

# Denka

Possibility  
of  
chemistry

Denka Report **2022**

Integrated Report





# Denka

Possibility  
of  
chemistry

## Tackling sustainability issues for the sake of corporate survival

With climate change and natural disasters caused by global warming, environmental pollution, the COVID-19 pandemic, and political instability around the world, we are vulnerable to a variety of sustainability-related threats.

But efforts like the Paris Agreement to mitigate global warming, the Sustainable Development Goals (SDGs) for a more sustainable global future, and other common goals for the international community show the way forward for Denka to survive as a corporation.



Promoting ESG initiatives



Formulating the Basic ESG Policy

# Achieving a Sustainable Society

In unpredictable times like these, we will use the SDGs as our compass to create value toward the achievement of a sustainable society.

Each and every one of us should have a story of contributing to society in which we are the protagonist, taking on social issues with sincerity. This is the aim under which we will move forward, engaging in “what we can do better than anyone else in order to become a company that is irreplaceable to society and that helps create a world where everyone can live a better life.”



S

- Technology that supports high-speed data communication systems (5G and beyond)
- Technology that prevents and diagnoses emerging and resurgent infectious diseases
- Technology to support the development of resilient infrastructure and aid in efforts to repair aged facilities and lengthen building life
- Nurture human resources
- Innovative working styles
- Periodic employee awareness surveys



E

- Achieving carbon neutrality
- Technology that supports the shift to xEVs in automobiles
- Hydroelectric power
- Chemical recycling



G

- Enhance the effectiveness of the Board of Directors
- Strengthen the risk management structure
- Partnership Building Declaration
- The Vision Formulation Project by young employees.



## Denka Report 2022

### Integrated Report

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## Editorial Policy

The Denka Report 2022 aims to communicate to stakeholders, including shareholders and investors, about what we have been doing to create new value over the medium to long term from the viewpoint of addressing environmental, social and governance (ESG) issues. We also have an ESG-themed corporate website to ensure that relevant information is disclosed in a comprehensive and timely manner.

### ■ Coverage

This report covers FY2021 (April 1, 2021 through March 31, 2022) in principle. It also includes additional information on some initiatives undertaken subsequent to the FY2021 year-end while presenting data on numerical targets for and performance statistics from the past several fiscal years. Date of publication: September 30, 2022

### ■ Scope

In general, this report covers topics related to the Denka Group's business sites within the scope of consolidation. However, some articles are based on data gleaned outside the scope of consolidation. These articles individually specify the organizations subject to reporting.

### ■ Guidelines

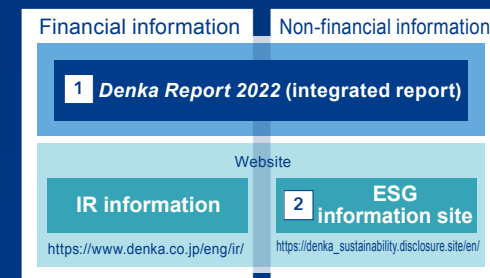
- The GRI Standards of the Global Reporting Initiative (GRI)
- The Environmental Reporting Guidelines 2018 of Japan's Ministry of the Environment
- The International Integrated Reporting Framework of the International Integrated Reporting Council (IIRC)

### ■ Inquiries

Corporate Planning Dept., Denka Company Limited  
Nihonbashi Mitsui Tower, Nihonbashi-Muromachi 2-1-1,  
Chuo-ku, Tokyo 103-8338, Japan  
Tel.: +81-3-5290-5510  
Fax: +81-3-5290-5149

e-mail:denkareport@denka.co.jp  
<https://www.denka.co.jp/eng/>

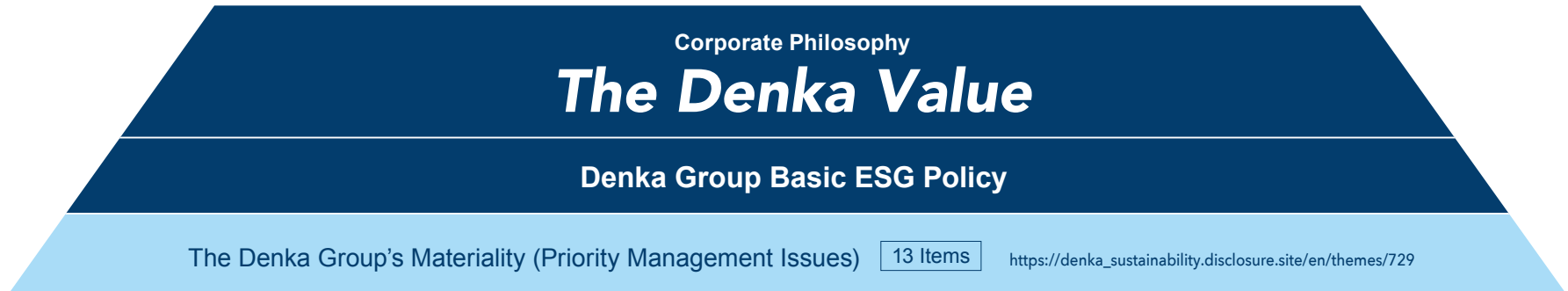
### ■ Overview of the Denka Report 2022



- 1 This report aims to communicate to our stakeholders, including shareholders and investors, what we have been doing to create new value over the medium to long term from the viewpoint of addressing ESG issues.
- 2 We disclose ESG-related corporate information in a comprehensive and timely manner via our website, providing updated reporting on relevant activities and detailed data that is not included in the report.



Our Value Creation Process



**INPUT**

**Six Types of Operating Capital**

**Human**  
**International and diverse human resources**

- Number of employees (consolidated) 6,358 (as of March 31, 2022)
- FY2021 ratio of women in managerial positions 2%
- FY2021 ratio of foreign national employees 15%

**Intellectual**  
**A broad range of essential technologies that capture megatrends**

- R&D bases 1 domestic and 3 overseas
- FY2021 researchers 858
- The world's top market share Over 13 products

**Natural**  
**Effective use of natural resources**

- FY2021 renewable energy ratio 31%
- Hydroelectric power plants 17

**Manufacturing**  
**A production system that facilitates global competition**

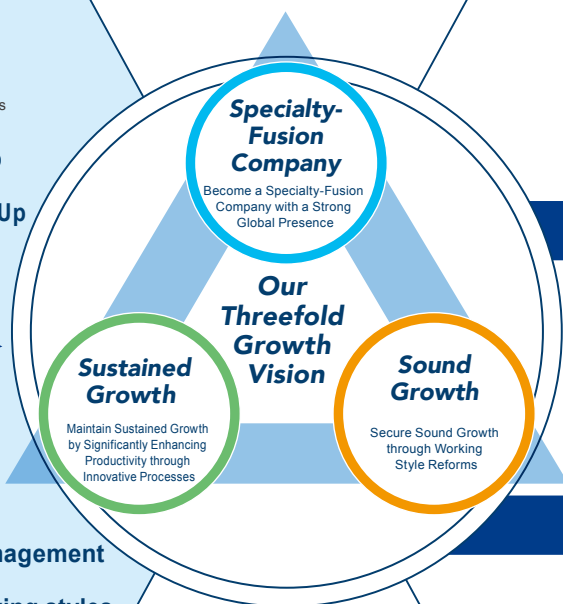
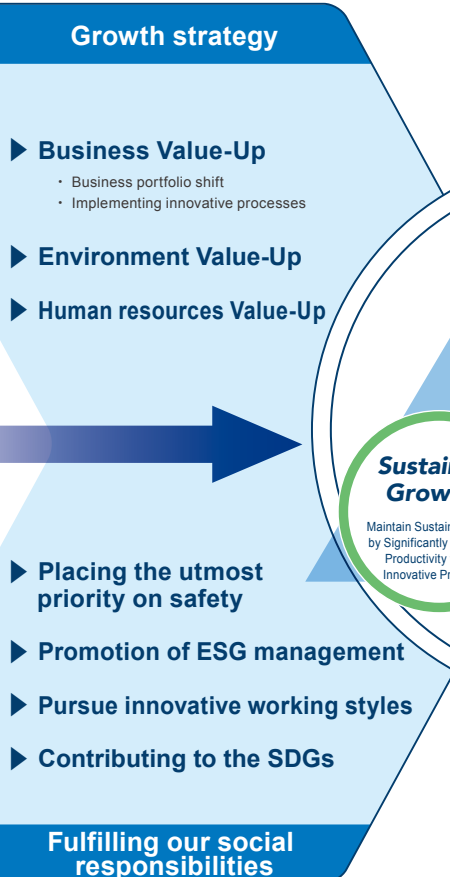
- Production bases 13 domestic and 9 overseas
- FY2021 capital expenditure ¥35.6 billion

**Social**  
**Partnerships with stakeholders**

- Products sold in 83 countries (as of June 2022)
- Partnership Building Declaration (P56)

**Financial**  
**Financial base and investments for value creation**

- Total assets ¥557.6 billion
- FY2021 strategic investment ¥15.6 billion
- \*Based on authorization



**OUTPUT**

**Environment and energy**

In our product development, we employ such core technologies as cutting-edge inorganic materials with the aim of meeting needs arising from mega trends toward high-speed data communications, the shift to electric vehicles, and the introduction of autonomous driving systems.



- Ensure universal access to affordable, reliable and modern energy services (7.1)
- Increase substantially the share of renewable energy in the global energy mix (7.2)
- Double the global rate of improvement in energy efficiency (7.3)

**Healthcare**

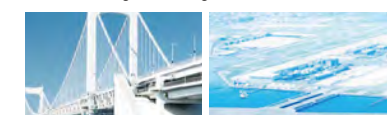
In addition to supporting the prevention and early diagnosis of infectious diseases and lifestyle diseases through the provision of vaccines and diagnostic reagents, we are expanding into such new businesses as cancer-related gene alteration analysis.



- End the epidemics of infectious and communicable diseases (3.3)
- Reduce premature mortality from non-communicable diseases (3.4)
- Achieve universal health coverage (3.8)

**High-value-added infrastructure**

As a provider of cutting-edge materials and solutions, including expansive additives, quick-setting agents and high-strength materials, we support the development of resilient infrastructure while aiding in efforts to repair aged facilities and lengthen building life.



- Ensure access for all to adequate, safe and affordable housing and basic services (11.1)
- Provide access to safe, affordable, accessible and sustainable transport systems for all (11.2)
- Enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management (11.3)
- Reduce the adverse environmental impact of cities by paying special attention to air quality and municipal and other waste management (11.6)

\*The numbers in parenthesis refer to the 17 goals and 169 targets of the SDGs.



# Corporate Philosophy — The Denka Value

**Denka Mission** — Taking on the challenge of expanding the possibilities of chemistry to create new value and contribute to sound social development.

**Denka Principles** — We:

- Boldly confront challenges with determination and sincerity.
- Think and take action today with the future in mind.
- Deliver new values, and inspire customers through innovative Monozukuri\*.  
\*Japanese-style craftsmanship
- Respect the environment and create a cheerful workplace that prioritizes safety.
- Contribute to a better society, whilst taking pride in being a trusted corporate citizen.

Denka's corporate philosophy was established in 2016.

The Denka Value (Corporate Philosophy) consists of the Denka Mission and the Denka Principles, which serve as a code of conduct for all Group employees.



# The Denka Group Basic ESG Policy

On November 8, 2021, we established the Denka Group Basic ESG Policy, setting forth basic principles related to ESG (environmental, social, and governance) in our business activities.

Based on our corporate philosophy of the Denka Value (the Denka Mission and Denka Principles), the cornerstone for all our corporate activities, we formulated this policy as a basic policy for ESG (environmental, social, and governance) of the business activities of the entire Denka Group. We will strive to comply with each of its principles and improve our corporate value by building effective corporate governance based on high ethical standards.

## Tackling sustainability issues

Consideration for climate change and other global environmental issues, respect for human rights, consideration for employee health and the working environment, fair and appropriate wages, fair and appropriate transactions with business partners, risk management for natural disasters, etc.

### Social issues



### The Denka Group Basic ESG Policy

- E**
  - Promote climate change countermeasures
  - Reduce the environmental impact and preserve/protect biodiversity
- S**
  - Sustainable economic growth and solving social issues
  - Respect for human rights
  - Develop inclusive workplace environments with the utmost priority on safety
  - Participate in, contribute to, and build trust toward creating better local communities
  - Build relationships of trust with customers
  - Promote diversity and inclusion, nurture human resource development, and reform working styles
- G**
  - Fair corporate activities
  - Information disclosure and constructive dialogue with stakeholders
  - Risk management
  - Protect and manage our tangible and intangible assets
  - Ensure the role of top management and the implementation of this policy

### Initiatives





## Message from the President

Since I was appointed President in April 2021, we have witnessed a series of events that have significantly affected the business environment, such as the prolonged COVID-19 pandemic, major hurricanes in the United States, the Russian invasion of Ukraine and the resulting spike in raw material prices, lockdowns in Shanghai, and the significant depreciation of the yen. Climate change, marine plastics, and the COVID-19 pandemic bring into stark relief the challenges that we need to address together, as a global community, but US-China friction and the international isolation caused by the Russian invasion of Ukraine have divided our world further. The world is at major crossroads in many ways.

Amid all this, the most important thing we must do for the company to continue to develop is to keep facing the essentials. We formulated the DENKA Group Basic ESG Policy in FY2021, and we will make sincere efforts to address the 13 items set forth therein while focusing on further business development with the SDGs as our compass. We will manage the company with a firm hand in order to build a system that allows us to make steady profits by contributing to society through our business.

FY2022 marks the final year of our “Denka Value-Up” Management Plan. As a result of our efforts under this management plan to become a “Specialty-Fusion Company” and to achieve both “Sustained Growth” and “Sound Growth”, our FY2021 operating income reached a record high of ¥40.1 billion, of which operating income from the specialty businesses accounted for ¥37 billion.

In FY2022, we want to continue to be the kind of corporation that can consistently contribute to stakeholders through our three Value-Ups: Business Value-Up, Environment Value-Up, and Human resources Value-Up.



**Toshio Imai**  
Representative Director, President

### Career Summary

April	1982	Joined the Company
October	2006	General Manager of the Styrene Division
June	2011	General Manager of the Corporate Planning Dept.
April	2013	Executive Officer
June	2019	Director, Managing Executive Officer
April	2020	Director, Senior Managing Executive Officer
April	2021	Representative Director, President



## Message from the President

In Business Value-Up, we will focus our management resources on "what we can do better than anyone else" in the three priority areas of the "environment and energy", "healthcare", and "high-value-added infrastructure". In the environment and energy, we will further strengthen the products for which we have the world's top market share, including acetylene black, fused silica, and the high-functionality inorganic filler spherical alumina. We are considering establishing a new production site for acetylene black, and we are now operating a new facility in Singapore for spherical alumina and expanding facilities in Japan and Singapore for fused silica. In the healthcare field, we have started the operation of a new influenza vaccine plant. We will also build a new plant for rapid antigen diagnostic testing kits and diagnostic reagents, and increase the production of "DELYTACT® injection,"\* a drug to treat malignant gliomas. Further, in the field of high-value-added infrastructure, we will expand our biostimulants operations overseas. As for new businesses, we launched the New Business Development Dept., our fifth business unit, in April of this year. This organization is reaffirming that the outlet of our research is business creation. We will work to quickly promote business creation using KPIs linked to the time axis, collaboration with startups, M&A, and other methods.

For Environment Value-Up, at the Kurobegawa Electric Power Company, which is our joint venture with Hokuriku Electric Power Company, we began commercial operation of the New Himekawa No. 6 Power Plant this April. With one of the largest hydroelectric power generation capacities in Japan, this plant will reduce CO<sub>2</sub> emissions by 41,000 tons annually. We also invested ¥3.7 billion in high-efficiency gas turbines for the Chiba Plant whose operation will result in a further reduction in CO<sub>2</sub> emissions of 12,000 tons annually. In addition, while our affiliate Toyo Styrene Co., Ltd. is constructing a chemical recycling plant that utilizes used food packaging, we will also use our carbon-absorbing CO<sub>2</sub>-SUICOM technology to advance the development of carbon-negative concrete, one of the themes of the Japanese government's Green Innovation Fund Project. With the conviction that Environment Value-Up is essential to the company's survival, we will reform our portfolio, reduce CO<sub>2</sub> emissions by half compared to FY2013 levels by FY2030, and achieve carbon neutrality by FY2050.

\*DELYTACT is a registered trademark of Daiichi Sankyo Co., Ltd.

Once we have achieved Human Resources Value-Up, it will serve as the foundation for the other two Value-Up initiatives: Business Value-Up and Environment Value-Up. I want Denka to be a company that employees can take pride in, and where they can feel growth through their daily work. To this end, each and every employee needs to have a solid narrative\* of how their own work contributes to society to provide them with the motivation to grow. We will continually improve our personnel evaluation system, career planning, training systems, and other personnel systems to the point that they can inspire and sufficiently satisfy this motivation for growth.

I believe that the top priority for Denka in our Human resources Value-Up is promoting diversity and inclusion. Over our 107-year history, Denka has fostered a unique culture based on an attitude of sincerity, but today, with the business environment changing at a dizzying pace, this culture can be quite strong, in both a positive and negative way. We must not become overly attached to history and tradition. Diversity and inclusion means respect for people's differences in terms of gender, career, and other characteristics. I think that respect for these principles is also what makes us competitive as a corporation. We will work steadily on measures such as increasing the number of mid-career recruits and the ratio of women in managerial positions.

We are currently in the process of formulating our next management plan. First, in FY2022, the final year of the Denka Value-Up plan, we will do everything we can to promote our three Value-Up initiatives for business, the environment, and human resources, and continue our "Endeavors we are better at doing than anyone else to build a better world for everyone and secure our standing as a company that is irreplaceable to society." We hope that the Denka Group's shareholders will continue to support us in these efforts.

\*Each and every one of us has a story of contributing to society in which we are the protagonist, taking on social issues with sincerity.

## Talk with the President

Denka Company Limited established our Basic ESG Policy in November 2021, and we are contemplating further strengthening our ESG management in the next management plan, which will be launched in FY2023.

Given this, to get suggestions on what form Denka's ESG management should take, we hosted a dialogue on the importance of ESG management and issues in its promotion. Our Representative Director, President & CEO, Toshio Imai, spoke with Minoru Matsubara, Executive Officer and General Manager of the Responsible Investment Division at Resona Asset Management. Matsubara is active in the field of ESG investment and is deeply knowledgeable about sustainability.



**Toshio Imai**

Representative Director, President & CEO  
Denka Company Limited

**Minoru Matsubara**

Resona Asset Management Co., Ltd.

### Profile: Minoru Matsubara

Resona Asset Management Co., Ltd.  
Executive Officer and General Manager,  
Responsible Investment Division

As the chief manager of asset management for the Resona Group, Matsubara has been practicing socially responsible investment for many years. He has also served in domestic and overseas initiatives in the financial industry and held a number of positions on committees of the Ministry of Economy, Trade and Industry and the Ministry of the Environment. He has proactively made proposals intended to improve the sustainability of the socioeconomic system and create an affluent society.

## 1. Denka's Reputation and the Market's Evaluation

### Denka's reputation and expectations for us

**[Matsubara]** From the perspective of long-term investors, Denka has the reputation of a company that has long been solid and is continuing to build the foundation of society. Denka has a wide range of business areas, but it's the areas of chemical and pharmaceutical manufacturing that are attracting particular interest from the market. As we enter an era of stakeholder capitalism, the market will pay attention to what kind of business you're aspiring to.

On one hand, companies in the chemical sector are perceived as being problematic for the environment, but companies should recognize that and have solutions to address it. We have expectations for Denka, so we'll be watching to see how you present and monetize these solutions.

### Specialties consistent with our ESG commitment

**[Imai]** Thank you for your faith in us. Under our Denka Value-Up Management Plan, we're focusing on the three priority areas of the environment and energy, healthcare, and high-value-added infrastructure as our business portfolio. All businesses in these areas are consistent with the SDGs, the aim of which is to contribute to social development. However, as Mr. Matsubara points out, there are issues such as the large amount of energy consumed in the production of chemical products and the high level of greenhouse gas emissions. That's why I use the phrase "what we can do better than anyone else," to emphasize the importance of both making profits and contributing to society through our work. The concept behind our management plan is specialty. With the premise of consistency with the ESGs, we will concentrate our management resources on high-value-added businesses with our unique technological capabilities. We will continue to focus on specialty as our basic philosophy going forward.



## Talk with the President

### 2. Our Corporate Value

#### Our strong commitment to society as corporate value

**[Matsubara]** President Imai, I felt that your message that all the businesses are consistent with the SDGs reflects Denka's desire to contribute to the world by solving social issues of some kind and while improving the level of specialization where your business model leads you. I understand that monetary value is only one aspect of what a company considers to be corporate value. The kind of corporate value that a company aims for is providing what society needs, and being the kind of company that is essential to the development of society.

#### Diverse values that enrich capital markets

**[Matsubara]** Sometimes the ESG efforts that companies make are not reflected in their capital market evaluations. But what creates liquidity and enriches the market is bringing people with diverse values together in the capital market. It's not a question of who is correct, short-term investors or long-term investors, because both these things are necessary.

Investors sometimes refer to a company as a stock and consider it solely from the perspective of how it can make them money or increase their assets. The accumulation of short-term profits is what makes a company sustainable so you can't give up on those, but we do pay attention to the medium- and long-term value creation of the companies in which we invest. If we evaluate a company based solely on a business framework, we might lose sight of its intrinsic strengths.

#### Righteousness is the source of profit, and profit is unity in righteousness

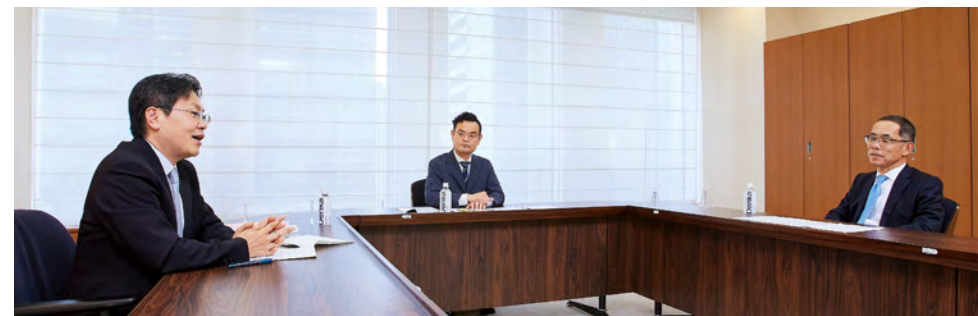
**[Imai]** In order for a company's value to be evaluated properly and for it to grow into something irreplaceable to society, it is necessary for each and every individual to do their job as well as possible. This kind of mastery means we can increase profits, protect the environment, and contribute to society. That is what "specialty" means to Denka. Doing the right thing over and over in the course of our day-to-day business activities will absolutely make the company better. There is a classical Chinese saying that goes "Righteousness is the source of profit, and profit is unity in righteousness." There's no shortage of time-consuming activities that require proper work from day to day—for example, reducing our environmental impact or contributing to society. When these efforts accumulate, it enhances our competitiveness and our corporate value, rewarding us for our hard work. ESG management is the natural conclusion of our corporate initiatives.

### 3. Accountability and Responsibility

#### Telling a story with our eyes on the future

**[Matsubara]** It is clear that, over Denka's long history, you have provided the businesses that society needs. But what does it mean to be Denka? If your path forward isn't clear, that means that Denka's identity isn't being conveyed properly. When it comes to the story you tell, I think that a novel is preferable to a short story; it will attract more interest from the market and improve how Denka is perceived. We are in a position to use the funds we receive from corporate and public pension clients and invest them in companies. We will fulfill our accountability and responsibility to those who support the social security system. This is a crucial mission for us. To do this, companies need to explain the businesses they are developing and the corporate value and social value that they expect to achieve, and to do it in terms of causality. I would like Denka to focus more on whether this is communicated successfully to others, and on the importance of two-way dialogue and engagement.

And the story you tell should also convey what ESG issues you want to solve for the sake of the future, and that you are the ones who are resolute enough to achieve this. I think that is the source of a company's strength. I hope that the world will learn more about Denka's technological and management strengths.



## Talk with the President

### 4. Embracing ESG

#### The strength of young employee's commitment to social contributions

[Imai] Now, what do we mean by accountability and responsibility? I would like to impress upon you that these things are the essence of management's job, and that they are crucial to the sustainability of the company.

With regard to the question of what ESG issues to solve, I also believe that it is important to share a common sense of purpose and identity when considering what Denka should be like in the medium to long term. For this reason, we took the formulation of the next management plan as an opportunity to organize the Vision Formulation Project. In this project, we bring together the young employees who will be responsible for management in the future and listen to their opinions on Denka's future and vision.

What impressed me the most was their strong commitment to contributing to society through their work. When we asked about what value means for Denka, they used phrases like "honesty," "attitude of sincerity" and "earnestness." All of these things are revered parts of our identity, so it's reassuring that this is consistent among our young employees as well.

#### Connecting our passion to our mission and our vision

[Matsubara] That's wonderful to hear. At the start of the meeting, President Imai, you said that all business activities are linked to the SDGs. It seems like young employees have also picked up on this sentiment and that it resonates with them. You have really conveyed your strong determination for Denka to pursue a business model that always leads to solving social issues. This strong commitment to and passion for contributing to society will be a great driver in achieving Denka's mission and vision.

#### Where you can feel yourself grow along with the company

[Imai] Yes, I think that the question is what kind of new vision we can create by utilizing this passion. How can we parse our 107-year history? What do we do best, and what do we focus on? That's where management's responsibility lies. Creating a vision that will convince our employees and reiterating what we believe time and again. That's what promoting ESG management is all about.



When I've visited our different offices, I've told people that I want each and every one of them to be able to explain how the products they are in charge of connect with society, what functions they serve, and how they contribute. This is called a narrative, and I think that it's extremely important.

I explain repeatedly, inside and outside the Company, that we're striving for the ideal form of the Denka Group as making "Endeavors we are better at doing than anyone else to build a better world for everyone and secure our standing as a company that is irreplaceable to society." What kind of contribution does each individual make in the field and in their own work, and what will they aim for in the future? We want to work together with our employees to make Denka a company where their work feels rewarding and allows them to grow.



