



# FY2022 2nd Quarter Progress of Business Strategy

November 17, 2022

President and Representative Director

Akira Nozaki



MINING THE FUTURE

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# I. Safety Initiatives

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# 1. Safety Initiatives

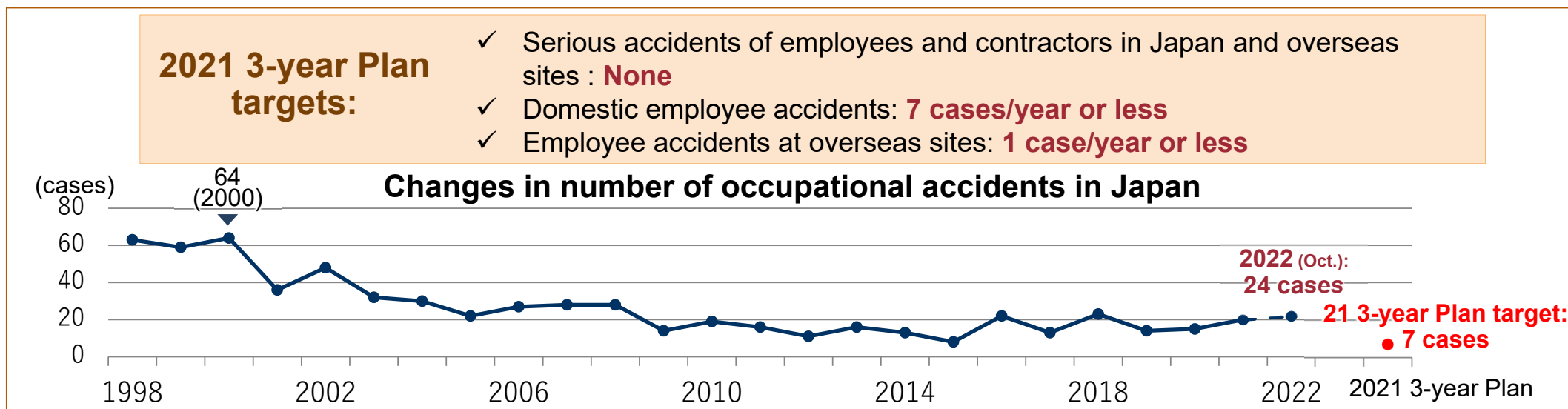
## 《Domestic employee occupational accidents》

2021 3-year Plan target: **7 cases** or less ➔ **2022 actual** (as of the end of Oct.): **24 cases**

Frequent Recurring accidents (ex. fall and caught accidents) resulted in an increased number of accidents.

Serious accidents resulting in absence from work for more than 3 months: **2 cases** (incl. contractors, previous year; 2 cases)

Based on the Three Realities Principle (Real places, Real facts, Real things), “ensuring safe facilities and procedures” has been set as the top priority to be achieved.



\* Recurring accidents: Accidents that occurred multiple times in the previous 20 years within the SMM Group

## II. FY2022 Forecast

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# 1. Global Economy

- ◆ Respective regions started to move toward a post-COVID world, but their directions differ significantly.
- ◆ There is a growing concern over the economic slowdown following the start of the U.S. interest rate hike cycle in mid-2022, while inflation continues to rise due to higher costs.
- ◆ Formation of economic blocs (fragmentation) continues to expand.



**The prospection of global economy is still uncertain.**

IMF's forecast on global economic growth (October forecast)

	2020	2021	2022	2023
Global	-3.0%	+6.0%	+3.2%	+2.7%
US	-3.4%	+5.7%	+1.6%	+1.0%
Europe	-6.1%	+5.2%	+3.1%	+0.5%
Japan	-4.6%	+1.7%	+1.7%	+1.6%
China	+2.2%	+8.1%	+3.2%	+4.4%



## 2. Current Status of Downside Risk Factors

	Mineral Resources Business	Smelting & Refining Business	Materials Business
<b>Russian invasion of Ukraine</b>	No direct impact but metal and energy prices have been affected		
<b>Energy price hikes</b>	Rising costs due to increasing prices of electricity and light oil for heavy machineries	Rising costs due to increasing prices of electricity and coal	Rising energy prices led to higher costs
<b>Slowdown in the global economy</b>	Decreasing metal demand caused a supply-demand imbalance, leading to lower metal prices		Decrease in materials demand due to the difficult sales environment for smartphones, PCs, and other final products
<b>Shortage of industrial materials and supplies such as semiconductors, etc.</b>	Shortage of various operational materials causing increase of project cost Increased the cost of operational materials		
<b>Another spread of COVID-19; and lockdown in major Chinese cities</b>	The metal supply-demand imbalance mainly in China resulted in the decline in metal prices		

### 3. Impact of Energy and Material Prices

Rising energy and material prices put pressure on earnings.

	Forecast in May	Additional in forecast in November	Total
Forecast Unit cost differentials (vs. FY2021 performance)	-15.5 billion yen	-37 billion yen	-52.5 billion yen

#### Estimated impacts

- ◆ Impact of rising energy prices: -40 billion yen (incl. exchange rate effect of 6 billion yen)
- ◆ Impact of rising material prices: -10 billion yen (incl. exchange rate effect of 1.5 billion yen)
- ◆ Unit consumption (consumption per production volume): No significant change
- ◆ Impact of volume change : There's only a minor impact while there were affection of decreasing in each metals.

Smelting and Refining business was particularly affected by coal and electricity prices.



## 4. Metal Supply and Demand Outlook

### 《Copper》 Supply and demand will ease in the short term.

- ◆ Supply: The supply-demand balance will be eased temporarily during 2023–2024 due to the opening of new mines and the expansion of existing ones.
- ◆ Demand: Tight supplies are expected in the late 2020s as the number of new projects decreases in the low-price period.

Fundamentals are helped by the demand for copper.  
(global decarbonization, clean energy, EV shift, etc.)

Cu	ICSG projection (October 2022)		
(kt)	2021	2022	2023
Production	24,798	25,495	26,344
Usage	25,256	25,823	26,189
Balance	-458	-328	+155

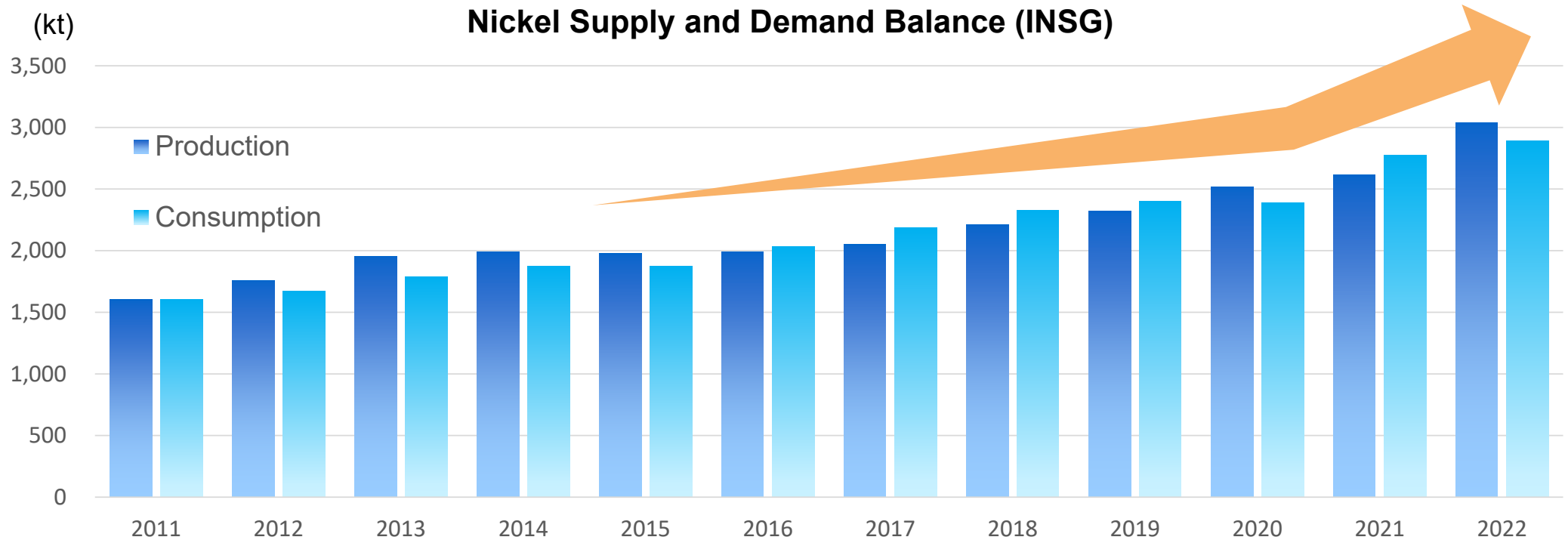
### 《Nickel》 Continued growth is anticipated.

- ◆ Supply: Increased NPI production will continue in Indonesia; Supply of Class I will be slightly tightened.
- ◆ Demand: In addition to stainless steel, the production of nickel-based lithium-ion batteries for EVs will continue to rise.

Ni	INSG projection (Oct. 2022)		
(kt)	2021	2022	2023
Production	2,612	3,036	3,387
Usage	2,775	2,892	3,216
Balance	-163	+144	+171

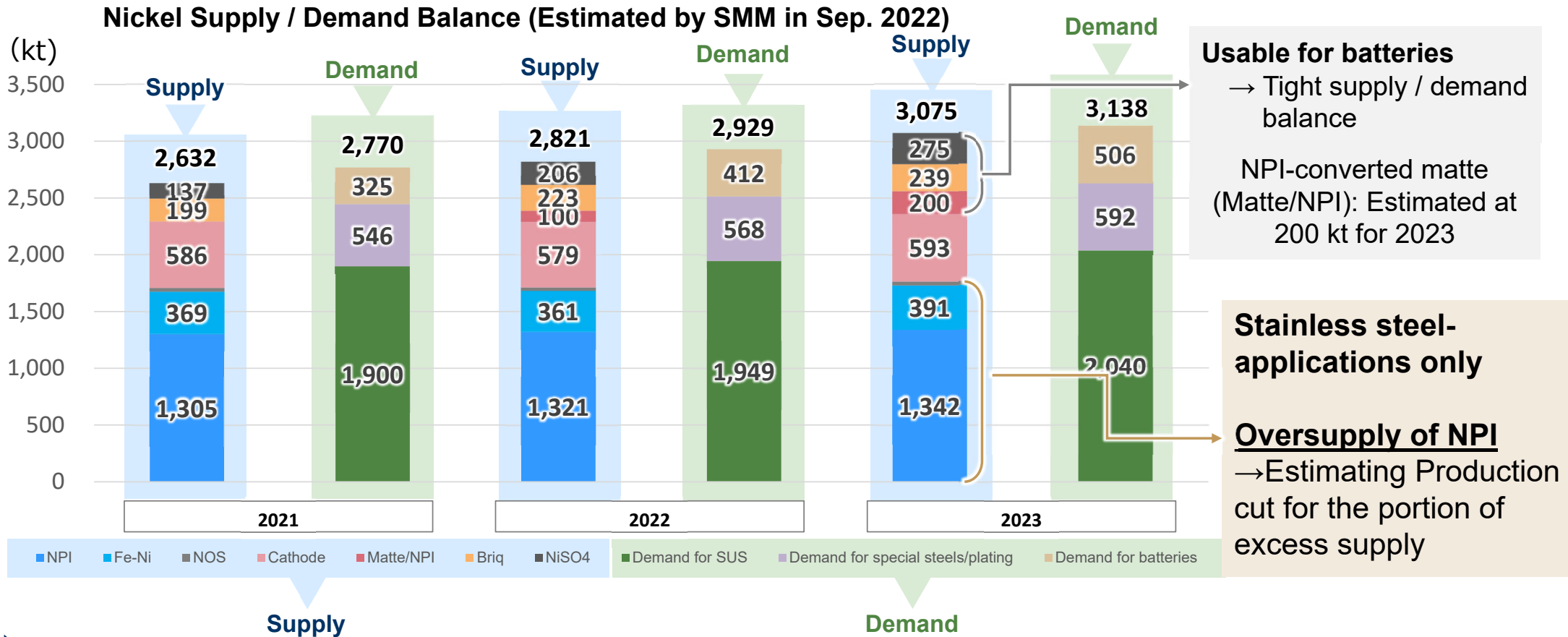
## 5. Nickel Business Environment (1) Changes in Supply and Demand

### Changes in nickel supply and demand



**Demand for nickel will increase further due to the subsiding impact of the COVID-19 pandemic.**

## 5. Nickel Business Environment (2) Supply / Demand Balance



**Tight supply-demand balance will continue, particularly for products that can be used in batteries (such as nickel sulfate and briquettes).**

**Demand for stainless steel will remain strong, but the outlook for NPI production increase and its conversion is unclear.**

## 6. Metal Prices estimation of FY2022 / 2H

《Copper》 \$7,500/t (FY2022/1H ave.: \$8,634/t, Oct. ave.: \$7,621)

- ◆ Concerns over a slowdown in the global economy outweigh concerns over supply, resulting in a sluggish market.

