DKS REPORT 2019

DKS Co. Ltd.

Chemistry provides a solution.

DKS Credo Contributing to the nation and society through industry

DKS Mottoes Quality First, Cost Reduction, R&D Efforts

DKS Group Logo

The DKS Group logo symbolizes “Act for a Leap,” our step for globalization.
It describes the bridge for growth toward “Challenge to 1000.”

DKS Report 2019 Editorial Policy

In 2016, the DKS Group began to publish its annual report (DKS Report), which added information about the Company's finances and management strategy to what had been in its Environmental and Social Report. From 2017, we referred to the International Integrated Reporting Framework promoted by the International Integrated Reporting Council (IIRC).

We are continuously publishing an English-language edition. As our business activities become increasingly international in nature, we aim to communicate to all our stakeholders including those outside Japan. Starting with the disclosure of environmental, social and governance (ESG), and nonfinancial information associated with DKS's sustainable growth, we will also convey management's vision, business results, growth strategy, capital policy and other information.

In this Report, by visualizing those "invisible assets" that raise corporate value, we attempt to describe the Company's current conditions and its journey to the future, so as to be able to inform the readers of the creation of value across the short, medium and long terms. Looking to the future, we will use the DKS Report as a communication tool with all our stakeholders.

Please refer to our official website for detailed information about the financial and nonfinancial information of the DKS Group.

Organizations Covered by this Report

DKS Co. Ltd. ("DKS" or "the Company") and Group companies (collectively "the DKS Group")

Period Covered by this Report

In principle, this Report contains our activities and data during FY2018 (from April 1, 2018, to March 31, 2019). The data on the Industrial Accident Severity Rate (ASR) and the Industrial Accident Frequency Rate (AFR) were obtained from January to December 2018.

Reference Guidelines

International Integrated Reporting Framework by the International Integrated Reporting Council (IIRC), "Environmental Reporting Guideline 2012" by the Ministry of the Environment, "Environmental Accounting Guideline 2005" by the Ministry of the Environment, "Environmental Accounting Guideline for Chemical Industries (November 2003)" by the Japan Chemical Industry Association (JCIA)

Posted on the Website

The Emission of Notification Substances under the PRTR Law in FY2018
Transition of the Environmental Impact at Branches and Yokkaichi Chemical
Safety Securement and Disaster Prevention

【Forward-Looking Statements】 Statements contained in this report regarding the plans, projections and strategies of DKS that are not historical fact constitute forward-looking statements about future financial results and are subject to risks and uncertainties. As such, actual results might differ significantly from these forward-looking statements due to changes in various external environmental factors. Consequently, DKS hopes for your understanding as it does not guarantee the certainty of such forward-looking statements.

CONTENTS

Advantages and Strengths of DKS Businesses

DKS products are used across a broad spectrum of industrial fields, which allows the Company to quickly catch on to the trends of the times and the needs of customers, as well as to deliver rapid solutions to problems.

Utilizing the range of expertise accumulated since its founding and its diverse lineup of product groups, the Company's strengths go beyond simply providing materials. Instead, the Company's strengths also lie in its technological capabilities, which allow it to customize the function and performance of products in line with customer requirements and to make proposals based on the ideal product combination.

Solutions to Society's Challenges

- Environmental conservation and climate change response
- Realization of safe, secure lifestyles
- Realization of an abundant, convenient society
- Contribution to technological innovation

Chemistry provides a solution

Functional Chemicals

We provide solutions for the individual needs of various industries by proposing and creating additional value based on our chemical technology-derived substances/material technologies (detergents, emulsifiers, dispersants, thickeners, foaming agents).

Plastic Materials

We provide plastic additives and resin materials indispensable for various plastics that have remarkable characteristics not found in natural materials (radcure monomers/oligomers, flame retardants, antistatic agents, lubricants, anti-clouding agents, antioxidants).

DKS's Five Segments

Surfactants

We have provided highly functional surfactants since our foundation in 1909.

Amenity Materials

We provide materials and application technologies to add comfort in daily living environments.

Polyurethane Materials

We provide industrial materials and polyurethane materials (paints, adhesives, civil engineering and construction materials and electric insulation materials).

Functional Materials

We provide flame retardants, radcure resins, waterborne polyurethanes, etc., for applications essential to home appliances and daily life.

Electronic Device Materials

We provide ceramic materials, conductive pastes, etc., for applications in home appliances and electronic components.

DKS's Three Strengths

A 100-Year History and Technological Capabilities that "Respond" to the Times

Since its founding, the Company has employed its technological capabilities to solve issues faced by corporations and society. While perfecting its technologies for formulating, synthesizing and evaluating materials, the Company also established itself as a leader in industrial chemicals.

Broad Customer Base of Inspiring/Inspired Partners

The Company has established a foundation of partners (customers) who anticipate the needs of the final consumer, inspire and are inspired by new approaches, and with whom the Company can cooperate.

Flexible Combinations Based on Diverse Product Groups

By applying its expertise in a broad range of industrial fields and combining its diverse product groups, the Company proposes added value tailored to its customers.

DKS Group Products Around Us

DKS Group products support a variety of products used in our daily life.

Oil spill treatment agents

Feed binders

Rock hardening agents

Waterproof roofing materials

Conductive pastes for solar batteries

Precision cleaning agents

Optical fiber connectors

Sealants for electric insulation

Building reinforcing agents

Silicon wafer detergents

Food additives
Health supplements

Coatings for building materials and furniture

Shampoos

Surface modifiers
Flame retardants

IT & electronic materials

The History of *Chemistry Provides*

Industry Events

1900s

With the advent of World War I, the spinning industry undergoes dramatic growth. Textile goods exceed 50% of Japanese exports.

Founding to Establishment of Business Base

1909 SILKREELER cocoon unwinding agent (chemical agents for spinning)

1915 Gembu Marseille Soap (industrial soap for textile)

Cocoon unwinding agents were developed at the start of the 1900s to address the need for a method to spin waste cocoons while leaving as much of the sericin in place as possible, which had been a challenge for the spinning industry.

Following the start of World War I, the Company introduced Gembu Marseille Soap, the first industrial soap for textiles made in Japan, and supported the development of the textile industry.

Trademarks of the Company
(from left: Seiryu, Suzaku, Byakko and Gembu)

1930s–1950s

Following World War I, the industry undergoes a period of modernization, during which time the textile industry sees an accelerating shift from natural fibers to synthetic alternatives.

Expands Business Scope and Modernizes Operations

1934 MONOGEN higher alcohol-based detergent

1950 CELLOGEN synthetic thickener

Along with the development of the textile industry, the Company developed many types of soaps and textile oil agents, thereby establishing its position as a textile oil agent manufacturer.

During this period, the Company developed the nonionic surfactant NOIGEN, the cationic surfactant CATIOGEN and various progenitors for other surfactants, setting the stage for its rise to the top of the industry.

Main products of this time

1960s–1970s

Upon entering Japan's period of rapid economic growth, the petrochemical industry begins to transition to domestic production and stronger international competitiveness.

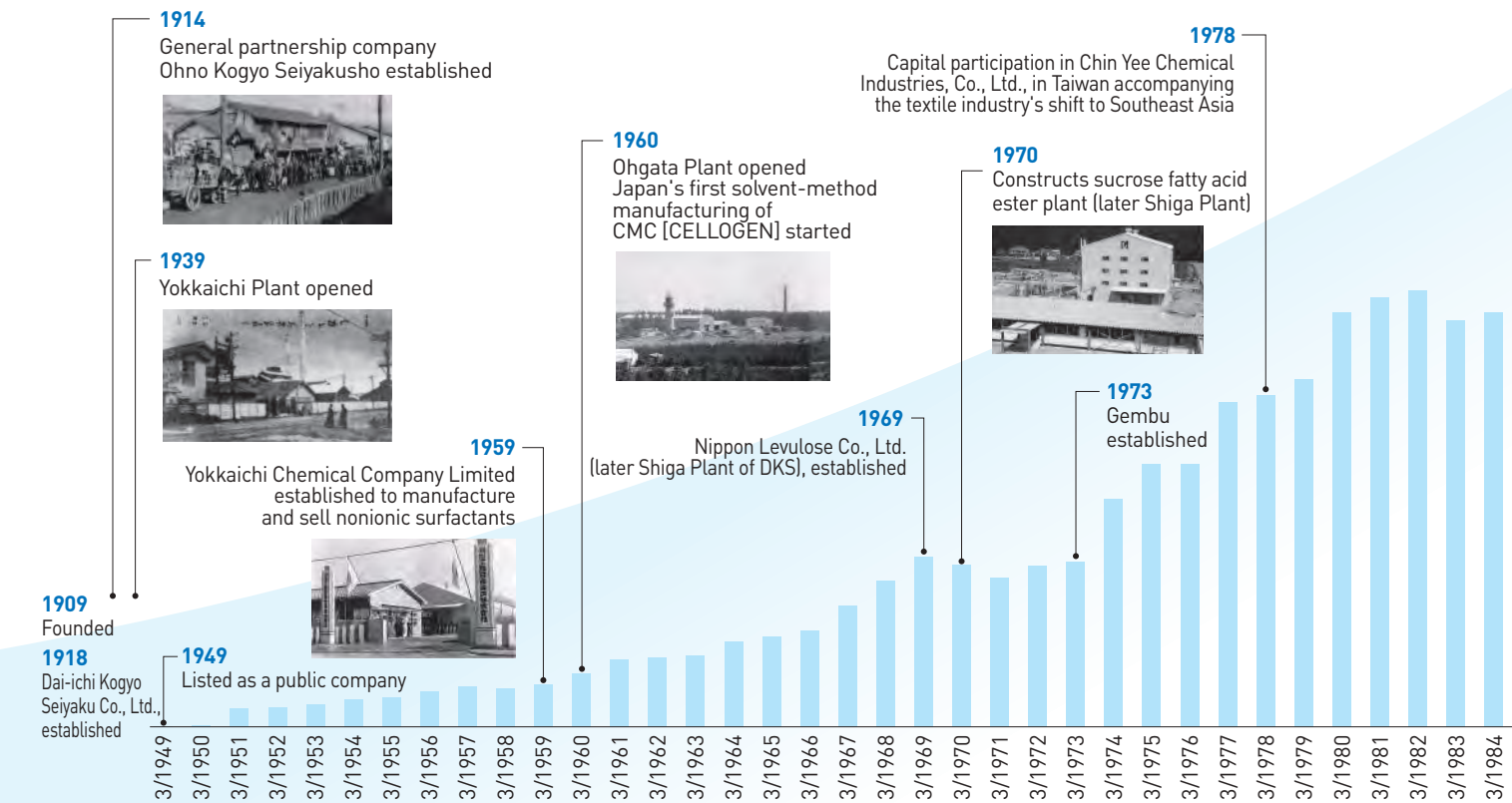
Strengthening and Renaissance

1969 PYROGUARD flame retardant for plastics

1970 DK ESTER food emulsifier

Against the backdrop of intensifying price competition in industrial fields, the Company expanded the scope of and diversified its industrial products. In anticipation of the future potential of the polyurethane market—positioned as a downstream sector within the petrochemical industry—the Company commenced its polyether business. Moreover, the Company launched one business after another that would serve as a foundation for the future, including flame retardants and sucrose fatty acid esters.

DK ESTER emulsifier for food



a Solution

1980s–1990s

Following the oil shocks of the 1970s, the industry transitions to high-value-added products. In the 1990s, greater interest is placed on environmental consideration and safety, which accelerates the greater functionalization of existing materials.

2000s

Japan's chemical industry begins to see the development of high functional sectors that aggressively create and deliver added value to society.

Rebuilds Operations and DKS Rebirth

1981 NEW FRONTIER UV/EB-curable monomers and oligomers

1982 SUPERFLEX waterborne polyurethanes

1990 EIMFLEX polyurethane

1992 HITENOL polymerizable surfactant

In the transition to high-value-added products, the Company enhanced its research and development in the priority areas of "Resources and Energy," "Electronics and IT," "Food, Pharmaceuticals and Cosmetics" and new materials. The Company developed various highly functional surfactants and polyurethane products.

In aiming to become a leader in highly functional chemicals, the Company began collaborating with other industries as a way of addressing new needs. Moreover, the Company developed nonionic surfactants with a low environmental impact in collaboration with an overseas manufacturer.

Qualitative Change and Second Renaissance

2005 ELEXCEL IL ionic liquid

2013 RHEOCRYSTA cellulose nanofibers

In establishing electronic and IT materials as the next generation of business pillars that will serve as the foundation for future growth, the Company began to take steps to transition from a traditional surfactant company to a leading industrial chemical supplier. In 2015, the Company completed construction of the Kasumi Plant at its Yokkaichi Branch, which is intended to serve as the core location for corporate value creation.

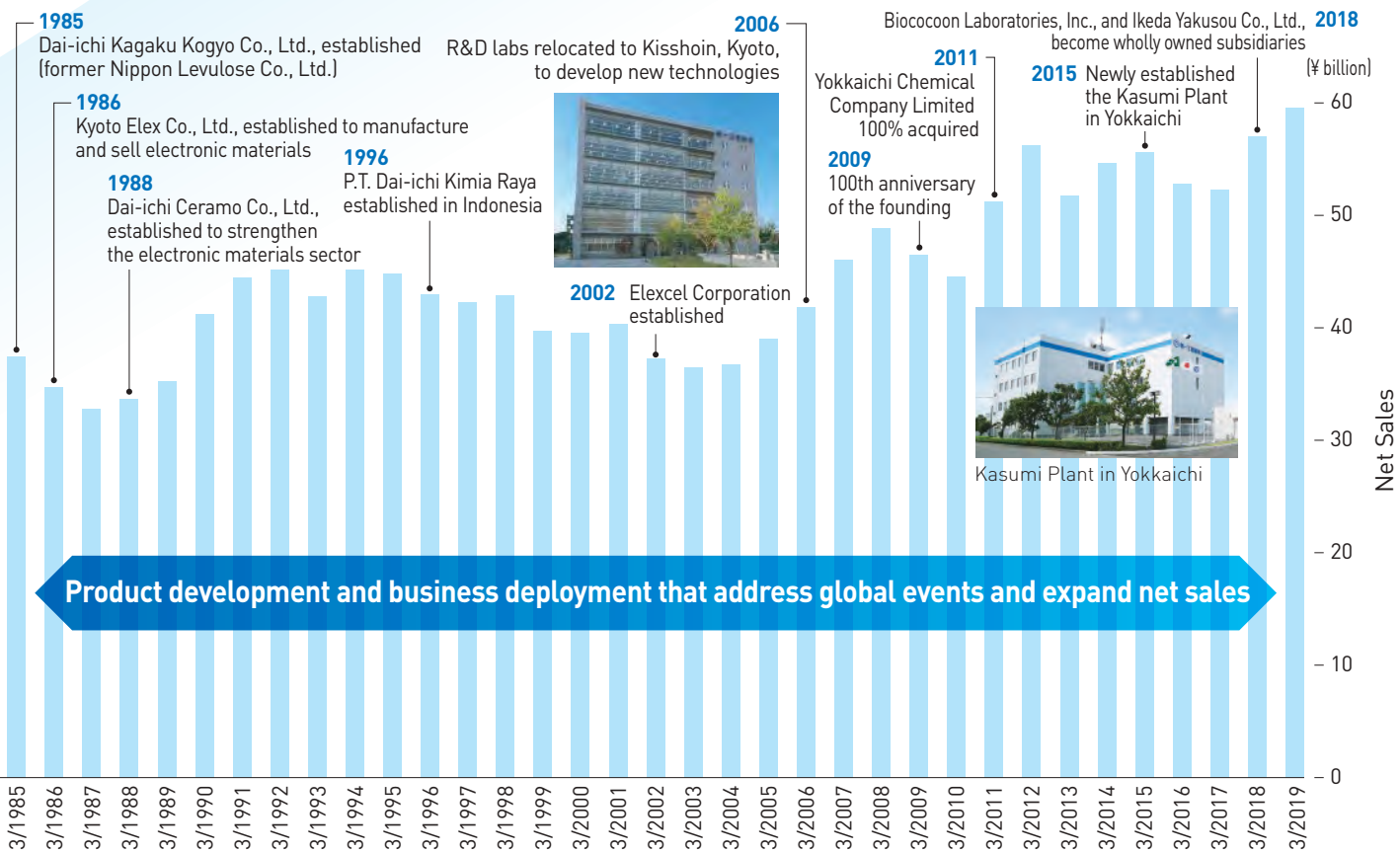
ELEXCEL IL ionic liquid

Full-Scale Shift to DREAM Businesses

2018 I. Japonica-Bombyx Fungus dietary supplement
Sudachin citrus sudachi peel extract powder

With its full-scale entry into the life sciences business in 2018, the Company acquired Biococoon Laboratories, Inc., and Ikeda Yakusou Co., Ltd., as wholly owned subsidiaries. As an initiative that links achieving healthy longevity and revitalizing communities, the life sciences business has, along with the environment/energy and electronics/IT fields, become part of the foundation on which the Company is focused for creating a better future.

I. Japonica-Bombyx Fungus and Sudachin



Value Creation Process of the DKS Group

Based on its technologies and trust accumulated over the past 100 years, the DKS Group applies originality and imagination to limited resources to deliver materials that enrich our way of life.

Principal Management Resources

(Results for the fiscal year ended March 2019)

Manufacturing capital

Manufacturing bases: **13** (includes three overseas)
Raw materials used: Petroleum, coal, ore minerals, plants, biological materials

Intellectual capital

Patents held: **961**
(of which held overseas: 453)

Human capital

Employees (consolidated): **985**
(of which global employees: 213)

Financial capital

Net assets: **¥33,591** million
Interest-bearing debt: **¥23,466** million

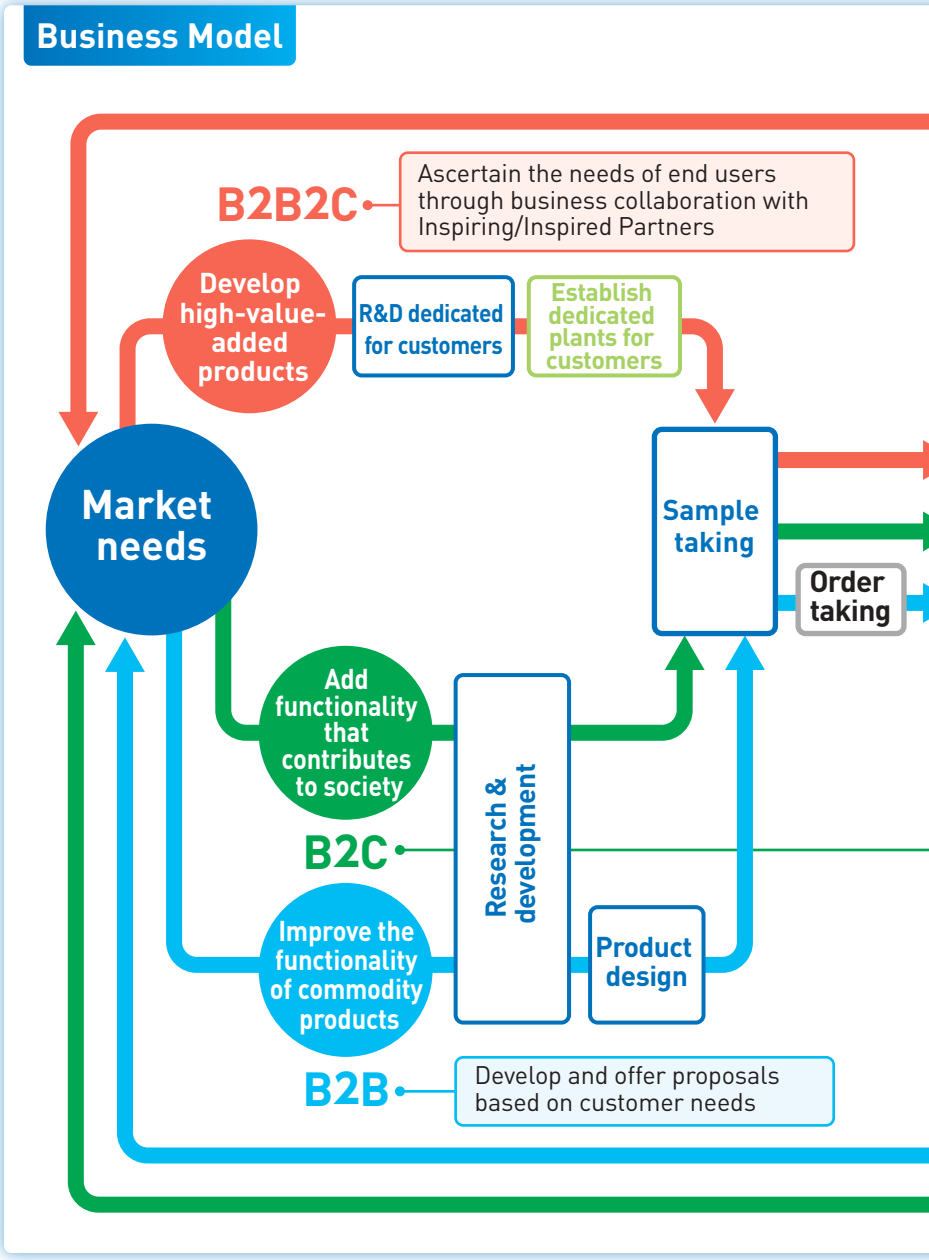
Social capital

Primary agencies (Zenkoku Ichi-Ko Kai): **34**

Natural capital

Energy consumption: **25,900** L/year
Water consumption: **4,392,000** m³/year

Business Model



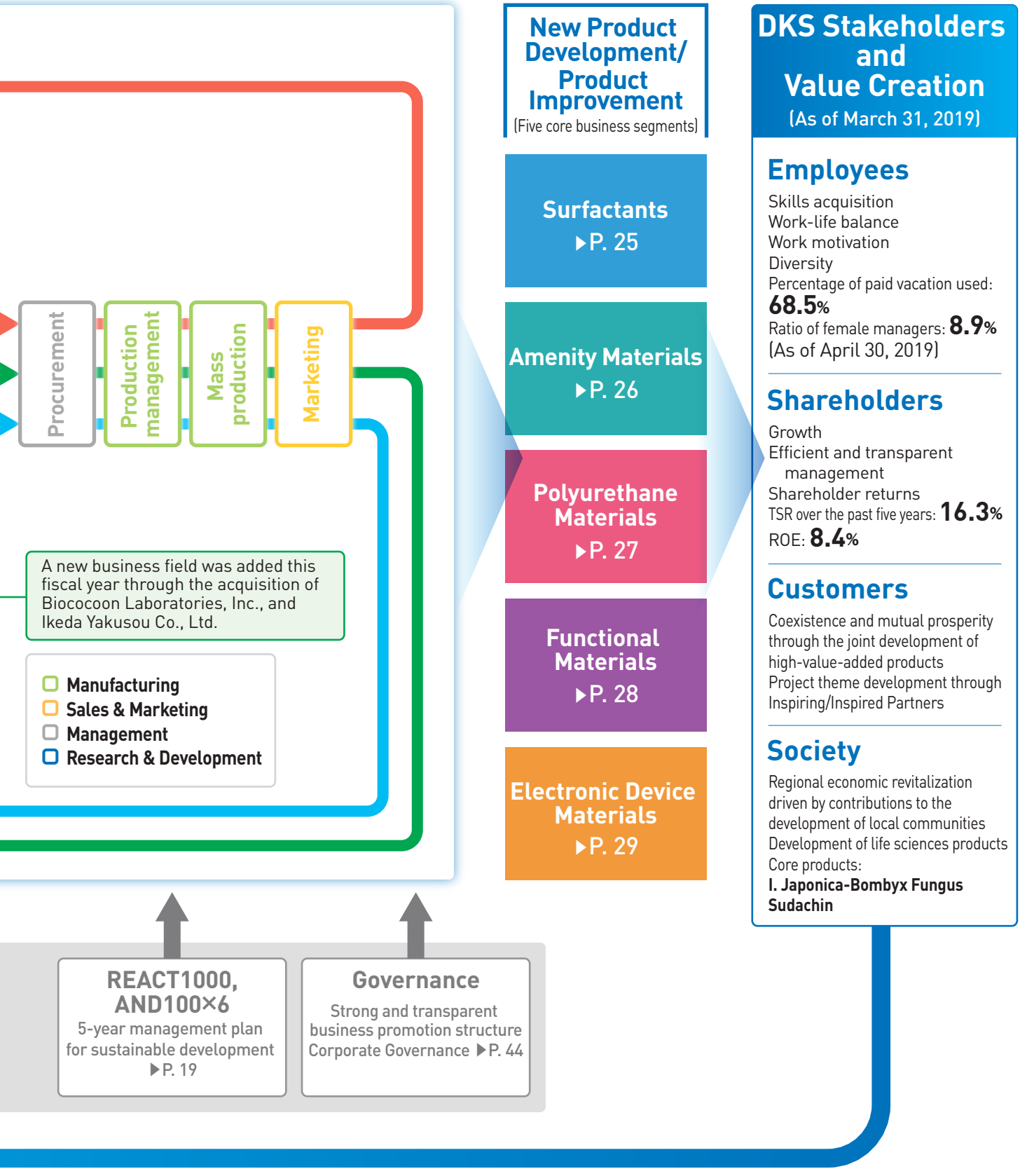
Value Drivers

Uni-Top Strategy

Aim for the top through uniqueness
Strengthen relationships with Inspiring/Inspired Partners ▶P. 17

R&D Foundation

Research and Development ▶P. 36
Proprietary Technologies of DKS ▶P. 52


Procurement
Production management
Mass production
Marketing
A new business field was added this fiscal year through the acquisition of Biococoon Laboratories, Inc., and Ikeda Yakusou Co., Ltd.
Manufacturing
Sales & Marketing
Management
Research & Development
New Product Development/ Product Improvement
(Five core business segments)
Surfactants
▶P. 25
Amenity Materials
▶P. 26
Polyurethane Materials
▶P. 27
Functional Materials
▶P. 28
Electronic Device Materials
▶P. 29
DKS Stakeholders and Value Creation
(As of March 31, 2019)
Employees
Skills acquisition
Work-life balance
Work motivation
Diversity
Percentage of paid vacation used: 68.5%
Ratio of female managers: 8.9%
(As of April 30, 2019)
Shareholders
Growth
Efficient and transparent management
Shareholder returns
TSR over the past five years: 16.3%
ROE: 8.4%
Customers
Coexistence and mutual prosperity through the joint development of high-value-added products
Project theme development through Inspiring/Inspired Partners
Society
Regional economic revitalization driven by contributions to the development of local communities
Development of life sciences products
Core products:
I. Japonica-Bombyx Fungus Sudachin
REACT1000, AND100×6
5-year management plan for sustainable development
▶P. 19
Governance
Strong and transparent business promotion structure
Corporate Governance ▶P. 44