## Talk with the President

## 5. Balancing Profits and ESG

## The importance of philosophy in staying afloat

[Matsubara] President Imai, I also felt the strength of your conviction to focus on bringing out the capabilities and potential of employees under the Human resources Value-Up management strategy, and the theme of how to explore the ideal form for Denka's future with employees and how to make their work rewarding.

In the future, the world will only become more unclear and uncertain. For Denka to continue creating value in the medium to long term, I believe that philosophy is increasingly important for deriving what you want to be and what you should be.

I believe that the strength of your determination to achieve this goal and the management philosophy will become even more important in the future.



## 6. Denka's ESG-Oriented Management Going Forward

## The resonance of ambition

[Matsubara] In the 20th century, finance was a world of "don't," built around laws and regulations. But looking forward, what do you want to do with the Corporate Governance Code or the Stewardship Code, and what do you expect to accomplish? It's important to have "wants" and "wishes." People may talk about a bird's eye view or a bug's eye view, but it's about having a grand vision of creating a new society and a new company through your work. The fact that these aspirations resonate within the company is an important corporate value.

I also hope that the day will come when the companies that will build the future will be able to attract investments by using such messages of support. We want to talk about the future and we want to share the future. I think that the capital market will likely continue to change going forward.

## Truth, goodness, and beauty: Science, ambition, and balance

[Imai] I believe that ESG management is based on doing the right things as a company, increasing the value of a company's existence, and enhancing its competitiveness. The Japanese expression shinzenbi means "truth, goodness, and beauty." I relate this to ESG management. Let's say that truth is science, good is ambition, and beauty is overall balance. I want to have solid science, high ambitions, and a good overall balance, and I want to maintain an awareness of these in our daily decision-making.

In facing the challenges of the COVID-19 pandemic, the world as a whole has become more conscious of what it means to examine the fundamentals. We will carefully examine the social issues that the Company faces and our specialties in the aim of having the strong will to make "Endeavors we are better at doing than anyone else to build a better world for everyone and secure our standing as a company that is irreplaceable to society."

May 19, 2022

Denka Company Limited Head Office

Facilitator: Mr. Takahiro Okabe, Sun Messe Innovation Network Center/Sun Messe Co.,Ltd.

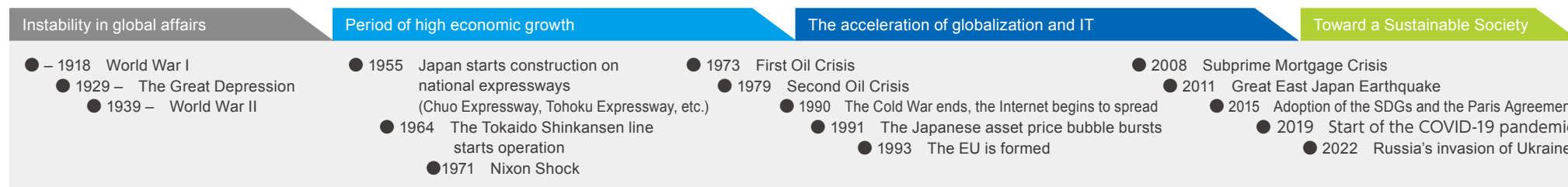
# Denka's Trajectory

## - Contributing to Social Development -

Since our founding in 1915, Denka has been wrestling with the issue of how much of the value required by society can be created through chemistry. Here, we will introduce the history of Denka's corporate value creation through five eras.



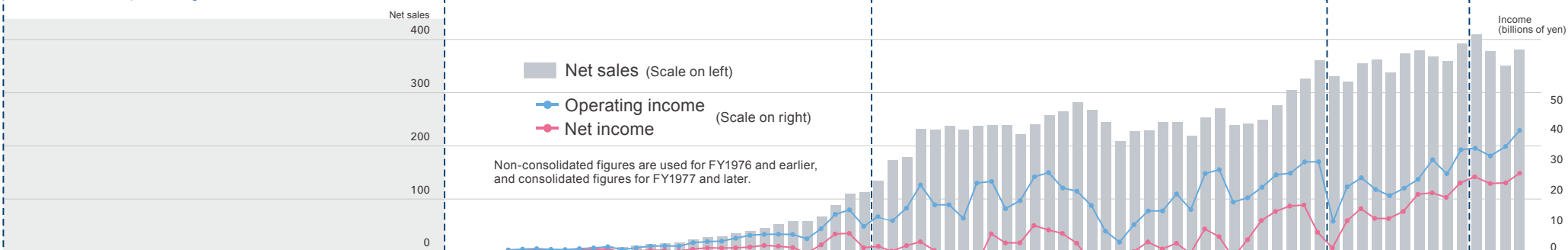
## Social changes



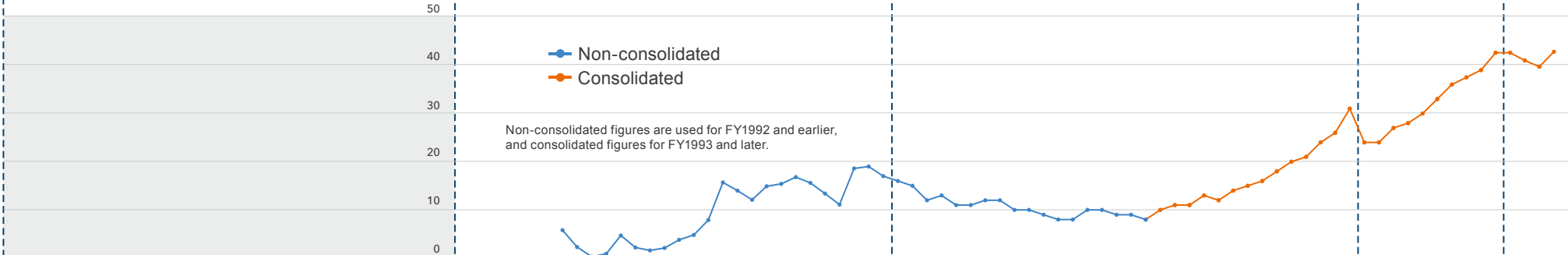




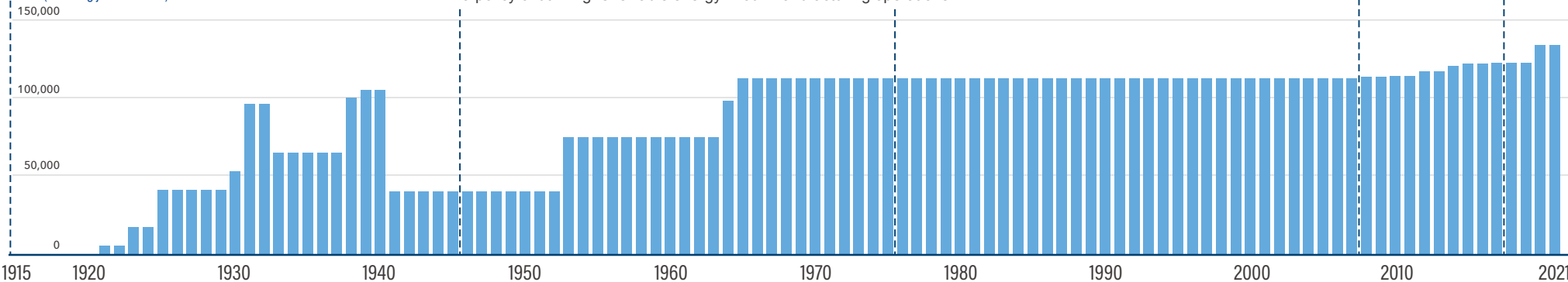
**Trend in operating results** (Unit: billions of yen)



**Trend in the overseas sales ratio** (Unit: %)



**Trend in maximum output of hydroelectric power plants** (Unit: kW) (including joint ventures)

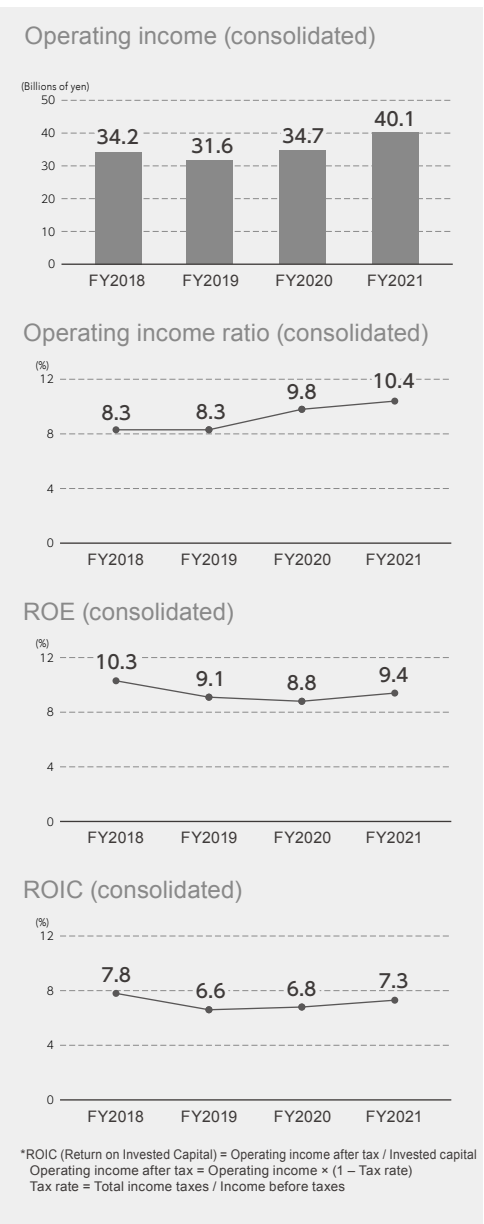
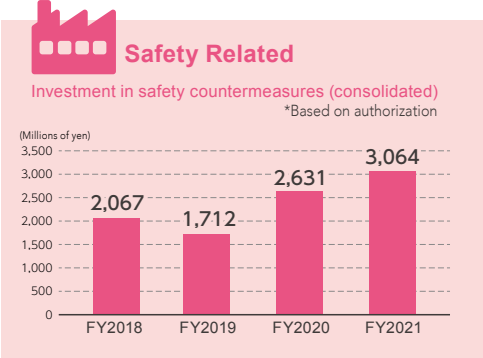
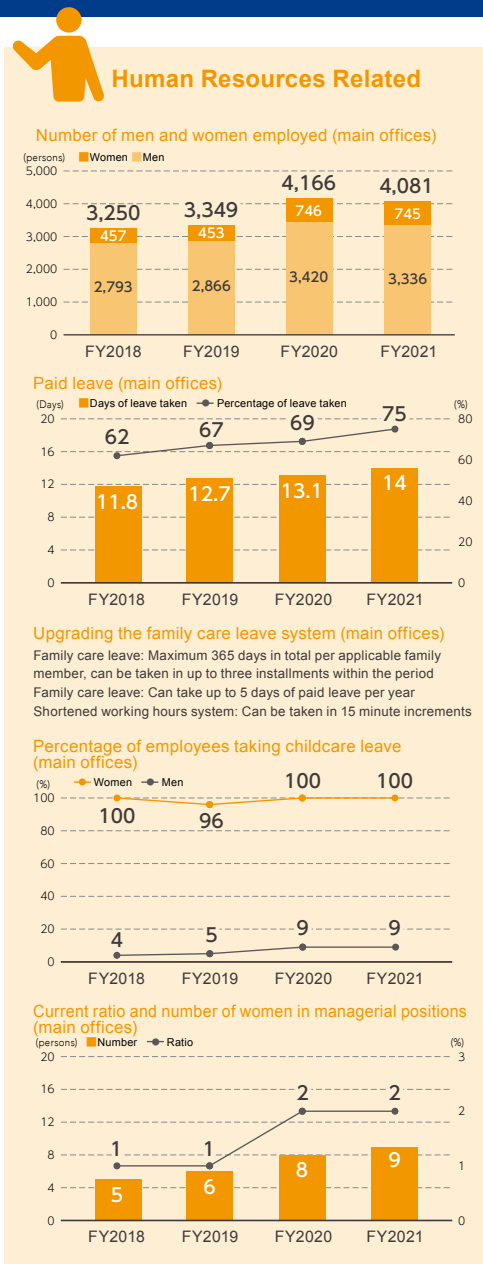
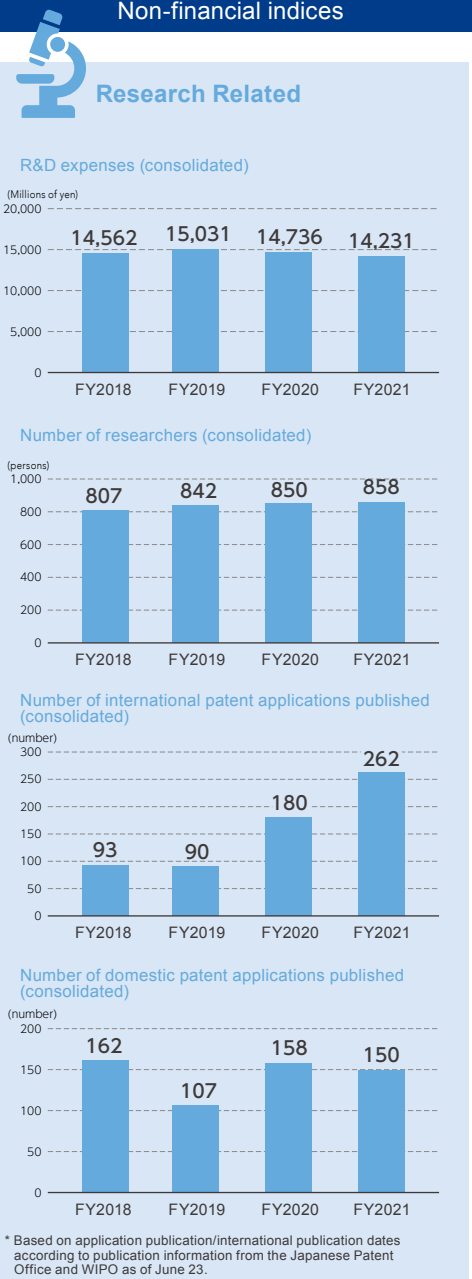
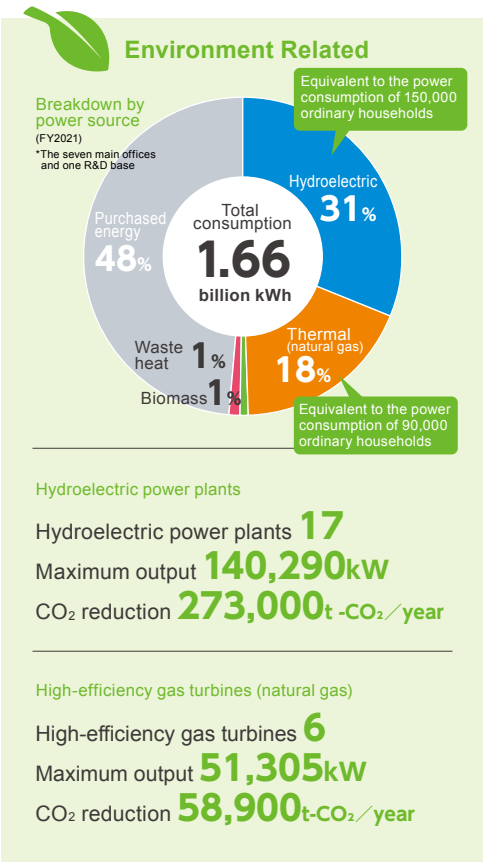


Since our founding in 1915, Denka has been proactively engaged in the construction of hydroelectric power plants, upholding a policy of utilizing renewable energy in our manufacturing operations.

Since 1933, the output from Kurobegawa Electric Power Company's power plants has been calculated in line with the ratio of Denka's equity (50%) in the joint venture. In 2022, the power generation capacity totaled 140,000 kW due to the start of operations of the Kurobegawa Electric Power Company's New Himekawa No. 6 Power Plant.

Initiatives to Create Corporate Value (Financial and Non-financial Highlights)

**Non-financial indices** Financial indices





## Review of FY2021 Operating Results | COVID-19 Response

## Non-financial

## Overview

- We launched the Vision Formulation Project to formulate a new company vision to serve as the framework for our management plan.
- With the aim of achieving net zero greenhouse gas emissions and carbon neutrality by FY2050, we have made concrete efforts to increase the ratio of renewable energy sources through the operation of new hydroelectric power plants.
- Even since the COVID-19 pandemic has settled somewhat, we are continuing with telework, positioning innovative working styles as a permanent effort for the survival of the company.

## Example initiatives

- Brought the New Himekawa No. 6 Power Plant on line
- Ranked A- on the CDP's List for climate change and for water security
- Supplied rapid COVID-19 antigen diagnostic testing kits to the Japanese government
- Set health and productivity management KPIs
- Promote innovative working styles
- The origins of the Vision Formulation Project

## COVID-19 countermeasures

## 1. Risk Management and Business Continuity Efforts

- Made telework and staggered working hours widespread by setting in-house working caps for each in-house alert level
- Encouraging the use of hand sanitizer, installing acrylic plates, conducting rapid antigen diagnostic testing kits for business trips, and other infection (cluster) prevention measures
- If an infection or close contact occurs at a business site and an operator is absent, take measures based on the production continuity plan for each office and plant.
- Perform objective risk assessment to prevent disruptions in the raw material supply chain
- Secured cash management (expanded loan facility and a robust volume of cash at hand)

## 2. Risk Management Committee Activities

- The Japanese government's Expert Meeting on the Novel Coronavirus Control recommends classifying outbreaks into three categories according to their circumstances: high alert, contagion precautions, and virus awareness. With this in mind, we classified the in-house measures into three threat levels and formulated action guidelines.
- Had overseas resident employees and their families return to Japan or take other measures in accordance with the travel risk level of the Ministry of Foreign Affairs.
- Announced company measures and our efforts to prevent the spread of the virus at our offices, and the eruption and condition of infected individuals in our offices regarding "Information on the measures that Denka is taking to fight the COVID-19 coronavirus" (<https://www.denka.co.jp/eng/covid-19/>)

## Financial

## Overview

## ● Change in volume (YoY) +¥20.5 billion

Demand for xEV- and semiconductor-related products grew, as did demand for diagnostic reagents such as rapid COVID-19 antigen diagnostic testing kits and inflammatory markers. Also, demand recovered from the previous year's pandemic-related decrease, despite the impact of reduced production of chloroprene rubber due to natural disasters. On the other hand, sales of influenza vaccines decreased year-on-year due to a decline in productivity.

## ● Change in purchase price (YoY) +¥33.1 billion

We revised product prices in response to the rise in raw material prices, despite the impact of a drop in purchase prices due to the reduction in the NHI points for COVID-19 antigen tests.

## ● Change in variable costs (YoY) -¥40.5 billion

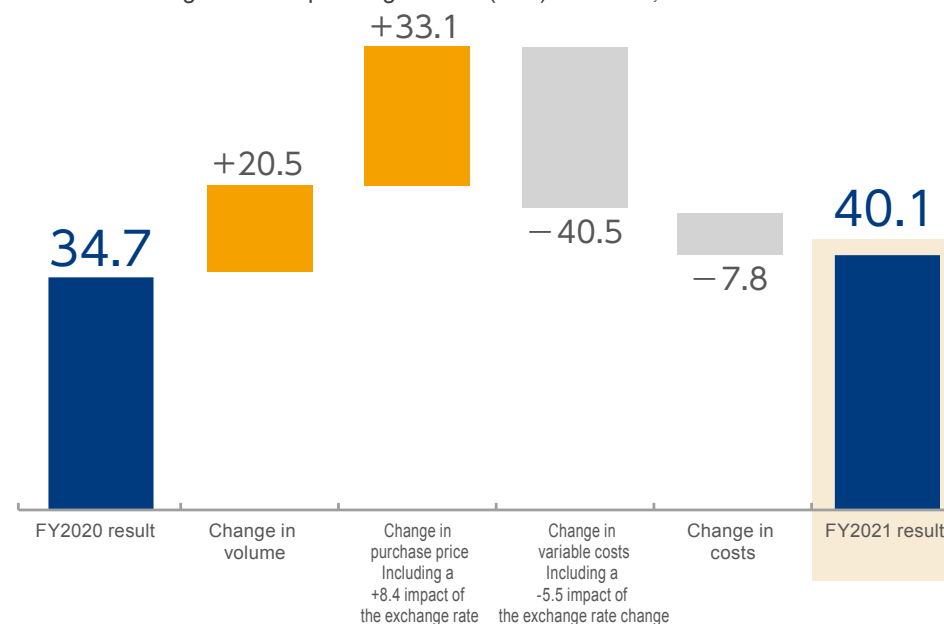
Variable costs increased mainly due to rising raw material prices.

## ● Change in costs (YoY) -¥7.8 billion

Fixed costs and other costs increased due to the construction of an increased production system mainly for the Electronics & Innovative Products.

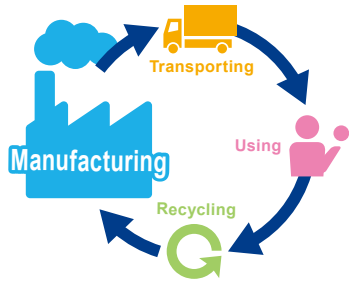
As a result of the above, FY2021 operating income increased by ¥5.4 billion year-on-year to ¥40.1 billion, marking a record high for the second consecutive year.

## Factors of changes in the operating income (YoY) Unit: billions of yen



# Our Vision for 2030 | The Denka Group's Social Responsibilities and Contributions

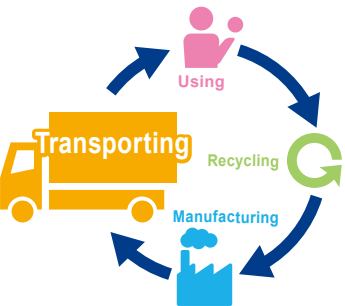
As a producer of chemical and pharmaceutical products, the Denka Group bears various responsibilities attendant to its value chain for delivering goods and solutions to society. Based on the concept of a circular economy, we will keep searching for issues that the Denka Group must address and responsibilities it must assume toward the goal of achieving the SDGs by 2030 to contribute to society.



**Social issues (risks)**

- Global warming attributable to greenhouse gas emissions
- Environmental destruction due to the emission of hazardous substances
- Aging population with a low birth rate, human resource shortages, and excessive working hours

Our factories will be even more worker- and eco-friendly and coexist harmoniously with the people, flora, and fauna of their neighboring communities. They will also consume less fossil fuel and minimize the use of fossil-based resources as raw materials. Advances in IoT, robotics, VR/AR, and other technologies will help establish labor-saving "smart" manufacturing processes, resulting in a lean production system capable of handling the small-lot production of multiple items while ensuring high quality. Simultaneously, we will realize a safer labor environment where everyone can work with confidence. Thanks to the popularization of AI-based development activities and the use of "smart" offices and factories, our employees will be empowered to concentrate on tasks that only people can handle, shifting their focus from simple manufacturing to value creation.



**Social issues (risks)**

- Environmental burden arising from production and logistics activities
- Deterioration in the working environment and shortage of human resources

Digital data is everywhere, and factories are becoming smarter, reducing transportation and inventory. The popularization of remote work will also result in a decrease in traffic and contribute to reducing the environmental burden. The Denka Group will supply cutting-edge materials and electronic components for use in high-speed data communication infrastructure, electric vehicles equipped with autonomous driving systems, automotive fuel cells, drones, and other machines.



**Nobuhiro Shigaki**  
Sustainability Promotion Department

**Efforts to Achieve Carbon Neutrality by 2050**

Reducing CO<sub>2</sub> emissions is an important step toward solving the global issue of climate change. As part of these efforts, it is necessary to disclose the CO<sub>2</sub> emissions from products (their carbon footprint, or CFP). We will build an automatic CFP calculation and management system and make data more visible, then work with related departments to increase our ratio of renewable energy usage and otherwise reduce emissions toward the aim of achieving carbon neutrality by 2050.

**Drastically Improve Labor Productivity**

I would like to contribute to a more digital-savvy workplace in DAPL by working on projects employing tools like robotic process automation and artificial intelligence to achieve increased operational efficiency. In addition, I would also aim to equip myself with sufficient analytics knowledge in order to leverage on data analytics tools to make data-driven decisions in order to solve business problems.



**Fendy**  
Denka Advantech Pte Ltd



**Tomohiro Yamashita**  
R&D Management Dept.

**Launch the Full-scale Utilization of Material Informatics**

By promoting the integration of the proprietary technologies that Denka has cultivated over many years with data science (material informatics, text mining, AI, etc.), and by linking this to improving the quality, speed, and efficiency of research and development, we hope to become a company that can respond appropriately to the needs of its customers and be rewarding for its employees. Also, we will use non-fossil-derived raw materials and recycled resources to achieve our desire to be a manufacturing company that is friendly both to the global environment and to human beings and that is worthy of sustained long-term trust.

**Create New Value through Innovation in Logistics and Sales Processes**

The risks in procuring raw materials are increasing due to natural disasters and rapid changes in the balance of supply and demand. To reduce risks and achieve stable procurement, we are working to further strengthen our supply chain through proactive communication, both internal and external, and by implementing the Declaration of Partnership Building. Going forward, we will continue to build sustainable relationships that will enable us to grow together with our suppliers even more than in our 107-year history, and we will strive to be a company that can contribute to society and the environment by providing things that the world needs.



**Sho Tanaka**  
Raw Materials Section, Purchasing Dept.



**Tsuginori Ogawa**  
Omuta Plant Operations Section, Operations Dept.

**Efforts to Ensure Sustainable and Stable Logistics Operations**

Amid changing circumstances in the logistics industry, we are working to ensure sustainable and stable logistics by cooperating with our sales and manufacturing departments to implement white logistics initiatives, such as eliminating manual cargo handling at the time of product shipment and reducing vehicle waiting times to reduce the workload. We are also pursuing productivity by increasing the size of shipping lots and introducing a warehouse management system to accurately manage inventory and prevent erroneous shipments. Going forward, we will promote smart logistics that incorporate the latest technologies, such as automated warehouses and AGVs, in the aim of creating an environment where everyone can work with peace of mind.





