Denka

Denka Report 2020

Integrated Report

Denka

Possibility
of
chemistry

0002ⓢ0010 SM　Printed in Japan, Published in January 2021 by Denka Company Limited

Our Corporate Philosophy

Following the celebration of its centennial in 2015,
Denka established The Denka Value, a corporate philosophy.
The Denka Value consists of the Denka Mission and the Denka Principles,
a set of precepts aimed at guiding the actions of all Group employees.

The Denka Value

Denka Mission

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

Denka Principles

We:

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

*Japanese-style craftsmanship

■ Editorial Policy

The *Denka Report 2020* printed brochure is aimed at providing our stakeholders, including shareholders and investors, with a robust communication tool that focuses on conveying 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.

In addition, we operate an ESG-themed corporate website to ensure the comprehensive and timely disclosure of relevant information.

■ Coverage

Fiscal 2019 (April 1 2019 through March 31, 2020) in principle; this report includes additional information on some initiatives undertaken subsequent to the fiscal 2019 year-end while presenting data on numerical targets for and performance statistics from the past several fiscal years.
Date of publication: January 29, 2021

■ Scope

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

■ Guidelines

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

■ Inquiries

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

http://www.denka.co.jp/eng/

CONTENTS

■ Overview of the *Denka Report 2020* and Other Supplementary Reporting Tools

1 This report is aimed at providing our stakeholders, including shareholders and investors, with a robust communication tool that focuses on conveying what we have been doing to create new value over the medium to long term from the viewpoint of addressing ESG issues.

2 We maintain the timely and comprehensive disclosure of our ESG-related corporate information via our website, updating reporting on relevant activities and detailed data that has not been included in the aforementioned editions.

Business at a Glance

Healthcare

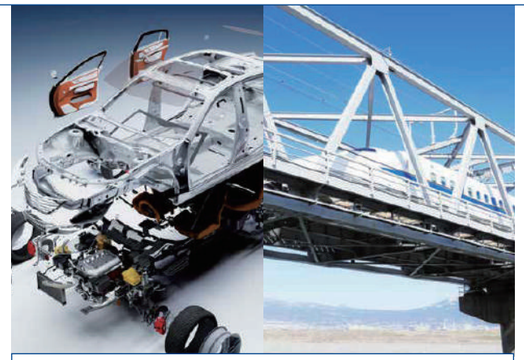
Help people around the world enhance their quality of life

In addition to illness prevention and early diagnosis via the provision of vaccines and diagnostic reagents, we are expanding into cancer remedies and gene alteration analysis.

Life Innovation

Vaccines

Diagnostic reagents



The environment and energy

Create a clean and safe future society

We employ such core technologies as cutting-edge inorganic materials in product development with the aim of better satisfying the latest needs for solutions that help achieve zero emissions and support autonomous driving systems.

Electronics & Innovative Products

Spherical alumina

DENKA BLACK

High-value-added infrastructure

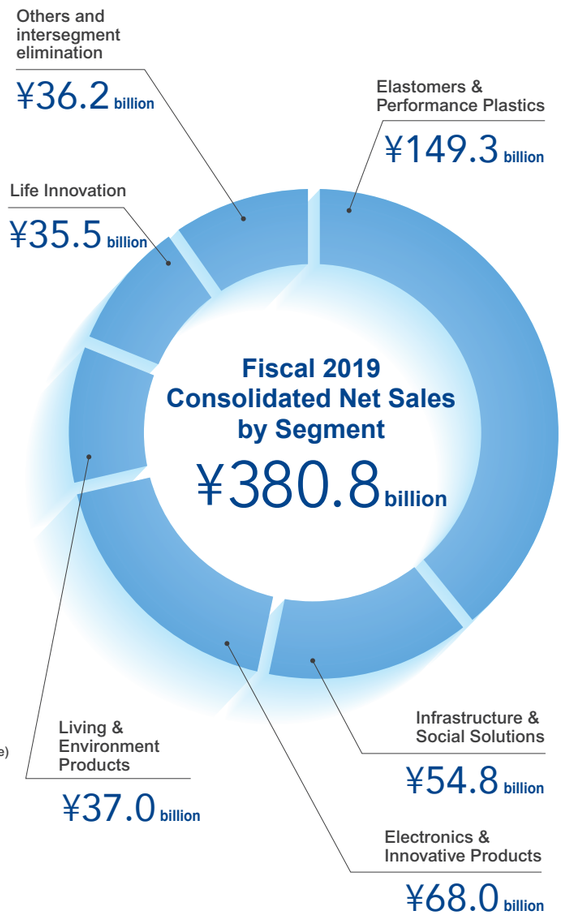
Support infrastructure development and improve accessibility

Addressing needs for such products as expansive additives, quick-setting agents and high-strength materials, we provide cutting-edge materials and solutions for infrastructure development while aiding in efforts to repair aged facilities and lengthen building life.

Infrastructure & Social Solutions

NATMIC

TOYODRAIN
(underground drainpipes for agriculture and construction use)



Key Operations

We are increasing the “specialty grade” ratio in our product lineup to secure resilience in the face of changes in external conditions as we shift our focus to the solution business.

Elastomers & Performance Plastics

Examples of chloroprene rubber-based automobile parts

Examples of products made using DENKA TRANSPARENT POLYMER (styrene-based functional resin)

Living & Environment Products

A food container

TOYOKALON
(synthetic fiber for wigs and hairpieces)

Main Group Companies

Japan

- Kanazawa Denka Ready-Mixed Concrete Co., Ltd.
- Kanto Acetylene Industry Co., Ltd.
- Kanbara Ready-Mixed Concrete Co., Ltd.
- Kyusyu Plastic Industry Co., Ltd.
- Kurobegawa Electric Power Company
- Sanshin Bussan Kabushiki Kaisha
- Juzen Chemical Corporation
- Shonan Sekisui Kogyo Kabushiki Kaisha
- Denal Silane Co., Ltd.
- Denak Co., Ltd.
- Denka Azumin Co., Ltd.
- Denka Elastlution Co., Ltd.
- Denka Consultant & Engineering Co., Ltd.
- Denka-KEW Genomics LLC
- Denka Kojundo Gas Kabushiki Kaisha
- Denka Cosmetics Limited Company
- Denka Ready-Mixed Concrete Takayama Co., Ltd.
- Denka Polymer Kabushiki Kaisha
- Denka Renotec Co., Ltd.
- Toyo Styrene Co., Ltd.
- NAKAGAWA CO., LTD.
- Nishi-nihon Koatsu Gas Co., Ltd.
- Higashi Nihon Koatsu Co., Ltd.
- Hinode Kagaku Kogyo Kaisha. Ltd.
- Akros Trading Co. Ltd.

Worldwide

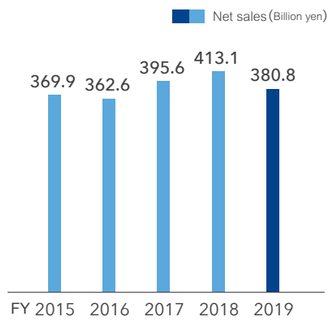
- Denka Advanced Materials (Suzhou) Co., Ltd.
- Denka Advanced Materials Vietnam Co., Ltd.
- Denka Advantech Pte Ltd
- Denka Chemicals Development Suzhou Co., Ltd.
- Denka Chemicals GmbH
- Denka Chemicals Holdings Asia Pacific Pte Ltd
- Denka Chemicals Hong Kong Co., Ltd.
- Denka Chemicals Shanghai Co., Ltd.
- Denka Construction Solutions Malaysia Sdn Bhd
- Denka Corporation
- Denka Electronics Materials Dalian Co., Ltd.
- Denka Infrastructure Technologies Pte Ltd
- Denka Infrastructure Technologies Shanghai Co., Ltd.
- Denka Inorganic Materials (Tianjin) Co., Ltd.
- Denka Korea Co., Ltd.
- Denka Life Innovation Research Pte Ltd
- Denka Middle East and Africa FZCO
- Denka Performance Elastomer LLC
- DENKA SEIKEN (SHANGHAI) Co., Ltd.
- DENKA SEIKEN UK Limited
- DENKA SEIKEN USA Incorporated
- Denka Singapore Pte Ltd
- Denka Taiwan Corporation
- Icon Genetics GmbH
- PT. ESTOP Indonesia

Financial and Non-Financial Highlights (Fiscal 2019)

Financial

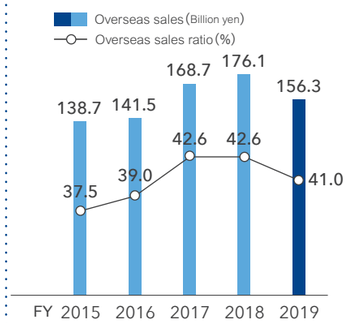
Net sales

380.8 Billion yen



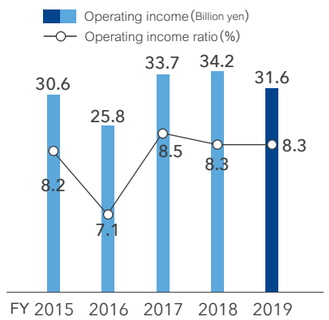
Overseas sales / overseas sales ratio

156.3 Billion yen / 41.0%



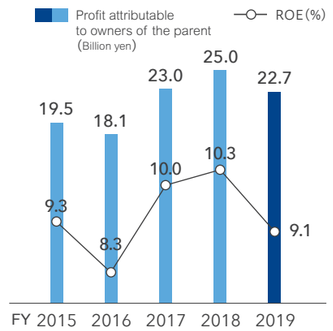
Operating income / operating income ratio

31.6 Billion yen / 8.3%



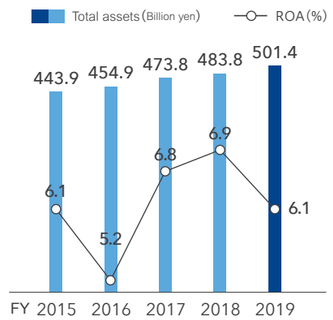
Profit attributable to owners of the parent / ROE

22.7 Billion yen / 9.1%



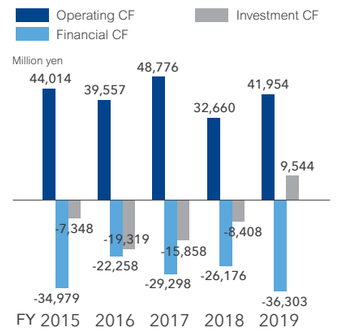
Total assets / ROA

501.4 Billion yen / 6.1%



Cash flow (CF)

Operating CF	41,954 Million yen
Investment CF	-36,303 Million yen
Financial CF	9,544 Million yen



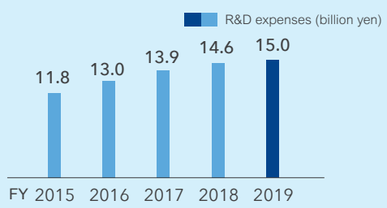
Non-Financial

Development

Promoting open innovation, we are developing new products and technologies that contribute to a sustainable society.

R&D expenses

15.0 Billion yen

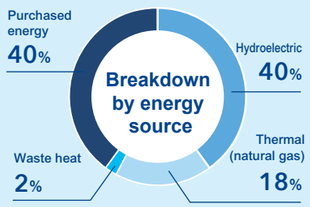


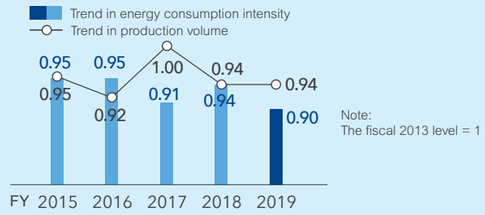
Power generation

To produce clean energy, we are employing a total of 15 hydroelectric power plants in addition to operating cogeneration systems fueled by natural gas.

Hydroelectric power generation

40%





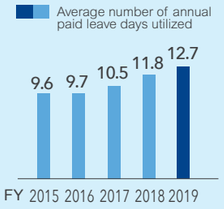
Note: The fiscal 2013 level = 1

Offices

We are promoting work style reforms and workforce diversity at our business bases at home and abroad.

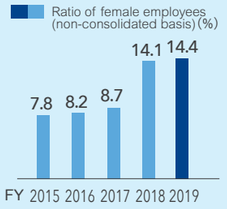
Average number of annual paid leave days utilized

12.7 days



Ratio of female employees (non-consolidated basis)

14.4%

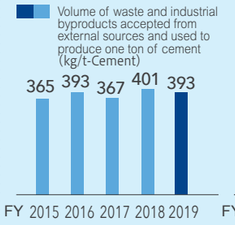


Production and sale

Giving due consideration to our environmental footprint, we pursue sustainable manufacturing operations to deliver safe and reliable products.

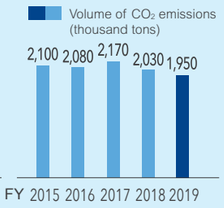
Volume of waste and industrial byproducts accepted from external sources and used to produce one ton of cement

393 kg/t-Cement



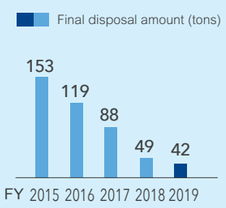
Volume of CO_2 emissions from energy sources and non-energy sources

1,950 thousand tons



Final disposal amount of waste

42 tons



Trajectory of Denka's Growth

Taking on the Challenge of Expanding the Possibilities of Chemistry for More than a Century

The Denka Group has striven to create a wealth of products ever since its founding, beginning with the innovative application of calcium carbide production technologies and expanding into operating a pharmaceutical business that today boasts an established track record spanning more than 70 years. Reflecting the needs of the times in our output, we have thus pursued the ultimate in *Monozukuri* (Japanese-style craftsmanship).

Dr. Tsuneichi Fujiyama, the pioneer of the carbide industry in Japan

In 1902, at a plant in Sankyozawa, near Sendai city, Dr. Fujiyama became the first in Japan to successfully manufacture calcium carbide. This was only about ten years after the world's first trial production of calcium carbide by a Canadian chemist. He also introduced technology for the manufacture of calcium cyanamide (nitrogenous limestone) from calcium carbide to Japan. Moreover, he himself developed a steady stream of new technologies and opened the Hokkai Carbide Plant in the city of Tomakomai, Hokkaido, in 1912. His achievements greatly influenced the subsequent growth of Japan's chemical industry.

1915 — Launched the manufacture of calcium carbide and calcium cyanamide

In 1915, Denki Kagaku Kogyo Kabushiki Kaisha (now Denka Company Limited) was established as the successor to the Hokkai Carbide Plant. It started off producing calcium carbide and a calcium cyanamide fertilizer derived from calcium carbide, with hydroelectric power plants providing the production facilities with electricity to sinter limestone and coke.

1942 — Commercialized acetylene black

The Company entered the acetylene chemicals field via the application of technologies that utilize acetylene derived from calcium carbide. After the release of acetylene black in 1942, the Company succeeded in commercializing such products as acetic acid, vinyl acetate and vinyl chloride.

1949 — TOYO KAGAKU Co., Ltd. established

1951 — VINI-TAPE

1954 — Entered the cement business on a full-scale basis

▶ Entered the field of acetylene chemistry

1955 — Rain gutters

1962 — Successfully initiated the domestic production of chloroprene rubber

1963 — AZUMIN

1965 — Entered the petrochemicals field

Styrene monomer and polystyrene

1967 — Launched CSA production as well as the special cement additive business

Cracking prevention technologies (e.g., nonshrink grouting materials)

1967 — Corrugated pipes

1970 — ABS resin / EVA TEX

1970 — TOYOKALON

1971

▶ Organic polymer-related technologies, including precise synthesis, polymerization and composite techniques

▶ Application of synthesis, calcining and sintering technologies

▶ Technological pursuit aimed at functionally upgrading concrete

1976 — HARDLOC high-performance adhesive

▶ Adhesion technologies

1977 — Σ1000

Technologies to enhance concrete strength

1979

▶ Antigen and antibody reaction technologies

▶ Technologies to combine multiple different materials

1980 — NATOMIC

Quick-setting agent technologies

1981 — Thermally conductive sheets

1983 — Biaxially-oriented polystyrene sheet (BOPS)

1985 — Diagnostic reagents

1985 — HITTPLATE

1985 — DENKA ER

1986 — Immunochemistry diagnostic reagents

1987 — Maleimide-modified resin

1989 — Spherical fused silica filler

1993 — Denka TECHNOCRETE System

Technologies for repairing and enhancing the durability of buildings

1996 — Macromolecular sodium hyaluronate preparation

▶ Biotechnology research

1997 — Launched polystyrene production in Singapore

1998 — DENKA SN Plate

2000 — Influenza antigen detection test kits

▶ Point-of-Care Testing (POCT)

2001 — TORETARO

2003

▶ Polymer design and processing technologies

Having merged with TOYO KAGAKU Co., Ltd., the Company launched the Living & Environment Products Business, introducing a lineup of unique products made via resin processing and designed to help enhance people's well-being and preserve the global environment.

2004 — Spherical alumina

2006 — SUQCEM

2007 — Became the world's biggest chloroprene rubber producer

2009 — Launched the ALONBRIGHT phosphor

2012 — Commercialized CO_2-SUICOM

2015 — Established Denka Performance Elastomer

2015 — Initiated the production of VINI-TAPE in Vietnam

2015 — Initiated the production of ALSINK in China

2015 — Made Malaysia-based POSCO a subsidiary

2015 — Made Germany-based Icon Genetics GmbH a subsidiary

2016 — Established an R&D base in Singapore

2020 — Merged with Denka Seiken via an absorption merger

▶ Novel coronavirus antigen rapid test kits

2015 — Centennial of Denka's founding
Rebranded to "Denka Company Limited"

Made an entry into the pharmaceutical field

Having acquired shares in the Research Institute for Biology, Physics and Chemistry, which was established in 1950 (subsequently renamed Toshiba Kagaku Kogyo in 1951 and then Denka Seiken Co., Ltd. in 1982), the Company made an entry into pharmaceutical-related fields, including vaccines and diagnostic reagents.

Made an entry into the fine ceramics field

In 1971, the Company initiated the marketing of fused silica and boron nitrate (BN) and developed various fine ceramics materials thereafter.

Healthcare

Leveraging its arsenal of unique technologies, which are backed by a long track record spanning more than 70 years, former Denka Seiken has created epoch-making pharmaceutical products, such as vaccines and diagnostic reagents. Looking ahead, the Denka Group will strive to help enhance people's quality of life and, to this end, deliver solutions to counter infectious diseases and lifestyle diseases while providing cancer drugs and cancer remedy information services.

The environment and energy

Our research into high-temperature control and nitride technologies led to the creation of fine ceramics that, in turn, helped us develop an array of unique solutions in the field of electronic materials, including insulation as well as thermally and electrically conductive and heat-resistant materials. Today, our products are used for a broad range of applications, such as automobiles, railcars, displays and mobile devices, to help achieve technological innovation in terms of energy saving, miniaturization, weight reduction and functional upgrading.

High-value-added infrastructure

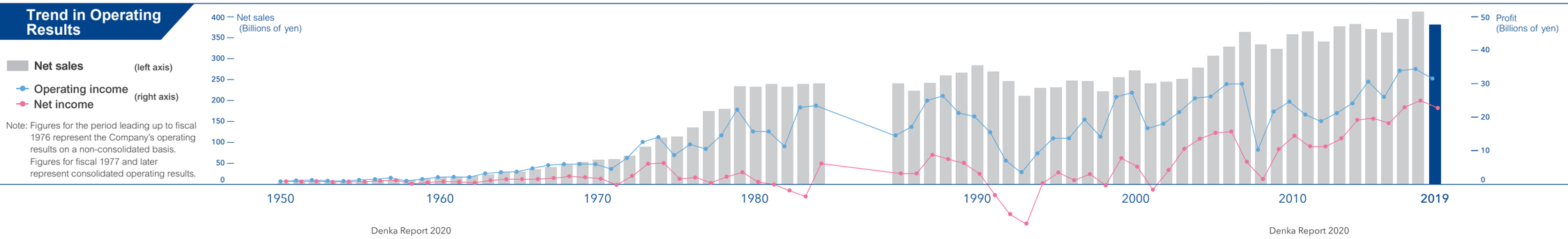
Our special cement additive business began with the release of DENKA CSA in 1967. Since then, we have been serving markets at home and abroad to meet needs for expansive additives, quick-setting agents, high-strength materials and other cutting-edge solutions in construction and civil engineering fields. In addition to helping reduce environmental burdens, we are taking on infrastructure development in such regions as Southeast Asia while supporting the resolution of issues associated with the repair of aged concrete structures and increasing building durability in Japan.

The specialization of key operations

We are increasing the "specialty grade" ratio in our product lineup to secure resilience in the face of changes in external conditions as we shift our focus to the solution business.

1915-1944	1945-1974	1975-2006	2007-2017	2018-2022
Initial Period	**Period of Expanding Core Businesses**	**Period of Expanding Specialty Businesses**	**DENKA100**	***Denka Value-Up***
Launched the calcium cyanamide business	Entered the field of acetylene chemistry	Created a series of leading-edge products via a combination of organic and inorganic chemistry	Developed a robust foundation for the next 100 years while focusing management resources on growth fields	To become a specialty-fusion company capable of achieving sound and sustained growth

Trend in Operating Results



Note: Figures for the period leading up to fiscal 1976 represent the Company's operating results on a non-consolidated basis. Figures for fiscal 1977 and later represent consolidated operating results.

Denka Value-Up Challenges

Our Strengths

In line with the Denka Value-Up management plan, we are striving to become a “Specialty-Fusion Company with a Strong Global Presence.” Here, we introduce some notable topics associated with distinctive strengths we are currently honing as we take on the challenge of expanding the possibilities of chemistry.

Hydroelectric Power Generation

15 power plants in Japan
(including those under co-ownership via a joint venture)

Maximum output:
118,240 kW

Note: As of April 2020; output from power plants owned by the joint venture is calculated based on Denka’s equity ratio.

Since its founding in 1915, Denka has been proactively engaged in the construction of hydroelectric power plants.

Output from 15 hydroelectric power plants, including those under co-ownership via a joint venture, accounts for approximately 40% of Denka’s energy consumption. Currently, construction projects are under way to build the New Omigawa Power Plant (maximum output: 8,100kW; planned operational kickoff: December 2020) and the New Himekawa Power Plant No. 6 (maximum output: 28,000kW; planned operational kickoff: April 2022; owned by the joint venture).

Overseas Network (Singapore)

The **40**th anniversary of expansion into Singapore

In 1980, we established Denka Singapore Private Limited (DSPL) to accommodate growing demand for acetylene black for use in dry batteries and power transmission cables. Having reached a new landmark in our expansion into Singapore, where we currently produce a number of offerings, including acetylene black, spherical fused silica fillers, styrene-based synthetic resins and vinyl chloride resin fibers, through our own local plants. Right now, efforts are underway to upgrade these facilities into a smart factory employing cutting-edge AI and IoT.

Life Innovation

Our rapid diagnostic testing kits detect the existence of novel coronavirus antigen in approximately 15 minutes without using special measurement equipment.

Thus, these testing kits serve as a hassle-free solution enabling healthcare institutions in general to quickly conduct examinations.

By using specimens collected from the examinee’s nasopharynx or nasal cavity, our testing kits are capable of executing the simultaneous testing for the novel coronavirus, influenza virus and RS virus.

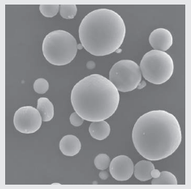
Time necessary for diagnosis
15 minutes

Novel coronavirus antigen rapid diagnostic testing kits

Released in August 2020 for use by healthcare institutions.

Electronics & Innovative Products

DENKA BLACK



Spherical alumina

We offer a diverse product lineup employing fine ceramics, organic fine chemicals and technologies for combining these materials. In particular, we boast the world’s No. 1 market share of DENKA BLACK and spherical alumina.

We command the world’s No. 1 market share of ultra-pure acetylene black, which boasts robust electro and thermal conductivity, and spherical alumina, which was developed via the use of unique technologies to achieve superior sphericity.

The world’s **No.1** market share

Infrastructure & Social Solutions

Biostimulants

Biostimulants are a new technology that aims to control abiotic stresses imposed on plants, reducing damage inflicted by shifts in climate or soil conditions and thus helping cultivate healthy crops.

Denka provides a humic acid liquid fertilizer that serves as a biostimulant and contributes to higher crop quality and larger crop yields.

Building on a track record in the functional fertilizer business spanning 105 years, Denka develops and delivers solutions supporting agricultural production and a steady food supply.

A track record spanning
105 years
years since Denka’s founding

Elastomers & Performance Plastics

We command the world’s No. 1 share in various product categories.

Employing production facilities at home and abroad, we deliver a stable supply of high-quality products to customers around the globe.

The world’s **No.1** market share

DENKA CHLOROPRENE (chloroprene rubber (CR))

A type of rubber that is extremely easy to process, CR boasts all-weather superiority, ozone and oil resistance and is equipped with other excellent and well-balanced properties.

Living & Environment Products

Cold-resistant, thin harness tape

A vinyl tape for bundling wire harnesses, essential automobile components, our harness tape is the industry’s thinnest and contributes to reduction in vehicle weight.

Denka became the first in Japan to successfully commercialize a vinyl tape.

Today, our VINI-TAPE is used in approximately 60 countries worldwide.

Used in approximately
60
countries worldwide

TOPIC

Contributing to industry efforts aimed at adapting to a revolutionary change that has been accelerating in the face of a post-pandemic world

Taro Kamiya
Automotive Materials & Solutions (AMS) Dept.

According to input from automakers and industry specialist magazines at home and abroad, the automotive industry is currently facing an urgent need to disperse supply chain risks and to take a more selective approach when determining R&D themes in order to counter sluggish financial results in the wake of undeniable changes in the business environment due to the influence of the novel coronavirus pandemic.

On the other hand, since before the pandemic four technological trends—Connected, Autonomous, Shared & Services and Electric—summarized as CASE have been precipitating a once-in-a-century revolutionary change that has been picking up momentum throughout the global automotive industry. Among these four technological trends, Shared & Services is expected to face difficulties due to anxiety about the risk of infection. However, automobiles themselves are once again garnering public support as they represent optimal vehicles for individual mobility. Accordingly, the Connected, Autonomous and Electric trends are expected to accelerate the pace of development industrywide. Moreover, the current surge in the popularity of online shopping is driving the vigorous movement of goods via parcel delivery and other services. Despite the expected stagnation of Shared & Services technologies, the ongoing megatrend toward Mobility as a Service (MaaS) will thus continue.

Aiming to meet needs for solutions supporting the post-pandemic trends discussed above, we are striving to ensure the steady supply of acetylene black, spherical alumina, ceramics-based electronic circuit substrates and other EV-related products, all of which have gained growing popularity. Simultaneously, we are endeavoring to release new products for use in connected cars and autonomous driving systems (LCP film and low dielectric loss tangent fillers) at an even faster pace.

Looking ahead, we will cultivate even closer ties with automakers and automobile parts manufacturers as we strive to flexibly and accurately accommodate the evolving needs of society. In these ways, we will develop new materials and components with the aim of contributing to the realization of a sustainable society as a chemical manufacturer.

A Message from the President

Manabu Yamamoto

Representative Director,
President & CEO

Reshaping Our Vision Amid the Novel Coronavirus Crisis

First of all, I would like to express my deepest condolences to any who have lost loved ones to the novel coronavirus. At the same time, I pray for the earliest possible recovery of people infected with the disease. Also, I would like to extend my wholehearted respect and gratitude to the frontline medical practitioners who combat the novel coronavirus to save lives and other essential workers who, despite the pandemic, strive to fulfill their duties to support our daily lives.

In 2020, the global economy has seen a crisis greater than the worldwide recessions triggered by Lehman Brothers bankruptcy. Many industries at home and abroad have been hit hard by a rapid decline in demand. In the short term, we must focus on overcoming economic fluctuations and continuing our business activities while acting swiftly to meet the pressing need for infection countermeasures. We must also work to secure our resilience against natural disasters, which have been hitting this nation one after another. In the long term, we are called upon to tackle the fundamental challenge of reshaping our vision as a business, just as individuals and society as a whole are being asked to figure out how to adapt to the irreversible lifestyle changes brought about by the novel coronavirus pandemic.

With this in mind, we consider the imminent management challenges we are currently confronting to be twofold: (1) securing a foundation for boosting our business expansion and achieving sustainable growth in ways that accommodate changes in social structure in the post-pandemic period as well as needs arising in people's lifestyles due to the new normal and (2) contributing to the resolution of issues society is now confronting in regions around the world through our business operations.

Meanwhile, the United Nations Sustainable Development Goals (SDGs) have become more important than ever before in terms of determining the immediate direction of our business activities centered on addressing environmental, social and governance (ESG) issues. We have thus positioned the SDGs as our compass in line with our aim to take a consistent approach to both business operations and social contribution activities and realize our goal of becoming a company that is genuinely needed by society.

