

Q2 FY2019
Analyst Meeting Material
2019/8/8



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I

Q2 FY2019

Financial Summary

Business Environment

- Graphite Electrodes: Customer inventories increased and the European economy decelerated. Needle coke supply remained tight and the sales price increased.
- Carbon Black: The impact from U.S.-China trade friction caused a decline in volume in the Asian region, while other regions remained firm.
- Fine Carbon: The pace of growth in the semiconductor market decelerated, and the consolidation of Tokai Carbon Korea as a subsidiary contributed to consolidated performance.

Operating Trends

- Net Sales: Increased 51.8% YoY
Sales prices improved for graphite electrodes, carbon black and fine carbon.
M&A projects contributed to consolidated net sales.
- Operating income : Increased 41.8% YoY
The sales price for graphite electrodes increased and other businesses also saw firm demand overall.
M&A deals contributed to consolidated profit.

Revision of Earnings Forecast for FY2019 (on August 6)

The forecasts for net sales and operating income were revised to reflect the contribution of the TOKAI COBEX business to consolidated performance.

Summary of Consolidated Results

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- Net sales ¥139.1 billion (+ 52% YoY)
- Operating income ¥40.4 billion (+ 42% YoY)
- ROS 29.1% (31.1% for Q2 FY2018)

(Millions of yen)

	Jan-Jun 2018	Jan-Jun 2019	YoY Change	% Change
Net sales	91,688	139,176	+47,488	+51.8%
Operating income	28,513	40,441	+11,928	+41.8%
Ordinary Income	29,290	40,562	+11,271	+38.5%
Net Income Attributable to Owners of the Parent Company	43,975	26,067	(17,908)	(40.7%)

Group companies (As of June 30, 2019)

- Consolidated subsidiaries: 30
- Equity method affiliates: 2

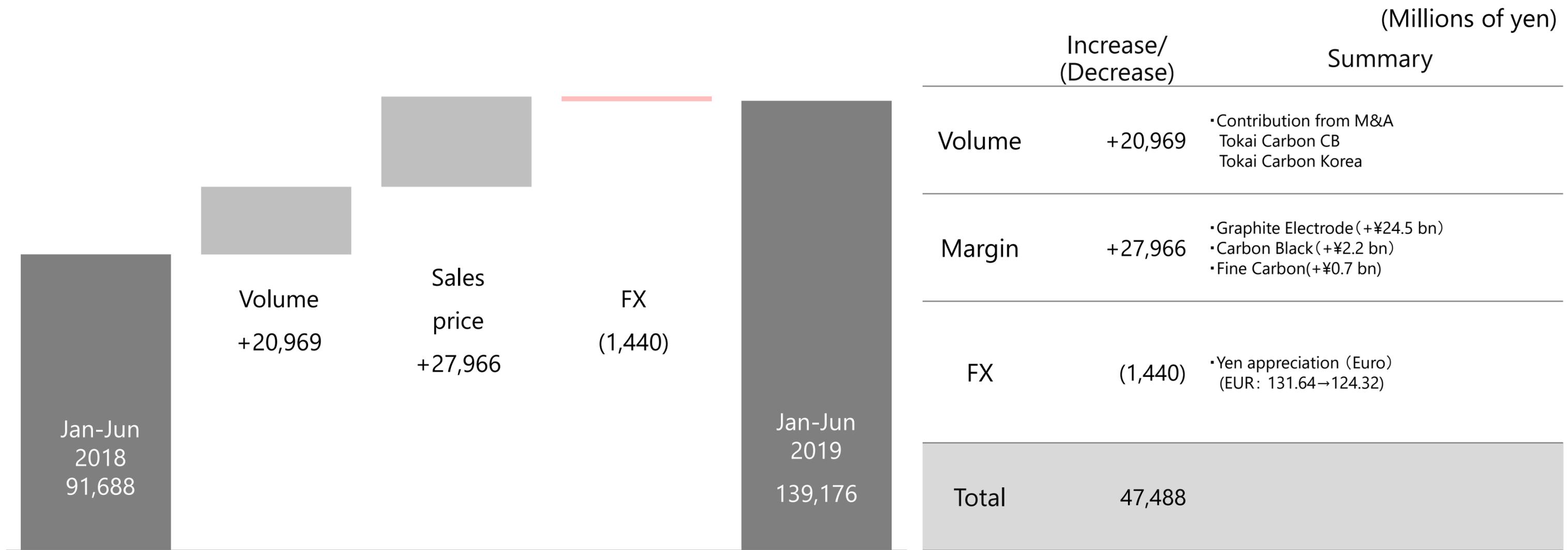
Average exchange rates for the first six months:

- 2018 \$1 = ¥108.68
- 2019 \$1 = ¥110.05

*The provisional accounting treatment of the TOKAI CARBON GE HOLDING LLC, Tokai Carbon Korea Co., Ltd., and Tokai Carbon CB Ltd. business combination was finalized. This resulted in the retroactive adjustment of 2018 figures.

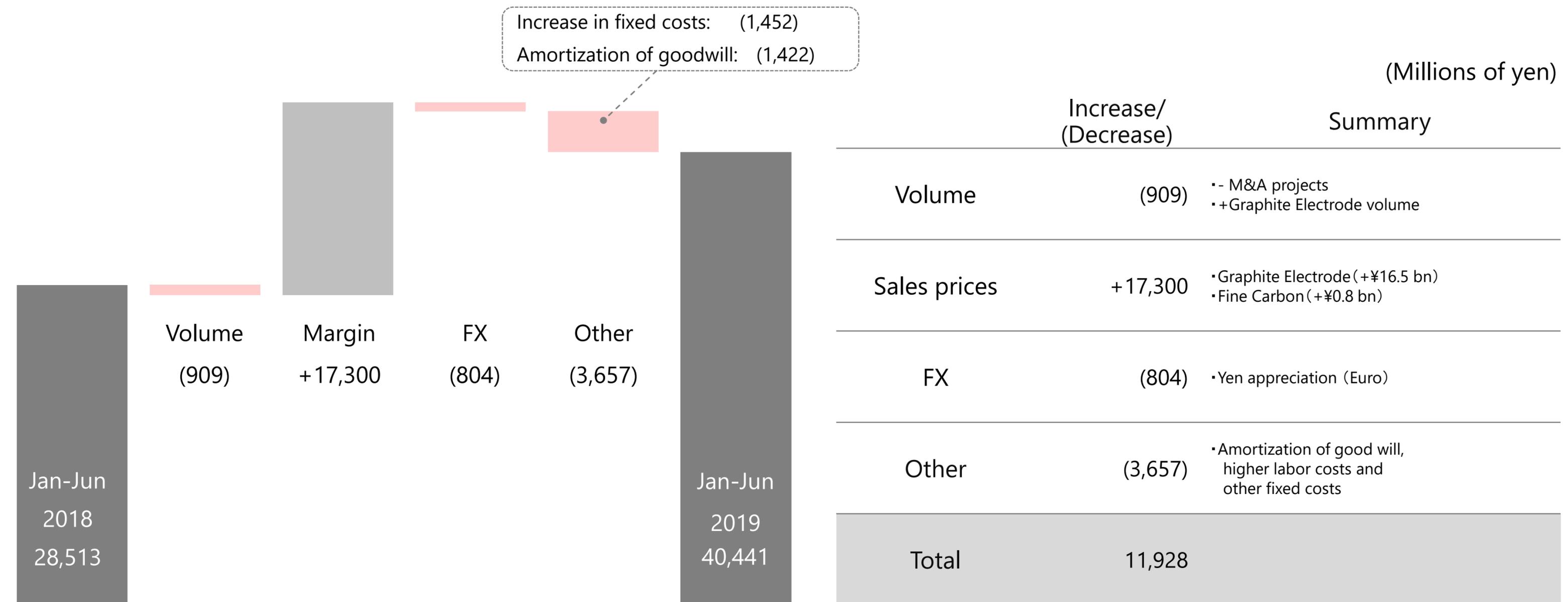
*Net income attributable to owners of the parent company in January-June 2018 includes special income of ¥22.8 billion.

- Sales prices for graphite electrodes, carbon black, and fine carbon increased.
- The consolidation of Tokai Carbon Korea and Tokai Carbon CB (U.S.) contributed to performance.



YoY Analysis: Operating Income

- Operating income grew 41.8% YoY due to an increase in sales prices for graphite electrodes, carbon black, and fine carbon.



Net Sales and Operating Income by Segment

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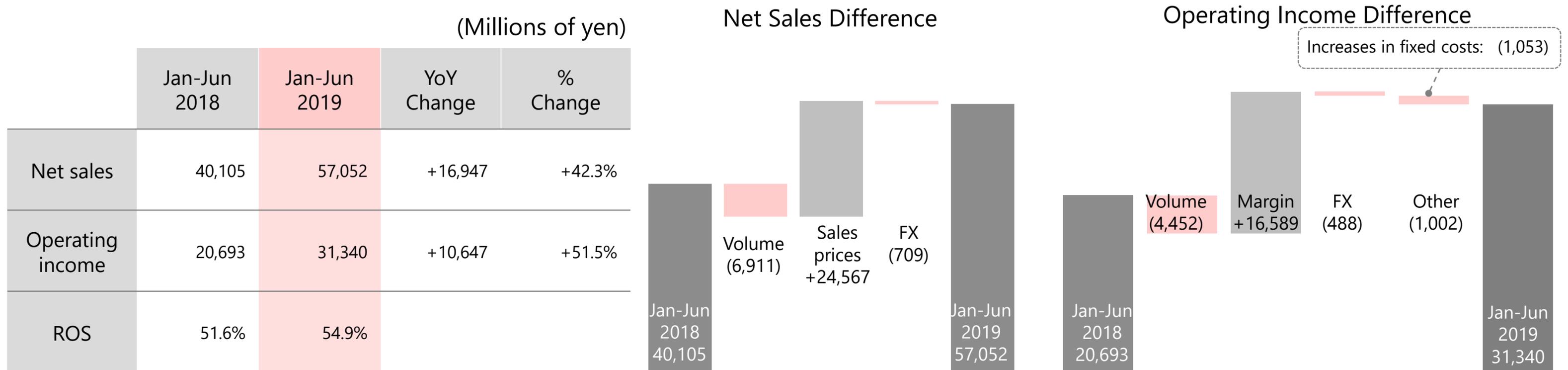
- Core divisions recorded growth in both net sales and operating income.
- Sales of friction materials dropped due to the exit from the four-wheel automotive business

(Millions of yen)

		Net sales			Operating income		
		Jan-Jun 2018	Jan-Jun 2019	YoY Change	Jan-Jun 2018	Jan-Jun 2019	YoY Change
Graphite Electrodes		40,105	57,052	+16,947	20,693	31,340	+10,647
Carbon Black		29,193	54,595	+25,402	5,199	5,686	+487
Fine Carbon		9,327	15,960	+6,632	1,234	3,455	+2,220
Industrial Furnaces and Related Products		5,348	5,013	(334)	1,324	1,348	+24
Other Operations	Friction materials	4,682	3,916	(765)	—	—	—
	Anode materials	2,952	2,564	(387)	—	—	—
	Others	78	72	(5)	—	—	—
		7,713	6,554	(1,158)	582	199	(383)
Inter-segment eliminations		—	—	—	(521)	(1,590)	(1,068)
Total		91,688	139,176	+47,488	28,513	40,441	+11,928

*The provisional accounting treatment of the TOKAI CARBON GE HOLDING LLC, Tokai Carbon Korea Co., Ltd., and Tokai Carbon CB Ltd. business combination was finalized. This resulted in the retroactive adjustment of 2018 figures.