《Gold》 \$1,625/toz (FY2022/1H ave.: \$1,801/toz, Oct. ave.: \$1,665)

- ◆ The bearish factor is the continued rise in the US long-term interest rates due to tighter monetary policy.
- ◆ However, prices will remain resilient due to uncertainties in the global economy.

《Nickel》 \$9.5/lb (FY2022/1H ave.: \$11.59/lb, Oct. ave.: \$9.95)

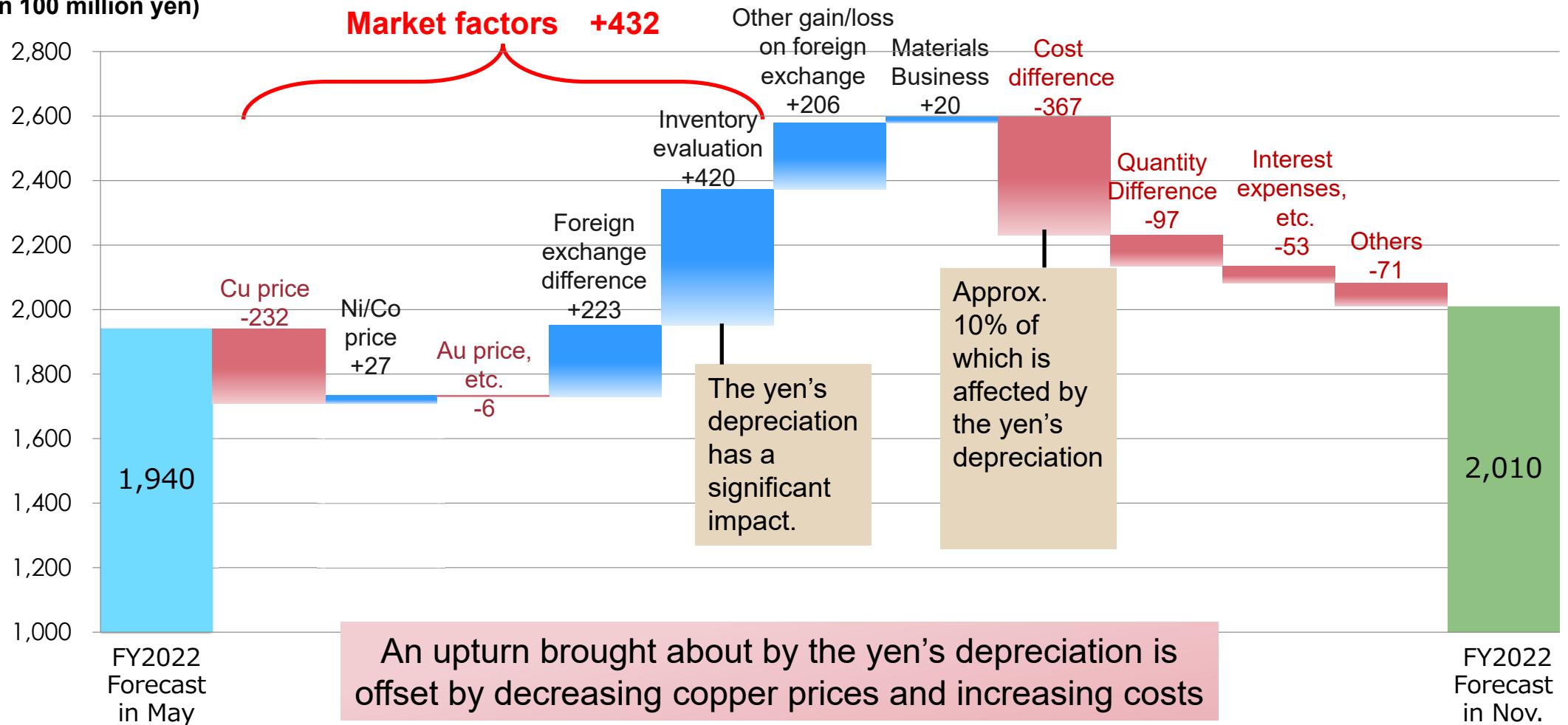
- ◆ The current tight supply-demand balance will be alleviated gradually as the production volume of intermediate products will increase.
- ◆ While the supply of Class I is increasingly tight, production of intermediate products in Indonesia is expected to grow.
- ◆ Class II supply seems to be in excess of the demand.

## 7. FY2022 Earnings Forecast (Nov. Forecast vs. May Forecast)

(in 100 million yen)		FY2022/1H results	FY2022/2H forecast (Nov.)	FY2022 full-year forecast (Nov.)	FY2022 full-year forecast (May)	Changes (Nov.-May)
Net sales		7,106	6,664	13,770	13,310	+460
Sales total profit		1,688	682	2,370	2,220	+150
Profit/loss before tax		1,691	319	2,010	1,940	+170
Equity method profit/loss		197	68	265	390	-125
Segment profit	Mineral resources	473	197	670	990	-320
	Smelting & refining	894	276	1,170	860	+310
	Materials	177	-57	120	100	+20
	Other	-10	-30	-40	-20	-20
	Diff. Adjustment	157	-67	90	10	+80
Net income attributable to owners of parent		1,191	179	1,370	1,370	0
Copper (USD/t)		8,634	7,500	8,067	9,000	-933
Nickel (USD/lb)		11.59	9.50	10.55	9.50	+1.05
Gold (USD/Toz)		1,801	1,625	1,713	1,750	-37
Cobalt (USD/lb)		31.79	22.00	26.90	30.00	-3.10
Exchange (JPY/\$)		133.98	140.00	136.99	120.00	+16.99

## 8. FY2022 Profit before Tax Analysis: Nov. Forecast vs. May Forecast

(in 100 million yen)



## 9. Financial Results & Dividends / Cash Flows & Financial Position

### Financial results and dividends

- ◆ Favorably affected by the yen's depreciation, good financial results in FY2022/1H, as was in the previous fiscal year.
  - Annual dividend is expected to be 175 yen/share based on the annual dividend payout ratio policy of 35%. An interim dividend of 90 yen was decided, and a year-end dividend of 85 yen is estimated.

### Cash flows and financial position

- ◆ Good business performance resulted in stable cash flows.
- ◆ Continue to have a sound financial position.

The forecast of metal prices and exchange rates is uncertain; operation materials, electricity, and other costs are expected to remain high.  
⇔ On the other hand, energy source conversion will need time; therefore, drastic cost improvements will be difficult to achieve in the short run.

**We will maintain competitiveness by reducing costs and improving productivity to move agilely when large-scale investments (growth investments/investments in carbon-neutral projects) become necessary.**

(Growth investments in the mining and Smelting/refining areas will require 100 billion yen-scale expenditures as soon as the decisions are made.)

## III. Progress in Implementing Key Strategies under 2021 3-year Plan

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# 1. Four Challenges under 2021 3-year Plan

## Four challenges

### Challenge 1. Increasing corporate value – Promotion of projects

- Expanding production capacity for battery cathode materials
- Quebrada Blanca 2 project
- Côte gold mine development project

### Challenge 2. Improving core business sustainability

- 3-biz collaboration to strengthen the value chain for Ni-batteries
- Shifting Hishikari Mine to sustainability-oriented operation
- Enhancing competitiveness of copper-smelting business
- Strategy for advanced materials business expansion

### Challenge 3. Adapting to changes in the social environment

- Reducing greenhouse gas (GHG) emissions
- Promoting the development of products, technologies and processes that can help achieve carbon neutrality
- Adaptation to digital transformation (DX)
- Initiatives for securing, fostering and utilizing human capital

### Challenge 4. Strengthening the foundation of business management

- Strengthening safety initiatives
- Reorganizing and enhancing sustainability promotion framework
- Corporate governance

## 2. Current Status of Côté Gold Project (1)

**Initial start-up costs increased significantly affected by such factors as the COVID-19 pandemic and inflation.**

**The initial overall schedule has been delayed.**

- The amount of investments required before the start of production has almost doubled from the level at the time the construction was decided Due to the increasing effects of COVID-19, strikes, materials cost, and other factors.
- The progress rate as of the end of Sep. 2022 was approx. 64%. There was good progress in the construction during this summer season.
- The production is expected to start in the 1Q of 2024.
- The mine has a long mine life. It is ranked high in annual production volume among gold mines developed during the last five years.
- The mine continues to have strong cost competitiveness supported by the good stripping ratio\*. \* Percentage of non-ore minerals
- We will continue to carried out the project, project management will be strengthened in cooperation with IAMGOLD. Involvement of SMM engineers will be boosted to prepare for the start of production.

	Start-up cost (in million US\$)
Jul. 2020	1,538
Nov. 2021	1,910
Nov. 2022	2,965

Note: Including costs for leasing major heavy equipment

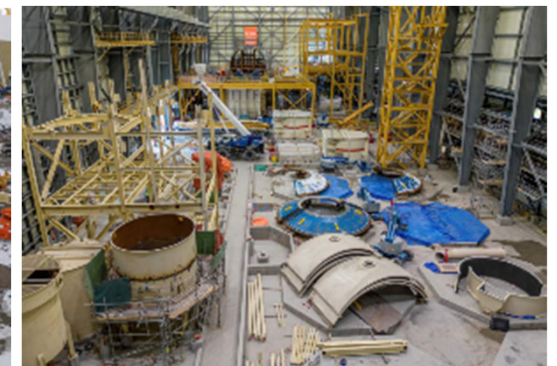
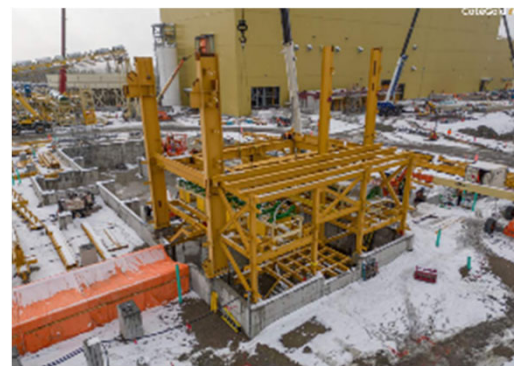
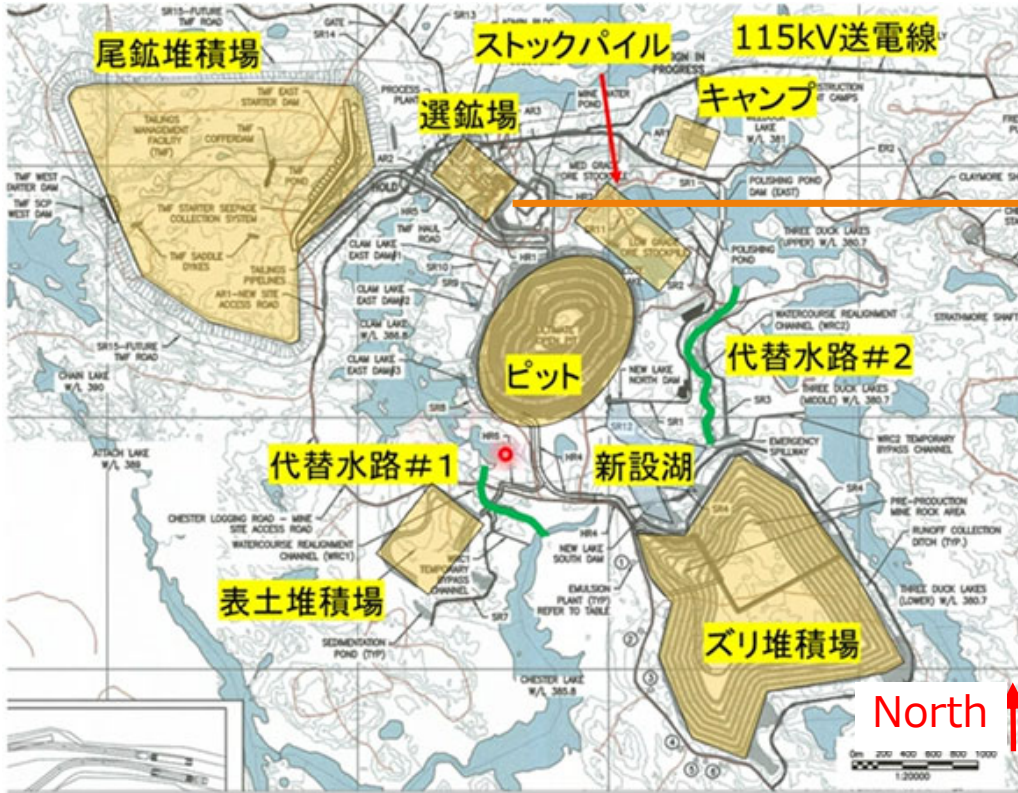
(Approx. 30% of which is the expense of SMM)

