



Denka Big Swan Stadium, a building that resembles a swan spreading its wings

Breathing new life into Niigata's sports culture

A Stadium Bearing the Denka Name

Have you heard of Niigata Stadium, also known as "Denka Big Swan Stadium," located on the banks of the Toyonogata Lake in Niigata Prefecture?

Constructed as one of the 2002 FIFA World Cup venues, Niigata Stadium celebrates its 20th anniversary this year. It has been recognized under the name of "Denka" since 2014, when Denka acquired the naming rights. Its distinctive design resembles a swan spreading its wings as if to take off. With a capacity of 40,000 people, it is also used as a home stadium for Albirex Niigata, a local soccer team in the J2 league. It has also been awarded the J league Best Pitch Award six times for its well-maintained pitch. Using this stadium as a base, Denka has been actively sponsoring sporting events such as the Denka Athletics Challenge Cup¹, which has been held every year since 2019.

Denka decided to acquire the naming rights due to its strong connection with Niigata Prefecture. Currently, around 2,000 employees, or one third of the entire Denka Group, work in Niigata prefecture. In addition, we have our own hydroelectric power plant in the area around Omi Plant (Itoigawa City), our main plant since its establishment 1921, and are planning to build another one soon. In 2020, Omi Plant produced pharma ingredients for the anti-influenza drug Avigan,² which is also a candidate treatment for COVID-19. At the Gosen Office (Gosen City), production of the rapid testing kit Quick Navi COVID19 Ag has begun. Niigata has been, and always will be an important place for Denka.

Conducting sporting events at the stadium will further strengthen the connection between Niigata Prefecture and Denka. From Denka Big Swan Stadium, Niigata and Denka will fly to the world, and towards the future.

¹ The Niigata event of the Japan Grand-prix Series of track & field tournaments held by the Japan Association of Athletics Federations (JAAF). The aim of this event is to develop athletes that can compete on an international level.

² Avigan is a registered trademark of FUJIFILM Toyama Chemical Co., Ltd.



Cover photo

The Bridge at Minamisanriku Tsunami Memorial Park

The Tsunami Memorial Park opened in 2020 to pass down the memories and lessons learned during the disaster to future generations. The bridge in the photo was built as a symbol of Minamisanriku's revival. It is an arched bridge that uses Japanese cedar from the Minamisanriku area.



The DenkaWay

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Photo provided by Minamisanriku-cho



10 Years After the Great East Japan Earthquake Conveying Our Feelings and Connecting Them to the Future

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Toshio Imai
Representative Director, President

To Become Indispensable for Society

From April 2021, we launched our Denka Value-Up initiatives for the next two years. In order for the Denka Group to become indispensable for society, we will continue promoting further growth by realizing the three Value-Up initiatives.

Laying out a clear path toward becoming a Specialty-Fusion Company

Since 2018, the Denka Group has been promoting the Denka Value-Up Management Plan with the aim of becoming a Specialty-Fusion Company with a global presence. In FY2020, despite the impact of the COVID-19 pandemic, we were able to achieve record profits and are seeing steady results in our specialty businesses, particularly in the environment & energy and healthcare businesses.

In 2021, after examining our results to date and identifying the issues, we refined our strategy for the next two years. In 2022, the final year of the Denka Value-Up Plan, we are aiming for 50 billion yen in operating income. Our most significant achievement during the three-year period from FY2018 to FY2020 is that we have been able to lay out a clear path toward becoming a Specialty-Fusion Company. Without a doubt, this is thanks to the efforts of each and every member of the Denka Group. I would like to once again express my gratitude to all of you, especially to the manufacturing staff who worked hard to keep production going through the COVID-19 pandemic.

In the post-COVID era of social change and the new normal, companies that are not genuinely needed by society will become obsolete. We will

also have to directly confront the social issues that the world is currently facing. With the SDGs as our compass, the Denka Group has clearly positioned the resolution of social issues as a management challenge, and through our initiatives over the next two years, we will strive to be a company that is indispensable for society. To that purpose, we must realize our three Value-Up initiatives, concerning our business, the environment, and human resources.

A company that employees and stakeholders can be proud of

In Business Value-Up, which is the core of Denka Value-Up, we will focus on the Business Portfolio Shift through concentration in businesses in which we can outperform others, and further specializing our key operations. In shifting our portfolio to focus on world-class businesses unrivaled by other companies, it is important to reevaluate whether we are really performing better than anyone else in our current businesses and to take action. I would like all employees to think of ways to do their jobs better than anyone else and to actively communicate those ideas. I believe that increasing the value of each individual will lead to an increase in the overall value of the company, and thus to the value we contribute to the world.

In terms of Introduction of Innovative Processes, we will continue working on removing 3D (dangerous, dirty, demanding) workplaces at manufacturing sites and ensuring mental wellbeing so that all employees can devote themselves to their work with peace of mind.

In Environment Value-Up, we have set a new goal of reducing greenhouse gas emissions by 50% by FY2030 and becoming carbon neutral by FY2050 in order to fulfill our responsibility as a chemical manufacturer. From a medium- to long-term perspective, we will take on the challenge of developing and implementing CCUS (Carbon dioxide Capture, Utilization and Storage) technology.

In Human Resources Value-Up, we will prioritize HR strategies such as staff education, diversity, and health with the aim of becoming a company where employees can feel growth through job satisfaction and work. We will also continue our efforts in sound management, including the creation of an environment where employees can fully demonstrate their skills.

My goal is to make the Denka Group a company that all of our stakeholders, including our employees, can be proud of. To that end, we must realize three Value-Up initiatives and become indispensable for society. Let us work together to carry out this transformation.

Numerical targets

Operating income
50 billion yen

Operating income ratio
13%

Ratio of specialty business
83%

The three Value-Up initiatives



Aiming for even greater heights

Launching the Three Value-Up Initiatives!

The Past and Future of Denka Value-Up

Denka Value-Up Plan started as a five-year management plan from FY2018 to FY2022. We have refined our strategy for the period up to FY2022 by reviewing our results to date and the issues that have emerged. We will strive to be indispensable for society based on the three Value-Up initiatives and lay the foundation for our next management plan.