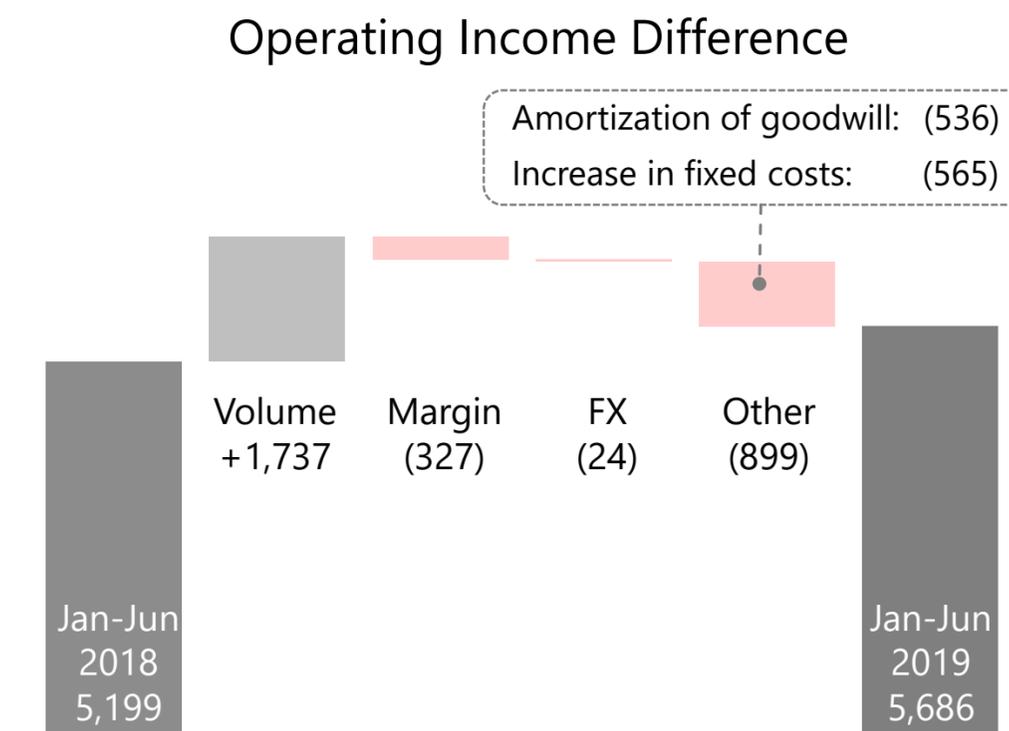
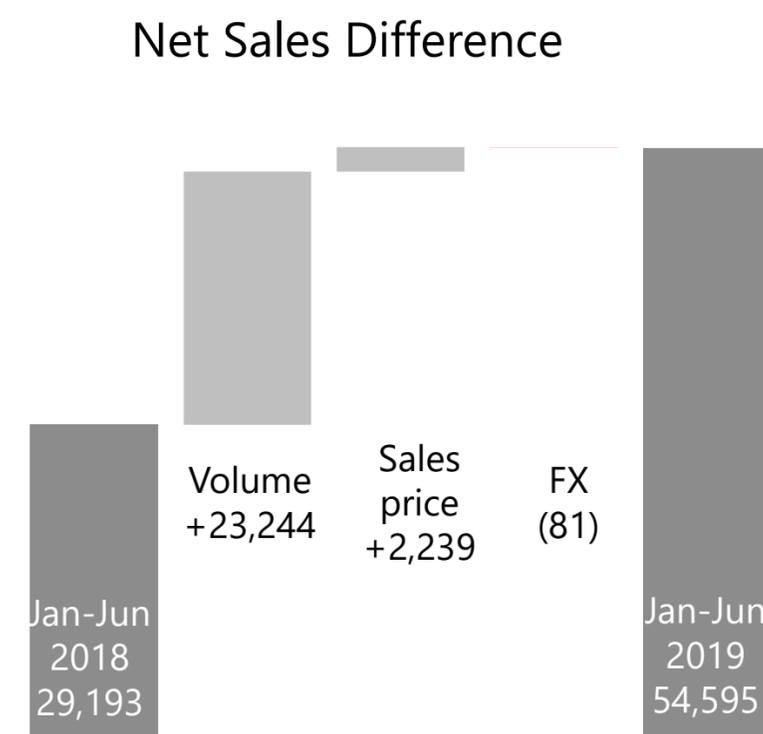
- YoY growth in net sales, operating income, and ROS
- Insufficient supply of graphite electrodes during the same period last year was mitigated by an increase in customer inventories and deceleration of economic growth in Europe, and sales volume declined YoY.
- Global tight supplies of key raw materials led to a YoY increase in the sales price, which remained at a high level.



- Net sales grew 87.0% YoY and operating income grew 9.4% YoY.
- The consolidation of Tokai Carbon CB Ltd. from September 2018 contributed to consolidated performance.
- U.S.-China trade friction led to a YoY decline in sales volume in the Asian region.
- Sales in other regions remained strong, and a price revision based on higher feedstock oil prices also contributed to growth in net sales.

(Millions of yen)

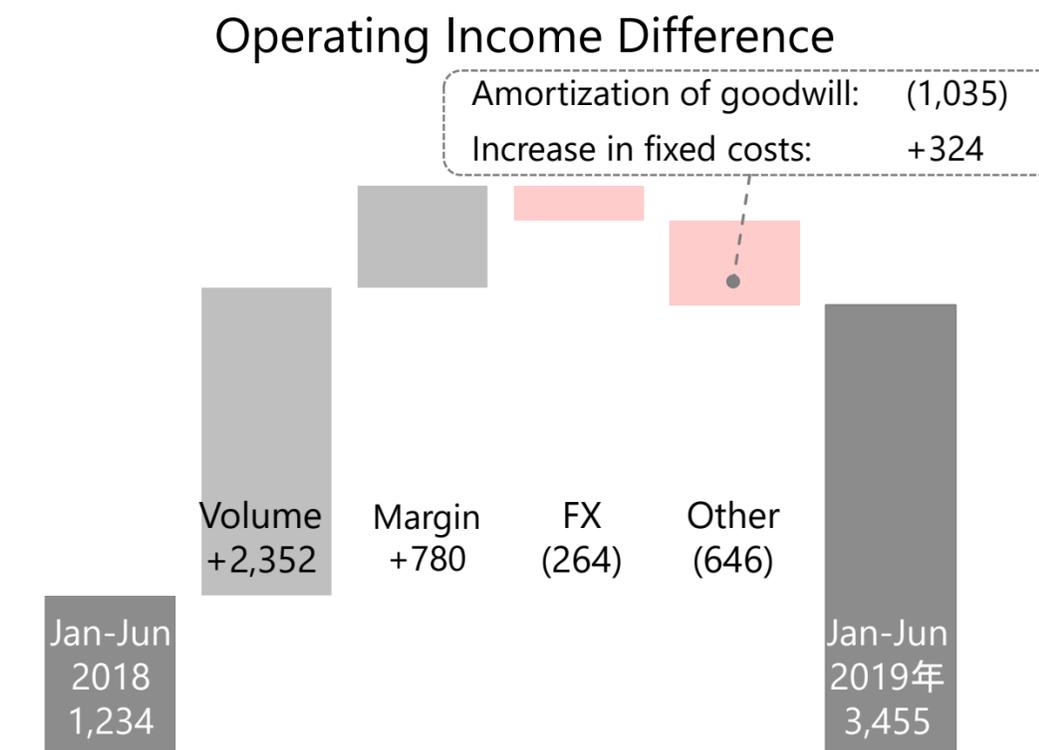
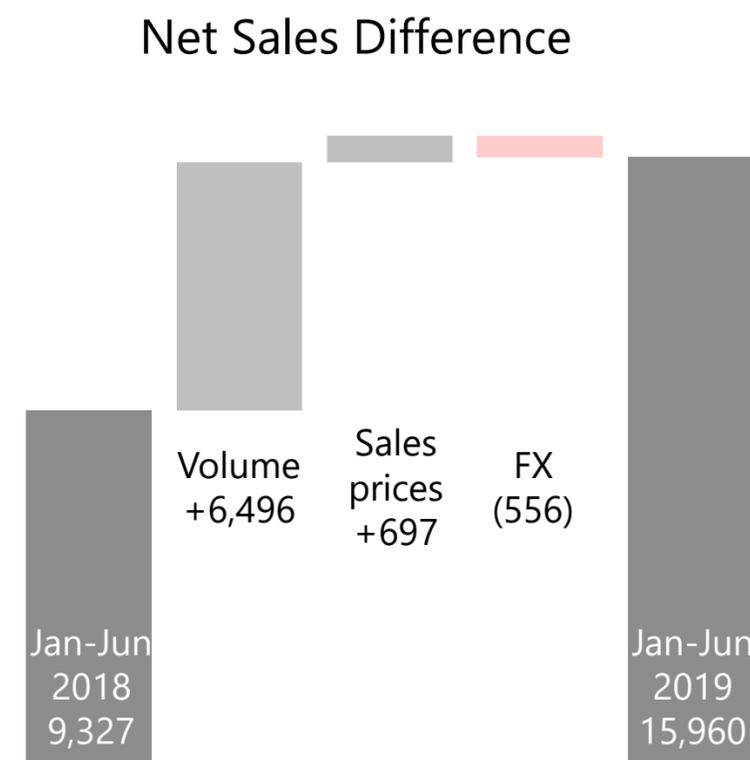
	Jan-Jun 2018	Jan-Jun 2019	YoY Change	% Change
Net sales	29,193	54,595	+25,402	+87.0%
Operating income	5,199	5,686	+487	+9.4%
ROS	17.8%	10.4%		



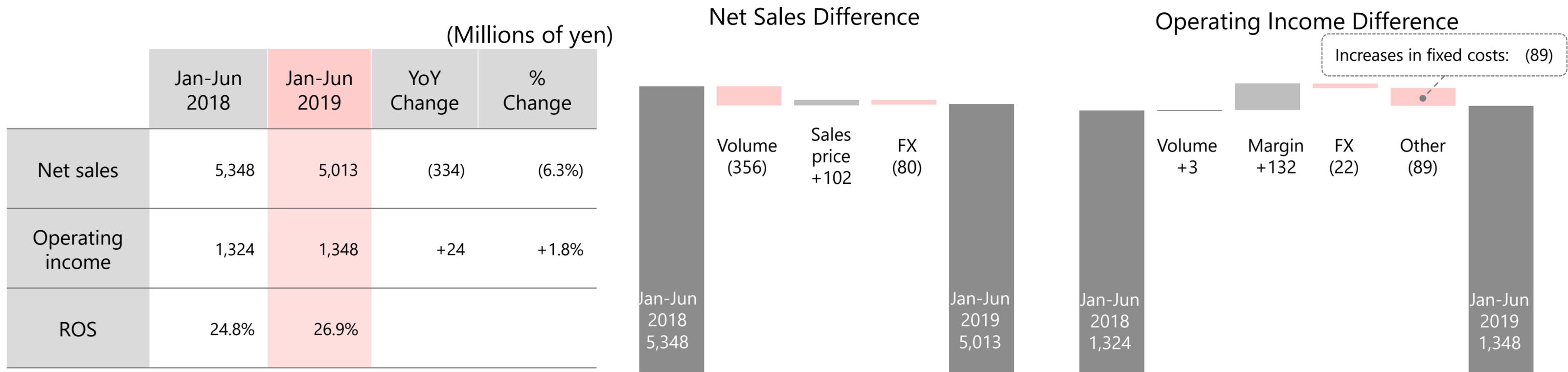
- Net sales grew 71.1% YoY and operating income grew 179.8% YoY.
- Growth decelerated in the semiconductor industry, a target industry, while demand from general industry was strong.
- The consolidation of Tokai Carbon Korea from June 2018 contributed to consolidated performance.

