

Denka

Possibility
of
chemistry

Denka Report **2023**

Integrated Report



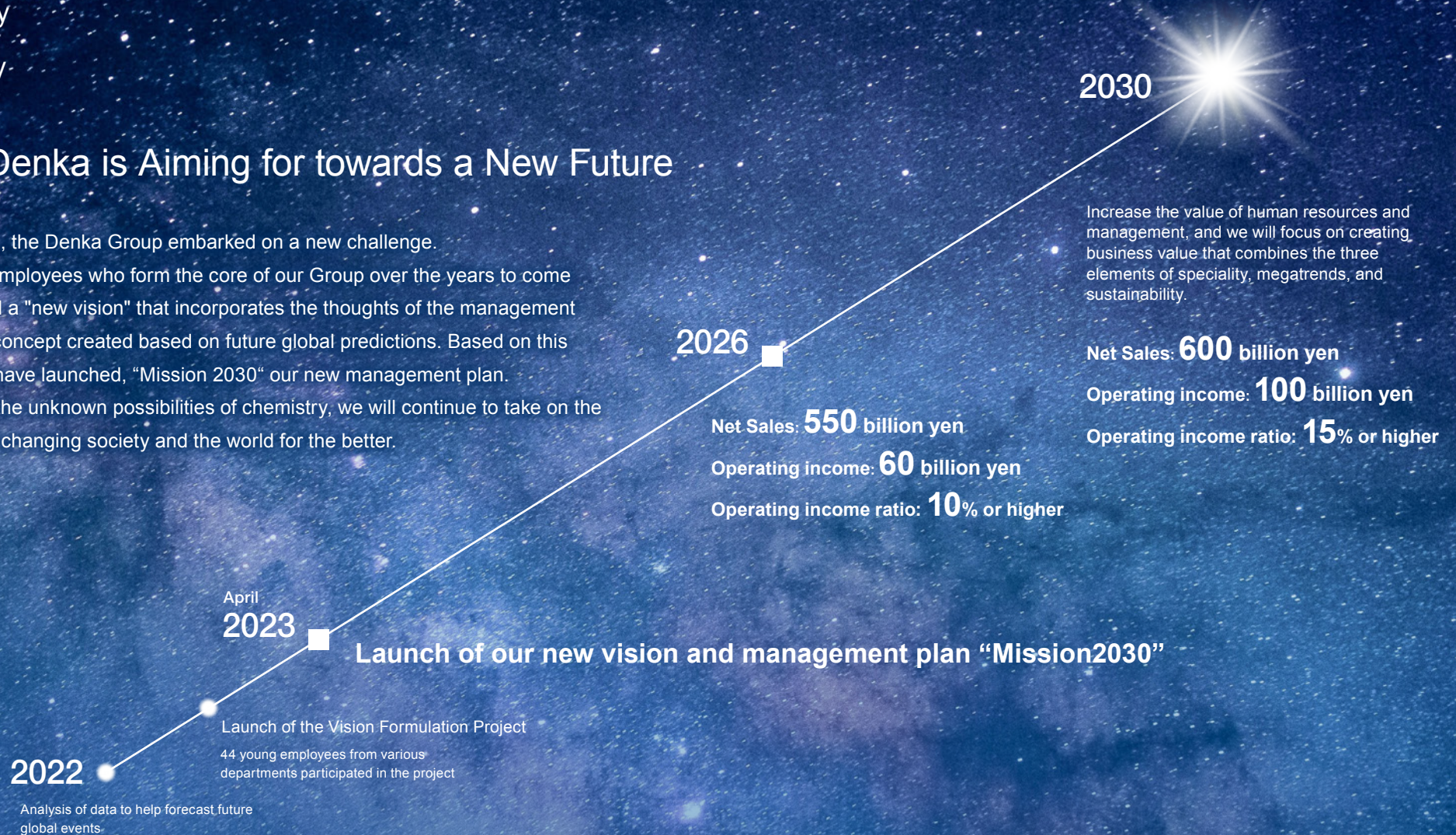
Denka

Possibility of chemistry

Making the world a better place as specialists in chemistry

What Denka is Aiming for towards a New Future

In April 2023, the Denka Group embarked on a new challenge. The young employees who form the core of our Group over the years to come have created a "new vision" that incorporates the thoughts of the management team into a concept created based on future global predictions. Based on this "vision", we have launched, "Mission 2030" our new management plan. Harnessing the unknown possibilities of chemistry, we will continue to take on the challenge of changing society and the world for the better.



What Denka can contribute to the world of the future

World of the future

Megatrends

Three focus areas and market share



Sustainability

- Increase in renewable energy
- Electrification of automobiles
- The issue of ocean plastic
- Increase in natural disasters



Evolving technology

- Expansion of DX, AI and 5G markets



Global population growth

- Global population growth
- Food and water shortages
- Increased demand for infrastructure



Confusion in social order

- Widespread social anxiety
- Heightened political and military tension
- Uneven distribution of wealth and entrenched inequality
- Regional conflict and terrorism
- Supply chain disruption



Conversion to renewable energy



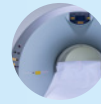
Mobility revolution



Growing demand for semiconductors and devices



Diversification of medical needs



Advances in innovative medical technologies



Depletion of food and water resources



Increased demand for infrastructure

ICT&Energy

Providing cutting-edge materials for a better society

Healthcare

Improving the quality of life of people around the world in the areas of prevention, diagnosis and treatment

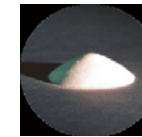
Sustainable Living

Realization of a safe, secure, and comfortable life

World No. 1



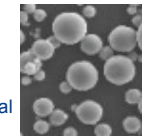
Acetylene black



Fused silica



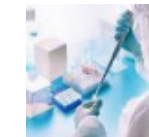
Silicon nitride



Spherical alumina



Semiconductor carrier tape



World No. 1

Reagent for measuring C-reactive protein (CRP)

Japan No. 1

Antigen rapid diagnostic kits



World No. 1



Chloroprene rubber



MS resin



Heat resistant agent for ABS

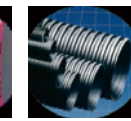
Japan No. 1



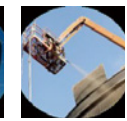
Liquid humic acid fertilizer



Humic acid manganese fertilizer



Underground drainpipes for agriculture



Special cement additive

Denka Report 2023

Integrated Report

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Editorial Policy

The Denka Report 2023 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 FY2022 (April 1, 2022 through March 31, 2023) in principle. It also includes additional information on some initiatives undertaken subsequent to the FY2022 year-end while presenting data on numerical targets for and performance statistics from the past several fiscal years.

Date of publication: September 29, 2023

■ 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

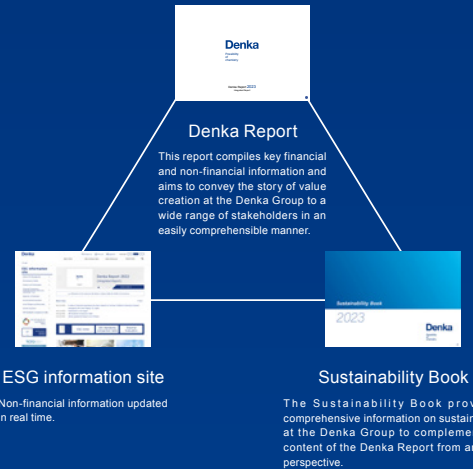
- The 2021 GRI Standards of the Global Reporting Initiative (GRI)
- The 2018 Environmental Reporting Guidelines of Japan's Ministry of the Environment
- The 2021 International Integrated Framework of the International Integrated Reporting Council (IIRC)

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■ Overview of the Denka Report



Logical Breakdown of the Denka Report 2023

Vision

(P5-P22)

The Vision Project was a project involving our young employees, employees who will play a key role in building the future of Denka, who came together to develop our core values, purpose, and mission, while discussing the future of Denka. In formulating our new management plan "Mission 2030" management plan, we reviewed the corporate philosophy we have had up to now and formulated a new vision to serve as the basis for the plan. In formulating our new management plan "Mission 2030".

Key contents

- Message from the President
- Vision Project
- Our Vision, etc.

Strategy

(P23-P50)

"Mission 2030" is the management plan for realizing our new vision. It introduces the basic policy and strategies for finance, innovation, technology, and each division.

Key contents

- Mission 2030
- Financial strategy
- Innovation
- Technology
- Divisional strategies, etc.

ESG management

(P51-80)

Based on the Denka Group ESG Basic Policy, this report introduces our efforts to incorporate sustainability issues into our management and explains the foundations that support our growth.

Key contents

- Environment
 - Carbon neutrality
 - Biodiversity
- Social
 - Nurture human resources
 - D, E & I
- Governance
 - Message from the Chairman
 - Round-table discussion with our Outside Directors
 - Corporate governance
 - Human rights initiatives
 - Place the utmost priority on safety
 - Risk management
 - Quality assurance management, etc.

Stakeholders (P81-P82)

Financial information (P83-P84)

OUR VISION

Denka's Vision

Denka's vision was created through discussions among 44 young employees and management based on our analysis of the "envisaged world of the future". This is the new corporate philosophy of the Denka Group, comprised of our "core value," "purpose" and "mission."

Core Value

Our "core value" is what form Denka's DNA. They also serve as a basis for decision making. Initiative, integrity, and empathy are verbalizations of the culture Denka has inherited from generation to generation for over 100 years. It is a creed that lives within us and that we should continue to uphold into the future.

Purpose

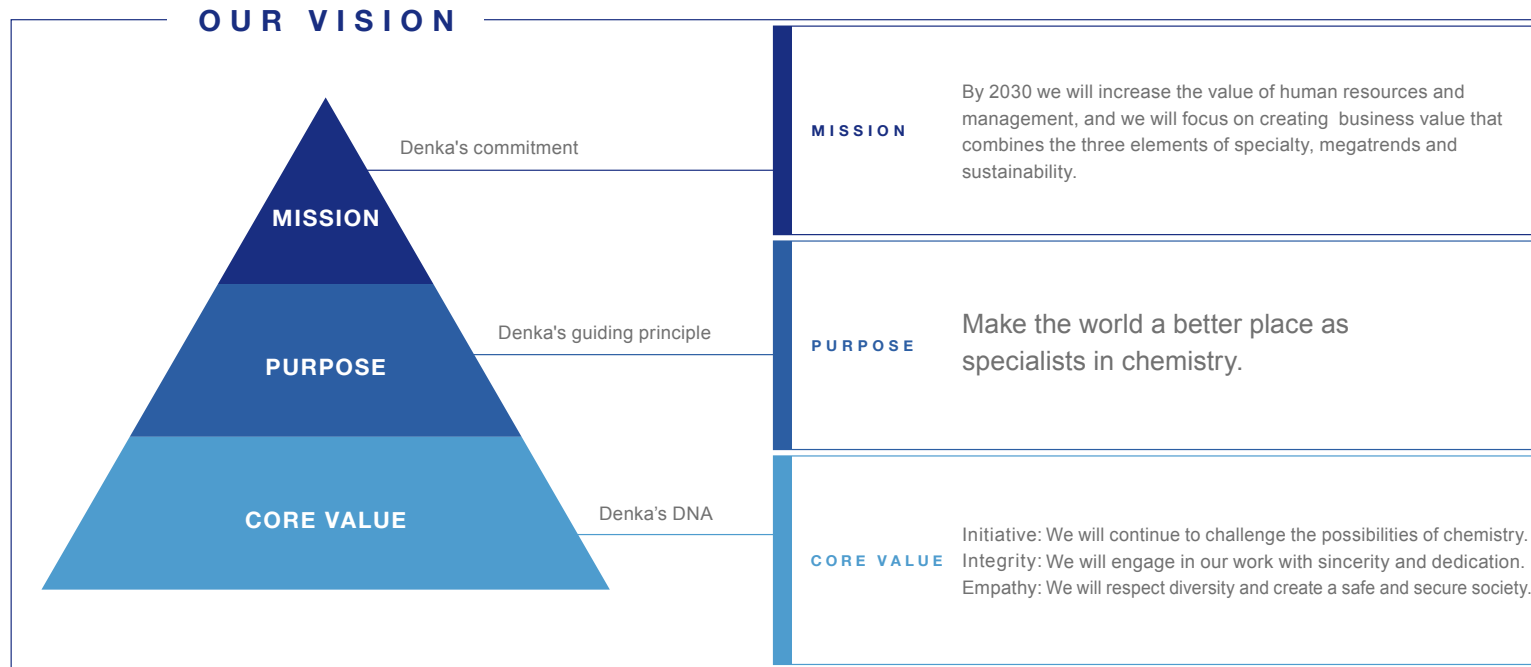
Our "purpose" also serves as Denka's guiding principle that guides us. It is our reason to continue to exist into the future.

Mission

Our "mission" is our mandate, our bold, compelling and ambitious targets. It is our mountain to climb with clear goals and time limits. In order to reach the summit in 2030, we have set forth specific strategies in our management plan, "Mission 2030".

Corporate message

It expresses our desire to become an unrivaled presence, or specialist and to make the world a better place through the power of chemistry.



Corporate message Possibility of chemistry.

Message from the President

First of all, I would like to express my deepest regrets for the victim who lost his life in a fatal accident at Omi Plant in June. I would also like to extend my deepest condolences to his family and loved ones and to offer my most sincere apologies to related stakeholders for all the concerns and difficulties caused by this accident and for the inappropriate conduct in relation to UL certification that was uncovered in May this year.

I recognize that both of these incidents threaten the principles of “assuring the quality of our products” and “maintaining safe work environments,” which are the very foundation of our continued existence as a manufacturer. I perceive these events as a serious crisis in our 108-year history. We are engaging the help of a third-party investigation committee so that we can thoroughly investigate their causes, develop preventive measures, and steadily take steps to prevent such incidents from recurring. Once again, I would like to offer most my sincere apologies for the concerns and difficulties suffered by related stakeholders.

Denka launched our new management plan, “Mission 2030”, under a new vision “Core Value, Purpose, Mission” from this fiscal year. The visions and missions announced by various companies in recent years have become more or less similar, showing signs of “commoditization.” It could also be said, however, that all of the inherently important things like love and friendship are commodities. I believe that the power of a vision depends on the ability of each employee to create a story that leads to that vision.

Toshio Imai

Representative Director, President

Career Summary

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



Message from the President

Initiative

The core values that form the basis of our new vision are "Initiative," "Integrity," and "Empathy."

The first "Value" is "Initiative." Denka was established 108 years ago as a company that produced lime nitrogen using our unique state-of-the-art technology to respond to social demand amid food shortages during the chaotic period of World War I. This was a major challenge in itself to begin with. Following World War II, we expanded our business into the fields of cement, synthetic resins, synthetic rubber, and resin processing, and in the 1980s, we also ventured into completely unknown fields, such as electronic materials and pharmaceuticals. The "Value" of "Initiative" has been passed down from generation to generation at Denka.

In 1931, the chloroprene rubber produced at our Omi Plant was commercialized by DuPont in the United States under the name Neoprene as the world's first synthetic rubber. In the 1960s, Denka and other companies planned to produce Neoprene in Japan and started negotiations with DuPont for licensing DuPont's manufacturing patents, but DuPont chose another company. For this reason, Denka started working on developing its own manufacturing technology, and finally succeeded in manufacturing them domestically using its own technology, and it is now the world's largest supplier.



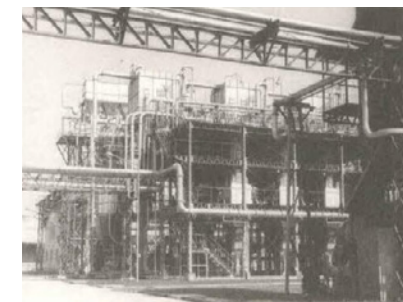
Members of the Omi Plant involved in chloroprene rubber development.
Front row, center: Senior Researcher Ryuichi Kobayashi

We have also recently begun commercial manufacturing of an oncolytic virus pharmaceutical for the treatment of malignant glioma, a type of brain tumor which is the first oncolytic virus product approved in Japan, the second even in all the developed countries. These products are the result of initiative that has been passed down over the generations.

Integrity

Our second "Value" is "Integrity." The concept of "Upholding a sincere attitude and providing a sincere response" has been passed down throughout our 108-year history, and it was a phrase I often heard from my seniors. The recent discovery of inappropriate conduct in relation to UL certification casts a significant shadow over this history. However, I believe that the value of "Upholding a sincere attitude and providing a sincere response" is still, inscribed certainly in our employees' minds.

Acetylene black, one of our flagship products, was first produced in 1942 during World War II when oil shortages made it difficult to continue producing carbon black from oil, and acetylene black was manufactured as a substitute, but following the resumption of oil imports after the war, our acetylene black started to lose its competitive advantage. After that, however, demand for our acetylene black emerged for use in manganese dry batteries, but fell again. However we discovered new uses such as a use for a special conductive compound in cables, and now our acetylene black has become the world's de facto standard for use as a positive electrode conductive material for LiBs. I believe that the driving force behind our success in finding these new uses has been our ability to "uphold a sincere attitude and provide a sincere response" to customer needs throughout the ages.



Acetylene black manufacturing facility

Fused silica and silicon nitride, materials produced using our proprietary technology of high-temperature sintering, were originally used as refractory materials in steel mills. By refining this process to control the purity and particle size, we are now operating in the field of electronic materials, including encapsulants and precision molding materials such as ball bearings. This is yet another example of our ability to "uphold a sincere attitude and provide a sincere response to customer needs."

Message from the President

Empathy

Our last “Value” is “Empathy”. I believe that diversity is what gives an organization a competitive edge, but “Empathy” is an essential concept for achieving that diversity. In order to work with people from various backgrounds, we need empathy for mutual understanding. I sometimes feel that our human resources may be very similar to one another. This is not always a bad thing, but it is important for us as an organization to strengthen our competitive advantage by working with diverse human resources while also maintaining a good balance. I believe that empathy is an important foundation for this. I also believe that this ability to empathize is an essential element in creating “a secure workplace where we can protect the mental and physical safety of our colleagues.”

Purpose (reason for existence)

Our purpose, namely our compass or the reason for our existence, is to “Make the world a better place as specialists in chemistry.” There are two key phrases in this purpose and one of them is "making the world a better place." Currently, developed countries are experiencing a "happiness plateau," a situation of economic well-being unprecedented in the history of mankind. Although inequality at home and abroad is widening, life satisfaction in advanced countries, including Japan, is on the rise. In such a world, we are not only required to contribute to sales, profits and other financial areas of our business. In order for companies to continue to survive, it is important that they provide some other “form of value.” "Making the world a better place" is an abstract and comprehensive expression, but I believe that regardless of what we are in charge of at the workplace, the question of whether that job is “making the world a better place” and each individual’s answer to that question has great significance. Another keyword is "specialist." Given the scale and development of business that Denka has seen over the years, it is only natural that we continue to focus our

business on our specialty that we do best as we did in our previous management plan, “Denka Value-up.”

We use the term "specialist" because we want each and every one of our employees to form some kind of connection to this purpose with their own story. I consider a specialist to be someone who can do a job better than anyone else. And to do something better than anyone else is to be the best we can be in the moment. Jim Collins wrote in his book, “Creativity is inherent in every one of us.” I believe that if we, as all of us are creative people, strive to be the best we can be in each place, we will surely become specialists there.

Mission (Management Plan "Mission 2030")

Now, next I would like to talk about our “Mission.”

Our Mission is “By 2030, we will increase the value of our human resources and management, and we will focus on creating business value that combines the three elements of Specialty, Megatrends, and Sustainability.”

“Business Value Creation” is one of the three growth strategies in this Mission, and it defines "3-Star Businesses" as businesses combining "Specialty," "Megatrends," and "Sustainability." We have defined what business value means to us by setting specific KPI criteria for each. The Portfolio Transformation Committee reviews each business for its 3-Star rating, and by 2030, we aim to create a portfolio that is comprised 100% of 3-Star Businesses.

<Three Growth Strategies>

Business Value Creation



Human Resources Value Creation



Management Value Creation



Message from the President

“Human Resources Value Creation” and “Management Value Creation” in “Three Growth Strategies” are important growth strategies. This is because, while the results of “Business Value Creation” are influenced by external factors, these two are largely achievable through our own efforts and are important elements that provide “meaning for our work” in the “happiness plateau” society described above.

“Human Resources Value Creation” aims to achieve our goal of becoming an organization where employees can experience growth and become their “best selves”. We will continue to promote diversity, equity and inclusion in the workplace, upgrade our training and personnel evaluation systems, and implement career and succession plans.

Further, “Management Value Creation” is a measure to enhance our sustainability, and it establishes KPIs for process reform, safety, quality, and supply chain improvements.

In our “Mission 2030” management plan, we will invest 540 billion yen over eight years, aim to achieve operating income of 100 billion yen and ROE of 15% by 2030. As non-financial indicators, we have set KPIs to reduce CO₂ emissions by 60%, from the current level of over 2 million tons per year to 1 million tons, and to promote diversity by increasing the percentage of females, foreign nationals and experienced employees in management positions to over 50%. The Sustainability Committee, newly established in April, will be responsible for the management of these targets and efforts.

I hope to achieve “Mission 2030” through the promotion of “Three Growth Strategies” of our business, human resources, and management value creation.

Strive to be our best self

I believe that each of us, as “creative people,” will strive to become the best version of ourselves in our respective fields, and as a result, create “Denka specialists” where we are the best at what we do in order to achieve “Mission 2030.” As part of my management efforts, I will create a strong foundation for our success through the creation of “Human Resource Value” and “Management Value.”

I would like to conclude this message by thanking our stakeholders in advance for their understanding and support of the Denka Group.



Talk with the President



Shu Yamaguchi

Independent researcher/author/public speaker

Toshio Imai

Representative Director &
President Denka Company Limited

[Facilitator]Mr. Takahiro Okabe, Sun Messe Co., Ltd./Sun Messe Research Institute

In April 2023, Denka Company Limited transformed "The Denka Value" (Corporate Philosophy), the Denka mission, and Denka's Code of Conduct into a new "Vision" to take Denka into the future. How can we use this vision to achieve sustainable growth? Shu Yamaguchi, an independent researcher, author, and public speaker whose book "Dawn of the New Type" suggests ways of thinking and behaving in the aftermath of COVID-19, was invited to speak with Toshio Imai, President and CEO of Denka, about the perspectives needed by corporations and Denka for the future.

Shu Yamaguchi Profile

Independent researcher/author/public speaker

Born in Tokyo in 1970. Independent researcher, author and public speaker. Involved in strategy formulation, cultural policy and organizational development at Dentsu, BCG, etc. His books include "The Future of Business," "Dawn of the New Type," "Why Do Global Elites Improve Their Aesthetics?" and "Philosophy as a Weapon." Graduated from the Department of Philosophy, Faculty of Letters, Keio University, and from the Graduate School of Letters.

Introduction

Okabe: I would like you to talk about three topics today. The first is Denka's "New Vision" formulated in April 2023, the second is the new management plan to drive that vision, and the third is about creating innovation.

Vision

First of all, I would like to ask President Imai about his thoughts on the new "Vision" and Mr. Yamaguchi about how corporations should seek to best utilize their vision.

Vision is a commodity, but also a truth. It is something that is necessary to create our individual stories.

Imai: Denka has always had the "Denka Mission and Code of Conduct" as our corporate philosophy, but in formulating our long-term management plan, we have completely overhauled these to create our "Vision" consisting of our "Core Value," "Purpose," and "Mission." At first glance, this vision may not seem all that different to that of other companies, and as Mr. Yamaguchi describes in his book, this may be seen as "commoditization." But because this vision is right, I think it is becoming a commodity. It is like saying love is true. I believe the most important thing is creating a connection between this vision and the company and each and every employee.

Vision penetration: True intentions and superficial intentions, short-term and long-term perspectives

Yamaguchi: There are what we can call our superficial intentions and true intentions and I believe that these two must come together in order to achieve true penetration of a vision. Superficial intentions tend to come to the fore in the case of a mission or value while true intentions can be seen on the front line and in personnel.

If you think about it in terms of sports, for example, there are athletes who have achieved great things and hold great influence. However, if they find themselves in a situation where it is absolutely necessary to make a substitution, they can do it without hesitation. I've heard it said before that a quality required by leaders is the ability to make these decisions.

I believe this kind of scenario occurs regularly in companies. Management tend to look at things over the long term. The president creates a vision and value because they feel these are necessary to survive. On the other hand, people working on the front line look at things over the short term. "I'm producing results this term and next." I'm producing results and I'm influential and popular. But I don't care about a vision. If you want to remove me from a project based on a vision, try it. Corporations cannot blame employees for taking such a stance. This is what makes trying to change corporate values or judgement criteria over the long term so difficult.

Talk with the President

Vision penetration: Specialty

Okabe: Changing the mindset of frontline workers and frontline leaders is likely to be a major factor. What do you think, President Imai?

Imai: We created this "core value" by listening to a wide range of opinions from our employees, ranging from our young to elder employees, and we ensured that they resonated with us. As for the "purpose" of our new vision, to "make the world a better place as specialists in chemistry", we are continuing the core concept of our previous management plan, "Denka Value-Up", to become a fusion of specialty businesses. I think of a specialist as someone who can do a job better than anyone else. How to instill this mentality in each and every employee and ensure they make it their own is a challenge that we continue to face.

Vision is also a management criterion

Yamaguchi: Specialty doesn't mean seeking scale or competing on cost. If your motivation is to be number one in terms of quantity, you will inevitably pander to the market, and when the market becomes tired of your product, you will quickly fall into decline. President Imai's desire to remain unique and become a specialist refers to becoming someone who cannot be replaced by anyone. I believe this purpose will become the standard and the starting point for how we compete. However, I feel that some people may have difficulty deciding where they should specialize. What are your thoughts on this, President Imai?

Imai: Everyone has different abilities and skill sets. I believe that everyone has something that they can do better than anyone else. It is my hope that person takes advantage of the abilities and skill set they have cultivated over their lifetime.

Yamaguchi: So, you have to find what you are good at. Surprisingly, people tend not to know what they are good at when everyone else around them can see it.

Imai: That is why communication is so important. To recognize and further refine our abilities. This concept is linked to our core value of "empathy". When this starts to gain momentum, I believe we will start to see both personal and corporate growth.

Vision Management Issues

Okabe: Could you talk about the key factors for B to B companies in effectively using their vision in management?

Yamaguchi: I don't see an essential difference between B to B and B to C, but in the case of an organization with a broad range of business areas, the vision has to be comprehensive and abstract, and there can be some conflict. However, a vision can not be motivating unless it is somewhat concrete. Therefore I believe it should be established at the business unit level, one level down, and similar to a strategy.

Imai: In the case of Denka, the scope of our business operations is relatively wide in relation to our size, but our value is all connected to and integrated by chemistry. Each business segment is niche and special in a way. However, I feel we have established a concrete purpose and core value.

Our Management Plan

OKABE: Now, let's move on to the topic of your management plan.

"Mission 2030" - The creation of value in business, human resources, and management

Imai: Our management plan, "Mission 2030" is divided into three strategies: business value creation, human resource value creation, and management value creation. Prior to the previous plan, our definition of specialty inferred an overwhelming presence and competitiveness. However, in our current plan, in an attempt to be more specific, we have made it our mission to make all of our businesses "3-star businesses", or in other words, business segments that satisfy the elements of being specialty, in line with megatrends, and sustainable, by 2030. The newly established Portfolio Transformation Committee will be responsible for looking at each of our business segments and making the decision to withdraw from or sell off segments that do not have a "three-star" story.

Yamaguchi: What you have just talked about reminds me of the Balanced Scorecard approach from the 1990s.

The Balanced Scorecard approach was a concept developed by Robert Kaplan, then a professor at Harvard Business School, and David Norton, a consultancy firm employee, in the early 1990s, which looked at management scoring not only in terms of financial value, but also in combination with several other factors. At the time, it was common for U.S. companies to temporarily increase their financial value by reducing labor costs, freezing R&D investment, and lowering manufacturing costs by lowering quality, thereby doubling their profits instantaneously and then selling them off. It was a harbinger of the vulture-fund like practices of the 2000s, which resulted in companies being ruined. Caplan and Norton



Talk with the President

stated that financial and non-financial indicators represent the past and future, and that making a profit in the short term is like pawning the future. They said that value is provided not only to shareholders, but also to customers, society, and employees, and that management is about scoring and managing the balance between how to give each of these growth opportunities. I believe it was a sound concept, very visionary and ahead of its time, but regrettably, it was an elaborate system that was difficult to manage. There were a lot of companies that tried to implement it, but with the IT and information gathering technologies of the time, it was too costly and time consuming, so the methodology died out. I feel that the concept of "business value, human resource value, and management value" raised by President Imai is identical to the concept of the Balanced Scorecard, made in the past by leading American management scholar.

Imai: No, I'm 20 years too late (laughs).

Yamaguchi: But if you think it through, you end up there.

Making more meaningful products than useful products / Things that are more important than KPIs

Okabe: In Japan, there is a culture and history of providing value to society, which some say is a three-way or even a four-way street. As a material manufacturer, Denka has developed a corporate culture that has provided value to society over many years.

Imai: We have included the phrase "make the world a better place" in our newly formulated purpose. This is a reflection of the voices of our young employees, but I feel this is shared by all our employees. As Mr. Yamaguchi states in his book, it is important that our work has purpose. Denka has always been in the pursuit of creating something of value to the world, but it also has to have meaning. That's what a three-star business should be.

Penetration of our KPIs

Okabe: Mr. Yamaguchi stated in his book that the significance of KPIs is more important than their numbers. Denka has just launched a management plan that has included management targets in its KPIs, do you have any advice for them?

Yamaguchi: I would suggest getting rid of the distinction between true intentions and superficial intention. At a Danish company I visited in the past, they worked without heating even when it was cold. The reason being that your CO₂ emissions will increase if you are using the air conditioning.

The company's CO₂ emissions were displayed in real time on the wall of the cafeteria and were visible to all employees to make them all more aware of whether they were achieving their targets. When I asked them if they weren't cold, they simply replied that if they were cold they could put on a sweater. I was amazed by their level of commitment.

Imai: This is a true representation of true intentions and superficial intentions coming together as one.

Yamaguchi: If they all make the decision to reduce CO₂ emissions, they will all stick to it. It is both essential and radical. This company's shared mindset about information and issues suggests one way of aligning true intentions with superficial intentions. There is a saying, "to know is to do." This means that we should act in

the way that we know. It was when I visited an industrial waste disposal company in Japan that I started to think about this issue of true and superficial intentions. The company's mission is to rid the world of the concept of trash, and when I visited their office they didn't have any trash cans. As a result, there were messages posted around the office telling employees to take their trash home with them. Indeed, it would be strange for a company that claims to eliminate the concept of trash around the world to have trash cans. This company had succeeded in aligning their objective with the details or otherwise, doing what they know. I think this is one of the keys to ensuring effective penetration of a vision throughout an organization. **Imai:** Exactly. True intentions and superficial intentions, "to know is to do". The biggest challenge is how to eliminate the difference.



Talk with the President

Engagement & Corporate Spirit

Yamaguchi: One of the things that surprised me was President Imai's story. It is ok for some things to become a commodity. The story talks about how a vision can become a commodity, just as love is true. When the management of an Internet company in the United States wanted to start an artificial intelligence business with the military, there was an internal petition against the project. Employees felt it went against their values and vision. Ultimately, they were able to secure a majority of signatures, and management formally apologized to the employees. I think it was their love for the company that drove them. When a company you love is trying to move in a direction that is contrary to its vision, it is because of the strength of the company that the employees choose to oppose it. I think they spoke out because they shared the values the company stood for and the people that identify with them, and felt that those values were in jeopardy. Corporate spirit is a very Japanese concept, but I feel it was definitely one of the driving forces that moved them.

Okabe: In terms of a sense of belonging to a company, I always believed this concept was stronger in Japan than in the United States.

Yamaguchi: The concept of engagement is still very weak in Japan. Whether you work for a particular company because you love it or because you are comfortable there is different.

Imai: Ultimately, the most important thing is that there is purpose to our work. It is important that people working on the front lines, leaders and everyone that you work with share that same purpose. To that end, I hope to propose a company-wide purpose and vision. I feel that is the real challenge.



■ Creating new businesses

Organizational reforms to take on new challenges

Okabe: The final topic I would like to discuss today. One challenge facing Denka is the creation of new businesses. President Imai, can you tell us your thoughts on the concept of “3-star businesses” that form the cornerstone of your vision, including the growth of the organic businesses?

Imai: Our core value of “initiative” will serve as the driving force behind new business development. In April 2022, we launched a new business development division to establish an integrated framework responsible for basic research, incubation, and product commercialization. Respective business divisions will be responsible for further research and development surrounding existing products and oversight of the plant research division. On the other hand, we have established a corporate venture capital fund with a company in Silicon Valley with the aim of investing in startups. Our challenge now is how we will go about driving new business development.

Multifaceted evaluation is the key

Yamaguchi: Business will continue to change with the times. I believe we have to make a very multifaceted assessment of what form business will take in the future. How this assessment is made will vary greatly depending on where you stand. For this reason, a supplier may view a product as unmarketable, however, there may actually be demand for such a product on the market. We need to generate a lot of ideas, create opportunities and sometimes wait for the right time.

Quantity is more important than quality

Imai: We need to be encouraging in order to generate a lot of ideas. After all, the best ideas are born when there is a large variety to choose from. But there will always be a lot of ideas that are not so great.

Yamaguchi: That is what “initiative” is all about. The more ideas you generate, the more you will have to throw out. From the standpoint of research into creativity and organizational theory, which are my research areas, you cannot create a winning idea without coming up with a certain amount of ideas to choose from. In saying that, the more ideas you generate, the more you will have to throw out. Ultimately, it is about whether the necessary framework is available as a financial strategy. The rest comes down to how quickly we can choose the winning ideas. Over the long term, this will require a great deal of resources. Therefore, in order to test a lot of ideas, it is also necessary to decide quickly which ideas to throw out.

Talk with the President

The challenges to generate new ideas (need for encouragement, financial impact, positive evaluation)

Yamaguchi: There is an online shopping site in the U.S. that has undergone rapid growth on the back of a considerable amount of failure. In the 20 plus years since it went public, it has launched nearly 100 large businesses, with one third failing in 3 to 4 years. In an economic climate with so much uncertainty, I believe it is impossible to hit every ball into the stands. When you have a globally diverse business, it's difficult to understand everything the customer wants. It is all about bringing a variety of products to market, testing them and enduring the failures while limiting the financial impact on your business. There will also be the challenge of creating a corporate culture and evaluation systems that tolerates failure to a certain degree. Japanese people, in particular, tend to view withdrawal, setbacks and failure in a very negative way. We tend to keep fighting a losing battle even though defeat is inevitable. Trying new things is what is important, and it is essential for the creation of new businesses to change our personnel and evaluation systems so that failure and setbacks do not carry such a negative connotation.

Imai: That's right. We must never evaluate everything solely on the basis of failure, because there are also many things that can be learned through failure. And I firmly believe that in order to do something new, there will be times where you will have to make the decision to abandon some ideas that should be abandoned, and this is the job and responsibility of top management.



Expectations & Message

Okabe: Finally, Mr. Yamaguchi, what are your expectations of Denka and do you have any final messages?

Yamaguchi: In today's world, where people are forced to work in jobs that they do not find rewarding or in companies that are focused on control and mistrust, I would like to convey to employees and stakeholders that it is a rare thing that the president of Denka is serious about the mission, purpose, and core value, and speaks from the heart rather than simply adopting to try to please everyone.

Imai: Denka has faced quality issues and experienced serious accidents, bringing inconvenience and distress to many people. We have established a third-party committee and are doing our best to investigate the causes and prevent similar incidents from occurring. Despite our long history, we are now facing a very serious problem. In light of this reality, it is precisely now that we need to adopt a management approach that is guided by our vision and rebuild the company.

Yamaguchi: I have had the opportunity to speak with Mr. Imai at executive training sessions at Denka, and I realize that he is accelerating investment in human capital. What struck me again today is the seriousness with which you are addressing it. The most important factor governing the success of initiatives such as vision and management strategy is the commitment of top management. Today, I have once again been reminded of the strength of Mr. Imai's commitment, and I feel strong that this initiative will produce great results.

