

## The Sumitomo Business Spirit

### Article 1

Sumitomo shall achieve strength and prosperity by placing prime importance on integrity and sound management in the conduct of its business.

### Article 2

Sumitomo shall manage its activities with foresight and flexibility in order to cope effectively with the changing times. Under no circumstances, however, shall it pursue easy gains or act imprudently.

## SMM Group Corporate Philosophy

Sumitomo Metal Mining Co., Ltd. (SMM), in accordance with the Sumitomo Business Spirit, shall, through the performance of sound corporate activities and the promotion of sustainable co-existence with the global environment, seek to make positive contributions to society and to fulfill its responsibilities to its stakeholders, in order to win ever greater trust.

SMM shall, based on respect for all individuals and recognizing each person's dignity and value, seek to be a forward-minded and vibrant company.

## SMM Group Management Vision

By improving technical capabilities, we shall fulfill our social responsibilities as a manufacturing enterprise.

Based on the principles of compliance, environmental protection and operational safety, SMM Group shall pursue maximum corporate value through the securing of resources and the provision of high-quality materials such as non-ferrous metals and advanced materials via its global network.

## Integrated Report 2019 Concepts

### Taking on the Challenge for New Growth

Here we will explain our 2018 3-Year Business Plan, which was announced in February 2019. The theme of the plan is "Become a World Leader in the Non-Ferrous Metals Industry—Taking on the Challenge for New Growth." A lot of the SMM Group's business requires long spans of five to 10 years from conception, through shaping and planning, to implementation, so management plans have a 10 to 15-year focus. Therefore, the 3-year plan is formulated by making a backcast to decide the measures that should be implemented over the next three years, so the 2018 3-Year Business Plan is not just a strategy for a three-year period but incorporates what should be done to work toward long-term objectives. It is an aggressive plan into which management resources are being invested on an unprecedented scale. In order to realize sustainable growth, we will implement the plan with resolve and strive to achieve new growth.

### Maximizing Corporate Value and Ensuring Sound Management

SMM's basic approach to corporate governance is to "maximize corporate value and ensure sound management." We think that the maximization of corporate value can be realized by promoting our growth strategy and ensuring steady profits from this by continuously strengthening our business base. Therefore, we are working toward being an organization in which each individual employee is aware of what it means to work for SMM and which can face up to challenges.

### Co-Creating Value with All

Stakeholders are becoming more diverse and specific in how they want to see companies approach sustainable social development. We recognize that responding appropriately to this trend of continuous large change is a pressing issue. We are deepening our communication with all stakeholders to facilitate understanding of the SMM Group's strategy and measures. The Group's CSR objective is "sustainable co-existence with the global environment," and we will work to solve social issues through our core business while mutually communicating with diverse stakeholders.

## World Leader in the Non-Ferrous Metals Industry

### Long-Term Vision

The SMM Group possesses leading technology and a unique business model that covers from the securing of resources to the provision of high-functionality materials in house that cannot be easily emulated, even by other major mineral resource companies. This is one of the Group's competitive strengths and means we are able to effectively utilize resources and materials without limits.

Our ambition is to raise our societal value through sustainable growth and become the world leader in the non-ferrous metals industry.

We aim to have a global presence in terms of mineral resource interests and metal production volumes (be in the global top five), to grow sustainably and stably produce a certain amount of profit, to actively tackle social issues such as the SDGs, and to have employees working with spirit. This is what we are aiming for, what our long-term vision of becoming the world leader in the non-ferrous metals industry looks like.

### Targets

#### Nickel (Ni) Annual production capacity of 150 kt

A quantity that will position us as top class globally (about 5th)  
A responsible quantity for meeting growing demand, including for battery materials

#### Copper (Cu) Annual production interest of 300 kt

A quantity that will position us as mid-level globally  
Achievement expected through participation in the Quebrada Blanca 2 Project → Continue to maintain

#### Gold (Au) Participation in new mine operations through the acquisition of superior interests

Increasing profitability and value of operational experience by participation in superior projects, rather than increasing the number of interests

#### Materials Achievement of annual profit before tax of ¥25.0 billion through portfolio management

Creating a presence as a core business by selecting the best mix of businesses based on the life cycle of each product group

#### Profit Annual profit ¥150.0 billion

# Development of the SMM Group

**1500** **History**

**1600**

**1700** **History**  
**Around 1700**  
**The majority of Nagasaki trade**  
 In the Edo period, about half of all copper produced in Japan for international trade is exported through Nagasaki. In the year 1698, Sumitomo's annual production reaches about 1,500 tons, a quantity that accounts for one quarter of Japan's copper production.

**1800**

**1900** **History**  
**Around 1900**  
**The modernization of industry**  
 Starting in the Meiji Period, with the growth in demand for communications lines, wires for electric lighting, and copper alloy fabricated products, domestic demand for copper increases significantly. The Besshi Copper Mine, which introduces Western-style smelting and refining, supports the industry in Japan.

**Around 1980**  
**The diffusion of stainless steel**  
 Nickel is used as a raw material in stainless steel and special steels. These materials are used in various areas such as communications, medical, construction materials, and the generation of electricity.

**Management and Organization**

**1650**  
**Monjuin Shiigaki**  
 The Sumitomo Business Spirit, which continues to this day, has its origins in the *Monjuin Shiigaki*, written by the founder of the Sumitomo family, Sumitomo Masatomo (1585–1652), in his later years to explain the merchant's frame of mind.



**1894**  
**Large-scale reforestation operations**  
 Large-scale reforestation operations are started after Iba Teigo, the second Director-General, becomes manager of the Besshi Copper Mine. At peak, more than two million trees are being planted annually and Mt. Besshi once again overflows with greenery.



The Besshi Copper Mine in the past (left) and today (right)

**Mineral Resources Business**

**Copper mines**

**1691**  
**Opening of the Besshi Copper Mine**



**Gold mines**

**1917**  
**Start of the gold mine business**



Kounomai Mine

**Overseas copper mines**

**1961**  
**Investment and financing contract signed for the Bethlehem Mine in Canada**

**1973**  
**Closure of the Kounomai Mine and the Besshi Copper Mine**

**1979**  
**Closure of the Sazare Mine**

**Smelting & Refining Business**

**Copper smelting and refining**

**1590**  
**Start of the copper smelting and refining business**

**Innovation Topic**  
**Nanban-buki**  
 In Japan at this time, there was no technology for removing the silver from copper ore, so copper was sold and exported at copper prices while it still included silver. Soga Riemon, SMM's founder, develops a smelting and refining technology for separating copper and silver, known as *Nanban-buki*. He shares this widely with others in the same business in Osaka, preventing the loss of wealth.



**Nickel smelting and refining**

**1905**  
**Relocation of copper smelting and refining from the Niihama coast to the Shisaka Island**

**1939**  
**Start of the nickel smelting and refining business**

**Innovation Topic**  
**World-leading nickel smelting and refining technology**  
 In 1939, SMM launches its nickel smelting and refining business and goes on to develop nickel refining technologies such as the MCLE method. In the 2000's, factors such as the diversification of raw material procurement through the practical application of HPAL technology push us toward becoming the world leader in nickel smelting and refining technology.



**1971**  
**Start of production at the Toyo Smelter & Refinery**

**Materials Business**

**1960**  
**Entry into the materials business**



**Innovation Topic**  
**Adding new value to metals**  
 As mining business in Japan undergoes a contraction, attention turns to electronic materials business as a new market. In 1960, SMM begins production of germanium dioxide for use in transistors. Since then, we have continued to provide the market with various electronic materials.

## Column

**Mineral Resources Business** **1691**

**Inheriting over 300 years of mining technology**  
 The Besshi Copper Mine operated continuously for 283 years from its opening and made a huge contribution to Sumitomo's development. The opening of the mine presented an opportunity to expand the company's business to include mineral resources business in addition to copper smelting and refining. The mining technology cultivated at the Besshi Copper Mine continues to be inherited by SMM's Mineral Resources Business as it expands across the globe.