(Millions of yen)

	Jan-Jun 2018	Jan-Jun 2019	YoY Change	% Change
Net sales	9,327	15,960	+6,632	+71.1%
Operating income	1,234	3,455	+2,220	+179.8%
ROS	13.2%	21.7%		



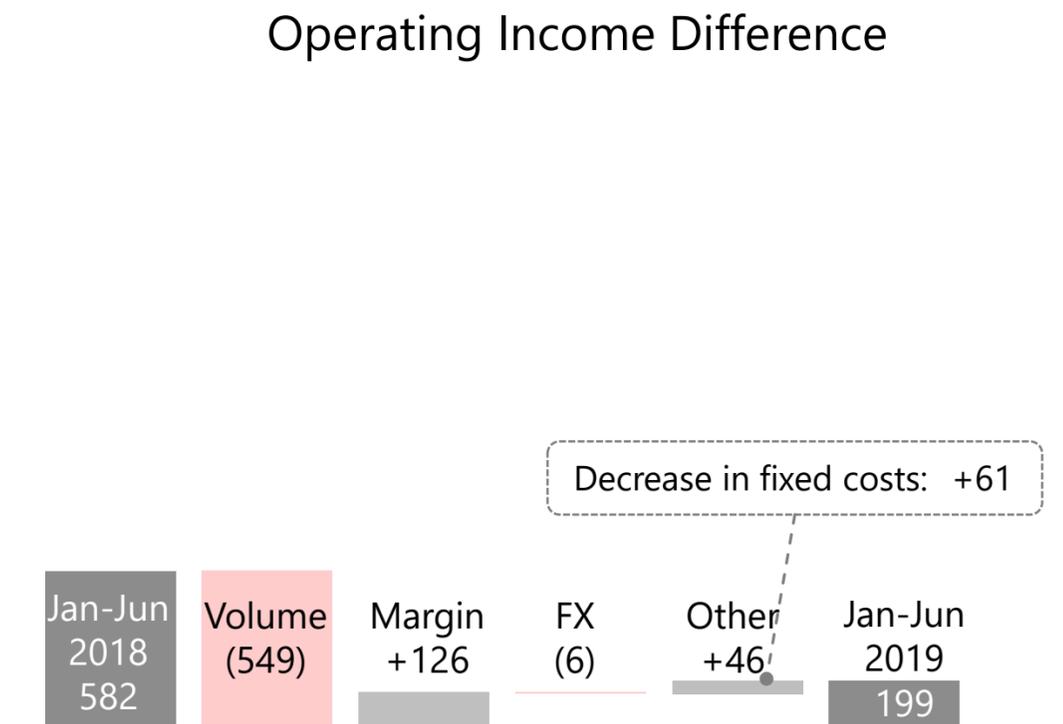
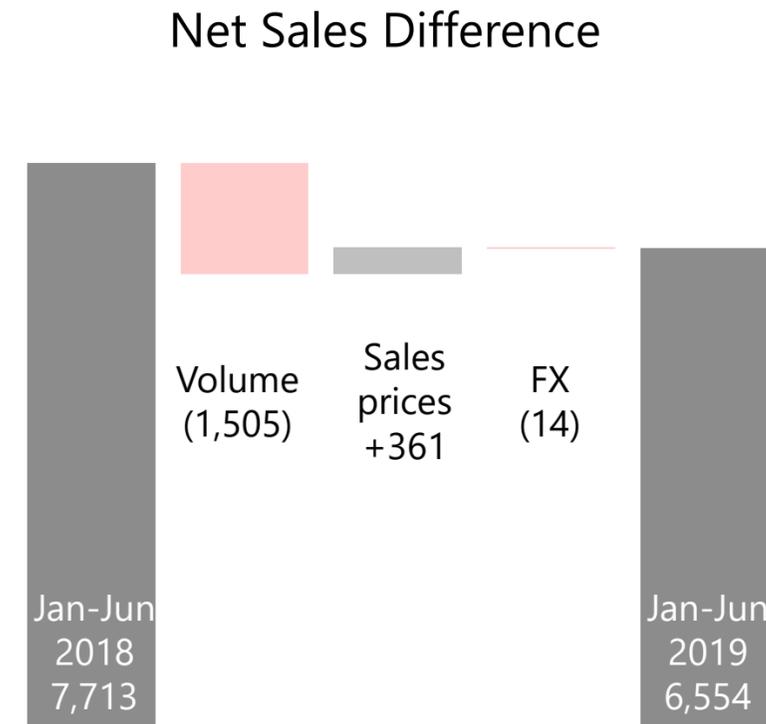
- Net sales decreased 6.3% YoY and operating income grew 1.8% YoY.
- Industrial furnace sales declined YoY since most of the shipments for 2019 are concentrated in the second half.
- Ceramic heaters and other products saw robust demand from the MLCC (multi-layer ceramic capacitors) and sheet glass industries, resulting in a higher net sales on a YoY basis.



- Friction materials:** Exited from the four-wheel automotive business as part of our business restructuring project
 Net Sales fell by ¥765 million (-16.3%) YoY.
- Anode materials:** Our sales volume did not grow YoY despite expansion of the secondary lithium-ion battery market.
 Net Sales fell by ¥387 million (-13.1%) YoY.

(Millions of yen)

	Jan-Jun 2018	Jan-Jun 2019	YoY Change	% Change
Net sales	7,713	6,554	(1,158)	(15.0%)
Operating income	582	199	(383)	(65.8%)
ROS	7.6%	3.0%		



Major Cash Flow Items

(Millions of yen)

	Jan-Jun 2018	Jan-Jun 2019	Summary
Cash flows from operating activities	18,607	15,027	
Net income (loss) before income taxes	52,227	40,295	
Depreciation and amortization	3,866	6,743	
Amortization on good will	532	1,315	
Loss (gain) on step acquisition	(22,843)	-	
Decrease (increase) in trade receivables	(8,346)	433	
Decrease (increase) in inventories	(9,835)	(17,840)	
Increase (decrease) in accounts payable-trade	4,002	(2,244)	
Income tax paid	(996)	(13,675)	
Cash flows from investing activities	(8,090)	(9,661)	
Purchase of property, plant and equipment	(2,320)	(9,466)	
Expenditure for acquisition of subsidiary	(5,669)	-	
Cash flows from financing activities	493	(8,420)	
Net increase (decrease) in short-term loans payable	1,984	(5,008)	
Payment of dividends	(1,278)	(2,557)	
Cash and cash equivalents at end of period	32,373	37,172	

Major Balance Sheet Items

(Millions of yen)

	December 31, 2018	March 31, 2019	Summary
Total assets	329,868	336,456	
Current assets	164,220	175,575	
Cash and cash equivalents	46,797	42,498	
Notes and accounts receivable	55,137	54,100	
Inventory	58,789	75,462	
Fixed assets	165,648	160,881	<ul style="list-style-type: none"> ▪ Tangible fixed assets(+¥3,193 million from the end of the previous period) ▪ Intangible fixed assets (decrease of ¥5,036 million from the end of the previous period) Capital expenditures: ¥9,447 million (+¥6,073 million from the end of the previous period) Depreciation and amortization: ¥6,743 million (+¥2,877 million from the end of the previous period) Amortization of goodwill: ¥1,315 million (+¥782 million from the end of the previous period)
Tangible fixed assets	80,312	83,506	
Intangible fixed assets	61,805	56,769	
Investments and other assets	23,529	20,606	
Total liabilities	122,035	110,786	
Current liabilities	91,654	69,908	<ul style="list-style-type: none"> ▪ Interest-bearing debt of ¥44,577 million (decrease of ¥5,133 million from the end of the previous period)
Long-term liabilities	30,381	40,878	
Total net assets	207,833	225,670	
Shareholder's capital	179,500	203,009	
Other accumulated comprehensive income	7,640	2,716	<ul style="list-style-type: none"> ▪ Capital-to-asset ratio:61.1% (End of previous period: 56.7%)
Non-controlling interests	20,692	19,943	
Total liabilities and net assets	329,868	336,456	

II

FY2019

Earnings Forecast

Consolidated Earnings Forecast FY2019

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- Net Sales: ¥304.4 billion
- Operating Income: ¥76.9 billion
- ROS: 25.3%

(Millions of yen)

	Previous Forecast (May 9)			New Forecast for FY 2019			YoY Change	% Change
	1H	2H	Full Year	1H	2H	Full Year		
Net sales	144,600	143,300	287,900	139,176	165,224	304,400	+16,500	+5.7%
Operating income	42,700	32,700	75,400	40,441	36,459	76,900	+1,500	+2.0%
Ordinary Income	42,700	32,700	75,400	40,562	36,338	76,900	+1,500	+2.0%
Net Income Attributable to Owners of the Parent Company	27,800	21,500	49,300	26,067	23,233	49,300	0	+0%
ROS	29.5%	22.8%	26.2%	29.1%	22.1%	25.3%	—	—
ROIC	—	—	—	—	—	—	—	—
ROE	—	—	23.7%	—	—	23.7%	—	—

Group companies

- Consolidated subsidiaries: 34 (COBEX added)
- Equity method affiliates: 2

Average exchange rates:

- 2018 \$1 = ¥110.43
- 2019 \$1 = ¥105.00 (3Q onward)

Net Sales and Operating Income Forecast by Segment

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(Millions of yen)

	Previous Forecast (May 28)			New Forecast for FY 2018			YoY Change	% Change
	1H	2H	Full Year	1H	2H	Full Year		
Net Sales	144,600	143,300	287,900	139,176	165,224	304,400	+16,500	+5.7%
Graphite Electrodes	60,800	54,600	115,400	57,052	58,348	115,400	0	—
Carbon Black	55,400	57,400	112,800	54,595	58,205	112,800	0	—
Fine Carbon	16,000	17,200	33,200	15,960	17,240	33,200	0	—
TOKAI COBEX	—	—	—	—	16,500	16,500	+16,500	—
Industrial Furnaces and Related Products	5,800	8,300	14,100	5,013	9,087	14,100	0	—
Other Operations								
Friction materials	4,000	4,300	8,300	3,916	4,384	8,300	0	—
Anode materials	2,500	1,400	3,900	2,564	1,336	3,900	0	—
Others	100	100	200	72	128	200	0	—
Total Others	6,600	5,800	12,400	6,554	5,846	12,400	0	—
Operating Income	42,700	32,700	75,400	40,441	36,459	76,900	+1,500	+2.0%
Graphite Electrodes	31,900	21,300	53,200	31,340	21,860	53,200	0	—
Carbon Black	6,600	6,700	13,300	5,686	7,614	13,300	0	—
Fine Carbon	3,300	3,700	7,000	3,455	3,545	7,000	0	—
TOKAI COBEX	—	—	—	(972)	2,472	1,500	+1,500	—
Industrial Furnaces and Related Products	1,500	2,100	3,600	1,348	2,252	3,600	0	—
Other	200	0	200	199	1	200	0	—
Inter-segment eliminations	(800)	(1,100)	(1,900)	(618)	(1,282)	(1,900)	0	—

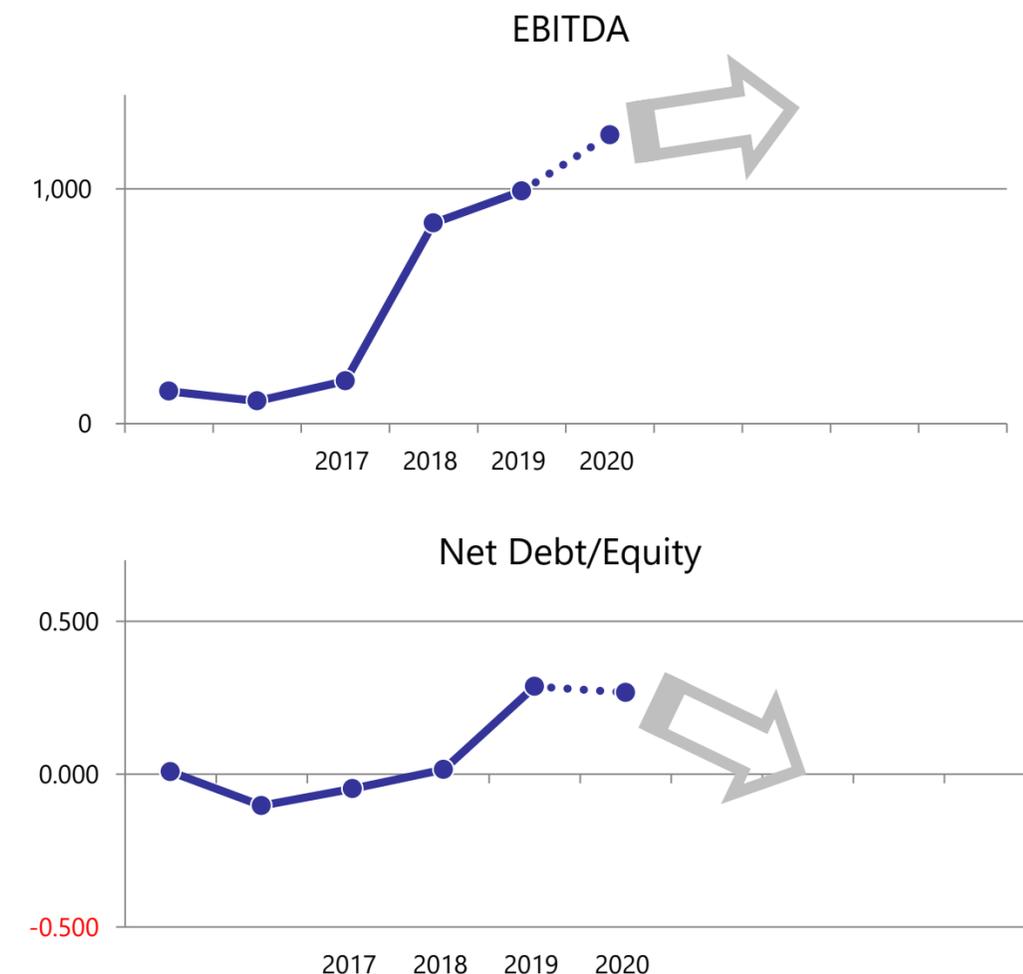
- Establish EBITDA exceeding ¥100 billion and increase it further.
- Procure funds through hybrid financing from a balanced mixture of capital and debt by year-end.
- Achieve adjusted net debt/equity around 0.0 times within 3-5 years of the COBEX acquisition.