2018 » 2020

In order to achieve dramatic global growth, we will aim to become a Specialty-Fusion Company and achieve sustained and sound growth. We have begun implementing the following six measures, and we are already seeing results.

Accelerate growth of specialty businesses

Environment & energy

- Increased production capacity for Spherical Alumina at DAPL and Omuta Plant
- Extended production of Acetylene Black at Omuta Plant

Healthcare

- Strengthened healthcare business through merger with Denka Seiken
- Began sales of rapid antigen test kit for COVID-19 antigens
- Resumed production of diethyl malonate, a raw material for COVID-19 treatment candidate Avigan

*Avigan is a registered trademark of FUJIFILM Toyama Chemical Co., Ltd.

Specialize our key operations

- Increased production of MS resin at DSPL
- Optimization through mergers of group companies (Akros Trading/YK Inoas, Housing Equipment Business, Nakagawa Techno)
- Entered into the Biostimulant market using technical knowledge collected by AZUMIN

Redefine the positioning of the commodity businesses

- Withdrew from businesses (DSPL PS, EVA/Saknohol, Firelen/ β silicon Nitride)
- Production halted (Omuta: Calcium Carbide, Omuta: Calcium Cyanamide)

Production process reforms

- Omi Plant: Introduced real-time monitoring system for operating information
- Omuta Plant: Introduced automated inspections by AI
- Singapore/Chiba Plant: Introduced a system for detecting operational abnormalities

R&D process reforms

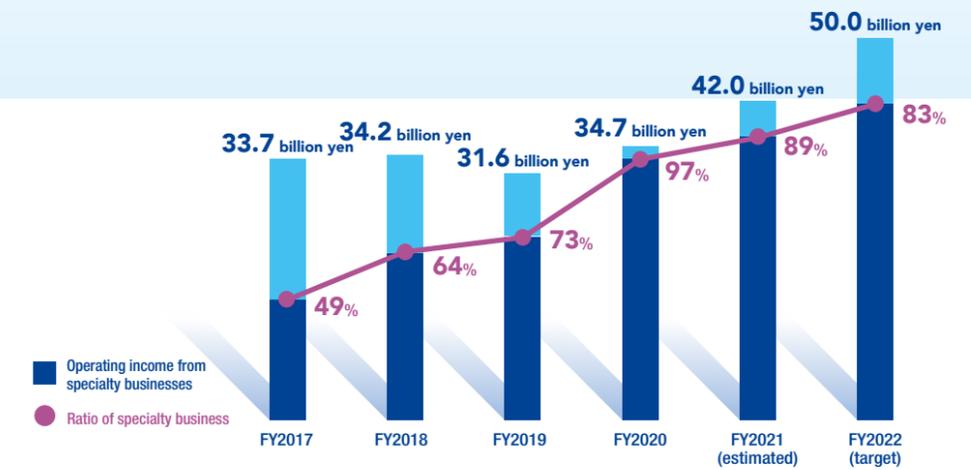
- Theme Reforms: Clarification of specialty vision through value-shift diagram
- Establishment of R&D support system using cutting-edge ICT
- Human Resource Reforms: Strategic development of research personnel and career advancement support

Operational process reforms / Work style reforms

- Introduced Office365, online operation management system, and launched internal portal site
- Digitalized decision approval, went paperless, switched to online meetings, and reduced meeting time (contributed to speedy change to telework)
- Renovated head office to revitalize internal collaboration and constructed new general office for plant

2021 » 2022 New Strategy

We have examined the results of the Denka Value-Up Plan to FY2020, identified the issues, and redefined our strategy to be indispensable for society, we will continue to promote over the period from FY2018 up until FY2022. In order to threefold Value-Up initiatives.



Business Value-Up

Business Portfolio Shift

Accelerate growth of specialty businesses

The environment & energy

- Expand sales to markets related to xEV, 5G, semiconductors and renewable energy
- Focus on developing new product lineups that are ahead of the times

Healthcare

- Actively contribute to measures & re-emerging diseases diagnosis using gen- and digitalization in
- Respond to netic detection the clinical field

Business Portfolio Shift through concentration in businesses in which we can outperform others and further specializing our key operations

High-value-added infrastructure

- Accelerate overseas development, new product development and drastic reforms of unprofitable products
- Pursue a new growth track to continue making it a priority field

Specialize our key operations; redefine the positioning of the commodity businesses

- For businesses that require reconstruction, we will aim to achieve the portfolio shift in two years

Innovative processes

Production process reforms

- Automate visual inspection, introduce robots, enhance sensors, etc.

Research process reforms

- Full-fledged use of R&D support systems and material informatics

Operational process reforms / Work style reforms

- Adopt online meetings, computerize documents, remove 3D (dangerous, dirty, demanding) workplaces



Environment Value-Up

With the SDGs as our compass, we have positioned the reduction of environmental impact as the foundation of our management and are focusing on reducing greenhouse gas emissions and contributing to resource recycling. Through a variety of initiatives including a portfolio shift and increased use of clean energy, we aim to reduce greenhouse gas emissions by 50% by 2030 and achieve carbon neutrality by 2050.

50% reduction of greenhouse gas emissions by FY2030 (compared to FY2013) Achieve carbon neutrality by FY2050

- Business Portfolio Shift
- Greater use of clean energy and introduction of highly efficient gas turbine
- Environmentally friendly products and environmental load reduction technologies
- Development and practical implementation of Carbon dioxide Capture, Utilization and Storage (CCUS)
- Chemical recycling technology
- Reduction of greenhouse gas emissions throughout the product life cycle (life-cycle assessment or LCA)



New Omi-gawa Power Plant



Human Resources Value-Up

Based on the new work style guidelines formulated for 2020, we will pursue a new way of working suitable for the post-COVID era. By further promoting diversity and work style reforms, we aim to become a company in which employees can feel growth through job satisfaction and work.

