

2nd Quarter of FY2018

Progress of Business Strategy

November 20, 2018



SUMITOMO METAL MINING CO., LTD.

Akira Nozaki
President and Representative Director

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I. Summary

1. Results forecast for FY2018

While the cumulative results for Q2 represented a large upturn year-on-year, the full year forecast is for a decline in year-on-year income and profit due to reduced production and large deterioration in cost variation

2. Factors behind deterioration of results

- (1) Deterioration in ore grade at overseas copper mines
- (2) Increasing costs at overseas copper mines
- (3) Lower production than planned at Taganito HPAL

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1) Trend of Business Performance

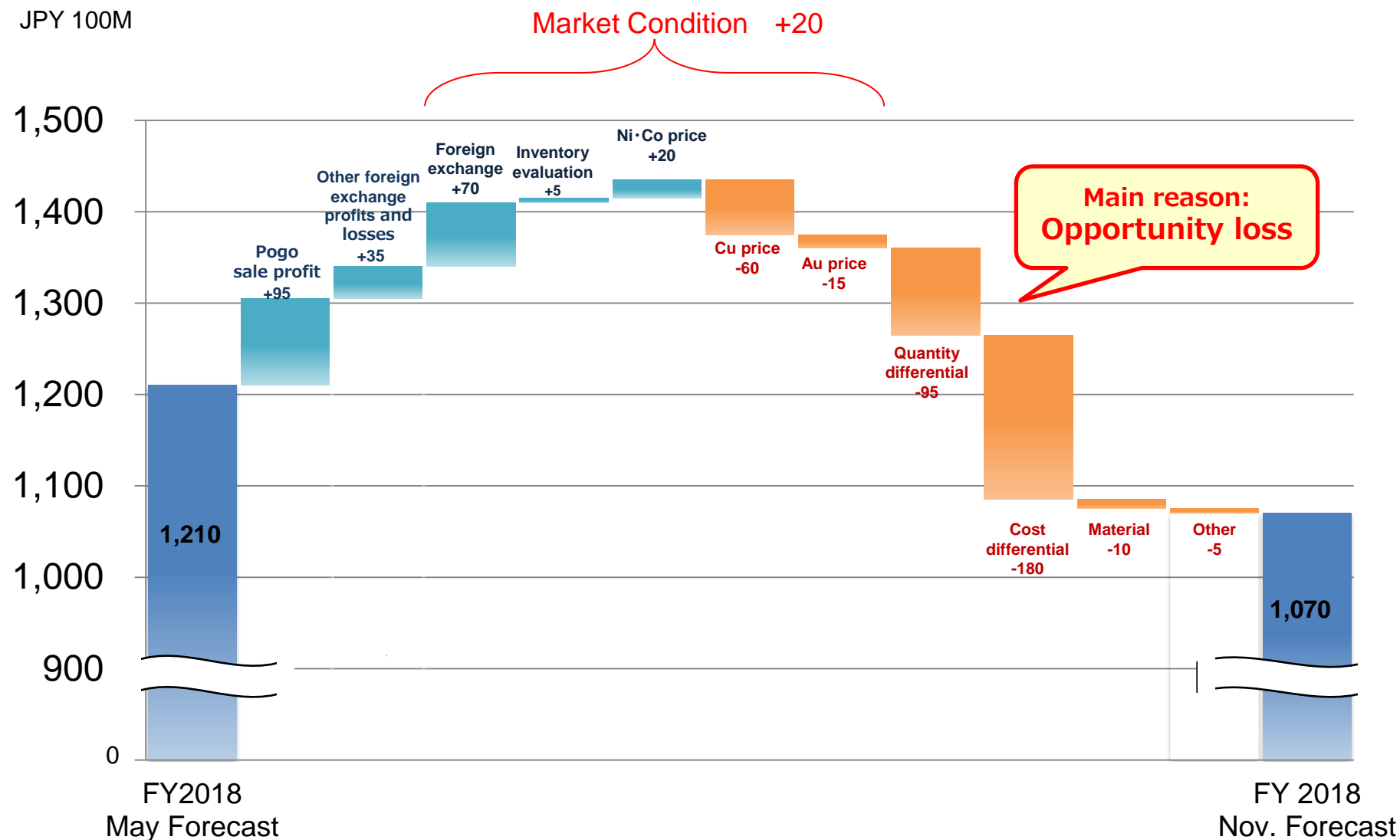
		Japanese standards【J-GAAP】					【IFRS】		
		2012	2013	2014	2015	2016	2017	2017	2018Forecast
Net Sales		8,085	8,305	9,213	8,554	7,861	9,335	9,297	9,090
Operating Income		958	754	1,258	597	764	1,102	—	—
Recurring Profit		1,150	1,144	1,742	-128	-16	1,249	—	—
Profit before tax		1,225	1,110	1,233	6	-60	1,058	1,083	1,070
Equity Method profit		171	298	239	-732	-860	114	123	60
Segment Profit	Mineral Resources	661	691	538	-443	-536	560		480
	Smelting & Refining	406	291	813	253	333	515		470
	Materials	33	111	129	60	121	153		150
	Other	16	16	-1	-8	-1	2		-20
	Diff. Adjustment	34	35	263	10	67	19		-10
Net Income (Profit attributable to owners of parent)		866	803	911	-3	-185	916	902	810
Copper (\$/t)		7,855	7,104	6,554	5,215	5,154	6,444	6,444	6,294
Nickel (\$/lb)		7.69	6.51	7.62	4.71	4.56	5.06	5.06	5.89
Gold (\$/Toz)		1,654	1,327	1,248	1,150	1,258	1,285	1,285	1,240
Cobalt (\$/lb)		12.29	12.67	13.69	11.73	13.67	30.64	30.64	34.27
Exchange (¥/\$)		83.11	100.24	109.93	120.15	108.40	110.86	110.86	110.14

2) Q2 Financial Results and FY2018 Forecast

Nov. Forecast vs. May Forecast

		1st Half of 2018 (A)	2nd Half of 2018 (B)	FY2018 November forecast (C)	FY2018 May forecast (D)	Difference (C) – (D)
Net Sales		4,667	4,423	9,090	9,300	-210
Gross Operating Profit		727	613	1,340	1,610	-280
Pretax Profit		732	338	1,070	1,210	-140
Equity Method profit		77	-17	60	90	-30
Segment Profit	Mineral Resources	372	108	480	510	-30
	Smelting & Refining	258	212	470	610	-140
	Materials	114	36	150	150	0
	Other	-7	-13	-20	-20	0
	Diff. Adjustment	-5	-5	-10	-40	30
Net Income (Profit attributable to owners of parent)		581	229	810	940	-130
Copper (\$/t)		6,487	6,100	6,294	6,500	-206
Nickel (\$/lb)		6,28	5.50	5.89	6.00	-0.11
Gold (\$/Toz)		1,260	1,220	1,240	1,300	-60
Cobalt (\$/lb)		38.55	30.00	34.27	35.00	-0.73
Exchange (¥/\$)		110.28	110.00	110.14	105.00	5.14

3) Analysis on Profit before tax (1) FY2018 Nov. Forecast vs May Forecast



4) ROA Results by Segment

	Mineral Resources	Metals	Materials	Overall
FY2013	21.5%	4.4%	7.8%	5.5%
FY2014	14.3%	11.7%	7.8%	5.5%
FY2015	-12.3%	3.7%	3.2%	0.0%
FY2016	-13.7%	5.0%	6.1%	-1.1%
FY2017	11.9%	7.8%	6.9%	5.4%
FY2018 2Q total	15.4%	7.8%	9.1%	6.7%

(Remark) ROA by segment is based recurring profit or loss.

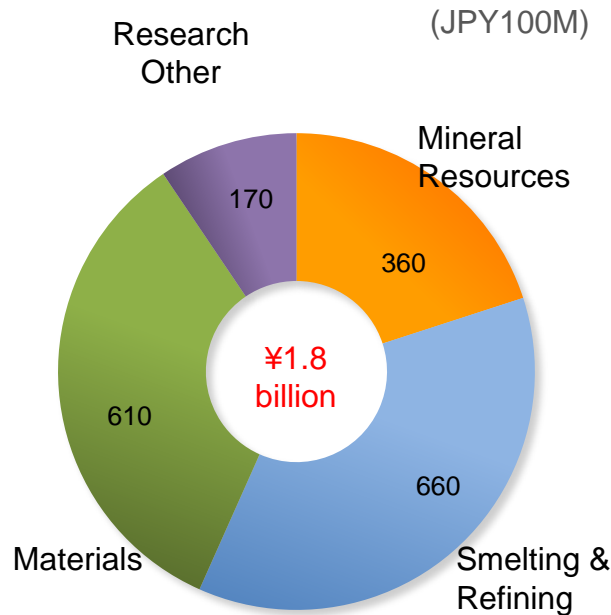
ROA for the whole company is based on net income or loss.

Japanese standards prior to FY2017, IFRS base used for FY2018

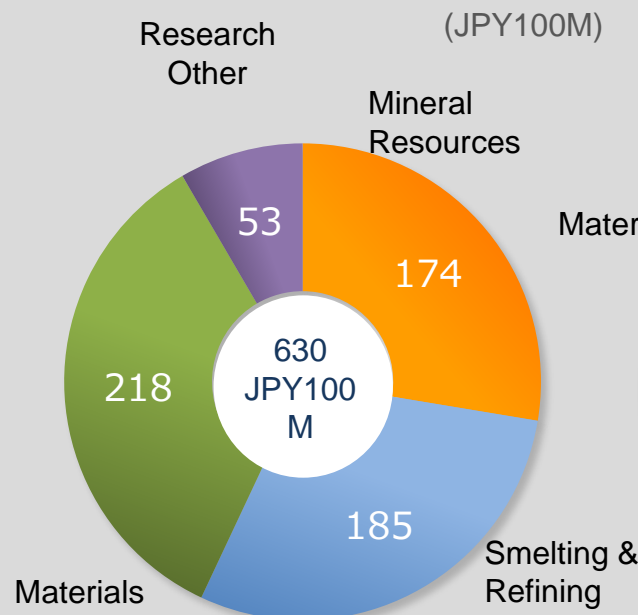
5) Investment Plans

2015 3-Yr Plan

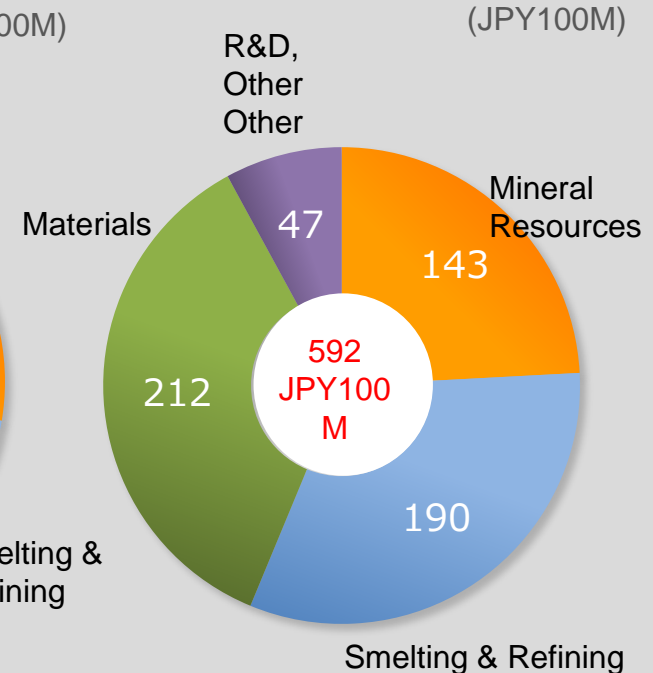
(Total of 3 Years)