(Millions of yen)

	2017	2018	2019 (Forecast)
Net sales	106,252	231,302	304,400
Operating income	11,093	73,066	76,900
ROS (%)	10.4	31.6	25.3
EBITDA	18,200	85,368	99,000
EBITDA margin (%)	17.1	36.91	32.52
Capital investment	4,282	11,794	27,600
Total assets	184,730	329,869	472,800
Interest-bearing debt at fiscal year-end	16,144	49,711	149,700
Net assets	127,130	207,833	250,500
Adjusted net debt/equity (times)	-0.047	0.016	0.300

Adjusted net debt/equity is the debt/equity ratio used by the rating agencies that rate hybrid financing to confirm capital.

Sustained profit growth and maintenance of sound financial status



III

Strategic Investments

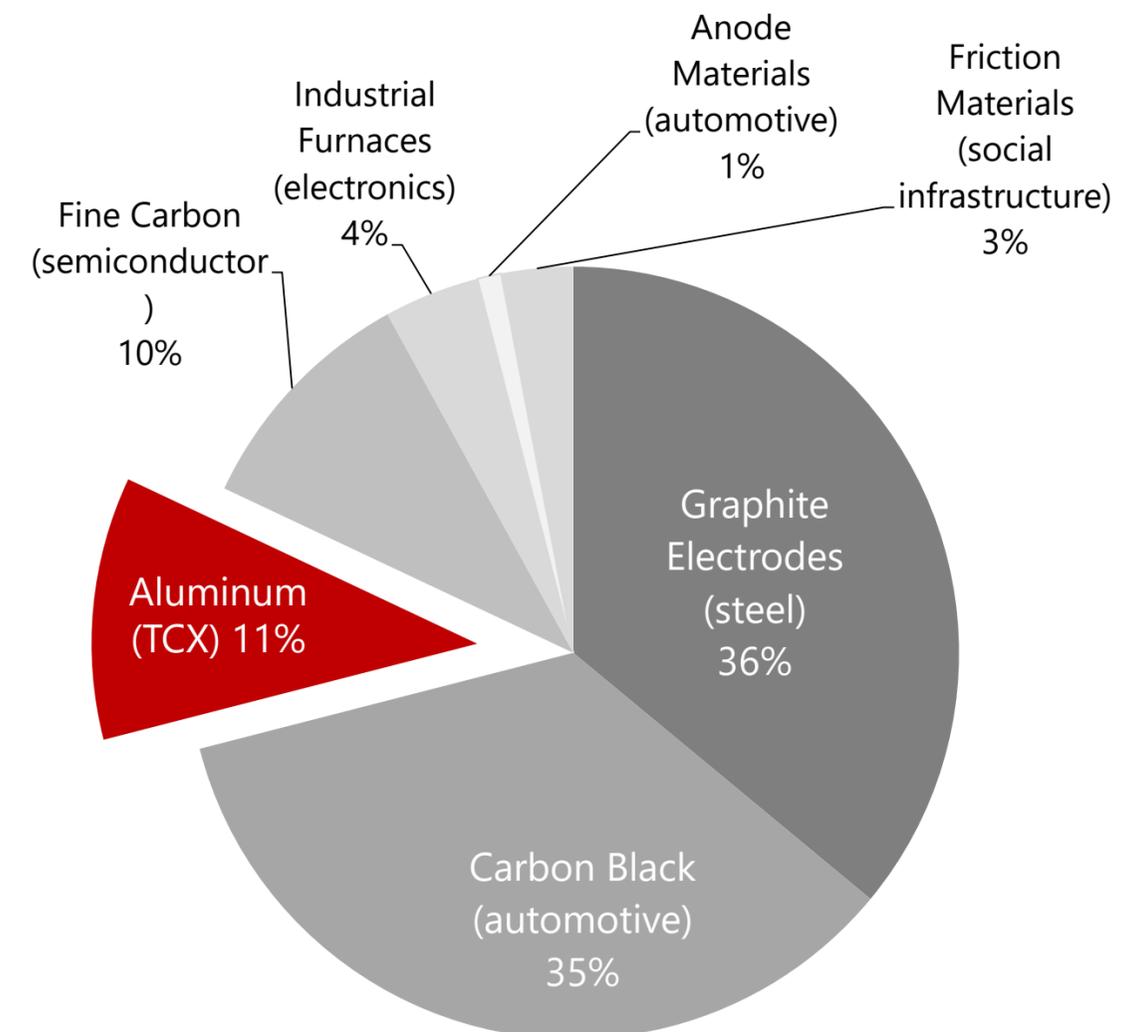
TOKAI COBEX GmbH

- TOKAI COBEX GmbH (TCX) was acquired as part of the growth strategy contained in the basic policies of Mid-Term Management Plan T-2021.

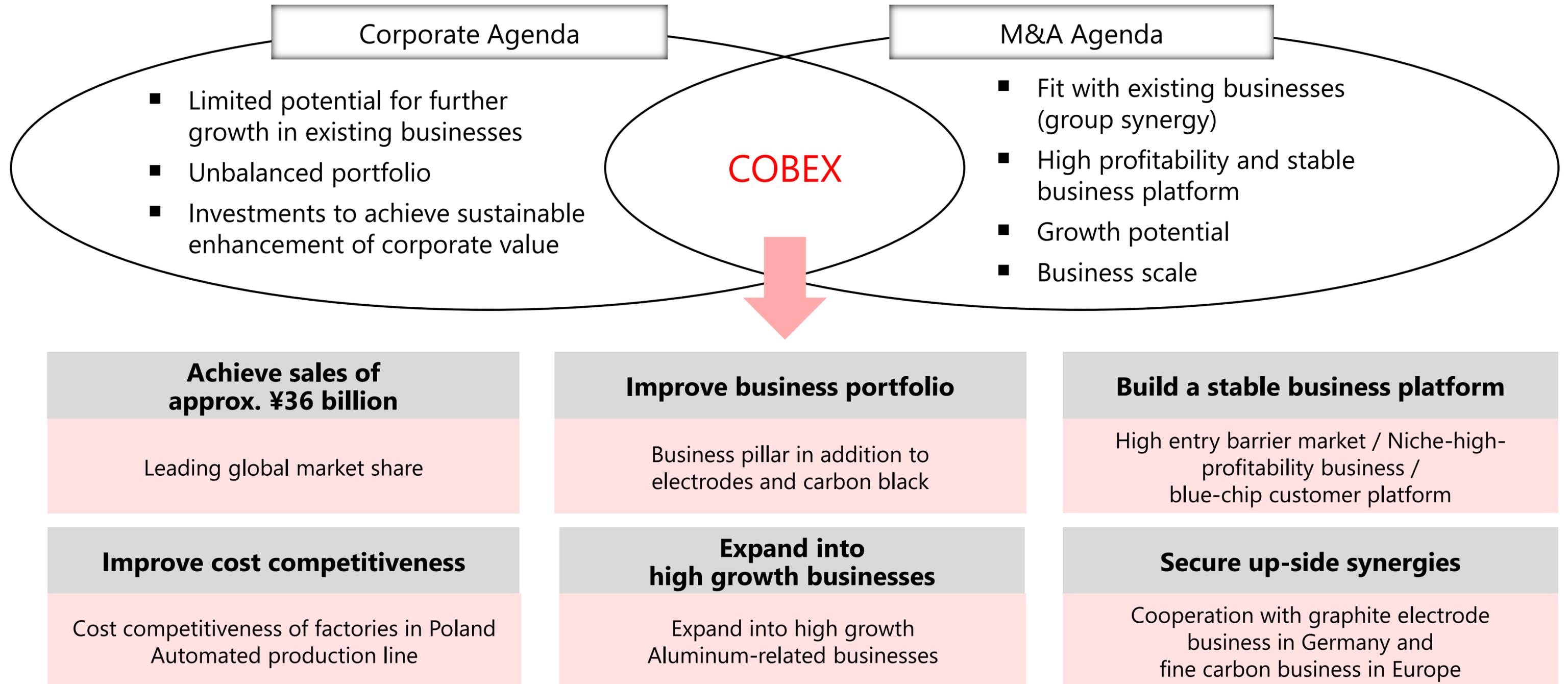
Mid-Term Management Plan T-2021 Basic Policies

- Strengthen the revenue base
- Expand opportunities for growth
- Build a consolidated governance structure

Revenue Structure After This Acquisition
(Full year conversion)



- The acquisition of COBEX fits with our corporate agenda and will enhance our long-term corporate value.



- Tokai Carbon acquired 100% of the shares in COBEX HoldCo GmbH and its group companies on July 26, 2019 and renamed the company TOKAI COBEX HoldCo GmbH.

Company name	TOKAI COBEX HoldCo GmbH (TCX)			
Date of establishment	September 2016			
Description of business	Manufacturing, sales and R&D of cathodes, furnace linings and carbon electrodes			
Business units	Head office:	Wiesbaden (Germany)		
	Manufacturing locations:	Nowy Sacz (Poland)	} 70,000 tons per year	
		Raciborz (Poland)		
Business results	Year ended December 2018 (actual):	Sales €235 million	EBITDA €76 million	EBIT €70 million
	Year ending December 2019 (forecast):	Approx. €300 million	Approx. €120 million	Approx. €117 million
Number of employees	Approximately 900 (including approx. 210 contract employees)			
Acquisition price	Enterprise Value: Approximately ¥100 billion (including approx. ¥25.2 billion in interest-bearing debt)			

- Grew to become the top player in cathodes and furnace linings used by SGL Carbon in smelting. The company was spun off in 2016 and was acquired by the European fund Triton in 2017.

1895	Established an electrode factory (ZEW S.A.) in Raciborz (Poland)
1960	Established an electrode factory (Polgraph S.A.) in Nowy Sacz (Poland)
1995	SGL Carbon acquired Polgraph S.A.
2000	SGL Carbon acquired ZEW
2000 to 2007	Consolidated the business in Poland, including cathodes, furnace lining, and carbon electrodes, when SGL Carbon reorganized its European manufacturing plants
2016	SGL Carbon spun off the cathode and furnace lining business into SGL CFL CE GmbH
2017	Triton acquired SGL CFL CE GmbH. Corporate name changed to COBEX GmbH (2018)
July 2019	Tokai Carbon acquired 100% of the shares and changed the company name to TOKAI COBEX HoldCo GmbH

- TOKAI COBEX (TCX) is a global market share leader in its three main businesses and leads the world in production capacity, customer base, and quality and technical capabilities.