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

- Set KPIs for "securing specialists," "diversity promotion" and "work style reforms"
- Implement system reforms on evaluation, hiring, development, labor environment, etc.
- Provide staff education for early development of future senior management candidates, pursue bold organizational and human resources restructuring
- In an aim to realize sound growth, promote sound management by putting in place an environment in which employees can fully demonstrate their skills



The next management plan based on the two-year preparation period



Masami Sawato Senior Analyst Corporate Research Department
SBI SECURITIES Co., Ltd.

PROFILE
After working for the Japanese subsidiary of a major U.S. chemical company, he became an analyst in the chemical industry in 1990. Since then, he has conducted research and analysis in the chemical and synthetic fiber industries for over 30 years.

Developing a Stronger Presence on the Global Stage

The Denka Group aims to become a Specialty-Fusion Company through the Denka Value-Up Plan. We asked Masami Sawato, a senior analyst at SBI SECURITIES Co., Ltd., what he expects from our initiatives over the next two years.

Three years of outstanding revenue growth through specialization

—What are your thoughts on the Denka Value-Up Plan for 2018-2020?

Although the company did not achieve the initial target of 42 billion yen in operating income, those three years were a period of outstanding revenue growth, with record profits and operating income ratio targets largely achieved. Many chemical companies reported lower profits in FY2020 due to lower demand caused by COVID-19. In this environment, Denka was able to expand revenue by steadily achieving results in the environment & energy and healthcare businesses based on the specialization strategy of the Denka Value-Up Plan. I would say that your strate-

gy of concentrating resources on specialty businesses—such as EV related products that accurately meet the needs of a market that is becoming increasingly environmentally conscious and the early development and sales of a COVID-19 rapid antigen test kit—has been very successful. You can see those results in the 97% specialty business ratio.

On the other hand, I believe that FY2020 was a year in which the company contributed not only to business but also to society. Resuming the production of diethyl malonate, a raw material for COVID-19 treatment candidate Avigan®, was a project of great social significance. And yet, it would not necessarily have contributed to significant revenue growth. I believe your stance of aiming for sustainable growth while also fulfilling your social responsibilities even in the

midst of a global emergency, as well as the technical capabilities and teamwork displayed in resuming production in such a short period of time, were favorably received by many stakeholders.

High stakeholder expectations for the three Value-Up initiatives

—What are your expectations for the three Value-Up initiatives concerning our business, the environment, and human resources that we will aim to achieve this year?

First, Business Value-Up evaluates management strategies that promote a business portfolio shift and innovative processes to accelerate the growth of specialty businesses.

While you did make progress in your business portfolio shift under the Denka Value-Up Plan leading up to 2020, I believe that you will need to proceed with more drastic reforms for unprofitable businesses in the next two years. As for specializing key operations and redefining the positioning of the commodity businesses, Denka has clearly expressed its intentions to shift the portfolio in two years, and I am sure this initiative will accelerate under President Imai's leadership. I expect that this will further improve the ratio of specialty business.

I was also impressed by the unique catchphrase "concentration in businesses in which we outperform others." It is easy to understand and relate to, and I am sure that employees will sympathize with it. There are very few chemical companies that have a clear management strategy to actively support employees in improving their work efficiency. I am looking forward to seeing how the production process reforms through DX (Digital Transformation), including the automation of visual inspections and the use of robots, will affect the way you work over the next two years.

Next, in terms of Environment Value-Up, I presume that all stakeholders have high expectations for the official announcement of achieving carbon neutrality by FY2050. In particular, Denka's specific list of sustainability initiatives, such as the development and implementation of CCUS and the introduction of chemical recycling technology, will be highly evaluated on the stock market. Denka has always been proactive in using clean energy sources such as hydroelectric power generation, and the company has a better chance of achieving carbon neutrality than most chemical companies.

First, I expect Denka will focus on the target of reducing greenhouse gas emissions by 50% by 2030, and achieve this goal ahead of schedule. I hope that Denka will demonstrate its leadership in the environmen-

tal field and become a driving force in the chemical industry.

Lastly, in the area of Human Resources Value-Up, I commend Denka for setting specific goals (KPIs) for securing specialists, diversity promotion, and work style reforms. Of particular interest is the goal to double the number of female managers in four years. The promotion of diversity has become an issue for society as a whole. I expect that building a system that evaluates employees based on their abilities, regardless of gender, will lead to greater job satisfaction and motivation among employees.

To be a global company with a global presence while being proud to be a member of Denka

—Finally, can you give us a message for members of the Denka Group?

I have been involved in the analysis of chemical companies for more than 30 years, and there are very few chemical companies in the world that have a history of more than 100 years. Denka's presence not only in Japan but also overseas is significant thanks to its large number of value-added products that boast the largest share of the global market. I believe that Denka were able to achieve this sort of business sustainability due to a virtuous cycle of investing resources in growth businesses, expanding specialty technologies, and responding to market needs. I hope members of Denka will take pride in the fact that you work for a wonderful company that is working toward a better future.

Based on your growth vision of becoming a Specialty-Fusion Company, I hope that Denka will achieve an even greater global presence through your efforts over the next two years.

*Avigan is a registered trademark of FUJIFILM Toyama Chemical Co., Ltd.

Keywords

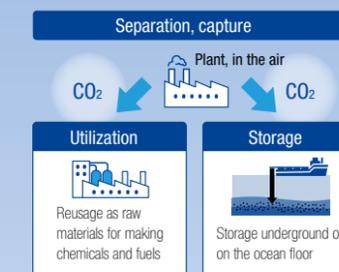
01 | Production process reforms

In order to remove "3D (dangerous, dirty, demanding) workplaces and create workplaces that are easy to work in, safe, and secure, the Denka Group will promote production process reforms such as digitalization, automation, and DX to stabilize operations and quality and improve productivity.



