

# 420 years of business transitions in response to changes in the surrounding environment

As the corporation inheriting the original business of the Sumitomo Group, not only have we responded flexibly to the changes in the surrounding environment based on the Sumitomo Business Spirit, we have also driven the business with a progressive stance. The current strengths of our Group have been formed by the various management decisions and solutions to problems which occurred in that process. We will continue to reinforce our strengths and bring about new strengths through our business activities.

1600 1700 1800 1900 1910 1920 1930 1940 1950 1960

## Mineral Resources Business

With the start of operation at the Besshi Copper Mine, noted at the time as one of the world's largest copper mines, Sumitomo's business expands greatly from a focus on the copper smelting and refining business to newly adding the mineral resources business. Over the following 283 years, until 1973, the mining technologies nurtured at Besshi are continually handed down within SMM's globally expanding resource business.



1917  
Gold mines  
Start the gold mine business

Sumitomo, whose resource business had centered on copper mines, acquires management rights for the newly discovered Kounomai Mine in Hokkaido at a time of growing importance of gold as a resource. This northern mine, known as "the biggest gold mine in the Orient," enhances the resource business portfolio with gold as a new metal.

After WWII, Japan ceases domestic mining operations in the non-ferrous metals industry and switches to smelting and refining with resources completely procured from overseas. In 1961, SMM signs an investment and financing contract with Bethlehem Mine (Canada), which is the start of the company's involvement with overseas mines. Continuing to today, SMM is gaining footholds in mines throughout the world.

1960-  
Overseas copper mines  
Participation in overseas copper mine development

1691  
Copper mines  
Open the Besshi Copper Mine

## Smelting & Refining Business

1590  
Start of copper smelting and refining

1905  
Relocation of copper smelting and refining to the Shisakajima Islands

The increase in production volume attributable to technological innovation in the Meiji period had the result of magnifying what had until then been a modest environmental impact. Sumitomo relocates its smelter to the Shisakajima Islands, situated 20 km from the nearest coast. This alone, however, does not completely resolve the problem, and the battle with environmental issues continues until the company is able to develop new smelting technology and fully constrain impacts.

1939  
Nickel smelting and refining  
Start of nickel smelting and refining

SMM launches a nickel smelting and refining business in 1939, a time when new demand is appearing (nickel's discovery was relatively recent, in the 1700s). Subsequently, SMM has come to lead the world in nickel technologies, including the development of the MCLE method and other nickel refining technologies, and in the new millennium, diversifying raw material procurement with the practical implementation of HPAL technology.



1960  
Entry into the materials business

While the mining business in Japan was undergoing contraction at this time, the electronic materials business comes under attention as a new market. In 1960, SMM begins production of germanium dioxide for use in transistors. Since then, we have provided the market with paste, lead frames, and other electronic materials that leverage metal technologies. At present, we are increasing our production of battery materials using nickel.

### Monjuin Shiigaki

The wellspring of SMM Group's strength  
Employees who share our Business Spirit and goals

Sumitomo Masatomo (1585-1652), the founder of the Sumitomo family, wrote *Monjuin Shiigaki* in his late years. In it he describes how a merchant should conduct business. The opening and five articles cover guidelines for business and also call for hard work and sincerity. This is the wellspring of the Sumitomo Business Spirit.



The opening says "in business, do not do things poorly, put your heart into everything you do, do it carefully and thoroughly, improve yourself as a person and become a fine person." The last article is about dealing with people; the attitude one

should have and that one has the responsibility to explain sincerely (accountability), stating "no matter what someone says to you, do not be short-tempered and argue, instead, repeatedly explain in detail."

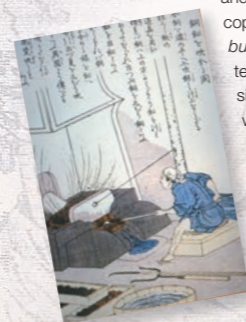
Succeeding to the history and tradition that began with this *Monjuin Shiigaki*, Saihei Hirose, the first Director General of Sumitomo, became the driving force, with the basic Sumitomo doctrine he put forth becoming rules governing the house of Sumitomo. Moreover, the central part stating the essentials of business, is the Sumitomo Business Spirit.

At the SMM Group, the Sumitomo Business Spirit is the common spirit among employees and we work to inculcate common goals and standards of action as guideposts for carrying out duties through various educational opportunities.