FY2018 Plan (May)



FY2018 Forecast (November)



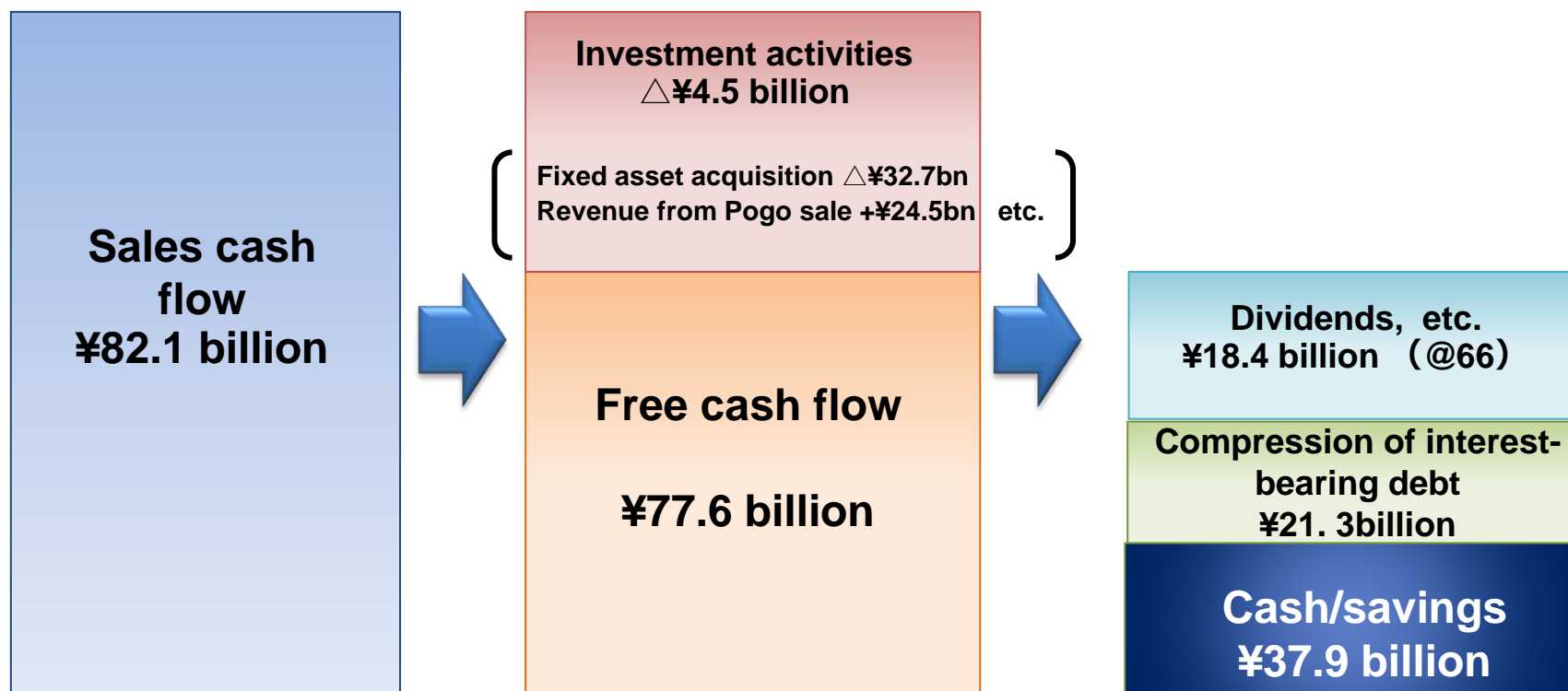
Acquisition of overseas
interest

(Morenci ¥11.2 billion)

Facility investment forecast for 2016 - 2018: 172.1bn yen
Expected to be almost as per the 2015 3-year business plan.

6) Cash Flow (cash source and use)

In addition to sales CF increase, FCF took a massive upturn with the revenue from the sale of the Pogo gold mine. Cash and deposits to be put to use in strategic investments such as new mine development projects.



7) Safety Results

Safety — To achieve by FY2018

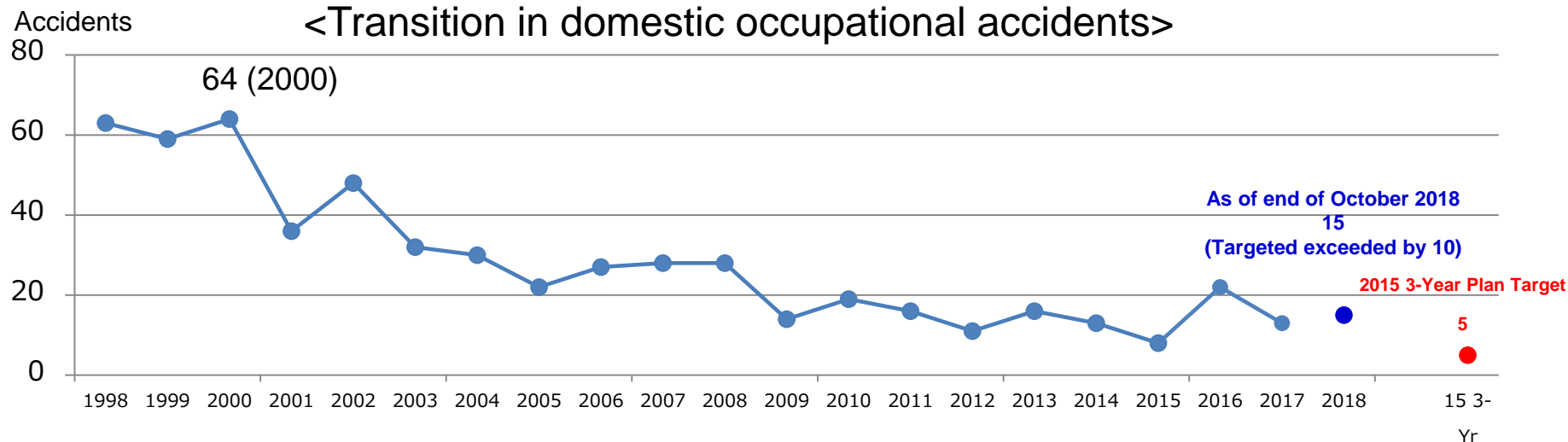
Use top-down approach to conduct effective safety activities at business sites and reduce major risks through appropriate equipment improvements.

Practice good communication to improve safety awareness among all employees and conduct proper line management to ensure safety.

2015 3-Yr Plan Targets

Limit domestic work-related accidents to 5 or less
Limit overseas work-related accidents to 9 or less

<Transition in domestic occupational accidents>



8) Shareholder Return

Dividend Forecast

FY2018

Intermediate dividend	¥51/share
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Year-end dividend forecast	¥38/share
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Annual dividend forecast	¥89/share
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Annual dividend payout ratio (forecast) 30.2%

III. Current Issues and Priority Measures

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1) Company-wide issues (1)

Production capabilities (site management capability enhancement and improvement)

- Minimization of opportunity loss
(facility management, recovery rate management,
inventory management, etc.)
- Elimination of quality/environment problems

Management capability enhancement and improvement

- Review of strategies and measures in line with changes
in business environment
- Speedy response to changes

Human resource development

- Reconstruction of a free organizational environment
- Enhancement of problem discover, conceptualization,
and problem solving abilities

**For [Corporate Value Improvement &
Maximization of Shareholder Profit]**

**Formulation of 2018 3-Year
Business Plan**

1) Company-wide Issues (2)

Enhancement of Corporate Governance

- 8 directors (of which 3 are external directors, including 1 female)
- 4 auditors (of which 2 are external auditors)
- The working of the board of directors has undergone analysis and evaluation including external evaluation since FY2016 -> further enhancement
- On-site inspections by external directors, establishment of external board members' committee

Initiatives regarding SDGs

- Strengths built up over 420 years of history
- CSR Committee 6th subcommittee activity promotion
- SDGs for working towards the goal for 2030
Start of internal learning support activities
- Proactive participation in external events regarding SDGs

2) 3 business collaboration: To strengthen the pillar of each business

Mineral Resources



Smelting & Refining



Materials

- Make Sierra Gorda copper mine profitable ASAP (debottlenecking)
- Transfer of interest in Pogo gold mine
- Cote Gold project initiatives
- Proactive participation in new promising projects

- THPAL operation and handling henceforth
- Increased productivity, enhanced cost competitiveness
- Further strengthening of nickel and cobalt business (Pomalaa project implementation)

- CASE progress => materials business opportunity expansion
- Battery materials business
 - NCA expansion progress
 - Future business expansion

Strengthen the pillar of each business,
strengthened synergy through 3 business collaboration



➤ Deteriorating ore grade and increasing costs at overseas copper mines

Morenci

- Reduced production due to decline in mineral ore grade of the mining orebody
- Increase in cost due to increase in mining volume and transport distance

Cerro Verde

- As a result of expanding the mining of low-grade area which was difficult to avoid in the mining plan, although the copper production amount was maintained, the cost increased.
- Temporary increase in labor costs following progress in labor negotiations

La Candelaria

- Reduced production due to impact of pit collapse in October 2017
- Production volume expected to recover around 2020 to the levels before the collapse

2) To strengthen the pillar of each business (1)

Mineral
Resources

Smelting
& Refining

Materials

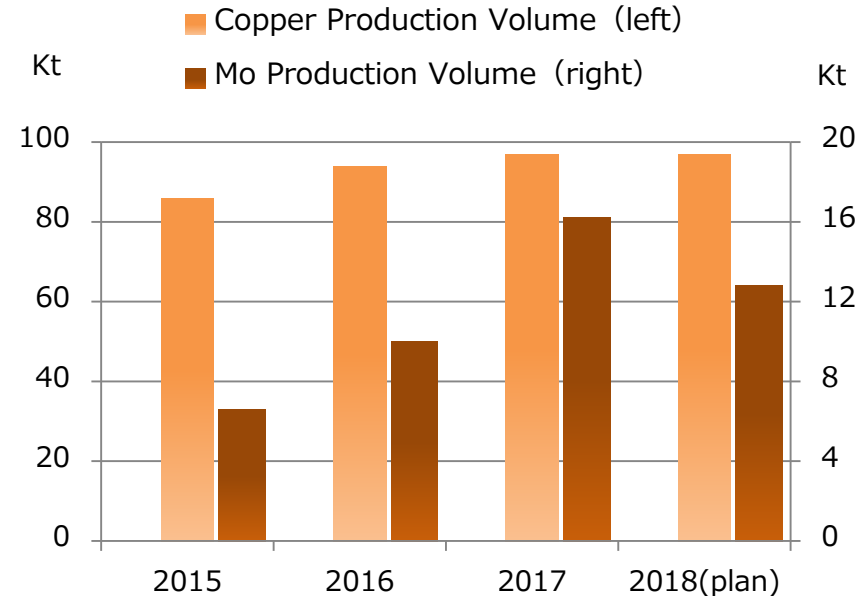
➤ Make Sierra Gorda copper mine profitable ASAP

- Cu, Mo recovery percentage: planned value mostly reached in FY2017
- Debottlenecking: increase current mineral ore processing volume of 110kt/day by 10% - 20%
Addition of regrinding mill for increased processing volume
Aiming for completion of work between end of 2019 and start of 2020

Debottlenecking:

Relatively small improvements made to existing operational facilities, and increase process capacity in areas that facility capacity is lacking.