**Mineral Resources Business** **1917**

**Starting our gold mining business**  
 At a time when the importance of gold as a resource was growing, we acquired the management rights for the Kounomai Mine in Hokkaido. This added gold as a new metal to our Mineral Resources Business portfolio, which had previously been centered on copper.



**Smelting & Refining Business** **1939**

**Overcoming smoke pollution at Shisaka Island**  
 In 1939, we realized zero emissions of sulfur dioxide gas, which was a root cause of the smoke damage, becoming the first in the world to solve the problem of smoke damage that was afflicting smelters all over the globe.



**Mineral Resources Business** **1961**

**Participating in overseas mines and acquiring interests**  
 After WWII, the closure of mines in Japan meant that smelting and refining businesses had to switch to resources procured from overseas. In 1961, SMM signed an investment and financing contract with Bethlehem Mine, beginning the company's involvement with overseas mines. To present, SMM has created footholds in mine interests and in 1986 we acquired an interest in the Morenci Copper Mine, known as a superior copper mine.

## 2000

Around 2000

### Rapidly rising demand for cathode materials for automotive secondary batteries

Against the background of rising environmental awareness, demand has risen rapidly for cathode materials for hybrid and electric vehicle secondary batteries. Through close collaboration with customers, the SMM Group is working to supply high performance, safe battery cathode materials in addition to fulfilling its obligation as a producer of nickel and cobalt, the raw materials of battery cathode materials.

1999

#### The JCO criticality accident

A criticality accident occurs at SMM subsidiary, JCO Co., Ltd., which manufactures fuel for nuclear power generation. The SMM Group reflects on this accident and in 2000 it formulates the Corporate Reform Plan which promotes the reconfirmation and thorough execution of the corporate philosophy, reinforcement of corporate organization, and reform of corporate culture.

2010

#### Switch to three core businesses – Mineral Resources, Smelting & Refining and Materials

In the 2009 3-Year Business Plan, it is announced that SMM will switch to a business model with three core businesses – Mineral Resources & Smelting & Refining & Materials. Management resources are concentrated and invested in these core businesses.

2017

#### Working style reform

2019

#### Reconsideration of the Long-Term Vision

The 2018 3-Year Business Plan is announced. This reveals a reconsideration of the Long-Term Vision and a target of ¥150.0 billion in annual profit as a world leader in the non-ferrous metals industry.

1985

Start of operations at the Hishikari Mine

1986

Acquisition of interest in the Morenci Copper Mine. Full-scale investment in overseas mines

2005

Start of production at the Cerro Verde Copper Mine

2015

Start of operations at the Sierra Gorda Copper Mine



2016

Acquisition of additional interest in the Morenci Copper Mine

2017

Acquisition of interest in the Cote Gold Mine

2019

Acquisition of interest in the Quebrada Blanca Copper Mine

1992

Conversion of nickel refining process to MCLE technology



2005

Start of production at Coral Bay Nickel Corporation

#### Innovation Topic

##### Practical application of the HPAL method

SMM is the first in the world to apply the HPAL method to convert low-grade nickel oxide ore into a nickel resource. In addition to contributing to the realization of in-house procurement and the effective use of nickel resources, we also carry out activities that contribute to society in the Philippines, where the operations are based.

2013

Start of production at Taganito HPAL Nickel Corporation



2001

Start of production of materials for automotive secondary batteries

#### Innovation Topic

##### Making high-capacity batteries possible

Lithium nickel oxide produced by the SMM Group has high-levels of nickel content which has made high-capacity batteries possible. We are leveraging our strength of being able to provide an integrated production structure that ranges from resource procurement to battery material supply and contributing to extending the range that an electric vehicle can travel on a single charge.

2014

Increase production of battery materials, increase production of SAW filter LT/LN<sup>1</sup>

Lithium nickel oxide (battery material)



1. LT/LN: Lithium Tantalate and Lithium Niobate. These refer to Lithium Tantalate substrates and Lithium Niobate substrates. Used in chips for information and communication terminal SAW filters.

### Mineral Resources Business

1985

#### Starting operation of the Hishikari Mine

With the closure of the Sazare Mine in 1979, the curtain closes for a time on SMM's heritage of mining technology. However, in 1985, operations begin at the Hishikari Mine and SMM Group's technology begins to chart a new history in a new area. The mine boasts a rich gold content ratio to date and has become a primary source of profit for the Group, and it also plays a role in passing down our mining technology.

### Management

1999

#### Corporate reform since the JCO criticality accident

The JCO criticality accident in 1999 was a turning point for the management of the SMM Group. Since then we have taken a strong turn toward returning to core values and thorough compliance through the Corporate Reform Plan. Even 20 years after the accident, we will not forget and will pass the lessons learnt on to younger generations.

### Materials Business

2014

#### Increasing the production of battery materials

In 2014, we announced that we were increasing production of cathode materials for secondary batteries and converting the business structure of our Harima Refinery to increase nickel sulfate production. We leveraged our strength of an integrated process from the procurement of nickel raw material through to processing in order to further advance material performance and ensure a stable supply.

## Seven Competitive Strengths that Support the Sustainability of the SMM Group



### Technology that has been continually honed over 420 years and is focused on the next generation

Innovation and technology accumulated since the *Nanban-buki* era



### Employees who share our business spirit and an open and vibrant organizational climate

*Monjuin Shiigaki* inherited from the founder of the Sumitomo family



### Relationships of trust with business partners that have been formed with a long-term perspective

The acquisition of interests in superior mines around the world as a foothold into involvement with overseas mines



### Involvement with local communities that has been built up through our core business

Social contribution and town development in the areas around mines that began with the reforestation of the Besshi Copper Mine



### A firm resolve in regard to safety and a management framework that heightens hazard awareness

The embedding and strengthening of a culture of safety to prevent serious accidents



### A close affinity with our customers' needs and the collaborative capabilities to continuously respond to them

The stable supply of high-quality mineral resources, advanced materials, and safety materials that meet customers' demands



### Financial standing that enables us to take advantage of investment opportunities

Superior mines that generate profits

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#### Editorial Policy

Since 2016, we have been publishing this integrated report so that all of our stakeholders, including customers, shareholders and investors, and local communities, can gain an even better understanding of our initiatives aimed at sustainable growth and maximization of corporate value, which is the goal of the SMM Group. In this Sumitomo Metal Mining Co., Ltd. Integrated Report 2019, the fourth publication of the integrated report, we newly reorganized the relationships among the risks and opportunities surrounding the Group and its businesses, our competitiveness and the value we provide, and our business models and strategies.

In this report, CBNC and THPAL are acronyms for Coral Bay Nickel Corporation and Taganito HPAL Nickel Corporation, respectively. Also, unless otherwise stated, the term "ton" refers to a metric ton.

#### Referenced Guidelines and Assurance

In editing this report, we referenced the International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC), and the Guidance for Collaborative Value Creation of the Ministry of Economy, Trade and Industry. For information on sustainability, we have complied with the Core option of the Global Reporting Initiative's Sustainability Reporting Standards, and the Company's self-declaration and performance data have received independent assurance.

1. Global Reporting Initiative (GRI): An organization established with the purpose of creating and promoting international guidelines for sustainability reports. An index for GRI contents is on our website: <http://www.smm.co.jp/E/>

#### Boundary of the Report

Sumitomo Metal Mining Co., Ltd. (SMM)  
The Sumitomo Metal Mining Group (SMM and consolidated subsidiaries)  
**Economic Topics**  
SMM, consolidated subsidiaries and equity-method affiliates

#### Environmental Topics

SMM and consolidated subsidiaries (31 companies)  
The boundary of the report is stated on p. 14–15. Companies marked with an asterisk (\*) and Sumitomo Metal Mining Pogo LLC, which we sold in September 2018, are included in the boundary of the report.