Fulfilling Denka's Social Responsibilities

In April 2020, the Denka Group executed two reorganization measures. First, Denka Company Limited merged with Denka Seiken Co., Ltd. with the aim of strengthening the healthcare business. Second, the merger of the Group's two trading companies resulted in the inauguration of Akros Trading Co. Ltd. Through the integration of Group entities equipped with different cultures and strengths, we will push ahead with across-the-board reforms and facilitate intragroup collaboration, thereby maximizing synergies.

When it comes to making social contributions through our business operations, we can point to a number of accomplishments, some of which we have listed below, achieved through the strengthening of our approach to reforms and collaboration on a Groupwide basis.

Since the beginning of fiscal 2020, we have been placing particular emphasis on delivering solutions enabling the swift diagnosis of the novel coronavirus as well as supporting a remedy for the disease.

To this end, we developed a rapid diagnostic testing kit for detecting the novel coronavirus antigen. Thanks to the dedication of our staff and cooperation of external partners, the testing kit was completed amazingly quickly and successfully released in August 2020. This testing kit detects the existence of the antigen in quite a short period of time without using specific diagnostic equipment. In October, we also released a new version capable of performing simultaneous examinations for the novel coronavirus, influenza virus and RS virus as well as accommodating a specimen collected from the examinee's nasal cavity. The latter feature is expected to help medical practitioners avoid the risk of infection in the course of collecting specimens. Our solutions are thus helping reduce burdens placed on both examinees and healthcare institutions while contributing to the enhancement of the latter's diagnostic examination capacities.

In addition, we have rallied the Group's overall strengths to resume the production of diethyl malonate, the raw material for Avigan®, an anti-virus drug expected to help treat novel coronavirus infection, to fulfill our responsibilities as the only domestic manufacturer of this substance. In the short span of six weeks since receiving a request from the government, we were able to restart our production lines, which had lain dormant for three years, and have begun once more supplying an essential ingredient for Avigan®, thus supporting the buildup of the drug's stockpiles. It is our sincere hope that our efforts as discussed above will contribute to the delivery of remedies to as many patients as possible and the restoration of their health.

We aim to serve as a contributor to the technological sophistication of the post-pandemic society. Accordingly, we are providing customers around the globe with a number of products supporting the introduction of 5G infrastructure and the intensive use of car electronics. In particular, we command the world's largest market share for acetylene black, spherical alumina and other essential materials for use in communication base stations as well as those used in lithium ion batteries. Demand for these materials is expected to grow rapidly. In addition to maintaining the stable supply of these offerings, we will continue to develop new products in an effort to secure our ability to meet future needs arising from the growing popularity of high-speed communications and the widespread use of high-performance electric vehicles (EVs) with the aim of fulfilling our social responsibilities.

Note: Avigan® is the registered trademark of FUJIFILM Toyama Chemical Co., Ltd.

Becoming a Company That Is Genuinely Needed by Society by Striving to Achieve Carbon-Neutral Status

Even in the midst of drastic changes in the business environment like those seen today, our corporate philosophy aimed at achieving sustainable growth in a way that fulfills our social responsibilities remains unchanged. In line with this, we have positioned the SDGs as our compass for the execution of an ESG-oriented management approach. Moreover, our corporate philosophy is shared by all Group members, with Denka Value-Up, our current management plan, being executed to support the realization of this philosophy.

Looking at concrete initiatives under this plan, we are responding to issues arising from global warming by promoting energy-saving measures at production front lines and strengthening our network of hydroelectric power plants via the expansion of their output and the construction of new plants. Furthermore, we have formulated a new target of achieving "carbon neutral" status, that is, reducing our net emissions of greenhouse gases to zero, by 2050. To achieve this target, we will pursue innovation employing our unique strengths as a chemical manufacturer.

In the face of changes in social structure brought about by the novel coronavirus pandemic, many businesses are looking for answers as they seek to secure their continued operations and corporate growth going forward. For Denka, I believe, the answer lies in our ongoing efforts to pursue our goal, which I mentioned earlier, of becoming a company that is genuinely needed by society. To that end, we will steadily promote the Denka Value-Up management plan, pushing ahead further with the specialization of our business structure while accelerating across-the-board operational reforms aimed at improving productivity via the introduction of the cutting-edge technologies and digital transformation (DX). Simultaneously, we will strive to help employees embrace innovative working styles as they learn to adapt to the new normal in the post-pandemic period. Our Companywide policy on work style reforms was formulated for that purpose. In line with this policy, we will empower each employee to choose the most efficient working style that enables them to realize their full potential and strike an optimal work-life balance. In these ways, we will improve productivity for the entire Denka Group.

Lastly, while I am proud of Group employees who share an aspiration to uphold Denka's corporate philosophy, I also consider the trust of our stakeholders who support this philosophy to be among the Company's most valuable assets.

As we strive to realize our corporate philosophy, we sincerely ask for your ongoing support for our endeavors.

Our Value Creation Process

Corporate Philosophy

The Denka Value

Denka Mission

Denka Principles

The Denka Group's 13 Materiality Issues https://denka_sustainability.disclosure.site/en/themes/729

【Categories】
■ Prioritization of safety ■ Products and technologies ■ Solid corporate governance/Corporate conduct deserving of stakeholder trust ■ Employee happiness ■ Environmental preservation ■ Dialogue with society/Partnership

The Denka Value-Up Management Plan (fiscal 2018 – fiscal 2022)

Social Issues

Healthcare
- Prevention of infectious disease pandemics
- Improvement of people's quality of life in an increasingly graying society

The environment and energy
- Global warming
- Soil, air and marine pollution
- Need for resource recycling solutions
- The safety of transportation systems

High-value-added infrastructure
- Need for countermeasures against aging infrastructure and new infrastructure development
- Need to secure the sustainability of agriculture and a safe and nutritious food supply

Six Types of Capital

Intellectual
- High-temperature calcining technologies developed through our inorganic chemistry-related endeavors
- Organic and inorganic material composite technologies
- Polymer synthesis and resin processing technologies
- Antigen and antibody reaction technologies for advancing infectious disease countermeasures

Natural
Company-owned power generation facilities, including hydroelectric power plants

Manufacturing
- Manufacturing facilities boasting superior energy efficiency
- Cement production facilities that contribute to a recycling-oriented society

Human
A corporate culture that sincerely addresses customer needs and seeks to propose solutions through manufacturing

Social
Across-the-board involvement in open innovation that aims to help resolve issues society is confronting via industry-academia-government collaboration

Financial
Ability to execute strategic investment and secure robust shareholder returns in a well-balanced manner

Pursuing Growth Strategies

- Business portfolio shift
- Introduction of innovative processes
- Three human resource strategies
  - Securing human resources with specialized skills
  - Work style reforms
  - Diversity promotion
- Placing the utmost priority on safety
- Stepping up environmental management
- Incorporating innovative working styles
- Contributing to SDGs

Fulfilling our social responsibilities

Our Threefold Growth Vision

Specialty-Fusion Company
Become a Specialty-Fusion Company with a Strong Global Presence

Sustained Growth
Maintain Sustained Growth by Significantly Enhancing Productivity through Innovative Processes

Sound Growth
Secure Sound Growth through Work Style Reforms

› Healthcare

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


› The environment and energy

We employ such core technologies as cutting-edge inorganic materials in product development with the aim of meeting needs arising from mega trends toward high-speed data communications, the intensive use of car electronics and the introduction of autonomous driving systems


› High-value-added infrastructure

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


Contribute to sustainable social development as a company genuinely needed by society

Contribute to sound social development

Help protect people's health and prevent infectious disease pandemics

Create a clean and safe future society

Support infrastructure development and improve accessibility

The Denka Group's Vision for 2030 regarding Its Social Responsibilities and Contributions

As a producer of chemical and pharmaceutical products, the Denka Group bears various responsibilities attendant to its value chain for delivering goods and solutions to society.

Meanwhile, the twelfth of the United Nations Sustainable Development Goals (SDGs), a set of international goals to be achieved by 2030, calls for public awareness of "Responsible consumption and production."

Based on the concept of a circular economy, we have identified issues the Denka Group must address and responsibilities it must assume in support of this goal. Aiming to be a company that is genuinely needed by society, we will focus on applying the unique strengths of the Denka Group and the areas in which it is best positioned to contribute to society.

: Social responsibilities to be fulfilled via manufacturing
: Responsibilities to the environment, resource preservation and safety
: Strategies

RECYCLING

Working in tandem with other members of society, we will create manufacturing processes and ecosystems designed to deliver products that are long-lived or easy to recycle while minimizing their footprints on the natural environment, including on marine, land and other living organisms.

For example, we will recycle waste plastics into raw material monomer for use in the manufacture of new products. We will also produce recycling-oriented materials that smooth the separation of parts and/or cleansing, while developing highly durable products that are inherently capable of self-restoration if cut or cracked as well as those that naturally repel stains. Furthermore, we will incorporate CO_2 as a plastic ingredient. In all these pursuits, we remain strongly committed to lengthening product life and promoting recycling.

Promote a circular economy

- Establish a plastic recycling ecosystem
- Develop CO_2 and carbon circulation technologies

→ Page 23 Initiatives to Achieve Carbon-Neutral Status

Enhance infrastructure resilience by delivering technologies to lengthen the durability of and restore concrete and other structures

Contribute to the advancement of concrete and special cement additive technologies

→ Page 47 Infrastructure & Social Solutions

USING

Targeting "Generation Z,"* which prizes empathy, sharing economies and respecting the unique attributes of individuals, as well as people who are highly concerned about ethical consumption, we will deliver manufacturing proposals for products and solutions that resonate with these sensibilities and help consumers discover new value while focusing on ensuring functionalities and eco-friendliness of our offerings.

We will also incorporate findings from biomimetics to advance our R&D aimed at creating eco-friendly products that generate minimal waste.

Moreover, we will uphold our commitment to ensuring the health of product users.

In line with these pursuits, we will be deeply involved in the provision of products and services aimed at assisting health maintenance and disease prevention as well as those addressing pre-symptomatic conditions.

Furthermore, we will help reduce the volume of food waste associated with processes ranging from harvesting through transport, processing and sale. In addition, as part of efforts to ensure food safety, we will contribute to logistics efficiency and help consumers smoothly receive fresh food.

* From 2030 onward, Generation Z are expected to be in their early 30s and become leaders of society around the world.

Protect people's lives and well-being

- Advance disease prevention, diagnosis and treatment technologies while helping improve pre-symptomatic conditions
- Contribute to the establishment of technologies to prevent, diagnose and treat diseases arising from the novel coronavirus

→ Page 17 Dialogue with an External Specialist
→ Page 21 Special Feature: Our Healthcare-Related Operations
→ Page 43 Life Innovation

Contribute to food safety and the resolution of food problems

- Help providers adapt to "new norms" in lifestyles, such as the growing trend toward solitary dining, by delivering food packaging materials that help preserve freshness and otherwise supporting stable food supply

→ Page 51 Living & Environment Products

Assist women around the world in their pursuit of success via the provision of fashion items

- Supply TOYOKALON (synthetic fiber for wigs and hairpieces)

→ Page 51 Living & Environment Products

MANUFACTURING

Our factories will be even more worker- and eco-friendly and coexist harmoniously with the people, flora and fauna of their neighboring communities in addition to consuming less fossil fuel and minimizing the use of fossil-based resources as raw materials. Advances in IoT, robotics, VR/AR and other technologies will help establish labor-saving "smart" manufacturing processes, resulting in a lean production system capable of handling the small-lot production of multiple items while ensuring high quality. Simultaneously, we will realize a safer labor environment in which everyone can work with confidence.

Thanks to the popularization of AI-based development activities and the use of a "smart" office/factory, our employees will be empowered to concentrate on tasks only humans can handle, shifting their focus from simple manufacturing to value creation.

Develop materials free of fossil resources

- Employ naturally derived ingredients from plant-based and other sources as well as microorganism cultivation

→ Page 49 Elastomers & Performance Plastics
→ Page 51 Living & Environment Products

Pursue clean energy technologies

- Battery material and high-temperature control technologies

→ Page 45 Electronics & Innovative Products

Achieve carbon-neutral status and reduce the environmental burden to zero

- Develop CO_2 and carbon circulation technologies
- Achieve "zero emission" status in terms of waste disposal

→ Page 23 Initiatives to Achieve Carbon-Neutral Status

Ensure occupational safety and health while creating a lively and sound workplace environment

- Reduce intrinsic dangers associated with our operations and improve the workplace environment

→ Page 39 Placing the Utmost Priority on Safety

Push ahead with energy-saving measures while promoting the use of renewable energy

- Enhance energy efficiency while expanding our hydroelectric power generation capacities

→ Page 5 Non-Financial Highlights
→ Page 23 Initiatives to Achieve Carbon-Neutral Status

Embrace innovative working styles and promote work style reforms

- Employ a "smart" office/factory while nurturing human resources with specialized skills

→ Page 29 Work Style Reforms
→ Page 33 Introduction of Innovative Processes
→ Page 39 Placing the Utmost Priority on Safety

Launch the full-scale utilization of material informatics

- Utilize a data lake, AI and text mining technologies

→ Page 35 R&D Process Reforms

Drastically improve labor productivity

- Introduce robotics, IoT and AI technologies to improve productivity while securing the ability to handle small lots of multiple production items

→ Page 33 Introduction of Innovative Processes

TRANSPORTING

High-speed circulation of digital data encompassing every corner of society will help realize a "smart" factory and reduce the volume of products that need to be transported or stored.

Moreover, the popularization of working remotely will result in a decrease in traffic and contribute to a reduction in the environmental burden.

The Denka Group will supply cutting-edge materials and electronic components for use in high-speed data communication infrastructure, electric vehicles equipped with autonomous driving systems, automotive fuel cells, drones and other machines.

Create new value through innovation in logistics and sales processes

- Help resolve issues confronting society by stepping up collaboration with supply chains
- Leverage advanced information networks and create an innovative business model

Ensure sustainable and stable logistics operations

- Pursue the improvement of our working environment and the enhancement of labor efficiency and productivity by advocating for the "white logistics movement"*
- Ceaselessly work to reduce environmental burden via partnership with supply chains

*An initiative promoted by the Japanese government since 2018 with the aim of achieving a highly productive and efficient logistics process while ensuring better working environments for operators

→ Page 39 Placing the Utmost Priority on Safety

Support the development and maintenance of resilient infrastructure and safe transportation methods

- Provide chemical and electronic materials for automotive parts and rolling stock
- Provide special cement additives for road and tunnel construction

→ Page 45 Electronics & Innovative Products
→ Page 47 Infrastructure & Social Solutions
→ Page 49 Elastomers & Performance Plastics

Contribute to the popularization of autonomous driving systems and drones

- Contribute to 5G and other communication technologies via the supply of chemical and electronic materials

→ Page 45 Electronics & Innovative Products

Dialogue with an External Specialist

Taking advantage of in-house and external collaboration, we will deliver genuinely meaningful changes in society to fulfill our responsibilities in light of the coming new normal.

Dr. Kazuhiro Tateda
Professor, Department of Microbiology and Infectious Diseases, Toho University School of Medicine

Manabu Yamamoto
Representative Director, President & CEO, Denka Company Limited

Hideki Takahashi
Executive Officer, Life Innovation Division, Denka Company Limited

■ Facilitator: Mr. Nobuyasu Tanaka
Senior Managing Executive Officer and Chief of Corporate Planning Division, Sun Messe Co.,Ltd.
Representative Director, Sun Messe Innovative Network Center (Sinc)

In this section, we present excerpts from a discussion with Dr. Kazuhiro Tateda, a professor at Toho University School of Medicine who also serves as president of the Japanese Association for Infectious Diseases and is a member of the government-led Expert Meeting on the Novel Coronavirus Disease Control. We invited Dr. Tateda to join us in dialogue in order to glean his insights into the role Denka should fulfill in a society undergoing drastic changes influenced by the novel coronavirus pandemic.

Becoming a Truly Resilient Company by Preparing for New Risks

Tateda: The risk of a global infectious disease pandemic has long been considered inevitable by many specialists. The recent emergence of the novel coronavirus saw their warnings becoming a reality, with an outbreak quickly developing into a worldwide pandemic.

A variety of factors have been put forward as allegedly facilitating a pandemic. For example, the separation of human development and the natural world has grown too narrow. It is believed that the excessive bulldozing of forests has led to a growing number of opportunities for direct interactions between humans and wild animals, where previously habitats had been segregated. The resulting exchange of the infectious viruses they host has allegedly caused certain types of viruses to evolve to acquire human-to-human transmission capabilities.

Also, global warming serves as a major risk factor. There is an undeniable possibility that the viable habitat of pathological organisms responsible for tropical and subtropical infectious diseases will expand going forward. We cannot know when the next pandemic will occur, nor can we determine if or when another novel pathological organism will emerge. Due to the increasing globalization of our society, a regional outbreak of an infectious disease can quickly spread globally, just as we have witnessed. Therefore, I consider ensuring thoroughgoing pandemic countermeasures to be a matter of crucial importance. As the spread of the novel coronavirus is still ongoing in regions around the world, human society will be forced to continue the grueling battle against this infectious disease for the time being.

Yamamoto: Dr. Tateda, could you elaborate on your thoughts on how we should counter this situation?

Tateda: The pandemic revealed two weak points in Japanese society. First is the country's less than robust ability to carry out Polymerase Chain Reaction (PCR) testing, with the required equipment in extremely low stock at domestic healthcare institutions. Given the considerable risk of another infectious disease emerging, building up testing capacity is essential to ensuring our preparedness.

Second, although the obedient nature of Japanese citizens is believed to be helping prop up a medical system on the verge of collapse as the vast majority of citizens have been remarkably willing to respect the voluntary "Stay Home" protocols during the state of emergency, this trait has also created a negative effect, such as excessive peer pressure. Because of that, lamentable incidents of discrimination and prejudice have also been reported from some corners of society.

Yamamoto: So, the pandemic has revealed both positive and negative aspects of the unique Japanese character, has it?

Tateda: That's right. It is important to learn lessons from what we have experienced during the pandemic, be it success or failure, to ensure our preparedness for the next crisis. We should not be content with merely getting through the current crisis. Rather, we should be focusing on how to upgrade our structure going forward. This will, in turn, help us acquire genuine resilience. Also, an endeavor of this kind must be carried out via collaboration involving industry, the government and academia.

Rebuilding the Business Portfolio

Tateda: When the novel coronavirus first emerged, people had been overly afraid of it as it was a totally unknown virus. Since then, however, specialist insights about the virus have become ever more robust. Accordingly, it is time to consider how to sustain economic activities while simultaneously preventing the spread of infection. Due to the drastic deterioration of the economy, a growing number of people are losing their jobs and struggling to maintain their livelihoods. We must face this harsh reality, too.

In order to genuinely protect the well-being of citizens, economic activities and infection countermeasures must go hand in hand. I consider it a matter of the utmost importance.

I assume that, in the midst of the pandemic crisis, business corporations are similarly being called upon to identify a business model capable of simultaneously achieving profitability and contributing to people and society as a whole. This seems to be an important challenge they are currently

Dr. Kazuhiro Tateda

- Professor, Department of Microbiology and Infectious Diseases, Toho University School of Medicine
- President, the Japanese Association for Infectious Diseases
- President, the Japanese Society for Clinical Microbiology
- Member of the Expert Meeting on the Novel Coronavirus Disease Control under the auspices of Cabinet Secretariat Headquarters for Novel Coronavirus Disease Control

In his efforts to disseminate accurate knowledge of infectious diseases and countermeasures against them, Dr. Tateda has appeared on television on a number of occasions and contributes to newspaper articles.

Dialogue with an External Specialist

Manabu Yamamoto, Representative Director, President & CEO

Responding to the Pandemic Crisis in Ways That Fulfill Denka's Responsibilities and Live up to Its Pride in Manufacturing

Yamamoto: To date, the Denka Group has responded to infectious disease pandemics by delivering a timely and steady supply of vaccines and diagnostic reagents. In doing so, we have been helping the general public prevent the spread of infectious diseases for 70 years. Thanks to our involvement in these operations, our colleagues across the Group are well aware of their responsibilities to "protect people's lives and well-being." This is one reason why I am proud of them.

Recently, we restarted shipping diethyl malonate, reviving our production lines, which had lain dormant for three years, upon a government request to supply the raw material for Avigan®, an anti-virus drug expected to help treat novel coronavirus infection. Although we had only six weeks until the scheduled date of first shipment, none of frontline operators were opposed to the Company's decision or balked at this challenge. As Denka is only domestic manufacturer capable of producing this substance, everyone knew that this task was uniquely bestowed upon it.

Tateda: That sounds wonderful. I think that employee aspirations supporting Denka's concerted efforts to contribute to society should be known to a broader range of the general public.

Speaking in general of the nature of Japanese people, they can be extremely sensitive to risk; but they also tend to quickly stop being vigilant once a crisis has passed. I think Japanese people are not so good at changing their mode of behavior based on takeaways from a crisis.

Tateda: In the field of medicine, a great number of papers have been issued right after major crises by specialists in countries abroad. This phenomenon is typically accompanied by a growing momentum of technological advances and the introduction of more sophisticated methodologies. In contrast, Japanese specialists seem to focus mainly on implementing robust countermeasures during crises.

By the way, business contribution to the preservation of the global environment is becoming the subject of growing public expectation. This issue is also relevant to the prevention of infectious disease pandemics. In this context, what are Mr. Yamamoto's views on the positioning of Japanese corporations among their global peers in terms of technological capabilities? I have heard about Denka's R&D efforts aimed at creating a variety of environment-friendly products, such as bioplastics.

Yamamoto: Many Japanese corporations boast a high level of environmental technologies even compared with their global peers. While the pandemic has revealed the weakness of globalized economic activities, businesses today are facing a growing shift in customer requirements from quantity to quality. To adapt to this change amid times like these, we need to rebuild our product portfolio by raising the proportion of specialty grades that are resilient against changes in the external environment.

Yamamoto: We have positioned our healthcare-related operations as one of the three priority fields that are subject to focused management resource allocations. To strengthen and expand these operations, in April 2020 we merged Denka Seiken Co., Ltd., a subsidiary, into Denka Company Limited. Although this move was already determined prior to the emergence of the novel coronavirus pandemic, the merger helped us swiftly make decisions and respond to the pandemic.

Takahashi: Amid the pandemic, Denka's Life Innovation Division has been operating with a strong sense of mission to practice a policy of "respecting the dignity of life and protecting people's health to remain a company deserving of society's trust." This also represents a mission upheld by and taken over from Denka Seiken.

The development of our rapid diagnostic testing kit for detecting the novel coronavirus antigen was launched in February 2020, several months before we obtained official approval for manufacture and sale in August. As this testing kit is intended to support doctors in private practice who have no access to costly diagnostic equipment but are often asked to quickly perform clinical diagnoses of patients with fevers, we employed the immunochromato-method, a popular method used for detecting such viruses as influenza virus, to develop the testing kit.

In the healthcare field, there must be considerable latent need for innovative pharmaceuticals and medical equipment. I believe that our ongoing efforts to assist medical practitioners and to support the well-being of patients will naturally position us to simultaneously achieve profit while contributing to society.

Identifying New Value to Be Delivered to Society through Our Existing Operations

Yamamoto: Denka believes that corporate growth matters only if it also entails the fulfillment of the Company's social responsibilities. In line with this belief, we have positioned the United Nations Sustainable Development Goals (SDGs) as the compass guiding our management approach centered on addressing ESG issues. Furthermore, the third of the SDGs, "Good Health and Well-Being," coincides with our mission, which, as Mr. Takahashi discussed, has been upheld by Group employees for many years, even before the formulation of the SDGs. Because of this, I consider the shared sense of mission among them to constitute an extremely valuable asset and expect it to support our efforts to become a company that is genuinely capable of fulfilling its social responsibilities.

Tateda: I understand why you are proud of Group employees and what they have accomplished. I also assume that a sense of mission has significantly helped them realize their potential whether they engage in research, development or other duties.

Yamamoto: Not only do I give credit to employees for their dedication, I also appreciate the cooperation and support offered by external specialists like Mr. Tateda and others from academia and government agencies. Denka has been able to achieve the growth it has thanks to long-cultivated ties and lasting collaboration with people it has worked hand in hand with in R&D activities. In addition to meeting the expectations of our shareholders, we will continuously strive to live up to the trust of the aforementioned stakeholders in the course of corporate activities. In these ways, we will play our part in industry-government-academia collaboration aimed at creating and delivering solutions in the fields of medicine and infectious disease prevention.

Tateda: It is important to have a partner with whom you can work toward a shared goal. Moreover, working in tandem with partners from a broad range of sectors will help you speed up your endeavor. In addition, chemistry arising from external collaboration may help to generate unconventional ideas. Based on my experience as a researcher, inspirational insights often spring from teams of individuals who have differing ways of thinking, rather than homogeneous teams in which everyone thinks in the same way.

Yamamoto: In line with the Denka Value-Up management plan, we aim to become a "Specialty-Fusion Company." In this regard, the merger of Denka Seiken is expected to better position us to utilize an even broader range of technologies and realize innovation. In addition, vigorous engagement in in-house and external collaboration is a requirement for a company aiming to grow sustainably. This approach is essential to swiftly effecting changes. To this end, we are currently developing a new framework supporting collaboration.

Hideki Takahashi, Executive Officer, Life Innovation Division

Takahashi: Specifically, the formulation of a "Health Tech Working Group" to be charged with interdepartmental assignments is now under way. Pharmaceuticals and medical equipment, which require official approval, are not the only things needed by frontline medical practitioners. We assume that there must be other areas in which Denka can bring solutions via the use of its materials, technologies and sales channels. Based on this assumption, we engage in information sharing with and proposals targeting medical practitioners.

Tateda: If you take a close look at medical front lines, you will come up with good ideas based on an accurate understanding of what is needed. Although a growing trend toward cross-sector collaboration and interdisciplinary research is similarly affecting the medical field, succeeding in these endeavors is, in reality, not easy at all. Collaboration of this kind does not occur naturally. Rather, it needs someone actively working to facilitate it. I have great expectations regarding Denka's spontaneous efforts to facilitate chemistry arising from collaboration. As a medical specialist, I find Denka's initiative to be quite promising and will gladly offer my endorsement.

Lastly, I have only one request of Denka. I would like the Company to keep working with medical specialists like me and play its part in contributing to the well-being of patients. I hope to deliver new solutions at the earliest possible date by working in tandem with Denka and other businesses as well as governmental agencies. I believe that by doing so, we will be able to see a breakthrough greater than what can be achieved by academia alone. Looking ahead, I expect the Company to make even greater social contributions by taking full advantage of its abundant potential in the fields of medicine and infectious disease prevention.

(September 17, 2020 at Denka's Head Office)

Special Feature:

Our Healthcare-Related Operations

In April 2020, our Life Innovation Division made a fresh start via the merger of Denka Seiken Co., Ltd. and Denka Company Limited.

Since the founding of the Research Institute for Biology, Physics and Chemistry—the precursor of Denka Seiken—in 1950, we have long been contributing to infectious disease prevention in countries around the globe, including Japan, via the manufacture and sale of vaccines and diagnostic reagents. Having integrated these operations with those handling Denka's macromolecular sodium hyaluronate preparation, cancer-related gene alteration analysis and other businesses relevant to healthcare, we have refreshed our Life Innovation Division and are poised to bring together technologies that have been cultivated by both companies to contribute to the well-being of people around the world.

History of the Life Innovation Division and Denka Seiken

- **1945** Research Institute for Biology, Physics and Chemistry (Toshiba Seiken) established by Tokyo Shibaura Electric Co., Ltd. to contribute to the prevention of infectious diseases immediately after World War II
- **1950** Research Institute for Biology, Physics and Chemistry inaugurated as an independent stock company (the precursor of Denka Seiken)
- **1952** Became the first in Japan to release a bacteriological diagnostic reagent
- **1966** Succeeded in commercializing a virological diagnostic reagent
- **1972** Succeeded in developing a highly purified influenza HA vaccine with a lower possibility of adverse effects and bringing it on the market in September
- **1972** Released a clinical chemical diagnostic reagent for use in automated analyzers
- **1982** Renamed Denka Seiken Co., Ltd.
- **1985** Released a diagnostic reagent for detecting O157 (enterohemorrhagic *Escherichia coli*)
- **1997** Released HDL-EX, a reagent for use in automated analyzers for measuring HDL cholesterol
- **2000** Released macromolecular sodium hyaluronate preparation
- **2004** Became the first in the world to create a reagent for measuring sd LDL
- **2006** Released Quick Ex-Flu, a rapid diagnostic testing kit for influenza viruses, achieving drastic improvement in detection sensitivity and capabilities to enable users to easily perform diagnoses
- **2016** Relocated the Niigata Plant's diagnostic reagent production facilities to the Kagamida Plant, thereby establishing integrated production systems for vaccines and diagnostic reagents at Niigata and Kagamida plants, respectively
- **2017** The Life Innovation Division established by Denka Company Limited
- **2020** **Denka Seiken merged into Denka Company Limited, with the Life Innovation Division making a fresh start**

Philosophy

Respecting the dignity of life and protecting people's health

Legacy

A track record of taking on infectious disease prevention since the post-war social turmoil

Strength

Specialty in the field of healthcare as an R&D-driven business innovator

Social mission

Protecting the well-being of people from the pandemic of life-threatening infectious diseases

Human resources

Denka healthcare field: approx. 250 + Denka Seiken: 725

Creating a healthcare team of nearly **1,000** people

Strengths

Prevention	• Influenza vaccines • Norovirus vaccines (currently in the process of development)
Diagnosis	• Diagnostic reagents • Genome-based panel examination method for cancer diagnosis (currently in the process of development)
Treatment	• Macromolecular sodium hyaluronate preparation for treating knee joint pains

Overview of the Life Innovation Division

The Life Innovation Division produces vaccines, diagnostic reagents and sodium hyaluronate preparation, which together constitute its mainstay operations, and has taken on such new businesses as a genome-based panel examination method expected to serve as a next-generation solution for cancer diagnosis.

