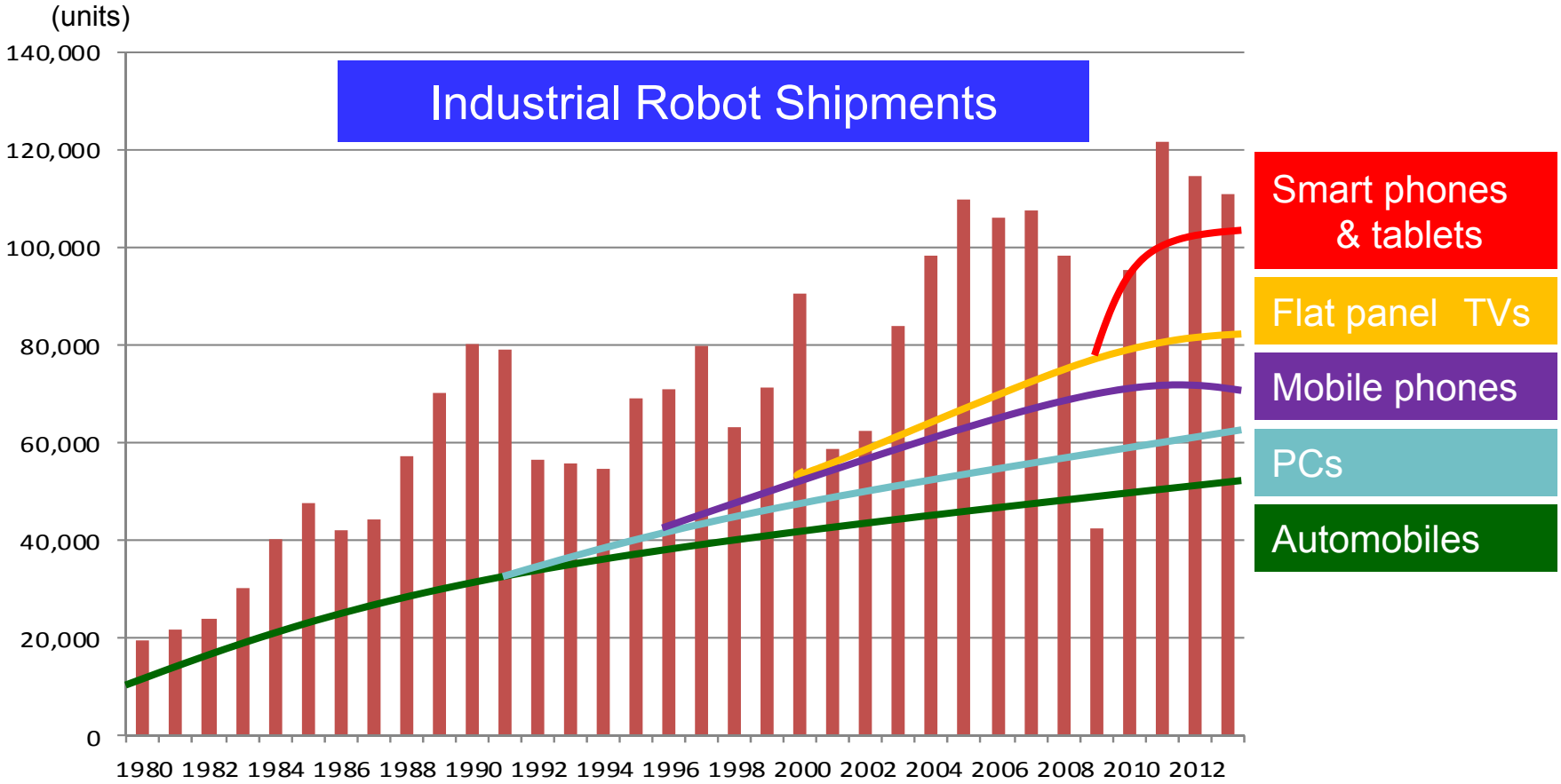
Growth Trends in Industrial Robot Market

The emergence and growth of devices with major impact on lifestyles are driving demand for industrial robots