#### Social Topics

SMM and consolidated subsidiaries

#### Publication Date

November 2019  
Next scheduled publication: November 2020  
(Previous publication: November 2018)

#### Period Covered

(Some activities before or after the following periods have also been included)  
Japan: April 1, 2018–March 31, 2019  
Overseas: January 1, 2018–December 31, 2018

#### Referenced Guidelines

GRI's Sustainability Reporting Standards  
IIRC's International Integrated Reporting Framework  
Ministry of Economy, Trade and Industry's Environmental Reporting Guidelines (Fiscal Year 2018 Version)  
Guidance for Collaborative Value Creation



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#### Disclaimer

The forward-looking statements in this integrated report, including business result forecasts, are based on information available to the Company and on certain assumptions deemed to be reasonable as of the date of release of this report. Actual business results may differ substantially due to a number of factors.

# The Global Non-Ferrous Metal Industry and the SMM Group

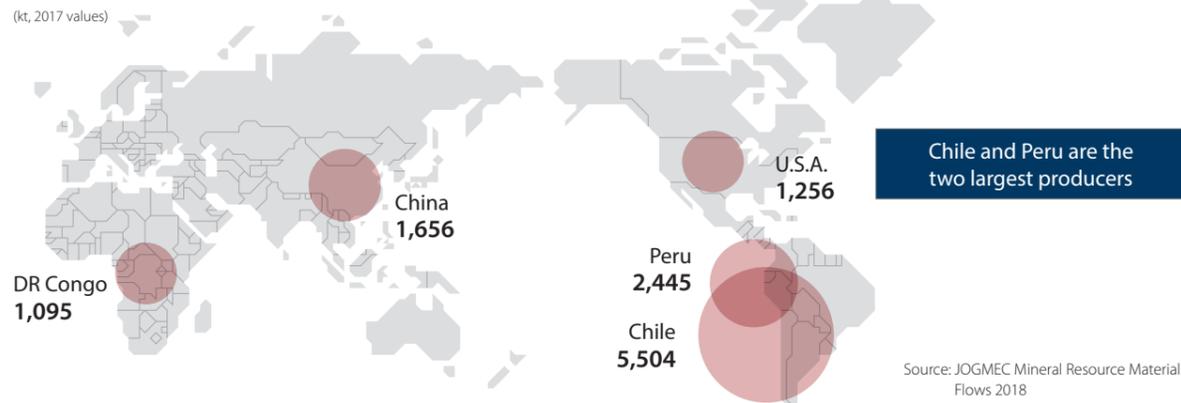
## The Business Environment Surrounding Copper

Copper is thought to be the first metal used in human history. It offers high heat and electrical conductivity, is relatively inexpensive, and has superior workability. This has resulted in it becoming an indispensable base metal for electrical wiring and copper alloy fabricated products in a wide range of industries.

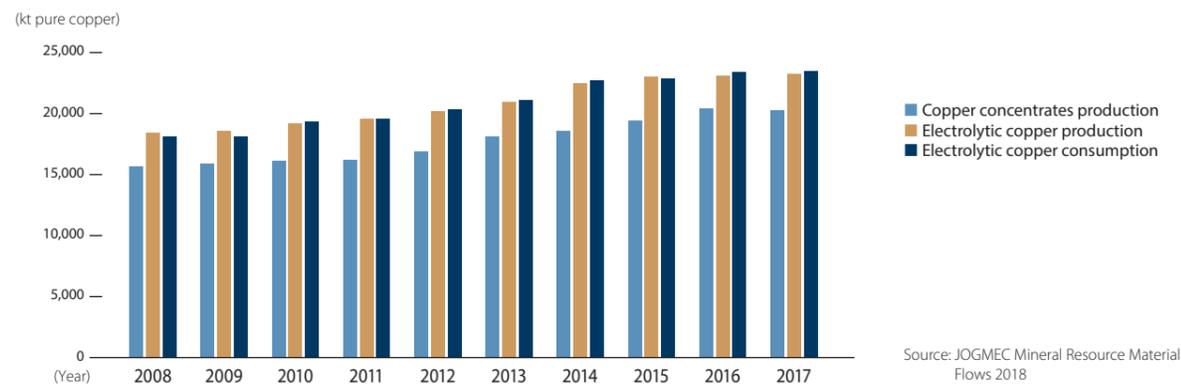
Chile and Peru are the world's two largest copper ore producing countries, followed by China and the U.S.A.

Copper is an indispensable base metal in a wide range of industries, particularly for infrastructure such as electrical wiring and copper alloy fabricated products, and China accounts for about half of global copper demand. Going forward, there is expected to be firm increases in demand along with global economic development. However, on the supply side, with development moving forward on the world's superior mines, the development of new sites will unavoidably occur in increasingly remote locations or higher elevations and with increasingly lower grade ore, making it more difficult. It is thought that this will result in the continuation of the current tight situation, including for recycled products. As a result of the factors described above, the current tight copper supply and demand circumstances are expected to continue.

### World's Largest Copper Ore Producing Countries

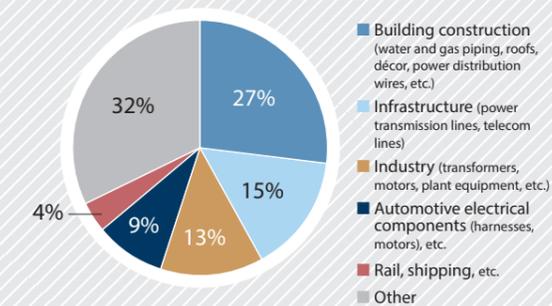


### Global Copper Supply and Demand

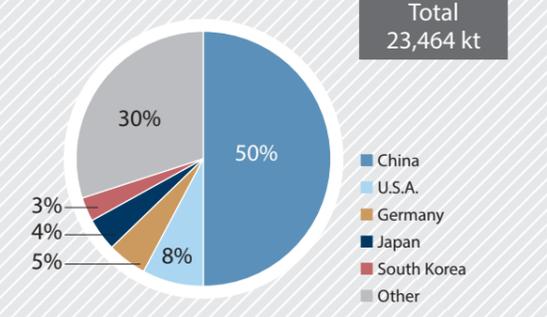


### Statistical Data Regarding Copper

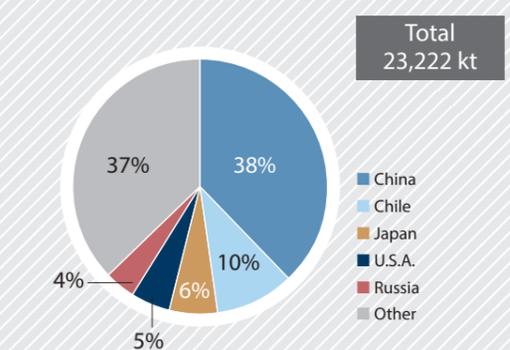
#### Copper End-Use (2018 results)



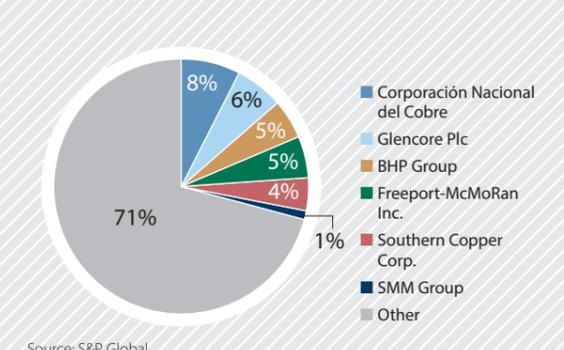
#### Copper Metal Consumption by Country/Region (2017 results)



