

Management Policy

Sustainability Management

As "contribute to solving the social and environmental issues, and realize the sustainable growth" is mentioned in our Management Policy, we understand that active engagement in social and environmental issues is required in our business activities. Specifically, we set KGI goals, such as achieving our goals (Scope 1 and 2) of carbon neutrality by 2030, and incorporated them in our mid-term management plan. Toward these goals, we have worked on solving climate change issues, promoting human capital management, and reducing emissions.

ESG Policy	In all aspects of our business activities, we actively address a variety of issues related to environment, society and governance and aim to achieve sustainable growth.
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ESG promotion organization

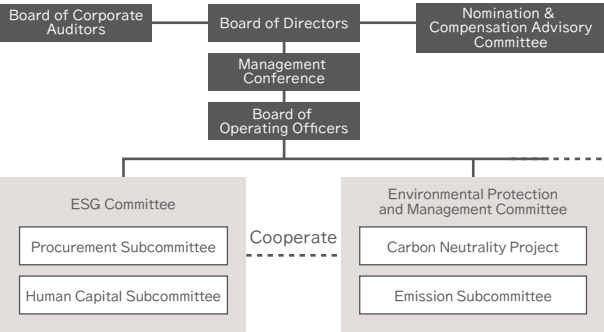
We set up the ESG Committee in December 2021 to take the initiative on natural environment and social issues and stakeholders. Director and Senior Managing Operating Officer was appointed the chairperson, and Executive Officers and Division Managers were appointed the committee members to promote the activities. Since April 2023, domestic affiliates have also participated in ESG activities. The ESG Committee holds 4 meetings a year to raise awareness and promote sustainability-conscious management and discuss such themes as a response to climate change, realization of a decarbonized society, respect for human rights, consideration for work conditions, and fair and appropriate transactions with clients.

Regarding environmental conservation activities, the Environmental Protection and Management Committee, which works with the ESG Committee, supervises the progress of activities conducted by the Carbon Neutrality Project and the Emission Subcommittee and continuously improves them.

The Procurement Subcommittee sets up the CSR Procurement Policy under the supply chain management and promotes CSR activities with suppliers. Under the concept of human capital management contributing to corporate value improvement, the Human Capital Subcommittee was established in March 2023 to link management strategy to human resource strategy. It holds a monthly meeting to discuss such matters as setting up a human

resource strategy.

Each committee periodically reports important agenda items and activity status to the Board of Operating Officers, the Management Conference, and the Board of Directors, and the Board of Directors makes final decisions. The Board of Directors checks the progress of the mid-term management plan, discusses measures for issues, and reflects the results in the management strategy and risk management and assessment based on the periodic reports. As shown above, the Board of Directors is responsible for debating ESG-related agendas and supervising the goal-setting and the progress of initiatives.

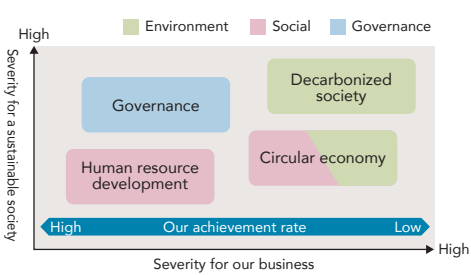


Board of Directors	- Supervise the entire sustainability
ESG Committee	- Promote the entire activities to overcome challenges for sustainability, such as establishing a general sustainability policy, coordinating to set division goals, and managing their progress
Procurement Subcommittee	- Procure eco-friendly materials, provide suppliers with training on human rights, labor rights, safety and health, and corporate ethics in accordance with the CSR Procurement Policy, and establish a socially acceptable supply chain
Human Capital Subcommittee	- Develop human resources who can implement CIC and promote human resource development by linking management strategy to human resource strategy - Develop future leader candidates who can achieve diversity and ensure equal opportunities
Environmental Protection and Management Committee	- Manage budgets and conduct company-wide coordination for activities to reduce environmental loads, such as setting goals for the Carbon Neutrality Project and the Emission Subcommittee and managing their progress
Carbon Neutrality Project	- Establish and implement measures to achieve carbon neutrality by 2030, such as capital investment, technological innovation, use of renewal energy, and improvement in energy use efficiency
Emission Subcommittee	- Take the initiative in reducing, removing, and recycling emissions and waste generated in business activities - Research the technology trend toward the realization of zero emissions in 2050

Materiality (key issue) identification

We discussed how to respond to changes in external environments due to environmental issues and how to contribute to international Sustainable Development Goals (SDGs) at the ESG Committee meetings. Consequently, we designated the following 4 items as materiality to be tackled in our mid-term management plan: "Contribution to a decarbonized society", "development of diversified human resources and improvement in job satisfaction", "promotion of circular economy", and "enhancement of governance". To solve these issues, we make company-wide efforts.

In the process of identifying materiality, the ESG Committee narrowed the items down to the above four based on the severity for a sustainable society and the severity for our business.



Initiatives on materiality

We set KGIs (key goal indicators) in each materiality to increase our corporate value.

Materiality	KGI (Key Goal Indicator)	Initiatives in FY2023	Promising global goals
Contribution to a decarbonized society [Climate change For details, see page 41.]	·Achieve carbon neutrality by 2030 ·Promote energy and resource saving ·Replace with renewable energy ·Offer low environmental load materials	33.9 % reduction compared with FY2020 (Target: 32%)  Installed a waste heat recovery system on the coating VOC processor (Scheduled to start operations in the latter half of FY2024) and continued to investigate the equipment for future management such as air-conditioning upgrade and production consolidation Areas for improvement: The company's first onsite PPA, which was scheduled to launch in FY2023, was postponed to June 2024 because the application for operations took time  Purchases in FY2023 (Renewable energy: 10.46 million kWh) (Carbon neutral gas: 1.45 million m³)  (1) Reduction in energy to produce existing mass-produced products (2) Development of eco-conscious new products Conducted in-house low-energy production, saved energy in clients' processes, and used for hydrogen energy purposes and mobility and lightweight purposes	7 Climate Action 13 Circular Economy
Development of diversified human resources [Human resource management For details, see page 47.]	·Develop next-generation human resources ·Be a company where all employees can work lively	Launched an internal internship in January Made efforts to increase the ratio of women in management positions to 20 % (FY2024) Held 9 sessions, 3 training sessions, 1 interview with Outside Directors, and 4 female training sessions  Efforts to increase the paid vacation utilization rate to 75 % (FY2024) Provides 3 paid days off upon employment (under the new employment rules) and offers days to encourage employees to take paid vacation Review of allowances and systems Reviewed allowances for late-night meals, overseas assignments, and work in hot conditions	3 Quality Education 5 Gender Equality 8 Decent Work and Economic Growth 10 Affordable and Clean Energy
Promotion of circular economy [Circular economy For details, see page 45.] [Supply chain management For details, see page 52.]	·Reduce emissions ·Establish a sustainable supply chain	14.8 % reduction in industrial waste disposal (compared with FY2020) Started patrols for waste and considering turning waste plastic into valuables by introducing a compressor Recycling rate: 94.1 % (thermal recycle: 64.9 %, material recycle: 29.2 %), started recycling PVC materials  Dissemination and encouragement of the CSR Procurement Policy Collected CSR questionnaire results from 116 companies and analyzed them 2 cases of using reused or recycled materials Used recycled copper foil and collected and reused film winding pipes (made of FRP) 2 cases of investigating carbon-neutral materials Green (bio-based) solvent and thermoplastic acrylic resin	6 Clean Water and Sanitation 8 Decent Work and Economic Growth 9 Industry, Innovation and Infrastructure 11 Sustainable Cities and Communities 12 Responsible Consumption and Production 14 Life Below Water 15 Life on Land 17 Partnerships for the Goals
Green (bio-based) solvent and thermoplastic acrylic resin	·Be an organization with a strong sense of ethics ·Build an organizational structure with an open-door policy	Conducted operating audits (including group companies)  Internal penetration of rebranding Renewed CIC information (internal public relations) and distributed a brand book to employees Rebranding promotion to external stakeholders Renewed the logo and published an integrated report	10 Affordable and Clean Energy 11 Sustainable Cities and Communities 16 Peace, Justice and Strong Institutions

Coexistence with society

To enhance our brand value, we have conducted locally focused social activities. We return 0.5 % of non-consolidated net income to society, including contributions to academies, schools, and health-promoting businesses.