CY2015-CY2018 operational performance/plan



2) To strengthen the pillar of each business (1)

Mineral
Resources

Smelting
& Refining

Materials

➤ Transfer of interest in Pogo gold mine

- 9/28 Transfer to Australian gold major Northern Star Resources Limited of 100% of interest (SMM 85%, Sumitomo Corporation 15%)
 - Leverage accumulated technology and human resources and aim to acquire interest in good projects henceforth
-
- Transfer amount: US\$260M (SMM interest 85%: US\$221M)
 - Impact on FY2018 financial results: approx. ¥9.5 billion
 - Energize interest and assets with funds gained through transfer

2) To strengthen the pillar of each business (1)

Mineral
Resources

Smelting
& Refining

Materials

➤ Côté Gold Mine Development Project

- Joined in June 2017, started joint venture with Canadian gold producer IAMGOLD
- Participate in management team and be proactively involved in F/S
- F/S completion in November 2018
- Promoting consideration for construction transition aiming to start production in 2021

FS Overview (from Press Release on November 1, 2018)

Location : Ontario, Canada

Initial startup costs : \$1.147 million

	Base case
Reserves	203Mt
Au amount : (Avg. grade)	About 198t (0.98g/t)
NPV@5% (Au:US\$1,250/Toz)	US\$795M



2) To strengthen the pillar of each business (1)

Mineral
Resources

Smelting
& Refining

Materials

➤ Preparation for acquisition of new interest

Copper

- Aiming for the long-term vision's target of an interest share of production of 300kt/year, continue evaluation of good assets as normal (present : 250kt)

Gold

- As well as accelerating exploration activities underway, investigate interest acquisition including exploration projects that have progressed to a certain degree.
- The target areas are Canada, Australia, and South America

☆ **Resource majors have gone through a round of financial structure enhancements -> new mine development -> SMM will work to ensure it does not fall behind**

➤ Nickel smelting and refining business

- Due to many problems in peripheral equipment such as autoclaves and in the MS reaction process as well as in boiler equipment, MS production was declined 5.4Ni-kt, and this led to reduced production of electrolytic nickel.
 - > Improve equipment inspections and maintenance during regular operation halts
 - > Avoid growing production decrease through stable production by enhancing daily production management

MS production volume (FY2018)

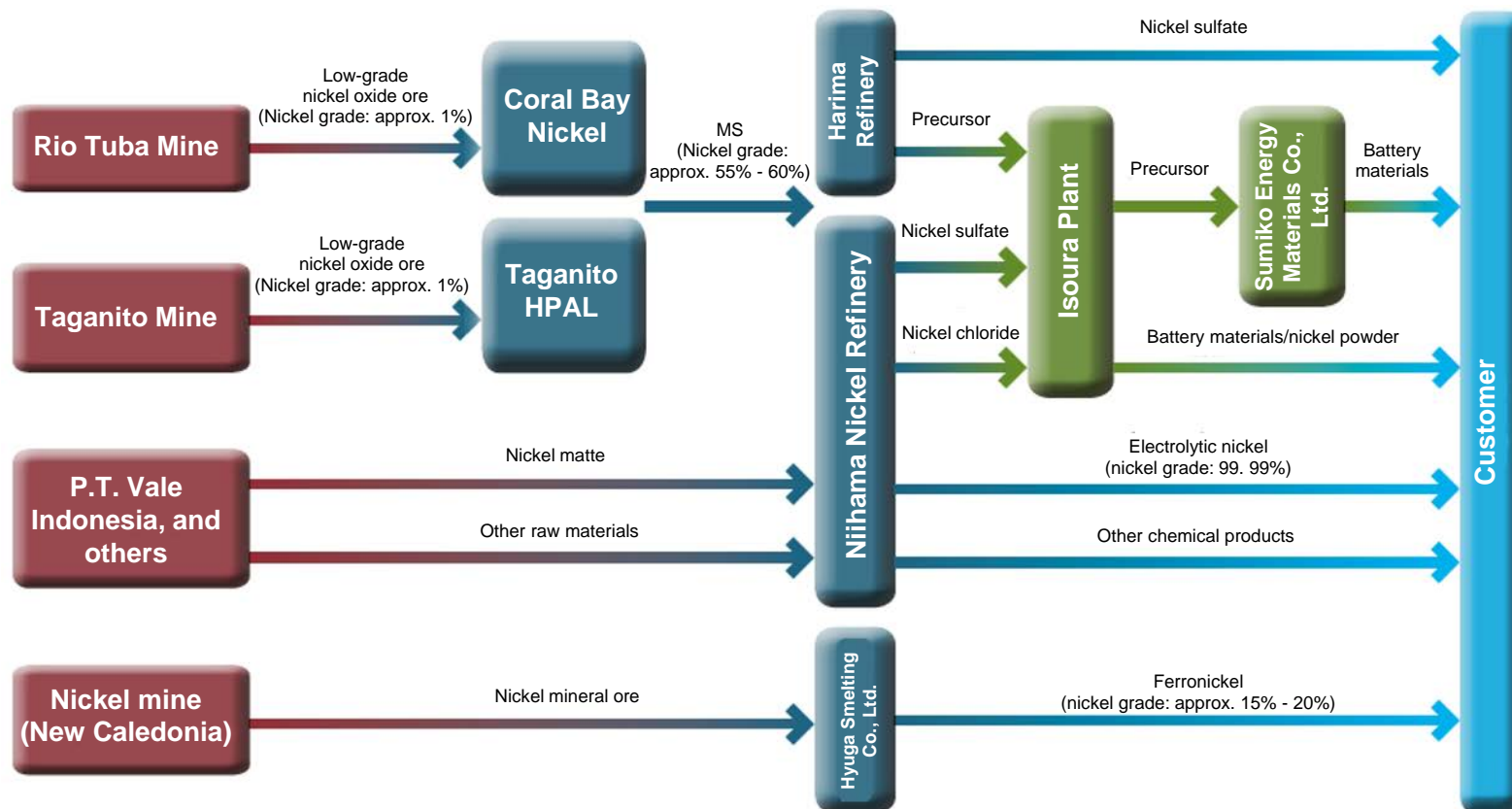
Unit Ni-kt	Nov. Forecast			May Forecast	Diff.
CBNC	1H R	10.6	21.5	21.5	—
	2H F	10.9			
THPAL	1H R	12.9	30.6	36.0	△5.4
	2H F	17.7			
Total	1H R	23.5	52.1	57.5	△5.4
	2H F	28.6			

Electrolytic Ni production volume (FY2018)

Unit Ni-kt	Nov. Forecast			May Forecast	Diff.
E-Ni	1H R	28.2	59.9	64.9	△5.0
	2H F	31.7			

➤ SMM Group Nickel Supply Chain

Stable procurement of raw material from mines in which interest is held. As well as selling to customers after going through the smelting and refining process, also provide to SMM battery materials business as raw material.



➤ Pomalaa Project

- From FY2018 start a DFS (Definitive Feasibility Study with PT Vale Indonesia (study period 1 - 2 years)
- Scale (target):
40Ni-kt/year, MS (Mixed Sulfide) Production
As with the Philippines, the mineral ore also contains Co at around 1/10 of the Ni
- Investment amount: several billion \$USD

☆ **For the moment, Class 1 nickel development projects are limited**

2) To strengthen the pillar of each business (2)

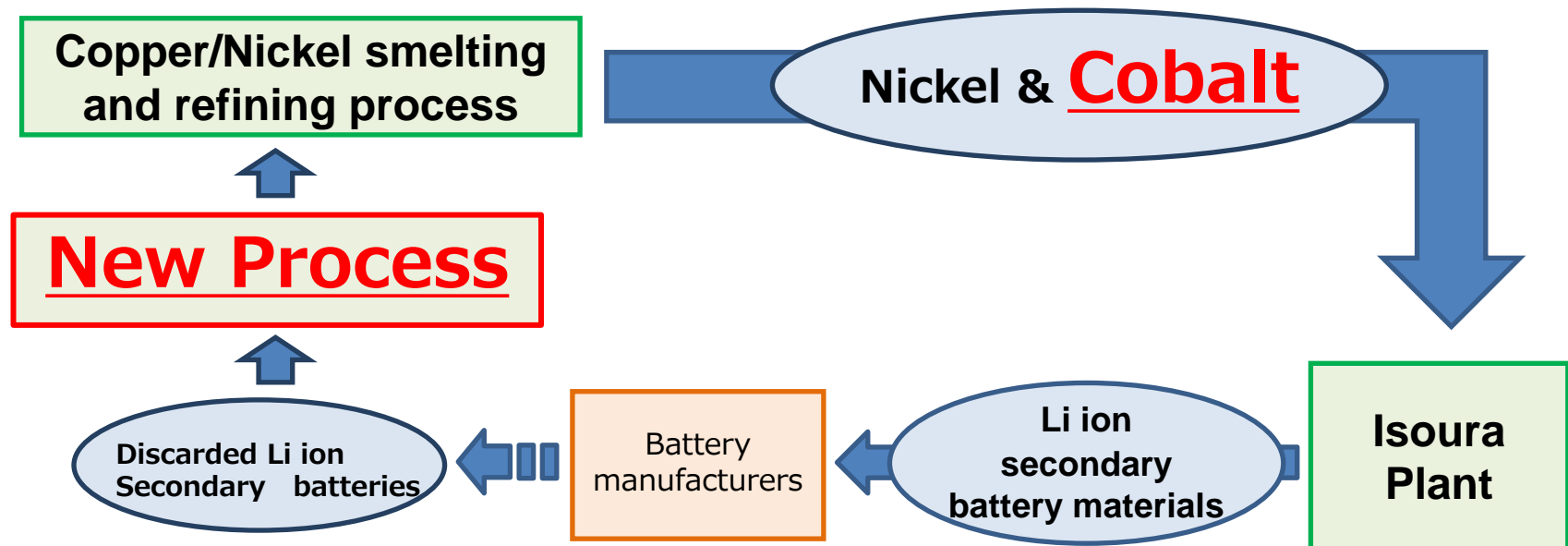
Mineral
Resources

Smelting
& Refining

Materials

➤ Recycling of discarded lithium ion battery secondary batteries

- Basic flow for cobalt recovery decided in lab experiments
- By constructing a pilot plant and conducting pilot experiments within FY2018, the profitability and feasibility of the process will be determined



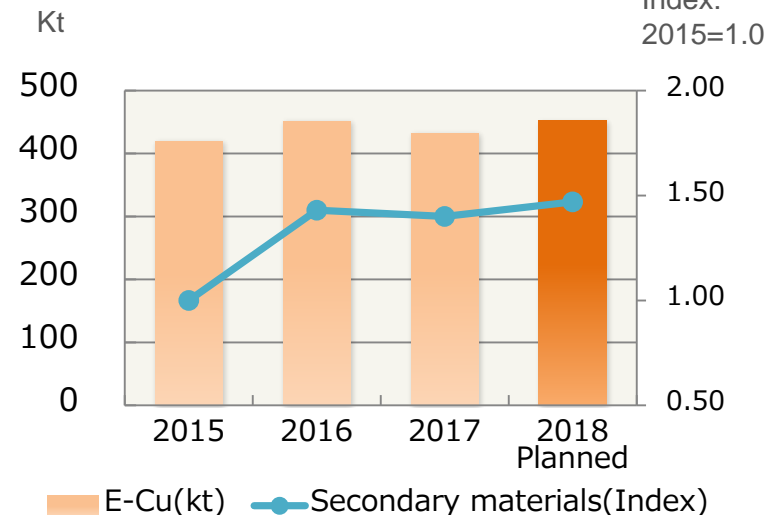
➤ Copper business (Toyo Smelter & Refinery)

