Translation

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

KOHOKU

Securities code: 6524



Kohoku Kogyo is a leading manufacturer of lead terminals for aluminum electrolytic capacitors and parts for submarine optical communication.

Financial Results Materials

Fiscal Year Ended December 2024

Kohoku Kogyo Co., Ltd.

February 12, 2025

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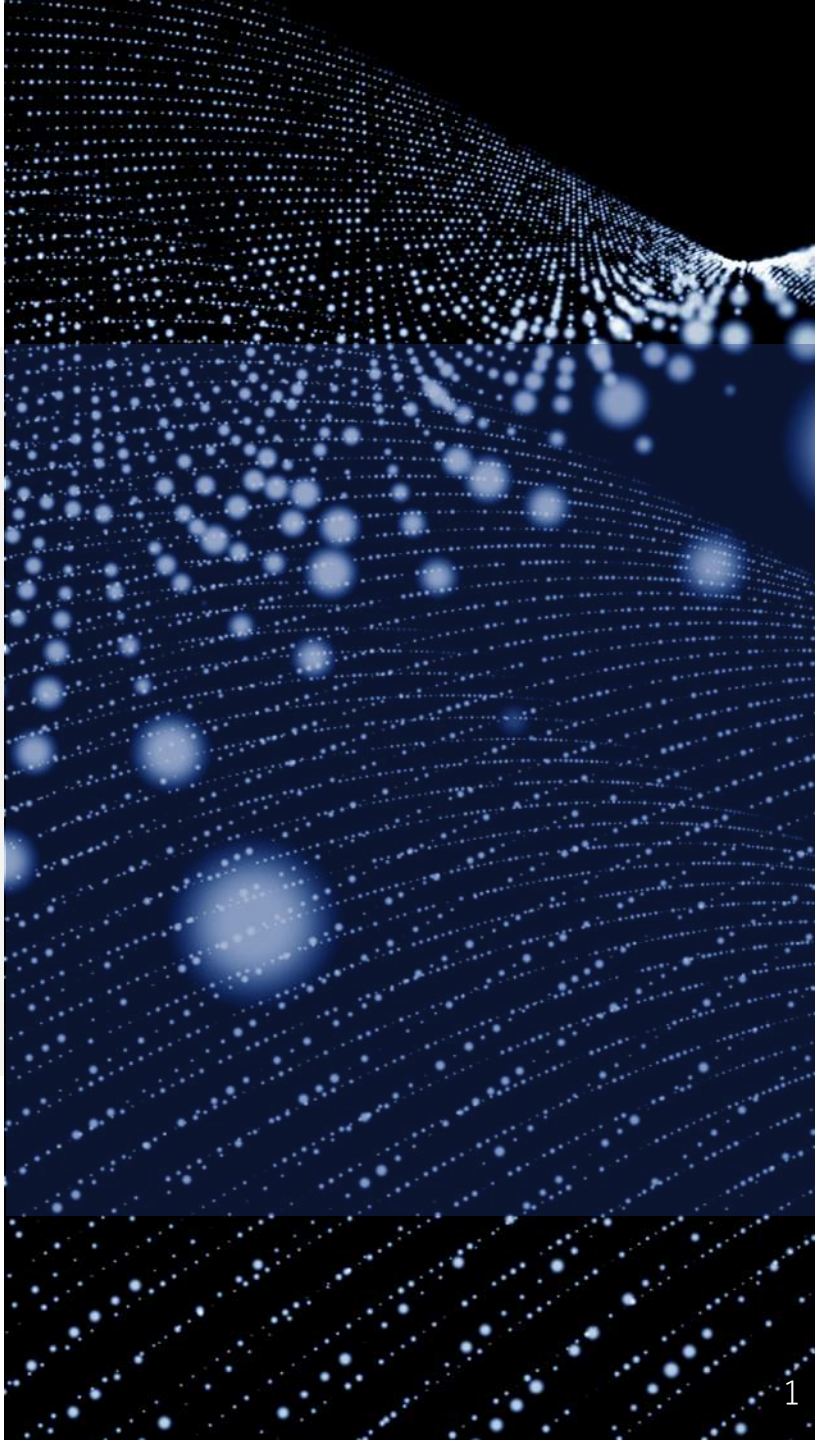


Ⅰ. Financial summary of FY12/2024 and Financial Forecast for FY12/2025

Highlights of Fiscal Year Ended December 2024

- **After bottoming out in Q4 of FY12/2023, performance has been on a recovery trend.**
- **Operating profit increased 40.1% year on year.**
- **Sales, ordinary profit and net profit reached record highs, surpassing the peak in 2022.**

Business Environment

- The submarine cable market saw temporary production adjustments, but was on an expansionary trend due to the resumption of investment in new cable projects.
- The automotive electronics market showed signs of recovery, thanks to the completion of inventory adjustments, the spread of eco-friendly vehicles, and the progress of advanced functions such as ADAS. However, since autumn, the company has been affected by factors such as the stagnation of the European EV market and slowing demand in China.
- The information and telecommunications equipment market was robust due to growing IT demand, particularly for AI servers in companies.

Performance (Q4 Cumulative)

- Sales increased 18.2% (2,451 million yen) year on year. Although there was a temporary adjustment in Q4, sales recovered steadily on a full-year basis.
- Operating income increased 40.1% (1,126 million yen) year on year. In addition to sales recovery in the two main businesses, profit improvement measures in the Lead Terminal Business were successful, resulting in a significant increase in profits.

Income Statement (Q4 Cumulative) Summary

Both main two businesses recovered significantly, with sales and operating profit increasing 18.2% and 40.1%, respectively year on year.

(Millions of yen)

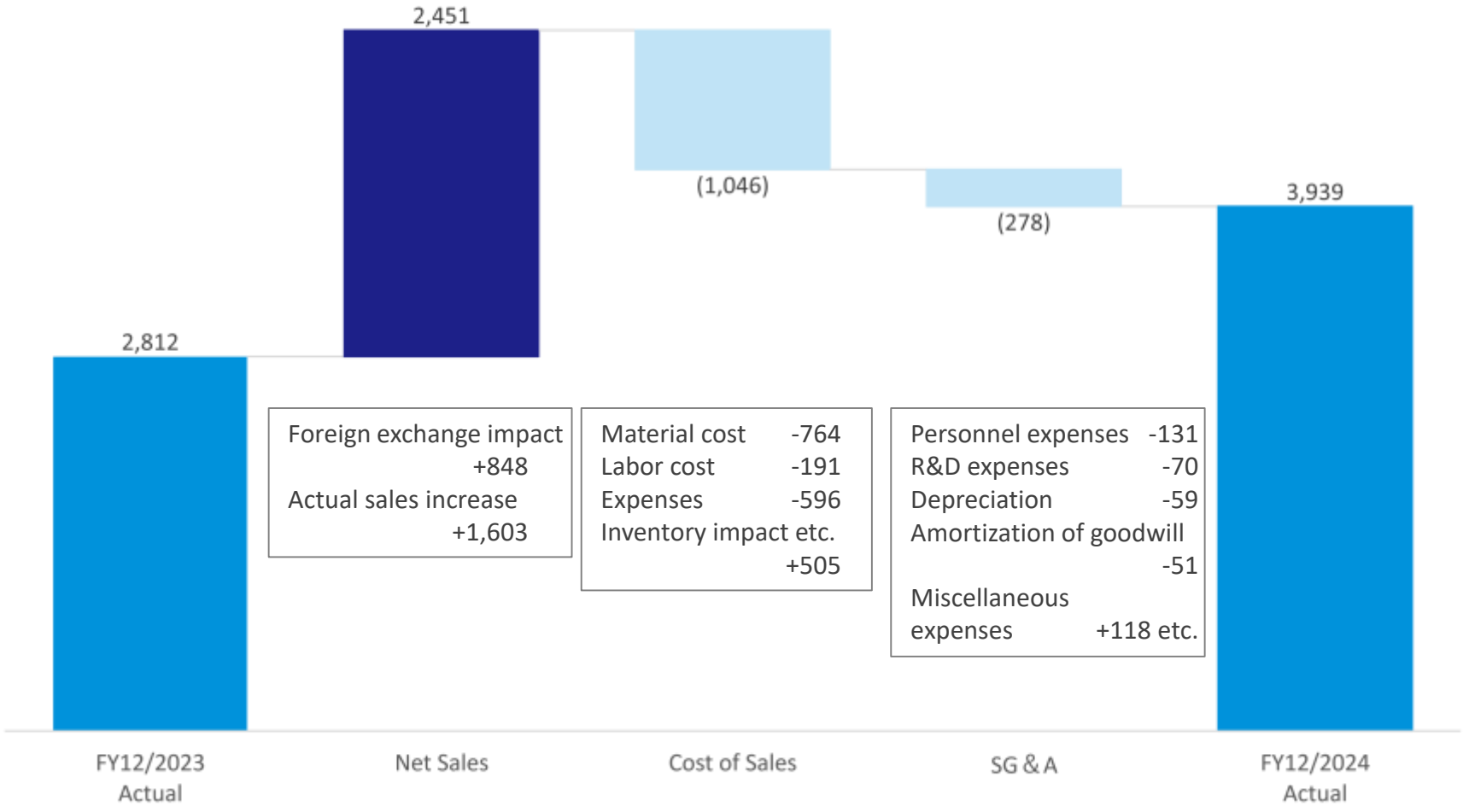
	FY12/2023	FY12/2024			FY12/2024					
	Q4 cumulative (Jan–Dec)	Q4 cumulative (Jan–Dec)	YoY change		Q1 (Jan–Mar)	Q2 (Apr–Jun)	Q3 (Jul–Sep)	Q4 (Oct–Dec)	QoQ change	
Net sales	13,472	15,924	+2,451	+18.2%	3,413	4,294	4,430	3,786	-643	-14.5%
Lead Terminals Business	7,400	8,403	+1,002	+13.6%	1,929	2,157	2,198	2,118	-80	-3.7%
Optical Components and Devices Business	6,071	7,520	+1,448	+23.9%	1,484	2,136	2,231	1,668	-563	-25.3%
Operating profit	2,812	3,939	+1,126	+40.1%	635	1,152	1,385	765	-620	-44.8%
Operating margin ratio	*20.9%*	*24.7%*	*+3.8pt*	—	*18.6%*	*26.8%*	*31.3%*	*20.2%*	*-11.1pt*	—
Lead Terminals Business	44	403	+358	+799.3%	-13	132	177	107	-70	-39.6%
Optical Components and Devices Business	2,767	3,536	+768	+27.8%	649	1,020	1,208	658	-550	-45.5%
Ordinary profit	3,152	4,856	+1,703	+54.0%	1,130	1,622	572	1,530	+957	+167.2%
Profit attributable to owners of parent	1,904	3,252	+1,348	+70.8%	724	1,066	433	1,027	+594	+137.2%
Exchange rate (average for the period)	140.66yen/$	151.69yen/$			148.62yen/$	155.86yen/$	149.69yen/$	152.37yen/$		

- Sales and operating profit in Q4 fell short of revised plans due to temporary inventory adjustments by customers in the Optical Components and Devices Business.
- Ordinary profit and quarterly net income exceeded the plan due to foreign exchange gains.

Factors of Increase/Decrease in Operating profit (Q4 Cumulative) (YoY basis)

Significant increase in sales and improved production efficiency etc. absorbed the increase in material costs and other costs, resulting in a large increase in profits of 40.1% year on year.

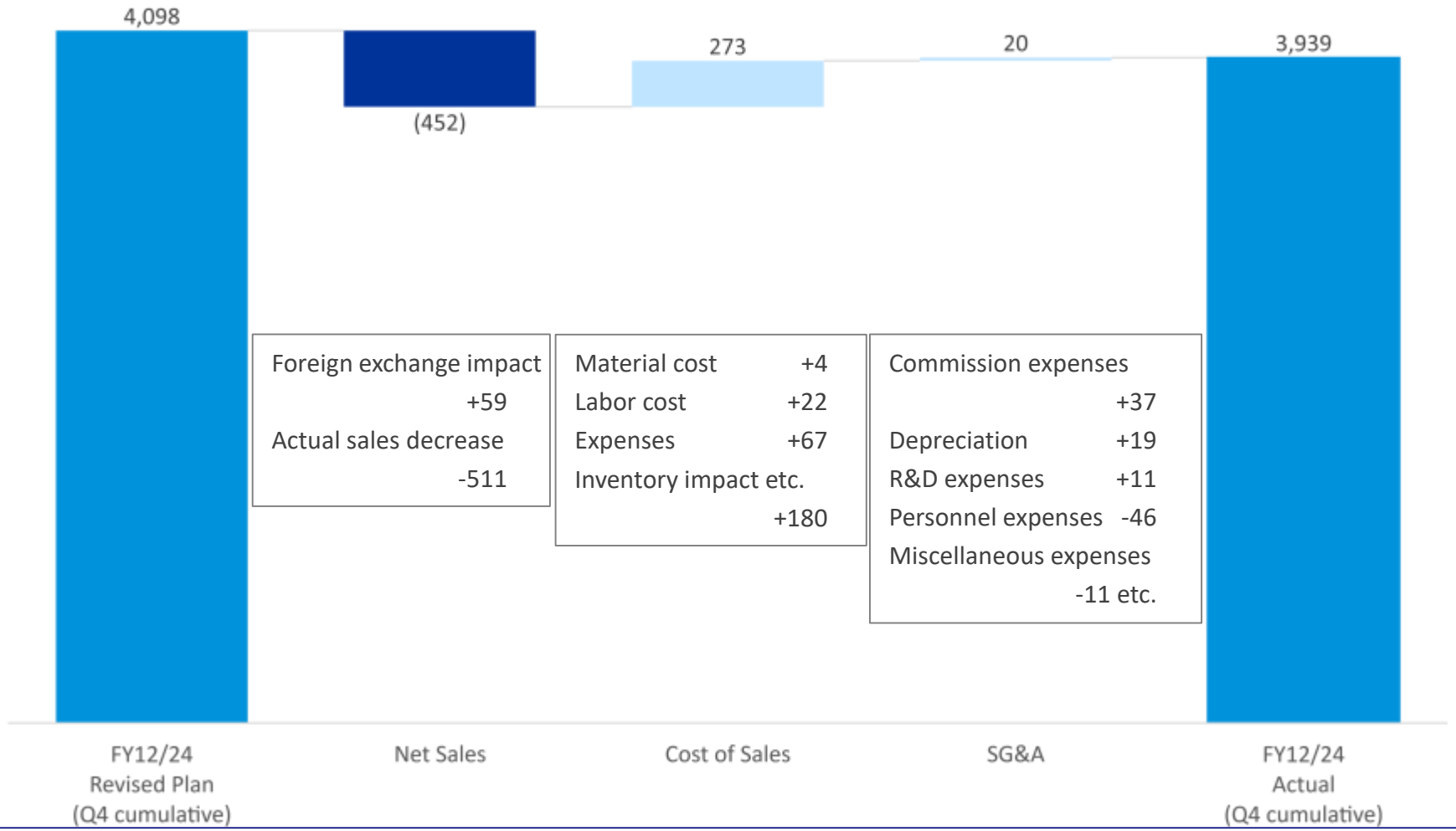
(Millions of yen)



Factors of Increase/Decrease in Operating profit (Q4 Cumulative) (vs. Revised Plan)

Operating profit fell slightly short of plan due to a temporary decline in sales in Q4.

(Millions of yen)



Summary of Balance Sheet/Statement of Cash Flows

(Millions of yen)

Balance Sheet	End of FY12/2023	End of FY12/2024	Increase /Decrease	Major changes
Current assets	16,735	18,331	+1,596	Notes and accounts receivable - trade, and contract +562, Raw materials and supplies +322, Securities +1,801, Cash and deposits -1,537, etc.
Non-current assets	8,237	10,353	+2,116	Acquired land in front of Maibara Station +612, Machinery, equipment and vehicles, net +281, Goodwill +291, Investment securities +470, etc.
Total assets	24,973	28,684	+3,711	
Current liabilities	2,522	2,945	+422	Accounts payable - trade +224, Income taxes payable +665, Current portion of long-term borrowings -309, Short-term borrowings -196, etc.
Non-current liabilities	2,391	2,309	-81	Long-term borrowings -208, Lease liabilities +58, Deferred tax liabilities +47, etc.
Total liabilities	4,913	5,254	+340	
Total net assets	20,059	23,430	+3,371	Retained earnings +2,712, Foreign currency translation adjustment +671, etc.
Total liabilities and net assets	24,973	28,684	+3,711	

Cash Flow Statement	FY12/2023	FY12/2024	Major items of FY12/2024
Operating cash flow	3,577	3,836	Profit before income taxes +4,856, Increase in trade receivables -640, Increase in inventories -306, Income taxes paid -888
Investing cash flow	-1,033	-3,115	Payments into time deposits -956, Purchase of investment securities -806, Purchase of property, plant and equipment -1,433
Free cash flow	2,544	721	
Financing cash flow	-1,577	-1,636	Dividends paid -539 Repayments of long-term borrowings -626
Net increase (decrease) in cash and cash equivalent	1,076	-639	
Cash and cash equivalent at end of period	10,439	9,799	

Financial Forecast for FY12/2025

In addition to the steady Optical Components and Devices Business, a significant recovery in profitability is expected in the Lead Terminals Business.