TOPICS

Financial donation to Ishikawa Prefecture and Joetsu City after the Noto Peninsula Earthquake

We made a financial donation to Ishikawa Prefecture and Joetsu City for those affected by the Noto Peninsula Earthquake on January 1, 2024. On February 20, 2024, Operating Officer Kazumi Ikeda personally presented a certificate of donation to the Mayor of Joetsu and exchanged opinions. They talked about a wide range of issues, including the progress of the Innovation Center under construction and the roles that government and private sectors should play for the future.



Ms. Ikeda  
Operating Officer  
General Affairs Department

Management Policy

Mid-Term Management Plan

Background of formulating a mid-term management plan and its basic policy

The environment surrounding us has the following various types of issues: Climate change, resource depletion, ecosystem collapse, tightening of regulations, diversification of values and lifestyles, aging society, divisions of the supply chain, exposure of human rights issues, mobility of workplaces, exposure of geopolitics and cyber risks, and progress of innovation. While being strongly requested to tackle these issues by stakeholders, including investors, companies must produce benefits to continue business.

Our group formulated a mid-term management policy based on the management policy (see page 3) with the motto "Create, Innovate, and Challenge," and released it in October 2020 (the earnings forecasts were updated in May 2022, taking into consideration the achievement status). By maximizing our corporate value with both business strategy and financial strategy, we aimed to achieve an ROIC goal of 6 % in FY2024 (fiscal year ending March 2025). However, our

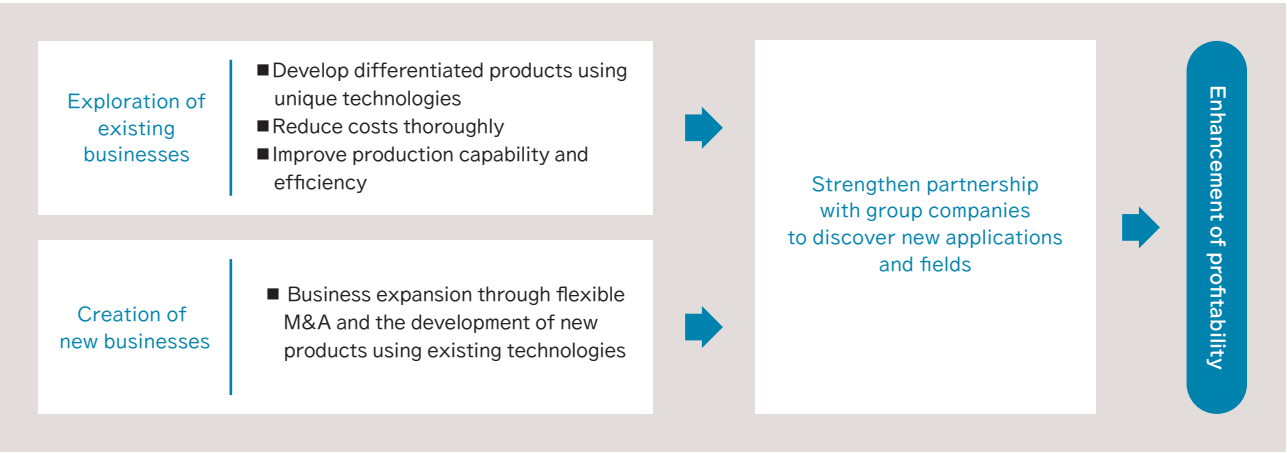
primary business of electronic materials has stagnated due to the demand decline in the Chinese market, which started in the latter half of FY2022. The electronic material business is expected to pick up gradually from FY2024, but the ROIC goal of 6 %, outlined in the current mid-term management plan, is likely to be achieved at the end of FY2026.

Our group strives to work on technological innovation and product development while fulfilling users' needs and continues to help solve social issues to realize its sound survival and sustainable growth. Specifically, to maintain or expand the revenue base of existing businesses, we implement strategic investments in a new business that maximizes the synergy effect with existing businesses and has high profitability of capital, as well as improving and expanding production capability and investing in the development of new products that anticipates users' needs.



Business strategy

We enhance profitability through "exploration of existing businesses" and "creation of new businesses" and also develop differentiated products with a focus on fields with growth prospects.



Regarding the "exploration of existing businesses", we create opportunities to earn profits by developing and selling differentiated products with a focus on fields with growth prospects.

To realize the "creation of new businesses", we accelerate M&A and new product development. Whether to implement M&A or not relies the most on the existence of high profitability acquired through "a synergistic effect with the strengths of our business and technology".

The target fields of differentiated products are information devices (contribution to IoT society), next-generation mobility (contribution to next-generation transportation aircraft), and life science (new challenge for environmental

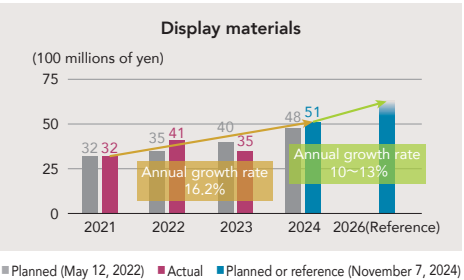
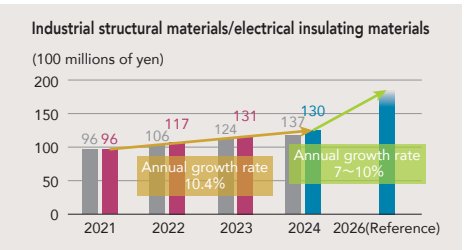
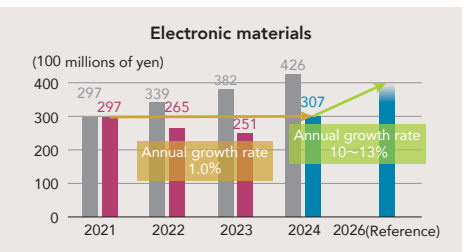
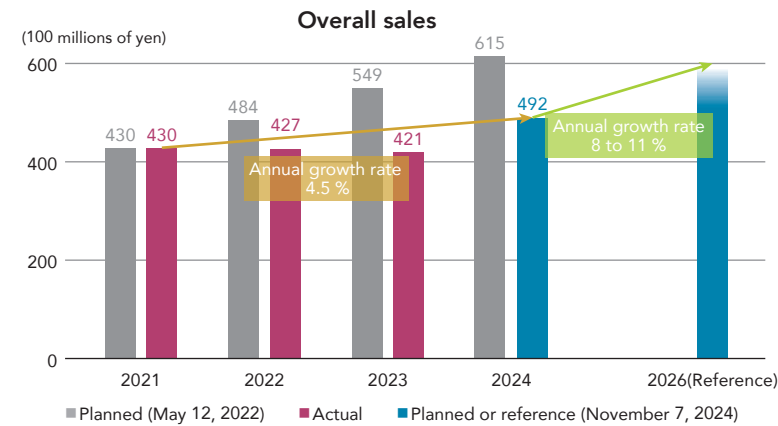
change). Working on the above helps solve social and environmental issues. Specific examples are as follows: (1) Electronic materials: Offering products that are compatible with new standards such as generative AI and fast communication, (2) Industrial structural materials and electrical insulating materials : Supplying materials for fuel cells and secondary cells, including FCV and EV materials, reducing the weight of structural and mechanical parts, securing drinking water and plant water, and tapping into the hydrogen energy and nuclear fusion power generation fields, and (3) Display materials: Expanding the application of 3D displays into non-medical fields.