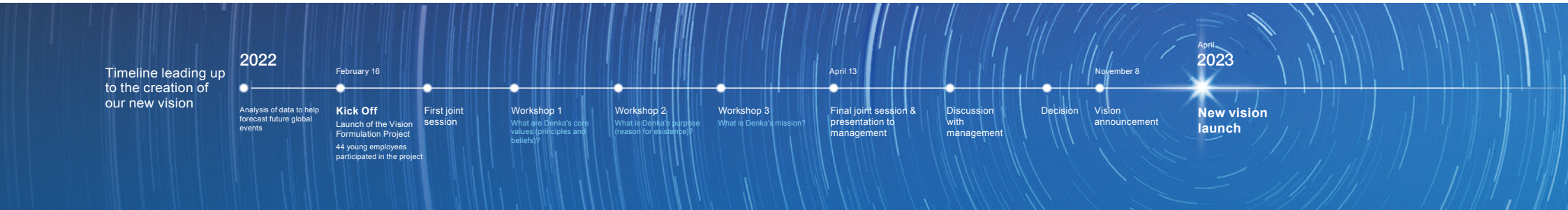
Imai: Thank you. I will do my best.



Date: June 29, 2023 Location: Denka Head Office

Vision project ~ How our vision was created ~

The Vision Project was a project involving our young employees, employees who will play a key role in building the future of Denka, who came together to develop our core value, purpose and mission, and to discuss the future of Denka. We have reviewed our corporate philosophy and formulated a new vision to serve as the basis for our Management plan "Mission 2030."



Vision Formulation Project

Project overview

44 young employees were divided into 3 groups to discuss the formulation of our core values, purpose and mission. After the first joint session, three workshops were held and the results of discussions were presented to management, including the President, at the final joint session. The results of this project came to fruition in the form of "Mission 2030", a management plan launched in fiscal 2023, and a vision that serves as the cornerstone of Denka's vision for the future.

Workshop 1

"What is Denka's core value?"

Discussion on the theme of "What is Denka's core value?" We listed a number of keywords, such as "chemistry," "future," "society and the environment," "sincerity and trust," "the power of chemistry," and "happiness".

Workshop 2

"What is Denka's purpose (reason for existence)?"

Individual groups discussed our purpose. "What is our reason for existence?" This led to a deeper discussion that transcended the workplace environment and hierarchy.

Workshop 3

What is Denka's mission (our goals)?"

We summarized the opinions about our mission put forth by each group. We had a lively discussion led by our leaders.

Final joint session

Presentation to management

Each group presented its core values, purpose, and mission to management and discussed them. Management then held discussions based on these presentations and Denka's vision was born.

The vision is not just symbolic words, but is interlinked with next management plan "Mission 2030" with the aim of instilling them in our daily activities, work practices and goal setting.

Our Vision

OUR VISION



What is your vision for yourself?

I want to systematize the idea of "carving out a new future" and push forward to reach my goals.



Yuta Takahashi
Tape Section,
Third Manufacturing Department,
Chiba Plant

I want to be a person who can sincerely face what is really needed in society.




Kensuke Irie
Digital Strategy & Innovation Department



I want to continue changing and become the person that I need to be, without stopping to think about whether or not I am growing.

Yuka Seki
Kagamida Plant, Gosen Office
Chemical Luminescence
Reagent Department,



I want us to be a company full of human resources whose jobs are driven by satisfaction and fun.

Takumi Maeda
Elastomer & Infrastructure Solutions
Omi Infrastructure Technology
Research Department



I want to make it possible for all kinds of people to encounter Denka products on a daily basis, and to spread Denka throughout the world.

Kaoru Osawa
Advanced Specialty Materials Department

As a Denka employee, I want to keep improving as the company grows.



Jessica Liu
Denka Taiwan

My vision is to become a specialist in risk hedging and a person who can provide the greatest peace of mind to all members of the Denka Group.




Mai Tomiyama
Akros Trading Co., Ltd.
Chemicals & Consumers
Insurance Service Section

I want to contribute to improving people's quality of life by flooding society with Denka products.




Yuka Murata
Life Innovation
New Business Exploration Department



I want us to create sustainable manufacturing plants and become a chemical manufacturer that remains globally valuable 100 years from now.

Shun Utagawa
Production Technology Department,
Omuta Plant













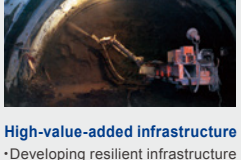



I want to stay ambitious. I want to face my own challenges from time to time and be a human resource that never goes stale.

Natsuki Okuno
Polymer Solutions,
Performance Plastics Department

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 and change in our portfolio over six eras.

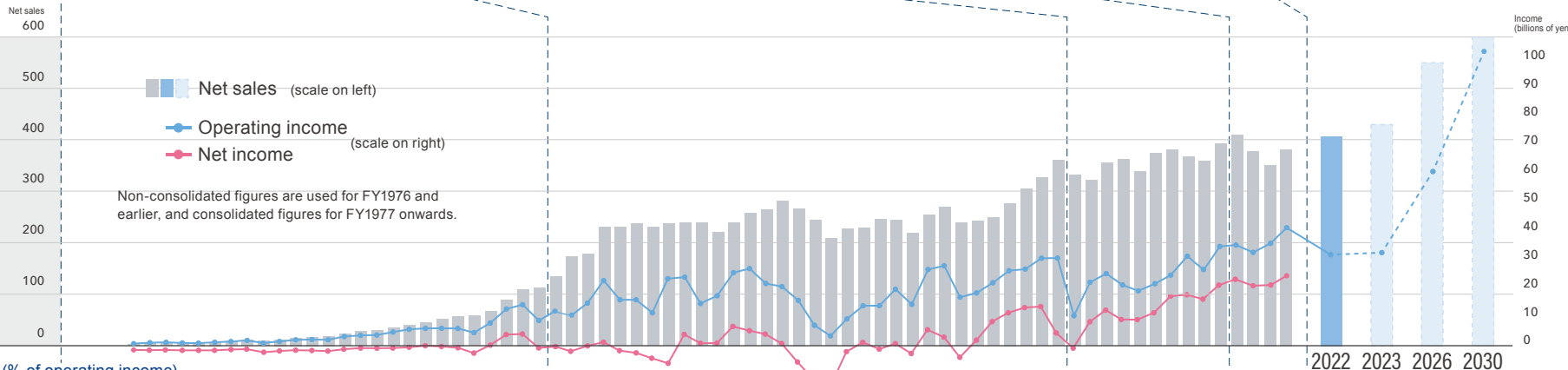
<p>Founding</p> <p>Initial Phase 1915-1944</p>	<p>Turning Point</p> <p>Core Business Expansion Phase 1945-1974</p>	<p>Turning Point</p> <p>Specialty Business Expansion Phase 1975-2006</p>	<p>Turning Point</p> <p>Making Strong Business Even Stronger 2007-2017 Denka100</p>	<p>Turning Point</p> <p>Becoming a Specialty-Fusion Company 2018-2022 Denka Value-Up</p>	<p>Make the world a better place as specialists in chemistry 2023-2030 Mission2030</p>
<p>Helping to resolve food supply problems</p>   <p>We continued to support Japan's agricultural sector through stable calcium cyanamide fertilizer production while overcoming a number of management crises that arose in the rapidly evolving era of World War I and II and a major economic recession. We also began operating our own hydroelectric power plants to secure a stable supply of electricity.</p>	<p>Technologies supporting high economic growth</p>   <p>Over the course of Japan's reconstruction in the aftermath of World War II and the subsequent period of high economic growth, we leveraged carbide acetylene chemistry and inorganic chemistry to supply a variety of products while delivering cement and special cement additives, with the aim of meeting the ever-growing demands of society.</p>	<p>Entry into the petrochemical and healthcare fields</p>   <p>To live up to ever higher expectations with regard to the functional improvement of plastics, we engaged in product development that rallied the Group's overall technological capabilities, ranging from precision material synthesis to resin processing and molding. Moreover, we strove to support the prevention and early diagnosis of a variety of infectious diseases via the supply of vaccines and diagnostic reagents, helping prevent the spread of such diseases.</p>	<p>Advancing into functional ceramics</p>   <p>Our ultra-high-temperature control technologies cultivated in the course of calcium carbide production, an activity that dates back to our founding, have enabled us to create a variety of new materials ranging from acetylene black to inorganic powders. Furthermore, our metal and polymer composite technologies allowed us to contribute to technological innovation in the field of thermal solutions for railways, automobiles, and communications devices.</p>	<p>Contributing to sustainable social development with the uniqueness that sets us apart</p>  <p>Environment and energy</p> <ul style="list-style-type: none"> • High-speed data communication (5G) • Shift to xEVs in automobiles • Renewable energy  <p>Healthcare</p> <ul style="list-style-type: none"> • Developing new preventive and diagnostic technologies • Innovative treatments  <p>High-value-added infrastructure</p> <ul style="list-style-type: none"> • Developing resilient infrastructure • Repairing aged facilities and lengthening building life 	<p>ICT & Energy</p> <p>[Policy] Create a better society with the supply of cutting-edge materials</p> <p>[Field] Next-generation high-speed telecommunications, xEV and renewable energy</p> <p>Healthcare</p> <p>[Policy] Improve quality of life for people around the world in areas of prevention, diagnosis, and treatment</p> <p>[Field] Preventive medicine, diagnosis and treatment</p> <p>Sustainable Living</p> <p>[Policy] Realize safe, secure, and comfortable daily lives</p> <p>[Field] Food, Infrastructure and Daily necessities</p> <p>Achievement of carbon neutrality</p>  <p>Portfolio reform including establishment of low-carbon acetylene chain</p> <p>Development and implementation of CO₂ capture, storage and utilization technologies</p> <p>Expansion of green energy by increasing hydroelectric power generation and establishing new solar power plant</p> <p>Sustainable cities and fulfilling daily lives</p>  <p>Promotion of circular economy for styrene-based packaging materials</p> <p>Establishment of CO₂ sequestration technology</p> <p>Environmental conservation and minimization of environmental footprint</p>  <p>Continuation of zero waste emissions</p> <p>Response to natural-related risks, such as biodiversity and water resource conservation, based on the Taskforce on Nature-related Financial Disclosures (TNFD)</p>

Social changes

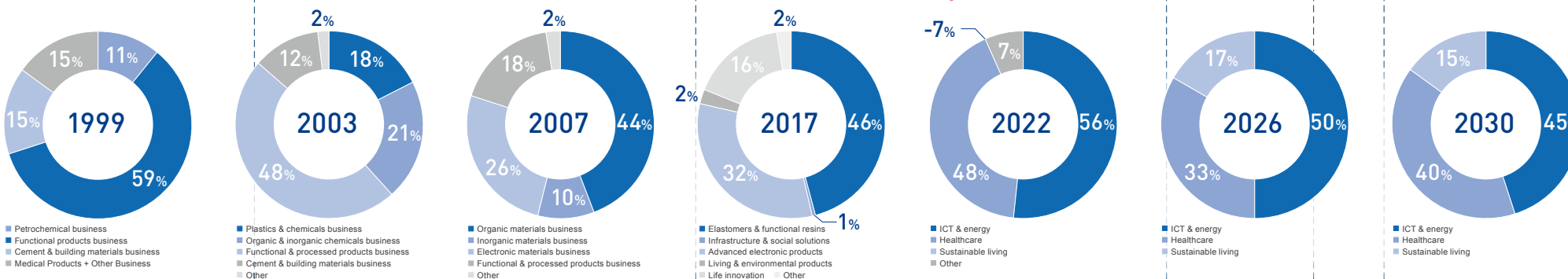
<p>Instability in global affairs</p>	<p>Period of high economic growth</p>	<p>The acceleration of globalization and IT</p>	<p>Toward a Sustainable Society</p>
<ul style="list-style-type: none"> ● - 1918: World War I ● 1929 -: The Great Depression ● 1939 -: World War II 	<ul style="list-style-type: none"> ● 1955: Japan starts construction on national expressways (Chuo Expressway, Tohoku Expressway, etc.) ● 1964: The Tokaido Shinkansen line starts operation ● 1971: The Nixon Shock 	<ul style="list-style-type: none"> ● 1973: The First Oil Crisis ● 1979: The Second Oil Crisis ● 1990: The Cold War ends, spread of the Internet ● 1991: The Japanese asset price bubble bursts ● 1993: The EU is formed 	<ul style="list-style-type: none"> ● 2008: Subprime Mortgage Crisis ● 2011: Great East Japan Earthquake ● 2015: Adoption of SDGs and the Paris Agreement ● 2019: Start of the COVID-19 pandemic ● 2022: Russian invasion of Ukraine ● Nov. 2022: Global population exceeds 8 billion ● Feb. 2023: Great Turkey-Syria Earthquake ● May 2023: G7 Hiroshima Summit ● May 2023: COVID-19 reclassified to "Class 5 Infectious Disease"



■ Trends in operating results (Unit: billions of yen)

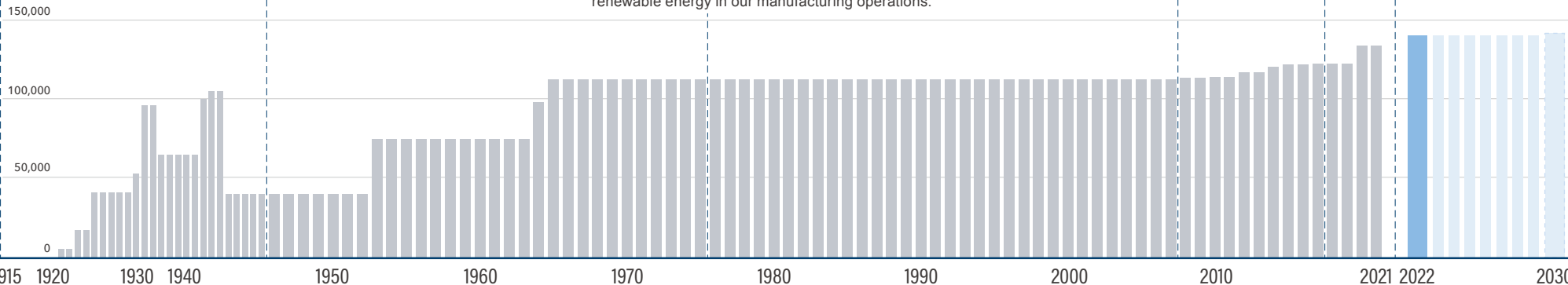


■ Trends in core businesses (% of operating income)



■ Trends in maximum output of hydroelectric power plants (including joint ventures) (Unit: kW)

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.


Our Value Creation Process

In response to the world we envision for the future, we are working to create corporate value and realize a sustainable society by leveraging our six management resources backed by over 100 years of history.


INPUT (6 management resources)




Human capital
International and diverse human resources
 • Number of employees (Consolidated) 6,406 (As of March 31, 2022)
 • FY2022 ratio of women in managerial positions 3.5%
 • FY2022 ratio of foreign national employees 16%




Intellectual capital
A broad range of essential technologies that capture megatrends
 • R&D bases 1 domestic and 3 overseas
 • FY2022 number of researchers 853
 • Global market share No. 1 over 13 products




Natural capital
Effective use of natural resources
 • FY2022 renewable energy ratio 32%
 • Hydroelectric power plants 17



Manufacturing capital
A production system that facilitates global competition
 • Production bases 13 domestic and 9 overseas
 • FY2022 capital expenditure ¥39.3 billion



Social capital
Partnerships with stakeholders
 • Partnership Building Declaration (https://denka_sustainability.disclosure.site/en/themes/758)



Financial capital
Financial base and investments for value creation
 • Total assets ¥592.2 billion
 • FY2022 strategic investment ¥15.6 billion

BUSINESS MODEL



OUTPUT

New Business Development

▶ Page 33-34

Electronics & Innovative Products

▶ Page 43-44

Life Innovation

▶ Page 45-46

Elastomer & Infrastructure Solutions

▶ Page 47-48

Polymer Solutions

▶ Page 49-50

OUTCOME (Contribution to Society)

Make the world a better place as specialists in chemistry

Sustainability/enhancement of corporate value

Operating income(FY2030)

¥ 100 billion or more
(operating income ration 15% or higher)

ROE (FY2030)

15% or higher

ROIC (FY2030)

10% or higher

Specialty, Megatrends, Sustainability,
100% Three-Star Businesses

Strategic Investment (Growth, Process, Environment, M&A)

8-year total: ¥ 360 billion

R&D expenses (including basic research of 50 billion yen)

8-year total: ¥ 180 billion

Contributing to a sustainable society



- 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)



- 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)



- 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)

SUSTAINABLE DEVELOPMENT GOALS

Important Management Issues (Materiality)

In formulating our Management Plan "Mission 2030," the Denka Group analyzed and evaluated ESG issues over the medium-to-long term up to 2030 and reviewed materiality.

1 ESG management promotion framework

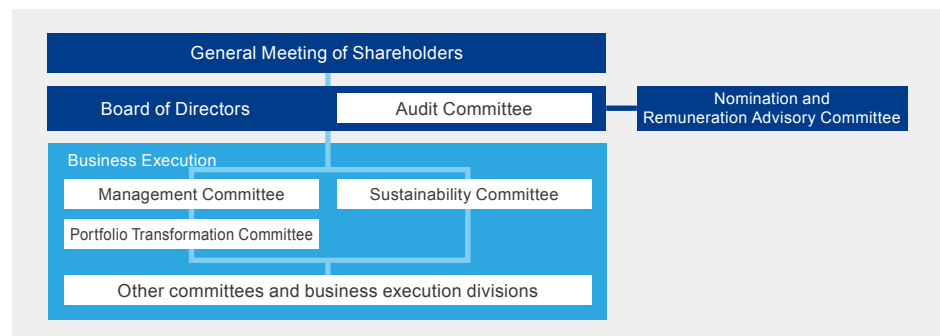
The Sustainability Committee (chaired by the President) has been established within the Executive Division to supervise the proactive and active efforts of the Executive Division to address issues related to sustainability (medium- to long-term sustainability). The committee meets five times a year with the President serving as chairperson, the Executive Officer in charge of the Corporate Planning Department as vice chairperson, and the Executive Officer in charge of the Management Department as a committee member, with Directors, excluding committee members, present as observers.

The committee deliberates and makes recommendations on sustainability initiatives implemented by the Executive Division and the achievement of non-financial target KPIs (Key Performance Indicators). In the implementation of deliberations and recommendations, from the perspective of ensuring transparency and fairness in corporate decision-making and the realization of effective corporate governance, the committee will consider the impact of risks and profit opportunities on our business activities, taking into account the level of consistency between our efforts to address sustainability issues and our management strategies and issues. The results of these deliberations will be reported to the Board of Directors.

The Portfolio Transformation Committee (chaired by the President) was established to further promote a change to our business portfolio based on three elements: specialty, megatrends, and sustainability. By incorporating indicators such as CO₂ emissions and labor productivity, we aim to achieve our target of 100% three-star businesses by 2030.



First Sustainability Committee Meeting (July 10, 2023)

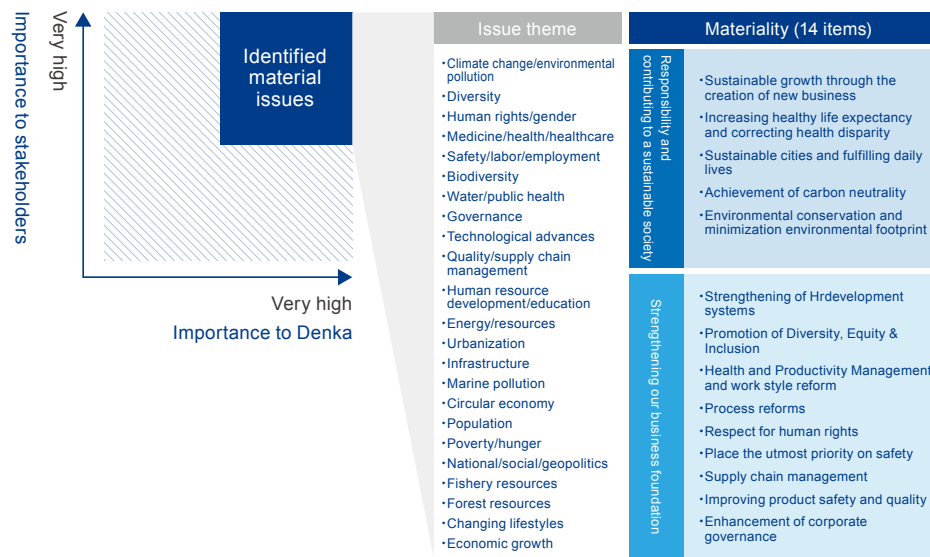


2 Materiality review process

- In formulating our Management Plan "Mission 2030," the Denka Group analyzed and evaluated ESG issues over the medium-to-long term for the 8 years leading up to 2030, and reviewed materiality.
- The new materiality serves to clarify management issues that are important in fulfilling our social responsibility in the "envisaged world" and "megatrends" analyzed at the time our "Mission 2030" management plan was formulated, and to connect them to individual business goals. With the support of external experts, we evaluated and analyzed the population (Note 2) list of social issues, selected them using the Materiality Map (Materiality Matrix) method, and through the process of formulating a management plan, we identified 14 materiality issues which were finalized by the Board of Directors meeting in November 2022.

(Note 2: Population of social issues: Survey items of ESG assessment organizations such as the World Economic Forum (WEF) Global Risk Report (2022 edition), Sustainable Development Goals (SDGs), the SASB Standard, and the CDP were analyzed and classified into 23 categories/333 items.)

Denka Group materiality analysis map



3 New material issues (important management issues)

Materiality (14 items)

- We have classified materiality issues into two categories, "responsibility and contributing to a sustainable society", in which we contribute to society through our business activities, and "strengthening our business foundation", which is a requirement for corporate survival and sustainable growth.
- Responsibility and contribution to a sustainable society (5 items) consists of items that the Denka Group should address in order to resolve social issues through its business operations, such as global warming countermeasures, healthcare, and sustainable cities and lifestyles.
- Strengthening our business foundation (9 items) is based on the Denka Group ESG Basic Policy, and issues related to human resources, a source of sustainable growth, and initiatives to fulfill social responsibilities through supply chain interaction.

Relationship between the Denka Group ESG Basic Policy and Materiality

The Denka Group ESG Basic Policy		Materiality (14 items)
E Promote climate change countermeasures	Responsibility and contribution to a sustainable society (5 items)	• Sustainable growth through the creation of new businesses
E Reduce environmental impact and preserve/protect biodiversity		• Increasing healthy life expectancy and correcting health disparity
E/S Sustainable economic growth and solving social issues		• Sustainable cities and fulfilling daily lives
S Respect for human rights		• Achievement of carbon neutrality
S/G Promote diversity and inclusion, nurture human resource development, and reform working styles		• Environmental conservation and minimization of environmental footprint
S Develop inclusive workplace environments with the utmost priority on safety	Strengthening our business foundation (9 items)	• Strengthening of HR development systems
S Participate in, contribute to, and build trust toward creating better local communities		• Promotion of Diversity, Equity & Inclusion
S Build relationships of trust with customers		• Increasing healthy life expectancy and correcting health disparity
G Fair corporate activities		• Process reforms
G Information disclosure and constructive dialogue with stakeholders		• Respect for human rights
G Risk management		• Place the utmost priority on safety
G Protect and manage our tangible and intangible assets		• Supply chain management
G Improve product safety and quality		• Improving product safety and quality
G Ensure the role of top management and the implementation of this policy		• Enhancement of corporate governance

Issue resolution for each materiality issue

Materiality	Issue resolution
Sustainable growth through the creation of new business creation	Creating new businesses by enhancing our core technologies, strong product development and open innovation
Increasing healthy life expectancy and correction of health disparity	Accelerating decarbonization and achieving carbon neutrality, mitigating the intensification of natural disasters caused by climate change, preventing the spread of emerging and re-emerging infectious diseases, and improving QOL
Sustainable cities and fulfilling daily lives	
Achieve of carbon neutrality	
Environmental conservation and minimization of environmental footprint	Address waste problems, conservation and restoring natural capital (biodiversity, etc.)
Strengthening of HR development systems	Nurturing future management personnel, building a company-wide education system and fostering a culture of self-learning
Promotion of Diversity, Equity & Inclusion	Fostering a workplace environment, framework, and culture in which people with diverse ideas can thrive
Health and Productivity Management and work style reform	Promote institutional reforms to create workplaces that will make people want to come back tomorrow
Process reforms	Transforming business models and organizations, improving productivity, and developing in-house digital talent
Respect for human rights	Absolute respect for human rights based on the UN Guiding Principles on Business and Human Rights and the UN Global Compact
Place the utmost priority on Safety	Creating absolute safety, establishing rules and a safe work environment
Supply chain management	Working with business partners to increase sustainable value in the supply chain
Improving product safety and quality	Provision of reliable products and services
Enhancement of corporate governance	Ensuring transparency and fairness based on high ethical standards and building an advanced and effective corporate governance system

4 Incorporating sustainability issues into management

Setting management strategies and KPIs

- Materiality is an essential element to address the risks and opportunities connected to issues of sustainability in our management base from a medium- to long-term perspective and aiming to realize our vision. It should form the cornerstone of our business activities.
- Under our new management plan, "Mission 2030," the entire Denka Group will work to resolve global issues, such as climate change and contribute to the realization of a sustainable society by establishing management strategies that are linked to materiality.
- The new materiality was reflected in each of the individual policies and measures in our management strategy, and KPIs were formulated with an awareness of visualizing progress management. We aim to achieve sustainable growth by resolving ESG issues and improving earnings, and accelerating this virtuous cycle.

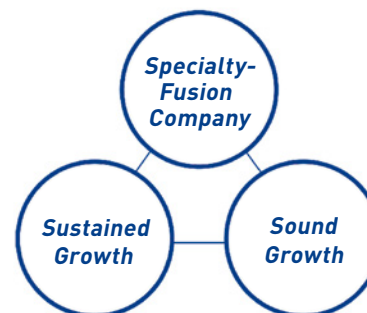
5 Future materiality reviews

In response to changes in sustainability issues, social needs, and stakeholder expectations, we will review materiality issues and non-financial indicators (KPI) as appropriate to reflect our business activities and their mutual impact on the economy, environment, and society in our management approach.

Review of the Previous Management Plan “Denka Value-Up” (FY2018–FY2022)

“Denka Value-Up”, a five-year management plan that began in FY2018, set forth three growth visions; “specialty-fusion company”, “sustained growth”, and “sound growth”, and promoted two growth strategies; “business portfolio shift” and “implementing innovative processes.” In the two years since FY2021, we have been working on the three “Value-Up” related to business, the environment, and human resources. However, we are still only halfway to becoming a specialty-fusion company, and we need to further shift our business portfolio. Our next management plan will require us to develop a growth strategy that goes a step further than “Denka Value-Up”.

Our Threefold Growth Vision



FY2021–

Vision

To be a company that is truly needed by society and is indispensable for the world and that Denka’s employees can be proud of.

Two growth strategies

Business portfolio shift

- Accelerate growth of specialty businesses



- Specialize our key operations
- Redefine the positioning of the commodity businesses

Introduction of innovative processes

- Productivity improvements through production, R&D, and business process reforms

Business Value-Up



Concentration in businesses in which we outperform others

Environment Value-Up



Achieve net zero greenhouse gas emissions by FY2050

Human Resources Value-Up



Become a company where all employees can feel growth

Business Value-Up

Trajectory of our business portfolio shift

	2018	2019	2020	2021	2022
Net sales	¥413.1 billion	¥380.8 billion	¥354.4 billion	¥384.8 billion	¥407.6 billion
Operating income	¥34.2 billion	¥31.6 billion	¥34.7 billion	¥40.1 billion	¥32.3 billion
Operating income ratio	8.3%	8.3%	9.8%	10.4%	7.9%
Specialization rate	64%	73%	97%	92%	99%

Shift of business portfolio

	2018	2019	2020	2021	2022
Growth policies	<ul style="list-style-type: none"> •Made entry into the bio stimulant market •Completed the Omii Innovation Hub 	<ul style="list-style-type: none"> •Decided on strategic investment in thermal conductive for automotive use (spherical silica, SN plates / ¥8.0 billion) •Capital participation in Plex Bio Co., Ltd. (genetic testing technology) 	<ul style="list-style-type: none"> •Significantly augmented silicon nitride production capacity •Acquired approval for the domestic manufacturing and marketing of rapid COVID-19 antigen diagnostic testing kits •Augmented influenza vaccine production capacity 	<ul style="list-style-type: none"> •Increased production of MS in Singapore •Decided to build a PS resin chemical recycling plant •Launch of “DELYTACT™”, G47A oncolytic virus as a regenerative medicine product for treatment of malignant glioma 	<ul style="list-style-type: none"> •New production facility for spherical alumina (Singapore, approximately quintupled production capacity) •Augmented spherical silica production facilities (Singapore, approximately 30% increase in production capacity) •Augmented production capacity of diagnostic reagents (Kagamida Plant, strategic investment of ¥11 billion)
Structural reforms			<ul style="list-style-type: none"> •Merged DENKA SEIKEN Co., Ltd. and consolidated group trading companies 	<ul style="list-style-type: none"> •Established Denka Astec Co., Ltd. (housing business) 	<ul style="list-style-type: none"> •Restructuring of carbide chain and withdrawal from cement business •Established a Corporate Venture Capital (CVC) fund •End of commissioned manufacturing of macromolecular sodium hyaluronate
Environmental strategies	<ul style="list-style-type: none"> •Withdrew from the FIRELEN and β-silicon nitride business 	<ul style="list-style-type: none"> •Withdrew from the EVA emulsion and polyvinyl acetate resin business 	<ul style="list-style-type: none"> •Declared carbon neutrality by 2050 •Started operation of new, high-efficiency gas turbine generators (Omii Plant, capital expenditure of ¥4.0 billion) 	<ul style="list-style-type: none"> •Brought the New Omigawa Hydroelectric Power Plant on line •Started joint research on next-generation technology to achieve carbon-negative concrete 	<ul style="list-style-type: none"> •Brought the New Himekawa No. 6 Hydroelectric Power Plant on line •Started operation of new, high-efficiency gas turbine generators (Chiba Plant, capital expenditure of ¥3.7 billion) •Developed sustainable plastic “PLATIECOP”, which contains natural eggshells

Business portfolio shift

Field	Issues
The environment and energy	New business (Icon, IntelliPlex, etc.) plan delays
Healthcare	Timely development of products for emerging and re-emerging infectious diseases
High-value-added infrastructure	Delays in overseas expansion and fundamental reform of low-profit products
Specialize our key operations	Response to natural disasters that hinder stable production of DPE (CR)
Redefine the positioning of the commodity businesses	Studying and implementing new business review themes

Implementing innovative processes

Field	Issues
Production	Technological innovation is needed due to an aging and declining workforce
R&D activities	Insufficient creation of new businesses and products
Business	Organizing and effectively utilizing vast amounts of data, including production and R&D (data lakes, etc.)

Environment Value-Up

Field	Achievements	Issues
Carbon neutrality	Announcing the net zero target and roadmap	Review of each CCUS process
	Declaration of support for TCFD and disclosure of information	Review of CO ₂ emission products
Energy-saving and renewable energy initiatives	Operation of New Omigawa, New Himekawa No. 6 Hydroelectric Power Plant, and high-efficiency gas turbines	Practical application of carbon cement additive LEAF®
		Shift to non-carbide manufacturing methods and fuels with lower environmental impact
Chemical recycling	Began construction of a plant for implementing PS resin chemical recycling	Consortium establishment and implementation of PS chemical recycling society

Human resources Value-Up

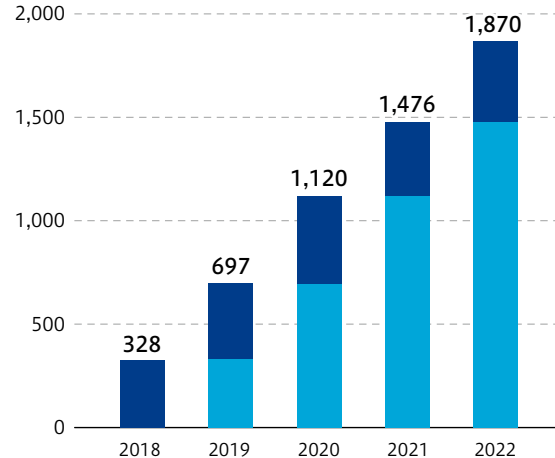
Field	Achievements	Issues
Secure and nurture specialists	Established of new personnel evaluation system	Improvement and review of human resource evaluation systems
	Commencement of succession plans (officers and general managers)	Strengthening human resource development systems (expanding succession plans, etc.)
	Revision of the wage structure for M-category employees	
Diversity promotion	Increase the number of female managerial personnel	Lack of female managerial personal and global human resources
	Introduction of paid nursing care leave and telecommuting	Further reduction of dirty, dangerous, and physically demanding workplaces
Health and productivity management initiatives	Declaration of health and productivity management and KPIs	Strengthening mental and physical health care (prevention and response)

Investment and shareholder returns

Capex, investment and financing

As a result of aggressive investment and financing in order to realize the goals of the previous management plan “Denka Value-Up”, the cumulative capital investment for the five-year period from FY2018 to FY2022 was ¥187 billion.

(hundred million yen)



Shareholder Returns

During the period of the previous management plan “Denka Value-Up” (FY2018–FY2022), we returned funds to shareholders in line with our policy of a total return ratio of 50%.

		FY2018 results	FY2019 results	FY2020 results	FY2021 results	FY2022 results	FY2023 full-year forecast
Net income	(hundred million yen)	250	227	228	260	128	220
Dividends per share	(yen/share)	120.0	125.0	125.0	145.0	100.0	120.0 (interim: 60.0, year-end: 60.0)
Total dividends	(hundred million yen)	105	108	108	125	86	104
Dividend payout ratio		42%	48%	47%	48%	68%	47%
Shares repurchased	(hundred million yen)	21	-	-	-	-	-
Total shareholder returns	(hundred million yen)	126	108	108	125	86	104
Total shareholder return ratio		50%	48%	47%	48%	68%	47%
Depreciation and amortization	(hundred million yen)	229	225	229	239	270	275
Capex, investment and financing	(hundred million yen)	328	369	423	356	394	470
Remaining interest-bearing debt	(hundred million yen)	1,121	1,343	1,382	1,370	1,697	1,770
Net DE ratio		0.40×	0.42×	0.42×	0.40×	0.50×	0.51×
ROIC		7.8%	6.6%	6.8%	7.3%	6.7%	5.6%
ROE		10.3%	9.1%	8.8%	9.4%	4.4%	7.3%

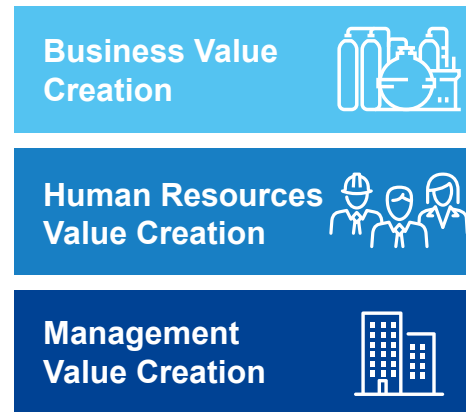
Management Plan "Mission 2030"

"Mission 2030" is our new management plan that aims to help us achieve our new vision by 2030. We will work to improve corporate value through three growth strategies: business value creation, human resources value creation, and management value creation. To create business value, we aim to make all of Denka's businesses "three-star businesses" that fulfill the three elements of Specialty, Megatrends and Sustainability.

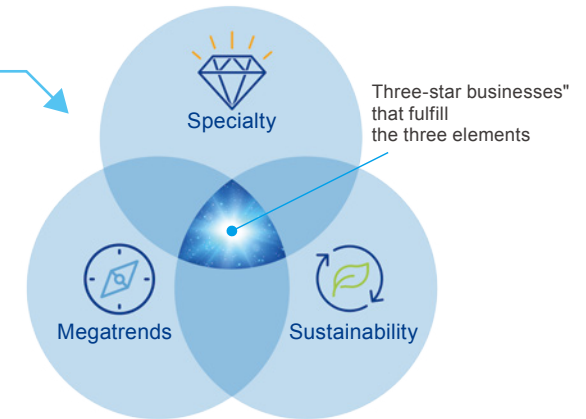
MISSION

By 2030, we will increase the value of our human resources and management, and we will focus on creating business value that combines the three elements of specialty, megatrends, and sustainability.

