PROTERIAL

# The Proterial Report 2023

## Integrated Report

Proterial, Ltd.

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## Information Provided by the Proterial Group

| | Financial information ← → Non-financial information | | |
|---|---|---|---|
| Information on how the Proterial Group creates value and achieves sustainable growth | The Proterial Group Report (Integrated Report) | | |
| Information for various stakeholders | Securities Report | Company Profile | CSR Activity Report |
| Publication of detailed information and the latest information | Corporate website https://www.proterial.com/e/ | | |
| | Corporate information | Product information | CSR information |

## Editorial Policy

Before becoming Proterial, Ltd. on January 4, 2023 , Hitachi Metals, Ltd. released the integrated reports (fiscal 2015 Hitachi Metals Group Report 2016) for all stakeholders, including shareholders and other investors from 2016. The aim of each report has been to deepen understanding among stakeholders about how the Group utilizes its strengths to create value for customers and achieve sustainable growth. Each report was edited referencing the International Financial Reporting Standards (IFRS)'s recommended International Integrated Reporting Framework and the Ministry of Economy, Trade and Industry (METI)'s Guidance for Integrated Corporate Disclosure and Company-Investor Dialogues for Collaborative Value Creation. In addition to the Proterial Group Report (Integrated Report), we provide information to our various stakeholders as shown in the chart above. We also periodically update our corporate website with the latest information, including detailed information and news releases.

Environment Social Governance
価値協創ガイダンス

**Review Period**
**Fiscal 2022 (April 1, 2022–March 31, 2023)**
Note: Where possible, the latest information is used at the time of publication.

**Relevant Entities**
**Proterial, Ltd. and its consolidated subsidiaries**
Note: In cases where information contained herein refers to a review period and/ or relevant entities different from those stated above, this is pointed out accordingly.



# Corporate Philosophy

## Mission

### Make the best quality available to everyone

Striving for the highest standards in our original technologies, products, processes, and people, we will bring new levels of value to customers all around the world.

### 質の量産

独創的な技術と、製品・ビジネスプロセス・人に関する高い質の追求によって、新たな価値を生み出し、世界の人々に広く提供していく

## Vision

### Leading sustainability by high performance

Through the creation of best-in-class materials, to be a company that solves individual customer issues and contributes to the prosperity and vitality of all.

### 持続可能な社会を支える高機能材料会社

お客さまの課題を解決する高機能材料の創造によって、持続可能な社会の実現に貢献し続ける企業となる

## Values

### Unfaltering integrity

We earn the trust of our customers and other stakeholders by being honest and sincere in our daily activities and by understanding our obligation to the people and communities we serve.

### 至誠

人や社会に対する責任を常に自覚し、
日々のあらゆる活動に誠実に向き合う。
約束を守る、正直に行動することを徹底し、
私たちに関わる全ての人々の信頼と期待に応える

### United by respect

Across our organization, we respect diversity and the free and independent exchange of opinions, learn from each other, and collaborate to achieve our common goal.

### 龢則彊（和すれば強し）

多様な個を尊重し、主体性をもって
自由に意見を交わし合い、学び合い、
共通の目的に向けてチーム全員の情熱と能力を
結集することで成果を出す

Who We Are

# The Company Name

## Proterial, Ltd.

**Since its founding in 1910, and continuing after its spin-off from Hitachi, Ltd. in 1956, the Proterial has grown by providing society with unique products using its advanced technological capabilities. Together with a new capital partner (a consortium of companies led by Bain Capital), we have been accelerating our transformation and growth as a materials company that leads sustainability by high performance from January 2023. Befitting this new beginning, we changed the Company's name from Hitachi Metals, Ltd. to Proterial, Ltd. on January 4, 2023.**

### Thinking behind the Company's name

Proterial reflects the essence of our corporate philosophy, which consists of three elements: Mission: Make the best quality available to everyone; Vision: Leading sustainability by high performance; and Values: Unfaltering integrity and United by respect. It combines pro- with the word material.

| Essence of our Corporate Philosophy | Keywords related to the Company's name |
|---|---|
| Pursuit of high quality / Creation of high-performance materials | Professional |
| Face in good faith / Keep a promise / Act honestly | |
| Continue to contribute to the realization of a sustainable society that creates new value and provides it widely | Progressive |
| Respecting diverse individuals and bringing together the passion and abilities of all | Proactive |

**PRO × MATERIAL**

Pro- represents our three pros:
Professional — work that exceeds expectations;
Progressive — a spirit that keeps challenging, and;
Proactive — an enterprising attitude.
Material refers to the high-performance materials that our original technologies produce and which underpin the three pros. With our focus on solving customer issues and bringing new levels of value, we promise to contribute to the realization of a sustainable society through the products and services that embody our philosophy.

### Brand Logo

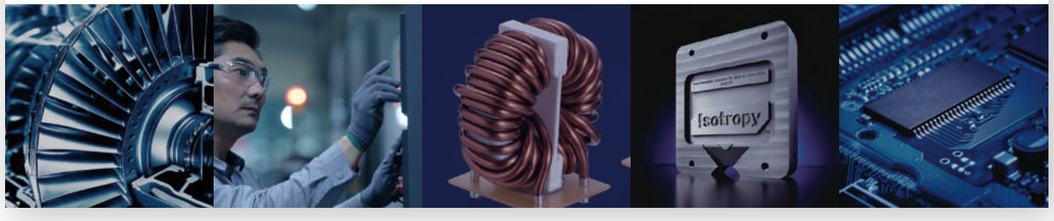
**PROTERIAL**

Our logo uses a typeface that expresses simplicity, power, and dignity. Its navy blue treatment suggests calmness and depth.

## Our Promise (Brand Story)

Proterial produces world-class, high-performance materials for mobility, industrial infrastructure, and electronics. Since 1910, we've brought together specialists of all kinds to improve our skills and technologies, reflecting our commitment to achieve the best possible quality in everything we do. Moving forward, we'll continue to elevate both our products and the processes and people that define them.
Only by conducting all our activities with unfaltering integrity can we meet the expectations and trust of the communities we serve. By creating new and ongoing value, we'll help customers realize innovation and contribute to a sustainable society.

With our professional determination, progressive intent, and proactive approach, we'll strive unceasingly to provide exceptional materials that pave the way to a brighter future.



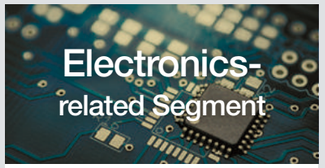
Who We Are

# Proterial's Businesses

**The Proterial is a material manufacturer with highly competitive core technologies for high-performance materials. With the world's top brands in its portfolio, Proterial engages in a broad range of businesses in the markets related to industrial infrastructure, automobiles, and electronics.**
**Our business foundations are broad, and our business structure—always responsive to the wide-ranging needs of society with its blend of technologies—has been the driving force behind the Proterial's growth.**

Aircraft components, power generating equipment-related components, rolling stock components and other industrial equipment are all exposed to severe operating conditions.
Our technologies, quality and product development capabilities, which were developed and proved over many years, have always been bringing innovation. We will continue to provide high-level reliability and innovation for infrastructure globally.

Proliferating eco cars and improving fuel economy and safety performance.
We appropriately capture changes in environmental performance required for automobiles, thus relentlessly pursuing the evolution of all of our products.
Ranging from drive motor components and exhaust system components to chassis components, we use our development and technological capabilities to support automobile manufacturing around the world.

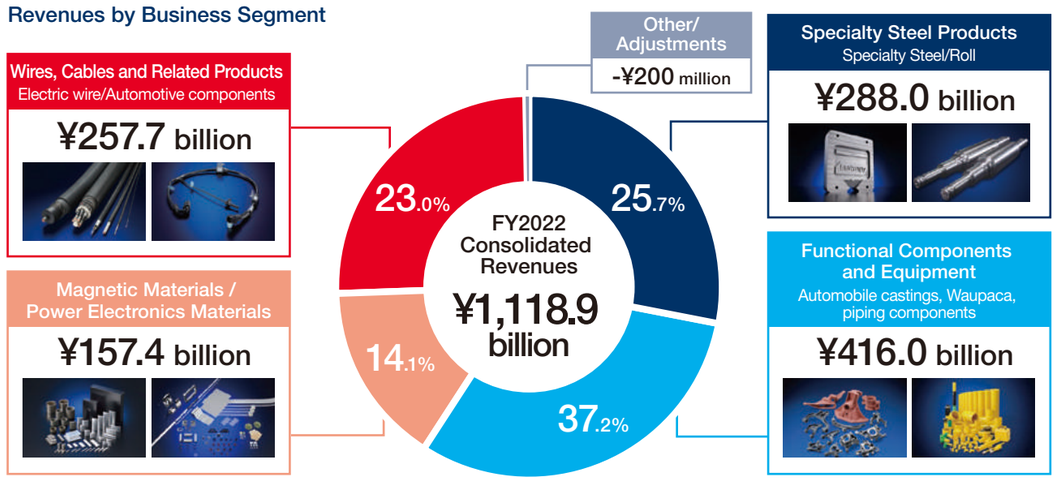



The fields of video/IT equipment, home appliances, batteries and medical devices are constantly evolving.
Encompassing the entire process, from prototypes to commercialization and mass production, our production system allows us to meet our customers' diverse needs.
We will continue to support the growth of society at large with high-performance components and materials.

## Proterial's Business Structure and Portfolio

| Business Segment \ Market segments | | Industrial Infrastructure | Automobiles | Electronics |
|---|---|---|---|---|
| Specialty Steel Products | Specialty Steel Products | Turbine cases | Molds and tool steel; CVT belt materials | Clad metals; Lead frame materials |
| | Rolls | Rolls for steel mills | | |
| Functional Components and Equipment | Automotive Castings | | Cast iron products; HERCUNITE™ heat-resistant cast components | |
| | Waupaca | | Iron castings for transportation equipment | |
| | Piping Components | Pipe fittings for general use; Polyethylene gas piping systems | | |
| Magnetic Materials and Applications/ Power Electronics Materials | Magnetic Materials | | NEOMAX® rare-earth magnets | NMF™ ferrite magnets |
| | Power Electronics Materials | Metglas™ amorphous metals | Silicon nitride substrates | |
| Wires, Cables and Related Products | Electrical Wires and Cables | Electrical wire for rolling stock | | Cables for industrial robots |
| | Automotive Components | | Harnesses for electronic parking brakes | |

## Revenues by Business Segment

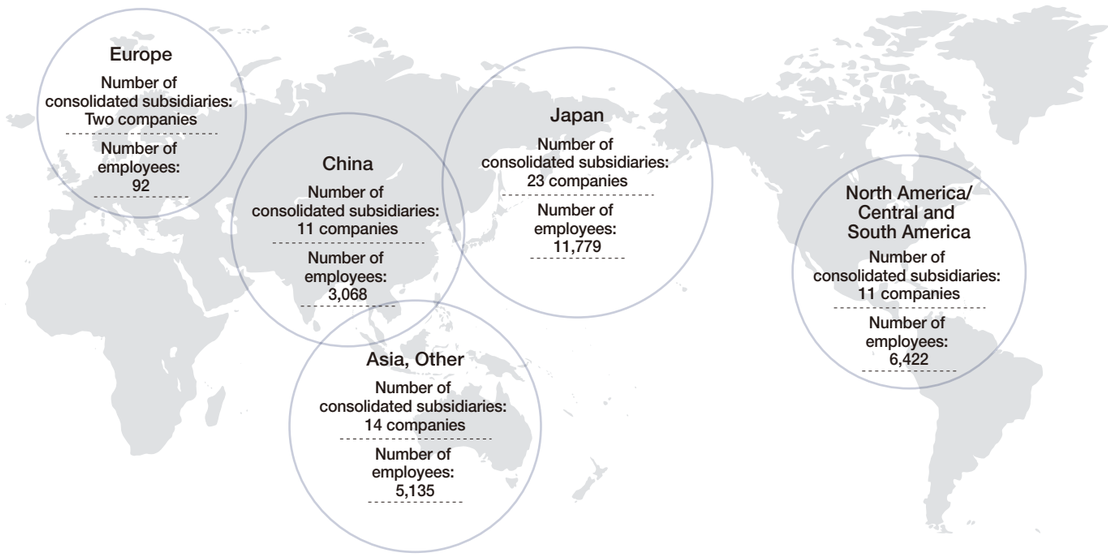



## Global Deployment

(As of March 31, 2023)

Number of employees: **26,496**

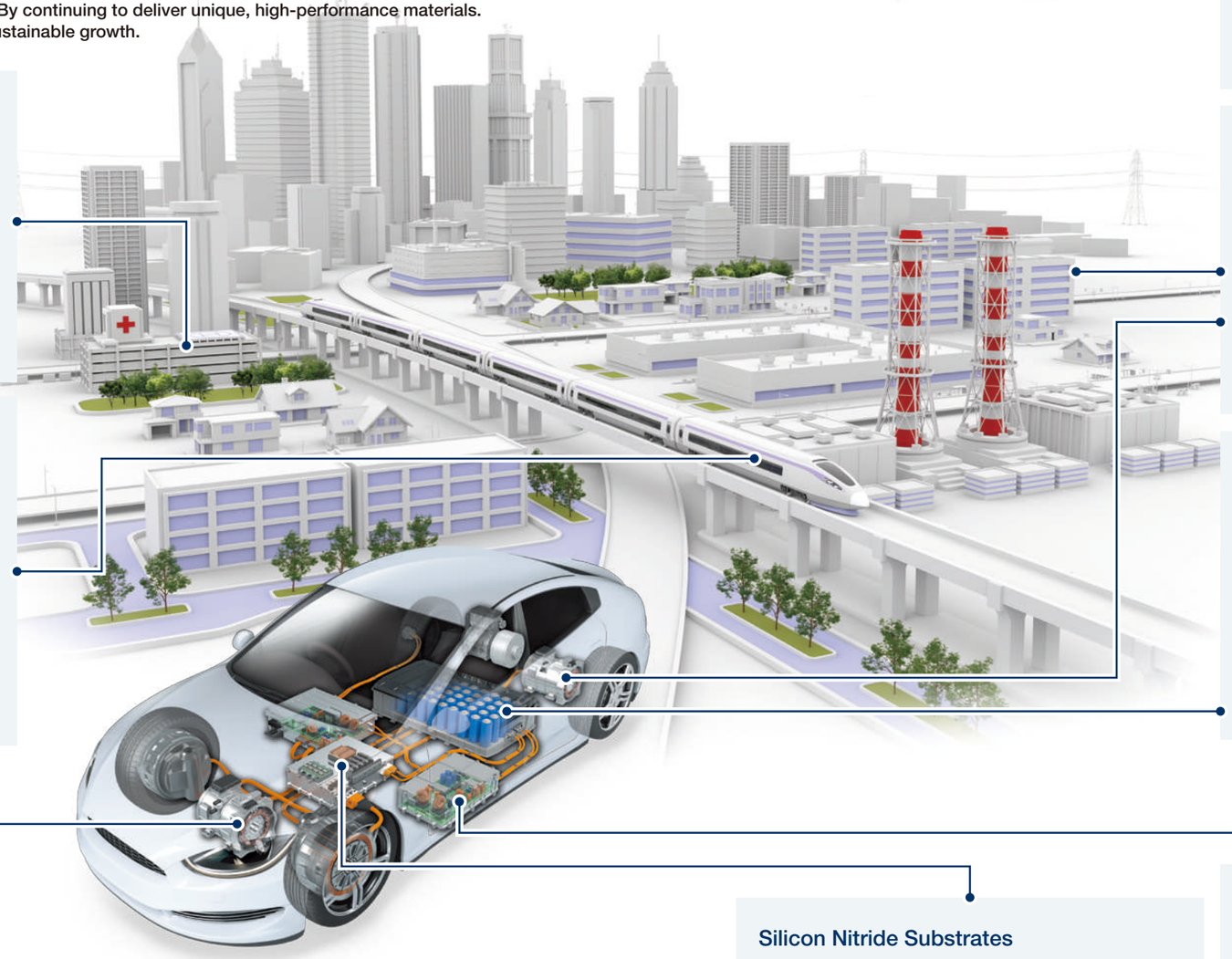
Number of consolidated subsidiaries: **61 companies**



Who We Are

# High-performance Materials for Supporting Society and Realizing Customer Innovation

**Focusing on structural and compositional control technologies for a wide variety of materials, the Proterial Group has created high-performance materials in collaboration with its customers. By reflecting the needs of our customers in every step from R&D to mass production, we help customers realize innovation. Moreover, this approach serves as the driving force for the sustained growth of the Company. By continuing to deliver unique, high-performance materials. Proterial is working to solve social issues and secure sustainable growth.**



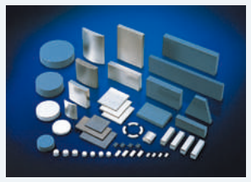
## Ceramic Scintillator

A scintillator is a substance that absorbs rays, such as X rays and gamma rays, and makes them visible to the human eye. Scintillators are used primarily in X-ray computer tomography (CT) and other medical equipment, analytical devices, nondestructive inspection equipment, and airport carry-on luggage scanners.

## Wires and Cables for Rolling Stock

Our wires and cables for rolling stock are used in cab wiring, underfloor wiring, car body wiring and other applications in Shinkansen bullet trains as well as many other rolling stock vehicles in Japan. In addition to Japan, these products have been adopted for rolling stock destined for China and Europe. In this way, Proterial's wires and cables for rolling stock support the development of railways as their importance continues to grow as a mode of transportation with a low environmental impact.

## NEOMAX® rare-earth magnets



## Ferrite Magnets

NEOMAX® rare-earth magnets and ferrite magnets are primarily used in motors. Originally developed by the Company in 1982, NEOMAX® magnets have nearly 10 times the magnetic force of ferrite magnets, and have therefore contributed to miniaturizing motors and to realizing a more efficient, electrified society. The Company continues to lead the industry in its transition to weight-saving rare-earth materials through R&D. Ferrite magnets are primarily composed of iron oxide materials which are abundantly available. The Company has also achieved the world's best-of-class magnetic properties in the form of ferrite magnets, which have also contributed to realizing smaller, more efficient motors. In 2022, the Company showed the world the potential of these as magnets for xEV drive motors.

## Aircraft Engine Components

The aircraft market is expected to broaden significantly over the medium- to long-term. The Company has therefore made large-scale investments with an eye toward market expansion. As a field that demands an extremely high level of technology, quality, and control, Proterial is developing these components into a new pillar of business.

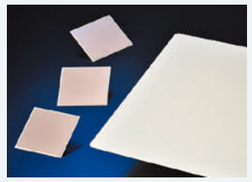
## Metglas™ Amorphous Alloy

Amorphous alloys are metals that lack a crystalline structure. When used as a core, amorphous alloy transformers demonstrate one-third to one-fifth the iron loss (no-load loss) compared to transformers with grain-oriented electrical steel plate cores, and thereby contribute to reductions in power consumption. In recent years, significant anticipation has therefore been placed on their application to motor cores.

## Clad Metals

Clad metals are made by roll bonding several metals with different characteristics. The clad metals used for the external electrodes of secondary batteries are able to efficiently connect the cathode and anode, which are made of different metals (aluminum and copper, etc.). Progress in the transition to xEV is therefore expected to expand demand.

## Silicon Nitride Substrates



Silicon nitride substrates are a key component for power semiconductors that control motors and convert power in xEVs* and other applications. The Company has also taken the lead toward commercialization over its competitors. In response to rapidly growing demand and the subsequent outlook for continued growth, the Company is currently making investments to increase production.

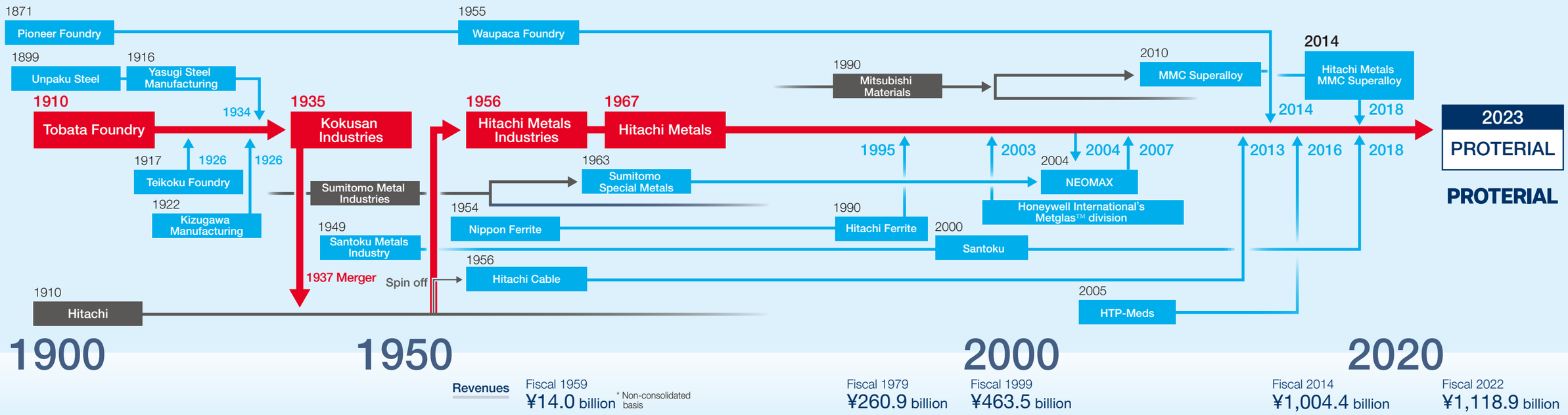
## Nanocrystalline Soft Magnetic Material FINEMET®

FINEMET® is crystalized alloy ribbon with a main chemical composition of Fe. By reducing the crystal alloy grain size to the level of 10 nm, something that had previously not been possible, the Company enabled FINEMET® to express dramatically improved magnetic characteristics. Since commercializing FINEMET® as an original product in 1988, applications for this product have expanded along with progress in the shift to xEV*.

xEV : A generic term for electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs).

# Milestones in Creating Value

Since the founding of Tobata Foundry in 1910, 'Proterial has unwaveringly "made the best quality available to everyone" through quality mass production in accordance with the needs of our customers. The Group's orientation for selected high-quality products has been passed down for over 100 years, and from very early on, we expanded into the global market with the goal of manufacturing a wide range of products, which are favored by our customers. These achievements allow us to continue to make the best quality available to everyone to this day and build a brand that has gained currency around the world. Our extreme pursuit of quality is passed down not only through the development of original products that form the essence of Proterial, but also through the development of our valuable human resources. By providing high-quality products and services to people around the world, the Group is contributing to the creation of a prosperous society.




## 1910 Tobata Foundry

At a time when a modernizing Japan relied on imports for almost all of its industrial goods, Yoshisuke Ayukawa acquired malleable cast iron manufacturing technology and established Tobata Foundry, the predecessor of Hitachi Metals. In 1911, the company began manufacturing Gourd brand-black heart malleable cast iron pipe joints. The company later began to make products for other uses including shipbuilding, railways, and spinning machines, and orders grew steadily as the superior quality of these products was recognized. Business areas were diversified through mergers with Teikoku Foundry, which at the time was producing steel for steel rolling, Kizugawa Manufacturing, a producer of fittings, and steelmaker Yasugi Steel Manufacturing.

## 1935 Kokusan Industries

As the business expanded to cover heavy industries in general, Tobata Foundry changed its name to Kokusan Industries.

## 1956 Hitachi Metals Industries

Hitachi transferred its metals business with five originally Tobata Foundry plants (Tobata, Fukagawa, Kuwana, Wakamatsu, and Yasugi) to establish Hitachi Metals Industries.

## 1967 Hitachi Metals

Hitachi Metals Industries changed its name to Hitachi Metals. Through creative monozukuri and proactive mergers and acquisitions, the company went through a succession of changes and grew to become one of the world's leading materials manufacturers.

## 1995 Hitachi Ferrite

Merged with Hitachi Ferrite in 1995 to strengthen the soft magnetic materials business in response to increased demand for noise reduction in automobiles and electronics.

## 2003 oneywell International's Metglas™ division

Acquired the Metglas™ (amorphous metal materials) division of Honeywell International of the United States. Strengthened the soft magnetic materials division as demand in the electronics segment grew for size and weight reductions, energy conservation, and electromagnetic noise reduction.

## 2007 NEOMAX

Established through the merger of the magnetic materials and applications operations of Hitachi Metals and Sumitomo Special Metals to manufacture high-performance neodymium magnets and ferrite magnets widely used in motors for automotive equipment and home appliances. With demand for automotive-use motors expected to grow, the merger was carried out in 2007 to integrate the magnetic materials businesses and increase synergies.

## 2013 Hitachi Cable

Merged with Hitachi Cable, the Hitachi Group's electric wires and cable business, in 2013. As the pace of movement toward a low-carbon society accelerated, the merger was intended to create synergies in terms of technologies and sales in the automotive, electronics, and industrial infrastructure segments.

## 2014 Waupaca Foundry

Made Waupaca Foundry, the world's largest manufacturer of automotive-use castings with an overwhelming share of the U.S. market, a subsidiary in 2014. Expanded our business to become the world's largest supplier of iron castings.

## 2014 Hitachi Metals MMC Superalloy

Made MMC Superalloy, with extensive experience and technological capabilities in aircraft parts, a subsidiary with a view toward global growth in core industries including aircraft and energy. Hitachi Metals' Okegawa Works established in April 2018.

## 2018 Santoku

Made a subsidiary to strengthen the production system for neodymium magnets and optimize the material flow from raw materials to finished products.

## 2023 PROTERIAL

In January 2023, the Company's name was changed from Hitachi Metals, Ltd. to Proterial, Ltd. Moving forward, Proterial will continue to contribute to the realization of a sustainable society by providing high-quality products and services.