Planned and actual sales

The initial target of ROIC at the end of FY2024 was 6 %, which is above the capital cost of 5.9 % (as of the end of FY2022). However, it was only 1.9 % in FY2023 and is even projected to be 5.2 % in FY2024, which is unlikely to achieve the target set in the mid-term management plan. This is mainly due to the prolonged adjustment of inventories such as smartphones and semiconductors in the electronic material market, one of our main businesses, and the slumping Chinese economy and its slow recovery. Meanwhile, the sales of FRP pressure vessels for industrial structural materials showed steady growth due

to the increased demand in the seawater desalination business. Regarding display materials, the sales of 3D displays are growing due to an increase in demand from the medical field.

In FY2024, the demand from the electronic material market finally began to pick up. Given these circumstances, the ROIC goal of 6 % is expected to be achieved in the fiscal year ending March 31, 2027. We will attempt to put our business back on track by steadily implementing the business strategy specified in the mid-term management plan.



	2021	2022	2023	2024	2026
(100 millions of yen)	Actual	Actual	Actual	*24.11 Planned	*24.5 Reference
Net sales	430	427	421	492	
Operating profit	33	22	14	42	
NOPLAT	24	16	10	30	
Equity + interest-bearing liabilities	568	572	571	597	
ROIC	4.4%	2.8%	1.9%	5.2%	6.0% or more
WACC	5.8%	5.9%	4.8%	4.9%	
Net income	39	28	16	32	
Equity	470	474	466	475	
ROE	8.3%	6.0%	3.5%	6.8%	8.0% or more

Management Policy

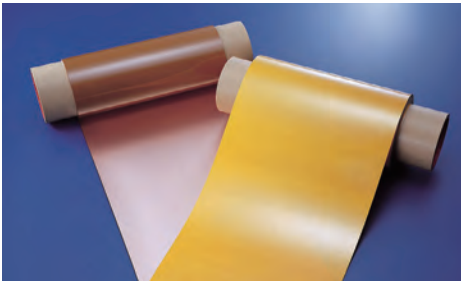
Businesses / Outline of Each Segment

Our group offers various products by leveraging our excellent processing technologies and centralized production system.

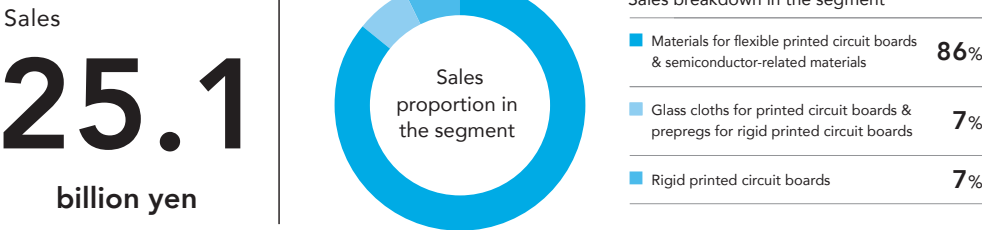
Electronic Materials

P29-30

This is our group's main business, which accounts for more than 60 percent of our consolidated sales. There are production sites in Japan, Taiwan, and China. This business contributes to the growth of society mainly in the information device field.



Sales and proportion of major products



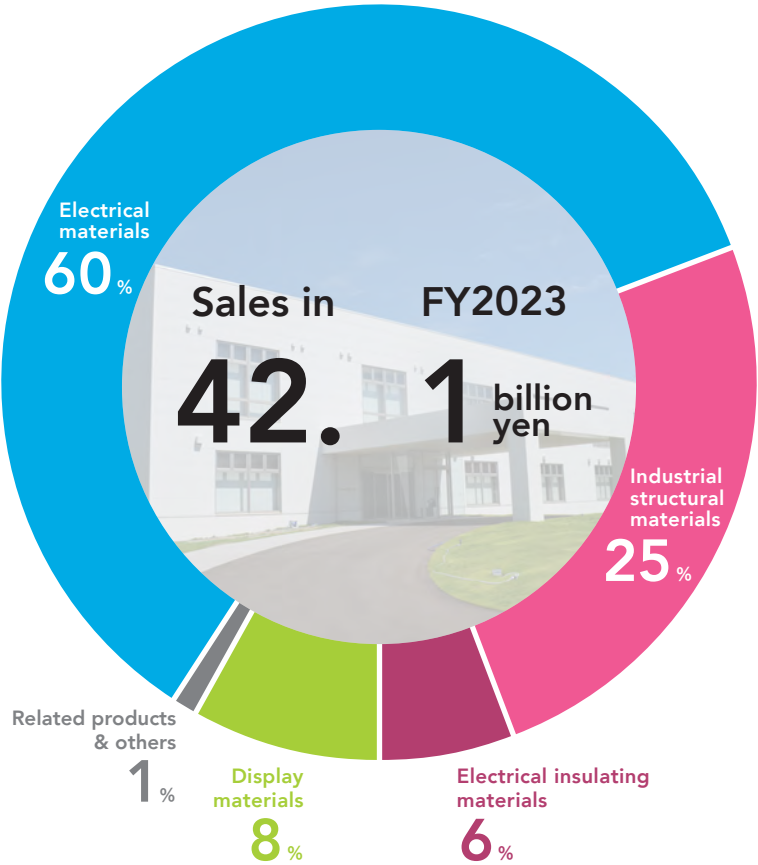
Display Materials

P33-34

This is a group of our products that can be recognized by general people. This business contributes to the development of people's rich lives by offering materials for medical and amusement use.



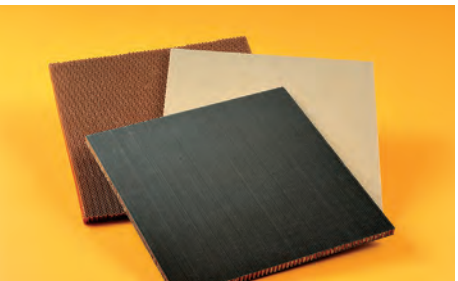
Sales and proportion of major products



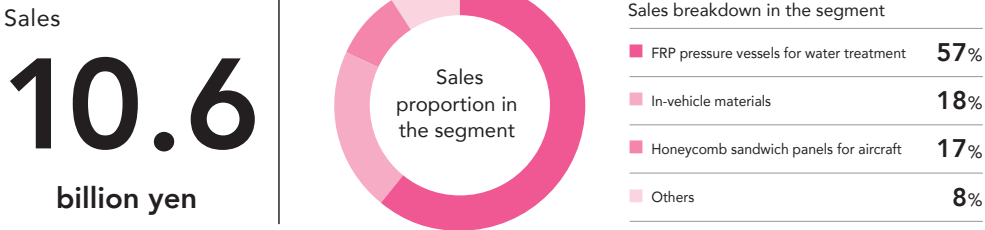
Industrial Structural Materials

P31-32

This is the second pillar of our group's business. There are production sites in Japan, Spain, and the U.S. This business contributes to society by offering materials to improve fuel efficiency for aircraft and vehicles and produce new energy and clean water.



Sales and proportion of major products



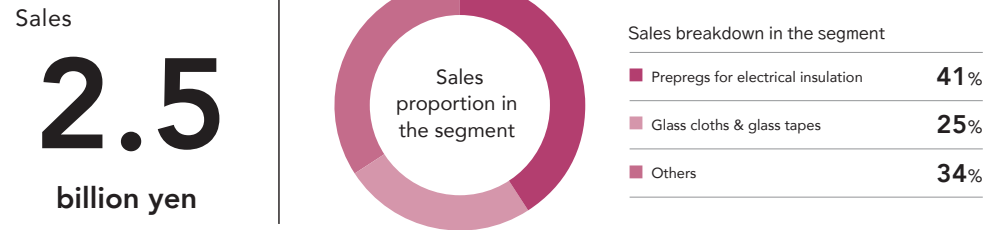
Electrical Insulating Materials

P31-32

This is a group of products with a long history. This business contributes to creating a livable society by offering insulating materials and heat-dissipation materials for generators.