Approximate Contribution to Sales (2018)



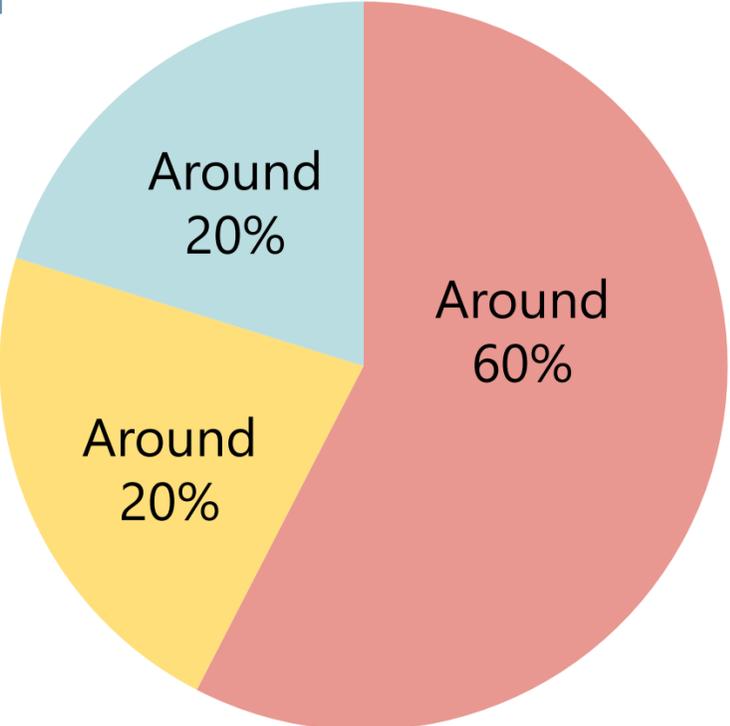
Furnace Linings

Carbon and graphite lining materials for blast furnaces used in hot metal production for steel



Carbon Electrodes

Used for smelting of silicon metals, ferroalloys, phosphorus, etc.



Cathodes

Carbon and graphite materials applied in the lining of electrolysis cells for aluminum smelting



- SGL, the predecessor, established a highly competitive position by reducing costs through business consolidation while individual companies withdrew from the business that built the company's position into a leading company among a few.



Approx. **40%** share

Global top share
Graphitized cathode market
(excluding China)



Approx. **40%** share

Global top share
Large blast furnace market
(including China)

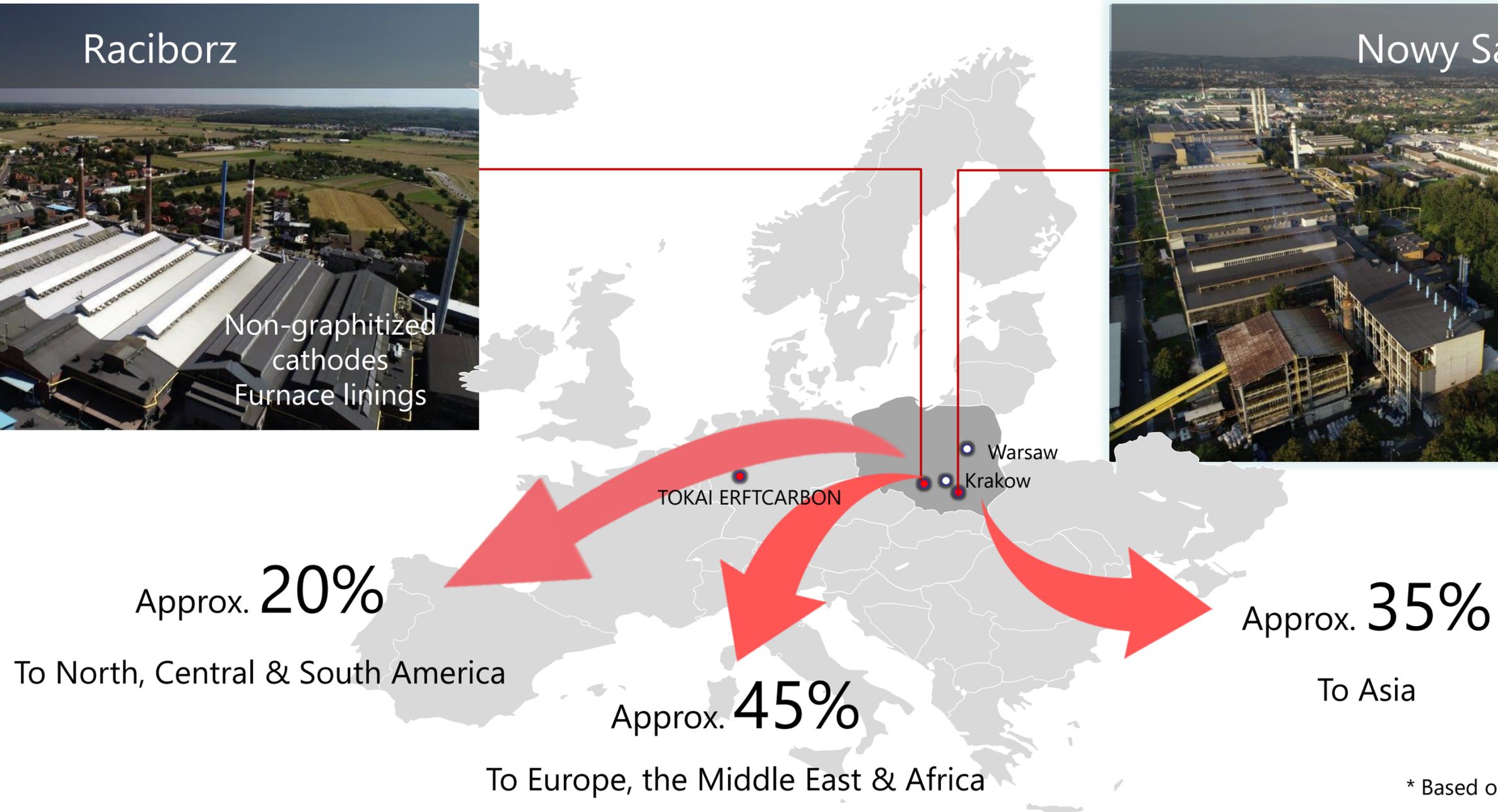
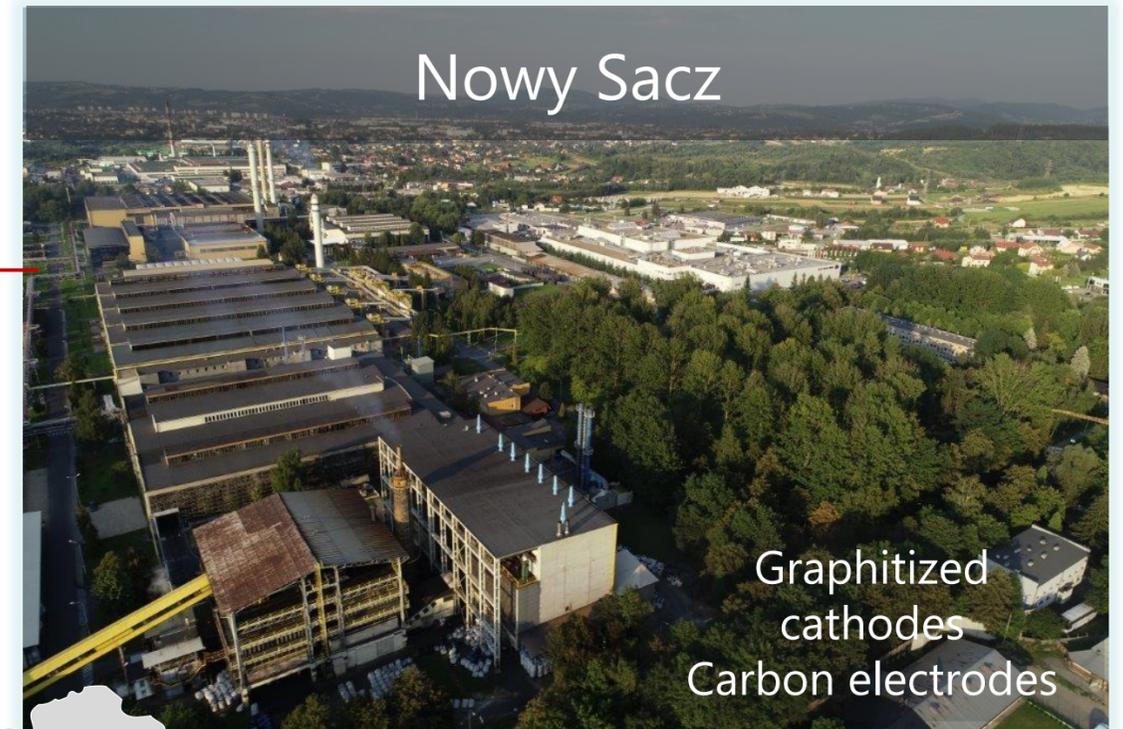
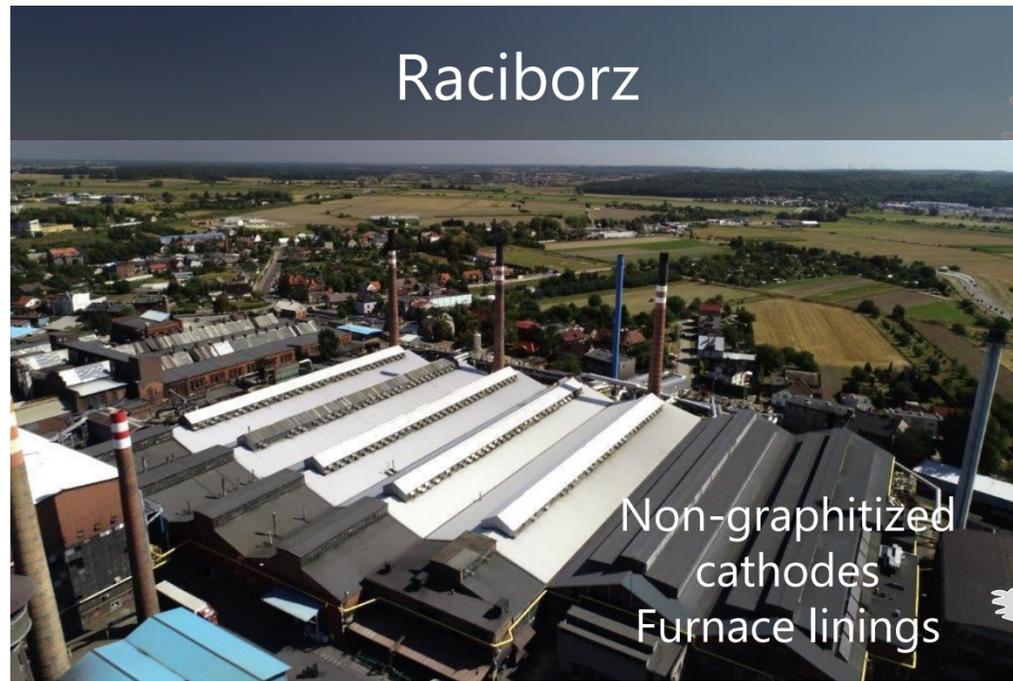


Approx. **30%** share

Global No. 2 share
Carbon electrode market
(excluding China)

Clearly Decisive Cost Advantage

- All product manufacturing was consolidated at the plants in Poland where the company has superior labor and energy costs. These plants supply the global market.

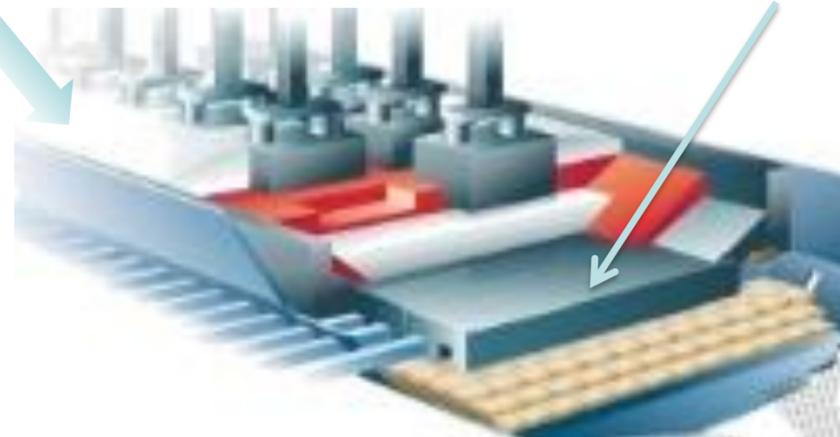


* Based on fiscal 2018 net sales

- It is difficult to enter the cathode and furnace lining industries due to the long cycle, initial capital investment, manufacturing technology, and raw materials procurement.