# CEO's Message

## Creating new value and working to achieve sustainable growth based on our commitment to high quality

Sean M. Stack
**Representative Director,**
**Chairman, President and CEO**

### Personal History

| | |
|---|---|
| 1989 | Bachelor of Business Administration, University of Notre Dame |
| 1990 | ABN AMRO Bank, specializing in the Metals and Mining Sector |
| 1995 | Master of Science (MS), Management J.L. Kellogg Graduate School, Northwestern University |
| 1996 | Vice President and Treasurer, Specialty Foods Inc. |
| 2001 | Vice President and Treasurer, Noveon Inc. |
| 2004 | Senior Vice President, and Treasurer and Head of Business Development Aleris Corporation |
| 2006 | Executive Vice President: Aleris Corporation<br>President: Aleris Europe |
| 2008 | Executive Vice President and Chief Financial Officer Aleris Corporation |
| 2014 | Executive Vice President: Aleris Corporation<br>President and CEO: Aleris Rolled Products North America |
| 2015 | President and CEO: Aleris Corporation |
| 2016 | Chairman and CEO: Aleris Corporation |
| 2021 | Business consultant |
| 2023 Jan. | Representative Director, President and CEO: Proterial, Ltd. |
| 2023 Apr. | Representative Director, Chairman, President and CEO: Proterial, Ltd. |

### Demonstrating Proterial's strengths to the maximum extent while carving out our own path

In January 2023, the Company changed its name from Hitachi Metals to Proterial. We then took our first steps as Proterial under a new capital partner. The Company, which had previously developed its business as a member of the Hitachi Group, a corporate group with a global reach, had reached the stage where it could determine its own destiny through capital restructuring*. This represents a major opportunity, and the policy to accelerate our transformation and growth with the aim of attaining our Vision of becoming a materials company that leads sustainability through high performance.

For the very reason that I had previously watched the Company from the outside, as Proterial's first CEO I feel that the Company has the potential to grow further in the global market. In particular, the fact that we own a large number of assets that are essential for many customers' sustainable growth represents a significant strength. In the long history since its founding in 1910, the Company has developed a succession of world-class product groups based on its outstanding technological capabilities and provided essential value to society in such areas as mobility, industrial infrastructure, and electronics. Due in particular to the Company's a large number of original products that contribute to energy efficiency, reduce $CO_2$ emissions, and deliver weight savings, I believe that we can grow significantly in the global market amid the global trend toward decarbonization.

In April 2023, the nine business units under my direct control took the initiative in business operations. At the same time, steps were taken to reorganize the Manufacturing & Engineering Division to standardize and optimize the Group's manufacturing on a global scale. In ddition, this reorganization will enable the Company to expedite decision-making relating to the execution of strategies, such as investments in financial and human capital. Moreover, each business unit will be able to respond to market trends and needs more flexibly and rapidly than ever before, thereby helping solve customers' problems and create new value.

### Fulfilling our mission of "making the best quality available for everyone" for stakeholders

All of our business activities are carried out based on our corporate philosophy which consists of our mission, vision and values.

We will make the most of our potential and engage in sustainable business activities by firmly carrying out our mission, "to make the best quality available for everyone," while fulfilling our universal role and commitment to society.

When people hear the word "quality," there may be some who recall quality as a product specification. At Proterial, however, we create new value not only for products, but also through our commitment to original technology and high quality in products, business processes, and people. We define "making the best quality available for everyone" as providing products widely to people around the world, including our customers, and this is shared by all employees, from the frontline factory sites to back office areas.

To deliver value to our customers, it is important to closely understand their needs and create the various forms of added value they desire. To that end, we understand that both sales departments, which are in direct contact with customers, as well as the research and development and production departments must work together to create value.

Making the best quality available for everyone is important not only for our customers, but also for our employees. Companies are required to take responsibility for the development of their human resources and place the

# CEO's Message

right people in the right positions so that each and every human resource can fully demonstrate their abilities. Each and every one of us must be able to fully understand our role in making the best quality available for everyone and embody our mission as their own assigned role. To that end, we must give opportunities to all employees so that they can maximize their potential. This is our obligation as leaders.

Aware that we are a member of the local community, we will also fulfill our responsibility for the sustainability of the global environment by striving to reduce the Company's $CO_2$ emissions. At the same time, we will focus on creating employment opportunities in each region where we operate. I would like us to be recognized as a company that contributes to society and develops together with the local community by building relationships of trust. Since taking office as president, I have visited various work sites and held town hall meetings not only in Japan, but also at various global bases. A question that employees would raise without fail on such occasions was the Company's policy on securing a workforce. Developed countries are facing the common social issue of a declining working population as their populations age. It is vitally important for us to be actively involved in the local community so that we can sustainably maintain and secure excellent human resources.

## Creating environmental value as a "Green Enabler"

Recognizing that our products help customers resolve environmental problems, I call our company a "Green Enabler." With this in mind, we are working to transform the global environment and society in a sustainable manner.

The global trend toward decarbonization represents a major opportunity for our company, which owns what I call world-class business assets that contribute to weight savings, reductions in $CO_2$ emissions, and safety improvements. While for the most part, people have few opportunities to observe our brand products first hand, these products are indispensable for a substantial number of end products, including automobiles, railroad cars, aircraft, and smartphones as well as for the machinery and infrastructure used to manufacture them. For example, there are cladding materials and soft magnetic materials that, despite their extremely small size, reduce the heat dissipation of smartphones and PCs and contribute to improving energy efficiency. Our rare earth magnets used in electric vehicle (EV) drive motors and the power electronics products used in power supply circuits also greatly contribute to improving efficiency. In this regard, we are proud to say that our products are used in a significant number of xEVs.

In light of the diverse range of business opportunities, we will place particular emphasis on aerospace applications going forward. I feel confident that we will be able to develop new pillars of business growth by making the most of our world-class assets, including the Yasugi Works, which has a world-class vacuum melting furnace, and the Okegawa Works, which has a large ring mill.

In addition, we are accelerating the execution of business strategies by making full use of the management resources and knowledge of our capital partners. For example, to develop our aircraft business, we are being provided with global information networks, knowledge, and human resources while promoting comparisons with competitors in the aerospace market and the formulation and implementation of strategic product roadmaps.

## The three pillars of management: People, Operational Excellence, and Growth

For the Company to develop as a truly global company and realize its vision of leading sustainability by high performance, I will be focusing on three pillars of management: people, operational excellence, and growth.

First of all, in the case of people, the most important thing that we need to do is make sure that safety is the Company's first priority and that we thoroughly adhere to the principle of action that health and safety take precedence over everything else. We will also foster a corporate culture that ensures accountability. Employees must have the spirit to decide the fate of their businesses by themselves, formulate and drive strategies, and take responsibility for the results. We will promote the empowerment of employees while promoting the delegation of authority for that purpose.

In addition, operational excellence is a very important element for a company in the manufacturing industry, as the activities that take place on a day-to-day basis on our manufacturing floors ultimately lead to value for our customers. While each factory naturally has excellent aspects, one could argue that these aspects have not been optimized and standardized on a global basis. We will optimize our global management assets by promoting the standardization of the methods and manufacturing processes that are best suited to Proterial.

One can say that, if the people and operational excellence aspects are right, the necessary conditions for growth are in place. The key here is to shift the mindset from a Japan-centric perspective to a broader, global market perspective. In particular, looking at the global mobility industry, the shift to EVs is progressing in each country, and the construction of the social infrastructure associated with EVs has begun. Even in industries such as aerospace and electronics, the main opportunities are global. It is my belief that there are still many customers, mainly in Europe and the United States, who are waiting for our world-class products that are full of diversity and originality. Allocating management resources with an even greater focus on global markets, we will strengthen the foundation for our growth as a global company.

## Achieve sustainable growth through progressive management

The "Pro" portion of our company name, Proterial, represents our three pros—professional, progressive, and proactive—but in particular I would like to carry out my duties progressively with the will to continue to take on challenges. Where do those future business opportunities lie? What are the possibilities and barriers there? While always looking forward and thinking about what to do, we will speedily execute our business strategies and put into practice "making the best quality available for everyone" for our customers and other stakeholders.

At a time when society as a whole is oriented toward sustainability, Proterial is overflowing with opportunities for global growth. Following our own growth path, we will increase our corporate value globally as a company leading sustainability by high performance. Please expect to see great things from Proterial in the years to come.

*Capital restructuring: Following a tender offer for our common stock by a corporate consortium led by Bain Capital and a series of subsequent transactions, the Company's shares were delisted on December 29, 2022, and withdrawn from the Hitachi Group on January 5, 2023. On January 4, 2023, we changed our trade name to Proterial, Ltd.

# Value Creation Process That Embodies Our Corporate Philosophy

With the Group's Corporate Philosophy as the starting point, we seek to be a high-performance materials company that supports a sustainable society. We have created a great number of original product lines through collaborative creation. These achievements are made possible through our structural and compositional control technologies centered on metals and solid relationships with a wide range of customers developed over more than 100 years since the Group's founding. Leveraging these strengths, we are investing capital in our business activities, including human capital and manufactured capital, and expanding our business activities while fixing our attention on six ESG materialities.
We develop, manufacture and provide high-performance materials that contribute to solving our customers' issues in primarily the automobile, industrial infrastructure, and electronics sectors. Through these activities, we will continue to contribute to realizing a sustainable society and further connect them to our Corporate Philosophy. The Group will continue to proactively engage in solving social issues and support the realization of a sustainable society.

## Corporate Philosophy

**Mission**
Make the best quality available to everyone

**Vision**
Leading sustainability by high performance

**Values**
Unfaltering integrity
United by respect

For details, see p.2

## Inputs

**Human capital**
- Number of employees (persons) 26,496
- Ratio of overseas employees 56%
- Training expenses Approx. ¥0.2 billion

**Intellectual capital**
- R&D expenses ¥12.2 billion
- Number of patents held 7,748 (Excluding patents held by certain Group companies)
- The Global Research & Innovative Technology center (GRIT) Established to promote sustainable growth and the research and development of advanced materials with the potential to make medium- to long-term social contributions.

**Manufactured capital**
- Capital expenditure ¥32.0 billion
- Number of global production bases Approx. 70 bases

**Social capital**
- Number of global customers Approx. 15,000 companies
- Social contribution activity expenses, including Nittoho Tatara startup support Approx. ¥1.9 billion
- Industry-government-academia collaboration, including participation in the Next-Generation Tatara Co-Creation Centre, NEXTA

**Natural capital**
- Number of zero emission works 17
- Recycling rate 8.9%
- Ratio of recycled materials used 72.0%

**Financial capital**
- Total assets ¥1,064.6 billion

+

### Proterial's Strengths

A period of continuous evolution over more than 100 years of collaborative creation

Structural and compositional control technologies centered on metals ⇄ Robust relationships with a wide range of customers

For details, see p.17

## Business Activities

Active promotion of ESG initiatives as fundamental and critical business opportunities necessary for business continuity

### Materiality

**Environment**
- Contributing to realize a decarbonized society
- Ubiquitization of resource-conserving, recyclable, and environmentally-friendly products

**Social**
- Safety and health are our overriding priority
- Diversity and Inclusion

**Governance**
- Make quality a strength
- Business model and process evolution anticipating changes in the external environment

For details, see p.20

## Outputs

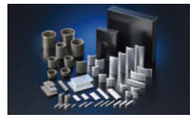
Creation of high-performance functional materials that solve customers' issues

Providing products in three markets through four business segments

### Business segments

Specialty Steel Products

Functional Components and Equipment


Magnetic Materials and Applications/Power Electronics

Wires, Cables, and Related Products

### Market segments

Automobile

Industrial Infrastructure

Electronics-related

For details, see p.5

## Outcomes

Continuing to contribute to realization of sustainable society

- Realization of a decarbonized society/circular society as a Green Enabler
- Stable supply of products essential to social infrastructure
- Sustainable growth for customers and the Group

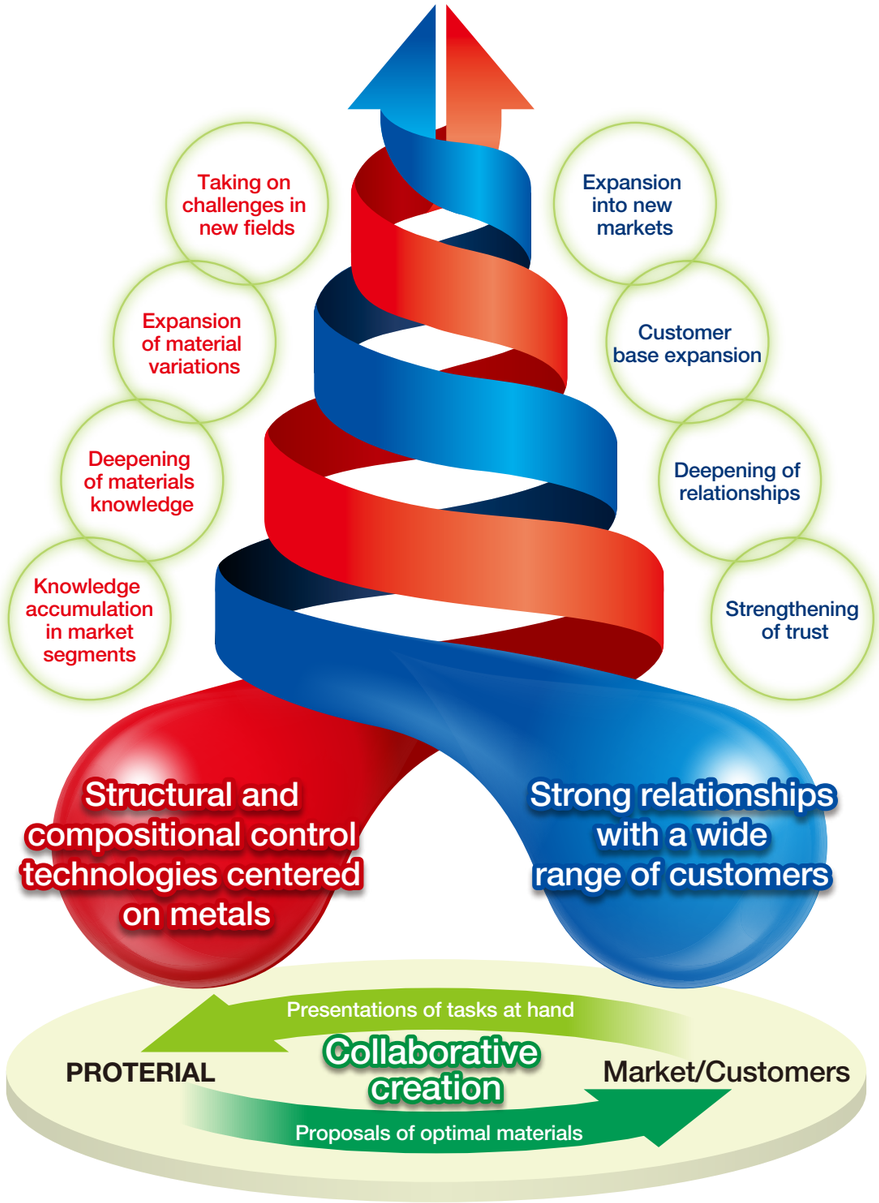
## Megatrends that significantly impact the Company's business activities

- Intensifying climate change
- AI technology development
- Increasing geopolitical and procurement risks
- Increasing demand for high-quality materials
- Insufficient human resources and competition for personnel
- Public demand for stronger governance

For details, see p.19

# Our Strengths

With its strengths lying in structural and compositional control technologies centered on metals and its strong relationships with a wide range of customers, Proterial has been providing products and services with high quality and functionality through collaborative creation with its customers. Continuing this cycle of collaborative creation will enable the accumulation of knowledge inmarket segments , the deepening of knowledge about materials, and expansion of material variations. In our relationships with our customers, we will also deepen our relationships of trust through the collaborative creation process. In this manner, as these two strengths develop in concert with their synergistic effects, there will be possibilities to take on challenges in new material fields, expand into new markets, and expand the customer base while Proterial continues to move forward and grow.




## Structural and compositional control technologies centered on metals

**By continuing to refine our knowledge and technical capabilities in structural and compositional control technologies centered on metals, we are creating products that demonstrate the potential of materials to the fullest extent.**
**Thoroughly committed to quality, we stably supply high-quality, optimal materials that exceed customer expectations.**

- By continuing to meet the needs of world-class customers in a wide range of industries, as a materials professional making proposals that comprise the diversity of product lines and materials we have acquired and a deep knowledge of our customers' industries.
- Developing highly functional, high-quality products by making full use of structural and compositional control technologies centered on metals, realizing mass production that maintains that high functionality and quality.

### Recent Major Award-winning Projects

| | |
|---|---|
| Oct. 2022 | Manufacturing method for large, nickel-based alloy forged parts for aircraft engines receives Shimane Prefectural Governor's Award at 2022 Chugoku Regional Invention Awards |
| Dec. 2022 | New SLD™-f cold work die steel that offers good toughness and machinability receives Machinery and Robot Parts Award at 2022 Cho-Monozukuri Parts Grand Prize |
| Jan. 2023 | Fiber -optic warning system for contact wire wins Masuda Award of Grand Prize at the 65th of the Best 10 New Products |
| May. 2023 | Invention of a steel annealing method that does not utilize a furnace wins Asahi Shimbun Award at 2023 National Invention Awards |

### Examples of Recent Major Product Developments

- Developed MaDC-A™ by applying magnetic domain control technology to the Fe-based amorphous alloy Metglas™. Having a high flux density and approximately 25% lower core loss than conventional products, MaDC-A™ contributes to the higher efficiency of distribution transformers.
- Developed DAC™-X steel for die-casting molds. Achieved both high-temperature strength and toughness by combining an alloy design that brings out high-temperature strength with a structure control process according to the steel grade. In particular, DAC™-X displays excellent heat crack resistance , thereby contributing to improved productivity and quality.

MaDC-A™

DAC™-X

## Strong relationships with a wide range of customers

**We have engaged in business with top-class customers in a wide range of industries for many years. Ongoing strong relationships with customers leads to opportunities for the collaborative creation of new materials.**

- Building relationships with customers in a wide range of industries by materials and components that can be applied and developed for various purposes and possessing product lines with top-class global market shares.
- Deepening mutual understanding with customers and building long-lasting relationships by continuing to create products that meet our customers' challenges.

### Main Business Partner Industries

Automobile manufacturing, automobile component manufacturing, mold manufacturing, aircraft manufacturing, industrial machinery, machine tools, home appliances and electronic equipment, communications, semiconductors, semiconductor equipment, IT equipment, steel, non-ferrous metals, construction, plant, electricity and gas businesses, rolling stock manufacturing, railway businesses, medical equipment, etc.

### Number of Business Partner Companies, etc.

We do business with more than 15,000 companies (FY2022 actual results) in approximately 70 countries and regions around the world.

- Product lines created as a result of our strengths

Supporting society, high-performance materials that help customers realize innovation (see page 7)

# Megatrends

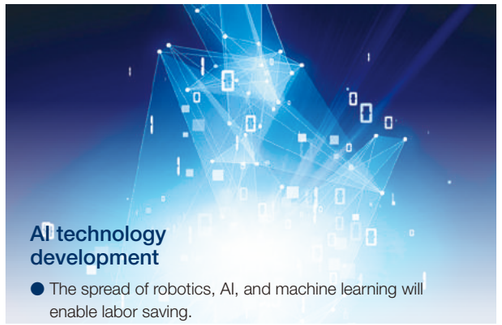
**Megatrends that significantly impact the Company's business activities include the following. In addition to our Corporate Philosophy, we have identified materiality (critical challenges) based on these changes in social issues.**

### Intensifying climate change

- Global warming has the potential to significantly impact society and the economy. Environmental consciousness is increasing.
- As demand for energy increases, especially in developing countries, the shift to clean energy is accelerating.
- As a result of such changes in the external environment, the market for environmentally-friendly products and services will expand. There will be a growth of clean mobility and an emphasis on waste reduction and recycling.

### Increasing demand for high-quality materials

- There are growing needs from customers for the application and development of new materials due to the electrification of automobiles, development of medical technologies, etc.
- Providing products and services that meet these changes in the business environment and needs is attracting increased emphasis.



### AI technology development

- The spread of robotics, AI, and machine learning will enable labor saving.
- Expansion of 3D printers will revolutionize production and manufacturing methods.
- Efficiency in production and manufacturing will increase through greater productivity due to the use of these technologies.

### Insufficient human resources and competition for personnel

- Risks including insufficient human resources and intensified competition for personnel are growing due to a shrinking working age population.
- Improving efficiency through labor savings and acquiring human resources by increasing corporate value will become critical.

### Increasing geopolitical and procurement risks

- In recent years, risks in procurement have been growing due to geopolitical risks and competition for rare metals.
- Measures such as control of difficult-to-obtain raw material will become necessary.

### Public demand for stronger governance

- Corporate transparency is growing in importance, and how it is handled affects reputational risk.
- Promotion of transparency of corporate activities will be important.



# Materiality (Critical Challenges)

**Proterial has long carried out business activities with a strong consciousness of ESG issues. To further accelerate our efforts, we have classified those materialities (critical challenges) to which to devote our energy into six categories. In addition, we have also organized measures and key management indicators related to each materiality. We have also presented SDG goals related to each materiality.**
**All materialities are reflected in concrete management measures, implemented based on the Group's Value of Unfaltering integrity and Vision of Leading sustainability by high performance . Furthermore, by continuously improving and deepening our engagements in these materialities, we will embody our Mission to Make the best quality available to everyone.**

## Materialities of Proterial

| | Materiality | Description | | Related external environmental changes (opportunities and risks) | Related SDGs |
|---|---|---|---|---|---|
| Environment | Contributing to realize a decarbonized society | Under the Vision of Leading sustainability by high performance , we will contribute to the realization of a society where greenhouse gas emissions are reduced to net zero through green manufacturing activities and efficient use of energy. | Opportunities | Increase in momentum to promote carbon neutrality among customers, suppliers, governments, etc., as climate change becomes more serious. | 7, 9, 12, 13 |
| | | | Risks | More stringent regulations on greenhouse-gas emissions, higher prices for clean energy due to increased energy demand and geopolitical risks, etc. | |
| | Ubiquitization of resource conserving, recyclable, and environmentally friendly products | Under the Vision of Leading sustainability by high performance , we will continue to contribute to the realization of a sustainable society by designing and delivering products that contribute to solving environmental issues including resource conservation and recycling. | Opportunities | Expansion of the market for environmentally-friendly products through the promotion of environmental initiatives in customer industries, growing momentum for waste reduction and recycling, development of new material technologies, etc. | |
| | | | Risks | Increased demand for recycled resources, competition for rare metals, soaring resource prices and challenges in procurement due to geopolitical risks, etc. | |
| Social | Safety and health are our overriding priority | Based on the concept of Prioritizing the protection of safety and health above all else, our highest priority is to protect the physical and mental health of our employees, their families, and our other stakeholders, including our business partners and the communities where we operate. | Opportunities | Development of robot technology for hazardous work, etc. | 5, 8 |
| | | | Risks | Lack of business successors due to intensified competition for human talent, outbreaks of infectious diseases, occurrences of natural disasters, etc. | |
| | Diversity and Inclusion | Guided by the United by respect section of our Values statement, we respect diversity and strive to create a workplace where each employee can work with a sense of fulfillment, trust, and ownership, thereby creating a team that delivers results. | Opportunities | Increase in importance and social momentum for work style reform due to intensifying competition for human talent, etc. | |
| | | | Risks | Insufficient human resources due to intensified competition for personnel, etc. | |
| Governance | Make quality a strength | To deliver high-quality products and services to customers, thoroughly implement measures to prevent the recurrence of quality problems, and make quality our strength that sets us apart from others. | Opportunities | Increase in society's interest in quality assurance, technological advances in measures against internal fraud, etc. | 9, 17 |
| | | | Risks | — | |
| | Business model and process evolution anticipating changes in the external environment | By anticipating rapid changes in the external environment and flexibly changing the way we operate, including the value provided by our products and services, the procurement of materials, and our production methods, we will continue to meet the demands of society and be a company that is needed . | Opportunities | Increase in customer demand for resilience to changes in the external environment (e.g., stable supply), development of related technologies (e.g., new materials, R&D technologies), etc. | |
| | | | Risks | Increase in geopolitical risks, outbreaks of infectious diseases, occurrence of natural disasters, etc. | |

# Providing Environmental Value As a Green Enabler

**Working to provide environmental value at each stage of the manufacturing process as a green enabler, we recognize our role in enabling customers to reduce their environmental impact through our products as a business opportunity. To provide value as a green enabler, we are working to (1) manufacture products using processes that reduce environmental impact, and to (2) develop environmentally friendly products.**

## 1 Manufacture and provision of products through processes that reduce environmental impact

We recognize that it is essential to make efforts to reduce environmental impact not only in our own company but also in the value chain. Measures we are advancing include the reduction of $CO_2$ emissions and of the resources used in each process, the promotion of recycling, and reduction in the use of harmful substances. We are focusing on these initiatives as we believe that products manufactured in processes that reduce the environmental impact indirectly contribute to reducing the environmental impact in the value chains of our customers who use those products. We also made our Scope 3 calculations based on this belief. Going forward, we will proceed with studies on managing $CO_2$ emissions under Scope 3 based on these calculation results.

### Raw Material Procurement

We give priority to business partners who are working proactively on environmental conservation as well as to materials that have a low environmental footprint, such as recycled materials.

**Main Initiative**

Expanding the use of recycled raw materials

**Examples**

- Iron scrap
- Waste from cutting magnets
- Amorphous metals, etc.

**Results (FY2022)**

Amount of recycled materials used 1,293 thousand tons

### Research and Development/ Design

We are engaged in the research, development, and design of products and services that can provide environmental value and lead to sustainable growth and social contribution.