Financial and Nonfinancial 11-Year Summary

Financial Data (Millions of yen)	3/2009	3/2010	3/2011	3/2012
Net Sales	46,528	44,352	51,245	56,249
Surfactants	15,880	14,373	15,131	18,779
Amenity Materials	8,316	7,397	7,046	7,220
Polyurethane Materials	7,504	7,161	8,761	8,634
Functional Materials	9,406	9,467	11,441	10,228
Electronic Device Materials	5,420	5,950	8,863	11,386
Overseas Sales	7,572	6,692	8,748	8,296
Operating Income	298	1,575	2,732	2,033
Ordinary Income	(28)	1,239	2,439	1,742
Profit Attributable to Owners of Parent	(350)	503	1,155	165
Capital Expenditures	2,929	873	1,111	2,312
Depreciation and Amortization	1,700	1,733	1,836	2,252
R&D Expenses	1,936	1,863	2,010	2,273
Net Cash Provided by (Used in) Operating Activities	1,383	3,061	2,502	2,309
Net Cash Provided by (Used in) Investing Activities	(2,678)	(1,661)	(616)	(2,869)
Free Cash Flows	(1,295)	1,400	1,886	(560)
Cash Dividends Paid	117	195	298	298
Net Assets	14,438	15,316	16,498	16,949
Total Assets	41,749	44,291	47,741	51,357
Interesting-Bearing Debt[1]	16,259	14,499	14,098	15,700
Per-Share Data (yen)[2]				
Net Profit	(44.95)	64.45	146.90	19.35
Net Assets	1,751	1,839	1,839	1,889
Cash Dividend	15.00	25.00	35.00	35.00
Major Indices				
Overseas Sales Ratio (%)	16.3	15.1	17.1	14.7
R&D Expenses to Sales Ratio (%)	4.2	4.2	3.9	4.0
Operating Margin (%)	0.6	3.6	5.3	3.6
Return on Equity (%)	(2.4)	3.6	7.7	1.0
Return on Assets (%)	(0.8)	1.2	2.5	0.3
Equity Ratio (%)	32.7	32.4	32.9	31.4
Net D/E Ratio (times)	1.0	0.8	0.5	0.6
Year-End Stock Price (yen)	975	1,330	1,305	1,230
PER (times)	–	20.6	8.9	63.6
PBR (times)	0.6	0.7	0.7	0.7
Dividend Payout Ratio (%)	1.5	1.9	2.7	2.9
Nonfinancial Data				
No. of Employees (consolidated)	894	910	861	995
No. of Employees (non-consolidated)	609	582	554	533
No. of Employees Outside Japan	131	129	131	133
Ratio of Female Employees to Total Employees (non-consolidated)	14.3	14.6	14.8	14.8
No. of Employees Who Utilized the Child-Care Leave System (non-consolidated)	6	8	6	10
No. of Employees Who Utilized the Child-Care Part-Time Work System (non-consolidated)	6	4	6	7
Annual Paid Leave Rate (non-consolidated + assigned employees) (%)	72.3	71.4	69.0	66.7
No. of Patents Held (overseas) [3]	–	–	–	–
Generated Waste Amount (tons) [4]	8,579	9,912	15,774	13,395
CO_2 Emissions (consolidated) (thousands of tons) [4]	43.1	37.4	57.5	49.8

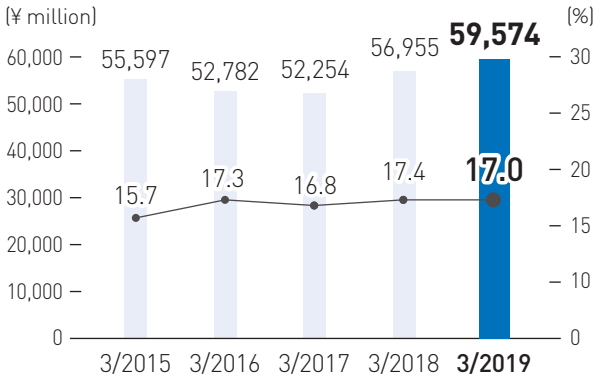
1. Lease obligations not included in interest-bearing debt.
2. Per share information and period-end share price data have been retroactively adjusted to reflect the consolidation of five shares into one share implemented on October 1, 2018.
3. The collation method was amended to a legal effective date basis from FY2016.
4. Data are presented on a non-consolidated basis up to FY2009 and on a consolidated basis including Yokkaichi Chemical from FY2010.

3/2013	3/2014	3/2015	3/2016	3/2017	3/2018	3/2019
51,843	54,614	55,597	52,782	52,254	56,955	**59,574**
19,486	20,359	21,573	20,779	19,793	21,416	**21,957**
6,825	7,141	6,856	7,208	6,986	7,502	**8,151**
8,466	9,564	9,442	8,934	9,093	9,115	**9,026**
9,666	10,680	11,216	11,259	12,517	14,070	**16,239**
7,398	6,868	6,508	4,600	3,862	4,850	**4,199**
7,323	8,103	8,743	9,131	8,794	9,929	**10,139**
1,754	2,477	2,944	3,439	3,944	5,053	**4,341**
1,544	2,374	2,717	3,200	3,773	4,725	**4,175**
797	1,336	1,782	2,198	2,489	3,351	**2,581**
3,664	1,512	3,948	8,485	3,786	2,467	**5,802**
2,003	2,104	2,153	2,087	2,335	2,473	**2,555**
2,340	2,506	2,439	2,380	2,393	2,307	**2,765**
2,477	3,553	2,322	4,197	3,750	5,017	**3,236**
(3,548)	(1,793)	(3,229)	(7,687)	(3,336)	(1,130)	**(5,694)**
(1,071)	1,760	(907)	(3,490)	414	3,886	**(2,458)**
298	298	474	528	608	710	**711**
18,200	19,886	26,156	26,745	28,044	31,960	**33,591**
55,416	57,570	64,420	66,057	69,046	73,976	**75,906**
18,712	20,679	21,322	23,227	24,594	23,863	**23,466**
93.40	156.60	193.45	208.20	237.00	330.30	**254.11**
2,022	2,200	2,362	2,425	2,650	2,971	**3,083**
35.00	35.00	45.00	50.00	60.00	70.00	**70.00**
14.1	14.8	15.7	17.3	16.8	17.4	**17.0**
4.5	4.6	4.4	4.5	4.6	4.1	**4.6**
3.4	4.5	5.3	6.5	7.5	8.9	**7.3**
4.8	7.4	8.2	8.7	9.5	11.8	**8.4**
1.5	2.4	2.9	3.4	3.7	4.7	**3.5**
31.1	32.6	38.7	38.8	38.9	40.8	**41.3**
0.7	0.6	0.4	0.5	0.5	0.4	**0.5**
1,250	1,610	1,935	1,640	2,135	4,375	**3,480**
13.4	10.3	10.0	7.9	9.0	13.2	**13.7**
0.6	0.7	0.8	0.7	0.8	1.5	**1.1**
2.8	2.2	2.3	3.1	2.8	1.6	**2.0**
979	969	944	982	967	976	**985**
526	514	508	495	486	497	**512**
135	135	142	150	189	193	**213**
14.8	16.0	15.9	17.0	17.5	17.5	**17.8**
10	8	11	9	6	12	**7**
11	8	9	10	13	10	**10**
62.7	63.7	61.0	64.5	62.4	67.4	**68.5**
636 (237)	660 (245)	722 (299)	822 (344)	855 (378)	924 (427)	**961 (453)**
14,421	12,724	13,876	13,191	17,364	20,770	**19,063**
51.9	52.0	51.3	50.9	52.5	53.9	**53.0**

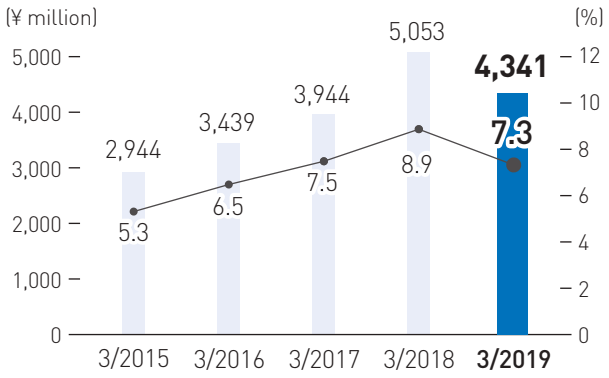
Financial and Nonfinancial Highlights

Financial Highlights (Consolidated)

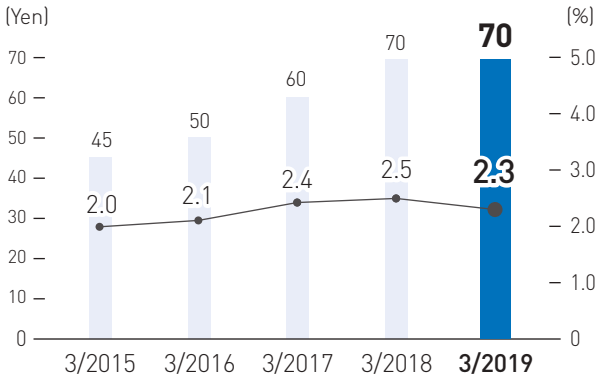
Net Sales/Overseas Sales Ratio



Operating Income/Operating Margin

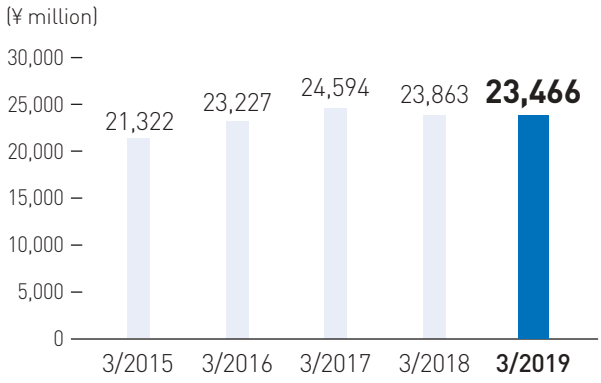


Dividend per Share/Dividend on Equity (DOE)



*The Company conducted a 5-to-1 reverse stock split for common shares on October 1, 2018.

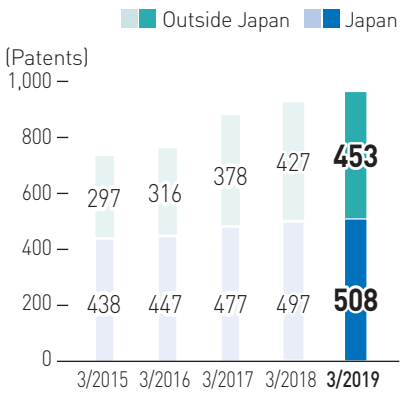
Interest-Bearing Debt



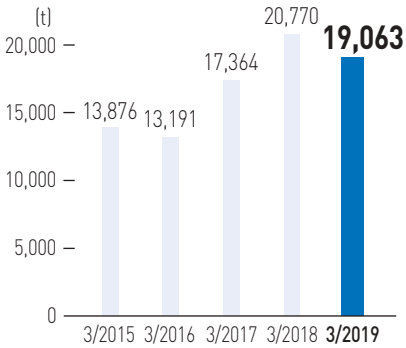
*Lease obligations not included in interest-bearing debt.

Nonfinancial Highlights (Group/Non-consolidated)

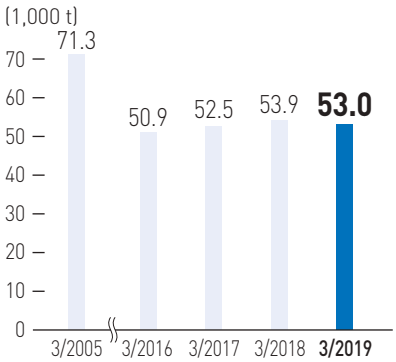
Number of Patents Held (Group)



Generated Waste Amount



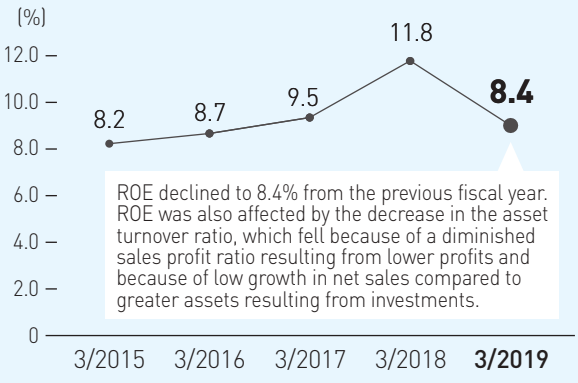
CO_2 Emissions (Group)



*The collation method was amended to a legal effective date basis from FY2016.

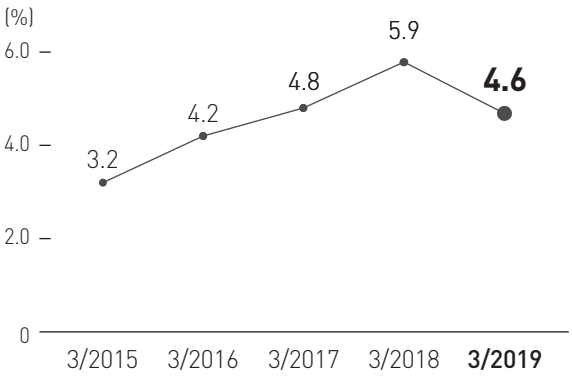
ROE Analysis based on the DuPont Model

ROE

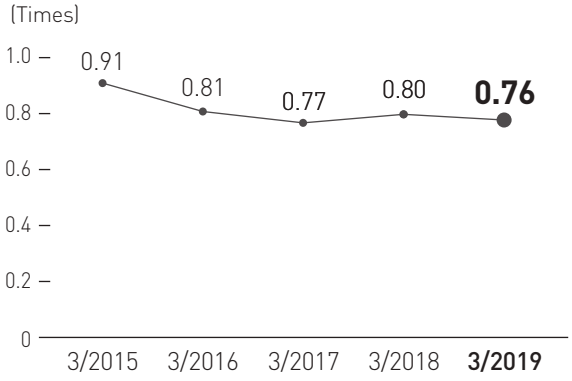


ROE declined to 8.4% from the previous fiscal year. ROE was also affected by the decrease in the asset turnover ratio, which fell because of a diminished sales profit ratio resulting from lower profits and because of low growth in net sales compared to greater assets resulting from investments.

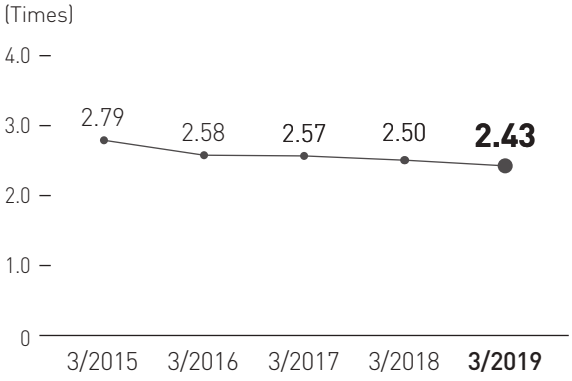
Net Profit Margin



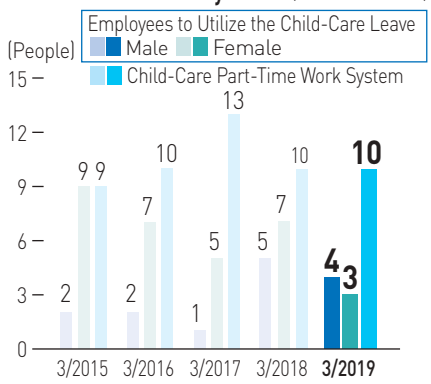
Asset Turnover Ratio



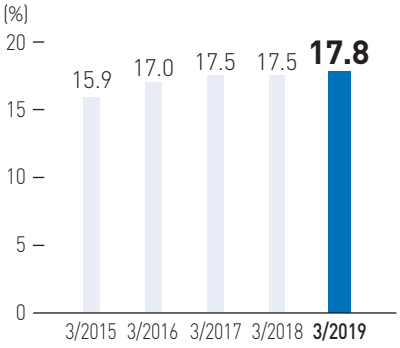
Financial Leverage



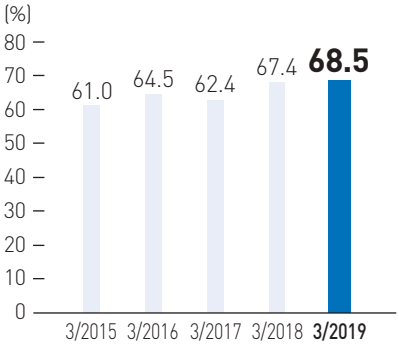
Number of Employees to Utilize the Child-Care Leave/Child-Care Part-Time Work Systems (Non-consolidated)



Ratio of Female Employees (Non-consolidated)



Annual Paid Leave Rate (Non-consolidated + Assigned Employees)



Message from the CEO

Chairman & CEO

SAKAMOTO Takashi

Calls of "Yo-i Ya Sa-" at Miyako Odori Festival Spring comes to new Reiwa era, dawning of a period of harmony and governance

Review of fiscal 2018, the final year of the Heisei era

Capital investment prioritized to increase capital productivity

The fiscal year ended March 2019 almost coincided with the end of the 30-year Heisei era, which the print media describes with expressions of upheaval and turbulence. I would like to mention three memorable events: the bursting of the bubble economy as described in *Japan as Number One*, the end of the U.S.-Soviet Cold War due to the collapse of the Soviet Union and the rise of China, and economic transformation due to advances in electronic equipment capacity and processing speed. Most economic changes are attributable to the speed at which they occur.

I would like to chart the course of what was then Dai-ichi Kogyo Seiyaku Co., Ltd.—we have been known as DKS only since 2013—through the 30 years of the Heisei era. As a result of management and operational failures that arose at the time the economic bubble burst, a period of sluggish performance continued for more than a quarter of a century. We used the Lehman Brothers crisis of September 2008 as an opportunity to rid ourselves of a negative legacy. In April 2009, the 100th anniversary of our founding, we launched the future-oriented "CHANGE100 Plan." We systematically executed measures to change our profit structure. Yokkaichi Chemical Co., Ltd., became a wholly owned subsidiary, and we established a future base by purchasing new land and building plants.

When the CHANGE100 Plan was completed, we labeled existing businesses as ACTUAL businesses, improvement businesses NEXT businesses and new businesses DREAM businesses. The current management plan, REACT1000, commenced with the introduction of NEXT peripheral businesses and the launch of completely new DREAM businesses. Our aim was to transform ourselves into a company that can withstand and survive any upheavals and turbulence.

Our focus areas are environment and energy, electronics and IT, as well as the life sciences. We are constructing new plants related to these focus areas in the Kasumi area of Yokkaichi City, Mie Prefecture, and undertaking manufacturing. The goal is a return on invested capital (ROIC) of more than two times the weighted average cost of capital (WACC). Estimates for the fiscal year ended March 2019 exceeded the target value, and the collection period was shortened. From a protracted business downturn, DKS converted to a structure that enabled stable growth during the 30-year period of the Heisei era. The NEXT businesses are contributing significantly to profits.

As a new business, we had been seeking to enter the life sciences field related to human health. While endeavoring to gather information, I met a professor who had been pursuing ways to prevent the onset or improve the early diagnosis of dementia for nearly 30 years. His results were being commercialized as a university-initiated venture. The substances that had proven effective in mouse experiments were related to silkworms. Since Dai-ichi Kogyo Seiyaku (today's DKS) was founded on a surfactant for unraveling silkworm cocoons, we came to a mutual understanding, including a regional economic revitalization plan. This venture happily decided to join our group.

Ikeda Yakusou Co., Ltd., was a manufacturer of functional foods that possessed the technology to extract this specific substance and had acquired GMP[1] certification, which is essential for pharmaceuticals. After repeated negotiations, we decided to acquire all the shares of Ikeda Yakusou. Along with health

Message from the CEO

supplements, we considered the formulation business to be two halves driving a life sciences whole. Fields such as CMO[2] and CDMO[3] in the development and manufacturing contract business support drug discovery in the pharmaceutical industry. In the years to come, we will work to realize a DREAM business through collaborations with venture companies and M&A with a view to entering this business.

1. Good Manufacturing Practice (manufacturing/quality control standard)
2. Contract Manufacturing Organization (organization entrusted with pharmaceutical manufacturing)
3. Contract Development & Manufacturing Organization (organization entrusted with development/manufacturing)

Progress and assessment of the REACT1000 Management Plan

Road to sustainable growth established in the turbulent Heisei era

Based on the results from the previous CHANGE100 Plan, under which we had promoted structural reform, we launched the current plan in April 2015. The sales target had to be revised at the midway point due to deterioration in the business environment of, for example, the solar panel sector, which had attracted high expectations. Amid the growing uncertainty of the economy due to the U.S.-China trade war, the fiscal year ended March 2019 was our second highest in terms of business performance with higher sales despite lower profits. We have left the operating income target for the final year of the plan as ¥6.0 billion, unchanged from the initial target. However, that target could be difficult to achieve due to high raw material costs, an increase in R&D costs and capital investment depreciation. The burden of R&D expenses and capital investment is not insignificant, however, that forms the basis for future growth and will proceed as planned.

The situation in the global economy is increasing in its severity, the main contributory factors being the U.S.-China trade war, uncertainty surrounding the European economy and geopolitical risks. We decided to focus on improving profits in unprofitable sectors while expanding our profitable NEXT businesses. In the fiscal year ending March 2020, we aim for operating income of ¥5.1 billion, which would exceed the record achieved in the fiscal year ended March 2018. Our plan calls for a total of ¥12.0 billion to be invested in electronic materials and life sciences over the next three years, including new investments in 5G fields for next-generation communications. Increasing total assets to ¥76.0 billion will provide the potential for sales growth.

Although the financial figures will not reach our targets, we have finished initial work on the non-financial issues set out under the five-year plan. Items for improving corporate value are listed in a matrix in relation to the four stakeholders surrounding the Company. These total 20 items, the five indicators derived from the acronym REACT times their relationships to the four stakeholders. For example, one of the relationships with shareholders is "change from undervalued stock to growth stock." The price-to-book ratio (PBR) has increased from 0.6x to 1x, and the price-earnings ratio (PER) has increased from 8x to 15x. What requires explanation is the international strategy. We selected EXPORT as the "E" in REACT and decided to improve the overseas sales ratio.

The securities report shows exports as a percentage of net sales classified by region. We had targeted an increase from 15% to 20% and achieved 17%. The thinking behind our international strategy is to make products that are valued globally before expanding overseas. In the era of the yen's appreciation toward the ¥70/$1 range, we issued a statement to the municipalities declaring our intention to build a plant in Japan. That was the new plant in Mie Prefecture. As globalization advances, the exports of business partners using our products is increasing. The sales of our products overseas including those of partners has increased from 35% to 51% over the past four years.

Under our REACT1000 plan, we are engaging in management that is conscious of the need to build a foundation for sustainable and stable growth, which remains the mission of all companies. As we live in an era of upheaval and turbulence, a business model that can survive change is demanded. From the last century to the beginning of this century, the crux of DKS's business operations had been high-quality manufacturing. I think that people will buy our products if they are good. We are living in a world in which the capacity and processing capability of electronic devices have advanced dramatically, and it is a world in which the planet's space and time have been reduced and shortened.

We are strengthening relationships with leading companies that are at the forefront of the product markets. At the same time, we are seeking models to create products that can only be supplied to those business partners, for example, collaborations with inspiring/inspired partners who spark off each other. The starting point of this model is not products but rather a customer focus. On the new 100,000-m^2 site at Kasumi, we started phasing in our fourth plant. The new plant's four products are only being offered to inspiring/inspired partners. These accounted for more than 40% of our total operating income for the fiscal year ended March 2019.

Reiwa, beautiful happiness created by harmony and governance

Our Company and others: A business model that combines our and their technologies

Spring in Kyoto starts with the Miyako Odori Festival. This year, it was the eight picturesque sights entitled *Miyogawari* (Imperial Succession) and *Kabuki no Irodori* (Celebration of Kabuki) that offered good wishes upon the arrival of a new era. As a result of the capital's relocation to Tokyo at the time of the Meiji Restoration in 1868, a mood of stagnation existed in Kyoto. Two opportunities were created to dispel thoughts of that situation and raise a sense of excitement. The governor of newly formed Kyoto Prefecture proposed the first exhibition in Japan, in which the Miyako Odori show was held to attract visitors. The Inoue Ryu Kyoto dance form was introduced at the festival and is now directed by the fifth generation of its practitioners.

Also, a national education institution was formed called the Seimikyoku, in part a transliteration of the Dutch word *chemie* (chemistry). There having been no Japanese-language equivalent to the word when *chemie* was brought to Japan in the latter part of the Edo period (1603–1867), an academic specializing in the Netherlands named KAWAMOTO Komin devised the word *kagaku* (chemistry) from the two kanji characters meaning "transformation" and "discipline." Established in 1869, the Osaka Seimikyoku later became Kyoto University, and the Kyoto Seimikyoku, established in 1870, was the dawn of the Japanese chemical industry. The chemical industry began with the import trade of synthetic indigo, which was invented by the German company BASF.

A cornerstone of Japanese industry during the era when new industries were being encouraged was the export of silk goods. A venture company that started with the manufacture of an unwinding agent, called soap today, used to unravel and wash the silkworm cocoons, the raw material for silk yarn, was what is now known as DKS. The synthetic indigo imported into Japan in 1898 through Yamada Ichirobei Shoten (now Yamada Kasei Co., Ltd.) is mentioned in publications of BASF. Later, we obtained a recipe for surfactants, the origin of our technologies from this agency that has continued for more than 200 years. I consider Reiwa as the start of a new era that will compare favorably with the Meiji era (1868–1912).

Previously chosen from Chinese origins, on this occasion the era name is associated with *Manyoshu*, Japan's oldest anthology of poems. Historically, the meaning implied by *rei* was auspicious and that of *wa* was graceful. On the day the new era was announced, I interpreted *rei* as governance and *wa* as harmony. If pronounced as Spanish, *rey va*, the meaning of a king going comes to mind. I find it an appropriate name for an era in which Japan is embarking on a new voyage—an era of growth and harmony through new collaborations and solid corporate governance.