Aluminum smelters (pots)

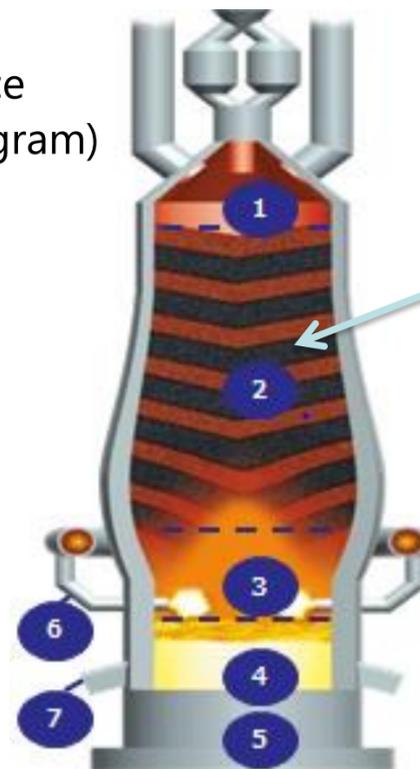


Cathodes

Replaced every 4-6 years

Cathodes are positioned at the bottom of the furnace in aluminum refining electrolysis cells as a disposable element used for electrolysis.

Blast furnace (Schematic diagram)



Furnace linings (heat-resistant material that lines furnaces)

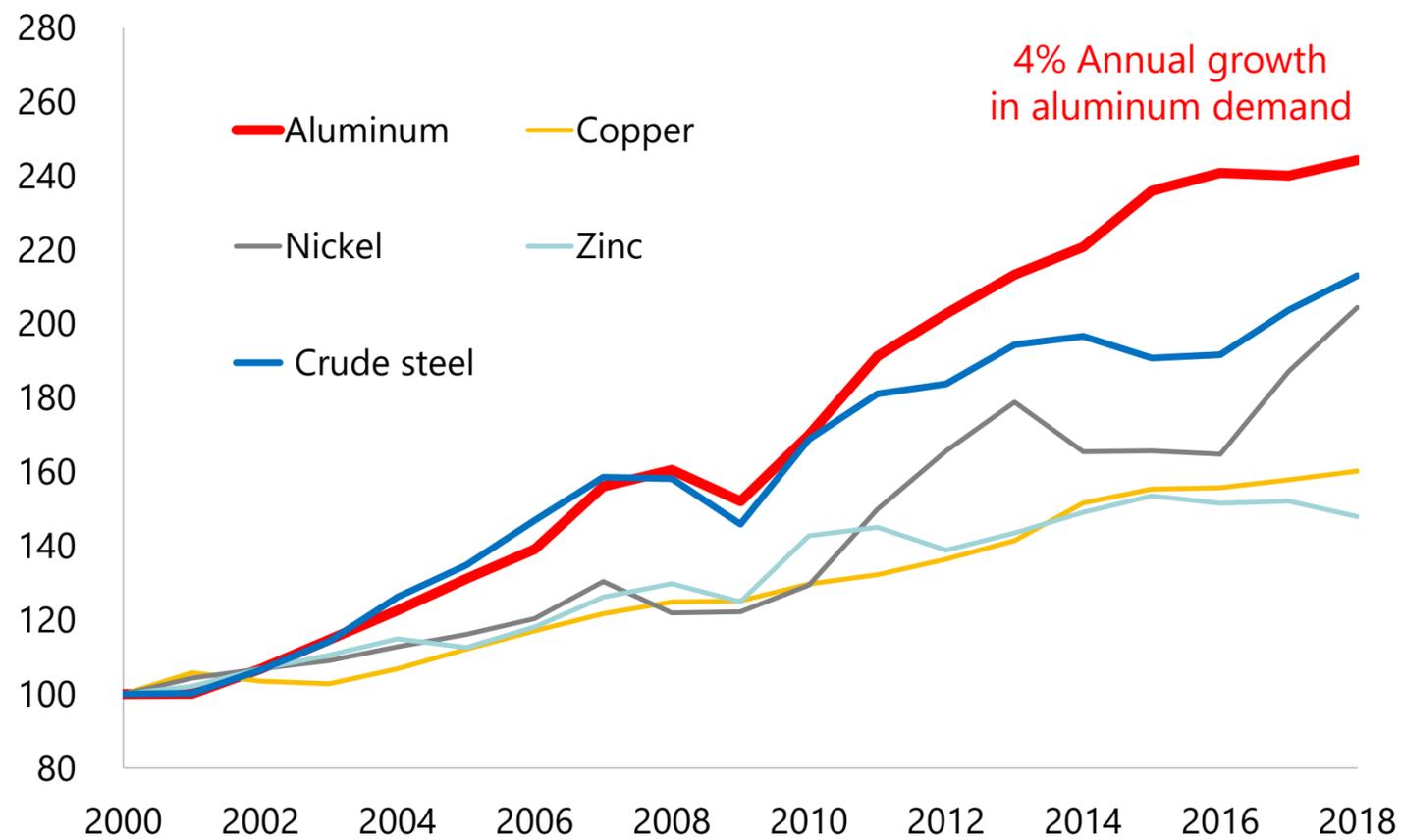
Replaced every 10-15 years

Carbon and graphite lining materials are used in sections (2) through (7) of a blast furnace, which are subjected to a high heat load.

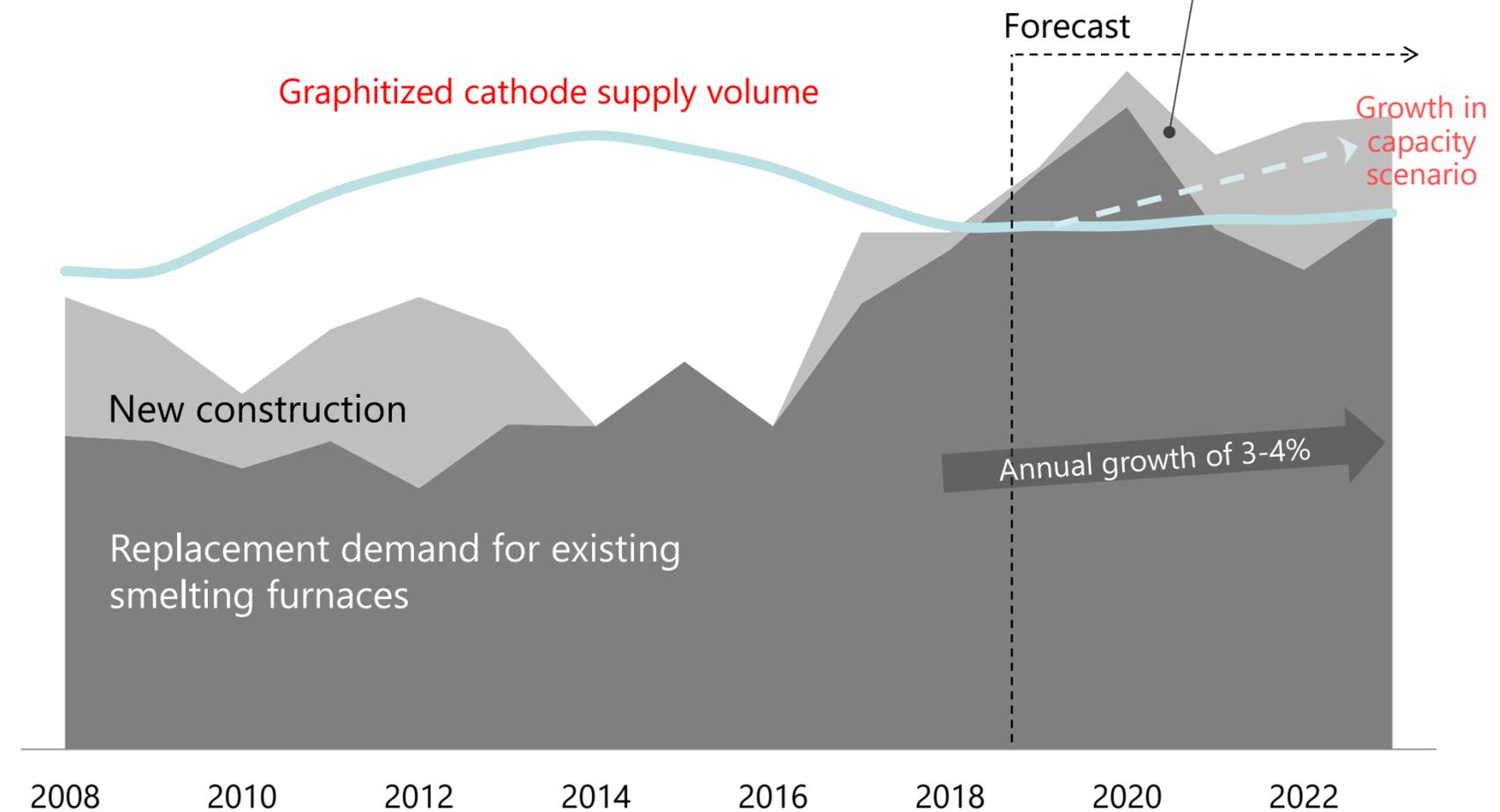
The replacement demand cycle is 4-6 years for cathodes and 10-15 years for blast furnaces. This is a barrier to entry because the quality evaluation cycle is also long.

- Production volume is growing faster for aluminum smelting than for other types of metal.
- Greater expansion is projected in the future as the volume used rises along with economic growth in emerging countries and the need for weight reduction in advanced countries.
- The demand for cathodes comes from replacement demand and new project, and we project continued annual growth of 3-4% in the future as well.

■ Global production of major metal products (CY2000 - 100)



■ Trend in Demand for Graphitized Cathodes (excluding China)