**Main Initiative**

- Promoting the development of environmentally friendly products that contribute to decarbonization and reduction of energy use over the product life cycle
- Conducting environmentally friendly design assessments, etc. during new product development

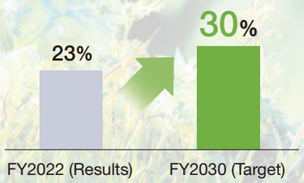
See page 23 for details

**Examples**

- Proposing high-performance ferrite magnets for xEV drive motors
- Reducing $CO_2$ emissions during the manufacture of cathode materials (page 24)
- Developing high-performance magnetic slot wedges that increase the efficiency of induction motors (page 24)

**Results (FY2022)**

New product ratio 23%




New product ratio

### Manufacturing

In addition to energy-saving measures, such as optimizing processes and layouts and improving energy efficiency, we are promoting the deployment of renewable energy.

**Main Initiative**

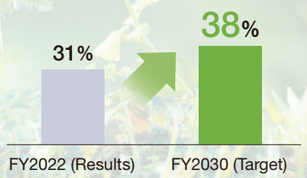
- Expanding the deployment of renewable energy
- Promotion of energy saving

**Examples**

- Installation of one of the largest photovoltaic panel installations in Japan
- Use of alternative coke

**Results (FY2022)**

Reduction in $CO_2$ emissions 31% compared with FY2015




Reduction in $CO_2$ emissions (compared with FY2015)

### Distribution/ Sales

Promoting manufacturing that takes life-cycle assessment (LCA) into consideration, we are also working to reduce environmental impact in distribution and sales operations.

**Main Initiative**

Reduction of impact on the environment caused by transportation

**Examples**

- Use of low-emission vehicles
- Improvements to load efficiency
- Reduction of transportation frequency
- Shortening of transportation routes
- Promotion of modal shift

**Results (FY2022)**

Improvement rate for reducing the use of energy for transportation 0.1% compared with the previous fiscal year

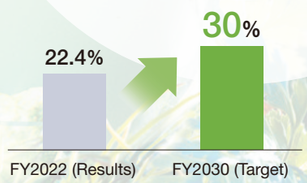
### Product use

We contribute to the reduction of environmental load with environmentally friendly products. These products include materials that are essential for xEV manufacturing, materials that reduce power loss, and materials that contribute to the long service lives of our customers' products and components.

**Main Initiative**

By their use of our environmentally friendly products, we are contributing to resolving our customers' environmental issues and those in society as a whole.

See next page for details




Sales ratio of environmentally friendly priority products

### Recyclable (Including recovery)

We are actively working on recycling that leads to the effective use of limited resources and to a reduction in the $CO_2$ emissions generated during the manufacturing process.

**Main Initiative**

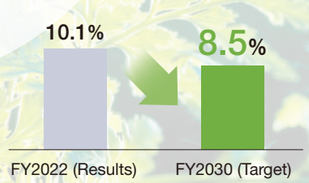
- Material recovery and reuse
- Product recovery and reuse

**Examples**

- Collection and reuse of cutting waste generated on production lines
- Recovery and reuse of amorphous materials, a major product

**Results (FY2022)**

Improvement rate for reducing amount of waste, valuables, etc. generated 33.6% compared with FY2010




Waste landfill disposal rate

# Providing Environmental Value As A Green Enabler

## 2 Development of environmentally friendly products

As a green enabler, we promote contributions to society through the provision of environmentally friendly products.
As an environmentally friendly company, Proterial develops products not only from the perspective of reducing the environmental burden during product use but also from the perspective of giving consideration to resource recycling during the manufacturing process.
As an initiative to create environmentally friendly products, we are promoting efforts to implement environmentally friendly design assessments in accordance with the IEC62430 international standard at the start and completion of development in the R&D phase. Involving the use of environmental assessment sheets to evaluate the environmental impact at each product life cycle stage during the R&D and product development phases, environmentally friendly design leads to environmentally friendly products after commercialization.

## Product development geared toward reduced environmental impact

Growing importance of strengthening $CO_2$ reduction and energy saving measures and accelerating the introduction and expansion of renewable energy toward a decarbonized society

In moving toward a sustainable society, the need to move away from mass production/consumption socio-economic activities and shift swiftly to a circular economy that makes efficient use of limited resources

**Proterial's Technologies/Products**

**Environmental value that can be provided (From development perspective)**

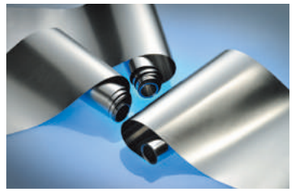
- Energy savings
- Renewable energy
- Electrification of automobiles
- Smaller/lighter products
- Long product service lives
- Resource conservation
- Reduced use of chemicals

**Fields in Which Contributions Being Made**

- **Energy**: Photovoltaic cells, wind power generation, power generation equipment, home appliances, transformers, batteries
- **Mobility**: Automobiles, xEV*, railways, aircraft
- **Industrial / Other**: Industrial equipment, water treatment, electronics

* xEV: General term for electric vehicle (EV), hybrid electric vehicle (HEV), and plug-in hybrid electric vehicle (PHEV)

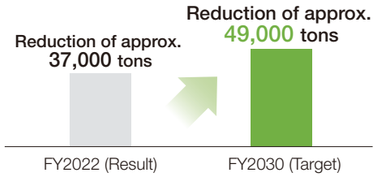
### Amorphous alloy contributes to energy saving in power transformers



Metglas™ amorphous alloy ribbon

Core materials for amorphous transformers

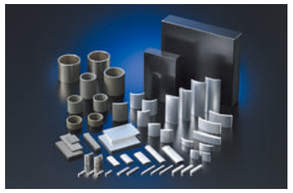
Power transformers lose power even when in standby mode. To solve that problem, since 2003 we have been providing Metglas™, an amorphous alloy that reduces standby power consumption to about one-third that in the case of conventional core materials (such as electromagnetic steel sheets) used for transformers.By providing core materials for amorphous transformers, the Proterial Group is aiming to contribute to reducing $CO_2$ emissions* by approximately 50,000 tons per year (compared with the figure for conventional magnetic-steel transformers). In March 2020, we developed a new amorphous material called MaDC-A™, which will contribute to further improving transformer efficiency.




$CO_2$ emissions compared with the case of conventional transformers

* Based on shipment volume and difference in transformer energy loss, according to Indian standards. For the $CO_2$ emission coefficient, we used the IEA's World $CO_2$ Emissions from Fuel Combustion (2017).

### Neodymium magnets contribute to the popularization of xEV vehicles



NEOMAX® neodymium magnets

In 1982, our company (Sumitomo Special Metals at that time) invented the neodymium magnet, the magnetic force of which is much stronger. Generally, as the magnetic force of the magnet gets stronger, the performance of the motor gets higher, and the motor can be designed to be smaller and lighter. In particular, in regard to the technological evolution of xEVs*, the magnet plays an important role as an indispensable material enabling motors to be smaller, lighter, more efficient, and more energy efficient. As a permanent magnet boasting the highest magnetic force in the world, the Company's NEOMAX® neodymium magnet is contributing to the improved efficiency and miniaturization of xEV drive motors and generators by providing high-performance neodymium magnets.

**Supply volume of magnets for xEVs (FY2022)**

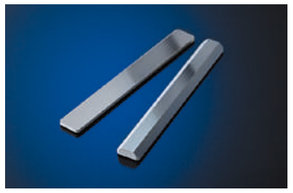
**Approx. 880,000 units*** *** Figure is Proterial estimate**

### Developed a technology that reduces $CO_2$ emissions by more than 20% when manufacturing cathode materials for lithium-ion batteries

Cathode materials

In the EV vehicle manufacturing process, lithium-ion battery (LIB) manufacturing makes up a large proportion of $CO_2$ emissions. Of those, the $CO_2$ emissions derived from the cathode starting materials account for the largest proportion. In the manufacture of cathode materials, Proterial therefore developed a technology that can produce cathode materials without going through the previously required process of converting nickel into $Ni(OH)_2$ (nickel hydroxide) to produce the precursor, which is the starting material. Through this technological development, it became possible to reduce $CO_2$ emissions during cathode material manufacturing by 20% or more when compared with the production method based on the solid phase reaction method established by our company.

### Development of high-performance magnetic slot wedge that contributes to higher efficiency of induction motors



Magnetic slot wedge

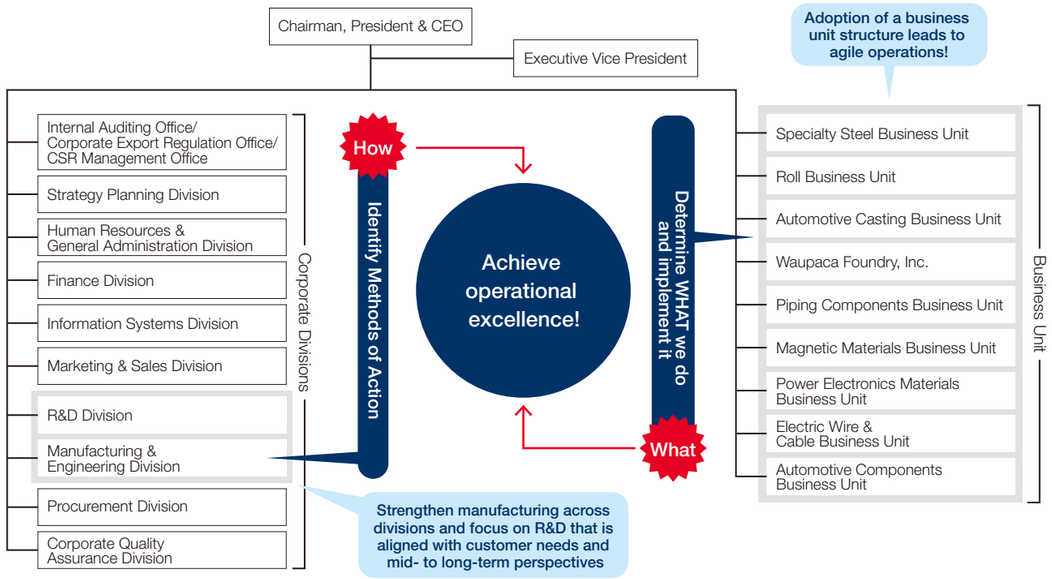
It is said that motors are responsible for 40% of the world's power consumption, and thus increasing their efficiency represents a key issue. Therefore, the existence of magnetic slot wedges that achieve high efficiency simply by mounting without changing the structure or size of the motor are drawing attention. By utilizing a new technology that bonds magnetic particles together, Proterial has developed a new type of magnetic slot wedge that does not contain any resin. This new technology has made it possible to increase the density of the magnetic particles, resulting in a high magnetic permeability that is about double the level of existing magnetic slot wedges. As a result, in a general 3.7kW four-pole motor we were able to improve efficiency by 0.5% compared with motors with existing magnetic slot wedges.

# Enhancing and Demonstrating the Full Potential of Our Strengths

**Starting in April 2023, Proterial enhanced its organizational structure to enable dynamic operations in response to changes in its environment and to promote global growth. By optimizing manufacturing on a global basis under this stronger organizational structure, the Company will realise our mission of "eMake the best quality available to everyone".**

## Organizational structure for realizing operational excellence

Proterial has a long history of practicing outstanding manufacturing on an individual product, business, and site basis. Under the new organizational enhancement measures, the Company implemented two major reforms, namely a shift to a business unit structure and the establishment of the new Manufacturing & Engineering Division. These reforms will enable us to more precisely capture market changes and needs on a global basis, as well as to better address market needs through standardized and optimized manufacturing practices across the globe. Working in concert, the business units and corporate departments will achieve operational excellence and deliver high-quality products to more customers throughout the world than ever before.




## 1 Shift to business unit structure

### Realizing dynamic business management

Proterial is involved in a wide range of business domains, which are respectively facing rapid and ongoing changes in the intentions and needs of the customers with whom the Company directly engages, the end users of products, and society as a whole. Against this backdrop, the Company shifted from a two-business division structure to a nine-business unit structure. The business units are directly overseen by the CEO, while each unit addresses its respective market and competitive environment, customer needs, and technology trends, and executes growth strategies by more rapidly and flexibly allocating resources. Moreover, the business units will engage more fully in communication with customers than ever before, and enhance their proposal capabilities and speed, all while energizing collaborative creation with customers.

## 2 Establishing the New Manufacturing & Engineering Division

### Standardizing and optimizing manufacturing

The Manufacturing & Engineering Division will go beyond manufacturing itself to play a role that horizontally links the manufacturing activities of each business unit from every facet involved in manufacturing, including safety, capital investment, and environmental compliance. The Manufacturing & Engineering Division will therefore take the lead in sharing best practices and promoting the standardization and optimization of manufacturing process control, improvement methodologies, and other aspects on an international scale. In addition, it will establish a structure for implementing a PDCA cycle that includes identifying issues at each manufacturing site, while formulating and executing action plans for improvements.

| Manufacturing & Engineering Division Initiative Themes |
|---|
| Share and standardize best practices |
| Construct systems for identifying the situation and issues at plants, implement a PDCA cycle for improvement, etc. |
| Accelerate the launch of mass production for developed products, perfect reliable mass production technologies, continuously improve product quality |
| Execute investments from a long-term perspective toward realizing the vision |
| Deeply cultivate safety activities intended to fully achieve accident-free worksites |

The Manufacturing & Engineering Division will identify "How we do" (methods of action) as it leads advancements in the Company's manufacturing practices. Each business unit will then determine and execute "What we do" (courses of action, and who will make and sell what where) as those responsible for manufacturing.

## Establishing the R&D Division

The Company established the R&D Division for the purpose of formulating and enforcing R&D policies that align with the Company's medium- to long-term growth strategies. The business units will take charge of R&D focused on short- to medium-term plans, while the R&D Division will undertake the challenge of DX promotion and other disruptive and discontinuous innovations that incorporate new technologies.

### Global Research & Innovative Technology center: GRIT

The Corporate Research Lab of Our Company was established to promote sustainable growth and the research and development of advanced materials with the potential to make medium- to long-term social contributions. GRIT goes beyond simply assembling the knowledge possessed by the Company, however, and actively engages in open innovation. In this way, GRIT guides the development of the Company's businesses in a manner that addresses the dramatic changes in society through the application of technology from an innovative perspective and in a fast-paced manner.

# Interview with General Manager of Manufacturing & Engineering Division

Executive Officer
General Manager, Manufacturing & Engineering Division
Toru Taniguchi

## Realization of mission to make the best quality available to everyone by co-creation with customers

### Q:Where would you say Proterial's strengths lie?

Our mission is to make the best quality available to everyone, which means bringing new levels of value to customers all around the world . From a manufacturing point of view, our strengths lie in responding to the advanced demands from and challenges faced by our customers, creating unique, high-quality materials that feature high functionality so that they exceed our customers' expectations, and providing these materials at mass manufacturing levels at our plants. In other words, by building up a track record of collaborative creation. Through repetitive collaborative creation with customers who are in leading positions in a wide range of industries, I believe that we have been accumulating strengths while continuing to help solve the issues faced by more customers.

### Q:From what technologies or other factors will you derive the source for fulfilling your mission to make the best quality available to everyone?

I believe our mission to make the best quality available to everyone is underpinned by our structural and compositional control technologies centered on metals and our strong relationships with a wide range of customers. Even with the same metal composition, it is possible to create materials that possess the desired advanced properties by controlling to a high degree their structure and composition, such as by making the metal structure extremely fine while minimizing the number of impurities. In the course of our more than 100- year history, we have accumulated knowledge about metal structure and composition control technology, from R&D to mass manufacturing.
With this metal structure and composition control technology as our core strength, we have been acquiring new knowledge and advanced technologies in response to new challenges from our customers by repeating the cycle of proposing and developing optimal materials and commencing their mass manufacture. This repetition causes the relationships with our customers to deepen and provides us with opportunities to develop next-generation materials and take on challenges in new markets. The barriers to market entry are high for highly original, next-generation products that are ahead of their time, but by spiraling up while mutually interacting those two factors—our metal-based structure and composition control technology and strong relationships with customers—it will be possible to materialize them for the first time.

### Q:What role does the Manufacturing & Engineering Division play?

In a form that links the functions of the highly competitive technologies and manufacturing capabilities that each business possesses, the role of the Manufacturing & Engineering Division is to optimize and standardize that stock of knowledge on a global scale. At the same time, our providing individual projects undertaken by each base with back-up support from the corporate side leads to the realization of best practices.
Previously, the Technology Development Division was in charge of R&D and manufacturing technologies. Recently, the R&D functions and the manufacturing technology development functions have been reorganized into the R&D Division and Manufacturing & Engineering Division, respectively. The latter will work together with each business division and the R&D Division while realizing our mission to make the best quality available to everyone.
I take pride in the fact that the Company's products have a competitive edge in terms of their high functionality and quality. However, manufacturers armed with the weapon of low prices are emerging in areas where advanced functions are not required to such a great extent. Thus, it is necessary for us to further improve our mass manufacturing through productivity improvements while maintaining our advanced functions and high quality.
As a group of experts, the Manufacturing & Engineering Division leads each business division in all areas related to manufacturing, such as ensuring safety, improving production technologies, enhancing efficiency, and initiatives for the environment, while optimizing the manufacturing of the Group on a global scale. On a different level, I am always telling Manufacturing & Engineering Division members that we must remain the ultimate supporters of our business divisions and plants. When a frontline workplace encounters difficulties, we provide full support with a high degree of expertise, but the main role of manufacturing is that of the site alone, and we are aiming to enable sites to operate autonomously. Also, to remain their ultimate supporter, I tell members that it is important to make a habit of visiting frontline sites in person.
The Manufacturing & Engineering Division comprises departments responsible for the promotion of innovation in manufacturing, safety, the environment, and investment. While cherishing the image of working hard on the factory floor, which the word monozukuri (manufacturing) evokes, we also gave consideration to manufacturing in its broader sense, which includes everything related to manufacturing inside a plant, such as equipment and human resources, and the entire supply chain outside a plant. We wanted to be an organization that covers the full gamut of manufacturing, so we took the name Manufacturing & Engineering Division.

### Q:What initiatives is the Manufacturing & Engineering Division currently advancing and what is its future direction?

At the present time, we are initiating steps to create a mechanism called the Proterial Operating System. This is a mechanism designed to ascertain and confirm the situation in which each plant is placed and the direction that they should ideally be taking, and to take action to improve the issues faced by each site by means of standardized procedures. First of all, we are making headway with organizing the KPIs and other factors that should be ascertained. Safety is the top priority in manufacturing. SQDC KPIs, which besides safety include quality, delivery, and cost are also important. In addition, continuous improvement and investment are required in terms of human resources, equipment, and even the environment. By means of the Proterial Operating System, we will build a management mechanism that will link the KPIs required for on-site self-management with the KPIs required from a management perspective, such as return on investment and cash flow. At the same time, we are aiming to create a mechanism that enables both management and improvement to work smoothly by incorporating a system for implementing improvement activities to address the issues that are besetting each plant. Also, by implementing PDCA cycles for improvements at each site, I would like to bring about evolution in efficient manufacturing while contributing to improvements in corporate value by promoting the creation of social value, such as strengthening our cost competitiveness and reducing our environmental impact.
As we are a new organization, the challenge will be to secure sufficient human resources for both this division and the sides responsible for manufacturing technologies in each business division. As decarbonization becomes an urgent issue on a global scale, environmental measures and related capital investment will also have to be implemented at appropriate times, not from short-term perspectives but looking five or even 10 years hence. Based on such financial and cost perspectives, we will prioritize the issues faced by each business division and fulfill our mission to make the best quality available to everyone through appropriate resource allocation and manufacturing technologies.

# Technologies Continuously Refined Together with Customers

Through a continuous cycle of material creation that is ideally suited to the sophisticated demands and challenges of its customers and the perfection of these materials to a level that can be provided to its plants for mass production, Proterial has developed a succession of unique materials that boats high functionality and quality which its has then deployed to new applications and market domains. Using the example of CVT belt materials, we will introduce our material structural and compositional control technologies that are pioneering the future of the Company. Specifically, we will look at how we developed CVT belt materials in the specialty steel business, and how we went on to develop aircraft-related materials based on this technology.

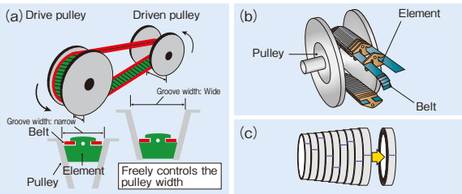
## 1 Metal Structural and Compositional Control Technologies and CVT Belt Materials

When conceiving of new products and businesses, the metal structural and compositional control technologies that we have built up over the years serve as a source of value creation. Relying on thermal treatment and additive element optimization, these technologies control the microstructures that determine the toughness, wear resistance, heat resistance, workability, and other characteristics of metals. By enhancing these structural and compositional control technologies, we are able to provide metals with a variety of characteristics, even when their chemical composition is the same. Moreover, we have provided metals that meet the demands of our customers by refining these technologies.

As a specialty steel product, CVT belt materials also serve as an example of a component material that we developed by leveraging our structural and compositional control technologies. CVT belt materials are designed for the continuously variable transmission (CVT) used in automobile engines, for which we currently boast the world's top share (Proterial estimate). CVT belts are made by layering about ten flat belts of metal just seven to eight millimeters wide, and securely fabricating these belts into continuous strips. CVT belts thereby function to convey motive power from the engine to the tires, and to govern gear shifting and other transmission functions when driving. Because CVT convey motive force through a belt instead of a gear, they eliminate shock when shifting and enable continuous shifting that matches the engine revolutions required for high combustion efficiency. For this reason, the demand for CVT has also expanded as automobile manufacturers have pursued greater fuel efficiency.

The CVT belt also continuously rotates while the automobile is in motion, so the metal from which they are made repeatedly undergoes bending and stretching under a state of constant load. The belt will therefore tear if there is even the tiniest of defects, which is why CVT belts require a high fatigue strength that can withstand a travel distance of 200,000 kilometers, or more than 10 million rotations, to meet the usage environment of automobiles. Possessing the world's highest level of fatigue strength by leveraging the metal structural and compositional control technologies that it has accumulated to date, and by continuing to refine these technologies together with its customers, Proterial has enabled the mass-production of CVT belt materials. As a result, we have contributed significantly to higher performance transmissions with improved reliability, and to greater fuel efficiency for automobiles.

### CVT Mechanism and Structure




(a) CVT Mechanism (b) CVT Metal Belt Structure (c) Ring Set (belt) Structure

### CVT Belt Material

Maraging steel belt materials developed for the continuously variable transmission (CVT), which is a major contributor to a fuel-efficient engine. Based on metallographic innovations, we have developed thin cold-rolled materials with world-class fatigue strength that contribute to upgraded transmission performance and increased reliability.

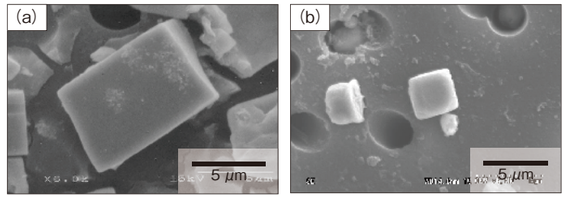
## 2 From CVT Belt Material Development to Mass-production

Since the 1990s, we have advanced the development of technologies designed to constrain the growth of nitrides contained in metals (TiN) using our structural and compositional control technologies for the energy domain. Meanwhile, in the automobile domain, we have built collaborative relationships with Japanese automobile manufacturers through the development of highly complex specialty materials used under harsh environments as part of an effort that has primarily focused on forging materials for engine valves. The relationships of trust we have fostered with our customers have also served as the motivation for why our customers choose us as their development partner when conceiving new products. The development of CVT belt materials was similarly triggered when a Japanese automobile manufacturer who recognized our materials development capabilities approached us about whether we could engineer a CVT belt material with a refined TiN grain suited to the usage environment of automobiles.

In general, when a component undergoes fatigue fracturing, the fractures often begin from the surface along which a material has been cut. In order to achieve a fatigue life that can withstand the more than 10 million rotations corresponding to the usage environment of automobiles, however, the material surface must be free from defects. Specifically, the inside of the metal must also be devoid of contaminants to the greatest extent possible. Materials with a high nitrogen content will form larger TiN grains, which will in turn shorten the fatigue life of the metal. For this reason, we had to address the extremely challenging demand to constrain the size of the grains to less than 10 microns, about half the conventional grain size.

In fact, we required two and a half to three years to achieve the customer's required standard after receiving their development request. At the outset of mass-production, the acceptance rate for the TiN dimensional standard was only about 10%, yet we continued to develop the technology further in order to improve the yield of the production process. As we did so, we came face-to-face with a new challenge, namely that different samples would demonstrate varying TiN grain sizes and unstable quality, even at the same level of nitrogen content. Therefore, we patiently tracked, evaluated, and verified the production process, and eventually discovered that the TiN grain size correlated to the magnesium content of the material. Having identified the technological background, we moved on to analyze the mechanisms and proceeded with quality control that actively utilized magnesium. This effort improved yield and opened the path to stable mass-production. Ultimately, this special process for adding and controlling additive elements established a mass-production system with a TiN dimensional standard acceptance rate of nearly 100%.

As a product that helps increase the fuel efficiency of automobiles, CVT belt materials were later adopted by other Japanese automobile manufacturers and overseas automobile manufacturers alike. During this period, we also addressed new demands from our customers, including detoxifying the impurities in the metals, based on the test results and knowledge we had acquired through our past technological developments. CVT belt materials thus came to be equipped on a growing number of vehicle models starting in the 2000s, and became a mainstay product that has driven our sales upward since 2010.




(a) TiN Generated by Conventional Technologies (b) TiN Generated by the Technology We Developed

## 3 Technological Deployment to the Aircraft Domain

The TiN grain refinement technology we acquired through the development of CVT belt materials expanded in new ways. This included application as an aircraft-related material.