The thing that came to mind when envisaging REACT1000 was that we had entered the dimension of consumer-to-business (C2B) flows. They are different from the 20th century B2B (business-to-business transactions) and B2C (business-to-consumer transactions) market flows. We, a chemical materials manufacturer, believe that our survival lies in developing products that address the new trend of needs, or rather, wants, of C = consumer. We will achieve this by strengthening our collaborations with inspiring/inspired partners who are familiar with the market.

A good balance between the ACTUAL (our existing businesses), the NEXT (our peripheral businesses) and the DREAM (our new businesses). The four stakeholders such as employees, shareholders, business partners and society. Operating these beautiful harmonies with appropriate governance, we consider Reiwa as a symbol of stable growth. We started the NEXT investment of ¥4.8 billion for 5G communication circuit board materials in August. The Formulation Development Promotion Office launched in April and the Quality Assurance Office, which is under the direct control of the president, has commenced operations.

Our next future-oriented plan: FELIZ 115

Creating corporate value starts with sound dialogue

While looking back on the current management plan, I reviewed the policies of the U.S. President. I interpret the trade war using my own judgment and prejudices. The Chinese economy that overtook Japan, which was the second largest in the world in terms of gross domestic product, was judged to be expansive in scale based on the 20th century model. In other words, it takes time to become an advanced country. President Trump's current tariff policy deals a significant blow to the traditional Chinese economy. Am I the only one who sees this feud as being of benefit to Japan? We view this as an opportunity for us as a chemical manufacturer in Japan.

I think we achieved structural changes during past four years under the REACT plan. There were four

Message from the CEO

Together with women employees (Shiga Branch 50th Anniversary Ceremony, August 2019)
From left: MORI Yuka, Enfubayar Enfuyanga, Chairman and CEO SAKAMOTO Takashi and TAIRA Sanae

questions at last year's general meeting of shareholders. The last question was "There is the word 'first,' but is Mr. Sakamoto's 'first' the shareholders or the employees?" I answered without hesitation. "Employees come first." The questioner nodded. At an opportunity to talk one-to-one with shareholders after the general meeting, one participant said that "a lot was affirmed in front of your shareholders. It gave me great pleasure." I was glad to hear those words.

Abbreviated as SDGs, the Sustainable Development Goals are UN targets for 2030. The form that DKS will take in 2030 already has been determined. Five years prior to that, in 2025, we aim for net sales of ¥85.0 billion and operating income of ¥10.0 billion, as well as sales in the life sciences business of ¥10.0 billion. In 2030, with net sales of ¥135.0 billion and operating income of ¥18.0 billion, the ACTUAL, NEXT and DREAM businesses should each account for a third of total sales. The plan is to substantially expand the high-profitability NEXT businesses and utilize that cash to invest in DREAM businesses, thereby laying the foundation for the future.

In conjunction with our financial goals, we will work to improve corporate value with an emphasis on quality in the non-financial aspects of our operations. We call this approach FELIZ 115, *feliz* meaning happy in Spanish. As we will be marking our 115th anniversary in the fiscal year ending March 2025, we will practice happiness management. The letters of FELIZ stand for FUTURE, ENVIRONMENT, LIFE, INNOVATION and Z-FLAG. Signifying the determination to face challenges, at the beginning of a new era, the latter is the signal flag adopted by the Japanese that was hoisted prior to a naval battle that took place in the Sea of Japan during the Meiji era.

A good relationship with the four stakeholders surrounding the Company is a constant theme, but what are the five components of FELIZ for employees, shareholders, business partners and society? Our employees will voice and share their opinions in discussions about the next management plan to be formulated in the current fiscal year. The themes for shareholders already have been selected: future = growth stock; environment = ESG index; life = longevity stock; innovation = market capitalization of ¥50.0 billion and the challenge = posting record profits.

The 17 SDGs are incorporated into the DKS Credo, the DKS Mottoes and the company song. We have selected five SDGs that DKS will make a conscious effort to address: 3. Ensure healthy lives and promote well-being for all at all ages; 7. Ensure access to affordable, reliable, sustainable and modern energy for all; 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation; 12. Ensure sustainable consumption and production patterns; and 17. Strengthen the means of implementation and revitalize the global partnership for sustainable development. The production of I. Japonica-Bombyx Fungus (Cordyceps sinensis) supplied by sericulture farmers will form an initiative directly linked to regional revitalization.

***Oiwaiyasu*, "Full of happiness, Uni-Top"**

Increasing our earning power, heading out into the world for a better future

On May 1, 2019, the day the new emperor acceded to the throne, we raised a celebratory glass as a toast with those who have a connection to Yamada Ichirobei Shoten. *Oiwaiyasu* is the Kyoto dialect equivalent of *itadakimasu*, the expression of gratitude uttered before a meal. If 1869, when the Seimikyoku was established in Japan, is taken as the first year of chemistry, this year marks the 150th anniversary. Back then, the Seimikyoku provided an opportunity to bring about the innovation called industrial revitalization through chemistry in Kyoto, which had been a city of a thousand years of history and tradition. The three-day Japan Industrial Safety and Health Association (JISHA) conference will be held for the 78th time, but for the first time in Kyoto, on October 23, in the first year of the new Reiwa era. This major event, held once a year by the JISHA, will be attended by more than 10,000 people from all over the country, and around 250 companies plan to make presentations at side meetings. As the head of a chemical manufacturer, I serve as the chairperson of the

Kyoto Labor Standards Association, which is co-hosting the conference. As the representative of a company that has received the White 500 health management certification from the government for two successive years, it is my firm intention to attend. Junko Koshino, the leading Japanese fashion designer, will give a special speech entitled "Words I Got from Mom." She is a diversity pioneer who wrote the "My Personal History" column in the *Nihon Keizai Shimbun* in August. We believe that work-style reform is synonymous with improving labor productivity and capital efficiency. It is also beauty created by harmony and governance.

On my desk I have a book entitled *Wage Labor and Capital* by Karl Marx. In my youth, while attending a Shorinji kempo martial art dojo, I studied economics. I always keep in mind three key concepts to be achieved in my own style: humanism, planned economy and peoples' right to self-determination (from Marx's *Das Kapital*). My interpretation is that we equally have basic human rights, should utilize limited resources systematically and should value what we rely on. I view this as a starting point for the employee-first concept and the basis of earning power. Intellectual and human resources are among the elements related to productivity that enhance value.

Research-and-development (R&D) expenses are an indicator of intellectual resources, and labor's share of income is used for human resources. We are aiming for an increase in our R&D expenses to sales ratio by 1.0 percentage point to more than 5% and for labor's share of income to increase 3 percentage points to 70%. This affects research and manufacturing personnel and we intend to raise the happiness level of our employees. In the NEXT and DREAM businesses, a key human resource development tool is on-the-job training (OJT). From the next fiscal year, we will separate the management and executive functions. The board of directors will consist of nine directors including two representative officers, directors in charge of production, sales, research and management and three outside directors, the goal being to make quick decisions. A Successor Training Committee made up of outside directors also will be established.

I think that "the power to earn = NEXT (intellectual + human resources) × Inspiring/Inspired Partners." The NEXT and DREAM businesses cover our focus fields of the environment and energy, electronics and IT, as well as life sciences. We supply each product to inspiring/inspired partners that are leading international companies. The intellectual and human resources involved are working on developments that anticipate the future of our business partners. In the case of the circuit board materials for 5G communication, for example, we have decided that our next investment will be double the amount of the first investment four years after plant construction. Construction began in August 2019 and will be completed in June 2020. We will strive for stable and continuous operation at a high level of business.

The Company's annual slogan for 2019 is "Full of Happiness, Uni-Top." This reconfirms the image of the Company as top-rated in terms of its uniqueness and as aiming for happiness management. Our strength is the technology that we have cultivated in our 110-year history, starting with the surfactant used to unravel silkworm cocoons. I believe that it is our mission to make the most of this strength and continue to develop, from Kyoto to the world and into the future. As a Uni-Top company, we are continuing along the path of creating a company that is widely known in the international community. We are grateful for the ongoing understanding of our shareholders, business partners and social stakeholders.

Entering the manufacturing smartification era

Who are our Inspiring/Inspired Partners?

Having purchased 100,000 m^2 of industrial land in the third industrial complex in Kasumi in the city of Yokkaichi and positioned the plant as a mother plant (a complex base that provides new product prototyping and fulfills R&D functions), we commenced operations in 2015. Based on the trust of the senior management of "business partners who provide a mutual spark," whom we call inspiring/inspired partners, we manufacture exclusive products using technologies that have been honed between the R&D and sales departments of both companies. These Uni-Top (small but unique) products account for most of the Kasumi Plant's output.

Kasumi Plant, Yokkaichi Branch

Plant No. 1's operations cover electronic materials as well as civil engineering and construction materials, No. 2 produces special nonionic surfactants, No. 3 manufactures functional polyurethane products and No. 4, which is currently under construction, will produce materials for electronics. Based on the ACTUAL businesses (existing products), the NEXT businesses (application of existing products and peripheral products) at the Kasumi Plant have grown to account for 40–50% of operating income.

We aim to achieve further growth toward 2030 by launching a new NEXT business in line with the C2B era to create products that are required by the final customer market.

Review of the Medium-Term Management Plans

	ADD21 (Ambitious Dynamics DKS for the 21st Century) —Tolerance to Changes	CHANGE100 Stage I —Changing the Corporate Culture	CHANGE100 Stage II —Expansion along with Earnings
	April 2004–March 2009	April 2009–March 2012	April 2012–March 2015
Targeted Figures	Consolidated net sales ¥50 billion Ratio of ordinary income to sales 7%	Consolidated net sales ¥55 billion or higher Operating margin 4% or higher	Consolidated net sales ¥60 billion or higher Operating margin 5% or higher
Slogan	"With High Aspirations, We Will Shine Brightly in the 21st Century"	"Each of Us Holds the Key to Success"	"Each of Us Holds the Key to Success"
Vision	Business Expansion and Sustainable Corporate Value Growth	Building a Business Structure Necessary as a Leading Industrial Chemical Company	Staying Ahead of the Times as a Leading Industrial Chemical Company
Management Policies	**1.** Putting the concept "R&D is the engine of the Company" into practice to realize customer satisfaction **2.** Continuously complementing and expanding the values of the Company **3.** Reinforcing the business by emphasizing the "three actuals" (actual work site, actual goods and actual situation) **4.** Enhancing corporate governance **5.** Promoting compliance management **6.** Establishing an ideal company structure by the 100th anniversary (April 2009)	**1.** Securing a stable profit structure **2.** Pursuing greater business efficiency **3.** Developing and strengthening our foundation to realize the "technology makes the Company" concept **4.** Accelerating the creation of new products **5.** Enhancing compliance management **6.** Improving managerial skills and human resource development	**1.** Expanding peripheral business fields **2.** Enhancing and reinvigorating domestic production facilities **3.** Accelerating the creation of new businesses **4.** Pursuing cost reductions **5.** Improving management capabilities and developing human resources **6.** Enhancing overseas expansion and strengthening administration
Plan Outline	**1.** Increasing sales and building a stable earnings-generating business portfolio **2.** Developing and expanding new high-value-added businesses **3.** Generating strong awareness of and benefits from realizing targets after establishing the management infrastructure	**Basic Strategies** **1.** Enhancing the enterprise's power (marketing clout, cost-saving ability, technical strength and organizational power) = Heightening our corporate value **2.** Promoting selection and concentration = Determining the withdrawal from underperforming segments based on our exit rule **3.** Optimizing the allocation of management resources = Funneling people, goods and capital **4.** Seeking more productivity = Seeking more profitability through the integrated business division approach **5.** Creating new businesses and strengthening cooperation with the parties concerned = Developing inorganic materials, dispersion technology, electronics materials, etc. **6.** Focusing on priority business segments = Promptly reaping the benefits of an existing, ongoing, highly profitable business	
Review	In the final year of the plan (FY2009), business conditions became severe, characterized mainly by declining demand and falling sales prices amid surging raw material naphtha prices caused by high crude oil prices and the subsequent global recession triggered by the financial crisis in the United States. Against this backdrop, DKS undertook such initiatives as boosting sales of core products, developing new markets in growing fields that include IT and the environment, focusing on developing new materials, continually revising prices, and cutting operating expenses and other costs. Despite these efforts, the Company's earnings fell below the plan's targets.	The initial year saw the impact of the financial crisis triggered by the Lehman Brothers bankruptcy. With revenues growing over the next two years, however, DKS successfully achieved a target of the plan by recording final fiscal year (fiscal year ended March 2012) consolidated net sales of ¥56.2 billion. In contrast, the Company was unable to reach the plan's operating income target due to operating income decreasing in the final fiscal year amid sharp demand drops and ongoing high raw resources prices.	Although DKS aimed to increase net sales from ¥56.2 billion the previous fiscal year to ¥60 billion, the fiscal year ended March 2015, the final year of the plan, ended with consolidated net sales at ¥55.5 billion, below the target because of delays in investment to raise production in core businesses and stagnation in the solar cell field. On the other hand, DKS achieved its operating margin target given record-high operating income, ordinary income and net income. While missing its quantitative targets, DKS saw success in qualitative terms.
Successes	● Introduced an integrated business division approach that vertically links the research, production and marketing divisions, and promoted a change in consciousness toward the concept of emphasizing earnings based on strict budget management and clarifying responsibilities	● Increased business divisions' profits by instilling a profitability mind-set ● Launched and promoted the Human Resources Development Project aimed at instilling an awareness of management in all departments	● Upgraded the management infrastructure (e.g., commenced introducing a new ERP system) for the future ● Maintained a healthy balance sheet (increased the capital adequacy ratio) ● Made new investments for growth (made Yokkaichi Chemical a wholly owned subsidiary) to expand business fields, purchased land, began preparation for a new plant
Issues	Further instillation of a profitability mind-set	Improve the corporate culture to bring a profitability mind-set to the forefront Realize a balance in three areas: 1. Maintain a strong balance sheet: Simultaneously increase assets and liabilities/capital 2. Revamp the business portfolio: Select and concentrate on future-oriented businesses 3. Optimize human resources: Develop highly capable employees that cross generational lines	Maintain a robust and healthy balance sheet to increase earnings

Five-Year Management Plan "REACT1000" April 2015 to March 2020

Practicing the concept "chemistry provides a solution," we will take up the challenge of carrying out our management plan REACT1000.

Management Policy

1. Create new corporate value — We will maximize our performance and market capitalization derived from assets held.
2. Create a clear corporate image — We will increase awareness toward the Company's image and profile.
3. Ensure more profound corporate governance — We will increase management efficiency by focusing on corporate governance.
4. Maintain and increase optimal ROE levels — We will pat careful attention to ROE from a medium- to long-term perspective.
5. Create advantages through collaboration — We will promote the development of materials and technologies in collaboration with business partners, academia, associations, and related parties.
6. Accelerate and enhance mother plant functions — We will improve Group-wide productivity based mainly on a Yokkaichi composite base structure.

Scope of REACT1000 and AND100×6

	Employees	Shareholders	Customers	Society
R (RETURN)	Give proper credit for their contributions	P/E and P/B for 1000	Active partner	Positive economic cycle
E (EXPORT)	Increase the overseas ratio	Annual report	Market development	Mother plant
A (ADVANCE)	ACTUAL100×6	Withdraw from unprofitable businesses	DREAM100×6	Brands
C (CREATE)	NEXT100×6	Change from undervalued stock to growth stock	Diplomacy with special assignments	Regional revitalization
T (TRAIN)	Training & education	Outside executive meetings	Increase IT sales	Public classes

Year to March 2020 Targets

Net Sales: **¥67.0 billion**

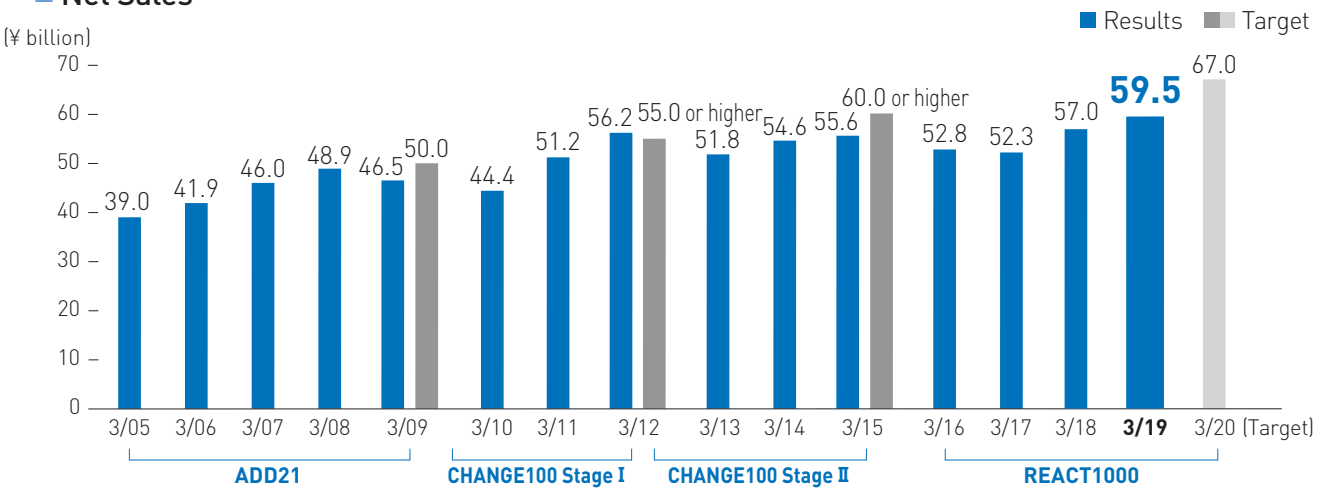
Operating Income: **¥6.0 billion**

Operating Margin: **9.0%**

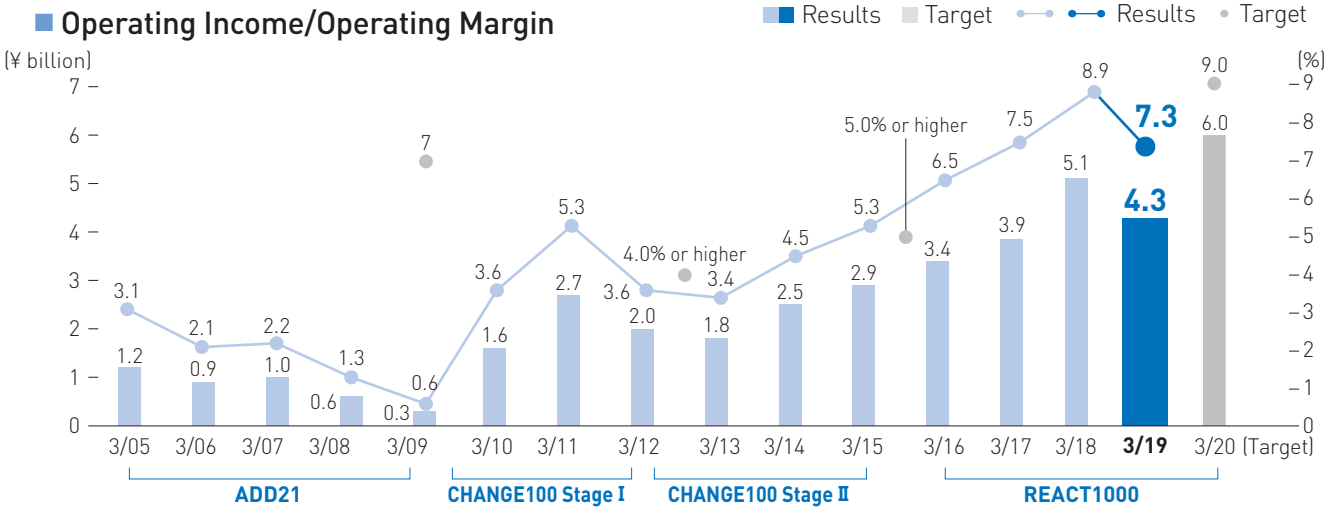
ROE: **10%**

Overseas Sales Ratio: **20%**

Net Sales



Operating Income/Operating Margin



Risks and Opportunities

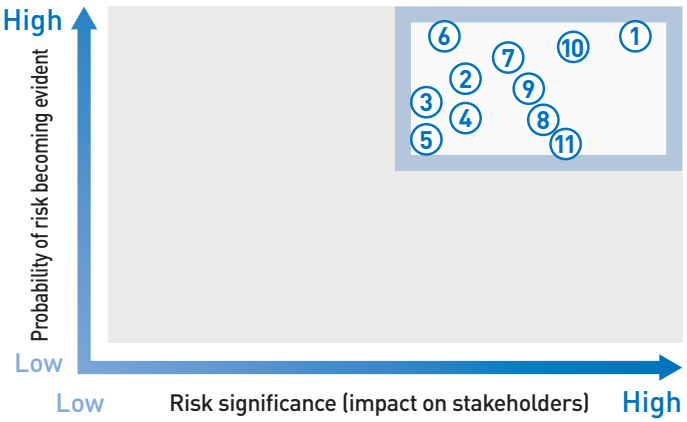
Identifying Significant Risks at DKS

In terms of risk management, the Company established a Risk Management Control Committee as a systematic response and formulates activity plans, reviews activities, identifies risks and examines countermeasures. (Please refer to page 47.)

Based on the results of such activities, in producing the DKS Report 2019 we identified risks from the viewpoint of information that is of great importance to the Company's stakeholders, namely in terms of materiality (significance). The procedure for extracting that information is set out below.

1	Confirmation of risks recognized in the organizational risk management system
2	Identification of risks that should be recognized at the five business segments
3	Matrix analysis based on the importance of each risk (the degree of impact on stakeholders) and the probability of risk becoming evident (possibility of negative impact due to occurrence/disclosure)
4	Extraction of significant risks from the viewpoint of materiality in integrated reporting
5	Analysis of impact and response to those risks when they occur

Identify risks



Prioritize the ①–⑪ significant risks on the right

Risks That Lead to Opportunities

An event that can damage the broad value of a company, risk can also lead to opportunities. DKS considers risks in a segregated manner: the avoidance of risk and the formulation of strategies in cases where corporate value can be increased by responding well to risk. The Company would like to practice management that can respond appropriately to risks in order to achieve sustainable growth.

Example of Potential Risk: Naphtha Price Hikes

The domestic price of naphtha, the main raw material for our products, rose to more than ¥70,000 per kiloliter in the fourth quarter of 2014. It then fell to around ¥31,000 in mid-2016 and stands at a level just above ¥40,000 in 2019. Measures against naphtha price fluctuations might include risk hedging using derivatives, including futures and foreign exchange rates, but they are only partially effective.

Increases in costs due to such raw material fluctuations could lead to pressure on profits, the burden of price hike negotiations and even the loss of customers. On the other hand, the contact points with customers during price hike negotiations, and the gathering of detailed information, give rise to opportunities to acquire new orders by replacement with new materials. If we can present more advantageous transaction conditions for customers compared to other companies in the same industry, it could lead to an increase in market share. This is one example of how we can seize risk-associated opportunities.

Overview of Significant Risks

The table on the opposite page summarizes the significant risks (11 items) to which DKS is exposed and outlines the impact of and responses to those risks as well as the accompanying opportunities created by them.

Significant Risks	Impacts from Risks	Responses to Risks and Opportunities
① Increases in raw material prices, centering on naphtha	Profits come under pressure from cost price increases	Increased contacts with customers through price hike activities will increase opportunities for replacement with new materials and proposals for new themes.
	Time taken for price hike activities to maintain profit margin	
	Decline in market share, lost ground due to price hikes (transfer to another company in the same industry)	If more price competitive than other companies in the same industry in a similar environment, market share could increase.
② No raw materials production in the manufacturing sector	Inability to control prices	There is no need for fixed costs, giving rise to predominance at times of economic downturns.
	Business continuity plan (BCP) measures become necessary	Costs can be reduced by searching for inexpensive raw materials.
③ Large numbers of customers	Time taken, costs incurred in customer follow-up	Information on each industry is easily obtainable due to having customers in every field.
④ Composition of sales with a large variety of small-lot products	Cost of small-lot product processing becomes expensive, cost competitiveness declines	Possessing a lineup of products that can be used in each field enables a variety of formulation proposals by combining them
	Time taken in research, sales and rectifying problems due to a variety of products	
⑤ Many single-material sales	Profitability declines in single-material sales for surfactants due to inferiority in terms of cost relative to overseas competitors and major manufacturers who specialize in bulk manufacturing	Improve competitiveness by promoting the Uni-Top strategy, which does not pursue volume.
⑥ Increasing demand for inexpensive products associated with growth in emerging nations	Decrease in profit margin due to the sales composition ratio being weighted toward inexpensive products	Promotion of a differentiation strategy through cost reductions, formulation sales proposals, Japanese quality, customizing
⑦ Improvement in technological level and productivity in neighboring countries, especially China	Concerns about losing competitiveness in domestic and overseas markets	Cooperation and alliances with overseas companies
	Concerns about patent infringements overseas	Enhancement of a patent strategy
⑧ Strengthened laws and regulations	Necessity to maintain regulatory conformance should there be legal revisions to, for example, the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.	Should the same thing happen with another company's product, it can be regarded as an opportunity to replace it with a DKS product.
	Associated sequence of work takes time starting with contacting customers supplied, proposals of alternative products, performance evaluations, 4M (man, machine, material and manufacturing method) changes, revision of standards, etc.	
	Cost, time and labor involved in replacement work due to a large number of varieties	
⑨ Stricter quality controls	In the fine chemical fields, such as energy-related, pharmaceuticals and foods, a higher level of quality control is required than with industrial chemicals, and know-how is necessary for that.	Utilization of GMP-certified Ikeda Yakusou in the life sciences field
		Utilization of the Kibi Plant as a fine chemical facility specializing in the life sciences and energy-related fields
⑩ Aging facilities/ equipment	Due to our long company history, some facilities are becoming obsolete.	An opportunity to make business continuity decisions, enabling the beginning of a portfolio review
	As they would not bring about enough profit to meet new capital investment, products for which the Company is uncertain as to their business continuity would be manufactured at those aging (and less efficient) facilities.	
	The scale of facilities is not matching the production volume due to decline in sales. Decreased efficiency and concern for quality problems due to small-lot production.	
	Rise of product unit cost due to production cost leads to lowering of price competitiveness.	
⑪ IT security	Leak of confidential information due to virus or internal management error	Strengthen compliance through employee training and appropriate measures against unauthorized access

Financial/Capital Strategies and Total Shareholder Return

1 Financial Position

As of the end of the fiscal year ended March 31, 2019, the Company had total assets of ¥75.9 billion (up 2.6% year on year), net assets of ¥33.5 billion (up 5.1% year on year), an equity ratio of 41.3% (up 0.5 percentage point year on year) and interest-bearing debt of ¥23.4 billion (down 1.7% year on year); the net D/E ratio was 0.48.