Sales and proportion of major products



Related products & others

The related product and other businesses handle pultrusion molding production, golf driving range operation, and logistics and transport.



Management Policy

Strategy by segment

Electronic Material Segment

In the electronic material field, we develop and manufacture materials for printed circuit boards, semiconductor-related materials, and printed circuit boards, all of which are key devices for information and communication society, using the following four core technologies:

Surface processing technology to maximize the performance of glass cloths

Compounding technology of mixing denaturants and chemicals into thermosetting resins

Resin coating technology

Laminating

Our group's products range from prepregs for rigid printed circuit boards to materials for flexible printed circuit boards (FPC). Especially, our materials for flexible printed circuit boards have gained acclaim for their production process with excellence in flexibility, anti-migration property, and heat resistance at high temperatures and ultra-narrow gaps. With the deep trust of customers, we have retained our position as one of the top manufacturers specializing in electronic materials.

Business locations

[Arisawa]  
(Nakadahara Factory, Nakadahara-nishi Factory, Minami-honcho Factory)

Materials for flexible printed circuit boards, prepregs for rigid printed circuit boards, & semiconductor-related materials

[Arisawa Fiber Glass]

Glass cloths for printed circuit boards

[Satosen]

Rigid printed circuit boards

Overseas offices

[ThinFlex] (Taiwan)  
Materials for flexible printed circuit

[TopFlex] (China)  
Materials for flexible printed circuit boards

Business environment

Electronic devices, such as smartphones, are becoming more highly functional, and electronic circuits have a higher circuit density through refining, accordingly.

There are growing needs for materials supporting fast transmission, high heat dissipation, high heat resistance, and large current in a wide range of application areas, from home appliances to in-vehicle parts, and we work on developing highly functional products in response to these needs.



Analysis of the present situations

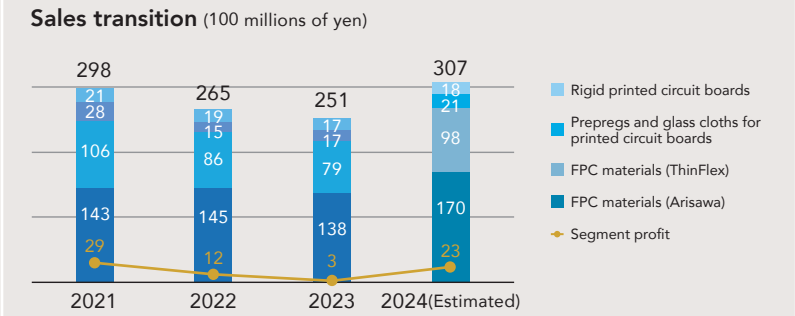
SWOT analysis based on the present business environment is shown below:

S Strengths	W Weaknesses
<ul style="list-style-type: none"><li>-Design flexibility with in-house resin compounding technology</li><li>-Support for various types of processing using equipment</li></ul>	<ul style="list-style-type: none"><li>-Lower production efficiency due to the production of many models in small quantities</li><li>-An excessive number of inspectors required to maintain quality</li></ul>
O Opportunities	T Threats
<ul style="list-style-type: none"><li>-Differentiated products with high functionality and high quality</li><li>-Flexible proposals, selected from a variety of products</li></ul>	<ul style="list-style-type: none"><li>-Low-price strategy of overseas competitors</li><li>-Slowdown in demand growth for PCs, tablets, and smartphones</li></ul>

Business strategy

To enhance profitability according to the mid-term management plan, we work on "exploration of existing businesses" and "creation of new businesses".

Regarding electronic materials, as our primary business, we develop new products mainly in the mobile, semiconductor, and in-vehicle fields for business expansion. We also deepen ties with our group companies to strengthen the business foundation in China and other Asian markets.



Business summary for FY2023 and measures and outlook for FY2024

Demand for PCs and smartphones in the Chinese market, which has declined since the latter half of FY2022, still did not recover in FY2023. As a result, the sales of materials for flexible printed circuit boards, semiconductor materials, and printed circuit boards saw a drop from the previous year.

Meanwhile, the sales of glass cloths for printed circuit boards hit the bottom in the first half of FY2023 and started showing signs of recovery. With inventories gradually being adjusted, the semiconductor market is on a steady recovery path. We are accelerating the development of new materials for fast communications, foldable technologies, higher heat dissipation, and larger current capabilities in the semiconductor, in-vehicle, and mobile markets.

In FY2024, the economic outlook remains uncertain due to the continued upward trend in energy and raw material prices, exacerbated by unstable international conditions such as the prolonged Ukrainian crisis, the worsening situation in the Middle East, and a slow recovery in demand from the Chinese market.

However, demand for PCs and smartphones expected to recover, and sales of materials for flexible printed circuit boards and glass cloths for printed circuit boards are also expected to rise gradually as a result.

Amid fierce competition in terms of products and costs with overseas competitors, we will boost our competitiveness by offering differentiated products and strengthening global ties with our affiliates.

	Exploration of existing businesses	Creation of new businesses
Business strategy	<b>Business enhancement in the mobile field</b> <ul style="list-style-type: none"><li>■ Create value for customers and continue growth by offering products with originality</li><li>■ Develop new products and strengthen the business foundation in the Asian markets by establishing ties with our group companies</li></ul>	<b>Commercialization in the semiconductor and in-vehicle fields</b> <ul style="list-style-type: none"><li>■ Develop new products and enter new fields of business</li><li>■ Expand business in growing fields by strengthening competitiveness in production and technology</li></ul>
Goals for FY2024	<b>Higher functionality for application to circuit boards</b> <ul style="list-style-type: none"><li>■ Launch new products (generative AI-powered, fast communication-compatible, and foldable) early in the fiscal year</li><li>■ Incorporate the growth of China and other Asian markets</li><li>■ Strengthen the business foundation by establishing ties with our group companies</li></ul>	<b>Development in preparation for versatile application</b> <ul style="list-style-type: none"><li>■ Semiconductor field: Increase production capability and strengthen ties with our group companies</li><li>■ In-vehicle field: Develop new products (higher heat dissipation and larger current products) and capture new markets</li></ul>

TOPICS

**Our ultra-thin FPC material is used for foldable smartphones!**

Foldable smartphones are becoming increasingly popular. The crease parts are made from FPC, which can be folded as a circuit board that conducts electricity. The parts must not cause a cable breakage even when they are repeatedly folded and unfolded, and it has been proven that the FPC made using our ultra-thin material is superior in these characteristics.

This material has been adopted by many smartphone manufacturers. To further improve these flexing characteristics, we are making earnest efforts.

**The application of our FPC materials for fast communications is expanding!**

More mobile products compatible with 5G's fast communications have been introduced. Electronic devices for fast communications require materials that ensure low signal transmission loss at high frequencies. To accommodate this requirement, we began developing low-dielectric FPC materials with low signal transmission loss earlier than other companies, and we now offer a range of materials, that have been increasingly adopted.

We have developed lower-dielectric FPC materials to support next-generation fast communications.

Management Policy

Strategy by segment

Industrial Structural Material and Electrical Insulating Material Segment

In the industrial structural material and electrical insulating material fields, we pursue FRP (fiber reinforced plastic) molding technology based on our core technologies of weaving and resin impregnation technology. FRP molded products are made by laminating prepregs, which are semi-cured through the impregnation of resin into the fiber, turning them into a desired shape, and applying heat and pressure to it.

Using glass fiber with insulation capability and heat resistance and carbon fiber with lightweight, high strength, and a high module of elasticity as main materials and leveraging FRP-specific anisotropy generated by the orientation (alignment) of fiber optimizes FRP materials to bring out desired mechanical and thermal properties. With these characteristics, they are used in electrical insulating materials for such devices as generators and motors, materials for aircraft interiors, primary structural materials, general industrial structural materials, materials in the in-vehicle and new energy fields, and materials for sports equipment.