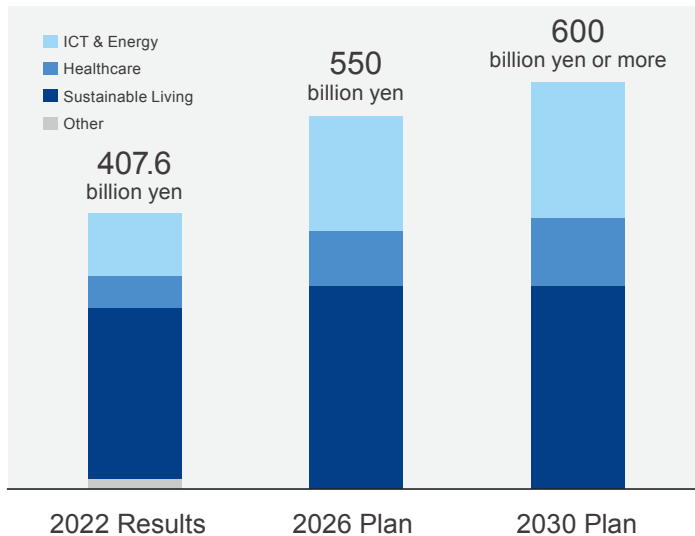
<Three Growth Strategies>



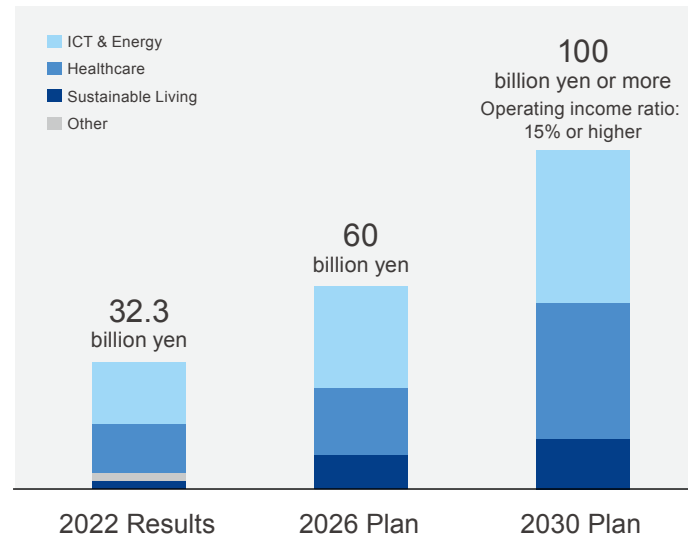
<Three Elements>



Net sales



Operating income



Strategic investment over 8 years
(Growth, Process, Environment, M&A)

¥ 360 billion

R&D spending
(Including basic research 50 billion yen)

¥ 180 billion

Business value creation

With regard to business value creation, we will focus on ICT&Energy, Healthcare, and Sustainable Living, the three areas of focus derived from the envisioned future world and megatrends. By 2030, we aim to have 100% of our businesses be “3-star businesses” that incorporate the three elements of specialty, megatrends, and sustainability. For businesses that are difficult to convert into “3-star businesses,” we will proceed with portfolio shifts, including divestment and withdrawal. At the same time, we will pursue sustainability by investing a total of ¥85 billion in the environment over eight years with the aim of contributing to the earth and further enhancing the social value of our company.

Three areas of focus

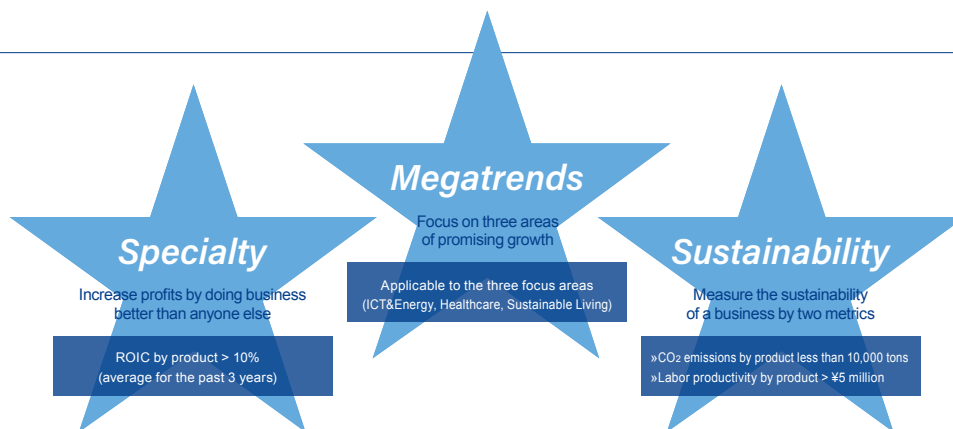
ICT & Energy 2030 operating income target: ¥45 billion	Megatrends	Shift to renewable energy, mobility revolution Expanded demand for semiconductors and devices
	Policy	Create a better society with the supply of cutting-edge materials
Healthcare 2030 operating income target: ¥40 billion	Megatrends	Sophisticated medical needs Innovative medical technology
	Policy	Improve the quality of life of people around the world in areas of prevention, diagnosis, and treatment
Sustainable Living 2030 operating income target: ¥15 billion	Megatrends	Foods and water resources depletion Increased infrastructure demand
	Policy	Realize safe, secure, and comfortable daily lives

Pursuing sustainability

Policy	Achievement of carbon neutrality	Measures	<ul style="list-style-type: none"> Portfolio reform including establishment of low-carbon acetylene chain Development and implementation of CO2 capture, storage and utilization technologies Expansion of green energy by increasing hydroelectric power generation and establishing new solar power plant
	Sustainable cities and fulfilling daily lives		<ul style="list-style-type: none"> Promotion of circular economy for styrene-based packaging materials Establishment of CO2 sequestration technology
	Environmental conservation and minimization of environmental footprint		<ul style="list-style-type: none"> Continuation of zero waste emissions Response to nature-related risks, such as biodiversity and water resource conservation, based on the Task Force on Nature-related Financial Disclosures (TNFD)

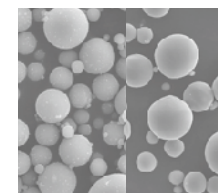
What is a 3-star business?

Businesses incorporating the three elements of specialty, megatrends, and sustainability. A star is given when each criteria is met.



Representative 3-star products

Spherical silica/ spherical alumina



Rapid antigen diagnostic testing kits for COVID-19



Transparent resin "CLEAREN[®]"



Example of use for PET bottle labels

Human Resources Value Creation

We will invest in human resources and undertake system reforms with the aim of being a company that enables each individual employee to feel self-realization and growth.

Policy	Strategy
Strengthening of human resources development systems	Cultivation of future executive manager candidates, building of company-wide, integrated education framework, and fostering of a selfdirected learning culture
Promotion of Diversity, Equity & Inclusion	Fostering of workplace environments, systems, and culture that empowers individuals with diverse ways of thinking to demonstrate their capabilities
Health and Productivity Management and work style reform	Promotion of system reforms to create workplaces that employees will “want to come to work again tomorrow”

Management Value Creation

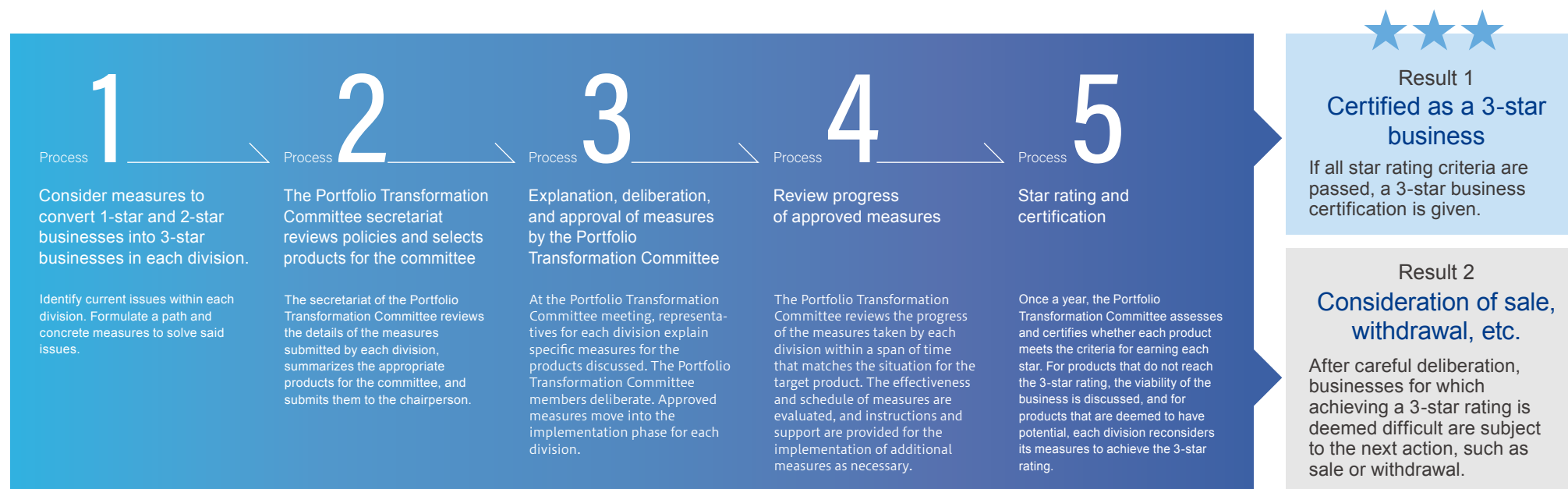
From the perspective of ESG management, we will work to strengthen our management foundation, on which Denka’s corporate survival is premised.

Policy	Strategy
Process reforms	Transformation of business model and organization, productivity improvements, and development of in-house digital workforce
Respect for human rights	Establishment of human rights policy and thorough respect for human rights based on the United Nations Guiding Principles on Business and Human Rights and the Global Compact
Place the Utmost Priority on Safety	Group-wide efforts toward essential safety, establishment of rules, and promotion of safe workplace environments
Supply chain management	Sustained improvement of added value across entire supply chain
Product safety	Contribution to sustained growth of society and the environment through the provision of trusted products and services
Enhancement of corporate governance	Building of highly sophisticated and effective corporate governance structure that ensures transparency and fairness based on high ethical standards

Portfolio Transformation Committee

The Portfolio Transformation Committee, chaired by the President, was launched in FY2023 in order to increase the number of 3-star businesses to 100%.

We will periodically review and confirm the policies of our 1- and 2-star business.



Sustainability Committee

►P21 ESG management promotion framework

The Sustainability Committee was launched in July 2023 to manage the progress of non-financial targets set forth in the management plan “Mission 2030”. The committee was established as an organization within the Executive Division. It is chaired by the President, and the committee members are made up of the officers in charge of each management division. Directors also participate as observers. The committee meets in April, July, October, January, and March to report to the Board of Directors and make recommendations.

- Management divisions: Report on the status of activities and non-financial KPI progress twice a year
- Business divisions: Report on responses to risks and opportunities related to sustainability issues yearly in March

Major Financial and Non-Financial Data (2030 Targets and FY2022 Results)

Financial

2030 KPI Targets	Operating income	¥ 100 billion or more (FY2022: ¥32.3 billion)	Operating income ratio	15% or higher (FY2022: 7.9%)
	ROE	15% or higher (FY2022: 4.4%)	ROIC	10% or higher (FY2022: 6.7%)
	Approved investment amount	8 years from FY2023 to FY2030: ¥ 540 billion (FY2022: ¥47 billion)	Total shareholder return ratio	50% level (FY2022: 68%)

Business value creation

Policy	Non-financial KPIs	FY2022 results	2030 Targets
Achievement of carbon neutrality	Reduction of group-wide CO ₂ emissions	2.04 million t-CO ₂	60% reduction compared to FY2013 (1 million tons)
	Maximizing renewable energy generation	146MW	150MW
	Renewable energy + electricity mix with non-fossil fuel certificates	33%	76%
	Group-wide promotion of energy conservation	101% YoY	Continue 1% reduction from previous year
Sustainable cities and fulfilling daily lives	Contribute to decarbonization and a recycling-oriented society through the chemical recycling of styrene resins	<ul style="list-style-type: none"> • Began construction of PS resin chemical recycling plant • Started building a demonstration project with Ichihara City 	Establishment of social implementation consortium for PS chemical recycling
Environmental conservation and minimization of environmental footprint	Continue zero waste emissions	Continue zero waste emissions	Continue zero waste emissions
	Address biodiversity, water and other nature-related risks in accordance with TNFD	<ul style="list-style-type: none"> • Formulated biodiversity assessment plan for main office • Conducted preliminary survey using Omi Plant as a model 	Implement a response plan for biodiversity conservation in compliance with TNFD

Human Resources Value Creation

Policy	Non-financial KPIs	FY2022 results	2030 Targets
Strengthening of HR development systems	Average training costs (per person)	¥ 66 thousand/person/year	Double amount compared to FY2021
Promotion of diversity, equity & inclusion	Ratio of female/foreign/experienced hires in management positions	19%	50%
	Percentage of males taking parental leave	44%	85%
	Percentage of mid-career hires	47%	50%
Health and productivity management and work style reform	Improve employee engagement	The third employee awareness survey conducted	Visualizing engagement and making ongoing improvements
	Overtime hours	160 hours/person/year	30 hours or less/person/year
	Taking annual paid leave	80%	100%
	Introduction of shift breakers	7persons recruited as shift breakers	
	Working-from-home rate	27%	2 days/week
	Employees within appropriate weight limits	65%	80%
	Employees with high stress levels	14%	10% or less
	Employees with good exercise habits	33%	40%
	Smokers	27%	12% or less

Management Value Creation

Policy	Non-financial KPIs	FY2022 results	2030 Targets
Process reforms	Investment in process reforms	¥ 2.7 billion	¥ 50 billion
Place the utmost priority on safety	Occupational accident frequency rate ※Denka (including partner companies) and consolidated subsidiaries with domestic or overseas offices	0.7	The Company and affiliates 0.2 or less
	Online training for occupational safety and security	77%	All group employees
Respect for human rights	Establishment of human rights policy and through respect for human rights based on the United Nations Guiding Principles on Business and Human Rights and the Global Compact	Signed the UNGC (June,2023)	On-going
Supply chain management	BCP measures based on raw material risk assessment	Conducted a risk assessment regarding raw material to secure BCP, and analyzed the result. The number of raw materials categorized in "high risk" group was reduced by 30%(October 2022 vs April 2020)	Zero
	Procurement questionnaire implementation rate	Conducted SAQ for upstream suppliers	Conduct questionnaire for suppliers covering 90% of total procurement cost
	Acquisition of high ESG rating	Ecovadis Bronze	Ecovadis Gold
Improving product safety and quality	Integration of quality control systems, raising of control standards	Zero	Zero
Enhancement of corporate governance	Ongoing improvement of effectiveness of Board of Directors	—	—
	Thorough risk management across the global Group	Zero	Zero
	Introduction of compliance training	Implementation E-learning about standards of conducts for all Group employees Attendance rate : About 80%	All group employees
	Appropriate operation of the whistle-blowing system and disclosure of responses to whistle-blowing	Disclose FY2021 results on ESG information site	Disclosure on ESG information sites
	Dissemination of Denka's Vision and management plan	<ul style="list-style-type: none"> Published the video about Vision & the management plan Considering internal penetration measures 	Implementation of measures to ensure dissemination of corporate vision and management plan
	Group-wide establishment of internal control framework	<ul style="list-style-type: none"> Completed : 5 companies On-going : 8 companies 	Establish internal control framework for all Group companies

Financial Strategy



Rimiru Hayashida

Managing Executive Officer,
Chief Financial Strategy Officer

Message from the Accounting & Finance Officer

Supporting the growth strategy of our management plan, "Mission 2030" with a financial strategy that balances offensive and defensive measures

We recognize that the role of the Finance Department is to support the three growth strategies in our management plan, "Mission 2030". In addition to strategic investments and investments designed to provide sustainability, portfolio transformation also requires financial backing, and we intend to play a role in balancing offensive and defensive measures. The Financial Department was established when formulating our management plan, "Mission 2030", and we thoroughly discussed the "optimal capital structure" (financial discipline), which is the basis for considering both growth strategy and financial security. We are now equipped to respond flexibly to possible changes in the financial and business environment. In terms of business operations and evaluation, we aim to pursue not only profit, but also return on capital that combines profitability with capital efficiency. ROIC management was introduced to promote awareness of how to efficiently link invested capital to earnings at the level of individual businesses and operations. We aim to increase corporate value by improving ROIC and ROE.

2030 KPI Targets				
Financial	Operating income	100 billion yen or more (FY2022: 32.3 billion yen)	Operating income ratio	15% or higher (FY2018 - FY2022 average 8.9%)
	ROE	15% or higher (FY2018 - FY2022 average 8.4%)	ROIC	10% or higher (FY2018 - FY2022 average 7.0%)
	Approved investment amount	8 years from FY2023 to FY2030: ¥ 540 billion (5 years from FY2018 to FY2022: ¥221.7 billion)	Total shareholder return ratio	50% level (FY2018 to FY2022 total 50.6%)

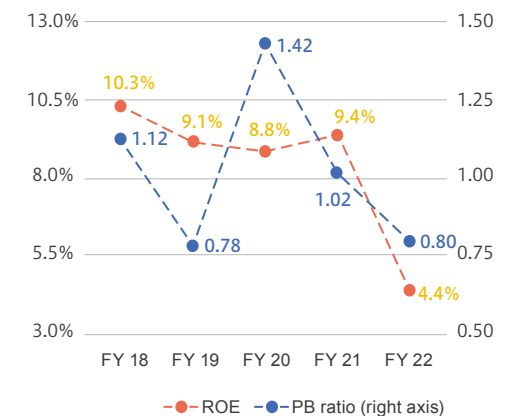
Review of the previous Management Plan "Denka Value-Up"

Under our previous management plan, "Denka Value-Up," launched in 2018, we promoted a business portfolio shift and continued the steady growth of our specialty business. As a result, in fiscal 2021, we achieved operating income of 40.1 billion yen, exceeding 40 billion yen for the first time since our founding. However, in fiscal 2022, the final year of the "Denka Value-Up" plan, operating income fell 19.4% year on year to 32.3 billion yen due to the impact of the global economic slowdown, and we recognize that our shift to specialty businesses is still only half complete.

In terms of return on capital, the average return on equity (ROE) for the four years from fiscal 2018 to fiscal 2021 was 9.4%, which exceeded our estimated cost of shareholders' equity*. P/B ratio was also generally above 1 times except in fiscal 2019, when stock prices plunged due to the impact of COVID-19.

However, in fiscal 2022, we recorded a temporary extraordinary loss due to the withdrawal from the cement business and the restructuring of the carbide chain, resulting in a decline in ROE to 4.4% and a P/B ratio (price-to-book ratio) of less than 1 times as of the end of fiscal 2022. Therefore, we believe it is necessary to continue working to improve ROE.

Changes in ROE and P/B ratio over the period of the previous management plan



*Calculated using the Capital Asset Pricing Model (CAPM), commonly used in practice. We regularly obtain information on the cost of capital from several outside experts to confirm ranges.

Enhancing corporate value by improving return on capital through our management plan "Mission 2030"

In our management plan, "Mission 2030" launched in April 2023, we set ROE and ROIC (return on invested capital) as KPIs to further promote cost-conscious management and enhance corporate value. Our aim is to increase ROE to 15% or higher and ROIC to 10% or higher by fiscal 2030. In addition to enhancing profitability and capital efficiency and transforming our portfolio by applying ROIC as an indicator to evaluate business performance, we aim to pursue an optimal capital structure and improve ROE by utilizing financial leverage under financial discipline that is conscious of ratings.

In creating business value, which is one of our three growth strategies, we aim to make all of Denka's businesses "3-star businesses" that satisfy the three elements of specialty, megatrends and sustainability. Of these three elements, we defined specialty as ROIC > 10% (average for the past three years). The Portfolio Transformation Committee (P. 28) will deliberate on measures to achieve 3-star status, and will be responsible for determining which business segments to sell off or withdraw from, and transforming our portfolio in order to achieve essential improvement in ROE over the medium- to long- term.

In addition, we will break down ROIC into its components to understand the issues facing individual products and promote initiatives to improve the return on capital for each product. In fiscal 2023, the first year of the introduction of ROIC-based management, we will focus on improving the cash conversion cycle (CCC) and spreading an awareness of capital cost and return on capital within the company. KPIs related to ROIC have been factored into the organizational goals of each department head, and each employee's individual goals will be reflected in evaluations to enhance performance.

We will also actively pursue ESG management (ESG Management P 51-80) and engage in responsible dialogue with our stakeholders (Stakeholders P 81-82).

Appropriate cash allocation to achieve management plan "Mission 2030" targets

Over the total eight year period of our management plan, "Mission 2030", we plan to invest 570 billion yen, consisting of 360 billion yen in strategic investments and 210 billion yen in general investments. Strategic investments include growth investments and mergers and acquisitions in 3 focus areas, as well as 85 billion yen in environmental investments aimed at achieving carbon neutrality and creating more sustainable cities and livelihoods. We believe that the firm implementation of these investments will lead to a sustainable increase in corporate value. We will also utilize debt from the viewpoint of optimal capital structure to raise any necessary capital.

During the period of the previous management plan, "Denka Value-Up" (FY 2018 to FY 2022), we returned funds in line with our shareholder return policy with a total return ratio of 50%. We will continue our policy of a total return ratio of 50% in our new management plan, "Mission 2030".

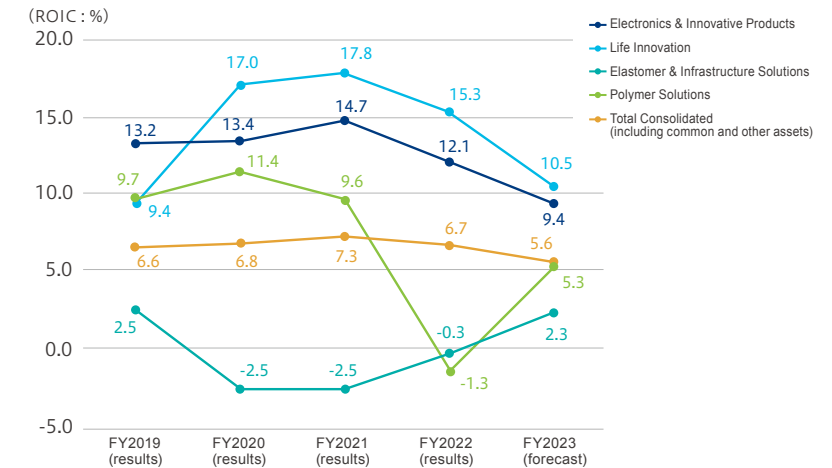
Sustainable Finance

Denka is also looking to raise funds through ESG and SDGs initiatives. In the last three years (FY 2020 to FY 2022), approximately 60% of our long-term funds were procured through sustainable finance, which we will continue to actively utilize in the future.

Financial Targets of our Management Plan, "Mission 2030"

	FY2018 – FY2022 average	FY2030	Measures
ROE	8.4%	15% or higher	<ul style="list-style-type: none"> • Improvement of profitability and efficiency with creation of three types of value • Selection and concentration of businesses through evaluation of ROIC • Pursuit of optimal capital structure (use of financial leveraging)
ROIC	7.0%	10% or higher	

Trends in ROIC by business division



Cash allocation

(hundred millions of yen)			(hundred millions of yen)			
Total Cash Inflow (annual average)			Total Cash Outflow (annual average)			
	Denka Value-Up 5 years	Mission2030 8 years		Denka Value-Up 5 years	Mission2030 8 years	
Operating CF	1,717 (343)	6,500 (813)	Cash flow from investing activities	Strategic	700 (140)	3,600 (450)
Sale of assets	121	100		General	1,093 (219)	2,100 (263)
Loans	554	800		Sub-total	1,793 (359)	5,700 (713)
Total	2,392 (478)	7,400 (925)	Shareholder Returns (Total shareholder return ratio: 50% level)	599 (120)	1,700 (213)	
			Total	2,392 (478)	7,400 (925)	

Innovation

•Research & development: <https://www.denka.co.jp/rd/>



Message from the Chief Scientific Officer (CSO)

The management plan “Mission 2030” has finally begun. Our mission is to contribute to the transformation of Denka’s portfolio through the development of new businesses, fulfilling Denka needs with 3-star businesses and products that have the three elements of specialty, megatrends, and sustainability. In addition to our conventional open innovation activities, we established a Corporate Venture Capital (CVC) fund in the form of a two-party partnership with Pegasus to strengthen collaboration with startups around the world. Keeping DX promotion in mind, we are also aiming to develop into fields and areas where Denka can generate innovation.

New business development is about the creation of both business value and human resource value, and so we will also focus on nurturing world-class human resources with a wide range of technological capabilities, commercialization ideas, management sense, diversity, equity, and inclusion sensitivity. The results of these activities will lead to the creation of management value.

In addition, in order to contribute to the development of new businesses and promote the organic growth of each business as a corporate function, the R&D Management Department, Intellectual Property Department, and Analysis Technology Research Department will promote activities to make the most of Denka’s assets, including the development of synergies within and outside the company.

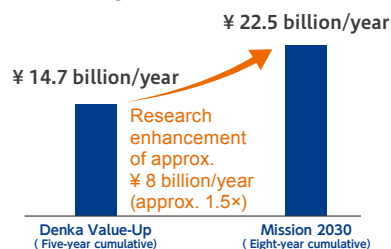
Nobuyuki Yoshino

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

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.

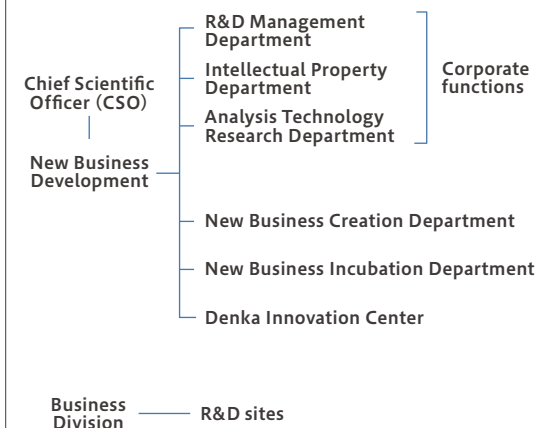
Strategy for the “Mission 2030” management plan



Research and development spending

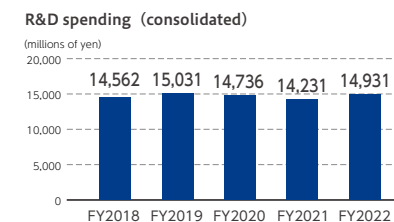
Denka Value-Up		Mission 2030	
Five-year cumulative	Annual average	Eight-year cumulative	Annual average
¥73.6 billion	¥14.7 billion/year	¥180 billion	¥22.5 billion/year

Promotion system



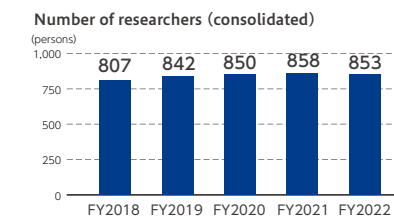
R&D spending (consolidated)

The R&D expenditure for the “Denka Value-Up” management plan from FY2018 to FY2022 was ¥14.7 billion/year on average, due in part to the impact of COVID-19, and there were no significant changes over the five-year period.



Number of researchers (consolidated)

The number of researchers averaged 842 from FY2018 to FY2022, with an increase of about 50 over the five-year period.



Activities Related to Intellectual Property

1 Policy

Denka will advance the acquisition of intellectual property, improve the value of intangible assets of the Group and utilize intellectual property information in decision-making situations (IP landscape*) in creating new businesses with the three elements of Specialty, Megatrends, and Sustainability through business portfolio transformation, and in developing new markets through co-creation with other companies.

*An integrated analysis of a company's and its peers' intellectual property and markets. The information gleaned from this analysis can be used for the advantage of management strategies.

2 Intellectual Property Approach to Business Value Creation

During the period of the previous management plan "Denka Value-Up" (2018–2022), Denka increased its overseas patent ratio in line with the globalization of its operations and proceeded to build the intellectual property portfolio necessary for each business.

Furthermore, to contribute to the transformation of its business portfolio, Denka introduced IP landscape activities in 2021 to make more efficient use of acquired intellectual assets.

To achieve the goals of the management plan "Mission 2030", Denka will strengthen its management foundation and promote the following intellectual property activities to contribute to business value creation.

- ① Acquiring and utilizing intangible assets to promote business
- ② Providing information useful for selecting collaborative partners and M&A candidates
- ③ Implementing IP landscape activities for new business creation

3 Status of intellectual property holdings

Figure 1 shows the number and ratio of patents held at Denka in Japan and overseas. Overseas patents accounted for 55.7% of Denka's patents at the end of March 2022 (48.5% at the end of March 2017).

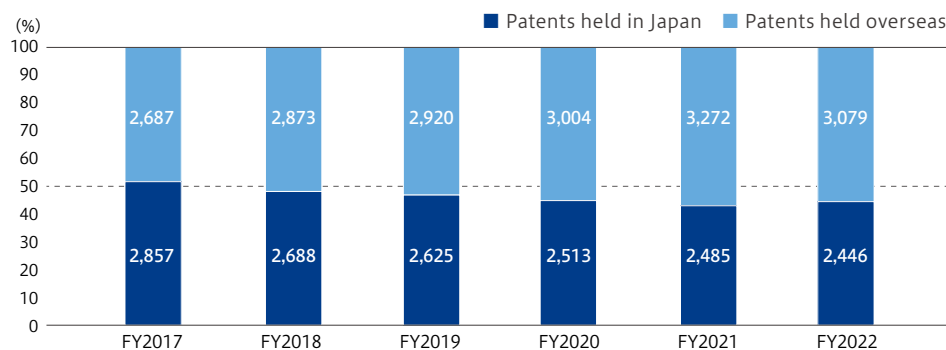


Figure 1. Number and ratio of domestic and overseas patents held at Denka

Figure 2 shows the number of domestic and overseas patents held in each business. The Elastomers & Infrastructure Solutions Department has a high percentage of domestic patents because it operates primarily in the domestic market for infrastructure-related businesses. On the other hand, the Electronics & Innovative Products and Life Innovation Departments are expanding their business globally and are thus have an increasing ratio of overseas patents.

Additionally, the number of overseas patents we hold for research that is expected to yield results from a long-term perspective, such as basic research and next-generation research themes, is increasing in anticipation of future markets. Going forward, we will use our IP landscape initiatives to differentiate ourselves by utilizing intangible assets and actively seek partners who can take advantage of Denka's strengths, with the aim of creating new markets and expanding existing ones.

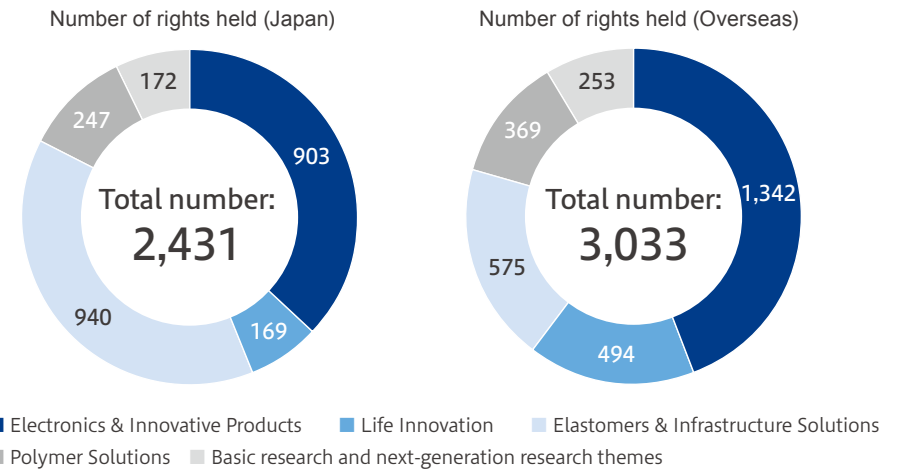


Figure 2. Number of domestic and overseas patents held by business segment

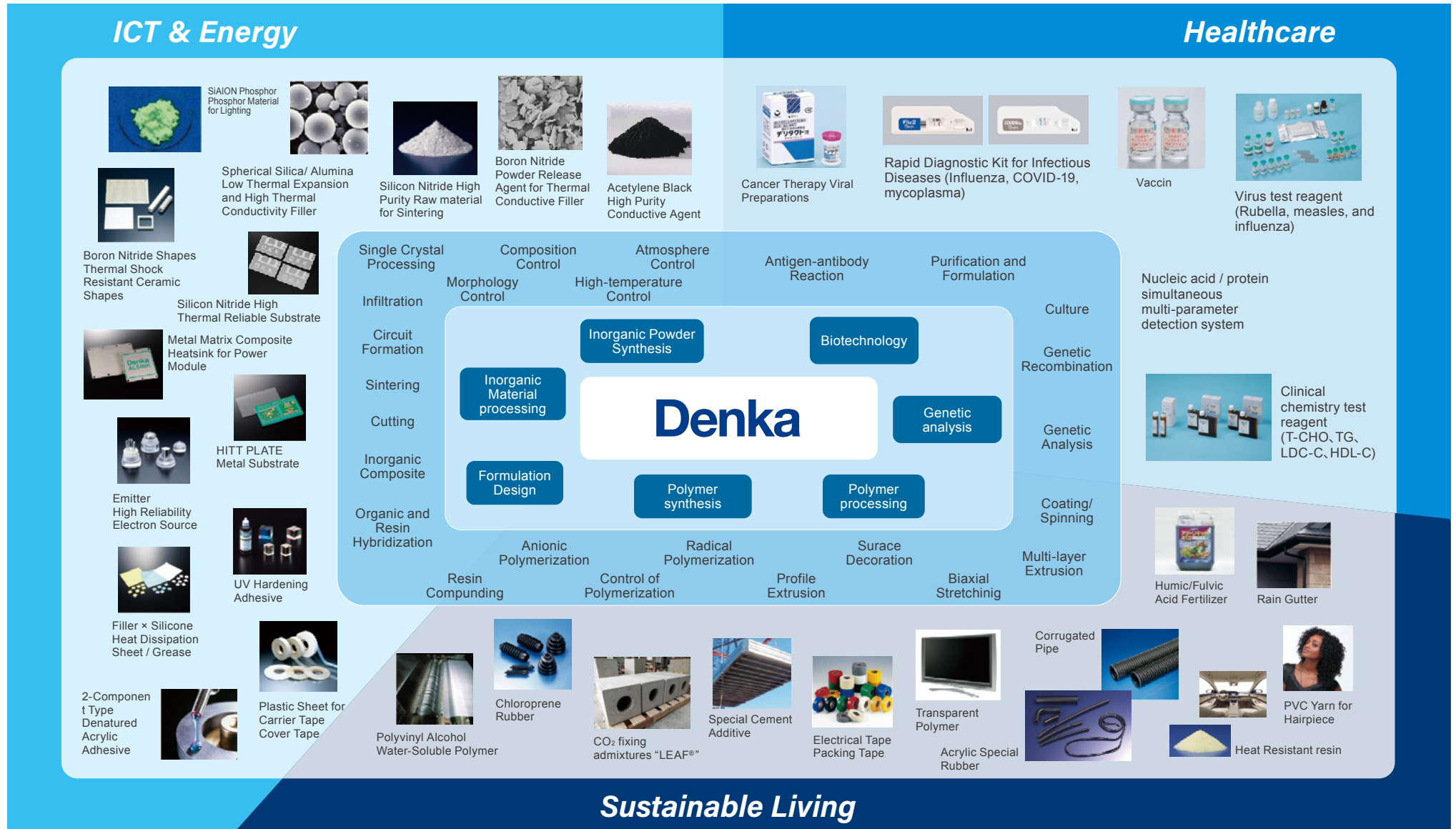
4 Activities as a partner in WIPO GREEN, a global platform for environmental technologies



WIPO GREEN is a platform to promote the use of environment-related technologies established by the World Intellectual Property Organization. Denka focus not only on reducing CO₂ emissions within our company, but also on developing and providing products that contribute to the environment and technologies that reduce environmental impact. By participating in WIPO GREEN and inviting partners to participate in WIPO GREEN, we will create innovation through interaction with other partners who are interested in our environment-related products and technologies, and contribute to decarbonization of society as a whole.

Technology platform diagram

Denka is focusing R&D resources on three focus areas that capture megatrends. Here are some of the technologies we are currently developing.



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**

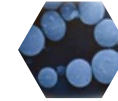


Acetylene black efficiently carries **clean energy**

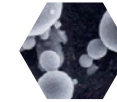
Denka technology supporting **5G**

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.