(Millions of yen)

<Exchange Rate Sensitivity> * Net Sales 80 million yen/1 yen Operating profit 30 million yen/1 yen	FY12/2024 Actual	FY12/2025 (plan) First half	Second half	Full-year forecast	YoY change	YoY change (%)
Net sales	15,924	8,344	9,574	17,919	+1,995	+12.5%
Lead Terminals Business	8,403	4,498	4,799	9,298	+894	+10.6%
Optical Components and Devices Business	7,520	3,846	4,775	8,621	+1,100	+14.6%
Operating profit	3,939	1,920	2,665	4,586	+646	+16.4%
Operating margin ratio	*24.7%*	*23.0%*	*27.8%*	*25.6%*	*+0.9pt*	-
Lead Terminals Business	403	326	420	746	+343	+85.1%
Optical Components and Devices Business	3,536	1,594	2,245	3,839	+303	+8.6%
Ordinary profit	4,856	1,623	2,850	4,474	-382	-7.9%
Profit attributable to owners of parent	3,252	1,082	1,924	3,006	-245	-7.6%
Net income per share (yen)	120.50	150.00	150.00	150.0		
Exchange rate (average for the period)	151.69yen/$	150.00yen/$	150.00yen/$	150.00yen/$		

● Basis for financial forecast

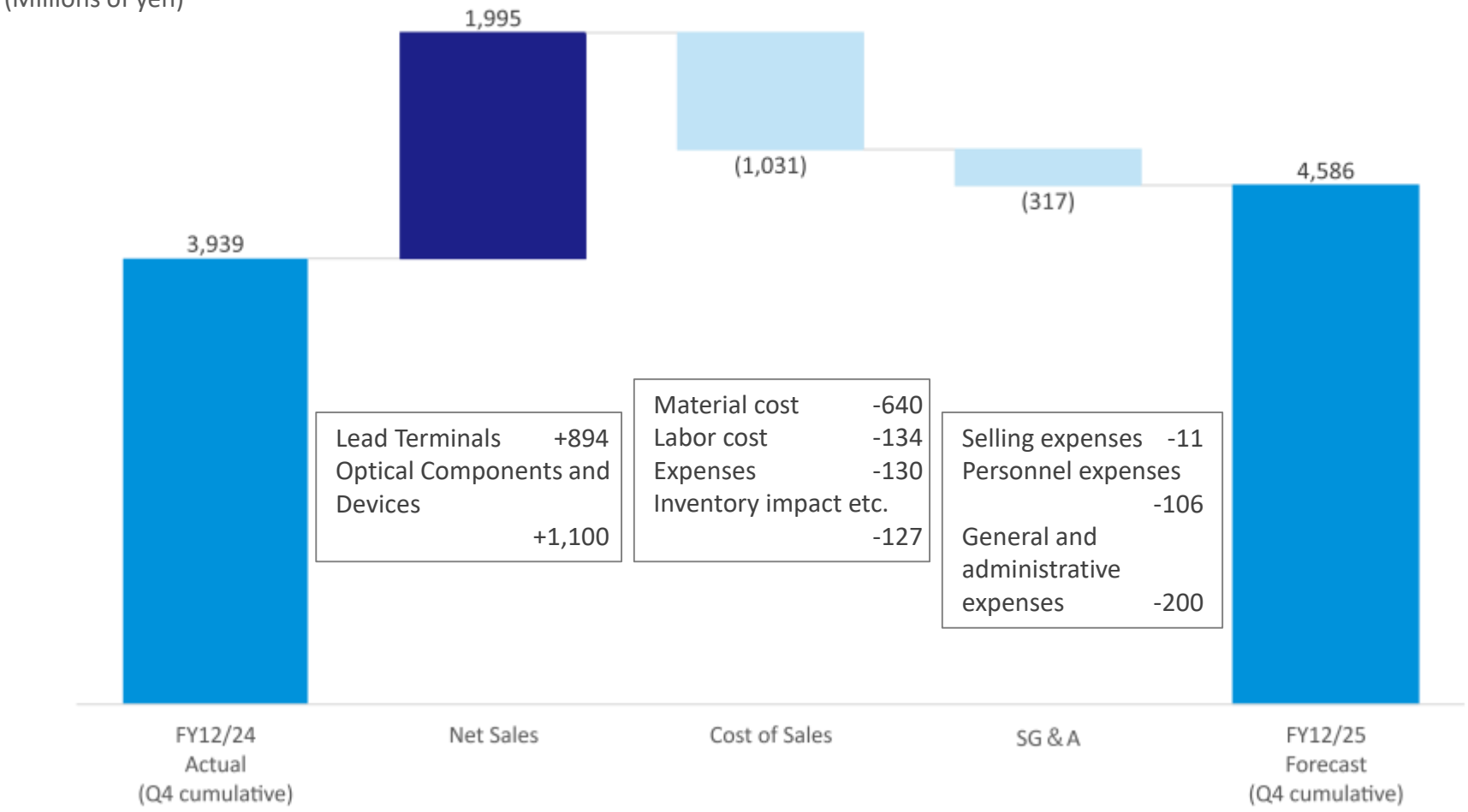
- Lead Terminals Business : Expect continued growth in the generative AI and data center markets and a recovery in the automotive electronics market from spring onwards.
- Optical Components and Devices Business : In addition to an increase in submarine cable projects and the trend toward multiple fiber cables, orders for FR products* for data centers are expected to increase rapidly.

* ＜Exchange rate sensitivity＞Estimated value assuming that the fluctuation of 1yen against 1 dollar continues for 1 year.
* FR product is an optical element (Faraday rotator) that rotates the polarization direction of light.

Factors of Increase/Decrease in Operating profit (FY12/2025 Forecast)

Sales and operating profit is expected to increase supported by increased sales in the Lead Terminals Business and Optical Components and Devices Business.

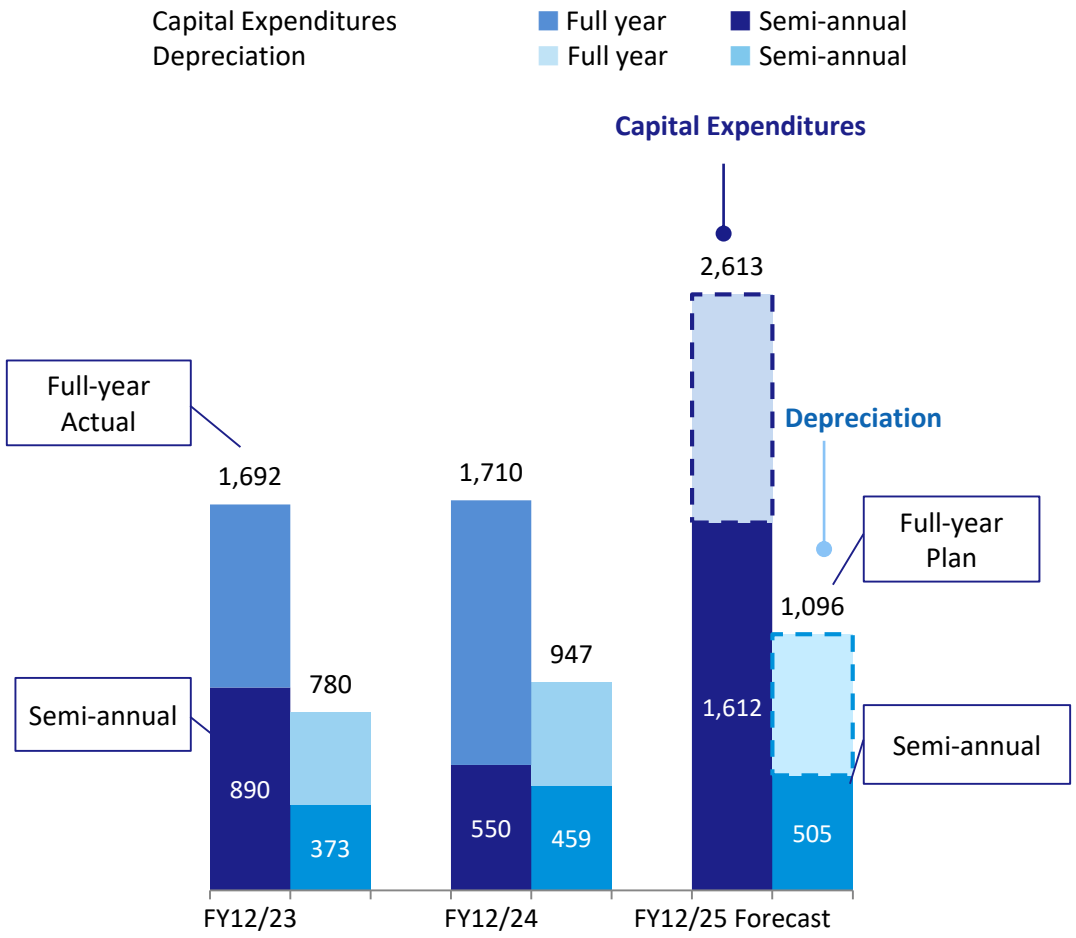
(Millions of yen)



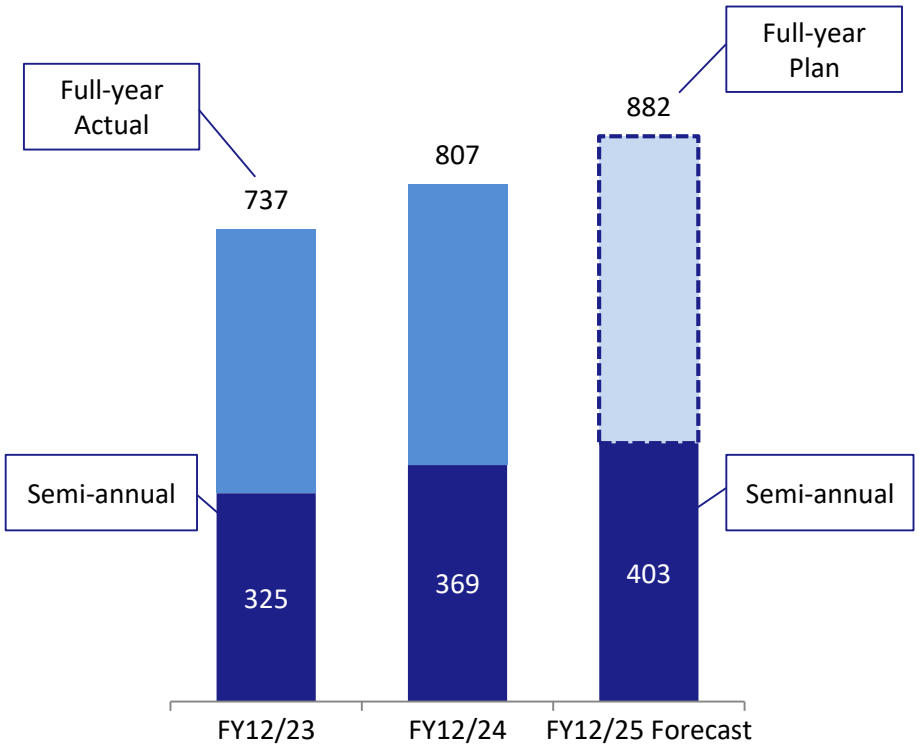
Capital Expenditures, Depreciation, and R&D Expenses

R&D expenses progressed almost in line with the initial plan.
Regarding capital investment, delayed investment in the Optical Components and Devices Business will be recorded in FY12/2025.

Capital Expenditures and Depreciation（Millions of Yen）



R&D expenses（Millions of Yen）



Ⅱ. Medium-Term Management Plan Growth Strategy

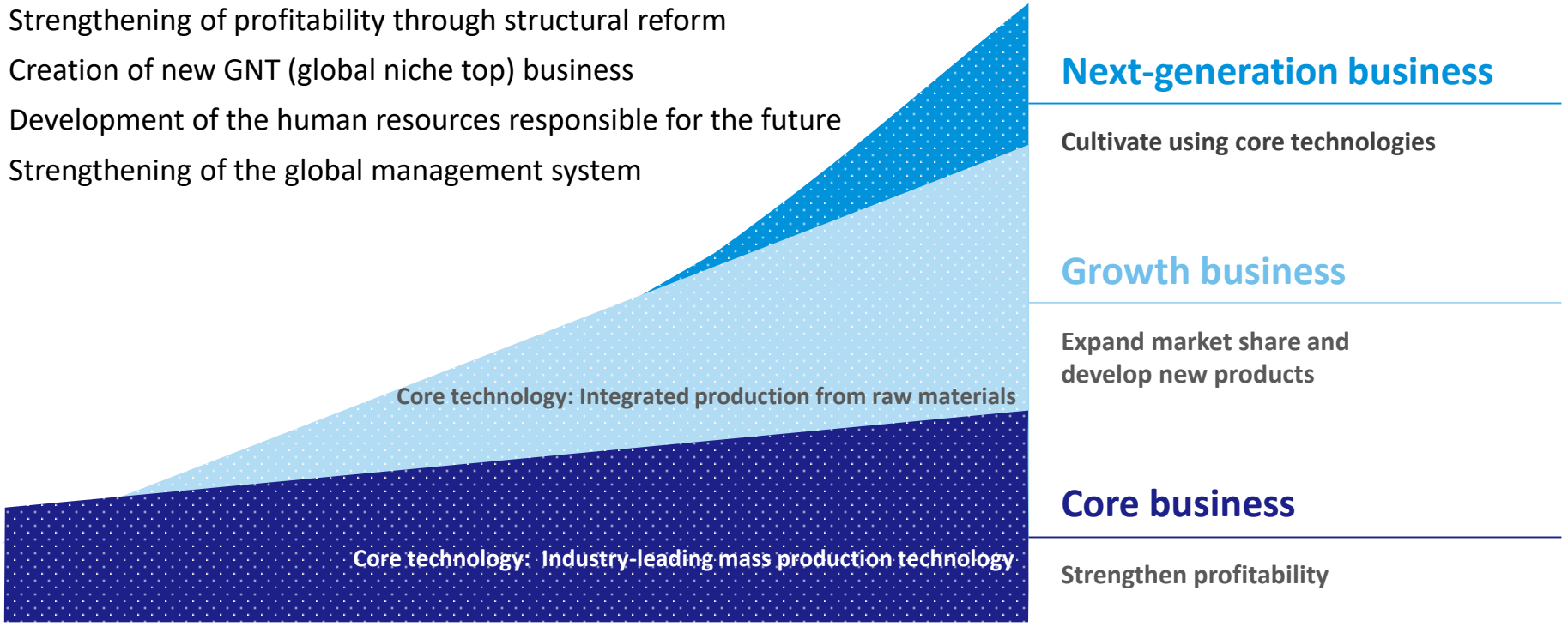
Basic Medium-Term Management Policy

Management Vision

We will carry out research and development, technology development, etc. that contribute to the realization of a one-of-a-kind company and build a highly profitable business.

Basic Medium-Term Management Policy

- Expansion of business scale through market development
- Strengthening of profitability through structural reform
- Creation of new GNT (global niche top) business
- Development of the human resources responsible for the future
- Strengthening of the global management system



Review of FY12/2024

	Basic Medium-Term Management Policy	Priority Measures	Action items, KPI	Results for FY12/2024
Lead Terminals Business	Expansion of business scale through market development	● New products(include Barr-Free type) adoption increase	● Goal of sales ratio of new products 30% in FY12/2026	●2024 Actual: 15.4%
		● Deepen in Chinese market and enhancing sales ● Focusing on Hybrid type, EDLC	● Maintain 95% market share for Automotive and increase global sales	●Maintained an estimated 95% share of the automotive market (drive system) ●Strengthened sales expansion of high-performance products for automotive (drive system)
	Strengthening of profitability through structural reform	● Optimizing global production system (Optimization in terms of supply chain, production in consumption areas, prices, and costs)	● Capacity increase and improve production efficiency in overseas production site (Head office factory specialize in high – performance products) ● Responding to increase production of hybrid capacitors by Japanese customers	●Increasing production capacity: Dongguan factory in China (positioned as the main factory) ●Improving productivity: Increased yield, improved process and improved OEE ●Deteriorating economic situation prevented full-scale increase in hybrid capacitor production
		● Development of high value-added products using laser welding technology	● Development in 2024, start mass production in 2026	●Shifted from development at outsourced company (ARIEL) to prototyping at headquarters
		● Development of high – performance lead terminals(Contribute to improvement in characteristics and yield)	● OEE (Overall Equipment Efficiency) 85% ● Efforts to improve ROIC	●Reduced manufacturing costs by increasing yield, improving process and improving OEE (83.4%) ●Improvement measures and development of low resistance products
Optical Components and Devices Business	Expansion of business scale through market development	● Sales expansion through the provision of one-stop solutions related to the development of a platform for next-generation submarine cables	●Sales ratio of new products such as composition and modularization: 20% in FY12/2026	●Samples shipped as scheduled in Q4/2024
		● Research and development of new core technologies and applications	● R&D expenses: 650 million yen in FY12/2026	●2024 Actual: 696 million yen
	Strengthening of profitability through structural reform	● Improvement of productivity by automating production	● 2024: Stage 2 investment for automation ● 2025: Automate 80% of optical isolator assembly process	●Investment in automation to be delayed until June 2025, with 80% automation planned by the end of the fiscal year
		● Strengthening based on multi-lining of production	● 2024: Consideration of concept ● 2026: Start of second base	●Considering continuation

Mid-term Management Indicators until 2027

Further enhance the competitiveness of the two main businesses and put a third business on a growth track.