**Yuri Terao**

Denka Innovation Center  
Advanced Materials  
Research Dept.

**Pursue Innovation in Electric Vehicle Technologies**

I will contribute to achieving carbon neutrality through research and development of the battery materials necessary for the electrification of mobility. I want to create new businesses that can contribute to achieving a sustainable society by pursuing research and product development that are truly necessary and that respond appropriately to social changes through open innovation. Also, I want us to reform working styles and promoting diversity in the aim of becoming a company where everyone can work comfortably and experience continued growth through their work.

**Contribute to Food Safety and the Resolution of Food Problems**

PRULA, our biostimulant material, contributes to food safety and the resolution of food problems. "Biostimulants" refers to the various substances and microorganisms that make plants healthy. These materials bring out the inherent, natural power of plants. With nearly 60 years of experience in the research and manufacturing of the biostimulant material humic acid, we are confident in our technological capabilities in this area. PRULA is particularly effective in environments that are dry, salt damaged, or otherwise poor. Amid the global movement of reducing the use of agricultural chemicals and chemical fertilizers in the production of agricultural products, as well as difficult growing environments caused by abnormal weather, PRULA is the savior that this crisis requires. The value it offers the world will serve to fulfill our mission to contribute to food safety and security.

**Yuta Uchida**

Agri-Products Dept.



**Shuntaro Komura**

G47A Unit  
Viral Formulation Dept.

**Protect People's Lives and Well-being**

I am involved in the business of "DELYTACT® injection,"\* a therapeutic cancer drug whose active component is a virus that has been genetically modified to selectively proliferate only in cancer cells. DELYTACT is the first viral cancer therapy in Japan, the second in the world, and the first in the world for gliomas. It is completely different from conventional drugs, and what makes it revolutionary that it is expected to be effective for all solid carcinomas in principle. I will continue to do my best in this business so that Denka can be a driver in achieving a world where, thanks to DELYTACT, cancer can be cured like any other illness.

\*DELYTACT is a registered trademark of Daiichi Sankyo Co., Ltd.

**Promote a Circular Economy**

As efforts toward a sustainable society spread around the world, this fiscal year, we launched a chemical resource recycling project aimed at styrene chain recycling. As one of the people in charge of food packaging sheets, I want to contribute to the achievement of a recycling-oriented society that incorporates the collection of so-called disposable products in cooperation with local government bodies. I believe that this new step will serve as a foundation to preserve the richness of our global environment, and that, at the same time, it will be a rewarding job that allows us to feel more connected to society.

**Hong Yang**

Polymer Solutions  
Household Packaging  
Materials Dept.

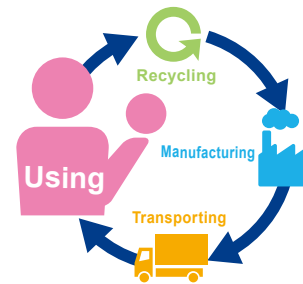


**Soichiro Nakanishi**

Sustainability Promotion  
Department  
Carbon Neutrality  
Promotion Section

**Efforts to Convert CO<sub>2</sub> into Chemical Raw Materials**

Denka has spent many years cultivating technologies and businesses that will ensure our future. To this end, we are proactively introducing new technologies based on a flexible, out-of-the-box mindset and conducting surveys and studies to establish methods to suppress CO<sub>2</sub> emissions and to produce chemical raw materials. I look at the need to transition to carbon neutrality (CN) by 2050 not as a crisis but as a major opportunity. I want all of Denka to work together to design technology and management strategies that will allow us to enter green businesses using chemical raw materials.

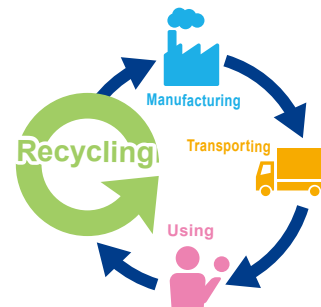


**Social issues (risks)**

- Food shortages arising from global population growth
- Global warming attributable to greenhouse gas emissions
- Increasing magnitude of damage caused by natural disasters due to climate change
- Outbreak of emerging and re-emerging infectious diseases pandemic
- Aging population and the resulting diversification of diseases among the general public

Targeting people who are concerned about ethical consumption and members of Generation Z\*, which prizes empathy, sharing, and respecting the unique attributes of individuals, we will deliver manufacturing proposals for products and solutions that resonate with these sensibilities and help consumers discover new value while ensuring the functionality and eco-friendliness of our offerings. We will also incorporate lessons from biology to create eco-friendly products that generate minimal waste. Moreover, we will uphold our commitment to ensuring the health of product users. In line with these pursuits, we will be deeply involved in the provision of products and services for health maintenance and disease prevention as well as presymptomatic diseases. Furthermore, we will help reduce the volume of food waste associated with processes ranging from harvesting through transport, processing and sale, and contribute to logistics efficiency as part of our efforts to ensure food safety.

\*In 2030 and beyond, members of Generation Z will be in their early 30s, leading society.



**Social issues (risks)**

- Increasingly serious consequences of climate change attributable to global warming
- Problems arising from marine plastic pollution
- Aging of concrete and other buildings and civil infrastructure

Working in tandem with other members of society, we will create manufacturing processes and ecosystems designed to deliver products that are long-lived or easy to recycle while minimizing their footprints on the natural environment, including on marine, land, and other living organisms. For example, we will recycle waste plastics into raw material monomer for use in the manufacture of new products. We will also produce recycling-oriented materials that facilitate the separation of parts and/or cleansing, while developing highly durable products that are inherently capable of self-restoration if cut or cracked, as well as products that naturally repel stains. Furthermore, we will incorporate CO<sub>2</sub> as a plastic ingredient. In all these pursuits, we remain strongly committed to lengthening product life and promoting recycling.

Management Plan

# Denka Value-Up

2018-2022

The Ideal Form of Denka

A company that is genuinely necessary to society and irreplaceable to the world, and that employees and stakeholders can take pride in

## Business Value-Up

Business portfolio shift through “concentration in businesses in which we outperform others”



## Environment Value-Up

Greenhouse gas emissions (compared to FY2013)  
Down 50% by FY2030  
Achieve net zero by FY2050



## Human Resources Value-Up

Becoming a company in which employees can feel growth through job satisfaction and work

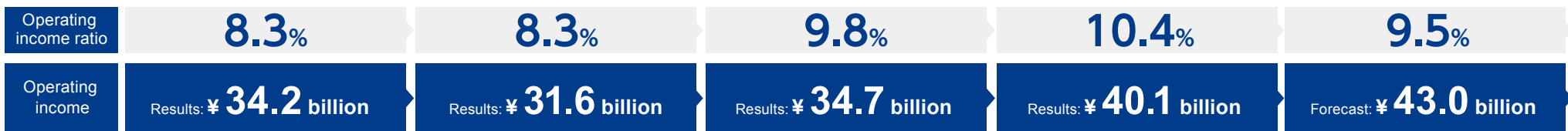
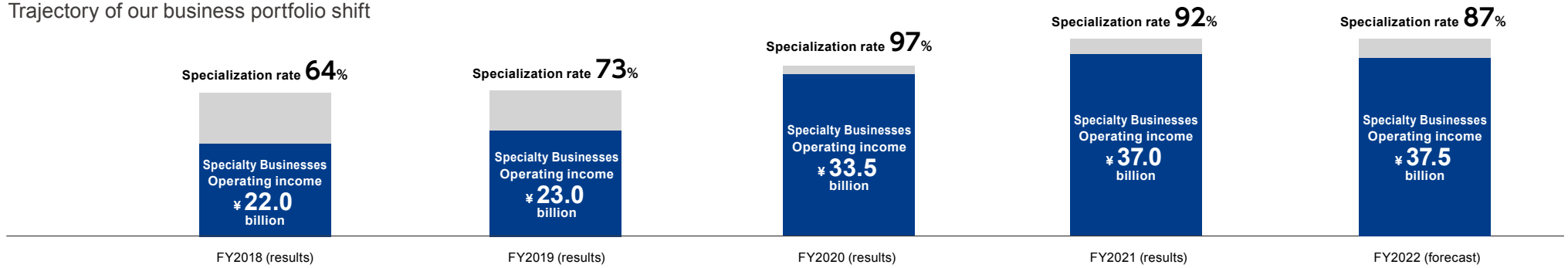




### 1. Review of Denka Value-Up through 2021

In order to realize our Corporate Philosophy, The Denka Value, the Denka Group has set forth a threefold growth vision: Become a Specialty-Fusion Company, Sustained Growth, and Sound Growth. Under the five-year management plan, Denka Value-Up, which began in FY2018, we have been promoting two growth strategies, a business portfolio shift and introducing innovative processes, to focus on expanding business and improving profitability. We have also positioned the two years following FY2021 as an important preparatory period for making a leap forward to the ideal form for the next management plan. As a first step toward becoming irreplaceable to society, we are working on three Value-Up initiatives related to business, the environment, and human resources.

#### Trajectory of our business portfolio shift



#### Business portfolio shift

Category	FY2018	FY2019	FY2020	FY2021	FY2022
<b>Growth policies</b>	<ul style="list-style-type: none"> <li>Made entry into the biostimulant market</li> <li>Completed the Omi Innovation Hub</li> </ul>	<ul style="list-style-type: none"> <li>Decided on strategic investment in thermal conductive materials for automotive use (spherical silica, SN plates / ¥8.0 billion)</li> <li>Capital participation in the Plex Bio Co.,Ltd. (genetic testing technology)</li> </ul>	<ul style="list-style-type: none"> <li>Significantly augmented silicon nitride production capacity</li> <li>Acquired approval for the domestic manufacturing and marketing of rapid COVID-19 antigen diagnostic testing kits</li> <li>Augmented influenza vaccine production capacity</li> </ul>	<ul style="list-style-type: none"> <li>Increased production of MS in Singapore</li> <li>Decided to build a PS resin chemical recycling plant</li> </ul>	<ul style="list-style-type: none"> <li>New production facility for spherical alumina (Singapore, approximately quintupled production capacity)</li> <li>Augmented spherical silica production facilities (Singapore, approximately 30% increase in production capacity)</li> <li>Augmented production capacity of diagnostic reagents (Kagamida Plant, strategic investment of ¥11 billion)</li> </ul>
<b>Structural reforms</b>			<ul style="list-style-type: none"> <li>Merged DENKA SEIKEN Co., Ltd. and consolidated group trading companies</li> </ul>	<ul style="list-style-type: none"> <li>Established Denka Astec Co., Ltd. (housing business)</li> </ul>	
<b>Environmental strategies</b>	<ul style="list-style-type: none"> <li>Withdrew from the Firelen and β-silicon nitride business</li> </ul>	<ul style="list-style-type: none"> <li>Withdrew from the EVA emulsion and polyvinyl acetate resin business</li> </ul>	<ul style="list-style-type: none"> <li>Declaration of carbon neutrality (2050)</li> <li>Started operation of new, high-efficiency gas turbine generators (Omi Plant, capital expenditure of ¥4.0 billion)</li> </ul>	<ul style="list-style-type: none"> <li>Brought the New Omigawa Hydroelectric Power Plant on line</li> <li>Started joint research on next-generation technology to achieve carbon-negative concrete</li> </ul>	<ul style="list-style-type: none"> <li>Brought the New Himekawa No. 6 Hydroelectric Power Plant on line</li> <li>Started operation of new, high-efficiency gas turbine generators (Chiba Plant, capital expenditure of ¥3.7 billion)</li> </ul>

In FY2021, the fourth year of the Denka Value-Up Management Plan, sales volume increased due to an overall recovery in demand, which had slumped during the COVID-19 pandemic. This year also saw expansion in the key growth businesses of electronics and innovative products and rapid COVID-19 antigen diagnostic testing kits. Moreover, net sales increased due to a review of sales prices in response to higher raw material and fuel prices. In terms of profits, growth in specialty products led to record highs for operating income, ordinary income, and net income attributable to owners of parent. These record profits were the result of steady growth in product lines in the priority fields of healthcare and of the environment and energy. This is a testament to the last four years of the steady promotion of specialization as the core strategy of the Denka Value-Up Management Plan.

In FY2022, the final year of the plan, we will continue to accelerate specialization and move forward with our business portfolio shift.

## Investment and Shareholder Returns

With regard to shareholder returns, we remain committed to a targeted total shareholder return ratio of 50% in line with the shareholder return policy established in November 2014. In addition to prioritizing dividends, we will flexibly execute share repurchases by giving due consideration to demand for funding and stock price trends.

While continuing initiatives aimed at maintaining a sound financial base, we aim to execute strategic investment centered on specialty businesses to ensure “Sustained Growth” and “Sound Growth”.

## We Remain Committed to a Targeted Total Shareholder Return Ratio of 50%

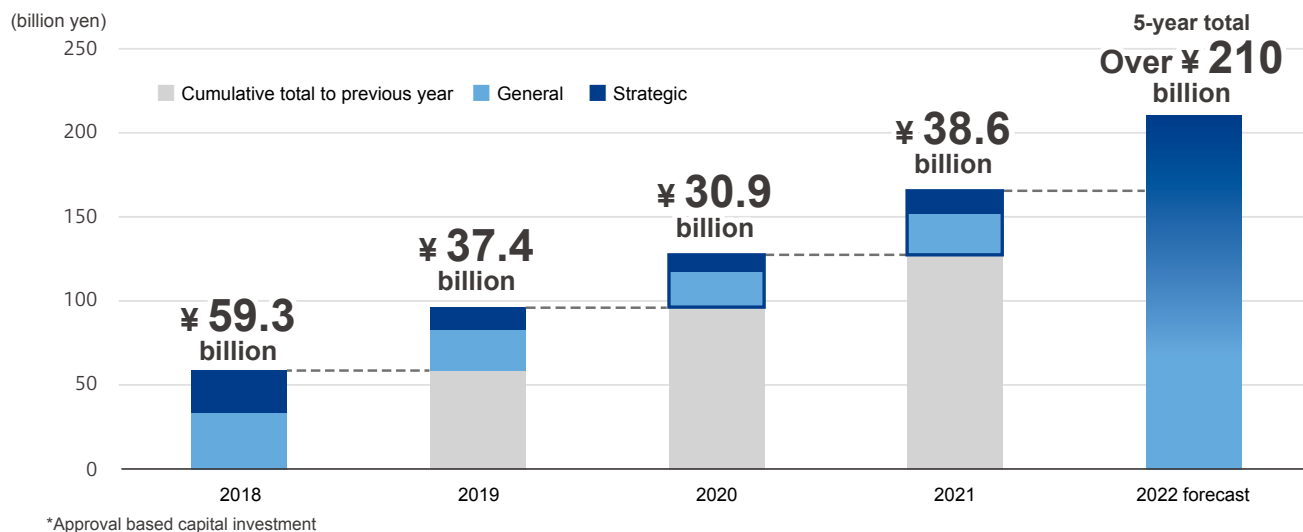
		FY2017 results	FY2018 results	FY2019 results	FY2020 results	FY2021 results	FY2022 forecast
Net income	(billion yen)	23.0	25.0	22.7	22.8	26.0	29.0
Dividends per share	(yen/share)	105	120.0	125.0	125.0	145.0	145.0
Total dividends	(billion yen)	9.2	10.5	10.8	10.8	12.5	12.5
Dividend payout ratio		40%	42%	48%	47%	48%	43%
Shares repurchased	(billion yen)	2.3	2.1	—	—	—	—
Total shareholder returns	(billion yen)	11.5	12.6	10.8	10.8	12.5	
<b>Total shareholder return ratio</b>		<b>50%</b>	<b>50%</b>	<b>48%</b>	<b>47%</b>	<b>48%</b>	
Depreciation and amortization	(billion yen)	24.6	22.9	22.5	22.9	23.9	26.0
Capex, investment and financing	(billion yen)	27.0	32.8	36.9	42.3	35.6	46.0
ROE		10.0%	10.3%	9.1%	8.8%	9.4%	9.8%

## Shareholder Returns

The Denka Group has established two growth strategies in its management plan, “Denka Value-Up”, to achieve its numerical targets: “Business Portfolio Shift” and “Implementing Innovative Processes”. It has also implemented an aggressive strategic investment. Cumulative capital investment for the five years from FY2018 to FY2022 is expected to be over ¥210 billion, exceeding the initial plan.


### Capital Investment (approval based)

Estimated total of  
**¥210 billion over**  
 for the five years



## 2. Threefold Value-Up Achievements and Issues to be Addressed

**Business Value-Up**




Business portfolio shift through "concentration in businesses in which we outperform others"

We will continue to pursue specialization, a core theme in our management plan, "Denka Value-Up", in each of our business fields, and optimize our business portfolio with an eye to megatrends.

Achievements
<p><b>Environment and energy</b></p> <ul style="list-style-type: none"> <li>Decision to reinforce production facilities for next-generation, high-performance spherical fillers (Omuta Plant, strategic investment ¥5 billion)</li> <li>Decision to introduce new production facilities for radiation sheets for use in 5G devices and xEVs (Shibukawa Plant doubled production capacity)</li> <li>Decision to increase spherical silica production capacity for semiconductor encapsulant fillers</li> </ul> <p><b>Healthcare</b></p> <ul style="list-style-type: none"> <li>Start of production of DELYTACT®(G47Δ) oncolytic virus</li> <li>Operation of new manufacturing site for influenza vaccines</li> <li>Decision to increase production capacity of test reagent products (Kagamida Plant, strategic investment ¥11 billion)</li> </ul> <p><small>**DELYTACT" is a registered trademark of Daiichi Sankyo Co., Ltd.</small></p>

Issues
<p><b>Environment and energy</b></p> <ul style="list-style-type: none"> <li>Improving profitability of low-profit products and capital efficiency</li> </ul> <p><b>Healthcare</b></p> <ul style="list-style-type: none"> <li>Implementation of new business (Icon, IntelliPlex, etc.) plans without delay</li> <li>Timely development of products for various emerging and re-emerging infectious diseases</li> </ul> <p><b>High-value-added infrastructure</b></p> <ul style="list-style-type: none"> <li>Delay in overseas expansion</li> <li>Delay in reforming low-profit products</li> </ul>

**Environment Value-Up**



Greenhouse gas emissions (compared to FY2013) 50% reduction by FY2030 Achievement of net zero by FY2050

We have positioned the reduction of environmental impact as the core of our management policy, and are aiming to reduce greenhouse gas emissions by 50% (compared to FY2013) by FY2030 and achieve carbon neutrality by FY2050. To this end, we will be aiming to implement a variety of measures, including reforming our business portfolio and manufacturing process, and expansion of hydroelectric power plants.

Achievements
<p><b>Carbon neutrality</b></p> <ul style="list-style-type: none"> <li>Announcement of the net zero target and roadmap</li> <li>Declaration of support for TCFD and disclosure of information</li> </ul> <p><b>Energy conservation and renewable energy</b></p> <ul style="list-style-type: none"> <li>Operation of high-efficiency gas turbine generators (Omi Plant 2020, Chiba Plant 2022)</li> <li>Start of operation of New Omigawa and New Himekawa No. 6 hydroelectric power plants (reduction in annual CO<sub>2</sub> emissions by 54,000 tons)</li> </ul> <p><b>Chemical recycling</b></p> <ul style="list-style-type: none"> <li>Commenced construction of a plant for chemical recycling of styrene resin (3,000 t/year capacity, scheduled for operation in the second half of FY2023)</li> </ul>

Issues
<p><b>Carbon neutrality</b></p> <ul style="list-style-type: none"> <li>Practical use of CCUS processes (conversion to manufacturing methods with less environmental impact)</li> </ul> <p><b>Energy conservation and renewable energy</b></p> <ul style="list-style-type: none"> <li>Identifying new ways to generate energy from a long-term perspective</li> <li>Conversion to fuels with less environmental impact</li> </ul> <p><b>Chemical recycling</b></p> <ul style="list-style-type: none"> <li>Participation in consortiums to provide solutions for expanding processing capacity</li> </ul>

**Human resources Value-Up**



Becoming a company in which employees can feel growth through job satisfaction and work

With the aim of becoming a company in which employees can feel growth through work, we are implementing a variety of measures that include bolstering our training programs, improving the work environment, and promoting diversity.

Achievements
<p><b>Specialty human resources</b></p> <ul style="list-style-type: none"> <li>Establishment of new personnel evaluation system</li> <li>Commencement of succession plan (directors and general managers)</li> <li>Reforming of job groups and management systems</li> </ul> <p><b>Promoting diversity</b></p> <ul style="list-style-type: none"> <li>Increased the number of female managerial personnel</li> <li>Introduced and established paid leave for nursing care and telecommuting</li> <li>Planned implementation of workplace improvement investment</li> </ul> <p><b>Health and productivity management</b></p> <ul style="list-style-type: none"> <li>Declaration of health and productivity management and KPIs</li> </ul>

Issues
<p><b>Specialty human resources</b></p> <ul style="list-style-type: none"> <li>Difficulty recruiting human resources due to the decline in the working-age population</li> <li>Strengthening human resource development systems (expand succession plans, etc.)</li> </ul> <p><b>Promoting diversity</b></p> <ul style="list-style-type: none"> <li>Lack of female managers and global human resources</li> <li>Further reduction of dirty, dangerous, and physically demanding workplaces</li> </ul> <p><b>Health and productivity management</b></p> <ul style="list-style-type: none"> <li>Mental and physical health care (prevention and response)</li> </ul>



## Vision Formulation Project - Thinking about the future of Denka -

### Project Objectives

The Vision Formulation Project is a project aimed at creating a new vision that will serve as the foundation for the next management plan from FY2023 to FY2030. A group of 44 project members comprised of young Denka employees responsible for creating the future of Denka devised a vision made up of core values, purpose and mission based on the "Collins Porras Vision Framework". A heated discussion ensued under the theme, "Thinking about the Future of Denka".

# Vision

## Core Value

-Philosophy-

Universal to the organization and preserved through time. It is a criterion for decisions and actions of the organization and represents the values and direction of the actions of each employee

## Purpose

-Reason for existence-

Pursuing the value we can provide to society through the strengths of the organization, i.e. Reason for existence to fulfill the needs of society and the world

## Mission

-Audacious goals-

Clear and compelling overall goals to focus the energy of all employees



The core value, purpose, and mission discussed in this project will be announced as a new vision that will form a top priority in our next management plan. These are not simply symbolic words, but will interlink with our next management plan with the aim of instilling them in daily activities, work practices and goal setting.

## Our Next Management Plan

The Denka Group is currently formulating an eight-year management plan for the period from FY2023 to FY2030.

In order to further take up the achievements and issues identified through the "Denka Value-Up" management plan through FY2022 and achieve sustainable growth over the medium to long term, we are working to establish a vision, review materiality issues, and introduce non-financial evaluation indicators in order to clearly establish a management strategy to address issues surrounding sustainability.

Based on the concept of "Business in which we outperform others to build a better world for everyone and become a company that is indispensable for society", the entire Denka Group is working to realize a sustainable society.

### Point 1 Materiality Issues Review

In FY2021, the Denka Group established the Denka Group ESG Basic Policy, recognizing sustainability issues, such as consideration for global environmental concerns, including climate change, respect for human rights, consideration for the health and working environment of employees, fair and appropriate treatment, fair and appropriate transactions with business partners, and risk management for natural disasters as important issues affecting the survival of the Company. We also believe that it is essential to strengthen our efforts to address these issues in the next management plan, which aims for sustainable growth over the medium- to long-term.

With this in mind, we are reviewing materiality issues established in FY2017 as part of the formulation of our next management plan. In conjunction with the Denka Group ESG Basic Policy, we will reflect sustainability issues and clarify our contribution to the further development of society through our business operations.

#### Materiality Issues (established in FY2017)

##### Denka's Materiality Issues Aimed at Realizing SDGs

Category	13 Materiality Issues	Relevant SDGs
Prioritization of safety	Reinforce security and disaster prevention measures	
	Maintain occupational safety and health while creating a vibrant and comfortable workplace environment	
Products and technologies	Create new products and technologies that contribute to sound social development	
	Ensure product safety	
Solid corporate governance/ Corporate conduct deserving of stakeholder trust	Ensure that our corporate philosophy is embraced by every employee and transform our corporate culture	
	Improve corporate governance	
	Maintain strict compliance with laws, regulations and corporate ethics	
Employee happiness	Nurture human resources and pass down our technological heritage to future generations	
	Embrace diversity and offer equal opportunities	
	Help employees strike a work-life balance and promote employee health	
Environmental preservation	Prevent air, water, soil and other environmental pollution	
	Promote climate change countermeasures (curb global warming, reduce GHG emissions, and adapt to climate changes)	
Dialogue with society/ Partnership	Maintain appropriate and timely disclosure of corporate information and establish bidirectional communications	

• ESG Information Site: Our Materiality Issue [https://denka\\_sustainability.disclosure.site/en/themes/729](https://denka_sustainability.disclosure.site/en/themes/729)



### Reviewing in our next management plan (2023 to 2030)

### Point 2 Introduction of Non-Financial Evaluation Indicators

In recent years, when business partners, institutional investors, and financial institutions evaluate corporate value, they are increasingly placing greater emphasis not only on financial statements, but also on whether the company will create new value in the future and whether sustainable growth is expected. As a result, every year there is a strong need to visualize non-financial information to measure potential corporate value.

In response to this change in accountability and responsibility, Denka is working to clarify the connection between materiality and management strategy in our next management plan, and to establish non-financial evaluation indicators for each in order to make non-financial initiatives that will lead to future financial results more visible.



E

## Environment

The Denka Group is accelerating efforts to achieve carbon neutrality by FY2050. We aim to identify the environmental impact of our production activities and take vigorous measures to reduce it.

### Message from the Supervisor of Environmental Measures Promotion



#### Shojiro Watanabe

Managing Executive Officer,  
Supervisor of Environmental  
Measures Promotion

### Committed to Reducing our Environmental Impact

The global movement toward global environmental protection and global warming countermeasures is accelerating, as evidenced by the de facto strengthening of the standard for climate change countermeasures to 1.5°C at COP26 held in Glasgow, UK in November 2021 and the completion of the Paris Agreement rulebook. In November 2020, we announced our carbon neutrality target for FY2050, and in May 2021, we raised our interim target for FY2030 from 26% to 50%, as we acknowledge the increasing importance of achieving carbon neutrality.