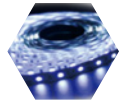
Spherical silica reduces **energy loss**



Spherical alumina protects against **heat**



Carrier tape sheets and top cover tapes protect against **static electricity and foreign matter contamination**

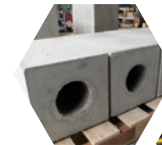


Denka Technologies - Contributing to a Sustainable Society

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 **carbon neutrality**

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 CO₂ from plants at the source, as well as the use of hydrogen. 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.



LEAF

PS chemical recycling



Hydroelectric power plants

*Photo courtesy of Agilyx

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 G47Δ 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.

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

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 modifiers 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**



Acetylene black increases the storage capacity of **lithium-ion batteries**



Heat resistance modifiers enhance **heat resistance**



Strengthening New Business Creation: Establishment of CVC with Pegasus Tech Ventures

On January 16, 2023, we established a Corporate Venture Capital (CVC) fund with Pegasus Tech Ventures with the aim of creating new businesses and acquiring new technologies. As one measure to make 100% of businesses “three-star businesses (, businesses which satisfy the three elements of specialty, megatrends, and sustainability) set forth in the “Mission 2030” management plan, we will continue to create new businesses and acquire new technologies in the three focus areas of ICT&Energy, Healthcare, and Sustainable Living. Additionally, by establishing the CVC fund, we will accelerate the creation of new businesses in addition to strengthening and expanding existing businesses through investments in and business alliances with venture companies with cutting-edge technologies, products, business models, and business ideas. We plan to invest up to around \$100 million USD by FY2030. We aim to create businesses that contribute to solving social issues by combining the technologies and businesses owned by promising venture companies in Japan and overseas with Denka’s proprietary technology and other management capital.



Hideaki Takase

Facilitator
Denka Company Limited
New Business Development,
General Manager of
New Business Creation Department

Anis Uzzaman

General Partner and CEO,
Pegasus Tech Ventures

Nobuyuki Yoshino

Denka Company Limited
Managing Executive Officer,
Chief Scientific Officer (CSO)
Head of New Business Development

1 History of the establishment of the CVC fund (Denka must be reborn)

Yoshino: Denka celebrated its 100th anniversary in 2015. The Denka Innovation Center was established the previous year, in 2014, to serve as a base for the Group’s core R&D activities based around the aim of continuing our corporate activities for the next 100 years and the need to reinvent ourselves. As part of open innovation, we have invited potential customers and strategic partners, mainly in downstream fields such as automotive products, to develop new products and businesses while envisioning new needs 5 or 10 years down the line. Unfortunately, we have not achieved sufficient results.

On the other hand, with seed research, we are collaborating with industry, government, and academia, working together with the National Institute for Materials Science and the National Institute of Advanced Industrial Science and Technology to explore research that is likely to blossom and bear fruit in the future. The probability of success is not high, but we are only halfway through. Our company, which focuses on materials and components, is removed from the final product (market needs), and we once again realized the difficulty of activities to fill that gap.

As such, the main reason for establishing the CVC (Corporate Venture Capital) fund is that we believe that working with startups who are honing their technology while having an image of social implementation (market needs) will increase the probability of commercialization for our company and be a shortcut to success.

2 Reasons for selecting Pegasus and expectations

Takase: We chose CVC as a way to meet startups, but what was the reason for choosing Pegasus Tech Ventures (hereinafter, Pegasus) as our partner for the fund?

Yoshino: While we do have some experience in M&A, we believe that our organized activities to create new businesses are insufficient. This time, we decided to take the form a CVC fund, a two-party partnership with venture capital (VC). With the support of the VC, we will make investments

and business alliances with startups reflecting our intentions. Through investment, we thought we could acquire startups' unique technologies, ideas, know-how, and paths to social implementation, allowing us to launch new businesses. First, I had to study investing in startups. Pegasus is a VC, and hearing about their CVC 4.0 I reached out and asked if they would be interested in working together.

I believe that the development of a new business means the creation of new business value, and in order to do so, it is necessary to increase the value of human resources. On the technical side, we need to integrating technologies from multiple fields, while on the business side we need the ability to commercialize and monetize ideas related to tangible and intangible products, the management sense to promote cooperation with startups, and we are cultivating a sensitivity to diversity, equity, and inclusion that will allow us to succeed worldwide. Business value creation and human resources value creation, which are the growth strategies of the "Mission 2030" management plan, are the two pillars of new business development, and the results will lead to management value creation.

Therefore, we believe that this CVC activity will play an important role.

3 Issues regarding CVC for Japanese companies

Takase: Anis, you have been involved in CVC for many Japanese companies. How do you feel about the challenges related to CVC for Japanese companies?

Anis: There are many cases of Japanese companies engaging in CVC internally without establishing a fund. It is still rare to find an operating company that directly invests in a startup and conducts CVC activities with a third party like us.

As for the problems faced by Japanese companies in CVC, I think the first problem is that there are few networks between Japanese companies and startups. As a Japanese company, even if you want to form a business or capital alliance with a startup with high technological capabilities and a business model, in many cases you will not be able to do so because you do not have a network with the startup. In addition, there are many excellent startups with advanced technology that are located overseas, and overseas startups currently can't be reached due to a lack of networks. In addition, limited ability to source and find good startups is also a barrier.

The second problem is a lack of knowledge about startups. Because of this, most Japanese companies fail to do their due diligence (research the value and risk of the startup they are investing in), which often leads to failure after investment. Lack of knowledge regarding startups also makes it difficult to have a good relationship with them. If companies lack the knowledge to properly support a startup, they won't be favored even by promising startups. Knowledge to survive in the innovation industry is essential for large companies.

Third, most Japanese companies are still focused on innovation internally. However, there is no mindshare for innovation within a company, and there is a great need for a change in mindset toward innovation. In Japan, both the number of startups and the possibilities for partnerships are limited. The concept of "starting domestically" is a major barrier and limitation to innovation. Innovations

require the spread of a global perspective.

Finally, there are cultural barriers between Japan and overseas and between operating companies and startups, as well as national risks and regulations at the government level such as CFIUS*. In addition, there are differences in the way business is conducted between operating companies and startups. I think the biggest challenge is the lack of skills and knowledge to start sourcing (finding startups to invest in) and to execute the process leading to business alliances and investments.

* The Committee on Foreign Investment in the United States (CFIUS), which is chaired by the Secretary of the Treasury and composed of several related departments and agencies, examines foreign investment in U.S. companies, businesses, and technologies from the perspective of U.S. national security.

4 What is the new "CVC 4.0" method?

Takase: Anis, you have proposed "CVC 4.0" or "Venture Capital as a Service". Can you tell us more about that?

Anis: Currently, we are focusing on CVC 4.0, or an approach of Venture Capital as a Service. What we saw in the early days of CVC was what is called LP (Limited Partnership) investment, in which multiple operating companies deposited money with a single VC, and professional investors then invested that money in startups. This was the world of CVC 1.0. The problem here is that the goal of the VC investors is capital gains (gains on the sale of assets held such as stocks and bonds), so they may invest in areas that are not the business domain of the operating company, or in areas other than those the company are interested in.

This led to the idea that investments should only be made in the areas of interest of the business company from which the investment was made. CVC 2.0 is a form of investing in startups in areas of interest by creating a CVC oneself or by creating a similar structure within a company. The problem here is the lack of investment experience and knowledge, so its easy to make bad investment decisions or difficult to invest in the desired startups.

CVC 3.0 was created in order to solve these problems, wherein a subsidiary VC firm is created in the operating company and experts with investment knowledge are recruited from outside. However, the problem was that it was difficult to cover global areas and the CVC had a strong operating company feel, so they did not attract many talented startups.

The challenge is the lack of skills
and knowledge regarding sourcing
and partnering





Human resource development is essential for creating a system that can create new businesses on a regular basis and for creating a corporate structure

Our company proposed CVC 4.0 to solve all these problems. With CVC 4.0, our company bears the brunt of the startups and refer them to operating companies that we believe are trustworthy, so that both operating companies and startups can safely form alliances and make investments with peace of mind.

CVC 4.0 is attracting attention as a model that solves all the problems that have been considered issues in the past, such as due diligence and cultural barriers.

Takase: Pegasus has already worked with more than 30 operating companies using the CVC 4.0 approach. Based on this experience, what do successful operating companies have in common?

Anis: Each company that has implemented Pegasus University (See 7. “Pegasus University” educational program), a program to learn the know-how from startup discovery to business partnerships, has been successful. At the end of the day, the big difference between doing CVC yourself and CVC 4.0 is the difference in knowledge. By using the Pegasus University classroom and learning about investment standards, you develop an eye for where to invest. However, the important thing here is to continue CVC. Increase the number of partnerships and investments with startups from the first year to the second year and from the second year to the third year, and increase the number of people involved in CVC. The commitment to study together and work hard is important. A top-down approach from the president is a major factor in success.

5 Current status of Denka's CVC activities

Takase: Denka's CVC activities started in January 2023, and it has been about six months. What kind of initiatives and activities are you currently engaged in?

Yoshino: We have started sourcing startups from the ICT&Energy field, one of our focus areas, and we are currently in the process of selecting candidates for business alliances and investment from the startup sourcing list together with our business divisions. One of the things I find difficult in this is due diligence. I am concerned that there will be too little, or that there will be too much and the period will become longer.

Anis: During the due diligence process, we want operating companies to focus on whether the

startup's technology can be used within their own company. Since we can be the ones to assess the management status and human resources of startups, I think we can find good projects by assessing the feasibility of Denka's business and technology.

Yoshino: Thank you. Another concern is that, for example, if there is a startup thinking of an interesting business with resin processing as a key element, is it assembled with high level resin processing? Do you dig deeper into the elements before assembling? Digging too deep might cause that interest to wane. I would like advice on what stage we should decide to invest in a startup when expecting the creation of an interesting product or solution.

Anis: Looking at other companies' cases, it's often difficult to discern at first. To solve this problem, many companies set their investment criteria step by step through a proof of concept. It is best to proceed in stages. For example, at this stage you can spend engineering costs, and if you pass this stage, you can consider commercialization and implementation. If, for example, you set investment criteria in four stages from A through D, you could invest 50 million yen in stages A and B and invest an additional 100 million yen after completing stages C and D. Even if failure occurs in stages C or D, you will only lose 50 million yen. Moreover, in reality, the shares acquired during stages A and B can be sold to a third party investor, so there isn't even that 50 million yen loss.

As you set these criteria and select startups, the number of potential startups to partner with and invest in will increase, and eventually investment and partnerships will go smoothly. Building a scheme to make good investments naturally takes time, so you shouldn't rush. Moreover, it's better to handle a small number of projects smartly at first. It is natural to increase investment projects over two or three years. Investing in the first company is especially important, so it's best to approach it without haste.

Takase: Four months have passed since we started CVC. How do our efforts look from your point of view?

Anis: I think you're off to a good start. As the number of people involved in CVC increases in the future, you'll become even more active.

6 Expectations for human resource development through CVC

Takase: With the establishment of the CVC fund, you're also looking to developing human resources, aren't you?

Yoshino: Right. As President Imai said, new business development and human resource development are equal for Denka. It is no exaggeration to say that new businesses will be developed along with human resources.

Although we have grown organically since our inception through the repeated application and development of technology, not many so-called “new businesses” have emerged. Areas between businesses that could have been explored more deeply may remain untouched. Human resource development is essential for creating a system that can create new businesses on a regular basis and for creating a corporate structure. I have high hopes that our human resources will grow through CVC.

7 “Pegasus University” educational program

Takase: In Silicon Valley, where Pegasus is based, pitching events (where startups present their technologies and services to investors) are held almost daily. We will continue to focus on sourcing activities by participating in such events.

By the way, one of the reasons why we chose Pegasus as our CVC partner is that they are focused on human resource development, which is very attractive. Could you tell us about the human resource development support for operating companies that are Pegasus LPs?

Anis: We have an educational program for business companies called “Pegasus University,” and we deliver regular webinars from Silicon Valley. We lecture on logical points to consider, such as due diligence. Other opportunities include training for interviews with startups, workshops with outside instructors, and a variety of third-party events. We can also connect operating companies that are LPs.

If you send someone to Silicon Valley, where we are based, they will be treated the same as a Pegasus employee and receive all of our programs, resulting in a huge amount of knowledge (one person is currently being dispatched from the New Business Creation Department).

8 Environment for future investment

Takase: On a slightly different note, Silicon Valley Bank went bankrupt the other day. How does that affect startups?

Anis: After Silicon Valley Bank, First Republic Bank also went bankrupt, and investors are becoming more cautious about investing. On the other hand, when it comes to CVC, we manage a lot of funds, but we haven’t received any requests from any of our operating companies to slow down their investments. Rather, the startups that survive in this situation are often well-managed and technologically advanced, and cannot be ignored by investors. In the last two to three years, it will be



possible to invest in good startups at a low price, and I think there are great financial benefits for the operating companies.

Takase: Is Silicon Valley still the place where most startups are born?

Anis: In my experience, technology startups tend to be in Silicon Valley. The largest number of startups are from North America, but there are also more companies appearing from Germany and Israel. We also introduce Asian startups, and hope that Denka will get a feel for how startup culture differs from country to country.

Yoshino: I heard that Japanese startups account for 1 to 2% of the total. Is there any reason for this small number?

Anis: The reason for the small number of startups in Japan is that they don’t raise a lot of money. Though this actually increases the likelihood that you’ll be able to acquire a startup with superior technology in its early stages.

9 Pegasus’ future aims

Takase: Anis, could you tell us what Pegasus is aiming for in the future?

Anis: We have a few things we are aiming for, but first we want to expand the Pegasus network and create an environment where people can consult with Pegasus if they have a technology-related investment project. To expand this network, we host the Startup World Cup, one of the world’s largest global pitch competition conferences, where entrepreneurs make presentations to investors. We will also further enhance the curriculum at Pegasus University and make it more accessible to outsiders. Furthermore, we are working to automate our due diligence processes. Specifically, we want it so that when startup information is entered, a due diligence score appears that helps makes work more efficient. Development has progressed and prototype software has been completed. If this can become commonplace and expanded globally, I expect that more operating companies will be able to participate in investments more easily.

10 Denka’s aims through CVC

Takase: Finally, Mr. Yoshino, please tell us about Denka’s goals with CVC.

Yoshino: In order for our company to continue its corporate activities into the next 100 years, it is essential not only to grow its existing businesses organically, but also to create businesses that match the times, to search for potential future businesses, and to create new businesses. We will engage in CVC activities that are filled with the wisdom and ideas of numerous startups, and while I think there will be many challenges in the future, under the partnership with Pegasus, we would like to create a system that can efficiently produce results and accelerate the creation of new businesses as well as the development of human resources.

(Date: May 25, 2023, Location: Denka Head Office)

Technology



Kazuo Takahashi

Senior Managing Executive Officer,
Chief Technical Officer

Message from the Chief Technical Officer

Accelerate process reforms by transforming business models and organizations, increasing productivity, and nurturing in-house digital talent

The world population is projected to increase from 8 billion in 2022 to 8.5 billion in 2030, while the Japanese population, on the contrary, will decrease from 125 million in 2022 to 119 million in 2030. In particular, the working age population will significantly decline by 8%, from 75 million in 2022 to 68.75 million in 2030, while society itself is also aging. On the other hand, recent advances in ICT and AI have given rise to social changes that have led to a rethinking and questioning of work styles. Denka has a history spanning over 100 years, and I believe that only by adapting to these major changes in society will we be able to further increase our reason for existence and continue to survive.

The way people work will continue to change significantly in the future and we must also learn to adapt. What is needed is process reforms through the introduction of comprehensive technologies, such as robots, automation, ICT and AI. As outlined in our management plan, "Mission 2030", we will invest 50 billion yen over the next eight years to ensure that we can adapt to the new social structure that is coming.

Policy	Strategy	KPI (FY2030 target)
Process Reforms	Business model/organizational reforms, productivity improvement, and development of in-house digital talent	Process reforms investment: 50 billion yen over eight years (DVU: 14.6 billion yen over five years)

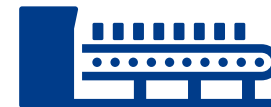
Process Reforms Initiatives

The Denka Group is committed to organizational change and the improvement of labor productivity by making the best use of digital and robotic technologies and by significantly reforming existing processes.

These include optimizing operating conditions by analyzing accumulated process data, automating inspections using AI technology, and automating material handling operations (robotization). We will further evolve these initiatives and aim to achieve the targets outlined in our management plan, "Mission 2030".

Examples of initiatives

- 1 Quality improvement by data analysis:** Using statistical analysis software based on big data obtained from manufacturing processes, we analyzed factors causing defects in the manufacturing process of ceramic substrates, and improved the defect rate by more than 10%.
- 2 Labor saving and quality improvement by automating visual inspection of circuit boards:** We aim to reduce labor by 65% by automating the visual inspection of circuit boards through the use of image-based analysis and robots for other processes.
- 3 Productivity improvement through the automation of material handling operations:** AGVs* were introduced to eliminate the manual transportation of large volumes of eggs required for the manufacture of vaccines, and productivity was improved by reducing labor and improving work efficiency in the handling of heavy materials.



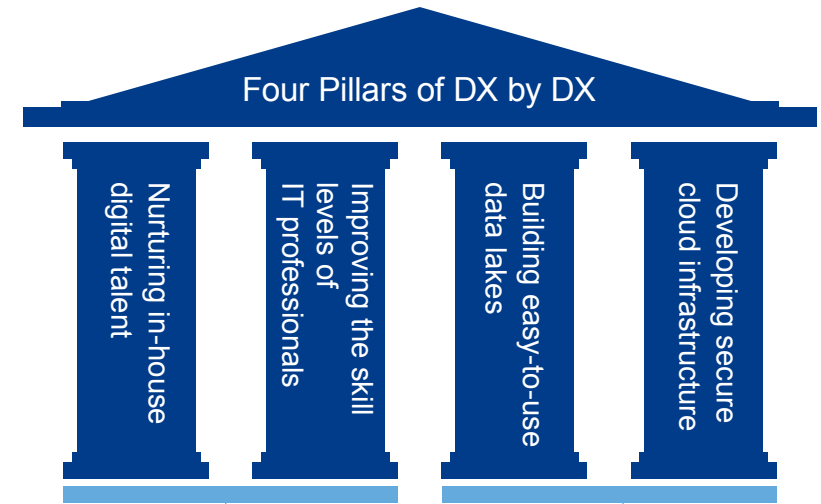
*AGV: Abbreviation for Automatic Guided Vehicle, unmanned ground vehicle

Digital Strategy for our Management Plan “Mission 2030”

Our new management plan, "Mission 2030" sets forth a variety of measures aimed at enhancing corporate value through three mission-based growth strategies. The Digital Strategy Department will work to clarify what systems can be used and how for each of these measures, and formulate concrete measures to achieve them.

As one measure that has already been implemented, we are providing a product-specific ROIC calculation system that contributes to data-driven management. Further, we will restructure core systems that we plan to update in the near future, taking into account the level of contribution that can be made to each measure.

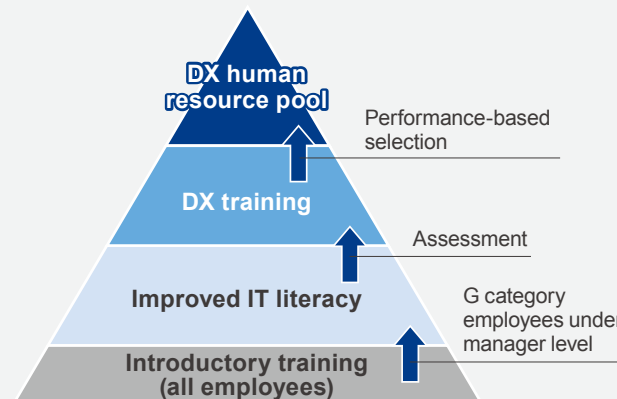
Under the theme of "DX by DX" (Denka Transformation by Digital Transformation), the Digital Strategy Department aims to make a concrete contribution to the financial targets set out in “Mission 2030“ by 2030 by achieving the "Four Pillars" (see right).



Nurturing in-house digital talent

In order to carry out measures to achieve our “Mission 2030” targets, we believe it is essential for all employees to acquire digital literacy and to utilize the available digital technology in their respective workplaces.

Each department requires DX human resources with the knowledge and skills to actively promote DX. However, rather than recruiting these from within our current resource pool, we aim to build a pyramidal "DX human resource" development and education program to raise the level of digital literacy for all employees. By establishing a company-wide "DX human resource pool," we aim to achieve our "Mission 2030" targets through "DX by DX" in each department, starting with process reforms.



Development of data lakes and infrastructure

The Digital Strategy Department aims to build the data environment and infrastructure necessary to promote DX. By creating an environment in which all employees can access the data they need from anywhere, we believe we can accelerate the progress of DX by enabling employees to think more about data utilization in their respective workplaces.

To this end, we aim to realize faster and smoother data distribution by utilizing the latest technologies, including cloud computing and data platforms, while also taking security into consideration. We are also actively developing the tools and systems necessary for data utilization, and are working to innovate internal business processes. As a result of these initiatives, we aim to establish an environment in which every employee can play a role in contributing to DX.

Electronics & Innovative Products

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



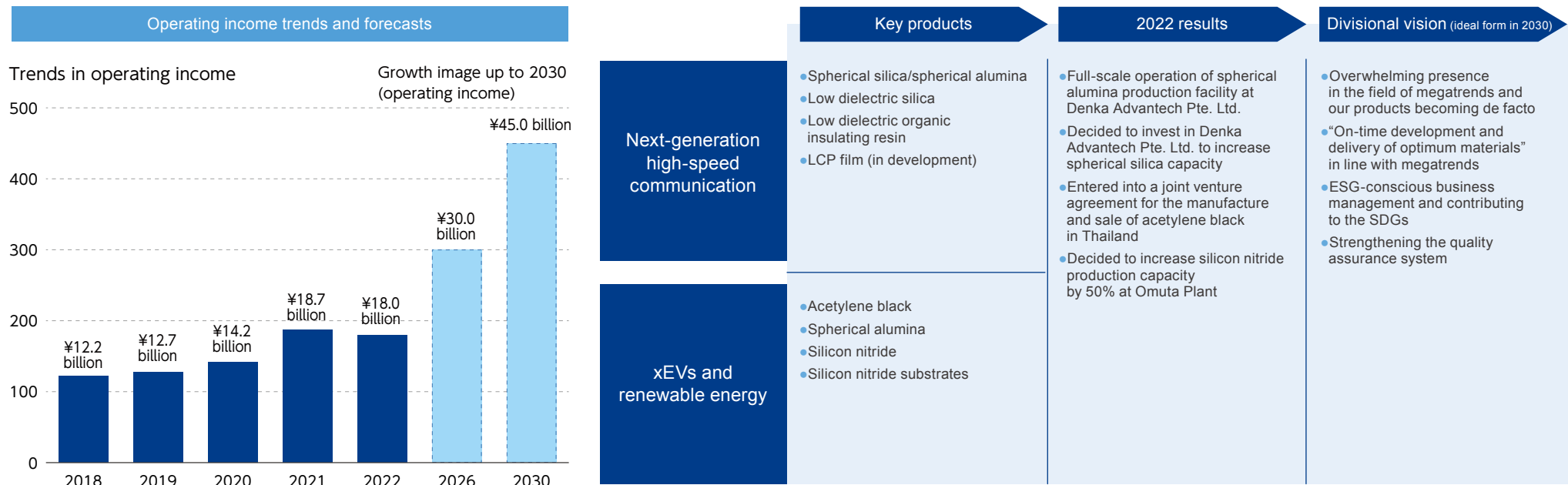
Message from the Division Head

Achieving a sustainable society and reducing environmental impacts have become pressing issues for the entire world. While digital technology continues to advance. Our division is utilizing our distinctive proprietary technologies, thermal countermeasure technologies, and high-frequency response technologies in the fields of xEV, renewable energy, high-speed high-frequency communications, and semiconductor fields to contribute to the realization of a better society. We are doing this through cutting-edge materials such as conductive materials for xEV batteries, thermal countermeasure materials for various power modules, electronic component transport materials, and high performance fillers.

As a leading company in each product group, we will continue to introduce new products to the market on time with the three elements of specialty, megatrends, and sustainability set forth in the “Mission 2030” management plan.

Hiroto Horiuchi Executive Officer
Head of Electronics & Innovative Products

Strategies for achieving the “Mission 2030” management plan targets



SWOT analysis

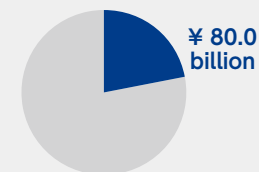
<ul style="list-style-type: none"> ● A diverse product lineup capable of meeting a broad range of customer needs ● Intelligence capabilities stemming from strong market share commanded by our products ● A broad range of essential technologies, including high-temperature control, nitriding, spherical shaping, and calcining technologies <p style="text-align: center;">Strengths S</p>	<ul style="list-style-type: none"> ● 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 environmental concerns <p style="text-align: center;">Opportunities O</p>
<ul style="list-style-type: none"> ● Growing financial burden attributable to capital expenditure due to rapid market expansion <p style="text-align: center;">Weaknesses W</p>	<ul style="list-style-type: none"> ● 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 <p style="text-align: center;">Threats T</p>

ICT&Energy strategic investment

FY2022 results:

¥ 11.4 billion

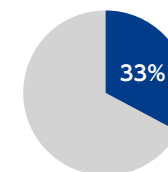
M30 strategic investment (8-year total) percentage



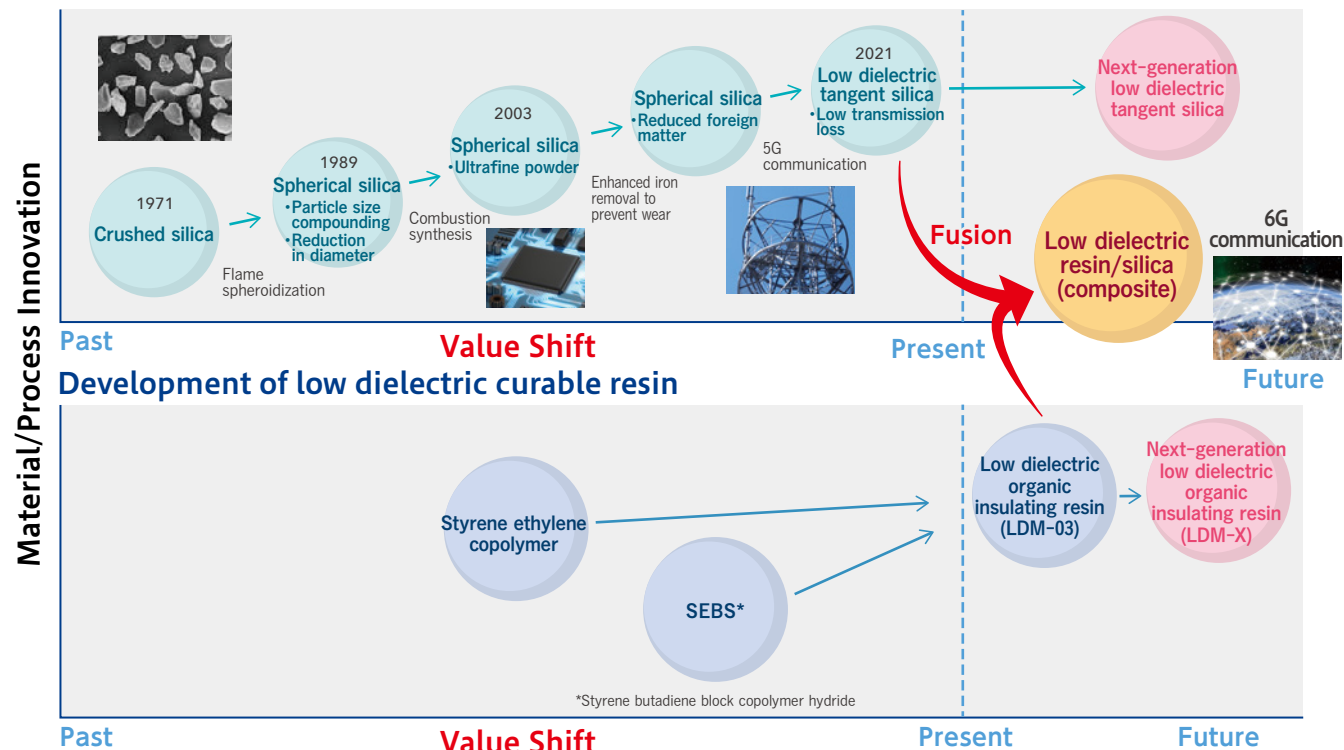
Electronics & Innovative Products R&D

FY2022 results:

¥ 4.9 billion



Development of spherical silica



Contributing to society through business

ALONBRIGHT

In addition to being used as a phosphor for white LEDs in LED backlights for LCD TVs, it is also being developed for use in various LED lighting applications. LEDs have significantly reduced power consumption and GHG emissions compared to conventional systems.



Acetylene black

It is used as a high-purity conductive material for the inner and outer semiconductive layers that make up buried cables and submarine cables. This has the effect of transmitting electricity more safely and contributes to the stable supply of electricity and the spread of clean energy.



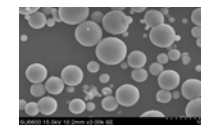
Silicon nitride

Because of its high strength and excellent lubricity, using it in bearings eliminates the need for lubricating oil and greatly reduces the burden of maintenance. Becoming increasingly popular for bearings installed in places where maintenance is difficult, such as offshore wind power generation.



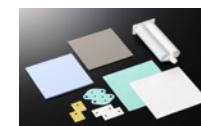
Spherical alumina

Filling the resin as a heat-conducting filler has the effect of dissipating heat from automotive LIBs, etc., reducing the loss due to electrical resistance.



Thermal materials

Materials with high thermal conductivity (low thermal resistance) made by highly filling silicone with ceramic filler. These products are used for heat dissipation measures for power semiconductors in hybrid and electric vehicles, contributing to miniaturization and energy conservation for automobile components.



Life Innovation

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 testing kits for the novel coronavirus.

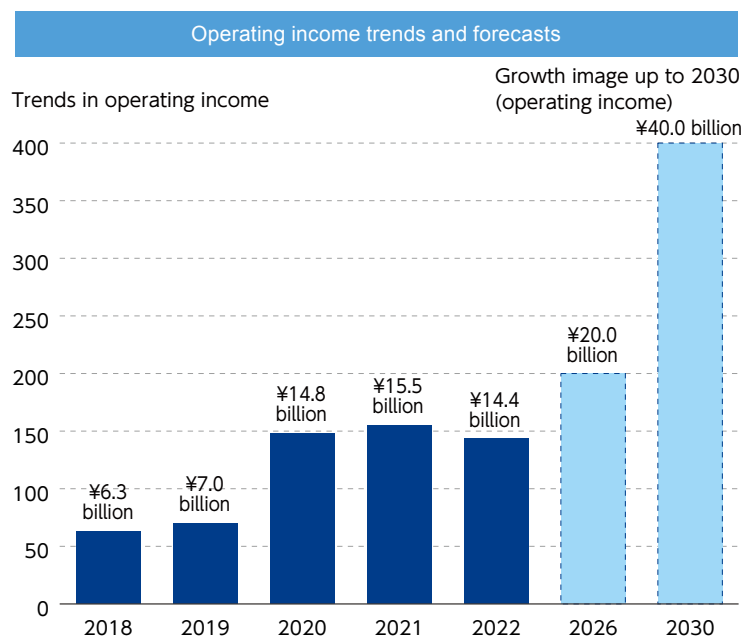


Message from the Division Head

Now that we have fought the battle against the novel coronavirus, medical needs have changed significantly and are becoming increasingly sophisticated. Along with this, innovative technologies are being created one after another, and we strive to create new value in each of our business areas of prevention, diagnosis, and treatment, which are our core operations. With quality safety as our top priority, we will continue to contribute to improving the QoL of people around the world through the provision of final products and services by bringing together the fundamental technologies we have cultivated through vaccines and testing reagents from contract development and manufacturing of the pharmaceuticals required by society.

Hideki Takahashi Managing Executive Officer
Head of Life Innovation

Strategies for achieving the “Mission 2030” management plan targets



	Key products	2022 results	Divisional vision (ideal form in 2030)
Prevention	<ul style="list-style-type: none"> Influenza vaccines 	<ul style="list-style-type: none"> Began operation of new facility for production of undiluted vaccine stock solutions to enable earlier and more stable supply of influenza vaccines 	<ul style="list-style-type: none"> Advance the development of safer and more effective vaccines in addition to early stable supply of existing vaccines
Diagnosis	<ul style="list-style-type: none"> Reagents for autoanalyzers Antigen testing kits 	<ul style="list-style-type: none"> Launched rapid norovirus antigen diagnostic test kit QuickNavi™- Noro3 Launched Japan's First In-vitro Diagnostic Product to Measure "Ugly Lipoprotein" Cholesterol 	<ul style="list-style-type: none"> Provide a variety of diagnostic agents and systems that are quick, simple, inexpensive, and multi-diagnostic.
Treatment	<ul style="list-style-type: none"> G47Δ oncolytic virus for the treatment of cancer 	<ul style="list-style-type: none"> Decided to Invest in Production Capacity Reinforcement of G47Δ, Oncolytic Herpes Simplex Virus Type 1 Product (April 12, 2023) Terminated commissioned manufacturing of macromolecular sodium hyaluronate 	<ul style="list-style-type: none"> Aim for CMOs and CDMOs based on cancer treatment viruses

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

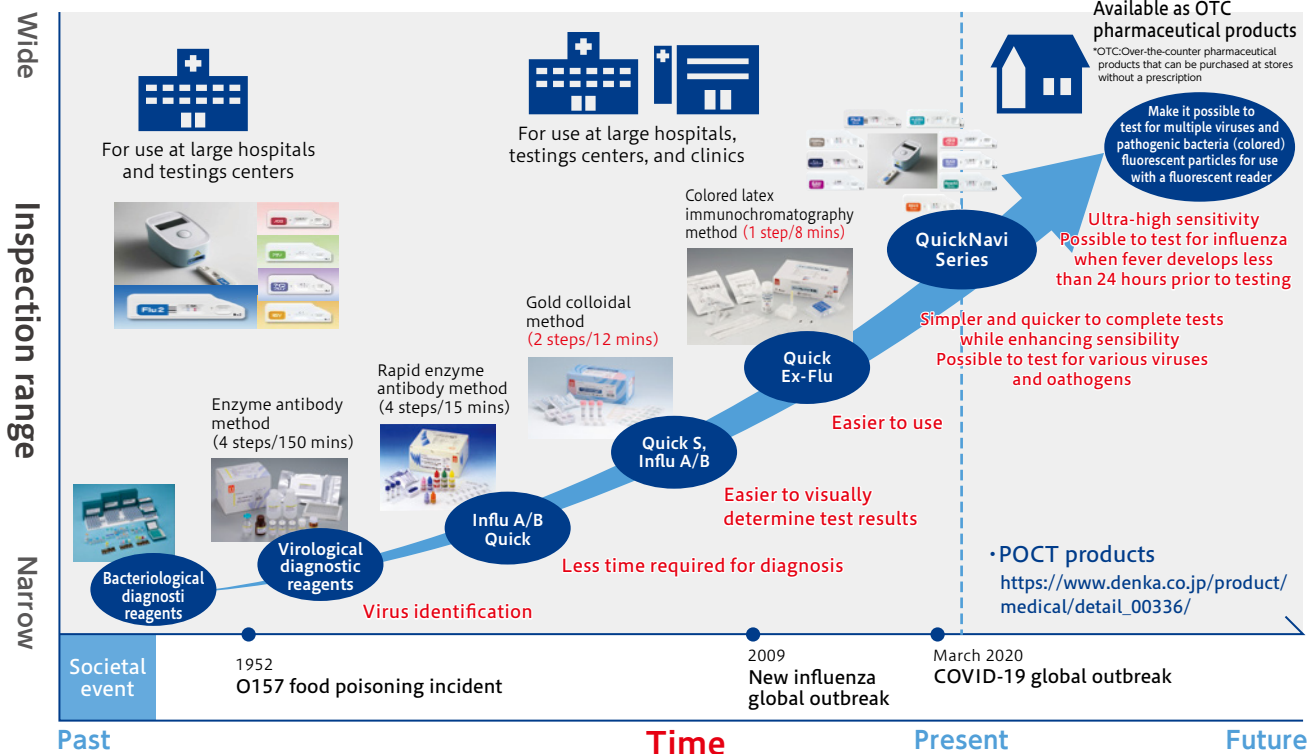
Strengths S O Opportunities

- 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)

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

Development of POCT Products

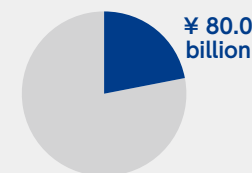


Healthcare strategic investment

FY2022 results:

¥ 1.1 billion

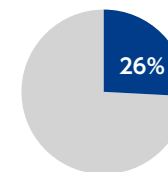
M30 strategic investment (8-year total) percentage



Life Innovation R&D

FY2022 results:

¥ 3.8 billion



Contributing to society through business

Influenza vaccines

Influenza prevention

Rapid influenza diagnostic testing kit

Quickly detects influenza virus antigens through a simple procedure and assists in diagnosis in a clinical setting.