Source: Japan Robot Association

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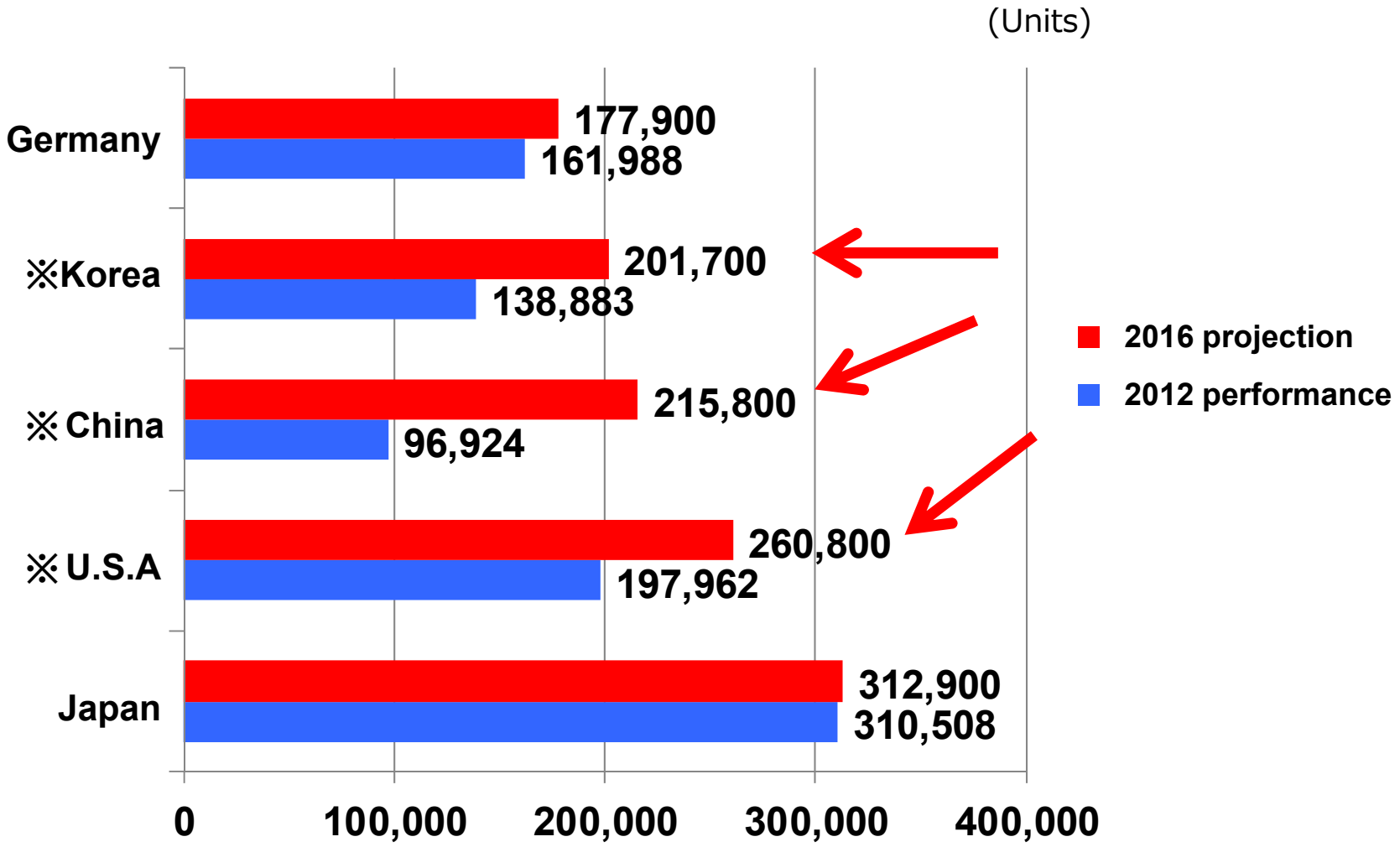
Industrial Robots in Operation Projection



Source: IFR

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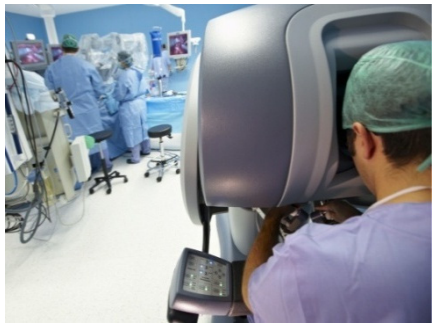
Potential of Professional Robots