As our next pillar of business, Proterial is now focused on developing aircraft-related materials indicating an outlook for market expansion over the medium- to long-term. We have therefore made large-scale investments at the Yasugi Works as the Company's main manufacturing plant, including a 24-ton vacuum induction melting furnace, which is also used for producing CVT belt materials, a 10,000-ton free forging press, and a high-speed radial forging machine. We established Japan Aeroforge, Ltd. (Kurashiki, Okayama Prefecture), with Kobe Steel, Ltd., and others in 2011, investing in a 50,000-ton hydraulic forging press–one of the largest in the world. In addition, Hitachi Metals MMC Superalloy, Ltd., which has an extensive track record and technological capabilities in aircraft-related materials, increased its product competitiveness by newly installing an 840-ton ring rolling mill and a large heat treatment furnace. In October 2017, we included Hitachi Metals MMC Superalloy in the Company's scope of consolidation as a wholly-owned subsidiary. As we made progress in these efforts, we received a request to develop a material for aircraft jet engine shafts in a way that applied the technologies for automobile CVT belt materials.

Although the performance required of aircraft-related materials is vastly different from that of automobiles, we achieved the stable control of fatigue strength for different requirements using control technologies perfected through our technological developments for automobiles.

In this way, one major feature of our structural and compositional control technologies is their ability to create different characteristics even for the same material. Proterial has enabled technological development for a broad range of manufacturers in the automobile market area by continuously refining the ingenuity of these technologies. At the same time, we have successfully deployed products at a relatively early stage beyond the domain of automobiles in the aircraft market area. Leveraging our structural and compositional control technologies we will continue to expand the scope of available materials, enhance technologies, and maximize the potential possessed by materials, thereby providing ideal materials that contribute to the solutions for our customers' challenges.

10,000-ton Free Forging Press

High-speed Radial Forging Machine

Yasugi Works

# R&D Activities & Achievements

**Proterial Group continuously invests in R&D on advanced materials that contributes to sustainable growth and social contribution, particularly in regard to strengthening the creation of new businesses and products that contribute to an environmentally friendly society. At the same time, we are shortening the development period by utilizing digital technologies such as AI and materials informatics.**

## Research and development expenses (FY2022)

| | |
|---|---|
| Research and development expenses | 12,150 (millions of yen) |

## Key R&D Themes by Segment (FY2022)

(millions of yen)

| Segment Name | Key R&D Themes | Research and development expenses |
|---|---|---|
| Specialty Steel Products | Development of materials, manufacturing methods, and related technologies for high-grade specialty steels, various rolling mill rolls, and metal 3D additive manufacturing for the fields of molds and tools, electronic materials, industrial equipment materials, aircraft and energy-related materials, etc. | 3,467 |
| Functional Components and Equipment | Development of high-grade ductile iron products, cast-iron products for transportation equipment, heat-resistant cast steel parts for exhaust systems, pipe fittings, valves and other equipment piping components | 2,607 |
| Magnetic Materials and Applications / Power Electronics Materials | Development of high-performance magnets, high-frequency parts and materials for information terminals, amorphous metal materials, nanocrystalline soft magnetic materials, various other magnets and ceramic products, and their applied products | 1,720 |
| Wires, Cables and Related Products | Development of materials, manufacturing process technology and connection technology related to various electric wires and windings for industrial, vehicle/automotive, equipment, medical, etc., as well as electrical components and hoses for automobiles, industrial rubber, etc. | 4,356 |

## R&D Activities & Key Achievements (FY2022)

**In fiscal 2022 , our R&D activities produced the key achievements listed below. These achievements are anticipated to contribute to environmental and social issues such as product-weight reduction, fuel efficiency and energy conservation, and decarbonization in industrial infrastructure and electronics-related fields as well as automotive related fields, where the shift to electrification (xEV)*1 is expected to continue.**

| Segment Name | Key Achievements |
|---|---|
| Specialty Steel Products | •We have developed and commenced sales high-performance Cast Roll for Cold Rolling (CR2) for use in steel cold rolling.*2 CR2 has high abrasion resistance (roughness retention) and accident resistance*3 required for cold rolling processes, and its introduction into rolling processes will contribute to improved productivity. |
| Functional Components and Equipment | •We have commercialized valves that use three types of nickel-based alloys as the main body material. ASTM A494 Gr.CW12MW (our trade name MA276, equivalent to Hastelloy C-276), which shows excellent corrosion resistance under both oxidizing and reductive conditions; ASTM A494Gr.CX2MW (our trade name MA22, equivalent to Hastelloy C-22), which has even better corrosion resistance under oxidizing conditions than MA276; and MAT21™, our original alloy with enhanced localized corrosion resistance. These products are used in processes at petrochemical basic product and derivatives plants that handle corrosive fluids in generation processes. |
| Magnetic Materials and Applications / Power Electronics Materials | •We have developed a new magnetic wedge for motors by developing our proprietary powder metallurgy technology accumulated to date. The high magnetic permeability and reliability of this product will contribute to lower power consumption and $CO_2$ emissions in society by further realizing low-loss and high-efficiency motors.<br>•Simulations have confirmed that optimizing the design of a motor that applies our high-performance NMF™15 ferrite magnet (hereafter referred to as ferrite magnet motor) achieves the same level of output as xEVs drive motors that use neodymium magnets. Ferrite magnet motors do not use the rare earth materials like neodymium, dysprosium or terbium, which are particularly limited in quantity, and are therefore expected to reduce resource risks and costs in response to the growing demand for xEVs. |
| Electric-wire Materials | •To decarbonize electric wires and cables, we have developed cabtire cables that can reduce $CO_2$ emissions by around 25% compared to conventional cables. The application of silane cross-linking technology has enabled lower $CO_2$*4 emissions in manufacturing processes (raw material purchases, product manufacturing).<br>•We have developed silicone cables with new UV-C sterilization treatment resistance and is an addition to our medical-use silicone cable brand SilMED, which combines high slipperiness and chemical resistance. This coating technology is expected to be applied not only to medical wire cables but also to various types of sterilizable medical equipment. |

*1 General term for electric vehicles (EV), hybrid electric vehicles (HEV), plugin hybrid electric vehicles (PHEV)
*2 A rolling process that is basically performed at normal or room temperature. The temperature of the material rises due to the heat generated when the material is deformed by rolling.
*3 Rolling accidents are defined as cracking or burning on the surface of rolls during rolling due to sudden thermal load, etc. The resistance to these rolling accidents is comprehensively evaluated based on the degree of cracking or burning and the numerical value of fracture toughness.
*4 $CO_2$ emissions are calculated using the CFP (Carbon Footprint) calculation method.
*Hastelloy and C-22 are registered trademarks of Haynes International, Inc.

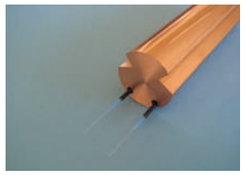


## Topic 1

### Wins Masuda Award of Grand Prize at the 65th of the Best 10 New Products organized by Nikkan Kogyo Shimbun

### Fiber-optic warning system for contact wire

Shinkansen bullet trains and other rolling stock run by receiving power from contact wires above the track through pantograph units fitted to their rooftops. Due to the structure where pantographs and contact wire are in contact, in the worst cases the contact wires break due to the effects of friction, preventing trains from running. To prevent this, conventional warning systems place a metal detection line inside the contact wire and monitor friction based on the presence or absence of a flowing current. However, this approach means that detection can only be performed at night when no noise is produced by running trains.
The fiber-optic warning system for contact wire that JR Central and Proterial jointly succeeded in commercializing uses fiber-optics for the detection line, making it possible to constantly monitor the state of contact wires and ascertain the progression of friction in real-time. This makes it possible to prevent contact wire breakage incidents before they occur.
Proterial will continue to respond to increasingly diverse needs as it strives to develop the high-performance materials that support social infrastructure.



Fiber-optic warning system for contact wire

## Topic 2

### Awarded the 2023 Asahi Prize National Commendation for Invention

### Invents steel annealing method that does not use heating furnaces

Depending on the temperature at which the steel is heated and the speed at which it is cooled, the microstructure of the steel changes (transforms) mainly to austenite, pearlite, martensite. Heat treatment is the process of intentionally transforming steel by utilizing these characteristics to obtain the appropriate properties for an intended purpose.
This invention is related to annealing methods for transforming to a pearlitic structure without using a heating furnace in semi-finished steel products such as hot mold steel after hot working. The heat generated during the transformation from austenite to pearlite (latent heat of transformation) is utilized by placing the material in an incubator, and the material is successfully converted to pearlite. No heating furnace, fuel or electricity is required, making it possible to reduce $CO_2$ emissions from these sources. It is also possible to move steel while keeping it warm, enabling efficient production that takes into consideration the next process.

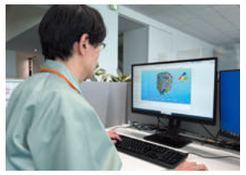
Annealing work using an incubator

## Topic 3

### Multiscale Integrated Simulator for Metal Additive Manufacturing

### Develops AM-DT

Proterial, in collaboration with the Institute of High Performance Computing at Singapore's A*STAR (Agency for Science, Technology and Research ), has developed a multi-scale integrated simulator for metal additive manufacturing.
Metal additive manufactured products are made in a one-part, one-sheet manufacturing process, so there has been limited means to evaluate the functionality of the products. This has prevented the expansion of applications because information necessary for design cannot be obtained. The Additive Manufacturing Digital Twin (AM-DT), an integrated simulator developed by Proterial, enables computer simulation of physical phenomena in metal additive manufacturing—including metal powder feeding, local melting mainly by lasers, rapid solidification, and product cooling—at different scales to suit each process. This makes it possible to reproduce metal additive manufacturing in a virtual space (realize digital twin*) and one-stop operation from product design, manufacturing plan development, quality design to evaluation in a virtual space. This will help expand and popularize of metal additive manufacturing applications.



* Digital twin: Reproduces real space information in digital space.

Promoting Materiality-related Initiatives

# Materialities/Major Measures/Key Management Indicators

Along with setting major measures to respond to six materialities identified for the environment, society, and governance, the Group has set indicators to manage the progress of major measures. We are implementing steady measures to achieve the target values of these key management indicators by FY2030.
Through achieving these targets, we aim to greatly increase our corporate value as a materials company that "leads sustainability by high performance," along with developing superior competitiveness at the top level of industries.

Meanwhile, the responsible executive officer oversees the setting of related targets as well as the planning and implementation of measures for these critical challenges. Matters relating to the achievement of these targets and plans are reported to and deliberated by the Executive Committee, which is presided over by the Representative Director, President and CEO, and managed through reports to the Board of Directors as appropriate.

| | Materialities | | Major Measures | Key Management Indicators | FY2022 actual results | FY2030 target |
|---|---|---|---|---|---|---|
| Environment | Contributing to realize a decarbonized society | P36 | Expansion of deployment of renewable energy and promotion of energy saving | Reduction in $CO_2$ emissions (compared to FY2015) | 31% (emission: 1,913 kt-$CO_2$) | 38% (emission: 1,723 kt-$CO_2$) |
| | | | | Amount of renewable energy deployed | 483 MWh/year | 35,000 MWh/year |
| | | | | Improvement in energy consumption unit*1 (compared to FY2015) | 20% | 14% |
| | Ubiquitization of resource-conserving, recyclable, and environmentally-friendly products | P42 | Expansion of environmentally-friendly products that contribute to decarbonation and reduction of energy use over the product lifecycle | Sales ratio of environmentally-friendly priority products*2 | 22.4% | 30% |
| | | | Expansion of use of recycled raw materials | Waste landfill rate | 10.1% | 8.5% |
| | | | Effective use of water resources | Improvement rate of water use (compared to FY2010) | 33.8% | 38.5% |
| Social | Safety and health are our overriding priority | P43 | Promotion of activities to disseminate basic rules (ironclad rules) to prevent disasters and make facilities intrinsically safe | Frequency rate of occupational accidents*3 | 0.45 | 0.15 |
| | | | | Number of serious accidents*4 | 2 | 0 |
| | Diversity and Inclusion | P45 | Reflection of employee survey results in management | Ratio of positive evaluation*5 of engagement indicators | 71% | TBU*12 |
| | | | Thorough implementation of diversity and inclusion | Diversity in recruitment ratio (women, foreign nationals, career hires) *6 | 66.3% | 50% or more |
| | | | | Ratio of female managers *6 | 2.2% | 5.0% |
| | | | | Diversity ratios at the executive level positions (women, foreign nationals, career hires) *6 | 35.7% | 30% or more |
| Governance | Make quality a strength | P47 | Data collection without human intervention | Percentage of automatic inspection and testing | 28% | 100% |
| | | | Expansion of activities to minimize and control variation in the 4Ms (huMans, Machines/equipment, Materials, and Methods) | Major quality incident index*7 | 0.4 | 0 |
| | | | Improved human resource development | —*8 | — | — |
| | | | Thorough implementation of actions with integrity at the core | Ratio of positive evaluation*9 of compliance awareness, etc. | 84% | 90% or more |
| | Business model and process evolution anticipating changes in the external environment | P40, P56 P49 P25, P31 | Promotion of comprehensive risk assessment and countermeasures through risk management | —*8 | — | — |
| | | | Diversification of procurement sources in response to changes in the procurement environment | Number of items required for source diversification | 11 | 0 |
| | | | Acceleration of R&D and realization of safe, high-quality production through DX | Manufacturing lead time*10 (compared to FY2022) | Base Year | 50% |
| | | | | Comparison of new products *11 | 23% | 30% |

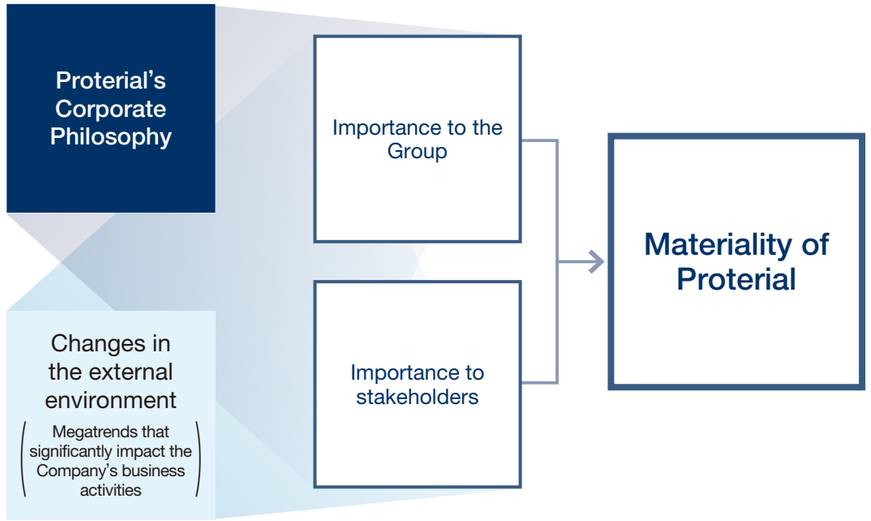
*1. Energy consumption unit: Energy consumption divided by sales
*2. Environmentally-friendly priority products: Selected products that are being expanded in terms of business strategy and contribute highly to solving environmental issues such as climate change and effective use of resources. To strengthen environmentally-friendly products, we are currently studying definitions of management indicators, target values, and strategies to achieve them.
*3. Frequency rate of occupational accidents: Number of fatalities and injuries due to occupational accidents divided by total actual working hours x 1,000,000 (number of accidents per 1 million working hours in a calendar year).
*4. Number of serious accidents: Serious accidents include fatalities, serious injuries equivalent to fatalities (disabling injuries of Severity 7 or higher), and accidents in which three or more persons are injured at the same time.
*5. Ratio of positive evaluation of engagement indicators: Positive response rate of employee survey sustainable engagement indicators. Changes to the survey framework and target questions for engagement indicators in FY2022. With plans to review survey methods, target values are not presented.
*6. Non-consolidated data.
*7. Major quality incident index: Index of accidents that caused serious damage to customers' bodies or property, or serious damage to society (including violations of laws and regulations), with FY2020 set as 1.
*8. Indicators that are not suitable and those with a non-disclosure policy are indicated with "—".
*9. Ratio of positive evaluation: Changes to the survey framework and engagement indicator target questions in FY2022.
*10. Manufacturing lead time: Percentage decrease in the time from the start of manufacture to the delivery of products for priority products. FY2022 figures are used as the benchmark.
*11. New product ratio: Ratio of sales of new products to consolidated sales revenue. New products are registered as those that open up new markets or new applications, or have significantly improved performance. A product that has been become generalized three years after registration as a new product is removed from the register.
*12. TBU : To be updated

Promoting Materiality-related Initiatives

# Process of Identifying Materiality

Proterial's ESG activities in 2022 largely targeted six specific materialities (critical challenges). In identifying these materialities, we began by selecting social issues and then extracting critical challenges based on an evaluation of their importance to the Company and its stakeholders. Building on the aforementioned, materialities were identified through repeated discussions among all Executive Officers and managers in charge of business divisions with final reviews conducted by the Executive Committee.

## Approach for Identifying Materiality




## Process of Identifying Materiality

| | |
|---|---|
| 1 Extract social issues | Extract social issues with reference to multiple international standards related to ESG. |
| 2 Evaluate importance to the Group | All Executive Officers and managers in charge of business divisions evaluate the materialities of the extracted social issues as they relate to Proterial's business, taking into consideration the Group's Corporate Philosophy and changes in the external environment. |
| 3 Evaluate importance to stakeholders | Furthermore, through discussions with experts in the industries in which the Group develops its business, we evaluate the importance of each issue from the perspective of our stakeholders (customers, business partners, etc.). |
| 4 Extract critical issues | The results of evaluation lead to the extraction of social issues that are of high criticality to both stakeholders and Proterial. |
| 5 Identify materiality | Materialities are identified through repeated discussions among all Executive Officers and managers in charge of business divisions. Final reviews are conducted by the Executive Committee. |





Promoting Materiality-related Initiatives

# Contributions to the Realization of a Decarbonized Society/ Ubiquitization of Resource-conserving, Recyclable, and Environmentally-friendly Products

# Proterial Group's Response to Climate Change

Disclosure Based on TCFD Recommendations (June 30, 2023)

## 1 Response to TCFD Recommendations

As countries around the world intensify their efforts to address climate change in accordance with the Paris Agreement, the Japanese government announced in October 2020 its policy goal of reducing emissions of greenhouse gases, as typified by carbon dioxide ($CO_2$), to virtually zero by 2050. Accordingly, companies are expected to be more proactive than ever in their efforts to transition to a decarbonized society.
The Group considers the impact of climate change on its business as one of our most-important management issues, and we believe that enhanced disclosure of climate-change-related information is a key factor in building a relationship of trust with our stakeholders. Accordingly, in June 2021, we registered our support for the TCFD* Recommendations, and in accordance with the TCFD Recommendations, the Group will continue to enhance our disclosure of information on the impact of climate change on our business activities.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

* The Task Force on Climate-related Financial Disclosures (TCFD) was established by the Financial Stability Board (FSB) in 2015 in response to requests from the G20 for climate-related disclosures. The TCFD published its final report in June 2017, in which it recommends companies to disclose items related to climate change-related risks and opportunities.

## 2 Governance

In April 2010, the Proterial Group established the Group Basic Policy on Environmental Preservation to clarify the Group's unified approach to environmental management. In June 2021, we registered our support for the TCFD Recommendations,and in August of that year, following a report to the Board of Directors, we established a new environmental policy named"Aiming for Green Growth while taking Risk as Opportunity."
The Proterial Group Environmental Committee (Group Environmental Committee, hereafter) has been established as a framework for promoting environmental activities such as climate-change countermeasures. The Group Environmental Committee is chaired by the Environment Executive Officer, and its executive office is the Environmental Strategy Department, Manufacturing & Engineering Division. Its activities are promoted in cooperation with the environmental managers of each business unit, business sites, and group companies. The Group Environmental Committee is responsible for developing environment-related regulations, setting targets for reducing environmental impact, and confirming that activities are appropriate and effective.

Policies and targets concerning environmental activities are discussed and set by the Group Environmental Committee as annual environmental-action plans. With regard to climate-change countermeasures, the Environmental Action Plan sets targets for reducing $CO_2$ emissions within the Group. On the basis of those targets, energy-saving activities and the use of renewable energy are being promoted at each manufacturing site. The status of reductions in $CO_2$ emissions is monitored regularly, and the Group Environmental Committee meets once a year to share the results of the previous fiscal year, the status of numerical targets for the current fiscal year, and major initiatives to promote continuous improvement of activities.Since fiscal year 2021, the Executive Officer in charge of the environmental issues (Environment Executive Officer after January 2023), who chairs the Group Environmental Committee, reports to the Executive Committee and the Board of Directors twice a year on the status of efforts, including climate-change measures, to address environmental issues.

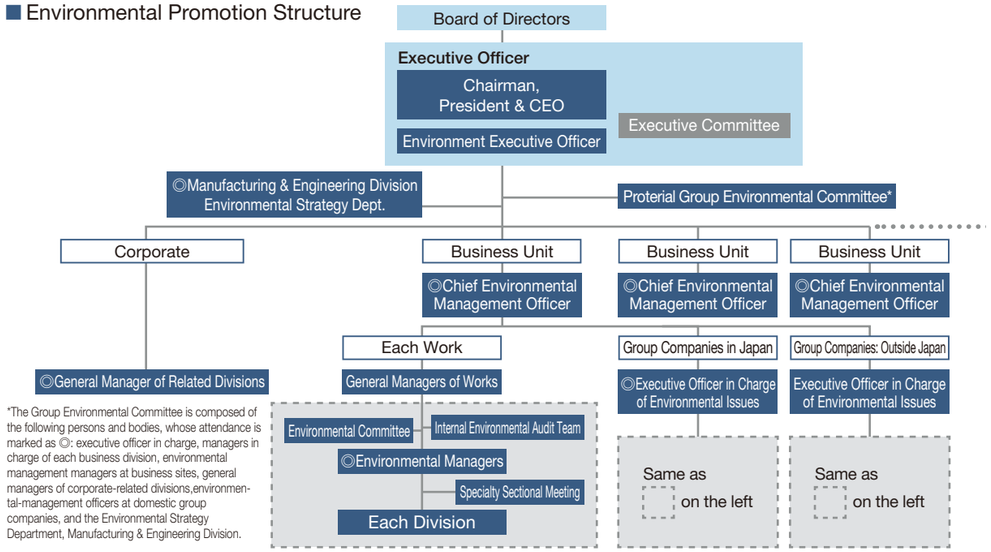
■Status of important decisions on climate change in fiscal year 2022

| Month/Year | Decisions on important issues related to climate change | Meeting body |
|---|---|---|
| March, April 2022 | Environmental strategy and status of initiatives | Executive Committee, Board of Directors |
| May 2022 | TCFD information disclosure | Executive Committee |
| September 2022 | Support GX League | (President's decision) |
| October, November 2022 | Environmental strategy and status of initiatives | Executive Committee, Board of Directors |
| April 2023 | Transition from supporter to member in the GX League | (President's decision) |

Promoting Materiality-related Initiatives

# Contributions to the Realization of a Decarbonized Society/ Ubiquitization of Resource-conserving, Recyclable, and Environmentally-friendly Products

■ Environmental Promotion Structure




*The Group Environmental Committee is composed of the following persons and bodies, whose attendance is marked as ◎: executive officer in charge, managers in charge of each business division, environmental management managers at business sites, general managers of corporate-related divisions,environmen-tal-management officers at domestic group companies, and the Environmental Strategy Department, Manufacturing & Engineering Division.

**Roles in the Promotion Structure**

■ Executive Officer in Charge
The executive officer in charge of manufacturing and technology is in charge as an Environmental Officer and exercises overall control through the Group Environmental Committee.

■ Proterial Group Environmental Committee
Deliberate and determine policies, targets, etc. related to environmental activities within the Group.

■ Chief Environmental Management Officer
Oversee environmental-management activities within the business units.

■ Environment Committee
Deliberate and determine policies, targets, etc. related to environmental activities at each business site.

■ Environmental managers
Take responsibility for and promote environmental-management activities at each business site.

## 3 Strategy (Scenario analysis)

The Group has begun "scenario analysis" to clarify the risks and opportunities posed by future climate change and to develop business strategies to reduce risks and expand opportunities. While we recognize that scenario analysis should cover the entire group, including the supply chain, in fiscal year 2021, we limited our analysis to a limited number of scenarios and scope of coverage. In fiscal year 2022, we completed the analysis of our domestic business.
In fiscal year 2023, we reevaluated our domestic business for each business unit in line with the transition to the new system. From now onwards, we will promote scenario analysis that includes overseas operations.

### Scenario-analysis Process

Scenario analysis—consisting of the four steps shown in Figure 1—aims to assess (i) financial and business impacts under different scenarios and (ii) resilience of the Group strategy in regard to climate-related risks and opportunities.

■ Assumptions for scenario analysis

| | |
|---|---|
| Scenarios | Refer to the "below-2°C scenario" for risks and opportunities excluding physical risks and the "4°C scenario" for physical risks. |
| Target businesses | FY 2021: Advanced Metals Division (Domestic sites)<br>FY2022: Advanced Components & Materials Division (Domestic sites)<br>FY2023: Each division (Domestic sites) |
| Target Fiscal Year | Impact as of 2030 |

■ Reference scenario

| Classification | Main reference scenario | |
|---|---|---|
| Below 2°C scenario | ●IEA World Energy Outlook 2020. Sustainable Development Scenario | ●IPCC RCP2.6 |
| 4°C scenario | ●IEA World Energy Outlook 2020. Stated Policy Scenario | ●IPCC RCP8.5 |

■ Scenario-analysis Steps (Figure 1)

- Identify climate-related risks/ opportunities
- Assess most-significant risks/ opportunities
- Set parameters related to the most-significant risks/opportunities

- On the basis of the information in Step 1,identify the most-relevant scenarios among the existing scenarios.
- Establish climate-related scenarios (societal vision)

- Analyze the financial impact of each scenario on the basis of the scenarios identified in Step 2 and the significant climate-related risks/opportunities and related parameters identified in Step 1.