#### Copper Metal Production by Country (2017 results)

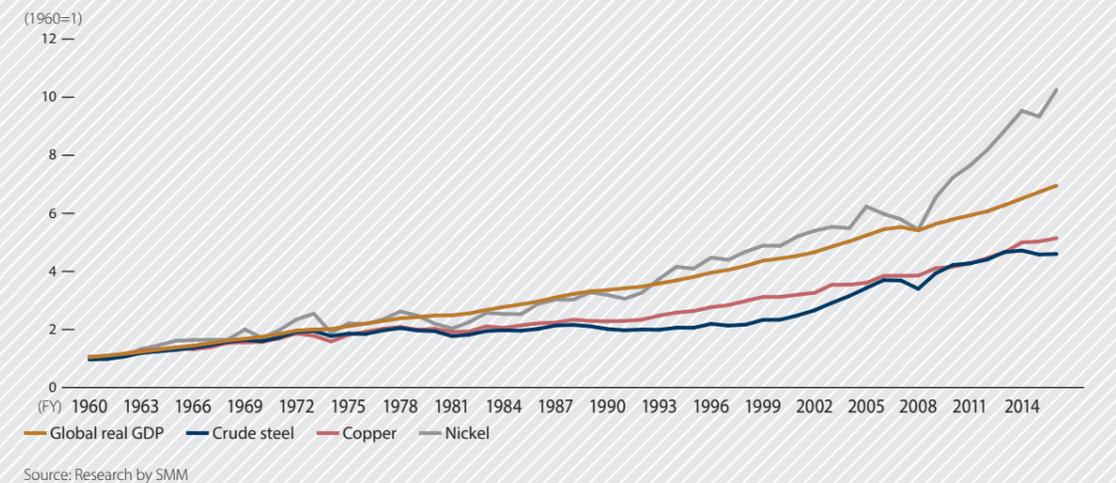


#### Global Copper Interest Production (2018 results)



The size of the global copper market is about 24,000 kt. The SMM Group ranks 20th in the world for global copper interest production (FY2018: 240 kt).

#### Global Resource Demand Trends



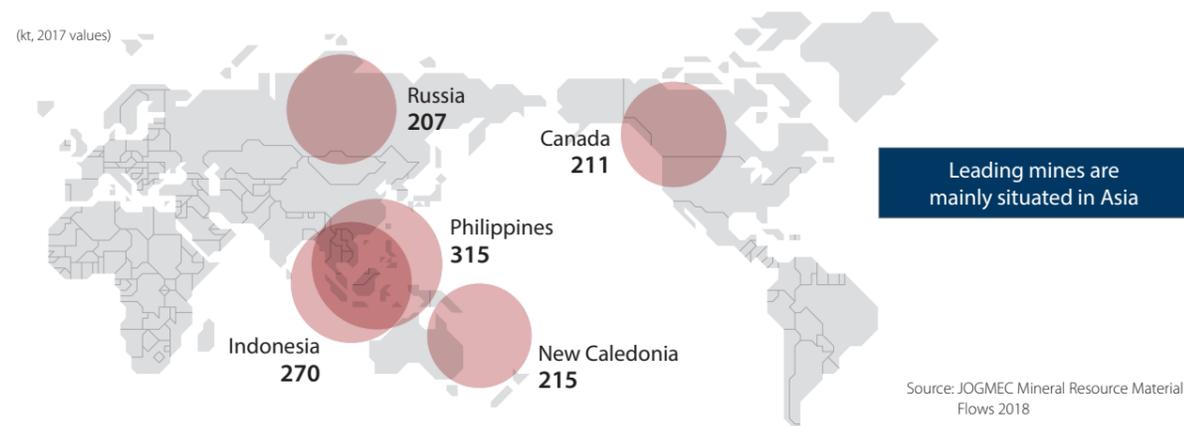
# The Global Non-Ferrous Metal Industry and the SMM Group

## The Business Environment Surrounding Nickel

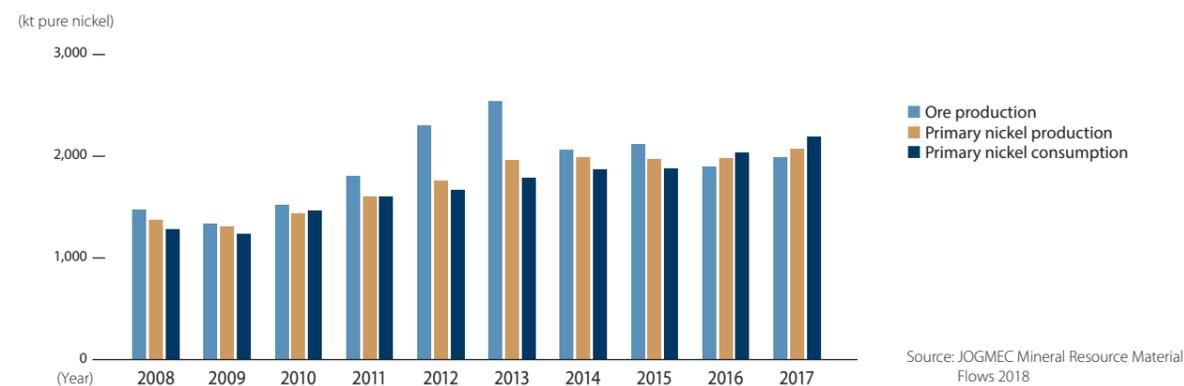
The main end-use of nickel is in stainless steel and a certain amount of increase in demand is expected. In addition to this, the flow toward EV in the automotive sector has accelerated globally in recent years and an increase in demand for nickel for use in cathode materials for lithium-ion secondary batteries is expected to accompany this.

The Philippines and Indonesia are the world's two largest nickel ore producing countries. The end-use of about 70% of all nickel is in stainless steel and, like copper, China accounts for about half of global demand. In recent years, the growth in demand for nickel has been increasing at a much greater rate than growth in demand for copper and going forward, an increase in demand for use in cathode materials for lithium-ion secondary batteries is expected to accompany the spread of EVs. However, on the supply side, although the supply of products that are not of particularly high grade – so-called “class 2” nickel grades, such as ferronickel and nickel pig iron (NPI), which are mainly used as raw materials for stainless steel production – will be brisk due to development by Chinese companies in countries such as Indonesia, for products in the “class 1” high-grade nickel category used as raw materials in special steels and EVs, there is a limit to the specific new development that can be carried out and a situation in which demand exceeds supply is expected to continue.

### World's Largest Nickel Ore Producing Countries

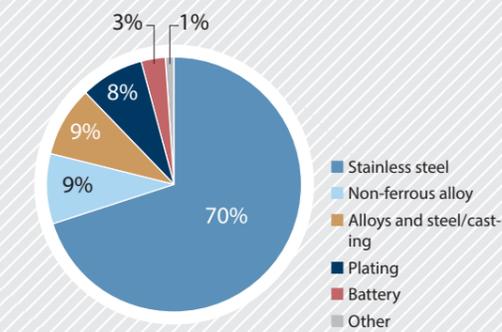


### Global Nickel Supply and Demand

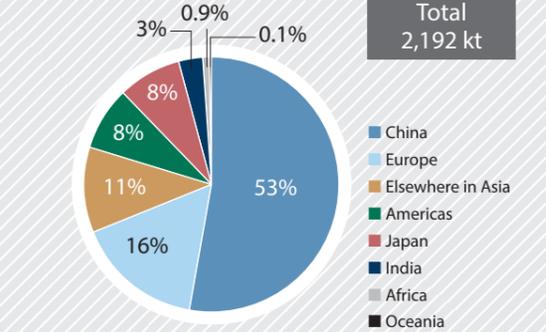


## Statistical Data Regarding Nickel

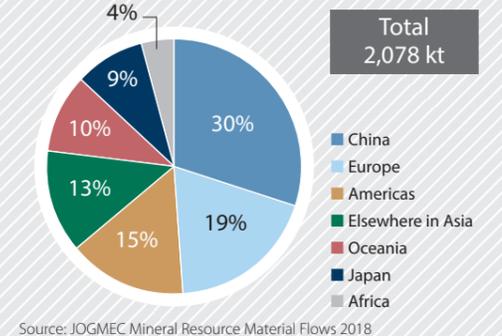
### Nickel End-Use



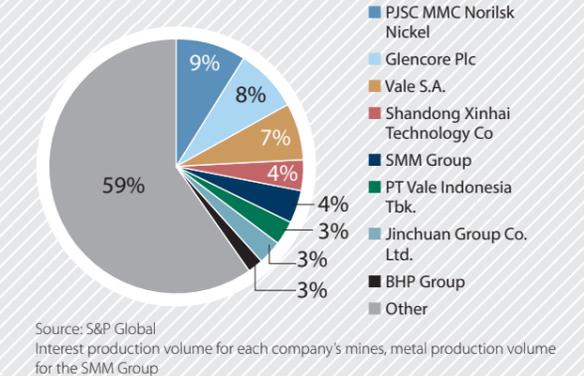
### Nickel Metal Consumption by Country/Region (2017 results)