Through continued full operation and increased processing of valuable raw material, maintain profitability as a global top class copper smelting and refining plant

Electrolytic copper production performance (FY2015 - FY2018)

Fiscal year	Production volume performance (kt)
2015	419.9
2016	451.5
2017	432.2
FY2018 (November forecast)	452.0

E-Cu production, increased pickup of secondary materials



Secondary raw material pick up (scrap copper, etc.) enhancement

- Background: Recycle and decline in copper ore grade in concentrate
- Following on from FY2016/FY2017, a high level of secondary raw material pick up is also planned for FY2018

2) To strengthen the pillar of each business (3)

Mineral
Resources

Smelting
& Refining

Materials

➤ Focus fields for materials business



Telecommunications



In-vehicle



Energy

Connected/automation

Storage batteries Electricity/
saving/Electricity generation

Growth areas targeted by materials business

2) To strengthen the pillar of each business (3)

Mineral
Resources

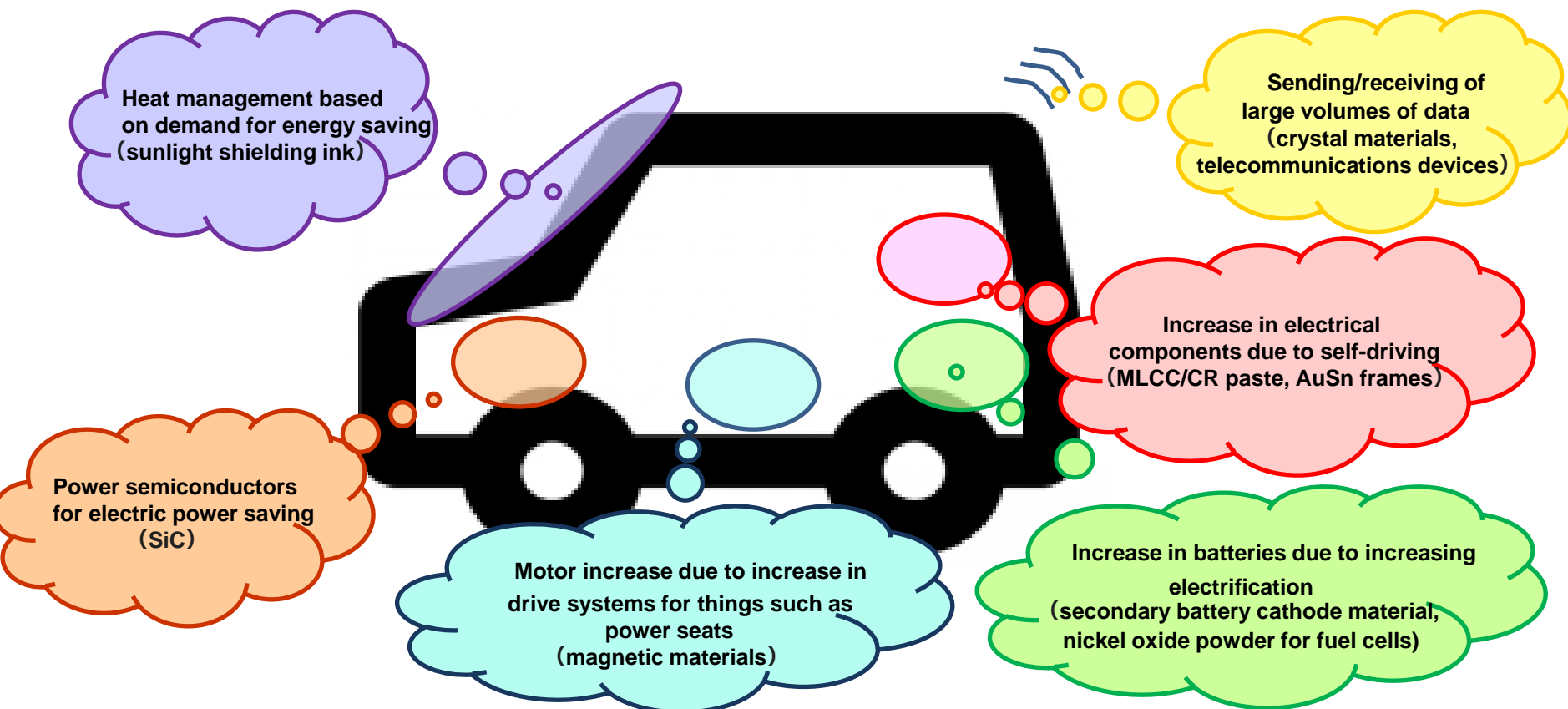
Smelting
& Refining

Materials

➤ Focus fields for materials business

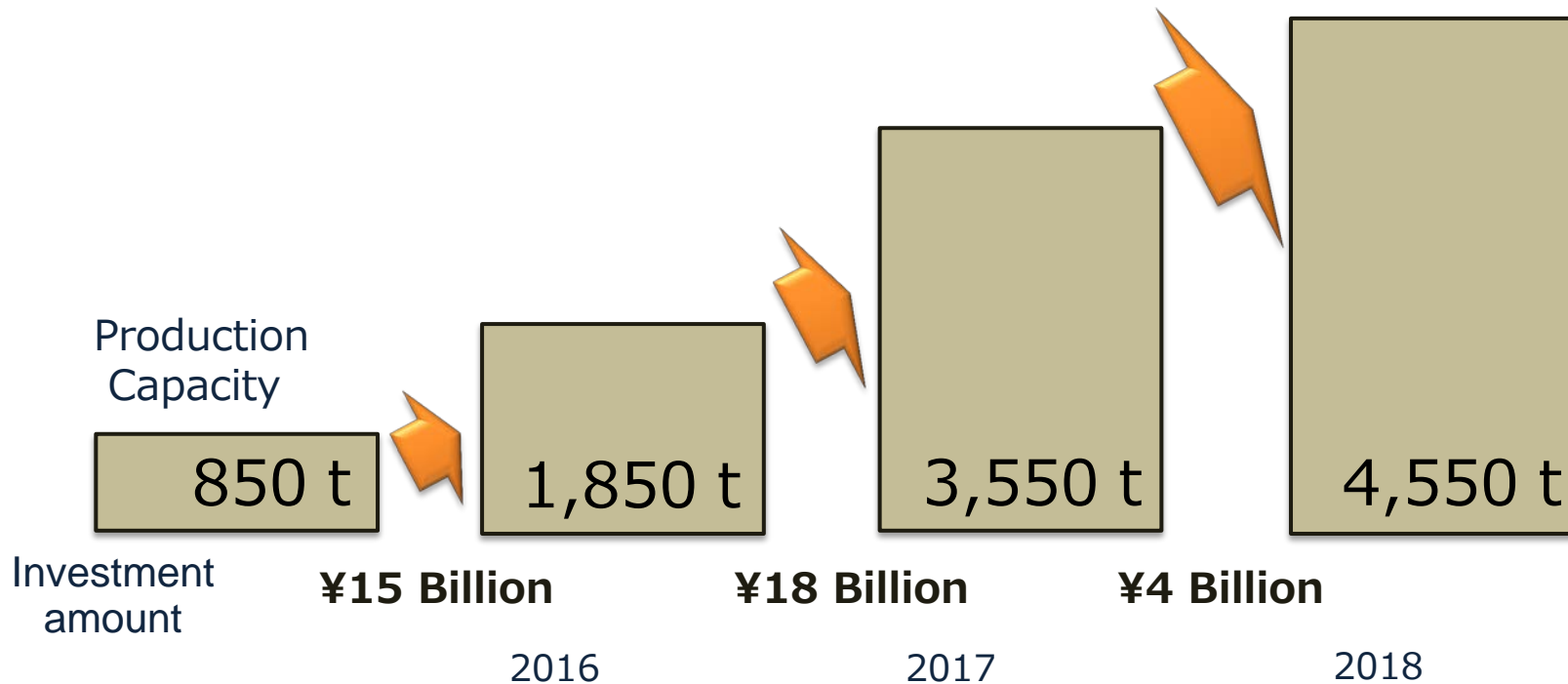
CASE* progress => materials business **opportunity expansion**

*Connected, autonomous, shared, electric



➤ Current battery material (NCA) situation

- 3,550t/month expansion almost complete and is operating
- 4,550t/month expansion expected to be completed at the end of 2018. Aim for full operation ASAP



2) To strengthen the pillar of each business (3)

Mineral
Resources

Smelting
& Refining

Materials

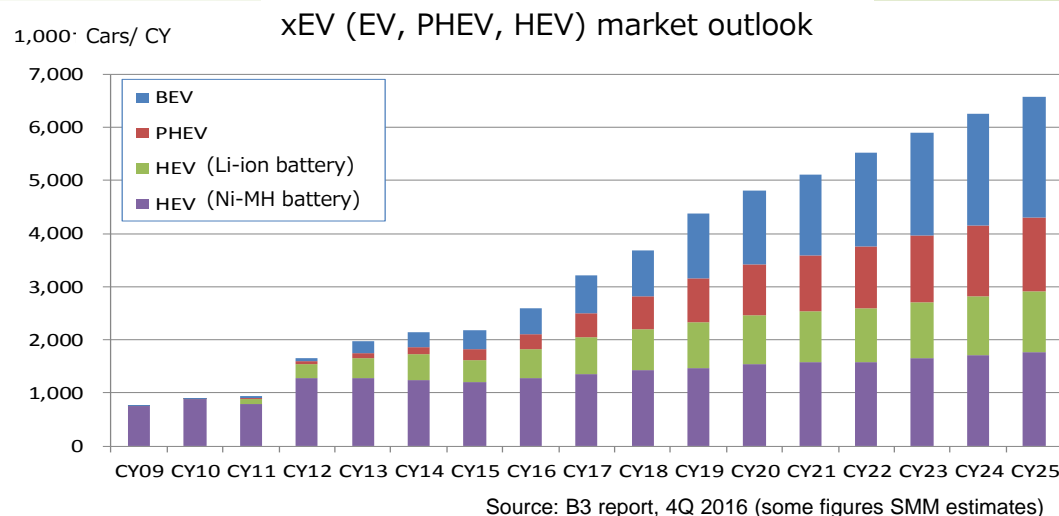
➤ Further expansion of battery materials business

<Business environment>

Due to strengthening of environmental regulations around the world, the xEV (electric vehicle) market has expanded, and demand for secondary batteries for automobiles is expected to increase

<Direction henceforth>

Using SMM's strengths of high technical capacity that enables high-Ni and the ability to provide a stable supply from Ni and Co raw material, continue expanding business through deepening relations with our important customers Panasonic and Toyota



IV. Next 3-Year Business Plan (2018 3-Yr Plan)

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IV. Next 3-Year Business Plan (2018 3-Yr Plan)

Fiscal years in scope: FY2019 - FY2021 (3 years)

Disclosure timing: in mid-Feb 2019 (planned)

No specific changes in long-term vision, and we will work to continuously increase corporate value in line with the growth strategy