Regarding cash flows for the period, lower profits during the fiscal year under review led to cash flows provided by operating activities declining to ¥3.2 billion, below the ¥5.0 billion recorded during the previous fiscal year. With an increase in capital investments to ¥5.8 billion from ¥2.4 billion the previous fiscal year, cash flows used in investing activities reached ¥5.6 billion. Meanwhile, free cash flows turned negative at minus ¥2.5 billion. Cash flows used in financing activities were ¥1.5 billion as a result of dividend payments (¥700 million) and loan repayments, but the financial base remains stable.

2 Financial Analysis of the Past 10 Years

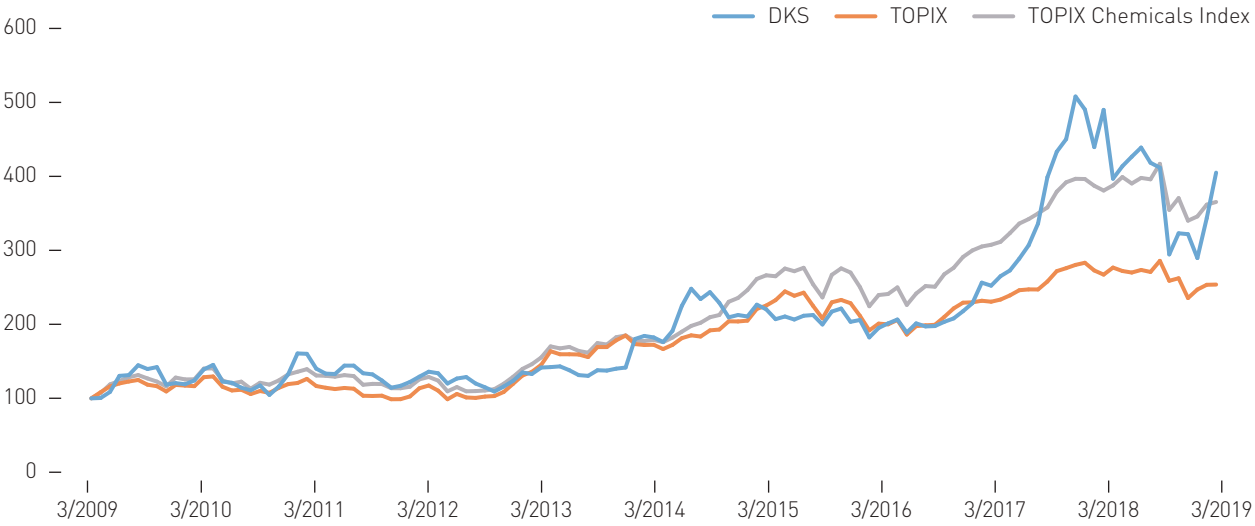
The performance and financial results of the DKS Group for the period from April 2008 to March 2019 are analyzed as follows. (Cumulative totals are the totals over the 10-year period from April 2009.)

	April 2008-March 2009	April 2018-March 2019	Assessment/Comments
Net Sales	¥46.5 billion	¥59.5 billion	Increased 28.0%
Operating Income	¥0.3 billion	¥4.3 billion	Second highest level in history despite lower profits
Operating Margin	0.6%	7.3%	Failed to reach the 5-year target (9.0%)
Profit Attributable to Owners of Parent	¥(0.35) billion	¥2.58 billion	Ten years ago, the business environment following the global financial crisis was severe
ROE	-2.4%	8.4%	Despite falling from the previous fiscal year, ROE in excess of 8% was ensured
Total Assets	¥41.7 billion	¥75.9 billion	Increased 81.8%
Net Assets	¥14.4 billion	¥33.5 billion	Increased approximately 2.3 times because of retained earnings and two capital increases
Interest-Bearing Debt	¥16.2 billion	¥23.4 billion	Increased ¥7.1 billion mainly due to securing capital investment funds
Net D/E Ratio	1.0	0.5	Improved significantly due to increases in net assets

	Total for 10 years from April 2009	Assessment/Comments
Profit Attributable to Owners of Parent Cumulative Total	¥16.3 billion	Recorded total profits of ¥12.4 billion over the past five years
Capital Investment Cumulative Total	¥33.9 billion	Invested aggressively for growth since the fiscal year from April 2014 onward investing ¥12.4 billion more than the amount of depreciation
Depreciation Cost Cumulative Total	¥21.5 billion	
R&D Expenses Cumulative Total	¥23.2 billion	Continued investment in technology
FCF Cumulative Total	¥0.86 billion	FCF over the past 10 years increased slightly
Dividend Cumulative Total	¥4.4 billion	The dividend per share increased to ¥70 from ¥15 a decade ago (after considering stock splits)
Capital Increase	¥4.4 billion	Implemented public offerings on two occasions (March 2011 and December 2014)
Share Buybacks	¥1.0 billion	Determined as a shareholder return policy in January 2017

3 Total Shareholder Return for the Past 10 Years

Total shareholder return (TSR) by dividend and stock price was as follows. Despite making adjustments over the past year in response to the rapid rise in the stock price during the previous fiscal year, TSR over the past three years reached a high annual return rate of 30.9%. Meanwhile, the annual TSR rate was 16.3% over the past five years and 15.0% over the past 10 years. These levels exceed the shareholder capital cost anticipated by the Company.



Note: Share price trends including dividends (closing price data for March 31, 2009 = 100)

	1 year	3 years		5 years		10 years	
		Cumulative total	Annual rate	Cumulative total	Annual rate	Cumulative total	Annual rate
DKS	(18.9%)	124.4%	30.9%	112.7%	16.3%	304.1%	15.0%
TOPIX	(5.0%)	26.2%	8.1%	47.1%	8.0%	153.3%	9.7%
TOPIX Chemicals Index	(4.0%)	52.4%	15.1%	104.0%	15.3%	264.6%	13.8%

Note: The annualized conversions are geometric averages of cumulative returns.

4 Future Financial Strategies/Shareholder Returns

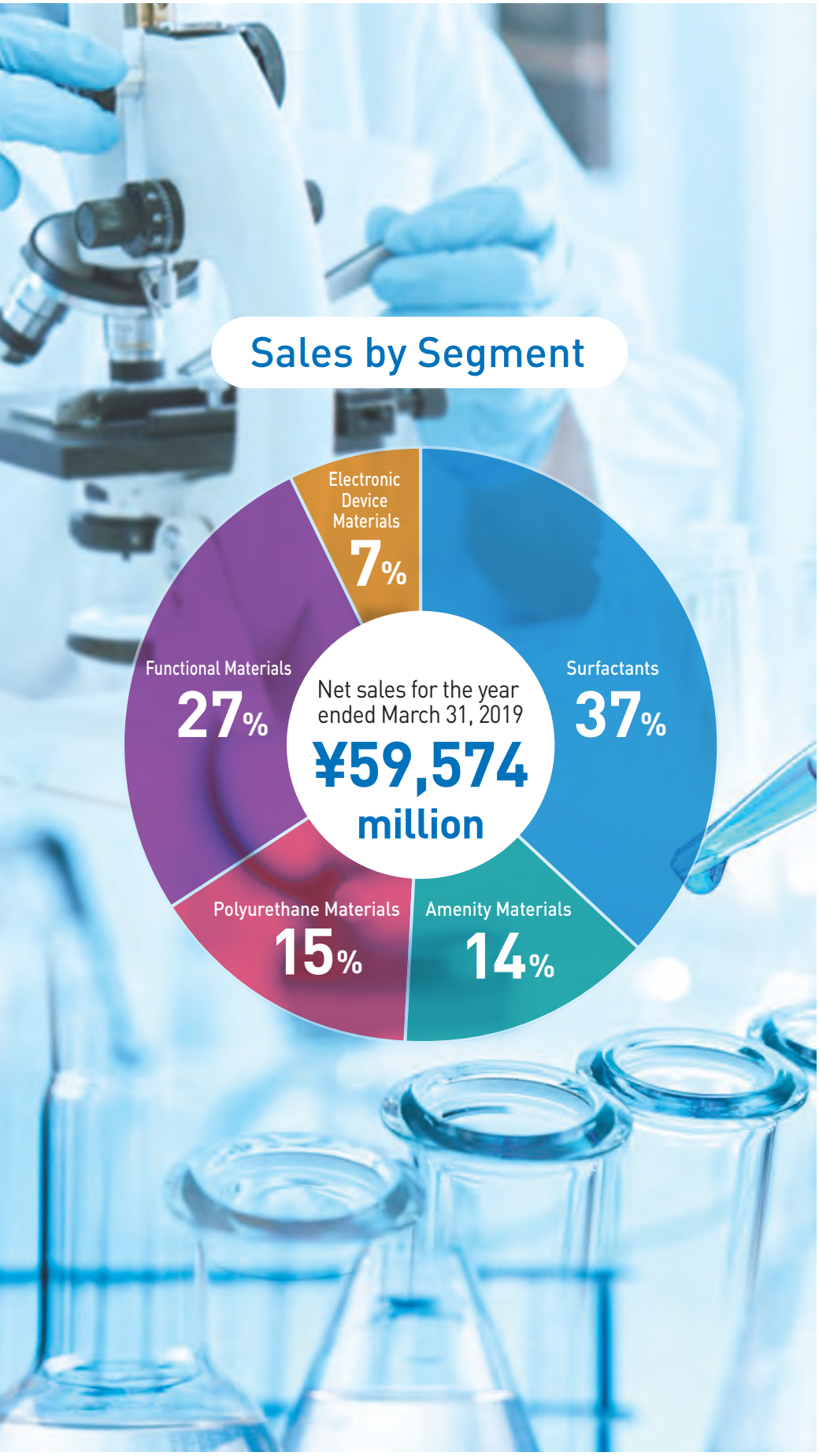
Under REACT1000, our current five-year management plan, we have set "maintaining and enhancing an appropriate ROE level" as a management policy. In addition, as an action point we are promising all our shareholders a change from comparative value stock to growth stock. For our financial strategy going forward, while supporting medium- to long-term growth, we would like to implement measures to optimize the cost of equity.

Because we are a chemical manufacturer, continuous investments in plant and equipment, as well as R&D expenditures, are indispensable for achieving medium- to long-term growth. While maintaining continuing financial discipline, we are therefore investing for growth, and the main source of that investment will be internal reserves and interest-bearing debt. In addition, we believe an important option will be to conduct policy flexibly, such as making capital increases for growth or financially strategic acquisitions of treasury stock, based on our financial situation and stock market trends.

Specifically, we will 1) steadily raise PBR to 1 or above by improving and maintaining ROE to a level above the cost of equity, 2) maintain financial discipline and bring about a reduction in the cost of capital to an appropriate level by using moderate leverage, and 3) aim for sustainable dividend growth and optimize the cost of capital through flexible shareholder return measures in conjunction with share buybacks.

Moreover, in terms of M&A as part of growth investment, we will select investment projects for which ROIC exceeds the capital cost and aim for PMI (post-merger integration) that contributes to greater corporate value over the medium to long term.

Five Core Business Segments



Surfactants

Providing highly functional surfactants since the Company's founding in 1909

- Nonionic surfactants
- Anionic surfactants
- Cationic surfactants
- Amphoteric surfactants
- Polymerizable surfactants

Amenity Materials

Providing materials and peripheral application technologies necessary for a comfortable living environment

- Sucrose fatty acid esters
- Cellulose polymers
- Vinyl polymers
- Acrylic polymers
- Health supplements

Polyurethane Materials

Providing industrial materials and urethane raw materials, for example, paints, adhesives, civil engineering and construction materials, electric insulating materials

- Polyether polyols
- Urethane prepolymers
- Urethane systems

Functional Materials

Providing products that are essential to daily life and home electronics, for example, flame retardants, radcure resins, waterborne polyurethanes

- Radiation-curable monomers/ oligomers
- Waterborne polyurethanes
- Flame retardants
- Amide-based lubricants

Electronic Device Materials

Providing ceramic materials and conductive pastes for home appliances and electronics components

- Conductive pastes for electronics
- Injection molding pellets
- Functional inorganic materials

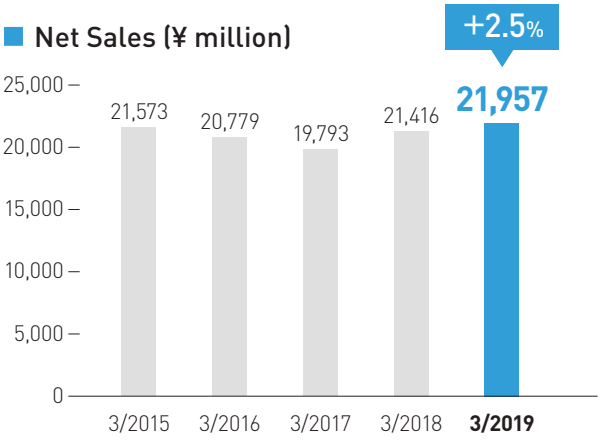

IT & electronics


Soap & detergents

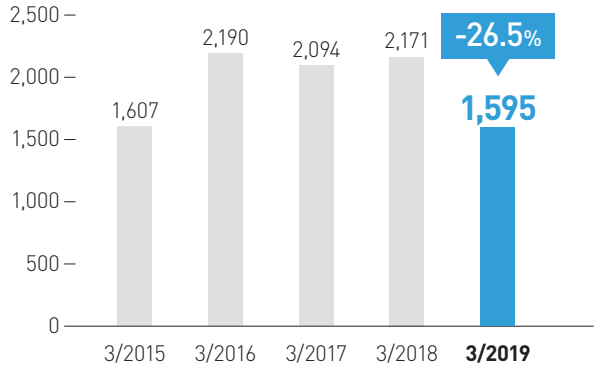

Paints & colorants

Surfactants

Net Sales (¥ million)



Operating Income (¥ million)



Segment outline

Since the Company's founding in 1909, the surfactants segment has provided core technologies that have supported DKS for more than 100 years. DKS surfactants provide high added value in a wide variety fields and applications including soap and detergent, IT, electronics, rubber and plastics, paints and color materials, and energy through their emulsifying, dispersing, solubilizing, penetrating, wetting, foaming and defoaming, and surface modifying functions. We currently develop and manufacture these products with petrochemicals and oils/fats as key raw materials primarily at the Yokkaichi Branch, the Shiga Branch and Yokkaichi Chemical Company Limited.

A review of the fiscal year ended March 2019 and our outlook for the future

During the fiscal year ended March 2019, this segment saw strong net sales overall.

In Japan, sales fell significantly for soap and detergent applications, were low for toiletry applications and slightly weak for machinery and metal applications. Sales were solid for rubber and plastic applications and strong for IT and electronics applications. Overseas, sales were slightly weak for textile applications but grew for paints and color material applications.

Looking ahead, we will focus on providing products customized to meet customer needs in accordance with the Uni-Top strategy.

The strengths of DKS and the main functions of the business

The typical function of surfactants is to clean (i.e., dirt removal), which is represented in the well-known item "soap." Surfactants act on the surface of substances that do not mix such as oil and water and display emulsification and dispersion actions to remove dirt.

Recently, however, the functions that the Company's customers require for surfactants have evolved beyond simply cleaning to more sophisticated and unique applications that reflect the advancement of the industry.

The surfactant synthesis, analysis and evaluation technology developed over its more than 110-year history has enabled the Company to provide performance and functions tailored to customer needs through its numerous product lines and combinations.

Relationship between the segment and society

This segment leverages our many years of experience and accumulated technologies. Our abundant lineup of products has enabled us to introduce optimal products that meet customer needs, while we are able to conceive high-value-added products through our unique development approach. Going beyond simply providing materials, we work closely with customers to find solutions to their problems.

Amid the global rise in environmentalism, we have been pursuing in recent years research and development on highly biodegradable, eco-friendly products that do not cause water pollution.

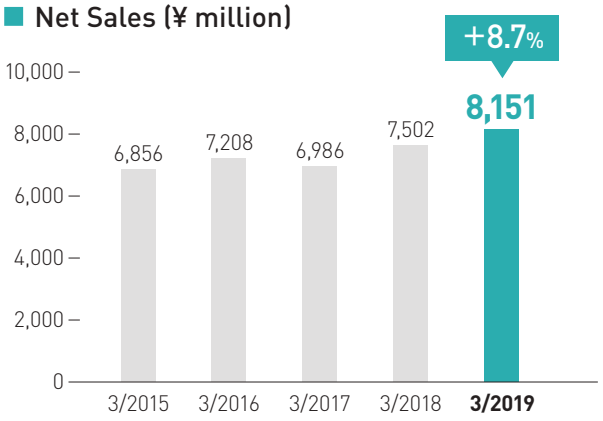

Personal care


Food

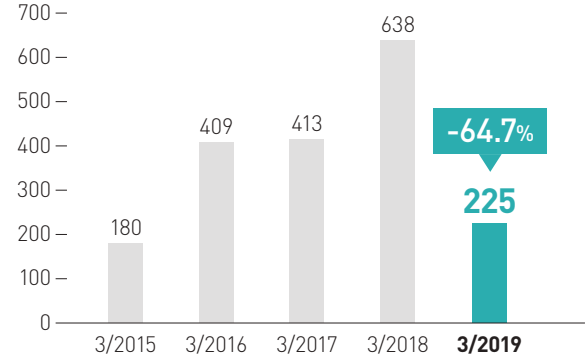

Energy

Amenity Materials

Net Sales (¥ million)



Operating Income (¥ million)



Segment outline

The Amenity Materials segment provides materials and peripheral application technologies necessary for a comfortable living environment. The Company provides materials suitable to the products of customers in a wide range of industries including foods, pharmaceuticals, cosmetics, toiletries, fisheries/livestock, textiles, pulp/paper, civil engineering, agrochemicals and agro-materials. As part of our entry into the new life sciences business, in July 2018 we acquired Biococoon Laboratories, Inc., and Ikeda Yakusou Co., Ltd., to produce I. Japonica-Bombyx Fungus and Sudachin (sudachi peel extract), respectively.

In addition to core-technology surfactants, DKS manufactures products made from natural raw materials, including sugar and pulp, at the Shiga and Ohgata branches in line with the Company's commitment to preserving the environment. The Company also produces health food products at the Biococoon Laboratories' Tanagura Plant and the Ikeda Yakusou facility in Tokushima Prefecture.

The strengths of DKS and the main functions of the business

With more than 65 years of experience in cellulose polymers using pulp and more than 50 years of experience in sucrose fatty acid esters using sugar, the Company has a long history in product development and is developing markets based on the basic and application technologies accumulated to date. Among these, sucrose fatty acid esters are highly characteristic as an edible surfactant and DKS is one of only a handful of companies worldwide producing them. Sucrose fatty acid esters are used as an emulsifier for oil/fat and cream as well as an agent to improve food texture, such as giving cookies their crispy texture. Recently, we have established technologies to produce cellulose nanofibers (CNF), using nanotechnology to make very fine natural cellulose fibers, a new material that is attracting attention mainly for its use in personal care and general industrial applications. This is accomplished by leveraging CNF's characteristic viscosity and emulsifying, dispersing and stabilizing properties.

A review of the fiscal year ended March 2019 and our outlook for the future

During the fiscal year ended March 2019, this segment saw overall growth in net sales.

Although sales in Japan for cellulose polymer for feed applications were somewhat sluggish, sales were solid for pharmaceutical applications and grew for energy and environmental applications. Sales for sucrose fatty acid esters for food applications remained solid.

Overseas, sales were weak for cellulose polymers for food applications but were strong for sucrose fatty acid esters for personal care applications, while food application-related sales rose.

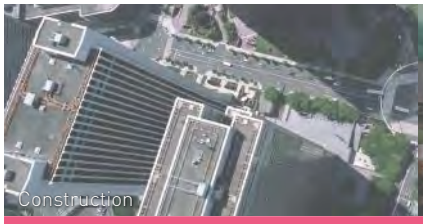
In the life sciences business, a new plant located in Tanagura, Fukushima Prefecture, will be completed in the autumn of 2019 and will manufacture I. Japonica-Bombyx Fungus, which is made with only pure domestic ingredients. We have obtained HACCP* certification and enhanced our quality control systems to provide consumers with safe and reliable health food products.

*HACCP (Hazard Analysis Critical Control Point): A food sanitation management method that was developed to ensure the safety of food used in the U.S. space program in the 1960s.

Relationship between the segment and society

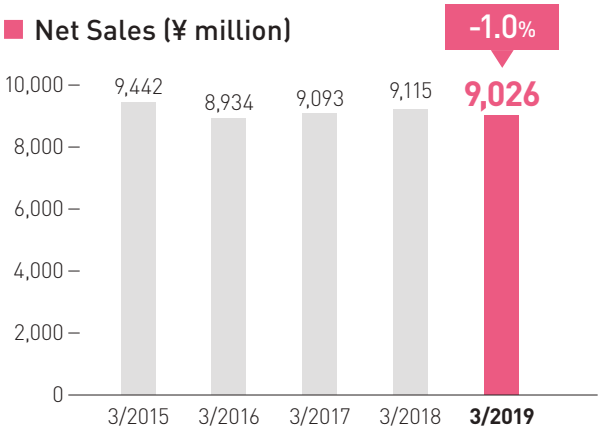
This segment targets industrial fields that place an emphasis on safety such as food, personal care products and pharmaceuticals as end products that are placed in the mouth, come into contact with skin and stimulate the five senses. With demographic trends indicating that major Japanese market growth looks unlikely, the Company will focus on overseas expansion while maintaining its current customer base.

DKS recently has gotten involved with I. Japonica-Bombyx Fungus, a health food product that could help address the rise in dementia patients, a social issue taking hold in Japan. Currently, clinical trials are under way aimed at receiving permission to label this product as a food with functional claims. We will pursue research and development to extend people's healthy lives that reflects the spirit of the DKS Credo: "Contributing to the nation and society through industry."

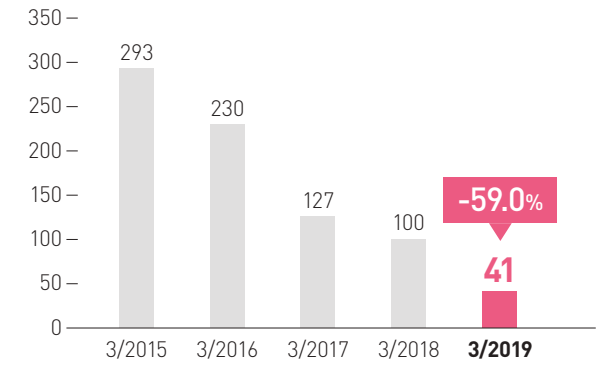


Polyurethane Materials

Net Sales (¥ million)



Operating Income (¥ million)



Segment outline

The segment provides polyurethane materials and industrial materials, including paints, adhesives, civil engineering and construction materials, and electric insulation materials. The Company possesses technologies used to manufacture high-elasticity urethane rubber and urethane elastomers as well as soft/rigid urethane foams. The Company leverages these properties to provide a variety of high-performance urethane products for a wide array of industries and applications that include cushioning, thermal insulation, molding and painting materials.

Rock hardening agents used for mountain tunnel projects such as roads and railways are an essential product for infrastructure upgrading. The Company's products play a role in maintaining safety in environments where one misstep can put people's lives in jeopardy.

With petrochemicals as the mainstay raw materials in the segment, the products are mainly manufactured at the Yokkaichi Branch.

A review of the fiscal year ended March 2019 and our outlook for the future

During the fiscal year ended March 2019, net sales for this segment were slightly weak overall.

Sales remained strong for functional urethane with IT and electronics applications and solid for synthetic lubricants that are eco-friendly and in line with HFC regulations but fell sharply for civil engineering chemicals.

Rock hardening agent sales are expected to grow as construction for the Linear Chuo Shinkansen project proceeds.

The strengths of DKS and the main functions of the business

The Company's urethane materials are used mainly in civil engineering and construction, painting materials, adhesives and electric insulation materials, with the overriding priority of ensuring people's safety through applications mainly for transportation equipment, civil engineering projects and electronic materials. With the recent diversification of electric appliances and the incorporation of IT in automobiles, electronic components are being used under increasingly severe conditions. Meanwhile, the need for lightweight, compact and integrated electronic components has increased, while components now need to be protected from physical and chemical effects to maintain strength and ensure durability. Lightweight, strong urethane resin plays a key role in this area. The Company's electric insulation materials—which feature a superior balance of insulation, heat-resistant and flame-retardant properties—have a wide range of uses, from home appliance to transportation equipment components, to meet the exacting needs of customers.

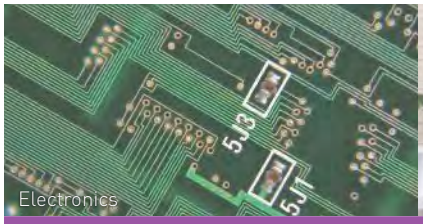
In addition, our rock hardening agents for tunnel construction have a broad array of uses that include public roads and railways while boasting a high market share based on their safety and performance.

We will conduct employee training at the safety training center located at the Kasumi Plant, where these products are manufactured, with the aim of generating Group-wide synergies.

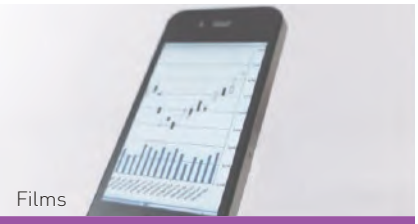
Relationship between the segment and society

The Kasumi Plant located in Yokkaichi, Mie Prefecture, began operations in December 2015 after construction went as planned and serves as a mother plant that accounts for one-third of the 100,000-m^2 site area. Rock hardening agents manufactured at the plant #1 are indispensable materials for tunnel construction, including roads and railways. These products are contributing to infrastructure projects that make people's lives more convenient. In June 2019, the plant #3 was completed and manufactures functional polyurethane resin. Against this backdrop, we will redouble our initiatives with inspiring/inspired partners.

Based on our Uni-Top strategy, we will pursue the development of materials by combining cutting-edge facilities and application technologies that meet customer needs and are in tune with the times.