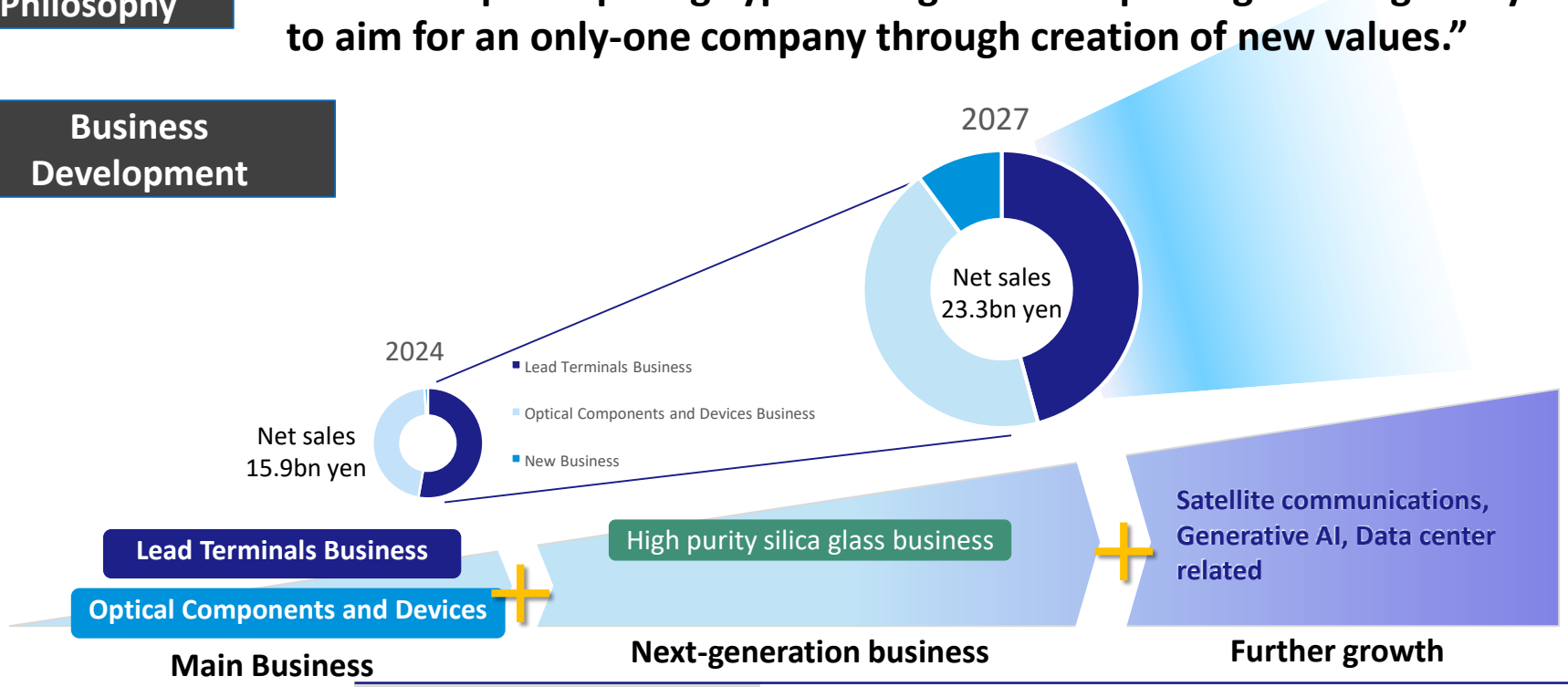
		FY12/2024 Results	FY12/2027 Medium-term management plan
Growth	Net Sales	15.9 billion yen	23.3 billion yen
Profitability	Operating profit	3.9 billion yen	7.3 billion yen
Investment	Capital Expenditures	Past three years 4.3 billion yen	Next three years 9.4 billion yen
Efficiency	ROIC	12.2%	16%
	ROE	15.0%	18%
Shareholder Return Policy		Goal of Consolidated Dividend payout ratio 30% DOE 3% or more	Goal of Consolidated Dividend payout ratio 30% DOE 3% or more

Vision and Business Portfolio

Management Philosophy

“Practice all-participating-type management respecting rich originality to aim for an only-one company through creation of new values.”

Business Development



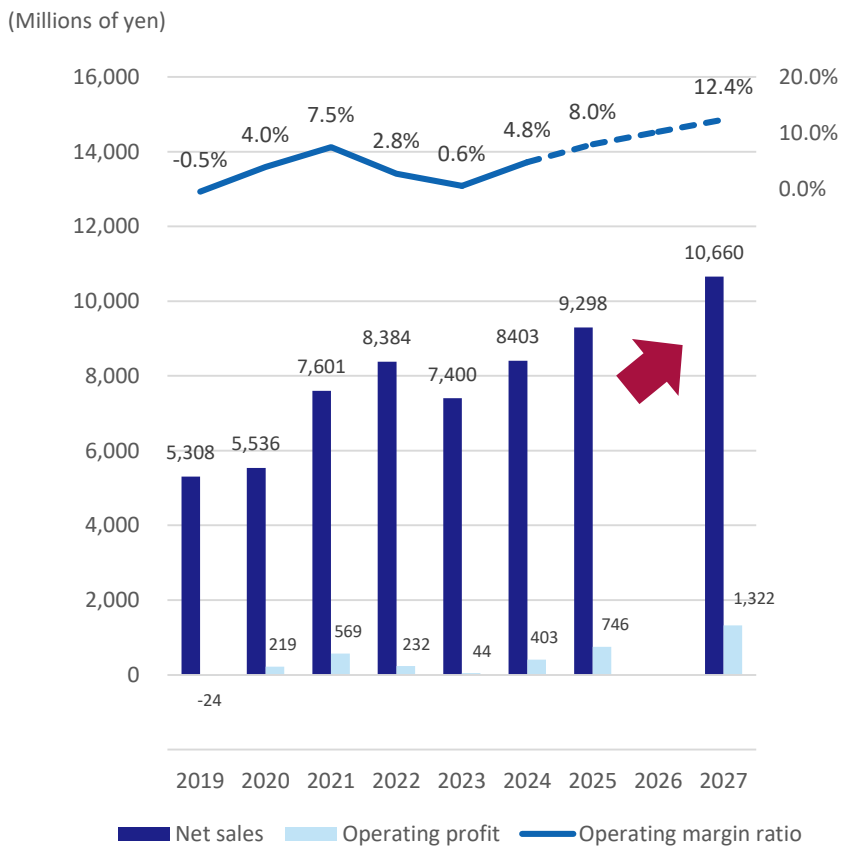
Strengthening the Management Structure

Strengthening Governance	● Transition to a company with an audit and supervisory committee, strengthen sustainability activities ● Strengthen the structure for the prime market
Maibara New Base Concept	● Core technology base for developing the third and fourth pillars ● Increase customer access and adoption through improving convenience
Others	● Strengthen efforts to improve ROIC by segment ● Increase employee motivation, improve performance awareness, etc. ● Strengthen sales structure for Lead Terminals, Optical Components and Devices, etc.

Image of performance of two main business

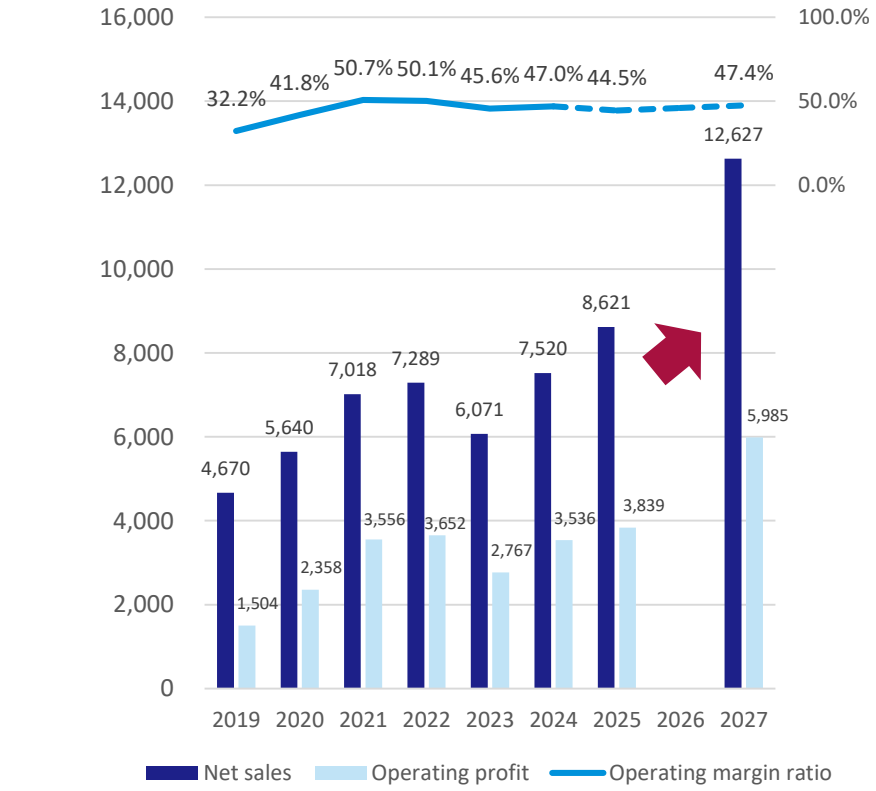
Aiming to increase sales by approximately 1.4 times in three years through growth in the two main businesses as well as contributions from the high-purity silica glass (SSG®) business.

Lead Terminals Business



Optical Components and Devices Business

(Includes high-purity silica glass business, etc.)



Strategy and Action plan (Lead Terminals)

Strengthen sales structures to anticipate changes in the market and improve production efficiency to expand market share and improve profitability.

Basic Medium-Term Management Policy	Priority Measures	Action items, KPI
Expansion of business scale through market development	● Strengthen marketing by collecting market and customer information ● Price adjustment for existing products and strengthening sales of high value-added products ● Development of high-value-added lead terminals ● Development of high value-added products based on core technologies centered on laser welding	● Expand business with a focus on overseas markets, including automobile and generative AI ● Strengthen sales and expansion structures in Asia ● Increase sales of burr-free products (strengthen adoption of newly designed aluminum electrolytic capacitors), strengthen products to improve leakage current, and strengthen sales of low resistance products to target a high value-added product sales ratio of 30% ● Mass production of new products for EDLC and lithium-ion capacitors using laser welding technology to begin in 2026
Strengthening of profitability through structural reform	● Improve OEE and strengthen cost control by solving process issues (changeovers, repairs, small outages) ● Strengthen education and training aimed at achieving zero defects ● Ensure material quality ● Improve QCDS by supporting and developing existing suppliers ● Promote multi-sourcing of suppliers ● Make efforts to improve ROIC by segment	● Improve manufacturing cost ratio (2024 actual result 79.5% → 2027 71.2%) ● Improve overall equipment effectiveness (OEE) at all factories by improving yields, strengthening process improvements, reducing changeover losses, etc. (target: 90% achievement in FY2027) ● Improve the manufacturing process through multi-skilling and the use of IOT ● Strengthen skills transfer education to develop young employees ● Raise quality level through training and guidance with overseas material manufacturers and stabilizing procurement

Strategy and Action plan (Optical Components and Devices)

Aim to further increase sales and profits through strengthening partnerships with customers, automation, and multi-line operations.

Basic Medium-Term Management Policy	Priority Measures	Action items, KPI
Expansion of business scale through market development	● Strengthen technical support for customers: Evolving from "customer" to "partner"	● Strengthen technical collaboration with customers and, together with pricing strategies, expand market share to over 60%
	● Research and development of new core technologies and application fields	● Research and development with a view to future multi-core fibers ● Development of high-speed optical switches for generative AI and data center demand ● Develop the space field (optical devices), generative AI, and data center markets (high-speed optical switches, optical components)
Strengthening of profitability through structural reform	● Improve productivity through production automation	● 2025: Introduce the optical isolator assembly automatic machine (No. 2)
	● Strengthen production through multi-line	● 2025: Increase the automated production ratio in Sri Lanka to 80% and establish a multi-line system ● 2026～: Start establishing second base

Mid-term Plan　Common issues and non-financial initiatives

Strengthening our structure for sustainable, stable growth with a long-term perspective.

In March 2025, the Company will transition to a company with an audit and supervisory committee and strengthen our governance structure.

Other Initiatives

- Functionalization of the PDCA cycle for management indicators (management goals/KGI/KPI/organizational goals)
- Sharing domestic and international environmental analysis (economic analysis, market analysis, performance analysis, financial analysis, etc.) and supporting the implementation of various strategies
- Identifying and developing global talent
- Renewal of personnel management system and personnel system reform
- Strengthening response capabilities for risk management, compliance, and BCP
- Developing a calculation program for greenhouse gas emissions to comply with Scope 3
- Creating a comfortable working environment for employees (on-site safety measures, strengthening security, etc.)

New base concept in front of Maibara Station

Acquired approximately 14,000 square meters of business land at the east exit of JR Maibara Station.

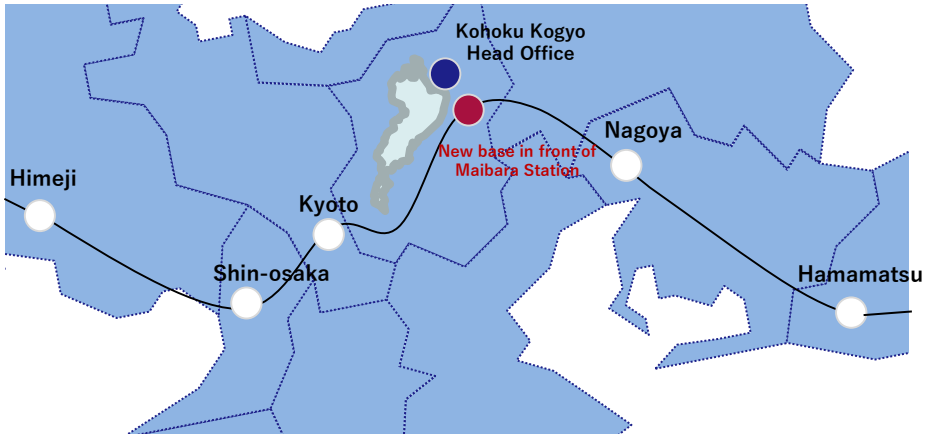
Purpose

- Taking advantage of its convenient location, just two minutes' walk from Maibara Station on the Shinkansen line, the facility will expand its recruitment of engineers and other staff and serve as a core base for next-generation technology

Use

- Planned to be used as a research and development center for next-generation high-purity silica glass business, PLZT devices, etc., and as an office for administrative departments

Using the Shinkansen greatly expands the commuting area



Commutable from Hyogo Prefecture in the west and Shizuoka Prefecture in the east.
Half-price subsidy for Shinkansen commuter fares from Maibara City.



- First phase of construction is scheduled to be completed and operations to begin in 2027
- The building design and floor area are currently undecided.
- Land acquisition: Approx.0.6 billion yen (already recorded in FY12/2024) (5.4 billion yen recorded in the medium-term plan as construction costs)

<Third Pillar> Progress of the High Purity Silica Glass "SSG®" Business

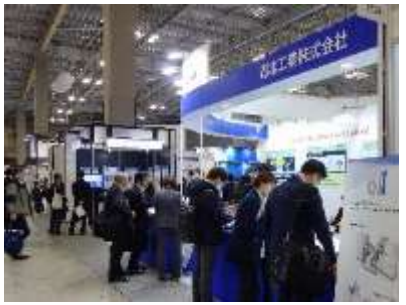
First exhibit at SEMICON Japan, great response from all quarters.

<SSG® product inquiries status>

- Inquiries and sample requests from major US and Japanese semiconductor manufacturing equipment manufacturers and silica glass manufacturers
- Expected to contribute to improving the performance of semiconductor-related equipment and energy conservation in various industrial equipment

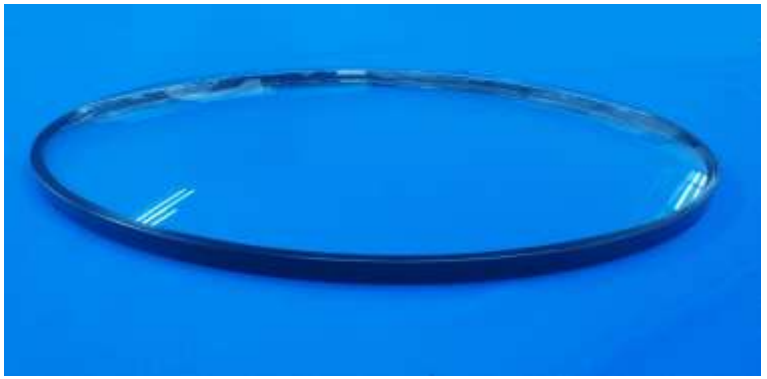
24'12/11-12/13 Exhibited at SEMICON Japan 2024!



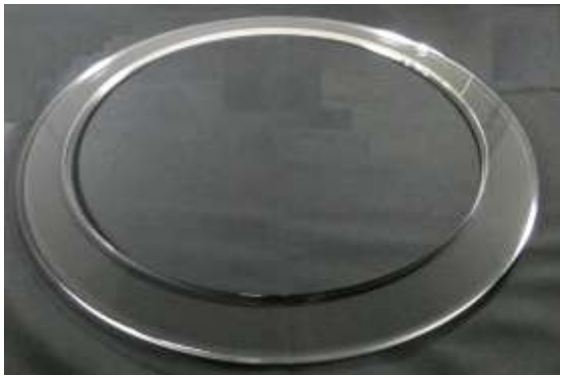


<Examples of various high-purity quartz glass products used in semiconductor manufacturing equipment>

Significantly expanding the lineup of shapes for semiconductor-related equipment, industrial machinery, etc.



Semi-dome shape for semiconductor manufacturing equipment, etc.



Large ring for semiconductor manufacturing equipment

Mid-term plan for high-purity silica glass business

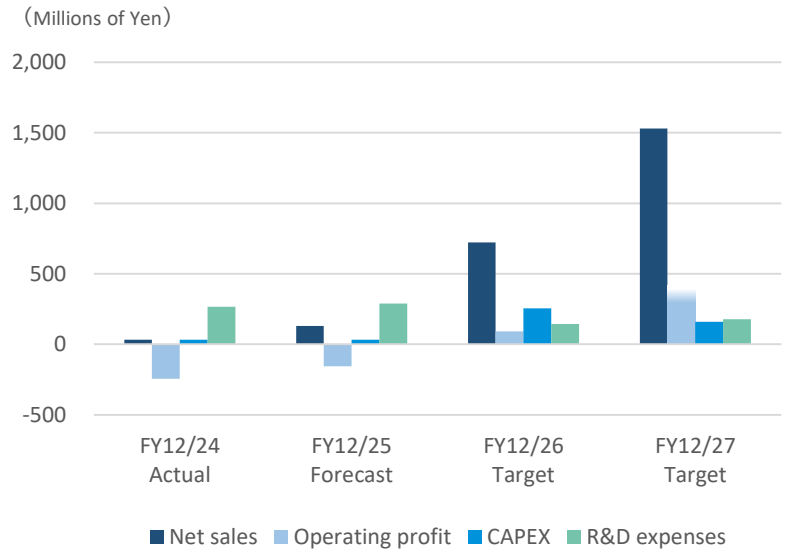
Strengthen business infrastructure and establish a medium- to long-term sales growth trend by 2027.