- Assess the resilience of our strategy for climate-related risks and opportunities
- Consider further countermeasures

The following table shows the results of our review of the risks and opportunities posed by climate change.

| Classification | | Type | Content | Business/financial impact | | | | Our response |
|---|---|---|---|---|---|---|---|---|
| | | | | Specialty Steel | Roll | Pipe* | Automotive castings | |
| Risk | Transition | Policy/ regulations | Increased production and operating costs owing to stricter regulations on carbon pricing (CP), which includes carbon taxes, taxes on fuel and energy consumption, and emissions trading. | Medium | Medium | Small | Medium | Currently, we are working towards improving energy consumption per unit of production by 1% or more per year by promoting various energy-saving measures (LED lighting/replacement and introduction of high-efficiency equipment) and productivity improvement measures. Aiming to become carbon neutral by 2050, we plan to actively promote fuel conversion and introduction of renewable-energy facilities (installation of solar panels) as additional measures to achieve the 2030 $CO_2$-reduction target. |
| | | | Higher procurement costs of raw materials (including rare metals and auxiliary materials such as direct complementary materials) due to stricter regulations concerning CP. | Medium | Small | Small | Medium | As for principle raw materials, we will strengthen surcharges (price sliding-scale system) and cultivate new suppliers.<br>From the perspective of LCA, we will increase the utilization ratio of scrap (which generates low $CO_2$ emissions) and nurture new suppliers. |
| | | Technology | Increased operating costs associated with the introduction of manufacturing processes (based on electrification and alternative fuels) to meet decarbonization requirements. | Medium | Small | Small | Large | When introducing new manufacturing processes, we will examine equipment specifications with the aim of reducing its impact on operating costs. |
| | | Market | Decreased sales of peripheral components of internal combustion engines owing to the expansion of xEVs. | Medium | — | — | Large | As for capturing demand for components of automotive internal-combustion engines, we will target the commercial-vehicle and agricultural/construction-equipment fields. |
| | | | Decreased sales due to changes in customer procurement standards (RE100 and other compliance requirements) in accordance with decarbonization. | Medium | Small | Large | Small | As for reducing $CO_2$ emissions from manufacturing processes, we will continue to promote both energy conservation and renewable energy, and we will focus on how to respond to customer requests for decarbonization. |
| | | | Increased costs of developing new products for a decarbonized society. | Small | Small | Medium | Large | We will develop environmentally friendly products and launch them onto the market sequentially while not being restricted to our conventional business areas. |
| | | | Increased procurement risk due to increased demand for raw materials. | Small | Small | Small | Small | We will develop processes that utilize overseas scrap alloys and low-grade raw materials as well as processes. |
| | | Reputation | Decrease in sales due to lower customer evaluations resulting from delays in the development and market launch of environmentally friendly products. | Small | Small | Medium | Large | We will strengthen cooperation between the sales departments and the research and development departments with the aim of developing environmentally friendly products, and we will make strengthening that cooperation a company-wide top priority. |
| | Physical | Acute and chronic | Orders and sales decreased owing to delays in delivery accompanying the suspension of operations caused by natural disasters due to abnormal weather. | Small | Small | Small | Small | We will systematically improve our production systems in anticipation of extreme weather events.<br>We will expand the BCP system and refine the action manual for emergencies. |
| | | | Increased business costs due to rising insurance costs. | Medium | Small | Small | Large | In areas where disasters such as tidal waves and floods are anticipated on the basis of examples of past disaster, we will systematically implement disaster preparedness measures such as relocation of factories and product warehouses, protection of production lines, etc. |
| Chance | | Resource efficiency | We will increase sales by increasing product value through efficient production and efficient use of materials and energy. | Medium | Small | Small | Small | To achieve the 2030 $CO_2$ reduction target, we plan to promote various energy-saving measures (LED lighting, renewal and introduction of high-efficiency equipment, etc.) and productivity-improvement measures while promoting fuel conversion and introduction of renewable energy (i.e., installation of solar panels). Naturally, we will publicize our efforts and achievements. |
| | | Source of energy | We will increase sales by improving the customer's evaluation of supplier selection by working on decarbonization. | Medium | Medium | Small | Medium | We will promote $CO_2$ reduction by introducing renewable energy and switching to carbon-neutral fuels. |
| | | Products/ Services | We will increase sales by developing and launching environment-friendly products onto the market. | Large | Small | Small | Large | We will promote new orders and increase market share of target products by shortening development lead times and reducing costs of environmentally friendly products. We will continue to expand sales of environmentally friendly products, which are expected to be in more demand in the future.<br>Examples:<br>・Mold materials that provide longer service life<br>・Materials for various industrial machinery, undercarriage parts, and exhaust-gas filters that contribute to improved fuel efficiency and reduced emissions by cars<br>・Aerospace products that are expected to improve fuel efficiency of airplanes<br>・Battery materials (clad products) and power-semiconductor materials for use in batteries and other products<br>・Mass-flow controllers that enable semiconductor manufacturing equipment to save energy |
| | | Market | We will increase sales by expanding sales into new global markets with increased demand for environmentally friendly products. | Medium | Small | Small | Small | As decarbonization progresses, products are expected to become smaller, more powerful, and lighter; accordingly, we will develop new applications with various alloys that can take advantage of different material properties. |
| | | | We will increase sales by expanding into xEV market. | Medium | — | — | Small | Many of our products, including cladding materials, are used in lithium-ion rechargeable batteries, for which demand is increasing with the expanding xEV market, so we expect sales to increase. |

Promoting Materiality-related Initiatives

# Contributions to the Realization of a Decarbonized Society/ Ubiquitization of Resource-conserving, Recyclable, and Environmentally-friendly Products

| Classification | | Type | Content | Business/financial impact | | | | Our response |
|---|---|---|---|---|---|---|---|---|
| | | | | Magnetic materials | Power* electronics | Electric* wires | Automotive components | |
| Risk | Transition | Policy/ regulations | Increased production and operating costs due to tighter regulations on carbon pricing (CP), including carbon taxes, taxes on fuel and energy consumption, and emissions trading) | Large | Medium | Medium | Medium | Currently, we are reducing $CO_2$ emissions by promoting various energy-saving measures (e.g., LED lighting and renewal and introduction of high-efficiency equipment) and measures to improve productivity. From now onwards, aiming to achieve our $CO_2$-emissions target for 2030, we will actively promote fuel conversion and purchase of renewable electricity as well as the introduction of renewable energy (i.e., installation of solar panels) |
| | | | Rising procurement costs of raw materials, including rare metals and auxiliary materials such as direct supplementary materials, due to stricter CP and other regulations. | Large | Medium | — | Small | As for principle raw materials, we will work to strengthen surcharges (price sliding-scale system) and cultivate new suppliers. From the perspective of life-cycle assessment (LCA), we will increase the utilization ratio of scrap (which generates low $CO_2$ emissions), and in regard to the magnet business, we will work to reduce the amount of heavy rare earths used and reduce procurement costs by developing low-heavy-rare-earth materials and introducing them to the market. |
| | | Technology | Increase in operating costs due to capital investment involved in the introduction of manufacturing processes (electrification and alternative fuels) to meet decarbonization requirements. | Small | Small | Small | — | When introducing new manufacturing processes (e.g., introduction of the latest energy-saving technologies), we will examine equipment specifications with the aim of reducing their impact on operating costs. And the increased costs will be passed on to sales prices. |
| | | Market | Decrease in sales due to lower sales prices and lower customer evaluations due to intensifying competition in the Asian market with competing xEV suppliers | — | Large | Small | Large | We will reduce costs by introducing high-efficiency equipment, improving productivity, and procuring parts locally. |
| | | | Sales declined due to the impact on operations caused by the tight procurement of main raw materials resulting from increased demand for copper | — | — | Large | — | We will reduce the amount of copper used by improving productivity and secure multiple procurement routes by securing new suppliers. |
| | | | Decrease in sales due to delays in responding to decarbonized-product requirements for existing products or lost opportunities to expand new sales (RE100, etc.) | Small | Large | Small | Large | We will improve the ratio of renewable energy use by promoting introduction of renewable energy and selecting electric-power companies with high RE power-generation ratio. |
| | Physical | Acute and chronic | Orders and sales decreased owing to delays in delivery accompanying the suspension of operations caused by natural disasters due to abnormal weather. | Small | Small | Medium | Large | We will systematically improve our production systems in anticipation of extreme weather events.<br>We will expand the BCP system and refine the action manual for emergencies. |
| Chance | | Resource efficiency | We will increase sales by increasing product value through efficient production and efficient use of materials and energy. | Small | Small | Medium | Small | To achieve our 2030 $CO_2$-reduction target, we plan to promote various energy-saving measures (switching to LED lighting and renewal and introduction of high-efficiency equipment) and measures to improve productivity as well as actively promote fuel conversion and introduction of renewable energy (installation of solar panels) while publicizing our efforts and achievements. |
| | | Source of energy | We will increase sales by improving the customer's evaluation of supplier selection by working on decarbonization. | Small | Small | Small | Small | Reduce electricity consumption by improving productivity and increase the utilization rate of renewable energy. |
| | | Products/ Services | We will increase sales by developing and launching environment-friendly products onto the market. | Large | Large | Medium | Medium | We aim to expand sales by developing products that contribute to a low-carbon society.<br>・Various products for xEVs (magnets, SiN, SiC, magnet wires, automotive electrical components, etc.)<br>・Amorphous alloy (MaDC-A™) that contributes to higher efficiency of transformers |
| | | Market | The shift to lighter rare earths will accelerate due to increased procurement risks and costs of heavy rare earths due to stricter regulations on CP and decarbonization requirements. | Large | Small | — | — | We aim to increase sales by developing low-heavy-rare-earth magnets for customers who are considering replacing rare-earth magnets containing a large amount of heavy rare-earth elements, introducing them into the market, and proposing replacements for rare-earth magnets by improving the characteristics of ferrite magnets. |

Pipe: Piping Components
Power electronics: Power Electronics Materials
Electric wires: Electric Wire & Cable
xEV: A collective term for electric vehicles (EV), hybrid electric vehicles (HEV), and plug-in hybrid electric vehicles (PHEV).
RE100: Abbreviation for 100% Renewable Energy. An international initiative that aims to provide 100% of the electricity used in business operations from renewable energy sources.

| Definition of assessment of business/financial impact | **Large:** cost or effect equal to or greater than 5% of sales*1<br>**Medium:** cost or effect equal to at least 1% but less than 5% of sales*1<br>**Small:** cost or effect is less than 1% of sales*1<br>**—:** Not subject to impact assessment |
|---|---|

*1 Net sales of target businesses

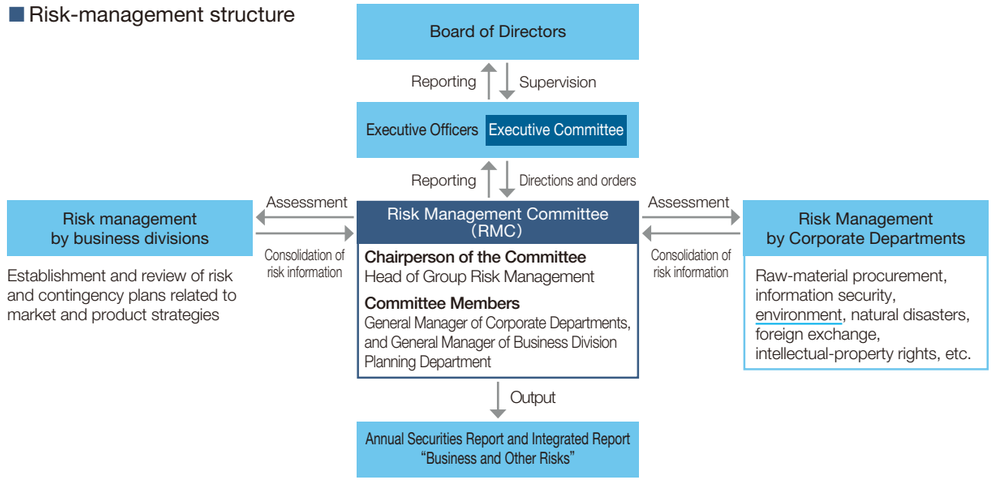
As described above, in response to the content of the October 31, 2022 disclosure of the Advanced Metals Division (Domestici sites) and the Advanced Components & Materials Division (Domestici sites), we have reassessed our domestic business by business unit in conjunction with the transition to the new system in fiscal year 2023, and we have verified that our strategy is resilient to each risk and opportunity with respect to the strategy for these businesses.



## 4 Risk Management

In April 2022, the Group established a "Company-wide Risk Management Committee" (RMC) under the supervision of the Executive Officer responsible for group-risk management. The RMC summarizes various business risks surrounding the Group and contingency plans for those risk, and evaluates their coverage and weighting. Risks related to climate change identified by the Group Environmental Committee, corporate departments, and business divisions are reported to the RMC together with other risks as one of the risks related to environmental regulations. The RMC is scheduled to meet twice a year, and the results of the interim and year-end risk-management assessments of the RMC are reported to and reviewed by the Executive Committee and the Board of Directors.

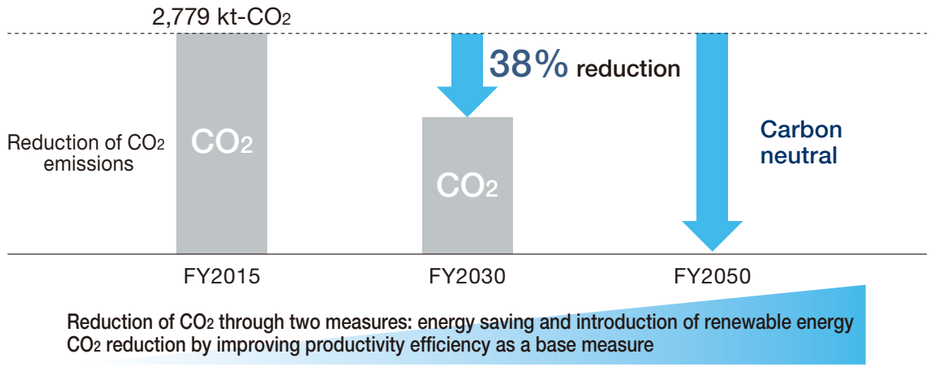
■ Risk-management structure




## 5 Indicators and Targets

The Group has set the Scopes 1 and 2 targets for reducing $CO_2$ emissions* as shown in the illustration below. In promoting carbon neutrality, we will continue our conventional energy-saving activities while striving to improve processes such as capital investment, convert to alternative fuels for melting furnaces, heating furnaces, and manufacturing processes, develop technologies based on carbon-free fuel, and introduce renewable energy.

■ Target for reduction of $CO_2$ emissions (whole Group)




*Scope 1 (direct $CO_2$ emissions by the company)
Absolute amount of Scope 2 (indirect emissions associated with use of electricity, heat, and steam supplied by other companies)

Promoting Materiality-related Initiatives

# Contributions to the Realization of a Decarbonized Society/ Ubiquitization of Resource-conserving, Recyclable, and Environmentally-friendly Products

■ Group-wide Scope 1 and 2 results (kt-$CO_2$)

| Target | FY2020 | FY2021 | FY2022 |
|---|---|---|---|
| Scope1 | 777 | 876 | 818 |
| Scope2 | 1,218 | 1,340 | 1,095 |
| Scope1 + Scope2 | 1,995 | 2,216 | 1,913 |

## About Scope 3

The Company calculated $CO_2$ amount for Scope 3 Categories 1 to 7 and 13 according to "Basic Guidelines on Accountingfor Greenhouse Gas Emissions Throughout the Supply Chain."

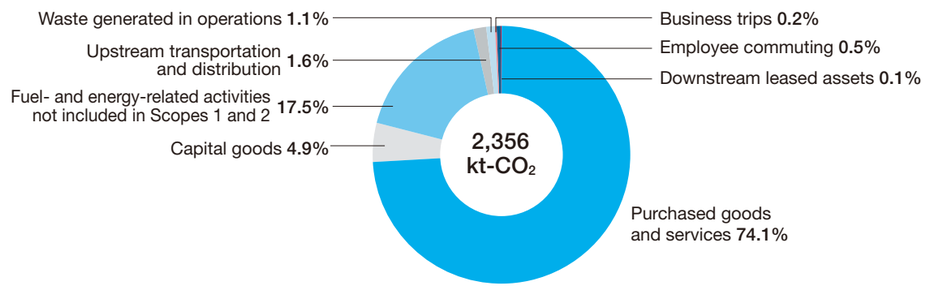
$CO_2$ emissions in fiscal year 2021 totaled 2,356 kt-$CO_2$, of which "Category 1: Purchased Goods and Services" accountedfor the largest share (74.1%).

■ Group-wide Scope 3 aggregated results (Fiscal year 2021)

| Category | Category description | $CO_2$ emissions (kt-$CO_2$) | Ratio (%) |
|---|---|---|---|
| 1 | Purchased goods and services | 1,746 | 74.1 |
| 2 | Capital goods | 115 | 4.9 |
| 3 | Fuel and energy related activities not included in Scopes 1 and 2 | 412 | 17.5 |
| 4 | Upstream transportation and distribution | 38 | 1.6 |
| 5 | Waste generated in operations | 27 | 1.1 |
| 6 | Business trips | 4 | 0.2 |
| 7 | Employee commuting | 12 | 0.5 |
| 13 | Downstream leased assets | 2 | 0.1 |
| **Total** | | **2,356** | **100.0** |

*Scope of data: Calculated only for the relevant category within the Group.
*Calculation method: Ministry of the Environment DB3.1 and IDEA database Ver. 3.2 were used.

■ Scope 3 Fiscal year 2021 results




## Executive compensation

Compensation for our Executive Officers is based upon the achievement of annual targets. From fiscal year 2022, we added the Group's $CO_2$-emissions reduction target as an evaluation item for climate-change response. We also applied this indicator to management staff, and we are working on carbon-neutrality measures as it's an important issue facing our business operations.

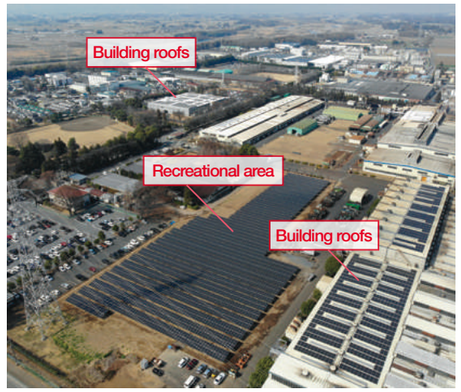
## Internal carbon price

To promote $CO_2$ reduction, we have added the concept of "internal carbon pricing" to our internal regulations related to capital investment. In detail, we set a carbon price (8,000 yen/t $CO_2$) based on the total amount of $CO_2$ emissions after capital investment, and the effect of the $CO_2$ reduction of the capital investment is calculated as profit. (October 2021)
The carbon price will be calculated with reference to the procurement price of renewable energy in Japan and reviewed periodically.



## TOPIC 1 Introduction of a PV Power Generation System Based on the TPO/PPA Model at the Company's Moka Site

The Proterial has identified contributions to the realization of a decarbonized society as an important management issue. In a bid to address this issue, reduce its environmental impact, and promote the use of renewable energy on a sustained basis, we introduced a photovoltaic (PV) power generation system based on a Third Party Ownership/Power Purchase Agreement (TPO/PPA) model at our Moka site in fiscal 2022. Operations commenced from April 2023. This system has a total solar cell module capacity of 1,333 kWh and an annual power generation of 2,500 MWh, all of which is consumed on-site. This amount of electricity is equivalent to approximately 2.5% to 3% of the Moka Works' electricity consumption, and is expected to reduce $CO_2$ emissions by about 1,100 tons per year. The clean electricity produced by this PV power generation system on the Company's property is being used in the manufacturing process at its Moka Works and is a central measure for realizing a decarbonized society. In addition to our efforts to reduce $CO_2$ emissions through the introduction of PV power generation, we will continue to promote initiatives that contribute to the transition to a decarbonized society.



Panoramic view of the PV power generation system at the Moka site

## TOPIC 2 Reduction Activities for a Plastic-related Resource-recycling Society

With Japan's Plastic Resource Circulation Act coming into effect, the need to contain the discharge of industrial waste from products that are made from plastic and to promote a variety of measures, including recycling, has increased substantially in recent years. Against this backdrop, Proterial conducts surveys on its amount of industrial waste from plastic-based products and is implementing activities aimed at recycling resources, focusing on business sites with large amounts of such waste. Each business site uses a waste emission classification chart to reduce waste through a process of emission, recycling, disassembly, and recycling. Through this process, industrial waste from plastic products is separated for recycling and waste at each business site to reduce the amount of waste.

The world is currently facing a host of marine plastic debris-related issues. Proterial places the utmost emphasis on preventing marine pollution, including the protection of fish ecosystems. Moreover, we are looking at ways to increase the use of recycled materials at the raw material procurement stage while recycling resources at the development and design stages, which will lead to a circular economy.

**Waste separation/sorting case study**

Outsourcing the disposal of waste

Sorting into valuable materials and waste, sales of valuable materials, and outsourcing disposal of residual waste

## TOPIC 3 Participation in Initiatives and External Evaluations

The Proterial actively endorses and participates in domestic and international environmental initiatives.

TCFD TASK FORCE on CLIMATE-RELATED FINANCIAL DISCLOSURES
TCFD Consortium
GX League
CDP DISCLOSURE INSIGHT ACTION

Promoting Materiality-related Initiatives

# Safety and health are our overriding priority

Having adopted Prioritizing the protection of safety and health above all else as one of our guiding principles, Proterial actively promotes activities to create safe, comfortable, and rewarding workplaces while nurturing healthy and energetic human resources in both mind and body. We have positioned prioritizing safety in an uncompromising manner to realize the safest possible workplaces as one of the core issues for management, where creating safe conditions will connect to People, Operational Excellence, and Growth as the three pillars of management.
Currently, we are engaged in eliminating major disasters, building a culture of safety, and creating healthy workplaces through health management as key health and safety measures. Similarly, we are working to create safe workplaces at manufacturing sites in Japan and abroad.

## Building a Culture of Safety

As part of the Group's efforts to instill a culture of safety, we have held town hall-style meetings continuously since December 2018, where policies and views on safety are communicated by the President and feedback is received from the Group workplaces. These meetings, which our executives started participating in from fiscal 2020 onwards, are held to obtain a wide range of opinions to reflect in our management policies. Meanwhile, at our manufacturing sites, we have been expanding the scope of our 2S-3F (Sort Out, Set in Order, Fixed Item, Fixed Quantity, and Fixed Location) activities as part of safety activities, and working to instill a culture of safety at the sites. In addition, from November 2020 onwards we started specialized level-based safety training for key employees differentiated by level (directors, business/plant managers, Group company presidents, production line managers, and staff in charge of safety) in order to cultivate human resources able to operate and manage health and safety activities in an organization-wide and systematic manner. As of the end of 2023, 43 specialized safety training sessions have been held, with 718 employees completing their training. Key employees involved in the training have got proactively involved in health and safety activities in their respective departments and have expanded on what they have learned during their specialized safety training. Through these efforts, we are carrying out continuous operation of our occupational health and safety management system that serves as our mechanism for instilling and re-establishing a culture of safety, and for operating and managing health and safety in an organization-wide and systematic manner.
In addition, we audit health and safety, confirm activities regarding the Proterial Group's key health and safety measures, verify compliance with the Company's rules and related laws and regulations, and provide health and safety training to supervisors.

## Creating Healthy Workplaces through Health Management

The Proterial Group is working to build better physical and mental health among its employees. For example, we conduct stress checks on all employees and take measures based on the results. We are also focused on creating a more dynamic working environment by eliminating overwork through workstyle reform.
In June 2019, we released our first Health Management Declaration, and made a further Health Management Declaration in conjunction with our company name change in January 2023. We will continue to steadily implement measures that enable employees to protect the safety of themselves and their coworkers, and to become involved in improving their own health of their own initiative. Several of these efforts include measures to prevent the spread of infections, initiatives to reduce smoking rates, stress checks, and health promotion activities at each works.

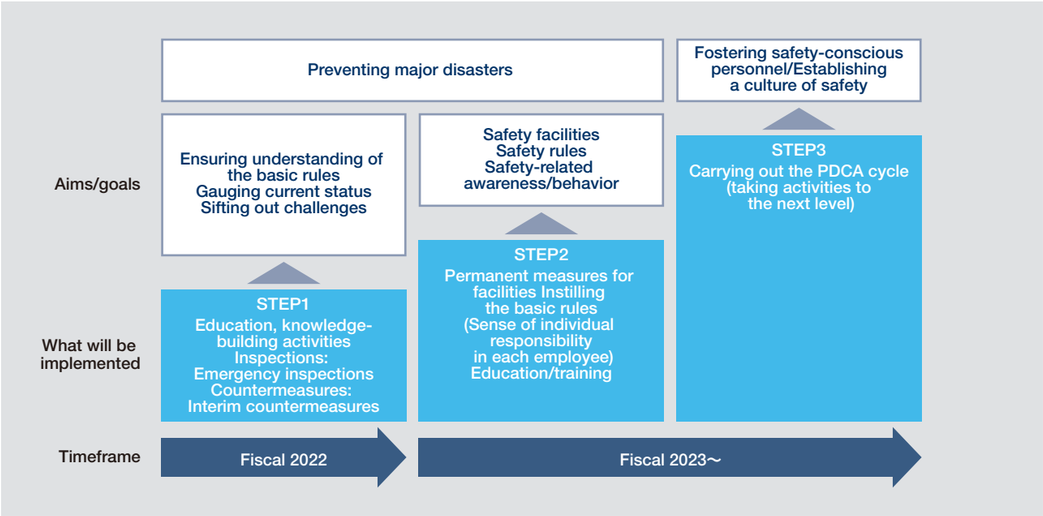
### Health Management Declaration

Based on our corporate philosophy , we regard health and safety as an important management principle for the company's sustainable development and the happiness of each and every one of our employees, and we will actively promote activities to create safe, comfortable, and rewarding workplaces while nurturing healthy and energetic human resources in both mind and body. We will actively promote activities to create safe, comfortable, and rewarding workplaces while nurturing healthy and energetic human resources in both mind and body.
I hereby reiterate my commitment to further work to ensure the safety of myself and my fellow workers and to encourage each of us to take the initiative in promoting our own health.