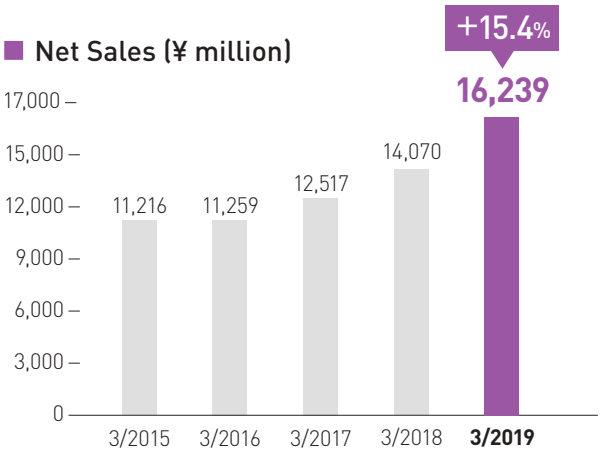

Electronics


Flame retardants for plastics

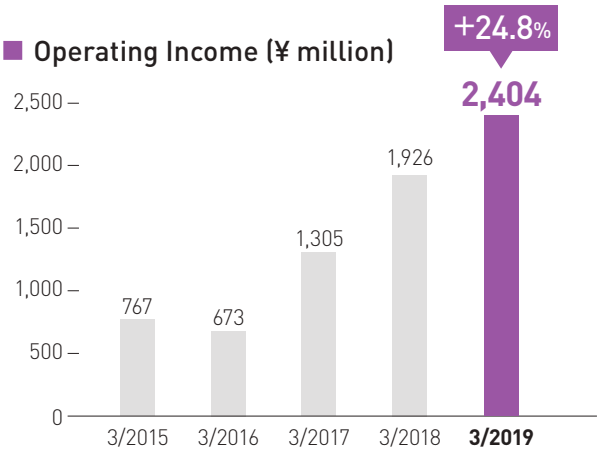

Films

Functional Materials

Net Sales (¥ million)



Operating Income (¥ million)



Segment outline

The Functional Materials segment provides technologies and materials contributing to advanced performance, including resins used in daily necessities, as well as IT and electronic materials often used in personal computers, smartphones and home electronics. Some of the segment's products include plastic flame retardants, antistatic agents, lubricants, anticlouding agents to reduce film and resin clouding, antioxidants suppressing oxidation degradation in a variety of materials, and radiation-curable monomers and oligomers using radcure (UV or EB curing) technology. The waterborne polyurethanes being developed since 1973 are used in wood and plastic paints, metal and paper coating agents, film and wood adhesives, and paper/fiber binding.

These products are manufactured at the Ohgata and Yokkaichi branches (Chitose and Kasumi Plant).

A review of the fiscal year ended March 2019 and our outlook for the future

During the fiscal year ended March 2019, the segment saw a substantial expansion in sales. In Japan and overseas, there was notable growth in radiation-curable monomers and oligomers for IT and electronics applications, as well as strong growth in flame retardants used in rubber and plastics applications. For flame retardants, it is important to note that pricing is set in line with bromine market conditions. On the other hand, the expansion in radiation-curable monomers and oligomers represents a success story in our cooperation with our inspiring/inspired partners.

The strengths of DKS and the main functions of the business

The technology used in radiation-curable monomers and oligomers is called radcure technology, in which a resin composition such as paint is instantaneously dried and cured by irradiating it with ultraviolet light (UV) or an electron beam (EB). Radcure technology is widely used in several applications across a variety of fields to conserve resources and energy and to reduce environmental impact. Applications include the clear paint used in building materials and furniture; anticorrosive paint for metals; resist materials for semiconductors, dry films and LCDs; and coating agents for mobile phones, optical fibers, plastics and paper. DKS monomers are highly functional alcohol-based products using ethylene oxide (EO) addition technology, which results in low curl, low viscosity and enhanced hardness. Our B2B2C business model focuses on a cooperative relationship with our inspiring/inspired partners to develop innovative one-of-a-kind products. The DKS brominated flame retardant's raw material is sourced from a global bromine production site, and because the raw material price can fluctuate based on bromine market conditions, it is important for DKS to maintain proper controls on product prices. Brominated flame retardants exhibit greater stability and stronger flame retardancy for rubber and plastic materials than do phosphorus and inorganic flame retardants.

Relationship between the segment and society

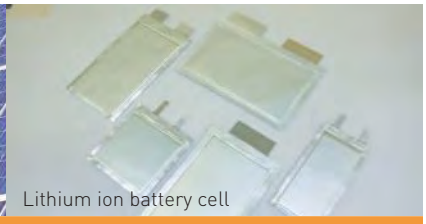
While many urethane resins are based on organic solvents, DKS also is researching and developing waterborne polyurethanes in which the polyurethanes are dispersed in water, largely in reaction to rapidly growing demand for safer water systems as society places an increased importance on environmental concerns. In addition to being safe for the environment and people, we believe these products are likely to see increased demand thanks to their ability to allow high-performance finishing in a variety of applications, including paper and metal processing, as well as film processability. Given the global trend away from organic solvents, this is one of the product groups on which we are focusing our energies.

Target markets for this business show a strong potential for growth and are in areas both in Japan and overseas in which DKS can demonstrate its strengths. While competitors include electronic materials manufacturers and overseas flame retardant manufacturers, the Company looks to secure growth through its innovative technologies and proposal capabilities.

DKS launched construction of a new radiation-curable monomers and oligomers plant in August 2019, with completion currently targeted for June 2020.

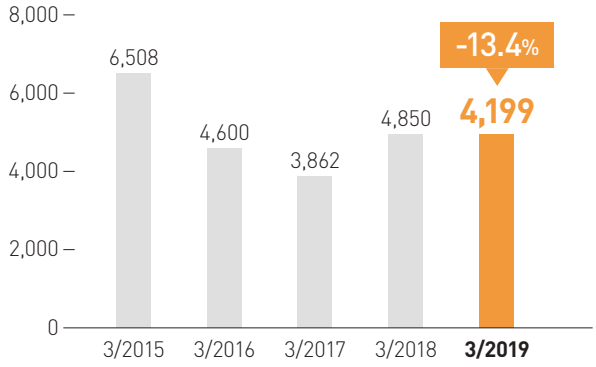
Ceramic materials


Solar cells

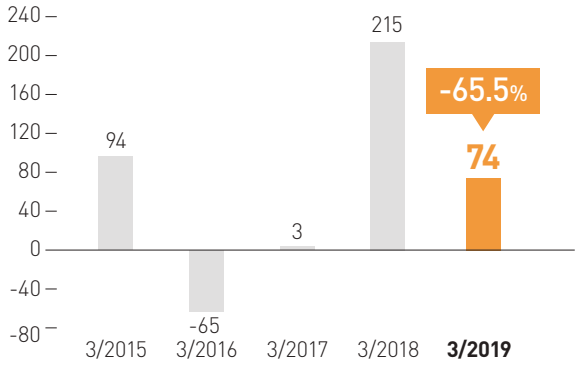

Lithium ion battery cell

Electronic Device Materials

Net Sales (¥ million)



Operating Income (¥ million)



Segment outline

As the information society continues to advance, as evidenced by the rapid spread of the Internet and smartphones, the electronic device materials segment is focused on developing and supplying ion-conductive polymers, ionic liquids, ceramic materials and lithium-ion battery materials, as well as conductive pastes for solar cells, We dissolved Elexcel Corporation last year and moved the former company's operations to the R&D Headquarters, with a corresponding shift to an organizational system specializing in the research and development of lithium-ion battery materials. We intend to further develop our innovative technologies in each area of operation, while also promoting R&D in line with the trends of the times. Mainstay products in the electronic device materials segment are produced at subsidiary companies Kyoto Elex and Dai-ichi Ceramo.

A review of the fiscal year ended March 2019 and our outlook for the future

Sales in this segment in the fiscal year ended March 2019 were generally sluggish.

Despite an expansion in sales of conductive pastes for solar cells, sales of injection molding pellets were generally weak. One threat to the segment is the improvement in technological abilities in countries throughout Asia, including China. However, by developing new markets and building firm relationships with customers based on the B2B2C business model, we intend to offer added value that cannot be beaten by cost competitiveness alone.

The strengths of DKS and the main functions of the business

DKS is focused on advancing business activity at subsidiary companies using its innovative technologies. The Company's surface chemistry, which is its core technology, is used in the mixing techniques of resins and ceramic powders or organic materials and metal powders. DKS can conduct mixing operations under special conditions and with a high level of viscosity thanks to its detailed know-how in the process. Compound technology is one of our key strengths, allowing us to provide specific materials that meet the needs of our customers. One example is conductive pastes, which have precious metals as the main raw material and are made with inorganic fillers and soluble binders. Conductive pastes improve functionality in the electronic devices and components used in solar cells, automobiles, smartphones, LEDs, office equipment and medical equipment. Materials for ceramic and metal powder injection molding are used to produce small and difficult-to-process complex three-dimensional ceramics and metal parts. They often are used in electronic devices such as smartphones, precision components such as watches and medical equipment, and automotive and optical communication components. The segment also can provide powder injection molding compounds made by precisely mixing raw material powder, binder, and dispersant.

Another one of our strengths can be found in lithium-ion batteries, where we handle everything from materials research and development to the manufacture of prototype lithium batteries.

Relationship between the segment and society

The lithium-ion batteries (LiB) used in electric vehicles generally employ lithium phosphate as an electrolyte and an organic solvent as an electrolytic solution. However, because there is a risk of organic solvents igniting, manufacturers have been careful to incorporate safety measures, including adding in flame retardants. We have developed an ionic liquid that remains in that state at 100℃ and below, has no vapor pressure and is nonflammable, and because it is highly safe and has high ion conductivity, we are developing electrolyte applications for lithium-ion batteries and capacitors. These kinds of liquids are also attracting attention as next-generation materials in the energy device field and as green solvents for reducing environmental impacts. Through these products and efforts, the segment is playing an important role in making all our lives safer and more comfortable. While the improving technological capabilities of countries in Asia, including China, are a threat, we believe growth is possible by offering our proprietary technologies, R&D capabilities and solid quality.

Pursuing breakthrough developments in connection with the human brain through I. Japonica-Bombyx Fungus

It has been said that we use only about 10% of our brain, leaving us with enormous potential. However, is it possible to develop our brains to resist the onset of dementia, or even to outperform AI? Biococoon Laboratories has revealed that an original hot water extract of I. Japonica-Bombyx Fungus has proven able to completely eliminate damage in the hippocampal tissue of senescence-accelerated mice. The research suggests the potential that more than 20% of the human brain can be used. In an environment in which there is no cure-all treatment for dementia, including Alzheimer's disease, in humans, we are promoting research and development in I. Japonica-Bombyx Fungus, which could serve as a critical innovation in an aging society.

Figure 1. Manufacturing methods for I. Japonica-Bombyx Fungus

Natural ophiocordyceps sinensis, existing as a moth parasite (left), is combined with the silkworm pupae (middle) to form I. Japonica-Bombyx Fungus (right)

Natural ophiocordyceps sinensis, existing as a moth parasite

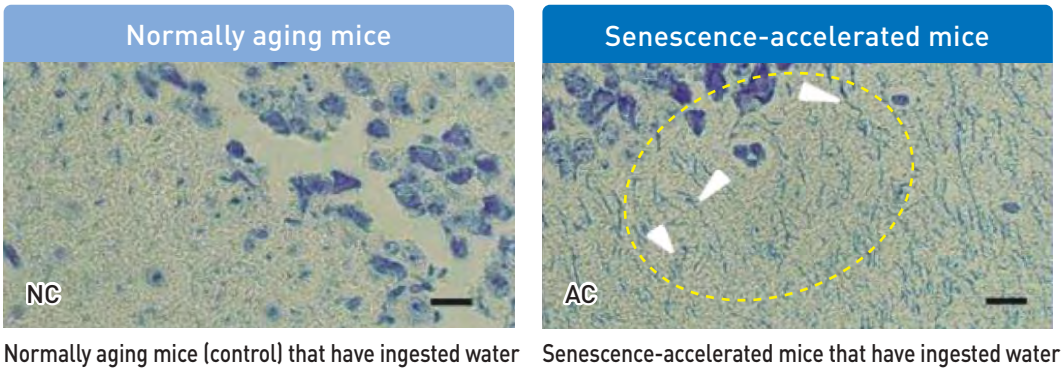
Silkworm pupae

I. Japonica-Bombyx Fungus

Figure 2. Effect of a hot water extract of I. Japonica-Bombyx Fungus to repair hippocampal damage in senescence-accelerated mice

Histochemical observations (Holzer's staining)

❶ Normally aging and senescence-accelerated mice given water, with hippocampus tissue observation made using Holzer's staining

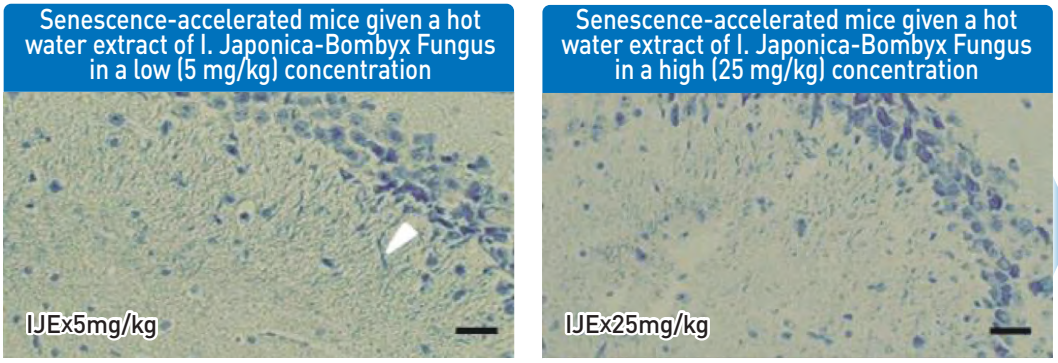


Arrows in the yellow circle indicate gliosis

Normally aging mice (control) that have ingested water

Senescence-accelerated mice that have ingested water

❷ Senescence-accelerated mice given a hot water extract of I. Japonica-Bombyx Fungus in low (5 mg/kg) and high (25 mg/kg) concentrations



Complete disappearance of gliosis

I. Japonica-Bombyx Fungus extract administered orally for five weeks (5 mg/kg)

I. Japonica-Bombyx Fungus extract administered orally for five weeks (25 mg/kg)

Substances that can repair damaged hippocampal tissue in senescence-accelerated mice as a welcome addition to an aging society

Figure 1 shows ophiocordyceps sinensis fungi harvested from a natural environment in a parasitic state with a moth, with the I. Japonica-Bombyx Fungus manufactured through infestation of silkworm pupae after expelling silk during sericulture.

The first stage of the experiment involves normally aging mice and senescence-accelerated mice drinking water, with observation of the hippocampal tissues permitted through Holzer's staining. The senescence-accelerated mice are used as the model for dementia, including Alzheimer's disease, and while no abnormal tissue was observed in the normally aging mice, the senescence-accelerated mice exhibited a gliopathic reaction, with what appears to be a fibrous lesion (lower section of Figure 2). In another experiment, the senescence-accelerated mice showed a greater deterioration in memory than did the normally aging mice. The senescence-accelerated mice are then given a hot water extract of I. Japonica-Bombyx Fungus in low (5 mg/kg) and high (25 mg/kg) concentrations. Surprisingly, at the low concentration there were only a few fibrous scratches and at the high concentration they were not observed at all. Further memory experiments showed memory in the senescence-accelerated mice restored to the level of normally aging mice. In other words, it appears that I. Japonica-Bombyx Fungus could serve to repair hippocampus damage and promote the improvement of memory.[1] As a result of the experiment with mice, human testing was advanced, with indications of an increase in acetylcholine[2] in the brain from the ingestion of I. Japonica-Bombyx Fungus.[3]

The mechanism by which I. Japonica-Bombyx Fungus repairs the hippocampus is highly distinct and different from the functional foods expected to contribute to enhanced cognitive function and currently available dementia treatments (see Table 1). We target further clarification of the ability of I. Japonica-Bombyx Fungus to repair the hippocampal tissue through a combination of DKS know-how in chemicals and the life sciences expertise of Biococoon Laboratories. If the restorative properties to the hippocampal tissue can be clarified, it would suggest not only the potential for functional foods and pharmaceutical candidates for cognitive improvement but also the formation of a material that could allow humans to use 20% or more of their brain in the near future.

<References>
1. *Sericulture and Insect Biotech*, Vol. 85, pp. 63–67 (2016).
2. *Iwate Medical Journal*, Vol. 68, pp. 223–227 (2017).
3. *Frontiers in Pharmacology*, Vol. 5, pp. 1–11 (2014).

Table 1. Mechanisms and target cells/tissues for pharmaceuticals, functional and health foods treating dementia, including Alzheimer's disease

Food or substance	Target (cells or tissue)	Mechanism
Donepezil (Aricept)	Nerve cells	Enzyme inhibition
Gingko biloba extract	Nerve cells	Antioxidant
Ferulic acid	Nerve cells	Antioxidant
Plasmalogen	Cerebral cortex	Plasmalogen supply
Resveratrol	Nerve cells	Antioxidant
Omega-3 fatty acids	Nerve cells	Antioxidant
Iso alpha acids	Microglia	Neuroprotection
I. Japonica-Bombyx Fungus	**Hippocampal tissue**	**Loss of gliosis response**

Note: Revised the reference material "3" noted above.

Important CSR Issues

Basic Policies

We are confronted with a broad range of issues, from environmental problems such as global warming, resource depletion and a crisis of biodiversity to an increasing population that causes food resource and energy problems amid rapid globalization and an increasingly information-based society. We look to take on these challenges and to protect our environment and way of life while improving safety and level of comfort. To do these things, we pursue "Chemistry provides a solution" and contribute to the establishment of a sustainable society.

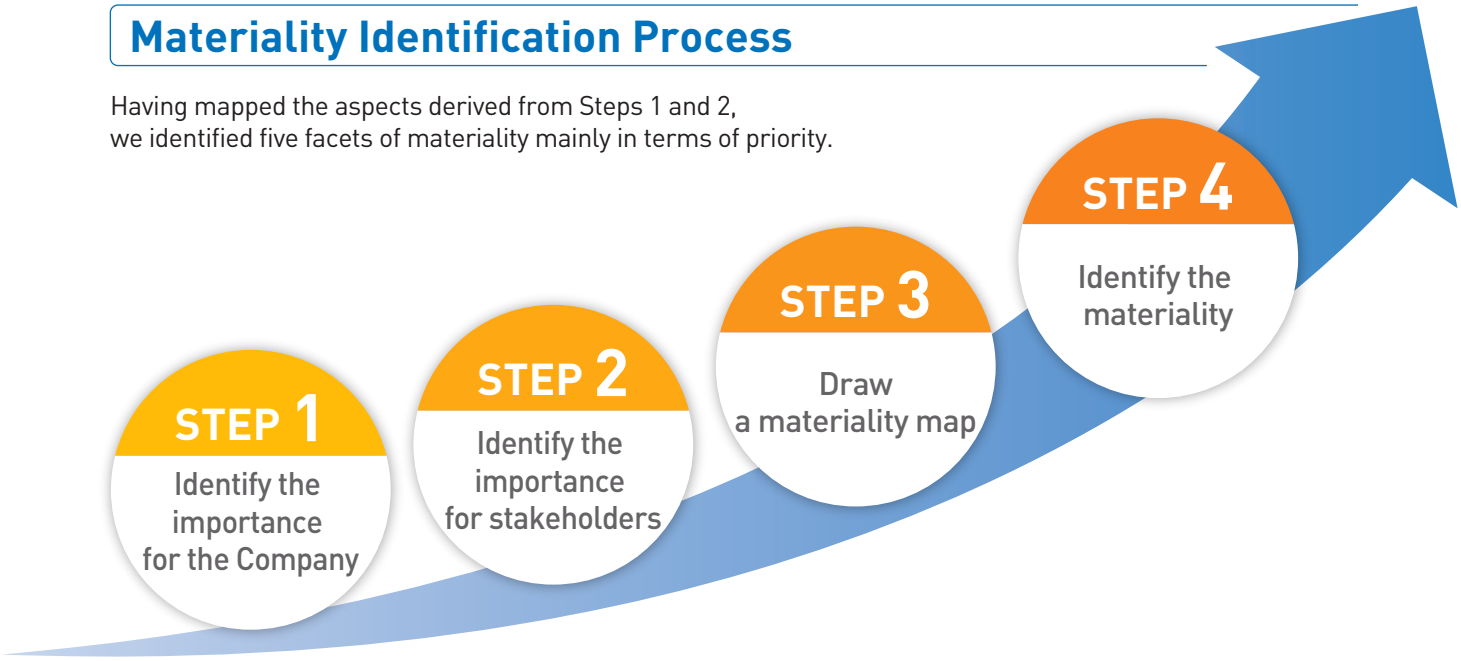
Identifying Important CSR Issues (Materiality)

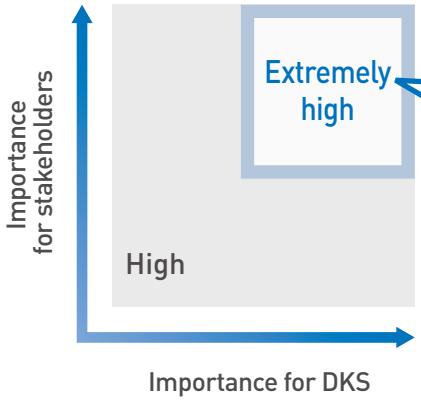
At DKS, we are formulating "materiality," tackling issues from a long-term perspective. In the formulation of materiality, we have referenced the UN's Sustainable Development Goals (SDGs),* ISO 26000 and other global guidelines, given the important demands that international society places on DKS as we work to advance business globally.

*At the UN Sustainable Development Summit held in September 2015, there were 17 SDGs adopted to find solutions to issues the world is facing.

Materiality Identification Process

Having mapped the aspects derived from Steps 1 and 2,
we identified five facets of materiality mainly in terms of priority.





Identify five critical issues of importance

1. Quality and Safety Management
2. Research and Development
3. Human Resource Management
4. Consideration for the Environment
5. Responsibility as a Global Company

Relationship between the Five Important DKS Issues and Global Guidelines

DKS's important CSR issues	Activity details	Relation to global guidelines: SDGs	Relation to global guidelines: ISO 26000
1 Quality and Safety Management (P. 34)	Providing highly safe products		Consumer issues
	Ensuring quality assurance and securing product safety		Consumer issues
	Promoting occupational safety and health » To website		Labor practices
2 Research and Development (P. 36)	Responding to potential and apparent needs with Uni-Top strategy promotion		Consumer issues
	Developing products that contribute to the environment		Environment
	Promoting an intellectual property strategy		Fair operating practices
3 Human Resource Management (P. 38)	Securing and nurturing outstanding human resources		Labor practices
	Promoting diversity		
	Health management initiatives		Labor practices
	In-house communication		Community involvement and development
4 Consideration for the Environment (P. 40)	Environmental conservation initiatives		Environment
	Preventing global warming (saving energy)		Environment
	Managing chemical substances		Environment
	Reducing emissions of environmental impact substances		Environment
5 Responsibility as a Global Company (P. 44)	Strengthening the corporate governance system		Organizational governance
	Strengthening risk management		Organizational governance
	Establishing a compliance structure		Fair operating practices

Sustainable Development Goals (SDGs) Stipulated by the United Nations

SDGs Targeted by DKS

Important Issue 1

Quality and Safety Management

Quality Assurance/Quality Policy

Our Company established its Quality Policy and Quality Assurance Management Regulations in 1995. Providing high-quality, safe and reliable products based on quality assurance (QA), we are working to realize improvements in customer satisfaction.

1. We establish quality-related management standards for each department that cover the entire process, from product planning to customer service through design/development, manufacturing and sales. Through the appropriate operation of such standards, we strive to provide high-quality products that are safe and reliable, maintain and improve product quality, and provide quality assurance for our customers.
2. To effectively bring about quality assurance functions throughout the entire Company, we establish and maintain a quality management system.
3. All our employees must observe this basic concept of quality assurance and carry out tasks in accordance with the Quality Assurance Management Regulations.


Quality Policy

"To ensure customer-satisfying quality."

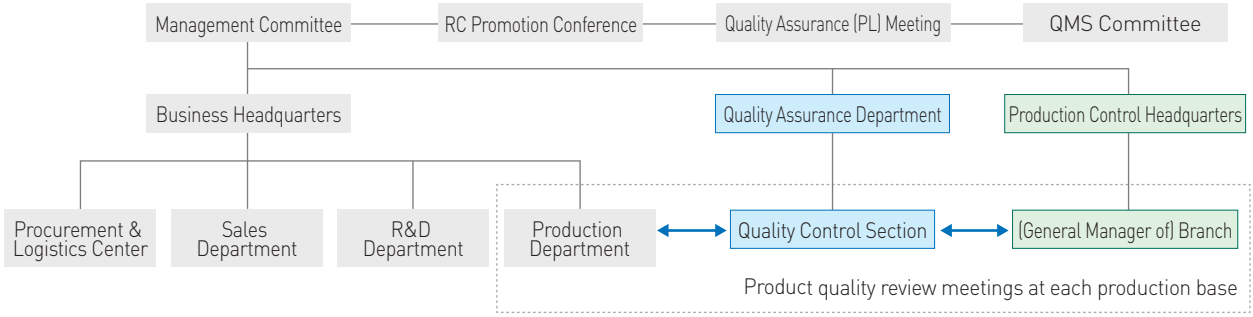
1. We aim at product designing and quality establishment that meet customers' satisfaction and supply a highly reliable and safe product by the requested delivery date at a reasonable cost.
2. We always pursue higher quality in our products and continuously improve the effectiveness of the Quality Manual for the purpose of maximizing customers' satisfaction.

HADA Yasuhiro / General Manager
Quality Assurance Department
Supervisor
Environment, Safety & Quality Assurance
DKS Co. Ltd.
April 1, 2018

Quality Control System

As a chemicals manufacturer, we are committed to the maintenance and improvement of product quality using ISO 9001 as a basic tool in our quality management system. We execute PDCA cycles to provide products and services that comply with customer requirements as well as with laws and regulations. We work on day-to-day activities—such as production control, corrective measures and preventive actions relative to nonconformities (such as complaints/abnormalities), audits, change control and training—and devise improvements by conducting continuous reviews of the management system. While aiming to improve customer requirement satisfaction levels, we are promoting the further integration of ISO and business activities.