<Implementation Items and Issues in the medium-term plan>

Theme	Implementation Items and Issues
Strengthening development capabilities	Shorten development time by improving mold design, prototype simulation technology, etc.
	Expand lineup of shapes to meet diversifying applications
Strengthening sales and marketing	Strengthen sales structure for global customers
	Participate in exhibitions and provide technical support to customers
Production System	Expand sintering furnace and other production equipment
	Establish BCP system

<Performance targets in the medium-term plan>

- Plans for annual sales of 1.5 billion yen by 2027
- 2025-2027, invest approx.500 million yen in capital equipment and 600 million yen in R&D expenses, while also increasing its workforce.
- Mid- to long-term goal: sales of 10 billion yen or more



Creation of GNT (Global Niche Top) businesses

Through technological collaboration, aim to open up new fields and achieve long-term growth.

KOHOKU

Lead Terminals | Optical Components and Devices | High-purity silica glass

- Satellite communications field
- Semiconductors and electronic components
- Medical equipment, industrial equipment
- Next-generation optical communications
- Advanced information processing

ARIEL PHOTONICS

Laser System

June 2024: Capital participation decision

<Major development themes and results>
- Development of laser welding technology for lead terminals
- Development of laser systems for satellite communications

EpiPhotonics

PLZT Device

Dynamic Optical Devices

March 2024:
Become a wholly owned subsidiary

<Major development themes and results>
- Development of PLZT high-speed optical switches and optical modulators
- Received an order for optical switch samples for European AI data centers

*Dynamic optical device: A device that uses light scattering to measure the size and dynamic characteristics of microscopic particles in a solution. It is used in analytical equipment in fields such as environmental science and biotechnology.

WARPSPACE

Optical components for space communications

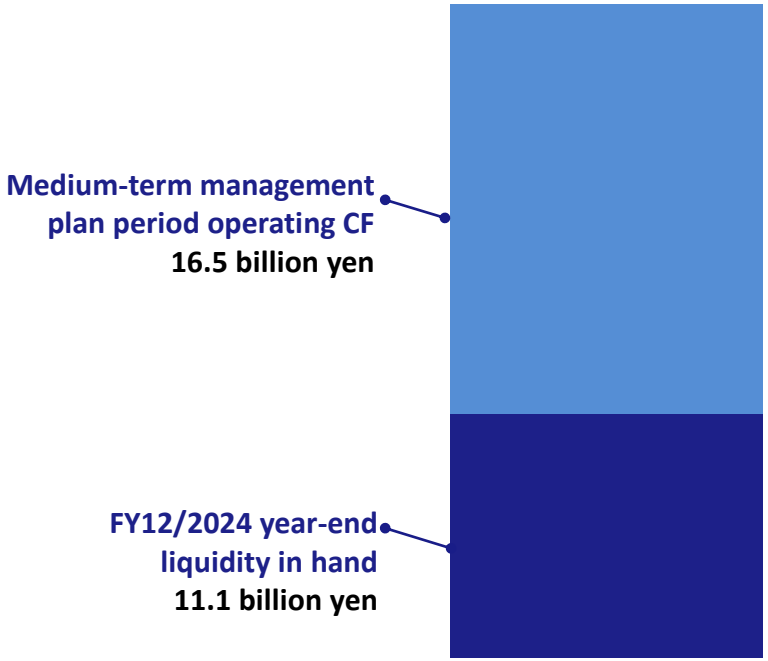
October 2024: Capital participation decision

＜Main Technology＞
- Development of an optical translator (HOCSAI) for interconnecting optical communication terminals with different communication standards
- Development of a digital twin emulator for satellite constellations (DTS) specialized in optical communications
- Development of medium-orbit optical repeater system

Financial Strategy and Capital Allocation

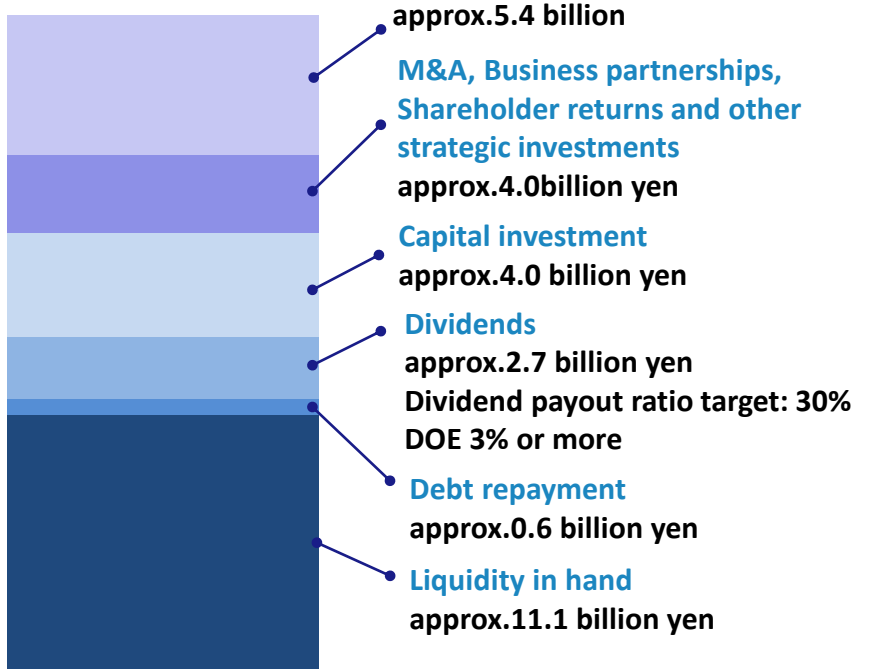
Finding the right balance between decisive growth investments and shareholder returns.

Capital



Total: 27.6 billion yen

Utilization

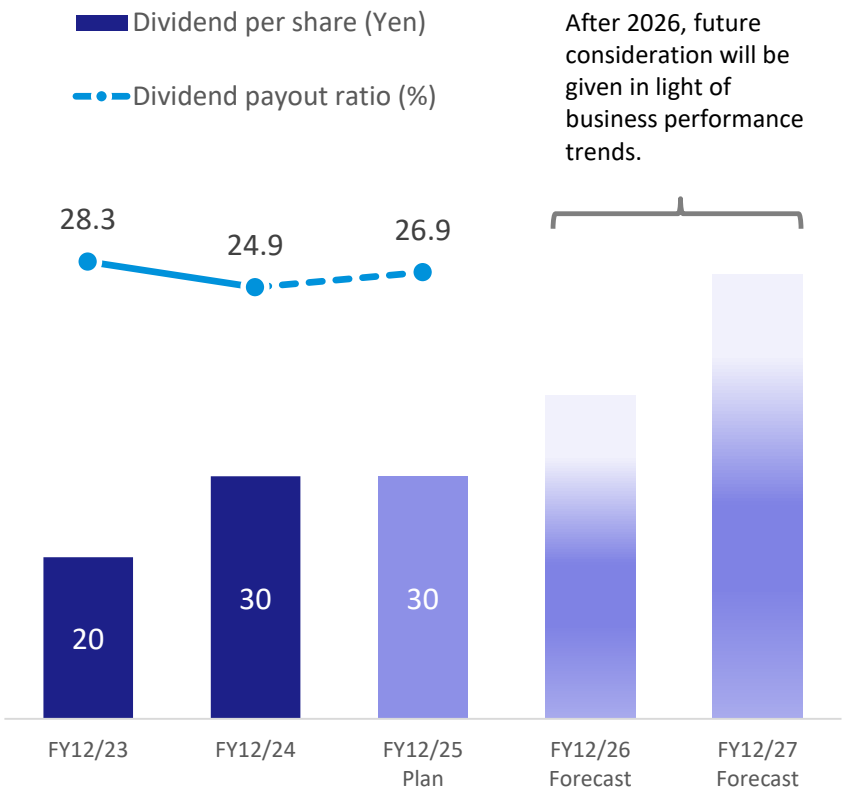


Total: approx.27.6 billion yen

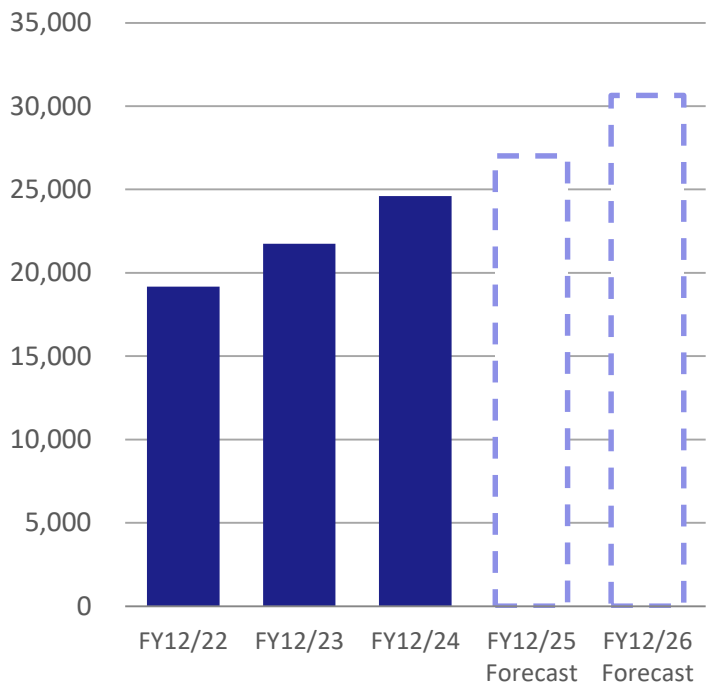
Shareholder Return Policy

① Continue to aim for consolidated dividend payout ratio of 30%
② In addition, DOE is set at 3% based on the need for stable dividends

Trend of Dividend



Trend of Equity (Millions of yen)



Sustainability

Sustainability Committee activities commenced, reviewed themes and KPI, and strengthened progress management.

	Issues	Achievements and activities	Working Group Event status
Environmental Working Group	Reduction of CO2 emissions ① Reduction of energy consumption (unit energy consumption)	● Each sub-working group considered new product development themes that can contribute to reducing CO2 emissions. ● CO2 emissions in 2024: 14,803t (up 9.7% from the previous year), 0.93t per unit of sales (down 7.2% from the previous year)	<Working Group held> 1 time <Sub-WG held> Total 4 times
	Reduction of CO2 emissions ② Utilization of renewable energy	● Wood biomass power generation was introduced in June 2024 (for low-voltage electricity for office lighting, etc.) ● Achieved zero emissions at the head office by introducing renewable energy from August 2024	
Social Working Group	Respect for human rights, diversity and inclusion	● Health Habit Feedback Seminar (held in November) ● Healthy Life Project ● Establishment of a fitness activity support system as part of enhanced employee benefits	<Working Group held> Held 3 times
	Human Resources Management	● Introduction of a qualification acquisition support incentive system ● Considering rising prices and increasing employee motivation, raised wages by 4.15% and annual bonuses increased to 6.25 months. ● Paid leave acquisition rate: 78.4%, childcare leave acquisition rate for male employees: 75.0% ● Accepting interns from Shiga University, conducting training at the head office and Sri Lanka factory	
	Disaster recovery and environmental conservation	● Noto Peninsula Earthquake Relief Fund: 10 million yen ● Volunteer activities for preserving the forest at the Yamakado Water Source (37 people participated) ● Donation to the vegetation restoration project to restore the natural environment of Mt. Ibuki: 30 million yen	
	Contribution to the local community, support for cultural activities, etc.	● Community support: Nagahama Hikiyama Festival, local concerts, support for running local libraries, support for the expulsion of local gangsters, etc. ● Support and collaboration with educational institutions: Nagahama Agricultural High School, Nagahama University of Bio-Science and Technology, The University of Shiga Prefecture Future Human Resources Fund, etc.	
Governance Working Group	Effectiveness evaluation of the Corporate Governance Code	● Reassessment of the effectiveness of all 83 principles of the CG Code ● Strengthening governance by transitioning to a company with an audit and supervisory committee	<Working Group held> Held 6 times
	Promoting business standardization and strengthening internal controls	● August 2024: Strengthening checks and balances by reviewing major company-wide regulations and strengthening the internal audit organization	

***The Sustainability Promotion Committee general meeting is held twice a year (February and August)**

Ⅲ. Situation by segment

Results by Segment - Lead Terminals

Operating profit margin improved significantly through the relocation of production bases, improvements in production efficiency, and review of transactions.

(Millions of yen)

	FY12/2023 Q4 cumulative (Jan–Dec)	FY12/2024 Q4 cumulative (Jan–Dec)	FY12/2024 YoY change		FY12/2024 Q1 (Jan–Mar)	FY12/2024 Q2 (Apr–Jun)	FY12/2024 Q3 (Jul–Sep)	FY12/2024 Q4 (Oct–Dec)	FY12/2024 QoQ change	
Net sales	7,400	8,403	+1,002	+13.6%	1,929	2,157	2,198	2,118	-80	-3.7%
Operating profit	44	403	+358	+799.3%	-13	132	177	107	-70	-39.6%
Operating margin ratio	*0.6%*	*4.8%*	*+4.2pt*	—	*-0.7%*	*6.2%*	*8.1%*	*5.1%*	*-3.0pt*	—

Overview of FY12/2024 (Q4 Cumulative)

● After a recovery, the market entered a correction phase again

- The automotive electronics market showed signs of recovery in the second half of the year as inventory adjustments came to a close, but then entered a period of adjustment again due to factors such as the sluggish spread of EVs in Europe and slowing demand in China.
- The information and telecommunications equipment market was robust due to growing IT demand, particularly for AI servers, at companies.

● The Company's situation and efforts to improve profitability

- After relocated main factory in Suzhou, China, optimized global production system and improved the technical capabilities of factories in Dongguan and Malaysia.
- Improved overall equipment effectiveness (OEE) by improving yield and operation rate and reducing changeover losses.
- Expanded sales of "burr-free" which has significantly improved vibration resistance and insulation properties, and new products for EDLC (electric double layer capacitors).

Comparison between Assumption at Beginning of the FY 2024 and Now
− Lead Terminals

1. Our perception based on information from customers, market research firms, and other sources.

	F12/2024 forecast (Initial comments)	FY12/2024 Results	FY12/2025 Forecast
(1) Overall aluminum electrolytic capacitor market (mainly Japanese customers)	● Inventory adjustments are expected to be completed by spring, followed by a recovery. ● While the continued spread of EVs is expected, the automobile market is expected to recover gradually due to concerns of a recession in China and elsewhere.	➢ **In the second half of the year, a recovery was seen as inventory adjustments came to a close.** ➢ **After that, the market entered a period of adjustment again due to factors such as the stagnation of EV spread in Europe and slowing demand in China.**	➢ **Sales to the European automotive market are patchy, but are expected to recover from April onwards.**
(2) Trends by application	● Sales of lead terminals for hybrid capacitors for automobiles are expected to triple year on year.	➢ **The market is once again in an adjustment phase due to factors such as the sluggish spread of EVs in Europe and slowing demand in China.**	➢ **In addition to the bottoming out of European automotive markets, production at Toyota is also recovering, so it is expected to maintain strong performance from Q1 onwards.**
	● Inventory adjustments were virtually complete at the beginning of the period. Sluggish demand is expected to continue.	➢ **The information and telecommunications equipment market was robust due to growing IT demand, particularly for AI servers, at companies.**	➢ **The market for aluminum electrolytic capacitors for generative AI and data centers is expected to grow steadily (double-digit growth expected year-on-year)**
	● The market is expected to head towards recovery in the second half of the year, driven by the ICT market, generative AI market etc.	➢ **The market was strong due to the expansion of IT demand, especially for AI and data centers.**	➢ **The industrial machinery and general consumer sectors are expected to continue to face difficult conditions.**

Comparison between Assumption at Beginning of the FY 2024 and Now – Lead Terminals

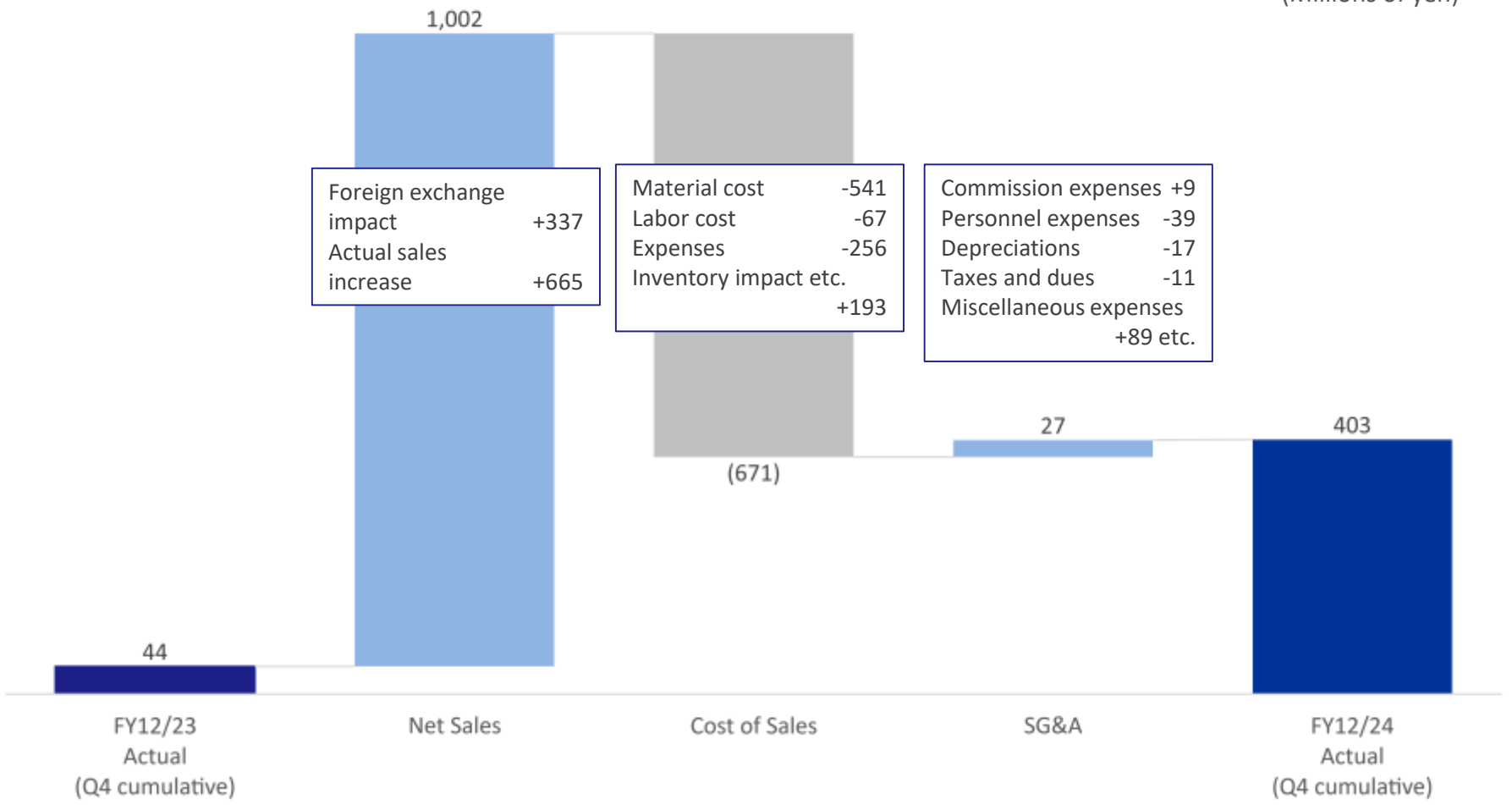
2. Business Environment surrounding the Company