Business locations

[Arisawa] (Nakadahara Factory & Minami-honcho Factory)  
FRP pressure vessels for water treatment (filament winding molded products), honeycomb sandwich panels for aircraft, prepregs, prepregs for electrical insulation)

[Arisawa Fiber Glass]  
Glass cloths, glass tapes, special fiber woven products

[Arisawa Sogyo]  
FRP (pultrusion moldings), prepregs

[Arisawa Jushi Kogyo]  
FRP

Overseas offices

[Protec Arisawa Europe, S.A.] (Spain)  
[Protec Arisawa America, Inc.] (U.S.)  
FRP pressure vessels for water treatment (filament winding molded products)

Analysis of the present situations

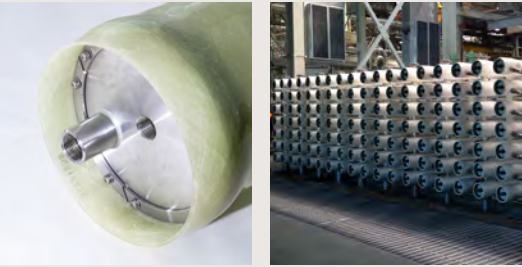
SWOT analysis based on the present business environment is shown below:

S Strengths	W Weaknesses
<ul style="list-style-type: none"><li>-Consistent development and manufacturing through the integration of core technologies of "weaving, coating, and molding"</li><li>-Flexible new resin formulation and improvement</li></ul>	<ul style="list-style-type: none"><li>-Easily affected by market changes due to many types of limited products sold to specific customers</li><li>-Lower production efficiency due to the production of many models in small quantities</li><li>-Long-term experience required in human resource development</li></ul>
O Opportunities	T Threats
<ul style="list-style-type: none"><li>-Demand recovery in the aircraft field</li><li>-An entry to markets requiring high heat resistance, high pressure resistance, and gas resistance</li></ul>	<ul style="list-style-type: none"><li>-Competition in costs with domestic and overseas competitors</li><li>-Competition in costs with other materials (metal, ceramic, etc.)</li></ul>

Business environment

Amid the shift to a decarbonized society, the demand for FCVs (Fuel Cell Vehicles) and EVs (Electric Vehicles) has been growing, which requires transportation methods, including aircraft, to be lighter weight for improved fuel efficiency. There is also a growing demand for new energy sources that replace fossil fuels.

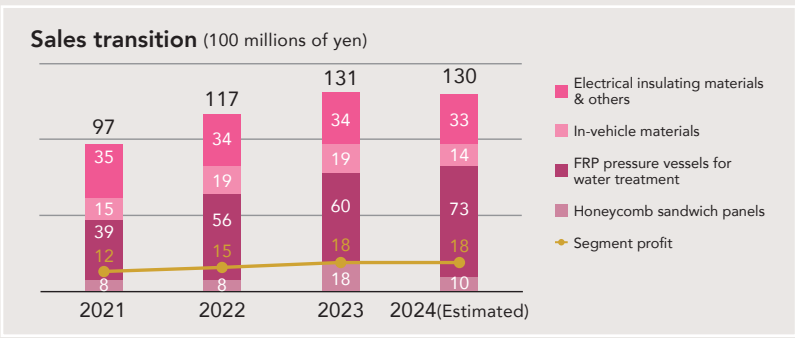
In the life science field, demand is also up for products for water treatment (seawater desalination) and infrastructure reinforcement as measures against disasters. Our group has developed highly functional products to fulfill these needs.



Business strategy

To enhance profitability according to the mid-term management plan, we work on "exploration of existing businesses" and "creation of new businesses".

Regarding industrial structural materials and electrical insulating materials, we develop unique products for further growth, focusing on the transportation infrastructure, water treatment, and new energy fields as our main businesses.



Business summary for FY2023 and measures and outlook for FY2024

The sales of industrial structural materials for FY2023 increased from the previous year due to the steady demand for FRP pressure vessels for water treatment and honeycomb sandwich panels for use in aircraft interiors.

The sales of in-vehicle materials and electrical insulating materials for infrastructure are also stably solid.

FRP pressure vessels for water treatment saw an increase in sales due to the technical support to Protec and continue to be considered for application to the medical field and CO<sub>2</sub> separators. Regarding in-vehicle materials, we deepened the relationship of trust with users and developed differentiated products in new fields.

For FY2024 as well, it is expected that there will be continued

strong demand in the water treatment field. Meanwhile, the prices of raw materials and energy continue to soar, which will need to be closely watched.

By continuing to produce differentiated products through the expansion of application of our materials into new fields, such as filament winding technology to other fields than water treatment, we will boost competitiveness through global cooperation with our affiliates.

To reduce the impact on the environment, we will develop lightweight materials in the aircraft field and materials and processes for fuel cells and water electrolysis in the mobility and infrastructure fields.

	Exploration of existing businesses	Creation of new businesses
Business strategy	<b>Business enhancement in the transportation infrastructure field and revenue expansion in the water treatment field</b> <ul style="list-style-type: none"><li>■ In-vehicle: Make differentiation and enter markets using unique technologies</li><li>■ Aircraft: Increase added value through the anticipation of users' needs</li><li>■ Water treatment field: Create new demand by developing high-performance products</li></ul>	<b>Commercialization in the new energy field</b> <ul style="list-style-type: none"><li>■ Promote development for entry into the hydrogen energy and superconductivity fields and commercialization</li></ul>
Goals for FY2024	<b>Higher functionality and versatile application</b> <ul style="list-style-type: none"><li>■ Transportation infrastructure field: Develop new lightweight and eco-friendly material products, and obtain user certification</li><li>■ Water treatment field: Expand businesses using our network of group companies (expand the service regions and applications)</li></ul>	<b>Development in preparation for versatile application</b> <ul style="list-style-type: none"><li>■ New energy field: Increase production capability, strengthen ties with our group companies, and enter new fields of business</li></ul>

TOPICS

**Nuclear fusion: Future energy**

Arisawa has participated in a magnificent international project called ITER (International Thermonuclear Experimental Reactor), aiming at creating an "artificial sun" on Earth.

Our technology is being used for the development of nuclear fusion power generation, which is expected to help solve energy problems. Nuclear fusion generates energy by using a strong magnetic field to confine hydrogen atoms, which have been converted into plasma, at ultra-high temperatures (100 million degrees or higher) and colliding them at ultra-high acceleration speeds. This nuclear fusion power generation is considered a dream method that not only uses hydrogen, which is abundant in nature, but also generates safe and clean energy, as it does not emit CO<sub>2</sub> and can be halted instantly. We developed and supplied a crucial insulating material for a superconducting coil that confines plasma in a magnetic field, supporting the international project.

Our insulating material GK Tape is used to insulate the superconducting coil.

**Arisawa Sogyo launched a new factory for pultrusion products!**

With the introduction of a new pultrusion molding machine, the Arai Factory Building B started operations in the latter half of FY2023. Pultrusion products refer to FRP (fiber reinforced plastic) products, including marker posts for snow clearing (delineators installed on the sidewalk when snow accumulates). These products are used for the construction of large facilities such as hotels, tunnels and train cars. This factory launch enabled the company to increase by 6-fold the annual production capacity of marker poles from about 50,000 meters to about 300,000 meters. This now allows us to enter the markets of long and large products, which we previously had to decline despite receiving inquiries. Our marker post for snow clearing has been registered as "Made-in-Joetsu" and "Made-in-Niigata". In addition, our Japan's first incombustible pultrusion material (patent pending) has been registered with the Ministry of Land, Infrastructure, Transport and Tourism. This material can be applied to building reinforcements, which was previously not possible with FRP, and the factory has been working with a major construction firm on its development for practical use.