High precision, high reliability

Surgical robots



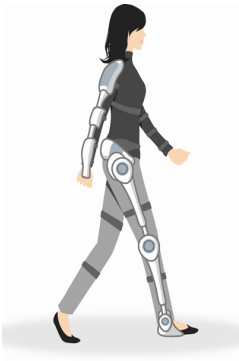
Heavy-work humanoid robots

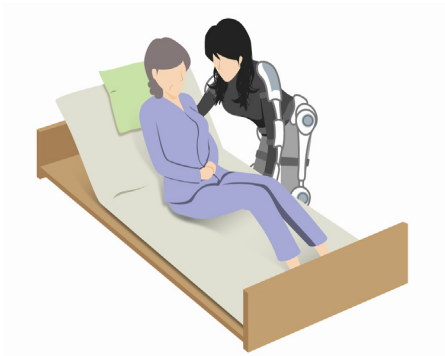
Source: DARPA Robotics Challenge

Aerospace

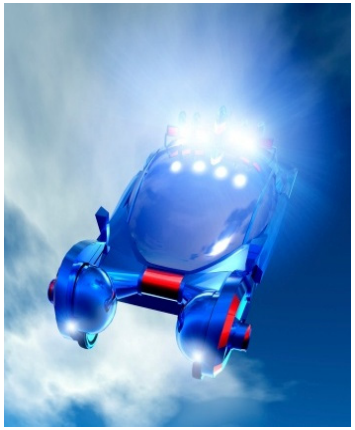
Specifications designed for each application

Healthcare & nursing robots





Next-generation mobility



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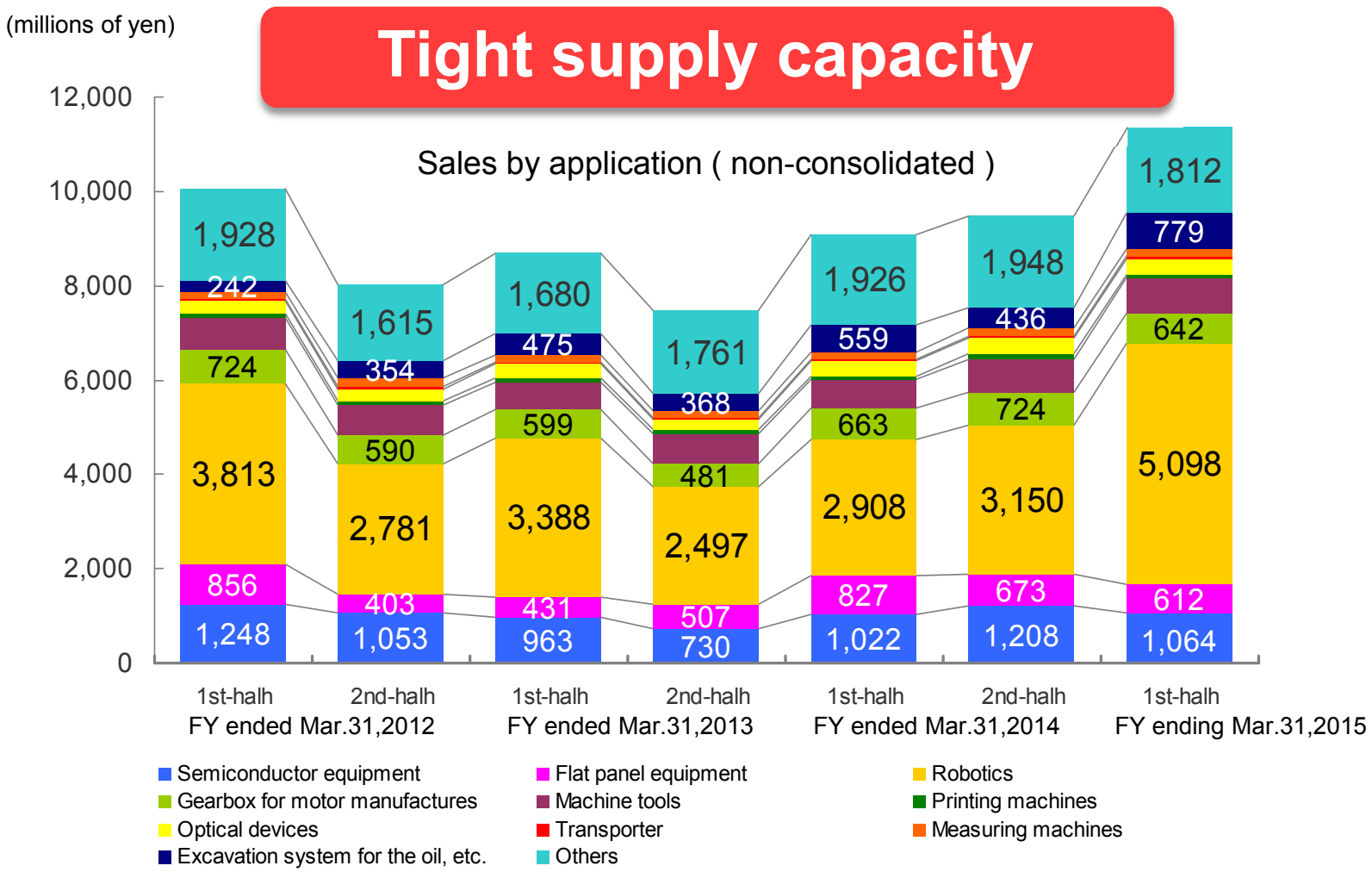
Sudden Increase in Demand for Robot Use