### Nickel Metal Production by Country/Region (2017 Results)

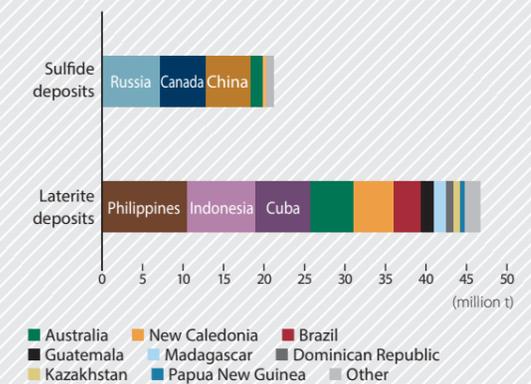


### Global Nickel Interest Production (2018 Results)

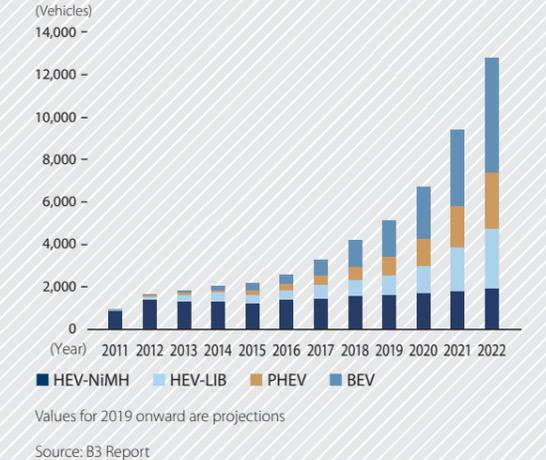


SMM Group is one of the top five producers of nickel as a metal in the world by volume (FY2018: 85 kt)

### Nickel in Reserves



### xEV Sales



# The SMM Group's Creation of Value

## Tackling Social Issues, Maximizing Corporate Value

The SMM Group is contributing to solving social issues and realizing a sustainable society by providing a stable supply of basic materials and highly advanced materials through collaboration among our three businesses of Mineral Resources, Smelting & Refining, and Materials. On the other hand, the SMM Group's business, which includes mine development and non-ferrous metal smelting and refining, puts a considerable burden on the earth's environment. In order to realize the "sustainable co-existence with the global environment" stated in our corporate philosophy, we will strive to contribute to global environmental preservation and local communities in every way possible to achieve value creation. Furthermore, in order to steadily implement our growth strategy, we must further strengthen our business base, including harmonious and mutually beneficial relationships with local communities, manufacturing capabilities, and good relationships between labor and management. Under our new Long-Term Vision, we will continuously tackle social issues and maximize corporate value while working toward solutions for these.

### Awareness of Business Environment and Social Issues

#### Rising awareness regarding the formation of a sustainable society

Global environmental problems, increasingly severe accidents and disasters

#### Changes in the social and business environments are accelerating

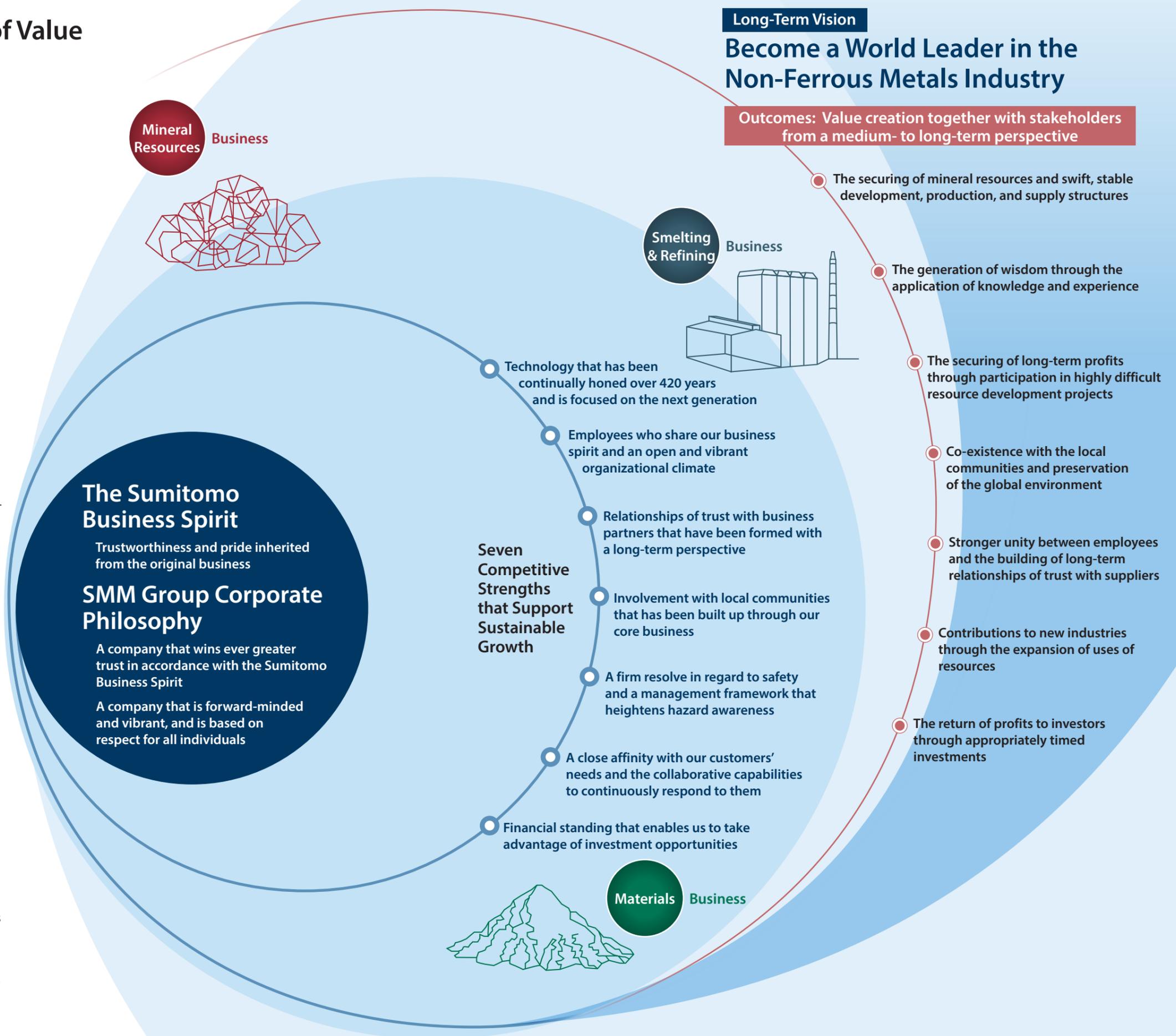
Responding to globalization, enhancing and improving site management capability (production capabilities), metal price and exchange rate fluctuations, commodification of technology, resource depletion and growing resource nationalism

#### Development and making the most of human resources and respect for human rights

Working style reform, revisions to human resources systems, revisions to recruitment strategy, prevention of human rights infringements

#### Mutual understanding with stakeholders

Dialogue with employees, local communities, civil society organization, shareholders, and investors



## Seven Competitive Capabilities Cultivated Over 420 Years of History

Among the management assets possessed by the SMM Group, which inherited the copper smelting business that was the original business of the Sumitomo Group, are seven competitive capabilities that have been cultivated over a history going back more than 420 years. These assets form the base of the Group's growth and they are built upon the Sumitomo Business Spirit. The application of this business spirit has enabled the Group to overcome every difficulty so far. Now we are responding flexibly to the changes of the times through collaboration among our three businesses of mineral resources, smelting and refining, and materials. All employees are united upon the foundation provided by our business spirit and we are aiming to become a world leader in the non-ferrous metals industry.