Reagent for measuring C-reactive protein (CRP)

In many inflammatory diseases, the concentration of C-reactive protein (CRP) appearing in the blood can be measured and used as an index for determining the severity of the disease, treatment effectiveness, etc.

Small dense LDL cholesterol measuring reagent

Used as a risk marker for heart disease and coronary artery disease, which cannot be fully evaluated by conventional LDL cholesterol.

Rapid COVID-19 (SARS-CoV-2) diagnostic testing kit

Quickly detects COVID-19 (SARS-CoV-2) antigens through a simple procedure and assists in diagnosis in a clinical setting.



Elastomer & Infrastructure Solutions

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 and 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.



Message from the Division Head

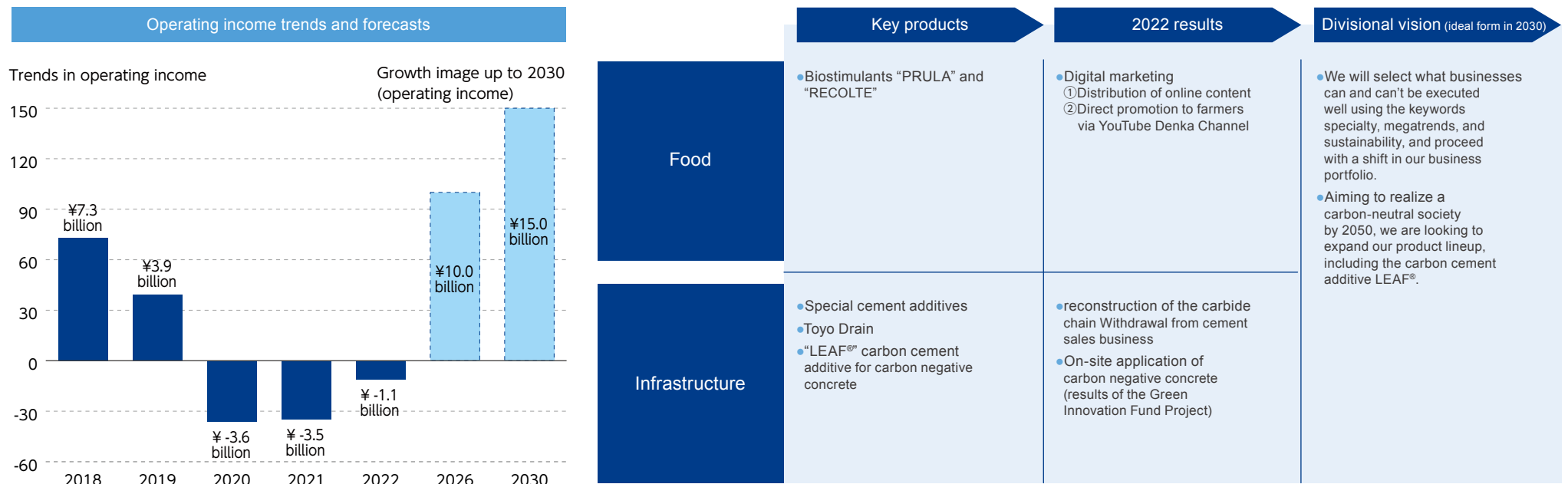
Using our own hydroelectric power, our division produces chloroprene rubber, of which we have the world's top share, and calcium cyanamide, which is a fertilizer that also has pesticide effects. We also provide a wide range of materials that are essential for building the foundation of social infrastructure, such as special admixtures that make concrete highly functional, fire-resistant and thermal-insulation materials for industrial furnaces, and corrugated pipes for underdrainage for agriculture and civil engineering.

We are also proceeding with the full-scale development of biostimulants to contribute to solving global food problems, and conducting research and development of carbon-negative concrete that aims to reduce the burden on the environment.

As the core division of Sustainable Living, a focus area of the "Mission 2030" management plan, we aim to realize safe, secure, and comfortable daily life.

Masahiro Omata Executive Officer
Head of Elastomer & Infrastructure Solutions

Strategies for achieving the "Mission 2030" management plan targets



*Operating income estimates for 2026 and 2030 are combined with Polymer Solutions.

SWOT analysis

- Technology for absorbing and immobilizing CO₂ in concrete
- A two-location production system supporting the chloroprene rubber business, with plants in Japan and the United States employing different manufacturing methods and facilities
- A robust carbide chain created via 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

Strengths **S**

- 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 that is currently deteriorating
- Growth in the biostimulant market due to growing food demand in step with the growing global population

Opportunities **O**

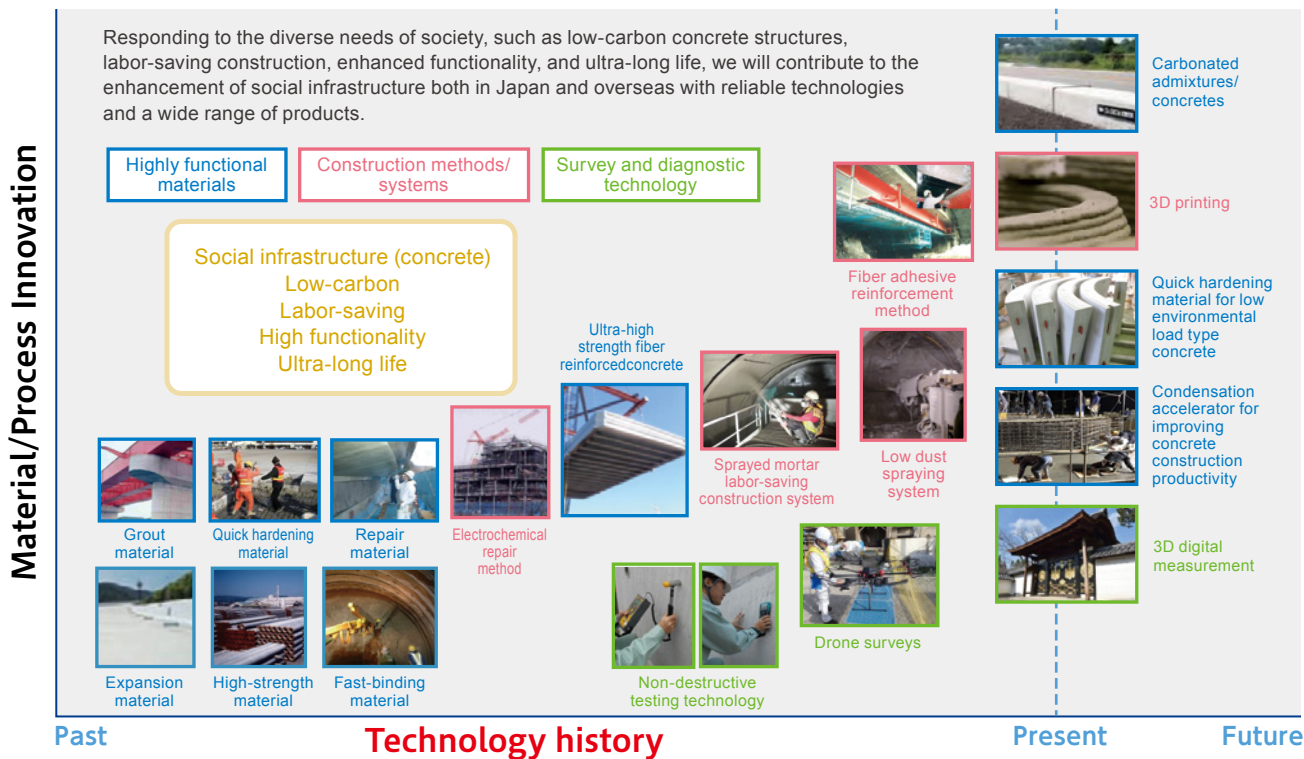
Weaknesses **W**

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

Threats **T**

- 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

Special cement additive business

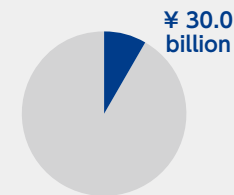


Sustainable Living strategic investment

FY2022 results:

¥ 0.3 billion

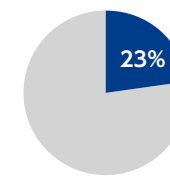
M30 strategic investment (8-year total) percentage



Elastomer & Infrastructure Solutions R&D

FY2022 results:

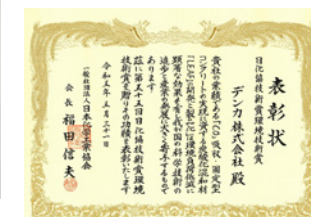
¥ 3.5 billion



*The strategic investment ratio is the sum combined with Polymer Solutions.

Contributing to society through business

The carbon cement additive LEAF® is made from slaked lime, a by-product of the manufacturing process of chemical products, and can reduce CO₂ emissions by approximately 80% compared to conventional cement production. It also improves the strength and durability of concrete by not reacting with water but preferentially reacting with CO₂ to form calcium carbonate. CO₂-SUICOM®, a concrete product using LEAF®, is attracting attention as a carbon capture and utilization technology (CCU) for realizing a decarbonized society. In May 2023, we were awarded the 55th Japan Chemical Industry Association Technology Award for outstanding performance in reducing environmental impact and contributing to the advancement of science and technology.



Polymer Solutions

Through a wide range of products, including styrene-based functional resins, food packaging sheets, synthetic fibers for wigs and hairpieces, and chemical products such as Poval, we are working to realize a sustainable society by supporting people's lives through various applications, such as in automobiles, electrical equipment, electronics, and food packaging containers.



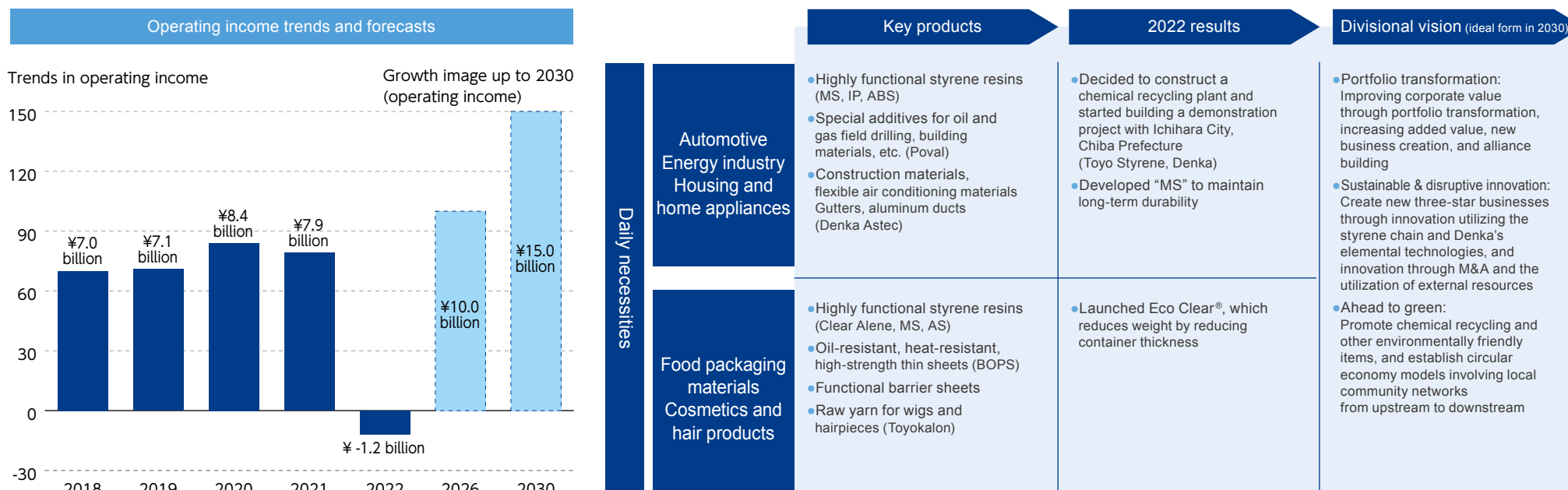
Message from the Division Head

In May of this year, our company and its equity-method affiliates were found to have engaged in inappropriate conduct, such as with regard to third-party certification of resin products. We believe that compliance is the most important foundation of management, and we have worked to ensure that everyone is well aware of that. We sincerely apologize for the great deal of concern and inconvenience that we have caused our customers and stakeholders. After deep reflection, we will make every effort to further strengthen compliance, prevent recurrence, and restore trust.

Although the current business environment surrounding plastic products is extremely challenging, our aim is to realize a futuristic recycling-oriented society, and as such we are preparing a styrene chemical recycling plant with Toyo Styrene, an equity-method affiliate, for operation in the second half of 2023. In addition, we will work on new projects that can contribute to the construction of a circular economy system on a global scale, with a wide perspective and an eye to the future, taking full advantage of Denka's elemental technologies.

Kei Hara Executive Officer
Head of Polymer Solutions

Strategies for achieving the "Mission 2030" management plan targets



*Operating income estimates for 2026 and 2030 are combined with Elastomer & Infrastructure 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**

- 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 meeting demand arising from the growing trend towards resource recycling
- Versatile expansion stemming from our diverse product lineup

Opportunities **O**

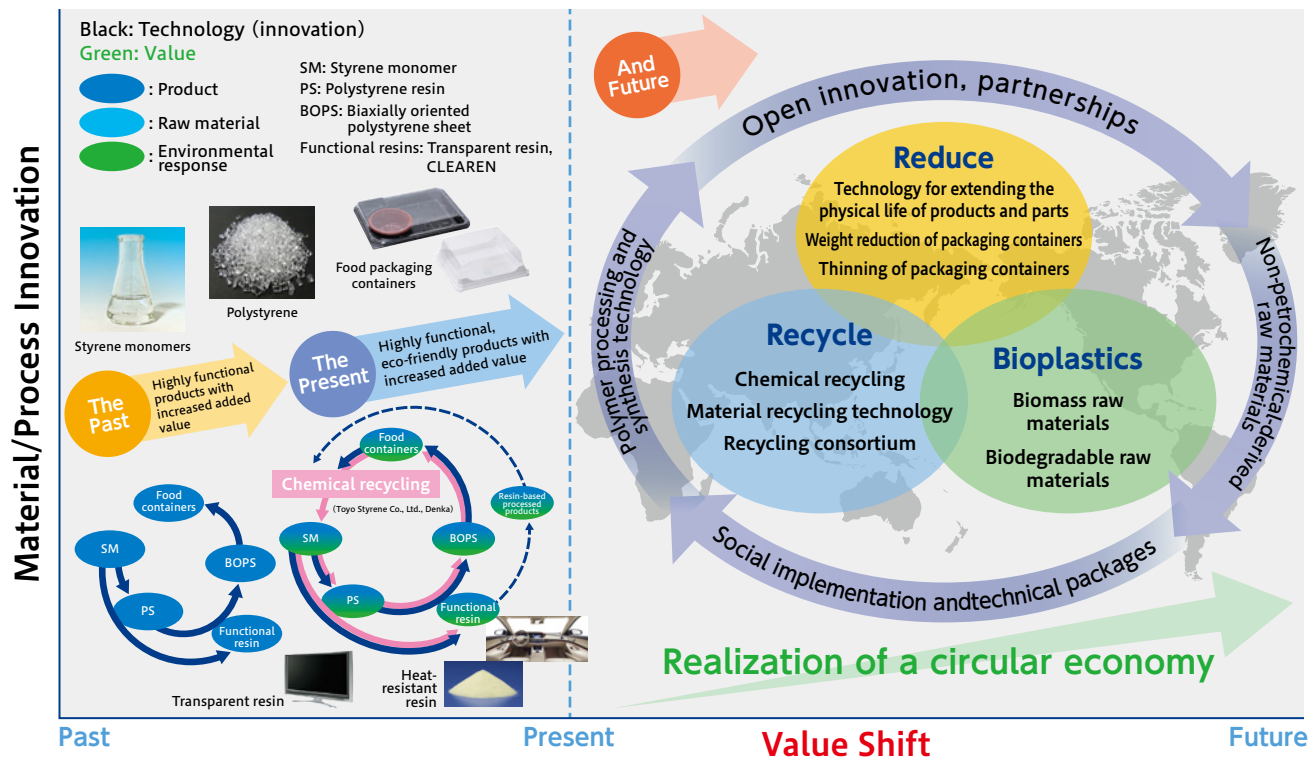
Weaknesses **W**

- 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

Threats **T**

- 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, the abolishment of certain materials, etc.)

Value shift across polymer solutions

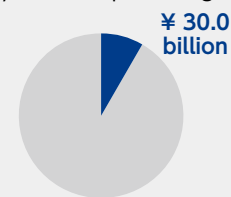


Sustainable Living strategic investment

FY2022 results:

¥ 0.3 billion

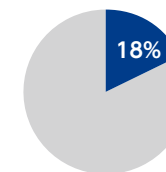
M30 strategic investment (8-year total) percentage



Polymer Solutions R&D

FY2022 results:

¥ 2.7 billion



*The strategic investment ratio is the sum combined with Elastomer & Infrastructure Solutions.

Contributing to society through business

① Denka IP

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



② Poval

A unique synthetic resin that dissolves in water. We are contributing to the improvement of productivity in the energy industry by improving efficiency, such as with excellent emulsifying/dispersing power and excellent adhesion.



③ Eco Clear®

By increasing strength to reduce thickness, food containers using these sheets are lighter, contributing to the reduction of CO₂ emissions and waste.





Masanobu Kosaka

Executive Officer,
Supervisor of Environmental
Measures Promotion

Message from the Supervisor of Environmental Measures Promotion

Contributing to Climate Change and Global Environmental Conservation

Following COP26 in 2021, COP27 in Sharm el-Sheikh, Egypt, in 2022 highlighted the challenges involved in achieving the 1.5 °C target. In addition to climate change issues tied to CO₂ emissions, the United Nations Conference on the Protection of Biodiversity was held in the same year as COP27, increasing the importance of global environmental conservation. Denka views these circumstances as an opportunity to consider and promote more effective environmental measures and contribute to society through the products and services we provide. In November 2020, the Denka Group announced its plan to achieve carbon neutrality by fiscal 2050, and in May 2021, the interim target for fiscal 2030 was raised from 26% to 50%. We have accelerated our efforts to achieve carbon neutrality by establishing a new reduction target of 60% in our management plan, “Mission 2030” launched in fiscal 2023.

More specifically, we aim to afford more consideration to and promote the reduction of supply chain emissions through the development and introduction of technologies for processes that generate emissions, further promote energy conservation, increase our use of renewable energy, and to make changes to the type of fuel used in our thermal power plants. One of the most distinctive initiatives is the start of consideration to introduce and implement new technologies to generate acetylene and hydrogen from methane using plasma in order to reduce non-energy-derived CO₂ emissions from the carbide chain, which is a challenge unique to Denka. We will also be focusing on reducing emissions not only from our own production, but also from raw materials used in our products and when our products are used and enhance the development of products and technologies that can contribute to these reductions.

Further, in addition to measures to combat climate change, we have initiated measures to conserve biodiversity in accordance with the TNFD (P. 56), whose guidelines were published in September 2023, as part of our global environmental conservation activities. Last fiscal year, we commenced full-scale field studies of Omi Plant’s contact points with nature, and over the next several years, will assess all of our sites in order to formulate the necessary conservation policies.

Denka aims to make a significant contribution to combating climate change and addressing other global environmental issues by developing and providing unique technologies and products.

Participation in GX League

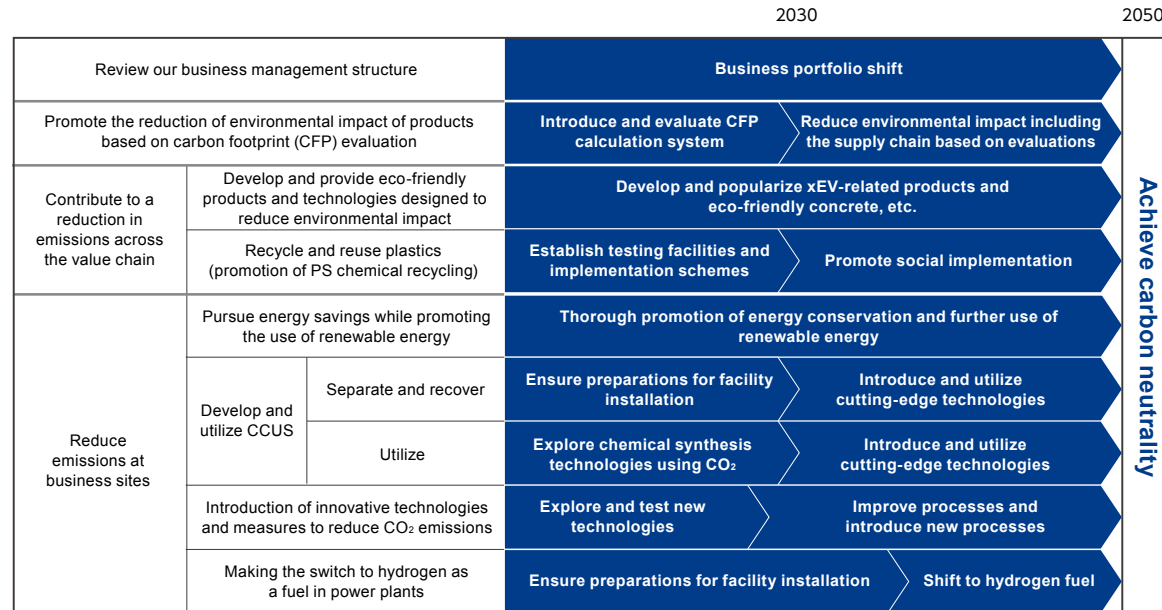
The GX League aims to promote discussion and practice for the creation of new markets in industry and government by a group of companies that will lead the transformation of the entire economic and social system, including stakeholders, to quickly transition to carbon neutrality. Denka has participated in this initiative since its full-scale launch in April 2023.



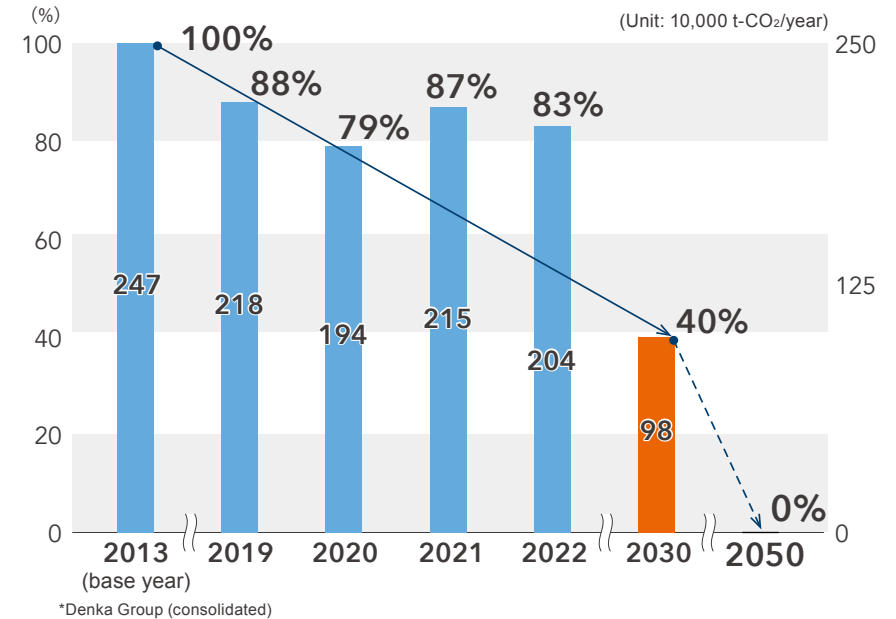
Carbon neutrality

We aim to be carbon neutral by 2050 with respect to our own CO₂ emissions (Scope 1 and 2), which can be directly reduced through our own activities. We aim to reduce the environmental impact of raw materials and processes, and to increase energy conservation and our use of renewable energy. Because there are limits to what individual companies can do to help contribute to carbon neutrality, in addition to our own efforts, we are actively seeking collaboration with surrounding companies and local governments to improve social infrastructure.

Roadmap toward carbon neutrality



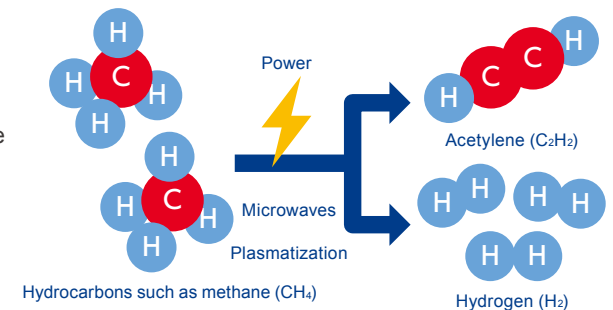
Medium- and long-term targets for reducing greenhouse gas emissions (Scope 1 + 2)



Introduction of innovative technologies and measures to reduce CO₂ emissions

Denka manufactures acetylene, the main raw material used in our flagship products, chloroprene and acetylene black, using the carbide method (hereafter “conventional method”). However, this method poses the problem in that a large amount of CO₂ is emitted from limestone, the starting material. Denka has begun commercializing a technology to produce acetylene from methane using a plasma process, an innovative technology, as a measure to reduce CO₂ emissions generated from conventional methods. This technology was originally developed by Transform Materials (TM), a US venture company and we have adopted their acetylene production facility (acetylene production capacity: approx. 1,600 t/yr, hydrogen max. 400 t/yr by-product) as a test facility and will collaborate on joint research using the facility with TM for future implementation. The test facility is scheduled to start operation in the first half of 2026. By using this technology, we can not only avoid CO₂ emissions from the above raw materials, but also make a significant contribution to our carbon neutrality targets by effectively utilizing the by-product, hydrogen. We aim to achieve early social implementation as a result of the joint research with TM.

Conceptual diagram of acetylene production technology from methane



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

Denka has been working on the use of renewable energy for more than 100 years. 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. In order to contribute to the preservation of the global environment through the use of these technologies, we will further focus our efforts on the use of renewable energy, one of our strengths.

1 Future Outlook for Our Renewable Energy Generation Capacity

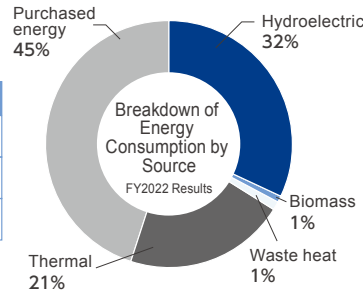
In order to achieve carbon neutrality by 2050, we have begun efforts to achieve "maximum renewable energy generation output: 150 MW" by increasing hydroelectric power generation and increasing our use of green energy through new solar power generation as part of "Mission 2030". Currently, we are promoting improvements in power generation efficiency through the renewal of existing hydroelectric power plants and the introduction of new solar power generation facilities at each plant. Further, as a medium- to long-term response, we are working to accelerate our efforts to increase our use of renewable energy, focusing on the construction of new hydroelectric power plants, as well as examining the possibility of introducing wind and geothermal power generation.

Future Outlook for Our Renewable Energy Generation Capacity

(Power generation capacity MW)

	FY2005	FY2022	FY2030
Hydroelectric	111	140	141
Solar, etc.	3	6	13
Total	114	146	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).



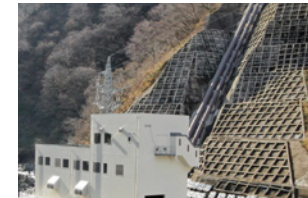
2 Denka Hydroelectric Power

The Omi Plant is geographically situated amid a web of 17 hydroelectric power plants, including power plants co-owned together with Kurobegawa Electric Power Company, which 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 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. We aim to make effective use of these resources to contribute to the realization of a sustainable society.

Hydroelectric power plants Japan

17 plants *Includes co-owned plants
Power generation capacity **140,290** kW

*As of August 2023, including Denka's ownership of output from power plants owned by a joint venture



New Omi-gawa Hydroelectric Power Plant (started operation in 2021)



New Himekawa No.6 Hydroelectric Power Plant (started operation in 2022)

3 Energy Conservation Initiatives

Rationalizing the use of energy is an effective means of achieving carbon neutrality. To date, we have been making efforts to efficiently utilize energy by switching to alternative fuels at our thermal power plants, introducing high-efficiency gas turbine power generators, and promoting waste heat power generation at our cement plants. Most recently, a high-efficiency gas turbine power generator was put into operation at the Omi Plant in 2020, and a similar gas turbine started operation at the Chiba Plant in 2022.



Gas turbine power generation facilities at the Omi Plant, which began operation in 2020



Gas turbine power generation facilities at the Chiba Plant, which began operation in 2022

4 Solar Power Generation Initiatives

We began installing solar power generation facilities at our Shibukawa and Isesaki plants in Gunma Prefecture in 2013. We are currently considering new candidate sites for each of our domestic plants and group companies. In order to quickly achieve and further increase the maximum renewable energy output of 150MW, one the non-financial KPIs in our management plan, "Mission 2030", we will promote the introduction of solar power generation facilities at the Chiba Plant and overseas offices (Singapore, etc.) and study the possibility of introducing such facilities at all our business sites.



DENKA Solar Power Shibukawa

Initiatives to reduce CO₂ emissions across the entire supply chain

In addition to managing supply chain emissions, Denka is also looking to reduce CO₂ emissions by evaluating and using the Carbon Footprint of Products (CFP) for each product. We are also focusing on providing products that contribute to the environment and reduce environmental impact through the use of our own products and technologies. Further, in addition to our own emissions (Scope 1 and 2), we will explore the possibility of collaboration across the entire supply chain for Scope 3, which is indirect emissions caused by raw material procurement, distribution, and sales, and will establish specific reduction targets and then promote countermeasures.

Addressing our Carbon Footprint

Reducing CO₂ emissions is an important step toward solving the global issue of climate change. This requires understanding the CO₂ emissions (Carbon Footprint of Products, hereinafter CFP) generated through the manufacture of our products and sharing information across the supply chain. In October 2022, Denka joined the Green × Digital Consortium, established by the Japan Electronics and Information Technology Industries Association (JEITA), to establish a CFP calculation system using digital technology and to achieve the efficient linkage of data across supply chains. Through the activities of this consortium, we will promote visualization of CO₂ data, such as supply chain emissions (Scope 1-3) and CFP, and aim to promote cooperation among business operators and improve the global competitiveness of our products.

**Green × Digital
Consortium**

Initiatives for Environmentally Conscious Products and Technologies

Carbon Negative Concrete "CUCO" Project

CUCO is a consortium of 55 companies led by Denka, Kajima Corporation, and Takenaka Corporation implementing the "Green Innovation Fund Project/Project for Development of Concrete and Other Manufacturing Technologies Using CO₂", adopted by the New Energy and Industrial Technology Development Organization (NEDO).

Through this project, we aim to develop highly versatile carbon negative concrete, construction technologies, establish quality assessment technologies, and promote its use around the world. In addition, through active CO₂ fixation in concrete, which will be addressed through this technological development, we will promote the transition from decarbonization to "active carbon" to play our role in the reduction of greenhouse gases.



CUCO Homepage
<https://www.cuco-2030.jp/>

Acetylene Black

Acetylene black is a variety of carbon black, a conductive material and is produced by the thermal decomposition of acetylene gas. Our unique thermal decomposition technology provides extremely low levels of metallic foreign matter, ultra-high purity, and excellent conductivity. Acetylene black is used to increase the capacity of lithium-ion batteries in xEVs and as a raw material for ultra-high voltage cables that efficiently transport electricity generated by clean energy offshore wind turbines, thereby contributing to a sustainable society.



Plastic containing natural materials PLATIECO® (Polystyrene Containing Eggshell)

Advanced Materials Research Department at the Denka Innovation Center has developed a sustainable plastic called "PLATIECO®", made through a process of dispersing and combining egg shells with polystyrene-based resin, with the aim of reducing the amount of plastic used and utilizing natural waste. This product has the same durability and moldability as existing polystyrene resin and contains more than 50 wt% * of eggshell. In 2022, it was put into practical use in the plastic model (Gunpla) Mobile Suit Gundam series made by BANDAI SPIRITS. In the future, we will contribute to the reduction of CO₂ emissions in society as a whole by deploying our products in a wide range of applications, such as daily necessities, food containers, and home appliances.

*wt% (weight percent): Unit of concentration measured in weight (Example: When 50 g of PS resin is mixed with 50 g of eggshell, 50 wt%)



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.



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 Sustainability Committee, with the representative director making final decisions.

Metrics and Targets

The Denka Group has positioned reducing the volume of CO₂ emissions from its operations as a matter of utmost importance in terms of environmental management in order to achieve a 60% 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, including making changes to manufacturing processes that do not emit CO₂ 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.

Responding to 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 and will continue to review the 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, European battery regulations and carbon border adjustment measures. 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 Based on Scenario Analysis

■ Risks ■ Opportunities

Scenario	TCFD classification	Item	Expected impact	Applicable Division (expected applicable products)	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	<ul style="list-style-type: none"> • Growing costs associated with overall volume of CO₂ emissions and/or emissions in excess of upper limits set by emissions quotas 	<ul style="list-style-type: none"> • Progress in energy-saving measures to reduce CO₂ emissions and reduction of non-energy derived CO₂ through the introduction of new technologies
		Establishment of new ratios for the introduction of biomass-derived fuels and increased demand for mandatory plastic resource recycling (waste reduction)	Small	Polymer Solutions, Electronic & Innovative Products, Elastomer & Infrastructure Solutions	<ul style="list-style-type: none"> • Deterioration in product properties and increased costs due to the move away from single-use plastics and the increased use of alternative biomass-derived raw materials 	<ul style="list-style-type: none"> • 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 & Reputation	Decarbonization requirements for products that emit large amounts of CO ₂ during production and global promotion of CCUS	Large	Elastomer & Infrastructure Solutions (cement, special blends, calcium carbide, chloroprene)	<ul style="list-style-type: none"> • Increased manufacturing costs • Promotion of alternative materials if no action is taken 	<ul style="list-style-type: none"> • Information disclosure following early introduction of CFP assessment • Progress in energy-saving measures to reduce CO₂ emissions and reduction of non-energy derived CO₂ through the introduction of new technologies • Seeking opportunities for collaboration with surrounding companies and local government for each business site
	Resource efficiency	Emergence of new technologies with advantages in terms of LCA (CFP)	Medium	Electronic & Innovative Products (thermal materials, etc.)	<ul style="list-style-type: none"> • Failure to disclose CFP calculations may hinder exports of alternative materials to EU countries 	<ul style="list-style-type: none"> • Expansion of production capacity in line with growing demand • Promotion and disclosure of CFP calculations, reduction of CO₂ emissions during product manufacturing
	Energy sources	Progress in transition to clean energy	Large	All divisions	<ul style="list-style-type: none"> • Growing use of renewable energy and hydrogen-fired energy 	<ul style="list-style-type: none"> • 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	Medium	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)	<ul style="list-style-type: none"> • Growth in product demand for EV-related components • Determining feasibility for application, mass production, sales expansion • Decrease in demand for internal combustion engine components 	<ul style="list-style-type: none"> • 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
		Development of renewable energy power supply systems	Medium	Electronics & Innovative Products (acetylene black) Elastomer (high-voltage cable)	<ul style="list-style-type: none"> • Increased demand for components for use in storage batteries and the development of transmission networks 	<ul style="list-style-type: none"> • Expansion of production capacity in line with growing demand and the development of new products with superior functions
4°C	Physical risks	Damage to production facilities due to drought caused by changes in rain patterns, severe flood damage caused by typhoons, heavy rains, floods, etc., shutdown of plants, and disruption of supply chains (supply network)	Medium	All divisions	<ul style="list-style-type: none"> • Loss of profit 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 	<ul style="list-style-type: none"> • 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
		Growing number of heat stroke cases due to rising temperatures and infectious diseases (outbreaks of new infectious diseases)	Medium	Life Innovation	<ul style="list-style-type: none"> • Growth in demand for diagnostic reagents and vaccines, including those for novel infectious diseases 	<ul style="list-style-type: none"> • Development of new diagnostic reagents and vaccines
	Products/services	Growing demand for infrastructure development in line with the increasing magnitude of natural disaster damage	Medium	Elastomer & Infrastructure Solutions	<ul style="list-style-type: none"> • Growth in demand for infrastructure-related products and services aimed at promoting disaster prevention measures and enhancing disaster resilience 	<ul style="list-style-type: none"> • Expansion of production capacity in line with growing demand and the development of new products with superior functions

Our Support of the Taskforce on Nature-Related Financial Disclosures (TNFD)

Along with measures to combat climate change, coexistence with the natural environment is becoming increasingly important to establish a sustainable society, and the creation of a framework for international information disclosure is in full swing.