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1) Our external environment

- Impact on actual economy due to increasing trade friction between the US and China
 - > Concerns about a cooling global economy (demand currently robust)
- Increasing mine development costs
 - More remote locations of mines, higher altitudes, deeper
 - Dealing with decrease in coarse ore grade, difficult to process ore (impurities)
 - Tougher environmental regulation, increased social hurdles for obtaining operating permits
- Increasing resource nationalism (protectionism)
 - Stronger tax measures, environmental regulation strengthening
- Great changes due to global increasing use of EV and use of IoT/AI
 - Development of business alliances for securing raw materials
 - Entry into other industries following structural changes/intensifying competition

2) Demand trends Copper/nickel

Copper

[ICSG Forecast October 2018]

(kt)

	2017	2018	2019
Production	23,498	24,161	24,825
Usage	23,759	24,253	24,890
Balance	-261	-92	-65

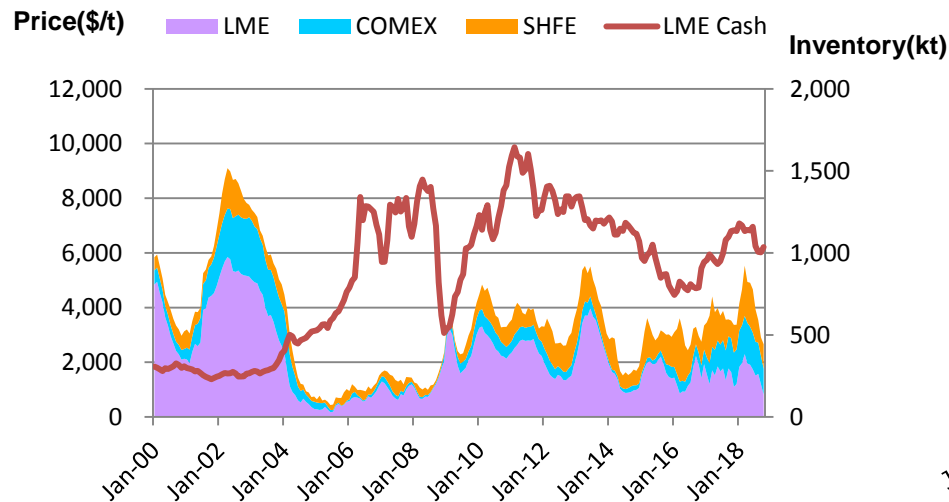
Nickel

(kt)

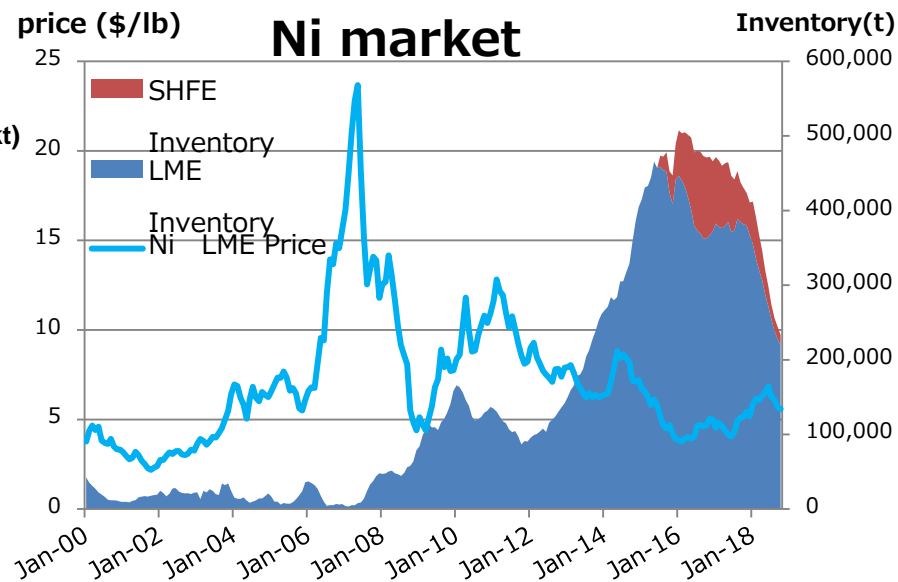
	[INSG Forecast October 2018]			[SMM Forecast August 2018]		
	2017	2018	2019	2016	2017	2018
Production	2,070	2,204	2,389	2,049	2,065	2,190
Usage	2,184	2,350	2,422	2,079	2,142	2,282
Balance	-114	-146	-33	-30	-77	-92