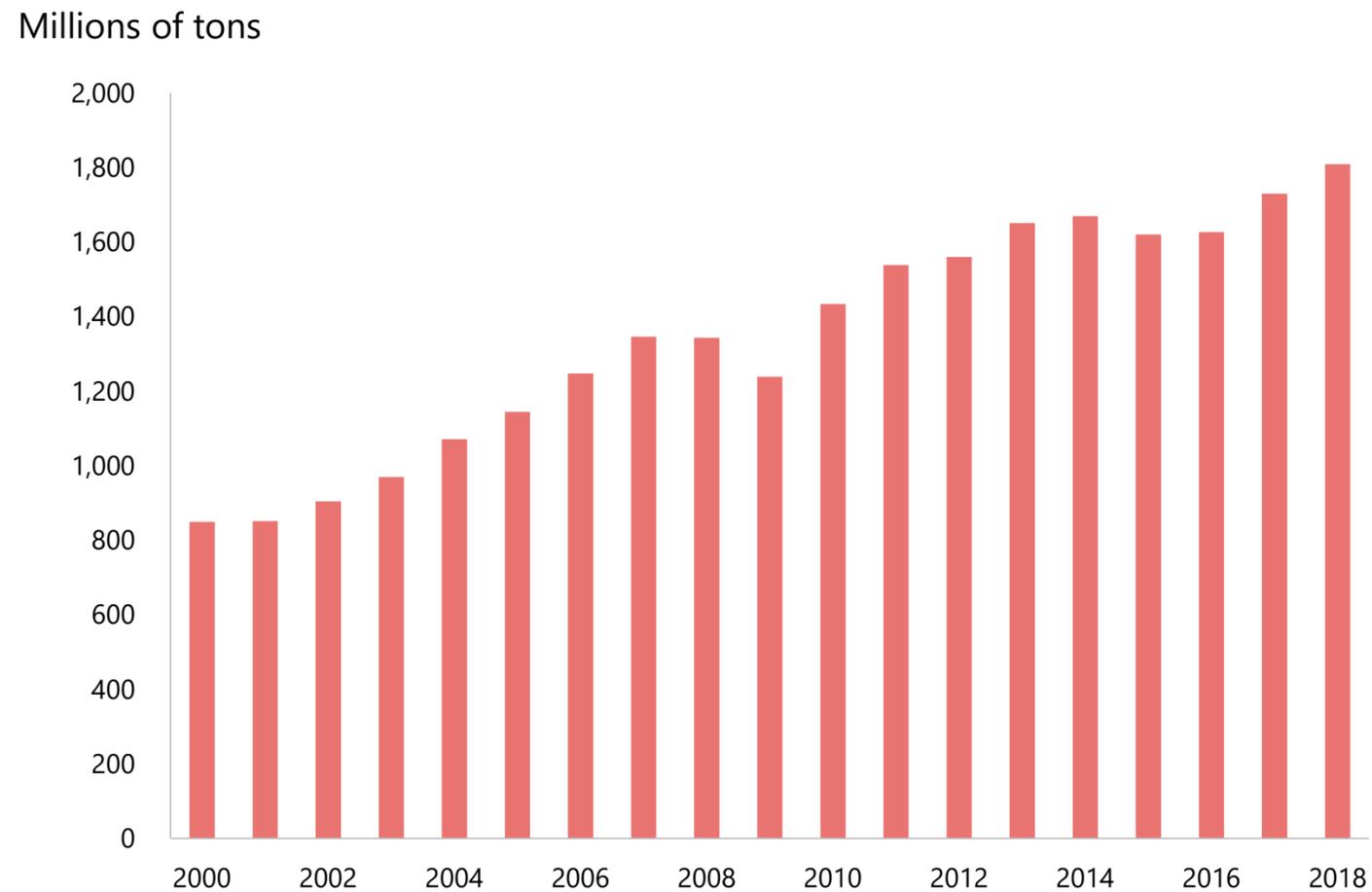


Source: World Metal Statistics, World Steel Association

* Tokai Carbon forecast

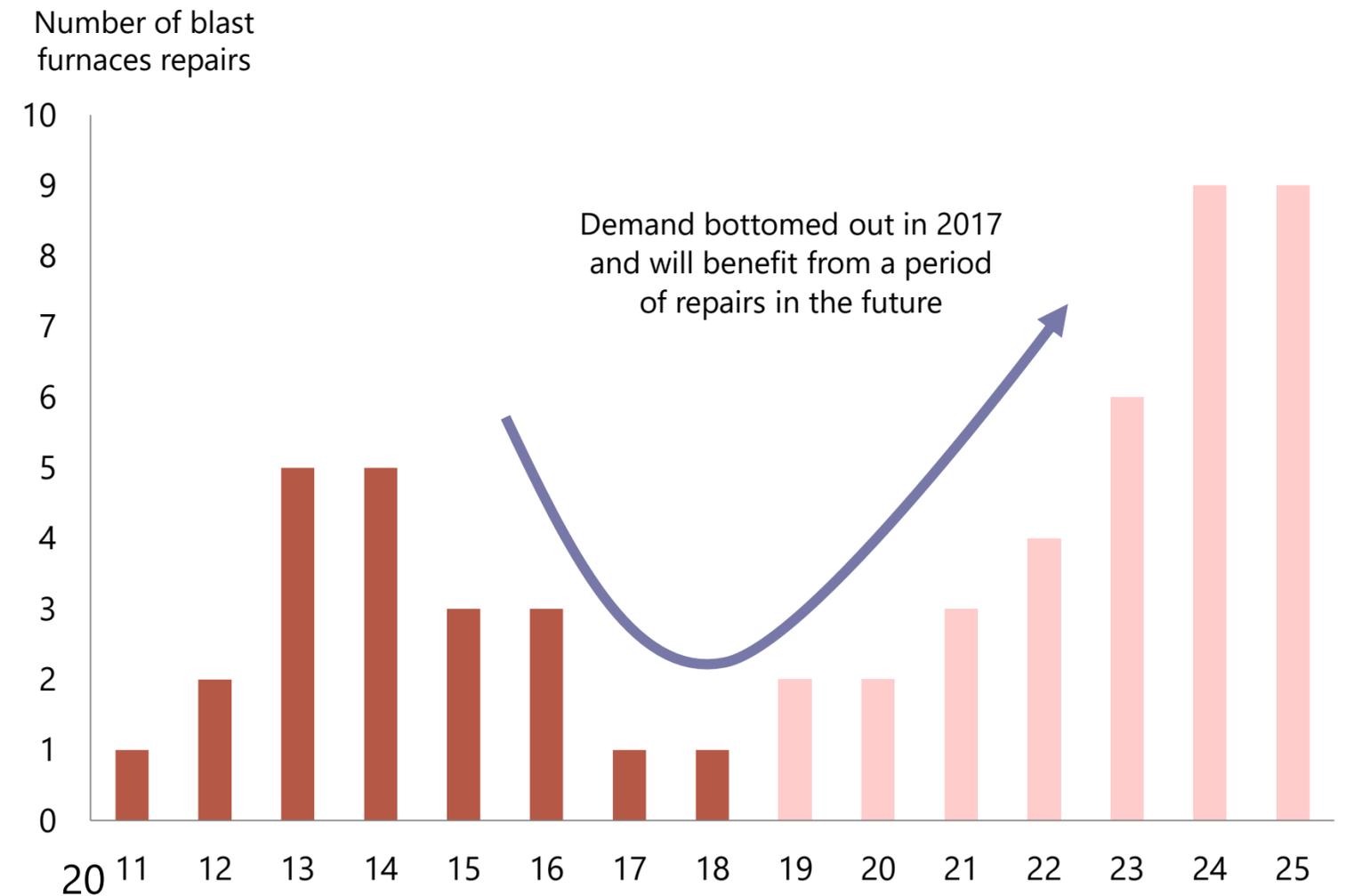
- In Southeast Asia where 74% of global blast furnace production takes place, we estimate that the large blast furnaces that have been operating since 2010 or before are nearing the point in the lifecycle for repairs and forecast an increase in demand for furnace linings in the future.

Trend in Global Crude Steel Production



* World Steel Association

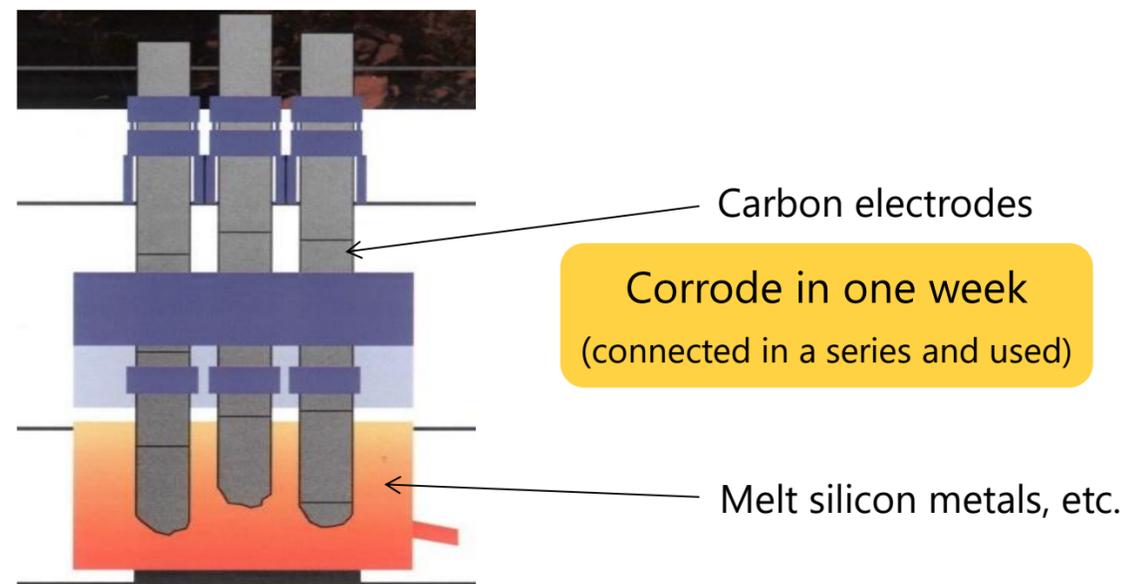
Forecast of large blast furnace repairs (East Asia)



* Tokai Carbon forecast

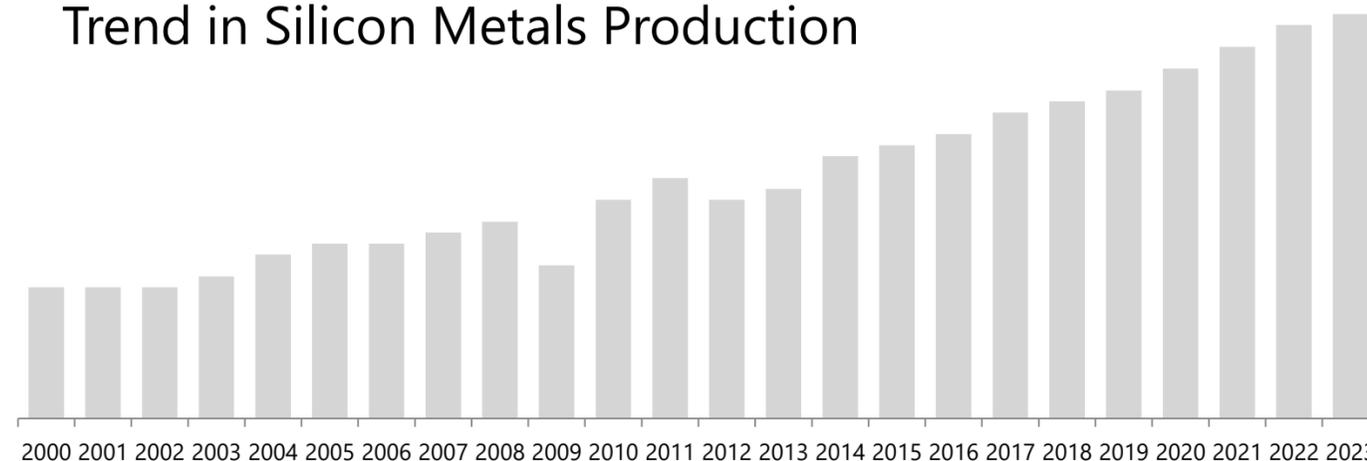
- Silicon metals production is forecast to grow at around 4-5% a year, boosted by demand from a broad range of industries, including aluminum alloys, solar, electronics, and chemicals.

Uses of carbon electrodes



- Electrodes are used as conductors for smelting silicon metals, etc. They tolerate heat of up to approximately 2000 degrees.
- An electrical charge runs through the carbon electrodes and melts silicon metals, etc. while corroding the electrodes via arc discharge.
- The higher the electrical current load, the larger the diameter of electrode required.
- It is called a submerged arc furnace because an electrode tip is buried directly in the melting metal materials. The uses are completely different than graphite electrodes for steel products used to melt scrap, and the characteristics of the product also differ.

Trend in Silicon Metals Production



The silicon metals market is roughly 3 million tons in size. The market is growing at 4-5% a year.

- This deal offered advantages for both sides, and a smooth post-merger integration (PMI) will lead to improved consolidated performance in the future.