### Nanban-buki

The wellspring of SMM Group's strength  
Continually honed technology

As peace returned to Japan at the close of the Sengoku period, the country sees strong demand for copper for uses such as Buddhist altar fittings. Riemon Soga, who started dealing in copper in Kyoto at this time, develops Japan's first smelting



and refining technology for separating copper and silver, known as *Nanban-buki*. Until then, there had been no technology in Japan to remove the silver from copper ore so copper was sold, and exported, at copper prices while it still included silver. With Soga's technology, it was now possible to sell the copper after separating out the silver. In 1623 he establishes a refinery in Osaka, which has a port. However, Soga doesn't monopolize the smelting

and refining technology, he discloses it broadly to others in the same business leading to many copper-related businesses gathering in Osaka. Osaka becomes one of the world's top copper towns. Around this time, the amount of copper unearthed in Japan is extremely large compared to the rest of the world, and because of the beauty of its rose-red appearance, Japanese copper is cherished and exported around the world by the Dutch East India Company.

In 1697, Japan produces approximately 6,000 tons of copper, making it the largest producer in the world. Copper from the Besshi Copper Mine accounts for approximately one quarter of that amount.

The SMM Group is comprised of *monozukuri* — manufacturing — companies and as such, we continue to polish our technology, working for sustainable growth and maximization of corporate value.