Regular production ceiling of ¥1.8 billion/month

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Response to Future Demand Increases

Harmonic Drive Systems

Hotaka Plant
capital investment

- **Investment to increase supply capacity**
- **New building to be completed March 2016**
- **Active introduction of automation**

Increase regular monthly production of the Harmonic Drive® high-precision control speed reducer

[Future]

40,000 units per month → 50,000 units per month → XXX units per month

Harmonic Precision

Investment to increase cross roller bearing production to match the regular monthly production capacity of the Hotaka Plant

Harmonic AD

Capital investment centered on in-house manufacturing of planetary gear reducers

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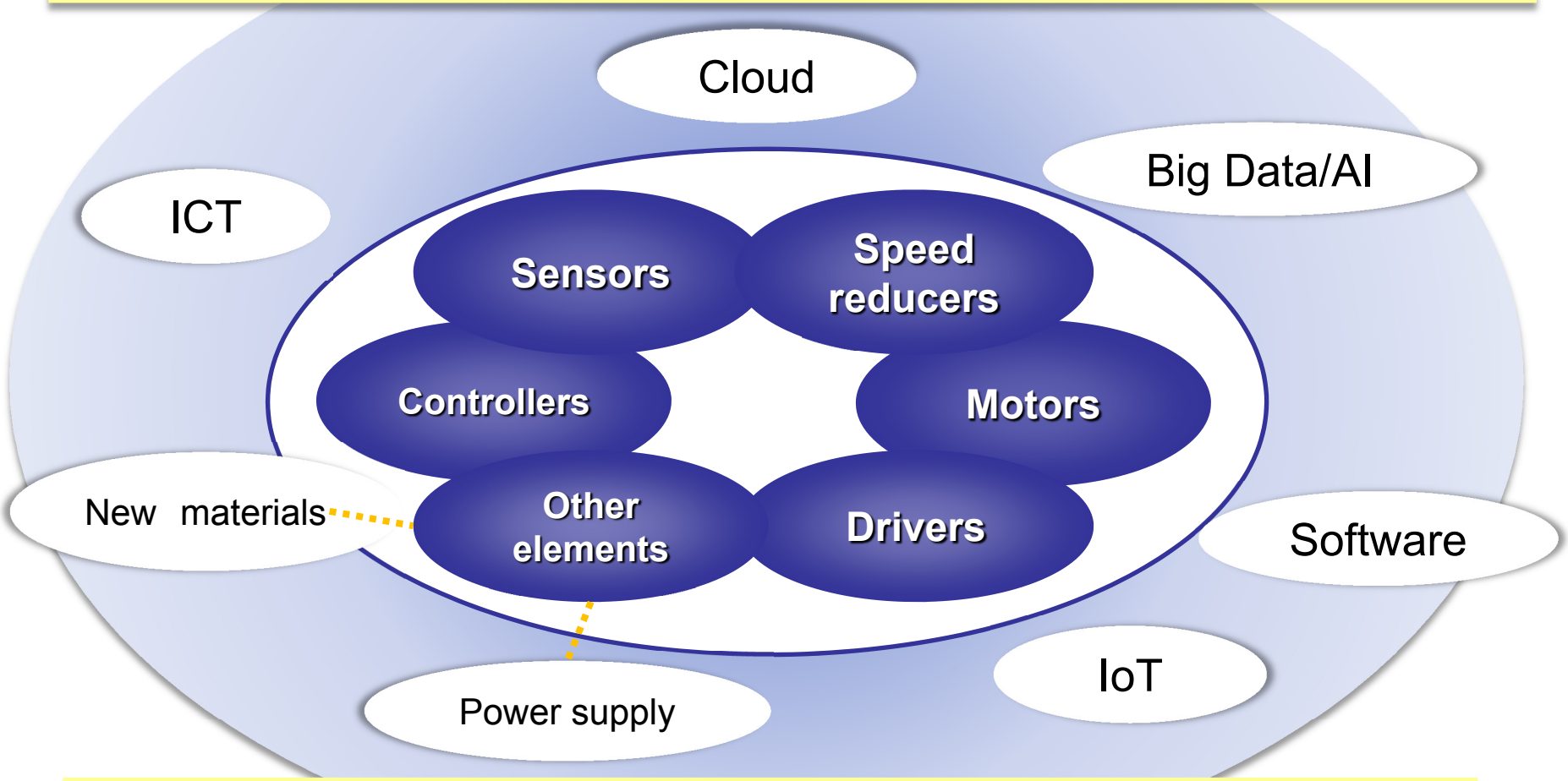
Total Motion Control