Protecting people from infectious disease pandemics

Today, the development of the global economy and the international transportation network is causing the pandemic risk associated with various infectious diseases to grow.

In response, Denka aims to help protect people from infectious diseases via its operations in the fields of prevention and diagnosis.

Supporting people's daily lives through disease prevention

Taking over the influenza vaccine business from Denka Seiken, which has been one of the few domestic vaccine manufacturers, Denka is striving to ensure its vaccines' safety and effectiveness as well as a stable supply.

Influenza HA vaccines

Helping improve the speed and efficiency of influenza diagnosis

With our testing kits requiring only around five minutes for diagnosis, we are helping frontline medical practitioners to quickly diagnose the disease.

Influenza virus rapid diagnostic testing kits

Supplying rapid diagnostic testing kits for detecting novel coronavirus antigen

Denka released a rapid diagnostic testing kit that employs the immunochromato-method and is capable of detecting the existence of novel coronavirus antigen in approximately 15 minutes without specific examination equipment.

Rapid diagnostic test kits for detecting novel coronavirus antigen

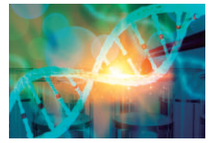
Helping people lead fulfilling lives despite the coming of an ultra-aging society

The rapid aging of society entails an increase in the number of people who suffer from cancer and/or such health problems as knee osteoarthritis, which causes knee joint pain.

Denka is striving to help improve people's quality of life in the fields of cancer treatment and joint function improvement.

Taking on the challenge of advancing cancer-related gene alteration analysis

Currently, we are developing a genome-based panel examination method targeting more than 400 cancer-associated genes to realize a solution capable of analyzing gene alteration attributable to a solid tumor. In this way, we are striving to contribute to the provision of optimal medical services designed to meet needs related to the conditions of individual patients.



Alleviating knee joint pain

We manufacture joint function improvers, and to this end, take advantage of our unique fermentation method to produce raw material macromolecular sodium hyaluronate.

Contributing to the enhancement of everyday skincare experience

Due to rapidly diversifying and evolving lifestyles in today's social environment, many people feel constrained in terms of how much time they can spend for skincare.

Denka aims to help people enhance their daily lives by providing skincare products.

Helping moisturize sensitive skin that is prone to dryness and promote the maintenance of good skin condition

We released the *uruoi* skincare brand, which incorporates Denka Pure Hyaluronate Acid (DPHA), an ingredient made using the Company's unique fermentation technology. Completely free of fragrances or pigments, the *uruoi* skincare products help moisturize the skin and promote the maintenance of good skin condition.

The *uruoi* skincare products

Pushing ahead with forward-looking R&D

We are engaged in forward-looking R&D aimed at blazing a new trail in the healthcare field. Our current themes include the development of a norovirus vaccine via the use of the magnICON technological platform, which is capable of efficiently manufacturing proteins using genetically modified tobacco plants. At the same time, we act in collaboration with PlexBio to create solutions for diagnosing septicemia and respiratory tract infections based on simultaneous multiplex assays.

Initiatives to Achieve Carbon-Neutral Status

A Message from the Executive Officer in Charge of the Environment

Hideki Hirano
Managing Executive Officer
Supervisor of Environmental Measures Promotion

Having Set a 2050 Target for Achieving Carbon-Neutral Status, We Are Strengthening Our Focus on Environmental Management.

- In 2019, parts of the Japanese archipelago were hit hard by a string of mega typhoons and sustained considerable damage. These events were not only natural disasters but exemplars of what to expect from the looming threat of climate change. As a chemical manufacturer, we are being called to bear a profound level of responsibility for addressing environmental concerns and, therefore, are determined to reduce the environmental footprint of our business activities, to this end focusing on reducing emissions of greenhouse gasses (GHGs) and waste from our operations.
- With regard to GHG emissions, we updated medium- and long-term reduction targets formulated in 2019, and decided to strive for the achievement of carbon-neutral status by the end of 2050. To this end, we are accelerating various initiatives, including a number aimed at overcoming technological challenges. Furthermore, in addition to reducing GHG emissions from our manufacturing front lines, we have been striving to reduce our environmental footprint from an even broader perspective that encompasses entire product life cycles ranging from the purchase of raw materials to the consumption of finished products.
- In October 2019, we established a dedicated department charged with tackling medium- to long-term environmental issues as part of our efforts to develop a more robust structure for executing environmental countermeasures and achieving solid results at an even faster pace. Looking ahead, we will announce the progress of initiatives discussed above in a timely manner via our corporate website, financial reporting and other outlets.

Denka's Stance on Environmental Management to Contribute to the Realization of the Paris Agreement's 2050 Target

- Since the Paris Agreement came into effect in 2016, the international community has been beefing up initiatives to reduce GHG emissions. With global efforts under way to reduce emissions to zero by the latter half of the 21st century to meet the agreement's long-term target, there is a major shift from initiatives aimed at merely contributing to a "low-carbon" transition to those aimed at achieving "decarbonization" and "carbon neutral" status.
- In order to secure the future sustainability of society, tackling environmental problems, which are universal issues for humanity, has become a matter of growing importance. Acutely aware of our responsibilities as a chemical manufacturer handling energy-intensive business operations, we have positioned addressing environmental concerns as a major management issue and an integral part of ESG-oriented management.
- Accordingly, we will strive to reduce GHG emissions and thus contribute to the realization of the Paris Agreement's target by promoting the use of renewable energy and developing technologies associated with CO_2 capture, utilization and storage. Moreover, we will facilitate efforts undertaken by individual production bases to maintain zero emissions while developing a system to utilize waste plastics via chemical recycling. Furthermore, we will step up our contribution to environmental preservation via the provision of products and technologies that employ our unique strengths, including electronic materials designed to help realize an energy-saving society and solutions aimed at contributing to the restoration and reinforcement of social infrastructure of disaster-hit communities.

Initiatives to Protect the Environment

1 Reducing the Volume of GHG Emissions to Eventually Achieve Carbon-Neutral Status

To contribute to the realization of the "well-below 2°C target" of the Paris Agreement, in fiscal 2019, we formulated medium- and long-term targets for the reduction of GHG emission volumes (Scope 1 and 2). In line with these targets, our previous efforts have focused on reducing GHG emissions by 26% by fiscal 2030 and by 85% by fiscal 2050 in comparison with the fiscal 2013 levels. However, with the Japanese government declaring its intention to pursue carbon-neutral status in October 2020 amid the growing trend toward the acceleration of international initiatives aimed at countering climate change, we have updated our GHG emission volume reduction targets and decided to strive for the achievement of carbon-neutral status by the end of 2050. To this end, we will step up and accelerate the initiatives listed below.

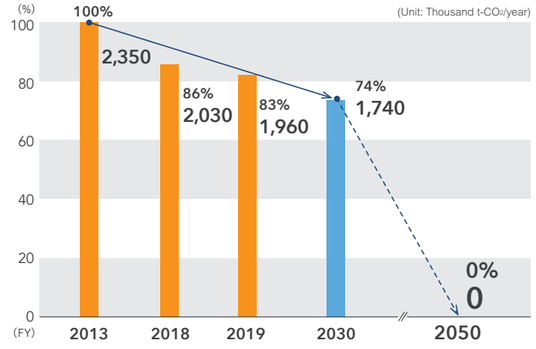
Examples of Initiatives

Employing our unique resources and technologies, we will promote the following global warming countermeasures from the perspective of optimizing entire product life cycles.

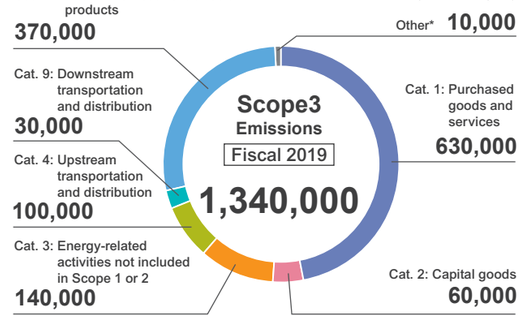
- **a Raise the ratio of renewable energy to overall energy consumption, mainly by taking advantage of our hydroelectric power generation facility network while introducing new gas turbine generators that boast high efficiency and lower environmental footprints**
- **b Create innovative technologies supporting CO_2 capture, utilization and storage (CCUS)* and commercialize them**
- **c Develop and deliver eco-friendly products and environmental load reduction technologies employing Denka's unique strengths**
- **d Commercialize chemical recycling technologies enabling the effective utilization of waste plastics**

*A technology aimed at collecting CO_2 from exhaust gas emitted by plant facilities and separating it from other exhaust gas content to prevent its release into the atmosphere. Discussions are now under way to identify methods to sequester collected CO_2 in underground or seabed storage or to reuse it as a raw material of chemical or fuel production. Acting in collaboration with external organizations, we are currently studying CCUS, with a goal of commercializing this technology by the end of 2030.

Our Medium- and Long-Term Targets for Reduction in GHG Emissions (Scope 1 and Scope 2)



(Unit: t-CO_2/year)



Note: GHG emissions associated with "Category 10: Processing of sold products" and "Category 11: Use of sold products" have been excluded due to difficulties in performing accurate and reliable calculations.
* GHG emissions attributable to waste emissions associated with business operations as well as those attributable to transportation, distribution and employees' business trips and commuting

Scope1: Direct emissions from the reporting company's factories, offices, vehicles, etc.
Scope2: Indirect energy-derived emissions from electric power and other energy consumed by the reporting company.
Scope3: Indirect emissions other than Scope1 and Scope2 (Emissions by others related to the company's activities).

2 Initiatives to Maintain Zero Emissions

We have reduced the volume of industrial waste generated by our facilities via the utilization of such waste as alternative fuel for cement kilns and the improvement of various production processes. We have thus achieved "zero emission"* status and are concentrating on maintaining it. Going forward, we will consider measures to achieve an even greater reduction in the volume of waste currently being disposed of by landfill.

In addition, as our cement kilns accept waste from both in-house and external sources, we are helping regional communities curb the volume of waste they dispose of.

* In Denka's definition, "zero emissions" means an emission ratio (amount of landfill waste/ amount of waste generated x 100) lower than 1%.); the "zero emission" status applies only to Denka's domestic production bases, including its affiliates.

3 Initiatives to Enhance Information Disclosure

Today, ESG investment—an investment approach that emphasizes investees' efforts to fulfill their corporate social responsibilities—has become a subject of public interest. In step with this trend, the disclosure of information associated with business efforts that address environmental concerns has become a matter of growing importance. With this in mind, we are proactively disclosing information on our initiatives aimed at reducing environmental burdens via financial and other reporting outlets while releasing such information through external frameworks, including the CDP.

We have been responding to climate change-related and water-related questions from the CDP since fiscal 2015 and fiscal 2019, respectively. As a result, we were granted "A-" and "B" ratings under the CDP2019 scoring program for our climate change-related and water-related initiatives. Moreover, in fiscal 2020 we announced our support of the Task Force on Climate-related Financial Disclosures (TCFD). Looking ahead, we will also strive to practice appropriate information disclosure in conformity with guidelines issued by the TCFD.

Initiatives to Achieve Carbon-Neutral Status

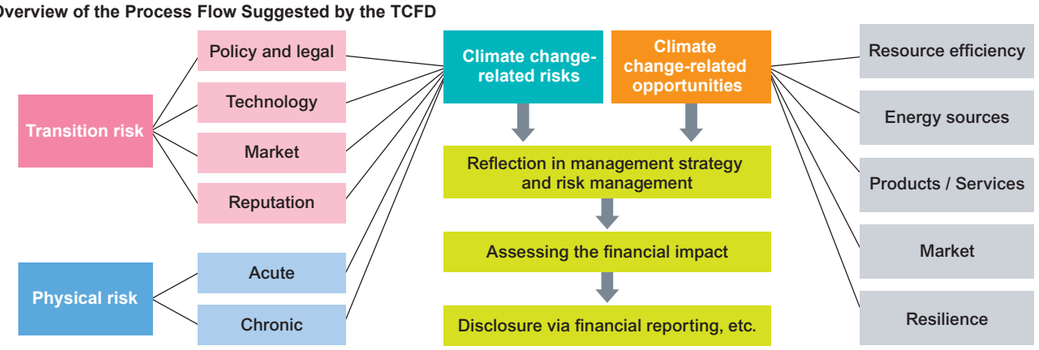
Responding to the TCFD Recommendations

▸Declaring Our Support of the TCFD Recommendations

In September 2020, Denka announced its support of the TCFD and began participating in the TCFD consortium. A taskforce established by the Financial Stability Board in 2015 upon the request of the G20, the TCFD issued guidelines on the disclosure of information associated with climate change's financial impact on businesses with the aim of ensuring a smooth transition to a low-carbon society and stabilizing the financial market. In response, a number of business corporations and other organizations around the globe (1,669 entities, including 332 domestic entities as of December 24, 2020) have declared their support of these guidelines.

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 a low-carbon society and the decarbonized society envisioned by the Paris Agreement. In line with the following process flow suggested by the TCFD recommendations, we will thereby identify what impact our businesses would face going forward.

Overview of the Process Flow Suggested by the TCFD



▸Verifying Risks and Opportunities via Scenario Analysis

The TCFD calls for businesses to verify risks and opportunities arising from climate change over the medium to long term and affecting their activities, asking for the incorporation of the results of such verification in their business strategies and risk management and the disclosure of information regarding the financial impact of these risks and opportunities.

As the first step of our initiatives acting upon the TCFD recommendations, we performed the identification and analysis of climate change-related risks and opportunities based on the "2°C scenario" and "4°C scenario" with the aim of contributing to the goal of the Paris Agreement, namely, keeping the global temperature rise in this century to less than 2°C above pre-industrial levels. While the former scenario assumes the acceleration of technological advancement associated with reduction in GHG emission volumes and the strengthening of relevant government regulations, the latter scenario assumes that these initiatives will remain unchanged from the current level. Based on the 2°C scenario, we have determined that, in the course of the transition to a low-carbon economy, we will confront such risks as the introduction of environmental taxation backed by governmental policies placing emphasis on global warming countermeasures; surges in carbon pricing due to the strengthened regulations on GHG emissions; and a decline in demand for plastic-based products in the wake of a social trend breaking away from the use of plastics. At the same time, we anticipate opportunities arising from demand for products and technologies employing Denka's unique strengths in step with the popularization of solutions capable of helping curb GHG emissions and global warming.

Based on the 4°C scenario, on the other hand, we forecast a growing threat attributable to physical risk as a growing number of natural disasters induced by global warming will inflict damage on our production facilities and force us to suspend business operations. Simultaneously, we expect to be called upon to offer products and technologies designed to help enhance countermeasures against abnormal weather and protect social infrastructure and people's well-being in the growing scope of business fields.

Toward the realization of a "decarbonized society," we need to accelerate initiatives to raise the ratio of renewable energy to overall energy consumption, introduce CO_2 separation and recovery technologies, and establish a plastic recycling system while pushing ahead with the review of our business operation structure and the reform of our business portfolio in an effort to expand our operations associated with eco-friendly products. As we believe that robustly responding to risks will position us to meet major business opportunities via, for example, the creation of new technologies, we will strive to secure medium- to long-term improvement in our corporate value through our response to these risks and opportunities.

Looking ahead, we will also increase the sophistication of scenario analysis as explained above as we maintain information disclosure in line with the TCFD recommendations.

Scenario	Assumed developments	Risks	Opportunities
2°C scenario	・The volume of global GHG emissions decreases in line with the goals under the Paris Agreement thanks to advances in energy-saving and decarbonizing technologies and the strengthening of relevant government policies (Carbon pricing: ¥11,000/t-CO_2; based on the World Energy Outlook 2019 issued by the International Energy Agency)	・Rises in raw material and fuel costs due to the strengthening of environmental taxation and the resulting rise in carbon pricing ・Growing costs attributable to the need to introduce technologies aimed at securing responsiveness to the strengthened regulations on GHG emissions ・A decline in product demand due to the introduction of regulations on plastics and a growing trend breaking away from the use of these materials	・Growing demand for electronic materials used in components for EVs, which will become increasingly sought after on a global basis ・Growing demand for heat-resistant materials and performance plastics ・The popularization of eco-friendly concrete (which absorbs CO_2) due to advances in carbon recycling technologies
4°C scenario	・The volume of global GHG emissions remains unchanged from the current level (Carbon pricing: ¥289/t-CO_2; based on the current pricing)	・A growing number of natural disasters inflicting damage on our facilities and forcing us to suspend business operations	・Growing demand for pharmaceutical products in the face of the spread of infectious diseases due to rises in global temperatures ・Growing demand for construction materials and environmental issue countermeasure-related products due to the need for solutions designed to support the restoration of communities hit by natural disasters induced by abnormal weather ・Expansion of the biostimulant business aimed at contributing to countermeasures against crop stress

Addressing Issues Arising from the Use of Plastics

▸Denka's Policies on the Recycling of Plastic Resources

Taking advantage of an integrated management approach involving companies under the Denka Group umbrella, our production system is supported by extensive range of facilities and robust product development capabilities enabling a range of endeavors from the design of synthetic resin materials to the processing and molding of polymers. We are leveraging these strengths to proactively deliver new solutions capable of popularizing the effective utilization of plastics in a way that helps reduce their footprints on the global environment.

In addition, we have been a participant in the Clean Ocean Material Alliance (CLOMA) since 2019.

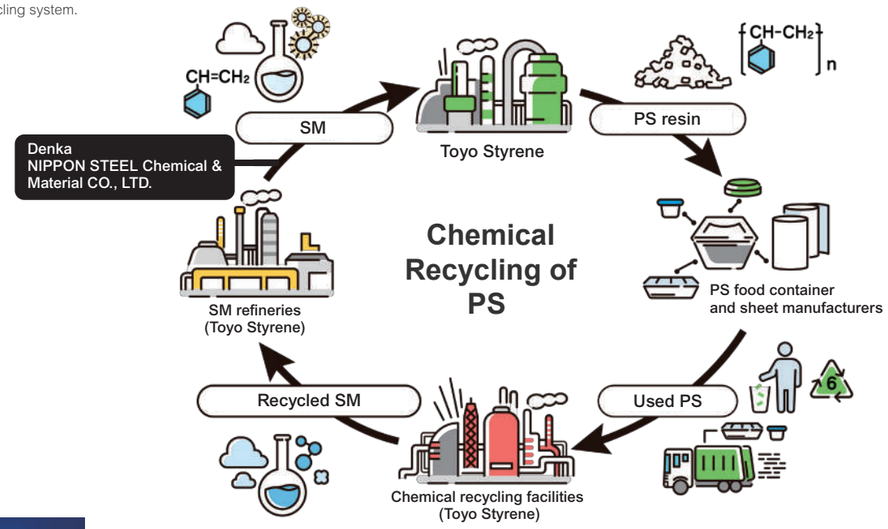
▸Chemical Recycling in Tandem with Toyo Styrene

To help popularize the recycling of plastic resources, Toyo Styrene Co., Ltd., an equity method affiliate of Denka, has initiated a project aimed at commercializing chemical recycling technologies for processing polystyrene (PS) resin.

As part of these initiatives, Toyo Styrene signed a technology licensing agreement with Agilyx Corporation, a company headquartered in Portland, in the U.S.State of Oregon, that is striving to commercialize chemical recycling technologies. Following the lead of Agilyx, which launched a pioneering verification testing facility in the United States, Toyo Styrene is promoting the construction of the first domestic verification testing facility of this kind on the premises of Denka's Chiba Plant. With the expected annual processing capacity totaling approximately 3,000 tons, the facility's operational kickoff is scheduled for the end of fiscal 2022.

To date, the material recycling process conventionally used for plastic recycling has entailed certain restrictions on the recycling of food-related containers. However, the chemical recycling method being tested by the aforementioned facilities is expected to serve as an innovative solution to remove such restrictions as it employs the thermal decomposition of PS into raw material styrene monomer (SM) , which, in turn, can be used to manufacture PS for use in any application. Moreover, the volume of CO_2 deriving from the chemical recycling of polystyrene is far smaller than that deriving from regular PS production process.

Along with extending comprehensive support to Toyo Styrene's chemical recycling business, we will help it act in collaboration with government agencies and other related organizations to establish a full-scale plastic resource recycling system.



PLAPS

BOPS sheet

▸3R Initiatives Undertaken by Denka Polymer

To contribute to the reduction of environmental burdens and industrial waste, Denka Polymer Co., Ltd., a Denka subsidiary, aims to push ahead with the development of environment-friendly products and materials, such as bioplastics, via the use of a development approach based on eco-friendly product design.

For example, this subsidiary makes PLAPS, a food container material comprising a combination of polylactic acid (PLA)—a plastic material derived from starch and other plant products—and polystyrene, as well as CLEALEAD, a new BOPS sheet that is 35% lighter than the usual one made with amorphous polyethylene terephthalate (A-PET). Having developed and released these offerings to promote resource saving, Denka Polymer aims to help its customers reduce environmental burden arising from the use of its products.

Furthermore, in addition to deploying proactive energy-saving measures at its production bases, Denka Polymer is striving to reuse plastic scraps derived from its manufacturing facilities as container materials, with the ultimate aim of achieving the recycle of virtually all waste plastics.

Progress of the Denka Value-Up Management Plan

Management Plan

Denka Value-Up

2018-2022

Become a company that boasts outstanding global competitiveness backed by a robust portfolio of specialty businesses and products along with its technological strengths and human resource capabilities

Strive to achieve a drastic improvement in productivity and, to this end, focus on truly essential operations and introduce innovative processes through the utilization of IoT, AI and other cutting-edge digital technologies, thereby securing the ability to secure sustained growth regardless of external conditions

Develop a working environment that is inclusive of diverse working styles with the aim of better collaborating with employees to pursue stakeholder happiness and to ensure sound corporate growth

Specialty-Fusion Company

Become a Specialty-Fusion Company with a Strong Global Presence

Our Threefold Growth Vision

Sustained Growth

Maintain Sustained Growth by Significantly Enhancing Productivity through Innovative Processes

Sound Growth

Secure Sound Growth through Work Style Reforms

Materiality Issues

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

- Production process reforms
- R&D process reforms
- Operational process reforms Work style reforms/ Diversity promotion

Fulfilling Our Social responsibilities

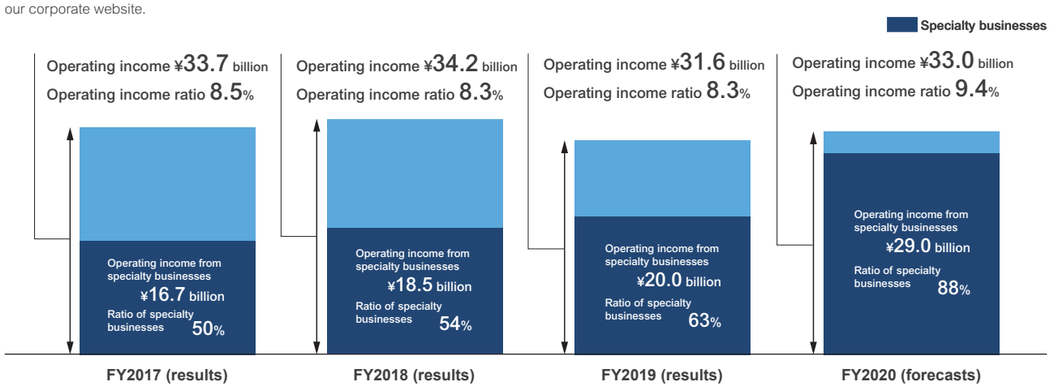
Numerical Targets under Denka Value-Up

In fiscal 2020, the economic environment remains harsh due to the repercussions of U.S.-China trade friction as well as significant restrictions placed on economic activities in countries around the globe with the aim of preventing the spread of novel coronavirus.

Denka's numerical targets for fiscal 2020 under the Denka Value-Up management plan initially included consolidated operating income of ¥42.0 billion and an operating income ratio of 10% or more. Also, we had originally aimed to raise the ratio of specialty businesses to 75% or more (on an operating income ratio basis). However, we have temporarily relinquished these targets and, assuming that the effect of the novel coronavirus pandemic will gradually taper off from the second quarter and economic activity will be largely normalized some time in the third quarter, and have formulated performance forecasts instead. Our performance forecasts are: net sales of ¥350.0 billion, operating income of ¥33.0 billion and an operating income ratio of 9.4%. We will also aim to raise the ratio of specialty businesses to 88% on the same basis.

Given the difficult environment discussed above, we will remain attentive to economic fluctuations that reflect fallout from the novel coronavirus pandemic even as we continue accelerating growth of specialty businesses with an eye to seizing opportunities arising from megatrends. At the same time, we will push ahead with ongoing process reforms via the introduction of cutting-edge digital technologies. In these ways, we will promote Denka Value-Up in an even more vigorous manner.

In addition, our original plans called for announcing numerical targets for fiscal 2022 under this management plan in conjunction with financial results presentations for the second quarter of fiscal 2020 and also featuring such targets in this integrated report. However, we have decided to postpone the announcement of these targets as the Group's operating results may be significantly affected by the timing of the containment of novel coronavirus and trends in the economic environment. Nevertheless, we still strive to finalize these numerical targets by the end of fiscal 2020 and intend to disclose them through such outlets as our corporate website.



Financial Strategies

While continuing initiatives aimed at maintaining the soundness of our financial base, we intend to execute strategic investment centered on specialty businesses to secure "Sustained Growth" and "Sound Growth." In addition, we have adopted the weighted average cost of capital (WACC) as a criterion for our judgment of strategic investment.

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

Investment and Financing Plan

Policy

- **Extend a total of ¥200.0 billion over a five-year period**

Breakdown

- **Strategic investment: ¥75 billion (¥15 billion/year)**
  Of which, investment in specialty businesses:¥60 billion
  Process reforms: ¥15 billion
- **Regular investment:¥125 billion (¥25 billion/year)**

Shareholder Returns

Policy

- **We will remain committed to a targeted total shareholder return ratio of 50%.**

In addition to prioritizing cash dividends, we will flexibly execute share repurchases by giving due consideration to funding demand, stock prices and other factors.

Note: Total payout ratio = (Dividends paid + treasury stock purchased) / consolidated net income

Fiscal 2019 Achievements

In fiscal 2019, we paid an interim dividend of ¥60 per share and a year-end dividend of ¥65 per share. With full-year dividends totaling ¥125 per share, the dividend payout ratio stood at 48%.

Results of Shareholder Returns and Investment

		FY2017 (results)	FY2018 (results)	FY2019 (results)	Full-year forecasts for FY2020
Net income	(billion yen)	230	250	227	220
Dividends per share	(yen/share)	105.0	120.0	125.0	125.0
Total dividends	(billion yen)	92	105	108	108
Dividend payout ratio		40%	42%	48%	49%
Shares repurchased	(billion yen)	23	21	-	-
Total shareholder returns	(billion yen)	115	126	108	108
Total shareholder return ratio		50%	50%	48%	49%
Depreciation and amortization	(billion yen)	246	229	225	230
Capex, investment and financing	(billion yen)	270	328	369	450
ROE		10.0%	10.3%	9.1%	

Note: The Company 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 performances in each fiscal year, the value of dividends per share for fiscal 2017 has been retrospectively converted to reflect the value of dividends had the reverse share split already been in effect.

Initiatives under Denka Value-Up

Establishing a Companywide Policy for Work Style Reforms

Pursuing innovative working styles even as we strive to become a company that is genuinely needed by society

The novel coronavirus pandemic has brought about the greatest economic crisis since the worldwide recessions triggered by Lehman Brothers bankruptcy. Moreover, the crisis is accelerating a paradigm shift and triggering the redefinition of lifestyle norms and value systems. With a strong sense of urgency, we believe that in this time of crisis, an enterprise's continued operation depends on whether or not it is genuinely needed by society. To adapt to the new normal being brought about by the pandemic, we are thus determined to pursue innovative working styles.

In line with the Denka Value-Up management plan, which was launched in fiscal 2018, we have been tightly focusing on operations that are truly essential as we promote operational process reforms as part of the plan's growth strategies. Amid the fallout from the pandemic, we are more acutely aware than ever of the importance of these reforms. In addition, once the virus is contained there will remain the risk of resurgence and we must stay prepared. With this in mind, we formulated a Companywide policy for work style reforms in July 2020. This policy is intended to support ongoing initiatives to protect the health of employees and their families. Looking ahead, we will steadily push ahead with work style reforms in accordance with this policy.