	F12/2024 forecast (Initial comments)	FY12/2024 Results	FY12/2025 Forecast
(1) Production	● Strengthen profitability and improve quality by improving production efficiency at the Suzhou, Dongguan and Malaysia bases. ● Target of OEE 85%	➢ **Expanded production capacity in Dongguan.** ➢ **The OEE target was slightly below target, and measures were taken to improve yield and processes.**	➢ **Further expand Dongguan and improve profitability (annual production ratio in 2025: KECD 50%, KECS 30%, KEM 20%).** ➢ **Continue to improve yield and operation rate, and reduce changeover losses.**
(2) Sales	● Sales forecast of Lead Terminals for High - performance capacitors	➢ **Although sales of the new "burr-free" product did not reach the target, evaluation activities for new products such as hybrid capacitors progressed.** ➢ **Sales of high value-added products for high-performance capacitors such as hybrid capacitors and EDLCs increased.**	➢ **Strengthen customer support and marketing for overseas automobile markets.** ➢ **Strengthen sales of high-performance lead terminals that contribute to reducing leakage current and low resistance, such as burr-free product.**
(3) Technology	● Target of OEE 85% ● Start of shipments sample products using laser welding machine.  (Laser welding machine currently under development)	➢ **Using laser welding technology, a development sample was made at Israeli company ARIEL.**	➢ **Development base transferred to headquarters for mass production prototypes.** ➢ **Develop lead terminals with reduced leakage current.**

Factors of Increase/Decrease in Operating profit by Segment for Q4 Cumulative (YoY) - Lead Terminals

Operating profit recovered as rising material costs were absorbed by sales.

(Millions of yen)



Forecast for FY12/2025 - Lead Terminals

Sales and profits are expected to increase due to the recovery of the automobile-related market, sales growth accompanying the growth of the AI market, and improved profitability.

(Millions of yen)

	FY12/2024	FY12/2025 (plan)				
	Actual	First half	Second half	Full-year forecast	YoY change	YoY change (%)
Net sales	8,403	4,498	4,799	9,298	894	+10.6%
Operating profit	403	326	420	746	+343	+85.1%
Operating margin ratio	*4.8%*	*7.2%*	*8.8%*	*8.0%*	*+3.2pt*	—

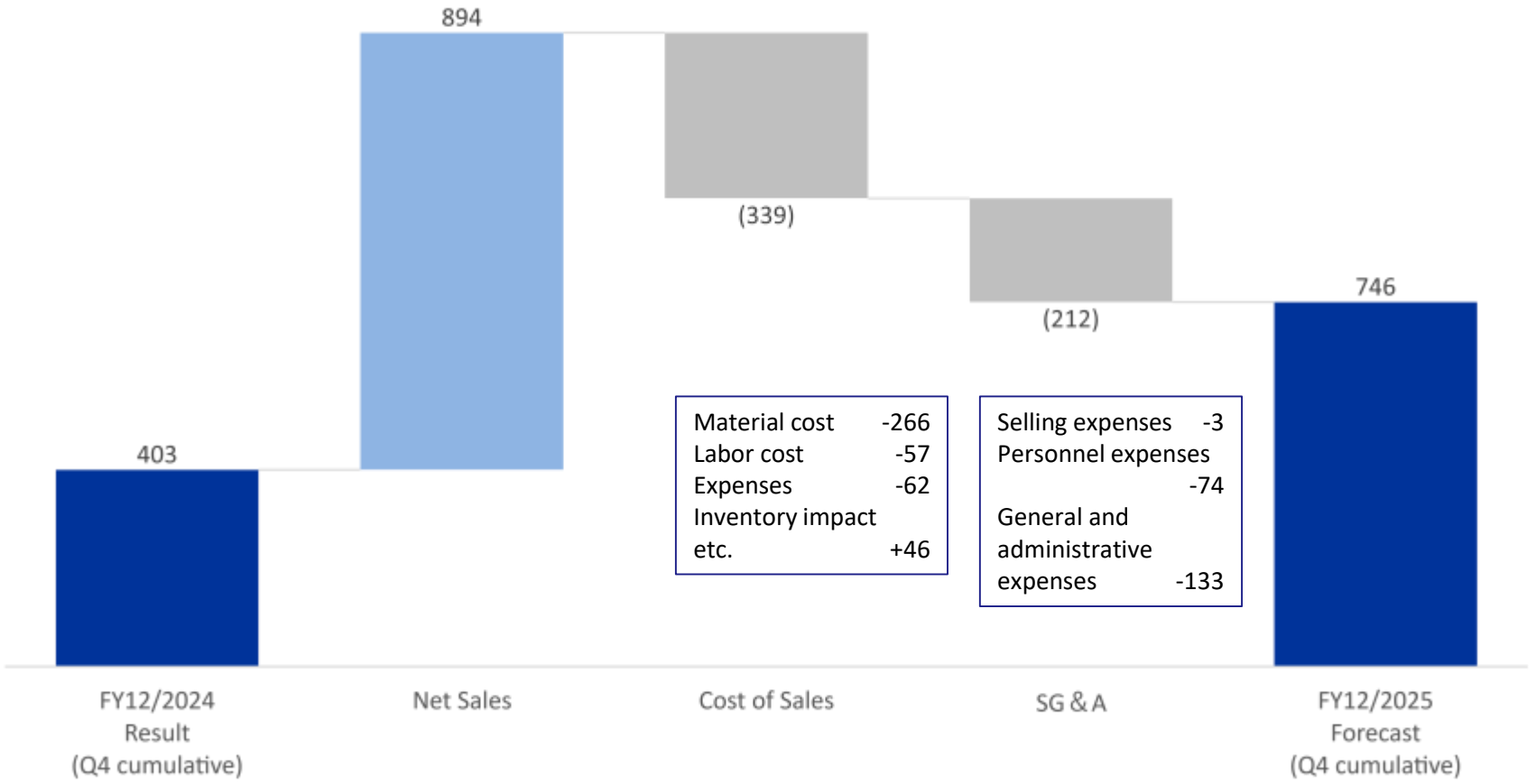
Outlook for FY12/2025

- With European automotive demand bottoming out and Japanese automobile production recovering, year-on-year growth is expected to begin in April.
- Increase production capacity, efficiency and quality in Dongguan factory.
- Demand for hybrid capacitors are expected to increase.

Factors of Increase/Decrease in Operating profit by Segment (Forecast) – Lead Terminals

Increased sales and profits expected due to market recovery, increased sales of new products, and improved efficiency.

(Millions of yen)



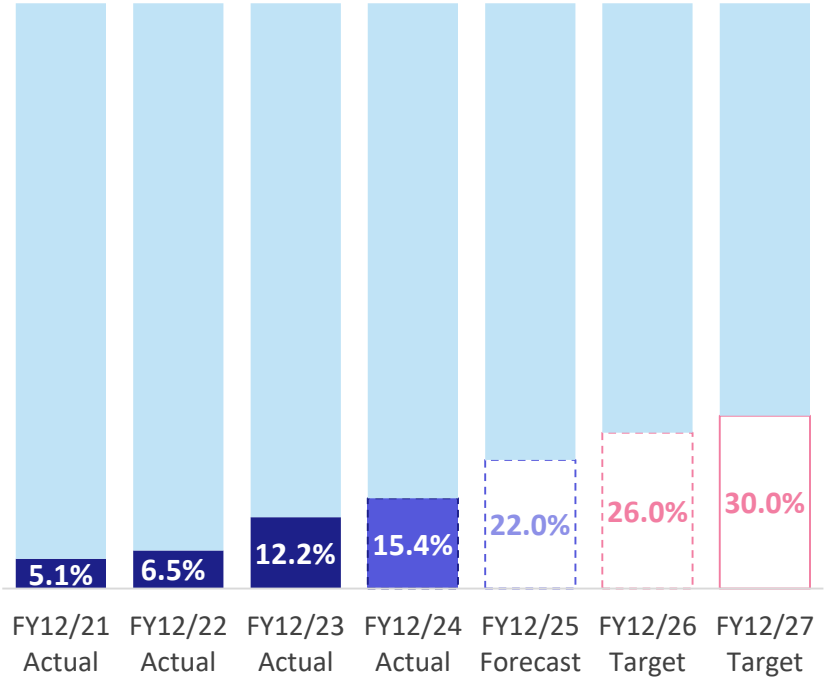
Expansion of Business Scale Through Market Development

Improve sales ratio of high value-added products and strengthen sales to the automotive market.

Sales Ratio of High Value-Added Products

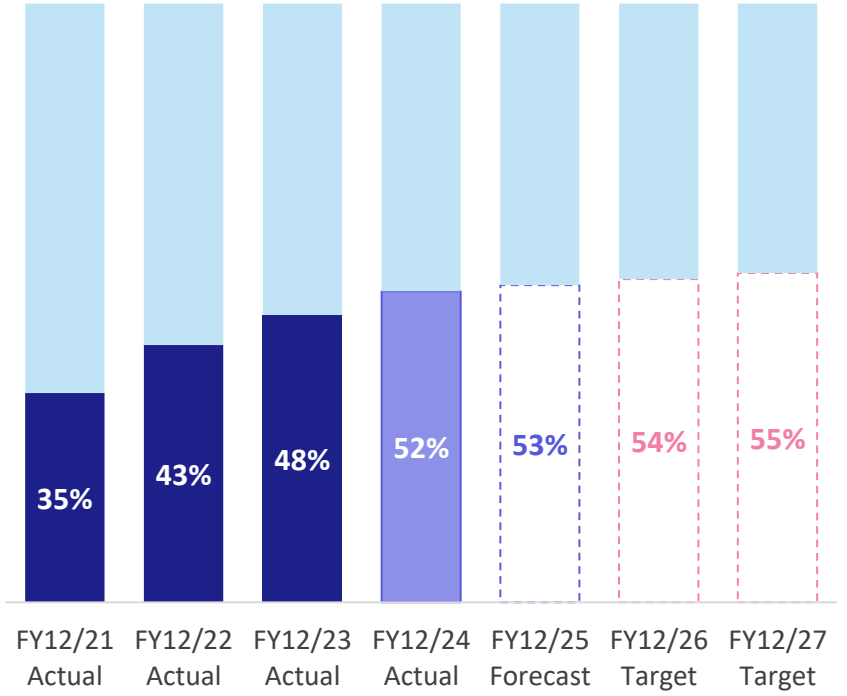


- High value-added product sales ratio gradually increasing
- Burr-free recovered for hybrid capacitors
- Strengthen lineup for EDLCs, including for lithium-ion capacitors



Ratio of Sales to the Automotive Market (Estimated)

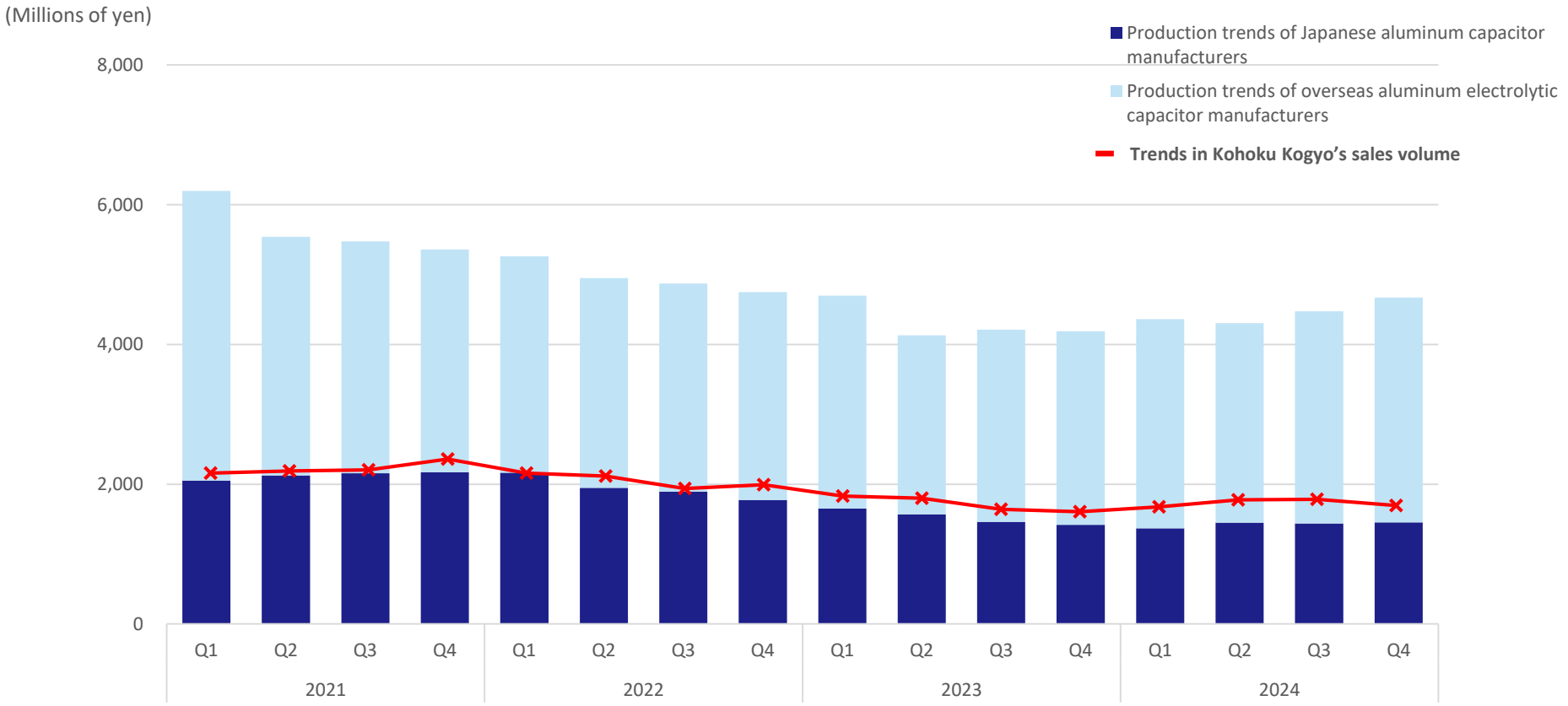
- Maintain global market share of 95% for the automotive market
- Sales expansion in overseas automotive market



Business Environment in FY12/2024

The adjustments in global aluminum electrolytic capacitor production have ended, and entered the recovery trend.

Trend of Global Market for Miniature Aluminum Electrolytic Capacitors and Sales Volume of the Company



*Since there are two lead terminals per capacitor, the number is converted into the number of capacitors.
*The production volume of aluminum electrolytic capacitors is the actual result for the last month of each quarter, and the sales volume of lead terminals is the monthly average for the quarter.(Estimated by the Company)

Results by Segment- Optical Components and Devices

Sales and profits increased as orders recovered rapidly due to inventory adjustments being completed and investment in submarine cables being resumed.

(Millions of yen)

	FY12/2023 Q4 cumulative (Jan–Dec)	FY12/2024 Q4 cumulative (Jan–Dec)	YoY change		FY12/2024 Q1 (Jan–Mar)	Q2 (Apr–Jun)	Q3 (Jul–Sep)	Q4 (Oct–Dec)	QoQ change	
Net sales	6,071	7,520	+1,448	+23.9%	1,484	2,136	2,231	1,668	-563	-25.3%
Operating profit	2,767	3,536	+768	+27.8%	649	1,020	1,208	658	-550	-45.5%
Operating margin ratio	*45.6%*	*47.0%*	*+1.4pt*	—	*43.7%*	*47.7%*	*54.2%*	*39.5%*	*-14.7pt*	—

Overview of FY12/2025 (Q4 Cumulative)

●Industry and Market Trends

- In the submarine cable market, the outlook for future demand has improved, as adjustments caused by the postponement of submarine cable projects since the year before last have come to an end, and new submarine cable projects have been announced in line with the global trend to strengthen telecommunication infrastructure.
- Orders increased rapidly and sales showed a recovery trend, but adjustments were seen from some customers in the second half of the year.

●Changes in the External Environment and their Handling

- Increased production capacity at Sri Lanka factory in response to a surge in orders for optical devices for undersea cables.
- For multi-core fiber products, the Company developed a fan-in/fan-out product with a built-in optical isolator function and presented it at an academic conference.
- Inquiries for high-purity silica glass (SSG®), a new business, steadily increased.

Comparison between Assumption at Beginning of the FY 2024 and Now - Optical Components and Devices

1. Market environment and order trends

	FY12/2024 forecast(Initial Comments)	FY12/2024 Result	FY12/2025 Forecast
(1)Market trends	● Optical isolators are expected to remain strong. ● Optical filters are expected to recover from mid-year. ● A recovery is expected in the second half due to long-term perspective submarine cable projects.	➢ Increased orders for optical isolators and optical filters for submarine cables. ➢ Inventory adjustments occurred at some customers in the second half of the year. ➢ Demand for optical components for data centers surged.	➢ Strong sales of isolators and filters for submarine cables are expected to continue. ➢ Submarine cable projects expected to grow as data centers grow. ➢ Supply and demand for optical components for data centers is expected to remain tight.