The Denka Group has set forth "Reduction of environmental burden and the preservation of biodiversity" in our ESG Basic Policy. Based on this policy, we have commenced measures in accordance with the beta guidelines issued by the TNFD(*), a biodiversity information disclosure framework, with the aim of understanding the environmental impact of our business activities and maintaining and improving them.

*TNFD: Taskforce on Nature-related Financial Disclosures
The official guidelines for biodiversity-related disclosure are scheduled to be released in the fall of 2023.

Initiatives to conserve biodiversity

We expect that it will take some time to collect, organize, review, and make decisions on natural environmental information. Using the LEAP approach* recommended in the TNFD guidelines, Denka began taking action in September 2022 with a view to finding contact points between our business activities and biodiversity and identifying priority issues.

More specifically, after conducting a surveys of the natural environment surrounding seven business sites in Japan using public data and literature, we have begun extracting and assessing points of contact with nature, focusing first on our Omi Plant (Itoigawa, Niigata), which has 17 hydroelectric power plants in the nearby mountains and has the greatest contact with the natural environment. Based on these surveys, we will analyze the risks and opportunities that face us in relation to the natural environment and take concrete measures to conserve biodiversity. In the near future, we will gradually expand the scope of our activities to other business sites and continue the cycle of the above activities with the aim of maintaining and improving the natural environment from a long-term perspective.

*The process of systematic, evidence-based assessment advocated by TNFD for companies to disclose nature-related risks and opportunities. It consists of four phases (Locate, Evaluate, Assess and Prepare).

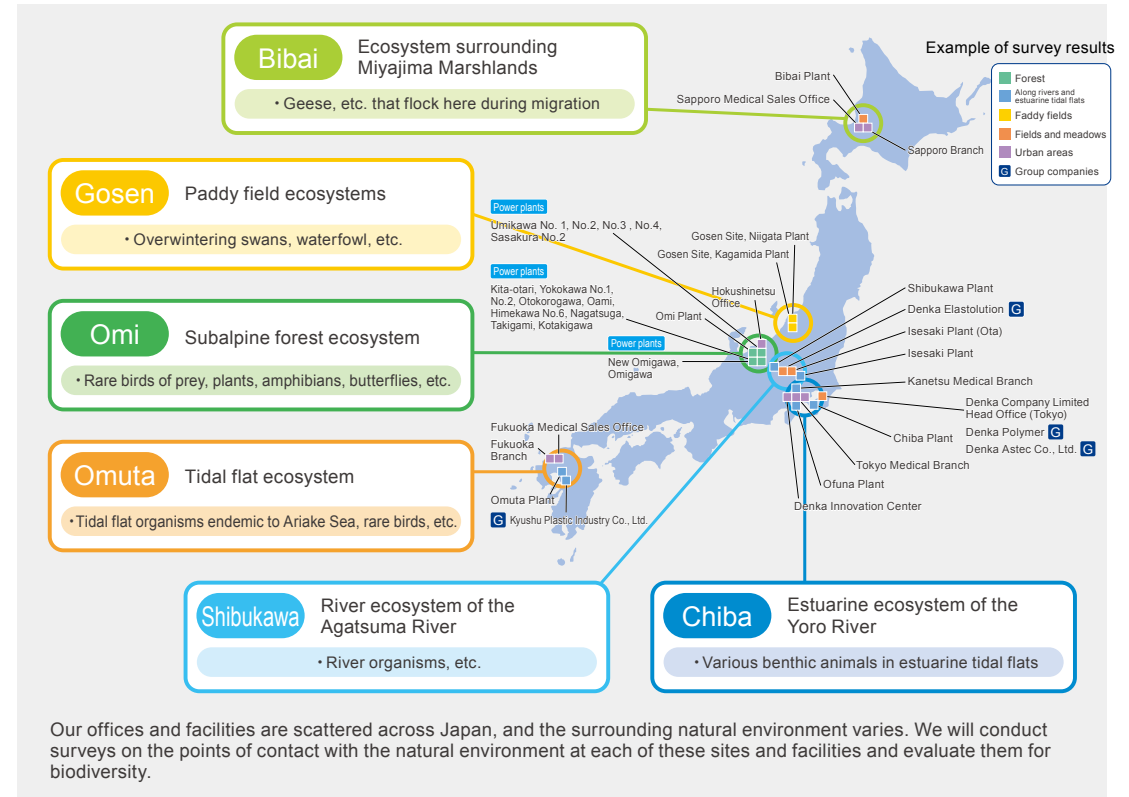
Understanding priority issues through preliminary biodiversity surveys at Omi Plant

A preliminary survey was conducted at Omi Plant from September to November 2022. We evaluated biodiversity at each point of contact while confirming the relationship between our business activities and nature in terms of whether they are dependent on or have an impact on nature. In the future, we will continue to expand the number of target sites and conduct surveys and formulate countermeasures where necessary.

Value chain	Relations between business operations and nature				Dependence/impact on nature				
	Name of site/facility	Business activity	Target Area, etc.	Relationship with the natural environment	Dependent	Impact	Ecosystem integrity	Importance of biodiversity	Water stress
Raw material procurement	Water conservation forests	Water conservation	Upper and middle reaches of the Himekawa	Water sources used for hydroelectric power and industrial water are also important biological habitats	○	—	High	High	—
	Weir	Intake water	Himekawa, Omigawa, Umikawa and Hayakawa	Intake weirs are installed in rivers such as the Himekawa.	○	○	High	High	High
	Transmission line	Power transmission	Around the power line	Power transmission lines run through bird habitats	—	—	Small	Large	—
Processing/manufacturing	Plant, manufacturing facility	Processing/manufacturing	Plant & surrounding area	Secondary forests and the Omigawa are located around the waste storage area	—	○	—	High	—
				Omigawa is used as a water source and drainage	○	○	High	High	High
	Hydroelectric power plant	Power generation	Area surrounding the power plant	The plant's green space faces a secondary forest, and part of it is also used as green space. Power is generated using river water sourced from Himekawa, etc.	○	—	Medium	—	Small

- Ecosystem integrity: assessment of the number of species, extinction risk, and ecological natural capital of the natural environment (region)
- Biodiversity Importance: Assessment of the importance of an area as a legal or internationally protected area, endemic ecology or endangered species habitat, etc.
- Water stress: evaluation of the amount of water (fresh water) used in relation to the amount of water (fresh water) supplied by the natural environment (region)

Our domestic plants and the surrounding natural environment (ecosystems)





Message from the Chief Human Resource Officer

Our management plan “Mission 2030” has begun. There are various KPIs in this plan, and we will be carrying out various activities to achieve them, and we recognize the need to strengthen the link between the management plan and the human resources strategy more than ever. Furthermore, in order for our company to enhance its corporate value, we would like to create an environment in which a diverse range of human resources can respect each other and fully demonstrate their abilities. As a result, I believe that the most important theme, and my mission, is to create a corporate culture in which each employee thinks about the purpose of our work and how to build their own career. I also believe that good internal communication is the basis for promoting these activities, and would like to promote effective initiatives in various ways.

Ikuo Ishida Managing Executive Officer
Chief Human Resource Officer



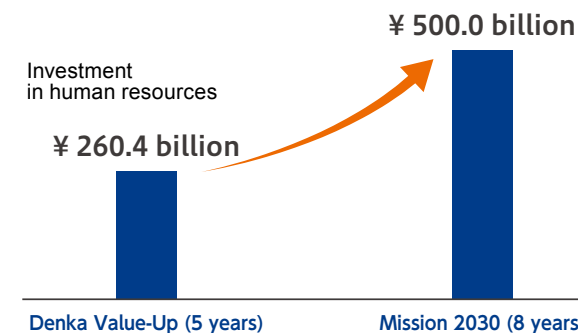
Human resources value creation

Denka’s core values of “initiative”, “integrity”, and “empathy” make it a company where each individual can realize personal growth

Our management plan, “Mission 2030”, sets out three policies, which are, strengthening the human resources development systems, promotion of diversity, equity, and inclusion, and health and productivity management and work style reform. We set strategies and 2030 targets based on these policies. As for investment in human resources, we plan to invest ¥500 billion over eight years, aiming to become a company where each person can feel their own personal growth through Denka’s core values of “initiative”, “integrity”, and “empathy”. We are also proactively working on system reforms with the aim of becoming a company

where each employee can experience personal growth. In April 2023, we conducted the 3rd Employee Awareness Survey to serve as a guideline for future human resource policies. By analyzing the results of this survey, we will identify issues that hinder the achievement of goals and the development of a corporate culture based on initiative, empathy, and integrity, formulating and implementing improvement measures.

Policy	Strategy
Strengthening of human resources development systems	Cultivation of future executive manager candidates, building of company-wide, integrated education framework, and fostering of a selfdirected learning culture
Promotion of diversity, equity & inclusion	Fostering of workplace environments, systems, and culture that empowers individuals with diverse ways of thinking to demonstrate their capabilities
Health and productivity management and workstyle reform	Promotion of system reforms to create workplaces that employees will “want to come to work again tomorrow”



Previous human resources initiatives and KPIs (2030 targets)

In the creation of human resources value under the “Mission 2030” management plan, we set medium- to long-term KPIs linked to our policies of strengthening of human resources development system, promotion of diversity, equity and inclusion, and health and productivity management and work style reform.

Policy	Measures	2018	2019	2020	2021	2022	2023	2030 Targets
Strengthening human resources development systems	Improve personnel systems and evaluations		<ul style="list-style-type: none"> Established new personnel evaluation system Reformed job groups and management systems 	<ul style="list-style-type: none"> Abolished qualification levels Integrated into job levels Established new job allowance 			<ul style="list-style-type: none"> Conducted study of job-based employment system Launched strategic personnel changes Reviewed human resource development programs 	Average training costs 2 times that of FY2021
	Improve employee treatment	<ul style="list-style-type: none"> Improved pay scale and bonuses Abolished associate employee system 	<ul style="list-style-type: none"> Increased starting salary 			<ul style="list-style-type: none"> Revised wages for M-category employees Established conversion system from S-category to M-category employees 		
	Improve management	<ul style="list-style-type: none"> Commenced training courses for managers 			<ul style="list-style-type: none"> Launched succession plan 	<ul style="list-style-type: none"> Established Career Planning Committee 		
Promotion of diversity, equity & inclusion		<ul style="list-style-type: none"> Conducted workshops for women Held seminars to raise awareness on issues related to diversity Provided career training Developed support measures for balancing work and nursing care commitments (help desk and handbook) 	<ul style="list-style-type: none"> Released video learning material to promote a further understanding of diversity 	<ul style="list-style-type: none"> Started providing support to balance work and nursing care commitments, developed seminars and video viewing programs 	<ul style="list-style-type: none"> Launched project to facilitate the hiring and promotion of females for managerial positions Established new investment limits to improve the workplace environment Acquired Kurumin certification 	<ul style="list-style-type: none"> Conducted employee surveys on diversity Held seminars to provide support for balancing work and childcare commitments 	<ul style="list-style-type: none"> Expanded recruitment portfolio Launched the Global Promotion Task Force 	Ratio of women/foreign nationals/mid-career hires in managerial positions 50% Percentage of male employees to take childcare leave 85% Ratio of mid-career hires 50%
Work style reform	System			<ul style="list-style-type: none"> Introduced telework system Introduced staggered working hours system (revised) 	<ul style="list-style-type: none"> Established investment limits for workplace environment improvement 	<ul style="list-style-type: none"> Relaxed requirements for employees to take childcare and nursing care leave Introduced Shinkansen commuter passes Hourly paid leave trials began at all production sites 	<ul style="list-style-type: none"> Systemized innovative working styles (telework, etc.) Expanded shift breakers 	Overtime hours 30 hours or less /person/year Percentage of employees taking annual paid leave 100%
	Employee engagement	<ul style="list-style-type: none"> President begins visiting and greetings at work sites in person 		<ul style="list-style-type: none"> Conducted 2nd Employee Awareness Survey 			<ul style="list-style-type: none"> Conducted 3rd Employee Awareness Survey 	Working-from-rate 2 days/week *Head Office
Promotion of health and productivity management			<ul style="list-style-type: none"> Started payment of nursing/nursing care leave (revised) Introduced flexible measures to shorten working hours for the purpose of providing child and nursing care (revised) 	<ul style="list-style-type: none"> Established Health Promoting Section Announced Declaration of Health and Productivity Management 	<ul style="list-style-type: none"> Introduced Health Support App (&well) Recognized as an Certified Health & Productivity Management Organization 2022 The 1st labor and management jointly sponsored walking contest 	<ul style="list-style-type: none"> Recognized as a Certified Health & Productivity Management Organization 2023 and part of the White 500 Held Denka's Health Week (seminars) Held gait measurement sessions to prevent falls (all production sites) Decided on future policies aimed at a workplace free of passive smoking Began offering support to quit smoking The 2nd labor and management jointly sponsored walking contest 	<ul style="list-style-type: none"> Employees within appropriate weight limits 80% Employees with high stress levels 10% or less Employees with good exercise habits 40% Smokers 12% or less 	

Reflecting employee awareness survey results on human resources strategies

Our company has been conducting employee awareness surveys on a regular basis since FY2017. Results for the FY2017 survey were reflected in various institutional reforms, such as reforms to the personnel evaluation system and the job categories system, in an effort to improve the working environment of our employees. With the FY2020 survey, we reassessed the current situation and issues of the company, including the effects of the previous measures, and implemented planned measures to create an environment in which employees could thrive, such as investing in improving the workplace environment (page60). The third survey was conducted in April 2023, and we are currently analyzing the results and identifying issues.

Strengthening of human resources development system

FY2022 initiatives

- 1. Effectiveness verification and refinement of the personnel evaluation system**
 - In FY2022, we confirmed the effectiveness of the promotion and incentive system.
- 2. Implementation of succession plans, including training for officers and general managers and training for outside directors**
- 3. Refinements of training**
 - All of the job level-based programs planned for the first half of FY2022 have been implemented. Outsourcing was also effectively used for training operations.
 - Training was enhanced prior to overseas assignments (training on compliance, management, and cross-cultural understanding for expatriates).
- 4. Recruitment and human resource utilization**
 - In order to expand our recruitment portfolio, we hired recent graduates looking to change jobs (young job seekers that had graduated from university within the last three years).
 - In principle, we consolidated personnel changes in April, and strategic personnel changes were implemented in consideration of long-term human resource development.

Future initiatives

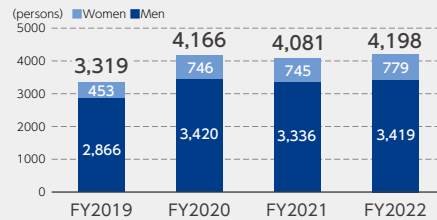
- Conduct study of job-based employment system
- Expand recruitment channels (career recruitment, referral recruitment*, etc.)
 - *A recruitment method in which employees of the company, external business partners, and others who are trusted internally and externally introduce people who are appropriate for the company
- Measures to support employee career plans and establishment of career counseling centers
- Maintaining succession plans (officer and general manager training/evaluation/human resource selection system, career plan implementation)

Promotion of diversity, equity & inclusion

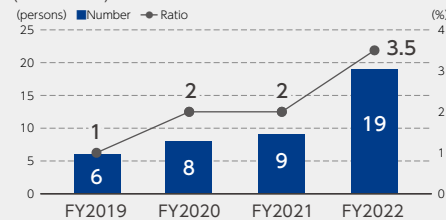
FY2022 initiatives

1. Active employment and promotion of female managers

Number of men and women employed (main offices)



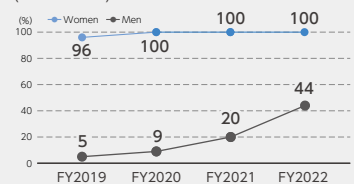
Current ratio and number of women in managerial positions (main offices)



2. Support for balancing work and childcare commitments

- Dissemination of systems to support the dual-income generation internally and carrying out awareness activities
- Development of seminar implementation plans for managers/involved parties
- Case studies of employees taking childcare leave on internal portal site

Percentage of employees taking childcare leave (main offices)



Column | Promotion of men taking childcare leave

I took a month off for childcare leave right after the birth of my first child. Because I was able to concentrate on raising my child during my childcare leave, I naturally became more involved in the process, which persisted even after my leave period ended. This gave me a base to balance work with raising my child. I am grateful to my boss and colleagues for following up on my work while I was away, and I want to do my best to help out everyone else with whatever they need.



Yuhei Gonda

Electronic Materials Research Department, Shibukawa Plant

Future initiatives

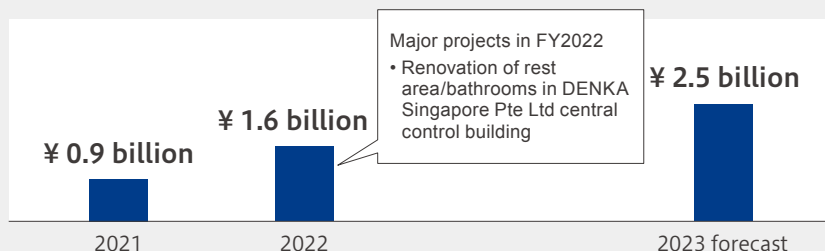
- Formulating an action plan to promote diversity
- Developing inclusive leaders
- Conducting events for related parties concerned about balancing work and childcare
- Developing diversity, equity, and inclusion policies
- Continued expansion of recruitment of women, foreign nationals, and mid-career hires
- Operating and thoroughly disseminating the new system based on the Revised Child and Family Care Leaves Act (creating a workplace that allows for a balance between work and childcare through training and dissemination of information)

Health and productivity management and workstyle reform

FY2022 initiatives

1. Implementation of investments to improve the workplace environment

In accordance with the company-wide policy for work style reforms issued in July 2020, we established a new capital expenditure budget from FY2021 with the aim of creating a more comfortable working environment at each business office, motivating employees and improving productivity. We decided to invest approximately ¥1.3 billion of the FY2022 capital expenditure budget in the improvement of the workplace environment, and made investments of approximately ¥1.6 billion.



2. Conducting stress checks and holding results debriefing sessions

Stress check results debriefing sessions were held at all business offices, and afterwards, workplace improvement training was conducted by a third party at those sites that requested it.

3. Implementation of collaborative measures with health insurance association

- ① Strengthening anti-smoking measures (subsidies for smoking cessation clinics and aids)
- ② Considerations for dental examinations
- ③ Conducting measurement sessions for fall prevention (muscle mass measurement sessions and walking guidance)

Recognized as a Certified Health & Productivity Management Organization 2023 and part of the White 500

For the first time, our company has been recognized as a Certified Health & Productivity Management Organization 2023 “White 500” company, a certification jointly administered by the Ministry of Economy, Trade and Industry (METI) and Nippon Kenko Kaigi.

This is the second consecutive year we have been recognized as a Certified Health & Productivity Management Organization. This recognition honors corporations that practice particularly good health and productivity management based on initiatives that address local health issues and health promotion initiatives promoted by Nippon Kenko Kaigi. And the top 500 corporations certified as Certified Health & Productivity Management Organizations receive the even more distinguishing White 500 certification. In January 2021, we established the Health Support Office as the executing organization for this initiative, and in April of the same year formulated the Declaration of Health and Productivity Management, which spells out the philosophy and action guidelines for health and productivity management. We began centralized management of employee medical exam data, established KPIs based on analyses of these data, collaborated with industrial health staff and health insurance associations, introduced remote smoking cessation guidance and health support apps, strengthened specific health guidance, and regularly held health promotion seminars. In the future, we will continue to promote health in order to create a company where employees can work actively and in good physical and mental health, experiencing their own personal growth.



Column | Health and productivity management

Health and productivity management is the strategic implementation by companies from a managerial perspective to improve the health of their employees. By promoting health and productivity management, we can contribute to society by eliminating managerial risks (securing workers and stable operation in the face of a declining workforce), improving corporate performance and brand strength, and reducing social security expenses. Because each and every employee is healthy, we can realize a workplace that places the utmost priority on safety, and each workplace is coming up with various ideas. The health of our employees is the key to achieving the goals of the “Mission 2030” management plan.



Daisuke Akatsuka
 Deputy Director of the HR Dept. and Head of the Health Support Office

Future initiatives

- Creating a safe work environment free from passive smoking (establishing anti-smoking guidelines and strengthening anti-smoking support in collaboration with health insurance associations)
- Holding feedback meetings on the results of medical exam data analyses to develop health measures tailored to the characteristics of the health issues unique to each site
- Continue gate measurement sessions to prevent falls

Message from the Chairman

In order for companies to continuously increase their corporate value in modern society, they are required to not only pursue profit, but also expand their perspective to the social needs of shareholders, customers, employees, local communities and the world, thus contributing to the increase of the happiness for a wide range of stakeholders.

Achieving carbon neutrality and pursuing sustainability such as environmental preservation, promoting diversity and health management, respecting human rights and ensuring safety are now the minimum conditions for a company to survive.

In fiscal 2023, we launched “Mission 2030”, a new management plan targeting fiscal 2030. The base for this will be our “New Vision” where we aim to respond firmly to these social demands, with “Initiative,” “Integrity,” and “Empathy” as our core values, and “making the world a better place as specialists in chemistry” as our purpose. The pursuit of ESG management and the achievement of SDGs over the medium term will form the basis of the non-financial objectives factored into the “Mission 2030” management plan.

In recent years, the company has taken various measures to strengthen its governance structure. In order to respond appropriately to changes in society, we are constantly implementing reforms that are one step ahead of the curve, such as making the Board of Directors more compact and increasing the ratio of outside directors, introducing a skills matrix, further strengthening supervisory functions through the introduction of an audit and supervisory committee system, and strengthening the sense of ownership through a review of the executive compensation system.

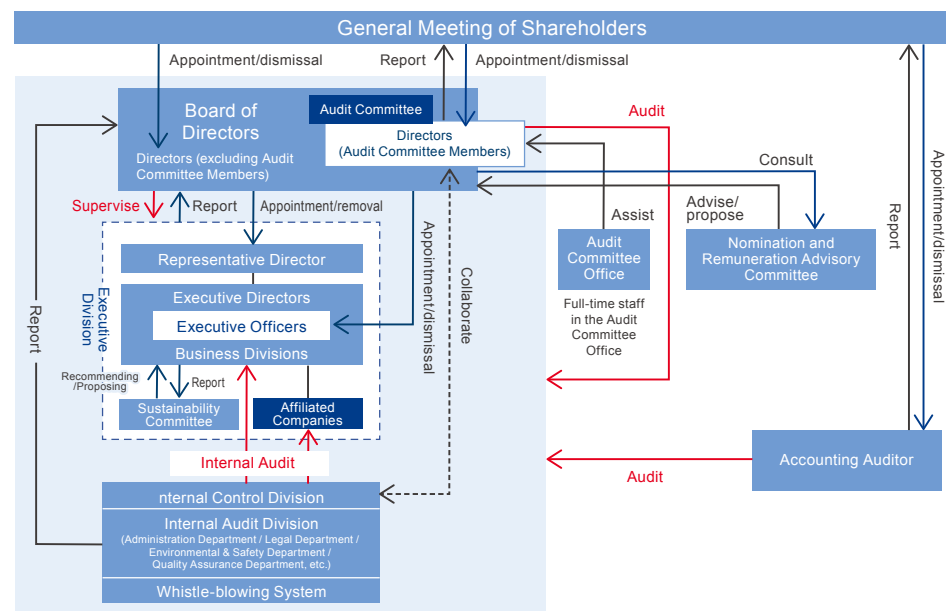
Through the promotion of the management plan “Mission 2030,” we will continue to contribute to the sustainable growth of corporate value of the Denka Group by improving the effectiveness of the supervisory and advisory functions through further activation of the Board of Directors and further upgrading of corporate governance, such as speeding up decision-making, so that the management team can pursue activities to realize the social demands described above.



Manabu Yamamoto

Chairman and Director

Corporate Governance System



Round-table discussion with our Outside Directors

Achieving "Mission 2030" with an eye toward the future



Toshio Kinoshita

Director,
Audit Committee Member

Akio Yamamoto

Director,
Audit Committee Member

Miyuki Matoba

Director,
Audit Committee Member

Yoshiyuki Fukuda

Director

Denka's new management plan "Mission 2030 (M30)" was launched this April. We asked our Outside Directors for their objective opinions on the plan, including their thoughts and appraisal, and about issues standing in the way of achieving sustainable corporate growth.

1 Recommendations for creating the Denka Vision and Mission 2030

"Formulation of the vision and management plan started with discussions among our young employees."

Yamamoto: In the process of creating "Mission 2030", we first organized a vision project to serve as the basis for our management plan. I believe this process was very important in terms of involving the whole company. The vision painstakingly created by our young employees who will lead the next generation was fed back to management, including Outside Directors, and there was a good connection from the perspective of further developing the aspirations of our younger employees.

Fukuda: The targets outlined in "Mission 2030" are very ambitious and cannot be achieved by mere extension. I think it is admirable that these new targets came up in discussions involving our young employees.

Matoba: I believe it is wonderful that "Mission 2030" was devised from the bottom up from the drafting stage. However, with the limited amount of time available at board meetings, the talks tended to become more a case of stating opinions rather than a detailed discussion. It would have been more productive if there was a form of free discussion with the employees who made the initial draft, even if it was in the form of a brainstorming session.

Recommendations for "Mission 2030"

■ Importance of the concept

Yamamoto: I suggested the importance of having a concept in management planning. "The future is words, the future is systems." Where will the global chemical industry be in three, five and ten years? Where should Japan and Denka position ourselves? The most important part of implementing a strategy is translating the concept into words and sharing it. Because the future is created by words. And, the future is systems. It is important to create the necessary systems and offer the right incentives to achieve our goals. It is necessary to ensure the right systems are in place to reach your objective. Simply setting a goal and encouraging one will not help an organization achieve its goals. The system may not be perfect at first, but I have often suggested the importance of continuously maintaining that mindset.

■ Portfolio transformation

Kinoshita: The medium- to long-term business plan is based on discussions about current business sustainability and the establishment of new business models. Can we continue along the same lines until 2030, and what kind of business models do we need to create to survive? This is true of every company. And in a company like Denka with more than 100 years of history, it is needless to say that there is value in what we are doing now or have done up to this point, but it is not necessarily the



Actively think and act on what needs to be done to achieve your goals

We need to make objective recommendations on what to stop, what to strengthen, and what new things to start.



case that all of our business areas are contributing to overall profit. Sometimes it is necessary to make the hard decisions. I suggested that in formulating "Mission 2030" it would be beneficial to discuss our portfolio.

Fukuda: In our previous management plan, "Denka Value-Up," we decided to withdraw from the cement business, and we will not be able to achieve the targets set out in "Mission 2030" unless we continue to transform our business portfolio. In order to achieve our lofty goals in fiscal 2030, we must act quickly.

Matoba: In today's rapidly changing business environment, everything may not go as planned. There may be times where you become too pre occupied on seeing things through. As an Outside Director, I am aware that I have a role to express a more objective opinion when it is time for change.

■ Financial Strategies & KPIs

Fukuda: As Outside Directors, we made various recommendations regarding the establishment of the Financial Strategy Department (May 2022) and including ROIC as one of our KPIs. Denka is a blue-chip company with an equity ratio of 50%. As a result, I believe the idea of using outside capital and borrowings to leverage and cultivate new businesses will spread within the company.

Kinoshita: KPI targets are absolutely necessary. A plan without numerical targets cannot be properly evaluated. In our new financial indices, segment divided ROIC was included, together with ROE in our KPIs. The important thing, is each personnel of each business division actively thinking about what is needed to achieve the ROIC goals, and taking necessary actions.

Matoba: That's right. It is important that everyone knows why we are aiming for those numbers and does everything they can to achieve them. We would also like to sit down with executives and think about it.

2 Challenges associated with "Mission 2030"

M&A and venture capital

Fukuda: Four of our business divisions, excluding New Business Development, have clearly identified priority areas and issues. For example, there are clear issues in the fields of

semiconductors, batteries, and healthcare. In order to achieve the high goals set forth in the "Mission 2030", we need to actively engage in strategic investment, including M&As. M&As have proven to be difficult for us in the past and we don't have a good track record.

Kinoshita: Organic growth can be difficult for any company, and trying something new will not always work out. This is why we have established Corporate Venture Capital (CVC) funds with Pegasus Tech Ventures in California, USA.

The important thing to keep in mind in going forward with CVC is to get involved from the stage of considering investment to think about how much risk we can take on. Otherwise, it won't be a business for Denka. However, our employees do not have the experience and knowledge to create new business models from an investment perspective. That's why it's important to take advantage of this opportunity to gain experience even if we make a few mistakes along the way. I believe that the Board of Directors has an important role to play in focusing on human resource development while reviewing the progress of each of our business areas.

Human resource development and utilization

Yamamoto: I think there are two issues to be addressed in order to ensure "Mission 2030" is implemented as planned. The first is creating a healthy business portfolio. As we mentioned before, we need to think about what business areas we need to withdraw from and what areas we need to strengthen. The second is how to go about creating new businesses. People who work on the front line have a special attachment to the work they do, so they have a role to offer objective recommendations. Another important point is the development and utilization of human resources. The domestic employment environment is completely changing, and we need to spend more resources on bringing in people from outside the company, designing human resource systems, and developing the necessary human resources. Initiatives to achieve diversity, equity and inclusion (D, E & I), such as employing more female employees and foreign nationals are still in their infancy. I feel we need proposal from a new perspective on what it is we should be doing.

Matoba: We mentioned earlier that the "Mission 2030" growth strategy is ambitious, but the goals and specific initiatives set out in the creation of human resource value are still somewhat lacking.



We need to work on improving our corporate culture and creating an environment where employees feel they can voice their opinions.

Yamamoto: Management is aware of the need to increase the number of female and foreign managers. But it will take time to achieve our human capital goals. I don't think D E & I will be able to move forward without consciously thinking about what we can do to speed up our efforts.

Matoba: You have to be brave enough to try something completely different. I think it's going to be a big challenge not only for top management, but also for managers and workers on the front lines.

Enhancing corporate governance

Yamamoto: I believe Denka has worked hard to improve its governance framework over the past 10 years or so. We have established a variety of corporate governance bodies in response to requests from Outside Directors. The way in which information is shared between outside officers, Executive Officers, and the bodies under them has changed significantly.

Kinoshita: This has greatly increased our work load (laughs). Discussions have become a lot more detailed and focused on the heart of the matter. When auditing our business divisions, the Audit Committee visits the factories and domestic and overseas subsidiaries and listens to their perceptions of the issues they face, often resulting in heated discussions. I believe this is a very good opportunity for us and for personnel working on the front lines.

3 What we hope to achieve with "Mission 2030" and how we can make it better

Corporate culture

Matoba: This is what I feel when I talk to people on the front line when I visit a business site for an audit. Everyone is serious about their work and I believe there is a good corporate culture, but on the other hand, people feel that they can't talk about things unless it goes through the proper channels. I believe it would be beneficial to work on further improving our corporate culture and creating an environment where employees feel they can speak up.

Fukuda: Maybe it's tradition.

Matoba: We don't have to do things as before. In my opinion, removing barriers for communicating with each other, leading to not adding, but multiplying each individuals' abilities could lead to

Strengthen corporate communications to convey the diverse capabilities of Denka



improvement of our company. I think we could have more opportunities to talk with the people that work on the front lines, as Outside Directors. I hope that this gesture would lead to conveying a message that we see and acknowledge them.

What we can achieve by sharing information and increasing communication

Kinoshita: I think we need more external communication. We are now in an age where it is important to gain understanding about what we do rather than just doing it. We have to communicate more with the outside world. We need to take a more proactive approach to communication and use a variety of tools, not just the Internet. Ultimately, it is my hope that we can link this to SDGs and improve communication not only with our shareholders, but with all our stakeholders.

Fukuda: I couldn't agree more. Denka still has a strong image as a cement and fertilizer manufacturer. We are not well known in the health care industry. Denka has a lot of outstanding qualities and should be recognized more. We need to further enhance our external communication. I feel we need to talk more about what we hope to achieve through "Mission 2030".

Kinoshita: I think we need to have more of a sense that we should not just deliver information, but need to involve and engage with stakeholders. It is important to establish a trusting relationship through two-way communication. This will serve to raise Denka's profile and attract talented personnel.

Matoba: I believe Denka has a strong foundation. We have told, not only to our institutional investors, but also to our employees to spread this fact.

Yamamoto: Yes, that's right. ESG management is attracting attention and corporate social responsibility is being repeatedly questioned. I believe the essence of ESG management is how each business research division can contribute to a healthy and sustainable society through friendly competition and the creation of new and profitable businesses. It is important to instill "Mission 2030" in our employees. I hope that this will help each employee achieve growth and create an atmosphere in which they are happy to work.

(Date: May 11, 2023, Location: Denka Head Office)

Directors



Photo taken on July 10, 2023

Mizuhiro UchidaDirector
(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**

Chairperson of the Board

Toshio ImaiRepresentative Director,
President & CEO**Yoshiyuki Fukuda**

Outside Director

Kazuo Takahashi

Representative Director

Ikuo Ishida

Director

• See here for Director profiles. https://denka_sustainability.disclosure.site/en/themes/673

Our View on the Appointment of Directors

Under the new vision, in order to achieve the eight-year management plan “Mission 2030” through fiscal 2030, the Company aims to strengthen the management structure with Directors and Executive Officers, while enriching the governance structure and supervisory function. In electing Directors, internal Directors are chosen from persons who possess a wealth of experience and achievements in various divisions within the Company, while also possessing insights and adequate specialized knowledge as Director, and Outside Directors are chosen from persons who possess specialization required for continuous growth and improvement in corporate value of the Company and wide insights based on a wealth of business experience and management experience at other companies. The Company believes that it is important for the Board of Directors as a whole to elect a good balance of personnel with a variety of knowledge, experience, and abilities, and ensure that the composition of the Board of Directors is diverse in terms of gender, international background, work history, and other factors. Additionally, the Company believes that Independent Outside Directors should comprise at least one third of Directors. The present ratio is approximately 44%.

Skills Matrix of the Board of Directors

			Attributes				Skills											
			Independent outside	Age	Number of years in office	Gender	Corporate Management/ Corporate Planning	Human Resources value creation	Global business	Financial strategy/ accounting	Legal/ compliance	ESG/sustainability			Business value creation/ marketing	Research/ Intellectual property	Technology/ manufacturing	DX
												E (Environment)	S (Society)	G (Governance)				
Chairman and Director	Manabu Yamamoto		67	10		○	○	○					○	○				
Representative Director, President & CEO	Toshio Imai	President and Chief Executive Officer	64	4		○	○	○				○	○					
Representative Director	Kazuo Takahashi	Senior Managing Executive Officer	63	2		○	○	○		○				○	○		○	
Director	Ikuo Ishida	Managing Executive Officer	61	0		○	○	○					○					
Director	Yoshiyuki Fukuda		66	2	○	○		○				○						
Director	Mizuhiro Uchida	Full-time Audit Committee Member	61	0				○	○		○	○					○	
Director	Toshio Kinoshita	Audit Committee Member	74	8	○			○				○						
Director	Akio Yamamoto	Audit Committee Member	71	8	○	○	○						○					
Director	Miyuki Matoba	Audit Committee Member	49	2	○				○			○	○		○			

*The matrix above shows the skills that the Board of Directors expects from them among knowledge and experience they possess. *Age and years of service are shown as of June 22, 2023.