Companywide Policy for Work Style Reforms

To remain a company that is genuinely needed by society, we will tightly focus on tasks that are truly essential while protecting the health of employees and their families by eliminating non-urgent business trips and eliminating close contact among personnel. We will also increase the options available to employees, empowering them to adopt more efficient working styles. By doing so, we will improve productivity and enhance the overall competitiveness of the Company.

Sales and administrative departments will be the first to implement this policy. At the same time, we will pursue innovative working styles for those working on the manufacturing and R&D front lines.

1 Offer flexible options regarding working hours and locations

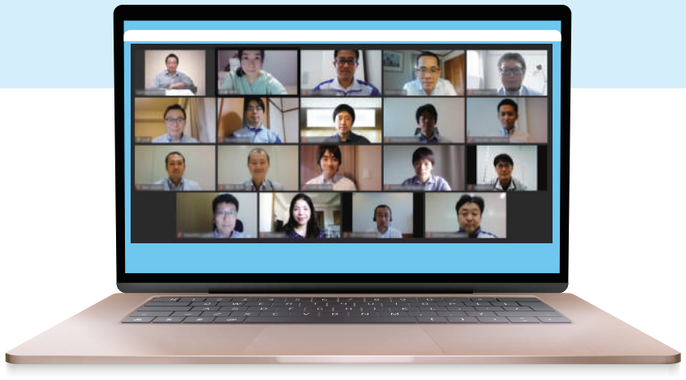
- Allow staff of sales and administrative departments to work remotely for around two days a week while confirming issues associated with and/or the effects of productivity improvement to determine whether or not to increase the proportion of remote workers; give appropriate consideration to the needs of employees providing nursing care or rearing children while providing proper training for new recruits regardless of their work location
- Optimize office layouts to adapt to new working styles and accommodate online meetings while establishing satellite offices

(Innovation Center, Ofuna Plant and Chiba Plant)

2 Promote the use of online meetings while enhancing the efficiency of face-to-face meetings; modify methods used for visits to business partners with an eye to eliminating non-urgent business trips and avoiding close contact

3 Digitize all documents and eliminate the need to stamp papers with personal seals while promoting the use of electronic authorization systems for all procedures requiring authorization

4 Push ahead with production process reforms at manufacturing front lines to empower staff to allocate more resources to intellectual tasks



Priority Management Materiality Issues

Denka's Materiality Issues Aimed at Realizing SDGs

In line with the corporate philosophy enshrined in The Denka Value, the Denka Group identified priority CSR materiality issues that, on April 24, 2017, its Management Committee narrowed down to 13 items, each of which is a matter of critical importance for a chemical manufacturer committed to fulfilling its social responsibilities. Through the pursuit of these 13 items, we aim to help realize the United Nations Sustainable Development Goals (SDGs) in ways that fulfill our responsibilities as a manufacturer and provide solutions to issues society is confronting.

In particular, we expect our product technologies in three priority fields (healthcare, the environment and energy, and high-value-added infrastructure) specified by Denka Value-Up management plan growth strategies, to greatly contribute to the realization of SDGs.

Category	13 materiality issues	Relevant SDGs	
		Fulfill manufacturers' responsibilities	Provide solutions
Prioritization of safety	Reinforce security and disaster prevention measures Maintain occupational safety and health while creating a vibrant and comfortable workplace environment	3, 8	
Products and technologies	Create new products and technologies that contribute to sound social development Ensure product safety	7, 9, 12, 13, 14, 17	2, 3, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 17
Corporate governance	Corporate conduct deserving of stakeholder trust Ensure that our corporate philosophy is embraced by every employee and transform our corporate culture Improve corporate governance Maintain strict compliance with laws, regulations and corporate ethics	4, 5, 16	
Employee happiness	Nurture human resources Embrace diversity and offer equal opportunities Help strike a work-life balance and promote employee health	3, 4, 5, 8, 10	
Environmental preservation	Prevent air, water, soil and other environmental pollution Promote climate change countermeasures (curb global warming, reduce GHG emissions and adapt to climate changes)	6, 11, 12, 13, 14, 15	6, 11, 13, 14, 15
Dialogue with society Partnership	Maintain appropriate and timely disclosure of corporate information and establish bidirectional communications	17	

Initiatives to Be Undertaken to Help Realize SDGs from Fiscal 2020 Onward

To clearly define the relationship between Denka's materiality issues and the Denka Value-Up management plan, we changed the terminology used to refer to our materiality issues, switching from "priority CSR materiality issues" to "priority management materiality issues." With the positioning of materiality issues thus clarified as focused on supporting the realization of the SDGs, we will ramp up our ESG-centered management approach, rallying the entire strength of the Denka Group.

Achievements under the Denka Value-Up Management Plan

Main Achievements in Business Portfolio Shift (Fiscal 2018 – 2020)

1. Accelerate Growth of Specialty Businesses

In addition to establishing a structure for long-term business development associated with operations related to healthcare, the environment and energy, we implemented initiatives aimed at accelerating the growth of these businesses.

Main initiatives accomplished (or scheduled)	Time frame
Healthcare	
Merger with Denka Seiken	April 2020
Construction of a new influenza vaccine production facility	Launch of vaccine supply scheduled for the 2022 influenza season
Release of novel coronavirus antigen rapid test kits	August 2020
The environment and energy	
Expansion of spherical alumina production facilities at Denka Advantech Pte Ltd in Singapore and Denka's Omuta Plant (for vehicle-mounted device and 5G applications)	Operational kickoff scheduled for the first half of fiscal 2021
Expansion of production facilities for silicon nitride and ceramics-based circuit substrates (for vehicle-mounted device applications)	Operational kickoff scheduled for the second half of fiscal 2020
Extension of the duration of acetylene black production at the Omuta Plant (for use in vehicle-mounted LiBs)	Decision scheduled for October 2019

2. Specialize Our Key Operations

We are strengthening the production of MS resin, a specialty functional resin product, in Singapore while consolidating management resources for and upgrading our solution capabilities in the housing material and agri-product businesses.

Main initiatives accomplished (or scheduled)	Time frame
Augmentation of MS resin production facilities at Denka Singapore Private Limited(DSPL) (for use in LCD televisions)	Operational kickoff scheduled for the first half of fiscal 2021
Establishment of a subsidiary specializing in housing material solutions	Establishment scheduled for April 2021
Full-scale entries into biostimulant markets	February 2019

3. Redefine the Positioning of the Commodity Businesses

We are shifting our focus to expanding the production of specialty products as we withdraw from low-profitability commodity businesses by, for example, terminating the Omuta Plant's calcium carbide production as well as the Group's polystyrene production in Singapore.

Main initiatives accomplished (or scheduled)	Time frame
Termination of calcium carbide and calcium cyanamide production at the Omuta Plant	Scheduled for December 2020
Withdrawal from the FIRELEN and β silicon nitride businesses	March 2020
Termination of polystyrene production at DSPL	Scheduled for the end of 2020
Withdrawal from the vinyl acetate monomer (VAM) and EVA emulsion businesses	Withdrawal from VAM and EVA scheduled for March and December 2021, respectively

Main Achievements in the Introduction of Innovative Processes (Fiscal 2018 – 2020)

1. Production Process Reforms

We are improving labor productivity via, for example, digital transformation (DX) and automation while striving to create a next-generation factory that allows people to realize their full potential.

Main initiatives accomplished	
Introduction of real-time operational status monitoring systems	Omi Plant
Automation of product inspection employing AI-based judgment	Omuta Plant, etc.
Introduction of systems for detecting signs of operational abnormalities	Singapore and Chiba Plants
Introduction of novel production process boasting high efficiency	Shibukawa Plant
Transition to seamless production process and the automation of facility operations that had previously been handled by veteran operators	Ofuna Plant
Automation of in-house transportation	Suzhou (China) and Isesaki Plants

2. R&D Process Reforms

Assiduously working to commercialize as many seeds as possible at the earliest possible date, we are promoting theme reforms, information reforms and human resource reforms to enhance R&D efficiency.

Main initiatives accomplished (or scheduled)	
Theme reforms	**Clarification of our vision for specialty businesses via the use of value-shift diagrams * definition of numerical indicators for measuring research results and strengthening of research capabilities via the evaluation of research output indicators**
Information reforms	**Use of electronic laboratory notes by frontline researchers, establishment of a data lake for consolidating and sharing research and sales information across the board, development of research assistance systems employing text mining, material informatics and other cutting-edge ICT solutions**
Human resource reforms	**Provision of assistance to researchers who seek to take doctoral courses or study abroad, appointment of young researchers to open innovation projects involving industry-government-academia collaboration and promotion of human resource development via, for example, English-language technological symposia**

* With the horizontal axis and vertical axis representing social issues/needs and advances in our technological development, respectively, the value-shift diagram indicates the characteristics of each product and solution as well as how they will contribute to future value creation.

3. Operational Process Reforms

In line with the implementation of a Companywide policy on work style reforms with an eye to adapting to the coming "new normal" influenced by the novel coronavirus pandemic, we are allowing employees to choose from among various working styles to maximize efficiency and productivity. We are also promoting digitization aimed at eliminating the need for non-urgent business trips and helping employees avoid close contact. Prioritizing the safety and health of frontline employees, we are thus enabling them to embrace innovative working styles and helping them focus on what is truly essential as part of our human resource strategies.

Main initiatives accomplished (or scheduled)	Time frame
Establishment of a Companywide policy on work style reforms (the pursuit of improved productivity via the introduction of innovative working styles designed to maximize individual efficiency)	July 2020
Launch of HR Strategy Dept. and acceleration of three HR strategies (securing human resources with specialized skills, pushing ahead with work style reforms and promoting diversity)	October 2020
Development of ICT infrastructure and introduction of remote work scheme	March 2020
Introduction of electronic authorization systems	April 2018
Renovation of Head Office facilities and completion of new comprehensive office buildings at Omi and Omuta plants	July 2018 (Head Office) October 2018 (Omi) March 2020 (Omuta)

Denka Value-Up

Introduction of Innovative Processes

Production Process Reforms

Aiming to Create a “Smart Factory” That Allows People to Realize Their Full Potential

We are currently pushing ahead with production process reforms to achieve a drastic improvement in productivity. This is paramount to realizing “Sustained Growth,” one of our objectives under the Denka Value-Up management plan.

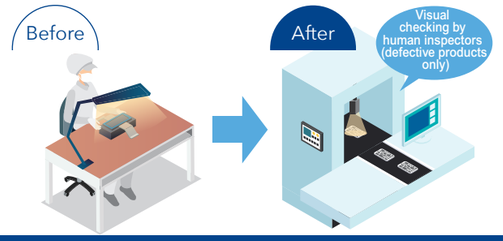
To this end, we will promote automation while reducing the burdens placed on human operators with the aim of creating an even safer and more stable working environment in which no one is tasked with back-breaking, dirty or dangerous work. Moreover, we will implement digital transformation (DX) and improve our process via the use of IT technologies. In these ways, we aim to improve the stability of our facility operations and product quality while enhancing productivity.

Ceramics-Based Circuit Substrate Production Facilities

Automation of Visual Inspection

Visual inspections of the exterior aspects of ceramics-based circuit substrates, a type of product that requires a high degree of reliability, has traditionally been carried out by large numbers of veteran inspectors. Because of this, we have been confronted by issues arising from the need to pass down skills to young employees and improve the efficiency of inspections. Moreover, a lack of trained human resources had often been an obstacle when we received a request for an increase in production volume.

- **To address these issues, we developed AI-driven image processing and automatic inspection systems that are being gradually deployed on the production front lines.**
- **Looking ahead, we aim to enhance inspection accuracy by employing AI-based machine learning while horizontally rolling out this automated inspection technology throughout Denka production sites.**



The productivity of inspections increased 2.5 times via the use of automated solutions replacing visual checking

Operational Process Reforms

Operational process reforms are positioned as another key initiative under the banner of innovative processes. These reforms have been steadily under way, with the Digital Promotion Department spearheading efforts to improve productivity via the use of cutting-edge ICT solutions.

As part of reform measures being undertaken since fiscal 2018, we have developed ICT infrastructure while digitizing workflows and introducing groupware and web-conferencing systems. Furthermore, we were able to smoothly introduce the remote work scheme when the “Stay Home” protocols were enforced following the emergence of the novel coronavirus outbreak. The ease of doing so was also attributable to the fiscal 2020 revisions in the personnel system to expand the scope of employees who can work from home and other measures aimed at helping employees avoid the use of overcrowded public transport systems during the period of the Tokyo Olympic games. The introduction of web-conferencing systems and groupware, which are essential functions enabling employees to work from home, also helps facilitate information sharing and reduce time spent in meetings.

On the other hand, these endeavors help us clarify issues associated with “new norms” in working styles. Taking on these issues, we are steadily promoting the reform of ordering processes used by sales departments to enable their staff to work fully remotely while digitizing procedures for dealing with bills and other forms used in accounting.

Examples of Initiatives

Singapore

Digitizing Analogue Operations

We have upgraded remote surveillance functions attached to production facilities and their instrument panels to ensure the early detection of abnormalities. This move allowed a reduction in the number of inspection patrols to monitor dangerous processes, helping reduce the workload while ensuring operator safety. Moreover, thanks to the upgrade of these functions, we were able to smoothly continue facility operations despite the enforcement of novel coronavirus-related movement restrictions.

Seraya Plant

Via the use of remote surveillance and diagnosis systems, the plant continued its operations with a limited workforce consisting only of Denka employees and staff from regularly-hired maintenance subcontractors. By doing so, the plant avoided a loss of business opportunities.

Tuas Plant

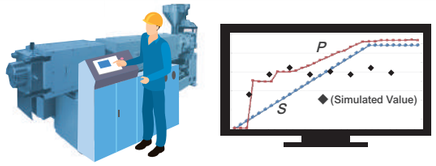
The plant has succeeded in enhancing the efficiency of frontline tasks, which had involved the visual confirmation of gas flow indicators, by 10% via the introduction of an automated measuring system. This move enabled the constant monitoring of facilities and resulted in more stable operations. Even when plant staff commuting from Malaysia were not allowed to enter Singapore, the plant was able to continue operations thanks to automated monitoring and other measures to enhance operational efficiency.

Polymer Processing Product Manufacturing Facilities

Making It Easier to Assess Operational Skills While Utilizing Soft Sensor Technologies

As our production facilities often require operational conditions to be confirmed and adjusted in addition to product quality checks, human operators engaging in these tasks need to regularly patrol production sites. In addition to ensuring the safety of these operators, we aim to reduce the burdens placed on them while helping them pass down skills to younger employees and automating onerous tasks.

- **We digitized process-related data to facilitate the consolidation, accumulation and analysis of this data. Efforts are currently under way to make it easier to visually assess the skills of veteran facility operators.**
- **As we promote the use of soft sensor technologies enabling the prediction of quality based on process-related data, we will reduce workload associated with quality checking while ensuring the safety of workers involved in this task. Moreover, we aim to automate the adjustment of operational conditions.**



Succeeded in operational automation that reduces dependence on human skills; our plans call for rolling out these solutions at other production lines

Examples of Automation

Before

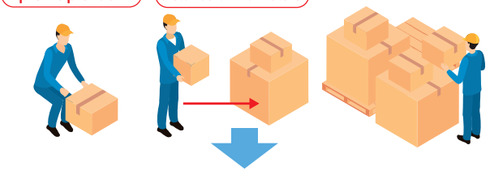
Boxing and stacking of goods (25kg per box; 70 times/day)

Average number of resignations stood at 6.6 in six months

Bend down to pick up a box

Carry the box for a distance of 1.5 meters

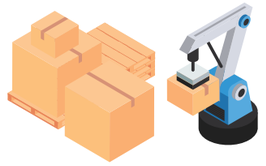
Stack the box



After

Automation employing proposals from frontline operators resulted in a significant reduction in the physical burden

Automated packing and stacking



No resignations; productivity per operator doubled

1.Development of ICT Infrastructure and Remote Work Platforms

- Increased the number of mobile devices (laptops and smartphones) being furnished for use in remote work
- Established a location-free working environment by promoting the use of web-conferencing (strengthening our mobile communication network via the introduction of VPN, WiFi and other infrastructure)
- Upgraded cybersecurity measures (installed protective measures against cyberattacks, such as those exploiting e-mail)

2.Introduction of Electronic Authorization Systems

- Efforts are under way to digitize various in-house application procedures, such as those seeking supervisor approval on budget.
- Expanded the scope of procedures processed via the Denka Electronic Authorization System while strengthening its functions

Main Issues to Be Addressed Going Forward

Expand the scope of digital innovation

- **Establish a data lake for the consolidated management of data gleaned from business units across the board and utilize it to improve operations**
- **Thoroughly reform our legacy operational processes while pushing ahead with DX by setting our sights far above merely accomplishing “office automation,” that is, automating only some back-office operations**

Denka Value-Up

Introduction of Innovative Processes

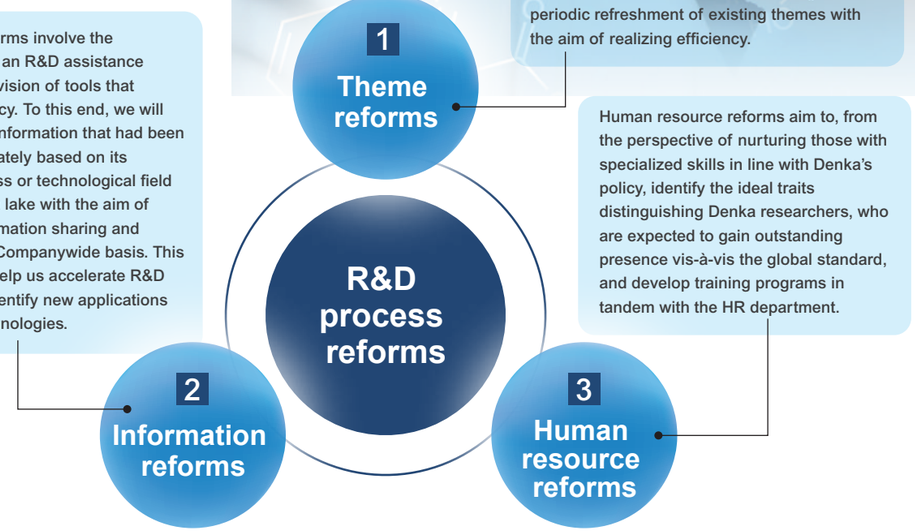
R&D Process Reforms

A given R&D project will not necessarily yield a useful or even tangible product. Accordingly, we focus our R&D on enhancing our competitiveness by working assiduously to commercialize as many seeds as possible at the earliest possible date.
For top efficiency, we have identified 1 theme reforms, 2 information reforms and 3 human resource reforms as key initiatives supporting our R&D process reforms.

Information reforms involve the development of an R&D assistance system and provision of tools that support efficiency. To this end, we will consolidate all information that had been managed separately based on its relevant business or technological field and build a data lake with the aim of facilitating information sharing and utilization on a Companywide basis. This is expected to help us accelerate R&D activities and identify new applications for existing technologies.

Theme reforms aim to ensure the selection of promising R&D themes and the optimal allocation of research resources alongside the periodic refreshment of existing themes with the aim of realizing efficiency.

Human resource reforms aim to, from the perspective of nurturing those with specialized skills in line with Denka's policy, identify the ideal traits distinguishing Denka researchers, who are expected to gain outstanding presence vis-à-vis the global standard, and develop training programs in tandem with the HR department.



1 Theme reforms

To date, we have been utilizing the "value-shift diagram" * as a tool for promoting the specialization of various products and technologies; clarifying our vision regarding specialty businesses; and identifying how these businesses contribute to the United Nations Sustainable Development Goals (SDGs). This approach helps us clearly define milestones and select promising themes.

In terms of R&D management, we also consider it important to make the numerical evaluation and assessment of research results smoother as we aim to ensure the optimal allocation of resources and maximize the contributions of each research project. As most research results are in themselves hard to evaluate numerically, we have designated operating income and other financial results earned by new products and technologies commercialized in the last five years as quantitative indicators of success. In addition to utilizing these indicators in R&D management undertaken by individual research units, we will promote more efficient resource allocation. We also define the number of patent applications filed, external presentations provided, in-house technological reports issued and other relevant activities as research output. Based on this definition, we are able to numerically assess output per researcher, making this another indicator of accomplishment. We are thus nurturing awareness of intellectual property and creating a corporate culture that supports the succession of technologies with the aim of improving our research capabilities.

* With the horizontal axis and vertical axis representing social issues/needs and advances in our technological development, respectively, the value-shift diagram indicates the characteristics of each product and solution as well as how they will contribute to future value creation.

2 Information reforms

Currently, we are engaged in the development of a centralized information management system supported by a "data lake" that consolidates research-related information on a Companywide basis. Although a number of research units at Denka operate in different fields and possess unique information (e.g. research reports and records of customer visits), we are aiming to share such information on an across-the-board basis to expand the possibility of using existing technologies in new applications. Looking ahead, we will also incorporate sales information into our data lake, thereby bringing together existing technologies and customer and market information in a way that transcends the boundaries between business fields. As these inputs are expected to be stored in the data lake and effectively utilized, we anticipate that theme reforms and information reforms will yield results in a synergetic manner. In addition, we are encouraging the use of "electronic laboratory notes" by frontline researchers to accumulate digitized research records supporting the data lake. Moreover, we are developing a "text mining" tool to secure the ability to quickly cull useful information from an enormous volume of text data. We are also engaged in forward-looking discussions regarding the introduction of material informatics. Breaking free of our conventional approach to material development, which had been dependent on individual experience and intuition, we will realize a new approach employing the material database and AI that is capable of completing projects in a shorter period of time.

3 Human Resource Reforms

Human resources are the most essential component supporting Denka's business development and its social contribution activities. Therefore, we recognize our human resources as invaluable assets. Reflecting this recognition, we encourage our researchers to take doctoral courses, study the latest technologies and refresh their expertise. By doing so, we are endeavoring to nurture human resources who can take on novel R&D challenges by setting their sights higher and employing a broader perspective.

With the close cooperation of the HR Department, we are reviewing our educational subsidy programs to make studying abroad or taking advantage of other educational opportunities more attractive and accessible. In this way, we will vitalize our human resources.

We assign young researchers to R&D missions associated with open innovation involving industry-government-academia collaboration with the aim of raising their levels of competence. As part of educational programs for young researchers, we launched the "NEXT" program. The first of its kind, "NEXT" is planned, organized and hosted by young researchers themselves on a completely voluntary basis with the objective of delving into the subjects they themselves have proposed as areas of study.

In addition, we hold the Technology Symposia, an in-house academic conference that serves as a venue for sharing the latest technological information and nurturing young researchers. To nurture globally capable human resources, we also hold English-based technological symposia and have done so regularly over the course of the three years since its inception. Although the 2020 round of this symposia was held remotely using web-conferencing systems, the exchange of opinions between participants was more vigorous than ever.

Topic

Developing Novel Coronavirus Antigen Rapid Diagnostic Test Kits

Amid the global outbreak of the novel coronavirus (SARS-CoV-2), the Denka Group obtained approval for the domestic manufacture and sale of rapid diagnostic test kits for this disease in August 2020, initiating their marketing.

Although the development of test kits of this kind normally takes 18 to 24 months at the shortest to complete all phases ranging from development to the obtainment of approval for manufacture and sale, we have made it possible to obtain said approval in just six months or so thanks to the cooperation and support of relevant government agencies, public organizations and external research institutions at home and abroad. These institutions included the National Institute of Infectious Diseases, which acted as our joint research partner, and the Japan Agency for Medical Research and Development (AMED), which welcomed our researchers into its research team.

These test kits do not require specific diagnostic equipment, and the antigen is detected in approximately 15 minutes. Because of this, they are expected to enable any healthcare institution to easily and quickly perform diagnosis and contribute to the enhancement of Japan's novel coronavirus testing structure.

In October 2020, we also released a new version capable of simultaneously testing for the novel coronavirus, influenza virus and RS virus using a single specimen collected from the examinee's nasopharynx or nasal cavity.

Taking advantage of our R&D bases specializing in life science, namely, the Denka Innovation Center (Machida, Tokyo), the Gosen Plant (Gosen, Niigata), Icon Genetics (Germany) and Denka Life Innovation Research (Singapore), we will continue to take on challenges in an even broader scope of healthcare fields that go far beyond the development of diagnostic reagents and vaccines for infectious diseases.

Operational Process Reforms

Nurturing and Better Utilizing Human Resources with Specialized Skills

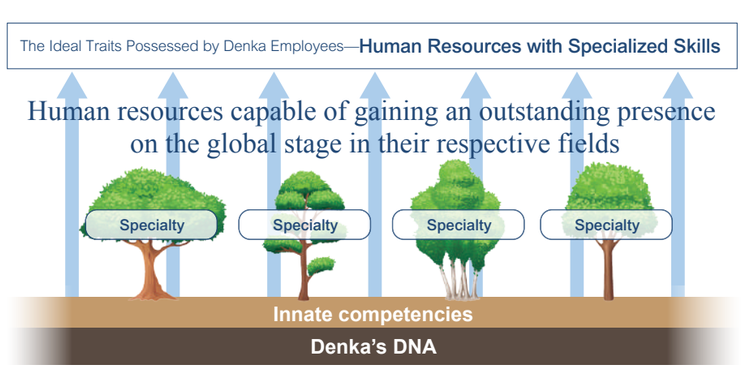
Promoting Three Human Resource Strategies

In the face of a paradigm shift affecting society as a whole and changing conventional lifestyle norms and value systems, we are implementing various measures aimed at empowering our human resources to embrace innovative working styles while accelerating three human resource strategies—"securing human resources with specialized skills (via recruiting and nurturing)," "pushing ahead with work style reforms" and "promoting diversity"—in line with the Denka Value-Up management plan.

1 Securing Human Resources with Specialized Skills (via recruiting and nurturing)

What Are the Ideal Traits Possessed by the Specialty Human Resources Denka Seeks?

Denka is looking for individuals who will contribute to the realization of The Denka Value, its corporate philosophy. Such individuals take full advantage of their innate competencies (mindset, skills, expertise, literacy, personal capabilities) while striving to acquire unique skills, thereby gaining outstanding presence in their respective fields vis-à-vis global standards.



Launching the HR Strategy Department

In October 2020, we launched the HR Department to accelerate the execution of and yield solid results from the three human resource strategies under the Denka Value-Up management plan. In addition to empowering our human resources to embrace innovative working styles, we are promoting health-oriented corporate management with the aim of invigorating our organization and improving productivity. In these ways, we are striving to become a company that is capable of achieving sustained and sound growth and is genuinely needed by society.

Hiring Human Resources with Specialized Skills

We systematically hire excellent human resources regardless of gender or nationality based on their potential to become specialty human resources supporting Denka. We also give due consideration to maintaining an optimal balance of new graduates and mid-career hires, the latter of whom are expected to immediately become active workforce components.

Initiatives to Nurture Specialty Human Resources

In fiscal 2018, we established the Career Value-Up Center (CVC) within the HR Department. Acting as a dedicated body tasked with nurturing human resources with specialized skills, the CVC prepares human resource development programs, which consists of job level-based training and purpose-specific training, through which we help each employee raise their skills and competencies.

Employing these programs, we hold joint training sessions aimed at providing job level-based training for officers, general managers, managers, young employees and new recruits. We also provide purpose-specific training focused on areas of specialty. Moreover, we strive to enhance the content of such programs as correspondence courses, which support self-motivated learning, as well as e-learning resources that can be utilized at any time regardless of location.

In addition, as we strive to provide highly spirited and skilled employees with opportunities to step up their careers, we have in place an in-house examination system for employees wishing to change their job categories, for example, those who aim to become career track employees. In such ways we are working to identify excellent human resources throughout the Denka Group, both at home and abroad and to assist them in their career development efforts.

Reviewing Various Personnel Systems

In fiscal 2019, we revised our conventional job categories, reclassifying specialists as "G-category" employees and establishing the "M-category," which collectively encompasses engineers and general staff. We have also clarified the job roles employees in each category are expected to fulfill while expanding the scope of tasks to be performed by "M-category" employees and thereby securing career paths for them to pursue managerial positions.

In addition, we have thoroughly revised our evaluation system, which constitutes the foundation of our personnel systems, improving it from the perspective of transparency, fairness and persuasiveness. Placing emphasis on providing staff with objective insight in the form of feedback from supervisors in order to secure motivation, the revised evaluation system is designed to ensure that each employee clearly understands what is expected of them and thereby contribute to human resource development.

In fiscal 2020, we revised our personnel system for managers, who are expected to take lead in the Company's business endeavors, to create an environment that allows them to realize their full potential. In line with this revision, we abolished conventional manager classifications based on in-house certification, stipulating that each manager is subject solely to duty-based classifications. We also introduced a position-based allowance. Furthermore, we have instituted an incentive system that rewards each manager according to their results and accomplishments vis-à-vis the annual targets they themselves formulate at the beginning of fiscal year.