January 4, 2023
**Proterial, Ltd.**

## Eliminating Major Disasters

Proterial's activities for instilling our basic rules (the Ironclad Rules) , based on analysis of disasters, began in fiscal 2022. In fiscal 2022, as Step 1, we carried out training and knowledge-building activities to ensure employees understand the basic rules. We also carried out inspections and put in place countermeasures, and gauged the current status and sifted out challenges. From fiscal 2023, while continuing to carry out the Step 1 initiatives, we will also put in place permanent measures for safety at facilities and work to instill the basic rules among employees, as Step 2. Finally, as Step 3, we will carry out the PDCA cycle for the abovementioned initiatives with the aim of fostering personnel who can behave safely at all times and establishing a culture of safety in which all employees encourage each other to be aware about safety.
We are also pushing forward the improvement of facilities to ensure fundamental safety (permanent safety measures). We have thus far given top priority across the Group to safety measures to prevent employees being caught in spinning machinery or crushed by machinery. In fiscal 2023, at the same time as continuing to prioritize safety measures to prevent employees being caught in/crushed by machinery, we have implemented safety measures based on risk assessments, starting with high-risk operations.




## Certified as a Health and Productivity Management Organization

The Certified Health & Productivity Management Outstanding Organizations Recognition Program honors small, medium, and large enterprises, as well as other organizations, that engage in outstanding health and productivity management practices based on initiatives that align with the health issues of local communities and on initiatives for improving health that are promoted by the Nippon Kenko Kaigi. Proterial was certified under the Large Enterprise Category as part of the 2023 Certified Health & Productivity Management Outstanding Organizations Recognition Program.
In addition, six Proterial Group companies were certified in the Large Enterprise Category and 13 were certified in the SME Category.

2023 健康経営優良法人 Health and productivity

■ Proterial and Group Companies Certified under the 2023 Certified Health & Productivity Management Outstanding Organizations Recognition Program

| Large Enterprise Category | SME Category | |
|---|---|---|
| NEOMAX Engineering Co., Ltd. | Tohoku Rubber Co., Ltd. | Proterial FineTech, Ltd. |
| Proterial Specialty Steel, Ltd. | Tonichi Kyosan Cable, Ltd. | Santoku Corporation |
| Proterial, Ltd. | Proterial Machinery, Ltd. | NEOMAX KINKI Co., Ltd. |
| Proterial Trading, Ltd. | Alcast, Ltd. | Proterial Ferrite Electronics, Ltd. |
| Proterial Metals, Ltd. | Proterial Solutions, Ltd. | Kyushu Techno Metal, Ltd. |
| Proterial Precision, Ltd. | Proterial Hallow, Ltd. | NEOMAX KYUSHU Co., Ltd. |
| Proterial Wakamatsu, Ltd. | HCP Product, Ltd. | |

Promoting Materiality-related Initiatives

# Diversity and Inclusion

Proterial positions the thorough pursuit of diversity and inclusion as an important management strategy and is working on various measures.

### ▶Proterial Basic Policy on Diversity Management

1. We regard differences in gender, nationality, culture, and so forth as unique qualities of the individual, and we ensure diversity through measures such as promoting the career development of women and utilizing global human resources. Such approaches allow us to promote innovation and enhance the flexibility and speed with which we respond to risks and changes.
2. We encourage the growth of the individual, enhance our ability to act as an organization, and reinforce the basis for sustained growth by engaging in active communication and the sharing of values.
3. We aim to become one of the world's top companies in the metal materials sector by designating diversity as a driver of growth, as we transform ourselves into a globally competitive business and challenge ourselves to meet new targets.

### ▶Proterial Action Policy on Diversity Management

**Cultivate a structure and environment in which all human resources can broaden their potential and play active roles**

Recognizing that human resources are the source of our competitiveness, the Proterial has worked to enhance and strengthen its human resource development program, believing it is important to develop people able to take action at the global level at Proterial. Additionally, in our evaluation system, we are revising our seniority-based pay system and have incorporated diversity management as one of our manager evaluation metrics. We place great importance on the fact that our managers are responsible for providing the employees who report to them with equitable growth opportunities with an understanding of their values, restrictions they face due to life events and other causes, and their backgrounds, and for getting them actively involved in various measures and initiatives.

In addition, we support exchanges among our diverse employees and the realization of diverse careers through human resource exchanges both inside and outside the Proterial, the proactive hiring of experienced personnel, the utilization of the My Challenge internal free agent system which allows employees who want to expand their potential to transfer across business divisions or job categories, and the introduction of leave to allow employees to accompany spouses on overseas assignments.

Proterial is also promoting diversity at the management level. As of June 1, 2023, our 14 executive officers included three foreign national executives. In addition, our Chief Executive Officer (CEO), Chief Financial Officer (CFO), Chief Executive Officer (CEO), Chief Information Officer (CIO)/Chief Data Officer (CDO), and Chief Transformation Officer (CTrO) were appointed to their roles from outside Proterial in light of their track records and capabilities demonstrated to date, after being selected from a wide range of candidates who were optimal for the roles and responsibilities in question.

## Human Resources as the Source of Competitiveness

The Proterial, which is moving ahead with global business expansion, recognizes human resources as the source of competitiveness. With this understanding, we will become a company where diverse human resources gather, test their opinions against others' views, and work with enthusiasm and pride.

### ▶Reflecting the Results of Our Survey of Employees into Management Policies

In aims of becoming a company where employees can work with enthusiasm and pride, we conduct a Survey of Employees each year to measure the percentage of favorable responses given for indicators such as engagement. After reporting the results to top management, the outcomes of discussions with top management are then reflected in improvement measures.

### ▶Human Resource Development Programs

The Proterial is striving to enhance and strengthen its human resource development programs linking OJT and OFFT, so that employees can develop their expertise, enabling them to actively seek out challenges and take actions to achieve success or solve problems, and to become shining examples for the Company who can make themselves indispensable to their organization.

**■Nurturing the next generation of human resources**

We identify at an early stage the human resources who will take responsibility for management in the next generation and enhance training programs for them. The training programs include cross-divisional personnel rotations and extra-challenging assignments, as well as OFF-JT which includes external training.

**■Global recruitment and development of human resources**

As our business rapidly globalizes, we are accelerating efforts at global regional headquarters in Europe, the U.S., China, and the rest of Asia, to employ and cultivate human resources who will be future executive candidates. We are also pushing ahead with the early cultivation of future executive candidates who can play active roles globally, through overseas business training and global training for employees in Japan, active hiring of foreign nationals, including international students, and promotion of locally hired staff at Group companies outside Japan into positions of responsibility.



## Promoting the Participation and Advancement of Women in the Workplace

After initially holding interviews with women in career-track positions during 2015, Proterial began conducting initiatives to promote the development of careers among women. These initiatives have included holding the Women's Forum at which female employees of Proterial from different workplaces interact, introduce various careers, and discuss issues, dispatching employees to outside training, and actively hiring and promoting women. We also present PAPA APRON to employees who have reviewed the division of housework and childcare duties with their partners to encourage the involvement of men in housework and childcare. Similarly, we have engaged in other activities to raise awareness of unique women's health issues, including holding seminars on women's health.

### ▶Policy on Promoting the Participation and Advancement of Women in the Workplace

1. Achieved targets for the hiring ratio of women among newly hired graduates (career-track positions)
   Technical positions: 10% or more Administrative positions: 40% or more
2. Support for retention
   - Career support to eliminate concerns (providing training, opportunities for exchange among women, etc.)
   - Awareness-raising for those in management-level positions
   - Enhancing systems relating to childcare and nursing care, and raising awareness of these
   - Promotion of diverse workstyles through workstyle reform (a work-from-home system, satellite offices, etc.)
3. Promotion measures
   - Achieved the target ratio of women in management-level positions: 5.0% in fiscal 2030
   - Carried out individual development plans and training for selected employees

**Main initiatives**

- Held the Proterial Young Women's Forum (networking event for employees in career-track positions)
- Survey and analysis of participation by women in Proterial
- Proactively dispatched employees to cross-industry exchange events and external seminars
- Presented PAPA APRON to male employees and the partners of female employees who have reviewed the division of housework and childcare duties with their partners
- Held unconscious bias seminars for those in management positions
- Held seminars on women's health
- Held parent support seminars
- Introduced family support leave (5 days of paid leave)

### ▶Eruboshi Certification:

**Certification based on the Act on Promotion of Women's Participation and Advancement in the Workplace (Women's Participation Promotion Act)**

The Eruboshi Certification is awarded by the Minister of Health, Labour and Welfare to companies that formulate and file action plans for the participation and advancement of women and carry out excellent initiatives to execute these plans. Companies are evaluated on a three-level scale, in accordance with the number of evaluation criteria they satisfy. In May 2020, Proterial was certified for Stage 3, having met all evaluation criteria.

## Promotion of diverse workstyles

We believe that it is essential to create an environment where diverse employees can share different values and ideas, pursue highly productive workstyles and approaches to their jobs, and realize a sense of fulfillment and personal growth in their work. Accordingly, we have continued to steadily improve operational efficiency and promote and establish work with no restrictions on time or location by pursuing ICT measures, allowing all employees to have real job satisfaction and feel truly comfortable at work.

In fiscal 2022, the total of annual actual working hours of back-office workers was 2,056, with the paid annual leave uptake rate standing at 74%, representing substantial improvements over the figures for fiscal 2016 (when annual actual working hours stood at 2,245 and the paid annual leave uptake rate at 48%) and highly productive workstyles are being instilled. In this way, the Group is working to instill workstyles with a high level of productivity.

**Main initiatives**

- Promoted satellite offices, mobile work, a work-from-home system, and flex work
- Introduced a work-from-home system that eliminates the need to send employees on remote assignments away from their families by enabling employees to mainly work from home, if they desire
- Set out working hours in visual form and provided workstyle training for managers
- Specified common Companywide rules for email and meetings, and enhanced ICT infrastructure such as filesharing systems and communications tools
- Shared information related to operational improvements such as using RPA and shifting to paperless operations
- Held 1-on-1 meetings

### ■Composition of Workforce (Non-consolidated)

| | Fiscal 2018 (ending March 2019) | Fiscal 2019 (ending March 2020) | Fiscal 2020 (ending March 2021) | Fiscal 2021 (ending March 2022) | Fiscal 2022 (ending March 2023) |
|---|---|---|---|---|---|
| Number of employees | 7,067 | 7,022 | 6,623 | 5,889 | 5,754 |
| Male | 6,277 | 6,215 | 5,826 | 5,068 | 4,927 |
| Female | 790 | 807 | 797 | 821 | 827 |
| Ratio of female employees (%) | 11.1 | 11.5 | 12.0 | 13.9 | 14.4 |
| Average age (years) | 43.2 | 43.4 | 43.4 | 44.2 | 44.4 |
| Average service (years) | 18.4 | 18.8 | 20.1 | 19.2 | 19.2 |
| Number of female managers | 19 | 19 | 19 | 20 | 24 |
| Employment ratio of people with disabilities* (%) | 2.21 | 2.26 | 2.27 | 2.36 | 2.42 |

* Including special subsidiaries

Promoting Materiality-related Initiatives

# Make Quality a Strength

Regarding our quality-assurance activities, in response to the inappropriate numerical values stated in an inspection report announced on April 27, 2020 (quality-assurance problem hereafter), we have devised measures to prevent recurrence of such a problem as a top priority and are doing our utmost to implement those measures so that such a problem will never happen again. Based on the recognition that quality is an important management issue for the Proterial Group to enhance its corporate value and achieve sustainable growth over the medium to long term, the Group has set Quality as a Strong Point as one of our six materialities. Aiming to provide our customers with a stable supply of high-quality products, we will work together to thoroughly implement measures to prevent recurrence of quality assurance-problems and to make quality a strength of our Group that differentiates us from our competitors.

## Establishment of the Quality Committee

On April 1, 2021 , we established the Quality Compliance Committee, which consists of two external experts and our Chief Quality Officer (CQO), as an advisory body to the Board of Directors. Under the committee, measures to prevent recurrence of quality-assurance problems have been implemented and their effectiveness verified. With the conclusion of the Quality Compliance Committee on March 31, 2023, however, we newly established the Quality Committee, which consists of two external experts and our Chief Quality Officer (CQO), on April 1, 2023. In addition to assuming the previous activity scope of the Quality Compliance Committee, the activities of the new Committee will include offering guidance and advice from an expert standpoint on overall quality activities.

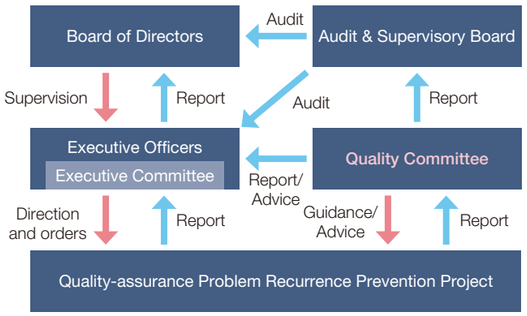
### Purpose

The new Committee is intended to enable assessments from an objective perspective regarding the Group's overall quality activities, including quality compliance activities. It is also purposed to ensure the effectiveness of mechanisms to prevent the recurrence of quality-assurance problems, as well as to ensure the vitality of management, corporate culture building, and quality-control and quality-assurance activities.

### Duties of the Quality Committee

The Recurrence Prevention Project reports to the Quality Committee on the details of recurrence prevention activities for quality-assurance problems, as well as those of quality-control and quality-assurance activities. The Quality Committee confirms the details of these reports, and provides guidance and advice regarding the Group's activities.

■ Organizational Association Chart




## Progress of measures to prevent recurrence of quality-assurance problems

Based on the guidance and advice of the Quality Committee, the three Technical Problem-Solving, Risk Management, and Quality-Assurance Problem-Solving Working Groups (WG) execute recurrence prevention measures as part of the Quality-assurance Problem Recurrence Prevention Project.

■ Quality-assurance Problem Recurrence Prevention Project Structure

Major Activities
**Manufacturing & Engineering Division: Quality control system reforms**
**R&D Division: Automated sensory inspection development**

* Specialty Steel Business Unit, Rolls Business Unit, Automotive Casting Business Unit, Waupaca Foundry Inc., Piping Components Business Unit, Magnetic Materials Business Unit, Power Electronics Materials Business Unit, Electric Wire & Cable Business Unit, Automotive Components Business Unit

Major Activities
**Activities to change the corporate culture and attitudes**

Major Activities
**Quality compliance program optimization**

* The Corporate Metal Materials Quality Assurance Unit is responsible for the Quality Assurance Unit of the Specialty Steel Business Unit, Rolls Business Unit, Automotive Casting Business Unit, Waupaca Foundry Inc., and Piping Components Business Unit. The Corporate Functional Materials Quality Assurance Unit is responsible for the Quality Assurance Unit of the Magnetic Materials Business Unit, Power Electronics Materials Business Unit, Electric Wire & Cable Business Unit, and Automotive Components Business Unit.



### 4M normalization activities Technical Problem-Solving WG

4M normalization activities are daily activities to recognize, minimize, and control variations in the 4Ms: Man (manpower), Machine (equipment), Materials, and Methods, and we position them as particularly important quality-control activities in the Group. During 4M normalization activities, we place importance on collecting small "insights" about a process and making improvements to these small insights. By continuing to make these incremental improvements, we aim to build a connected process that is free from 4M irregularities, and will improve the safety, quality, and comfort of worksites by eliminating, reducing, and controlling unnecessary items, unnecessary conditions, and unnecessary requirements at monozukuri sites.

Before

After

### Quality-compliance education Risk Management WG

The Proterial Group designates April as Quality Compliance Month and April 27 as Quality Compliance Day every year, and in conjunction with Quality Month in November, which is a nationwide initiative, we take these opportunities to reaffirm our commitment to quality activities by all employees. In 2022, we conducted quality-compliance training and questionnaire surveys in April and November (and partially in December) for our domestic worksites. We received comments to the effect that employees were able to reconfirm the importance of quality compliance, and that employees attained a deeper understanding from the explanations of technical terms. We will continue to make improvements to ensure more effective educational content, and will continue to implement education in a way that raises the awareness of quality compliance throughout the Group.

### Changing the Corporate Culture and Attitudes to Focus on Quality Risk Management WG

To enhance our employees' understanding of quality compliance and ensure the effectiveness of reform, the CEO, CQO, and other layers of management send out messages on quality compliance and hold town-hall style meetings on quality on an ongoing basis. At the same time, since 2021, we have been adding integrity, sincerity, and honesty as evaluation items in personnel evaluations of managers.

Dialogue between the CQO and quality-assurance managers at a town-hall style meeting

### Securing the inspection system Quality Assurance Problem-Solving WG

Securing the inspection system means establishing a system that automatically imports measured values from measurement equipment to a PC, automatically determines whether a product passes or fails on the basis of that measurement data, and automatically prepares a report to be submitted to the customer. That automated system is in stark contrast to the conventional one that involves human intervention such as writing the measured values on a special form by hand or entering them into a PC during the inspection process. Moreover, it eliminates the need to write down the measured values and the occurrence of operational errors such as incorrectly writing or mis-typing the measured values. It also improves inspection efficiency by eliminating the need to write down the measured values on special paper or input them into a computer. We have been systematically working to upgrade and modify measurement equipment at each site, and plan to complete the introduction of these measurement equipment during FY2024 with the intention of finishing data input by the first half of FY2025.

### Holding International QA Meeting Quality Assurance Problem-Solving WG

The Proterial Group organizes the International QA Meeting for the purpose of stimulating communication, sharing information and best practices related to quality assurance and quality control, and discussing the establishment of a globally unified QMS system. These meetings are attended by the quality-assurance managers from Group companies around the world and by employees involved in quality assurance in Japan. This meeting was held for the first time as a Group in November 2021. During the third International QA Meeting held in December 2022, participants shared initiatives involving changes in work procedures and inspection automation that led to major outcomes for product quality and production. We will continue to hold the International QA Meeting as a forum for global dialogue on quality with the aim of invigorating the quality activities of the entire Proterial Group.

### Establishment of the Quality Help Desk Quality Assurance Problem-Solving WG

In June 2022, we established the Quality Help Desk, which allows employees to discuss their concerns regarding quality within the company with peace of mind. The Corporate Quality Assurance Division, Quality Assurance Unit, serves as the contact point for employees that still find it difficult to make a decision even after repeated dialogue and consultation at their workplace. Moreover, the Help Desk will enhance the understanding of quality activities within the Proterial Group by offering advice and by working to solve problems.

Building a Foundation for Sound Business Continuity

# CSR-Conscious Procurement

The Proterial Group procures materials from suppliers in countries and regions around the world. While remaining aware of our social responsibility and its impact, we have formulated our procurement policy with the aim of practicing fair and impartial procurement activities and, with the cooperation of many suppliers, engage in procurement that takes CSR into consideration.

## Issuance of Proterial Group Sustainable Procurement Guideline

We published the Proterial Group Sustainable Procurement Guideline on our website in January 2023. While based on the latest standards that have been acknowledged worldwide, the Guideline was created by encompassing a wide range of CSR concepts recognized as a company's social responsibility, including respect for human rights, consideration of the environment, fair trading and ethics, occupational health and safety, product quality and safety, information security, and social contributions. When a clear violation is discovered among any procurement partner, the Guideline stipulates that corrective measures must be taken. When starting a new business relationship, we request compliance with our Sustainable Procurement Guideline, and, at the same time, we conduct corporate surveys on bribery risks based on the Proterial Group Compliance Program (PGCP) to strengthen our screening of suppliers.

Proterial Group Sustainable Procurement Guidelines
First edition, 2023
Procurement Division,
Proterial, Ltd.

## Response to Globalization

The Proterial Group is striving to establish a global procurement network while augmenting our procurement base. We are working to support the optimization of procurement activities overall while enhancing CSR risk management and increasing concentration and consolidation of purchasing across the Group. We have also set up Global Procurement Offices (GPOs) in four locations—Europe, the United States, Asia, and China—where we are promoting transparent procurement activities from optimal suppliers worldwide, at the same time as strengthening governance at our overseas Group companies. As part of this, since fiscal 2019 we have been pushing forward the standardization of procurement operation criteria for overseas Group companies, and in fiscal 2022 worked to embed these standards through auditing and guidance carried out by GPOs.

**▶Responsible Mineral Procurement**

In July 2010, the United States enacted the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act), out of concern that minerals mined in the Democratic Republic of the Congo (DRC) and surrounding countries could become fund sources for armed groups, designating the following four minerals (3TG) as conflict minerals: tantalum, tin, tungsten, and gold. The region covered by the EU Conflict Minerals Regulation, passed in July 2017, was expanded to include Conflict-Affected and High-Risk Areas (CAHRAs) when it came into force in January 2021. In recent years, there have been growing concerns about other aspects, including serious human rights violations and environmental pollution, in addition to conflict. In the wake of such developments, the Proterial Group announced the Conflict Minerals Procurement Policy in September 2013 and the Proterial Group's Policy for Responsible Mineral Procurement in January 2023. In coordination with industry groups, the Proterial Group has clarified that it is working to ensure responsible procurement that does not contribute to conflict and human rights violations, and is accelerating efforts in coordination with industry groups to enhance the transparency of its supply chain.

To carry out responsible procurement, we conduct activities including surveys using the Conflict Minerals Reporting Template (CMRT) and other tools published by the Responsible Minerals Initiative (RMI), to specify the countries of origin and smelters of the minerals used in the supply chain, and request suppliers to procure minerals from smelters that are compatible with the Responsible Minerals Assurance Process (RMAP). Up to now, no cases of armed groups being funded or problematic uses of minerals have been found.

## Periodic Audits of Operation

Acquiring correct and legal knowledge of operations is indispensable during procurement transactions. Utilizing online and other means, we provide our procurement specialists at business offices with training about laws and regulations. Additionally, all offices and Group companies in Japan perform annual mutual audits of operations. The auditors are procurement managers from offices and Group companies, and executives from the Head Office.

In fiscal 2022 as well, we performed most mutual audits remotely for all offices and Group companies to monitor whether operations were being conducted in accordance with laws and internal regulations as well as with Company regulations.

## Green Procurement

The Proterial Group procures products with a minimal environmental footprint from procurement partners which are working proactively on environmental conservation activities. In 1998, Hitachi Metals issued the Green Procurement Guidelines to share with our suppliers our views on environmental considerations, including the prevention of global warming, the recycling of resources, and the conservation of biodiversity and ecosystems. Since then, we have repeatedly revised these guidelines in response to the latest laws and chemical regulations and have notified our suppliers of the latest information. In addition, in June 2021, we endorsed the TCFD recommendations; going forward, we will take up initiatives on reducing our environmental footprint (reduced resource consumption, reduced energy consumption, recycling and appropriate management of various chemicals contained in products), keeping in mind not only compliance with the law and responding to demands from our customers but also the transition towards a low-carbon society.

## Procurement BCP Initiatives

We engage in procurement BCP activities as preparation against risks that could halt our business, including earthquakes, wind and flood damage, and other natural disasters, as well as new infectious diseases, fires, and power outages. We are working to minimize procurement risk by diversifying and decentralizing our sources of procurement, while asking our key suppliers to have their own BCP measures in place.





Building a Foundation for Sound Business Continuity

# Respect for Human Rights

The Proterial Group stipulates respect for human rights in the Proterial Group Code of Conduct and the supplementary Proterial Group Human Rights Policy. Our basic stance is to respect the rights of all persons involved in our business operations, and make all possible efforts to avoid infringing such rights.

## The Proterial Group Human Rights Policy in Practice

We formulated the Hitachi Metals Group Human Rights Policy in December 2013 which was subsequently revised into the Proterial Group Human Rights Policy in January 2023. This policy recognizes the human rights stated in the International Declaration of Human Rights and in the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work as representing the minimum starting point for such rights. It clearly states that the Proterial Group pursues measures to observe the international principles of human rights. Specifically, we will implement human rights due diligence and appropriate education on the basis of the UN Guiding Principles on Business and Human Rights, while strictly observing the laws of the regions and countries in which we do business.

## Initiatives on Human Rights Due Diligence

Human rights due diligence refers to defining and assessing impacts on human rights, taking action to prevent and redress negative impacts, and continually validating the effects of such actions. The Proterial Group will assess the actual and potential impact on human rights resulting from the business activities of the Company, our value chain, and develop countermeasures based on ranking human rights risks in terms of their seriousness and likelihood of occurring, while putting countermeasures in place based on the level of priority.

We study priorities and countermeasures, including assessments by the procurement divisions regarding the impact on human rights in our supply chain, and assessments by the human resources divisions regarding the impact on the human rights of employees.

## Human Rights Educational Activities and Harassment Prevention Efforts

We regularly use e-learning to conduct human rights education and training for each level of employee to systematically raise awareness of human rights. In addition, we established various harassment hotlines to incorporate the Proterial Group Human Rights Policy into all of our activities.

As our business activities expand rapidly on a global basis, we will enhance human rights awareness and support measures to prevent abuses of human rights based on differences of religion or nationality, the presence or absence of disabilities, gender, or other factors.

## Efforts to Strengthen Global Human Rights Risk Management

In April 2021, we established the Human Rights Risk Management Committee as part of our efforts to strengthen global human rights risk management. Through these activities, we will promote sound management of human rights risks.