### Major events

1602 Establishment of the Dutch East India Company

1760s Industrial Revolution

1867 Nobel invents dynamite

1914 Start of WWI

1923 The Great Kanto Earthquake

1939 Start of WWII

1951 Signing of The Treaty of San Francisco

1961 Free trade of electrolytic nickel

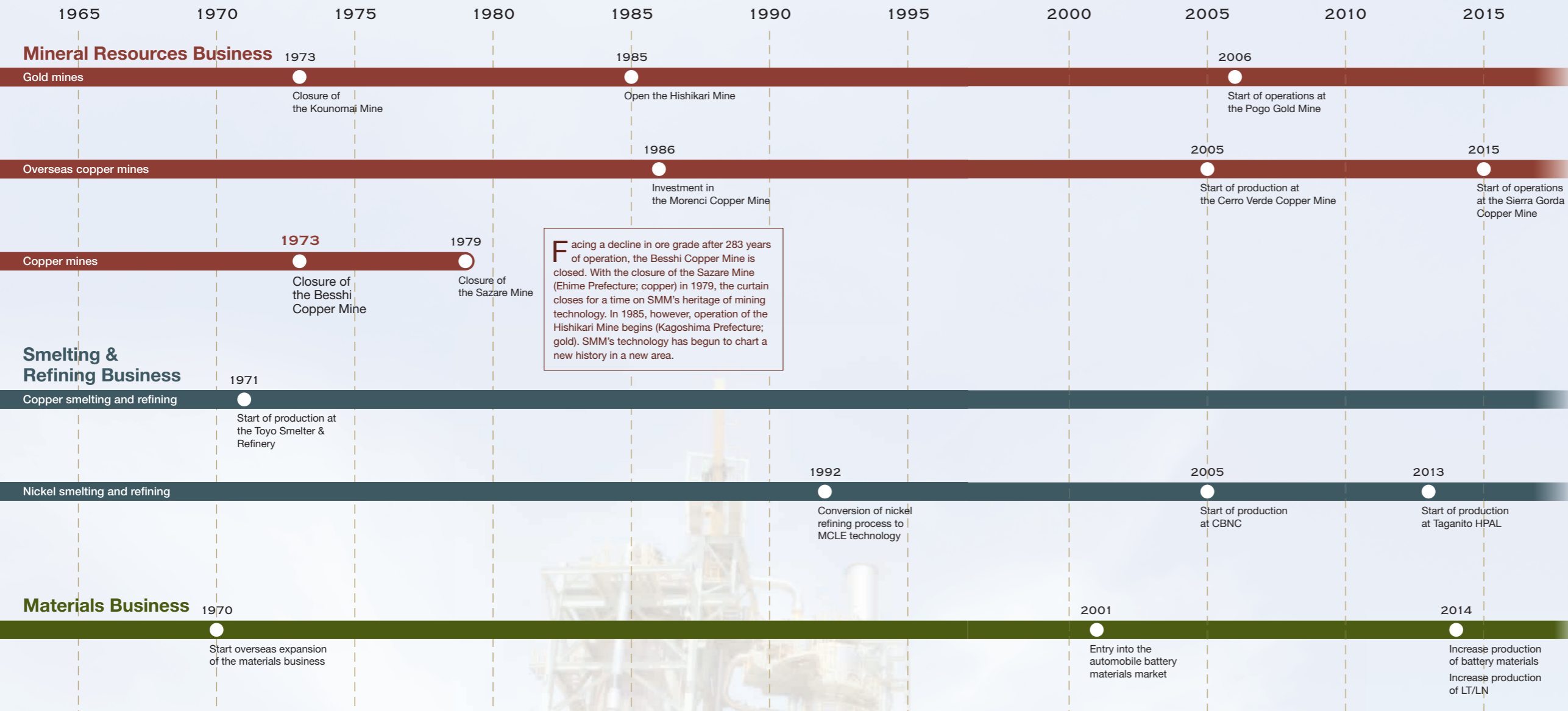
1603 Establishment of the Edo Shogunate

1775 American War of Independence

1869 Opening of the Suez Canal

1929 The Great Depression

1955 Japan joins GATT (General Agreement on Tariffs and Trade)



Facing a decline in ore grade after 283 years of operation, the Besshi Copper Mine is closed. With the closure of the Sazare Mine (Ehime Prefecture; copper) in 1979, the curtain closes for a time on SMM's heritage of mining technology. In 1985, however, operation of the Hishikari Mine begins (Kagoshima Prefecture; gold). SMM's technology has begun to chart a new history in a new area.

**Reforestation business**

In order to secure the charcoal and wood necessary to operate the Besshi Copper Mine, clear-cutting of the forests on Besshi Mountain continued for many years, leading to deforestation over wide areas. When Teigo Iba, later to become the second Director-General, saw this devastated state he felt that leaving Besshi Copper Mine desolate was going against the law of heaven and earth and set up a major policy to return it to a state of nature, putting it in its original green state. He called in experts and made plans and proceeded with reforestation. With the implementation of these plans, the annual average for the previous 15 years of 60,000 trees planted doubled to 120,000 in just 1894, the year Iba

became manager of the Besshi Copper Mine, and three years later, in 1897, broke 1 million, and continued to increase every year after that, hitting a peak of over two million. This business continued even after Iba retired and today, the Besshi Copper Mine that was denuded more than one hundred years ago, is again lush with forests and has abundant ecosystems.

SMM Group works at co-existence and co-prosperity with local societies by working on environmental preservation in its development of mines in the mineral resources business, which has a large impact on the environment, and also in its smelting and refining and materials businesses.



**Overcoming smoke damage**

With the modernization of the Besshi Copper Mine, increases in the amount of ore extracted were planned, and the smelter was relocated to the coastal area of Niihama. As a result, the damage to agricultural crops in the surrounding area due to the sulfur dioxide gas produced by the smelting operations became severe by 1893. Because of this, Iba, the second Director-General, purchased uninhabited islands which didn't even have water, and are located about 20 kilometers north of Niihama City, and moved the smelter there in 1905. These were later called the Shisakajima Islands. However, things didn't go as expected and smoke damage

from the Shisakajima Islands spread over a wide area. In addition to paying damages, Sumitomo took the unusual measure at the time of adjusting production in order to reduce damage to crops. Sumitomo wasn't alone in facing this problem of smoke damage; all copper smelters and refineries around the world faced the same problem. But after many years and spending huge sums on research, in 1939 Sumitomo became the first smelter in the world to bring about zero emissions of sulfur dioxide gas, which was a root cause of the smoke damage, finally solving the problem of smoke damage after 47 years.

In overseas operations, too, such as in the Philippines, SMM Group works to not only preserve the environment but also aims for co-existence and co-prosperity with local societies by providing support for regional promotion policies which build and preserve a trusting relationship.

The wellspring of SMM Group's strength  
● Relationships of trust with local communities

**Seven strengths nurtured over 420 years**

Continually honed technology

Employees who share our Business Spirit and goals

Solid relationships with business partners

Good relationships with customers

Relationships of trust with local communities

Safe labor environment

A sound financial standing

**Created value**

Sustainable growth through the securing of mineral resources and the stable supply of basic materials and high-functionality materials

Contribution to sustainable society through global environmental preservation, development of products with low environmental impact, and co-existence with local communities

**Major events**