Other initiatives include the development of on-the-job-training (OJT) methods for those working from home in response to the growing trend toward remote work in the face of the novel coronavirus pandemic. As such, we are addressing issues associated with human resource development in a timely manner through these and other personnel system reform initiatives.

2 Work Style Reforms Empowering Each Individual to Choose the Most Efficient Working Style to Improve Productivity

In line with Denka Value-Up, we are also focused on pushing ahead with work style reforms in ways that address issues specific to each business unit—from Head Office to sales offices to production bases—to allow every Denka employee to realize their full potential. In response to the outbreak of the novel coronavirus that emerged in February 2020, we formulated in-house guidelines aimed at protecting employee health and thoroughly preventing infection by rallying the entire strength of the Company. Moreover, we continued the distribution of PCs and other devices to enable employees to work from home, an ongoing activity since 2019, while encouraging a switchover to online meetings. As a result, the ratio of employees who work remotely surpassed 80% as of April 2020.

In July 2020, we formulated a Companywide policy for work style reforms (also see page 29), with an eye to securing our responsiveness to the "new normal" in the post-pandemic period. In line with this policy, we are striving to update our working styles to focus on truly essential operations and protect the health of employees and their families. At the same time, we are addressing various issues arising from decreasing opportunities for face-to-face meetings, to this end seeking out alternative methods for conducting employee evaluations, OJT, mental health counseling sessions and other operations that cannot be executed remotely.

In addition, as part of initiatives to improve employee engagement, we conducted an employee awareness survey in April 2020 for the first time since the previous survey undertaken in fiscal 2017. Drawing on survey results, we will analyze issues and problems in our workplaces to systematically promote the review of various programs aimed at helping diverse employees achieve success as well as the development of working environments to improve productivity.

3 Promoting Diversity Improving Organizational Flexibility by Diversifying Our Workforce

In October 2017, we established the Diversity Promotion Section and, under the slogan "Your value is Denka's value," we have been creating a workplace environment in which each employee can realize their full potential and work energetically while staying healthy.

Specifically, our diversity initiatives are focused on improving organizational flexibility supported by a diverse workforce and, to this end, encouraging employees to (1) accept and (2) better utilize each other's differences and thereby (3) enhance team strength. Until fiscal 2019, our initiatives emphasized (1) and (2) and encompassed such activities as issuing messages from top management and similar employee-awareness raising efforts, introducing systems and programs designed to facilitate the better utilization of diverse human resources, and implementing training that addressed differing needs among various employee groups. In fiscal 2020, we shifted that focus to (3) in an effort to move on to a new stage. Having thus adjusted our approach, we are implementing various measures, including the development of workplace environment, in a way that addresses issues specific to each business unit.

Recent Track Record in Diversity Promotion Initiatives

Fiscal 2017–2019

Raised employee awareness "accept"

Implemented job level- and job category-based training sessions to raise employee awareness and ensure the shared understanding of issues

Reviewed personnel systems "better utilize"

Updated personnel systems and other conditions to promote diversity (Reviewed job category and evaluation systems, expanded career promotion paths for employees, and enhanced the content of programs aimed at helping strike an optimal work-life balance)

Fiscal 2020 Initiatives

"Enhance team strength"

Enhance team strength via measures aimed at addressing issues specific to each business unit and leveraging diverse workforce components

Diversity Promotion Target

Target **Double the ratio of female managers in four years**
(raise the ratio to 3% and the number to 18 by the end of fiscal 2024)

Issue The current ratio of female managers amounts to 1.6%, falling short of the 8.1% average ratio for the chemical manufacturing industry
(as of April 2020)

Initiative Maintain the ratio of women among new recruits to be included in the "G-category" at 30% or higher to increase the size of the pool of managerial candidates

Diversity-Related Indicators

Non-consolidated basis	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
• Ratio of women among new recruits to be included in the "G-category"	22%	17%	18%	26%	33%	34%
• Number of women in managerial positions (managers or higher)	1	2	2	2	5	6
• Ratio of individuals rehired after reaching retirement age	89%	93%	93%	95%	94%	87%
• Ratio of people with disabilities among employees	2.14%	2.06%	2.06%	2.17%	2.29%	2.24%

Consolidated basis	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019
• Ratio of foreign national employees	7%	12%	14%	14%	13%	13%
• Ratio of foreign nationals in managerial positions (managers or higher)	—	—	—	—	169	151

Note: These indicators have been compiled from fiscal 2018 onward.

Placing the Utmost Priority on Safety

Example of installing a safety fence to prevent machine entanglement

Basic Policy for Workplace Safety, Health, Security and Disaster Prevention

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

To fulfill our social responsibilities as a chemical company, we put the utmost priority on safety as our basic stance for operations, working together to create a lively and sound workplace and thereby becoming a company capable of eliminating accidents and disasters and worthy of society's trust.

Safety Management Structure

Safety Management Structure Overview

- **President** (Chair of the Safety Measures Headquarters)
- **Officer in Charge of the Environment and Safety** (Chair of the RC Committee)
- **Safety Measures Headquarters** (Secretariat: the Environment and Safety Dept.)
  - Heads of business bases (plant managers)
  - Heads of relevant head office departments
  - Heads of HR and Administrative departments
  - Heads of Business Promoting departments at each business division

Annual Safety Promotion Meeting

An annual one-day event aimed at promoting the inspection of and facilitating discussion about priority safety initiatives undertaken at each business site

Safety management conferences

Conferences aimed at identifying potential dangers related to explosion, fire and leakage posed by each manufacturing process and formulating countermeasures

Fiscal 2019 Initiatives

Companywide Targets

1 Reduce the number of major accidents and disasters to zero

2 Continually improve the occupational safety record

Priority Initiatives

Facilitate communication to create a lively and sound workplace while promoting safety assurance activities in which each worker is able to grasp the worth of their efforts

1	Initiatives to reduce the number of major accidents and disasters to zero	• Develop a system for identifying any signs of serious risks and mitigate intrinsic danger associated with our operations • Thoroughly control residual risks after the implementation of countermeasures as well as newly emerging risks with the aim of preventing disasters
2	Initiatives to continually improve the occupational safety record	• Take full advantage of hazard prediction systems to spot workplace danger • Create a workplace in which everyone is capable of conducting on-site hazard prediction activities before operations begin
3	Initiatives to ensure safety for everyone working at Denka business sites	• Promote the exchange of courtesies (saying "Goanzen-ni!" or "Stay safe!"), encouraging the avoidance of unsafe behavior and discouraging others from engaging in such behavior • Thoroughly practice the 3Ss—*Seiri* (sort), *Seiton* (set in order) and *Seiso* (shine) to facilitate efforts to identify workplace danger

The Safety Study Center completed on the Chiba Plant's premises in April 2020

Follow-Up Report on Initiatives Being Undertaken Since the Major Accident in March 2018

Following a fatal accident involving the collapse of a bulk bag pile at its worksite in March 2018, the Omuta Plant has implemented various countermeasures, for example, setting up racks at its warehouses, reviewing the allocation of cargo stored in these warehouses and revising operational rules to ensure that conditions are in line with the guidance of the labor standards inspection office. The Omuta Plant has thus enhanced its safety measures from the aspects of operational rules, facilities and technologies and, in March 2020, it completed the introduction of all measures required as a "business operator under the special guidance on safety and health management" stipulated by relevant regulations. In addition, initiatives undertaken by the Omuta Plant are being rolled out at other production bases. These bases completed the review and documentation of procedures for treating a broken bulk bag as well as for other cargo stacking and unstacking operations undertaken at their warehouses while implementing follow-up education for frontline operators.

Looking ahead, the Denka Group will provide its affiliates with briefings on its cargo loading procedures, including rules on how to treat a broken bulk bag, at the earliest possible date. By doing so, the Group will ensure that all worksites are furnished with clearly defined rules and well-documented procedures and that their employees are properly educated to operate safely in accordance with said rules and procedures.

Moreover, the Group will accelerate the execution of facility improvement projects related to safety countermeasures scheduled for each production base while strengthening its focus on risk assessment vis-à-vis cargo loading, the treatment of broken bulk bags and other frontline operations. In these ways, the Group will continuously improve its occupational safety record.

Topics

1 Declaration of a "State of Emergency" due to the Occurrence of Multiple Occupational Accidents

Beginning with the August–September 2019 period, the Denka Group declared a "state of emergency" at the direction of the Chair of the Safety Measures Headquarters (President) due to the occurrence of multiple occupational accidents. In response, all plant managers distributed messages aimed at communicating to plant employees the need to place the utmost priority on safety. In addition, the schedule for facility improvement projects, the aim of which is to mitigate intrinsic dangers associated with plant operations, was accelerated. Moreover, worksite leaders stepped up the practice of on-site patrols and the exchange of courtesies.

In January 2020, the Group lifted the "state of emergency" as the number of occupational accidents had been stabilized at a low level. However, as we strongly believe that there is much more to do to achieve an ideal level of occupational safety, we are engaging in an ongoing effort to establish a safety-oriented workplace culture that tolerates no violation of the rules. At the same time, we are accelerating the execution of measures to mitigate the intrinsic dangers associated with our operations while striving to ensure that the utmost priority is placed on safety at all worksites.

2 Measures to Prevent the Spread of the Novel Coronavirus (as of June 2020)

As we aim to prevent the virus from being introduced from the outside and then spreading within our premises, we request that all employees and visitors wear masks and sanitize their hands with alcohol-based sanitizers upon entering our facilities. For employees, we also ask them to voluntarily refrain from such activities as taking business trips, dining in groups and participating in trade shows while encouraging them to opt for shorter meetings or, better yet, employ web-conferencing systems.

Furthermore, the number of participants in on-site meetings regularly held at each production base is now limited so as to avoid the "3Cs" (closed spaces, crowded places and close-contact settings). These bases have also installed partitions on desks and vinyl curtains in doorways as part of thoroughgoing countermeasures against virus transmission.

Meanwhile, the Head Office and sales offices introduced a staggered commuting system in addition to operating a full-scale remote work scheme, in which laptops and other necessary devices are furnished to their employees, from March 31, 2020 onward.

3 Facility Improvement Projects related to Safety Countermeasures

To eliminate potential worksite dangers, we have been executing ongoing facility improvement projects related to safety countermeasures. As a result, the number of major accidents decreased. Currently, we are striving to spot unidentified worksite dangers by, for example, employing third-party viewpoints and enforcing "Safety Design Guidelines," as we accelerate the execution of facility improvement. In addition, although there are types of facilities that must be kept running during the course of adjustments and those with residual risks even after improvement, we will properly counter risks arising from them by clearly defining our risk handling methods and ensuring that all employees involved in on-site operations are well-versed in such methods. By doing so, we aim to reduce the number of major accidents to zero.

▸Securing Transportation Safety

In fiscal 2019, our initiatives included safety patrols undertaken by staff from the logistics departments of Denka's Isesaki, Ota and Chiba plants. We also invited our transportation subcontractors to take part in periodic drills in which they practiced emergency responses, employing the information on "yellow cards" to deal with logistics accidents. Moreover, we implemented training sessions for on-site fork lift operators to enhance their safe driving techniques. These initiatives helped raise employee safety awareness and provided an opportunity to exchange opinions on logistics safety.

As Denka supports the objective of the "white logistics movement," an industry-wide campaign promoted by a number of business corporations to mitigate the burdens placed on logistics operators, the Company issued a declaration of voluntary action aimed at the realization of sustainable logistics operations. In line with this declaration, we strove to upgrade measures to ensure logistics safety and improve the working environment for our logistics operators, for example, by enhancing safety measures in place at each production base (enforcing heat stroke countermeasures, beefing up the rule requiring drivers to take sufficient breaks, etc.), mitigating the burdens placed on operators (the use of pallets and material handling equipment, etc.) and reviewing on-premises driving lanes for trucks.

For fiscal 2020, we will continue with various activities to ensure logistics safety along with our involvement in the "white logistics movement," as we strive to regularly review and improve our logistics operations and thereby prevent the occurrence of logistics accidents.

A safe-driving training session for forklift operators

Safety patrol

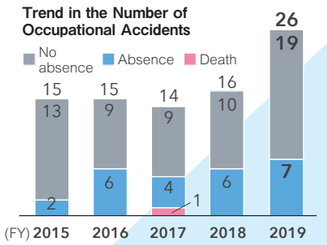
▸Production Process-Related Incidents and Occupational Accidents

We experienced five incidents related to our production process, including a leak, breakage and a fire as well as an incident arising from electrical systems' failure. In response, we have upgraded detection devices and otherwise strengthened surveillance functions installed at incident sites. None of these incidents involved human injury or environmental damage.

However, the number of incidents increased by 10 compared with fiscal 2018. Although there was no major accident, we have seen a higher number of incidents attributable to operator action, such as those arising from the lack of the correct understanding of procedures or the operator's careless behavior (see also Topics 1, above).

Going forward, we will rally the Denka Group' s entire workforce, from production worksite leaders and operators to employees at Head Office business departments as well as those at subcontractors and affiliates, to mitigate intrinsic dangers associated to our facility operations while striving to create a workplace environment in which the "Safety First" principle is firmly embraced and acted upon by all.

Trend in the Number of Occupational Accidents



Quality Assurance Management

Our Fiscal 2020 Quality Policy

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

To achieve the goals of the Denka Value-Up management plan, all employees must maintain acute quality awareness and strictly comply with product safety standards while engaging in ongoing quality improvement activities with the aim of delivering products and services that live up to the trust placed in them by users and society as a whole.

Compliance—Securing Responsiveness to Revisions of Laws and Regulations

Revised Food Sanitation Act

In June 2018, the partial revision of the Food Sanitation Act came into effect, mandating all domestic food-related businesses to undertake hygiene control in conformity with the Hazard Analysis and Critical Control Point (HACCP).* In response, the Denka Group introduced an HACCP-conformant hygiene control system for food additives, food packaging materials and other food-related products. Our food hygiene control thus accurately meets customer requests with regard to food safety.

* A food hygiene control method involving the analysis of hazard factors associated with all processes from the acquisition of raw materials to the shipment of finished products. With the goal of eliminating or minimizing said factors, HACCP is used to manage crucially important processes. HACCP also mandates that food business operators perform hazard analysis and management themselves to ensure product safety.

Chemical Substance-Related Regulations

In accordance with the Poisonous and Deleterious Substances Control Act, the Ministry of Health, Labour and Welfare annually discusses and specifies new items to be added to the list of regulated poisonous and deleterious substances. We promptly communicate this information to our customers while making proposals regarding alternative products free of substances that are expected to be included into said list of regulated substances. Furthermore, we implement thoroughgoing inventory management to ensure that our product stockpiles never violate chemical substance-related regulations.

In addition, we have in place a chemical substance management system that confirms legal and regulatory compliance in the course of developing new products, launching fresh exports and switching raw materials.

ISO 9001 Quality Management System Standard Certification and IATF 16949 Automotive Quality Management System Standard Certification

Acquiring IATF 16949 standard certification

All of Denka's production bases and its main subsidiaries are certified under the ISO 9001 quality management system standard. Furthermore, ongoing efforts are under way to acquire certification under IATF 16949, an international quality management system for the automotive industry, in order to accommodate requests from customers handling the manufacture of vehicle-mounted products.

Developing IT-Based Quality Management System Infrastructure

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

Quality Management Education

Quality management education at Denka starts with basic quality management training for new recruits. Moreover, we provide ongoing employee education on relevant laws, regulations and internal rules as well as statistical quality management, reliability management, quality management system operations and other quality management-related topics based on employees' job ranks and duties. With assistance from departments charged with quality management and external specialist organizations, we are thus helping employees raise their awareness of quality assurance activities and acquire relevant knowledge and skills

In addition, we proactively incorporate e-learning programs into quality management education that starts with the education of new recruits. These programs help enhance the effectiveness of education while promoting a shift to remote work.

Assessing Risk Issues and Responding Systematically

1 Quality Risk Assessments for All Products and Quality Assurance Activities

To achieve the goals of the Denka Value-Up management plan, we are strengthening our quality assurance capabilities via quality risk management. The Denka Group handles diverse goods ranging from commodities to specialty products and is positioned to handle a similar level of diversity in the risk arising from each product and influenced by changes in both internal and external factors. Accordingly, a "one-size-fits-all" approach will not suffice to secure robust employee awareness regarding quality management and maintain effective quality assurance activities.

With this in mind, in fiscal 2019 we introduced a new initiative to assess and manage the quality risks associated with each product from both the market environment and the business environment aspects. We will continue implementing quality assurance activities that accurately address various quality risks based on the assessment of their characteristics and magnitude.

Distribution of Quality Risk from the Market and Business Environment Aspects

2 Employing Business Environment Analysis in Quality Management for Vehicle-Mounted Products

Striving to address quality risks associated with vehicle-mounted products, each business division is engaged in the comprehensive analysis of the risks and opportunities as well as the strengths and weakness associated with each product from the aspects of the market environment and quality assurance. Results of this analysis are utilized to formulate quality targets and improvement plans under which relevant departments promote across-the-board quality assurance activities.

Enhancing Customer Communications via Customer Satisfaction Surveys

With the aim of accurately satisfying requests from customers and utilizing their feedback in quality assurance activities, annual customer satisfaction surveys are undertaken by the Electronics & Innovative Products Division and the Household Packaging Materials Department of the Living & Environment Products Division. Through these surveys, we analyze customer reviews and opinions from the aspects of product reliability, our response capabilities and partnerships with customers, thereby pushing ahead with systematic improvements.

Also, data deriving from the analysis of customer complaints and requests, quality audits performed by customers, score cards and other sources is systematically managed and shared among relevant departments to enhance the effectiveness of their quality management activities. This helps us take a comprehensive and constant approach to quality-related customer communications as we strive to improve customer satisfaction.

Life Innovation

Creating New Value via a Combination of Technologies Accumulated over Many Years

Hideki Takahashi
Executive Officer,
Life Innovation Division

On April 1, 2020, Denka Seiken Co., Ltd. and Denka Company Limited merged with the aim of strengthening and expanding the Denka Group's healthcare-related operations. Rallying the entire strength of the Group, we will accelerate the development of these operations.

As we consider contributing to countermeasures against the novel coronavirus pandemic to be one of our social responsibilities, we are currently striving to meet the need for various diagnostic examinations on the medical frontlines, to this end, for example, developing rapid diagnostic testing kits and new examination equipment. With acute awareness of the social significance of these operations, we will continuously contribute to the healthcare of people around the world and support their well-being.


Macromolecular sodium hyaluronate preparation


Vaccines


Diagnostic reagents

Customers

Healthcare institutions, examination institutions, research institutions, pharmaceutical companies, etc.

Strengths

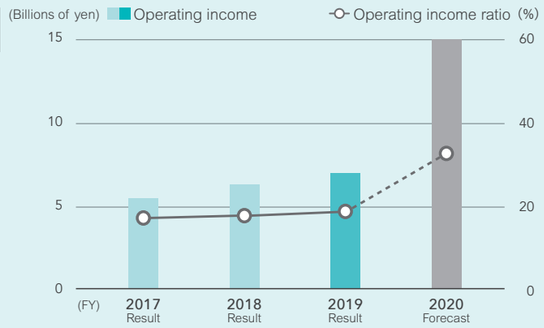
The division handles vaccines and diagnostic reagents taken over from Denka Seiken, and a macromolecular sodium hyaluronate preparation manufactured employing Denka's biotechnologies. With these products serving as the core, the division is also engaged in the development of vaccines via the application of plant-based gene modification technologies possessed by Germany-based Icon Genetics GmbH while providing panel examination aimed at identifying cancer-associated genes. In short, the division is developing specialty businesses in the fields of disease prevention, diagnosis and treatment.

Business Strategies under *Denka Value-Up*

Risks and Opportunities		Strategies
Risks	・Drastic changes in the market environment due to the novel coronavirus pandemic and other factors ・Revision of pharmaceutical prices under government-led policies aimed at curbing healthcare expenses	■ Develop new products aimed at contributing to the prevention of the novel coronavirus pandemic ■ Strengthen and expand the core businesses (influenza vaccines, diagnostic reagents, macromolecular sodium hyaluronate preparation, etc.) ■ Ensure the smooth launch of new businesses (oncolytic virus, genome-based panel examination method for cancer diagnosis, etc.) ■ Promote open innovation for the creation of products and technologies capable of meeting future needs (Denka Innovation Center, Icon Genetics, Denka Life Innovation Research, etc.)
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 infectious disease pandemic	

Main Achievements

- Achieved growth in sales of diagnostic reagents and influenza vaccines, contributing to the Group's profit
- Made steady progress in the development of new businesses (norovirus vaccines, gene-based diagnostics, etc.)
- Contributed to countermeasures against the novel coronavirus
- Resumed the production of diethyl malonate, the raw material for Avigan®, an anti-virus drug



Three-Year Divisional Performance Summary and FY2020 Forecast

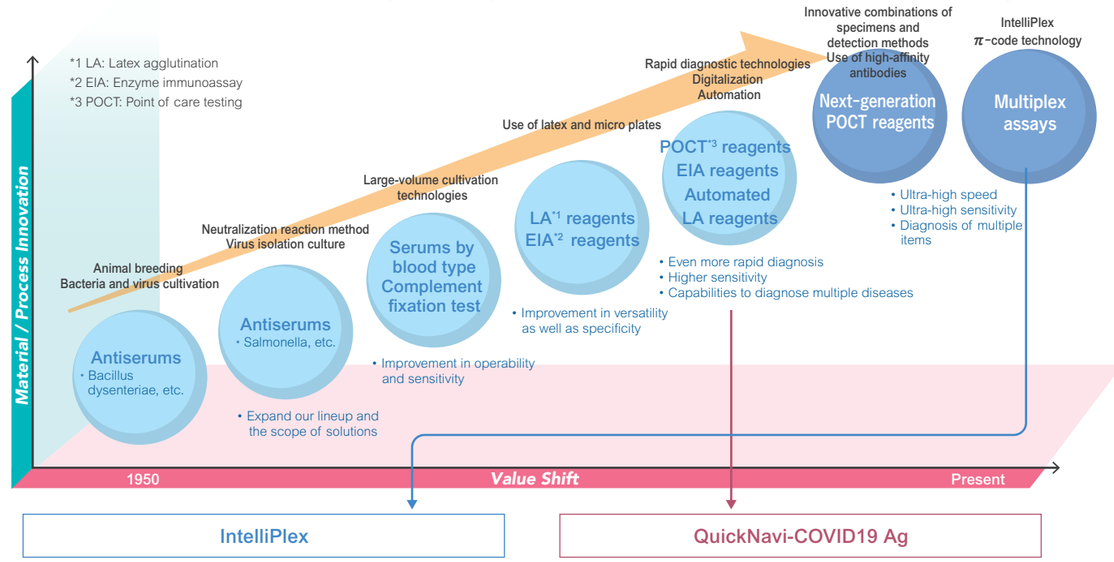
Note: With the horizontal axis and vertical axis representing social issues/needs and advances in our technological development, respectively, the value-shift diagram indicates the characteristics of each product and solution as well as how they will contribute to future value creation.

Value-Shift Diagram

Relevant SDGs

Business development in the field of infectious disease diagnosis

Since the founding of Denka Seiken, which had been a core subsidiary supporting the Denka Group's healthcare-related operations, we have contributed to infectious disease countermeasures through the manufacture and sale of diagnostic reagents. Today, our products, including influenza virus rapid diagnostic testing kits, are widely used by frontline medical practitioners. Moreover, we provide healthcare institutions with timely supplies of diagnostic testing kits whenever the threat of an infectious disease pandemic emerges.



The Denka Group is engaged in R&D aimed at creating a diagnostic testing system comprising a new set of equipment and reagents by applying π-code technology licensed from Taiwan-based PlexBio in September 2016 that is expected to help realize highly sensitive and simultaneous detection of multiple targeted items. In particular, we are striving for the swift detection of the nucleic acid of pathological microorganisms, addressing a major issue medical practitioners are now confronting in the field of infectious diseases. This project also aims to realize hassle-free, highly convenient diagnostic testing systems.

On August 11, 2020, we obtained approval for the domestic manufacture and sale of QuickNavi-COVID19 Ag, a rapid diagnostic testing kit for detecting novel coronavirus (SARS-CoV-2) antigen, successfully releasing this product on August 13 of the same year. Without the use of specific examination equipment, this testing kit helps detect the existence of the antigen within 15 minutes of the specimen being collected from the nasopharynx and pretreated.

Contribution to the SDGs through Business Operations

CANCERPLEX (panel examination service for identifying cancer-associated genes and delivering cancer remedy information)

CANCERPLEX is a comprehensive examination system for identifying cancer-associated genes via the combination of a next-generation sequencer*1 and bioinformatics technology.*2 This system is capable of detecting more than 400 cancer-associated genes by carrying out the accurate and detailed analysis of gene alteration attributable to a solid tumor. To contribute to the enhancement of people's QOL, we will assist each patient in the optimal selection of treatment methods through the commercialization of CANCERPLEX.

Social issues	Source of value
High cancer mortality	Applied technologies that have been cultivated through the involvement in the diagnostic reagent business

*1 Examination equipment that reads genome sequences at an extremely high speed
*2 A type of informatics technology that analyzes such data as genome sequences identified by the sequencer to overcome the complexities of genomic information and acquire useful insights in the life science and medical fields

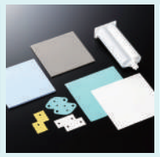
Electronics & Innovative Products

Taking Advantage of Denka's Unique Technologies to Support the Development of Innovative Products

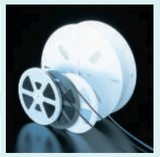
Ikuo Ishida
Executive Officer,
Electronics &
Innovative Products

The Electronics & Innovative Products Division offers a robust lineup ranging from functional fillers, thermal solution components and electronic packaging materials to electro-conductive materials for use in vehicle-mounted batteries. In short, the division delivers products that are essential to the field of electronic materials. Pushing ahead with the specialization of our operations, we will pursue advances in essential technologies covering a broad range of materials. In these ways, we will develop unique products that will contribute to the introduction of next-generation communication technologies and autonomous driving systems as well as the creation of even smaller electronics devices boasting superiority in functions, high-speed processing capabilities, safety and reliability.

Phosphor



DENKA THERMALLY CONDUCTIVE SHEET



Packaging materials for transporting electronic components
(Applications: Carrier tapes, etc.)

Customers' Products

Automobiles, electric and electronic devices, aircraft and spacecraft, rolling stock, marine vessels, the environment and energy, communication, power, etc.

Strengths

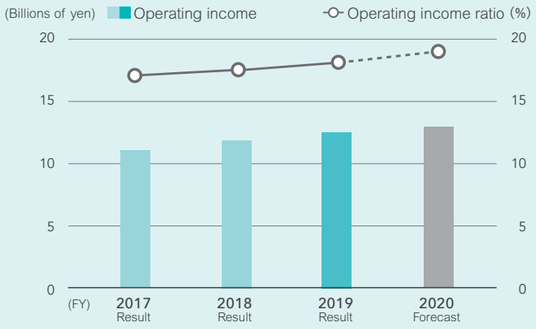
Ceramics sintering and calcining, particle manufacturing, nitride synthesis, precision processing and machining, material composite, sheet and film lamination, thermal conductive, heat and light curing, static electricity control, coating and painting and adhesive technologies as well as optical property control technologies, including those associated with controlling the refractive index

Business Strategies under *Denka Value-Up*

Risks and Opportunities		Strategies
Risks	・Shift of materials and components driven by technological breakthroughs as well as the decline of product value due to commoditization ・Insufficiency of product supply capabilities to meet rapid growth in demand	■ Expand our operations targeting the vehicle-mounted device market Deliver products associated with eco-friendly vehicles and autonomous driving systems to meet emerging needs in the automotive field ■ Boost production capacity to meet needs of growth markets Execute timely capital investment to enhance our ability to serve growth markets as we expect burgeoning demand in such fields as semiconductors and next-generation communications infrastructure ■ Launch new businesses at the earliest possible date Swiftly commercialize new specialty products
Opportunities	・Growing demand for electronic materials for use in fields representing megatrends, including EVs, 5G communication systems and renewable energy infrastructure ・Rapid growth of the communications-related market due to the widespread use of non face-to-face services	

Main Achievements

- Promoted the specialization of our operations via the upgrading of existing products to increase their added value and the development of highly functional products, thereby securing stable business profit
- Stepped up marketing in the field of next-generation communications infrastructure
- Proactively executed capital investment as we expect growth in demand for such products as silicon nitride-based ceramic substrates, spherical alumina, spherical fused silica fillers and acetylene black



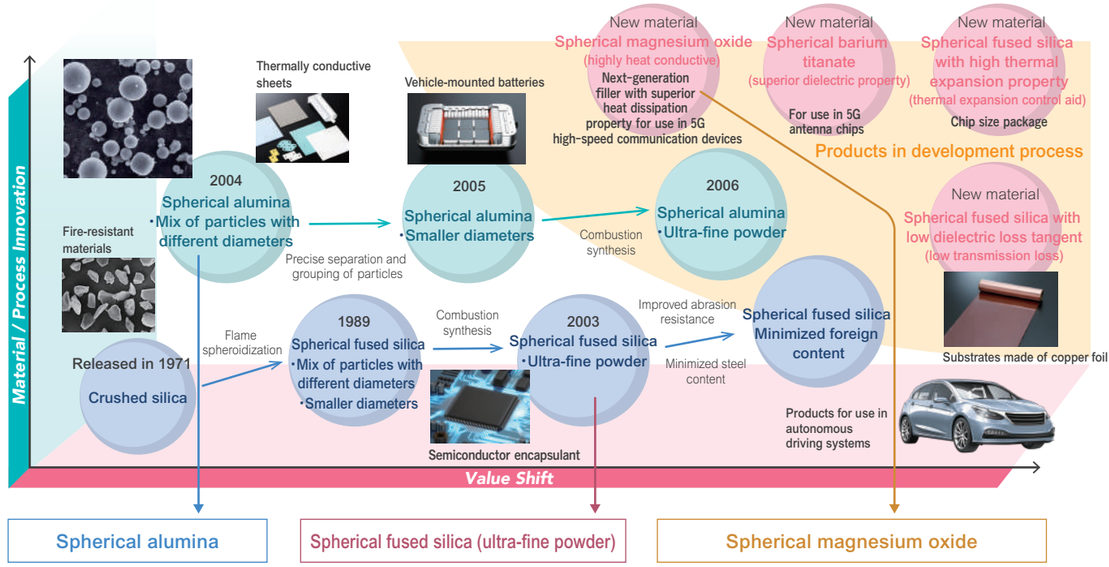
Three-Year Divisional Performance Summary and FY2020 Forecast

Value-Shift Diagram

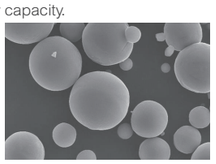
Relevant SDGs

Spherical fillers

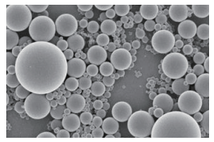
In step with the popularization of highly functional and compact electronic devices, which have become ever lighter, thinner and smaller, manufacturers of ceramic powder spherical fillers are being called upon to supply products equipped with superior functionalities. We offer a robust lineup of spherical alumina and spherical fused silica, both of which boast superior sphericity and encompass a broad range of particle diameters. Moreover, we have been focused on accurately meeting customer needs via product design and development. These are ways we contribute to the enhancement of electronic device functions.