Mr. Kasuya  
Plastics Division, Engineering Department

Arisawa Sogyo Arai Factory

Pultrusion products

Post for snow clearing (Reference)



Management Policy

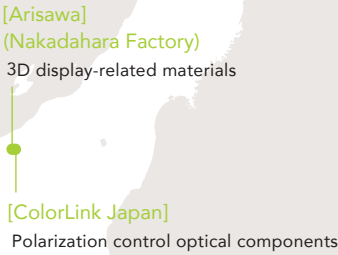
Strategy by segment

Display Material Segment

In the display material field, we have expanded our technological areas from front screen molding, UV molding, and thin film coating to 3D images. Xpol® is a 3D image display filter with fine polarizing elements arranged in order. Attaching this filter to a flat panel display, such as an LCD, allows 3D images to be viewable without flickering through polarized glasses. This filter has been used mainly for medical purposes, such as endoscope monitors.

We have developed an optical retardation element (wave plate) that can be a phase difference plate using a photo-alignment layer and a polymerizable liquid crystal and offered it as a product. We not only offer optical materials but also add a bit of contrivance to them to gain the trust of customers. One such example is lamination processing. Our advanced lamination technology has been developed through the experience of handling a wide range of optical materials and has been highly acclaimed. By reconsidering the properties of "light", we will work on further product development.

Business locations



Analysis of the present situations

SWOT analysis based on the present business environment is shown below:

S Strengths	W Weaknesses
<ul style="list-style-type: none"><li>-Xpol® brand value</li><li>-In-house 3D optical design</li><li>-Mass production factories available for in-house core processing</li><li>-Flexibility for the production of many models in small quantities</li></ul>	<ul style="list-style-type: none"><li>-Energy costs required to operate mass production facilities (a higher processing cost percentage)</li><li>-A lower level of compounding technology than molding technology</li></ul>
O Opportunities	T Threats
<ul style="list-style-type: none"><li>-Growth opportunities in the Asian markets</li><li>-Spread of minimally-invasive treatment to the medical field</li><li>-Spread of remote surgeries due to a shortage of doctors</li></ul>	<ul style="list-style-type: none"><li>-xEmergence of different types of 3D displays</li><li>-Competition in costs with overseas competitors</li></ul>

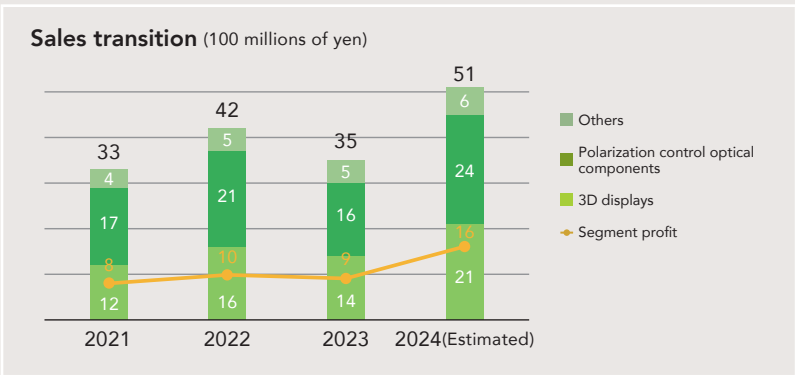
Business environment

Under circumstances where a shortage of doctors and the concentration of population in urban areas have occurred, the spread of fast communications allows remote surgeries and robotic arm surgeries, hopefully reducing the workload on doctors. As the demand for displays is also expected to rise in the education field due to the progress of digitization, we have developed highly functional products to meet these needs.



Business strategy

To enhance profitability according to the mid-term management plan, we work on "exploration of existing businesses" and "creation of new businesses".  
Regarding 3D displays, we aim to expand the sales channels in the medical field, which requires higher-definition products. As for polarization control optical components, we will expand the sales of new products utilizing our unique technologies, such as improving the quality in the AR/VR field and creating new businesses in the space observation field.



Business summary for FY2023 and measures and outlook for FY2024

Due to decreases in the sales of 3D-related materials and ColorLink Japan's sales of polarization control optical components, the total sales for FY2023 dropped from the previous year. Meanwhile, the demand for PSA (Pressure Sensitive Adhesive) sheets started growing.

Regarding 3D-related materials, we are working on reducing costs through process improvement and expanding their application to non-medical purposes. As for the application expansion, we narrowed down the target fields and started promotion using demonstration content. In FY2024, we aim to continue growth through the expansion of our businesses, mainly Xpol®, and the

development and sales of new products. Regarding 3D displays, we are planning to expand the sales channels for general industries (construction machinery, heavy machinery) while expanding the sales channels in the European and U.S. markets and penetrating the Chinese market for the medical field.

As for polarization control optical components, we aim to make higher-definition products in the AR/VR field and expand the supply of products to the space observation field.

By offering differentiated products, such as PSA (Pressure Sensitive Adhesive) sheets, and establishing global ties with our affiliates, we will boost our competitiveness.

	Exploration of existing businesses	Creation of new businesses
Business strategy	<b>Business enhancement in the medical high-definition display field</b> <ul style="list-style-type: none"><li>■ Expand the share of endoscopes and microscopes and tap into overseas markets</li><li>■ Expand the sales channels for telemedicine and robotics use</li><li>■ Meet the needs for a higher definition</li></ul>	<b>Commercialization in new fields</b> <ul style="list-style-type: none"><li>■ Expand 3D filter application into non-medical fields</li></ul>
Goals for FY2024	<b>Higher functionality and versatile application</b> <ul style="list-style-type: none"><li>■ 3D display: Develop markets in China and expand the sales channels for robotics use</li><li>■ Polarization control optical components: Make higher-definition products for AR/VR</li></ul>	<b>Development in preparation for versatile application</b> <ul style="list-style-type: none"><li>■ 3D display: Expand business into the industrial field and make a full-scale entry into the AR/VR market</li><li>■ Polarization control optical components: Expand application to the space observation field</li></ul>

TOPICS

ColorLink Japan  
Our polarization grating is used for the Subaru Telescope of the National Astronomical Observatory of Japan!

ColorLink Japan began joint development with Leiden University in the Netherlands in FY2023. The university is a leading authority in astronomy, having participated in Dutch astronomical institutes NOVA and SRON. One of the development themes is a polarization grating for the Subaru Telescope at the National Astronomical Observatory of Japan, which was delivered in October 2023. This product is an optical element using photo-alignment technology and a curable liquid crystal and generates interference fringes\*1 using diffraction caused by a fine pattern. Observations have already been conducted, and the product is expected to improve the accuracy of detecting and observing planets by blocking the light from fixed stars.

Since its introduction to this project, our polarization grating has been adopted for astronomical telescopes in the TOLIMAN project\*2 and METIS project\*3. The company has been working on development with the aim of applying it to other astronomical telescopes.

\*1 Striped light and dark patterns generated by light diffraction \*2 An Australian project to observe extrasolar planets targeting Alpha Centauri  
\*3 A joint project by European astronomical institutes to observe protoplanetary disks and planet formation



Polarization grating samples NOVA members and ColorLink Japan employees (third from the left and at both ends of the photo)

Management Policy

Financial strategy

Aiming for further growth and corporate value improvement

Our consolidated financial results for FY2023 showed declines in both sales and profit, with net sales of ¥42.1 billion (a 1.4 % decrease year-on-year) and operating profit of ¥1.4 billion (a 33.4 % decrease year-on-year). This decline is attributed to the continued uncertainty in the global economy, driven by factors such as persistently high energy and raw material prices, ongoing global conflicts, global inflation leading to price surges, and a decline in demand in the Chinese market since the latter half of FY2022.

In FY2024, challenging external conditions such as persistently high energy prices and inflation are likely to continue. Despite these difficult business circumstances, we will focus on developing attractive, differentiated products and expanding their sales to further improve and improve profitability.