# 2. Current Status of Côté Gold Project (2)

## Close view



## 2. Current Status of Côté Gold Project (3)



Ore dressing facilities

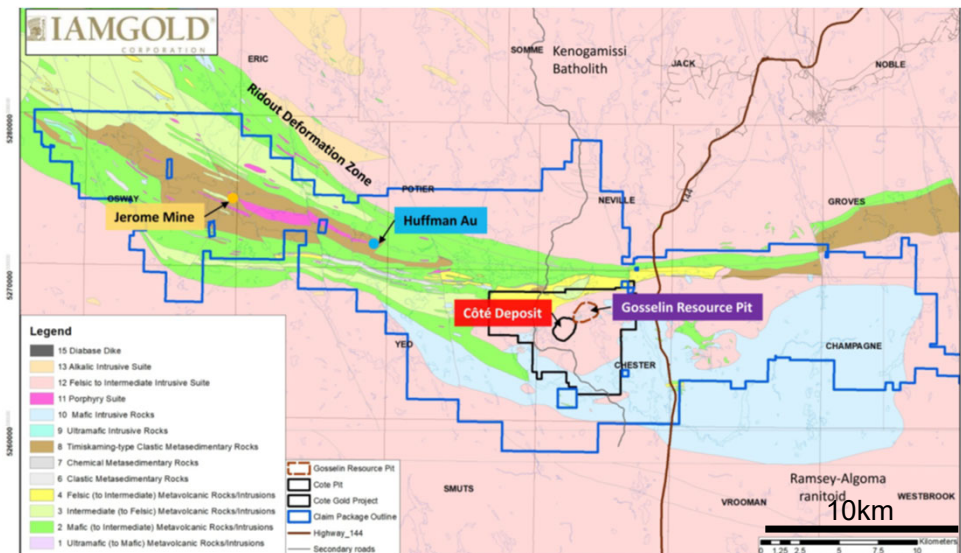
## 2. Current Status of Côté Gold Project (4)

### Positioning of Côté Gold Project

- **Long mine life** and large production volume (more than 10 tons/year)
- **Low cost** (ranked in the top 15% of AISC (total cost), low stripping ratio, easy-to-process ores)
- Introduction of automated trucks
- Vast JV areas and numerous mineralized zone → Upside potential

Accumulation of mine management know-how in politically stable Canada  
Accumulation of experience in open-pit mining;  
development of mining engineers

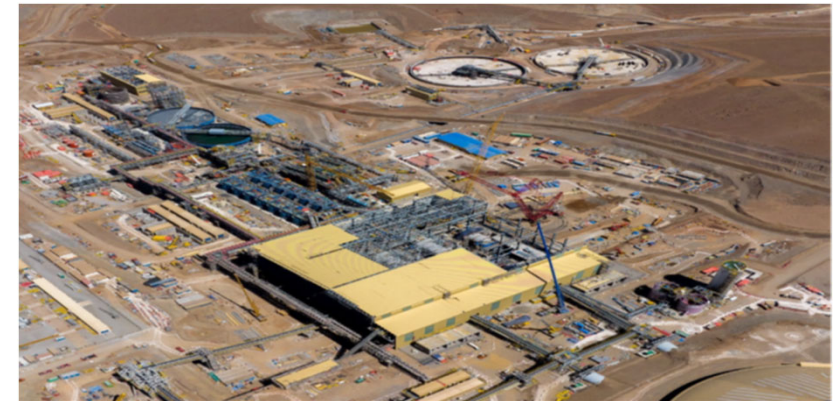
**Côté can serve as a foothold for achieving our long-term vision; we will carry out the project vigorously to its completion.**



### 3. Quebrada Blanca 2 (QB2) Project (1)

#### Quebrada Blanca 2 (QB2) Project

- ◆ Currently, the Project is at the final stage of construction with 13,000 workers.
- ◆ Electricity started to be supplied to main facilities; the stockpile dome has been completed;  
trial operation of desalinated water plant started
- ◆ The amount of start-up investment was reviewed in Aug. 2022 (revised from approx. 5.2 billion USD to approx. 7.5 billion USD)
- ◆ Along with the construction work, commissioning is underway at some completed facilities.
- ◆ The Project will be ramped up in 2023 and move to the year-round full production phase in 2024.



### 3. Quebrada Blanca 2 (QB2) Project (2)

#### Quebrada Blanca 2 (QB2) Project (Impressions during on-site visit)

- ◆ The construction work is well underway toward completion.
- ◆ The visitors realized the hardships of mine development in the high altitude (4,000 meters above sea level) environment.
- ◆ Good relationships were maintained with local governments and communities.
- ◆ We will promote project through solid cooperation with partners.
- ◆ Given the mine's scale and the quality of facilities, we are confident that the mine will become an asset capable of supporting global copper demand over the long term.



## 4. Nickel Business Strategy

### 3-business collaboration (Nickel - batteries) to strengthen the value chain

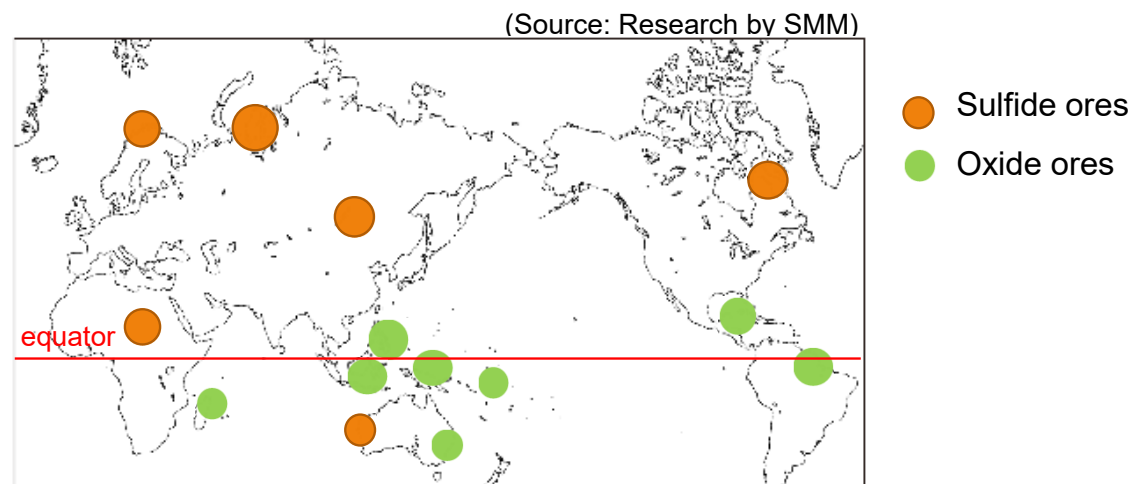
**Secure nickel resources and implement measures to enhance collaboration among the three core businesses**

- ◆ Enhance the exploration of new nickel projects for the next period (medium- to long-term).
  - Accelerate the exploration of projects at various stages, mainly in the Pacific Rim region.
- ◆ Business development utilizing existing intermediate materials in circulation (short-term)
- ◆ Continue to explore measures to secure ore for CBNC and THPAL.
- ◆ Start the designing of battery recycling facilities in full scale.



#### Distribution of major nickel ores in the world

Large-scale sulfide deposits have already been developed.  
Oxide ores are unevenly exist around the equator.





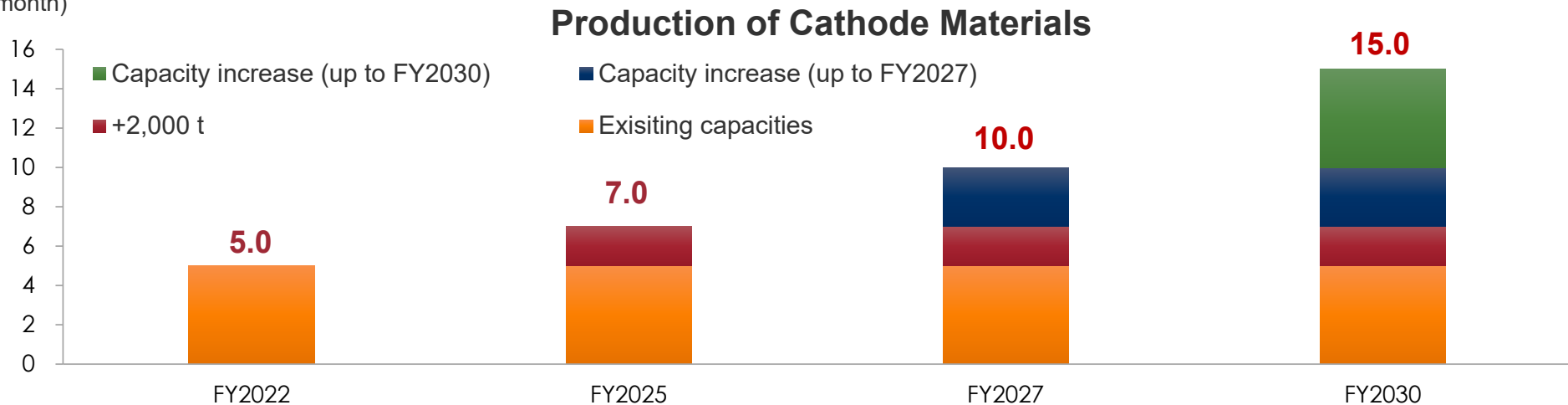
## 5. Progress in Strengthening Battery Materials Business (1) Construction of New Plant (Nickel-based Materials)

### Expand battery (cathode) materials production capacity

- ◆ Increase production capacity by 2,000 tonnes per month (by the end of FY2025).  
Progressing both the construction of the new Niihama Plant and the hiring of necessary human resources.
- ◆ Continue the consideration for increased production in the next period.  
Legal systems frequently change in worldwide (ex. USA).  
Considerations should be made as to investments at the optimal timing and location.  
Continue discussions with customers.



(kt/month)



## 5. Progress in Strengthening Battery Materials Business (2) LFP Business

### Promoting consideration of the possibility of LFP business

The business was acquired on May 1st and is now operated under the name of SMM. The LFP Project Dept. was established in the Battery Materials Div. as of Oct. 1st.

Production management capabilities have been strengthened through collaboration with SMM's engineering team. Accelerating development by closely cooperating with Research Laboratories.

Strengthening is under consideration to prepare for future market changes.



## 6. Expansion of Advanced Materials Business (1) Overview

### Demand has declined sharply for the time being.

In the latter half of FY2022, demand for parts and components for smartphones and PCs declined sharply due to the decreasing demand for these products.

→ Sales of powder materials and crystal products have been on a declining trend

Demand is expected to recover in the next fiscal year onwards when inventory adjustments are completed.

We will focus on such priorities as cost reduction, productivity improvement, and product development so as to actively capture the demand when it recovers and improve profits.