This product is used as an additive that gives resins and elastomers superior heat conductivity. With the application of Denka's unique high-temperature fusing technologies, the filler boasts superior purity, liquidity and sphericity and is used as a key thermal solution material capable of supporting the creation of miniaturized electronic devices with greater capacity.



Employing its unique manufacturing technologies, Denka developed spherical fused silica in the form of ultra-fine powder, with its lineup encompassing particles whose diameters are measured at the sub-micron or even the nano-levels. Having thus realized a higher filling density, this product is expected to help various types of resins curb thermal expansion or achieve high dimensional precision. In addition to applications in electronic material and engineering fields, our spherical fused silica is used as a filler in various surface finishing and modification processes.



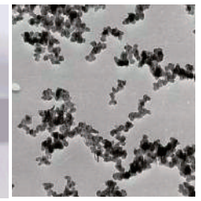
Denka's spherical magnesium oxide boasts robust thermal conductivity 1.5 times higher than that of alumina. In step with the introduction of next-generation communications infrastructure and the popularization of EVs, securing thermal solutions has become a matter of growing importance for electronic device manufacturers as they strive to achieve the ever-greater data transmission capacities and higher transmission speeds required of communications devices, or otherwise meet increasingly stringent performance requirements for vehicle-mounted components. In response, we will contribute to the enhancement of electronic device functions by taking full advantage of the particle diameter control and other core technologies we have accumulated in the field of inorganic materials as a producer of spherical fused silica and spherical alumina.

Contribution to the SDGs through Business Operations

DENKA BLACK Li (acetylene black)

Specialty carbon black made via the thermal decomposition of acetylene gas in a high-temperature environment, DENKA BLACK Li boasts a foreign matter content, such as sulfur or metal, that is extremely low and serves as an essential raw material for lithium ion secondary batteries (LiBs) and the inner and outer semi-conductive layers of transmission cables. Thanks to its ultra-high purity, it contributes to the safety of LiBs and helps prolong the lifetime of high-voltage cables. Moreover, due to its unique structure, DENKA BLACK Li is capable of curbing changes in the cubic volume of batteries that occur in the course of charging and discharging, a feature that helps lengthen the batteries' product life.

Social issues	Source of value
・Need for products supporting the enhancement of LiB safety and reliability ・Need for products supporting safe power transmission via high-voltage cables to ensure stable power supply and facilitate the popularization of clean energy	Contribution to the safety of eco-friendly vehicles and the lengthening of their lifetimes thanks to distinctive product features supported by ultra-high purity carbon

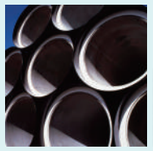


Infrastructure & Social Solutions

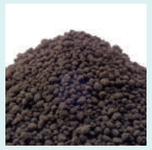
Delivering Even Better Solutions to Satisfy the Needs of the Times

Toyoki Yokoyama
Managing Executive Officer,
Infrastructure &
Social Solutions

The Infrastructure & Social Solutions Division is pursuing the specialization of its operations via structural reforms of the commodity businesses, which have supported Denka for 100 years, and the creation of high-value-added products and businesses that yield solutions that meet the needs of the times. The latter pursuit focuses on employing Denka's unique technologies to address environmental concerns, promote labor saving and deliver people-friendly products with the aim of contributing to the realization of the United Nations SDGs and other universal goals related to ESG issues. In addition, we are developing a working environment that facilitates employee creativity via work style reforms. By doing so, we are becoming an organization that encourages all employees to take on challenging goals and helps them work vibrantly and achieve success.



DENKA CSA
(expansive additive for concrete)



AZUMIN
(humic acid fertilizer)

TOYODRAIN
(underground drainpipes for agriculture and construction use)

Customers' Products

Civil engineering, construction, agriculture, automobiles, iron-making, ceramics, etc.

Strengths

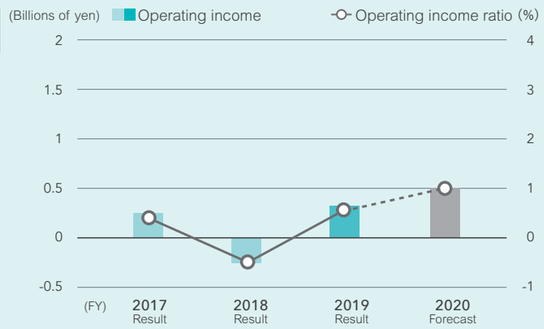
Abundant in-house power generation capacity, mining operations, the ability to recycle waste as fuel and as raw material for cement production, concrete-related technologies that control the pace of hardening and prevent cracking, material design technologies, construction and repair technologies, and soil improvement and fertilization technologies as well as high-temperature calcining technologies for inorganic materials and polymer processing technologies

Business Strategies under *Denka Value-Up*

	Risks and Opportunities	Strategies
Risks	・Changes in the business environment reflecting global warming ・Shrinkage of the domestic market due to a declining population	■ Develop and release products designed to help adapt to climate change in the field of infrastructure maintenance ■ Facilitate the utilization of recycled waste and thereby help develop a recycling-oriented society ■ Step up overseas expansion by developing our local network for special cement additives in Asia ■ Maximize profitability by optimizing our production system ■ Step up the proposal of materials that mitigate the impact of climate change on farming and the provision of solutions designed to improve farmland ■ Propose solutions utilizing functional fire-resistant materials to promote energy-saving measures and to cultivate new applications in the construction field
Opportunities	・Growing demand for solutions supporting infrastructure maintenance and upgrading aimed at countering the aging of facilities ・Full-scale market expansion for biostimulants, which are expected to help address issues arising from surging food demand as a result of global population growth	

Main Achievements

- Cement: Promoted the recycling of industrial waste in collaboration with neighboring communities via the effective utilization of resource recycling facilities
- Special cement additives: Seized opportunities arising from growing demand associated with natural energy development projects (e.g., supplied products for hydroelectric power station conduits) while making a full-scale entry into the overseas road repair business and the European market for tunnel construction solutions
- Agri-products: Made entries into biostimulant markets worldwide
- Inorganic materials: Reviewed and augmented production facilities to meet growing demand for automobile-related products
- Environmental materials: Initiated expansion into overseas markets for agricultural irrigation systems



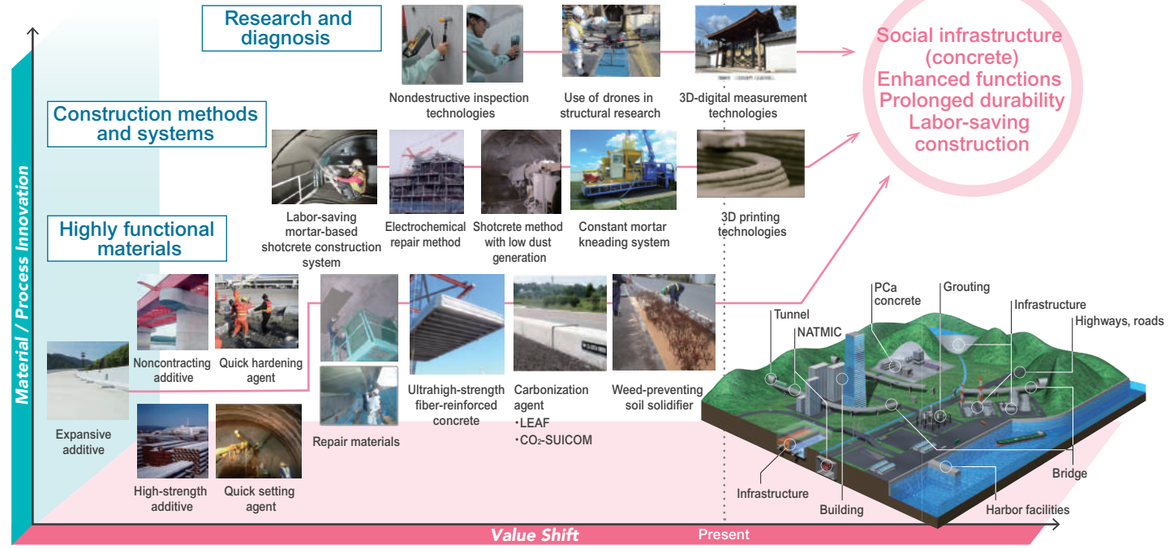
Three-Year Divisional Performance Summary and FY2020 Forecast

Value-Shift Diagram

Relevant SDGs

Special Cement Additive Business

We offer our solid technological capabilities and extensive product lineup to accommodate wide-ranging social needs for solutions capable of enhancing the functions of concrete structures, lengthening their durability and reducing the need for intensive labor in construction. By doing so, we are contributing to the development of robust social infrastructure at home and abroad.



Contribution to the SDGs through Business Operations

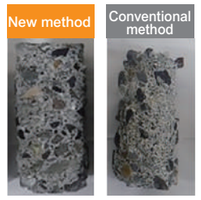
Eco-Friendly Shotcrete Method

Social issues

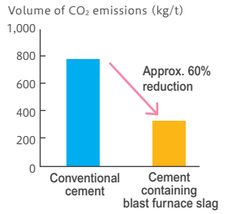
・Issues arising from urbanization driven by rapid economic growth
・Increasing seriousness of the consequences of climate change

Source of value

Quick-setting agents created in the course of developing NATMIC and construction system technologies optimized for these agents



Comparisons of concrete samples immersed in sulfuric acid for eight weeks



Comparisons of the volume of CO_2 emissions from conventional cement and cement containing blast furnace slag

Denka's eco-friendly shotcrete method takes advantage of a powdered quick-setting agent that delivers greater strength faster. In addition, this method not only helps to ensure worker safety during construction, by employing cement concrete containing a large amount of blast furnace slag fine powder (approximately 290kg/m^3), an industrial byproduct, this method contributes greatly to the reduction in greenhouse gas emissions. Moreover, the high content of blast furnace slag gives the shotcrete superior acid resistance. Denka's shotcrete method is thus expected to improve the overall quality of concrete and lengthen its lifetime.

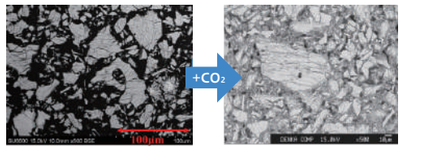
Carbonization Agent "LEAF"

Social issues

Need to realize a carbon-free society by balancing the volumes of CO_2 emitted and absorbed

Source of value

Effective utilization of byproduct slaked lime and clinker manufacturing technologies



Changes in concrete ingredients via carbonization induced by LEAF
Left: Before carbonization (gray: LEAF; black: airspace)
Right: After carbonization (gray: calcium carbonate and amorphous silica)

LEAF is a carbonization agent developed by Denka that vigorously converts CO_2 into chemically stable calcium carbonate. Used as a cement additive, it causes carbonization and helps densify the resulting concrete, thereby improving strength and durability. Instead of limestone, which emits CO_2 in the course of high-temperature calcination, LEAF is made using slaked lime, making it an effectively use of this byproduct. By thus offering a way of curbing the volume of CO_2 emissions from its manufacturing onward, LEAF is expected to contribute to the realization of carbon neutrality.

Elastomers & Performance Plastics

Contributing to Technological Innovation and Social Development by Employing a Variety of Technologies and a Wealth of Know-How

Koki Tabuchi
Managing Executive Officer,
Elastomers &
Performance Plastics

The Elastomers & Performance Plastic Division is in charge of three business categories: the elastomer business, which includes global market-leading chloroprene rubber (CR) operations; the performance plastics business, which boasts highly functional styrene-based products in an array of grades; and the styrene and chemicals business, which centers on styrene monomer and acetyl chemicals and is backed by Denka production facilities that boast the largest capacity in the east Japan. Currently, the division's overseas sales ratio is holding stable at over 60%. In addition to our production bases in Japan, we operate overseas plants in the United States and Singapore to meet global market needs. Although the business environment remains harsh in fiscal 2020 due to the novel coronavirus pandemic, we are acutely aware of our mission to support Denka's largest flagship business segment in terms of sales and profit. Accordingly, we will strive to maintain stable operations while promoting specialization with the aim of achieving the goals of the Denka Value-Up management plan.

Examples of CR-based automobile parts

Examples of products made using DENKA TRANSPARENT POLYMER (styrene-based functional resin)

A slope that has been sprayed with DENKA COAT soil erosion prevention agent

Customers' Products

Automobile parts, transmission belts, adhesives, civil engineering products (soil erosion prevention agents), home appliances, office equipment, food packaging materials, household goods for daily use, etc.

Strengths

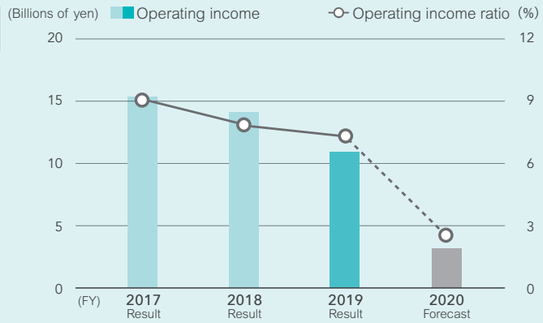
- A two-location production system for flagship products (CR produced in Japan and the United States; functional resins produced in Japan and Singapore)
- Polymer structure design and control technologies, polymer composite technologies and material compounding technologies that aid in the creation of products for a variety of applications in line with customer intentions

Business Strategies under *Denka Value-Up*

Risks and Opportunities		Strategies
Risk	•A decrease in demand because of plastic-induced environmental problems	■ Promote the specialization of our operations by upgrading existing products, increasing their added value and developing highly functional grades with the aim of establishing a business portfolio that is capable of securing stable profit and resilient against changes in trade conditions ■ Fully take advantage of our production bases at home and abroad to secure an optimal structure for business operations ■ Expand sales of rubber for highly heat-resistant hose applications in response to the growing need for gasoline vehicles with turbo functions on the back of an ongoing shift away from diesel engines ■ Address plastic-related environmental issues by focusing on (1) promoting R&D aimed at reducing the specific weight of plastics and creating environment-friendly materials incorporating biomass plastics while (2) striving to commercialize a polystyrene chemical recycling process
Opportunities	•Growing global appetite for CR and functional resins, both representing product categories for which we boast international supply chains •Emerging needs for novel automobile-related materials, the focus of our vigorous R&D efforts, in the wake of a revolutionary change in the industry •Potential competitive advantages arising from our unique technologies as a plastic manufacturer, including chemical recycling, biomass-related products and others that support environmental countermeasures	

Main Achievements

- Made progress in the strengthening of an integrated operational structure for the CR business employing production facilities in Japan and the United States
- Decided on the execution of measures to double the capacity of our MS resin production facilities in Singapore via the conversion of polystyrene manufacturing facilities in response to ongoing growth in demand for products for use in optical and other applications
- Initiated a project involving the commercialization of Toyo Styrene's chemical recycling technology targeting polystyrene resin



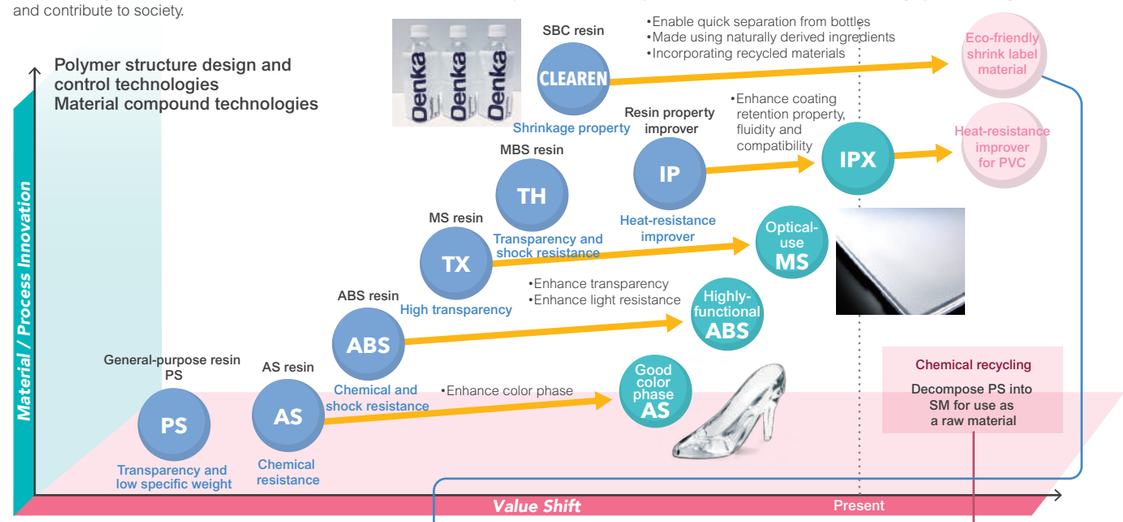
Three-Year Divisional Performance Summary and FY2020 Forecast

Value-Shift Diagram

Relevant SDGs

Business Development Centered on Functional Resin

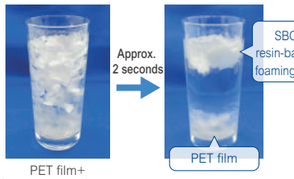
In 1965, we launched styrene monomer (SM) and polystyrene (PS) production facilities in the Chiba Plant. Since then, we have expanded our scope of production items to include ABS resin (1970), SBC resin (1973) and other styrene based functional resins. In 1997, we commercialized PS production in Singapore, and, in 2006, initiated the production of SBC resin and transparent resin in that country. Moreover, our base in Singapore began manufacturing DENKA IP thermal resin in 2012. Our optimal production system supported by multiple locations helps us deliver highly functional grades and contribute to society.



Ongoing Discussions about SBC Resin Recycling

Currently, discussions are under way regarding how to address environmental concerns associated with our SBC resin, a styrene-based shrink film material. With the purpose of establishing a product lineup capable of contributing to society, we are carrying out surveys of candidate film materials with lower specific weight, a property that will facilitate the smooth separation of labels from bottles. We are also exploring the possibility of providing shrink films made using recycled materials while looking into the possible combination of conventional materials with biomass resin and the incorporation of biomass-based styrene and butadiene.

● **Facilitating gravity separation to remove labels from PET bottles**



PET film+
SBC resin-based foaming film immersed in water

Functional film that combines SBC resin and biomass resin

Initiating PS Chemical Recycling Business

Toyo Styrene Co., Ltd., an equity method affiliate of Denka, signed a technology licensing agreement with Agilyx Corporation, a global company specializing in plastic recycling, and is currently licensed to use Agilyx technology in the domestic market. Employing this agreement, Toyo Styrene aims to commercialize the chemical recycling of used PS. To this end, the construction of a verification testing facility is now under way on the premises of Denka's Chiba Plant. With an expected annual processing capacity totaling approximately 3,000 tons, the facility is scheduled for operational kickoff at the end of fiscal 2022.

Photo provided by Agilyx

A BOPS sheet that has undergone the blanking process to produce container lids

Contribution to the SDGs through Business Operations

Novel Functional Resin: DENKA IPX Series

Over the years, we have cultivated styrene-based precision polymerization technologies in the course of polymer design. The creation of DENKA IPX is a result of our efforts to increase the sophistication of these technologies. This product boasts improved performance in terms of heat and chemical resistance as well as coating retention in addition to reduced VOC content and is capable of acting as a thermal resistance improver. It is expected to accommodate wide-ranging needs for automotive interior materials and other applications with stringent requirements.

Social issues	Source of value
The need for material development capabilities that help accommodate wide-ranging needs for high-performance products with multiple functions in terms of, for example, heat and chemical resistance as well as coating retention	Increased sophistication of styrene-based precision polymerization technologies cultivated in the course of polymer design

DENKA IP and IPX series

An example of finished products made using these materials

Living & Environment Products

Pursuing Value Creation while Delivering Products Designed to Meet Market Needs

Jinichi Osuga
Executive Officer,
Living &
Environment Products

The Living & Environment Products Division will take on the pursuit of new value without insisting on limiting the search to a particular material or field and, to this end, fully take advantage of its strengths in the areas of technology and quality with the aim of supporting the entire Group in its role as a chemical engineering division. In these ways, we will create and deliver products that satisfy market needs. Currently, the division is accelerating global expansion via the development of unique chemical engineering products aimed at supporting people's lifestyles and improving living environments. At the same time, we are striving to develop and deliver solutions aimed at helping reduce environmental burdens and thereby creating shared value toward resolving issues society is confronting.

An example of housing made using TOYO GUTTERS (hard polyvinyl chloride rain gutters)

TOYOKALON (synthetic fiber for wigs and hairpieces)

VINI-TAPE (vinyl chloride-based insulated adhesive tape)

Customers' Products

Automobiles, electric and electronics equipment, civil engineering and construction, food, aircraft and aerospace, rolling stock, medical and nursing care, the environment and energy, agriculture, logistics, etc.

Strengths

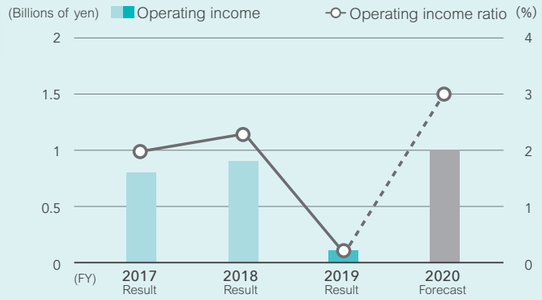
Sheet film manufacturing technologies, adhesive manufacturing and adhesion coating technologies, resin compounding technologies, plastic ejection processing technologies, etc.

Business Strategies under *Denka Value-Up*

Risks and Opportunities		Strategies
Risk	• Unfavorable market changes that make existing products obsolete	■ Housing materials (rain gutters) • Develop products with anti-bacterial and virus functions • Develop products that support labor-saving, hassle-free installation and are environmentally friendly ■ Advanced tapes (industrial tapes) • Maintain stable supply by taking advantage of a two-location production system • Seize opportunities arising from growing demand for e-commerce • Develop products for use in air conditioners in a way that meets demand for materials supporting ventilating functions ■ TOYOKALON (synthetic fiber for wigs and hairpieces) • Improve existing fiber materials and create those with new color in anticipation of the future trend • Develop products that genuinely satisfy customer needs ■ Household packaging materials (plastic materials for food packaging) • Step up efforts to develop eco-friendly products and promote recycling • Cultivate new markets in response to changes in consumer lifestyles
Opportunity	• Demand for the supply of resin processing products capable of meeting evolving requirements amid the global trend toward eco-friendliness and growing need for infectious disease countermeasures as well as diversifying consumer preferences	

Main Achievements

- Promoted the development of specialty products in the commodity businesses
- Pushed ahead with marketing activities aimed at getting our specialty products on track as materials chosen by major manufacturers
- Stepped up other sales and marketing activities in a way that fully takes advantage of our strengths in the areas of technology and quality
- Proactively Reduce, Recycle, Reuse and Renew measures to create new value



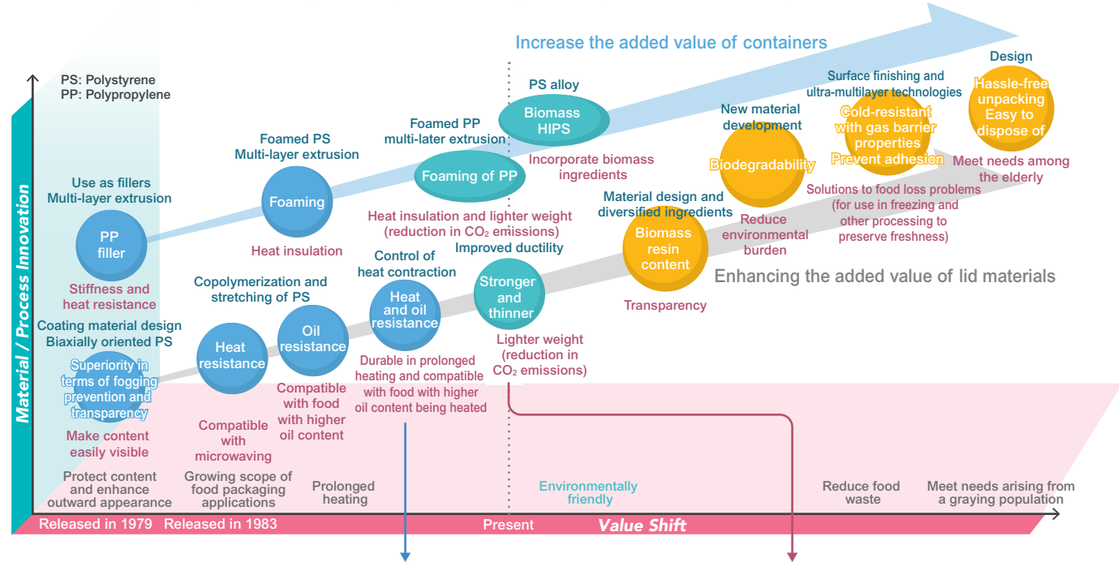
Three-Year Divisional Performance Summary and FY2020 Forecast

Value-Shift Diagram

Relevant SDGs

Business Development Centered on Plastic Food Containers and Lids Compatible with Microwaving

BOPS as a Solution
Today, there is a growing need for products supporting hassle-free cooking due to the aging of Japanese society and the increasing number of double-income households. Containers made using our BOPS sheets are compatible with a variety of food even when microwaved. In addition, we are striving to develop products designed to help address issues arising from waste plastics.

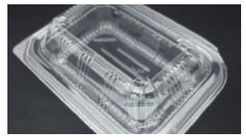


Mighty Guard

Boasting superior performance in terms of heat and oil resistance, this product was developed to contribute to a rich dietary life.

Eco Clear

This product helps reduce the weight of food containers, thereby contributing to reduction in the volume of CO_2 emissions and plastic waste.



Contribution to the SDGs through Business Operations

BOPS Sheets

Food containers made using BOPS sheets are being used for a growing scope of applications, such as supermarket food packaging and the lids of convenience store boxed lunches, while supporting the recent boom in takeaway and delivery services.

To address plastic-related environmental concerns that have recently been brought to light by public attention, we took advantage of our long-accumulated technologies in the BOPS sheet business to develop Eco Clear. With this product, we have succeeded in realizing superior strength that allows for the production of even thinner sheets.

The use of Eco Clear will thus contribute to reduction in the weight of food containers and the volume of plastic materials used.

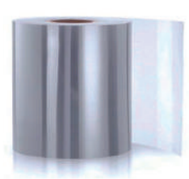
Going forward, we will deliver this and other products designed to contribute to society and, to this end, continue to pursue better solutions capable addressing environmental concerns.