02 | Development and practical implementation of CCUS

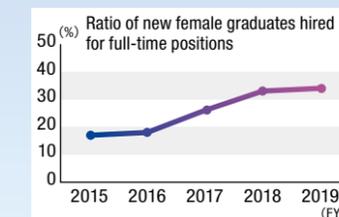
CCUS is a technology that separates CO2 from other gases emitted by plants and captures it, thus preventing it from being released into the atmosphere. Denka is jointly developing this technology with the National Institute of Advanced Industrial Science and Technology, with the goal of realizing implementation by 2030.



CCUS: Carbon dioxide Capture, Utilization and Storage

03 | Doubling the number of female managers

Denka has set a goal of doubling the number of female managers in its workforce by FY2024. We will maintain a 30% ratio of new female graduates hired for full-time positions and expand the population of candidates for management positions.





Think INNOVATION
Introducing articles that provide hints for innovation

No. 08

Leaving Room for Intuition

CEO, Deportare Partners



Dai Tamesue

Born in 1978 in Hiroshima, Dai is the first Japanese medalist in a world competition for a sprint event. He also participated in three Olympics and holds the Japanese record for men's 400m hurdles (as of May 2021). Dai currently serves as CEO of Deportare Partners. He is also the Director of Shin-toyosu Brillia Running Stadium, and the author of "Winning Alone," "The Philosophy of Running," "The Strength to Give Up," among other titles.

Learning from the world and reexamining our preferences and strengths

Know the world, and know yourself. For me, these are the two most important things when competing on the world stage. Knowing the world means learning all the best practices out there. These days, you can watch top athletes practice on the Internet. However, I believe that the most important things are hidden from view. During my days as an athlete, I had the opportunity to observe the Jamaican team practice. In videos, you always see them running on the track in the stadium, but to my surprise, they spent a lot of time running on uneven grass surfaces. On the track, your shoes will always grip the surface, but that is not the case on soil. It's difficult to get that same sensation on soil, so they had to repeatedly practice their foot strikes. This is not something you will see in books or videos; it is something you will only notice if you are there. I realized that in order to know the world, I needed to look behind the scenes.

However, if you just try to "know the world," you will eventually run into a barrier. Namely, differences in body shape, culture, and language perceptions that cannot be overcome by simple mimicry. That is why you also need to "know yourself." And part of that is accepting the areas that you cannot change. You have to see your strengths and weaknesses as part of your individuality, make the most of them, and strategically find a way to win. So, how do you do that? I think it is ultimately about defining our preferences and strengths. Your prefer-

ences are things that you enjoy doing. Your strengths are skills that come naturally to you. I enjoy mulling things over. I have a wide step length. Of course, that could also be taken as a weakness in that my step frequency is low. However, I took advantage of this by switching from the 100 m to the 400 m hurdles, where I could make the most of my abilities. In that way, I was able to achieve results on the world stage. You probably already have an idea of where your preferences and strengths lie. I believe the important thing is being able to verbal-

ize them and incorporate them into your strategy.

The more innovative something is, the more it looks like a failure

I do not think that innovation is something you can aim for. Let's take the high jump for example. In 1968, an athlete named Fosbury became the first person in the world to jump backwards (instead of the conventional belly roll) and win a gold medal at the Olympics. However, his backward style did not come out of nowhere. It was actually a derivative of the basic scissors jump. So, you could say that he

failed. In that sense, we need the ability to recognize failures as innovations.

When I talked with Fosbury later, he said, "I instinctively knew it would work." I think this intuition is also an important element of innovation. Some studies have shown that human intuition is a physical response. In other words, a person with good intuition is someone who can catch subtle signs from their body. Intuition is an ability acquired through the accumulation of diverse physical experiences. This is difficult to explain logically and is often avoided in business, but leaving some room for intuition may lead to unexpected breakthroughs.



At Brillia Running Stadium where Tamesue serves as a Director

Special Feature 10 Years After the Great East Japan Earthquake

Conveying Our Feelings and Connecting Them to the Future

Ten years have passed since the Great East Japan Earthquake.

Denka has worked to support reconstruction efforts by providing products such as special cement additives, fertilizers, corrugated pipes, and rain gutters.

In addition, over 900 Denka employees have participated in volunteer activities and developed bonds with people living in disaster-affected areas.

In this section, we will look back on the reconstruction efforts and think about how to support people in the future.

**Amazing
the
World
with Innovation**



Here, we will look back on the period from March 11, 2011, when the earthquake occurred off the Pacific coast of Tohoku, to the present. Throughout this period, Denka has worked to support the reconstruction efforts and build relationships with local people.

2011

March 11
Earthquake off the Pacific coast of Tohoku

March 17
Donation of 20 million yen in relief funds to the Japanese Red Cross Society

July
Letter of appreciation from East Japan Railway Company (JR East)
We received a letter of appreciation for quickly responding to efforts to reconstruct the Tohoku Shinkansen Line, which was damaged by the Great East Japan Earthquake.

July
Establishment of volunteer support program and launch of volunteer activities
We established the Disaster-Affected Area Volunteer Support Program, in which Denka and its employees work together on support activities.



2015

March
Participation in Minamisanriku Volunteer Appreciation Event

Disaster volunteers from all over Japan were invited to this event, which was held to celebrate a milestone in the town's reconstruction.

June
9th Disaster Reconstruction/Maintenance Meeting

Participants observed the levee raising construction in Rikuzentakata-shi.



2017

June
Launch of Denka Farm activity

Denka rented some farmland in Minamisanriku Town and established Denka Farm as a place to communicate with the local community. 600 sweet potatoes were planted.

October
First harvest festival at Denka Farm

The first harvest festival was held, and we invited people from the local community.



2019

May
Began the "tumugu" project to support reconstruction efforts

Started farming rice in the disaster-affected area (Hitomebore brand from Minamisanriku-cho) that would be used for brewing sake.



2021

May
Start of rice cultivation for "tumugu" (FY2021)



2012

February
Establishment of Disaster Reconstruction/Maintenance Support Headquarters

The Disaster Reconstruction and Maintenance Support Headquarters was established to efficiently support reconstruction efforts. Denka began providing products necessary for reconstruction.

June
Completion of disaster relief catalog
We combined our previously separate catalogs into a single catalog to widely introduce our businesses to those affected by the disaster and those involved in the reconstruction projects.