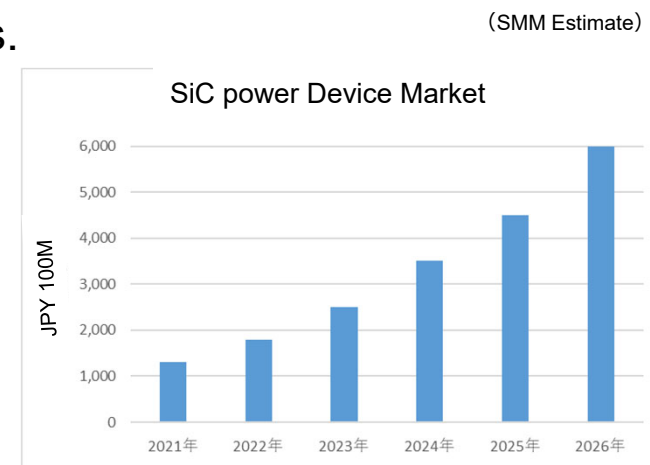
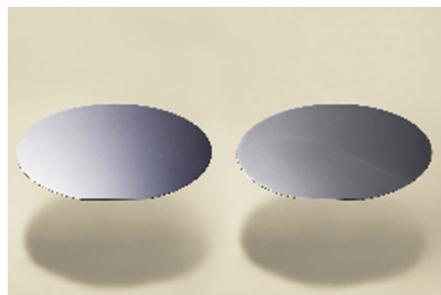


**Achievement of even higher functionality with high-value-added products**

**→ Ensure consistent earning power**

## 6. Expansion of Advanced Materials Business (2) SiC

- ◆ SiC (silicon carbide): A semiconductor material used in **power semiconductors**. SiC shows superior attributes in high temperature, high frequency, and high voltage environments. It is attracting attention for being often used in driving-system-controlling devices for **EVs and hybrid vehicles**.
- ◆ Direct Bonded SiC substrates produced by Sicoxs Corporation [Product name: SiCkrest]
  - **Lower cost than single-crystal SiC due to the use of inexpensive polycrystalline SiC support substrates**
  - **Reduced resistance and increased strength of overall substrates while maintaining the attributes of single-crystal SiC**
- ◆ Six-inch SiC products have already been sold to some customers.
- ◆ In July 2022, we announced the **establishment of a production line for eight-inch SiC products**. (Scheduled completion: Mar. 2024)
- ◆ We plan to increase **monthly production to 10,000 sheets** (in six-inch equivalents) by 2025.



## 7. Human Resource Strategies (Securing/Development/Utilization) (1) Corporate Ads

### Placement of corporate ads

ずっとやるんだ。

- Toma Ikuta was appointed as the Company's poster boy; SMM used an actor for the first time in its corporate TV commercial.
- The ad's core message—"Our history continues"—conveys the Company's spirit to go forward into the future based on its long history of more than 430 years.
- Our name recognition should be improved through TV, newspaper, and transit ads, as well as the internet media, to attract more job applicants.

## 7. Human Resource Strategies (Securing/Development/Utilization) (2) New Company Dormitory

### A new company dormitory was completed in the Besshi District (Niihama and Saijo city, Ehime Pref.)

- The dormitory was completed in Sep. 2022 with 259 rooms.
- A studio-type apartment that allows residents to enjoy their private time; a variety of shared spaces designed to promote communication among employees
- The environment offers peace of mind to new employees who recently joined the Company and spend their crucial time.
- Frequent featuring in local media (incl. TV stations) will contribute to improving the Company's image among potential local job applicants.



## 8. Reduction of GHG Emissions

◆ In FY2021, the amount of GHG emissions was 2.65 million tons. Electricity-derived emissions continue to account for the majority.

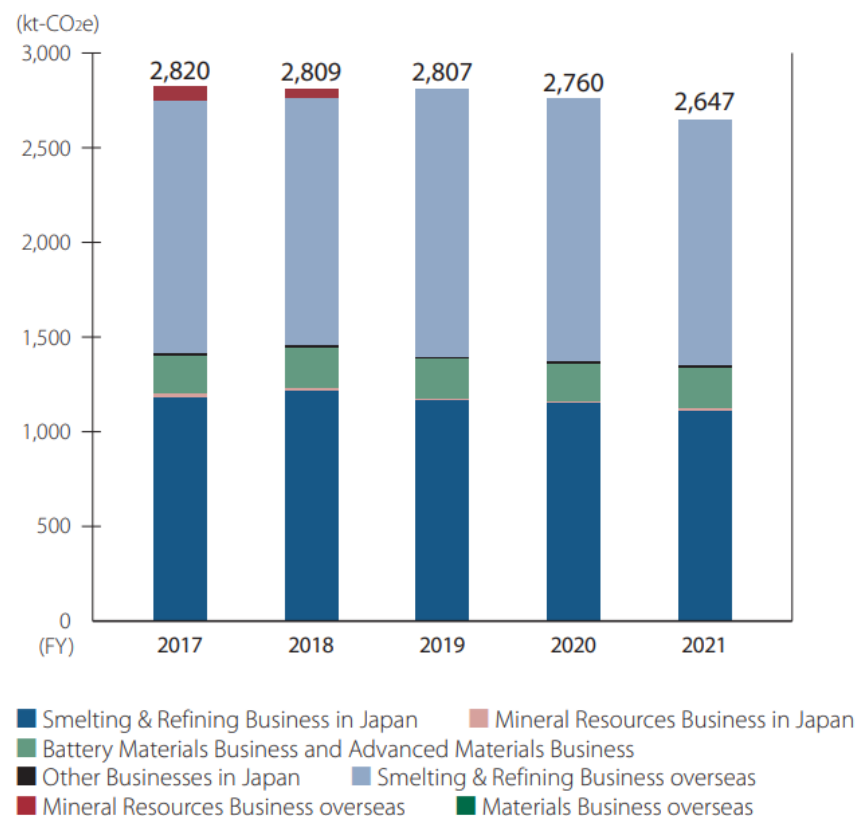
→ We will ensure further reduction efforts.

◆ The amount of contribution to the reduction of GHG emissions: Approx. 420,000 tons-CO<sub>2</sub>

CWO™ for automotive use was included in the category of low-carbon load. (There was only battery materials before).

◆ Scope 3 was disclosed in the Integrated Report.

GHG Emissions (Scope 1 + 2)



## 9. Accelerated Promotion of Sustainability Measures

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- ◆ Based on the UN Guiding Principles on Business and Human Rights, our human rights policy was revised in June to stipulate the following:
  - Support for the UN Guiding Principles on Business and Human Rights;
  - The Group’s approach toward basic human rights violations associated with business activities;
  - International norms respected by the Company, including the “UN Declaration on the Rights of Indigenous Peoples” (“UNDRIP”);
  - Implementation of human rights due diligence, construction of a complaint processing mechanism, and systems to promote them;
  - Holding of dialogues and consultations with stakeholders and disclosure of information on a regular basis; and
  - The fact that the Policy was supported by external experts, discussed at the internal Sustainability Committee, and approved by the Board of Directors.
  
- ◆ According to the Responsible Mineral Sourcing Policy, LBMA RGG certificates were obtained for gold and silver, while an RMI certificate was gained for cobalt in 2021.

Appropriate measures will be implemented according to internationally accepted standards within FY2022 for nickel and by 2023 for copper.



## IV. Supplementary Materials

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# 1. Trends in Supply and Demand (Copper and Nickel)

Data/Reference

## Copper

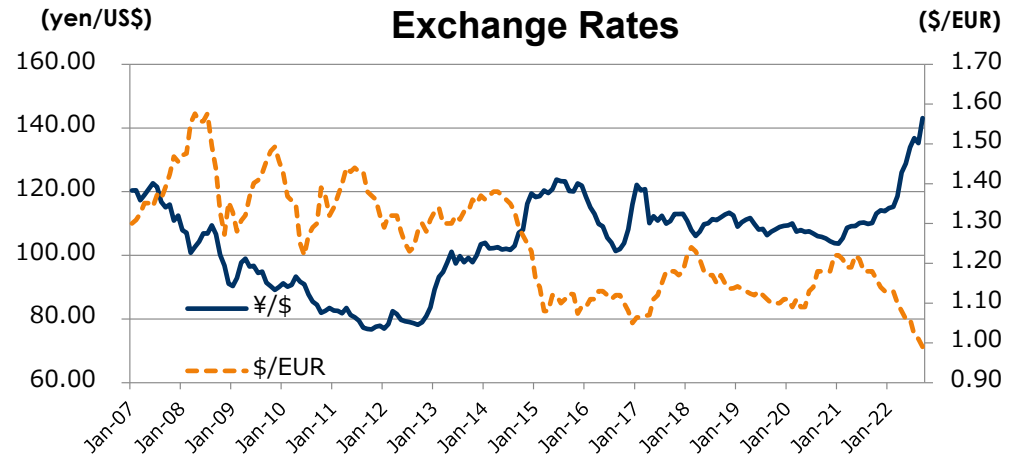
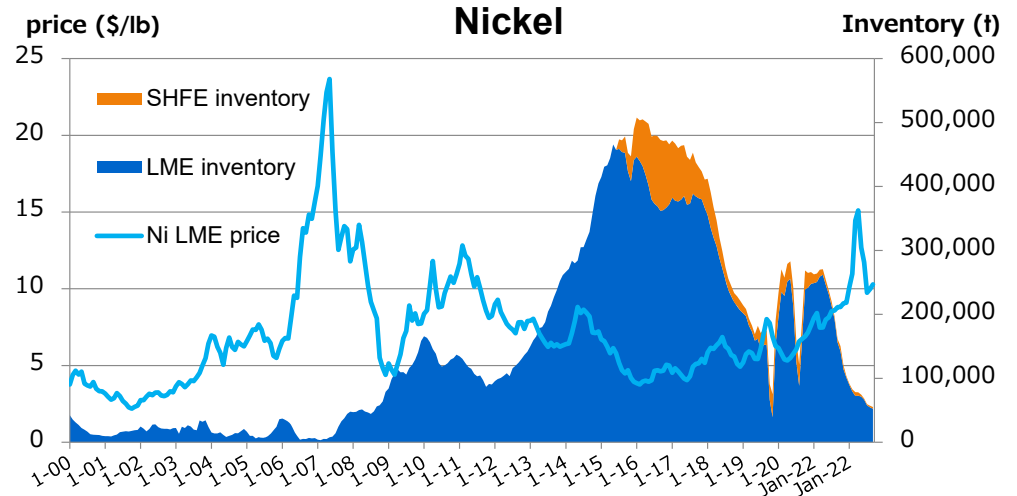
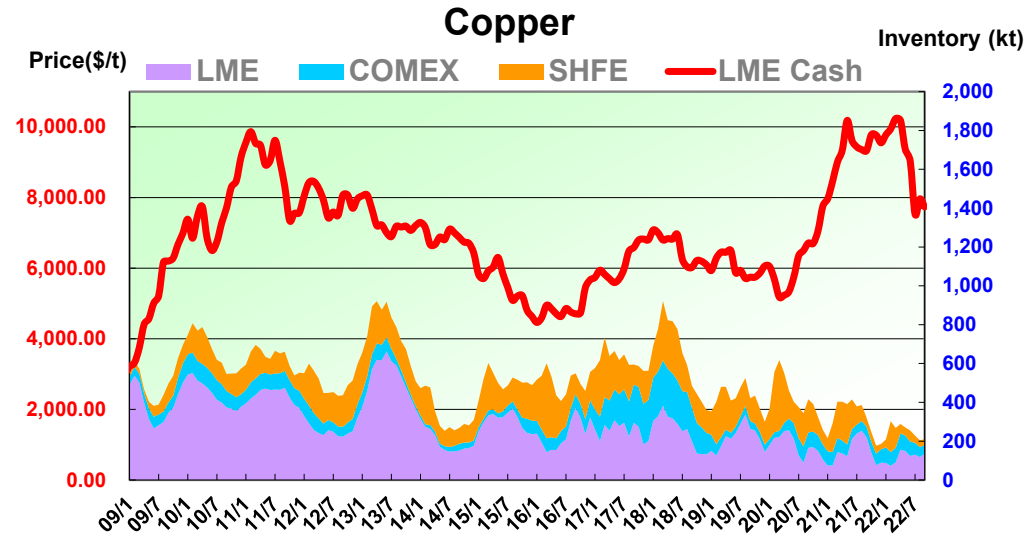
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(kt)	2021	2022	2023
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Usage	25,256	25,823	26,189
Balance	-458	-328	+155

## Nickel

	INSG Projection (Oct. 2022)			SMM Projection (Sep. 2022)		
(kt)	2021	2022	2023	2021	2022	2023
Production	2,612	3,036	3,387	2,632	2,821	3,075
Usage	2,775	2,892	3,216	2,770	2,929	3,138
Balance	-163	+144	+171	-138	-108	-63