3) Non-ferrous Metals/Foreign Exchange

Copper market



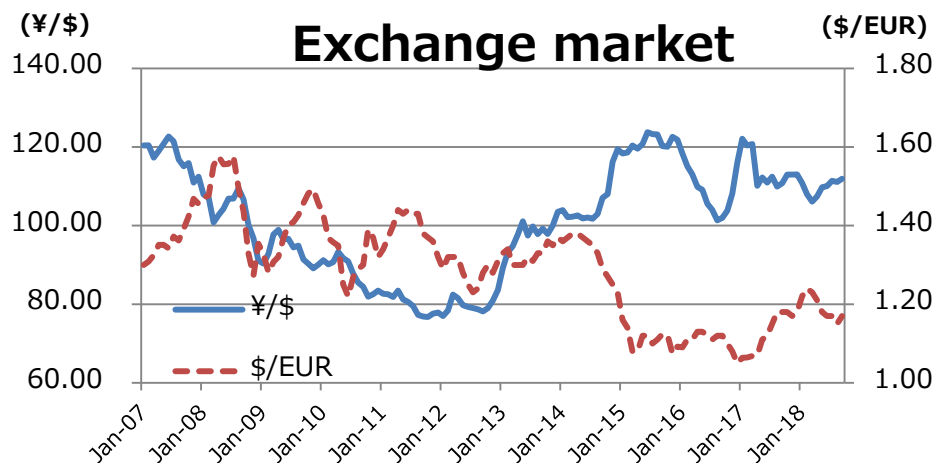
Ni market



Gold market



Exchange market

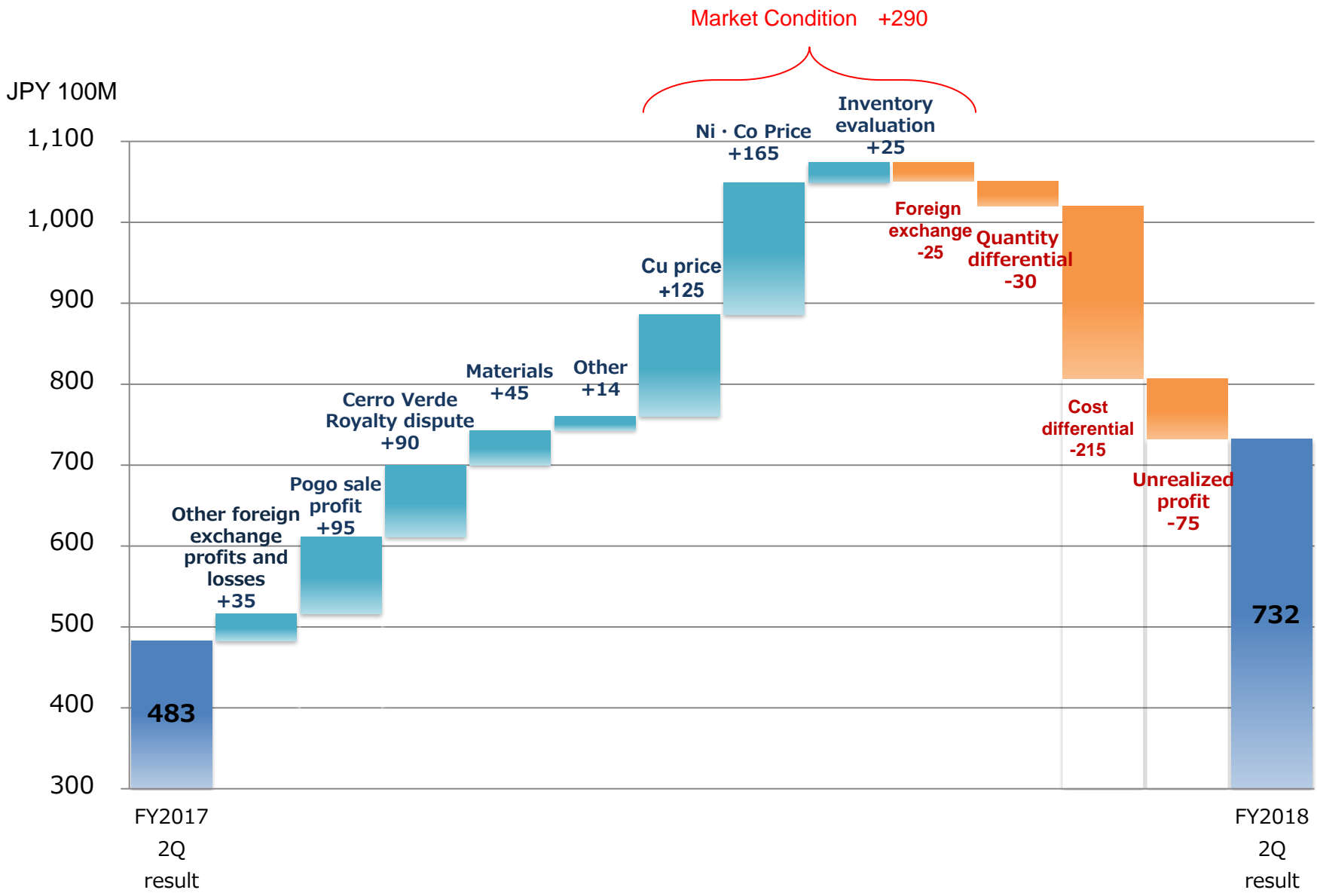


4) FY2018 Q2 cumulative financial results Year-on-year

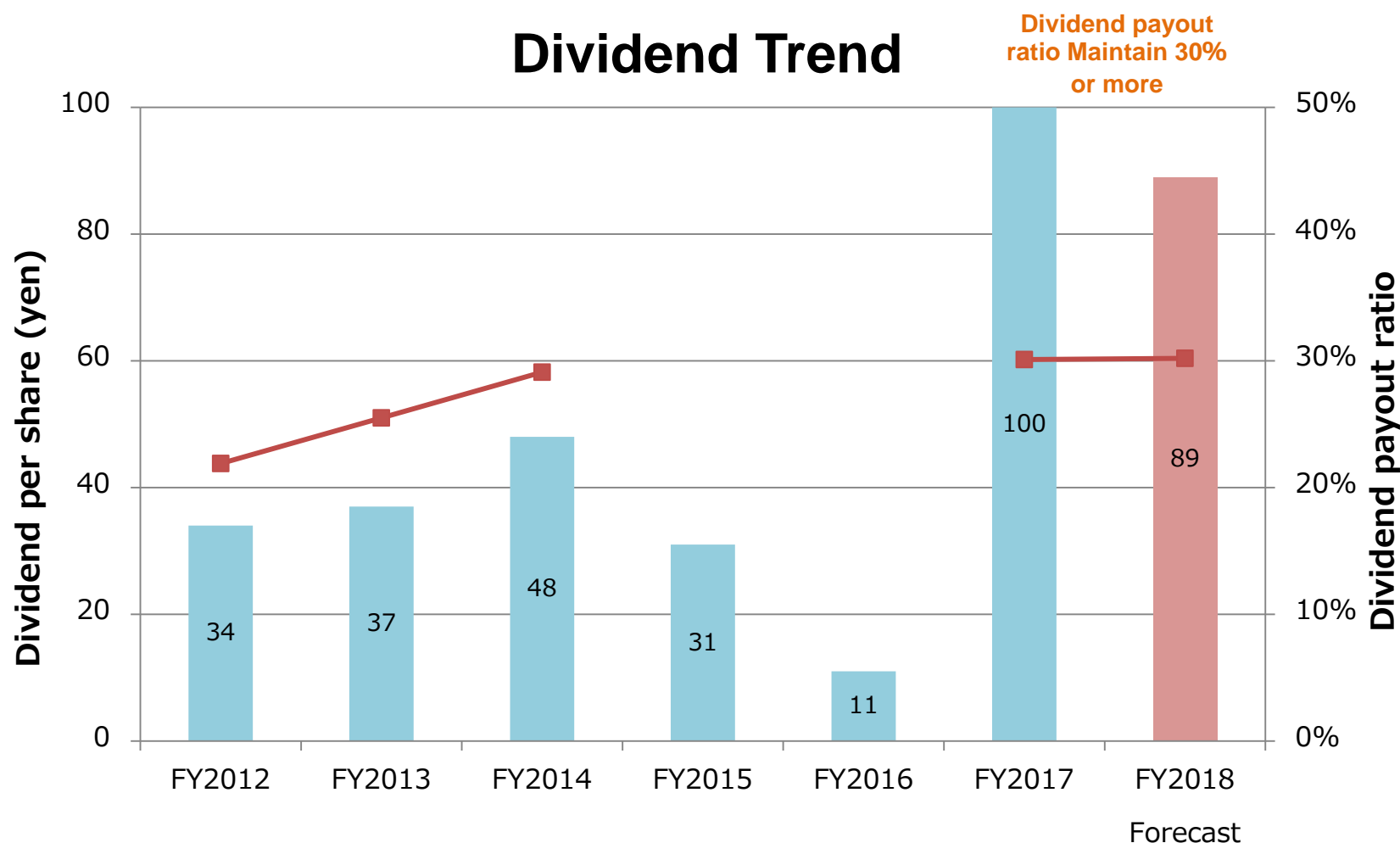
(JPY 100M)

		2018/2Q(A) [IFRS]	2017/2Q(B) [IFRS]	Difference (A) – (B)
Net Sales		4,667	4,403	264
Gross Operating Profit		727	694	33
Pretax Profit		732	483	249
Equity Method profit		77	-22	99
Segment Profit	Mineral Resources	372	181	191
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	Materials	114	71	43
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	Diff. Adjustment	-5	54	-59
Net profit attributable to owners of parent company		581	383	198
Copper (\$/t)		6,487	6,005	482
Nickel (\$/lb)		6.28	4.49	1.79
Gold (\$/Toz)		1,260	1,268	-8
Cobalt (\$/lb)		38.55	26.65	11.90
Exchange (¥/\$)		110.28	111.08	-1.80

5) Sales/gross profit analysis FY2017 2Q Results vs FY2018 2Q Results



6) Shareholder return



(Remark) As consolidation of shares was not performed up to and including FY2016, the results values are used as is only the 2017 interim dividend uses the dividend per share calculated according to standards prior to consolidation of shares

7) Overview of individual businesses -Mineral Resources-

① Copper (Morenci/Cerro Verde)

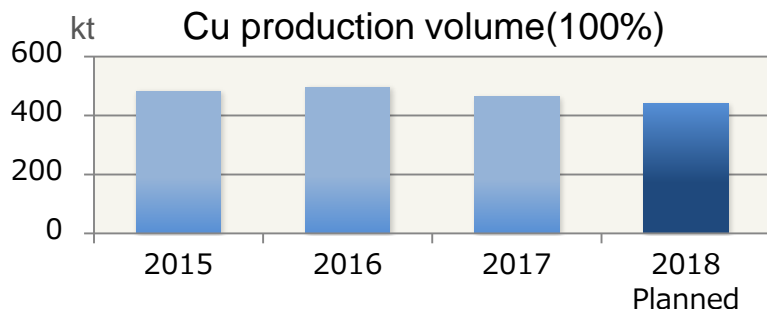
Morenci copper mine (Arizona, USA)

Equity
interest
ratio

FCX	72%
SMM	25%
Sumitomo Corp.	3%



- Production volume FY2017 464kt
FY2018 441kt (planned)



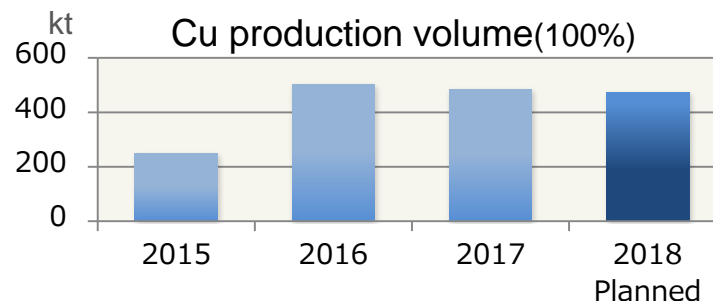
Cerro Verde copper mine (Peru)

Equity
interest
ratio

FCX	53.56%
SMM	16.80%
Sumitomo Corp.	4.20%
Other	25.44%



- Production volume FY2018 472k t (planned)
- Continue production as planned
- No developments re: royalties



Continuation of stable production in order to enjoy a recovering copper price

7) Overview of individual businesses -Mineral Resources-

① Copper (La Candelaria)

La Candelaria copper mine (Arizona, USA)

Equity interest ratio	Lundin	80%
	SMM	16%
	Sumitomo Corp.	4%

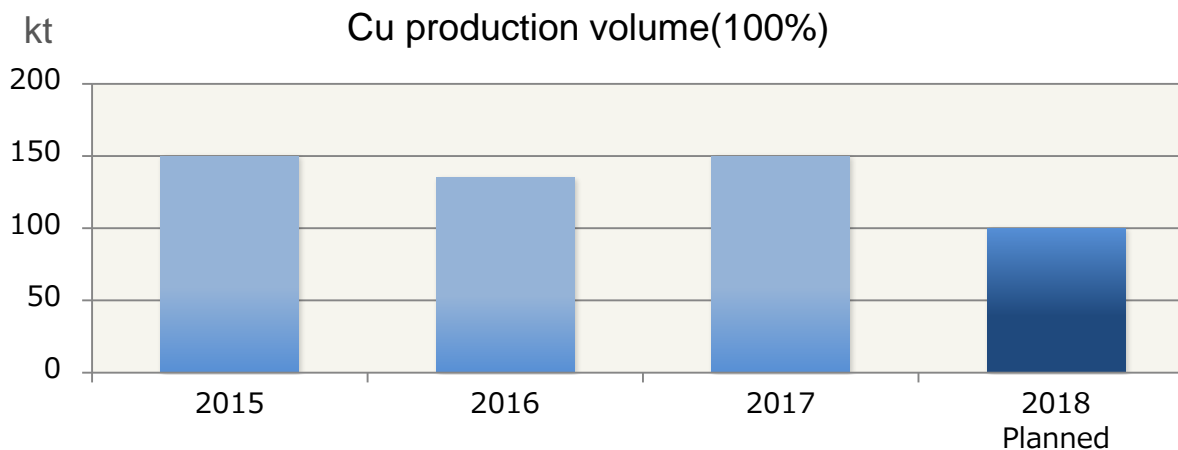


- Production volume

FY2017 150kt

FY2018 100kt (planned)

- Due to the pit collapse in October 2017, Production volume in 2018 is expected to decline compared to 2017



Production volume expected to recover to FY2016 levels around 2020

7) Overview of individual businesses -Mineral Resources-

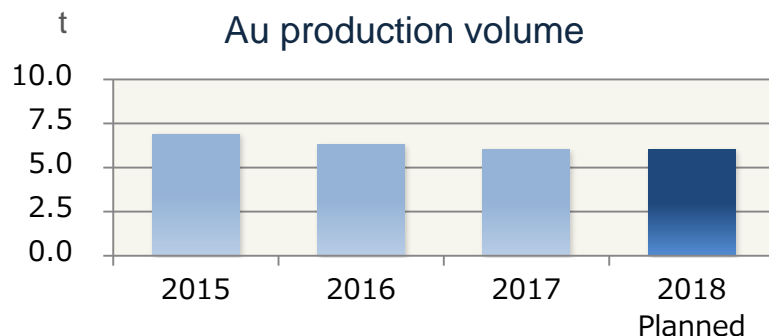
②Gold(Hishikari/Côte)

Hishikari Mine (Kagoshima Prefecture, Japan)

Equity interest ratio SMM 100%



- Lower mine development Continue with safety first
- End of 2016 Gold reserves 169t (JIS standards)
- Production volume FY2018 6.0t (planned)



● Côte Gold Mine Development Project (Canada)

Equity interest ratio IMAGOLD 64.75%
 SMM 27.75%
 Others 7.50%

- Participate in management team and be proactively involved in F/S
- F/S completion in November 2018

FS Overview (from Press Release on November 1, 2018)

Location : Ontario, Canada

Initial startup costs : \$1.147 million

	Base case
Reserves	203Mt
Au amount : (Avg. grade)	About 198t (0.98g/t)
NPV@5% (Au:US\$1,250/Toz)	US\$795M

Hishikari : Continue stable production, and take action towards extending mine life
 Côte : Preparing as planned

8) Overview of individual businesses -Smelting and Refining-

①Toyo Smelter & Refinery

Toyo Smelter & Refinery

Production volume

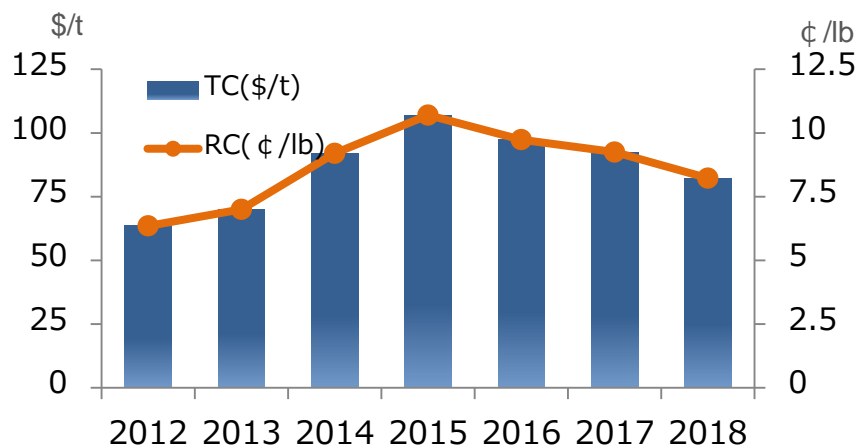
FY2017 432kt (result)

FY2018 452kt (planned)

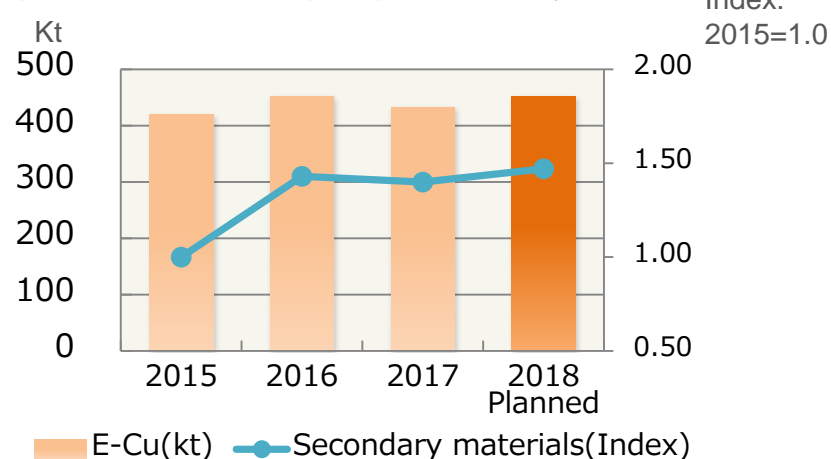
Further increased revenue as a leading global copper smelting and refining plant through increased valuable base material processing and cost reduction