September
Completion of diorama exhibition object
Displayed dioramas that show where Denka's materials are used at various exhibitions.

June
First exhibition at EE Tohoku
We exhibited at EE Tohoku, an engineering technology exhibition with the slogan of "Let's utilize new technologies for reconstruction, now." We exhibited various products, including Denka Clearshot with the low dust spray method.



2016

April
Launch of volunteer activities for new employees

Volunteer activities were started as part of training for new employees. Through these activities, the new employees deepened their bonds with the local community.



February
13th Disaster Reconstruction/Maintenance Meeting

Agriculture land regeneration activities (drain construction and fertilization training) that would later lead to the launch of activities like the "Denka Farm" and "tumugu project" was decided.

2018

October
Second harvest festival at Denka Farm



2020

January
Completion of "tumugu" sake
Completed production of 1,000 bottles of junmai undiluted genshu sake and 1,000 bottles of junmai sake.

Establishment of Disaster Reconstruction/Maintenance Support Headquarters Committee

In February 2012, the committee was established with the aim of contributing to the early recovery of disaster-affected areas. It consisted of head office staff members from the Cement Dept., Special Cement Additives Dept., Fertilizer Dept., and Housing & Environmental Materials Dept., and Tohoku Branch members. The Logistics Dept. has also been participating since the 10th meeting. In the nine years of activities, we have held 20 meetings, made five inspection tours to disaster-affected areas, and held five lectures with speakers from various public organizations. In addition to contributing to society by responding to demand for reconstruction materials, we have worked with pride and conviction, transcending departmental boundaries.



During 18th meeting at J Village, an important site of disaster reconstruction

Denka Farm harvest festival

On October 21, 2017, we held a harvest festival at Denka Farm and invited people from the Minamisanriku Town Local Production Association. After harvesting sweet potatoes that were planted in June of the same year jointly by Denka employees, participants enjoyed eating boiled and baked sweet potatoes together. Some of the farmers said they would be waiting for us next year, leading to an opportunity for the employees and the local people to deepen their relationship.



Denka and Employees' Efforts to Support Reconstruction

Coming Together to Support Disaster Affected Areas

Over the past ten years, Denka and its employees have worked on various reconstruction support projects. Here, we will introduce some examples.



Hirokazu Nakanishi
Agri-Products Section
Nagoya Branch

He worked at the Tohoku Branch from May 2016 to September 2020.



Hidetaka Yamagata
Purchasing Dept.
Head Office

He was engaged in restoration work at the Tohoku Branch at the time of the earthquake.



Kenta Morimoto
Osaka Branch

He worked at the Tohoku Branch from January 2012 to March 2016.

Many farmlands in Tohoku were damaged by salt from the tsunami and radioactive contamination. Denka's fertilizers contributed greatly to their recovery. After the disaster, Hidetaka Yamagata worked together with Zen-Noh and JA (Japan Agricultural Co-operative) to visit local farmers and explain the products. He says, "We would approach farmers who had suffered damage and were emotionally distraught by the disaster and offer them products to restore their farmland. Explaining products is something we do all the time, but that time we had a greater sense of mission."

Hirokazu Nakanishi explained that fertilizers cannot be sold just by putting them on store shelves. Rather, it is necessary to offer appropriate product

solutions based on each farm's needs. "The steady efforts of our sales team have helped to spread our products in Tohoku." Kenta Morimoto also emphasizes that "solution-based sales" is a Denka's tradition. "The know-how and trusting relationships with customers built up by our predecessors were a great help when supporting the reconstruction efforts." In addition, Nakanishi emphasizes the contributions of those who served as technical advisors to the Tohoku Branch. "Mr. Sugita, who passed away last year, and Mr. Yokoyama worked tirelessly to strengthen the ties between our company and the farmers."

Up until now, many farmers have used our products and realized their benefits. "Some farmers happily

called me and said, 'The seeds weren't sprouting before, but after using Denka's fertilizer, I'm amazed at how well they've taken root!' It was very moving to hear that. The data obtained from our activities in the disaster-affected area is also being utilized in our current biostimulant business," says Yamagata. Morimoto also shared his hopes to apply the knowledge he has gained for the future. "We are developing crops that are resistant to poor environments. Our role is to further nurture the technological capabilities, solutions, and know-how we have cultivated and pass them on to the next generation." Denka's know-how, which has been protected and nurtured over the years, will surely breathe new life into the future.

Restoring Japan's major arteries as early as possible

Infrastructure development with special cement additives



Masanobu Kawano
Special Cement Additives Section
Tohoku Branch

He is engaged in overall restoration work at the Tohoku Branch.



Gohei Hirose
Special Cement Additives Dept.

He was in charge of customer service at the head office at the time of the earthquake.



Naohito Yanagisawa
Special Cement Additives Dept.

He was in charge of providing technical guidance for products at local construction sites.



Yoshiyasu Katsuta
Special Cement Additives Dept.

He was in charge of sales of accelerators for tunnels at the Tohoku Branch.

Denka's products have played a major role in the restoration of the Tohoku Shinkansen Line, which was severely damaged by the Great East Japan Earthquake, the largest earthquake recorded in Japan with a magnitude of 9.0. After the earthquake, Denka made an emergency shipment of special cement additives to the viaduct restoration site. In addition to shipping from the warehouse, we also delivered directly from the Omi Plant to the site. "The key to success was shortening the lead time from order to delivery. We maintained the supply by working closely with the plants, branches, and distributors," Masanobu Kawano recalls.

At that time, Gohei Hirose was working day and night at the head office, responding to inquiries from railway companies and other customers. Naohito Yanagisawa rushed to Tohoku with an emergency vehicle to visit work sites to provide technical

guidance for products. "We moved the construction work forward through direct communication with customers. That's how we were taught to do things by our senior colleagues. The situation following the major earthquake was unusual, but we responded as usual," Yanagisawa says. Hirose said that, even in the midst of the confusion, he could feel the underlying strengths of the Special Cement Additives Dept. "We have a wide range of products and can offer appropriate solutions based on the needs of individual sites. Our staff members are also very knowledgeable about the technology and can provide accurate advice. These are our strengths." The Tohoku Shinkansen Line resumed operation on all lines in a mere 49 days after the earthquake. Afterwards, Denka received a letter of appreciation from the East Japan Railway Company.