# 2. Non-ferrous Metal Prices and Exchange Rates

Data/Reference

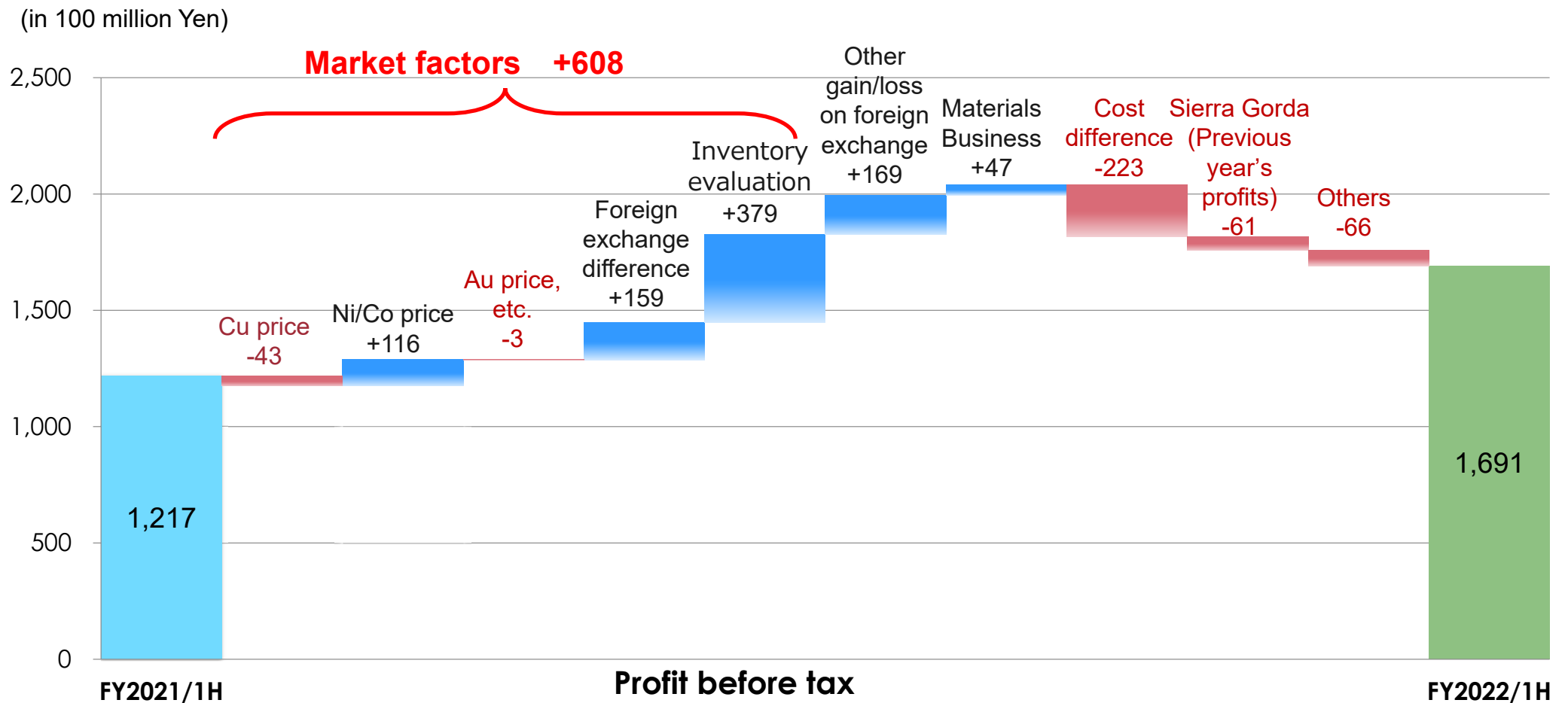


### 3. FY2022/2Q Financial Highlights (YoY Changes)

Data/Reference

(in 100 million yen)		FY2022/2Q Cumulative (A)	FY2021/2Q Cumulative (B)	Changes (A)-(B)
Net sales		7,106	5,979	+1,127
Pretax profit		1,691	1,217	+474
Equity method profit/loss		197	244	-47
Segment income	Mineral resources	473	674	-201
	Smelting/refining	894	502	+392
	Materials	177	130	+47
	Others/Adjustments	147	-89	+256
Net income attributable to owners of the parent		1,191	1,138	+53
Copper (USD/t)		8,634	9,541	-907
Nickel (USD/lb)		11.59	8.27	+3.32
Gold (USD/Toz)		1,801	1,803	-2
Cobalt (USD/lb)		31.79	22.43	+9.36
Exchange rate (¥/USD)		133.98	109.81	+24.17

## 4. Pre-tax Profit/Loss Analysis (YoY, FY2022 / 2Q cumulative vs. FY2021/ 2Q cumulative) Data/Reference



# 5. State of Business—Mineral Resources (1) Copper (Overseas Mines)

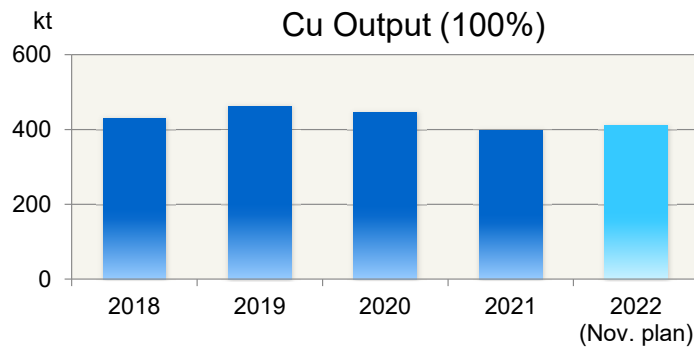
Data/Reference

## Morenci Copper Mine (USA)

Interest ratios	FCX	72%
	SMM	25%
	Sumitomo Corp.	3%



- Output: FY2021 397 kt (actual)  
FY2022 411 kt (plan)

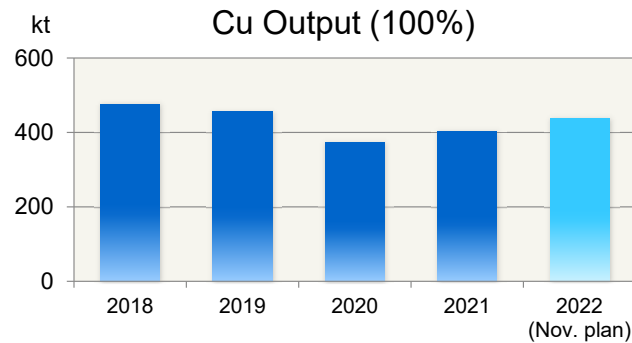


## Cerro Verde Copper Mine (Peru)

Interest ratios	FCX	53.56%
	SMM	16.80%
	Sumitomo Corp.	4.20%
		25.44%



- Output: FY2021 402 kt (actual)  
FY2022 438 kt in (plan)

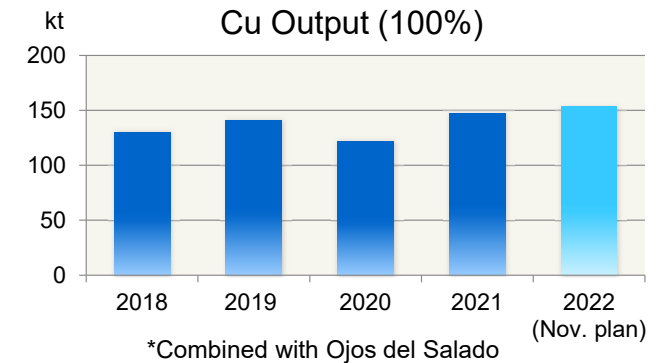


## Candelaria Copper Mine (Chile)

Interest ratios	Lundin	80%
	SMM	16%
	Sumitomo Corp.	4%



- Output: FY2021 146 kt in (actual)  
FY2022 152 kt in (plan)



## 5. State of Business—Mineral Resources (2) Gold (Hishikari and Côté)

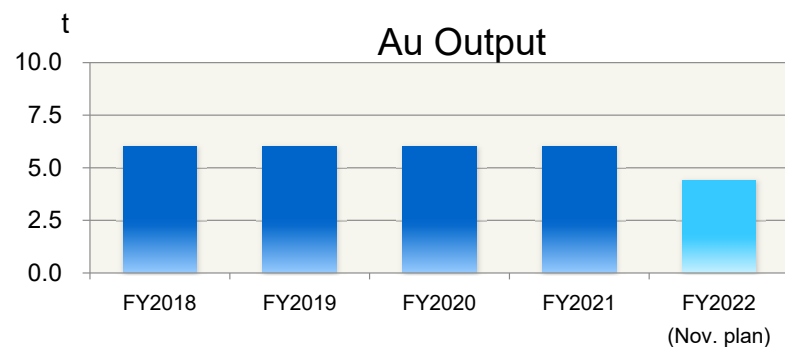
Data/Reference

### Hishikari Mine (Kagoshima Pref.)

Interest ratio SMM 100%



- Mining of lower ore body has begun.
- Mineable gold reserve as of the end of 2021: 157 tons (JIS Standard)
- Output in 2022: 4.4 tons (in Nov. plan)



### Côté Gold Mine Development Project (Canada)

Interest ratios IAMGOLD 64.75%  
SMM 27.75%  
Others 7.50%

Acquisition price: USD 195 million (Approx. 21.5 billion yen)  
Location: Ontario

- F/S completed in Nov 2018
- Construction began in Aug 2020
- Production scheduled to begin in 2024.



Mine life	18 years
Total gold output	205 tons
Mineable reserve	233 Mt
Mineable ore grade	0.96 g/t

(Source: SMM Press release on Jul. 21, 2020)

# 5. State of Business—Smelting & Refining (1) Copper (Toyo Smelter & Refinery)

Data/Reference

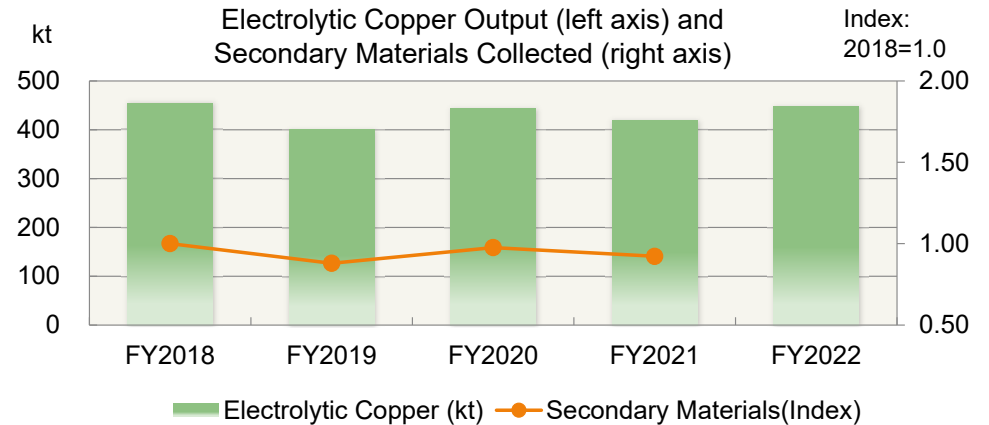
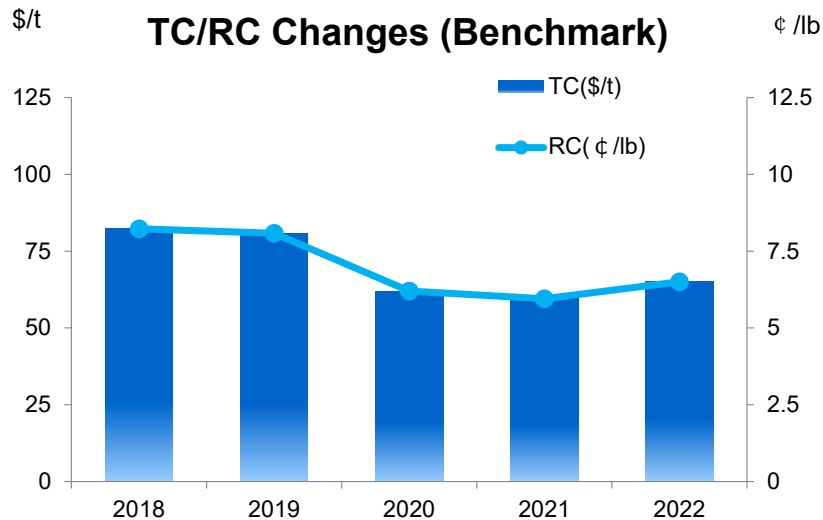
## Toyo Smelter & Refinery

### Electrolytic copper output

FY2021: 419 kt (actual)

FY2022: 447 kt (Nov. plan)

\*A scheduled shutdown was carried out in FY2021.