As a result, we have identified options that take advantage of our strengths, including energy conservation, expansion of renewable energy sources, fuel conversion at thermal power plants, introduction of CCUS\* technology, and the development and introduction of processes that reduce environmental impact. These options are concrete measures to address the issues we have identified. We continue to actively consider and promote them.

In addition, although there are many ways to achieve carbon neutrality, there are some that we cannot achieve alone. Therefore, we will actively explore possibilities for collaboration with neighboring companies and the government.

While accelerating our response to global warming from a long-term perspective, we have begun to examine the environmental impact of our current production activities in an expanded scope. By including conservation of water resources and securing biodiversity, which to date have been sporadic and individual activities, in our environmental policy, we have decided to comprehensively assess the impact of our business activities on the natural environment from a higher perspective and promote countermeasures.

From now on, we will actively promote measures to conserve water resources and ensure biodiversity, in addition to reducing waste, promoting energy conservation, and reducing CO<sub>2</sub> emissions from production activities.

As a chemical manufacturer, Denka is keenly aware of its social responsibility and will make every effort to play our part in addressing the problem of climate change.

\*CCUS: Carbon Dioxide Capture, Utilization and Storage

#### Policy on the Prevention of Environmental Pollution

Denka strives to accurately gauge the volume of environmental load substances emitted from production facilities run by its Group companies while continuously working to reduce them. These substances include greenhouse gases, such as CO<sub>2</sub>, SO<sub>x</sub> (sulfur oxides), NO<sub>x</sub> (nitrogen oxides), soot and dust, BOD (biochemical oxygen demand), COD (chemical oxygen demand), and other substances designated by the PRTR Law (Pollutant Release and Transfer Register Law). With marine plastic waste becoming a social issue, we are also focusing our efforts on reducing and recycling plastic waste as stipulated in the Law for Promotion of Recycling of Plastic Resources, which came into force in April 2022.

We will actively introduce equipment to remove substances that have a negative environmental impact, comply with voluntary management standards that are stricter than those set by relevant laws and regulations, and continue to strive to reduce the amount of environmental load substances.



### Roadmap to FY2050

Denka announced in FY2020 that it would be carbon neutral by FY2050. As a milestone, we have established the interim target of reducing CO<sub>2</sub> emissions by 50% (compared to FY2013) by FY2030.

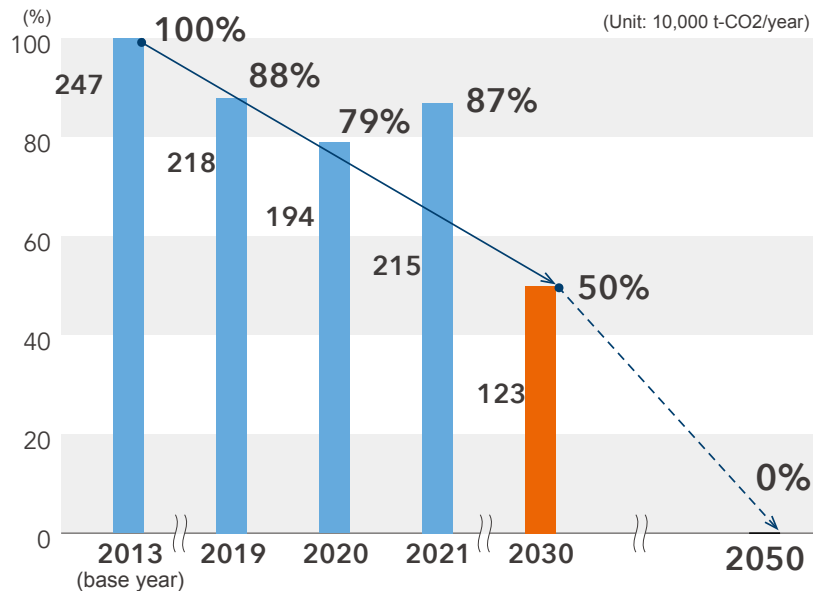
Annual emissions from Denka and its Group companies in FY2021 increased compared to the previous year, when plant operations declined significantly due to the outbreak of COVID-19. However, thanks to efforts to promote energy conservation and the introduction of renewable energy (hydroelectric power), total emissions amounted to 2.15 million tons, 87% of the FY2013 level.

As part of measures to achieve carbon neutrality, we will continue to promote the following.

<b>Promotion of energy conservation</b>	High-efficiency gas turbine generators were introduced at the Omi Plant (started operation in October 2020) and the Chiba Plant (started operation in June 2022). We will continue to promote thorough energy conservation at all of our business sites.
<b>Further introduction of renewable energy</b>	Denka currently has 17 hydroelectric power generation facilities (1 of which started operation in FY2022). In the future, we will actively consider the introduction of solar power generation and further promote the use of other forms of renewable energy.
<b>Introduction of innovative technology</b>	Denka is promoting joint development with the National Institute of Advanced Industrial Science and Technology with the aim of implementing CO <sub>2</sub> recovery technologies by FY2030.

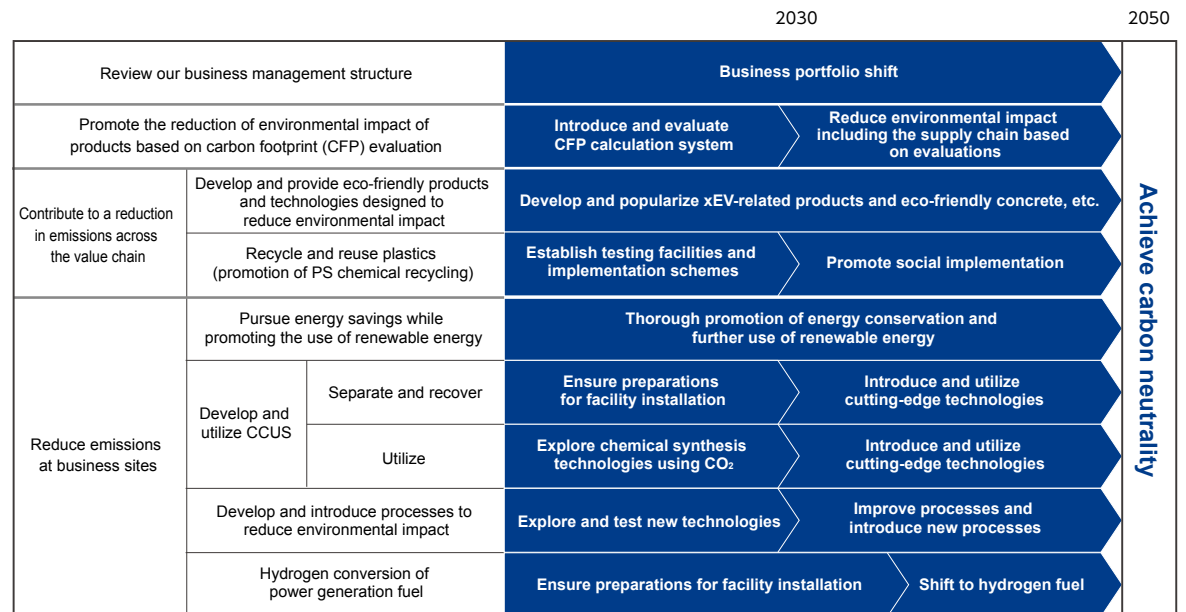
We are exploring and considering the development of chemical diversion for use of recovered CO<sub>2</sub>, with a view to collaborating with local communities and surrounding companies. We are also considering the introduction and development of an environmental impact reduction process to reduce CO<sub>2</sub> emissions. By combining these technological developments and collaboration with external partners, we will steadily reduce CO<sub>2</sub> emissions generated by our business operations.

Medium- and long-term targets for reducing greenhouse gas emissions (Scope 1 + 2)



\*Denka Group (consolidated) \*Starting from the Denka Report 2021, values for the entire Denka Group are shown.

Roadmap toward carbon neutrality



## Expansion of Renewable Energy Sources and Introduction of Power Generation Technologies with Low Environmental Impact

For more than 100 years, Denka has been promoting the use of renewable energy. Specifically, we have engaged in technological pursuits on two fronts, namely (1) leveraging hydroelectric power generation and other technologies to create renewable energy while (2) fully taking advantage of this energy in chemical manufacturing and utilizing it as a valuable energy source. Toward the realization of a low-carbon society, we are increasing our focus on renewable energy-related initiatives, one of our areas of strength.

### 1. Denka Hydroelectric Power Plants

The Omi Plant is geographically situated amid a web of 16 hydroelectric power plants, including those under co-ownership. These power plants boast a combined maximum output of approximately 140,000 kW, making this one of the largest private-owned power generation networks of its kind in Japan. All of these facilities employ a natural inflow type hydroelectric power generation system that ushers river water into the turbine runners and returns it to the river as soon as it leaves the generator. Thanks to these features, this type of hydroelectric power plant places a relatively smaller burden on the natural environment.

Moreover, hydroelectric power plants generate virtually no greenhouse gases while serving as a renewable energy source with superior energy efficiency. Thus, these power plants are capable of harmoniously coexisting with the natural environment while generating electricity in a sustainable manner.

#### Hydroelectric power plants

**17** plants in Japan

\*Including facilities owned by a joint venture

#### Maximum output

**140,290** kW

\*As of August 2022, including Denka's ownership of output from power plants owned by a joint venture



New Himekawa No. 6 Power Plant run by Kurobegawa Electric Power Company which commenced operation in April 2022 (on the left is the New Himekawa No.6 Power Plant, and on the right is the Himekawa No.6 Power Plant).

### 2. Initiatives Related to Solar Power Generation



In 2013, Denka installed solar power generation facilities on the premises of its Shibukawa and Isesaki plants.

We are currently considering new candidate sites for our plants in Japan and Group companies and promoting the introduction of more solar power generation facilities.

Denka Solar Power Shibukawa

### 3. Introduction of Power Generation Technologies with Low Environmental Impact

Denka is promoting energy conservation and expanding the use of renewable energy sources in order to achieve carbon neutrality. We have been promoting energy conservation measures by switching to alternative fuels and introducing high-efficiency gas turbine generators at thermal plants, and waste heat and biomass power generation at cement plants.

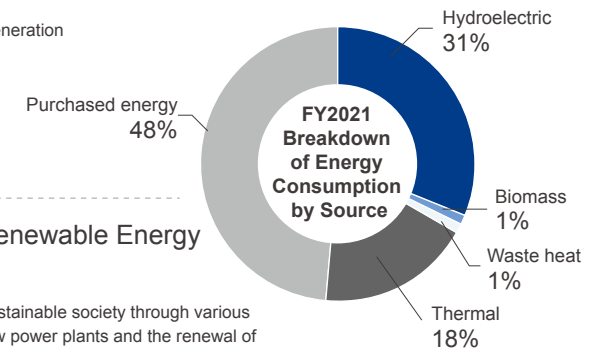
Recently, a high-efficiency gas turbine went into operation at the Omi Plant in FY2020, and a similar gas turbine started operation at the Chiba Plant in FY2022.



Gas turbine power generation facility at Chiba Plant, which started operation in June 2022

### 4. Breakdown of Energy Consumption by Source (non-consolidated)

The Omi Plant employs biomass power generation in addition to utilizing hydroelectric power generation facilities.



### 5. Future Outlook for Our Renewable Energy Generation Capacity

We will contribute to the realization of a sustainable society through various initiatives, including the construction of new power plants and the renewal of existing power plants.

#### Power generation capacity (1000 kW)

	FY2005	FY2021	FY2022	FY2030
Hydroelectric	111	126	140	141
Solar, etc.	3	7	7	13
Total	114	133	147	154

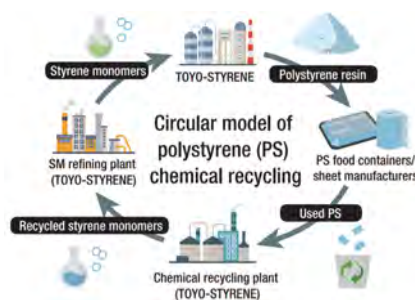
\*The above figures include 50% of the power output from power plants run by Kurobegawa Electric Power Company (a joint venture co-owned by Denka and Hokuriku Electric Power Company).

## Initiatives to Reduce Environmental Burden

To fulfill its social responsibilities as a chemical manufacturer, the Denka Group is striving to reduce the environmental burden attributable to its own operations while also striving to resolve environmental concerns by recycling waste plastic and conserving biodiversity through its products and technologies.

### 1. Resource Recycling and Chemical Recycling

Denka and Toyo Styrene Co., Ltd., an equity method affiliate, have launched initiatives to commercialize the chemical recycling of polystyrene resins. With technologies licensed from U.S.-based Agilyx Corporation, we have finalized plans for the construction of a plant (annual processing capacity: Approx. 3,000 tons) at our Chiba Plant, with plans to commence operations in the second half of FY2023. The chemical recycling process we are currently studying is expected to remove restrictions on the usage of recycled polystyrene and thus serve as an epoch-making alternative to conventional material recycling processes. Moreover, the volume of CO<sub>2</sub> deriving from the chemical recycling of polystyrene is around half that of regular production. We will continue efforts to realize full implementation as soon as possible.



### 2. Efforts to Conserve Biodiversity

Along with climate change, biodiversity is becoming increasingly important to establish a sustainable society, and the establishment of an international disclosure framework is in full swing. The Denka Group's Basic ESG Policy calls for reducing environmental impact and conserving and protecting biodiversity, and aims to maintain and improve biodiversity by assessing the environmental impact of our production activities.

More specifically, based on the Basic Act on Biodiversity and related guidelines, we will implement the following initiatives within the next three or so years.



Gosen Office (Gosen City, Niigata)  
Waterway cleaning

1. Conduct risk analysis on ecological conservation in environments surrounding major offices (seven domestic offices and major production sites within the Group)
2. Identify issues based on risk analysis and formulate an effective response plan toward 2030
3. Conduct environmental education and biodiversity awareness activities for Group employees

## Denka Performance Elastomer's Environmental Management

Denka Performance Elastomer LLC (DPE) a Denka Group company based in Louisiana, the United States manufactures chloroprene rubber (CR). In 2015, DPE started operations upon the acquisition of CR production facilities established by the U.S.-based DuPont in 1969. Since then, DPE has been engaged in the provision of CR to customers all around the world. Under the Denka Group's environmental load reduction policy, DPE is committed to complying with the chloroprene monomer emission standards established by environmental laws and regulations and to reducing emissions and waste. DPE is also working together with relevant agencies and research institutions to strongly encourage the best available science and technologies to be used in the toxicity assessment of chemical substances by the relevant agencies.

Currently DPE is facing multiple lawsuits along with DuPont and its affiliates. These lawsuits were filed by residents of communities around DPE's Pontchartrain Plant and demand compensation on the grounds that said residents have sustained physical, financial and emotional damage arising from chloroprene monomers emitted from the plant.

However, the December 2020 updates of an epidemiologic study conducted by researchers at a University of Pittsburgh under the auspices of the International Institute of Synthetic Rubber Producers has confirmed that no correlation between chloroprene monomer exposure and the fatality rate arising from lung and liver cancer can be found. This study involved follow-up surveys targeting approximately 7,000 people who are ex- or active employees of U.S.-based facilities handling chloroprene monomers over the course of nearly 70 years. The study follows up on similar findings obtained in 2007, based on data up to the end of 2000, with additional data on worker health surveys for the 17 years up to 2017.

Furthermore, according to data publicized by the Louisiana Tumor Registry, region-specific carcinogenic risk in the location of the plant is not significantly different from the average risk for the entire state.

DPE invested more than US\$35 million (approximately 4 billion yen) in equipment to reduce chloroprene monomer emissions, achieving a 86% reduction (FY2021 results and comparison with FY2014).

DPE has also submitted a formal Request for Correction/RfC to the U.S. Environmental Protection Agency (EPA) on July 15, 2021 to review the toxicity assessment of chloroprene monomers, requesting the incorporation of a physiological-based pharmacokinetic (PBPK) model, a cutting-edge method used in the research of chloroprene monomer's impact on human health. EPA responded by announcing the rejection of the RfC on March 14, 2022, stating that the conclusions in the Integrated Risk Information System (2010 IRIS) cancer risk assessment and its supporting materials, which served as the basis for EPA's toxicity assessment of chloroprene monomers, were consistent with EPA's Information Quality Guidelines (created in the United States in 2002), and therefore it would not review the toxicity assessment values upon update of scientific information. In response, on June 10, 2022, DPE submitted a Request for Reconsideration/RfR.

Denka will continue to support DPE's efforts to encourage EPA to use the best available science and technology to assess chemical toxicity.

For details, please refer to the news releases\* posted on Denka's corporate website.

\*News releases dated June 19, 2019, February 14, June 8, June 19, August 7, December 17, 2020, March 2, June 22, July 20, 2021, April 28 and June 17, 2022



## Our Support of the Task Force on Climate-Related Financial Disclosure (TCFD)

In September 2020, Denka announced its support of the TCFD and began participating in the TCFD Consortium.

Going forward, we will carry out ongoing assessments focused on risk and opportunities arising from climate change and other relevant factors, including changes in government policies, regulations and market conditions as well as technological breakthroughs in the course of across-the-board initiatives aimed at realizing the low-carbon society and decarbonized economy envisioned by the Paris Agreement. In line with the following process flow suggested by the TCFD recommendations, we will identify the impact our businesses may face going forward.



### Governance and Risk Management

With regard to Denka's response to medium- to long-term concerns arising from climate change, the Board of Directors supervises these policies. Meanwhile, the Sustainability Promotion Department is charged with overseeing company-wide initiatives to counter climate change under the instruction of the executive officer responsible for supervising the promotion of environmental countermeasures.

Related matters deemed particularly important, including the formulation of medium- to long-term targets, the revision of basic policies and priority measures and the determination and evaluation of management indicators are discussed by the Board of Directors and other bodies attended by top management, with the representative director making final decisions.

### Metrics and Targets

Denka has positioned reducing the volume of CO<sub>2</sub> emissions from its operations as a matter of utmost importance in terms of environmental management in order to achieve a 50% reduction from FY2013 levels by FY2030 and achieve carbon neutrality by FY2050.

In addition to promoting energy conservation and expanding renewable energy sources, namely hydroelectric power generation, we are also studying the introduction of innovative technologies such as CCUS, which separates, recovers, utilizes, and stores CO<sub>2</sub> from plants at the source, and the use of hydrogen. Denka is also currently working on joint development with external research institutions with the aim of adopting such technologies by FY2030. Moreover, we will push ahead with efforts to reduce the environmental burden attributable to our entire value chain by expanding the scope of our initiatives to address issues associated with the total life cycles of our products.

### **C O L U M N** Working with CDP to Enhance Our Environmental Management

Denka began responding to the CDP Climate Change Questionnaire in FY2015 with the aim of proactively disclosing information on climate change, including across our entire value chain, and to strengthen environmental management and increase corporate value with the aim of focusing on the use of sustainable resources and energy. From FY2019, we also expanded the scope of our responses to water security. Moreover, we take an objective view to analyzing our responses to CDP to examine and reduce/improve risks and opportunities through future insights into governance and climate change that are related to our environmental management policies.

In FY2021, Denka was awarded a place on the CDP A List for both climate change and water security, the second-highest on an 8-point scale.

## Updated Scenario Analysis and Our Response to Climate Change-Related Risks and Opportunities

To assess risks and opportunities arising from climate change, we have conducted scenario analysis using the “below 1.5°C scenario” (Glasgow Climate Pact), and the “below 4°C scenario”, which assumes that global temperatures will continue to rise at their current pace. By doing so, we have verified the magnitude of climate change-related impact we expect to face in FY2030 and the countermeasures we must implement. The scenario analysis revealed that, in areas of government policy and legal regulation, we will be confronted by risks arising from the introduction of carbon taxes, carbon pricing and carbon-emission trading systems. On the other hand, it is expected that Denka will meet growing sales opportunities for its LEAF carbon agent and electronic materials for use in xEVs and other products, reflecting its diverse product and business portfolio. We will continue to strive to quantitatively assess the business risks and opportunities lying ahead and reflect the results in our management planning and business strategies based on appropriate courses of action in line with TCFD.

### Identification of Climate Change-Related Risks and Opportunities and Subsequent Scenario Analysis

Risks Opportunities

Scenario	Category	Item	Expected impact	the business field	Impact on the business field	Countermeasures
1.5°C	Government policies and legal regulations	Introduction of carbon tax and emission trading system	Large	All divisions	•Growing costs associated with overall volume of CO <sub>2</sub> emissions and/or emissions in excess of upper limits set by emissions quotas	•Shift of business portfolio •Progress in energy-saving measures to reduce CO <sub>2</sub> emissions and introduction of CCUS technologies
		Growing demand for plastic resource recycling (waste reduction)	Large	Polymer Solutions Electronic & Innovative Products Elastomer & Infrastructure Solutions	•Promotion of alternative materials for single-use plastic containers •Deterioration in product properties and increased manufacturing costs due to the mandatory incorporation of biomass raw materials	•Promotion of resource recycling involving styrene-based resin by introduction of chemical recycling technologies, switchover to plastic products incorporating bio-polymers, improvement of physical properties, cost reduction
	Technology	Increased costs related to decarbonization and CCUS promotion	Large	Elastomer & Infrastructure Solutions (cement, special blends, calcium carbide, chloroprene)	•Increased manufacturing costs •Promotion of alternative materials if no action is taken	•Examination of optimal CCUS facilities for each manufacturing plant
	Reputation	Growing demand for countermeasures against emission-intensive businesses	Large	Elastomer & Infrastructure Solutions (cement, calcium carbide, chloroprene)	•Rapid change in investment behavior	•Development and introduction of CCUS technologies and the construction of plants employing such technologies
	Resource efficiency	Realization of carbon recycling (waste reduction and product recovery/recycling)	Large	Elastomer & Infrastructure Solutions (cement, calcium carbide, chloroprene) Polymer Solutions (polystyrene, food packaging materials)	•Reduced manufacturing costs, improving the environment, enhanced corporate image, and reduced impact of carbon pricing	•Popularization of CO <sub>2</sub> -SUICOM eco-friendly concrete, the promotion of R&D into chemical synthesis technologies under industry-academia-government collaboration, capital investment
		Emergence of new technologies with advantages in terms of LCA	Medium	Electronic & Innovative Products (thermal materials, etc.)	•Growing demand for products designed to contribute to reduction in CO <sub>2</sub> emissions throughout the course of their life cycles	•Expansion of production capacity in line with growing demand •Reduction of CO <sub>2</sub> emissions during product manufacturing
	Energy sources	Progress in transition to clean energy	Large	All divisions	•Growing use of renewable energy and hydrogen-fired energy	•Expansion of hydroelectric power generation capacity, the utilization of hydrogen-fired energy, and the planning of a hydrogen production process (electrolysis of water) fed by hydroelectric power
	Products/services	Expansion of existing products and development of related parts in line with the increased use of EVs	Large	Electronics & Innovative Products (power control units installed in xEVs, ceramic substrates used as thermal materials in batteries, spherical alumina, thermal materials, acetylene black, etc.) Elastomer & Infrastructure Solutions (DENKA ALCEN, amorphous silica paper for thermal insulation and fire prevention for lithium ion batteries)	•Growth in product demand for EV-related components •Determining feasibility for application, mass production, sales expansion •Decrease in demand for internal combustion engine components	•Expansion of production capacity in line with growing demand •Verification of performance requirements through user work, promotion of trial production through collaboration with other companies, and determination of business feasibility to meet these needs, including price •Capital investment and new product development •Development of products for new xEV applications
		Growing number of offshore wind farms	Small	Electronics & Innovative Products (silicon nitride) Elastomer (high-pressure cable)	•Increased demand for components used in wind power generation facilities	•Expansion of production capacity in line with growing demand and the development of new products with superior functions
		Development of renewable energy power supply systems	Medium	Electronics & Innovative Products (acetylene black) Elastomer (high-voltage cable)	•Increased demand for components for use in energy storage and the development of transmission networks	•Expansion of production capacity in line with growing demand and the development of new products with superior functions
4°C	Acute	Suspension of production facilities (equipment damage, supply chain disruption)	Medium	All divisions	•Loss of profit opportunities due to the suspension of production activities and the emergence of costs associated with the restoration of production facilities •Stagnation in our production and sales activities due to facility damage incurred by raw material suppliers and product consumers	•Strengthening of facility maintenance measures due to the revision of the expected level of disaster damage and an assumption of a disaster of greater magnitude •Diversification of supply chains
	Chronic	Decrease in operation of renewable energy power generation plants due to unstable weather patterns (less sunshine/sunlight, drought, hydroelectricity)	Medium	All divisions	•Increased cost due to reduced output of solar power plants and growing costs attributable to increase in energy purchasing in line with a decline in output from our hydroelectric power plants	•Promotion of energy-saving measures and diversification of energy sources
		Increase in operating costs of thermal power and chemical plants due to a decrease in cooling efficiency caused by rising temperatures	Small	Thermal power plants Elastomer & Infrastructure Solutions (fertilizer, chloroprene, caustic soda) Polymer Solutions (Poval, styrene monomer and functional resin)	•Decline in productivity	•Introduction of high-efficiency cooling equipment
	Products/services	Growing number of heat stroke cases due to rising temperatures	Large	Life Innovation	•Growth in demand for diagnostic reagents and vaccines, including those for novel infectious diseases	•Development of new diagnostic reagents and vaccines
Growing demand for infrastructure development in line with the increasing magnitude of natural disaster damage		Medium	Elastomer & Infrastructure Solutions	•Growth in demand for infrastructure-related products and services aimed at promoting disaster prevention measures and enhancing disaster resilience	•Expansion of production capacity in line with growing demand and the development of new products with superior functions	

# Denka Technologies - Contributing to a Sustainable Society -



## S Social

Denka is vigorously pursuing various initiatives that contribute to sustainability in order to become a company with a superior competitive edge that is consistent with ESG initiatives.