(Skill matrix for managing executive officers who do not concurrently serve as directors)

Nobuyuki Yoshino	Managing Executive Officer		65								○	○			○	○	
Kazuya Tokumoto	Managing Executive Officer		64			○		○			○	○			○	○	
Hideki Takahashi	Managing Executive Officer		63			○	○					○					
Rimiru Hayashida	Managing Executive Officer		61						○				○				

Necessary skills for the Directors and the reason they were selected

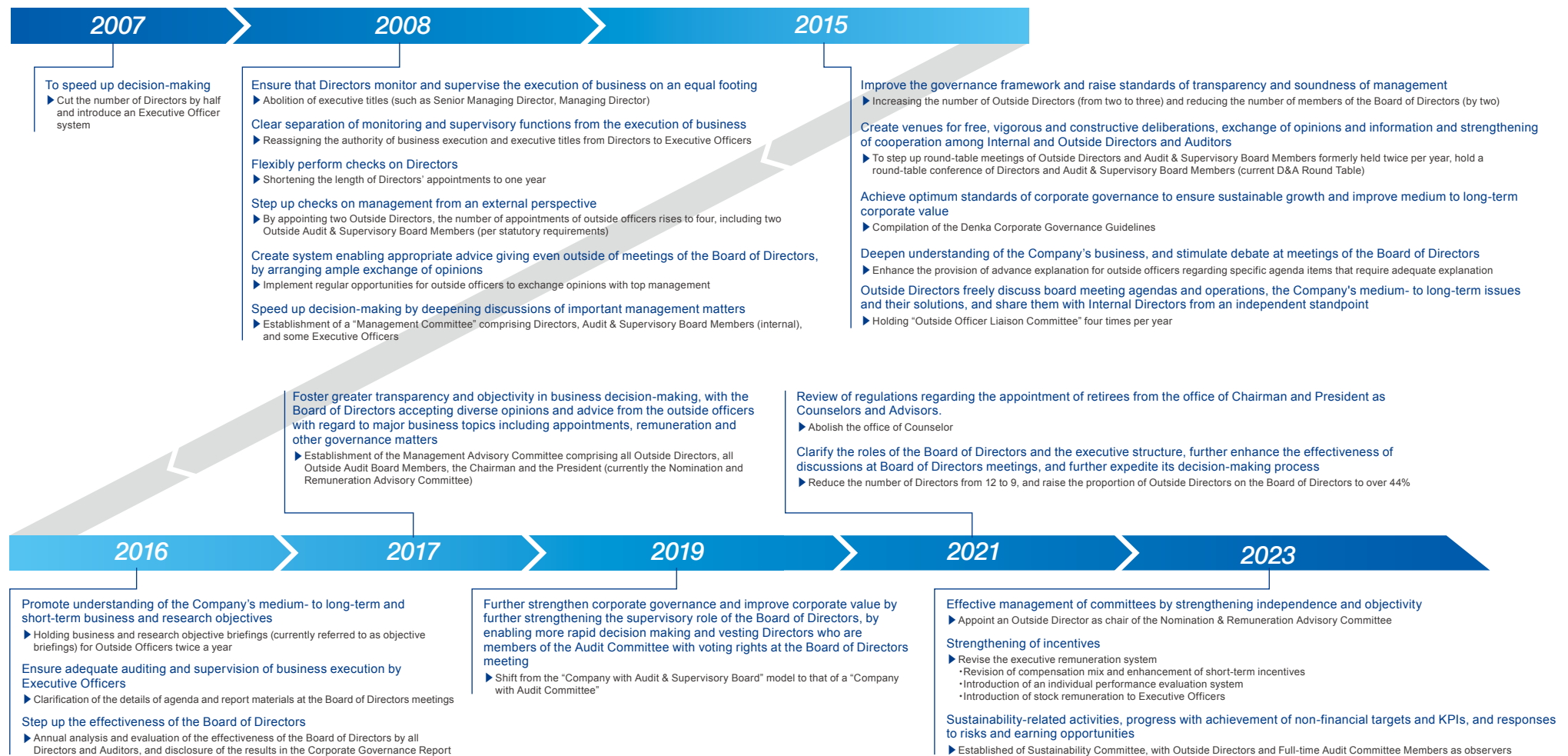
The skills considered necessary for the Company’s Board of Directors to make important decisions and supervise management under the new vision to reach the goals of the Company’s eight-year management plan “Mission 2030” through fiscal 2030, and to promote ESG management through the priority management materiality issues are as follows.

Skills	Reason for the selection of the skills	
Corporate management / Corporate planning	Directors are needed who have extensive management experience and achievements to establish and review management plans aimed at realizing the Denka’s Vision and supervise the execution of duties to achieve these plans.	
Human Resources value creation	Directors are needed who have extensive knowledge and experience related to human resources value creation in order to realize human resource investment and system reforms, aiming to become a company where each and every employee can gain experience self-realization and personal growth.	
Global business	Directors are needed who have extensive experience in global business to fulfill our Purpose to “making the world a better place as specialists in chemistry” with an awareness of global megatrends.	
Financial strategy/Accounting	Directors are needed who have extensive knowledge and experience in the financial strategy and the accounting field not only to ensure the accurate disclosure of financial information, but also to drive selection and concentration of businesses, pursue optimal capital structure and improve profitability and efficiency.	
Legal/compliance	Directors are needed who have robust knowledge and experience in the legal and compliance fields to ensure fair and trustworthy corporate activities appropriately responding to increasingly complex legal systems and regulations in Japan and abroad.	
ESG/sustainability	E (environment)	Directors with extensive knowledge and experience in E (Environment) are needed to fulfill corporate social responsibility working on the precondition for continuation of business, “Achievement of carbon neutrality,” “Sustainable cities and fulfilling daily lives,” and “Environmental conservation and minimization of environmental footprint.”
	S (Society)	Directors with solid knowledge and experience in S (Society) are needed to fulfill corporate social responsibility through the provision of safe and highquality products, respect for human rights, and participation in the effort to build a better community.
	G (Governance)	Directors with solid knowledge and experience in G (Governance) are needed to fulfill corporate social responsibility building a more advanced and effective corporate governance system that ensures transparency and fairness based on high ethical standards.
Business value creation & marketing	Directors are needed who have market insight based on a broad perspective, as well as extensive business experience to ensure that all the three focus areas, ICT & Energy, Healthcare, and Sustainable Living, will be fully made up of “three-star businesses” that incorporate the three elements of specialty, megatrends, and sustainability, while promoting the transformation of business portfolio, considering also selling or exiting a business that is difficult to convert to a “three-star business.”	
R&D/Intellectual Property	Directors are needed who have a track record of promotion of innovation, as well as deep knowledge in science and technology and a wealth of experience in proprietary technologies and intellectual property, in order to create business value in the three focus areas of ICT & Energy, Healthcare, and Sustainable Living.	
Technology/Manufacturing	Directors are needed who are deeply familiar with technology, and who have extensive practical experience and robust insight into manufacturing in order to create management values through process reforms to improve productivity, ensure trustworthiness in manufacturing, and establish a safe work environment.	
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 promote transformation of business model and organization through process reforms.	

Basic Approach to Corporate Governance

In order to fulfill the expectations and trust of its many stakeholders, including shareholders, customers, local society, and employees, based on the Denka's Vision (a vision of the future) comprising the Core Value that is the Company's DNA to serve as the foundation to support the tiers above, Purpose that serves as the North Star to guide the Company, and the Mission that the Company aspires to accomplish by 2030, the Company strives to strengthen its business foundation by improving its earnings power and expanding the scope of operations, while also working to improve corporate value by making every effort to continue being a company that can win the trust and sympathy of society. The Company considers corporate governance as the foundation for the above, and so we have striven to strengthen governance, in order to fulfill the responsibilities we owe to all our stakeholders, and ensure the transparency and soundness of our management.

Governance chronology Initiatives to Corporate Governance Thus Far



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 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 and individual 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.

FY2022 Director Remuneration

Category	Number of persons	Amount of remuneration, etc.	Breakdown					
			Cash remuneration				Stock remuneration	
			Basic remuneration		Performance-linked compensation		Number of persons	Total
			Number of persons	Total	Number of persons	Total		
Directors (excluding Directors who are Audit Committee Members) (of which Outside Directors)	5 (1)	279 million yen (12)	5 (1)	231 million yen (12)	4 (—)	25 million yen (—)	4 (—)	21 million yen (—)
Directors (Audit Committee Members) (of which Outside Directors)	4 (3)	74 (36)	4 (3)	74 (36)	— (—)	— (—)	— (—)	— (—)
Total (Of which Outside Directors)	9 (4)	353 (48)	9 (4)	306 (48)	4 (—)	25 (—)	4 (—)	21 (—)

*Remuneration for fiscal 2022 will be an amount determined based on policy under the system before the review described below.

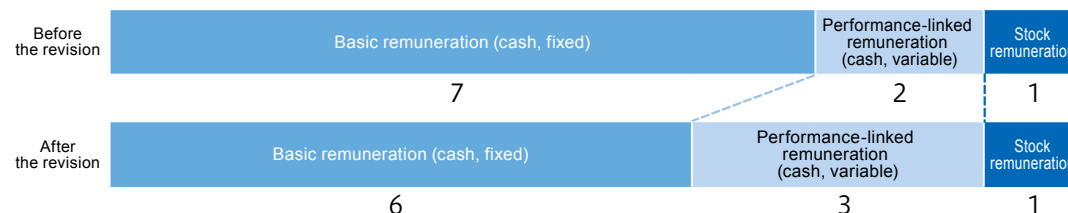
Topics | Outline of the revision of officer remuneration system (overview)

In response to the report and recommendations of the Nomination & Remuneration Advisory Committee, the Board of Directors resolved at its meeting held on March 13, 2023 to revise the officer remuneration as the following, with a focus on strengthening incentives, in order to make the system more conducive to the achievement of the “Mission 2030” management plan.

① Revision of Remuneration Composition Ratio / Strengthening of Short-term Incentives

Increase variable remuneration for each officer to be strongly mindful of achieving profit targets of the management plan.

< Image of the ratio of each remuneration paid to Directors (excluding Outside Directors) >



*The above chart shows the approximate ratio when operating profit is achieved based on the management plan and the evaluation for individual performance-linked remuneration is standard.

② Introduction of an individual performance evaluation system

Introduce an individual target management and evaluation system to encourage each officer to strongly commit to achieving the financial/non-financial targets of the division under his/her control, and reflect the evaluations in the remuneration.

③ Introduction of stock remuneration for Executive Officers

Introduce a new stock-based remuneration system to raise awareness of the need to contribute to medium- and long-term performance improvement and increase in corporate value in the same manner as Directors.

Evaluation of the Effectiveness of the Board of Directors

1 Method of Evaluation

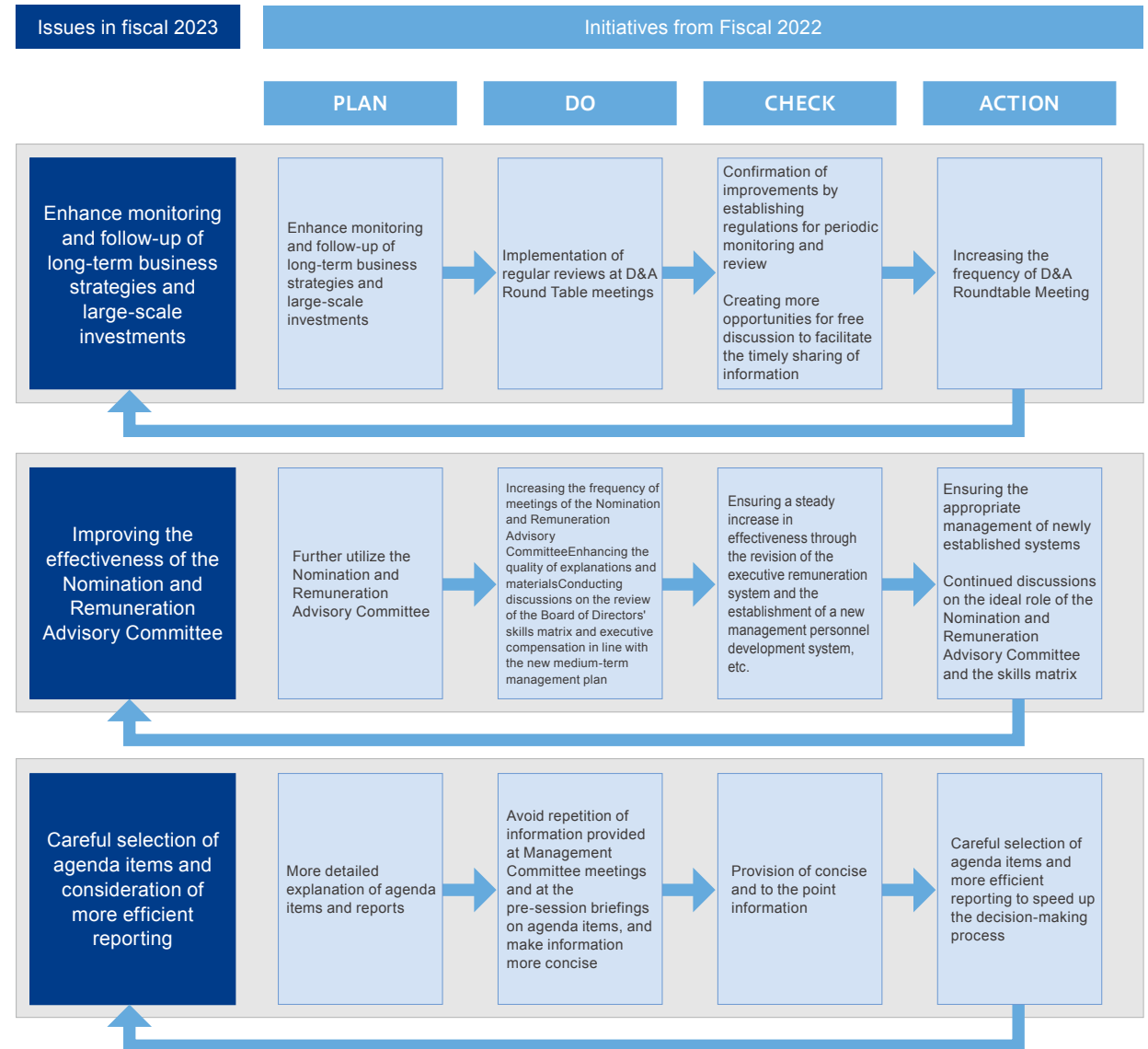
As we did in the previous fiscal year, Denka analyzed and evaluated the effectiveness of the Board of Directors by having individual Directors complete the “Self Evaluation Questionnaire”, which covers items related to the effectiveness of the Board of Directors, such as scale, composition, operation and 27 other items, and discusses the questionnaire results at Board of Directors meetings.

2 Summary of Evaluation Results and Future Efforts

Results confirmed that the frequency and time of meetings of the Board of Directors and its composition (balance and diversity of knowledge, experience and abilities) are appropriate, and due to the further efforts of the Nomination and Remuneration Advisory Committee and the D&A Roundtable Meeting, it has also been confirmed that management oversight and supervision is being properly implemented by the Board of Directors, of which 44% are Independent Outside Directors.

While there have been improvements in monitoring and following up on long-term business strategies and large-scale investment projects, there was an opinion that the Board of Directors should continue to make efforts to provide timely information and increase the number of opportunities for free discussion, which was last year’s issue of enhancing discussion of board of directors meetings. With respect to further utilization of the Nomination and Remuneration Advisory Committee, the frequency of its meetings was increased and explanations and materials were enhanced to further invigorate discussions. As a result, we have seen a steady increase in its effectiveness, including a review of the executive remuneration system and the establishment of a new training system for candidates for management positions. In order to ensure the reliable operation of these systems in the future, we are aware of the need to continue discussions and make recommendations. It was also pointed out that further careful selection of agenda items for the Board of Directors and more efficient reporting would require continued review and consideration, with an eye to speeding up the decision-making process.

In light of these constructive opinions, the Board of Directors will continue its efforts to improve its effectiveness, thereby enhancing corporate value over the medium and long term and meeting the expectations and trust of shareholders and other stakeholders.



Management Status of Each Committee

Board of Directors and optional committees, etc.

Board of Directors (Met 15 times in fiscal 2022)

To accomplish the Company's Mission in the Vision, the Board of Directors monitors and supervises major operational decision-making and execution of business duties by executive officers, based on strategic and management planning. The Board of Directors as a whole appoints candidates to be Directors in line with the standards for the appointment of both internal and Outside Directors, based on the belief that it is important to appoint a good balance of people with a variety of expertise, experiences, and skills. (For further details of our approach in appointing members of the Board of Directors, please see page 60.)

In addition, in principle, the Company has discontinued the use of executive titles, (such as Senior Managing Director, Managing Director) for Directors, such that all Directors may focus on monitoring and supervising the execution of business duties from an equal standpoint. Also, the Company has set the length of Directors' (excluding Audit Committee Members) terms to one year, in order to facilitate flexible checks on them at the General Meeting of Shareholders.

Objective briefings (convened 2 times in FY 2022)

Briefings are held in order to enable Outside Directors understand our medium- to long-term and short-term business and research policies.

Nomination and Remuneration Advisory Committee (convened 4 times in FY 2022)

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 the last fiscal year, this committee received inquiries from the Board of Directors regarding the review of the executive structure, the development of the skills matrix, succession plans, and the executive remuneration system and made recommendations and proposals following deliberations among the Committee. Further, an Outside Director has served as chairperson of the Committee since FY2023.

D&A Round Table (convened 7 times in FY2022)

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.

Outside Officer Liaison Committee (convened 4 times in FY2022)

Outside officers frankly discuss the nature of agenda and operation of the Board of Directors, as well as the Company's medium- to long-term issues and their solutions, from an independent standpoint and share the results of the discussions with internal Directors, so as to contribute to management.

Audit Committee (convened 14 times in FY2022)

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.

Policy on strategic shareholdings

The Company will hold such shareholdings if it judges that they will contribute to building a stable business relationship and maintaining and strengthening business alliances in accordance with its growth strategy, thereby enhancing the Company's corporate value over the medium to long term. The Company will sell shareholdings that are not in line with this policy. In accordance with the above policy, the Company's Board of Directors conducts a comprehensive annual review of such shares from various perspectives, including the financial condition of the issuing company, the volume of transactions with the Company and the economic rationality of such transactions, and a comparison with the Company's cost of capital. The number of issues of strategic shareholdings as of March 31, 2023 decreased by 20 from the end of the previous fiscal year to 70, and the ratio to consolidated net assets decreased by 1.68 percentage points to 9.97% from the end of the previous fiscal year.

Trends in strategic shareholdings

	FY2018	FY2019	FY2020	FY2021	FY2022
Number of issues	102	97	93	90	70
Amount on balance sheet (Millions of yen)	32,665	26,468	33,243	34,034	29,956
Total net assets (Millions of yen)	250,481	254,014	270,036	292,094	300,351
Percentage of consolidated net assets	13.04%	10.42%	12.31%	11.65%	9.97%

Number of issues of strategic shareholdings at the end of March 2023 and the amount on the balance sheet

	Number of issues	Amount on balance sheet
Unlisted issues	58 issues	3,551 million yen
Listed issues	12 issues	26,404 million yen

Issues with declining number of shares held in FY2022

	Number of issues	Total amount of gains related to the decrease in the number of shares
Unlisted issues	2 issues	8 million yen
Listed issues	23 issues	7,412 million yen

Human rights initiatives

We, the Denka Group, share a common understanding of the importance of human rights throughout our business activities. Based on the Denka Group ESG Basic Policy and the Denka Group Ethics Policy, we work to fulfill our human rights responsibility.

We value diversity in terms of race, religion, gender, age, nationality, and disability, and will increase corporate value by fulfilling such responsibility.

Denka Group Human Rights Policy

The Denka Group Human Rights Policy was approved by the Board of Directors and enacted on September 11, 2023. This human rights policy applies to all Group executives and employees, and its business partners and suppliers are urged to support and respect it. Furthermore, we have sent a Self-Assessment Questionnaire (SAQ) to major suppliers regarding various risks, including human rights risks, asking for their responses.

We will continue to promote awareness of and disseminate the Denka Group Human Rights Policy to all Group employees and work systematically together with expert third parties on human rights due diligence and redress mechanisms.



•The Denka Group Human Rights Policy https://denka_sustainability.disclosure.site/en/themes/779

Signatory to the UN Global Compact

The Denka Group signed a petition expressing its endorsement of the United Nations Global Compact (UNGC) and was registered as a participating company on June 8, 2023.

UNGC is the world's largest sustainability initiative that aims to build a sound global society through the collaboration among the United Nations and companies and organizations. Companies and organizations that sign the UNGC are required to support the 10 principles of human rights, labor, environment, and anti-corruption advocated by the UNGC, and strive to realize them through their business activities.

Denka has set forth the Denka Group ESG Basic Policy to address issues related to sustainability. In addition, the Company has promoted three growth strategies in its "Mission 2030" management plan: business value creation, human resources value creation, and management value creation. The Company is working to pursue sustainability in its business activities and strengthen its management foundation. By signing the UNGC, we will clarify our corporate stance toward the realization of a sustainable society and put the 10 principles advocated by the UNGC into practice in our business activities.

Place 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

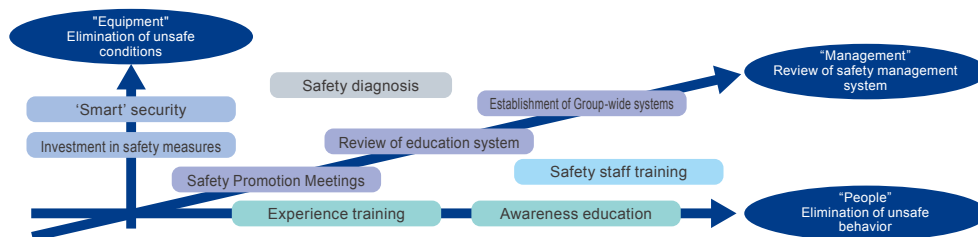
1 | Fiscal 2023 Activities

Companywide Targets	
1 Promotion of initiatives to achieve an occupational accident frequency rate of 0.2 or less	2 Achievement of zero serious accidents
Priority Initiatives	
1 Creating Absolute Safety A penetrative series of activities, from identifying the source of danger and construction of safety measures to establishing rules	
2 Strengthening of Process Safety Simulation of explosion leakage and response to natural disasters	
3 Enhancing Education Improved education system to bring about a training environment that enhances both hard and soft safety measures	
4 Support for Affiliated and Partner Companies Develop safety management system and promote activities for the whole group	
5 Enhancement of Horizontal Functions Corporate Division to take the lead in horizontal development of good practices within the Group	

2 | Strategy to Achieve Objectives of Management Plan "Mission 2030"

In order to achieve an occupational accident frequency rate of 0.2 or less and 0 serious accidents by 2030, we have introduced a strategy of "Creating absolute safety, establishing rules and a safe work environment throughout the Group" and we are systematically working on the following strategies.

- ① "Equipment": Elimination of unsafe conditions by creating absolute safety**
By utilizing capital investment limits for safety measures, we will reduce the risk of accidents caused by equipment.
- ② "People": Elimination of unsafe behavior by enhancing safety education**
We will nurture human resources from both technical and non-technical perspectives, improve security technologies, and eliminate accidents caused by employee behavior.
- ③ "Management": Ensuring the effectiveness of safety activities through the review of safety management mechanisms**
We will use IT to analyze strengths and weaknesses in safety and security and promote highly effective safety activities throughout the Group.



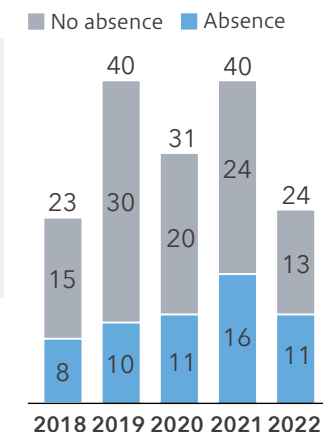
3 | Occupational and Process Accidents

Omi Plant Pipe Burst Accident

On June 14, 2023, at our Omi Plant, one employee from our partner company died and two others sustained injuries in an accident in which a pipe had burst during maintenance work at. We pray for the deceased and extend our condolences to the bereaved family. We also take this opportunity to express our sympathies to the injured. We sincerely apologize for the inconvenience and concern we have caused to local residents, our many business partners and other persons involved. In addition to fully cooperating with the investigation by the relevant authorities, we have established an Accident Investigative Committee by inviting outside experts and professionals to thoroughly investigate the cause of the accident and formulate measures to prevent recurrence.

In fiscal 2022, the number of occupational accidents was 24 (16 less than the previous fiscal year) and the occupational accident frequency rate was 0.7 (0.3 points less than the previous fiscal year), giving a reduction in both measurements. As in the previous year, one noticeable cause of accidents was a lack of due attention, such as the belief of workers in the safety of their surroundings. Therefore, we have not only invested in safety measures to make our facilities inherently safer, we have also promoted education to improve safety awareness (non-technical skills) and initiatives to ensure compliance with and enhance awareness of basic actions.

Trends in the Number of Occupational Accidents



NB: Number of occupational accidents at Denka (including partner companies) and consolidated subsidiaries with domestic or overseas offices

4 | Topics

1. Fostering a Culture of Safety

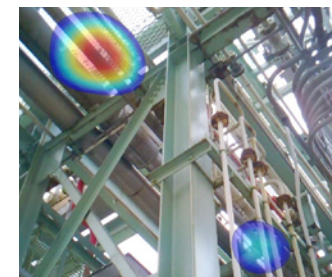
- Safety staff are trained in all environment and safety, manufacturing, and engineering departments within the company, and measures are taken to ensure both safety and operability by improving processes that workers find difficult.
- In order for inexperienced workers and foreign workers to understand, we have created an environment where everyone can work safely by using pictograms and operating procedures in video media.



Example of Pictogram Display

2. Prevention of Safety Accidents

- We are working to prevent safety accidents and automate monitoring by introducing exemplary cases of 'smart' safety (inspection by drones, installation of leak detection cameras, etc.) throughout the company.
- As a response to natural disasters such as earthquakes and heavy rain, we are endeavoring to avoid damage by promoting countermeasures that have been formulated from the results of damage simulations.



Examples of Utilization of Leakage Detection Cameras
*Colored area indicates simulated leakage

3. Activities of the Entire Denka Group

- In order to accelerate the absolute safety measures of each group company, we have set up a "mother plant" within Denka itself which supports the safety activities of affiliated companies, thereby promoting safety activities with a sense of unity.
- We are working to improve safety knowledge and awareness through the use of e-learning to educate the entire group on laws, regulations, internal rules, and safety awareness, as well as risk assessment.

Risk management



Message from the Executive Officer in charge of the Internal Control Dept., Legal Dept., Administrative Dept., and Secretary Dept.

In order to provide high value to all stakeholders, including shareholders, the Denka Group has constructed an internal control system for the corporate group and reports the results of the internal control to the Board of Directors, and is also developing and strengthening a group-wide compliance system. Denka provides officers and employees of Denka Group companies, both in Japan and overseas, with compliance training based on the Group's common rules, such as the Basic ESG Policy, the Denka Group Ethics Policy, and the Standards of Business Conduct, to ensure thorough compliance with social ethics and laws. Denka also operates a Group whistle-blowing system for early detection and early correction of problems. Furthermore, in order to reduce capital costs, Denka will identify, evaluate, and manage risks in terms of both uncertainty and business opportunities, and will continue efforts to make use of such risk management for Group management.

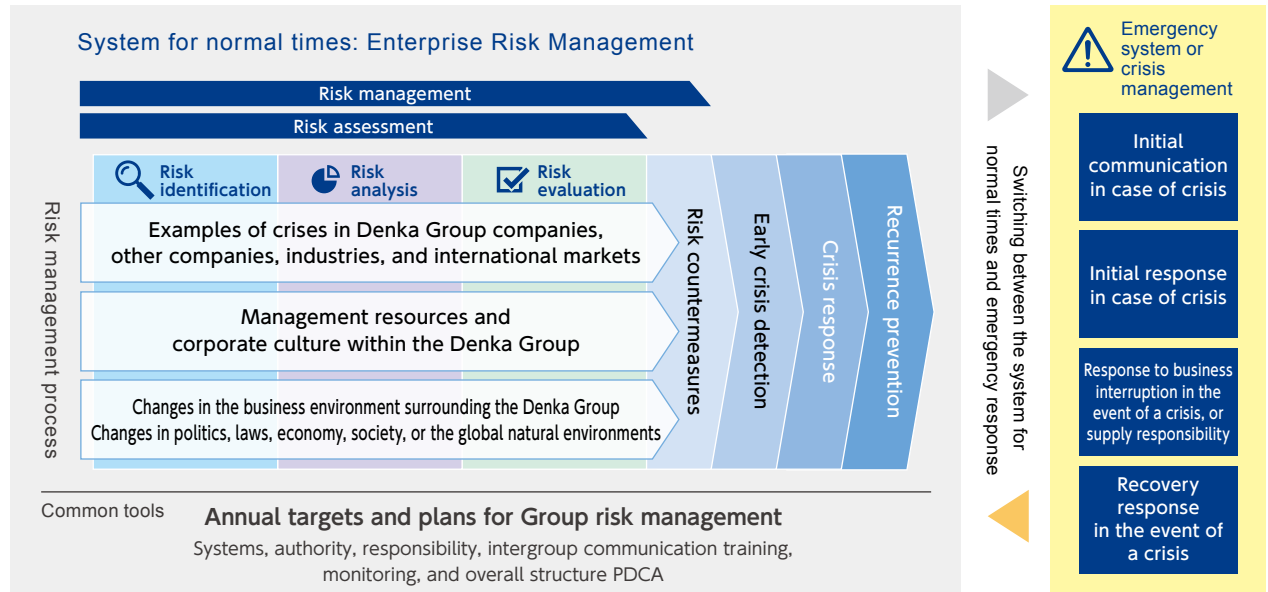
Ken Watanabe Executive Officer

Denka's approach to sustainability and risk management

Denka's Board of Directors recognizes that responding to the changing business environment and various social issues is an important management issue that leads to reductions of risks and to profit opportunities. The Board of Directors has established The Denka Group Basic ESG Policy as Denka's basic policy to proactively address these issues, and is working to improve the corporate value of the Denka Group over the medium to long term by appropriately responding to each risk, such as by strengthening compliance systems at the corporate group level and by transforming our business portfolio, challenging ourselves to create new businesses to solve social issues.

Enterprise Risk Management initiatives

The Denka Group is working to strengthen its risk management system in order to minimize capital costs in the face of increasing uncertainty surrounding its business, including rapid changes in the business environment and the full-scale transformation of its business portfolio. Specifically, in order to strengthen our risk management activities in normal times, Denka is working to construct an integrated risk management process based upon COSO Enterprise Risk Management framework that provides advance prediction, assessment and analysis, visualization, planning of risk countermeasures, and monitoring of risks that may have significant impacts on Group management. By doing so, Denka will strive to improve corporate value for stakeholders over the medium to long term by reducing impacts of risk exposure on its business performance and minimizing its capital costs.



Denka Group policies and other group-wide rules such as basic policies, principles, procedures, manuals, checklists, etc.

Denka's risk management structure

Denka's Board of Directors is working to develop and improve an environment in which each executive officer can take risks, while at the same time developing and improving Denka's risk management structure for the entire Group. In order to achieve these purposes, the Management Committee and the Business Issues Reporting Meeting, both of which are held monthly, discuss risk management in light of economic values such as profitability, by identifying and evaluating various risks that may affect the Group's management, preventing the materialization of such risks, and devising countermeasures to minimize their adverse effects. In addition, the Business Issues Reporting Meeting monitors various risks, including the status of achievement of the business plan.

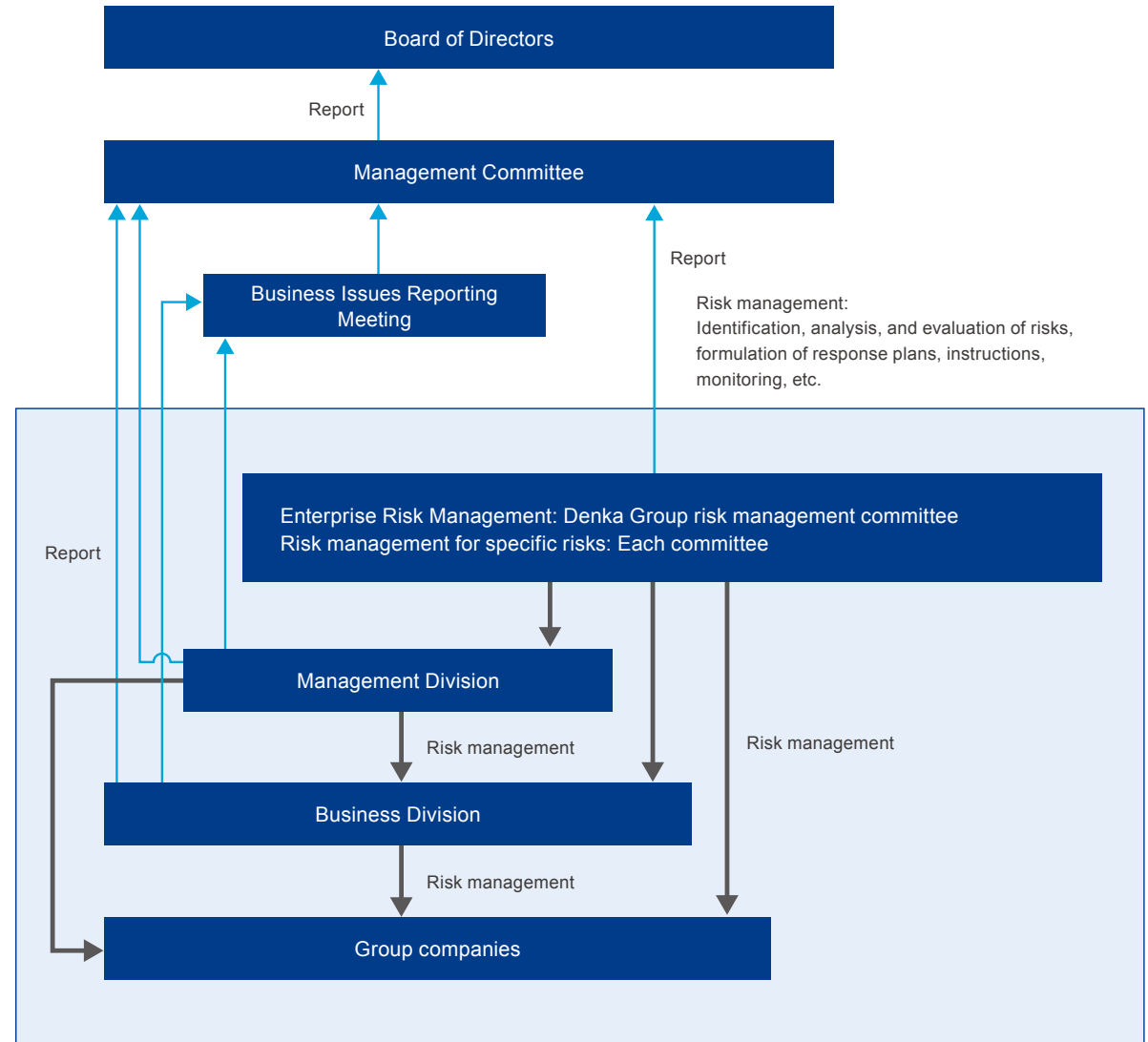
Also, each of cross-organizational committees conducts comprehensive and specialized risk management depending on the type of risk, such as legal matters, capital investment, the environment, health and safety, quality control, startup investment, and more.

Furthermore, Denka's management divisions, including the Legal Department, Quality Assurance Department, and Environment & Safety Department, is striving to manage Group's risks of which each of the departments is in charge based on the Group's common rules.

In addition, with respect to risks specific to business divisions, the relevant divisions not only carry out risk management, but also, especially with respect to those risks at each of the Denka Group companies, directors and officers dispatched to the Group companies from the division of the parent company carry out risk management with support from the specialized departments of the parent company such as the Legal Department, Environment & Safety Department, and Quality Assurance Department.

Denka is working to further strengthen the risk management system of the entire Group based on the concept of Enterprise Risk Management, enhancing the functions of risk identification, assessment, and planning of countermeasures.