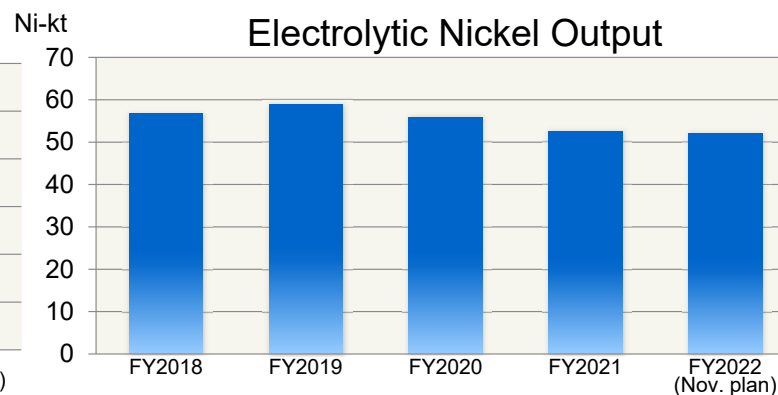
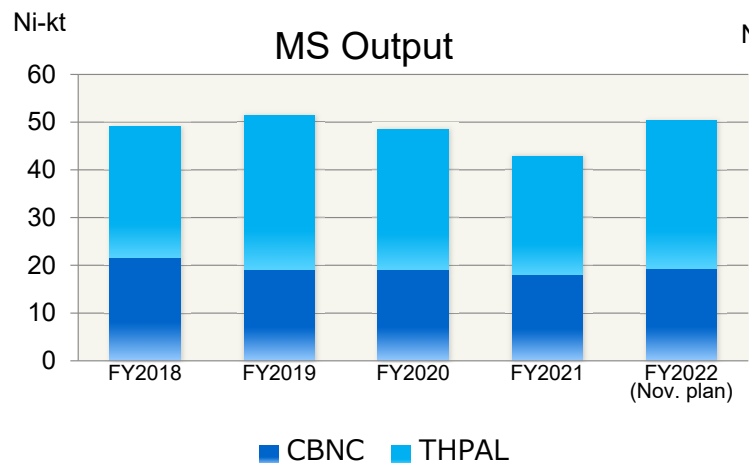
## 5. State of Business—Smelting & Refining (2) Nickel (CBNC, THPAL, and Niihama Refinery)

Data/Reference

### CBNC, THPAL, and Niihama Nickel Refinery

#### Output

(Ni-kt)	FY2021 Actual	FY2022 (Nov. Plan)	Changes
CBNC	18.1	19.3	+1.2
THPAL	24.8	31.1	+6.3
Niihama Refinery	52.5	52.1	-0.4



#### Maximizing HPAL by-product recovery

Scandium oxide:  
Commercial production started in 2019.

Chromite:  
Sales started in FY2021.

## 5. State of Business—Smelting & Refining (3) Nickel Sulfate (Niihama and Harima)

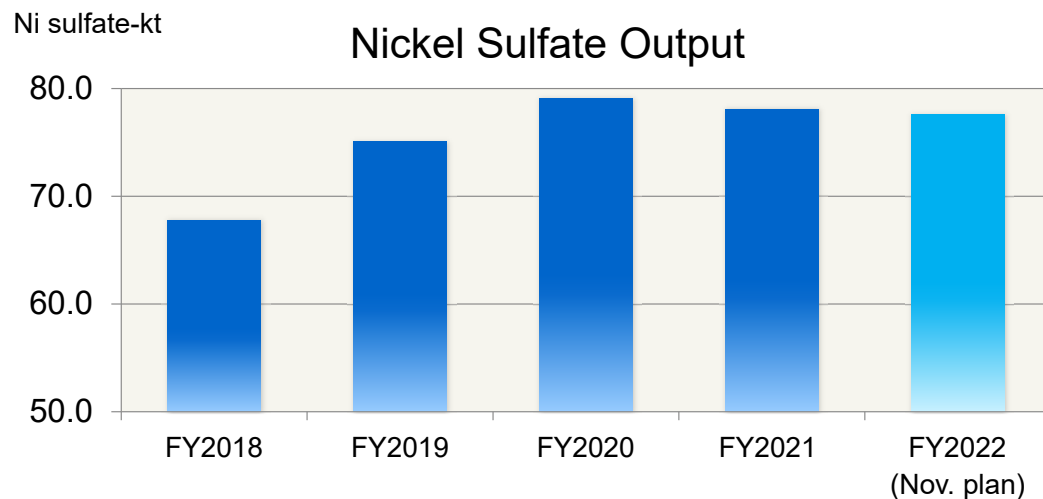
Data/Reference

### Niihama Nickel Refinery and Harima Refinery

Nickel sulfate output (total of Niihama and Harima)

FY2021: 78.1 kt (actual)

FY2022: 77.6 kt (Nov. plan)



## 5. State of Business—Smelting & Refining (4) Ferronickel (Hyuga)

Data/Reference

### Hyuga Smelting Co., Ltd.

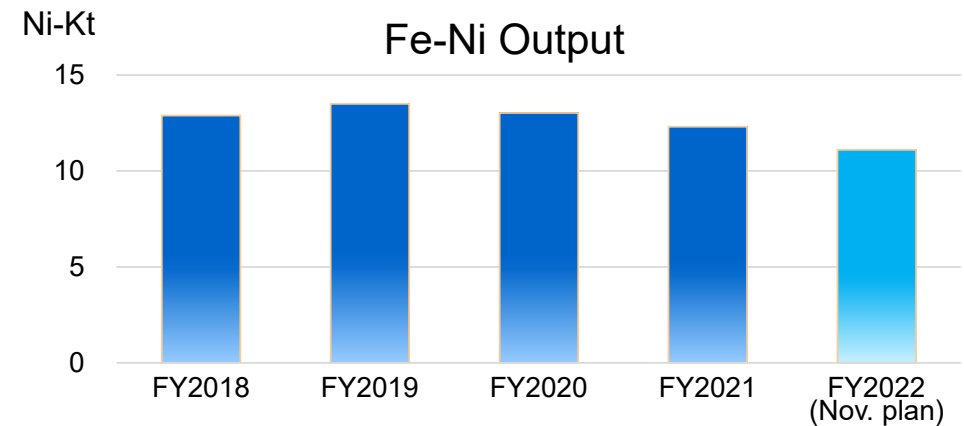
#### Output

FY2021: 12.3 Ni-kt (actual)

FY2022: 11.1 Ni-kt (Nov. plan)



- Maximize output under the two-kiln, one-electric furnace system.
- Secure revenue by reducing costs through stable production and efficient operation.



## 5. Status of Business—Materials

Data/Reference

### Battery materials

NCA has raised its production capacity to 4,850 tonnes/month. Its production is on track as EV-related markets remain strong.

### Powder materials

In FY2022/2H, demand for electrode materials is weak due mainly to slow smartphone sales. In the medium to long term, the demand is expected to rise with the growth of electrified automobiles and 5G smartphones.

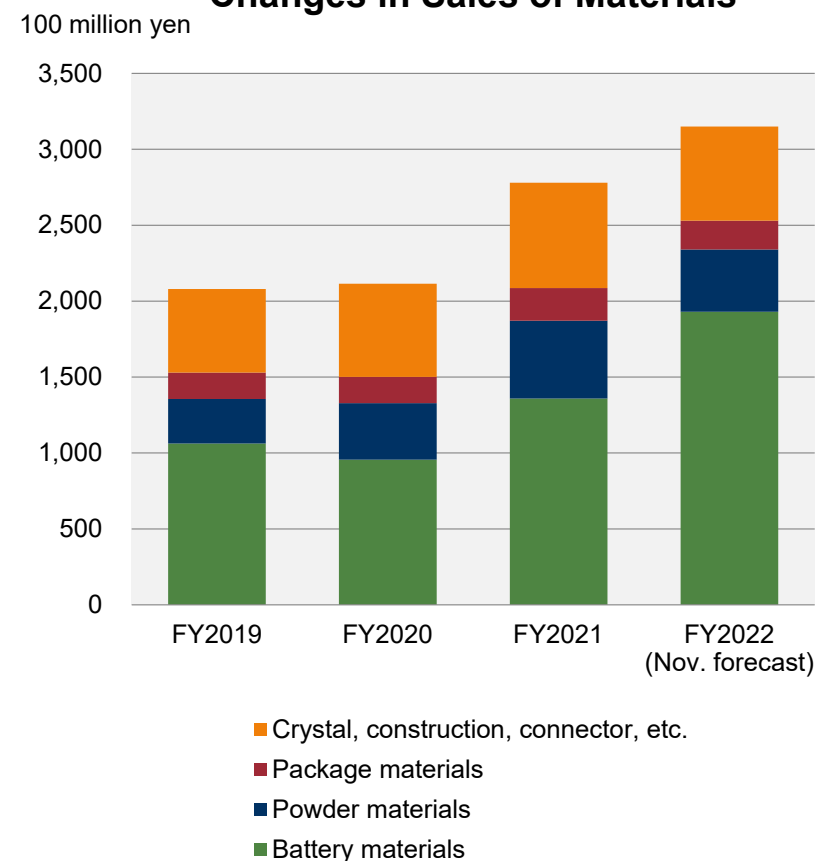
### Crystal materials

In FY2022, the smartphone market is experiencing a major downturn. The communication device market has also been sluggish since July due to the weak Chinese market and the impact of lockdowns. No recovery will be seen within this year.

### Package materials

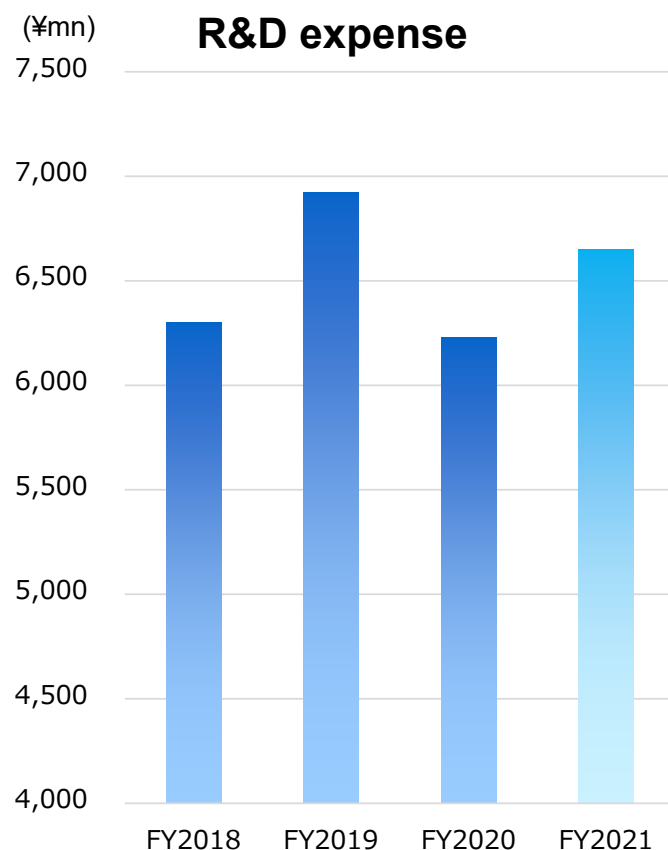
Demand for displays and monitors is on a declining trend. Currently, the market is in an adjustment phase.