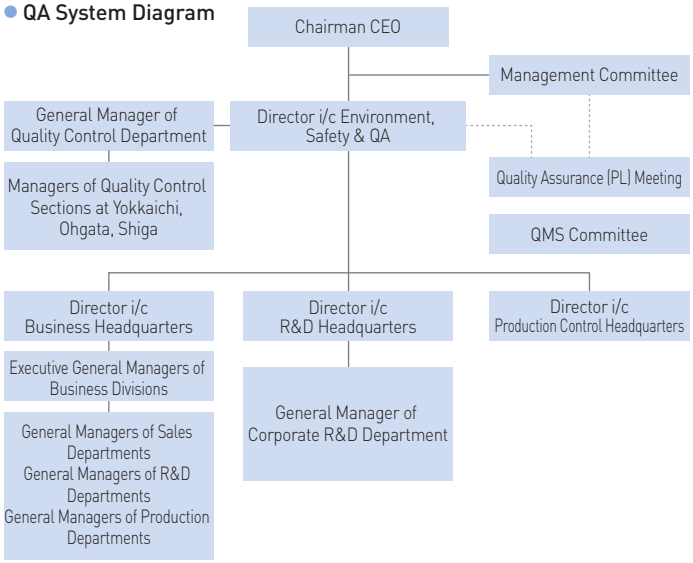
● QC System Diagram



Quality Assurance (QA) System

We view QA as fundamental to our business, and as we keep our Quality Policy in mind, we continue to promote QA activities from product design/development, manufacturing and sales to customer service through each relevant department. Having established a QA Department, independent from the Business Headquarters, R&D Headquarters and Production Control Headquarters, in April 2018, the Department is charged with taking the lead role in supervising quality assurance and in overall coordination between our departments, while working on the establishment and strengthening of the QA system. In line with the diversifying customer demands and the heightened requirements for product quality from a social perspective, we remain committed to working to ensure product safety and quality, as well as trying to prevent quality-related issues before they arise.

● QA System Diagram



Product Safety (chemical substance management from design development)

We have in place a product development system based on our environmental and safety philosophy, which is centered on "contributing to the sustainable development and realization of happy societies by considering human health, safety and environmental preservation throughout the life cycle of each product, from development to scrapping." Ensuring compliance with laws and regulations related to chemical substances in Japan and overseas, we formulate chemical substance management rules, conduct the appropriate management of chemical substances, and undertake design and development that as far as possible considers the environmental impact. We are also promoting the building of a system that enables the appropriate relaying of information on the chemical substances contained in our products and information on applicable laws and regulations throughout our supply chains.

● **Product Safety Mechanism**

Compliance with Chemical Substance Laws and Regulations

With the goal of obtaining the latest information and enacting management measures to ensure compliance, we continue to monitor trends in not only domestic laws such as the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., the Industrial Safety and Health Law, the Food Hygiene Law, and the Poisonous and Deleterious Substances Control Law but also the Export Trade Control Order in regard to products for export, and overseas laws and regulations, including those dealing with conflict minerals and rules regarding the registration of chemical substances. We also focus on the sharing of information by using groupware to transmit outlines of revisions to laws and regulations.

Provision of Product and Technical Information

Our products are utilized in a variety of industrial fields, and we provide product and technical information tailored to the characteristics of each product and service. We always respond to requests and inquiries from our customers quickly, adequately and in good faith. We also provide information on hazardous materials to ensure safe handling, including that relative to product properties, applicable laws and regulations, transportation, handling methods and emergency measures by means of safety data sheets (SDS). We provide information using chemSHERPA, an information transfer scheme for chemicals contained within products throughout the supply chain. We also promote product labeling and issue SDS related to compliance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and compliance with local regulations for exports to the United States, Europe and Asia. We have continuously updated our SDS and labeling to remain in compliance with the revised Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., and the Industrial Safety and Health Law, as well as the Poisonous and Deleterious Substances Control Law. When introducing our products, we not only focus on close communication with our customers through daily business meetings but also disseminate information through brochures and technical documents.

Efforts to Reduce Complaints/Nonconforming Products

Because we position quality-related nonconformity (complaints/deviation) as an important issue for securing quality, we check any appearance of nonconformity, determine the cause and verify the corrective action and its effectiveness to prevent reoccurrence. We also attempt to handle any product complaints we have received quickly, adequately and in good faith. Information on complaints and nonconformity is managed centrally via the Company's intranet, and we implement appropriate measures to prevent any similar recurrences of nonconformity by the involvement of peer groups. In addition to our efforts aimed at preventing the reoccurrence of nonconformity, we conducted a review of our system and made improvements, the priority issue being to respond to our customers with speed and the appropriate measures whenever such an event occurs. In the years to come, we will continue to strive to improve customer satisfaction by focusing on being imaginative and creative while promoting ongoing efforts to reduce nonconformity and prevent any recurrence should an incident arise.

Important Issue 2

Research and Development

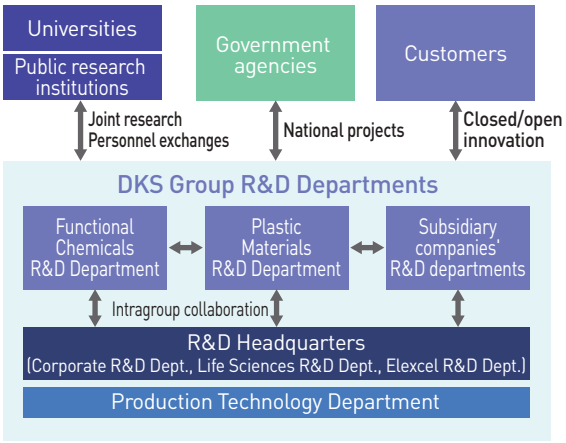
DKS's Foundation That Underpins Strategies

As an industrial chemical manufacturer, it is our management philosophy to continue to be a prominent company that responds to the expanding chemical requirements of industries. To realize that philosophy, we are focusing on the research and development of high-value-added products, with a particular focus on products with IT and electronics-related applications, and the development of new applications for battery materials and cellulose nanofibers. With innovative wisdom and technologies, we are pursuing "Chemistry provides a solution" in every industry and developing products that can contribute to a sustainable society.

R&D System

In FY2018, we established the Life Sciences R&D Department, which is focused on the development of cellulose nanofibers, and the Elexcel R&D Department, which develops applications for battery materials, within the Research and Development Headquarters as part of the reorganization to a system promoting new development and collaboration with the Corporate R&D Department in charge of new development, new businesses and companywide research themes. In addition to promoting in-group cooperation between the Functional Chemicals R&D Department, which mainly conducts product development for the Surfactants and Amenity Materials segments, and the Plastic Materials R&D Department, which is responsible for the development of products for the Polyurethane, Functional Materials and Electronic Materials segments, we are working to accelerate research and development through cooperation with outside entities such as public research institutes, universities and customers. The Production Technology Department provides support for the innovation and creation of new production technologies.

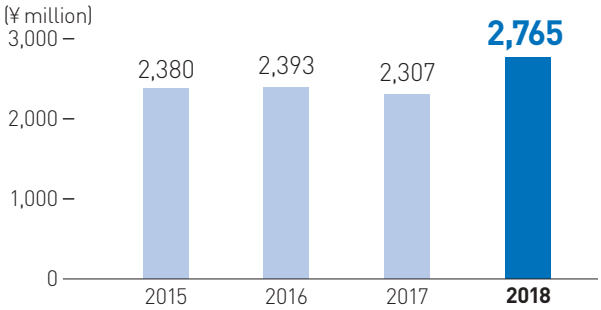
R&D System Diagram



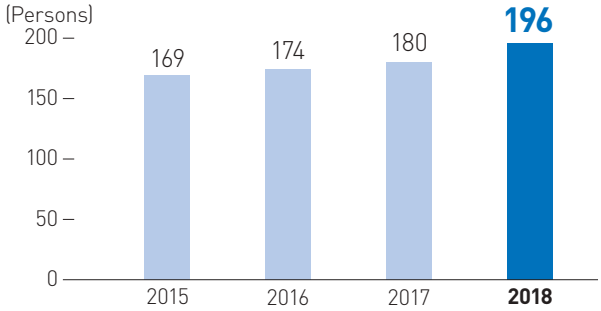
R&D Investments

In FY2018, the total expenses required for R&D amounted to ¥2,765 million, which represented 4.6% of net sales. The total number of R&D personnel of the Company and the domestic subsidiary companies was 196, which was equivalent to around 20% of all employees (as of March 31, 2019).

R&D Costs



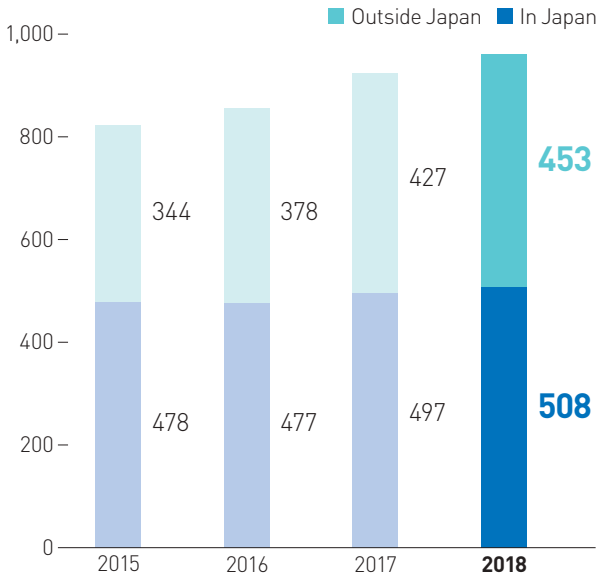
Research Personnel



Number of Patents Obtained

Mindful of future business development, we actively promote the filing and obtaining of intellectual property (IP) rights based on R&D results. Recently, to provide our business operations with stronger backup, we have been focusing on improving the quality of our patents through enhanced information retrieval functions. We will continue to respond to the globalization of our business and acquire rights securely for important domestic and foreign markets.

Number of Patents Held



*Based on the effective date.

Our Products and Technology Development

Eco-Friendly Products and Technology Development

We supply products that meet environmental requirements, including global warming prevention, energy and resource saving, environmental protection and prevention of environmental pollution, and engage in the development of related technologies.

Environmental requirement	Functions & features	Our product lineup & technology/Application	
Global Warming Prevention	Clean energy	Lithium-ion batteries	
		CELLBINDER Series	Binder for lithium-ion batteries
		ELEXCEL ACG Series	Gel polymer for lithium-ion batteries
		DD-1200C Series	Conductive paste for solar cells (lead-free)
	Halogen-freeness	DK BE-CLEAR Series	Waterborne detergents
		DK POLYOL 3000 Series	HFC[1] -free water-reactive polyols for urethane foams/Insulating materials
Energy & Resource Saving	Energy efficiency	COLOURSOL CT-171D	Dye accelerating/Leveling agents for polyester
		NEW FRONTIER Series	Solvent-free UV/EB-curable monomers/Adhesives, coating agents
		DK SYSTEM NF Series	HFC-free systems for rigid polyurethane foams/Insulating materials
	Effective resource utilization Extension of life span	Slag anti-solidification agents	
		ELEXCEL IL Series	Ionic liquids/Energy device materials
		EIMFLEX Series	Polyurethanes for electric insulation/Sealants
Environmental Protection, Prevention of Environmental Pollution	Eco-friendliness	NOIGEN XL Series, NOIGEN TDS Series	Nonionic surfactants/Emulsifiers, cleaning agents
		RHEOCRYSTA Series	Cellulose nanofiber water dispersions
		AH212	Organic alkaline agent
	VOC[2] reduction	SUPERFLEX Series	Polyurethane water dispersions/Paints, coating, binders
		EIMFLEX WF Series	Waterborne single-shot polyurethanes for electric insulation/Sealants
		ELASTRON Series, ELASTRON BN Series	Thermoreactive polyurethane water dispersions/Binders, adhesives
		NEW FRONTIER Series	Solvent-free UV/EB-curable monomers/Adhesives, coatings
	Reduction of environmental impact	HITENOL Series, NOIGEN Series	Polymerizable surfactants/Emulsifiers for emulsion polymerization
		TRIBIO Series	Polylactic acid modifying agents
	Removal of contaminants	SEACLE N-800	Marine oil spill treatment agent
		DEOPELLET Series	Foul odor gas absorbents

1. HFC: Hydrofluorocarbons
2. VOC: Volatile organic compounds

Products to Meet Environmental Requirements

DKS has been developing products made using sugars and cellulose, which are eco-friendly materials that are derived from plants and are renewable. Among them, the cellulose nanofiber **RHEOCRYSTA** possesses unique physicochemical properties due to its single-digit nano size, and the Company is advancing the development of applications so that this product can be used as a high-performance additive in, for example, inks, cosmetics, ceramics and batteries.

DKS began to manufacture and sell **HITENOL** and **NOIGEN** Series polymerizable surfactants in the 1980s. Such eco-friendly products as water-based paints and adhesives, which have been popular in recent years, offer excellent water resistance and adhesiveness. The new **HITENOL AR** Series products offer excellent copolymerization qualities with a wide range of monomers and improve the water resistance of and inhibit the formation of bubbles in paints and adhesives.

Important Issue 3

Human Resource Management

Securing Superior Human Resources, Ensuring Diversity

Human Resource Philosophy
Respect for Humanity

Our fundamental human resource philosophy is rooted in the idea that our people are our assets and must be nurtured and treasured.

Our basic understanding is that the growth of our people will support the growth of the Company. The employees are supposed to actively play their roles in each workplace; learn, grow and exhibit their capabilities; and try to fulfill themselves. This way, we believe that they become the power of prosperity of the Company and the source to make it eternal.

The Company also supports the maintaining and improving of employee health, which form a cornerstone of individual employee self-fulfillment.

Human Resource Development Policies

1. Development of Professional Workers

We aim to train professional human resources who have high market value and can work on their own initiative.

(1) People possessing advanced, specialized skills
(2) People who recognize and achieve their roles and goals
(3) People who raise and solve issues themselves
(4) People who demonstrate leadership in the workplace

2. Development of Autonomous Personnel

Switch to human resources able to work on their own initiative through their own motivation

Respect for Human Rights and Diversity

▶Efforts to Prevent Harassment

We are trying to prevent harassment through, for example, educational programs in hierarchical training courses. Several persons are selected as contacts, even from outside the Personnel Department, so that anyone can easily find someone to talk to and get advice from, and in addition, whistleblower portals inside and outside the Company are in place.

▶Work-Style Reforms

● Work-Life Balance

Since the Company's Chairman and CEO, SAKAMOTO Takashi, is concurrently serving as the chairperson of the Kyoto Labor Standards Association, we are taking the initiative to support activities that balance work and family life. For FY2018, the actual ratio of annual paid leave taken was 68.5%. From FY2019, we will introduce the taking of annual leave in hourly increments and, in the years to come, promote initiatives toward achieving 70%, which is the Cabinet Office's target. There has been an increase in men taking childcare leave in recent years. In the fiscal year ended March 31, 2019, 57% of those using childcare leave were men.

● Introduction of Telecommuting System

We are introducing a telecommuting system from the current fiscal year. We are reforming the human resource system to improve work productivity and realize diverse work styles.

▶Promotion of Employee Participation and Advancement

Having set up an Employee Participation and Advancement Promotion Committee chaired by a senior management member, we are aiming for a human resource group capable of successfully contributing to improvements in Company performance. We are creating environments in which we can maximize the abilities of diverse employees, including women, seniors, people with disabilities and members of the LGBT community, and enable them to take an active part in our Company.

● Promotion of Women's Participation and Advancement

In addition to environments that facilitate women in working for many years, we will maintain work environments that enable women to develop their careers and implement measures aimed at having 10.0% or more of managerial positions occupied by women. As of the end of April 2019, the ratio had risen to 8.9% compared with 6.8% as of the end of April 2018. We also have created environments in which women can play active roles in all workplaces, and women have been active at manufacturing sites since FY2019.

● Retiree Reemployment System

In reemploying all applicants as "senior challenge staff," we conduct *monozukuri* (manufacturing) by handing down the techniques and skills that make the best use of the experience they have accumulated over many years.

● Employment of People with Disabilities

We appreciate the aptitudes of people with disabilities and are actively working to create opportunities for them to demonstrate their abilities.

Human Resource Development/Education

▶Global Human Resource Development

We are undertaking a variety of projects based on the DKS Group's globalization strategy.

The efforts on which we are focusing involve conducting three types of training: global mind-set training to make young employees more overseas-aware from an early stage; cross-cultural understanding and skills training sessions for mid-level employees; and in-house, selective training involving visits to subsidiaries geared toward employees with high global awareness.

In addition, we have opened an in-house language school and are actively recruiting non-Japanese nationals.

We will continue to accelerate the globalization of the DKS Group.

▶Education Courses

Education programs for our employees are supported by three pillars: in-house on-the-job training, external education to learn skills and abilities, and assisting self-development. In recent years, we have focused on joint training with other companies to nurture next-generation leaders and enhancing our brother/sister program (reinforcement of a backup support system for new employees) aimed at having a new employee leaving rate of 0% three years after joining the Company. The Company is focusing its attention on human resource training in other areas as well, including by bolstering its support of employees aiming to improve their own abilities, be it through correspondence learning, the acquisition of qualifications or other forms of self-development.

General view of a training session

Efforts in Healthy Company Management

We aim to bolster the Company's productivity, and thus its corporate value, by maintaining and improving the health of our employees, which is a key RETURN component in the REACT matrix of action guidelines targeting Sustainable Development Goal No. 3: *Ensure healthy lives and promote well-being for all at all ages.*

Healthy Company Declaration *Regarding its employees as Company assets, DKS will strive to maintain and improve their health.* Chairman & CEO, SAKAMOTO Takashi

Concept of Healthy Company Management

Healthy Company Declaration

Prevent disease and mental health issues by health management	Work and live in a safe and healthy environment
● Formulate measures to prevent lifestyle-related diseases ● Formulate health management targets ● Develop internal company communication ● Improve the workplace environment	**Plan** / **Do** ● Regular health checkups, special health checkups, specific health guidance ● Mental care: internal and external EAP*, stress checks ● In-house education: e-learning, group training, etc. ● Improve conditions of company premises and housing: amenity facilities, measures to prevent passive smoking, etc. ● Look into absenteeism and presenteeism ● Holding of events involving exercise
Action / **Check** ● The management understands health checkup data and mental health survey results ● In-house sharing of health checkup results data ● Internal and external release of an assessment by external institutions ● Explore routes for improvement based on an assessment by external institutions ● Explore next health management targets based on health checkup results and secondary data	● Inspect workplaces, monitor working environments ● Interview after health checkup and summarize results ● Follow-up after stress checks ● Third-party assessment by external institutions: DBJ Health Management rating, White 500 (Certified Health and Productivity Management Organizations)

*EAP: Employee Assistance Program

Efforts in Healthy Company Management

For the second successive year, DKS was recognized as a White 500 Organization, receiving certification from the Ministry of Economy, Trade and Industry (METI) as an outstanding entity engaging in health and productivity management. Four of our subsidiaries also received certification.

We also acquired the highest health management rating from the Development Bank of Japan Inc. (DBJ) for the second consecutive year.

The purpose of acquiring the ratings is to assess Company efforts through the eyes of external organizations, which could lead to further improvements in corporate value in the years to come.

DBJ健康格付 2018

2019 健康経営優良法人 Health and productivity ホワイト500

▶Health Management Initiatives

The Company's health checkup participation rate, the re-checkup participation rate, the health guidance implementation rate and the stress check rate all stand at 100%. We support daily exercise with morning calisthenics and the holding of walking events and provide nutritious and well-balanced meals at canteens. We encourage measures to prevent passive smoking, educate all employees on how best to prevent lifestyle-related diseases, provide fully Company-subsidized influenza vaccinations while subsidizing the cost of breast cancer screening, dental screening and treatments to quit smoking. The Company has established internal and external contact centers for mental and physical issues, extending acceptance to family members such as parents. We provide mental health education for all our employees and for employees who work long hours, and we have established interviews with occupational physicians that exceed the statutory requirements. Health measures for employees are planned, implemented, and investigated at meetings attended by management, as we believe the enhanced health of our employees bolsters the overall strength of the Company.

Internal Communications

▶Holding of "Festa"

We hold festa, which are festivals for each region, to promote the good health of employees and their families and broad exchanges. Elaborately planned events, such as a mochi-pounding festival, a bowling tournament, a tuna filleting show and chartering a sightseeing boat on the Uji River are useful in facilitating active inter-departmental and intergenerational communications.

▶Information Transmission inside the Company

Publishing the in-house newsletter "DKSCOM" every other month, our Public & Investor Relations Department works to instill the management policies and visions, as well as to foster communications within the Company. Feedback is also taken into consideration in planning the newsletters so that information can be disseminated and clearly understood by all employees in a timely fashion.

Important Issue 4

Consideration for the Environment

Basic Philosophy and Basic Policies for Environmental and Safety Practices

Basic Philosophy

Our basic philosophy is to contribute to society by making a company that thrives together with local communities and employees by supplying products that satisfy customers. Based on this, our environmental and safety philosophy is to contribute to the sustainable development and realization of happy societies by considering the human health, safety and environmental preservation throughout the life cycle of each product from development to scrapping.

Basic Policies

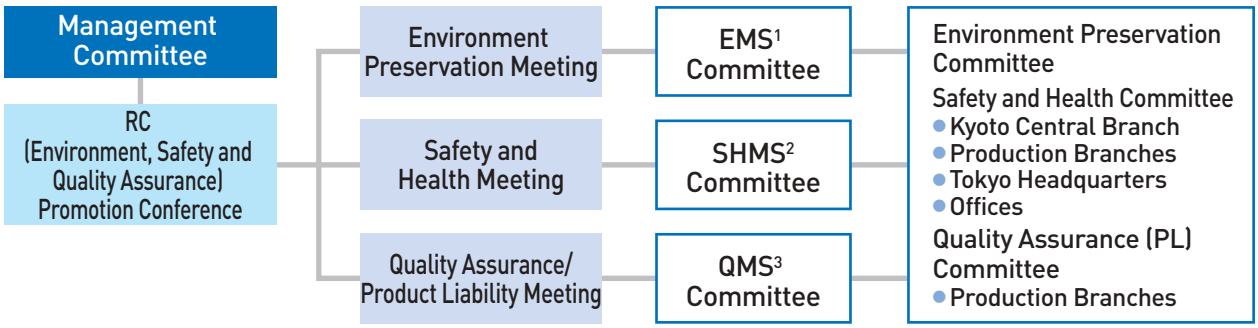
(1) Throughout the life cycle of each product from development to scrapping, we evaluate and minimize the impact of business activities on the environment and make the best efforts to preserve the environment.
(2) We aim at accident- and disaster-free operations to secure the safety of both local communities and employees.
(3) We confirm the safety of raw materials, semi-finished products and final products to prevent health-related disorders of all relevant people including, but not limited to, employees, logistic/transportation workers, customers and general consumers.
(4) We strive to continuously improve the safety and environment not only by strictly complying with relevant legislation and regulations but also by self-management.

Responsible Care (RC) Activity Promotion System

We set up the safety and environment philosophy, basic and action policies, based on which we promote our corporate activities related to quality, safety and the environment. Such issues are discussed and decided by the RC Promotion Conference, which is the top decision-making body and is chaired by the president.

Moreover, we regularly hold environmental preservation meetings, safety and health meetings and quality assurance/product liability meetings chaired by the quality, safety and environment personnel and joined by the production branch general managers and relevant department managers. In these meetings, corporate targets, action plans and results are discussed to promote the RC activities. Under each of these meetings is a committee to make, implement and evaluate specific action plans for continuous improvements.

● RC Promotion System Diagram



1. EMS: Environmental Management System
2. SHMS: Safety and Health Management System
3. QMS: Quality Management System

Management Systems

The Company promotes the comprehensive safety management of chemical substances based on the RC Code, which consists of the seven management systems stipulated based on Japan Chemical Industry Association (JCIA) policies: environmental conservation, safety and disaster prevention, occupational safety and health, logistics safety, chemical product/product safety, dialogue with society and management system. In addition, the Company is working on improvements in environmental conservation and quality, using environmental ISO and quality ISO standards as tools.

Observation of Environmental Laws and Regulations

Environmental risk management is an important measure to minimize environmental risks and/or consequent damages caused by risks. We comply with environmental-related legislation and regulations and agreements with local municipal governments, based on the Declaration of Action by Board Members and Employees and there was no violation of laws and regulations. All our production sites in Japan are regularly checked for environmental compliance in accordance with the ISO 14001–based environmental management system. Up-to-date information on legislation is checked and understood on a timely basis and disseminated internally to ensure compliance. Recently, education programs using an e-learning system have started.

Environment-Related Complaints

The Company received no complaints related to the environment in the fiscal year ended March 31, 2019. We will continue to strive to ensure safety in our operations while working to earn the understanding of those living nearby our plants and other company locations.

Environment Accounting

In the fiscal year ended March 31, 2019, the DKS Group's investment in environmental-related systems was spent mainly in the field of pollution prevention. Resource circulation costs accounted for a relatively strong ratio of costs tied to preservation of the environment. The economic benefits therein include profits on the actual sales of valuable resources and the amount of cost savings and are not based on estimated economic benefits.

● **Investments and Costs of Environmental Protection Activities**

Category	Main activities	Investment (Millions of yen)	Costs (Millions of yen)
Costs within the plant premises	Air/water/other pollution prevention	16.2	212.9
	Global environment preservation, energy saving	55.3	61.4
	Resource recycling, resource saving, waste treatment/disposal	4.4	420.9
Upstream/downstream cost	Lowering environmental impact in containers/packaging	0.0	0.2
Administrative cost	ISO acquisition/completing surveillance audits, greening branch premises	1.0	32.0
R&D cost	Environmentally responsive R&D	0.0	594.9
Social activity cost	Providing support grants for environmental protection to environmental preservation groups or local communities	0.8	1.8
Environmental damage cost		0.0	0.0
Total		**77.7**	**1,324.1**

● **Economic Effects Generated by Environmental Protection Measures**

Category	Main activities	Cost (Millions of yen)
Profit on sale of valuable resources	Sale of metal scrap, waste oil and waste alkali, etc.	8.2
Amount of cost savings through energy saving	Cost savings in electric power and fuels	0.0
Amount of cost savings through resource saving	Cost savings through reduction of water use/waste	1.9
Total		**10.1**

● **FY2018 Activity Targets and Results, FY2019 Activity Targets**

Evaluation A: Significant result B: Result in line with the target C: Target remains unachieved

Target parameter	Management items	FY2018 activity targets	FY2018 results	Evaluation	Refer to page	FY2019 activity targets
Promotion of energy saving	Energy consumption per unit	1% improvement compared with FY2017	1.6% improvement compared with FY2017	C	P. 42	1% improvement compared with FY2018
Reduction of GHG* emissions	CO_2[1]	29.5% reduction compared with FY2005 on average from FY2016 to FY2019	26.1% reduction in FY2017 compared with FY2005	C	P. 42	29.5% reduction compared with FY2005 on average from FY2016 to FY2019
Reduction of industrial waste	Waste generation per unit	1% improvement in the fiscal year rate of nonconsolidated DKS[3]	7.1% increase compared with FY2017	C	P. 43	1% fiscal year rate improvement in non-consolidated DKS
	Final disposal rate[2]	3.4% or less in FY2019	4.8%	C		3.4% or less in FY2019
Reduction of environmental impact substance emissions	SOx emissions	Reduced emissions of environmental pollutants in the air	9.0% decrease compared with FY2017	A	P. 43	Reduced emissions of environmental pollutants in the air
	NOx emissions		50.0% decrease compared with FY2017	A		
	Dust emissions		57.3% decrease compared with FY2017	A		
	Water discharge	Reduced emissions of environmental pollutants in water	5.6% decrease compared with FY2017	A		Reduced emissions of environmental pollutants in water
	COD emissions		3.9% increase compared with FY2017	C		
Proper management of chemical substances	PRTR Law-designated substances emissions	Reduced emissions of PRTR Law-designated substances	26.1% increase compared with FY2017	C	P. 42	Reduced emissions of PRTR Law-designated substances
Promotion of green procurement		Promoting the green procurement ratio of office supplies	27.9%, decreased 8.6 percentage points compared with FY2017	C	—	Improvement of the green procurement ratio of office supplies
Elimination of disasters/accidents		No occupational accidents (days away from work)	Two cases occurred	C	Posted on our website	No occupational accidents (days away from work)
		Eliminating severe accidents associated with production facilities	No accidents occurred	B		Elimination of severe accidents involving production facilities
Environmental management system		Promotion of an environmental management system	Maintained	B	P. 40	Promotion of an environmental management system

1. Derived from energy in the production and administrative sectors
2. The ratio of the final disposal amount to the generated waste amount
3. We have decided not to set numerical targets for the Group until the method of recycling sludge newly generated from the wastewater treatment plant is established at a subsidiary company.