Denka's strengths could also be seen in the construction of a new

expressway to speed up reconstruction efforts after the earthquake. At the tunnel site, the quality of shotcrete was unstable, resulting in construction delays. In response to this, Denka immediately developed ClearUp α, an admixture that stabilizes the properties of concrete, contributing to the reconstruction work by eliminating these delays.

"This was the result of a combined approach of three sites: the research institute, the head office, and the construction site. The general contractors also praised us for our response," Yoshiyasu Katsuta says proudly. Kawano adds, "Thanks to the skills and technology that we've cultivated over the years, we were able to demonstrate our strengths when disaster struck. I hope that younger employees will inherit these strengths and further enhance Denka's capabilities."

**Amazing
the
World**
with Innovation

Protecting the agricultural industry in Tohoku

Farmland recovery using fertilizers



Distributing Denka's fertilizer

Employees' Continuous Volunteer Activities

Our Role is to Connect People

Since the establishment of the Disaster-Affected Area Volunteer Support Program in July 2011, a total of 917 employees have been engaged in volunteer activities.

Through the Denka Farm and many other activities, we have been able to communicate with those in the disaster-affected area.



Members of the Zaigo Farmers' Association and Tohoku Branch



Yuichi Yokokawa
Medical Science Dept.

He served as the Tohoku Branch Manager from October 2011 to March 2013, as well as the head of the Disaster Reconstruction Support Headquarters for the Tohoku region.



Juichi Yamamoto
Labor Union Headquarters

He promoted reconstruction support efforts as vice president of the labor union at the time. Also in charge of dispatching labor union members to the disaster-affected area.



Eika Ishihara
Polymer Processing Research Dept. Iseaki Plant

She participated in volunteer activities during the 2019 new employee training program and in 2020, and was involved in farming work at the Denka Farm.

When people work together, anything is possible

Yokokawa For about a year and a half from October 2011, I helped support employee volunteer activities as the Tohoku Branch Manager. I remember how encouraging it was to see so many employees from the head office and research institutes coming to Tohoku every week. We were so grateful to those who took time out of their weekends to come to the Tohoku area, where winters are extremely cold and summers are hot. I imagine they volunteered after seeing the devastation on TV.

Ishihara That's right. I was a high school student when the earthquake struck in 2011. As I watched the reports on TV, I was wondering if there was anything that I could do to help the affected area. Being able to actually visit the disaster-affected area and interact with the people there was a very big event in my life.

Yamamoto After experiencing it once, many

employees continue to participate in the support program. I think actually going there triggers a lot of emotions and fuels their desire to help the local people even more.

Yokokawa Since employees from various departments and age groups participate in the program, I'm able to meet many people with whom I wouldn't usually have the chance to work. Volunteer activities are also a great opportunity to deepen exchanges between colleagues.

Yamamoto That's absolutely right. I think the world today is becoming more and more individualistic. However, volunteer activities teach us the importance of ties with colleagues, the significance of community, and the spirit of helping others, which will be of a great help for Denka as it moves forward in society.

Continuing to pass the sash

Yokokawa The company's official endorsement, including the volunteer leave system, was also a

huge help. In addition to supporting reconstruction efforts with products such as fertilizers and special cement additives, I could feel the company's commitment to contributing to the disaster-affected areas.

Ishihara The first time I participated was during the new employee training in 2019. I didn't know that volunteer activities were part of the training program until I joined the company, but I was glad to see the company focusing on things like that.

Yamamoto I know what you mean. At the time of the earthquake, we were considering dispatching volunteers from the Denka Labor Union, but we thought it would be difficult because of the risk of secondary disasters and injuries during the activities. However, when we requested to participate in the company's volunteer program, the approval process was very smooth, and as many as 182 labor union members have participated in volunteer activities over the eight years from 2012 to 2019. I believe that sincerity and integrity is the DNA that has been passed down for generations at Denka. The company and each

Amazing
the
World
with Innovation



Held a roundtable discussion online

of its employees support those in need. I am proud to work for such a company.

Ishihara I think that we must pass this DNA onto the next generation. Not everyone can volunteer, but if the participants can communicate what they did and how they felt, it may encourage others to participate or think about how they can support others.

Yokokawa When I participated, I remember a receptionist at the local volunteer center saying, "Nice to see you again, Denka." I was glad that they saw me as a member of Denka and not an individual volunteer. I think that we are passing on the sash that we have received from our older colleagues working at Denka.

Denka Farm Today

We leased some farmland from a Minamisanriku Town farmer who had been using our culvert pipes and fertilizers and opened the Denka Farm in 2016 as a place for communication with the local community. In June 2017, employees of the Tohoku Branch planted 600 sweet potatoes, and in November, we invited people from the local community to a harvest festival where everyone enjoyed digging up and eating sweet potatoes. Moving forward, we will continue to operate the farm in hopes of contributing to the recovery of the disaster-affected areas in Tohoku and the restoration of farmland. We interviewed members of the local community involved in the operation of the Denka Farm and two members of the Tohoku Branch about their thoughts on the farm.

From local community members

It helped the community regain its vitality

The people of the Zaigo area felt down after the disaster, but I think it helped that they were able to build relationships with the Denka employees through reconstruction efforts. I feel that Denka Farm is an opportunity for the community to regain its vitality.



Hiraku Chiba
Commerce and Tourism Department
Minamisanriku Town

We appreciate your support

We are moved by the fact that you have been working with us in Minamisanriku Town for such a long time. Denka Farm has become a rich field for harvesting crops. It has also become a training place for new employees. Some of my favorite memories are working hard and communicating with the young people from Denka.