TC/RC transition (benchmark)



E-Cu production, increased pickup of secondary materials



Full production with 450,000 t annual capacity through stable operation Enjoy benefits of high standard TC/RC

8) Overview of individual businesses -Smelting and Refining-

②Nickel smelting and refining (CBNC,THPAL, Nickel Refinery)

CBNC,THPAL, Nickel Refinery

Normal production
capacity

CBNC 24kt
THPAL 30kt

The Philippines

2HPAL

New 60kt structure

from 2nd half of FY2017

Production
capacity

CBNC 24kt
THPAL 36kt

THPAL

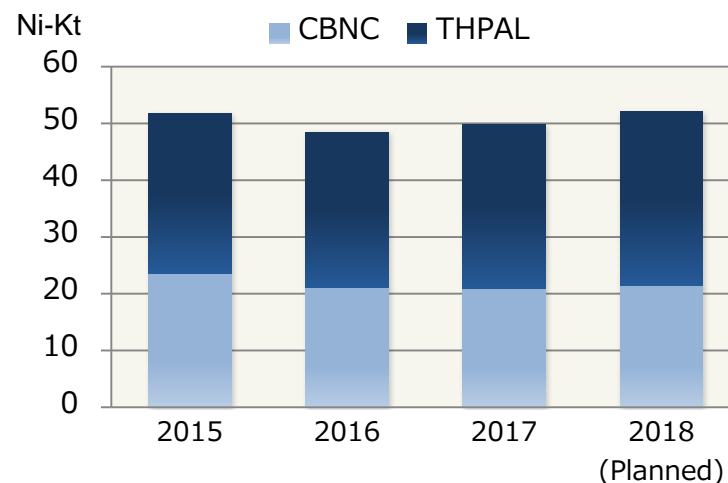
Expansion investment
¥300 million



Production volume (FY 2018)

Unit Ni-kt	Nov. Forecast			May Forecast	Diff.
CBNC	1H R	10.6	21.5	21.5	—
	2H F	10.9			
THPAL	1H R	12.9	30.6	36.0	△5.4
	2H F	17.7			
Nickel Refinery	1H R	28.2	59.9	64.9	△5.0
	2H F	31.7			

MS production volume

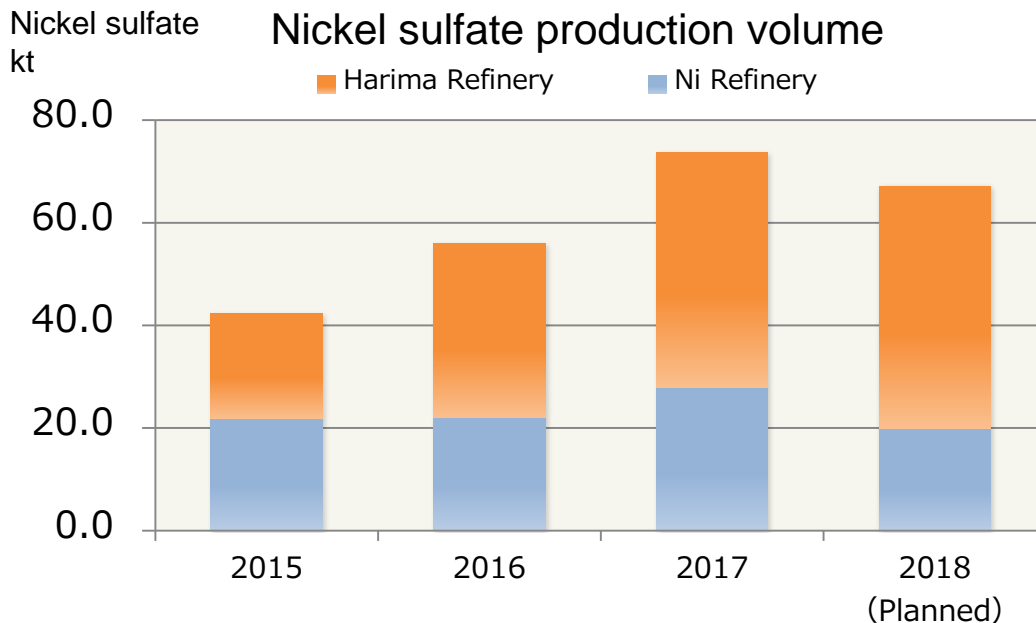


8) Overview of individual businesses -Smelting and Refining-

③Nickel sulfate (Nickel Refinery and Harima Refinery)

Nickel Refinery and Harima Refinery

- Full 49,000 t production planned at the Harima Refinery
- Total production of 74,000 t of nickel sulfate combining the Nickel Refinery and the Harima Refinery



74 kt nickel sulfate production capacity complete with Harima enhancements
Full contribution to profits from FY2018

8) Overview of individual businesses -Smelting and Refining-

④ Ferronickel (Hyuga Smelting Co., Ltd.)

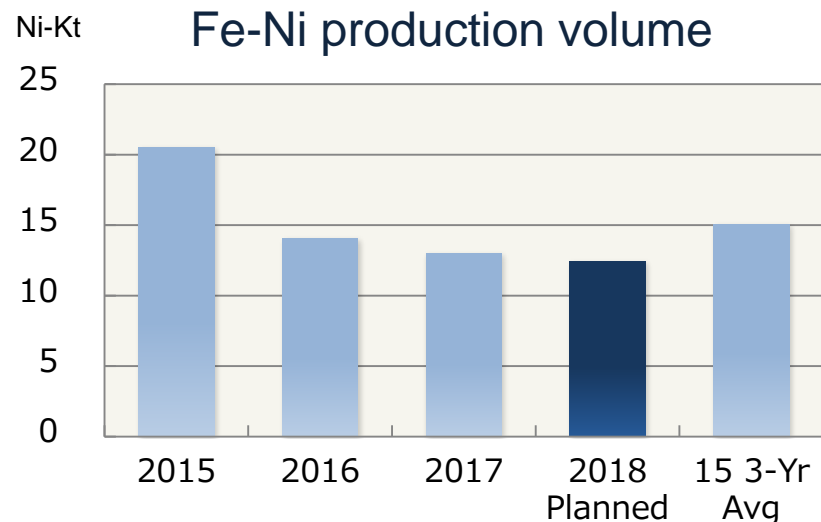
Hyuga Smelting Co., Ltd. Ferronickel Production Plan

Massive increase in mineral ore cost due to enactment of new mining laws in Indonesia
Processing volume increased due to decrease in mineral ore grade

From FY2015 Q4
Switch to 2 kiln 1 electric furnace setup

Production volume
FY2017 13,000 t
FY2018 12,400 t (planned)

Aim to secure revenue and profit through stable operation technology at the production volume level for cost minimum



9) Overview of individual businesses - Materials -

① Material products and subsegments

Four key functionalities/development of products in electronic industry material field

Battery materials



Nickel hydroxide

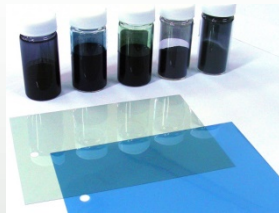


Lithium nickel oxide (NCA)

Powder materials



Thick film paste



Infrared shielding material



Magnetic materials



Thin-film material

Crystal materials

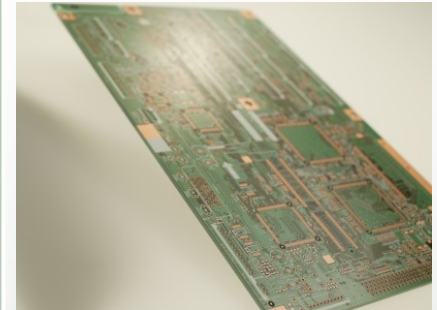


Lithium tantalate (LT)
Lithium niobate (LN)