Building a Foundation for Sound Business Continuity

# Corporate Governance

## 1 Overview of Corporate Governance

**(1) Details on corporate organs**

Following the capital restructuring by the new partners in the form of a consortium of companies led by Bain Capital in January 2023, Proterial laid out a policy of utilizing the new partners' financial strength, knowledge, and expertise within the Company's management to make large-scale investments and implement reforms in response to changes in the market environment. For the purpose of more prompt and flexible decision-making and execution of management strategies based on this policy, during January 2023 the Company shifted from a Company with Nominating Committees, etc. system to a Company with Audit & Supervisory Board. The details of each organ are as follows.

a. The Board of Directors is an organ with purposes to make decisions on the Company's business execution and supervise the execution of duties by Directors and Executive Officers, and holds the authority to decide matters provided in the Articles of Incorporation of the Company and the Board of Directors Rules as well as in laws and regulations.
As of the filing date of this document, the Board of Directors consists of the following six Directors

| | |
|---|---|
| Representative Director, | Sean M. Stack |
| Representative Director, | Kazuya Murakami |
| Director, | Yuji Sugimoto |
| Director, | Masashi Suekane |
| Director, | Joseph Robbins |
| Director, | Hidemi Moue |

b. The Auditors abide by the audit policies established by the Audit & Supervisory Board, and attend the Board of Directors and other important meetings, for example, in order to audit the execution of duties by the Directors. The Auditors consist of the following three individuals (two of whom are Outside Auditors), who together form the Audit & Supervisory Board.

| | | |
|---|---|---|
| Auditor | Kenichi Nishiie | |
| Auditor | Shunsuke Nakahama | (Outside Auditor) |
| Auditor | Yuriro Ogawa | (Outside Auditor) |

c. Along with introducing an Executive Officer System, the Company established the Executive Committee to ensure that the Representative Director, who consecutively serves as President and CEO, makes decisions on and executes business operations in compliance with laws and regulations and the Articles of Incorporation, as well as more efficiently.
Important matters regarding decisions on business operations delegated to the Representative Director, who consecutively serves as President and CEO, by the Board of Directors are first deliberated by the Executive Committee, which is composed of Executive Officers ranked Managing Executive Officer or above. Following these deliberations, the President and CEO makes a decision. The Executive Officers consist of the following 14 individuals.

| | |
|---|---|
| Chairman, President & CEO | Sean M. Stack |
| Executive Vice President | Kazuya Murakami |
| Managing Executive Officer | Tony I. Cha |
| Managing Executive Officer | Yutaka Nakashima |
| Managing Executive Officer | Hisaki Masuda |
| Executive Officer | Ryoichi Aita |
| Executive Officer | Randy Ahuja |
| Executive Officer | Yoshihiro Anmo |
| Executive Officer | Toru Taniguchi |
| Executive Officer | Natsuki Tokubuchi |
| Executive Officer | Kenji Minegishi |
| Executive Officer | Hajime Murakami |
| Executive Officer | Motohide Mohri |
| Executive Officer | Toru Yamamoto |



The Company has introduced an Executive Officer System. The names, titles, and responsibilities of each Executive Officer are as follows.

### Sean M. Stack

Representative Director,
Chairman, President & CEO

### Kazuya Murakami

Representative Director,
Executive Vice President

### Tony I. Cha

Managing Executive Officer,
CFO General Manager, Finance Division

### Yutaka Nakashima

Managing Executive Officer, CHRO
General Manager, Human Resources &
General Administration Division,
Chief Risk Management Officer

### Hisaki Masuda

Managing Executive Officer,
CSPO General Manager,
Strategy Planning Division

### Ryoichi Aita

Executive Officer, CQO

### Randy Ahuja

Executive Officer,
Proterial, Ltd. Director & Co-President,
Proterial America, Ltd. Chairperson,
Proterial Europe GmbH

### Yoshihiro Anmo

Executive Officer, CIO & CDO

### Toru Taniguchi

Executive Officer, General Manager,
Manufacturing & Engineering Division

### Natsuki Tokubuchi

Executive Officer, CTrO

### Kenji Minegishi

Executive Officer, General Manager,
Magnetic Materials Business Unit

### Hajime Murakami

Executive Officer,
CTO General Manager, R&D Division;
General Manager,
Global Research & Innovative Technology Center

### Motohide Mohri

Executive Officer, General Manager,
Specialty Steel Business Unit

### Toru Yamamoto

Executive Officer, General Manager,
Marketing & Sales Division

CEO : Chief Executive Officer
CFO : Chief Financial Officer
CHRO : Chief Human Resources Officer
CSPO : Chief Strategy and Planning Officer
CQO : Chief Quality Officer
CIO: Chief Information Officer
CDO: Chief Digital Officer
CTrO : Chief Transformation Officer
CTO : Chief Technology Officer

**(2) Status of Outside Directors and Officers**

Among the Audit & Supervisory Board Members, Shunsuke Nakahama and Yuriro Ogawa serve as Outside Auditors. Mr. Nakahama is also an Outside Auditor for EVIDENT CORPORATION. Although the Company engages in product transactions, etc., with EVIDENT CORPORATION, the trading value is minimal. Furthermore, Mr. Nakahama and Mr. Ogawa are partners at Bain Capital Private Equity (Japan), LLC. As the parent of the Company, K.K. BCJ-52 is a fully-owned subsidiary of K.K. BCJ-51. Bain Capital Private Equity, LP, and the investment funds to which it provides investment advice; the funds which Japan Industrial Partners, Inc., manages, operates, and provides information to; and the funds operated by Japan Industrial Solutions Co., Ltd., indirectly hold all shares in K.K. BCJ-51.

**(3) Internal Control System Development Progress** (including development progress regarding systems intended to ensure the appropriateness of operations by the Company's subsidiaries)

The Company resolved its basic policy on the internal control system pursuant to the Companies Act at a meeting of the Board of Directors, and is now implementing this system. The details of this basic policy are as follows:

1. Systems to Ensure the Compliance of the Execution of Duties by the Company's Directors with Laws and Regulations and the Articles of Incorporation
2. Systems for the Retention and Management of Information Related to the Execution of Duties by the Company's Directors
3. Rules and Other Systems for Managing the Risk of Loss of the Company and its Subsidiaries
4. Systems to Ensure the Efficient Execution of Duties of Directors of the Company and Directors of its Subsidiaries
5. Systems to Ensure Compliance of Employees of the Company as well as Directors and Employees of its Subsidiaries in Executing Their Duties with Laws and Regulations and the Articles of Incorporation
6. Systems for Reporting Matters Relating to the Execution of Duties by Directors of Subsidiaries to the Company
7. Other Systems to Ensure Appropriate Operations of the Company as well as the Corporate Group Consisting of the Company, its Parent Company and Subsidiaries
8. Matters concerning Employees to Assist with the Duties of the Company's Audit & Supervisory Board Members
9. Matters to Ensure the Independence of Employees Referred to in the Above Item (8) from Directors, as well as the Effectiveness of Instructions of the Company's Audit & Supervisory Board Members Given to the Said Employees
10. Systems for Reporting to the Company's Audit & Supervisory Board Members and Systems to Ensure Prohibition of Disadvantageous Treatments of a Person Who Made Such Reports
11. Matters Concerning the Policy on Prepayment or Reimbursement Procedures and Other Treatments of Expenses or Debt that Are Incurred in the Course of Executing the Duties of the Company's Audit & Supervisory Board Members
12. Other Systems to Ensure the Effective Execution of Audits by the Company's Audit & Supervisory Board Members

**(4) Risk Management System Development Progress**

Each Executive Officer identifies and analyzes business risks including changes in political, economic and social situations, currency fluctuations, rapid technological innovations, as well as changes in customer needs, examines measures against such risks, and reviews these measures whenever necessary through discussions at the Board of Directors, the Audit & Supervisory Board, the Executive Committee and other meeting bodies. In addition, the Company avoids, prevents and manages the risks by ensuring each site of the group companies develop systems to immediately share information of materialized risks relating to compliance, antisocial forces, investments, finance, procurement, the environment, disasters, safety, quality, human rights, information security, export control, legal affairs, etc. with respective business divisions in charge, as well as ensuring each corporate administrative division prepare internal rules, guidelines, etc., conduct education and enlightenment activities, preliminary checks, audits on business operations, etc. and cooperate with the relevant internal business divisions. Moreover, the Company established the Risk Management Committee as an organ to summarize various business risks surrounding the Group and contingency plans for those risk, and to evaluate their coverage and weighting in an effort to strengthen the risk management capabilities of the Group. In addition to ongoing formulation of, training for and review of BCPs assuming large-scale of earthquake etc., the Company established a safety confirmation system for confirming the safety of employees and their families via the internet in the event of a disaster.

Regarding misconduct related to quality, the monitoring function for quality compliance risk did not function adequately, and it was unable to fully grasp the possibility of misconduct or the occurrence of misconduct as a problem, which we believe is one of the main factors for misconduct continued. Therefore, the Company has put forward strengthening monitoring related to quality compliance as one measure to prevent recurrence, and will implement the following: (1) in addition to the first line of defense, which is the internal control system for sales, development, design, and manufacturing, also review the second line of defense, which is internal audits (integrity audits) by the Corporate Quality Assurance Division, and conduct audits of the Corporate Quality Assurance Division by the Internal Auditing Office, which is the third line of defense, (2) establish a process whereby the Audit & Supervisory Board expresses opinions regarding the results of the aforementioned audits by the Corporate Quality Assurance Division and the Internal Auditing Office in (1), and in the event that improvement is required, follow up on how improvement was carried out, and establish an operational system for confirmation from an objective point of view, and (3) regarding details of risk management activities conducted by the Corporate Quality Assurance Division and Chief Quality Officer (CQO), information will be regularly shared among management executives, the suitability and necessity of cross-divisional measures will be discussed, and made the subject of internal audits.

## 2 Status of Audit

**(1) Status of the Audit & Supervisory Board Audits**

The Audit & Supervisory Board Members are in charge of auditing business execution by Directors in accordance with laws and regulations, as well as of auditing the adequacy of internal control systems and of the accounting audit. Based on annual auditing policies and audit implementation plans formulated by the Audit & Supervisory Board, the auditors perform audits by hearing reports on important items and visiting each facility, etc., and each subsidiary. In addition, the Audit & Supervisory Board Members conduct special audits if an audit finds the possibility of violations of laws and regulations or the Articles of Incorporation by the Directors.

Main agendas for the Audit & Supervisory Board meetings are as shown below.

(a) Reporting and discussions on the Accounting Auditor's audit plans, the results of its quarterly review, and its audit results

(b) Internal audit policies and implementation plans for the Internal Auditing Office in charge of internal audits, reporting on the results of internal audits, and reporting and discussions on the status of follow-up on the management and operational challenges identified by the audits

(c) Reporting on policies and plans for promoting internal control over financial reporting; reporting on the results of evaluation on the effectiveness of internal control (three times); and discussion towards improving the effectiveness on internal control and business management

(d) Reporting on challenges that business execution divisions currently face and the status of their efforts to address such challenges, and discussions towards improving the corporate governance

Moreover, the Audit & Supervisory Board selects full-time auditors. These full-time auditors attend the Executive Committee and other important meetings besides the Board of Directors to audit the execution of duties by Directors on a daily basis. In addition, full-time auditors engage primarily in the following activities

(a) Audit the business report, verify the financial statements, etc., hearing from the Accounting Auditor on procedures and views about important issues, and report at the Audit & Supervisory Board on findings concerning the business report and views on the Accounting Auditor's auditing

(b) Conduct on-site audits of the Group's facilities and subsidiaries based on the audit implementation plans; share the results with each of the Audit & Supervisory Board Members; report the issues detected through such on-site audits to the Internal Auditing Office and the Accounting Auditor; and express opinions in the context of corporate governance at the Board of Directors

**(2) Status of the Internal Audit**

a. Internal Audit Organization, etc.

The Company has the Internal Auditing Office (with 11 dedicated staff members) that is in charge of internal audits. The Internal Auditing Office formulates annual audit policies and audit implementation plans for internal audits on the Group. Based on these policies and plans, the office conducts on-site audits on the status of execution of the Company's offices and subsidiaries in Japan and overseas and business management over the course of three years in principle and also collaborates with the Audit & Supervisory Board and the Accounting Auditor to promote cooperation in tripartite audits. In addition to these audits, a special audit may be conducted upon special request, etc. of the President & CEO. The Internal Auditing Office also reports to the President & CEO and the Audit & Supervisory Board regarding its audit policy and audit implementation plans in advance, reports the audit results mostly once in a month, holds an audit report meeting mostly once in a month to the person in charge of business at the respective business division and each department of the corporate division, and requests improvements regarding the execution of duties. If necessary, it also carries out on-site audits in collaboration with divisions in charge of the environment, safety, information systems and risk compliance within the Company.

b. Coordination between Internal Audits, Audits by the Audit & Supervisory Board Members and Accounting Audits

The Audit & Supervisory Board (a) receives explanations about audit implementation plans from the Accounting Auditor and carries out a discussion on and adjustments to the detail as needed, and (b) receives reports on audit results and engages in an exchange of opinions.

Moreover, the Audit & Supervisory Board receives reports from the Accounting Auditor in cases where, as for the performance of duties by Directors, etc., they find any significant evidence of wrongful act or violation of related laws and regulations, or the Articles of Incorporation in the course of performing their duties. In addition, the Audit & Supervisory Board Members receive reports on policies and audit implementation plans for internal audits, as well as periodic reports, from the Internal Auditing Office in charge of internal audits at the Audit & Supervisory Board. At the same time, to promote coordination with audits performed by the Audit & Supervisory Board Members, as necessary, the Board may request (a) a special audit to be conducted by the Internal Auditing Office and (b) set key audit items for internal audits performed by the Internal Auditing Office. Furthermore, the Internal Auditing Office is also in charge of assessing the effectiveness of internal controls over financial reporting, and reports on the status of such to the Audit & Supervisory Board Members. Moreover, besides the Internal Auditing Office, the corporate divisions, etc. in charge of finance, compliance, risks, and other areas also play certain roles in internal control and report the status of performance of their duties to the Audit & Supervisory Board Members.

The Company regards promotion of tripartite audit function as a paramount theme for the audit and supervision functions. The Audit & Supervisory Board Members, the Accounting Auditor, and the Internal Auditing Office mutually share information on issues detected by each of them.

**(3) Status of the Accounting Auditor**

The Company's Accounting Auditor is Ernst & Young ShinNihon LLC. Audits have been continuously conducted for 55 years. The certified public accountants named in the table below conducted accounting audits. Under the direction of said certified public accountants, as necessary, certified public accountants, certified public accountant assistants, and other personnel from Ernst & Young ShinNihon LLC assisted with the execution of accounting audit duties. Seven certified public accountants and 33 other personnel assisted with the Company's accounting audit duties.

| Name of certified public accountant, etc. | Auditing firm of certified public accountant |
|---|---|
| Teruyasu Omote, Engagement partner | Ernst & Young ShinNihon LLC |
| Hiroki Morimoto, Engagement partner | Ernst & Young ShinNihon LLC |

Note: The consecutive number of years audited does not exceed seven years for any of the auditors, and has therefore been omitted.

## 3 Risk Management

With respect to risk management, each Executive Officer identifies and analyzes business risks including changes in political, economic, and social conditions, currency fluctuations, rapid technological innovations, as well as changes in customer needs. At the Risk Management Committee, chaired by the Group Chief Risk Management Officer, a comprehensive review of the risks is conducted. Then, through discussions as appropriate at the Board of Directors, the Audit Committee, the Executive Committee, and other meeting bodies, measures against such risks are examined. The Risk Management Committee identifies and examines the Group's risks, identifies risks that may become management issues, and regularly monitors the conditions of the risks. In addition, each of the Group's sites has established a system to promptly share information that has become known regarding risks relating to compliance, antisocial forces, finance, procurement, the environment, disasters, quality, information security, export control, legal affairs, etc., with each business division. Meanwhile, each corporate business division has prepared internal rules, guidelines, etc.; conducts education and enlightenment activities, preliminary checks, audits on business operations, etc.; and cooperates with the relevant business divisions to avoid, prevent, and manage risks.

**(1) Risks associated with product demand and market conditions**

**Major potential risks by market segment**

The Group conducts business in a wide range of market segments, including the automobile, industrial infrastructure, and electronics-related sectors. In addition, its businesses span many regions, including Japan, as well as the United States, China, the rest of Asia, and Europe. For these reasons, the Group's operating results and financial situation may be affected by trends in these markets and regions. With the near total lifting of restrictions on economic and social activities taken in response to the COVID-19 pandemic, going forward the global economy is expected to transition to a post-COVID period in which economic conditions are not affected by the extent of infection. Moreover, the prices of major resources affected by the slowdown in the global economy to date are starting to pass their peak, while there is also anticipation for a recovery in demand due to the termination of the zero-COVID policy taken by China. However, the pace of economic recovery will be sluggish due to the continuation of monetary tightening policies implemented by major countries against the backdrop of global price inflation, while the end to automobile production declines that have stemmed from semiconductor and raw material shortages will be further delayed. Such developments could affect demand for the Group's products. Presented below is a non-exhaustive list of the major potential risks, by market segment.

**Automobile-related segment**

- The Company offers a wide range of products in the automobile segment. While our plans incorporate the effects of slowdown in automobile production due to factors including the global shortage of semiconductors, further cutbacks or prolonged production slowdown by automobile manufacturers could impact the Group's operating results or financial situation. The automobile industry is also currently undergoing a period of transition from conventional internal combustion engines (ICE) to electrification (xEV*). To meet market needs, the Group is reinforcing its manufacturing lines, expanding product lineups, and taking other measures. However, if the shift to electrification (xEV) rapidly accelerates or is slower than expected, the operating results or financial situation of the Group may be affected.

  * xEV refers to electric vehicles (EVs), hybrid electric vehicles (HEVs), and plug-in hybrid electric vehicles (PHEVs).

- With regard to molds and tool steel, manufacturers in China and emerging countries have been gaining power and are expected to enter the Japanese market. If competition intensifies, the operating results or financial situation of the Group may be affected. The Group is responding with efforts at differentiation from other companies, such as by launching high-performance products and strengthening its supply chain.

**Industrial infrastructure segment**

- Among aircraft and energy-related materials, the business for aircraft-related materials tends to depend on supplying specific customers and providing specific products. If demand in the aircraft industry has a long-term slump, the operating results or financial situation of the Group may be affected. The Group is responding by strengthening its business with engine manufacturers and introducing new next-generation products using specialized technologies.
- With regard to fittings for piping components, the Group mainly supplies products to gas-company customers. The liberalization of the gas industry is increasing competition, and if this competition further intensifies, the operating results or financial situation of the Group may be affected. The Group is responding with efforts at differentiation from other companies, including the early introduction of new types of fitting products.
- Regarding wires and cables, the Group is moving to local production of electric wires for rolling stock and is expanding its product lineup, etc., to increase business in the rolling stock segment, one of the Group's growth segments. If demand in the railway segment experiences a long-term slump as railway investments by China, the largest market, stagnate, the operating results or financial situation of the Group may be affected.

**Electronics-related segment**

While the Company offers a wide range of products in the electronics-related segment, customer needs and technologies in this segment are quickly changing. If rapid technological innovations occur and our response is delayed, the operating results or financial situation of the

Group may be affected. In this regard, the Group is striving to respond promptly by grasping customer needs and technological innovations at an early stage, developing new products, and taking other measures.

**(2) Risks associated with competitiveness, and the development and commercialization of new technologies and products**

Each of the Group's businesses has competitors that supply the same type of products as the Group. The markets for the Group's existing products may shrink due to changes in technology or the maturation of the market for some of the Group's products. As a result, the Group's competitiveness is affected by its competitive advantage in terms of price, quality, and delivery, and its ability to develop and commercialize new technologies and products. Consequently, an inability to respond appropriately to changes in technology or customer needs, and delays in developing or commercializing new technologies and products would have a negative impact on the Group's growth and revenue and may affect the operating results or financial situation of the Group. In addition, as part of environmental measures centered on reducing $CO_2$ emissions, society is demanding the development of environmentally friendly technologies and products with lower environmental impact. Amid such circumstances, an inability to respond appropriately to these demands and delays in developing or commercializing environmentally friendly technologies and products may affect the operating results or financial situation of the Group. The Group will respond to these risks by striving to develop and commercialize new technologies and products to maintain its competitive advantage and by doing its utmost to respond to changes in market conditions and customer needs by rapidly introducing new products to the market through co-creation with customers, while strategically advancing the development of technologies and products aimed at environmental measures.

**(3) Risks associated with raw materials procurement**

The Group utilizes a variety of raw materials in its production activities, including iron scrap and copper. These raw materials include many rare metals, which are produced in limited areas and by a limited number of suppliers. The prices of these raw materials vary greatly according to international supply and demand, as well as by the resource policies and other conditions in the producing countries, and by social upheaval, such as conflicts between many countries. If the Group is unable to transfer high market prices to its sales prices in a timely manner, the operating results or financial situation of the Group may be affected. In addition, if the supply of these raw materials becomes tight or is delayed due to issues in the producing country, such as not only major natural disasters, strikes, deterioration of the political situation, or failure in its logistics capabilities, but also including social upheavals such as conflicts between many countries, the Group could be prevented from acquiring the necessary volume of raw materials. In addition, if it is confirmed that conflict minerals, child labor, or other problems lie behind the raw materials procured, it may be necessary to change raw materials or suppliers, affecting the production and supply of products. The Group is responding with efforts to reduce these risks by making procurement more stable by such measures as diversifying procurement sources. Our efforts also include sharing the Proterial Group Sustainable Procurement Guidelines with our procurement sources.

**(4) Risks associated with securing talent**

To stay competitive, the Group must continually secure the talented human resources needed to execute its businesses, but the pool of such talented human resources is limited. If the Group is unable to hire or retain such talent, or if the development of its human resources does not proceed according to plan, a shortage of the talent required to execute its businesses may result, thereby affecting the operating results or financial situation of the Group. The Group responds to this risk by striving to secure talent by restructuring its human resource system to enable diverse human resources to work actively at the Group and by promoting the development of talent by further enhancing and strengthening its human resource development program.

**(5) Risks associated with product quality**

①Effects of the misconduct at issue

In April 2020, the Company identified cases of misconduct, including the misrepresentation of test results in inspection reports submitted to customers. Since then, the Company has examined the facts and causes of the misconduct. The results of the investigation confirmed that misconduct, such as rewriting the inspection results of the characteristics stated in the specifications agreed to with customers and the delivery to customers of products that did not meet the specifications agreed upon with the customer, had occurred with magnet products, specialty steel products, automotive casting products, etc., manufactured by the Company and its subsidiaries. For affected products, we are currently verifying their performance by analyzing the correlation between our actual inspection methods and the inspection methods agreed upon with our customers, confirming performance under the observation of our customers, and re-inspecting product samples stored by the Company. At present, no performance defects or safety issues have been found.

In April 2023, the Company established the Quality Committee as a replacement for the Quality Compliance Committee, which was established in April 2021 to monitor the steady implementation of various measures to prevent recurrences of incidents, fundamentally review our quality assurance system, and further strengthen compliance. The committee is working with full commitment to prevent the recurrence of misconduct and restore the trust of customers, shareholders, and other stakeholders. However, depending on the progress of cases in question, the Group's operating results or financial situation may be affected by a decline in confidence in the Group's products, the need for additional responses if new cases of misconduct are uncovered, losses including compensation for customers, and increase in expenditure to strengthen the quality control system.

②Non-compliant products and defective products

The Group's products include those requiring high credibility such as key safety components. The Group has established a strict quality control system for product manufacturing to prevent sending to the market products that do not meet the specifications agreed upon with customers (non-compliant products) or defective products. However, if non-compliant or defective products flow into the market and costs are incurred in the repair, replacement, recall, compensation for damages, or legal actions of the Group's products, the operating results or financial situation of the Group may be affected.

**(6) Risks associated with environmental regulations**

The Group's business is also subject to a wide range of environmental laws and regulations, as well as laws and regulations related to the Industrial Safety and Health Act, covering areas such as air pollution, water pollution, the use and handling of hazardous substances, reasonable use of energy, waste disposal, and soil and groundwater contamination. These regulations have continued to become stricter over the years. Moreover, in addition to compliance with conventional environmental laws and regulations, recently there has been growing social demand for companies to take initiatives to respond to the risk of climate change. Included are calls for decarbonized management, such as using non-greenhouse gas-producing renewable energy and managing greenhouse-gas emissions throughout the entire value chain, not just for business relationships with customers and suppliers. Moreover, consideration is also being made towards introducing a Carbon Border Adjustment Mechanism that imposes a tax corresponding to the amount of $CO_2$ emitted during the manufacture of individual products. The Group has been working to reduce $CO_2$ emissions, including omitting excess processes, promoting the introduction of energy efficient equipment, and converting to natural gas and LPG fuel. Moreover, in June 2021, the Group set the long-term goal of achieving carbon neutrality by 2050 (with the medium-term goal of reducing $CO_2$ emissions by 38% by FY2030 compared with FY2015). To achieve this goal, in addition to even greater efforts to reduce $CO_2$ emissions, the Group is considering efforts that go beyond emission reduction, such as recycling emitted $CO_2$. The Group also endorses TCFD recommendations and is committed to evaluating and disclosing the impact of climate change. Amid these major changes in the environment, the costs of procuring the materials, parts, and energy that the Group uses to manufacture its products may rise, and the costs of R&D investment and capital investment related to these initiatives may increase. The Group strives to mitigate these environmental risks by complying with environmental laws and regulations within its environmental management structure, in accordance with the environmental management system ISO 14001:2015, and strives to recognize and reduce the financial impact of environmental compliance.

**(7) Risks associated with changes in foreign exchange rates**

Since the Group imports raw materials from abroad, exports products manufactured in Japan overseas, and engages in global cash pooling with its overseas Group companies, fluctuations in exchange rates affect its transactions, assets, and liabilities denominated in foreign currencies. For this reason, if a major change in exchange rates occurs, the operating results or financial situation of the Group may be affected. In this regard, the Group strives to reduce the risk from exchange fluctuations in imports and exports denominated in foreign currencies through means such as foreign-exchange contracts and currency options. In addition, when preparing its consolidated financial statements, the Group converts the financial statements of its overseas subsidiaries to yen, and fluctuations in exchange rates may affect the operating results or financial situation of the Group.