Risk management structure during normal times



Denka's risk management activities

Denka has established the Basic Guideline for Crisis Management as basic rules for responding to emergencies in the event that a risk that could have a significant impact on the management of the Denka Group materializes. Based on this guideline, all management departments, including the Administrative Department, Environment & Safety Department, Corporate Communications Department, Quality Assurance Department, and Legal Department, develop appropriate initial response rules, including early detection and response to risks, rules for the centralized aggregation of information, and rules for communication with management team and external stakeholders. In order to minimize risks that could affect business continuity, such as information leaks caused by cyber-attacks, Denka has established common Group policies such as the Denka Group Information Security Policy, and Denka is implementing various initiatives related to information security, including the protection of personal information.

Also, with regard to risks in connection with product quality which is important for a manufacturer, to minimize risks that may affect business continuity, Denka has established the Denka Group Quality Issue Response Policy, and is implementing various initiatives across the entire Group.

If, in a case of misfortune, a crisis does take place, CEO is to decide whether to establish a crisis task force in accordance with the seriousness of the incident based on the Basic Guidelines for Crisis Management. The relevant departments, including the Legal Department, Environment & Safety Department, Quality Assurance Department, and Internal Control Department, work closely together and, when necessary, obtain the advice of outside experts to conduct various investigations, analyze causes, and formulate various countermeasures in an effort to prevent recurrence.

Based on the concept and framework of Enterprise Risk Management, Denka is working to strengthen the risk management system of the entire Group by conducting various activities to enhance its functionalities regarding risk management, such as risk identification, risk evaluation, devising countermeasures, and drills.

List of risks and locations of articles describing our response

Category	Summary of major risks	Page number of articles
Business management	Awareness of social and sustainability issues	P6- Message from the President, P10- Talk with the President, P21- Important Management Issues (Materiality)
	Execution of management plans and financial strategies	P24- Management Plan "Mission 2030" P31- Financial strategy
	Corporate governance	P61- Governance [ESG Information Site] "Solid corporate governance/Corporate conduct deserving of stakeholder trust" Improve corporate governance
Risk management & compliance	Risk management	P73- Risk management [ESG Information Site] "Solid corporate governance/Corporate conduct deserving of stakeholder trust" Maintain strict compliance with laws, regulations and corporate ethics, risk management
Environmental management	Climate change, abnormal weather, reduction of environmental impact, and biodiversity	P51- Environment
HR strategy	Recruitment, nurturing human resources, health management, diversity, workplace harassment and other human rights issues	P57- Social [ESG Information Site] "Solid corporate governance/Corporate conduct deserving of stakeholder trust" Whistle-blowing system, Denka Group Helpline, response to human rights risks
Quality & product liability	Product safety & quality control, and chemical substance control	P80 Quality assurance management
Accidents & disasters	Safety, health and disaster prevention	P72 Place the utmost priority on safety
Communication	Responsible dialogue with stakeholders	P81- Dialogue with stakeholders [ESG Information Site] "Products and technologies" Customer satisfaction improvement activities
Information systems & security	System security maintenance and promotion of DX	P75 Denka's risk management activities [ESG Information Site] "Solid corporate governance/Corporate conduct deserving of stakeholder trust" Information asset management
Protection of Intellectual property & privacy information	Protection of intellectual property & privacy information	P34 Activities related to intellectual property Denka website: Privacy policy, [ESG Information Site] "Solid corporate governance/Corporate conduct deserving of stakeholder trust" Initiatives related to protecting intellectual property
Supply chain	BCP, export trade management	[ESG Information Site] "Improvement of safety and quality of products" BCP measures based on risk assessments of conflict minerals and raw materials "Solid corporate governance/Corporate conduct deserving of stakeholder trust", export trade management P73 Enterprise Risk Management initiatives
Individual businesses	Responding to changes in the business environment	P36 Contributing to a sustainable society through technology, P43- Message from division heads, business strategies, SWOT analyses

Denka Group Internal Control (Mission, Vision, Value)

Our company is committed to improving the non-financial value of the entire group by enhancing internal control, improving business processes, reduce risks, and preventing fraud. The Internal Control Department is organized to lead the force, and we envision of becoming a professional team that is trusted by stakeholders inside and outside the company by carrying out three activities : implementing assurance, giving advice, and assistance activities, all on a PDCA basis.

As one of the non-financial KPIs in management plan “Mission 2030” , we have set a goal of completing the establishment of a structure of internal controls (Internal Control Framework) within the group by 2030, which packages standardized internal control initiatives.

Overview of internal control

1 Risk owners (sales, manufacturing, etc.)

Our company’s internal control system is composed of three lines of defense: the first line is the risk owners (sales and manufacturing sites, etc.), the second line is the management department that provides control support and monitoring to the first line, and the third line is the internal audit departments that evaluate and assure the effectiveness of controls.

2 The Internal Control Department as the third line

The Internal Control Department as the third line of defense has two independent organizations, the Internal Control Steering Office and the Internal Audit Office. In addition to evaluation and assurance activities such as the Management Assessment and Audit concerning Internal Control Over Financial Reporting (J-SOX) and voluntary audits, the Internal Control Department also supports and assists the establishment of internal control while effectively utilizing the Internal Control Framework, working together closely with risk owners who lack knowledge and know-how.

3 Achievements (number of audits and support for internal control development)

In FY2022, we conducted 40 voluntary audits, 10 group companies for Company-level Control (CLC) and 2 group companies for internal control related to Process-level Controls (PLC) under J-SOX,. In addition, 13 group companies, mainly overseas, have started to establish internal controls using the Internal Control Framework, and the evaluation of 5 companies has been completed.

4 Reporting lines

The Internal Control Department reports directly to the president (solid line report) for audit results, etc., but also shares the results with the Audit and Supervisory Committee (dot line report), which is another audit function, to improve the efficiency and comprehensiveness of audits.

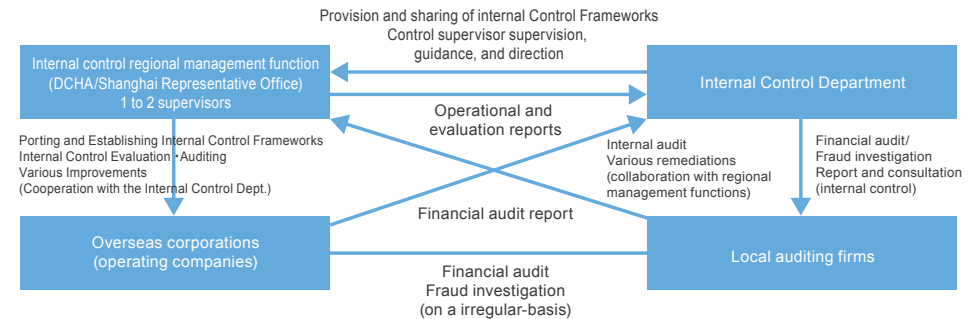
5 Awareness and dissemination of internal controls

The results of internal control evaluations and audits are also shared with relevant management departments (second line) and major group company executives, and a wide range of items are discussed and reported, such as significant findings, specific actions to be taken, and good examples of control.

Overseas corporate internal control regional management structure

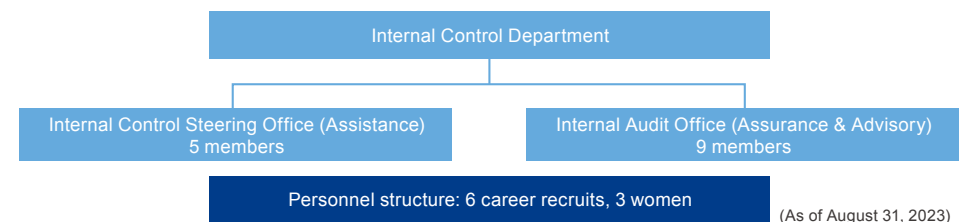
Internal control functions have also been organized within regional headquarters companies in Singapore and China, and are working with the Internal Control Department to strengthen Group’s control.

Overseas corporate internal control regional management structure



Organizational chart of Internal Control Department

The Internal Control Department is composed of two organizations: the Internal audit Office, which is responsible for assurance activities such as control evaluation, auditing, and advice; and the Internal Control Steering Office, which supports and assists the construction of internal controls by the first line. The Internal Control Department is also actively promoting career hiring and transforming into an organization with diverse values that are not bound by gender, age, or nationality.



Denka's Group compliance

I sincerely apologize for the inconvenience and concern caused to all parties involved due to the quality irregularities at Denka corporation and its equity-method companies. Also, I offer my deepest condolences and sympathy to the person who lost their life as well as to those who suffered from the explosion at the Omi Plant. The Denka Group will work to determine the cause and prevent this from happening again.

The Group broadly defines “compliance” as compliance with laws, internal regulations, and social norms. The Denka Group Ethics Committee, established by the Board of Directors and chaired by the CEO, oversees compliance efforts across the entire Group. In response to various compliance risks related to corporate ethics, general laws and regulations, the environment, quality, occupational health and safety, human rights, etc., each department of our Management Division is working hard to devise and implement various preventive measures, gathering information on the latest laws and regulations, legal precedents, and case examples from other companies, establishing and revising various rules, including the Group’s common rules and common company-wide rules, carrying out various compliance training, monitoring, auditing, and more. In addition to the activities of the Head Office Management Division, each of business offices, plant and Group company strives to reduce compliance risks in each field during normal times, including collaborative activities with outside experts.

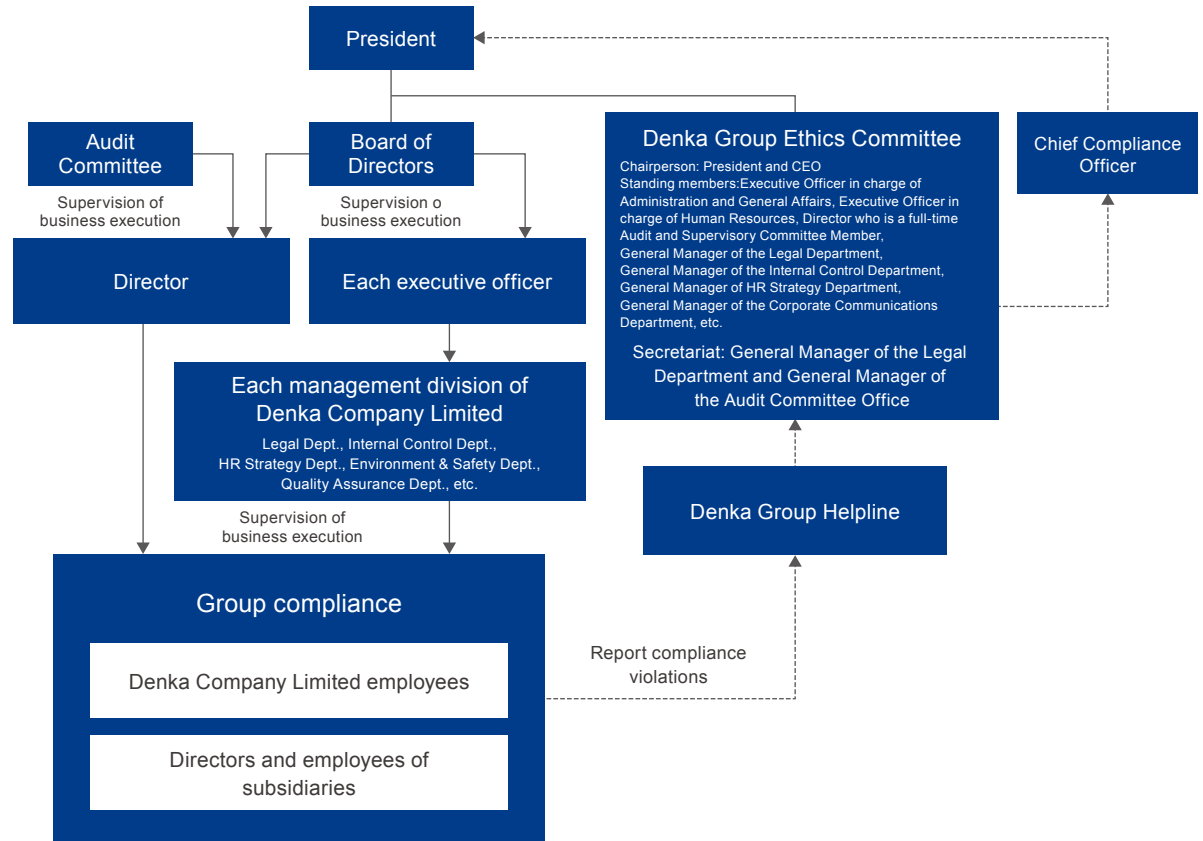
In response to current problems, the Group is enhancing the Group-wide activities of each department of the management divisions. Furthermore, Denka is also working diligently to ensure that all employees throughout the Group comply with laws and regulations as though they were their own responsibilities based on Denka’s core values of “initiative”, “empathy”, and “integrity”.

Denka Group Standards of Business Conduct

The Board of Directors established the “Denka Group Code of Ethics” to ensure compliance by officers and employees of Denka Group companies both in Japan and overseas, and to gain the trust of stakeholders. Furthermore, the Legal Department, as secretariat of the Ethics Committee, has established the “Denka Group Standards of Business Conduct”, which further embodies the content of the “Denka Group Code of Ethics”. These set forth global standards of ethical conduct, as guidelines, including respect for human rights and anti-corruption, which Denka Group’s executives and employees should follow to put the Group’s management principles and values into practice.

Denka Group’s compliance promotion system

Denka is striving to ensure thorough compliance at the Group level based on the common Group rules established by the Board of Directors, such as the “Denka Group Code of Ethics”, the “Denka Group Information Security Policy”, as well as the “Allocation of Duties and Job Standards”. The Board of Directors established the Denka Group Ethics Committee to realize compliance throughout the Denka Group. The committee deliberates on overall compliance, including compliance promotion plans. At the same time, the Board of Directors has appointed an executive officer to oversee compliance as the Chief Compliance Officer (CCO), as well as an executive officer in charge of legal affairs, internal control, general affairs, and secretarial affairs. The CCO oversees Denka Group compliance issues, while the executive officer in charge of legal affairs, internal control, general affairs, and secretarial affairs promotes the strengthening and improvement of the Denka Group compliance system in Japan and overseas through the activities of the Legal Department, Administrative Department and the Internal Control Department.



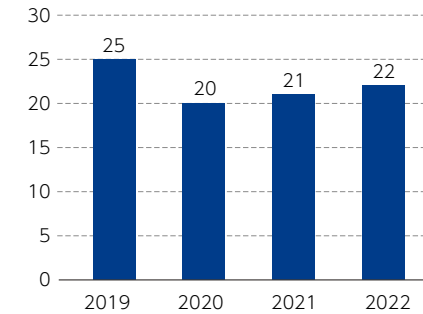
Denka Group Helpline

The Denka Group Ethics Committee operates the Denka Group Helpline, a group whistle-blowing system in compliance with the guideline of Consumer Affairs Agency of Japan, to detect and correct compliance violations at the early stages in domestic and overseas Group companies.

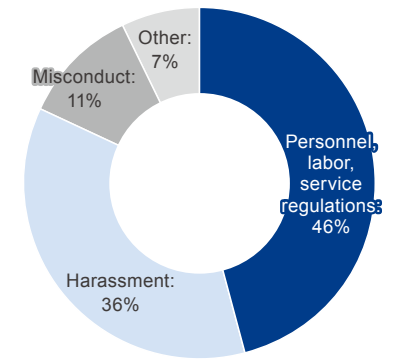
Officers and employees of domestic and overseas group companies, regardless of the contract type, such as temporary employees, etc., their family members within the second degree of kinship living with them, and retirees as stipulated by the Whistleblower Protection Act of Japan, can report compliance violations to the Denka Group Ethics Committee at any time using the Denka Group Helpline, either anonymously or with identifying information, whichever whistleblower prefers, in Japanese, English, or Chinese language.

The Denka Group Ethics Committee not only has multiple contact points for receiving reports, the committee secretariat serves as an internal contact point while Nishimura & Asahi and specialized businesses serve as external contact points, but also has stipulated the obligations by the group-wide rules for officers and employees to keep the identity of the whistleblower confidential and to prohibit retaliatory actions against whistleblowers, and the strict punishment for violations of these obligations. The Legal Department is also working to maintain trust in and promote the use of the whistle-blowing system by emphasizing these information for officers and employees through various compliance training programs. As a result, the Denka Group Helpline is actively being used, contributing to improving the effectiveness of compliance efforts made by the Denka Group.

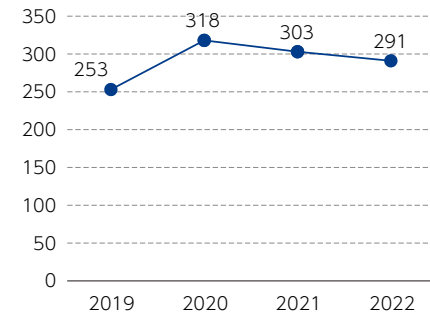
Trend in the number of reports



Breakdown of internal reports (cumulative from FY2019–FY2022)



Trend in the number of consolidated employees per report



*Classification is based on the content of the report at the time of receipt, and does not necessarily reflect the recognized facts.

Column | Group Training for the Denka Group in Denka's Global Compliance Program

Mari Muramatsu
Legal Department



The Legal Department conducts compliance training at Denka Group sites both in Japan and overseas with the aim of ensuring compliance with laws and regulations and the Denka Group's "Standards of Business Conduct". Training consists of lectures on the "Standards of Business Conduct" by members of the Legal Department and on local laws by local law firms, tailored to meet the risk situation of each location.

Implementing E-Learning for the Denka Group

Aoi Takeichi
Legal Department



As a member of the Legal Department, I conduct compliance e-learning trainings for executives and employees of the Denka Group both in Japan and overseas to improve the non-financial value of the Denka Group. I will continue to carry out trainings on the "Standards of Business Conduct" and on specific legal fields, while continuing to devise ways to disseminate compliance throughout the Group efficiently and effectively.

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 Denka Group's environmental load reduction policy, DPE is committed to complying with the chemical emission standards established by environmental laws and regulations and to reduce emissions and waste.

Currently DPE is facing multiple lawsuits along with DuPont and its affiliates. These lawsuits were filed by residents of communities around the 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.

In connection with these lawsuits, in December 2015, the U.S. Environmental Protection Agency (EPA) published the National Air Toxics Assessment (NATA), which showed that the area around DPE's CR plant in LaPlace, Louisiana, was classified as having high carcinogenic risk.

The NATA assessment used data from EPA's 2010 toxicity assessment of chloroprene monomer based on the Integrated Risk Information System (IRIS/Integrated Risk Information System). DPE believes that toxicity is overestimated in the data.

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 could 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 does not significantly differ from the average risk for the entire state.

In addition, DPE has consistently complied with emission standards for chloroprene monomer since acquiring the plant from DuPont. In order to further reduce emissions

under Denka Group's environmental impact reduction policy, DPE invested more than US\$35 million in equipment to reduce chloroprene monomer emissions, achieving an 85% reduction (comparison with FY2014). DPE continue to reduce emissions through various improvements.

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 aforementioned toxicity assessment of chloroprene monomers conducted in 2010, requesting to consider an advanced physiological pharmacokinetic (PBPK) model. In response, the EPA announced on March 14, 2022 that it would reject the RfC because the conclusions in the carcinogenic risk assessment of the Integrated Risk Information System and its supplementary materials, which formed the basis for the EPA's toxicity assessment of chloroprene monomer, were consistent with the EPA's Information Quality Guidelines (created in the United States, 2002) and would not immediately review the toxicity assessment values even if the scientific information was updated.

For this reason, DPE submitted a Request for Reconsideration (RfR) to the EPA on June 10, 2022 in response to the EPA denying the request. However, the EPA published a letter denying the RfR on October 19, 2022 on its official website. In response, DPE filed a lawsuit against the EPA on January 11, 2023, requesting a "fair correction of a chloroprene monomer toxicity assessment."

Subsequently, DPE saw a lawsuit filed against it by the United States Department of Justice (DOJ) on behalf of the EPA on February 28, 2023 seeking "to eliminate the hazards resulting from discharges of chloroprene monomer," which was followed by a motion for a preliminary injunction in the same matter, filed on March 20, 2023.

In light of the lawsuit and preliminary injunction by the DOJ, DPE withdrew its lawsuit against the EPA on April 11, 2023 in order to consolidate multiple lawsuits that are disputing the same issues, and to properly respond to the two lawsuits filed by the DOJ to seek a fair correction of the toxicity assessment based on the best available science.

Under the Denka Group ESG Basic Policies, Denka Group conducts its activities while respecting the human rights of all people, striving to protect the environment, and observing laws and regulations and culture in each region. Denka Co., Ltd. will continue to support DPE's activities aiming to reduce environmental impacts based on the best available science. For details, please refer to the news releases* posted on the corporate website of Denka Co., Ltd.

*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, October 28, 2022, and January 13, March 6, April 21, 2023.

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, and by establishing a quality policy that aligns with our management plan "Mission 2030", we are engaging in quality assurance activities regarding our various products.

Strategies for the provision of trusted products and services

Enhancing quality compliance across the Denka Group

We have identified inappropriate conduct in the manufacture of resin products which we and our equity-method affiliate manufacture and sell, related to third-party certification and parts registration. We take this situation seriously and will conduct thorough investigations and measures to prevent recurrence under the guidance of an external investigation committee consisting of outside experts. We will also review the Denka Group Quality Assurance Policy and other company regulations, and strive to further strengthen quality compliance in the entire group and to make every effort to restore trust.

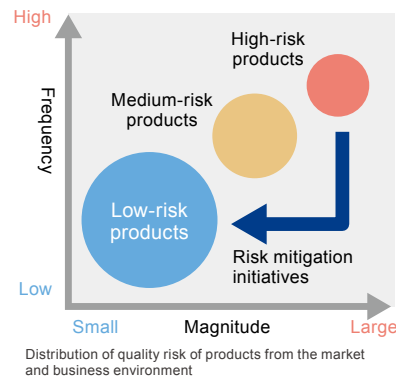
Quality Assurance Framework Comprising of Alignment of Three Divisions

The company has established quality assurance divisions within its head office, business divisions and plants (incl. group companies). These three types of quality assurance divisions work together organically to improve the overall quality level of the Denka Group.



Quality Risk Assessment/Risk Reduction

The risk arising from each product is changing by social needs, such as the growing public call for businesses to contribute to the SDGs 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.



Quality Policy (Fiscal 2023)

Recognizing that quality assurance of products and services is an important management issue, the Denka Group undertakes compliance, thorough product safety, and continuous quality improvement activities to provide superior products and services through technologies that can be performed better than anyone else, thereby contributing to customer satisfaction and trust, problem resolution, and sustainable growth.

Chemical Substance Management/Product Safety

We routinely collect and monitor information on the revision of domestic and international laws concerning chemical substances. We strive to respond promptly and appropriately when changes are required in the chemical composition of products or chemicals used in production processes to ensure compliance with legal amendments and further safety.

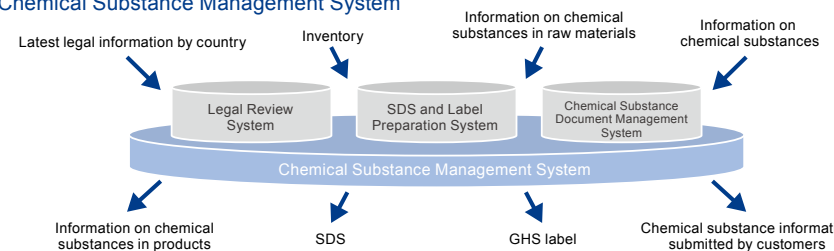
Improvement of Quality Management System and Management Level

We are promoting the development of quality management systems to provide trustworthy products and services. We are working to further improve the quality of our products and ensure product safety by improving the level of management through our Customer Complaint Management System, which integrates and manages customer complaint information and leads to continuous quality improvement, and our Chemical Substance Management System, which coordinates information on chemical substances with product safety.

Customer Complaint Management System



Chemical Substance Management System



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.








Participation in the Summer Vacation Children's Chemical Experiment Show 2023

On August 5 and 6, 2023, Denka participated in the "Children's Chemistry Experiment Show 2023" organized by Yume Kagaku 21 (Chemical Society of Japan, etc.). Denka has been participating in the Summer Vacation Chemistry Experiment Show since 2013. The purpose of the event is to encourage children to experience the wonders and joy of chemistry in society and life through chemical experiments to have interest in chemistry. (Due to COVID-19, the event was canceled in fiscal 2020 and 2021, and in fiscal 2022, a video was distributed on the Children's Chemical Channel.)



2. Examples of dialogue with stakeholders

	Objective/Themes	Means																		
 <p>Customers</p>	<ul style="list-style-type: none"> ■ Providing safe, high-quality products that satisfy our customers and appropriate information. ■ Forging relationships built on trust through sincere communication with our customers 	<ul style="list-style-type: none"> ■ Face-to-face and online dialogue with customers ■ Providing technical services ■ Conducting customer satisfaction surveys 																		
 <p>Denka Group Employees</p>	<ul style="list-style-type: none"> ■ Reflecting the opinions of employees to promote the creation of a healthy and comfortable workplace for all members of the Denka Group. 	<ul style="list-style-type: none"> ■ Visits by and dialogue with the President ■ Use of internal portal sites ■ Employee awareness surveys ■ Labor-management council 																		
 <p>Business Partners</p>	<ul style="list-style-type: none"> ■ Promoting open innovation and building good relationships with our business partners to ensure co-existence and shared prosperity across the entire supply chain. 	<ul style="list-style-type: none"> ■ Face-to-face and online meetings with suppliers ■ Announcement of our Partnership Building Declaration 																		
 <p>Local Communities</p>	<ul style="list-style-type: none"> ■ Actively participating in the formation of more habitable local communities and contributing to their development as a good corporate citizen. ■ Maintaining sound political and administrative relations and fostering a relationship of trust with society. 	<ul style="list-style-type: none"> ■ Comprehensive disaster prevention drills ■ Participation in local events ■ Facility tours and resident briefings ■ Educational support ■ Interaction with local residents and dialogue ■ Social contribution activities 																		
 <p>Shareholders and Investors</p>	<ul style="list-style-type: none"> ■ Actively, effectively and fairly disclosing financial and non-financial information and ensuring its reliability through constructive dialogue. ■ Enhancing our group governance system to enhance the value of the entire company. ■ Meetings with institutional investors and securities company analysts (Excluding shareholders' meetings and Financial Results Presentation) <div> <table border="1"> <caption>Meeting Distribution Data</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Japan (Total)</td> <td>66%</td> </tr> <tr> <td>Overseas (Total)</td> <td>34%</td> </tr> <tr> <td>Individual/small meetings</td> <td>48%</td> </tr> <tr> <td>SR meetings</td> <td>29%</td> </tr> <tr> <td>Top meetings</td> <td>6%</td> </tr> <tr> <td>ESE seminars</td> <td>4%</td> </tr> <tr> <td>Overseas road shows</td> <td>8%</td> </tr> <tr> <td>Overseas (Other)</td> <td>5%</td> </tr> </tbody> </table> <p>Total: 361 people in Japan and overseas</p> </div> <ul style="list-style-type: none"> ■ Main topics of dialogue and matters of interest to shareholders and matters for increased disclosure <ul style="list-style-type: none"> • Details of each segment and major products and future outlook • Share of major products by sales application • Cash allocation (Shareholder returns, strategic investment, human capital investment, R&D, financial leverage, etc.) • Opportunities and risks • Initiatives to achieve financial and non-financial KPIs in our "Mission 2030" management plan (Business plans in areas of focus for target ROE, ROIC, and operating income, and measures to promote portfolio transformation, etc.) 	Category	Percentage	Japan (Total)	66%	Overseas (Total)	34%	Individual/small meetings	48%	SR meetings	29%	Top meetings	6%	ESE seminars	4%	Overseas road shows	8%	Overseas (Other)	5%	<ul style="list-style-type: none"> ■ Holding of the General Meeting of Shareholders (once per year) <p>Improve the content of convocation notices and other materials for shareholders' meetings to increase the level of disclosure. Adoption of live-streaming for shareholders who are unable to attend the venue on the day, and the exercise of voting rights via the Internet using personal computers, etc.</p> ■ Holding of Financial Results Presentation (4 times a year: 80 - 100 people) <p>The President and senior management provide quarterly briefings on financial results and growth strategies to institutional investors and securities company analysts. (Briefings are also held for the media 2 times a year.)</p> ■ Meetings with institutional investors and securities company analysts (361 people) <ul style="list-style-type: none"> • Individual meetings/small meetings (175 in Japan and 106 overseas) <p>The Corporate Communications Department conducts interactive dialogue with institutional investors and securities company analysts at individual meetings or small meetings to discuss financial results, management plans and other details.</p> • SR meetings (2 times a year: 29 people in Japan) <p>The General Affairs Department conducts dialogue with major domestic shareholders (institutional investors) to discuss our initiatives centered on governance and the voting policies of institutional investors.</p> • Top meetings (once a year: 15 people in Japan) <p>The President discusses changes to our business portfolio, business plans, and other management strategies with domestic institutional investors.</p> • ESG seminars organized by securities companies (once a year: 20 people in Japan) <p>Our Officer in charge of Investor Relations explains the unique nature and growth potential of our management strategies for ESG-based themes.</p> • Overseas road shows (3 times a year: 17 people overseas) <p>Our Officer in charge of Investor Relations holds dialogue with overseas institutional investors in the Americas, Europe and Asia on management plans, business models, R&D, shareholder returns and ESG initiatives (including annual conferences sponsored by securities companies)</p> ■ Feedback of shareholder opinions and views to management (4 times a year + every time) <p>In addition to providing quarterly feedback on the opinions of shareholders obtained through dialogue to the President and other management and related departments, feedback is also provided whenever there is an event that attracts a large number of shareholders' opinions. This is used as a reference for future disclosure materials and management strategy formulation and promotion measures.</p>
Category	Percentage																			
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Denka's 11 Year Financial Summary

	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022
Summary Statement of Income (million yen)											
Net sales	341,645	376,809	383,978	369,853	362,647	395,629	413,128	380,803	354,391	384,849	407,559
Operating income	18,817	21,230	24,047	30,634	25,844	33,652	34,228	31,587	34,729	40,123	32,324
Ordinary profit	17,824	20,604	24,287	27,022	23,158	31,499	32,811	30,034	32,143	36,474	28,025
Profit attributable to owners of parent	11,255	13,573	19,021	19,472	18,145	23,035	25,046	22,703	22,785	26,012	12,768
Equity in earnings (losses) of affiliates	530	550	950	1,097	568	1,105	1,384	1,170	933	876	2,328
Financial Position (million yen)											
Current assets	158,595	164,747	170,497	161,876	168,902	184,129	190,730	198,452	200,726	218,164	251,793
Total assets	415,356	431,347	445,569	443,864	454,944	473,799	483,827	501,448	526,035	557,646	592,158
Current liabilities	170,752	163,645	160,101	147,537	144,190	158,043	154,047	160,807	155,062	166,679	164,457
Net assets	180,709	189,516	210,798	216,071	227,487	242,780	250,481	254,014	270,036	292,094	300,351
Interest-bearing debt	114,241	120,669	122,536	124,596	113,748	108,269	112,134	134,340	138,191	137,032	169,729
Cash Flows (million yen)											
Cash flows from operating activities	40,215	27,245	35,557	44,014	39,557	48,776	32,660	41,954	40,610	42,630	8,946
Cash flows from investing activities	(25,864)	(26,693)	(27,449)	(34,979)	(22,258)	(29,298)	(26,176)	(36,303)	(36,976)	(36,839)	(28,268)
Cash flows from financing activities	(12,784)	(3,327)	(7,437)	(7,348)	(19,319)	(15,858)	(8,408)	9,544	(6,706)	(12,341)	18,361
Cash and cash equivalents at end of year	10,680	8,244	9,157	11,813	10,174	14,101	13,889	29,170	25,909	20,209	20,199
Per Share Information (yen)											
Dividends per share*	50.0	50.0	62.5	65.0	70.0	105.0	120.0	125.0	125.0	145.0	100.00
Profit per share	118.13	145.16	207.40	214.71	205.05	261.80	286.18	262.62	264.24	301.67	148.08
Net assets per share	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	3,438.28
Financial Indices											
Operating income ratio (%)	5.5	5.6	6.3	8.3	7.1	8.5	8.3	8.3	9.8	10.4	7.9
Return on equity (ROE) (%)	6.4	7.4	9.6	9.3	8.3	10.0	10.3	9.1	8.8	9.4	4.4
Return on assets (ROA) (%)	4.4	4.9	5.5	6.1	5.2	6.8	6.9	6.1	6.3	6.7	4.9
Shareholders' equity ratio (%)	43.1	43.5	46.9	47.7	49.1	50.5	51.0	50.0	50.8	51.7	50.1
Other											
Capital investment (million yen)	26,964	25,735	21,300	21,196	25,731	22,710	32,745	34,205	42,323	35,644	39,369
Depreciation and amortization (million yen)	21,585	22,254	23,032	23,242	24,359	24,599	22,946	22,482	22,911	23,883	26,554
R&D expenses (million yen)	10,605	10,828	11,127	11,787	13,026	13,868	14,562	15,031	14,736	14,231	14,926
Number of employees at end of year (consolidated)	5,206	5,249	5,309	5,788	5,816	5,944	6,133	6,316	6,351	6,358	6,406

Management Plans **DENKA100** (2007-2012)Resumption of **DENKA100** (2013-2017)**Denka Value-Up** (2018-2022)

▶ Denka's main achievements

- Completed the Denka Innovation Center main building
- Celebrated the centennial of the Company's founding
- Changed company name
- Established Denka Performance Elastomer LLC

- Merger with DENKA SEIKEN Co., Ltd.

▶ Environmental developments

- 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/>

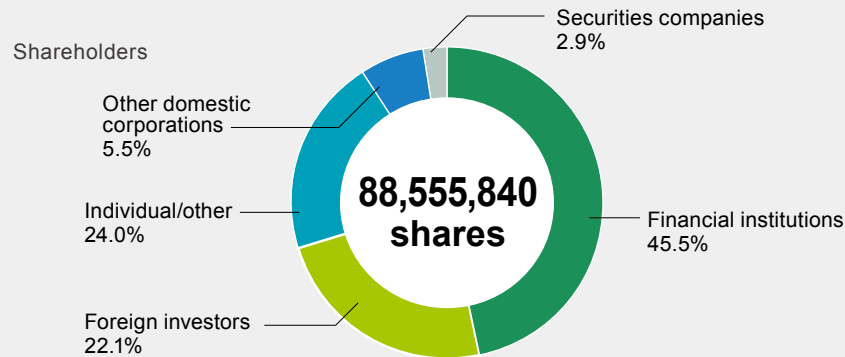
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Denka Report 2023 Integrated Report

■ Corporate Profile (as of March 31, 2023)

Name	Denka Company Limited
Established	May 1, 1915
Employees	Non-consolidated: 4,198 Consolidated: 6,406
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, 2023)



Major Shareholders

Shareholder name	Number of shares held (hundred shares)	Percentage of shares held(%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	162,786	18.87
Custody Bank of Japan, Ltd. (Trust Account)	85,404	9.90
Mizuho Trust & Banking Co., Ltd. Retirement Benefit Trust, Mizuho Bank Account (Account re-trusted 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
SSBTC CLIENT OMNIBUS ACCOUNT	17,141	1.99
STATE STREET BANK AND TRUST COMPANY 505001	13,992	1.62
Denka Employee Shareholding Association	13,308	1.54
JP MORGAN CHASE BANK 385781	11,532	1.34
Custody Bank of Japan, Ltd. (Trust Account 4)	11,295	1.31

(Notes) 1. 2,280,095 shares of treasure 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, 2023)



Japan

- Toyo Styrene Co., Ltd.
- Denak Co., Ltd.
- Hinode Kagaku Kogyo Co., Ltd.
- Denka Azumin Co., Ltd.
- Nishi-nihon Koatsu Gas Co., Ltd.
- Denka Renotec Co., Ltd.
- Sanshin Bussan Kabusiki Kaisha
- Denal Silane Co., Ltd.
- Denka Polymer Kabushiki Kaisha
- Denka Astec Co., Ltd.
- Akros Trading Co., Ltd.
- Denka Consultant & Engineering Co., Ltd.
- Kurobegawa Electric Power Company

Overseas

- Europe
- Denka Chemicals 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 Taiwan Corporation
 - Denka Korea Co., Ltd.
 - Akros Trading China Co., Ltd.
 - Akros Trading Taiwan Co., Ltd.
- Southeast Asia
- Denka Advanced Materials Vietnam Co., Ltd.
 - Denka Construction Solutions Malaysia Sdn Bhd.
 - PT.ESTOP Indonesia
 - Denka Advantech 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

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