### Technology that has been continually honed over 420 years and is focused on the next generation

The origins of the SMM Group's technologies are found in the *Nanban-buki* method started in Kyoto by Soga Riemon in around 1600. Nowadays, copper continues to be an essential metal and the SMM Group's technology and expertise for dealing with copper have been honed continuously and uninterrupted over 420 years. Our advanced technological capabilities include exploration, mining, and mineral processing technology for taking on the challenges presented by difficult-to-develop new deposits and sea-floor resource development, advanced smelting and refining technology such as HPAL, the world's first method for converting low-grade oxide ore into a nickel resource, and crystal growth and processing technology in the materials field. Against this technological background, we have built a business model in which our three businesses collaborate through a fully integrated supply chain. We are the only company in Japan to produce electrolytic nickel and electrolytic cobalt and have grown to being close to the world's fifth largest producer of nickel by volume. We are also advancing technological development such as the production of automotive secondary batteries and "battery to battery" recycling, and we are focused on creating new technologies for new industries. In recent years, we have been actively building partnerships with academic institutions and every day we are engaged in technological innovation focused on the society of 2050.



### Employees who share our business spirit and an open and vibrant organizational climate

SMM Group employees take pride in our long history of procuring materials from all over the world that provide the platform for business development and supplying these to resource-scarce Japan. By training and cultivating human resources who can take on this important business, act with integrity, and take on individual tasks with a sense of responsibility, we have been able to inherit technology and personal connections over generations. At the heart of this is the desire to raise human resources who can be entrusted with 420 years of Sumitomo DNA. Training for new employees always involves a climb up to the former Besshi Copper Mine where the core of the Sumitomo's development took place, and management training and the like sometimes involves visiting sites where Sumitomo's various businesses were developed and where, through periods of often difficult management, we gradually fostered our traditional business spirit as represented by the phrase, "Benefit yourself and others, for they are the same" (our business must benefit society even as it benefits Sumitomo itself). Recently, we have adapted to changes in the speed of the development environment to actively recruit mid-career employees who can hit the ground running and we are ensuring diversity in our human resources in order to reenergize the organization and realize further growth.



### Relationships of trust with business partners that have been formed with a long-term perspective

In each area of Mineral Resources, Smelting & Refining, and Materials, the SMM Group is unable to operate completely by ourselves. In order to ensure the success of projects that span several decades, it is essential to gradually build trust with partners. In the long-term, there are many cases where making SMM the "choice if you want to work together" has led to new business opportunities and there are businesses that have been started through connections made by employees who had already retired. Although the excellent mine interests we possess are one of the Group's strengths, the first step toward this was the acquisition of the Bethlehem Mine around 60 years ago. Nowadays, we can acquire these interests not only because of the funds generated by Group assets such as the Hishikari Mine, but also because of the relationships of trust we have with our partners. The SMM Group has cultivated expertise through Niihama and the Besshi Copper Mine and the superior process engineering abilities of our engineers have resulted in continuous success after success. Unlike general trading companies, we do not just hold overseas interests. The SMM Group has the technology to implement processes all the way to smelting and refining and our model creates partnerships with business contacts.



### Involvement with local communities that has been built up through our core business

The SMM Group cannot continue to operate our businesses without buy-in from local communities. In cases where a business can only be developed in a certain location, we put extra care into our relationships with the local community. Based on the spirit of "repaying for what was reaped from the land" (remember debts of gratitude, be thankful for the blessings of nature and achievements of ancestors), the Group's growth continues with the approach of our predecessors for making people happy, including the families of employees, as well as developing together with society. Since the time of the Besshi Copper Mine, we have worked to realize harmonious and mutually beneficial relationships with local communities through projects that contribute to society, such as reforestation. Since olden times, mine development has started with the creation of a town through the establishment of schools, hospitals and the like. Sumitomo founded an elementary school in Niihama City 120 years ago and in order to share with future generations the philosophy that a company cannot continue to prosper unless it prospers together with employees and the local community, we built two bridges on Niihama's Showa-dori street, *Kyozon-bashi* (bridge of co-existence) and *Kyoei-bashi* (bridge of mutual prosperity), which still stand today. In addition to Japan, we are also contributing to local communities overseas through scholarship programs, the operation of hospitals and schools, road construction, and other initiatives.



### A firm resolve in regard to safety and a management framework that heightens hazard awareness

In both mine development and smelting and refining business, unless the correct management framework is established, there is the risk of serious accidents occurring that cost lives. In the SMM Group, each business division is responsible for this management through line management, and our staff divisions provide cross-organizational support for this line management. Staff members patrol workplaces to discover issues, and support for setting up systems for avoiding accidents is leading to the creation of workplaces that have a sense of alertness, ensuring high safety standards. Even small incidents that are not accompanied by lost work time are recorded in the total number of accidents, and we strive to minimize risk, including accidents at this level. Under the awareness that injuries should definitely not be allowed to happen, we continuously work to increase safety by enhancing facilities to prevent human error and we implement ongoing education and training such as hazard simulation training at in-house facilities in order to ensure hazard awareness levels do not fall. At workplaces, experienced staff take care and follow up on other workers, which together with efforts to strengthen internal management and communication between employees, ensures that unsafe acts are not overlooked. Also, we believe that skill is important in regard to safety activities, so we offer a wide variety of training for improving skills.