### Denka technology supporting **5G**

There are many technologies that support high-speed data communications required in an advanced information society, such as technology to protect semiconductors from heat, technology to reduce energy loss, and technologies to prevent static electricity and contamination of semiconductors by foreign matter during transport to ensure absolute quality.

- Spherical silica reduces **energy loss**
- Carrier tape sheets and top cover tapes protect against **static electricity and foreign matter contamination**
- Spherical alumina protects against **heat**

**No.1** share of the global spherical alumina market

Market share of Approx **60%**

### Denka technology supporting next generation **xEVs**

There are many technologies that support the electrification of automobiles, including the circuit boards for CPUs that control the power of xEVs that run on motors, heat resistance modifier that make automotive components lighter and paint-free, and high-purity special carbon black used in lithium-ion batteries.

- Aluminum nitride and silicon nitride substrate conduct **heat to enhance vehicle safety**
- Heat resistance modifier enhance **heat resistance**
- Acetylene black increases the storage capacity of **lithium-ion batteries**

**No.1** in global market share and production capacity of acetylene black

Production capacity (total 3 sites) **25,000 tons/year**

### Denka technology **improving QOL**

There are many technologies that support the three areas of prevention, diagnosis, and treatment, including the development of manufacturing technology for G47 oncolytic virus, a new treatment to combat cancer; influenza vaccine production and stable supply to meet society's needs for immunization; and rapid antigen diagnostic testing kits that enable rapid response to pandemics.

- "DELYTACT®(G47Δ)"\*, oncolytic virus is meeting **unmet medical needs**
- Influenza vaccines protect your **health and wellbeing**
- Rapid antigen diagnostic testing kits help protect **society**

\*Unmet medical needs refers to medical needs for which there is no effective treatment available  
\*\*DELYTACT® is a registered trademark of Daiichi Sankyo Co., Ltd.

### Denka technology supporting **renewable energy**

Technologies that support the development of renewable energy include acetylene black, used as a raw material for ultra-high voltage cables that efficiently transport electricity generated by clean offshore wind power to various locations, and silicon nitride, which is used in bearing balls for wind power generation.

- Silicon nitride assists in the transmission of **clean wind power**
- Acetylene black efficiently carries **clean energy**



# Initiatives Undertaken at Production Sites to Achieve a Sustainable Society

The Denka Group is carrying out activities to promote ESG initiatives in all of its business sites across Japan. This page introduces some of these initiatives, along with the Denka Group ESG Basic Policy.

## Initiatives for prioritization of safety and the creation of an easy-to-work environment

Denka is implementing a variety of initiatives to create a safe, comfortable working environment for all our employees.

### Safety Promotion Meetings (all business sites)

Safety Promotion Meetings are held on a regular basis to improve safety and security at all our business sites. These meetings are attended by personnel from head office and other business offices and not only feature presentations from the President, but also provide opportunities to discuss important issues and the progress of activities being implemented at respective business sites. The opinions that are provided from other business offices are used to generate new awareness and improve the workplace environment.

### Safety Activity Debriefing Session (Shibukawa Plant)

In August 2021, the second Safety Activity Debriefing Session was held at the Shibukawa Plant in two formats, both on line and through on-site participation. Presentations were made by various divisions and groups, and strongly reflected the opinions of frontline employees relating to safety activities and near-miss responses. Through these presentations, we hope to further promote the sharing of information and cross-divisional collaboration.



Presentation of Safety Activity Debriefing Session



Employee using the Safety Creation Center

### Safety Creation Center (Chiba Plant)

We have established a Safety Creation Center at the Chiba Plant with the aim of fostering a culture that places top priority on safety and to reduce occupational accidents to zero. This center allows employees to experience simulations of real-life accidents and to become more aware of them in the workplace. Moreover, the center is also used to provide safety training programs to all plant employees and the employees of partner companies. We will continue to use this center and regularly update our training programs as we work to instill a culture of safety in all our production plants.

## Initiatives for betterment of regional communities and relationships of trust

Through our business operations and a range of other activities, Denka is working to create more habitable communities.

### Construction of an emergency supply warehouse (Omuta Plant)

In July 2021, we completed the construction of an emergency supply warehouse at the Omuta Plant as part of our efforts to build a plant resistant to natural disasters. This facility is stocked with drinking water, food, emergency supplies, materials and equipment so that goods can be supplied quickly in the event of a disaster. In August of the same year, we were trained on the handling of materials with the cooperation of the Omuta City Fire Department. Through this training, participants learned how to properly use a lifeboat and a range of other safety activities, including the wearing of lifejackets and how to use the oars so as to enable them to act quickly and appropriately and assist members of the local community in the event of a disaster.



Inside the warehouse

## Initiatives for fair business conduct, information disclosure and stakeholder dialogue

Denka is working to reinforce our ties with all our stakeholders through the provision of corporate information.

### Omi Plant accepts government officials from Niigata for a private enterprise training experience



Work experience at Omi Plant

The private enterprise experience training for government officials from Niigata Prefecture employees is held every year for officials from various industries to learn more about private enterprises, expand their perspectives and improve administrative services. Denka received its first request to host officials at Omi Plant in 2021, and the program included an overview of the plant, a plant tour, discipline and experience training, and patrols at the plant. After the training, participants commented that they had learned a lot about safety awareness and operations at the plant. It is also a good opportunity for the Denka Group to experience and learn more about its own operations.

# Human Resource Initiatives

With the aim of becoming a company in which employees can feel growth through job satisfaction and work, Denka is promoting a range of initiatives, including securing and nurturing human resources with specialized skills, work style reforms, promoting diversity and health and productivity management.



## Message from the Chief Human Resource Officer

Denka boasts a history that spans over 100 years. Until now, we have focused primarily on developing superior technologies and decisive business development in order to grow Denka into what it is today. However, recent social demands clearly indicate that such strategies alone are insufficient for a company to really mature. In order to further enhance our purpose, or reason for existence, it is necessary that we work to develop quality human resources strategies, and we still have a lot of room for improvement.

As society and people's values continue to diversify at an accelerating pace, I believe the most important areas we need to address are those related to human resources. These areas include how to provide work styles that best satisfy our employees, how to transform their dreams into reality, how to make them feel secure, and how we can work to enhance the value of our employees.

Through various approaches and dialogue with our employees, we will continue our efforts to provide a firm direction for human resource strategies within Denka.

**Kazuo Takahashi**

Managing Executive Officer, Chief Human Resource Officer

### 1 Previous Human Resource Initiatives

Objectives	Measures	2018	2019	2020	2021	2022
Secure and nurture human resources with specialist skills	Improve personnel systems and evaluations		<ul style="list-style-type: none"> <li>Established new personnel evaluation system</li> <li>Reformed job groups and management systems</li> </ul>	<ul style="list-style-type: none"> <li>Abolished qualification levels and integrated job levels</li> <li>Established new job allowance</li> </ul>		
	Improve employee treatment	<ul style="list-style-type: none"> <li>Improved pay scale and bonuses</li> <li>Abolished associate employee system</li> </ul>	<ul style="list-style-type: none"> <li>Increased starting salary</li> </ul>			<ul style="list-style-type: none"> <li>Revised wages for M-category employees</li> </ul>
	Improve management	<ul style="list-style-type: none"> <li>Commenced training courses for managers</li> </ul>			<ul style="list-style-type: none"> <li>Specialty human resource development program</li> </ul>	<ul style="list-style-type: none"> <li>Launched succession plan</li> </ul>
Diversity promotion and work style reform		<ul style="list-style-type: none"> <li>Held seminars to raise awareness on issues related to diversity</li> <li>Provided career training</li> <li>Developed support measures for balancing work and nursing care commitments (help desk and handbook)</li> </ul>	<ul style="list-style-type: none"> <li>Released video learning material to promote a further understanding of diversity</li> <li>Started payment of nursing/nursing care leave (revised)</li> <li>Introduced flexible measures to shorten working hours for the purpose of providing child and nursing care (revised)</li> </ul>	<ul style="list-style-type: none"> <li>Introduced telework system</li> <li>Introduced staggered working hours system (revised)</li> <li>Started providing support to balance work and nursing care commitments</li> <li>Developed seminars and video viewing programs</li> </ul>	<ul style="list-style-type: none"> <li>Launched project to facilitate the hiring and promotion of females for managerial positions</li> <li>Established new investment limits to improve the workplace environment</li> <li>Acquired Kurumin certification</li> </ul>	<ul style="list-style-type: none"> <li>Introduced Shinkansen commuter system</li> <li>Held seminars to provide support for balancing work and childcare commitments</li> </ul>
Promotion of health and productivity management					<ul style="list-style-type: none"> <li>Established a Health Promoting Sec.</li> <li>Announced Declaration of Health and Productivity Management                             <ul style="list-style-type: none"> <li>Introduced Health Support App (&amp;well)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Recognized as an Excellent Health Management Corporation 2022</li> </ul>
Enhancing employee engagement		<ul style="list-style-type: none"> <li>Created more opportunities for the President to visit work sites</li> </ul>		<ul style="list-style-type: none"> <li>Conducted 2nd Employee Awareness Survey to identify current issues and plan countermeasures</li> </ul>		<ul style="list-style-type: none"> <li>3rd Employee Awareness Survey (planned)</li> </ul>

In response to results of the 2017 Employee Awareness Survey

## 2 Four Human Resource Focus Points

Under the "Denka Value-Up" management plan, we are implementing and promoting a variety of specific measures, including the promotion of health and productivity management, work style reform, business process reform and the hiring of more global human resources, placing a specific focus on the strategic employment of human resources together with the development of human resources from within Denka, improving our human resource development programs, promoting diversity and creating safe and comfortable work environments. Moreover, we plan to establish human resource KPIs to visualize the achievement of these measures in our next management plan.

Focus Points	Overview
<ul style="list-style-type: none"> <li>Strategic employment of human resources and the development of human resources from within Denka</li> </ul>	<p><b>"Ensuring that every employee can perform their work better than anyone else"</b></p> <ul style="list-style-type: none"> <li>Securing highly skilled human resources and creating a pool of highly specialized management personnel</li> </ul>
<ul style="list-style-type: none"> <li>Improving our human resource development programs</li> </ul>	<p><b>"Nurturing a culture of self-improvement and creating a company where employees feel they are attaining tangible personal growth"</b></p> <ul style="list-style-type: none"> <li>Putting into action succession plans</li> <li>Establishing a company-wide integrated training framework</li> </ul>
<ul style="list-style-type: none"> <li>Promoting diversity</li> </ul>	<p><b>"Nurturing an environment, systems, and culture in which people with diverse views can play an active role"</b></p> <ul style="list-style-type: none"> <li>Establishing projects to hire and promote females for managerial positions</li> <li>Relaxing requirements for employees to take childcare and nursing care leave</li> </ul>
<ul style="list-style-type: none"> <li>Creating safe and comfortable work environments</li> </ul>	<p><b>"Creating workplace environments that employees will want to keep coming back to"</b></p> <ul style="list-style-type: none"> <li>Establishing systems to prevent harassment</li> </ul>

## 3 Health and Productivity Management

Denka established the Health Promoting Sec. in January 2021, and in recognition of various initiatives, including publication of the Denka Health Management Declaration and providing employees with the COVID-19 vaccine, Denka was selected as an Excellent Health Management Corporation 2022. Moreover, we have started the centralized management of data from employee health checks, and based on the analysis of this data, we will establish KPIs and implement measures aimed at preventing the onset and severity of lifestyle-related diseases, etc., in collaboration with the health insurance association and the Health Promoting Sec. Most recently, we have started providing employees with opportunities to visit remote clinics to assist them to quit smoking and have further reinforced specific health guidance provided to employees. Moving forward, we will continue to support the wellbeing of our employees to enable them to work to their full potential, both physically and mentally.

KPI	2021 Results	2030 Targets
•Employees within appropriate weight limits	65%	80%
•Employees with high stress levels	13.4%	10%
•Employees with good exercise habits	32.9%	40%
•Smokers	32.5%	12%



### C O L U M N

#### Follow-Up on Our Employee Awareness Survey

Based on the feedback from the Employee Awareness Survey conducted in 2020, discussions were held within respective departments. Key topics discussed included areas Denka should focus on, areas respective departments should focus on and the role that each and every employee can play. Two years later in June 2022, we conducted interviews to ascertain the progress of measures and improvements that were made to address these issues.

The results of these interviews will be used to improve the content of the 3rd Employee Awareness Survey, scheduled for the second half of FY2022.







# G

## Governance

Denka believes that corporate governance forms the bedrock for further enhancing our corporate value and will strive to further strengthen our governance framework in order to fulfill the responsibilities we owe to all our stakeholders and ensure transparent and sound management.

## Message from the Chairman

### Aiming to Enhance Corporate Governance

I would like to take this opportunity to express my sincere gratitude to our stakeholders for their continued support.

As part of efforts to realize our corporate philosophy as defined by “The Denka Value” and achieve the targets set out in our management plan, “Denka Value-Up”, the Denka Group is working to further clarify the roles of the Board of Directors and the executive team. The Board of Directors plays a supervisory and advisory function and we are constantly working to ensure that our Board of Directors is comprised of personnel who can contribute to the execution of management strategies based on a skill matrix. We have also worked hard to reinforce the function played by our Audit Committee established four years ago in order to stimulate effective deliberations and accelerate the decision-making process, with an even greater awareness of responsibility of our directors in the execution of their respective roles.

Due to the recent upheaval in domestic and international circumstances and growing environmental awareness, businesses today are facing ever stronger social demand regarding robust corporate governance, something that forms the foundation for corporate sustainability. Accordingly, we will continue to strive to enhance our corporate governance framework that accurately reflects these demands.

Pushing ahead with company reforms within the Denka Group and intragroup collaboration to create new value for all our stakeholders, we will take on the challenge of resolving various social issues with the United Nation’s SDGs as our compass. Through these endeavors, we aim to become a company that is irreplaceable to society and that employees and stakeholders alike can be proud of.

We sincerely ask all our stakeholders for their ongoing support and encouragement in our endeavors.



**Manabu Yamamoto**  
Chairman and Representative Director

## Message from Outside Directors

### Expectations for governance reform and the role of an outside director

Recent years have seen an increase in expectations for robust corporate governance and this has brought an increased focus on the role of outside directors. The Board of Directors is a body responsible for monitoring the execution of business operations, but it is also important to thoroughly discuss medium- to long-term business strategies with a view to sustainable growth, rather than simply assuming the function of monitoring and supervision. Outside directors are also expected to play a role in discussions and provide appropriate advice at Board of Directors meetings based on this perspective. Moreover, given the rapid changes in the environment facing businesses today, it is important to be constantly aware of where Denka aims to be in the future and to be able to approach and make decisions on each individual project with flexibility and agility. If these perspectives are overlooked in the execution of business operations, I believe it is the role of an outside director to point this out and take the necessary corrective measures. From a medium- to long-term perspective, I recognize that the Board of Directors is also required to discuss management strategies, including topics like what issues should be addressed by the current management team. Based on this perspective, I feel that one important topic facing Denka is the recruitment and development of human resources, and I would like to devote my time to discussing and providing appropriate advice on this issue.

As a member of the Audit Committee, I am focusing on monitoring the maintenance and management of internal control systems, including those of affiliated subsidiaries, from the perspective of so-called defensive governance and compliance.

I take the expectations of my role as an outside director seriously and will make every effort as a member of Denka while also maintaining a sense of distance and independence.



**Miyuki Matoba**

Outside Director  
(Audit Committee Member)



**Yoshiyuki Fukuda**

Outside Director

### Creating an open corporate culture and an organization that is risk-sensitive

I have worked in the finance sector for 42 years since graduating from university. Over this time, I have faced and worked diligently to address a variety of risks. Faced with such risks as the collapse of the bubble economy in Japan, the disposal of nonperforming loans, excessive entertaining of public servants, the merger of three banks, system failures, the bankruptcy of Lehman Brothers, the Fukushima nuclear power plant disaster and the COVID-19 pandemic, I have become keenly aware of two things: the need to promptly escalate bad information to management and act swiftly, and never to conceal information regardless of how bad it is. I have been monitoring the management of Denka for a year now, and I believe they perform exceptionally well in both these areas.

The Denka Value-up management plan, which will come to an end in 2022 has achieved positive results. I admire the corporate culture nurtured at Denka, a company with a history spanning over 100 years not to become complacent with the status quo, but to constantly look to evolve through the development and manufacture of high-value added products. However, global circumstances are now more turbulent than we could ever have imagined and the potential for risk is becoming increasingly complex and diverse. Amidst such an environment, we must formulate and implement a new management plan starting in 2023. In order to do so it is essential for us to adapt and adopt new approaches to management and to have ability to effectively execute them. As we come to face a variety of new risks in the current and future business environment, risk management will become increasingly more important.

In my role as outside director, I hope to impart my experience and information network and maintain an appropriate distance and objective approach to the corporate management team while focusing my attention on effective risk management.



Directors



Photo taken on June 13, 2022

**Masaharu Suzuki**  
Director  
(Full-time Audit Committee Member)

**Miyuki Matoba**  
Outside Director  
(Audit Committee Member)

**Akio Yamamoto**  
Outside Director  
(Audit Committee Member)

**Toshio Kinoshita**  
Outside Director  
(Audit Committee Member)

**Manabu Yamamoto**  
Chairman and  
Representative Director

**Toshio Imai**  
Representative Director,  
President & CEO

**Yoshiyuki Fukuda**  
Outside Director

**Tetsuya Shinmura**  
Director

**Kazuo Takahashi**  
Director

•See here for director profiles. [https://denka\\_sustainability.disclosure.site/en/themes/673](https://denka_sustainability.disclosure.site/en/themes/673)



## Our View on the Appointment of Directors

With the aim of embodying The Denka Value, our corporate philosophy, we are promoting the Denka Value-up management plan and strengthening our management structure supported by directors and executive officers while upgrading our governance and supervisory functions.

Director candidates are nominated from among individuals who have abundant experience and a strong track record in Denka's business divisions and are equipped with sufficient knowledge and specialist expertise for the position. Outside director candidates are nominated from among those who boast extensive knowledge backed by abundant business experience as well as distinctive strengths in their areas of expertise so that they can bring their insights on how to achieve sustainable growth and enhance corporate value. With regard to overall composition of board members, we focus on maintaining a diverse and well-balanced composition in terms of expertise, competency, gender and nationality.

We also aim to maintain a sufficient number of independent outside directors to ensure that they account for at least one third of director membership and currently this ratio stands at approximately 44%.

## Skill Matrix

	Attributes				Skills									
	Independent outside	Age	Years in service	Gender	Management experience/management strategy	HR strategy	International experience	Finance/accounting	Legal/compliance	Sustainability/ESG	Business strategy/marketing	Research/intellectual property	Production technology	DX
<b>Manabu Yamamoto</b> Chairman and Representative Director		66	9		○	○	○			○	○			
<b>Toshio Imai</b> Representative Director, President & CEO (President & Executive Officer)		63	3		○	○	○			○	○			
<b>Tetsuya Shinmura</b> Director (Senior Managing Executive Officer)		64	1			○				○		○	○	○
<b>Kazuo Takahashi</b> Director (Managing Executive Officer)		62	1		○	○	○	○	○	○		○	○	
<b>Yoshiyuki Fukuda</b> Director	○	65	1		○	○		○		○	○			
<b>Masaharu Suzuki</b> Director (Full-time Audit Committee Member)		66	3		○	○	○			○		○	○	○
<b>Toshio Kinoshita</b> Director (Audit Committee Member)	○	73	7		○	○	○	○		○				
<b>Akio Yamamoto</b> Director (Audit Committee Member)	○	70	7		○	○	○			○	○			
<b>Miyuki Matoba</b> Director (Audit Committee Member)	○	48	1	○		○			○	○		○		

### [Reasons behind skill selection]

#### Management experience/management strategy

Directors are needed who have extensive management experience and achievements to establish management plans aimed at realizing the corporate philosophy of "The Denka Value" and supervise the execution of duties to achieve these plans.

#### HR strategy

The Company has identified HR strategy, including securing human resources with specialized skills, diversity promotion, work style reforms and health and safety management, as a priority management issue. Directors are needed who have extensive knowledge and experience related to HR strategy, to be a company where employees can gain satisfaction and experience personal growth through work.

#### International experience

Directors are needed who have extensive international experience, for the Company to grow its global presence and aspire to be a company with outstanding competitive strength in the global market.

#### Finance/accounting

Directors are needed who have extensive knowledge and experience in finance and accounting, not only to ensure the accurate disclosure of financial information, but also to achieve sound, sustainable growth through strategic investment while maintaining a sound financial base, and formulate finance policies for shareholder returns, etc.

#### Legal/compliance

Directors are needed who have robust knowledge and experience in the legal and compliance fields to ensure fair and trustworthy corporate activities through the dissemination of the corporate philosophy, the reform of corporate culture, legal and regulatory compliance, and through corporate ethics.

#### Sustainability/ESG

Directors are needed who have robust knowledge and experience related to ESG, as set forth in the Denka Group ESG Basic Policy and priority management materiality issues, to promote ESG management across the Group, realize the corporate philosophy of "The Denka Value," and aim for sound and sustainable growth.

#### Business strategy/marketing

Directors are needed who have market insight based on a broad perspective, as well as extensive business experience, to promote the transformation of the business portfolio, by further focusing on businesses with a top-class share, that are consistent with ESG initiatives, that are both unique and high value-added, and that are not easily shaken by the external environment (specialty businesses), and rebuilding the commodity business.

#### Research/intellectual property

Directors are needed who have extensive experience in research and development, who have achievements in promoting innovation, a detailed knowledge of the science and technology fields, and are closely familiar with the Company's unique technologies and intellectual property, in order to promote reform of the research and development process while creating new products and technologies that will contribute to sustainable social development, to accelerate the growth of the Group's specialty business.

#### Production technology

Directors are needed who are deeply familiar with production technology, including those unique to the Group, and who have extensive practical experience and robust insight into manufacturing, to achieve rapid improvements in productivity through production process reform, maintain and enhance equipment safety, disaster prevention, safety and health, and continue to reduce the Group's environmental burden as a manufacturer, including through climate change response.

#### DX

Directors are needed with a profound knowledge and extensive experience related to digital technologies and data utilization, as well as the ability to understand and analyze the nature of the Group's business, and use this insight to transform it, in order to integrate processes of production, research and development, and operations through DX and bring about the transformation of business models and organization in innovative processes.

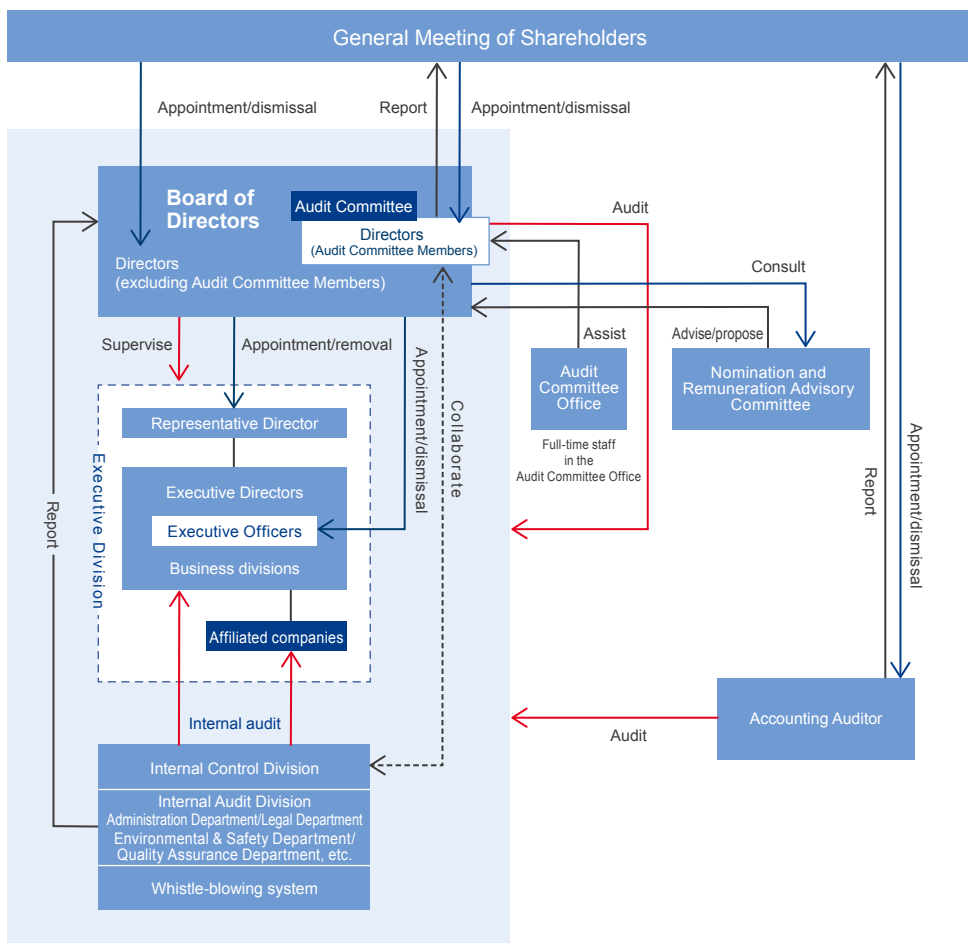
\*The skills listed are those expected of each director and do not represent all of the knowledge possessed by each.

\*Age and years of service are current as of the conclusion of the Ordinary General Meeting of Shareholders held on Wednesday, June 22, 2022.

# Corporate Governance

## Basic Approach to Corporate Governance

Based on “The Denka Value” (corporate philosophy), the cornerstone for all the corporate activities undertaken by the Denka Group, we are striving to fulfill the expectations and earn the trust of our many stakeholders, including shareholders, customers, local communities and employees. To this end, we are strengthening our business foundation by working to enhance our earning potential and expand our scope of operations. At the same time, we are making every effort to continue being a company that can win the trust and support of society and thereby improve our corporate value. Denka considers corporate governance to be the bedrock on which the above rests, and so we have striven to strengthen our governance framework in order to fulfill the responsibilities we owe to all our stakeholders and ensure transparent and sound management.