Eifuku Saijo
Chairman
Zaigo Farmers' Association

Looking forward to seeing everyone again

The harvest festivals in 2017 and 2018, where 50 members of Denka Tohoku and the local community were able to deepen their bonds, left a strong impression. Denka has been supporting us both physically and mentally, and I would love to see you again once the pandemic is over.



Masanori Umezawa
Zaigo Farmers' Association

From Denka employees

Working with pride

Looking back on the past ten years, I am happy to say that I am proud to be a member of Denka. However, ten years is only a milestone, not the end. The reconstruction efforts in Tohoku are not yet finished. I will continue working with pride to help disaster-affected areas.



Koya Takahashi
Manager
Tohoku Branch

Continuing community-based activities

Through this activity, I learned that it is possible to restore farmlands that were devastated by the tsunami, and the importance of building connections with the local community. I believe that continuing to engage in a wide range of community-based activities and passing on The Denka Value will lead to further growth in the long run.



Kazumi Mitsuzuka
Tohoku Branch



Mr. Yamamoto,
Chairman of Denka
looks back on
the past 10 Years



Manabu Yamamoto
Chairman and
Representative Director



**tumugu sake made
to support reconstruction
efforts
(Not for sale)**

This sake is made from the Hitomebore brand of rice harvested from rice paddies in Minamisanriku Town, Miyagi Prefecture, which was damaged by the tsunami. Fertilizers from Denka Azumin Co., Ltd. and Hinode Kagaku Kogyo Kaisha, Ltd. were used to prepare the fields. We chose the name from ideas submitted by new employees who joined the company in FY2019 and volunteered to support reconstruction activities. The word "tumugu," which means "to spin thread," represents the connection between people in the disaster-affected area and Denka.

To continuously contribute to the wellbeing of society

Challenges that companies must address in the face of the disaster

Ten years ago on March 11, I was staying in a hotel on a business trip, and I remember being struck speechless and feeling the tears silently roll down my face at the sight of the devastation on the Tohoku coastline on TV.

The disaster took the lives of nearly 20,000 people, and even 10 years later, the bereaved families are still suffering from their losses. Many of the victims of the disaster, including those affected by the nuclear accident in Fukushima, have lost their livelihoods and are still unable to return to their hometowns.

After the earthquake, our business, which was also damaged by the disruption of supply chains and other factors, managed to overcome the crisis thanks to the efforts of our employees and is now back on a growth track. However, the memory of the earthquake is still deeply etched into the minds of those who experienced it. Natural disasters are no longer a vague possibility but rather a huge risk that can happen at any time, and this realization has dramatically changed our worldview.

Recovering from the disaster is a heavy task not only for the victims, but also for the entire nation that experienced it. Unless we can restore the security and happiness of the people, we will be unable to move forward in our corporate activities. To make sure that ESG and SDGs do not become mere platitudes, we, as a company, need to do what we can to realize a true recovery and protect lives in the event of such a major disaster occurring again. Over the past 10 years, I have come to strongly feel this way.

Proactive employees are one of Denka's greatest assets

For the past ten years, Denka has been addressing this challenge head-on.

Currently, we are continuously dispatching volunteers to disaster-affected areas, but this activity originally started with employees who volunteered

out of a genuine desire to help people. This kind of proactive attitude toward social contribution is one of Denka's greatest assets. I am convinced that their unrelenting efforts, motivated by a strong desire to help people, have strengthened our ties with the disaster-affected areas, and also helped to foster company pride through the fulfillment of our social mission.

In addition to this, we established the Disaster Reconstruction/Maintenance Support Headquarters immediately after the earthquake and have been focusing on supporting reconstruction efforts through our businesses. We have made significant contributions to accelerating the reconstruction process by supplying a wide range of products and services, including fertilizers and corrugated pipes for agricultural reconstruction, cement and special cement additives as construction materials, and rain gutters for temporary housing.

Through our activities over the past ten years, we have gained confidence and learned that Denka has many valuable and unique products and technologies that can contribute to society. Above all, we have outstanding human resources.

By refining our specialties, we will contribute to both the wellbeing of society and the growth of the company. Even setting aside the SDGs for a moment, this is a prerequisite for growth and the basic spirit of our ongoing management strategy, Denka Value-Up.

I believe that our achievements over the past 10 years have proven that we can realize this ideal.

Moving forward, I hope that Denka will continue to address not only natural disasters but also global issues such as decarbonization and develop businesses that can make a significant contribution to people's wellbeing. In this way, we can become a company that is truly needed by society and one that all of our stakeholders, not to mention our employees, can be proud of.

Finally, I would like to express my sincere gratitude to those carrying out volunteer activities and those involved in supporting the reconstruction efforts.

DENKA TOPICS

Introducing Denka Group news topics from April to June 2021

Apr. Formulated Health Management Declaration

We have formulated the Health Management Declaration to further develop our efforts to maintain and promote the health of our employees and their families. We consider the maintenance and promotion of good health to be an important management issue, and last year formulated a company-wide policy on new work styles with consideration for after the COVID-19 crisis is resolved. In order to become a company that is truly indispensable to society, we will continue our efforts to create health and happiness for our employees and their families.



May Denka Spherical Magnesia takes Excellence Award at Semiconductor of the Year Awards

Denka's functional ceramic "Denka Spherical Magnesia" won the Excellence Award in the Electronic Materials for Semiconductors category of the 27th Semiconductor of the Year Awards sponsored by Electronic Device Industry News. The product's high heat dissipation contributes to reducing environmental impact, and it has a wide range of applications, including for wind power generation and communication base stations.



June Cement accelerator Denka ACF adopted at first construction site

The cement accelerator Denka ACF, which was jointly developed with Shimizu Corporation by applying the inorganic material design technology we have cultivated through our cement and special cement additives, was adopted for the first time at a construction site in Nakadomari-machi, Aomori Prefecture. During the cold season, concrete takes longer to set, but adding this product to the concrete truck ensures that it sets in the usual time. Moving forward, we will expand it to other construction sites.