*GHG: Greenhouse gas

Important Issue 4

Consideration for the Environment

Global Warming Prevention (Energy Saving)

In the fiscal year ended March 31, 2019, energy consumption in the DKS Group amounted to 25,900 KL, a 1.0% decrease compared with the previous fiscal year, however, the energy consumption per unit worsened 1.6%, which means that we were not able to achieve our fiscal year targets. This is mainly due to only the slight decrease in energy consumption while the production volume decreased. We recorded 52,900 tons of carbon dioxide emissions in the fiscal year ended March 31, 2019, a 1.9% decrease compared with the previous fiscal year, but a 26.1% reduction compared with the fiscal year ended March 31, 2006, meaning that the third year of the five-year target was not reached. We will continue to work to improve the efficiency of our energy use toward the achievement of our five-year targets.

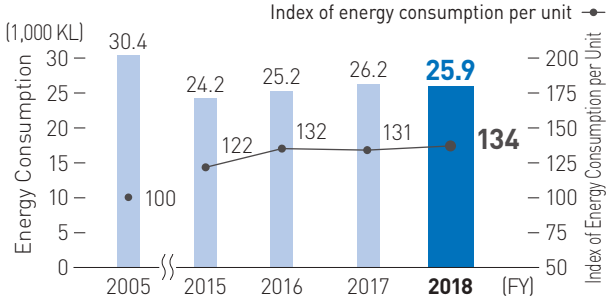
Targets and Performance in FY2018 Evaluation A: Significant result B: Result in line with the target C: Target remains unachieved

Target parameter	Management items	Activity targets	Performance in FY2018	Evaluation
Promotion of energy saving	Energy consumption per unit	1% improvement compared with FY2017	1.6% increase compared with FY2017	C
Reduction of GHG* emissions	CO_2	29.5% reduction compared with FY2005 on average from FY2016 to FY2019	26.1% reduction compared with FY2005	C

*GHG: Greenhouse gas

Changes in Energy Consumption

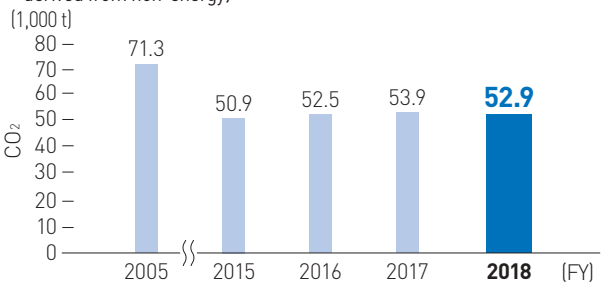
(Yokkaichi, Ohgata, Shiga, administrative sectors, domestic subsidiaries)



Notes: 1. Index of energy consumption per unit [2005 = 100]
2. Domestic subsidiaries include Yokkaichi Chemical, Kyoto Elex and Dai-ichi Ceramo.
3. Administrative sections include Elexcel Corporation (currently Elexcel R&D Department) acquired through an absorption merger in 2018.
4. The calculation method for energy consumption was revised in FY2018. Data have been retroactively adjusted from FY2017.

Changes in CO_2 Emissions

(Yokkaichi, Ohgata, Shiga, administrative sectors, domestic subsidiaries, derived from non-energy)



Note: Carbon dioxide emissions in administrative sectors include fuels for Company cars.

Proper Management of Chemical Substances

The DKS Group had a total of 65 notification substances under the PRTR Law in FY2018. The total amount of emissions was 61.0 tons, which resulted in a 12.6-ton (26.1%) increase compared with the previous year. The breakdown was 60.4 tons to air, 0.59 tons to water and none to land.

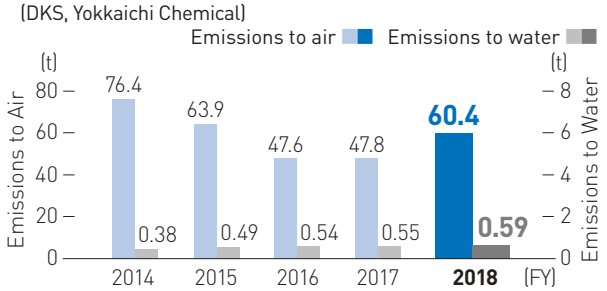
In FY2018, the amount of waste transfer recorded was 207.4 tons, a 61.6-ton (22.9%) reduction compared with the previous fiscal year due to the use of recycled solvents and changes in the variety configuration. We will advance improvements in production processes and the introduction of recovery equipment, while continuing to make efforts to reduce the emissions/discharge of PRTR substances into the environment.

Targets and Performance in FY2018 Evaluation A: Significant result B: Result in line with the target C: Target remains unachieved

Target parameter	Management items	Activity targets	Performance in FY2018	Evaluation
Proper management of chemical substances	PRTR Law-designated substances	Emission reduction of PRTR Law-designated substances	26.1% increase compared with FY2017	C

Changes in Emissions of PRTR Law-Designated Substances

(DKS, Yokkaichi Chemical)



Notes: 1. The numerical values show the total amount for DKS and Yokkaichi Chemical.
2. We have revised the method for calculating atmospheric emissions volume and have retroactively revised PRTR notification substance figures through FY2015 according to this method.
3. For the emission amount of notification substances under the PRTR Law in FY2018 (among all notification coverage substances, those of which the emission or transfer amount was 0.01 tons or more), please visit our website. https://www.dks-web.co.jp/english/ir/report/index.html

Reducing Emissions of Environmental Impact Substances

Air Pollution Prevention

Compared with the previous fiscal year, the DKS Group's air-pollutant emissions in FY2018 showed a 9.0%, 50.0% and 57.3% decrease in SOx, NOx and dust emissions, respectively.

We will move ahead with facility improvements and studies of operational methods with the aim of making further energy-efficiency enhancements.

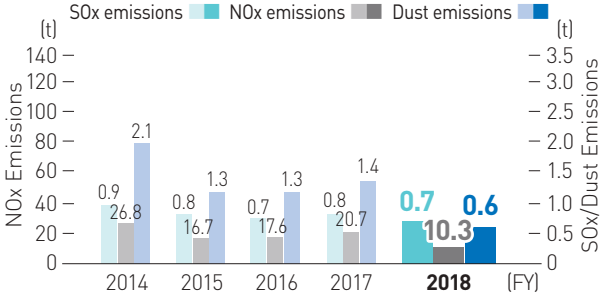
Water Pollution Prevention

In FY2018, the DKS Group recorded 4,177,000 cubic meters in the amount of water discharge, a 5.6% decrease compared with the previous year, and 27.3 tons of COD emissions, a year-on-year increase of 3.9%. We will continue to make efforts to reduce the water discharge and COD emission amounts by, for example, conducting reviews of our production processes and optimizing the operation methods at our effluent treatment facilities.

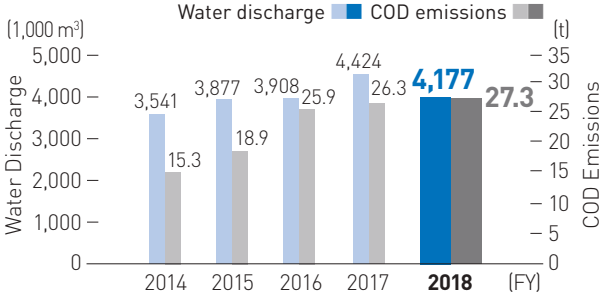
● **Targets and Performance in FY2018** Evaluation A: Significant result B: Result in line with the target C: Target remains unachieved

Target parameter	Management items	Activity targets	Performance in FY2018	Evaluation
Reduction of environmental impact substance emissions	SOx emissions	Emission/discharge reduction of environmental pollutants in the air	9.0% decrease compared with FY2017	A
	NOx emissions		50.0% decrease compared with FY2017	A
	Dust emissions		57.3% decrease compared with FY2017	A
	Water discharge	Emission/discharge reduction of environmental pollutants in water	5.6% decrease compared with FY2017	A
	COD emissions		3.9% increase compared with FY2017	C

● **Changes in SOx, NOx and Dust Emissions**
(Yokkaichi, Ohgata, Shiga)



● **Changes in Water Discharge and COD Emission Amounts**
(Yokkaichi, Ohgata, Shiga, Yokkaichi Chemical)



Note: Yokkaichi Chemical possesses no facilities that generate SOx, NOx or dust.

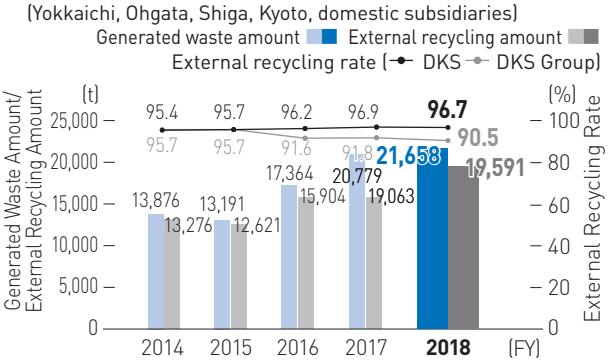
Waste Reduction

The amount of waste generated by the DKS Group in FY2018 amounted to 21,658 tons, an increase of 878 tons compared with the previous fiscal year. The waste generation per unit result was 7.1% worse (an increase) than the previous fiscal year, and thus we were unable to achieve our target of a 1% improvement (decrease) in the annual rate. The recycling rate was 90.5%, which marked a 1.3-percentage-point worsening (decrease) compared with the previous fiscal year. The final disposal amount was 1,044 tons, representing 101 tons year-on-year decrease. One contributory factor was that part of the sludge generated at the new facility was now recycled. For that reason, the final disposal rate was 4.8%, an improvement (decrease) of 0.7 percentage point compared with the previous fiscal year. In the year ahead, we will move ahead with a review of our sludge recycling and work to reduce the final disposal amount.

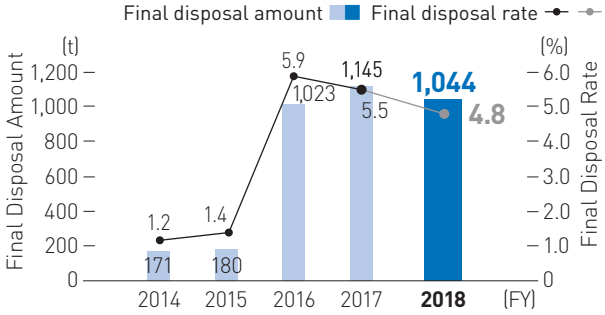
● **Targets and Performance in FY2018** Evaluation A: Significant result B: Result in line with the target C: Target remains unachieved

Target parameter	Management items	Activity targets	Performance in FY2018	Evaluation
Reduction of waste	Waste generation per unit	1% improvement in the fiscal year rate of non-consolidated DKS	7.1% increase compared with FY2017	C
	Final disposal rate	3.4% or less in FY2019	4.8%	C

● **Changes in Generated Waste Amount, External Recycling Amount and External Recycling Rate**
(Yokkaichi, Ohgata, Shiga, Kyoto, domestic subsidiaries)



● **Changes in Final Disposal Amount and Final Disposal Rate**
(Yokkaichi, Ohgata, Shiga, Kyoto, Yokkaichi Chemical)



Notes: 1. Domestic subsidiaries include Yokkaichi Chemical, Kyoto Elex and Dai-ichi Ceramo.
2. Kyoto Branch includes Elexcel Corporation (currently Elexcel R&D Department) acquired through an absorption merger in 2018.

Note: The ratio of the final disposal amount to the generated waste amount

Important Issue 5

Responsibility as a Global Company

Corporate Governance

Basic Concept

We are operating the business based on our Company Credo "contributing to the nation and society through industry" along with our three Company Mottoes—"Quality First," "Cost Reduction" and "R&D Efforts," which were the founders' spirit. To aim for the establishment of a management base that can gain and maintain the trust of society, as well as to conduct transparent and fair corporate activities that are rooted in corporate social responsibility (CSR), we pursue higher governance as management policy and position it as one of our most important tasks. As a specific measure to achieve this, the DKS Board of Directors passed a resolution establishing a basic policy for our internal control system in May 2006.

Through these practices, we will strengthen our management base so that we can earn high trust from all stakeholders, including our customers and society. We also believe it is important to conduct corporate activities with transparency and fairness rooted in CSR.

For an overview of corporate governance at DKS, please refer to page 27 and the following pages in our Securities Report for FY2018 at the following URL (Japanese only):

▸ https://www.dks-web.co.jp/ir/img/annual_security_report_h31_3.pdf

Status of Our Response to the CG Code

We hereby provide the reasons for not implementing the following 10 principles as part of our compliance with the Corporate Governance Code.

▸ Corporate Governance Code Principles for which DKS is Not in Compliance and the Reasons for Non-Compliance

[Supplementary Principle 1-2-4]
Given that the shareholding ratio for overseas investors at DKS is only about 12%, we have determined that it is not necessary to provide an English translation of the Notice of Convocation at this time. To make it easier for overseas investors to exercise their voting rights, we will consider providing an English translation when the shareholding ratio for overseas investors exceeds 20%.

[Principle 1-4. Cross-Shareholdings]
DKS maintains cross-shareholdings for the purpose of strengthening its relationships with its business partners. Our holdings are verified based on risks and returns from a medium- to long-term perspective and continually reviewed based on suitability of ownership, considering the purpose of ownership, the rationality of investment and the investment amount. Voting rights on cross-shareholdings are exercised in consideration of whether the given proposal will contribute to enhanced medium- to long-term corporate and shareholder value for the DKS Group and the investee company.

[Principle 2-6. Roles of Corporate Pension Funds as Asset Owners]
DKS has introduced a "defined benefit-type corporate pension plan" and a "defined contribution-type corporate pension plan." We have established "pension rules" for the "defined benefit-type corporate pension plan" and in accordance with our basic policy have defined an optimal asset composition ratio and appointed a management agency we believe best suited for stable pension management over the medium to long term. With the goal of ensuring proper management, we regularly request from this agency reports on operational policies and the status of assets. We ensure that there is no conflict of interest between the beneficiary and the Company by entrusting individual investment decisions and the exercise of voting rights to the asset management agency.

The corporate pension plans are designed to ensure low operating risk and appropriate management, with the latter achieved through regular communication with the specialized asset management agency. We accordingly believe there is little need for DKS to actively recruit and maintain human resources specializing in pension asset management.

[Supplementary Principle 4-1-3]
The succession planning for the CEO and other top executives remains a most important matter for company continuity, and it is important to carefully judge evident and potential management ability. Succession planning is a matter solely for the chief executive officer, who is familiar with the inner workings of the Company. DKS plans to establish and operate a successor development committee with outside executives as members, as we believe it is important to listen to the opinions of our outside directors in regard to the qualities and attributes of potential candidates.

[Supplementary Principle 4-10-1]
The three independent outside directors do not constitute a majority on the DKS Board of Directors. However, in addition to monthly Board of Directors meetings, external executive officers hold meetings every other month and one "free meeting" is held for external directors and representative directors each year. These meetings allow the sharing of information regarding the state of the Company and current management issues, as well as communication and coordination with management and cooperation with the auditors and audit & supervisory board members. In addition, the independent outside directors provide advice and commentary on important matters, including nominations and remuneration, at the outside directors' meetings. We therefore believe it is not necessary at this time to establish independent committees such as a nomination committee or a remuneration committee.

[Principle 4-11. Preconditions for Board and Audit and Supervisory Board Effectiveness]
The Board of Directors is composed of company employees with knowledge and experience in a variety of fields, including sales, production, research, purchasing, logistics, planning, accounting and finance, and human resources and management, as well as those with management experience overseas. Those from outside the company have a wealth of experience and specialized knowledge from working in life insurance companies, as well as in manufacturing companies operating in domains separate from those of DKS, and government agencies focused on working conditions and occupational health and safety. We believe diversity, including that relative to gender, still shows room for improvement, though any person who is recognized as having the proper qualifications will be considered as a candidate for the Board of Directors. On the whole, we believe the Board of Directors and the Audit and Supervisory Board are well-versed with the business and have achieved a level of diversity and effectiveness with functional financial checks.

[Supplementary Principle 4-11-3]
Verification of the effectiveness of the Board of Directors is conducted on an annual basis, with self-assessments by all directors and auditors based on questions prepared by the Secretary's Office of the Board of Directors. The replies are collected by the Secretary's Office, where they are then analyzed and given an assessment by the outside executives and full-time auditors. In the previous fiscal year, the outside executives and full-time auditors found the Board of Directors' effectiveness to be at a generally appropriate level, with the effectiveness of the Board of Directors as a whole deemed as sufficient. DKS does not disclose a summary of the analysis or evaluations results.

Executive Remuneration

▶Director Remuneration

Director remuneration consists of 1) fixed remuneration, 2) performance-linked remuneration to provide incentives and 3) stock-linked compensation to accentuate the sharing of value with shareholders. However, remuneration for outside directors consists of 1) fixed remuneration and 2) stock-linked compensation.

Fixed Remuneration

Fixed remuneration is set based on the scope of operations for which each director is responsible, as well as his or her position, and is paid on a monthly basis.

Performance-Linked Remuneration

Based on an annual performance evaluation of the Company as a whole in the previous fiscal year, and performance evaluations of the division of which each director is in charge that are conducted twice a year, performance-linked remuneration factors in consolidated sales, recurring profit and operating cash flow, with the allocation as a set position-based percentage of the whole.

Stock-Linked Remuneration

Having introduced restricted stock-linked compensation based on the scope of operations for which each director is responsible in his or her position, we set specific allocations for the monetary compensation that provides a bonus for the granting of shares with restriction on transfer.

Of the above, as determined by resolution at the Ordinary General Meeting of Shareholders held on June 25, 2019, 1) fixed remuneration and 2) performance-linked remuneration are set to a maximum amount of ¥30 million per month (equating to ¥360 million per annum, which does not include the wage salaries of individuals serving concurrently as employees and executives). As determined by resolution of the Ordinary General Meeting of Shareholders held on June 27, 2017, 3) stock-linked compensation is set to a maximum of ¥100 million per annum (of which the portion for outside directors shall be ¥6 million or less per year, and which does not include the wage salaries of individuals serving concurrently as employees and executives). In addition, the total number of shares of common stock that the Company will thus issue or dispose of is to be up to a maximum of 100,000 shares per annum.

Having been drafted by the representative directors, all the above is paid upon the passing of a resolution by the Board of Directors.

▶Audit & Supervisory Board Member Remuneration

Audit & Supervisory Board member remuneration consists of 1) fixed remuneration and 2) stock remuneration based on audits conducted and the role played in promoting shareholder interests.

● **Executive Remuneration (Fiscal year ended March 2019)**

Executive position	Total remuneration (Millions of yen)	Total by type of remuneration (Millions of yen)			Number of executives
		Fixed	Performance-linked	Stock-linked	
Directors (excluding outside directors)	277	180	71	24	11
Audit & supervisory board members (excluding outside audit & supervisory board members)	41	38	—	3	3
Outside executives	30	27	—	2	6

● **Significant Portion of Salary Paid to Executive Directors Who Concurrently Serve as Employees (Fiscal year ended March 2019)**

Total (Millions of yen)	Number of executives	Details
58	7	Salary (including bonuses) as employees

Important Issue 5

Responsibility as a Global Company

Compliance

Basic Concept

Since the Compliance Control Committee was established in 2004, our Company has been continuously engaged in the building and maintenance of our compliance system, as well as in activities to instill compliance practices in our employees. Recognizing that compliance activities are indispensable for continuing as a sound company, we will further strengthen our activities in the years to come.

Corporate Philosophy

The corporate philosophy around which the Company forms the basis of its actions is indicated in our Company credo, Company mottoes and Code of Corporate Ethics. These are also outlined in our Declaration of Action by Board Members and Employees. We post these in-house so that all employees can always act with them in mind, and we provide a pocket-sized Corporate Philosophy Handbook to all Company employees. The Company also conducts e-learning activities explaining our philosophy, with tests given to confirm understanding.

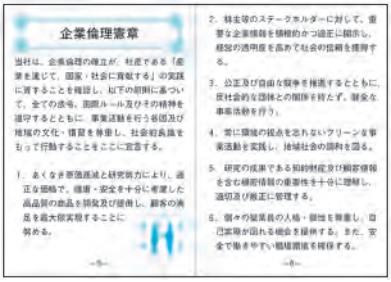
Code of Corporate Ethics

To establish corporate ethics that contribute to putting the Company policies into practice, we established a six-item set of principles as the Code of Corporate Ethics and adhere to the word and spirit of all laws and regulations, as well as international rules. We also respect the culture and customs of each country and region where we conduct our business activities and declare that we will act with social common sense.

Declaration of Action by Board Members and Employees

Regarding the six-item set of principles established as the Code of Corporate Ethics, we broke down the content as to what kind of behavior is actually required, clearly state the guidelines for the actions of executives and employees (including seconded and contract employees, as well as temporary employees) and declare that these guidelines will be implemented as a code of conduct.

Corporate philosophy handbook



Code of Corporate Ethics

Compliance in Practice

Compliance Control Committee

The Compliance Control Committee is charged with establishing and maintaining the Company's compliance system.

Since its establishment in 2004, the Compliance Control Committee has been continuously engaged in building the compliance system, implementing educational activities to entrench compliance practices in our employees and conducting surveys to ensure understanding of the compliance system.

Corporate Ethics Month

The Compliance Control Committee has designated October every year to be Corporate Ethics Month and conducts activities during the month, including educational activities and the dissemination of information, centered on a particular theme. The theme for the fiscal year ended March 31, 2019, was employees confirming and following company rules. Activities focused on the importance of conducting business with a full understanding of the rules, with the Committee reviewing all established rules and regulations for deficiencies and subsequent revisions.

Whistleblower Hotlines

DKS has established whistleblower hotlines where employees can consult on and report possible violations to established laws and regulations.

While the Company already had an internal hotline, DKS in 2016 established an external hotline as well, with instructions on use distributed internally, including through the Company intranet.

Compliance Awareness Survey

We conduct a Compliance Awareness Survey for all employees each December with the aim of accurately understanding the effects from activities aimed at further instilling compliance practices. Based on employee awareness of key issues, we use the results to determine initiatives for next year.

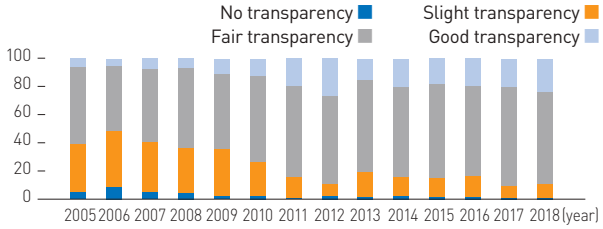
The fiscal year ended March 31, 2019, was the 14th consecutive year the Company has implemented the Awareness Survey.

Initially, internal awareness was rather low, and the response rate for the survey was only about 76% for the Company as a whole. However, improved penetration and the ongoing activities contributed to a response rate of 99% for the 14th survey.

The survey contains the same fixed questions each time, focuses on issues deemed important for that year and confirms the results from that year's Corporate Ethics Month.

《Sample Items in the Awareness Survey》

● **Highly transparent management has been achieved through the appropriate disclosure of information**



We intend to continue to raise awareness of compliance and strengthen our activities aimed at ensuring that employees comply with all laws and regulations.

Risk Management (Risks and Responses to Them)

Basic Concept

Diverse and becoming more complex, the corporate risks surrounding the Company could result in increased adverse impacts on the Company itself, as well as on employees, shareholders, customers and local communities. We position risk management as an important management issue and are taking steps to prevent potential risks and prevent the spread of risks that have already manifested.

Risk Management

To address Group risk, we have established a Risk Management Control Committee that meets on a regular basis and is composed of representatives of each department, with the director in charge serving as the chairperson.

With a focus on developing and standardizing the risk management system, the Committee determines an action plan and reviews results, identifying potential risks and considering countermeasures.

In Japan and overseas, the Company and its subsidiaries are working to operate and maintain crisis management systems on a daily basis so that we can communicate risk crisis information as soon as possible, ascertain the situation and take appropriate measures. To deal with potential and/or evident risks, we have taken several steps, including establishing and maintaining Risk Management Procedures, Product Liability (PL) Prevention and Management Procedures and Information Security Rules.

Major initiatives implemented in the fiscal year ended March 31, 2019, included the extraction of risks and implementation of countermeasures in each department, the implementation of measures to prevent information leakages and notifications to overseas travelers through groupware calling attention to these leaks.

We believe it is important for employees to understand concepts such as "risk management," "crisis management" and "business continuity management" (focusing on responding to interruptions in business) and to view the establishment of activities entrenching these concepts as vitally important.

With renewed recognition, we will promote further management education, including e-learning, in the fiscal year ending March 31, 2020.

Business Continuity Plan (BCP) and Disaster Countermeasures

BCP is an abbreviation for Business Continuity Plan, which allows a company to maintain critical operations when it is affected by an unforeseen natural disaster such as an earthquake. Even if business activities are unavoidably interrupted, the BCP focuses on restarting important functions within the recovery time objective and minimizing the risks involved in interrupted operations.