Social issues

- Container lids often hinder shoppers' view of what is inside
- Conventional plastic containers and lids are incapable of withstanding the heat produced during microwaving
- The volume of plastic waste continues to grow

Source of value

- Technologies that improve the transparency of plastic lids and prevent them from fogging up
- Enhanced heat resistance that withstands microwaving
- Provision of stronger and thinner container lids with the aim of reducing the volume of plastic waste and CO_2 emissions



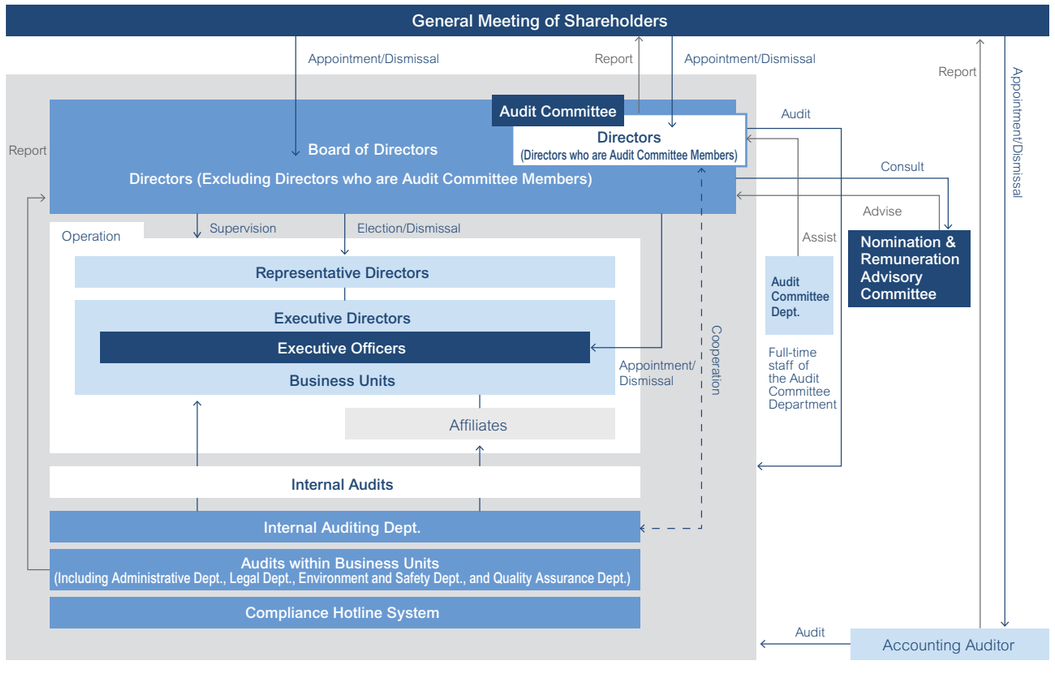
Corporate Governance

Basic Approach to Corporate Governance

Based on “The Denka Value” (corporate philosophy), the cornerstone for all the corporate activities undertaken by the Denka Group, the Company is striving to fulfill the expectations and earn the trust of its many stakeholders, including shareholders, customers, local communities and employees. To this end, the Company is strengthening its business foundation by working to enhance its earnings power and expand its scope of operations. At the same time, it is making every effort to continue being a company that can win the trust and support of society and thereby improve corporate value.

The Company considers corporate governance to be the bedrock on which the above rests, 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.

Corporate Governance Structure



Initiatives Being Undertaken Thus Far to Improve Corporate Governance

	Purposes	Initiatives
2007	Speed up decision making	Halved the number of directors while introducing an executive officer system
2008	Ensure that all directors who supervise and monitor business execution engage with their peers on equal footing at Board of Directors meetings	Abolished senior managing and managing director positions
	Secure clear functional separation between those charged with business execution and those charged with monitoring and supervision	Delegated executive authorities and positions from directors to executive officers
	Flexibly assess the adequacy of each director	Shortened the term of office for directors to one year
	Ensure stringent supervision of the Company’s operations by incorporating external perspectives	Appointed two outside directors, securing a total of four external individuals, including the mandatory two outside Audit & Supervisory Board members, for overseeing Denka’s management
	Provide robust opportunities to interact with each other outside Board of Directors meetings to develop a structure enabling directors to contribute meaningful insights	Made it a rule to hold periodic meetings in which outside directors exchange opinions with top management
	Improve authorization process to realize faster decision making by facilitating in-depth discussion focused on important management matters	Established the Management Committee, consisting of in-house directors and in-house members of the Audit & Supervisory Board as well as some executive officers
2015	Enhance the governance structure to improve management transparency and soundness	Increased the number of outside directors from two to three while decreasing the prescribed number of overall directors by two
	Create opportunities for in-house and outside directors and in-house and outside members of the Audit & Supervisory Board to engage in constructive discussion, help them freely exchange frank opinions and facilitate information sharing and closer collaboration	Decided to hold monthly exchange meetings for all directors and Audit & Supervisory Board members, stepping up the previous practice of holding biannual exchange meetings for these individuals
	Optimize corporate governance aimed at securing sustainable growth and a medium- to long-term improvement in corporate value	Established the Denka Corporate Governance Guidelines
	Facilitate the understanding of Denka’s operations and invigorate discussion at Board of Directors meetings	Enhanced the content of prior briefings on individual agenda items requiring closer explanation for outside directors and outside Audit & Supervisory Board members
	Help outside directors and outside Audit & Supervisory Board members exchange their insights and share their understanding of the status of Denka’s operations	Decided to hold the Outside Director Liaison Meetings on a quarterly basis
2016	Facilitate the understanding of Denka’s short-, medium- and long-term policies on business operations and R&D	Decided to hold the biannual Strategy and R&D Policy Presentation Meetings for outside directors and outside Audit & Supervisory Board members
	Help the Board of Directors ensure robust auditing of and supervision over business operations being executed by executive officers	Clarified the content of meeting handouts on agenda items and reporting materials distributed at Board of Directors meetings
	Enhance the effectiveness of the Board of Directors	Instituted the annual evaluation of the Board of Directors’ operations to assess their effectiveness with the involvement of all directors and all Audit & Supervisory Board members while making it a rule to disclose its findings via the Corporate Governance Report
2017	Ensure that outside directors and outside Audit & Supervisory Board members contribute diverse opinions and advice to the Board of Directors with regard to such governance issues as director nomination and remuneration as well as other important management matters with the aim of securing the fairness and objectivity of management judgment	Established the Management Advisory Committee attended by all outside directors, all outside Audit & Supervisory Board members, the Chairman and the President & CEO
		Monthly exchange meetings for all directors and Audit & Supervisory Board members were formally named the D&A Round Table meetings
2019	Appoint directors with concurrent membership in the Audit Committee to speed up decision making while strengthening the Board of Directors’ supervisory functions with the aim of improving corporate governance and achieving growth in corporate value	Transitioned from a Company with an Audit & Supervisory Board to a Company with an Audit Committee
		The Management Advisory Committee was renamed the Nomination and Remuneration Advisory Committee

Transition to a Company with an Audit Committee

Acutely aware of the importance of securing solid corporate governance, Denka has introduced an executive officer system aimed at ensuring functional separation between personnel charged with supervision and decision making and those charged with business execution. Moreover, Denka appointed three outside directors and two outside members of the Audit & Supervisory Board. As such, Denka has strengthened the functions of the Board of Directors and the Audit & Supervisory Board in terms of supervision and auditing, respectively, with the aim of establishing a robust foundation for fair and transparent business management.

In June 2019, Denka transitioned to a Company with an Audit Committee, another move aimed at strengthening the Company’s corporate governance and enhancing its corporate value. In addition to supporting speedier decision making, this transition was intended to enhance the supervisory functions of the Board of Directors and, to this end, entailed appointing individuals to serve as Audit Committee members and authorized to vote at Board of Directors meetings.

Currently, Denka’s Audit Committee is engaged in audits of such subjects as the development of internal control systems and their practical application. To this end, members of the Audit Committee attend key meetings, study reports from directors and review important documents. Throughout these endeavors, the Audit Committee audits directors’ business execution from an independent standpoint.

Moreover, Denka’s Audit Committee Department maintains a full-time staff tasked with assisting the Audit Committee in the proper execution of its duties and otherwise supporting the committee’s activities.

In August 2020, the Company revised criteria for agenda items to be submitted to its Board of Directors meetings. As we embarked on our second year since the transition to a Company with an Audit Committee, the revision was intended to optimize governance operations as a whole in line with purposes of transition. Thanks to this move, the Board of Directors is now empowered to make even swifter decisions and to allocate more time to important deliberations.

Purposes of Transition to a Company with an Audit Committee

- **Step up the separation of supervisory and execution functions**
  Improve the transparency and fairness of management while realizing speedier and dynamic decision making
- **Increase the number of outside directors**
  The number of outside directors grew from three to five, one of whom is female
- **Promote diversity**
  Ensure that the composition of Board members is diverse and well-balanced in terms of their expertise, experience, competency, gender and nationality

Concepts on the Appointment of Directors

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

Director candidates are nominated from among individuals who have abundant experience and a strong track record in Denka's business divisions and are equipped with sufficient knowledge and specialist expertise for the position. Outside director candidates are nominated from among those who boast extensive knowledge backed by abundant business experience as well as distinctive strengths in their areas of specialty so that they can bring their insights on how to achieve sustainable growth and enhance corporate value. With regard to the overall composition of board members, we focus on maintaining a diverse and well-balanced composition in terms of expertise, experience, competency, gender and nationality. We also aim to maintain a sufficient number of independent outside directors to ensure that they account for at least one third of director membership. Currently, such directors account for 42% of the Company's Board of Directors, well in excess of the targeted composition.

Director Remuneration

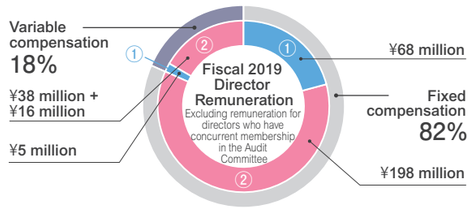
We have set remuneration for each director based on their roles and responsibilities within the limit of the total amount approved by the General Meeting of Shareholders. The Board of Directors decides on the content of remuneration after receiving advice and recommendations from the Nomination and Remuneration Advisory Committee.

Remuneration for directors consists of monthly basic compensation set at a fixed amount (paid to all directors) as well as performance-based compensation and share-based compensation (neither of which are paid to outside directors or in-house directors with concurrent membership in the Audit Committee).

The value of the performance-based compensation is determined in step with consolidated operating income for each fiscal year. However, this portion may be decreased or fully withheld in cases where consolidated operating income did not reach a certain amount or the Company was found to be involved in compliance violations and other significant misconduct.

Share-based compensation is intended to ensure that directors share shareholders' interests and risks regarding stock price fluctuations. By doing so, we aim to instill a strong sense of purposefulness toward achieving medium- to long-term growth in corporate performance and corporate value in our directors.

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



Remuneration (paid during the period from April 1, 2019 to the close of the 160th Ordinary General Meeting of Shareholders (June 20, 2019)

- Directors
  ① Total amount of remuneration: ¥74 million
  Breakdown: Basic compensation: ¥68 million for eight recipients (¥9 million for three outside directors)
  Share-based compensation: ¥5 million for five recipients
- Corporate auditors
  Basic compensation: ¥19 million for four recipients (¥6 million for two outside corporate auditors)

Remuneration paid during the period from the close of the 160th Ordinary General Meeting of Shareholders (June 20, 2019) to March 31, 2020

- Directors (excluding those who have concurrent membership in the Audit Committee)
  ② Total amount of remuneration: ¥253 million
  Breakdown: Basic compensation: ¥198 million for seven recipients (¥18 million for two outside directors)
  Performance-based compensation: ¥38 million for five recipients; share-based compensation: ¥16 million for five recipients
- Directors (those who have concurrent membership in the Audit Committee)
  Basic compensation: ¥68 million for five recipients (¥27 million for three outside directors)

Evaluation of the Effectiveness of the Board of Directors

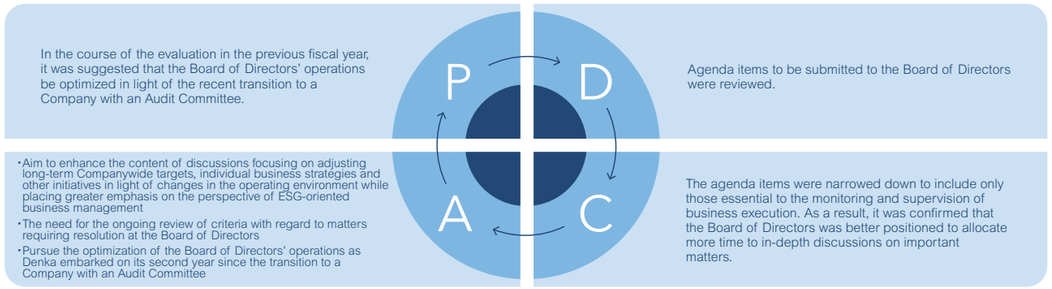
Method of Evaluation

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

Summary of Evaluation Results and Future Efforts

The Company confirmed the appropriateness of Board size and composition (in terms of getting the right balance of expertise, experience, competency and diversity) in addition to concluding that meetings were of an appropriate frequency and duration. The Company also determined that its Board of Directors, which includes independent outside directors who account for 42% of its membership, is capable of the proper monitoring and supervision of management.

In addition, the Board of Directors evaluated initiatives being undertaken to address issues identified via the previous fiscal year's evaluation by employing a PDCA cycle as depicted below. It also ensured that all directors share a common understanding of initiatives to be executed in fiscal 2020.



The Denka Group's Internal Control

Our Philosophy and Principles

Based on "The Denka Value" (corporate philosophy), which serves as the cornerstone for all the corporate activities undertaken by the Denka Group, we are committed to fulfilling the expectations and trust of many stakeholders, including shareholders, customers, local society and employees. Accordingly, we consider the fulfillment of our social responsibilities, especially those related to compliance, to be essential to sustainable corporate development. With this in mind, we are striving to ensure that all officers and employees within the Group abide by laws, regulations and in-house rules as well as social and ethical norms.

Aiming to secure conformity with laws, regulations and the Articles of Incorporation in all activities undertaken by the Denka Group as a whole and to improve corporate value via appropriate and efficient business operations, the Company established a basic policy on the development of internal control systems. In line with this policy, we made it a rule to periodically assess the operational status of internal control systems and constantly improve and strengthen these systems. Moreover, we established the Denka Group Ethics Policy to provide action principles for all Group members.

Efforts to Raise Awareness among Group Members

To convey the philosophies discussed above, Denka's President takes advantage of various opportunities and methods to deliver his message to all Group officers and employees, communicating the importance of a shared sense of crisis with regard to the consequences of corporate misconduct, which can damage the Group's credibility from the perspective of social responsibility, put it in position to draw harsh criticism from the general public and endanger the continuity of its business operations. Furthermore, representatives of the main Group companies meet twice a year with Denka's directors and heads of corporate departments to ensure a shared understanding of the corporate philosophy and management policies as well as of current issues before the Group. These meetings also address material risks associated with internal control and discuss policies on how to handle such risks.

In fiscal 2019, the Legal Department prepared the Denka Global Compliance Program, a compliance education program designed to ensure the Group measures up to the global standard in terms of guiding employee conduct to maintain compliance with laws, regulations and corporate ethics. Via this program, we have systematically provided all Group officers and employees at home and abroad with compliance education so that they are properly educated about the Group Ethics Policy and other compliance matters.

Monitoring, Internal Auditing and the Compliance Hotline System

To ensure the appropriateness of business operations undertaken by the Denka Group as a whole, the Audit Committee performs audits targeting Denka and its main subsidiaries.

The Internal Auditing Department consists of general managers and 10 staff members and maintains an independent status to fulfill its one and only role, namely, monitoring business operations. In addition to assessing the status of internal control in accordance with Japan's Financial Instruments and Exchange Law, the department is tasked with audits aimed at identifying operational and management risks. The Internal Auditing Department not only reports findings from such audits to the heads of the business execution departments it audits, it also shares its insights with the Audit Committee and otherwise acts in close collaboration with the committee. Moreover, the department provides the President and the Board of Directors with periodic reports on audit plans and results.

In addition to targeting Denka and its subsidiaries, the aforementioned operational and management risk audits encompass some affiliates led by individuals dispatched from Denka to assume representative director or other positions with significant management responsibilities. As a large number of business units are subject to these audits, we strive to enhance the effectiveness and efficiency of auditing by narrowing down material risks via the self-evaluation of compliance status. With regard to on-site audits, we focus on assessing the status of internal control related to risk management within the Group, legal compliance, asset management and operational management. By doing so, we seek to identify risks inherent in and issues associated with these matters while monitoring the effectiveness and appropriateness of each process. Addressing issues identified via audits, the Internal Auditing Department provides executives of audited entities with advice on how to resolve these issues or make improvements in a way that respects said entities' autonomous management. As necessary, the department acts in collaboration with Denka's relevant business units to resolve such issues. In these ways, it is endeavoring to help each Group entity reduce operational and management risk while contributing to improvement in their corporate value.

In addition, the Accounting & Finance Department separately performs accounting audits of main subsidiaries, while the Legal, Environment and Safety, Quality Assurance and other departments likewise undertake audits on a standalone basis or in collaboration with the Internal Auditing Department to secure legal compliance in their areas of specialty.

Also, we began monitoring internal control systems in place at local business units in Southeast Asia in response to the expansion of our operations in the region. In fiscal 2019, a dedicated department was established for this purpose within a local subsidiary serving as regional headquarters and it is currently conducting monitoring in collaboration with Denka's Internal Auditing Department.

To supplement the internal audits discussed above, we maintain the Group Compliance Hotline System, which is designed to ensure the early detection of incidents involving the violation of laws, regulations and in-house rules while supporting the swift implementation of correction measures.

A Message from an Outside Director

We Will Fully Exercise Our Check-and-Balance Functions to Secure Organizational Transparency and Maintain Fairness.

Tatsutsugu Fujihara
Outside Director

Denka's founding dates back more than 100 years. Having started out with the manufacture of calcium carbide and calcium cyanamide fertilizers, Denka has long been pushing ahead with the vigorous reform of its business structure. As a result, the Company has successfully secured the ability to manufacture a wide range of products from chloroprene rubber (a synthetic rubber) and synthetic resins to cement and special cement additives to electronic component materials to vaccines. Over the course of these pursuits, Denka has also nurtured a distinctively unique corporate culture. Specifically, a culture that cherishes sincerity in business conduct while encouraging proactive efforts to take on challenges in new fields even as the Company stays prudently vigilant against changes in the business environment. Also, the Denka Mission—Taking on the challenge of expanding the possibilities of chemistry to create new value and contribute to sound social development—which is integral to the Company's corporate philosophy, encapsulates this corporate culture. Furthermore, I personally consider this mission statement to carry within it an unchanging belief that no business can improve its corporate value without a robust platform supporting fair and transparent management. Despite its longstanding business track record, I am highly appreciative of Denka's unlimited potential, which most resembles that of a growing startup venture.

Outside directors like myself are in position to play various important roles in supporting Denka's pursuit of medium- to long-term improvement in corporate value and sustainable business growth. Personally, I am particularly conscious of my duty to provide management with the benefit of external insight. I am determined to be staunch in performing this duty. It is well known that an organization with a leadership that doesn't change for long periods naturally tends to devolve into an overly homogeneous culture in which people refrain from criticizing each other. Such conditions often give rise to "normalcy bias" and "unconscious bias" affecting value systems and causing the leadership to underestimate or ignore unfavorable opinions. The organization's transparency, fairness and soundness are thus undermined. Even if the organization has in place a robust internal control system designed to strengthen corporate governance, such a system may fail to be fully effective as the homogeneity of the corporate culture can hinder the functioning of check-and-balance mechanisms.

In order to address such typical governance-related problems, outside directors must continuously strive to explicitly provide external insight while unceasingly monitoring management. Obviously, for outside directors to fulfill their duties, it is essential that they share with top management a broad range of information and an accurate understanding of the actual status of business operations. As Denka's top management is firmly determined to employ the insight offered by outside directors and backed by their experience and expertise, the Company has developed a structure enabling outside directors to be deeply involved in business management.

For example, they receive prior briefings on agenda items to be submitted to the Board of Directors and discuss these items in the course of such briefings. They also attend "Strategy and R&D Policy Presentation Meetings" to deliberate on such matters as strategies implemented by each division from the medium- to long-term perspective. Moreover, they join the D&A Round Table meetings in which attendees freely exchange their opinions on important management matters. Outside directors also offer their views and opinions to top management by participating in such key meetings as Nomination and Remuneration Advisory Committee meetings attended by top management as well as Outside Director Liaison Meetings in which five outside directors (including Audit Committee members) discuss issues Denka is now confronting. In addition, outside directors occasionally propose a subject to be discussed among directors. One such proposal resulted in the revision of criteria with regard to matters requiring resolution by the Board of Directors. Thanks to this revision, Board members are currently positioned to allocate more time to intensively discuss important themes. As such, outside directors are helping Denka's Board of Directors to proactively update its mode of operation to ensure that each meeting results in meaningful conclusions.

The fallout from the novel coronavirus has led to many businesses being called upon to take on irreversible business management reforms. Against this backdrop, Denka's Board of Directors is engaged in the formulation of performance targets for 2030 as part of discussions about clarifying the Company's focus on an ESG-oriented management approach guided by the United Nations Sustainable Development Goals (SDGs). With this in mind, the Company aims to continuously nurture employees who can spontaneously take on challenging tasks even as it assiduously promotes workforce diversity in various ways. We expect that by succeeding in creating a corporate culture that firmly embraces diverse people, Denka will be strengthened by a legacy of sincerity and vigorousness arising from said diversity. I am convinced that upon the success of this endeavor, Denka will grow into a genuine global company.

As an outside director, I will continuously do my best to supervise and support the Company's business operations and not fall into contentment with cozy relationships among Board members. To this end, I will remain acutely aware of various stakeholder perspectives and continuously exercise an objective standpoint with a strong sense of ownership regarding my duties vis-à-vis management.

Profile of Tatsutsugu Fujihara

April 1976	Joined The Dai-Ichi Kangyo Bank, Ltd.
March 2003	Executive Officer, General Manager of Corporate Department II of Mizuho Corporate Bank, Ltd. (until April 2003)
June 2003	Managing Executive Officer of Orient Corporation (until March 2005)
April 2005	Managing Executive Officer of Mizuho Corporate Bank, Ltd. (until March 2007)
June 2007	Director and President of Mizuho Marketing Experts Co., Ltd. (until March 2013)
June 2013	Representative Director and President of KSO Corporation
June 2014	Representative Director and Chairman of KSO Corporation
June 2016	Chairman and Executive Officer of KSO Corporation (until June 2018)
June 2016	Outside Director of Denka Company Limited (current position)

Directors

Directors (photo taken on July 8, 2019)

Shinsuke Yoshitaka

Chairman (Born February 1, 1951)

As a chemical manufacturer, the Company has a corporate philosophy of createing new value and contribute to social development. As Chairman of the Board of Directors, I will consistently take the perspective of all our stakeholders as I endeavor to ensure that we contribute to society through sound and fair management.

Manabu Yamamoto

Representative Director, President & CEO (Born March 31, 1956)

I will endeavor to promote our management plan, “Denka Value-Up,” while enhancing the specialization of our business structure and productivity in order for the Company to become a sound company that grows continuously even amidst rapidly changing markets and fulfills our social responsibility based on the SDGs as our guide.

Norihiro Shimizu

Director (Born October 2, 1955)

Through continuous innovation leveraging the comprehensive capabilities of the Group, I am committed to ensuring sustainable growth and improving corporate value by implementing business strategy from a medium- to long-term perspective.

Masaharu Suzuki

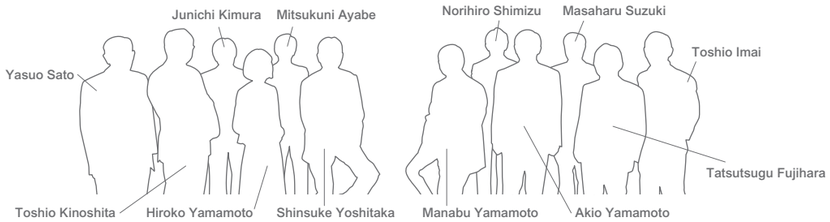
Director (Born December 11, 1955)

I will endeavor to continuously boost the corporate value of the Company by promoting ESG-oriented management from a global perspective.

Toshio Imai

Director (Born January 25, 1959)

As the business environment changes rapidly, I will consider the actions we should take to achieve “sustained growth” and “sound growth” in order to meet the expectations of our stakeholders regarding the future.



Akio Yamamoto

Outside Director (Born December 2, 1951)

As the business environment surrounding companies undergoes major changes, an age is approaching when all companies must reexamine their own raison d'être and mission. While earnestly taking on the Company’s future vision and a variety of issues, I have a renewed desire to contribute to the sound development of the Company and boost the corporate value of the Company.

Tatsutsugu Fujihara

Outside Director (Born November 23, 1952)

I intend to contribute to the creation of an organization that approaches matters with a fair stance, not affected by opinions of others easily, and has a diversity that enables such organization to purge itself of negative influences.

Mitsukuni Ayabe

Director (Audit Committee Member) (Born September 23, 1952)

I am committed to further improving the corporate value of the Company so that it becomes more trusted by stakeholders through audits and other operations conducted fairly and without bias.

Junichi Kimura

Director (Audit Committee Member) (Born August 12, 1958)

As our society is beset by frequent unexpected developments, I intend to prioritize the appropriateness of the Company’s risk management function with regard to various types of risk in my audits.

Yasuo Sato

Outside Director (Audit Committee Member) (Born September 30, 1942)

In a spirit of rationality and fairness, I am determined to contribute to the medium- to long-term growth of the Company and boosting its corporate value as I focus on further strengthening corporate governance and enhancing awareness of compliance as an Audit Committee member.

Toshio Kinoshita

Outside Director (Audit Committee Member) (Born April 12, 1949)

I will identify potential risks and contribute to enhancing corporate governance at the Company in order to ensure Denka’s sustainable growth and enhance corporate value over the medium- to long-term.

Hiroko Yamamoto

Outside Director (Audit Committee Member) (Born February 16, 1956)

I intend to contribute to enhancing corporate value while focusing on the fullest compliance and the effectiveness of corporate governance in a spirit of diversity.

Promoting Thorough Compliance

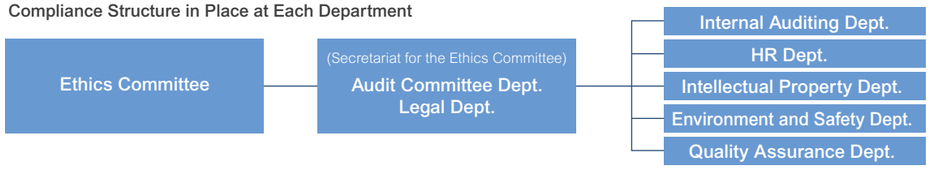
Basic Policy

The Denka Group Ethics Policy codifies Groupwide standards of conduct. To ensure that this policy guides the actions of all, the Ethics Committee chaired by the President oversees the overall compliance structure and reports to management on compliance matters. Moreover, under the initiative of the Ethics Committee, such key business units as the Legal, Internal Auditing, HR Strategy, Intellectual Property, Environment and Safety, and Quality Assurance departments ensure thorough legal compliance in their respective areas of specialty.

In October 2019, we also formulated the Standards of Business Conduct. Aiming to live up to the global standard, this move is intended to provide all Group officers and employees at home and abroad with clear and detailed guidelines on the actions they are expected to take in accordance with the provisions of the Denka Group Ethics Policy.

Furthermore, we employ a “legal hazard map” to analyze the significance of compliance-related risks that may affect each Group company with the aim of enhancing the effectiveness and efficiency of compliance structures being developed and operated within the Denka Group.

Compliance Structure in Place at Each Department



Utilization of the Legal Hazard Map and Strengthening of Compliance Structure

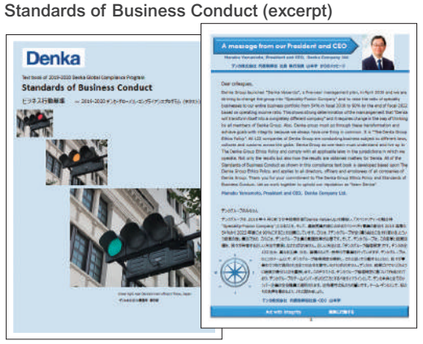
Having identified more than dozen legal fields closely associated with the Denka Group’s business operations, the Legal Department has analyzed the magnitude of compliance risk in each field and prepared a legal hazard map for each Group company. Employing this map, we provide compliance education in an effective manner consistent with the Denka Global Compliance Program, a Groupwide plan for ensuring thorough legal compliance, while strengthening our compliance structures via, for example, the development and review of Group Policies and other in-house rules applicable to all Group members as well as Denka’s Companywide rules.

Taking advantage of input from legal hazard maps, during fiscal 2019 we focused on implementing compliance education addressing topics associated with the Standards of Business Conduct and labor laws, targeting employees at sales offices and production bases as well as those at Denka Group companies at home and abroad. Currently, we are engaged in the development and review of in-house rules regarding information security and ICT governance intended to secure conformity with ISO 27001, an international standard for information security management.