### Changes in Sales of Materials



## 5. Status of Business—Research & Development (1)

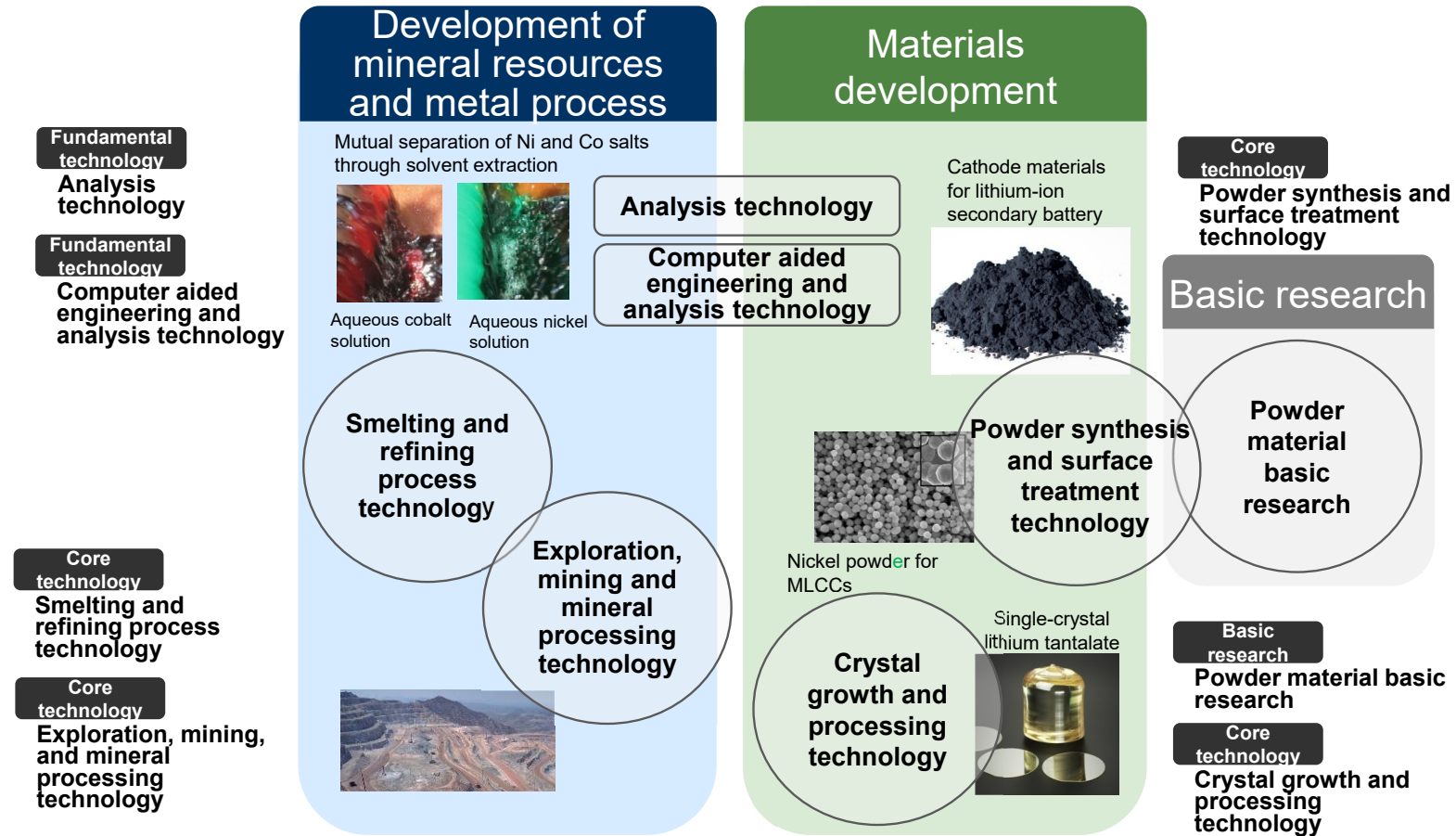
Data/Reference



### Accelerating the development of products, technologies, and processes that contribute to carbon neutrality

- ◆ Advanced materials (e.g., functional ink, nickel powder, and SiC)  
Established the “SMM × Tohoku University GX Materials Science Co-Creation Research Center”
- ◆ Direct reduction of GHG emissions from existing processes
  - ✓ By such means as reducing neutralizers, fixing CO<sub>2</sub>, and using biomass reductants
- ◆ Direct reduction of GHG emissions from innovative smelting and refining processes
  - ✓ Pursuit of a next-generation nickel smelting and refining process, use of hydrogen reduction technologies, etc.
- ◆ Contribution to the carbon footprint reduction through new projects
  - ✓ Battery recycling (Ni, Co, Cu, and Li): Adopted as a NEDO-subsidized project
  - ✓ Lithium refining (direct recovery from salt lake brine)
  - ✓ Development of cathode materials for all-solid-state batteries: Adopted as a NEDO-subsidized project
  - ✓ Research on photocatalyst materials for artificial photosynthesis: Established an industry-academia joint course on carbon dioxide with Kyoto University

# 5. Status of Business—Research & Development (2) Areas/Fields



Focus on growth strategy fields, search for the seeds of next-generation business

## 6. FY2021 ROCE

Data/Reference

**2021 3-year Plan target: At least 5.5%**

	Mineral Resources Business	Smelting & Refining Business	Materials Business (Battery/Advanced)
FY2021 actual	19.3%	13.0%	10.0%

\*The figures above do not include materials other than battery and advanced materials.

**Estimates under 2021 3-year Plan**

	Mineral Resources Business	Smelting & Refining Business	Materials Business	
2021 3-year Plan 2024	10.1%	4.5%	4.1%	
	Cu	Ni	Au	Exchange(¥/\$)
21 3-Year plan Metal price for trial calc.	\$8,000/t	\$7.5/lb	\$1,600/toz	115

## 7. Changes in Business Results (FY2017–FY2022 Forecast)

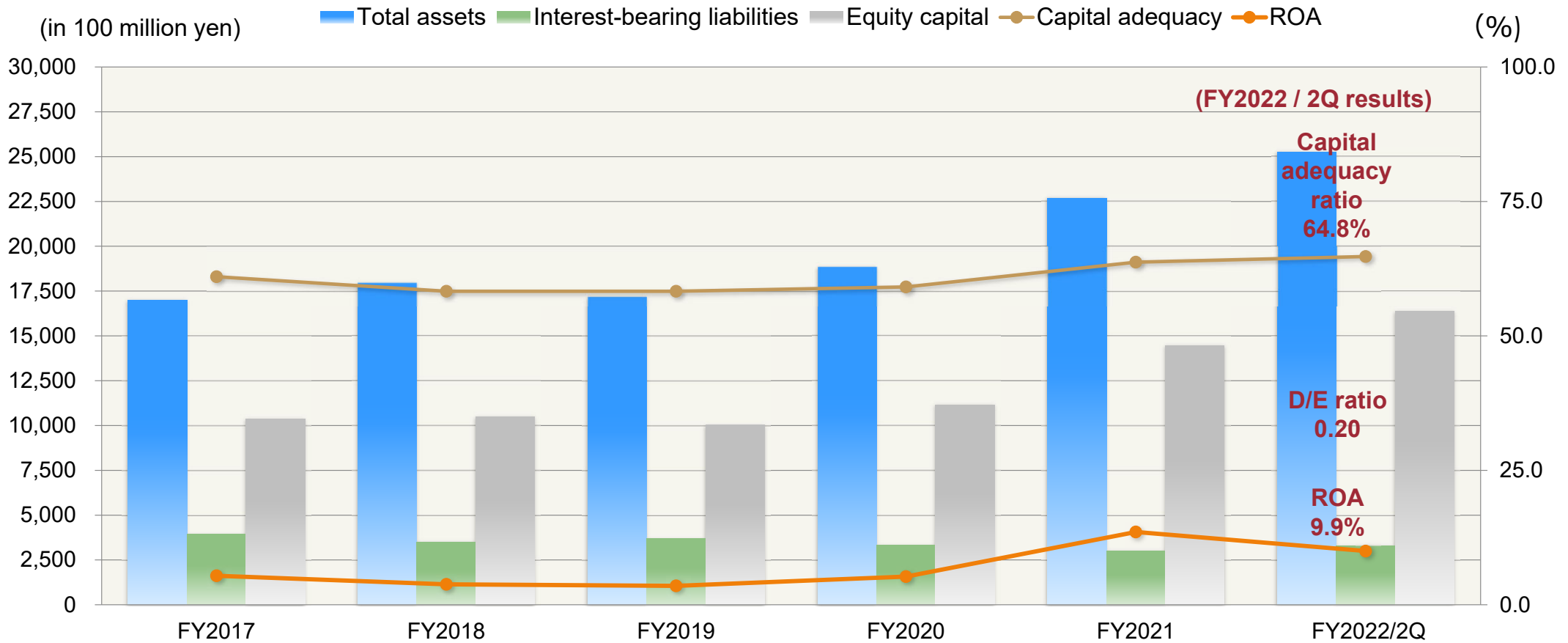
Data/Reference

(in 100 million yen)		FY2017	FY2018	FY2019	FY2020	FY2021	FY2022 (Forecast in Nov.)
Net sales		9,297	9,122	8,519	9,261	12,591	13,770
Pretax profit		1,083	894	790	1,234	3,574	2,010
Equity method profit/loss		123	-49	62	87	575	265
Segment income	Mineral resources	580	473	379	631	2,085	670
	Smelting/refining	478	409	482	530	1,148	1,170
	Materials	71	138	53	105	276	120
	Others/Adjustments	-74	-20	-9	-28	-9	-40
Net income attributable to owners of the parent		28	-106	-115	-4	74	90
Copper (USD/t)		902	668	606	946	2,810	1,370
Nickel (USD/lb)		6,444	6,341	5,860	6,879	9,691	8,067
Gold (USD/Toz)		5.06	5.85	6.35	6.80	9.35	10.55
Cobalt (USD/lb)		1,285	1,263	1,462	1,824	1,818	1,713
Exchange rate (¥/USD)		30.64	31.64	15.76	16.62	27.46	26.90
Net sales		110.86	110.92	108.74	106.07	112.39	136.99



# 8. Changes in Financial Position

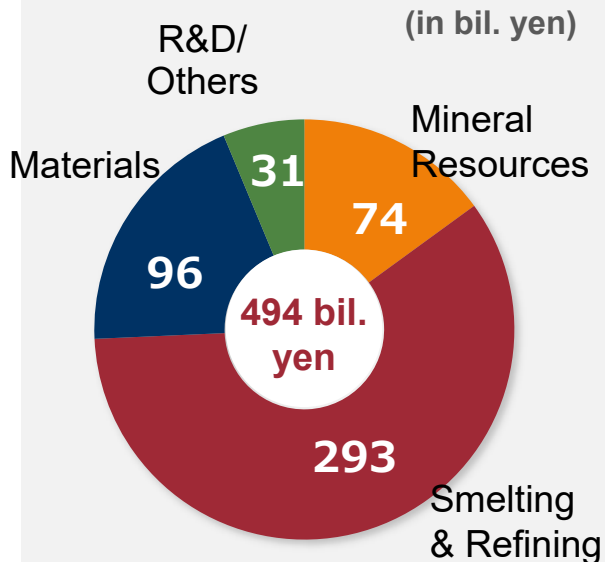
Data/Reference



# 9. FY2022 Capital Investment

Data/Reference

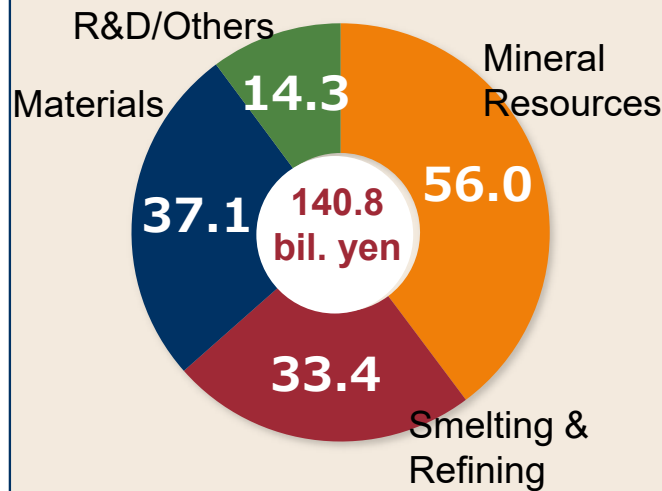
## 2021 3-year Plan (3-year total)



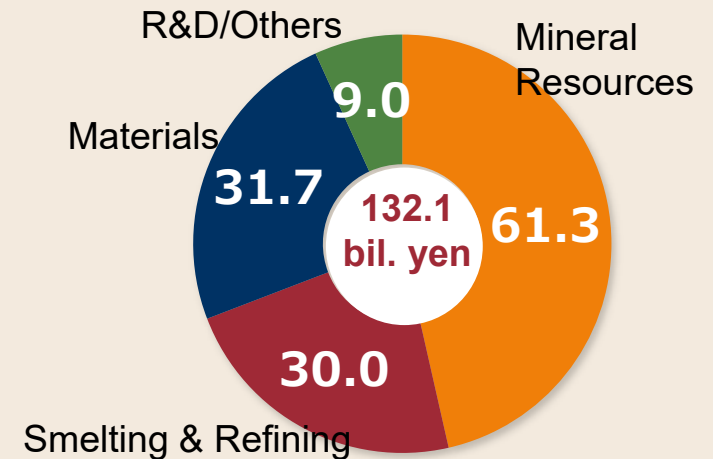
### Investments and financing

(109 bil. yen for QB2 and others)