Our group established a new mid-term management plan in

2020, with FY2024 set as the target year. The plan focuses on a business strategy that explores existing businesses and creates new ones, targeting fields with strong future growth potential. Meanwhile, we have focused on effectively managing cash flow and the converting non-business assets into business assets from a financial strategic perspective to strengthen our revenue base.

Specifically, we actively and continuously return profits to our shareholders while managing the invested capital required for growth and maintaining a capital structure (with a capital adequacy ratio of approximately 50 % in the medium term), including the use of leverage to improve capital efficiency. Through these efforts, we aim to reduce the weighted average cost of capital (4.8 % as of March 31, 2024) and transform ourselves into a company with high capital efficiency.

Capital investment	Return to shareholders	Strategic investment
Exploration of existing businesses <ul style="list-style-type: none"><li>■ Maintain and expand the revenue base</li><li>■ Develop new applications</li></ul>	Active and continuous return <ul style="list-style-type: none"><li>■ Pay which is the greater of DOE of 6% or a total return ratio of 80 % or more</li><li>Flexible approach to share buybacks</li></ul>	M&A and new businesses <ul style="list-style-type: none"><li>■ Tap into new markets with a growth strategy</li><li>■ Capital efficiency improvement</li></ul>

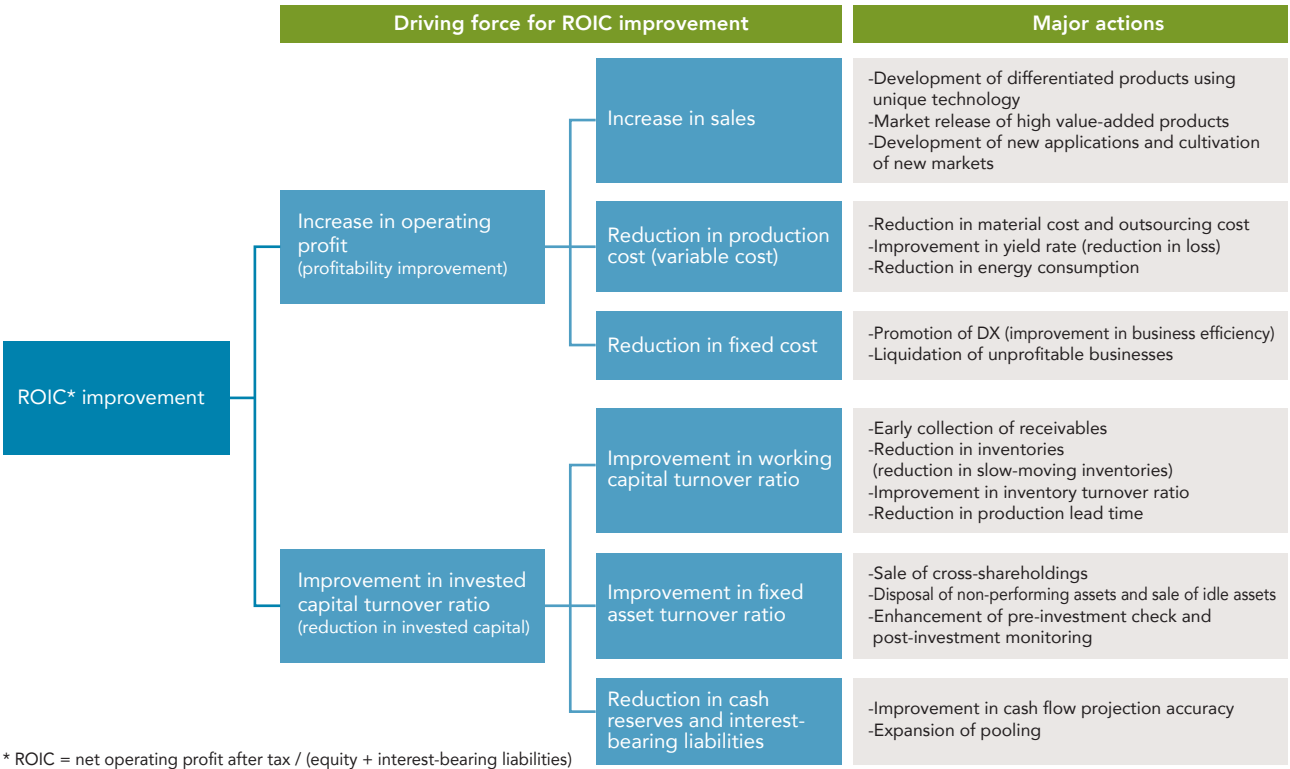
Capital efficiency improvement

Aggressive and defensive business management through the introduction and spread of ROIC management

Our group used to set a financial target with ROA (Return On Assets) as our KPI goal. To adapt to changes in expectations required in our business environment and by our stakeholders, however, we decided to adopt ROIC as our KPI goal toward the shift to capital cost and corporate value-conscious management based on the mid-term management plan formulated in FY2020. The set goal is 6 % or more, which is higher than our shareholders' cost of capital WACC of 5.9 % (as of the end of FY2022, calculated by us based on the value measured by a third-party organization).

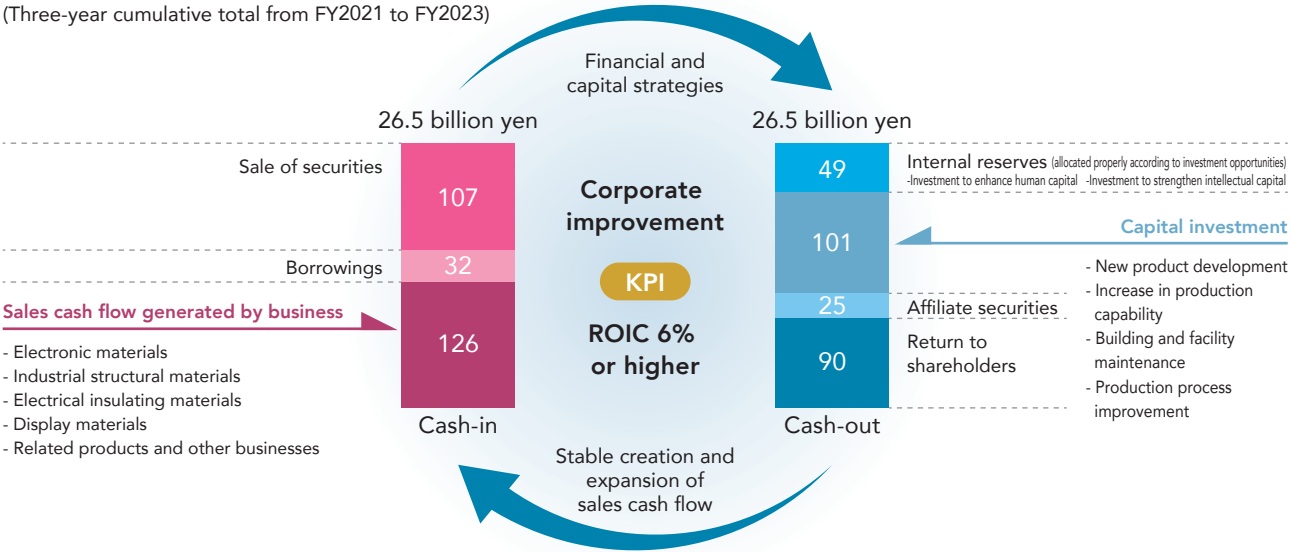
We are currently investing in the mid- to long-term growth fields for future profitable growth and profitability improvement and developing and launching new differentiated products for competitiveness enhancement. Meanwhile, we have reduced non-business assets, specifically selling cross-shareholdings. We will continue to improve the working capital turnover ratio and expand pooling.

In addition, we use ROIC not only for management KPI but also as a judgment tool for investment in facilities.



Cash allocation

To enhance our corporate value, we allocate the capital generated from our business to investments and dividends, while ensuring financial stability. From FY2021 to FY2023, we have converted non-business assets into cash. From FY2024 onwards, we will invest in increasing production capacity and developing new products through borrowings, while actively and continuously returning value to our shareholders. We will also allocate internal reserves effectively based on investment opportunities to strengthen our human capital and intellectual capital.