## Director Remuneration

We have set the remuneration for each director (excluding Audit Committee Members) based on their roles and responsibilities within the limit of the total amount approved by the General Meeting of Shareholders. In order to enhance objectivity and transparency, remuneration is determined by the Board of Directors after receiving advice and recommendations from the Nomination and Remuneration Advisory Committee and this process is set forth in our internal regulations. Remuneration for directors (excluding Audit Committee Members) consists of a basic remuneration set at a fixed amount as well as performance-linked remuneration and stock remuneration. The performance-linked remuneration is designed to increase awareness of directors of their responsibility to work to improve business performance each fiscal year so as to function as an incentive, while the stock remuneration aims to instill a strong sense of purposefulness toward achieving medium- to long-term growth in corporate performance and corporate value in our directors. However, outside directors and non-executive directors receive only basic remuneration in light of their duties.

Further, the value of the performance-linked remuneration is determined in step with consolidated operating income for each period. However, this amount may be decreased or fully withheld in cases where consolidated operating income did not reach a certain amount, the company suffered a significant loss or a director was found to be involved in a serious compliance violation or other significant misconduct.

In addition, remuneration paid to directors with concurrent membership in the Audit Committee consists only of basic monthly compensation in a fixed amount. Total remuneration paid to such directors is determined within the upper limit approved by the General Meeting of Shareholders.

### [FY2021 Director Remuneration]

#### ① Directors (excluding Audit Committee Members)

- Basic remuneration: ¥242 million paid to 10 recipients (¥15 million to three outside directors)
- Variable remuneration (in-house directors only)
- Performance-linked remuneration: ¥47 million paid to four recipients
- Stock remuneration: ¥22 million paid to seven recipients

#### ② Director (Audit Committee Member)

Basic remuneration: ¥78 million paid to eight recipients (¥36 million to five outside directors)

There are currently nine directors (including four outside directors), and the above compensation includes compensation for directors who resigned at the conclusion of the 162nd Ordinary General Meeting of Shareholders held on June 22, 2021.

The number of directors (excluding directors who are Audit Committee Members) is five (including two outside directors), and the number of directors (Audit Committee Members) is four (including two outside directors).

## Evaluation of the Effectiveness of the Board of Directors

### Method of Evaluation

As we did in the previous fiscal year, Denka analyzed and evaluated the effectiveness of the Board of Directors by having individual directors complete the “Self Evaluation Questionnaire”, which covers items related to the effectiveness of the Board of Directors, such as scale, composition, operation and 20 other items, and discusses the questionnaire results at Board of Directors meetings.

### Summary of Evaluation Results and Future Efforts

Results confirmed that the Board of Directors have made progress in the optimization of the frequency and duration of Board of Directors meetings and its composition (in terms of achieving the right balance of knowledge, experience, competency and diversity). Moreover, we have determined that our Board of Directors, which includes independent outside directors who account for 44% of its membership, is capable of the proper monitoring and supervision of management. In addition, the Board of Directors evaluated initiatives being undertaken to address issues identified via the previous fiscal year’s evaluation by employing the PDCA cycle as depicted below. It also ensures that all directors share a common understanding of initiatives to be executed going forward.



## Management Status of Each Committee

### ■ Nomination and Remuneration Advisory Committee (convened 2 times in FY2021)

For major management matters such as nomination, remuneration and other elements of governance, the Board of Directors has set up the Nomination & Remuneration Advisory Committee, comprising all Outside Directors, the Chairman and the President, to foster transparency and objectivity in management decision-making, informed by a wide range of opinion and advice from Outside Directors.

In fiscal 2021, this Committee received inquiries from the Board of Directors regarding the executive and governance structure, the formulation of a skills matrix, succession planning, and remuneration for Executive Officers, and made recommendations and proposals regarding the results of these inquiries after deliberations at the Committee.

### ■ D&A Round Table (convened 4 times in FY2021)

In order to facilitate in-depth discussions regarding management matters that are of particular importance, the D&A Round Table is organized as a forum for free, open-minded, constructive discussions, exchange of opinions and information, and strengthening of cooperation between internal and Outside Directors.

### ■ Audit Committee (convened 14 times in FY2021)

In accordance with their fiduciary responsibilities to shareholders, Audit Committee Members and the Audit Committee work with the support of the full-time staff of the Audit Committee Dept., whose independence from management is ensured, to conduct audits of the execution of directors’ duties, internal control, business duties, and accounting, by exercising statutory rights that include requesting reports on the businesses of the Company, investigations pertaining to business duties and accounting, and the appointment, dismissal, non-reappointment, and remuneration of an auditing firm.

In addition, the Audit Committee forms views on matters related to the election, etc. and compensation, etc. of Directors (excluding Directors who are Audit Committee Members), including matters to be put forward at the General Meeting of Shareholders.

Furthermore, the Company appoints candidates for Directors who are Audit Committee Members based on its judgment that, in order for the Audit Committee to fulfill its roles and responsibilities, Audit Committee Members should possess appropriate experience and ability as required for their duties, and that in particular, there should be at least one person with expertise in finance and accounting.

### ■ Objective briefings (convened 2 times in FY2021)

Briefings are held in order to have Outside Directors understand the Company’s medium- to long-term and short-term business and research policies.

### ■ Outside Officer Liaison Committee (convened 4 times in FY2021)

The Company holds “Outside Officer Liaison Committee” meetings to facilitate the exchange of information and mutual awareness among outside officers concerning matters related to Denka’s corporate governance and business.



# Management Risk Analysis and Response

## Basic Approach to Risk Management

The Denka Group believes that accurately assessing the diverse and numerous risks that prevent us from achieving the goals of our “Denka Value-Up” management plan, and minimizing the damage arising from these risks is a matter of extreme importance. Accordingly, we are working to enhance our risk management structure. Each of our business divisions, offices and group companies is working to assess risks and implement measures to prevent and reduce the impact of them while our corporate division is formulating regulations and providing support based on advice from experts and working to enhance internal audits to quickly identify risks and provide advice to prevent them.

Furthermore, in the event of a crisis, we have rules and systems in place to ensure that top management and the Board of Directors are promptly informed and can make appropriate management decisions, and we are mindful of making timely announcements.

## TOPICS

### 1. Review of Crisis Management Guidelines

In order to appropriately manage situations that may have a significant impact on our corporate activities, Denka established Crisis Management Guidelines, and has developed specific risk classifications, responsible divisions, and an emergency contact framework.

The Risk Management Committee, set forth in these guidelines and other bodies involved in the management of risks meet on a regular and as-needed basis and report directly to the Board of Directors. In FY2021, the guidelines were revised to speed up responses in the event of a crisis and to strengthen supervisory functions.

### 2. Strengthening ICT Governance

In line with the Denka Value-Up management plan launched in FY2018, we have been promoting operational process reforms encompassing all aspects of our corporate activities, ranging from R&D and manufacturing to sales and administration, with the aim of enhancing both operational efficiency and corporate governance.

These initiatives involve the utilization and upgrading of information & communication technology (ICT) on a Groupwide basis.

At the same time, we have striven to protect the Denka Group's information assets from incidents arising from the use of ICT, including data leakage, falsification and sophisticated cyber attacks. To this end, we are working to further develop the security infrastructure of the entire group while conducting risk-based enhancement of our preventive maintenance regime. The above activities are guided by a robust set of in-house rules regarding information security. Going forward, we will help all Group companies at home and abroad strengthen ICT governance supporting their internal control systems as we endeavor to avoid loss and improve our corporate value.

## List of Risks and Locations of Articles Describing Our Response

Category	Summary of risks	Page number of articles
Business management	Awareness of social and sustainability issues	p. 6 Denka Group ESG Basic Policy pp. 7-8 Message from the President, pp. 9-12 Talk with the President, p. 13 Denka's Trajectory
	Risks associated with the execution of management plans and financial strategies	p. 16 Review of 2021, pp. 19-22 Denka Value-Up Management Plan
	Corporate governance	pp. 35-36 Messages from the Chairman and Outside Directors pp. 39-42 Corporate Governance [ESG Information Site] “Corporate Governance” Corporate Activities Deserving Stakeholder Trust
Risk management & compliance	COVID-19 pandemic	p. 16 COVID-19 Countermeasures
	Risk management	p. 41 Basic Approach to Risk Management, Review of Crisis Management Guidelines [ESG Information Site] “Corporate Governance” Corporate Activities Deserving Stakeholder Trust
Environmental management	Climate change, abnormal weather, reduction of environmental impact, and biodiversity	pp. 25-30 Promotion of Environmental Management, Carbon Neutrality, Promotion of DPE Environmental Management, TCFD
HR strategy	Risks associated with recruitment, nurturing human resources, health management, diversity, workplace harassment and other human rights issues	pp. 33-34 Human Resource Strategy [ESG Information Site] “Corporate Governance” Corporate Activities Deserving Stakeholder Trust
Quality & product liability	Product safety and quality control, chemical substance control	p. 43 Quality Assurance Management
Accidents & disasters	Safety, health and disaster prevention	p. 44 Placing the Utmost Priority on Safety
Communication	Responsible dialogue with stakeholders	pp. 55-56 Dialogue with Stakeholders [ESG Information Site] “Products and Technologies”
Information systems & security	System security maintenance and promotion of DX	p. 41 Strengthening ICT Governance [ESG Information Site] “Corporate Governance” Corporate Activities Deserving Stakeholder Trust
Intellectual property protection & privacy information	Protection of intellectual property and personal information	p. 45 Initiatives Related to Intellectual Property Denka Website: Privacy Policy, [ESG Information Site] “Corporate Governance” Corporate Activities Deserving Stakeholder Trust
Supply chain	BCP, export trade management	p. 16 Risk Management and Business Continuity Efforts p. 56 Partnership Building Declaration [ESG Information Site] “Products and Technologies” Improvement of Safety and Quality of Products “Corporate Governance” Corporate Activities Deserving Stakeholder Trust
Individual businesses	Responding to changes in the business environment	p. 31 Denka Technologies - Contributing to a Sustainable Society - pp. 45-54 Messages from Business Unit General Managers, SWOT Analysis and Business Strategies

•ESG Information Site: Corporate Governance [https://denka\\_sustainability.disclosure.site/en/themes/658](https://denka_sustainability.disclosure.site/en/themes/658)

## Past Initiatives to Improve Corporate Governance

The Denka Group considers robust corporate governance to be fundamental to earning the trust and support of stakeholders and improving our corporate value. Accordingly, we strive to maintain transparent and sound management and thereby enhance corporate governance.

	Purpose	Measures
2007	To speed up decision-making	Cut the number of directors by half and introduce an executive officer system
2008	Ensure that Directors monitor and supervise the execution of business on an equal footing	Abolition of executive titles (such as Senior Managing Director, Managing Director)
	Clear separation of monitoring and supervisory functions from the execution of business	Reassigning the authority of business execution and executive titles from directors to executive officers
	Flexibly perform checks on directors	Shortening the length of directors' appointments to one year
	Step up checks on management from an external perspective	By appointing two Outside Directors, the number of appointments of outside officers rises to four, including two Outside Audit & Supervisory Board Members (per statutory requirements)
	Create system enabling appropriate advicegiving even outside of meetings of the Board of Directors, by arranging ample exchange of opinions	Implement regular opportunities for outside officers to exchange opinions with top management
	Speed up decision-making by deepening discussions of important management matters	Establishment of a Management Committee comprising Directors, Audit & Supervisory Board Members (internal), and some executive officers
2015	Improve the governance framework and raise standards of transparency and soundness of management	Increasing the number of Outside Directors (from two to three) and reducing the number of members of the Board of Directors (by two)
	Create venues for free, vigorous and constructive deliberations, exchange of opinions and information and alliancstrengthening for internal and Outside Directors and Audit & Supervisory Board Members	To step up round-table meetings of Outside Directors and Audit & Supervisory Board Members formerly held twice per year, hold a round-table conference of Directors and Audit & Supervisory Board Members
	Achieve optimum standards of corporate governance to ensure sustainable growth and improve medium to long-term corporate value	Compilation of the Denka Corporate Governance Guidelines
	Deepen understanding of the Company's business, and stimulate debate at meetings of the Board of Directors	Enhance the provision of advance explanation for outside officers regarding specific agenda items that require adequate explanation
	Enable exchange of information and formation of consensus among outside officers	Holding "Outside Officer Liaison Committee" four times per year
2016	Promote understanding of the Company's medium- to long-term and short-term business and research objectives	Holding business and research objective briefings (currently referred to as objective briefings) for outside officers twice a year
	Ensure adequate auditing and supervision of business execution by executive officers	Clarification of the details of agenda and report materials at the Board of Directors meetings
	Step up the effectiveness of the Board of Directors	Report Arrangement for all Directors and all Audit & Supervisory Board Members to annually analyze and evaluate the effectiveness of the Board of Directors, and disclose the results in the Corporate Governance Report
2017	Foster greater transparency and objectivity in business decision-making, with the Board of Directors accepting diverse opinions and advice from the outside officers with regard to major business topics including appointments, remuneration and other governance matters	Establishment of the Management Advisory Committee comprising all Outside Directors, all Outside Audit and Supervisory Board Members, the Chairman and the President
		Renaming the "round-table conference of Directors and Audit & Supervisory Board Members" the "D&A Round Table"
2019	Further strengthen corporate governance and improve corporate value by further strengthening the supervisory role of the Board of Directors, by enabling more rapid decisionmaking and vesting directors who are members of the Audit & Supervisory Committee with voting rights at the Board of Directors meeting	Shift from the "Company with Audit & Supervisory Board" model to that of a "Company with Audit Committee"
		Change the name of the "Management Advisory Committee" to the "Nomination & Remuneration Advisory Committee"
2021	Review of regulations regarding the appointment of retirees from the office of Chairman and President as Counselors and Advisors.	Abolish the office of Counselor
	Clarify the roles of the Board of Directors and the executive structure, further enhance the effectiveness of discussions at Board of Directors meetings, and further expedite its decision-making process	Reduce the number of Directors from 12 to 9, and raise the proportion of Outside Directors on the Board of Directors to over 44%

# Quality Assurance Management

The Denka Group handles a broad range of operations with an extensive product lineup ranging from various organic and inorganic materials to electronic materials and pharmaceuticals. Reflecting a quality policy that aligns with the Denka Group ESG Basic Policy, we are engaging in quality assurance activities encompassing this diversity, striving to satisfy quality requirements in the business fields relevant to our products and services and to meet customer needs in light of the latest social expectations.

## Quality Policy (FY2022)

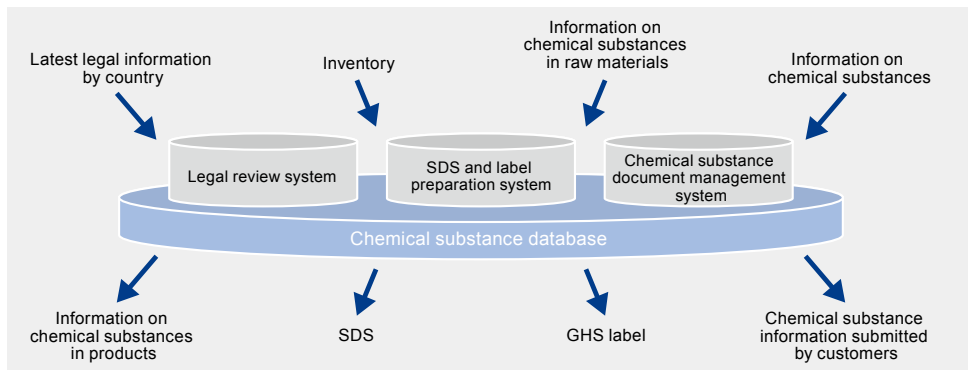
In accordance with the Denka Group ESG Basic Policy, we will strive to contribute to the sustainable growth of society and the environment by providing products and services that are trusted by our customers by raising quality awareness, ensuring compliance with legal regulations and product quality standards while engaging in ongoing quality improvement activities.

## Chemical Substances

The Denka Group constantly monitors and collects information regarding the status of legal revisions at home and abroad to ensure it is positioned to swiftly respond appropriately to the latest laws and regulations governing chemical substances. Whenever a new chemical substance-related regulation comes into effect, we ensure that all relevant business units are informed and weigh our options regarding the adoption of safer alternatives or otherwise implementing the measures necessary to maintain regulatory compliance.

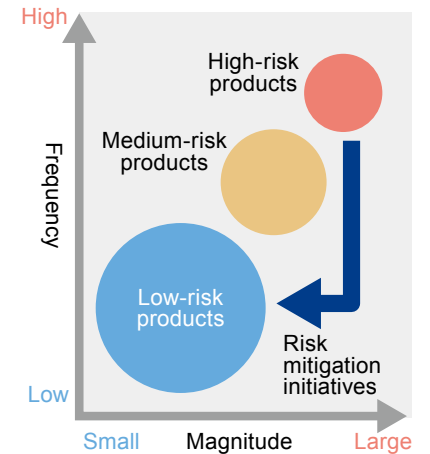
## Developing IT-Based Quality Management System Infrastructure

To enhance customer satisfaction, we are developing an IT-based infrastructure that supports our quality management. Encompassing an upgrade of the existing customer complaint management system, the infrastructure is expected to enhance our ability to address customer grievances and complaints. Moreover, it will help increase the sophistication of design reviews undertaken at the research, design and development stages to ensure that customer needs are promptly and accurately met while updating our system for managing the functional and quality specification documents furnished to customers at the time of delivery. In these ways, we strive to enhance the reliability and efficiency of our operations and facilitate the effective utilization of accumulated data.



## Assessing Risk Issues and Implementing Risk Mitigation

The Denka Group handles diverse products from commodities to specialty products and is positioned to handle a similar level of diversity in the risk arising from each product. Moreover, the risk arising from each product is changing by social needs, such as the growing public call for businesses to contribute to the United Nations Sustainable Development Goals even as they strive to meet customer requirements for even higher product quality. With this in mind, we annually review results of the quality risk assessments for all products from the perspective of both the market environment and business environment. We also perform systematic initiatives to mitigate various quality risks based on assessments of their characteristics and magnitude.



Distribution of quality risk from the market and business environment

## Failure of the Rapid Antigen Diagnostic Test Kit for COVID 19

In November 2021, we confirmed that some products in our QuickNavi™-COVID-19 Ag rapid antigen diagnostic test kits for novel coronavirus antigens may have an increased false positive rate. Denka made the decision to recall all applicable products (Class II\*) in consideration of the safety of consumers. The collection and replacement work was completed by the end of March 2022, and we have received no reports of adverse health effects. We will continue to strengthen our quality assurance framework and strive to provide more reliable products and services.

\*Class II refers to situations in which the use of the product, etc., is likely to cause temporary or medically curable adverse health effects or is unlikely to cause serious adverse health effects.





# Placing the Utmost Priority on Safety

We put the utmost priority on worksite safety and health, facility security and disaster prevention in all aspects of our business activities

Fiscal 2022 Activities (companywide targets and priority initiatives)

Companywide Targets

- 1 | Reduce the number of major accidents and disasters to zero
- 2 | Continually improve our occupational safety record

Priority Initiatives

Promote the creation of truly safe work environments, the establishment of rules throughout the Group

- 1 | Initiative to reduce the number of major accidents and disasters to zero**
  - Using third parties to identify potential workplace hazards and make them inherently safe
  - Actively support safety measures at group companies
- 2 | Initiatives to continuously improve our occupational safety record**
  - Inspect existing and new facilities for conformity with our safety design guidelines, and if necessary, make improvements
  - Strictly comply with rules for facility operations and construction
- 3 | Initiatives to ensure safety for everyone working at Denka business sites**
  - Establish appropriate training programs and promote education through e-learning
  - Promote communication in the workplace through small group activities

Safety Management Structure



TOPICS

1. Stepping up initiatives to establish rules and create safer work environments

- ◆ In order to eliminate accidents and disasters in the workplace, we are actively using third parties (external personnel and other divisions, etc.) to identify potential sources of danger, conduct risk assessments, and evaluate and improve the conformity of existing facilities with safety design guidelines and will continue to do so. Moreover, we will expand on examples of good practices at each business site in response to temporary stoppages resulting from safety measures (full enclosure of facilities).
- ◆ In order to further foster a culture that promotes safety in the workplace, we will promote (1) education to raise knowledge, skills (technical skills) and awareness (non-technical skills), (2) awareness of compliance with rules, and (3) the active introduction of a third-party perspective and the enhancement of cross-functional capabilities.

2. Improving plant safety

- ◆ We will continue to systematically carry out planned inspections, repairs and upgrades to maintain and improve plant safety.
- ◆ The Chiba Plant and our plants in Singapore are taking the lead in implementing smart safety measures (using wearable cameras, drones, etc.). We will continue to expand our knowledge in this area and incorporate it at other sites.



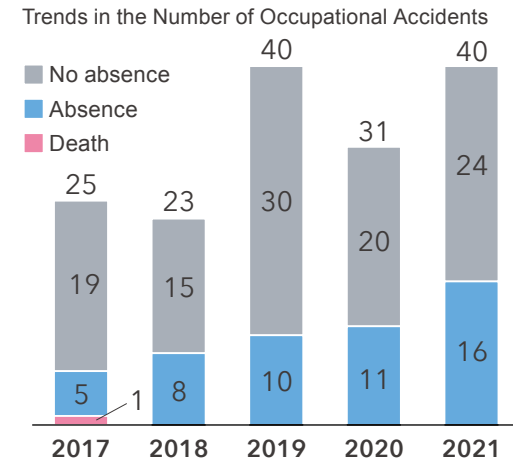
Chiba Plant: Inspection by drone

3. Improving safety throughout the Denka Group

- ◆ In order to prevent accidents not only at Denka, but across the entire Group, including affiliated and partner companies, we are working together to promote a variety of safety measures. An example of this is the introduction of interactive education programs using virtual reality systems used at business sites across Japan at other group companies in order to enhance safety awareness.

Production Process-Related Accidents and Occupational Accidents

The number of accidents in FY2021 increased by nine compared to the previous year. There were a large number of accidents caused by careless behavior while walking, lifting and transporting loads, with a large number of these involving personnel with less than 10 years of service. We are working to reeducate employees about basic behaviors and rules, and to raise awareness of compliance with those rules. There were two cases of leaks, four cases of small fires, and four cases of electrical accidents caused by lightning. There was no physical harm or impact on the environment resulting from these accidents. We will work to further our understanding of the principles of plant design and raise the level of safety management based on the safety-related technologies employed at similar plants. We will also strengthen our response to natural disaster risks.



\*Number of occupational accidents at Denka (including partner companies) and its consolidated subsidiaries with domestic and overseas offices

# New Business Development

•R&D: <https://www.denka.co.jp/eng/rd/>



## Message from the Chief Scientific Officer (CSO)

The New Business Development was established in April 2022 with the aim of further creating new business activities for the next generation in anticipation of the next management plan to be launched in FY2023. Recognizing once again that the goal of R&D is to develop new businesses with SDGs as our compass, we established the Denka Innovation Center to form the base for our wide range of technologies and the New Business Creation Department and New Business Incubation Department as bodies to play a role in the process of devising new business concepts, concept verification, incubation, right through to product commercialization.

In addition, the R&D Management Department, Intellectual Property Department, and Analysis Technology Research Department fall under the umbrella of our division to play a corporate function in research and development for the Denka Group. We aim to promote sustainable growth for our existing businesses while also looking to explore a synergy with new business endeavors.

In bringing together these strengths and developing Denka's current diverse technologies and new technologies for the future, we aim to make a greater contribution toward solving social issues.

**Nobuyuki Yoshino**

Managing Executive Officer,  
Chief Scientific Officer (CSO), New Business Development

## Objective of the New Business Development

To expand our specialty business domain through the development of new business fields and contribute to the achievement of the goals of the next management plan.

### 1 Launch of the New Business Development

On April 1, 2022, we established the New Business Development and restructured our companywide research and new business development framework with the aim of further promoting activities to create new businesses for the next generation and ensure the sustainable growth of our existing businesses.

### 2 Enhancing our Ability to Create New Business Ideas

To date, the Denka Innovation Center has played a key role in promoting open innovation with industry, academia and government, and has been engaged in new business development and creation activities through the New Business & Planning Development Department and the Automotive Materials & Solutions Department. Looking ahead to the next management plan starting in FY2023, we have reaffirmed that the goal of R&D is to develop new businesses, and under the umbrella of the New Business Development, we have established a number of bodies, including the Denka Innovation Center to play a role in the process of devising new business concepts, concept verification, incubation, right through to product commercialization in order to further clarify the responsibility and management structure for new business development.

### 3 Further Development of Existing Businesses

Each of our research departments, traditionally responsible for the specialization of existing businesses, will be placed under the umbrella of each business unit to clarify responsibility and accelerate the development of new products.

## Initiatives Related to Intellectual Property

Denka has continued to apply for patents for its new technologies to increase our intellectual property assets, and in recent years, the number of patent applications has been on the rise. We have also introduced scoring tools to analyze the intellectual property environment, and have worked to secure a competitive advantage through intellectual property rights when commercializing our products.

These efforts are being widely promoted from existing business areas to new business areas, and are supporting the expansion of specialty areas.