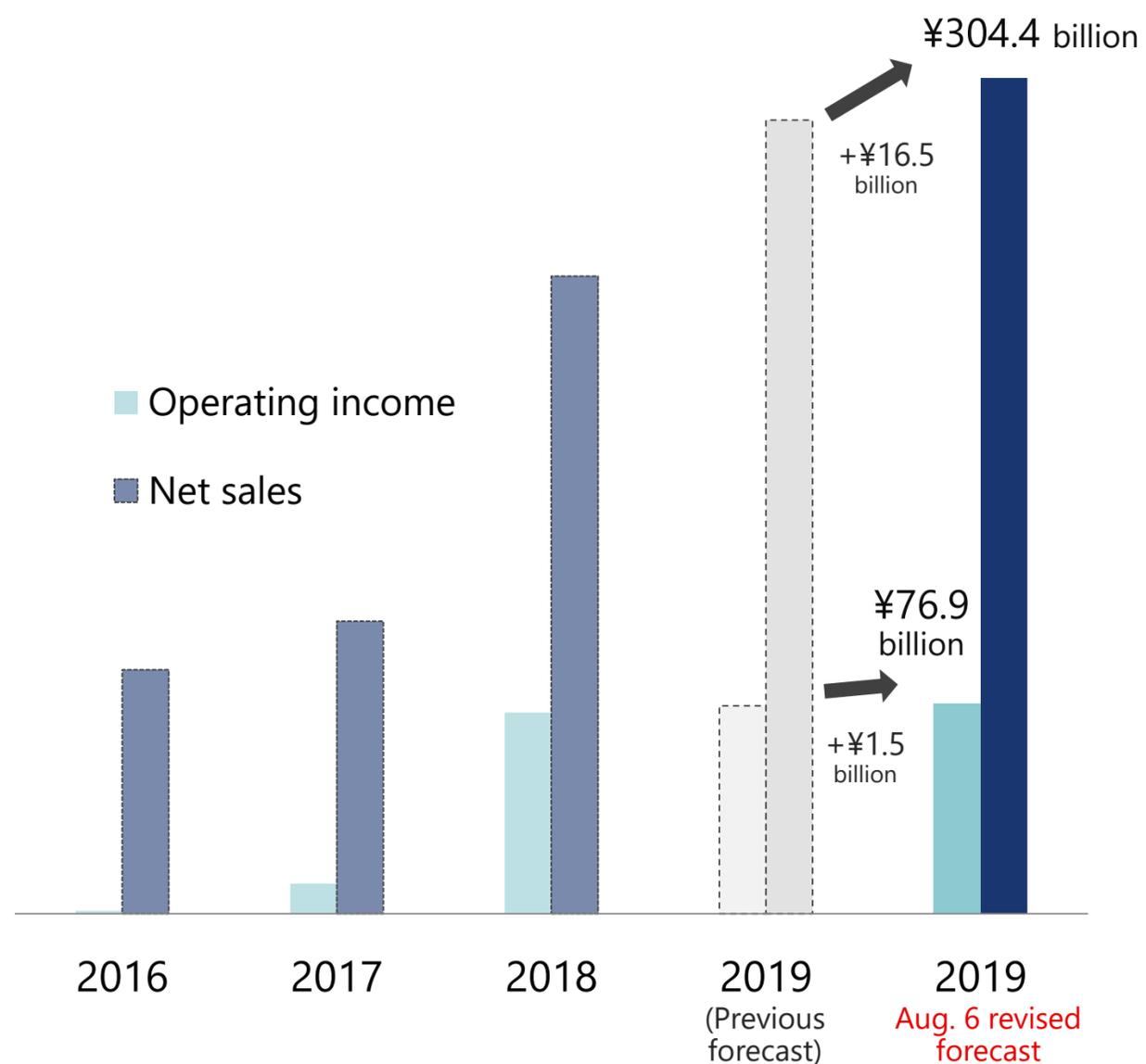
Advantages for TOKAI COBEX

- ✓ The owner backing the company switch from an investment fund to a manufacturing company
- ✓ Technology: Sharing of carbon and graphite manufacturing expertise within the group
- ✓ Production: Potential for contract manufacturing, etc. within the group
- ✓ Raw materials procurement: Joint purchasing, etc.
- ✓ Finance: Avoidance of harm to the P/L due to liabilities carrying a high interest rate

Advantages for TOKAI CARBON GROUP

- ✓ Creates a healthier business portfolio
 - Acquisition of a highly profitable, stable business
 - Extricates the group from sole dependence on graphite electrodes
- ✓ Acquisition of locations in Eastern Europe
- ✓ Technology: Sharing of expertise in automation, environmental equipment, and manufacturing management
- ✓ Production: Potential for contract manufacturing within the group

- The TOKAI COBEX (TCX) business will contribute to consolidated performance from August 2019.
- Net sales and operating income for the full year have been revised to account for this.



TCX Business August-December 2019		For 5 months
Net sales:		¥16.5 billion
Operating income:		¥5.6 billion
Acquisition cost	- ¥1.4 billion	One-time expense
Estimated amortization of good will*	- ¥2.7 billion	For 5 months
Estimated contribution to consolidated operating income	¥1.5 billion	For 5 months

* Amortization of good will (estimate):
 Assumes amortization of ¥65.3 billion in good will over a 10-year period.
 The exact amount of good will and the incremental amortization will be determined after PPA (Purchase Price Allocation).

Reference Material

Net Sales of Main Subsidiaries

35

(Millions of yen)

Subsidiary	Jan-Jun 2018	Jan-Jun 2019	YoY Change	Location /Business	Summary
TOKAI ERFTCARBON	16,043	18,244	+2,200	Germany Graphite Electrodes	
TOKAI CARBON GE	14,610	22,519	+7,908	U.S. Graphite Electrodes	▪Contributing to consolidated results from November 2017
THAI TOKAI CARBON PRODUCT	9,340	9,351	+10	Thailand Carbon Black	
Tokai Carbon Tianjin	2,944	2,342	(601)	China Carbon Black	
Tokai Carbon CB	—	24,265	+24,265	U.S. Carbon Black	▪Contributing to consolidated results from September 2018
Cancarb	3,948	3,633	(315)	Canada Carbon Black	
Tokai Carbon Korea	1,482	8,486	+7,004	Korea Fine Carbon	▪Contributing to consolidated results from June 2018

(Millions of yen)

	2015	2016	2017	2018	2019(Forecast)
Net Sales	104,864	88,580	106,252	231,302	304,400
Operating Income	4,088	1,131	11,093	73,065	76,900
Net Income Attributable to Owners of the Parent Company	2,484	(7,929)	12,346	73,393	49,300
ROS (%)	3.9%	1.3%	10.4%	31.6%	25.3%
ROE (%)	2.0%	(6.8%)	10.4%	46.8%	23.7%
ROIC (%)	2.1%	0.7%	7.7%	29.6%	-
Depreciation and Amortization	9,242	8,124	6,647	10,383	12,000
Capital Investment	5,301	6,013	4,282	11,794	27,600
Research and Development Expenses	1,822	2,249	1,482	1,883	-
Number of Employees	2,092	1,980	2,142	2,944	-
Exchange Rate (JPY/USD)	121.05	108.85	112.19	110.43	105.0

Quarterly Segment Results by Segment

37

(f=forecast) (Millions of yen)

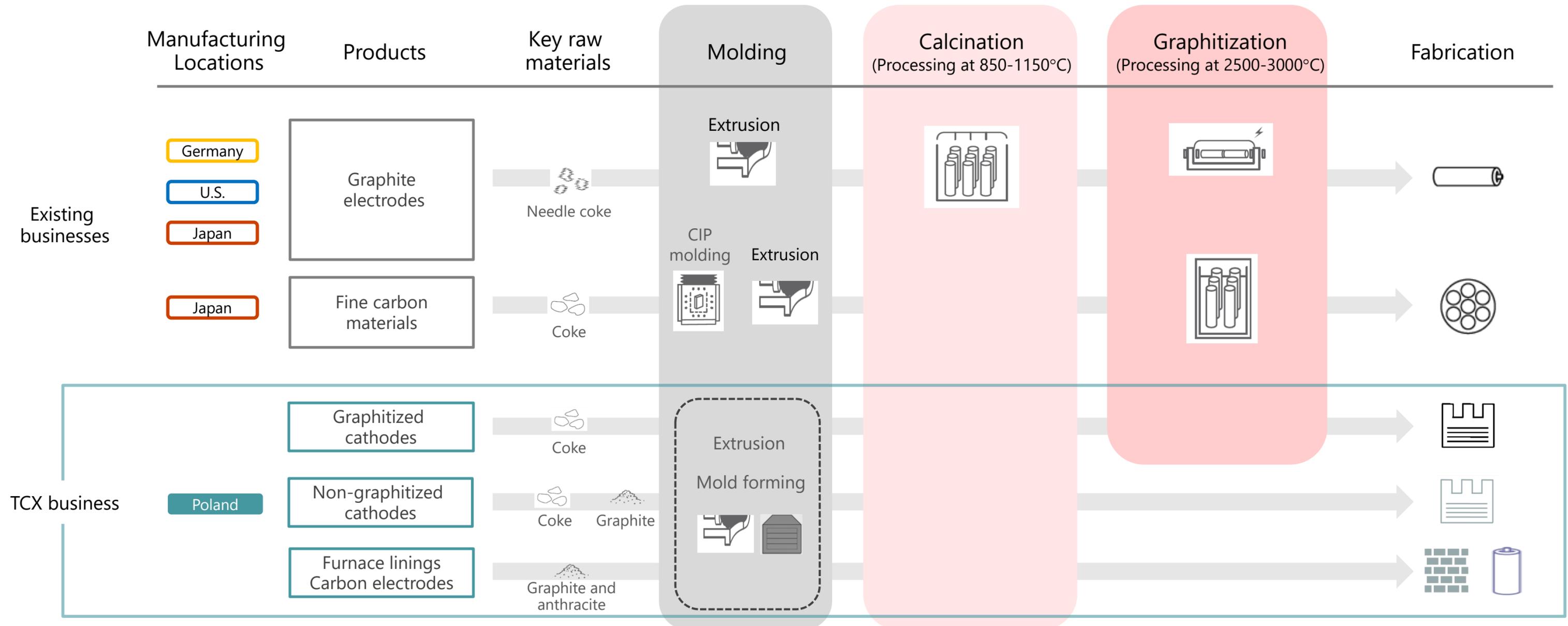
		2018				2019(f)					
		Q1	Q2	Q3	Q4	Full Year	Q1	Q2	H2(f)	Full Year	
Net Sales		41,595	50,092	63,697	75,917	231,302	68,838	70,338	165,224	304,400	
	Graphite Electrodes	16,984	23,121	29,134	32,835	102,075	27,540	29,511	58,348	115,400	
	Carbon Black	14,276	14,916	19,794	27,938	76,926	27,308	27,286	58,205	112,800	
	Fine Carbon	3,893	5,434	8,191	7,884	25,403	8,296	7,664	17,240	33,200	
	TOKAI COBEX	—	—	—	—	—	—	—	16,500	16,500	
	Industrial Furnaces and Related Products	2,663	2,685	2,642	3,380	11,371	2,212	2,801	9,087	14,100	
	Other Operations	Friction materials	2,296	2,385	2,336	2,462	9,480	2,030	1,886	4,384	8,300
		Anode materials	1,439	1,512	1,563	1,379	5,894	1,413	1,151	1,336	3,900
		Others	42	36	36	36	150	36	36	128	200
	Total Others	3,778	3,934	3,935	3,877	15,525	3,480	3,073	5,846	12,400	
Operating Income		12,610	15,902	21,647	22,905	73,065	21,226	19,215	36,459	76,900	
	Graphite Electrodes	8,381	12,311	17,369	17,978	56,040	15,423	15,917	21,860	53,200	
	Carbon Black	2,816	2,382	2,461	2,771	10,431	3,424	2,262	7,614	13,300	
	Fine Carbon	708	526	1,058	1,421	3,715	1,905	1,549	3,545	7,000	
	TOKAI COBEX	—	—	—	—	—	—	(972)	2,472	1,500	
	Industrial Furnaces and Related Products	633	691	723	995	3,043	586	762	2,252	3,600	
	Other Operations	320	261	312	174	1,068	166	33	0	200	
	Inter-segment eliminations	(250)	(271)	(277)	(435)	(1,233)	(279)	(339)	(1,282)	(1,900)	

- Cathodes, furnace linings, and carbon electrodes are important elements that affect the quality of customers' products and the cost of manufacturing.
- Importance is placed on factors such as ongoing performance, supply capacity, delivery reliability, and past performance.

	Customer	Relationship to Tokai Carbon	Importance of Our Products	Impact of Our Products on the Customer's Manufacturing Costs
Cathodes	Global aluminum manufacturer Over 50 companies are regular customers	Over 20 years	Affects the unit cost of electricity (Electricity accounts for roughly one-third of the customer's manufacturing costs)	1% or less (Aluminum smelting cost)
Furnace Linings	Steel manufacturer (blast furnaces) In the top ten customers that account for a majority of sales	Over 15 years	Able to withstand continuous use for 10-15 years Stable quality is the key	0.03% or less (Variable cost of steel)
Carbon Electrodes	Manufacturer of silicon metals, etc. Including smelting of ferroalloys and phosphorus, and other niche markets	Over 10 years	Affects the unit cost of electricity (Electricity accounts for roughly 40% of the customer's manufacturing costs)	12-20% (Cost of silicon metals)

For Reference: Heat-processing Line Equipment Increasingly Used Around the World

- Part of the manufacturing line for the TCX business is the same as for our existing business. This contributes to expansion of group production capacity and improvement in technical capabilities.



- Forward-looking statements in this document are based on information obtainable at the time this document was published and assumptions as of the date of publication concerning elements of uncertainty that could affect future earnings.
- Actual results may differ substantially, depending on various future factors. Factors that affect business performance include, but are not limited to, economic conditions, trends in product demand and market prices, and fluctuation in exchange rates.
- The quantitative goals, reference values, investment amounts, and other numerical goals in this document only express the medium-term strategy and vision of the company; they are not performance forecasts. The company is not obligated to update such information.
- Please see the disclosures in the Consolidated Financial Results for the official earnings forecast, based on the rules of Tokyo Stock Exchange, Inc.

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Building a Future of Technology and Trust

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