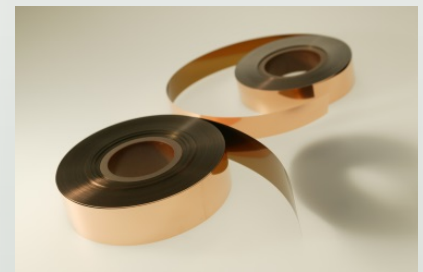


Optical isolators

Package materials



Printed wiring boards



Dual-plated circuit boards

9) Overview of individual businesses - Materials -

②Trend of sub-segment sales

Battery materials

Establishment of increased production structure contributes to sales

Powder materials

Expected to maintain robust sales

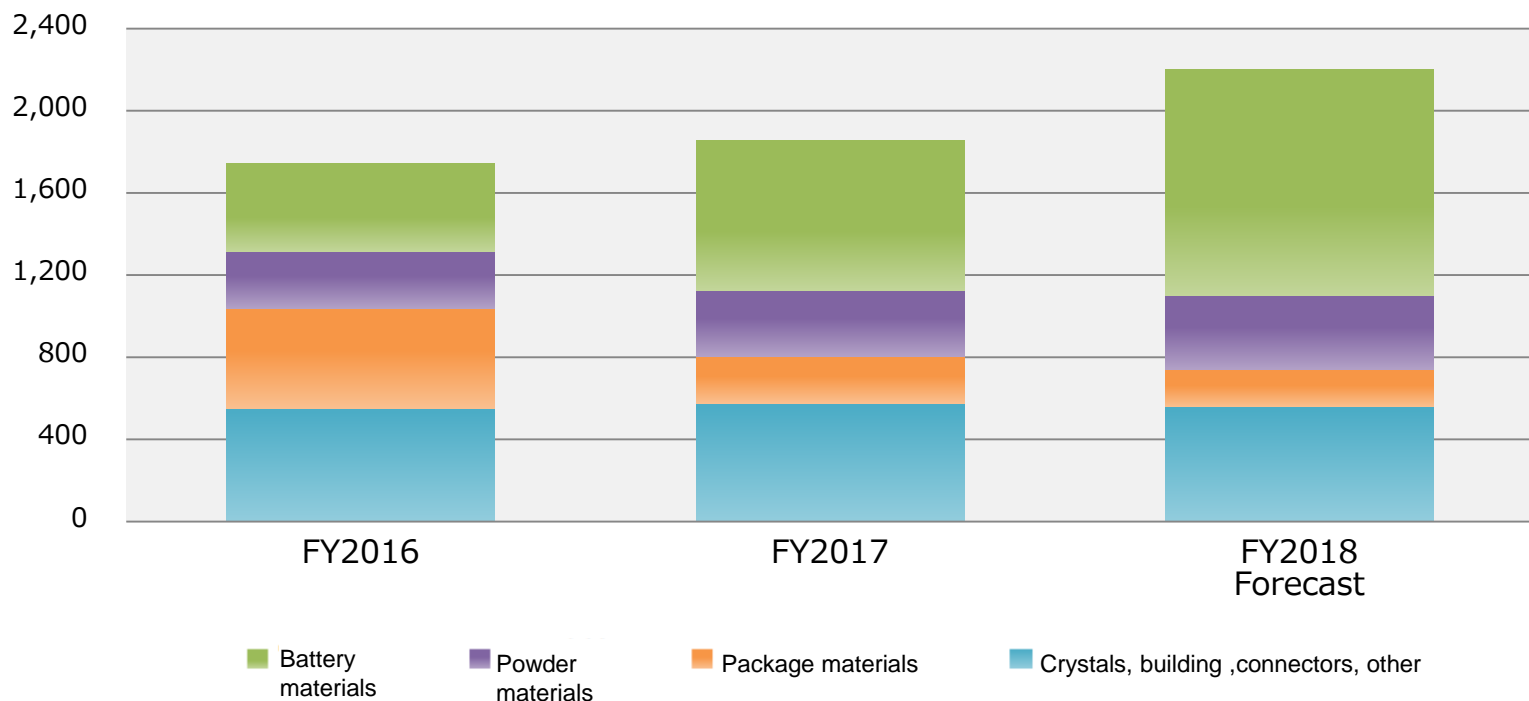
Package materials

Withdrawal from business progressing, sales decreasing

Crystal materials

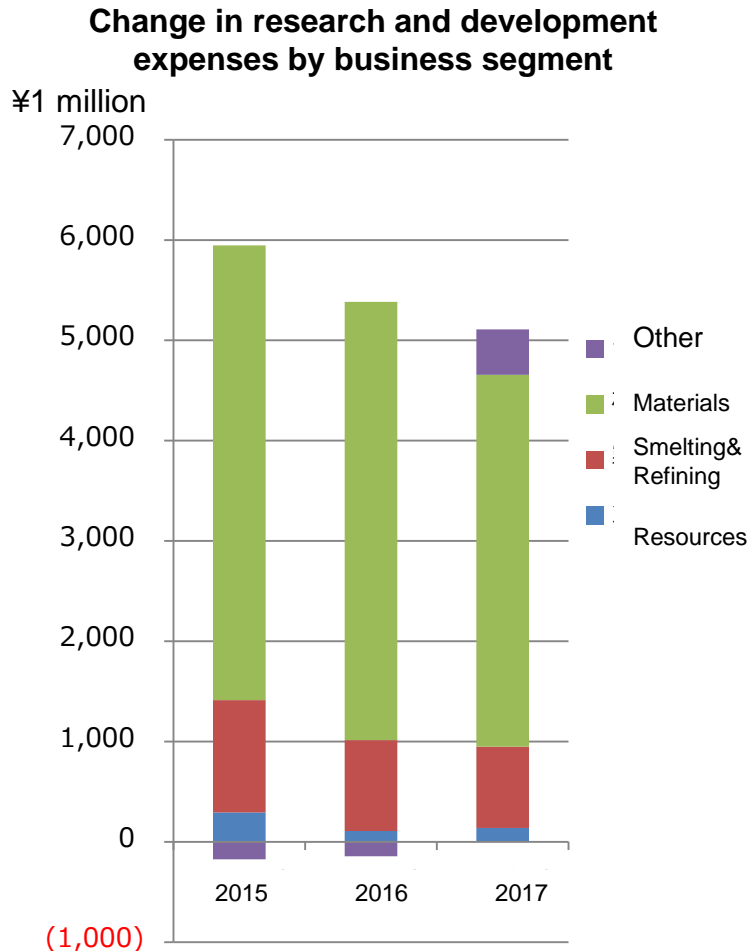
Ongoing situation in which planned sales are far lower expected when the increased production was planned

Sales trend of materials business



10) Research & development ①Results

FY2017 research & development progress



Materials business (material development)

[Battery materials]

- Research & development of higher performance battery cathode materials
- Customizing for solid electrolyte

[Crystal materials]

- Cost reduction ahead of commodification
Achievement of improved productivity through crystal lengthening and improved crystal growing/production yield, etc.
- Meeting new user needs
Large bore LT crystal growth technology established, now in user work

Smelting & Refining Business (process development)

[Securing raw material for batteries (Ni/Co)]

- Internal low cost chemical product manufacturing process established specialized in battery raw material
- New process to enable new Ni/Co raw material utilization, and enhance ability to handle raw materials

[Lithium ion battery recycling]

- Develop cobalt recovery process which was the subject of recycling, transition to pilot test

10) Research & development ②Fields

Development of mineral resources and metal process

Resource & Hydrometallurgy Process Center



Smelting and refining process technology



Sierra Gorda Copper Mine

Exploration, mining, and mineral processing technology

Analysis technology

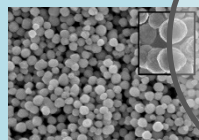
Computer aided engineering and analysis technology

Materials Development

Cathode materials for Lithium-ion secondary battery

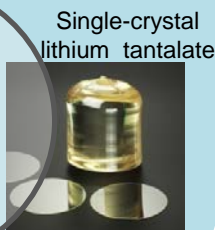


Powder synthesis and surface treatment technology



Nickel powder for MLCCs

Crystal growth and processing technology



Single-crystal lithium tantalate

Core technology

Powder synthesis and surface treatment technology

Basic research

Powder material basic research

Fundamental technology

Powder material basic research

Core technology

Crystal growth and processing technology

Fundamental technology

Analysis Technology

Fundamental technology

Computer aided engineering and analysis technology

Fundamental technology

Information and communication technology (ICT)

Core technology

Smelting and refining process technology

Core technology

Exploration, mining, and mineral processing technology

Concentration on growth strategy fields, search for "seeds" of next-generation business

11) Sensitivity trial calculation

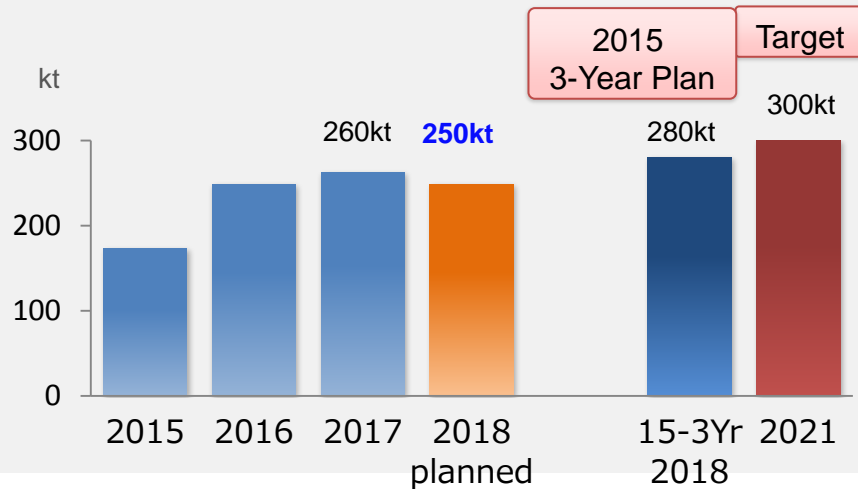
(JPY 100M)

Element	Degree of variation	FY2018 Trial calculation Pretax profit
Cu	±100\$/t	27
Ni	±10 ¢ /lb	17
Au	±10\$/toz	3
¥/\$	±1¥/\$	12

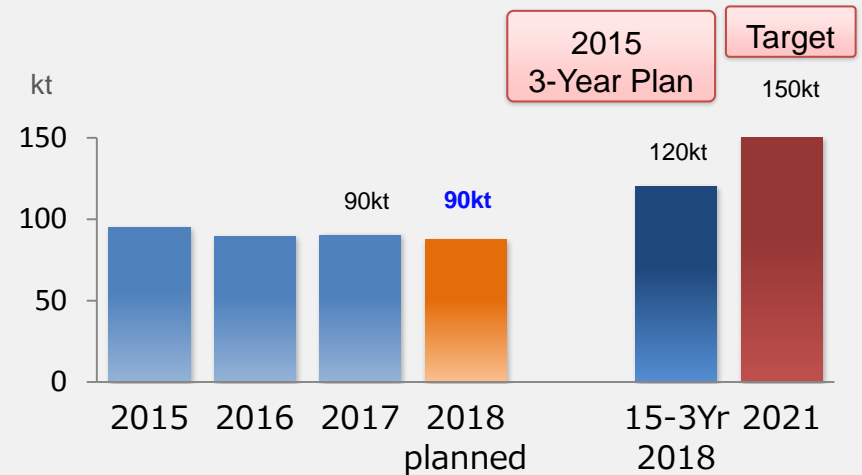
(Remark) ¥/\$ translation includes RC-related and Conversion rate of overseas consolidated / equity-method affiliate companies' profit.

12) Status of Achievement of Long-Term Vision

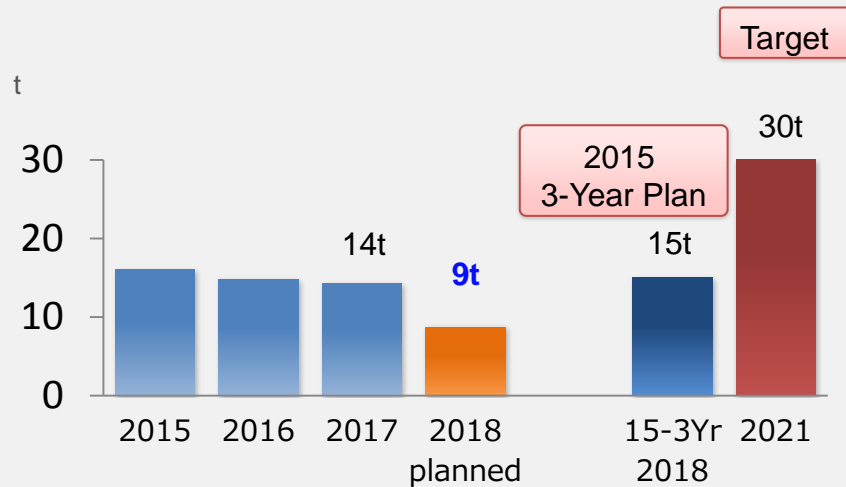
Cu (Production from interest in mine)



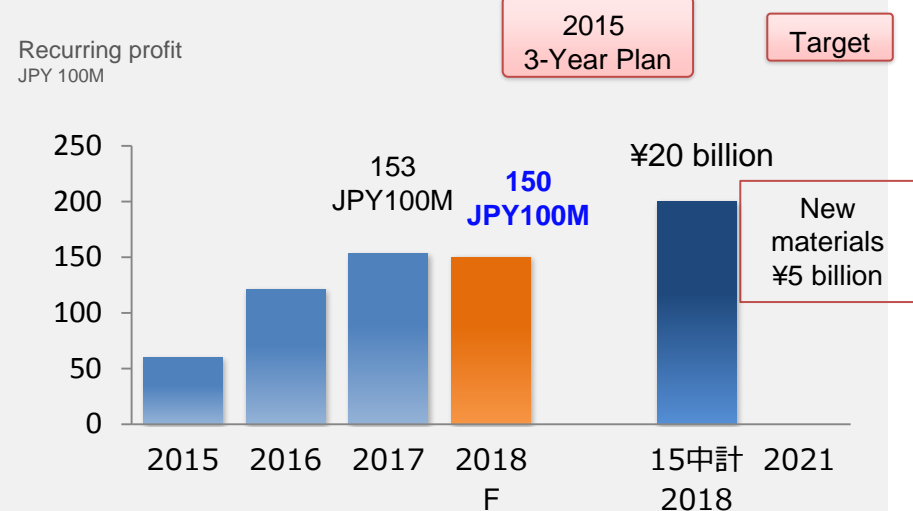
Ni (Annual production)



Au (production volume from interest)



Materials business (recurring profit)



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