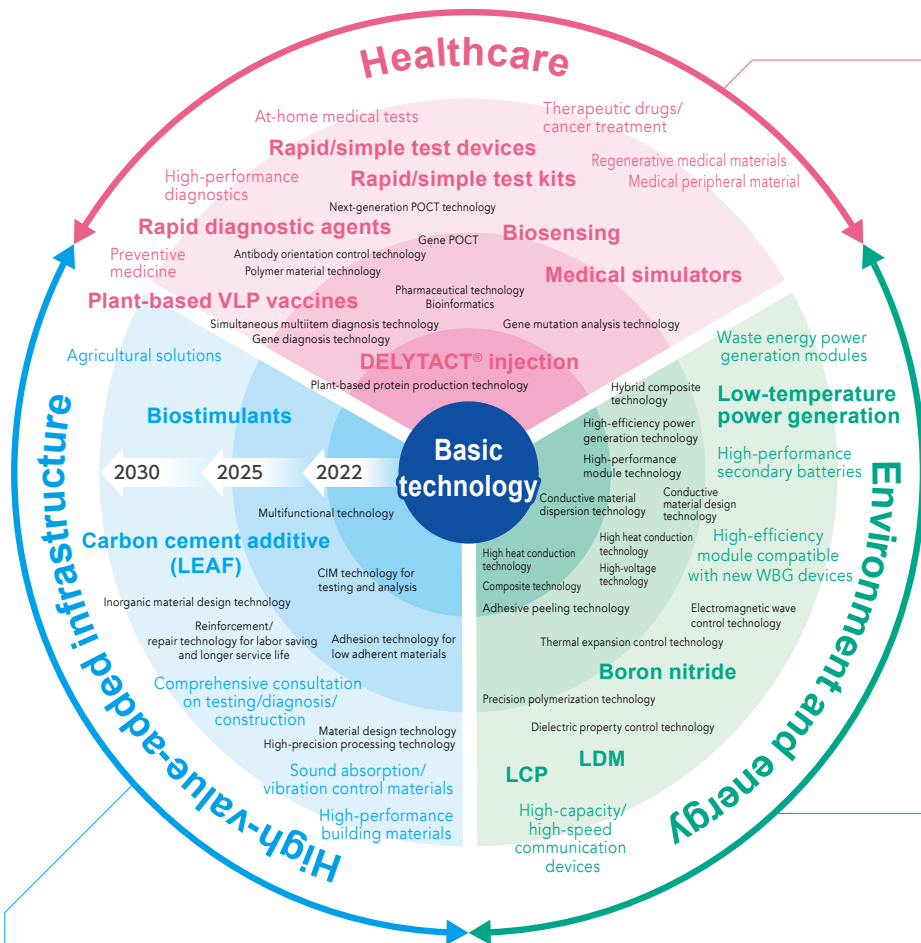
In order to further create new businesses, we will once again use analysis of the IP landscape to clarify the relationship between future social issues based on SDGs and our intangible assets, including proprietary technologies and intellectual property, to serve as a compass for the creation of new businesses and to help us take a more strategic approach.

In addition, in the process of creating new businesses, we will make efforts to avoid intellectual property risks and secure our business domains by complying with the relevant laws and regulations and by making effective use of our intellectual property rights.

## Research & Development Policy

The Denka Group is accelerating the creation of attractive new businesses and products that create new value by expanding our range of "technologies that we do best" and promoting the development of products unique to Denka that can contribute to a sustainable society. To this end, we will promote research and development that leverages the Group's collective strengths to integrate multiple disparate technologies and generate synergies across the entire Denka Group that transcend organizational boundaries and domains.

**Technology Platform** Denka concentrates its R&D resources on "what we can do better than anyone else" in the megatrends in three priority fields. Here are some of the technologies we are currently developing.



In the healthcare field, Denka has been contracted by Daiichi Sankyo Co., Ltd. to begin the manufacture of "DELYTACT® injection", a completely new G47Δ oncolytic virus for the treatment of cancer formulated from a live virus. In addition, we will continue to pursue research into conventional tests and diagnostic based on key themes that include simultaneous multiitems, genes, rapid and simplicity. Denka is also looking to expand into the field of biosensing with a focus on non-invasive biomarkers.

### TOPIC

#### G47Δ oncolytic virus for the treatment of cancer "DELYTACT® injection"

"DELYTACT® injection" (general name: Teserpaturev)\* is a G47Δ oncolytic virus for the treatment of cancer and is the world's first approved oncolytic virotherapy for the treatment of malignant glioma. Because Delytact is formulated from live viruses, production requires large-scale virus cultivation and special testing technologies, making full use of the technologies and know-how built up by Denka in the area of vaccines for viral infectious diseases and virus testing reagents over many years. Through the provision of commercial production and supply, Denka hopes that Delytact will offer a new treatment option for malignant glioma, an area of high unmet medical needs, and contribute to the further development of medicine.

In order to respond to the rapidly expanding needs in Japan and overseas, Denka is working to increase our manufacturing capacity and other measures to ensure a stable supply, and will use the technology and know-how it has gained in the development of the manufacturing process to establish and expand its presence as a contract pharmaceutical company for the manufacture and development of viral products.



\*"DELYTACT" is a registered trademark of Daiichi Sankyo Co., Ltd.

In the field of high-value-added infrastructure, we have developed a carbon cement additive "LEAF" that absorbs and fixes CO<sub>2</sub> during concrete hardening, making full use of the special additive technology we have cultivated over many years, and are aiming for social implementation. We are also focusing on the development of biostimulants that can improve the yield and quality of crops by further facilitating plant growth.

In the environment and energy field, we are developing materials with a low dielectric loss tangent that can be used in the high-frequency band, where communication performance tends to deteriorate, and materials that can generate electricity from waste heat and body heat at temperatures below 200°C.



# Electronics & Innovative Products

• Business Categories: Electronics & Innovative Products <https://www.denka.co.jp/eng/electronics/>



Striving to help create an abundant society, we provide such cutting-edge materials as conductive agents, for lithium ion batteries (LiBs), thermal materials and substrates as well as functional ceramics, films and tapes, thereby playing an essential role in the advance of 5G communications infrastructure, xEVs and renewable energy generation.

The realization of a sustainable society and the reduction of environmental impact have become urgent, global issues. The Electronics & Innovative Products contributes to the resolution of such issues facing society today and the realization of a prosperous society by providing a diverse product lineup (various ceramic materials, thermal conductive materials and high-performance films/tapes, etc.) that take full advantage of our essential technologies.

In addition, we will continue to be a leading company in terms of technology in each of our product lines while also sending out new technology to market ahead of our competitors to provide new products that meet market needs in a timely manner.

To this end, we will continue to drive innovation.

**Ikuo Ishida**

Executive Officer  
Electronics & Innovative Products

## SWOT Analysis

- A diverse product lineup capable of meeting a broad range of customer needs
- Intelligence capabilities stemming from strong market share commanded by our products
- A broad range of essential technologies, including high-temperature control, nitriding, spherical shaping and calcining technologies

Strengths **S**   **O** Opportunities

Weaknesses **W**   **T** Threats

- Growing financial burden attributable to capital expenditure due to rapid market expansion

- Growing importance of communications devices on the back of the spread of IoT and autonomous driving systems and resulting advances in high-speed transmission technologies
- New business opportunities arising from government policies supporting a shift to xEVs and addressing environment concerns

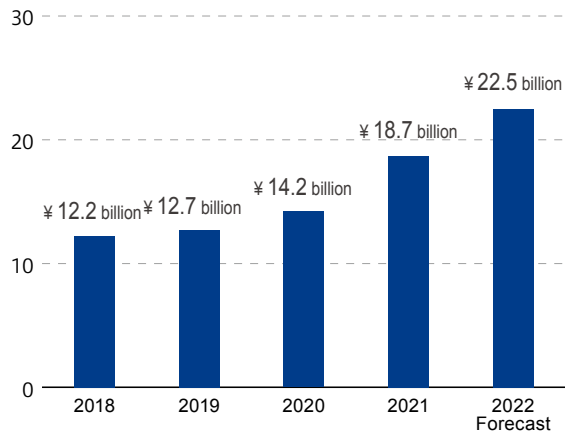
- Possible emergence of novel material serving as a game changer
- A major shift in technological development trends due to factors such as the growing need for environmental solutions
- An increase in the number of competitors due to the entry of newcomers from emerging nations

## Business Strategies

- **Establish an unparalleled presence in fields associated with megatrends (xEVs, 5G communications, semiconductors and renewable energy)**  
—Contribute to society by delivering products that meet market requirements
- **Create next-generation products**  
—Develop specialty products employing our unique technologies

## Electronics & Innovative Products

### Trends in Operating Income



Sales of spherical alumina and high-purity electroconductive carbon black increased primarily in the xEV industry. Sales of high-performance films and spherical fused silica fillers for the electronic materials and semiconductor markets were favorable due to growing global demand in the 5G field and data centers. In addition, sales of HITTPLATE, a metal aluminum substrate for the automotive industry, and industrial tape increased, and sales of ALONBRIGHT, a sialon phosphor for LEDs, remained generally firm. However, demand for ALSINK, a highly reliable thermal conductive plate for use in the railway industry was weak.

In FY2022, we expect further growth in demand in the environmental and energy sectors, including xEVs, semiconductors, and renewable energy. Moreover, a new facility in Singapore for the manufacture of spherical alumina started full-scale operation in May 2022.

### Capital Investment

FY2018 to FY2021  
**Cumulative results: ¥42.3 billion**

- New facility construction to increase production capacity of high-purity electroconductive carbon black (Omuta Plant and Singapore subsidiary)
- New facility construction to increase production capacity of silicon nitride ceramic substrates (Omuta Plant)

### R&D Activities

FY2018 to FY2021  
**Cumulative results: ¥16.6 billion**

- Developed low dielectric tangent silica for use in 5G communications devices

### Helping to resolve social issues through our products

#### Silicon nitride powder

Silicon nitride is a raw ceramic material with superior thermal and mechanical properties. Moldings made from this powder (SN powder) are lightweight and demonstrate high thermal conductivity. Harnessing these characteristics, it is used as a raw material for light-weight power module substrates for xEVs and electric railroads, and contributes to reducing CO<sub>2</sub> emissions by supporting the acceleration of the automobile industry's conversion to xEVs with material technology. It is also used as a bearing ball for wind power generators due to its excellent lubricity, contributing to the spread of clean energy.

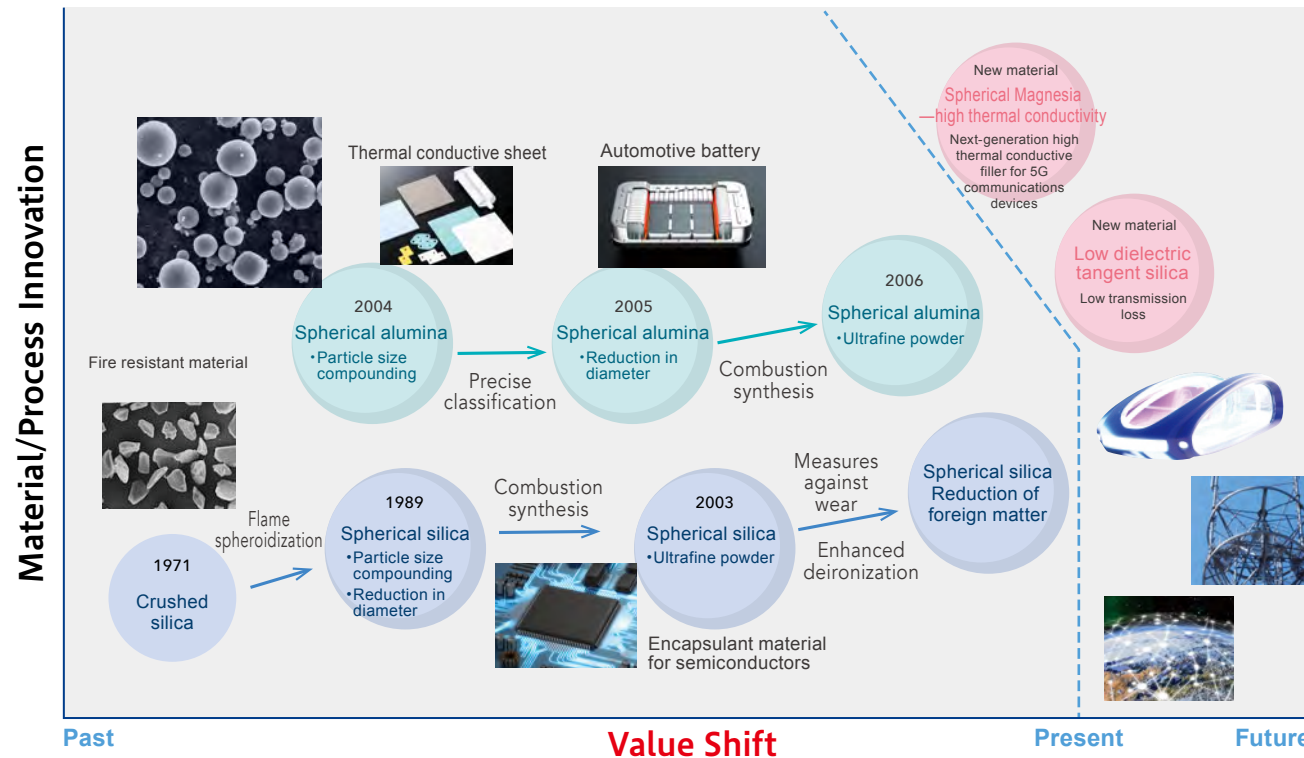


#### Source of value

- Material development technology harnessing fundamental inorganic material technologies Denka has continued to foster since our foundation
- Reduction of CO<sub>2</sub> emissions
- Spread of green energy

#### Social issues

### Development of Spherical Fillers



# Life Innovation

•Business Categories: Life Innovation <https://www.denka.co.jp/eng/medical/>



We are working to improve the quality of life of people around the world in the areas of prevention, diagnosis and treatment, including influenza vaccines and test reagents such as rapid antigen diagnostic test kits for the novel coronavirus.

Last year, we faced the bitter experience of recalling some batches of our coronavirus rapid antigen diagnostic test kits, which brought home to us the weight of our quality assurance responsibilities in the healthcare business and the depth of our involvement with the lives of citizens. We also learned the most important thing of being prepared in normal times so that we may contribute where we can to fighting and overcoming the challenges faced by humankind in the form of unknown emerging infectious diseases that may come at any moment. Based on the lessons learned from the various events that occurred during the COVID-19 pandemic, we will continue to strive toward achieving our purpose of continuing to contribute to improving the quality of life of people around the world by delivering products and services needed by society.

**Hideki Takahashi**

Managing Executive Officer,  
Life Innovation

## SWOT Analysis

- A lineup of various diagnostic reagents developed in-house employing Denka's proprietary technologies
- Superior technological capabilities and robust production capacities backed by cutting-edge vaccine manufacturing facilities
- A robust network of industry-academia-government collaboration with a diverse range of partners to enhance Denka's own R&D capabilities
- Innovation arising from the integration of know-how in the fields of chemistry and healthcare, two very different fields, and marketing capabilities derived from a combination of customer bases in both fields

Strengths **S** **O** Opportunities

Weaknesses **W** **T** Threats

- Susceptibility of infectious disease-related products to demand fluctuations attributable to changes in the magnitude of epidemics and types of disease

- Growing need for solutions supporting the prevention and early diagnosis of disease in countries around the globe
- Growing demand for rapid diagnostic testing kits in the face of the COVID-19 pandemic
- Growing demand for medical services tailored to the needs of individual patients
- Widespread use of IoT and AI
- Possible emergence of novel types of business supported by government-led growth strategies (legal revisions and regulatory relaxation)

- Acceleration of competitor technologies for vaccine and diagnostic reagents on the back of global efforts to counter the COVID-19 pandemic

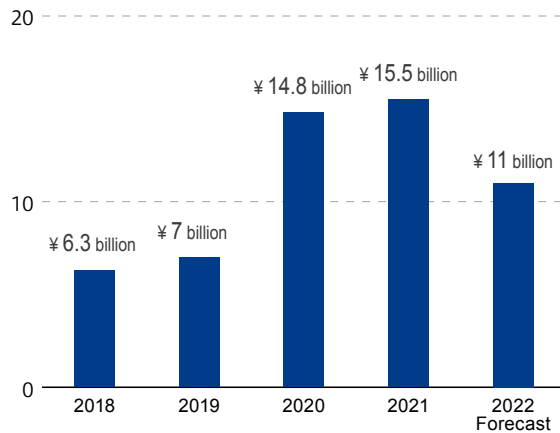
## Business Strategies

- **Strengthen and expand existing operations, including influenza vaccines and diagnostic reagents**
- **Swiftly launch new businesses, including oncolytic virus and simultaneous multiplex assay systems**
- **Push ahead with further open innovation while consolidating the Denka Group's expertise to create new business to secure future earnings pillars**
- **Create new products and businesses aligned with changes in the market environment in light of the ongoing fallout from the COVID-19 pandemic and in anticipation of life post COVID**



Life Innovation

Trends in Operating Income



QuickNavi™-COVID19 Ag, a rapid antigen diagnostic test kit for COVID-19 was supplied for the Ministry of Health, Labour and Welfare's distribution program to enhance the rapid antigen testing system as part of its measures against infectious diseases, and sales volume increased due to the further spread of infection following the New Year. Sales of other reagents were also favorable both in Japan and overseas.

On the other hand, shipments of influenza vaccines were lower than the previous year due to a shortage of production materials caused by a worldwide increase in production of new coronavirus vaccines. The production volume of vaccines was also lower compared to the previous year due to the proliferative nature of vaccine production strains and other factors.

In FY2022, we expect a decrease in profits due to the negative impact of the reduction in insurance points by the COVID-19 qualitative antigen test. However we will work to strengthen and expand our business in vaccines and test reagents.

Capital Investment

FY2018 to FY2021  
Cumulative results: **¥ 23.3 billion**

R&D Activities

FY2018 to FY2021  
Cumulative results: **¥ 18.1 billion**

- Development of mass production technology for commercialization of "G47A (delta)" oncolytic virus

Helping to resolve social issues through our products

Rapid Antigen Diagnostic Test Kit  
QuickNavi™-Flu + COVID-19 Ag

These testing kits enable medical practitioners operating on the frontlines to visually determine test results in 10 minutes without using specialized testing equipment.

Employing our proprietary technologies, Denka has developed and is supplying the QuickNavi series, rapid diagnostic test kits for detecting antigens of a variety of infectious diseases.

Through these efforts, we are assisting medical practitioners in their battle against infectious diseases and, by doing so, helping to relieve them of the burden of disease diagnosis.



Source of value

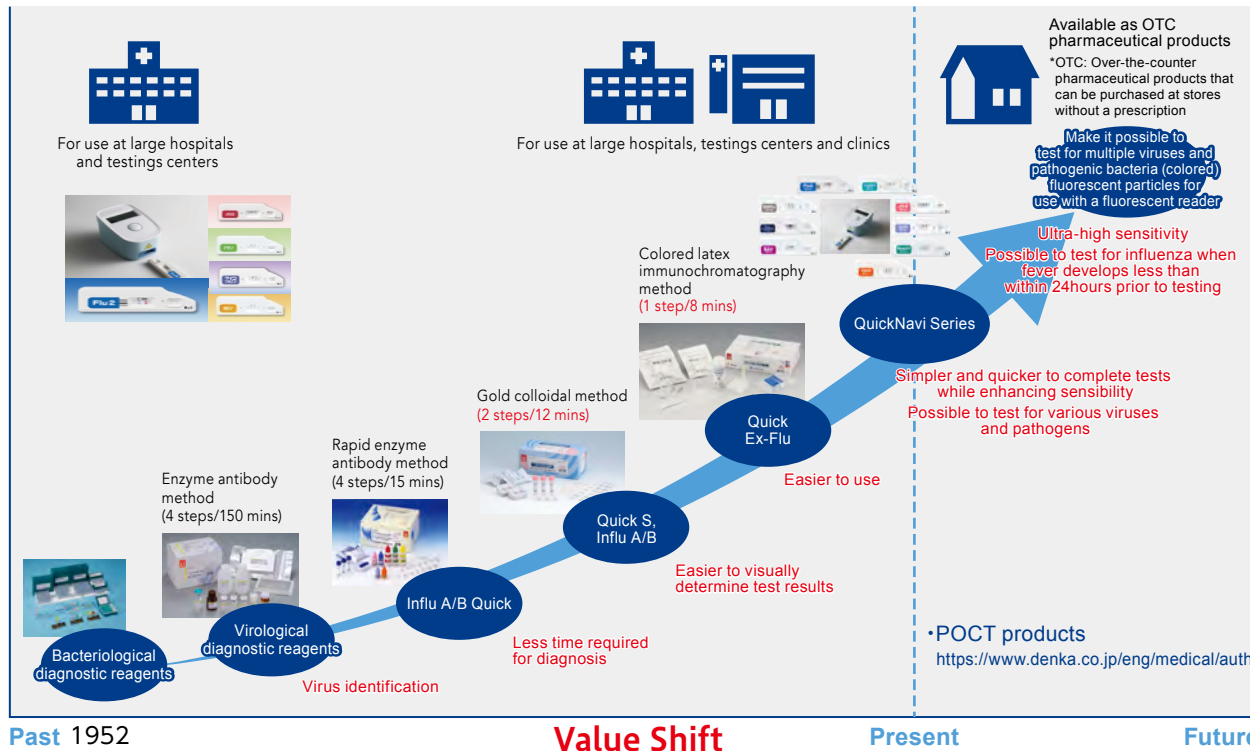
- Applied technologies that have long been cultivated through our involvement in the diagnostic reagent business

Social issues

• Business Categories: Life Innovation <https://www.denka.co.jp/eng/medical/>

Development of POCT Products

Material/Process Innovation



# Elastomer & Infrastructure Solutions

Business Categories: Elastomer & Infrastructure Solutions [https://www.denka.co.jp/eng/elastomer\\_infra/](https://www.denka.co.jp/eng/elastomer_infra/)



To help ensure people's daily lives are safe and secure, we employ a wealth of technological capabilities in organic and inorganic chemistry to supply a range of offerings from functional elastomers, cement and special cement additives - both of which are essential to strengthening infrastructure - to fertilizers and agricultural corrugated pipes, taking full advantage of the calcium carbide chain that we have maintained since our founding.

The Omi Plant, which serves as the mainstay plant for the Elastomer & Infrastructure Solutions Department, employs limestone and hydroelectricity to develop a robust carbide chain enabling Denka to secure a position as a producer of chloroprene rubber boasting the world's top market share. This asset has also supported Denka's fertilizer production spanning 107 years, while empowering the company to maintain its position as a cement manufacturer with a significant presence in a broad swathe of regions along the Sea of Japan side of the country. Based on technologies nurtured and further refined since our foundation, we aim to contribute to the development of infrastructure around the globe and advances in the mobility sector to enable people to enjoy safe, secure and comfortable lives. In addition, we are actively working to achieve carbon neutrality through the development of environmentally friendly products, such as CO<sub>2</sub>-SUICOM.

**Koki Tabuchi**

Managing Executive Officer,  
Elastomer & Infrastructure Solutions

## SWOT Analysis

- A robust carbide chain created via the use of the limestone from nearby limestone mines and powered by Denka's own hydroelectric power plant network
- A resource recycling system that accepts urban waste, waste plastic and other waste as raw materials and fuel for cement production
- A two-location production system supporting the chloroprene rubber business, with plants in Japan and the United States employing different manufacturing methods and facilities

Strengths **S**   **O** Opportunities

Weaknesses **W**   **T** Threats

- Difficulty in securing robust brand recognition in markets overseas (special cement additive business)

- Growing demand associated with enhancing the resilience of buildings and civil infrastructure to mitigate natural disaster damage
- Growing demand associated with the maintenance and renewal of domestic infrastructure constructed mainly during the period of high economic growth in Japan and currently deteriorating
- Growth in the biostimulant market due to growing food demand in step with the growing global population

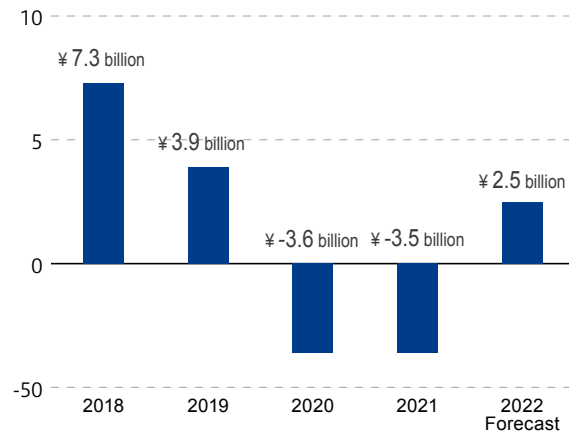
- Expansion in the scope of various environment-related regulations influenced by a growing trend toward carbon neutrality
- Shrinking in the construction and agricultural markets due to a decline in the domestic population
- Soaring global raw material and fuel prices

## Business Strategies

- **Establish a stable business foundation to minimize the impact of trade conditions while stepping up the development of highly functional products**
- **Deliver cutting-edge infrastructure technologies designed to contribute to climate change countermeasures and energy saving**
- **Secure even more robust foundations for our special cement additive business bases in Asia**
- **Work to further expand our agriculture biostimulant business overseas**
- **Strengthen and expand resource recycling operations that utilize waste as a raw material and fuel for cement production**

## Elastomer & Infrastructure Solutions

### Trends in Operating Income



Sales of chloroprene rubber exceeded that of the previous year due to an overall increase in demand for industrial and automotive applications as the global economy recovered. However, U.S. subsidiary Denka Performance Elastomer (DPE) was affected by the upstream supply chain disruption caused by Hurricane Ida, forcing the company to suspend production. In our cement products, only a portion of the soaring cost of raw materials was passed on to the cost of our products while sales of special additives was also down on the previous year.

Although raw material prices are expected to soar in FY2022, we expect an increase in profits as a result of flexible price hikes and the elimination of the negative impact from last year's natural disaster that affected DPE.

### Capital Investment

FY2018 to FY2021  
Cumulative results: **¥ 59.8 billion**

### R&D Activities

FY2018 to FY2021  
Cumulative results: **¥ 12.7 billion**

- Development of technology to absorb and fix CO<sub>2</sub> during concrete production

### Helping to resolve social issues through our products

#### Carbon cement additive "LEAF"

"LEAF" developed by Denka is a carbon cement additive that is able to sequester CO<sub>2</sub> during the production process. Chemically stable calcium carbonate is produced by actively reacting with and sequestering CO<sub>2</sub>. This helps to densify the concrete thereby improving strength and durability. The use of a by-product in the form of slaked lime as a raw material in place of limestone, which emits CO<sub>2</sub> during high-temperature firing, also reduces the volume of CO<sub>2</sub> emissions during the manufacturing process.

By mixing "LEAF" with cement and concrete, we are contributing to the reduction of CO<sub>2</sub> emissions in the manufacturing process.