### A close affinity with our customers' needs and the collaborative capabilities to continuously respond to them

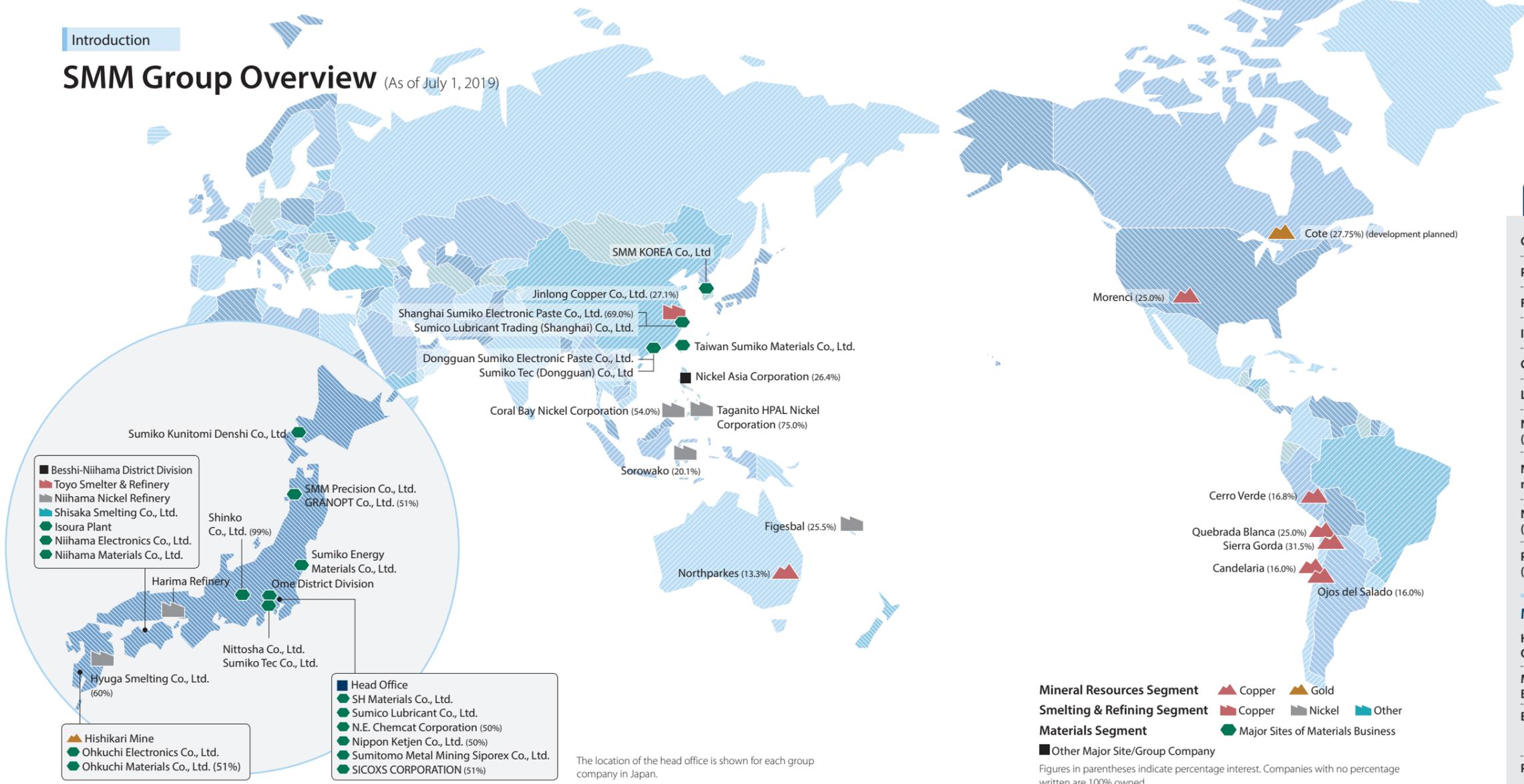
The automotive and information and communication industries, the primary supply destinations for materials fields showing remarkable growth, are both notable for experiencing rapid and significant change, including globalization. This change requires a timely and high-quality response from material suppliers. The SMM Group is leveraging our strength of possessing a full knowledge of not only materials, but also the characteristics of their component materials, in order to connect the various technologies we have developed to date with the innovation sought by the customer. We possess technology for deriving nickel from low-grade oxide ore and a framework that enables us to secure materials stably, and we boast the top share of the global market of cathode materials for lithium-ion batteries used by major electric vehicle manufacturers. On the other hand, we recognize the importance of handling customer demands steadily and sincerely in a way that wins trust. Although technology evolves on a daily basis and the materials needed change, we will make energy and the environment, and information and communications our domain, and continually create new products.



### Financial standing that enables us to take advantage of investment opportunities

To be a successful global competitor, it is crucial to have sufficient financial power in order to acquire superior interests. In order to realize sustainable growth, from 2000 onward we set a course to return to core business and with a firm conviction that mineral resources and smelting and refining are growth industries that will support global economic growth, we implemented a process of selection and concentration and invested overseas. We focus on keeping initial investments as low as possible, carefully timing aggressive investment in accordance with growth strategies and defensive investment that strengthens our business base, building solid positions in drastically fluctuating markets, and concentrating limited management resources on core business. We are proud that by implementing high levels of investment while at the same time boosting the profitability of existing businesses, including the Materials Business, we have become a company that can generate a certain amount of profit, even when the market is sluggish. In fact, we possess the Hishikari Mine, which is the only gold mine in Japan that produces commercially on a large-scale, as well as multiple excellent mine interests, such as an interest in the Morenci Copper Mine, one of the world's top-class producers of copper. We aim to maintain a sound financial standing that befits our status as one of the major global non-ferrous metal companies and a partner to major resources companies and maximize corporate value.

# SMM Group Overview (As of July 1, 2019)



## Corporate Data

Company name	Sumitomo Metal Mining Co., Ltd.
President	Akira Nozaki
Founded	1590
Incorporated	1950
Capital	¥93.2 billion
Listing	Tokyo Stock Exchange
No. of subsidiaries (consolidated)	61 (including the money held in trust which is deemed to be a consolidated company)
No. of equity-method affiliates	16
Net sales (consolidated)	¥912.2 billion (for the year ended March 31, 2019)
Profit before tax (consolidated)	¥89.4 billion (for the year ended March 31, 2019)

## Main Facilities

Head Office	11-3, Shimbashi 5-chome, Minato-ku, Tokyo (Shimbashi Sumitomo Building)
Main Branch	Osaka Branch
Branches	Nagoya Branch (Aichi Prefecture) Besshi-Niihama District Division (Ehime Prefecture)
Plants	Toyo Smelter & Refinery (Ehime Prefecture) Niihama Nickel Refinery (Ehime Prefecture) Harima Refinery (Hyogo Prefecture) Ome District Division (Tokyo) Isoura Plant (Ehime Prefecture)
Mine	Hishikari Mine (Kagoshima Prefecture)
Research centers	Niihama Research Laboratories (Ehime Prefecture) Battery Research Laboratories (Ehime Prefecture) Materials Laboratories (Tokyo) Ichikawa Research Center (Chiba Prefecture)

## Main Products

Mineral Resources Segment	Gold and silver ore, copper concentrates, copper, gold
Smelting and Refining Segment	Copper, gold, silver, electrolytic nickel, electrolytic cobalt, ferronickel, chemical products
Materials Segment	Battery materials, thick film materials, crystal materials, thin film materials, magnetic materials, package materials, oil refining catalysts, automotive catalysts, autoclaved lightweight concrete, lubricants

No. of countries and regions where business is conducted  
**15**

◆ Consolidated subsidiaries ● Equity-method affiliates \* Included in the boundary of the environmental performance data

- Japan**
- Sumitomo Metal Mining Co., Ltd.\***
- Mineral Resources**
- ◆ Sumiko Resources Exploration & Development Co., Ltd.
- ◆ Sumiko Solomon Exploration Co., Ltd.
- Smelting & Refining**
- Acids Co., Ltd.
- MS Zinc Co., Ltd.
- ◆ Shisaka Smelting Co., Ltd.\*
- ◆ Sumiko Logistics Co., Ltd.\*
- ◆ Taihei Metal Industry Co., Ltd.\*
- ◆ Hyuga Smelting Co., Ltd.\*
- Mitsui Sumitomo Metal Mining Brass & Copper Co., Ltd.
- Materials**
- ◆ SH Materials Co., Ltd.\*
- ◆ SMM Precision Co., Ltd.\*
- N.E. Chemcat Corporation
- ◆ Ohkuchi Electronics Co., Ltd.\*
- Ohkuchi Materials Co., Ltd.\*
- ◆ GRANOPT Co., Ltd.\*
- ◆ SICOXS CORPORATION
- ◆ Shinko Co., Ltd.\*
- ◆ Sumiko Energy Materials Co., Ltd.\*
- ◆ Sumiko Kunitomi Denshi Co., Ltd.\*
- ◆ Sumico Lubricant Co., Ltd.\*
- ◆ Sumiko Tec Co., Ltd.\*
- ◆ Sumitomo Metal Mining Siporex Co., Ltd.\*
- ◆ Niihama Electronics Co., Ltd.\*
- ◆ Niihama Materials Co., Ltd.\*
- ◆ Nittosha Co., Ltd.\*
- Nippon Ketjen Co., Ltd.\*
- Other**
- ◆ Igeta Heim Co., Ltd.\*
- ◆ JCO Co., Ltd.\*
- ◆ Sumiko Technical Service Co., Ltd.
- ◆ Sumiko Techno-Research Co., Ltd.\*
- ◆ Sumitomo Metal Mining Engineering Co., Ltd.\*
- ◆ Japan Irradiation Service Co., Ltd.\*