## FY2022 Plan (May)



## FY2022 Plan (Nov.)



### Key projects

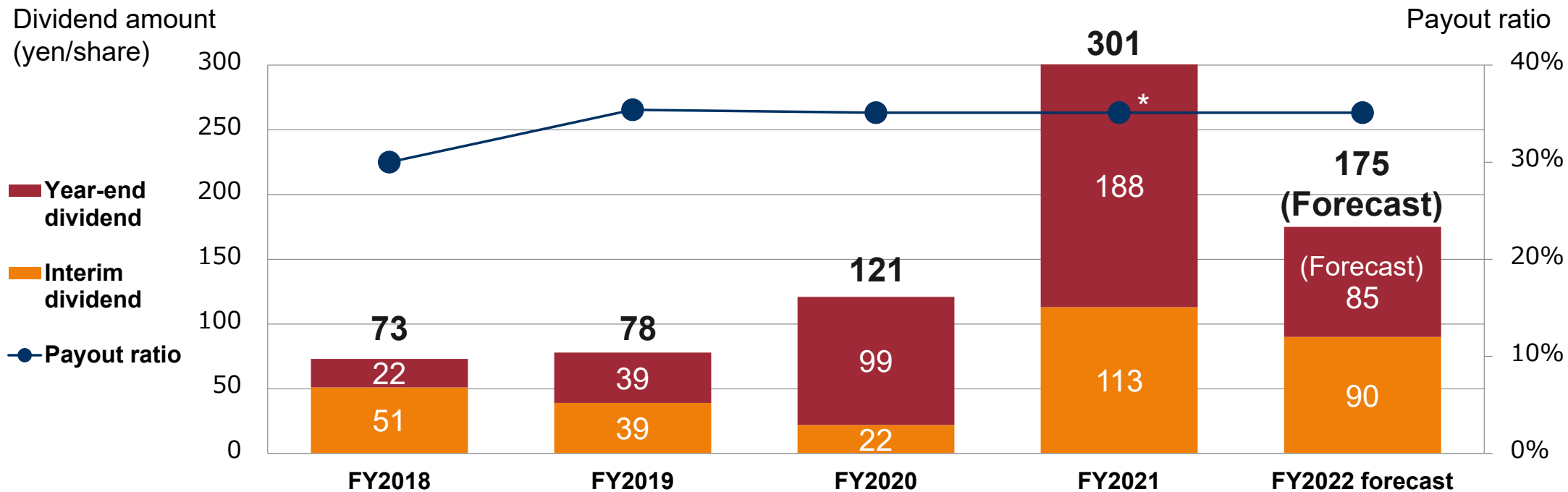
- Côté Gold Development Project: 42.7 bil. yen (USD 846 mil. in total)
- Increased production of cathode materials for automotive batteries (Besshi District + Harima Refinery): 13.5 bil. yen (47 bil. yen)
- Expansion and improvement of Battery Research Laboratories: 1 bil. yen (1.3 bil. yen in total)
- Construction of new company dormitory for Besshi-Niihama District Div.: 3.7 bil. yen (3.8 bil. yen in total)
- Development of lower ore body in Hishikari Mine (installation of new dewatering facilities): 0.2 bil. yen (3.7 bil. yen in total)
- Replacement of existing boilers to LNG-fired boilers\*: 0.5 bil. yen (0.8 bil. yen in total)

\*Internal carbon pricing project

# 10. Shareholder Return (Dividend Forecast)

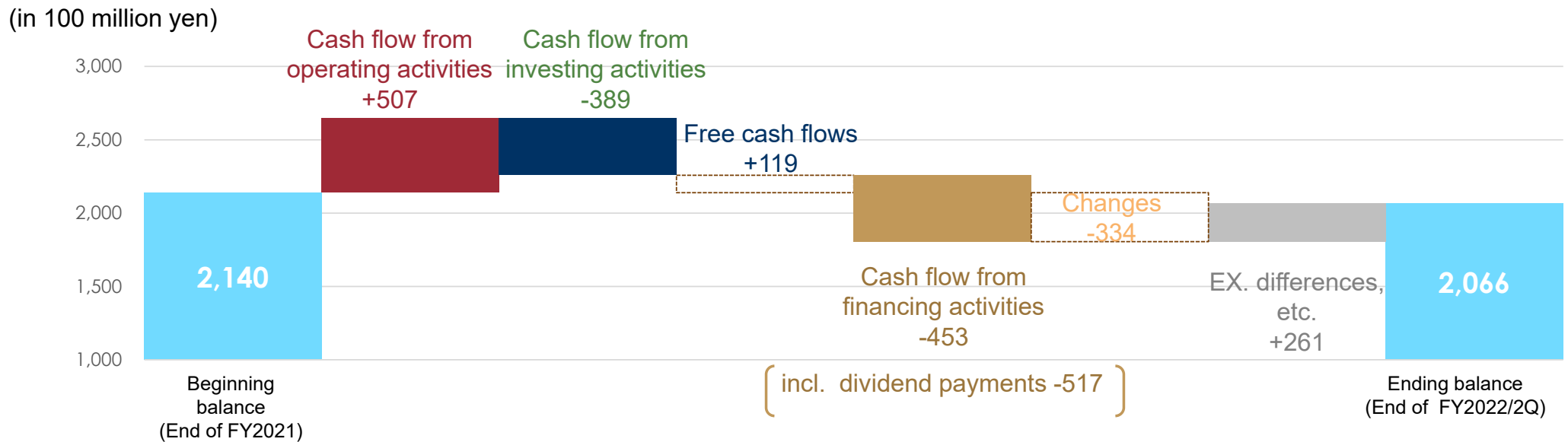
Data/Reference

**<Periods under 2021 3-Year Plan>  
Annual dividend payout ratio: At least 35% (in principal)**



\*The dividend payout ratio for FY2021 is calculated excluding the adjustments related to the transfer of Sierra Gorda.

# 11. Cash Flows (1H FY2022 Results)



**In and out cash flows are at a similar level.**

**Pursue the growth strategy set out in the 3-year Plan.**

**Maintain capital in hand to prepare for future increases in the investment amount.**

## 12. Sensitivity Estimation

Data/Reference

(in 100 million yen)

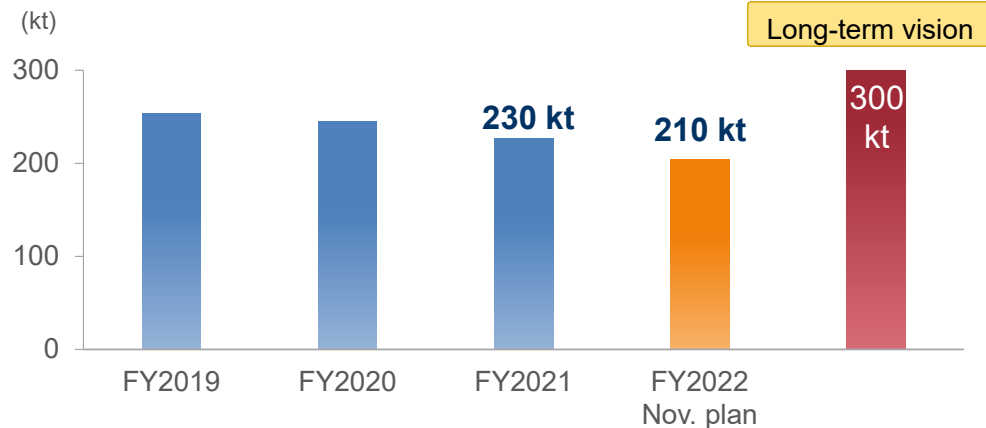
Element	Fluctuation	FY2020 Profit before Tax
Cu	±100\$/t	27
Ni	±10 ¢ /lb	18
Au	±10\$/toz	2
Exchange rate (yen/USD)	±1 yen/USD	16

Note: The monetary value of the impact of exchange rate fluctuations provided above is the sum of the revenue from metal processing operations in Japan and the exchange difference on foreign operations.

# 13. Long-term Vision Targets and Their Achievements

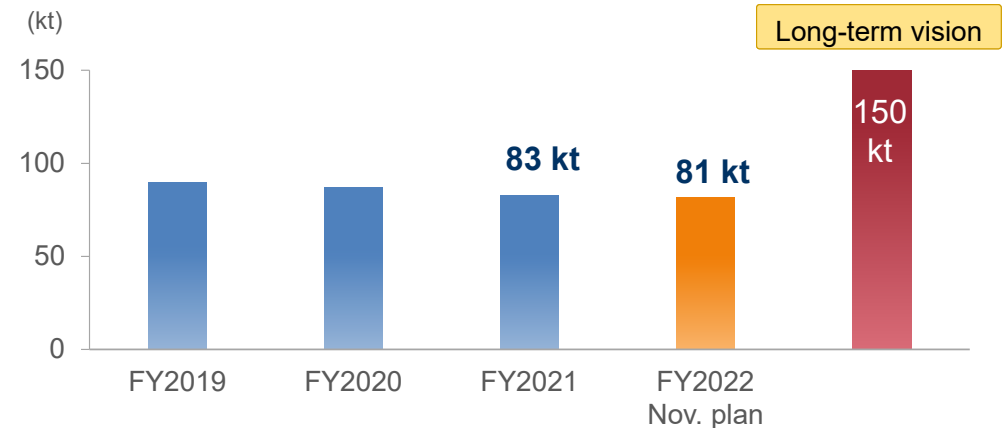
Data/Reference

## Cu (Production from company mines)

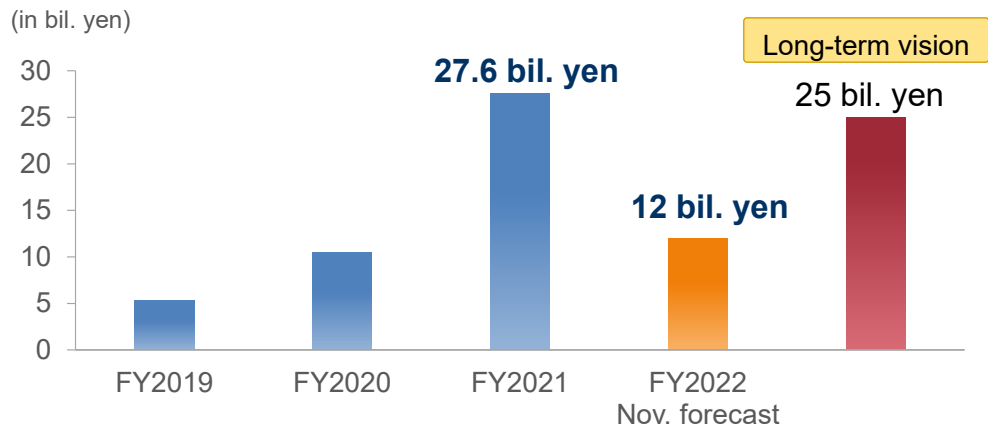


## Ni (Annual production volume)

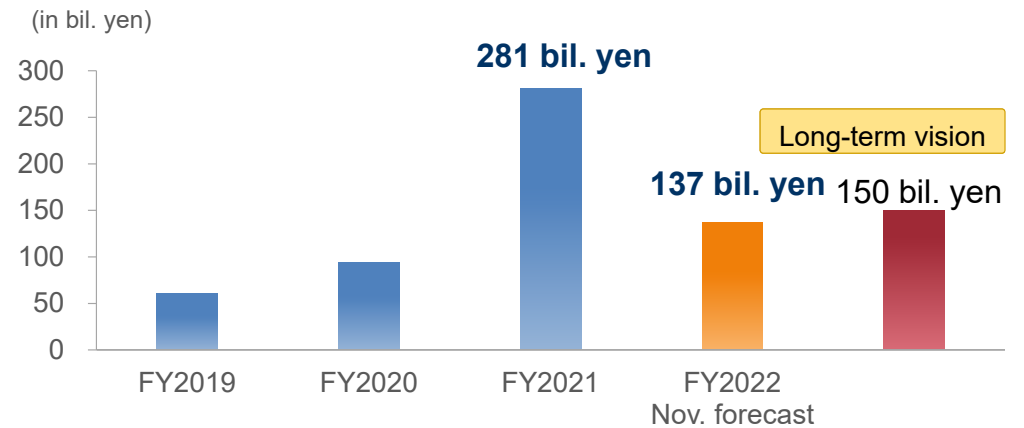
Note: The long-term vision focuses on "production capacity."



## Materials Business (Segment profit)



## Net income (Attributable to owners of the parent)



# Disclaimer

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