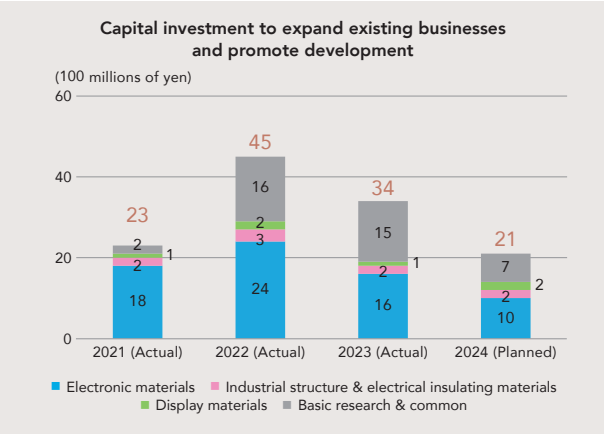
Management Policy

Financial strategy

Investment for growth

Our group allocates funds we have now and will gain during the current fiscal year to production capital expenditure to support the expansion of existing business areas and growth investment to create new business. We also spend capital on quality improvement, research and development, human resource development, and digitization to aim at strengthening the business foundation. Achieving continuous growth while maintaining our competitive advantages through these activities will lead to a virtuous cycle that allows reinvestment for further growth of our group.

The right graph shows the actual results from FY2021 to FY2023 and the transition of capital investment for FY2024 and beyond. From FY2022 to FY2024, we have invested in research and development from a mid- to long-term perspective.



Details of capital expenditure from FY2021 to FY2024

Planned (May 2022)	Actual (Estimated up to FY2024)
<div>Increase in production capability</div> <div>6.7 billion yen &gt;</div> <div><ul style="list-style-type: none"><li>- Production facilities for ThinFlex (expansion of sales in the Chinese market)</li><li>- Production facilities for insulating films for semiconductor boards (expansion of existing businesses)</li></ul></div>	<div>→ Installed</div> <div>→ Postponed (construction commencement date under review)</div> <div>&gt; 5.35 billion yen</div>
<div>New product development</div> <div>6.1 billion yen &gt;</div> <div><ul style="list-style-type: none"><li>- Innovation Center (establishment of an open innovation base)</li><li>- A small coating machine and testing facilities (expansion of existing businesses and creation of new businesses)</li></ul></div>	<div>→ Under construction (scheduled to be completed in July 2025)</div> <div>→ In operation</div> <div>&gt; 2.1 billion yen</div>
<div>Building and facility maintenance</div> <div>3.4 billion yen &gt;</div>	<div>&gt; 3.55 billion yen</div>
<div>Improvement in the production process</div> <div>1.2 billion yen &gt;</div> <div><ul style="list-style-type: none"><li>- A waste heat recovery system and onsite solar energy generation (promotion of carbon neutrality)</li><li>- A production management system and security measures (promotion of DX)</li></ul></div>	<div>→ Progressively installed</div> <div>→ In preparation for operations of the production management system</div> <div>&gt; 1.1 billion yen</div>

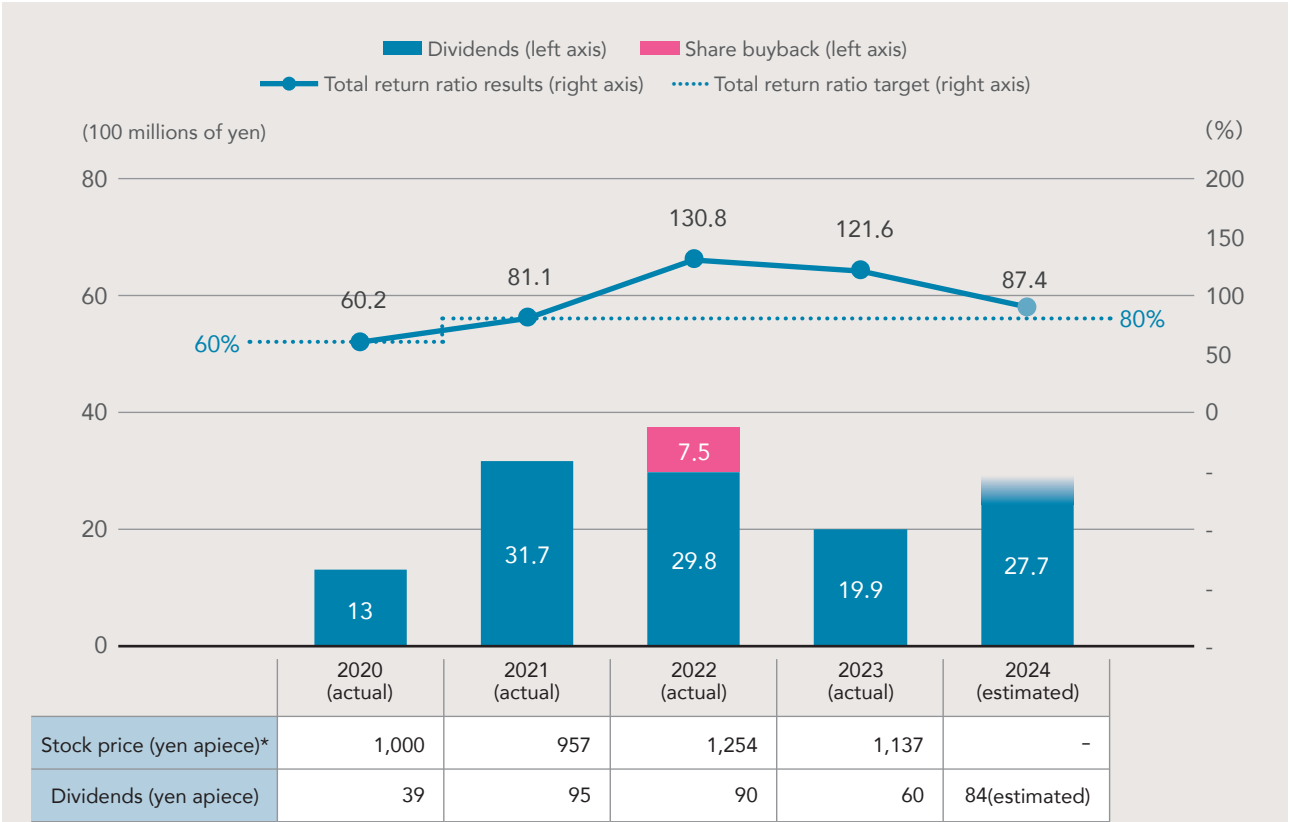
Policy of determination on dividends from surplus, etc.

We will invest the funds earned during the current fiscal year in the maintenance and expansion of our revenue base for existing businesses and the creation of new businesses and strive to enhance active and continuous returns to shareholders. Specifically, the company's basic dividend policy is to pay the greater of a

dividend on equity (DOE) of 6 % or a total return ratio of 80 % or more. Additionally, we will take a flexible approach to share buybacks, considering factors such as funds, financial conditions, etc. This policy shall be basically applied until a capital adequacy ratio of about 50 % is achieved.

Policy on return to shareholders

	Old policy	New policy (announced in April 2024)
Basic dividend policy	<ul style="list-style-type: none"><li>- Link to each term's business performance</li><li>- Active return</li></ul>	<ul style="list-style-type: none"><li>- Link to equity or each term's business performance</li><li>- Active and continuous return</li></ul>
Return to shareholders	<ul style="list-style-type: none"><li>- Total return ratio of 80 % or more</li><li>- Flexible repurchase of its own shares</li></ul>	<ul style="list-style-type: none"><li>- Which is the greater of a dividend on equity (DOE) of 6 % or a total return ratio of 80 % or more</li><li>- Flexible approach to share buybacks</li></ul>



\*各年度末の終値