**(8) Risks associated with M&As and business reorganization**

The Group may acquire other companies, establish joint ventures, form strategic partnerships, sell businesses, or take other such measures to develop new technologies and products in its business areas, become more competitive, or expand its business areas, etc. These measures include complex issues that require time and money for business operations and the incorporation of technologies, products, and personnel, and time may be required to achieve synergies. If such measures do not proceed according to plans, the initially anticipated effects may not be achieved. In addition, the effects of business partnerships may be adversely impacted by the decision-making and capabilities of the partner, which the Group cannot control, as well as by market trends. Furthermore, integration, restructuring of acquired businesses, post-acquisition operations, etc., related to these measures could incur large expenses for the Group and may affect its operating results or financial situation. The Group responds to these risks by employing outside advisers to analyze M&As, business reorganization, etc., from various perspectives, including market trends, strategies, acquisition price, the PMI process, and latent risks, as well as deliberations by the Executive Committee and the Board of Directors.

**(9) Risks associated with information security**

The usage and importance of information systems in the Group's business activities are increasing. The Group retains and manages personal information obtained from its customers, as well as confidential information regarding the technologies, R&D, manufacturing, sales, and operating activities of the Group and its customers, in a variety of formats, including the use of external service providers. The Group works to strengthen its information security in order to protect this confidential information. However, if (1) external cyberattacks or other threats impede the functioning of these information systems, (2) services from

an external service provider are interrupted, or (3) email is missent or theft of equipment, etc., occurs, such confidential information may be disclosed through data breach or leak without authorization. Therefore, the Group may be held liable for compensation for damages or be exposed to legal action, and the Group's operating results, financial situation, reputation, or trust may be affected.
The Group responds to these risks by taking security measures based on the severity and frequency of the risk, under the assumption that cyberattacks cannot be completely prevented. The scope of strengthening information security has been expanded from the office automation environment to a wide range of business environments, including the production and manufacturing floors, and the Group is enhancing its Information Security Committee system by further strengthening participation by relevant divisions. In addition, the Group conducts security training every year through e-learning to deepen employees' understanding of the Group's information security measures. The Group has also taken out insurance against information leaks, including cyberattacks. This insurance covers claims for compensation for damages in the event of an information leak.

**(10) Risks associated with the global expansion of businesses**

To respond to the maturation of the Japanese market and the increase of customers overseas, the Group is expanding its businesses aggressively, including expanding into and exporting products to the United States, China, the rest of Asia, Europe, and other overseas markets.
To newly expand a business overseas requires the Group to make a large initial investment in manufacturing equipment and other capital, and, in most cases, substantial time is needed before operations commence. Developing a business overseas involves a number of inherent risks: (i) changes in laws and tax regulations; (ii) underdeveloped social systems and infrastructure; (iii) social turmoil, such as war, terrorism, riots, and the spread of infectious disease; and, (iv) other obstacles to overseas business activities caused by the economic, social, or political situation, such as trade-related tariffs, import restrictions, and protectionism. If these issues occur, they could form an obstacle to the Group's overseas business activities and may affect the operating results or financial situation of the Group. The Group responds to this risk by continuously monitoring the political, economic, and social conditions of each region, analyzing the impact on the Group's business, and implementing measures for the Group as a whole.

**(11) Risks associated with health and safety**

Following the view that prioritizing safety and health is above all else, the Group is pushing ahead the creation of safe and healthy workplaces at its manufacturing sites both in Japan and abroad, by instilling a culture of safety, creating safe organizations, and improving facilities to ensure fundamental safety. However, when an incident such as a work-related accident or violation of labor laws and regulations that affects employees, facilities, or equipment due to unforeseen circumstances occurs, not only could that cause serious damage to the lives or bodies of workers, but could also result in interruption of the Group's business activities, compensation for victims, or administrative penalties for labor law violations. Such results could affect the Group's operating results or financial situation. In response, the Group has established the Safety & Health Management Department as the organization to manage the health and safety of the Group. In addition, the Group continually implements health and safety education to improve employees' awareness of risks and managers' awareness of health and safety issues. The Group also invests in the implementation of essential safety measures for facilities, and promote Group-wide health management measures, such as prevention of lifestyle-related diseases and support for smoking cessation.

**(12) Risks associated with earthquakes and other natural disasters**

The Group's business activities may be interrupted if its facilities are directly damaged or destroyed by a major earthquake or other major natural disasters, such as storms and floods due to climate change. Even if the Group's facilities are not affected directly, its distribution, supply, or communications network could be thrown into turmoil. Furthermore, an outbreak of a previously unknown infectious disease could result in a disruption of the Group's business activities. Direct or indirect disruption of the execution of the Group's businesses due to such natural disasters or events could impede the Group's business activities and affect its operating results or financial situation.
The Group responds to these risks by formulating a Business Continuity Plan (BCP) that accounts for major earthquakes and other disasters, and by continuously revising this plan and providing training on it. It has also established a safety confirmation system that verifies the safety of its employees and their families via the Internet, in the event of a disaster. The Company is also working to construct a remote work environment, including working from home, in an effort to put into place a working environment that will remain stable in the event of a disaster or when faced with measures to prevent infectious diseases.

**(13) Risks associated with impairment losses on property, plant, equipment, and goodwill**

To maintain and grow its businesses, and acquire new business opportunities, the Group must continuously make capital investments. In addition, it acquires the businesses of other companies and the like, as necessary. In particular, the Group makes full use of large-scale capital investments to reap early effects. At the same time, when making new capital investment, the Group implements selective capital investment that focuses on high-growth, high-revenue areas. In addition, the Group holds large amounts of fixed assets from previous capital investments and acquisitions of businesses from other companies, etc. Therefore, the Group could record an impairment loss on its current or future fixed assets, if it is unable to recover its investments due to changes in the external environment, etc. This may affect the operating results or financial situation of the Group. The Group responds to this risk by having the Investment Committee review major investments beforehand and subsequently having the Executive Committee and the Board of Directors deliberate, from a multifaceted and whole-company perspective that includes conformity with business strategies, market and other trends, business risks, the appropriateness of technology and productivity improvement plans, and the appropriateness of investment amounts and investment plans. In addition, after an investment decision is made, the Group performs regular follow-ups, accelerating and changing investment plans, while tracking the market environment and internal situation.

**(14) Risks associated with financing activities**

The Group's basic policy is to cover the funds needed to invest for growth with cash generated by businesses and cash on hand. However, to avoid missing growth opportunities, the Group also borrows from K.K. BCJ-52 as the parent, and raises long-term financing from the capital markets. Therefore, if financing cannot be obtained under favorable terms due to a deterioration of the financial markets, or if it becomes infeasible to obtain funds flexibly due to rising financing costs or to a worsening cash flow, the operating results or financial situation of the Group may be affected.
The Group strives to reduce risk by using global cash pooling and working to optimize the flow of funds within the Group.

**(15) Risks associated with laws and regulations, and official regulations**

The Group is subject to economic laws, related laws and regulations, and official regulations, including systems for commerce, trade, currency exchange, and taxation, in Japan and the countries where the Group does business. The Group strives to comply with these laws, regulations, and official regulations by maintaining and improving its internal control systems. However, if the Group is deemed to have violated such laws or regulations, it will be subject to administrative sanctions and could be held liable for compensation for damages in a civil lawsuit, etc., due to such violations. In addition, if these laws, regulations, or official regulations are amended, the cost of compliance could increase. Such administrative sanctions, compensation for damages, and increases in compliance costs, etc., may affect the operating results or financial situation of the Group.
The Group has responded to these risks by formulating the Proterial Group Code of Conduct, which stipulates rules and principles intended to assist officers and employees in making decisions and taking actions. This Code of Conduct was formulated to cultivate an awareness of compliance among all officers and employees and to ensure thorough legal compliance, and the Group is conducting its business activities based on the principle of always acting with integrity. Furthermore, the Proterial Global Compliance Program, which stipulates regulations for matters such as compliance with competition laws and the prevention of corrupt practices, is in place at all companies throughout the Group. The Group prepares and distributes the CSR Guidebook to enhance understanding and works continuously to provide education through means such as training and e-learning.

**(16) Risks associated with intellectual property rights**

The Group holds a large number of intellectual property rights, exercises these rights, and grants licenses to other companies in accordance with its business strategy. Meanwhile, the Group respects the intellectual property rights of other companies and obtains their licenses when it is deemed necessary. If the exercise of rights or the granting or acquisition of licenses does not proceed as planned, the business execution or competitiveness of the Group could be affected. In addition, although the Group responds appropriately to legal action or other disputes relating to intellectual property rights by such means as coordination with outside attorneys or other experts, costs related to dispute settlements could be incurred and may affect the operating results or financial situation of the Group. In order to curb these risks, the Group investigates the patents of other companies in advance when conducting research, development, design, etc., and implements preventive measures and countermeasures. To deepen understanding of such risks, the Group also provides continuing education to its employees through various training programs.

**(17) Risks associated with retirement benefit obligations**

The Group bears large retirement benefit costs and obligations, which are determined by actuarial calculations. Evaluations of these costs include key assumptions on estimating pension costs, such as mortality rates, separation rates, retirement rates, changes in salary, discount rates, and expected rates of return on pension assets. The Group must estimate the major assumptions used in this assessment, taking into account many factors, such as the conditions of its workforce, current market conditions, and trends in future interest rates. Although we believe that the estimation of these major assumptions, based on underlying factors, is reasonable, there is no guarantee that the assumptions will match the actual results. Financial market downturns may reduce the expected rate of return due to reduced valuation of plan assets. Depending on circumstances, additional contributions to plan assets may be required. Reductions in the discount rate will increase the actuarial retirement benefit obligations. For this reason, changes to the major assumptions may affect the operating results or financial situation of the Group. In response, the Group's Retirement Benefits Committee meets regularly to deliberate and decide on appropriate investments based on advice from investment advisory firms on matters such as asset allocation and selection of investment projects.

# Financial Data

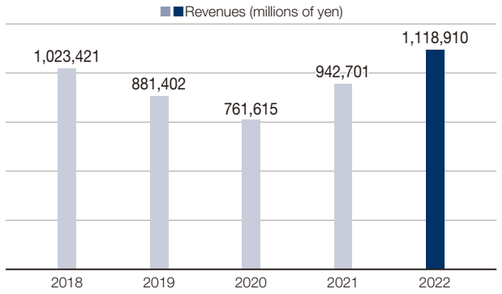
(millions of yen)

| | FY2022 IFRS *1 | FY2021 IFRS | FY2020 IFRS | FY2019 IFRS | FY2018 IFRS | FY2017 IFRS | FY2016 IFRS | FY2015 IFRS | FY2014 IFRS | FY2013 IFRS |
|---|---|---|---|---|---|---|---|---|---|---|
| For the period | | | | | | | | | | |
| Operating results: | | | | | | | | | | |
| Revenues | 1,118,910 | 942,701 | 761,615 | 881,402 | 1,023,421 | 988,303 | 910,486 | 1,017,584 | 1,004,373 | 807,794 |
| Cost of sales | 952,091 | 807,516 | 666,246 | 755,947 | 851,029 | 803,607 | 731,153 | 819,433 | 793,517 | 637,081 |
| Selling, general and administrative expenses | 117,738 | 108,376 | 100,346 | 111,072 | 120,965 | 119,566 | 113,350 | 122,090 | 126,446 | 106,851 |
| Adjusted operating income*2 | 49,081 | 26,809 | △4,977 | 14,383 | 51,427 | 65,130 | 65,983 | 76,061 | 84,410 | — |
| Other income | 5,702 | 18,018 | 9,726 | 8,599 | 10,667 | 5,401 | 14,070 | 36,416 | 21,303 | 5,844 |
| Other expenses | 15,967 | 18,132 | 53,962 | 62,108 | 19,652 | 24,205 | 11,786 | 12,523 | 21,306 | 16,278 |
| Operating income | 38,816 | 26,695 | △49,213 | △39,126 | 42,442 | 46,326 | 68,267 | 99,954 | 84,407 | 53,428 |
| Income before income taxes | 43,338 | 32,740 | △50,588 | △40,614 | 43,039 | 46,985 | 66,016 | 96,233 | 86,391 | 55,820 |
| Net income attributable to shareholders of the parent company | 23,285 | 12,030 | △42,285 | △37,648 | 31,370 | 42,210 | 50,593 | 69,056 | 70,569 | 48,133 |
| Cash flows: | | | | | | | | | | |
| Cash flows from operating activities | 43,969 | 29,851 | 52,586 | 105,958 | 66,582 | 39,133 | 89,391 | 115,742 | 108,983 | 99,171 |
| Free cash flows | 13,410 | 23,479 | 54,777 | 49,540 | △29,665 | △35,947 | 53,527 | 83,595 | △4,767 | 89,339 |
| Increase (decrease) in cash and cash equivalents | △48,449 | 25,306 | 56,986 | 1,255 | △13,814 | △84,499 | 19,111 | 41,271 | △7,443 | 61,765 |
| Capital expenditure | 32,041 | 34,349 | 28,806 | 53,019 | 95,389 | 91,786 | 63,843 | 59,602 | 51,474 | 31,987 |
| Depreciation and amortization | 47,667 | 46,531 | 50,407 | 55,180 | 50,901 | 46,138 | 43,039 | 42,927 | 39,917 | 33,762 |
| Research and development expenses | 12,150 | 12,404 | 14,475 | 15,918 | 18,604 | 17,749 | 17,971 | 19,121 | 20,903 | 16,814 |
| At the end of the period: | | | | | | | | | | |
| Total assets | 1,064,575 | 1,069,695 | 972,249 | 977,766 | 1,099,252 | 1,058,832 | 1,040,390 | 1,033,311 | 1,083,450 | 848,772 |
| Interest-bearing debt*3 | 384,186 | 196,909 | 195,318 | 187,586 | 202,098 | 160,844 | 194,457 | 220,376 | 255,350 | 177,195 |
| Equity (net assets) | 196,274 | 531,118 | 492,118 | 522,853 | 595,211 | 570,192 | 548,746 | 504,675 | 476,176 | 382,840 |

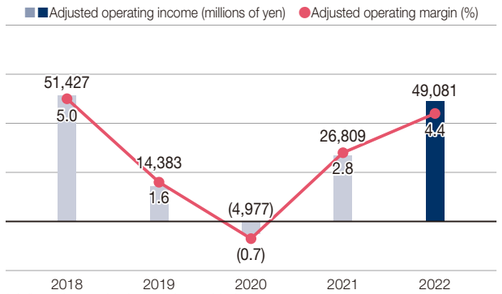
| | FY2022 IFRS | FY2021 IFRS | FY2020 IFRS | FY2019 IFRS | FY2018 IFRS | FY2017 IFRS | FY2016 IFRS | FY2015 IFRS | FY2014 IFRS | FY2013 IFRS |
|---|---|---|---|---|---|---|---|---|---|---|
| Key financial indicators: | | | | | | | | | | |
| Operating income ratio (%) | 4.4 | 2.8 | △6.5 | △4.4 | 4.1 | 4.7 | 7.5 | 9.8 | 8.4 | 6.6 |
| Operating cash flow margin (%) | 3.9 | 3.2 | 6.9 | 12.0 | 6.5 | 4.0 | 9.8 | 11.4 | 10.9 | 12.3 |
| ROS (%)*4 | 2.1 | 1.3 | △5.6 | △4.3 | 3.1 | 4.3 | 5.6 | 6.8 | 7.0 | 6.0 |
| ROE (%)*5 | 6.5 | 2.4 | △8.4 | △6.8 | 5.5 | 7.7 | 9.8 | 14.4 | 16.8 | 15.6 |
| Ratio of equity attributable to shareholders of the parent company (%) | 18.1 | 49.3 | 50.4 | 53.2 | 53.5 | 53.1 | 51.6 | 48.0 | 43.0 | 43.9 |
| D/E ratio (times) | 1.99 | 0.37 | 0.40 | 0.36 | 0.34 | 0.29 | 0.36 | 0.44 | 0.55 | 0.48 |

*1 IFRS: The Company has adopted the International Financial Reporting Standards (IFRS) for the Consolidated Financial Statements in the Annual Securities Report since the fiscal year ended March 31, 2015.
*2 Adjusted operating income : Operating income (loss) excluding other income and other expenses as an indicator to provide a true view of the condition of the Group's business without the effects of business restructuring, etc.
*3 Interest-bearing debt: The total of short-term debt, long-term debt, and corporate bonds.
*4 ROS: Net income attributable to shareholders of the parent company divided by revenues.
*5 ROE: Computed as the net income attributable to shareholders of the parent company divided by the average total equity excluding non-controlling interests (the average of the beginning and ending balance of the year).

## Revenues

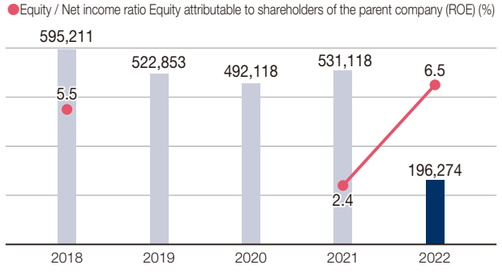



## Adjusted operating income / Adjusted operating margin

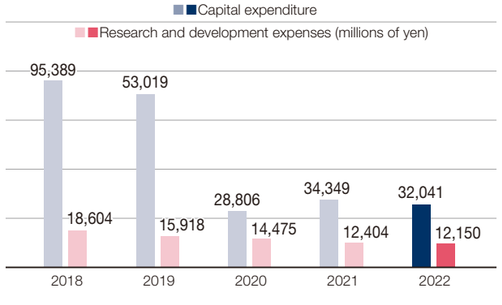



* Adjusted operating income is provided.

## Equity / Net income ratio Equity attributable to shareholders of the parent company (ROE)




## Capital expenditure / Research and development expenses



## Non-Financial Data

| | FY2022 | FY2021 | FY2020 | FY2019 | FY2018 |
|---|---|---|---|---|---|
| Environmental e-learning attendance rate (%) | 99 | 97 | 92 | — | 100 |
| Environmental auditor development training sessions (times) | 1 | 1 | 1 | 2 | 1 |
| Sales of key environmentally conscious products (millions of yen) | 250,765 | 200,121 | 163,004 | 178,479 | 213,980 |
| Sales ratio of key environmentally conscious products (%) | 22.4 | 21.2 | 21.4 | 20.2 | 20.9 |
| Energy consumption converted into crude oil (kl/year) | 966,617 | 1,011,641 | 915,129 | 1,035,053 | 1,109,813 |
| $CO_2$ emissions (thousands of tons of $CO_2$/year) *1 | 1,913 | 2,216 | 1,995 | 2,319 | 2,630 |
| $CO_2$ emissions per production unit (tons of $CO_2$/million yen) | 1.710 | 2.351 | 2.619 | 2.631 | 2.570 |
| Total waste and valuables generated (thousands of tons/year) | 758 | 824 | 761 | 879 | 1,004 |
| Waste and valuables generated per production unit (thousands of tons / million yen) | 0.677 | 0.824 | 0.999 | 0.974 | 0.981 |
| Recycling rate (%) | 81.0 | 77.4 | 76.7 | 74.6 | 78.2 |
| Recycling volume (tons) | 634,633 | 615,212 | 568,586 | 641,068 | 768,687 |
| Final disposal volume (tons) | 149,052 | 180,075 | 172,688 | 218,456 | 214,763 |
| Number of business offices achieving zero emissions (final disposal rate below 0.5%)*2 | 17 | 14 | 19 | 17 | 14 |
| Water consumption (thousands of $m^3$) | 14,737 | 11,602 | 11,349 | 12,186 | 13,391 |
| Water consumption per production unit (thousands of $m^3$/million yen)*3 | 13.171 | 12.307 | 14.901 | 13.826 | 13.085 |
| Amount of chemical substances released into the atmosphere (tons) | 182 | 86 | 88 | 235 | 268 |
| Percentage of positive engagement indicator evaluations in employee awareness surveys (%)*4 | 71 | 56 | 59 | 53 | 59 |
| Diversity in recruitment ratio (non-consolidated) (%)*5 | 66.3 | 50 | 11 | 34 | 57 |
| Ratio of women among newly hired graduates (career-track positions) (technical positions) (non-consolidated) (%)*6 | 6.3 | 7 | 8 | 10 | 12 |
| Ratio of women among newly hired graduates (career-track positions) (administrative positions) (non-consolidated) (%)*6 | 35.7 | 60 | 33 | 36 | 38 |
| Ratio of women in management positions (non-consolidated) (%)*7 | 2.2 | 1.8 | 1.5 | 1.4 | 1.5 |
| Ratio of women in career-track positions (non-consolidated; full-time) (%) | 6 | 6.3 | 5.3 | 4.8 | 4.7 |
| Number of women in career-track positions (non-consolidated) (persons) | 116 | 112 | 106 | 101 | 99 |
| Total annual working hours (non-consolidated/back-office workers) (hours)*8 | 2,056 | 2,078 | 2,028 | 1,980 | 2,049 |
| Occupational accident frequency*9 | 0.45 | 0.30 | 0.23 | 0.27 | 0.42 |
| Number of employees (persons) | 26,496 | 27,771 | 28,620 | 29,805 | 30,304 |
| Number of employees (non-consolidated) (persons) | 5,754 | 5,889 | 6,623 | 7,022 | 7,067 |
| Number of employees (non-consolidated; male) (persons) | 4,927 | 5,068 | 5,826 | 6,215 | 6,277 |
| Number of employees (non-consolidated; female) (persons) | 827 | 821 | 797 | 807 | 790 |
| Average age (non-consolidated) (age) | 44.4 | 43.9 | 43.4 | 43.4 | 43.2 |
| Average years of service (non-consolidated) (years) | 19.2 | 20.8 | 20.1 | 18.8 | 18.4 |
| Number of female managers (non-consolidated) (persons) | 24 | 20 | 19 | 19 | 19 |
| Employment ratio of people with disabilities (non-consolidated) (%) | 2.42 | 2.36 | 2.3 | 2.3 | 2.2 |
| Investment in new safety-related construction for facilities (thousands of yen) | 1,122,199 | 1,161,402 | 1,044,988 | 864,910 | 1,255,201 |
| Attendance at human rights-related training (persons) | — | 14,150 | 6,623 | 7,022 | 5,892 |
| Number of Directors (persons) | 6 | 5 | 5 | 6 | 9 |
| Number of female directors (persons) | 0 | 0 | 0 | 1 | 1 |

*1. In Japan, the power company $CO_2$ emissions coefficient is based on the power supplier emissions coefficient, announced by the Ministry of the Environment, while outside Japan, it is based on the IEA World Energy Outlook 2022 Edition country-specific conversion coefficient.
*2. As of fiscal 2011, the definition of "zero emissions" is a final disposal rate below 0.5%.
*3. Water per production unit = (Water consumption) ÷ (Volume of activity: Numerical values indicating the scale of business activities, such as revenues, etc.)
*4. The percentage of positive engagement indicator evaluations in employee awareness surveys represents the non-consolidated figures up to fiscal 2019
*5. The diversity recruitment ratio represents the rate of foreign nationals, women and mid-career hires among all hires for planning roles
*6. Ratios of newly hired graduates show the year of hiring activity for each fiscal year. (For example, the hiring ratio for fiscal 2020 generally shows hiring activity targeting March 2021 graduates.)
*7. The ratio of women in management positions is the percentage of women in management and those working as professionals (non-consolidated; currently working as managers or professionals).
*8. Total annual working hours are the average annual working hours of back-office workers (non-consolidated; including managers and professionals).
*9. Occupational accident frequency = Number of casualties due to occupational accidents/Total actual working hours x 1,000,000 (calendar year)





## Participation in ESG-related initiatives and external evaluations

The Task Force on Climate-related Financial Disclosures (TCFD) is a framework for companies to disclose financial information on their climate change efforts and impacts. The Company expressed its endorsement of the TCFD recommendations in June 2021 and began disclosing information based on the TCFD recommendations in May 2022.

The Company joined the TCFD Consortium in July 2022.

The Green Transformation League (GX League) was established as a forum for companies to collaborate with industry, government, and academia in pursuit of Japan's carbon neutrality by 2050 goal along with economic growth. Companies contribute to the reduction of greenhouse gas emissions and at the same time aim for a virtuous cycle between the economy, the environment, and society. Proterial endorsed the GX League concept in September 2022 and has been participating in the GX League since 2023.

Put forward by an international non-profit organization, the Carbon Disclosure Project (CDP) is a system that allows companies to disclose information on their environmental initiatives and impacts. This system serves as a tool to evaluate companies, etc. based on the information disclosed against a common global scale.

Proterial received the highest level of Eruboshi certification on a three-level scale for its excellent initiatives to promote the participation and advancement of women.

Proterial was certified under the Large Enterprise Category as part of the 2023 Certified Health & Productivity Management Outstanding Organizations Recognition Program, which recognizes corporations that engage in outstanding health and productivity management practices.

## Corporate Data

| | |
|---|---|
| Company name | Proterial, Ltd. |
| Head Office address | Toyosu Prime Square, 5-6-36 Toyosu, Koto-ku,Tokyo 135-0061<br>TEL 0120-603-303 |
| Founded | 1910 |
| Established | 1956 |
| URL | https://www.proterial.com/e/ |

**Disclaimer regarding forward-looking statements**
This report contains forward-looking statements about the Company and the Group. All such statements are based on analyses and judgments using information available when this report was prepared, and thus may include risks and uncertainties due to changing economic circumstances, market conditions, and the like. Please note the possibility that actual results may differ from the Company's forecasts. This report was compiled based on information deemed reliable by the Company. Accordingly, such information's accuracy and integrity cannot be guaranteed.

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