HDS Group business domain → **Provision of the value "total motion control"**



Affects the company's business field → **To smart robots**

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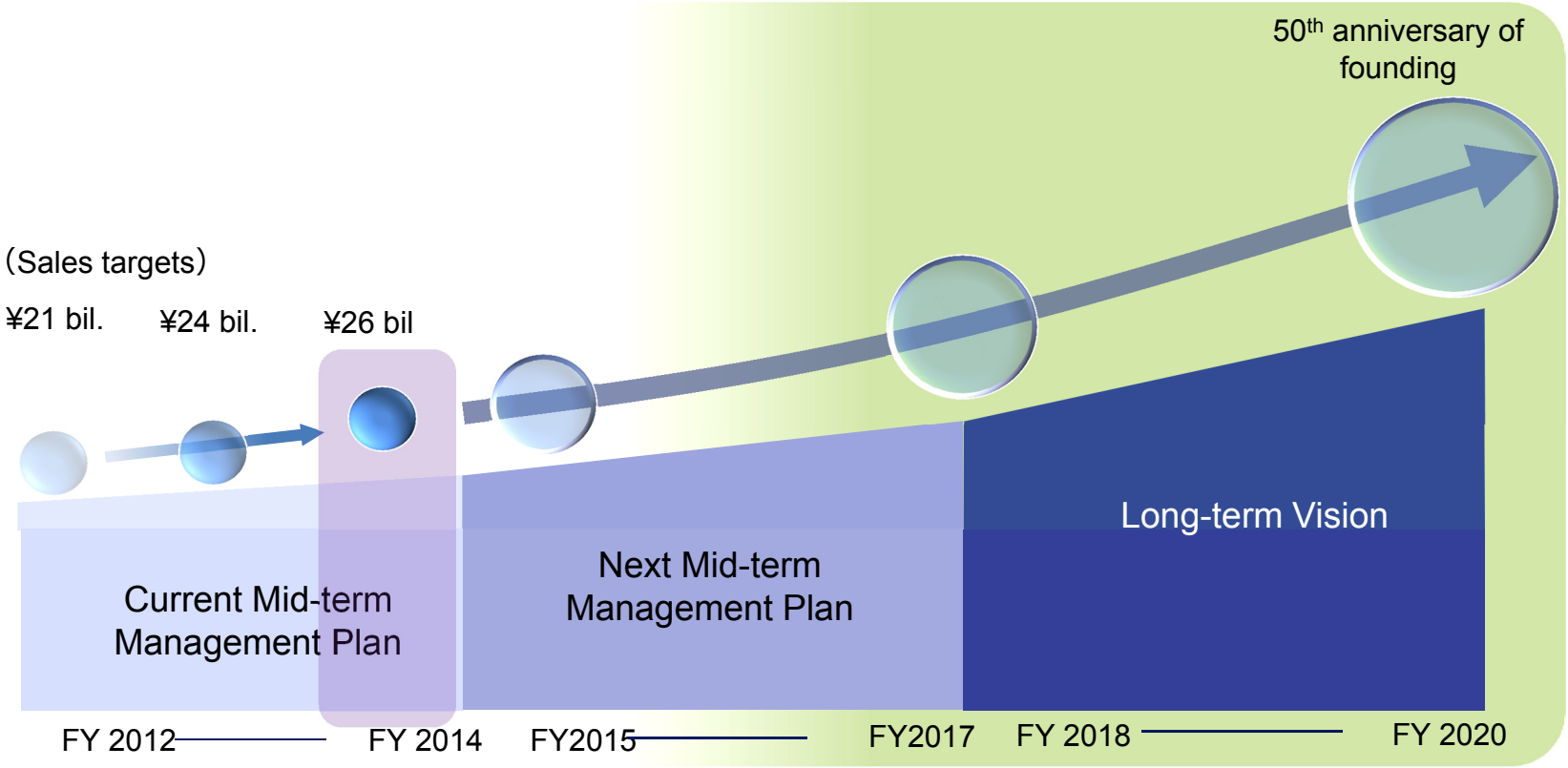
Envisioning Growth

On to a new growth stage



(Sales performance)

¥18.1bil. ¥21 bil.

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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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