June Analysis kit for detecting COVID-19 variants launched

On June 16, PlexBio's IntelliPlex™ SARS-CoV-2 Variant Analysis Kit was released for sale to inspection organizations. It was co-developed by Denka and PlexBio (Taipei, Taiwan), a business partner in which Denka owns a 33.4% equity stake, and verified in collaboration with the Toho University School of Medicine. In conjunction with specialized equipment, this kit can simultaneously detect a total of 10 COVID-19 variants



Apr. Denka to supply COVID-19 antigen rapid test kits to U.S.

Denka will supply its QuickNavi™-COVID19 Ag COVID-19 antigen test kits relabeled as SPERATM COVID-19 Ag Test as a manufacturer for the U.S.-based Xtrava Health per Xtrava Health's U.S. market specifications. With needs continuing to grow in the U.S., Xtrava Health is currently running clinical trials to obtain FDA EUA for point-of-care use, with launch targeted for later this year.



June Denka Athletics Challenge Cup 2021 held

On June 5 and 6, the Denka Athletics Challenge Cup 2021, a Japanese track and field competition sponsored by Denka, was held at Denka Big Swan Stadium (Niigata City, Niigata Prefecture).



June G47Δ virus Delytact® approved for cancer treatment

Daiichi Sankyo received a conditional and limited-time approval for Delytact® (teserpaturev), G47Δ virus for cancer treatment for which Denka has been developing commercial production technology with Prof. Tomoki Todo of the University of Tokyo's Institute of Medical Science. This product will be the world's first viral agent approved for the treatment of malignant glioma. Denka will be responsible for the production of this product on behalf of Daiichi Sankyo. *Delytact is a registered trademark of Daiichi Sankyo



June Received approval to manufacture and sell antigen rapid test kit

On June 16, we received approval to manufacture and sell a rapid antigen test kit that can simultaneously detect COVID-19 and influenza virus antigens with a single device in Japan. It is now possible to test for both antigens in 10 minutes. This product will be marketed under the name QuickNavi™ COVID-19 Ag by our sales partner Otsuka Pharmaceutical.



视界良好

Clear view



Japan

Tetsuya Kawano
Sales Section
East Japan Branch
Sales Division
Denka Astec Co., Ltd.

How are things in Japan, Kawano?

Working out at the gym!

Joined the company in December 2013. He is responsible for sales of resin and metal rain gutters in the Tohoku region of Japan. He is also involved in follow-up services for continuing customers and new design activities.

As I am a well-organized person, I get distracted whenever I see dirty laundry or unwashed dishes. So, in cooperation with my wife, I always try to finish all the housework before work starts. When everything is settled, I take a little break, prepare my favorite cup of coffee, and start working surrounded by the aroma of the coffee. On my days off, if the weather's good, I go outside with my two-year-old daughter and enjoy the fresh air.



Set clear goals and expectations



USA

Sam Ali
Development
Life Innovation and New Business
Denka Corporation

How are things in the USA, Sam?

Spending time in nature refreshes me

Joined the company in September 2015. He is leading the development of new healthcare businesses and products not only in the US but also overseas. Currently, he is working on the acquisition of the FDA emergency use authorization and the development of the US market for the COVID-19 rapid testing kit Quick Navi-COVID19 Ag.

The unfortunate circumstances caused by the COVID-19 pandemic have not significantly affected productivity and throughput. Using modern work tools such as Zoom meeting, desktop, and mobile communication has enabled our critical work tasks to continue and the projects to progress rapidly. There are some even advantages since there is less time wasted in commuting and more time to focus on work.



一日一回の散歩

Taking a walk at least once a day

I love visiting art museums!

Joined the company in April 2021. She is responsible for transforming work processes and supporting alliances with overseas companies.

I take a walk during my lunch break and in the evening every day to refresh my mind and also to stay healthy. Although I see the same scenery every day, I enjoy seeing the gradual changes that come with the passing of the seasons. There are many plants in my neighborhood, and this spring, I enjoyed the scent of fully bloomed roses, jasmine, and cape jasmine.



Japan

Haruka Shiratani
Business Planning Dept.
Denka Co., Ltd.

How are things in Japan, Haruka?

LINK GLOBALLY, LINK FUTURE

Group members around the world, working toward the future of Denka

The Denka Group has 6,000 employees around the world. We posed the following question to members from different countries.

Theme How do you separate work and private life during remote work?

How are things in Germany, Frank?



道阻且长，行则将至

Life is a long and bumpy road. However, if you continue to walk forward, you will reach the goal someday.

Create physical work separation.

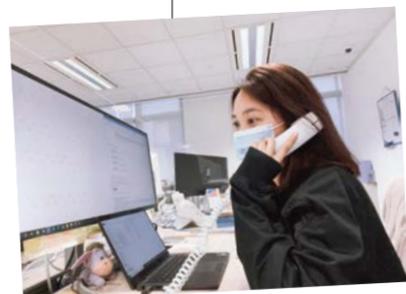
I love anime, comics, and my dog!

Joined the company in April 2017. He is in charge of order management and delivery management inside and outside Japan.

I created a separate workspace at home, and I always ensure that my work desk is empty, to prevent me from getting distracted. During my lunch break, I take my dog out for a short walk to refresh my mind.

Most importantly, I will always play classical or jazz music while working from home – it helps me focus. Lastly, I will get out of my workspace after working hours to mentally shut down "work" mode and return to my personal space at home.

How are things in China, Liu?



Singapore

Yee Shu Hui
Special Cement Additives
Denka Infrastructure Technologies Pte Ltd

How are things in Singapore, Yee?



Germany

Frank Thieme
Development Dept.
Icon Genetics GmbH

I love to go hiking with my family!

Joined the company in 2008. As a development manager, he is responsible for making arrangements for clinical trials, as well as supervising early clinical trials conducted by a global team.

The pandemic has the tendency to turn structured daily routine into a mishmash of work, school for the kids, and free time. Working from home sometimes makes it hard to tell when work ends and family life begins. Fortunately though, teleconferences, cloud-based shared work environments, and a lot of patience and understanding allows us to make smooth progress with our work projects and family lives.



Patience and understanding