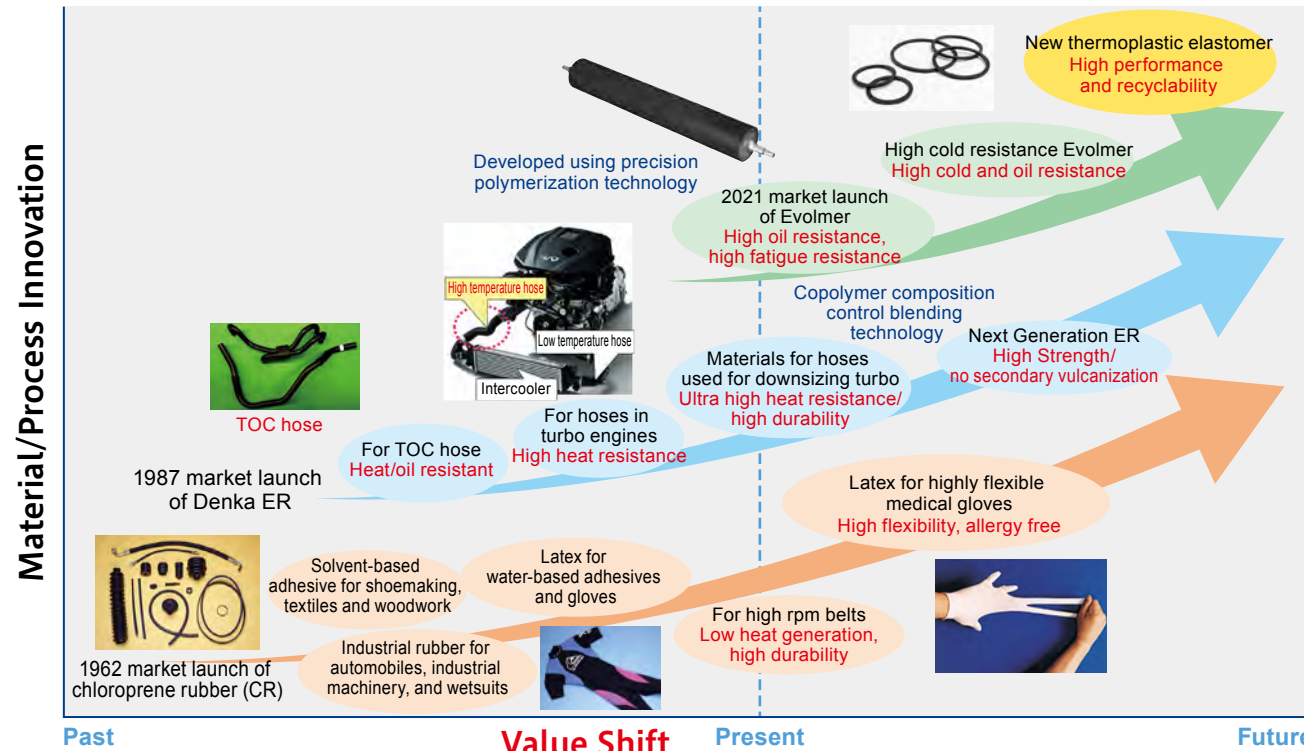
#### Source of value

- Application of cement and special additive technology cultivated over many years

- Curbing global warming by reducing CO<sub>2</sub> emissions

#### Social issues

### Growth of the Elastomer Business



•Business Categories: Elastomer & Infrastructure Solutions [https://www.denka.co.jp/eng/elastomer\\_infra/](https://www.denka.co.jp/eng/elastomer_infra/)



# Polymer Solutions

•Business Categories: Polymer Solutions <https://www.denka.co.jp/eng/polymer/>



We provide a wide range of products globally, including styrene-based functional resins, food packaging sheets, processed products, synthetic fiber for wigs and hair pieces, rain gutters, and chemical products such as Poval. By creating the functions and value required of plastics, we are working to realize a sustainable society by supporting people's daily lives through a wide range of applications in the automotive, electrical, electronics, and food industries.

Our departments' mission is to contribute to a sustainable society and provide safe and secure lifestyles for people around the world through the development of environmentally friendly products.

In order to find a place for styrene-based resins in today's society where recycling is becoming increasingly more important, we made the decision this year to construct a chemical recycling plant together with Toyo Styrene Co., Ltd., an equity-method affiliate, and are making preparations for the commencement of operations in the second half of FY2023. Under our new research framework launched in April this year, each department, research, manufacturing, and other related departments will work together to develop products that address environmental and social issues and provide new value with SDGs forming our compass.

**Kenjiro Ishizuka**

Executive Officer  
Polymer Solutions

## SWOT Analysis

- An integrated manufacturing and marketing system in Japan that encompasses a range of styrene-based operations from the production of raw materials to the manufacture of processed products
- Global business capabilities backed by a two-location production system comprising of bases in Japan and Singapore
- A diverse range of resin processing technologies, including those associated with polymer structure design and control and the production of sheets, films and synthetic fiber
- Synergies arising from the combination of materials and processed products as well as solution proposal and development capabilities supported by such synergies

Strengths **S**   **O** Opportunities

Weaknesses **W**   **T** Threats

- Time lag between fluctuations in the prices of raw materials (e.g. naphtha and benzene) and product price revisions reflecting these external conditions
- Foreign exchange risks and the risk of changes in market conditions associated with products mainly exported to customers overseas

- Development of plastic resins and processed products in a way that accommodates growing needs for eco-friendly solutions
- Establishment of a comprehensive recycling system that takes full advantage of the strengths afforded by our integrated production system, extending from raw materials to processed products, and thereby meets demand arising from the growing trend towards resource recycling
- Versatile expansion stemming from our diverse product lineup

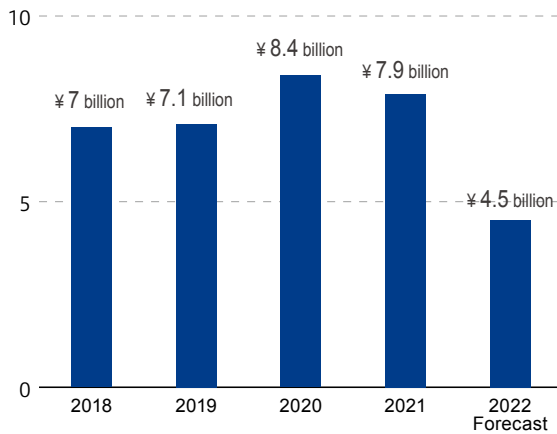
- A decline in the need for plastic due to environmental problems induced by waste plastics (especially single-packaging containers)
- Intensification of price competition in step with the improvement in the quality of products manufactured by overseas competitors
- Unstable procurement of various raw materials (due to rises in costs and the abolishment of certain materials, etc.)

## Business Strategies

- **Promote specialization in each business area through the development of highly functional product grades that meet market needs with a heightened awareness of ESG management**
- **Develop products that offer solutions to environmental problems**
  1. Accommodate the needs of a recycling-oriented society and reduce CO<sub>2</sub> emissions by realizing a chemical recycling process for styrene-based resin
  2. Promote R&D into materials to reduce our environmental footprint through the use of biomass materials

## Polymer Solutions

### Trends in Operating Income



Sales of ABS resin, and MS resin and styrene monomers manufactured by Denka Singapore were generally robust. Sales of Toyokalon, raw yarn for synthetic wigs, rain gutters, sheets for food packaging materials, and processed products were generally favorable. Sales prices were also revised in response to rising raw material prices.

In FY2022, we expect to maintain the spread by implementing price revisions in response to the sharp rise in raw material prices, but expect a decrease in earnings due to periodic repairs to the styrene monomer plant, the lockdown in Shanghai, and lower demand caused by rising prices, etc.

### Capital Investment

FY2018 to FY2021  
 Cumulative results: **¥ 19 billion**

- New facility construction to increase production capacity of Denka Singapore's highly functional transparent resin (MS resin)

### R&D Activities

FY2018 to FY2021  
 Cumulative results: **¥ 9.4 billion**

- Development of new grade Denka IPX Series boasting superior coating properties
- Development of high-strength thin-walled sheets that contribute to weight reduction of food containers to reduce environmental impact

### Helping to resolve social issues through our products

#### DENKA IP, a highly heat-resistant material

DENKA IP boasts various properties that include heat resistance with low VOC, chemical resistance and superior coating properties and is primarily used for automotive interior parts, exterior materials and home appliances to increase heat resistance. The addition of DENKA IP increases the heat-resistant temperature of the resin, thereby suppressing deformation of parts due to heat and contributing to improved safety.

We are also contributing to the reduction of our environmental impact by reducing the weight of automotive parts and eliminating the use of paint in line with the growing demand for xEVs, improving the environment of car interiors by reducing VOCs, and reusing heat-resistant ABS made from recycled ABS materials for automotive applications.



- Reduction of CO<sub>2</sub> emissions through the promotion of recycling
- Contributing to weight reduction and resource conservation through high flow and thin wall plastics
- Improving the environment of car interiors by reducing VOCs

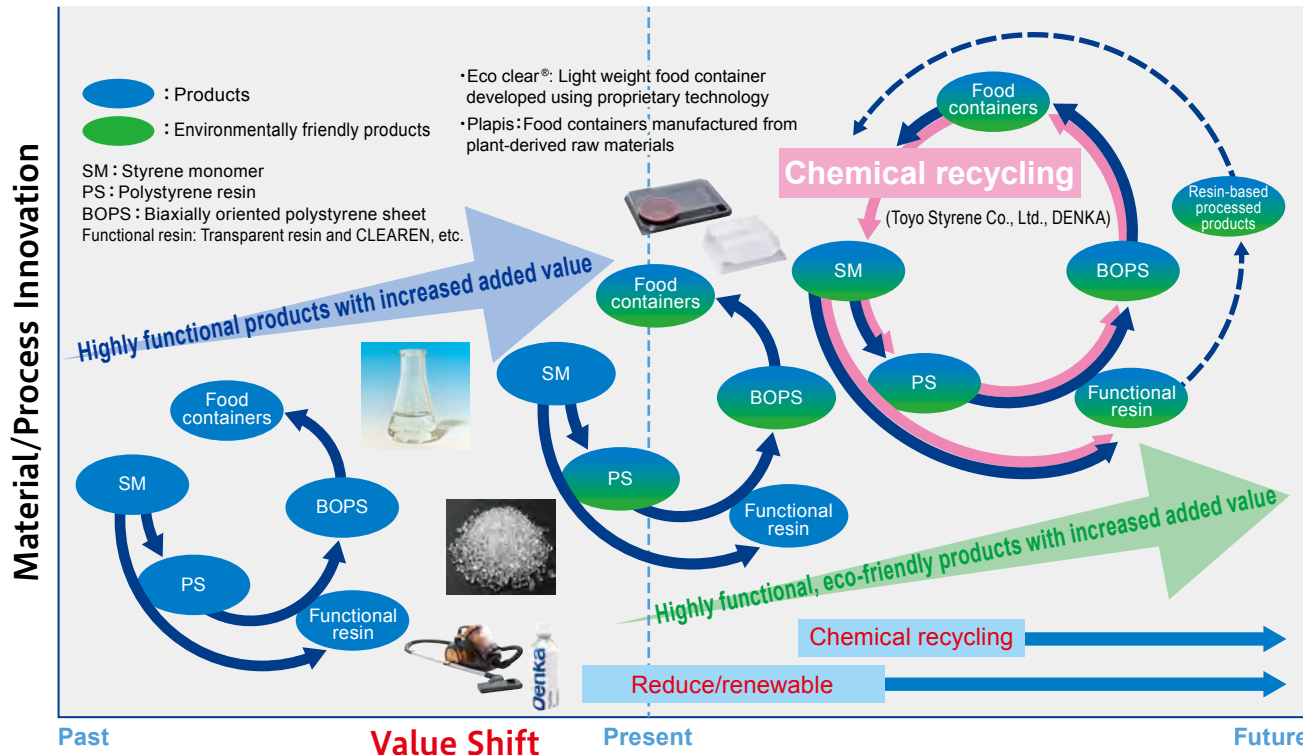
#### Source of value

- Precision polymerization and resin design technologies for styrene-based resins

#### Social issues

• Business Categories: Polymer Solutions <https://www.denka.co.jp/eng/polymer/>

### Value shift of the entire styrene chain



## Dialogue with Stakeholders






### 1. Creating value through dialogue with our stakeholders

The Denka Group considers maintaining responsible dialogue with stakeholders and integral part of the process of assessing our social responsibilities, the degree of our social contributions and stakeholder expectations with regard to improving our corporate value. It also forms part of the Denka Group ESG Basic Policy, "Information disclosure stakeholder dialogue". The diagram below illustrates the significance of dialogue with our various stakeholders and the value it creates.





## 2. Examples of dialogue with stakeholders

	Objective/Themes	Means
Customers 	<ul style="list-style-type: none"> <li>■ Providing safe, high-quality products that satisfy our customers and appropriate information.</li> <li>■ Forging relationships built on trust through sincere communication with our customers.</li> </ul>	<ul style="list-style-type: none"> <li>• Face-to-face and online dialogue with customers</li> <li>• Providing technical services</li> <li>• Conducting customer satisfaction surveys</li> </ul>
Denka Group Employees 	<ul style="list-style-type: none"> <li>■ Reflecting the opinions of employees to promote the creation of a healthy and comfortable workplace for all members of the Denka Group.</li> </ul>	<ul style="list-style-type: none"> <li>• Visits by and dialogue with the President</li> <li>• Use of internal portal sites</li> <li>• Employee awareness surveys</li> <li>• Labor-management council</li> </ul>
Business Partners 	<ul style="list-style-type: none"> <li>■ Promoting open innovation and building good relationships with our business partners to ensure co-existence and shared prosperity across the entire supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>• Face-to-face and online meetings with suppliers</li> <li>• Announcement of our Partnership Building Declaration</li> </ul>
Shareholders and Investors 	<ul style="list-style-type: none"> <li>■ Actively, effectively and fairly disclosing financial and non-financial information and ensuring its reliability through constructive dialogue.</li> <li>■ Enhancing our group governance system to enhance the value of the entire company.</li> </ul>	<ul style="list-style-type: none"> <li>• Holding of the General Meeting of Shareholders</li> <li>• Disclosure of consolidated reports, financial statements, etc.</li> <li>• Face-to-face and online engagement with institutional investors</li> </ul>
Local Communities 	<ul style="list-style-type: none"> <li>■ Actively participating in the formation of more habitable local communities and contributing to their development as a good corporate citizen.</li> <li>■ Maintaining sound political and administrative relations and fostering a relationship of trust with society.</li> </ul>	<ul style="list-style-type: none"> <li>• Comprehensive disaster prevention drills</li> <li>• Participation in local events</li> <li>• Facility tours and resident briefings</li> <li>• Educational support</li> <li>• Interaction with local residents and dialogue</li> <li>• Social contribution activities</li> </ul>

## C O L U M N

## Partnership Building Declaration (May 13, 2022)

Denka has announced the Partnership Building Declaration showing our support for the principle of building sustainable relationships that help both large enterprises and small and medium enterprises grow together, as advocated by the "Council on Promoting Partnership Building for Cultivating the Future", which operates under the aegis of the Cabinet Office and the Small and Medium Enterprise Agency in collaboration with related economic organizations.

By announcing this declaration, Denka will endeavor to improve added value along the entire supply chain and to create open innovation transcending size, business group or sector boundaries through efforts to build relationships of co-existence and shared prosperity with customers. Moreover, this declaration is consistent with Denka Group ESG Basic Policy, "Fair business conduct" and "Information disclosure and stakeholder dialogue" and with one of the priority management materiality issues, which is "Dialogue with society/partnership"



## Denka's 11 Year Financial Summary

	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
<b>Summary Statement of Income</b> (million yen)											
Net sales	364,712	341,645	376,809	383,978	369,853	362,647	395,629	413,128	380,803	354,391	384,849
Operating income	20,713	18,817	21,230	24,047	30,634	25,844	33,652	34,228	31,587	34,729	40,123
Ordinary profit	18,996	17,824	20,604	24,287	27,022	23,158	31,499	32,811	30,034	32,143	36,474
Profit attributable to owners of parent	11,330	11,255	13,573	19,021	19,472	18,145	23,035	25,046	22,703	22,785	26,012
Equity in earnings (losses) of affiliates	966	530	550	950	1,097	568	1,105	1,384	1,170	933	876
<b>Financial Position</b> (million yen)											
Current assets	153,637	158,595	164,747	170,497	161,876	168,902	184,129	190,730	198,452	200,726	218,164
Total assets	402,552	415,356	431,347	445,569	443,864	454,944	473,799	483,827	501,448	526,035	557,646
Current liabilities	160,676	170,752	163,645	160,101	147,537	144,190	158,043	154,047	160,807	155,062	166,679
Net assets	172,737	180,709	189,516	210,798	216,071	227,487	242,780	250,481	254,014	270,036	292,094
Interest-bearing debt	118,049	114,241	120,669	122,536	124,596	113,748	108,269	112,134	134,340	138,191	137,032
<b>Cash Flows</b> (million yen)											
Cash flows from operating activities	28,521	40,215	27,245	35,557	44,014	39,557	48,776	32,660	41,954	40,610	42,630
Cash flows from investing activities	(22,363)	(25,864)	(26,693)	(27,449)	(34,979)	(22,258)	(29,298)	(26,176)	(36,303)	(36,976)	(36,839)
Cash flows from financing activities	(4,050)	(12,784)	(3,327)	(7,437)	(7,348)	(19,319)	(15,858)	(8,408)	9,544	(6,706)	(12,341)
Cash and cash equivalents at end of year	8,207	10,680	8,244	9,157	11,813	10,174	14,101	13,889	29,170	25,909	20,209
<b>Per Share Information</b> (yen)											
Dividends per share*	50.0	50.0	50.0	62.5	65.0	70.0	105.0	120.0	125.0	125.0	145.0
Profit per share	116.11	118.13	145.16	207.40	214.71	205.05	261.80	286.18	262.62	264.24	301.67
Net assets per share	1,768.20	1,884.96	2,013.84	2,279.70	2,366.74	2,526.42	2,727.94	2,839.16	2,906.95	3,101.92	3,345.34
<b>Financial Indices</b>											
Operating income ratio (%)	5.7	5.5	5.6	6.3	8.3	7.1	8.5	8.3	8.3	9.8	10.4
Return on equity (ROE) (%)	6.7	6.4	7.4	9.6	9.3	8.3	10.0	10.3	9.1	8.8	9.4
Return on assets (ROA) (%)	4.7	4.4	4.9	5.5	6.1	5.2	6.8	6.9	6.1	6.3	6.7
Shareholders' equity ratio (%)	42.3	43.1	43.5	46.9	47.7	49.1	50.5	51.0	50.0	50.8	51.7
<b>Other</b>											
Capital investment (million yen)	22,878	26,964	25,735	21,300	21,196	25,731	22,710	32,745	34,205	42,323	35,644
Depreciation and amortization (million yen)	23,192	21,585	22,254	23,032	23,242	24,359	24,599	22,946	22,482	22,911	23,883
R&D expenses (million yen)	10,639	10,605	10,828	11,127	11,787	13,026	13,868	14,562	15,031	14,736	14,231
Number of employees at end of year (consolidated)	4,921	5,206	5,249	5,309	5,788	5,816	5,944	6,133	6,316	6,351	6,358

## Management Plans

## DENKA100 (2007-2012)

## Resumption of DENKA100 (2013-2017)

## Denka Value-Up (2018-2022)

## Denka's main achievements

- Established the Shanghai Representative Office

- Completed the Denka Innovation Center main building

- Celebrated the centennial of the Company's founding
- Changed company name
- Established Denka Performance Elastomer LLC

- Hit a record high in profit
- Merger with DENKA SEIKEN Co., Ltd.
- Achieved record high profit for a consecutive year

## Environmental developments

- European debt crisis
- Great East Japan Earthquake

- Consumption tax hike (to 8%)

- Signing of the Paris Agreement
- Inauguration of the U.S. Trump administration

- Consumption tax hike (to 10%)
- U.S.-China trade tension

- COVID-19 pandemic

- Inauguration of the U.S. Biden administration

- Russian invasion of Ukraine

Note: Figures for FY2017 and onwards are modified in accordance with the Partial Amendments to Accounting Standard for Tax Effect Accounting (Accounting Standards Board of Japan (ASBJ) Statement No. 28 issued in February 2018).

\*Cash dividends per share 1. Denka executed a reverse share split that merged five shares into one share as of October 1, 2017. As we aim to support easy-to-understand comparisons between performance in each fiscal year, the value of dividends per share for the preceding fiscal years has been retrospectively converted to reflect the value of dividends had the reverse share split already been in effect.  
2. Dividends per share for FY2014 comprise (1) full-year dividends per share of ¥52.5 (¥10.5 per share prior to conversion); and (2) commemorative dividends per share of ¥10.0 (¥2.0 per share prior to conversion)

IR Information <https://www.denka.co.jp/eng/ir/>

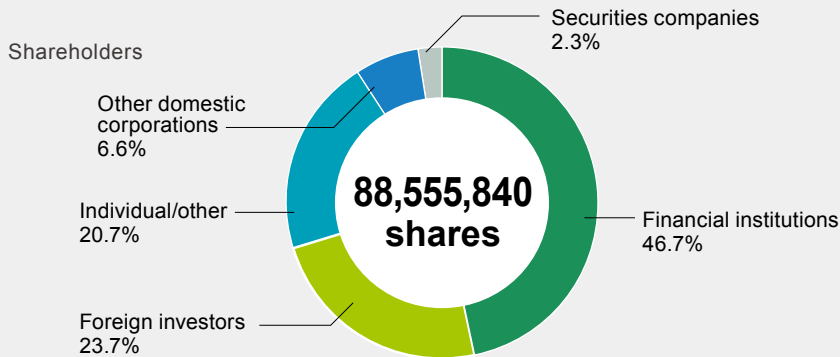
Return

Denka Report 2022 Integrated Report

Corporate Profile (as of March 31, 2022)

Name	Denka Company Limited
Established	May 1, 1915
Employees	4,081 (non-consolidated), 6,358 (consolidated)
Paid-in Capital	¥ 36,998 million
Head Office	1-1, Nihonbashi-Muromachi 2-chome, Chuo-ku, Tokyo 103-8338, Japan (Nihonbashi Mitsui Tower) Tel.: +81-3-5290-5055 Fax: +81-3-5290-5059

Share Information (as of March 31, 2022)



Major Shareholders

Shareholder name	Number of shares held (hundred shares)	Percentage of shares held(%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	156,560	18.15%
Custody Bank of Japan, Ltd. (Trust Account)	77,928	9.03
Mizuho Trust & Banking Co., Ltd. Retirement Benefit Trust, Mizuho Bank Account (Account re-entrusted by Custody Bank of Japan, Ltd.)	32,158	3.73
National Mutual Insurance Federation of Agricultural Cooperatives	29,007	3.36
TAIJU LIFE INSURANCE COMPANY LIMITED	23,816	2.76
Japan Post Insurance Co., Ltd.	18,105	2.10
SSBTC CLIENT OMNIBUS ACCOUNT	15,883	1.84
STATE STREET BANK AND TRUST COMPANY 505001	14,211	1.65
Denka Employee Shareholding Association	12,345	1.43
JP MORGAN CHASE BANK 385781	11,213	1.30

(Notes) 1. 2,278,289 shares of treasury stock have been excluded from the above list of major shareholders.  
2. Treasury stock is excluded for calculation of the percentage of shares held.

Major Group Companies (as of April 1, 2022)



Japan

- Denka Elastlution Co., Ltd.
- Toyo Styrene Co., Ltd.
- Denak Co., Ltd.
- Shonan Sekisui Kogyo Kabusiki Kaisha
- JUZEN CHEMICAL CORPORATION
- Hinode Kagaku Kogyo Co., Ltd.
- Denka Azumin Co., Ltd.
- Nishi-nihon Koatsu Gas Co., Ltd.
- Kanazawa Denka Ready-Mixed Concrete Co., Ltd.
- Denka Renotec Co., Ltd.
- Denka Ready-Mixed Concrete Takayama Co., Ltd.
- Higashi Nihon Koatsu Co.,Ltd
- Kanto Acetylene Industry Co., Ltd.
- Sanshin Bussan Kabusiki Kaisha
- Kanbara Ready-Mixed Concrete Co., Ltd.
- Denal Silane Co., Ltd.
- Denka Kojundo Gas Kabusiki Kaisha
- Denka Polymer Kabushiki Kaisha
- Denka Astec Co., Ltd.
- Kyushu Plastic Industry Co., Ltd.
- Denka Cosmetics Limited Company
- Akros Trading Co., Ltd.
- Denka Consultant & Engineering Co., Ltd.
- Kurobegawa Electric Power Company

Overseas

- Europe
- Denka chemicals G.m.b.H
  - Icon Genetics G.m.b.H
  - DENKA SEIKEN UK Limited
- North America
- Denka Corporation
  - Denka Performance Elastomer LLC
  - DENKA SEIKEN USA Incorporated
- East Asia
- Denka Inorganic Materials (Tianjin) Co., Ltd.
  - Denka Electronic Materials (Dalian) Co., Ltd.
  - Denka Chemicals Development (Suzhou) Co., Ltd.
  - Denka Advanced Materials (Suzhou) Co., Ltd.
  - Denka Chemicals Shanghai Co., Ltd.
  - Denka Chemicals Hong Kong Co., Ltd.
  - Denka Korea Co., Ltd.
  - Denka Taiwan Corporation
- Southeast Asia
- Denka Advanced Materials Vietnam Co., Ltd.
  - Denka Construction Solutions Malaysia Sdn Bhd.
  - PT.ESTOP Indonesia
  - Denka Advantec Pte.Ltd.
  - Denka Singapore Pte.Ltd.
  - Denka Life Innovation Research Pte. Ltd.
  - Denka Chemicals Holdings Asia Pacific Pte.Ltd.
  - Denka Infrastructure Technologies Pte.Ltd.



# Denka

## ■ Inquiries

Corporate Planning Dept., Denka Company Limited  
Nihonbashi Mitsui Tower, 1-1 Nihonbashi-Muromachi, 2-chome,  
Chuo-ku, Tokyo 103-8338, Japan  
Tel.: +81-3-5290-5510  
Fax: +81-3-5290-5149  
e-mail: [denkareport@denka.co.jp](mailto:denkareport@denka.co.jp)

<https://www.denka.co.jp/eng/>