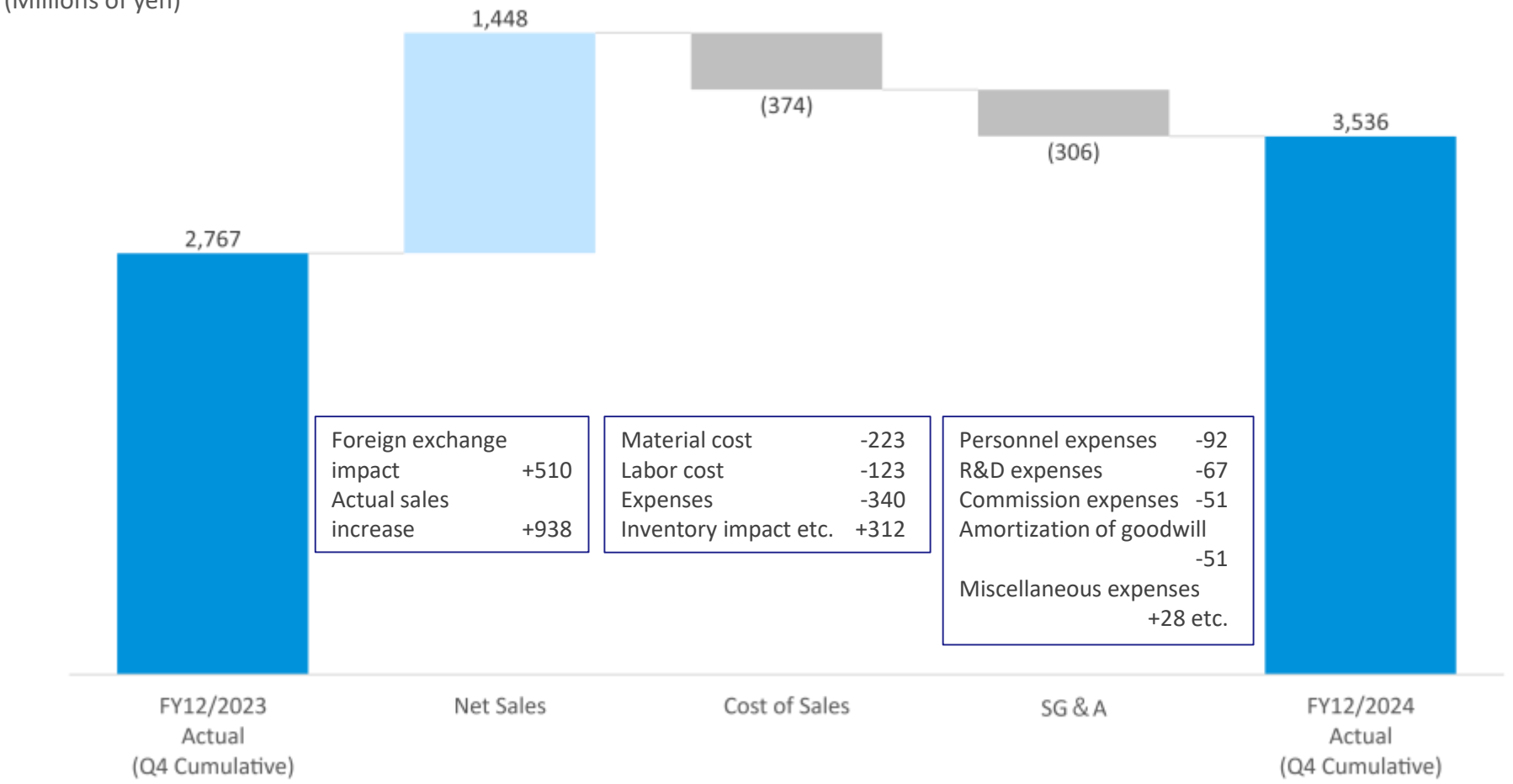
2. Business Environment surrounding the company

	FY12/2024 forecast(Initial Comments)	FY12/2024 Result	FY12/2025 Forecast
(1) Product development	● New hybrid device products. Shipments of mass production samples in the second half of 2024. These are expected to contribute to sales in 2025. ● Transition from conventional seed development to next-generation technology and platform development.	➢ Development of hybrid and module products has progressed as planned, and sample shipments have begun. ➢ Developed an isolator and fan-in/fan-out device for multi-core fibers.	➢ Evaluation of composite and module products is planned to proceed, mass production is scheduled to start in 2026. ➢ Sales ratio of small isolators is expected to increase, and their adoption is expected to expand with the trend toward multiple fiber cable. ➢ Development of high-speed optical switches using PLZT is planned to proceed.
(2) Productivity, etc.	● Expand semi-automated production equipment and production capacity in Sri Lanka.	➢ Automated production at the back-end process base in order to strengthen the stable supply system. ➢ Strengthened natural disaster countermeasures, such as water stoppage measures, at front-end process bases.	➢ The second semi-automatic equipment will be launched in May, and its 80% will be automated by the end of the fiscal year. ➢ Increase production capacity and sales of optical components for data center. ➢ Sales of high-purity silica glass (SSG®) products is expected to increase.

Factors of Increase/Decrease in Operating profit (YoY)
- Optical Components and Devices

Sales recovered due to the resumption of investment by cloud service providers, resulting in increased sales and profits.

(Millions of yen)



Forecast for FY12/2025
– Optical Components and Devices

Sales are expected to recover and increase from the middle of the year due to the expansion of information and telecommunications, including generative AI.

(Millions of yen)

	FY12/2024	FY12/2025 (plan)				
	Actual	First half	Second half	Full-year forecast	YoY change	
Net sales	7,520	3,846	4,775	8,621	+1,100	+14.6%
Operating profit	3,536	1,594	2,245	3,839	+303	+8.6%
Operating margin ratio	*47.0%*	*41.5%*	*47.0%*	*44.5%*	*-2.5pt*	—

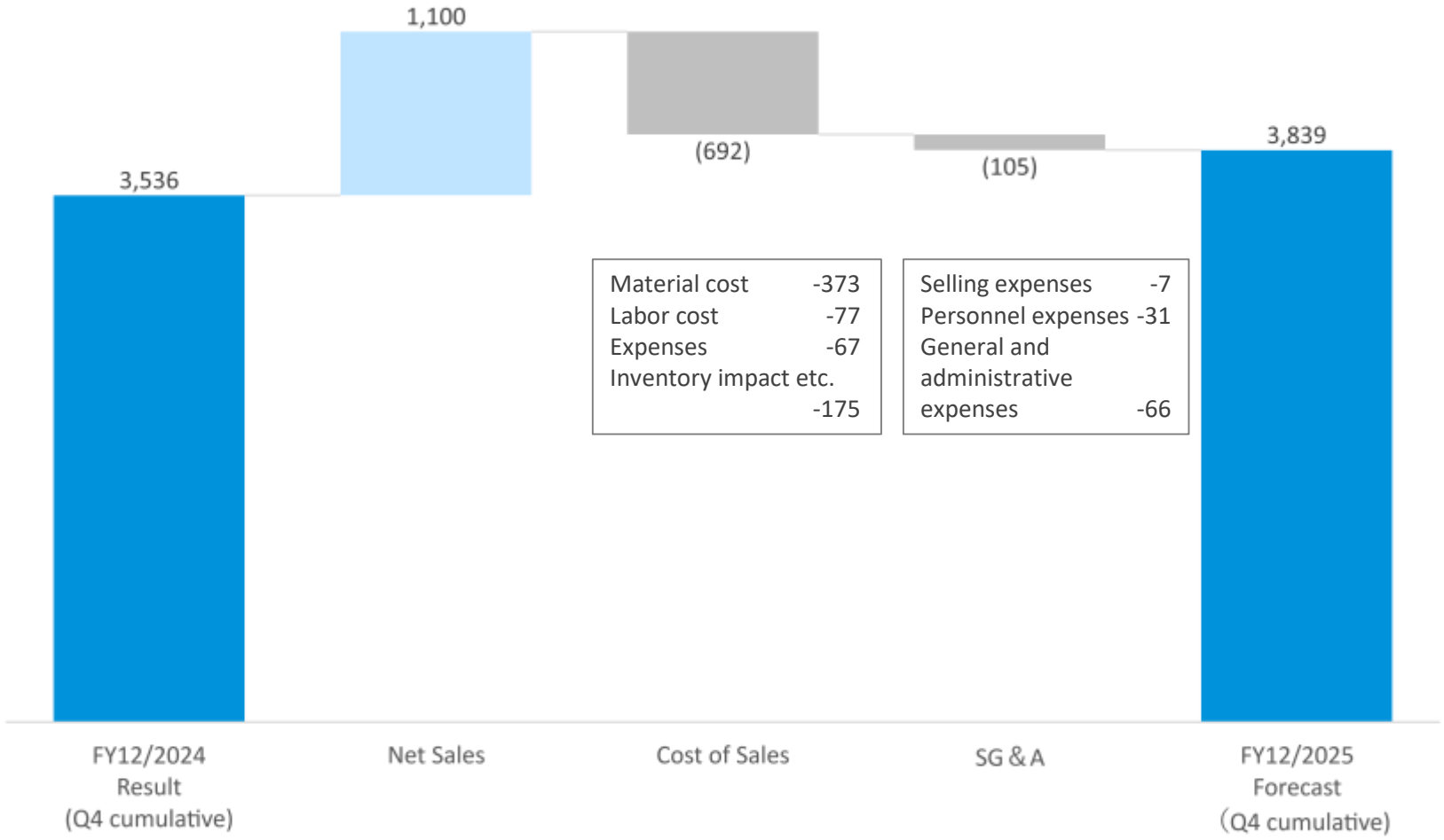
Outlook for FY12/2025

- Demand for optical devices for submarine cables is expected to continue to grow
- Optical isolator products are becoming smaller responding to an increase in the number of fibers, and planning to switch to smaller products by more than 50% in 2025
- Strengthening production capacity of optical components for the data center market, and planning to significantly increase sales in 2025

Factors of Increase/Decrease in Operating profit by Segment (Forecast) - Optical Components and Devices

Sales are expected to increase, but will be affected to some extent by increased material costs.

(Millions of yen)

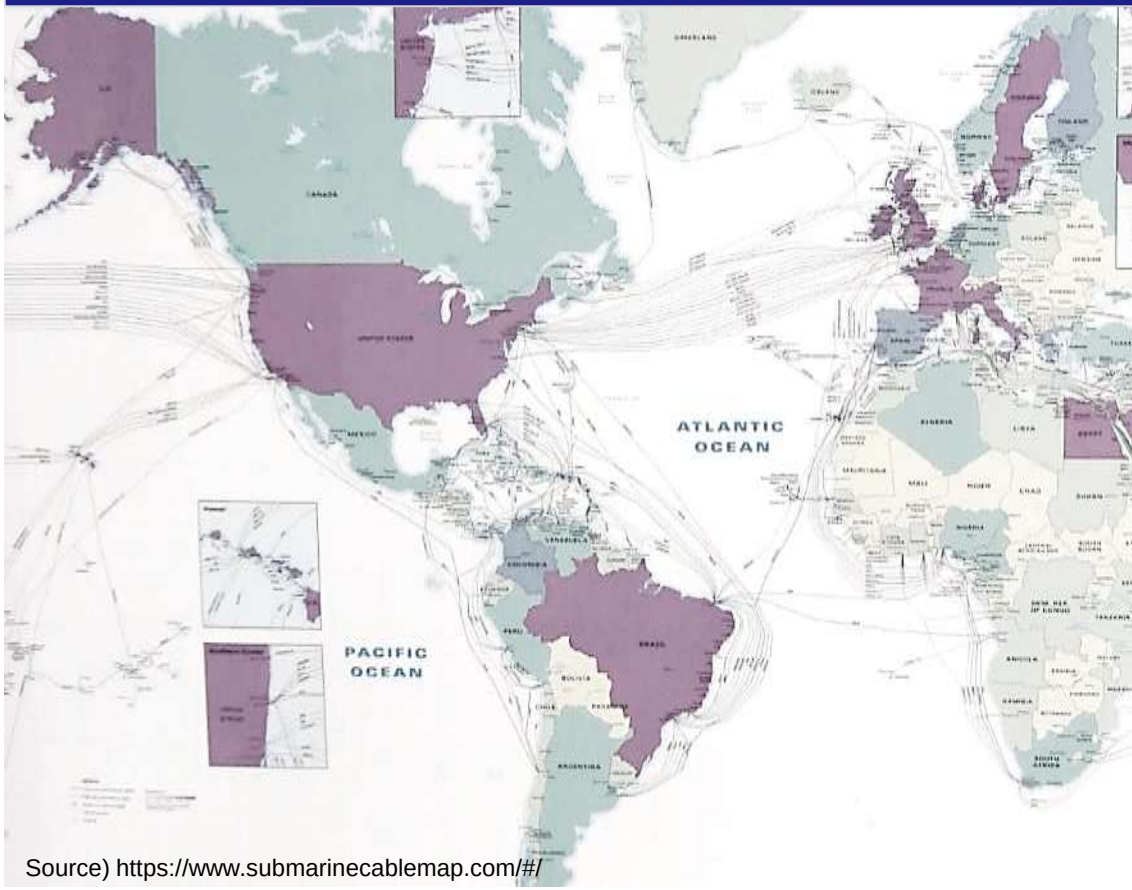


New submarine cable networks will continue to be laid after 2025

In addition to telecommunications carriers and GAFAM, new projects from data centers continue to increase.

Overall diagram of long – distance submarine cable

＊Lines in the map are undersea cables



Source) https://www.submarinecablemap.com/#/

Submarine Cable Projects announced in the last 3 months

Project name	Start of service	Owner	Distance (km)
Australia Connect Interlink	2027	Google	
Bosun	2027	Google	
CELIA	2027	APUA Orange Setar Telxius	3,700
Daito Loop	2025	Okinawa Prefecture	18
EAGLE	2026	4iG Group Telecom Egypt	2,750
ICE IV	2027	Etisalat UAE Telecom Egypt Telin	11,000
Lake Tanganyika	2025	Bandwidth and Cloud ervices (BCS)	370
Norte Conectado (Infovia 04)	2025	Entidade Administradora da Faixa (EAF)	515
ORCA	2027	Meta	12,482
Satun-Hatyai-Songkhla -Rayong Cable System		International Gateway Company (IGC) LitUp Network	
Tasman Ring Network	2027	Chorus Datagrid	6,000
VAKA	2025	Tuvalu Telecommunications Corporation (TTC)	668

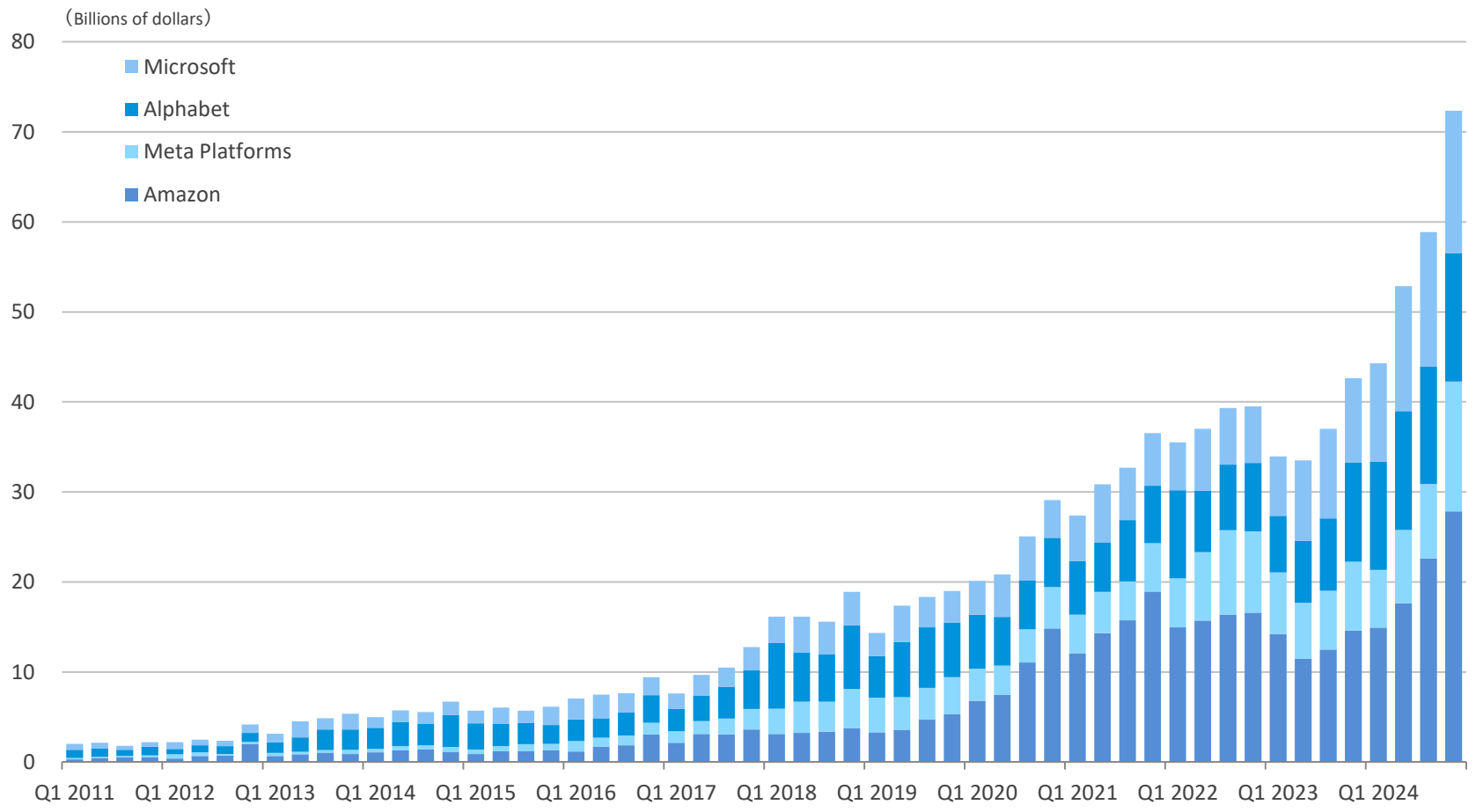
＊ Source）TeleGeography “Submarine Cable Map”

*Project updates are extrapolated from announced data.