- Asia**
- Mineral Resources**
- Cordillera Exploration Co., Inc. (Philippines)
- Smelting & Refining**
- Jinlong Copper Co., Ltd. (China)
- ◆ Sumitomo Metal Mining Management (Shanghai) Co., Ltd. (China)
- ◆ Sumitomo Metal Mining (Hong Kong) Co., Ltd. (China)
- North America**
- Mineral Resources**
- ◆ SMM Candelaria Inc. (U.S.A.)
- ◆ SMM Exploration Corporation (U.S.A.)
- ◆ Sumitomo Metal Mining America Inc. (U.S.A.)
- ◆ Sumitomo Metal Mining Arizona Inc. (U.S.A.)
- ◆ SMM Morenci Inc. (U.S.A.)
- ◆ SMM Gold Cote Inc. (Canada)
- ◆ Sumitomo Metal Mining Canada Ltd. (Canada)
- ◆ SMM Resources Inc. (Canada)
- ◆ Coral Bay Nickel Corporation (Philippines)\*
- Nickel Asia Corporation (Philippines)
- ◆ Taganito HPAL Nickel Corporation (Philippines)\*
- ◆ Sumitomo Metal Mining Philippines Holdings Corporation (Philippines)
- PT Vale Indonesia Tbk. (Indonesia)
- Materials**
- ◆ Dongguan Sumiko Electronic Paste Co., Ltd. (China)\*
- ◆ Shanghai Sumiko Electronic Paste Co., Ltd. (China)\*
- ◆ Sumico Lubricant Trading (Shanghai) Co., Ltd. (China)
- ◆ Sumiko Tec (Dongguan) Co., Ltd. (China)
- ◆ Taiwan Sumiko Materials Co., Ltd. (Taiwan)\*
- ◆ SMM KOREA Co., Ltd. (South Korea)
- ◆ Sumiko Tec (Thailand) Co., Ltd. (Thailand)

- Other Regions**
- Mineral Resources**
- Compania Contractual Minera Candelaria (Chile)
- Compania Contractual Minera Ojos Del Salado (Chile)
- ◆ Sumitomo Metal Mining Chile Ltda. (Chile)
- ◆ SMM Sierra Gorda Inversiones Ltda. (Chile)
- Sierra Gorda S.C.M. (Chile)
- ◆ SMM-SG Holding Inversiones Ltda. (Chile)
- ◆ SMMQB Holding SpA (Chile)
- SMM Quebrada Blanca SpA (Chile)
- Quebrada Blanca Holdings SpA (Chile)
- ◆ Sumitomo Metal Mining Peru S.A. (Peru)
- Sociedad Minera Cerro Verde S.A.A. (Peru)
- ◆ Sumitomo Metal Mining do Brasil Ltda. (Brazil)
- ◆ Sumitomo Metal Mining Oceania Pty. Ltd. (Australia)
- ◆ SMM Cerro Verde Netherlands B.V. (Netherlands)
- ◆ SMM CV Holding B.V. (Netherlands)
- Smelting & Refining**
- FIGESBAL (New Caledonia)
- Other**
- ◆ SMM Holland B.V. (Netherlands)

**Mineral Resources Segment** ▲ Copper ▲ Gold  
**Smelting & Refining Segment** ▲ Copper ▲ Nickel ▲ Other  
**Materials Segment** ● Major Sites of Materials Business  
 ■ Other Major Site/Group Company  
 Figures in parentheses indicate percentage interest. Companies with no percentage written are 100% owned.

The location of the head office is shown for each group company in Japan.



## Business Summary



### Mineral Resources Business

The skills cultivated at the Besshi Copper Mine, which began operations in 1691, have been handed down in an unbroken line to our current Mineral Resources business, which is now global in scale.

Although demand for non-ferrous metal resources continues to rise in accordance with the growth of global GDP, issues related to resource development, including a decrease in superior mines and rising resource nationalism, are becoming increasingly serious. Within this environment, relationships of trust built up over many years with major resource companies and partner companies are enabling the SMM Group to acquire new resource interests. The Group's business model ranges from resource procurement to highly advanced materials, a model that is rare throughout the world. The Mineral Resources business holds the most upstream position within this model and has the important role of continuously providing a stable supply of non-ferrous metal materials not only within the Group, but also to various industries in both Japan and overseas.

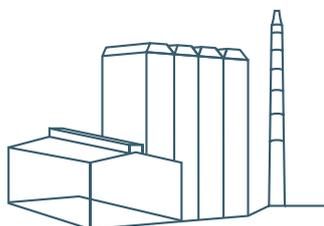
As natural resources will eventually become depleted, there is a need to continuously carry out the exploration of new mines and to acquire interests in superior mines. The Mineral Resources business is currently engaged in planning the development of the Quebrada Blanca Copper Mine, which is expected to make a huge contribution to realizing our Long-Term Vision, as well as advancing the Côté Gold Project and carrying out initiatives aimed at increasing the processing volume of the Sierra Gorda Copper Mine.



### Smelting & Refining Business

Our smelting and refining business has its roots in Sumitomo's original business of copper smelting, which was started in Kyoto in 1590 under the name of Izumiya. At that time, copper smelting technology in Japan was still undeveloped, meaning that the copper exported overseas still contained silver impurities, reducing profits. Sumitomo developed the *Nanban-buki* smelting technique which separates copper from silver. This technique was shared widely within the industry, enabling Japan's copper production to make a huge leap forward in development. In modern times, we have responded to issues regarding the effective use of resources through our technology, including establishing the HPAL method, which enables the efficient recovery of nickel from low-grade ores that were previously discarded, and successfully realizing the world's first commercial production of nickel intermediates. The Smelting & Refining business smelts and refines resources procured from sources including the Mineral Resources business and foreign mining companies to convert them into metals such as copper, nickel and gold and then sell them. It fulfills a central role in the Group's business model and continuously supplies quality materials produced through cost-competitive smelting and refining processes to SMM's Materials business and various industries that support society.

Currently the Smelting & Refining business is honing a complex plan for realizing the Pomalaa Project, which would become the company's third HPAL plant. We are also strengthening management in order to increase manufacturing capabilities and will continue to fulfill our supply responsibilities to customers and the SMM Group's Materials business.



### Materials Business

The Materials business was launched in 1960 to leverage the strengths of our Minerals and Smelting & Refining businesses.

The most important aspects of the Materials business are "seeds" and "needs." The SMM Group's technological "seeds" enable us to answer the needs of the market and customers. We consider our main strengths in regard to materials development to be our powder synthesis and surface treatment technology, particularly for metals, and our crystal growth and processing technology. These kinds of technologies are the backbone of our business and we are further strengthening initiatives in which our sales representatives communicate with customers to clarify their needs in order to guide development. Collaboration among our three businesses of Mineral Resources, Smelting & Refining, and Materials offers significant advantages including the sharing of market information and recognition of customer trends, and the ability to respond flexibly in terms of technology and quality. The Materials Business is working to collaborate closely within the company while also building relationships with the customers that are the supply destination of materials and watching trends to carefully time investments. On April 1, 2019, the Materials business established the Battery Materials Division with the aim of creating an organization that can respond swiftly and flexibly to the rapid expansion of the battery materials market, and the Advanced Materials Division as an organization for realizing sustainable growth in advanced materials fields, especially the energy and environment, and information fields.