Legal Fields in Which Denka Group Companies Must Maintain Acute Compliance Awareness and Examples of Typical Compliance-Related Misconduct Associated with These Fields

Labor laws (e.g. Labor Standards Act)	Unfair Competition Prevention Act	Foreign Exchange and Foreign Trade Act
•Excessive overtime without supervisor approval •Power harassment •The lack of a safe and hygienic working environment	•Illicit acquisition and use of another company’s trade secret •Leakage of a Denka trade secret for illicit use by other company	•Unlicensed export of goods named in the list of regulated items •The provision to non-residents of technologies named in the list of regulated technologies

Standards of Business Conduct (excerpt)



Compliance education


The United States


Singapore

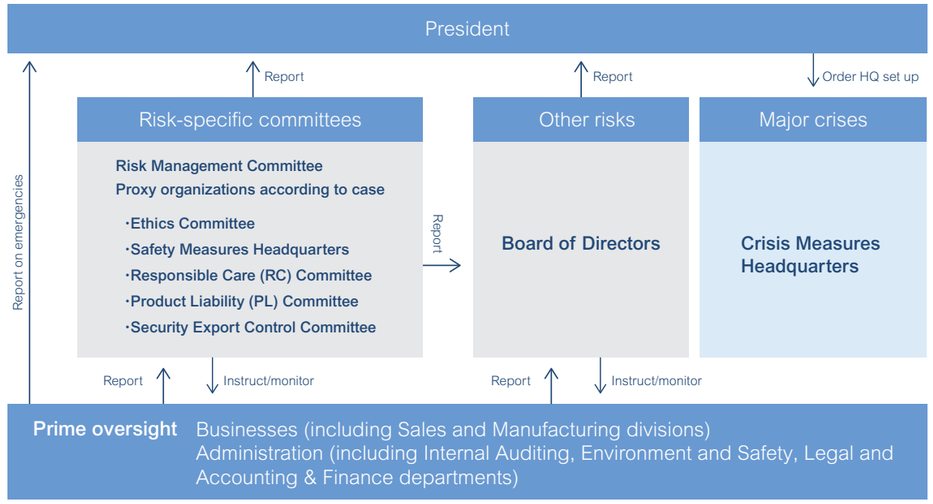

Vietnam


Japan

Risk Management

Basic Policy

To achieve the goals of the Denka Value-Up management plan, we aim to strengthen corporate governance and, to this end, strive to accurately assess the diverse and numerous risks arising from the Denka Group’s corporate activities, believing that minimizing damage arising from these risks is a matter of extreme importance. While risks inherent in specific operations are addressed by the pertinent business divisions, the Company also has in place dedicated departments tasked with addressing compliance, information security, environmental and occupational safety risks related to overall Denka Group operations. To this end, these departments implement employee education while monitoring risks in their areas of specialty. Furthermore, among risks related to the Group’s overall operations, product liability, export control and other key risks deemed particularly important are handled by dedicated committees.



Information Security

Striving to adapt to the times, the Denka Group is currently promoting the restructuring and updating of its in-house ICT-related rules in step with progress in the Denka Value-Up management plan and recent advances in ICT.

Denka defines informational assets as consisting of two components: business-related information and systems for managing and utilizing this information. As part of initiatives to ensure information security, the Denka Group is striving to establish Group policies that align with currently prevailing standards for corporate conduct in line with public expectations regarding the protection of informational assets. At the same time, the Group is promoting the development of rules that provide clear guidance for employees based on said policies.

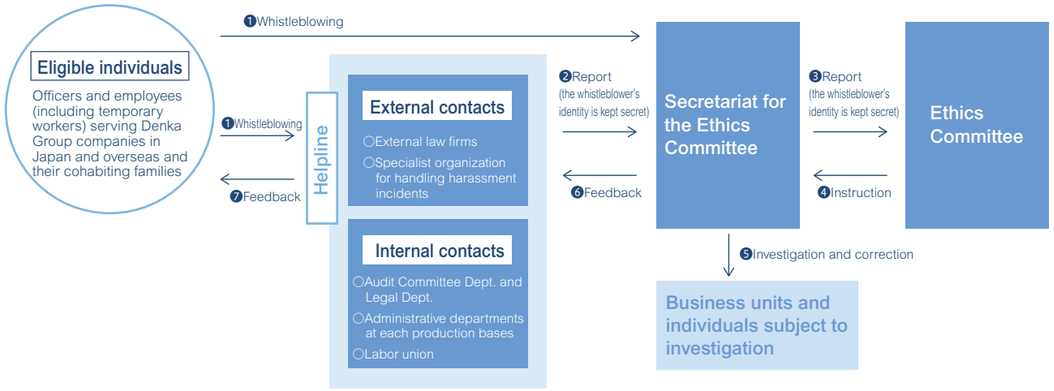
With the ongoing trend toward embracing novel working styles helping to popularize remote working, worksites are no longer limited to employers’ premises. This trend applies to the Denka Group as well, which is increasing opportunities for its employees to utilize informational assets, especially business-related digital information, via the use of off-premises mobile devices. In light of the growing volume of operations dependent on digital data, the Denka Group is developing rules for the management of digital documents to ensure information security while allowing employees to smoothly utilize such documents. Also, the Group is striving to realign its existing employee action standards regarding the use of information systems by giving due consideration to recent information security circumstances. Employee action standards and the rules discussed above are posted on the intranet portal to ensure that they are observed by all. Moreover, as part of human resource development, we are stepping up efforts to raise information security awareness by offering e-learning programs designed to deepen employee understanding of these topics.

Risk Management

Compliance Hotline System

In October 2018, Denka established rules on whistleblowing based on guidelines formulated by the Consumer Affairs Agency. In line with these rules, we exhaustively updated the Group's conventional compliance hotline system to create the Denka Group Helpline. To encourage the proactive use of this helpline, in fiscal 2018 we sent out a message from the President to all Denka Group officers and employees while distributing a handbook and displaying a poster at business sites to let them know about how to use it. In fiscal 2019, we stepped up efforts to raise employee awareness of the hotline via the intranet. In addition, we addressed topics related to the compliance hotline system in the course of employee education based on the Denka Global Compliance Program. Thanks to these efforts, the awareness of the hotline system among employees grew stronger, with the number of reports received via the system showing a remarkable increase. (For the trend in the number of reports, please visit the "ESG Information Site" of Denka's corporate website.)

Compliance Hotline System Flow

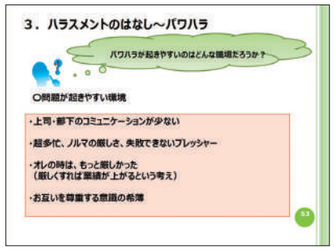


Response to Human Rights Violation Risk

We have been encouraging the "maintenance of favorable human relationships" in line with the Denka Group Ethics Policy. Accordingly, all Denka Group officers and employees are called upon to respect individual human rights. Moreover, the Standards of Business Conduct provide clear and detailed guidelines regarding what practices must be observed and what constitutes prohibited action with the aim of living up to our commitment to complying with labor laws, ensuring equal employment and career opportunities without discrimination, and preventing workplace harassment. In particular, these standards feature case studies of actual workplace incidents involving power harassment and sexual harassment being dealt with in a way conformant to guidelines issued by relevant ministries and government agencies. Thus, these standards include elaborative provisions designed to prevent harassment incidents from occurring within the Denka Group.

In fiscal 2019, we implemented employee education optimized in a way that takes advantage of input from legal hazard maps. Using case studies of power harassment and other incidents, we have thus raised the awareness of Denka Group members at home and abroad and offered them insights on preventive measures. We have also invited external lawyers to provide training sessions involving role-playing to raise the capabilities of employees in charge of in-house consultation regarding harassment incidents.

Excerpts from a textbook used for employee education on labor laws



Our Policies on the Prevention of Environmental Pollution

Denka is properly managing the volume of environmental load substances emitted from production facilities and R&D bases run by its Group companies while continuously working to reduce the emission of such substances. In addition to managing GHG emissions, the Group is striving to control emissions of sulfur oxide (SOx) and nitrogen oxide (NOx) from boilers and heating furnaces; substances emitted from production lines, including soot and dust; substances that affect biochemical oxygen demand (BOD) and chemical oxygen demand (COD); and substances regulated under the Pollutant Release and Transfer Register (PRTR) laws.

We strive to comply with relevant laws and national and municipal regulations as well as to upholding pollution control agreements with local authorities. Having installed wastewater treatment facilities, bag filters and other equipment to remove harmful substances, we are enforcing voluntary emission standards that are even more stringent than those mentioned above in the course of facility operations and maintenance.

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 initiated 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 around the world.

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

However, research undertaken by external epidemiologists has revealed that, after studying the health conditions of more than 12,000 people with work experience at multiple chloroprene monomer production sites, including more than 2,000 people who are ex-workers or active employees of the plant, the rate of fatalities due to cancer among the subject group was lower than average. The research thus concluded that no correlation between chloroprene monomer exposure and carcinogenic risk can be found. Furthermore, according to data publicized by the Louisiana Tumor Registry, region-specific carcinogenic risk in the location of the plant is not significantly different from the average risk for the entire state.

In addition to complying with chloroprene monomer emission standards stipulated by environment-related laws and regulations, DPE constantly strives to minimize emissions of substances and waste from its facilities in line with the Denka Group's policies on the reduction of environmental burdens.

Accordingly, DPE introduced new facilities intended to reduce emissions of chloroprene monomer even further, to this end executing a massive investment totaling more than US$35 million (approximately ¥4 billion). This investment resulted in an 85% reduction in the volume of chloroprene monomer emissions (fiscal 2019 results; based on a comparison with the fiscal 2014 level). In addition, DPE has requested the U.S. Environmental Protection Agency (EPA) to carry out a review of its chloroprene monomer toxicity assessment. The EPA responded by accepting DPE's suggestions regarding the incorporation of assessment methods based on the latest scientific evidence and is currently engaged in the reverification of its toxicity assessment. Looking ahead, Denka will continue to assist DPE in its efforts to remain a good neighbor for people living in communities in which it operates by protecting the environment, ensuring their well-being and working to reduce their anxieties.

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

*News releases dated June 19, 2019, February 14, 2020, June 8, 2020, June 19, 2020, August 7, 2020 and December 17, 2020 address related topics.

Initiatives to Reduce the Emissions of Fluorocarbons

In fiscal 2019, the volume of fluorocarbon emissions increased 54% year on year as leakage from the Omi Plant's air conditioning systems was in excess of the usual levels. We will step up daily inspections for these systems to prevent an increase in emission volume.

In response to the revised Act on Rational Use and Proper Management of Fluorocarbons that took effect in April 2020, Denka aims to fulfill its management responsibilities as a company in possession of equipment*1 regulated by said act. To this end, we are steadily implementing facility maintenance and inspections while systematically executing facility renewal. We also introduced refrigerants with a smaller global warming potential in an effort to remove inherent risks arising from the use of fluorocarbons. In April 1, 2020, we initiated the use of the Refrigerant Management System (RaMS) developed by the Japan Refrigerants and Environment Conservation Organization at all of Denka's business sites. In addition to complying with relevant laws and regulations, we are thus stepping up initiatives to curb global warming.

The volume of fluorocarbon emissions from Denka's business sites (six plants and one R&D base)

FY	2015	2016	2017	2018	2019
Emission volume	812t-CO_2*2	448t-CO_2	440t-CO_2	415t-CO_2	640t-CO_2

*1 Class I Specified Products defined under said act (air conditioners, refrigerators and freezers for industrial use)
*2 Representing the carbon dioxide equivalent

Number of units of regulated equipment possessed by Denka's business sites and registered with RaMS (a total of seven plants, including the Gosen Plant, and one R&D base)

Category	Industrial-use air conditioners	Industrial-use refrigerators or freezers	Total
Number of units	3,606	2,094	5,700

As of June 2020

Consolidated Financial Statements

Denka's 11 Year-Financial Summary

	Fiscal 2009	Fiscal 2010	Fiscal 2011	Fiscal 2012	Fiscal 2013	Fiscal 2014	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019
Summary Statement of Income (Millions of yen)											
Net sales	323,875	357,893	364,712	341,645	376,809	383,978	369,853	362,647	395,629	413,128	380,803
Operating income	21,655	24,618	20,713	18,817	21,230	24,047	30,634	25,844	33,652	34,228	31,587
Ordinary profit	16,888	23,052	18,996	17,824	20,604	24,287	27,022	23,158	31,499	32,811	30,034
Profit attributable to owners of parent	10,474	14,355	11,330	11,255	13,573	19,021	19,472	18,145	23,035	25,046	22,703
Equity in earnings (losses) of affiliates	223	1,189	966	530	550	950	1,097	568	1,105	1,384	1,170
Financial Position (Millions of yen)											
Current assets	138,360	143,352	153,637	158,595	164,747	170,497	161,876	168,902	184,129	190,730	198,452
Total assets	400,407	402,046	402,552	415,356	431,347	445,569	443,864	454,944	473,799	483,827	501,448
Current liabilities	150,689	153,410	160,676	170,752	163,645	160,101	147,537	144,190	158,043	154,047	160,807
Net assets	160,316	168,182	172,737	180,709	189,516	210,798	216,071	227,487	242,780	250,481	254,014
Interest-bearing debt	120,576	114,562	118,049	114,241	120,669	122,536	124,596	113,748	108,269	112,134	134,340
Cash Flows(Millions of yen)											
Cash flows from operating activities	46,418	33,780	28,521	40,215	27,245	35,557	44,014	39,557	48,776	32,660	41,954
Cash flows from investing activities	(28,377)	(23,763)	(22,363)	(25,864)	(26,693)	(27,449)	(34,979)	(22,258)	(29,298)	(26,176)	(36,303)
Cash flows from financing activities	(17,262)	(10,554)	(4,050)	(12,784)	(3,327)	(7,437)	(7,348)	(19,319)	(15,858)	(8,408)	9,544
Cash and cash equivalents at end of year	6,815	6,160	8,207	10,680	8,244	9,157	11,813	10,174	14,101	13,889	29,170
Per share information(Yen)											
Dividends per share*	40.0	50.0	50.0	50.0	50.0	62.5	65.0	70.0	105.0	120.0	125.0
Profit per share	106.67	146.20	116.11	118.13	145.16	207.40	214.71	205.05	261.80	286.18	262.62
Net assets per share	1,607.32	1,686.73	1,768.20	1,884.96	2,013.84	2,279.70	2,366.74	2,526.42	2,727.94	2,839.16	2,906.95
Financial Indices (%)											
Operating income ratio	6.7	6.9	5.7	5.5	5.6	6.3	8.3	7.1	8.5	8.3	8.3
ROE	6.9	8.9	6.7	6.4	7.4	9.6	9.3	8.3	10.0	10.3	9.1
ROA	4.3	5.8	4.7	4.4	4.9	5.5	6.1	5.2	6.8	6.9	6.1
Shareholders' equity ratio	39.4	41.2	42.3	43.1	43.5	46.9	47.7	49.1	50.5	51.0	50.0
Other											
Capital investment (millions of yen)	26,928	21,325	22,878	26,964	25,735	21,300	21,196	25,731	22,710	32,745	34,205
Depreciation and amortization (millions of yen)	20,932	22,292	23,192	21,585	22,254	23,032	23,242	24,359	24,599	22,946	22,482
R&D expenses (millions of yen)	9,615	9,819	10,639	10,605	10,828	11,127	11,787	13,026	13,868	14,562	15,031
Number of employees at end of year	4,742	4,768	4,921	5,206	5,249	5,309	5,788	5,816	5,944	6,133	6,316

Management Plans

Denka 100 (fiscal 2007 – fiscal 2012) | **Resumption of Denka 100** (fiscal 2013 – fiscal 2017) | ***Denka Value-Up***

Denka's main achievements

- Established Denka Chemicals Holdings Asia Pacific Pte Ltd.
- Established the Shanghai Representative Office
- Completed the Denka Innovation Center main building
- Celebrated the centennial of the Company's founding
- Changed company name
- Established Denka Performance Elastomer LLC
- Hit a record high in profit
- Achieved record-high profit for a second consecutive year

Environmental developments

- Recessions triggered by Lehman Brothers bankruptcy
- European debt crisis
- Great East Japan Earthquake
- Consumption tax hike (to 8%)
- Signing of the Paris Agreement
- Inauguration of U.S. Trump administration
- Consumption tax hike (to 10%)
- U.S.-China trade tension
- Novel coronavirus pandemic

Note: Figures for fiscal 2017 and later 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).

* The Company 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 performances in each fiscal year, the value of dividends per share for preceding fiscal years has been retrospectively converted to reflect the value of dividends had the reverse share split already been in effect. In addition, dividends per share for fiscal 2014 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 per share (¥2.0 per share prior to conversion).

Consolidated Balance Sheets

(Millions of yen)

Assets	Fiscal 2018 (March31,2019)	Fiscal 2019 (March31,2020)
Current assets	**190,730**	**198,452**
Cash and deposits	13,902	29,172
Notes and accounts receivable—trade	95,780	85,637
Merchandise and finished goods	47,455	52,159
Work in process	4,389	4,037
Raw materials and supplies	19,911	19,582
Other	9,802	8,156
Allowance for doubtful accounts	(511)	(293)
Noncurrent assets	**293,097**	**302,995**
Property, plant and equipment	**218,677**	**231,815**
Buildings	40,497	40,733
Structures	21,895	21,770
Machinery and equipment	70,359	69,098
Vehicles	796	691
Tools, furniture and fixtures	3,820	4,146
Land	63,366	63,370
Lease assets	307	2,260
Construction in progress	17,634	29,745
Intangible assets	**12,415**	**11,808**
Software	978	1,002
Goodwill	8,312	7,544
Right of using patent	3,124	3,261
Investments and other assets	**62,004**	**59,371**
Investment securities	55,028	51,200
Long-term loans receivable	236	178
Long-term prepaid expenses	1,699	2,423
Deferred tax assets	2,736	3,160
Other	2,422	2,526
Allowance for doubtful accounts	(118)	(117)
Total assets	**483,827**	**501,448**

Liabilities	Fiscal 2018 (March31,2019)	Fiscal 2019 (March31,2020)
Current liabilities	**154,047**	**160,807**
Notes and accounts payable—trade	52,924	43,005
Short-term loans payable	43,101	51,929
Commercial paper	2,000	9,000
Current portion of long-term loans payable	5,062	10,010
Current portion of bonds	5,000	—
Accounts payable—other	18,504	18,079
Income taxes payable	3,010	3,550
Accrued consumption taxes	487	1,431
Accrued expenses	10,881	11,194
Provision for bonuses	3,122	2,992
Other	9,953	9,613
Noncurrent liabilities	**79,298**	**86,626**
Bonds payable	22,000	37,000
Long-term loans payable	34,969	26,400
Deferred tax liabilities	4,961	3,245
Deferred tax liabilities for land revaluation	8,403	8,403
Net defined benefit liability	7,269	7,874
Provision for stock benefits	44	58
Other	1,650	3,644
Total liabilities	**233,346**	**247,434**
Net assets		
Shareholders' equity	**225,498**	**235,628**
Capital stock	36,998	36,998
Capital surplus	49,353	49,365
Retained earnings	144,638	156,857
Treasury stock	(5,492)	(7,593)
Accumulated other comprehensive income	**21,362**	**15,092**
Valuation difference on available-for-sale securities	15,182	10,691
Deferred gains or losses on hedges	(345)	(551)
Revaluation reserve for land	10,260	10,259
Foreign currency translation adjustment	(120)	(876)
Remeasurements of defined benefit plans	(3,614)	(4,429)
Non-controlling interests	**3,620**	**3,294**
Total net assets	**250,481**	**254,014**
Total	**483,827**	**501,448**

Changes in Disclosure Methods

At the beginning of fiscal 2019, Denka adopted "Partial Amendments to Accounting Standard for Tax Effect Accounting" (ASBJ Statement No. 28, dated February 16, 2018). In line with this standard, the Company revised relevant disclosure methods, with deferred tax assets being classified under investments and other assets, and deferred tax liabilities being classified under noncurrent liabilities.

The adoption of these amendments resulted in changes in consolidated balance sheet items for the previous fiscal year, namely, a ¥2,338 million decrease in deferred tax assets classified under current assets, a ¥1,052 million increase in deferred tax assets classified under investments and other assets and a ¥1,286 million decrease in deferred tax liabilities classified under noncurrent liabilities.

Moreover, Denka has offset its deferred tax assets and liabilities as a single taxable entity. This resulted in a ¥1,286 million decrease from the end of the previous fiscal year.

Consolidated Statements of Income

(Millions of yen)

	Fiscal 2018 (From April 1, 2018 to March 31, 2019)		Fiscal 2019 (From April 1, 2019 to March 31, 2020)	
Net sales		413,128		380,803
Cost of sales		310,839		281,465
Gross profit		102,289		99,338
Selling, general, and administrative expenses		68,060		67,750
Operating income		34,228		31,587
Non-operating income				
Interest and dividend income	2,313		1,552	
Equity in earnings of affiliates	1,384		1,170	
Other	495	4,193	822	3,545
Non-operating expenses				
Interest expenses	762		866	
Other	4,849	5,611	4,231	5,098
Ordinary income		32,811		30,034
Extraordinary income				
Loss on sales of investment securities	689	689	280	280
Extraordinary loss				
Loss on liquidation of business	389		940	
Loss on disaster	718		249	
Other	—	1,108	113	1,303
Income before income taxes		32,392		29,011
Income taxes—current	6,480		6,344	
Income taxes—deferred	978	7,459	131	6,475
Profit		24,933		22,535
Profit (loss) attributable to non-controlling interests		(112)		(167)
Profit attributable to owners of parent		25,046		22,703

Consolidated Statement of Changes in Net Assets

From April 1, 2019 to March 31, 2020 (Millions of yen)

	Shareholders' equity				
	Capital stock	Capital surplus	Retained earnings	Treasury stock	Total shareholders' equity
Balance at beginning of the fiscal year	36,998	49,353	144,638	(5,492)	225,498
Cumulative effect of changes in accounting policies			(306)		(306)
Restated balance	36,998	49,353	144,332	(5,492)	225,192
Changes of items during the fiscal year					
Dividends from surplus			(10,396)		(10,396)
Profit attributable to owners of parent			22,703		22,703
Change of scope of consolidation			217		217
Change in ownership interest of parent due to transactions with non-controlling interest		11			11
Purchase of treasury stock				(2,108)	(2,108)
Disposal of treasury stock		(0)		7	7
Reversal of revaluation reserve for land			0		0
Net changes of items other than shareholders' equity					—
Total changes of items during the fiscal year	—	11	12,525	(2,101)	10,435
Balance at end of the fiscal year	36,998	49,365	156,857	(7,593)	235,628

	Accumulated other comprehensive income						Non-controlling interests	Total net assets
	Valuation difference on available-for-sale securities	Deferred gains or losses on hedges	Revaluation reserve for land	Foreign currency translation adjustment	Remeasurements of defined benefit plans	Total valuation and translation adjustments		
Balance at beginning of the fiscal year	15,182	(345)	10,260	(120)	(3,614)	21,362	3,620	250,481
Cumulative effect of changes in accounting policies						—		(306)
Restated balance	15,182	(345)	10,260	(120)	(3,614)	21,362	3,620	250,175
Changes of items during the fiscal year								
Dividends from surplus						—		(10,396)
Quarterly profit attributable to owners of parent						—		22,703
Change of scope of consolidation						—		217
Change in ownership interest of parent due to transactions with non-controlling interests						—		11
Purchase of treasury stock						—		(2,108)
Disposal of treasury stock						—		7
Reversal of revaluation reserve for land						—		0
Net changes of items other than shareholders' equity	(4,491)	(206)	(0)	(755)	(815)	(6,270)	(326)	(6,596)
Total changes of items during the fiscal year	(4,491)	(206)	(0)	(755)	(815)	(6,270)	(326)	3,839
Balance at end of the fiscal year	10,691	(551)	10,259	(876)	(4,429)	15,092	3,294	254,014

Consolidated Statements of Cash Flows

	Fiscal 2018 (From April 1, 2018 to March 31, 2019)	Fiscal 2019 (From April 1, 2019 to March 31, 2020)
Cash flows from operating activities		
Income before income taxes	32,392	29,011
Depreciation	22,434	21,972
Amortization of goodwill	511	510
Increase (decrease) in provision for bonuses	123	(130)
Increase (decrease) in net defined benefit liabilities	(814)	(570)
Increase (decrease) in allowance for doubtful accounts	28	(218)
Interest and dividend income	(2,313)	(1,552)
Interest expenses	762	866
(Gains) losses on equity in affiliates	(1,384)	(1,170)
(Gains) losses on valuation of investment securities	211	–
(Gains) losses on sales of investments in securities	(689)	(280)
(Gains) losses on sales and disposals of property, plant and equipment	412	202
Losses on business restructuring	389	940
(Increase) decrease in notes and accounts receivable	(3,036)	9,769
(Increase) decrease in inventories	(5,501)	(4,513)
Increase (decrease) in notes and accounts payable	(2,132)	(9,609)
Other	(1,674)	763
Subtotal	39,720	45,991
Interest and dividends received	3,128	2,627
Interest paid	(767)	(851)
Income taxes (paid) refunded	(9,420)	(5,812)
Net cash provided by (used in) operating activities	32,660	41,954
Cash flows from investing activities		
Purchases of property, plant and equipment	(27,273)	(33,062)
Proceeds from sale of property, plant and equipment	50	25
Purchase of intangible assets	(185)	(777)
Purchase of investment securities	(58)	(2,738)
Proceeds from sale of investment securities	946	342
Purchase of investments in subsidiaries	(92)	(31)
Other	435	(61)
Net cash provided by (used in) investing activities	(26,176)	(36,303)
Cash flows from financing activities		
Increase (decrease) in short-term loans payable	4,148	16,007
Proceeds from long-term loans payable	496	1,439
Repayment of long-term loans payable	(616)	(5,063)
Cash dividends paid by the Company	(10,082)	(10,396)
Proceeds from issuance of bonds	15,000	15,000
Payment for redemption of bonds	(15,000)	(5,000)
Cash dividends paid to non-controlling interests	(44)	(74)
Payment for purchase of treasury stock	(2,311)	(2,108)
Other	2	(259)
Net cash provided by (used in) financing activities	(8,408)	9,544
Effect of exchange rate changes on cash and cash equivalents	(252)	(123)
Net increase (decrease) in cash and cash equivalents	(2,176)	15,071
Cash and cash equivalents at beginning of year	14,101	13,889
Increase (decrease) in cash and cash equivalents from newly consolidated subsidiaries	1,964	209
Cash and cash equivalents at end of year	13,889	29,170

Company Overview

(as of March 31, 2020)

Name	Denka Company Limited
Head Office	Nihonbashi Mitsui Tower, 1-1, Nihonbashi-Muromachi 2-chome, Chuo-ku, Tokyo 103-8338, JAPAN TEL: +81-3-5290-5055 FAX: +81-3-5290-5059
Established	May 1, 1915
Paid-in Capital	¥36,998 million
Main business	• **Elastomers & Performance Plastics** (Chloroprene rubber, styrene monomer, polystyrene resin, ABS resin, CLEAREN, heat-resistant resin, transparent resin, POVAL, etc.) • **Infrastructure & Social Solutions** (Cement, special cement additives, fertilizers, calcium carbide, fire resistant materials, environmental materials, etc.) • **Electronics & Innovative Products** (Fused silica, electronic circuit substrates, fine ceramics, electronic packaging materials and acetylene black, etc.) • **Living & Environment Products** (Food packaging materials, housing materials, industrial tapes, synthetic fiber for wigs, etc.) • **Life Innovation** (Joint function improvers, vaccines, and diagnostic reagents, etc.) • **Others** (Plant engineering etc.)
Employees	6,316 (consolidated basis); 3,349 (non-consolidated basis)

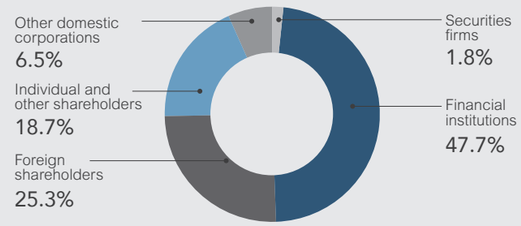
Stock Information

(as of March 31, 2020)

Shareholder name	Number of shares held (thousand shares)	Percentage of shares held (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	101,817	11.80
Japan Trustee Service Bank, Ltd. (Trust Account)	81,008	9.39
Trust & Custody Services Bank, Ltd. (Mizuho Corporate Bank, Ltd. Retirement Benefit Trust Account re-entrusted by Mizuho Trust & Banking Co., 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
STATE STREET BANK AND TRUST COMPANY 505001	16,202	1.88
JP MORGAN CHASE BANK 385151	15,886	1.84
Japan Trustee Service Bank, Ltd. (Trust Account 5)	14,602	1.69
Mitsui Sumitomo Insurance Company, Limited	13,832	1.60
The Nomura Trust and Banking Co., Ltd. (Investment Trust Account)	13,336	1.55

Note: Percentage of shares held is calculated after excluding treasury stock.

Composition of shareholders by category



Global Network

(as of April 1, 2020)