Business Environment until FY12/2024

GAFAM's investment restraint has bottomed out, turning to a recovery trend from the second half of 2023, and aggressive investment is continuing.

Capital Expenditures by Cloud Providers



(Source: Company data)

Expand Business Scale through Market Development (Optical Components and Devices Business)

Provide a full lineup of products to meet the increasing number of cores in submarine cables.

Evolution of submarine cables in response to the expansion of information and telecommunication capacity

Number of fiber pairs in major submarine cables

2020 — 2025 — 2026 — 2027 — 2035

As the fiber cable market expands, the number of fiber pairs is also diversifying.

8FP → 16FP → 24FP → 32FP or more

Technology evolution to accommodate increasing fiber pair counts

- 8FP / 16FP: Conventional Isolator



- 24FP / 32FP: Small Optical Isolator



- 32FP or more: Hybrid products + Modules
- Conventional Optical Filters

Image of hybrid product + module device

Optical Circuit → Composite Optical Device (Multiple Optical Isolators → Multiple Optical Filters) → Optical Circuit





- Isolator function (blocks light in the reverse direction)
- Filter function (transmitting light of required wavelengths)
- Other functions (branching, multiplexing)

Modularization of multiple devices contributes to space savings and efficiency in cable manufacturing processes

Expand Business Scale through Market Development (Optical Components and Devices Business)

In addition to multi-core fibers for next-generation submarine cables, the Company is expanding into the fields of AI data centers and space communications.

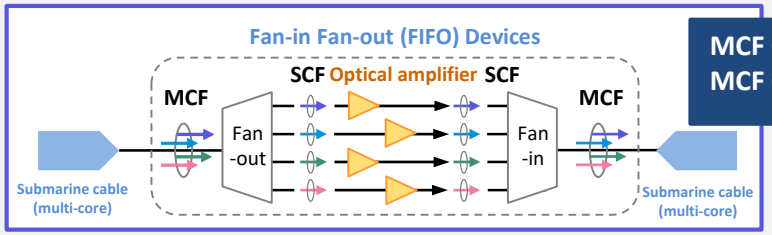
2025 — 2027 — 2030 — 2035

Submarine Cable Multi-core Fiber

Full-scale use of MCF is expected to begin after 2030

MCF（2 cores） → MCF（4 cores）

FIFO Devices



MCF Optical Isolator
MCF Optical Filter

Generative AI Data Centers

High Speed

Photoelectric Fusion

Optical components (elements)

Increase production capacity and expand sales

Sample supply

Optical Switch

High-speed optical switch

Switching Module

Space Communications

LEO (Low Earth Orbit) Communications

Demonstration Test

Space Optical Devices

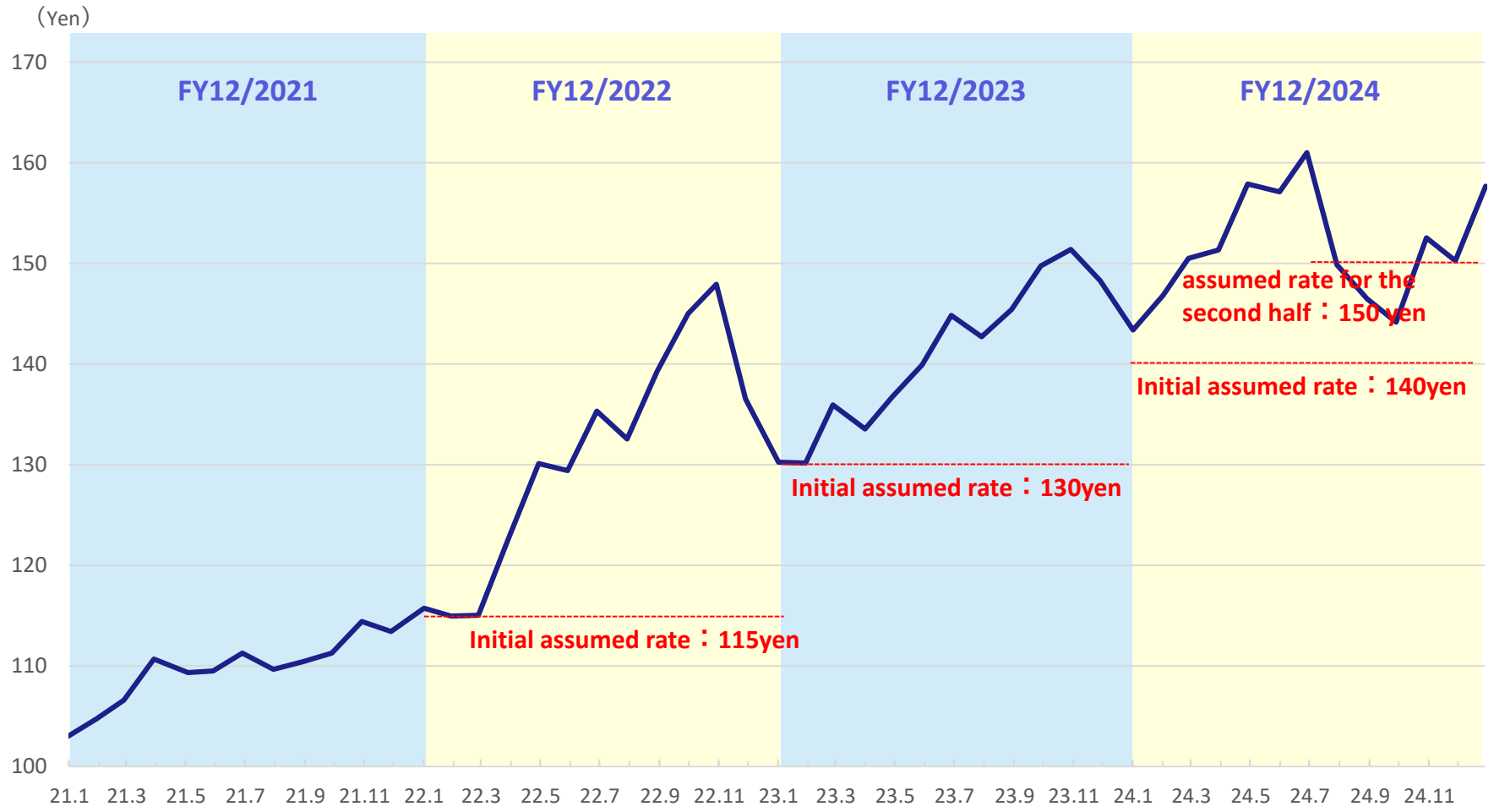
Space Communications Subsystem

Ⅳ. Reference information

Business Environment for FY12/2024

The average exchange rate for the period from January to December was 151.69 yen/USD, and the yen's depreciation trend continues.

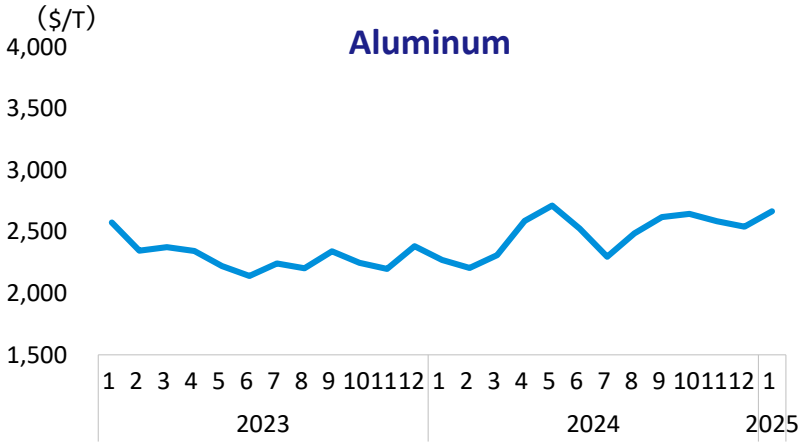
USD/JPY trend graph

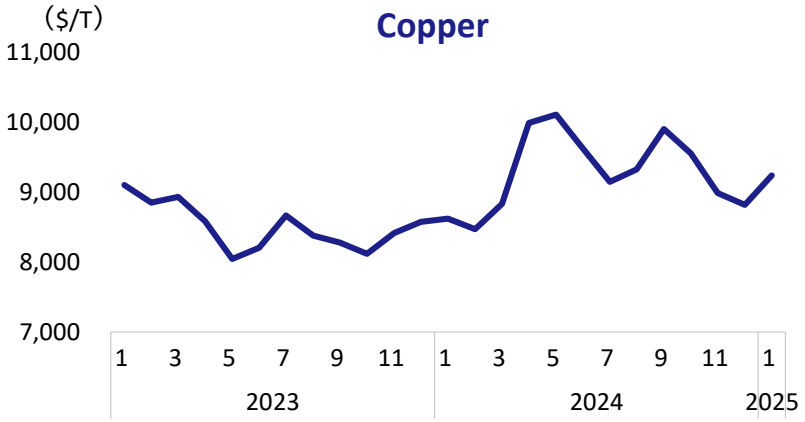


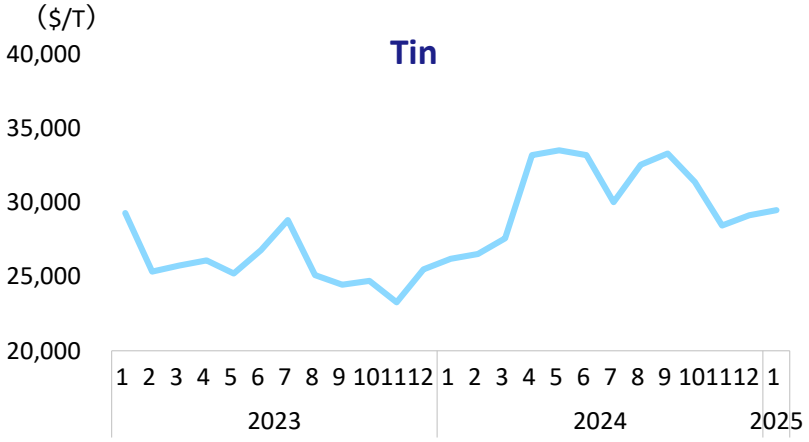
External Environment –Non-Ferrous Metals Market Trends

There was no significant change in the market price of non-ferrous metals, but it may be affected by future exchange rate trends and global inflation.

Non-Ferrous Metals Market (LME)

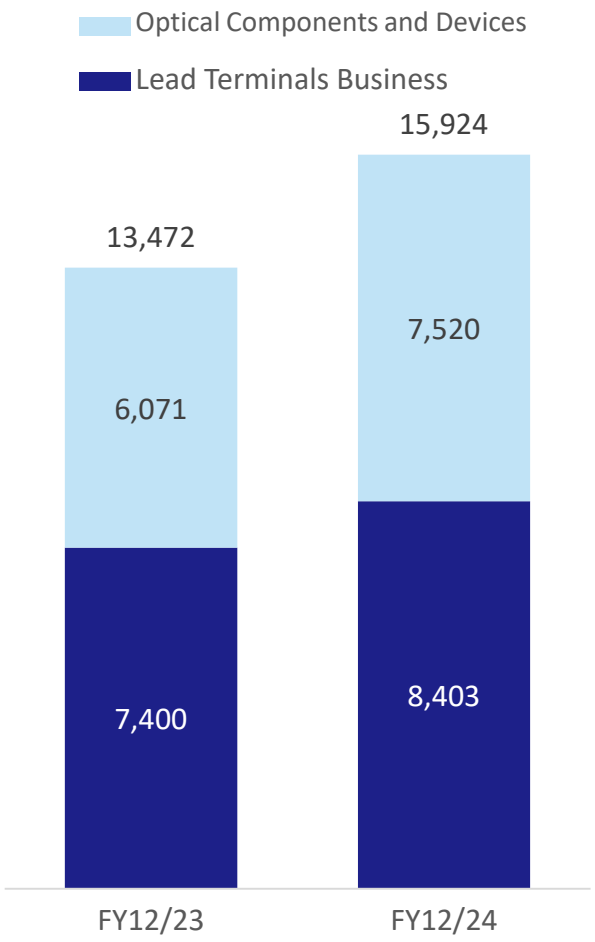




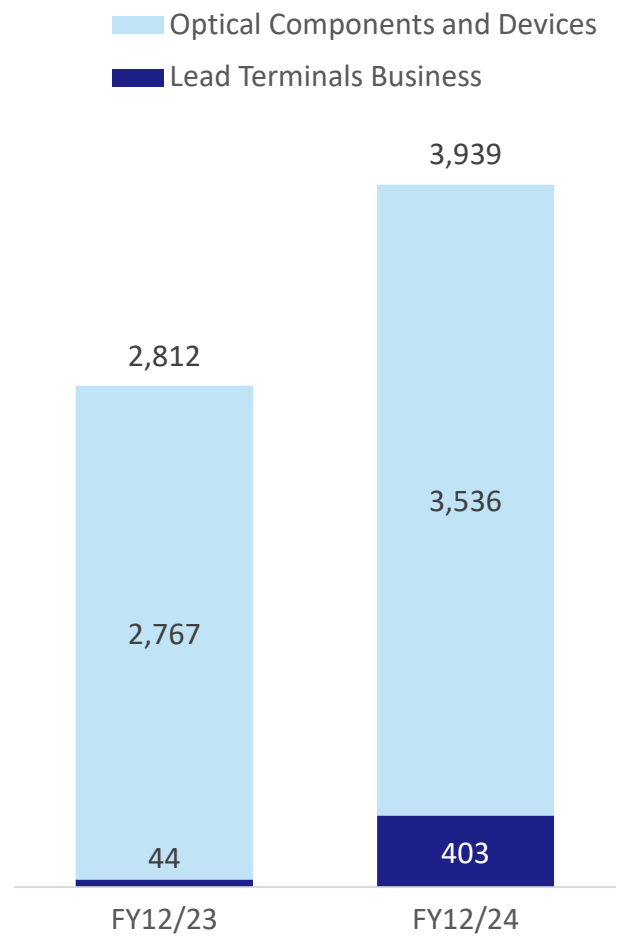


Results by Segment and Ratio of Domestic and Overseas Sales (Q4 Cumulative)

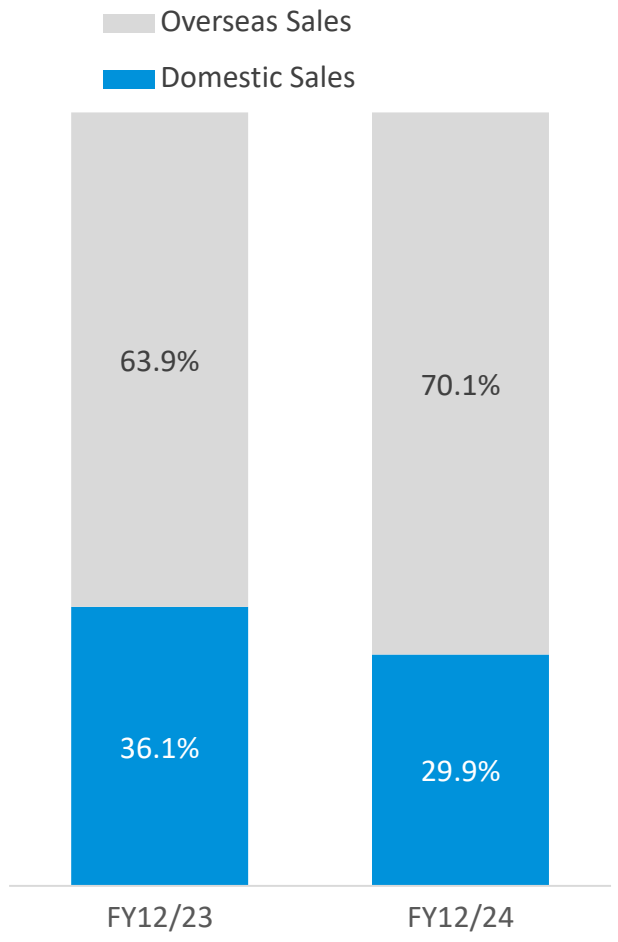
Net Sales （Millions of Yen）



Operating profit （Millions of Yen, %）

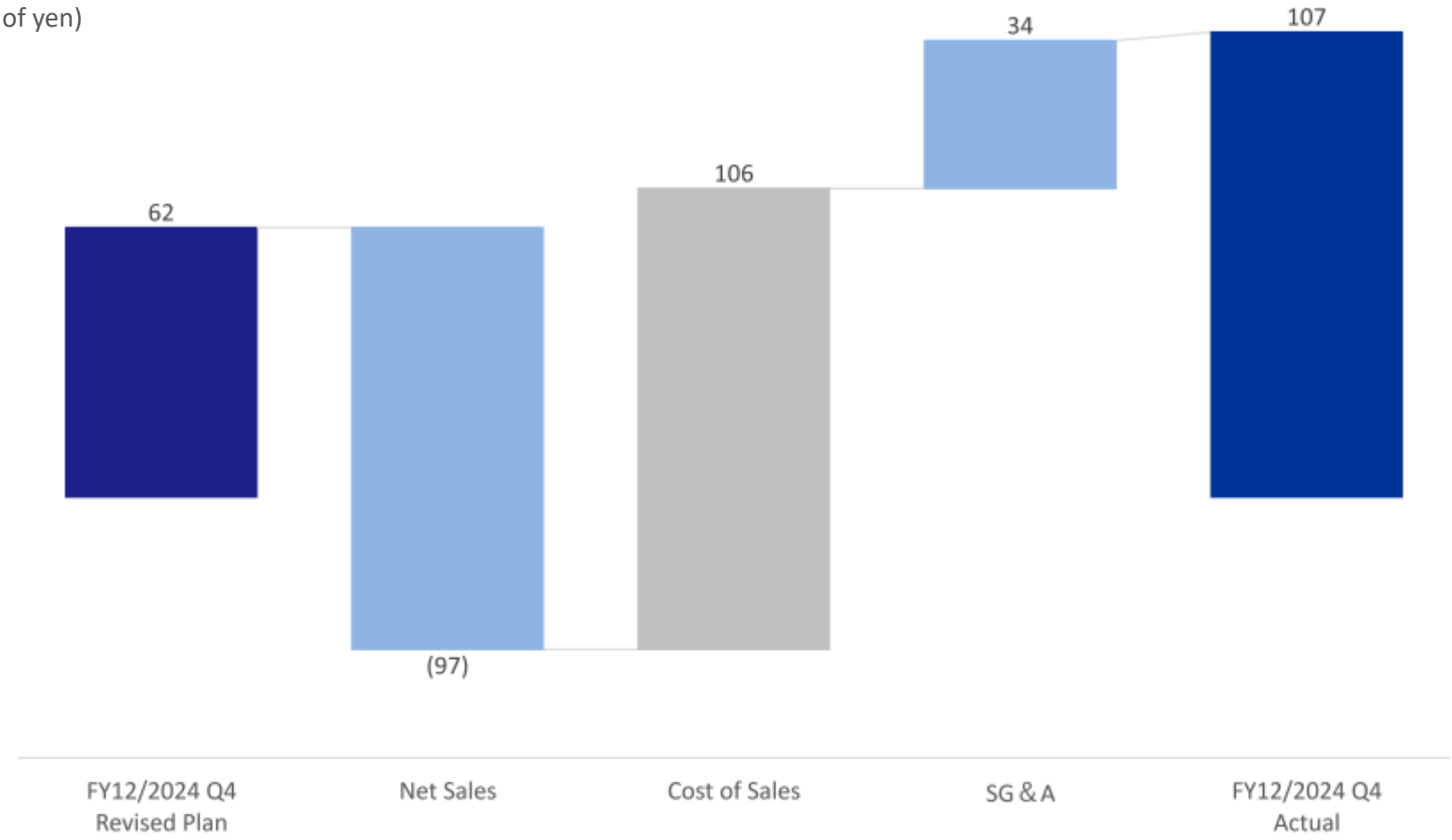


Domestic and overseas sales ratio



Factors of Increase/Decrease in Operating profit for Q4 (Oct - Dec) (vs. Revised plan as of Aug.2024)- Lead Terminals

(Millions of yen)



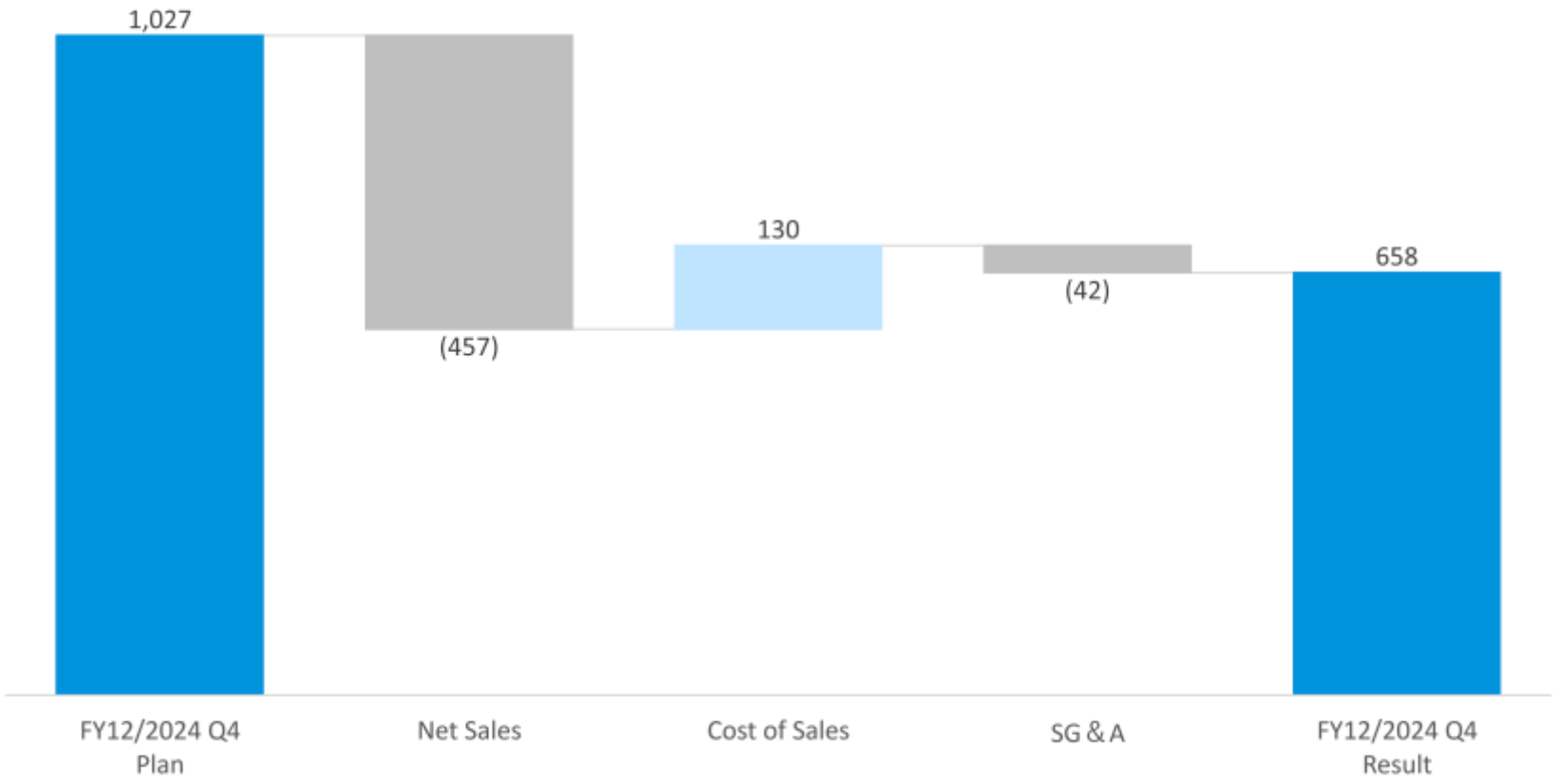
Factors of Increase/Decrease in Operating profit for Q4 (Oct - Dec) (YoY) - Lead Terminals

(Millions of yen)



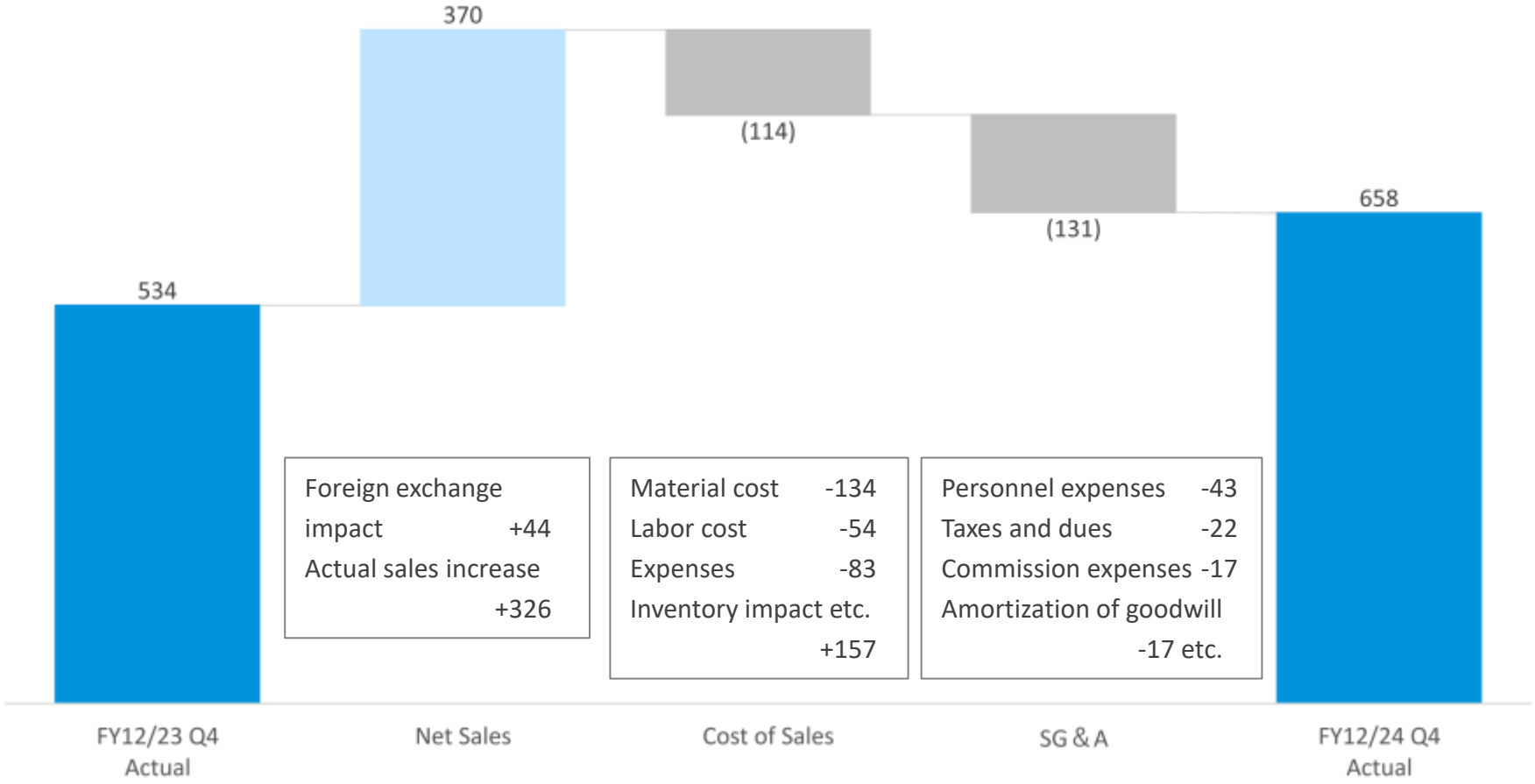
Factors of Increase/Decrease in Operating profit for Q4 (Oct - Dec) (vs. Revised plan as of Aug.2024)- Optical Components and Devices

(Millions of yen)



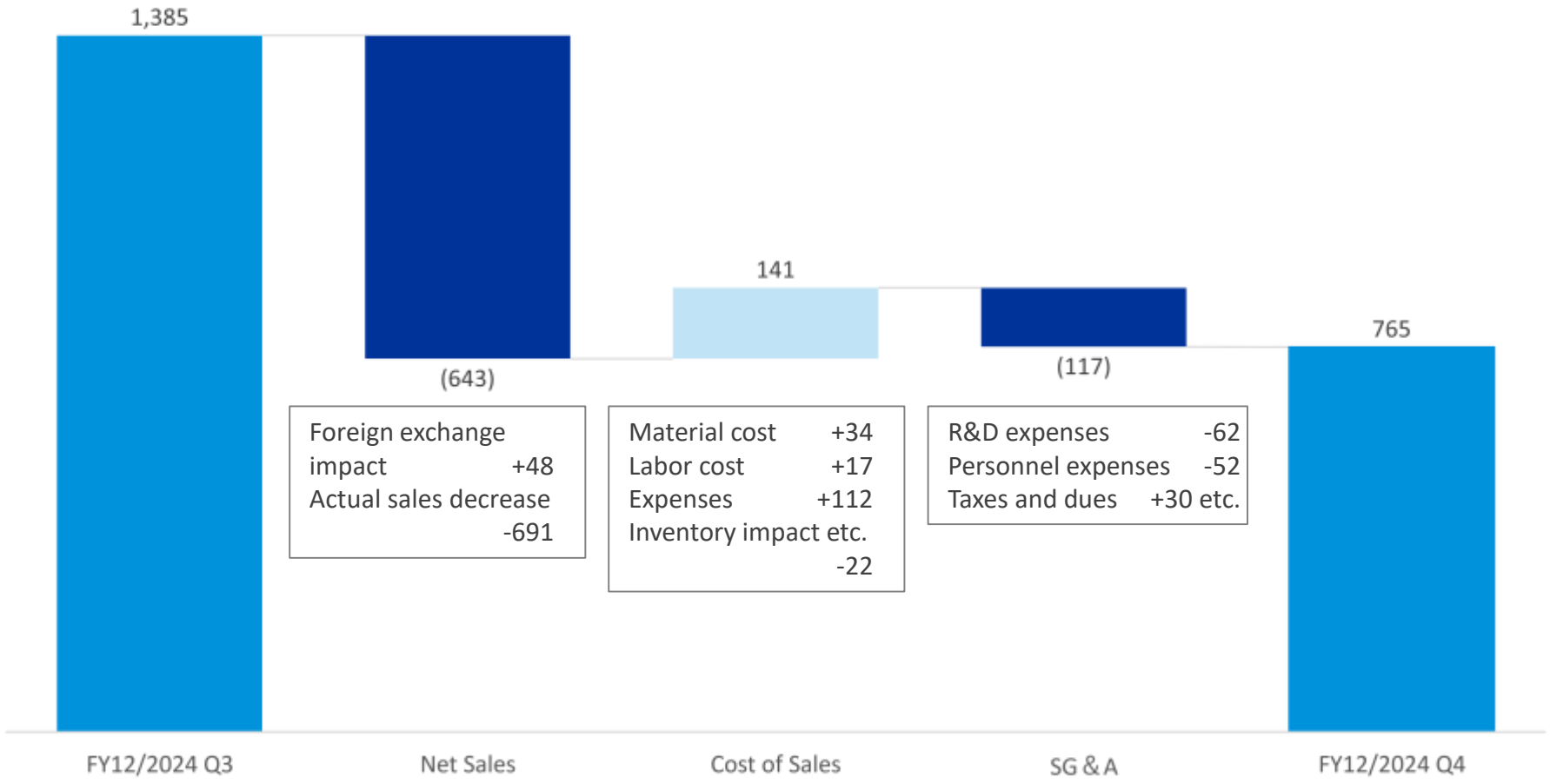
Factors of Increase/Decrease in Operating profit for Q4 (Oct - Dec) (YoY)- Optical Components and Devices

(Millions of yen)



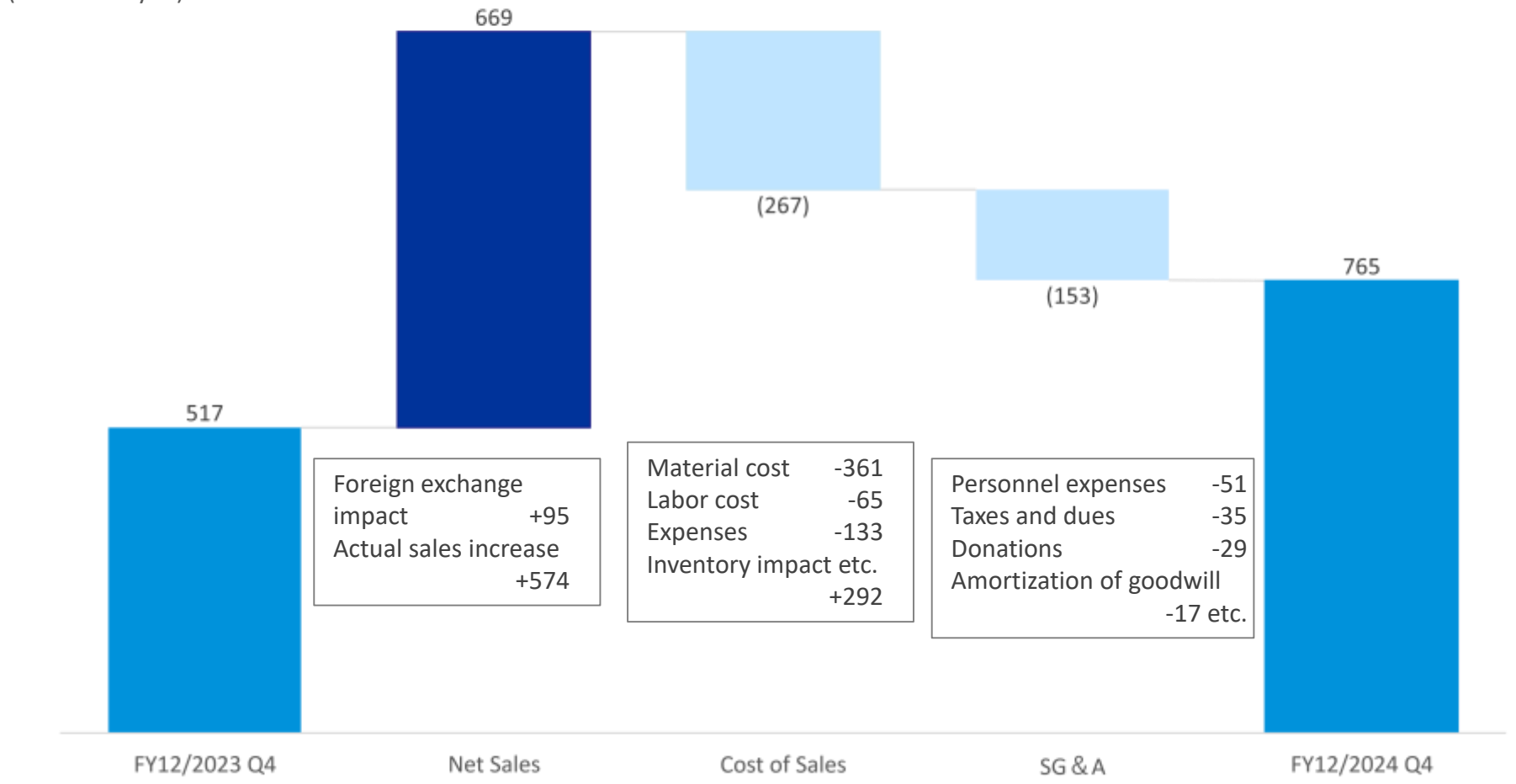
Factors of Increase/Decrease in Operating profit for Q4 (Oct - Dec) (QoQ)

(Millions of yen)



Factors of Increase/Decrease in Operating profit for Q4 (Oct - Dec) (YoY)

(Millions of yen)



This document contains our current plans and performance forecasts. These future plans and forecast figures are plans and projections made by us based on available information. Actual results may differ from these plans and forecast figures due to various conditions and factors.

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