We have created a BCP for a large-scale earthquake and the outbreak of a highly virulent H1N1-type influenza. We also have created a BCP for logistics operations in the event of an earthquake or torrential rain. We are regularly reviewing and updating our BCPs.

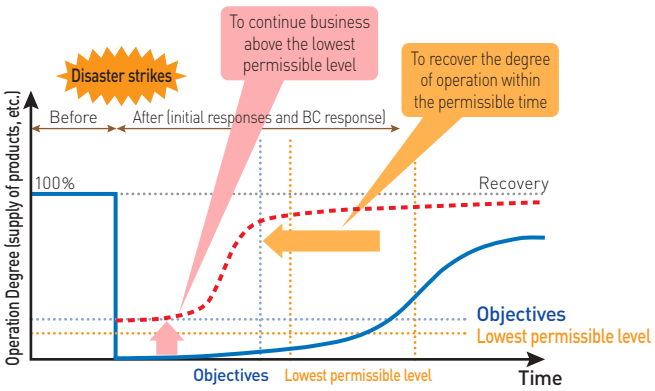
▶Disaster Preparedness

In the event of a crisis, our Risk Management Manual establishes management levels in line with the crisis, with the person in charge in line with those risk management levels tasked with risk management.

Noting the increased occurrence of abnormal weather conditions, such as torrential rain, typhoons and abnormal temperatures, our annual preparation for natural disasters includes training on understanding and reporting the safety situations of employees and damage conditions, as well as ways to improve disaster response and employee awareness. In the fiscal year ended March 31, 2019, the safety confirmation system linked to the Japan Meteorological Agency information was used four times to confirm the safety of each department using companywide PCs and mobile phones. We will continue training in the fiscal year ending March 31, 2020, to make sure all employees are registered in the safety confirmation system and through safety confirmation training we will reaffirm the reporting procedure via the responsible parties.

Risk Management Level Ⅰ	Understanding risk possibilities under normal operation
Risk Management Level Ⅱ	Risks to be coped with within plants, branches, offices and subsidiaries
Risk Management Level Ⅲ	Risks to be coped with within divisions (including subsidiaries)
Risk Management Level Ⅳ	Risks to be coped with Companywide
Risk Management Level Ⅴ	Unexpected risks

● **Business Continuity Plan (BCP) Outline**



Source: Cabinet Office, Business Continuity Guidelines, Third Edition

Information Security

Through the optimization of infrastructure and the ensuring of security, we provide high-quality services protecting against disasters and cyberattacks, while simultaneously promoting robust and sustainable industrialization and the expansion of technological innovation.

Within the Company, we are creating a system ensuring information security by established information security policies, countermeasure standards and implementation procedures. Recognizing the importance of the internal control system, the Internal Audit Department conducts internal audits while independent auditors conduct outside audits.

Management (as of June 25, 2019)

Board of Directors

SAKAMOTO Takashi

Chairman CEO

■ **Number of shares held:** 29,242 shares
■ **Career summary**

April	1970	Joined The Fuji Bank, Limited (current Mizuho Bank, Ltd.)
February	1991	Manager of Madrid Branch of Fuji Bank
May	1994	Manager of Nihonbashi Branch of Fuji Bank
December	1999	Managing Director of Fuji Asset Management Co., Ltd.
June	2001	Joined DKS Co. Ltd.
June	2001	Director
April	2004	Executive General Manager in charge of Corporate Planning Headquarters
June	2004	Managing Director
June	2007	Senior Managing Director
June	2011	Representative Vice President
June	2013	Chairman and Executive Director (current)
June	2015	Concurrently President (current)

URAYAMA Isamu

Managing Director
Executive General Manager in charge of Financial Headquarters

■ **Number of shares held:** 13,227 shares
■ **Career summary**

April	1975	Joined DKS Co. Ltd.
October	2007	General Manager of Financial Division and Assistant to Auditor
May	2008	General Manager of Accounting Department and Assistant to Auditor
June	2008	Executive General Manager in charge of Financial Headquarters (current)
June	2009	Director
June	2016	Managing Director (current)
May	2019	Concurrently General Manager of Financial Department

KITADA Akira

Director
Executive General Manager in charge of Personnel & General Affairs Headquarters
President of Osaka Branch

■ **Number of shares held:** 5,044 shares
■ **Career summary**

April	1989	Joined DKS Co. Ltd.
April	2009	General Manager of Functional Chemicals R&D Department, Functional Chemicals Business Division
October	2010	General Manager of Planning Office, Functional Chemicals Business Division
April	2013	Executive General Manager of Functional Chemicals Business Division, Business Headquarters
June	2015	Director (current)
April	2016	Executive General Manager in charge of Production Control Headquarters and in charge of Environment, Safety & Quality Assurance Department
April	2018	Executive General Manager in charge of Personnel & General Affairs Headquarters (current) and President of Osaka Branch (current)

YAMAJI Naoki

Director
Executive General Manager in charge of Corporate Planning Headquarters
Concurrently General Manager of COO Office
Concurrently General Manager of Formulation Development Promotion Office

■ **Number of shares held:** 3,482 shares
■ **Career summary**

April	1991	Joined DKS Co. Ltd.
April	2013	General Manager in charge of Planning Department, Yokkaichi Reorganization Division, Production Control Headquarters
April	2014	General Manager of COO Office
April	2015	Executive General Manager of Plastic Materials Business Division, Business Headquarters
April	2016	Concurrently in charge of Tokyo Headquarters
April	2017	Executive General Manager in charge of Corporate Planning Headquarters (current) and COO Office
June	2017	Director (current) and in charge of Personnel & General Affairs Headquarters
April	2018	In charge of Production Control Headquarters
December	2018	Concurrently General Manager of COO Office (current)
April	2019	Concurrently General Manager of Formulation Development Promotion Office (current)

MISAWA Hideto

Director
Executive General Manager of Domestic Subsidiaries Division (Business Headquarters)

■ **Number of shares held:** 1,468 shares
■ **Career summary**

April	1981	Joined Matsushita Electric Works, Ltd. (current Panasonic Electric Works Co., Ltd.)
December	2001	General Manager of Product Development Department, Electronic Device Materials Business Division
November	2002	General Manager of Market Development Department, Electronic Device Materials Business Division
March	2004	General Manager of Circuit Materials Development Department, Electronic R&D Center, Electronic Materials Headquarters
April	2007	General Manager of Functional Materials Business Division
April	2008	Director of Electronic R&D Center
October	2015	Director of New Business Development Center
October	2017	Joined DKS Co. Ltd. General Manager of COO Office
April	2018	Advisor and Executive General Manager in charge of Domestic Subsidiaries Division, Business Headquarters (current)
June	2018	Director (current)

AKASE Yoshinobu

Representative Senior Managing Director
Executive General Manager in charge of Business Headquarters

■ **Number of shares held:** 11,361 shares
■ **Career summary**

April	1982	Joined DKS Co. Ltd.
April	2004	General Manager of Polyurethane & Construction Materials East Sales Department, East Sales Headquarters
April	2008	General Manager of Plastic Materials Sales Department, Plastic Materials Business Division
January	2009	General Manager of Procurement Department, Procurement & Logistics Headquarters
April	2009	Executive General Manager in charge of Procurement & Logistics Headquarters
June	2011	Director and Executive General Manager in charge of Personnel & General Affairs Headquarters
January	2012	Concurrently President of Osaka Branch
April	2013	Executive General Manager in charge of Corporate Planning Headquarters and Personnel & General Affairs Headquarters
April	2014	Managing Director
April	2017	Representative Senior Managing Director (current) Executive General Manager in charge of Business Headquarters (current)

ONISHI Hideaki

Managing Director
Executive General Manager in charge of R&D Headquarters

■ **Number of shares held:** 11,025 shares
■ **Career summary**

April	1982	Joined DKS Co. Ltd.
April	2001	General Manager of Plastic Materials R&D Department, Plastic Materials Business Division
October	2005	General Manager of Synthesis R&D Supervision Department, Technological Development Headquarters
March	2006	General Manager of Plastic Additive Materials R&D Department, Technological Development Headquarters
April	2008	Deputy General Manager of Plastic Materials R&D Department, Plastic Materials Business Division
April	2009	General Manager of Plastic Materials Laboratory, Plastic Materials Business Division
June	2011	Executive General Manager in charge of R&D Headquarters (current)
June	2014	Director
April	2017	Managing Director (current)

OKAMOTO Osami

Director
Executive General Manager of Plastic Materials Business Division, Business Headquarters and in charge of Tokyo Headquarters

■ **Number of shares held:** 6,188 shares
■ **Career summary**

April	1989	Joined DKS Co. Ltd.
April	2006	General Manager of Sales Department, Plastic Additive Materials Business Division
May	2007	General Manager of East Sales Department, Surfactants Business Division
April	2008	General Manager of Planning Office, Functional Chemicals Business Division
October	2010	Director of Yokkaichi Chemical Co., Ltd.
April	2013	General Manager of Yokkaichi Reorganization Department, Production Control Headquarters
April	2014	General Manager in charge of Management Planning Office, Corporate Planning Headquarters
April	2016	Deputy Executive General Manager in charge of Corporate Planning Headquarters
April	2017	Executive General Manager of Plastic Materials Business Division, Business Headquarters (current) Concurrently in charge of Tokyo Headquarters (current)
June	2017	Director (current)
December	2018	Concurrently General Manager of Plastic Materials Sales Department

KAWAMURA Ichiji

Director
Executive General Manager in charge of Production Control Headquarters

■ **Number of shares held:** 1,589 shares
■ **Career summary**

April	1985	Joined The Fuji Bank, Limited (current Mizuho Bank, Ltd.)
August	1995	Senior Assistant to Director of London Branch
November	2001	General Manager of Yokohama Branch
April	2002	Assistant Branch Manager, Yokohama-chuo Branch of Mizuho Bank
May	2004	Assistant Branch Manager, Seoul Branch of Mizuho Corporate Bank, Ltd.
July	2008	Deputy General Manager of Sales Department 6
April	2011	General Manager, International Corporate Sales Department
July	2013	General Manager, International Corporate Sales Department of Mizuho Bank
April	2015	Temporary transfer to DKS Co. Ltd.
April	2016	Joined DKS Co. Ltd. Deputy Executive General Manager in charge of Personnel & General Affairs Headquarters
April	2017	Executive General Manager in charge of Personnel & General Affairs Headquarters
April	2018	Executive General Manager in charge of Production Control Headquarters (current)
June	2018	Director (current)

IWASAKO Koichi

Director
Business Headquarters
Representative Director and President of Yokkaichi Chemical Company Limited

■ **Number of shares held:** 3,853 shares
■ **Career summary**

April	1987	Joined DKS Co. Ltd.
October	2006	General Manager of Business Planning Office, Corporate Planning Headquarters
June	2007	General Manager of Business Planning Office, Yokkaichi Chemical Company Limited
April	2008	General Manager Research Management of the Research Management Center, R&D Headquarters
April	2013	General Manager of Planning Office, Plastic Materials Business Division, Business Headquarters Concurrently General Manager in charge of Flame Retardants and Resin Additives, Plastic Materials Sales Department
April	2014	Executive General Manager of Plastic Materials Business Division, Business Headquarters
April	2015	General Manager of COO Office
June	2015	Director
April	2016	Executive General Manager of Domestic Subsidiaries Division, Business Headquarters
June	2016	Concurrently President of Osaka Branch
June	2018	Advisor of Domestic Subsidiaries Division, Business Headquarters Representative Director and President of Yokkaichi Chemical Company Limited
April	2019	Representative Director and President of Yokkaichi Chemical Company Limited, Business Headquarters (current)
June	2019	Director (current)

Board of Directors

AOKI Sunao

Director (outside)

■ **Number of shares held:** 449 shares
■ **Career summary**

April	1972	Joined Mitsubishi Heavy Industries, Ltd.
June	2000	Director of Takasago Laboratory, Technology Department
June	2003	Director
January	2005	General Manager, Technology Department
June	2005	Representative Executive Officer
December	2005	Visiting Professor of Tsinghua University in China (current)
April	2006	Representative Managing Executive Officer of Mitsubishi Heavy Industries, Ltd.
April	2009	Executive Vice President and Executive Officer
June	2011	Vice Chief Director of Mitsubishi Research Institute, Inc.
April	2014	Special Advisor of Mitsubishi Heavy Industries, Ltd.
June	2014	Director of DKS Co. Ltd. (current)

TANIGUCHI Tsutomu

Director (outside)

■ **Number of shares held:** 328 shares
■ **Career summary**

October	1978	Labor Standard Inspector of Labor Ministry
April	2002	Chief of the Sonobe Labor Standards Inspection Office, Kyoto Labor Bureau, Ministry of Health, Labour and Welfare (former Labor Department)
April	2004	Senior Officer for Personnel Planning, General Affairs Division
April	2006	Chief of the Kyoto-minami Labor Standards Inspection Office
April	2008	Director of the General Affairs Division
April	2010	Chief of the Kyoto-shimo Labor Standards Inspection Office
April	2012	Chief of the Kyoto-kami Labor Standards Inspection Office
June	2014	Executive Director of Kyoto Labor Standards Association
June	2017	Registered as Labor and Social Security Attorney (Kyoto Labor and Social Security Attorney's Association) Chief of Tsutomu Taniguchi Labor and Social Security Attorney's Office (current) Director of DKS Co. Ltd. (current)

MIYATA Yasuhiro

Director (outside)

■ **Number of shares held:** —
■ **Career summary**

April	1987	Joined Dai-Ichi Mutual Life Insurance Company (current The Dai-Ichi Life Insurance Company, Limited)
April	2003	Senior Portfolio Manager, Kogin-Daiichi Life Asset Management Company (current Asset Management One Co., Ltd.)
April	2009	General Manager of Global Fixed Income Investment Department, Dai-Ichi Mutual Life Insurance Company (current The Dai-Ichi Life Insurance Company, Limited)
April	2010	General Manager of Global Fixed Income Investment Department, The Dai-Ichi Life Insurance Company, Limited
April	2014	General Manager of Group Pension Business Unit, The Dai-Ichi Life Insurance Company, Limited
April	2016	Executive Officer, General Manager of Group Pension Business Unit, The Dai-Ichi Life Insurance Company, Limited
April	2018	Executive Officer, Chief General Manager, Investment Concurrently General Manager of Equity Investment Department
April	2019	Managing Executive Officer, Chief General Manager, Kansai Market Concurrently Chief General Manager, Kansai Operations Bureau, The Dai-Ichi Life Insurance Company, Limited (current)
June	2019	Director of DKS Co., Ltd. (current)

Audit & Supervisory Board

FUJIOKA Toshinori

Audit & Supervisory Board Member

■ **Number of shares held:** 11,905 shares
■ **Career summary**

April	1980	Joined DKS Co. Ltd.
October	2000	General Manager in charge of General Business Promotion Office, Procurement & Logistics Headquarters
July	2001	General Manager in charge of Sales Promotion Office, Sales Headquarters
October	2005	General Manager of East Supervision Department, Sales Supervision Headquarters
June	2007	Executive General Manager in charge of Personnel & General Affairs Headquarters
April	2010	President and Representative Director of Kyoto Elex Co., Ltd.
June	2011	Executive General Manager in charge of Procurement & Logistics Headquarters and President of Osaka Branch Office
June	2014	Director
April	2016	Executive General Manager of RHEOCRYSTA Business Division (Business Headquarters)
April	2018	Assistant to President
June	2018	Audit & Supervisory Board Member (current)

NISHIZAKI Shinichi

Audit & Supervisory Board Member

■ **Number of shares held:** 5,648 shares
■ **Career summary**

April	1982	Joined DKS Co. Ltd.
July	2004	General Manager of Financial Department, General Affairs Financial Headquarters
October	2007	Executive General Manager of Secretary's Office
November	2008	Executive General Manager of Internal Audit Office and Auditor
April	2010	General Manager of Financial Department, Financial Headquarters and Auditor
April	2013	Assistant to President
June	2013	Audit & Supervisory Board Member (current)

IDE Hidehiko

Audit & Supervisory Board Member (outside)

■ **Number of shares held:** 449 shares
■ **Career summary**

April	1970	Joined The Fuji Bank, Limited
May	1995	Manager of Chicago Branch
May	1997	Manager of London Branch
July	1999	Deputy Director General of Headquarters
September	1999	Managing Director of Fuji Asset Management Co., Ltd.
October	2005	Full-time Management Auditor of Mizuho Private Wealth Management Co., Ltd.
June	2007	Auditor of Ulvac Materials, Co., Ltd.
June	2008	Audit & Supervisory Board Member of DKS Co. Ltd. (current)

TANAKA Haruo

Audit & Supervisory Board Member (outside)

■ **Number of shares held:** 225 shares
■ **Career summary**

April	1978	Joined The Bank of Kyoto, Ltd.
February	2005	General Manager of Private Banking Division
June	2006	General Manager of Public Affairs Division
June	2010	Executive Officer and General Manager of Public Affairs Division
June	2011	Auditor
June	2013	Full-time Auditor
June	2015	President and Representative Director of Kyogin Card Service Co., Ltd. (current)
June	2016	Audit & Supervisory Board Member (current)

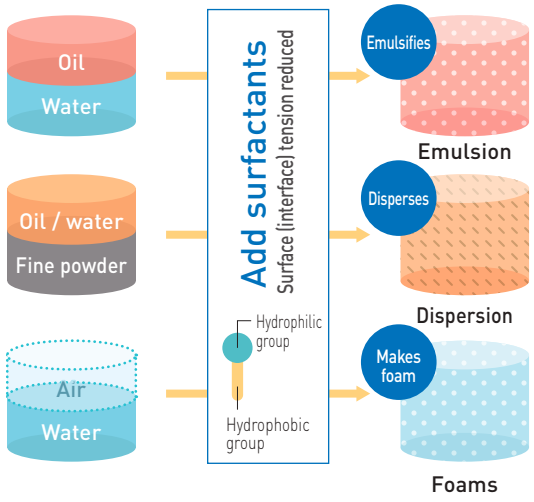
Fundamental Knowledge of Surfactants

Generally, an "interface" refers to the border area between two materials of different states of solid, liquid or gas. A *surface active* agent, or surfactant, is a term for a chemical that exhibits functions and improves the performance of these interfaces.

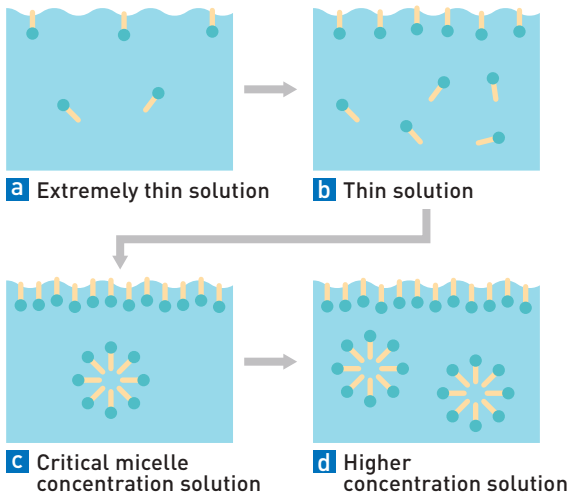
1 Basic Structure of Surfactants

Surfactants have a unique chemical structure that has both hydrophilic and hydrophobic properties. Using this structure, surfactants can achieve a variety of effects such as emulsification, dispersion, foaming and adsorption by weakening surface tension or forming molecular aggregates or micelles (spheres).

Functions of surfactants by reducing surface tension



Surfactant solutions

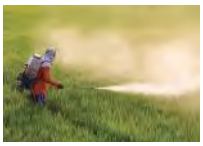


2 Surfactant Types

Surfactants have four main structural types based on the functions they are designed to achieve. Of these four types, three are ionic surfactants that transform into electrolytic dissociation ions (atoms or groups of atoms bearing an electrical charge) when dissolved in water, and the remaining type is nonionic surfactants, which do not form ions. The three ionic surfactants are further subdivided based on the type of ion they form in water: anionic (or negative ion) surfactants, cationic (or positive ion) surfactants and amphoteric (containing both positive and negative ions) surfactants.

Types of surfactants	Characteristics	Main applications
Anionic surfactants	● Superb emulsifying and dispersing properties ● Good foaming ● Not susceptible to temperature	Laundry detergent, Shampoo, Shower gel
Cationic surfactants	● Absorbed by textiles, etc. ● Antistatic effects ● Sterilizing effect	Hair conditioner, Fabric softener, Disinfectant
Amphoteric surfactants	● Non-irritative to the skin ● Superb solubility in water ● Synergetic effects with other surfactants	Shower gel, Dishwashing liquid, Shampoo
Nonionic surfactants	● Balance of hydrophilic and hydrophobic properties easily adjustable ● Superb emulsifying and solubilizing properties ● Low foaming ● Susceptible to temperature	Laundry detergent, Emulsifier/solubilizer, Dispersant, Metal processing oil

3 Main Actions and Applications

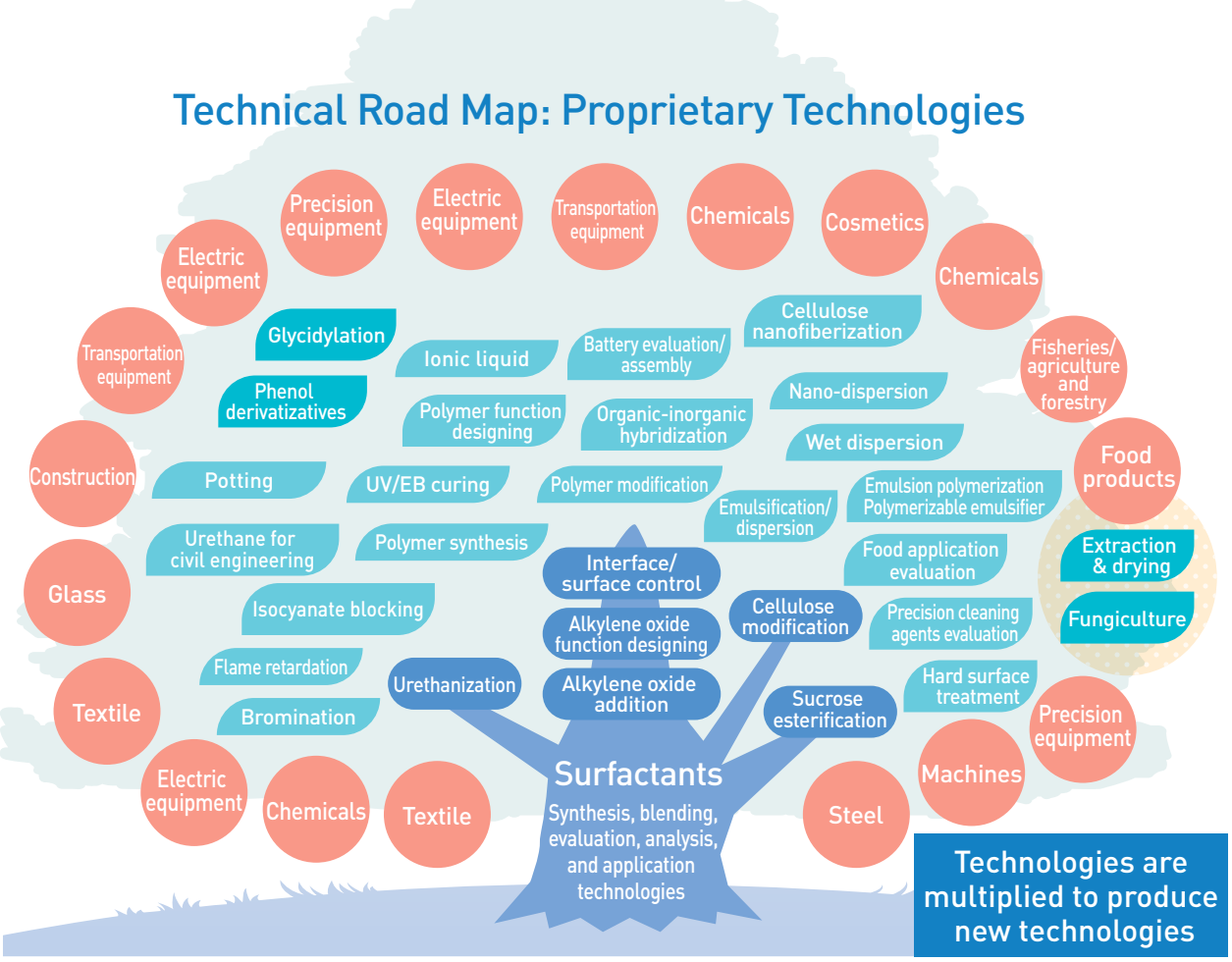
Function	Actions and effects	Applications
Emulsifying, dispersing Mixes incompatible substances	Mixes water and oil and makes an emulsion. Makes a uniform dispersion with fine particles floating on the water surface.	Ice cream, margarine, paints, inks 
Moistening, permeating Makes wetting and permeation easier	Spreads agrochemicals thin and uniform on the leaf surfaces. Evenly disperses dyestuff and finishing agents on textiles and leathers.	Pesticide spraying, permeation of dyestuff and finishing agents on textiles 
Making or removing foam Makes and/or removes foam	Takes in air bubbles in water and stabilizes. Prevents foaming.	Foam concrete, light gypsum boards 
Cleaning Removes dirt	Removes dirt by moistening the surface of textiles and dirt, taking the dirt off the textiles by penetrating in between them, and emulsifying/dispersing the dirt.	Household detergents, bath soaps, machinery and metal cleaning agents 
Softening, smoothing Softens and smooths	Improves the smoothness of yarns in the spinning and/or knitting process and makes soft and smooth-textured textiles.	Textile finishing agents, metal processing oils 
Antistatic Prevents static electricity	Prevents static electricity generation by making the surfaces smooth. Makes static electricity easier to escape by forming a water-absorptive coating on the surface.	Antistatic and dustproofing treatment for synthetic fibers and plastic products 
Rustproofing Prevents rust	Adheres to the metal surface and forms a coat to prevent oxygen (air) and water from contacting the metal and causing rust.	Metal surface treatment 
Leveling, fixing Prevents uneven dying, enhances dye fastness	Makes the dyestuff gradually be absorbed by the textiles and brings about uniform dyeing.	Textile processing 
Sterilizing Removes bacteria	A positively charged surfactant is absorbed to negatively charged bacteria, destroys the cells and sterilizes.	Hand sanitizer 

4 Environmental Impact of Surfactants

Domestic wastewater contains surfactants. Most such wastewater is collected and treated at public sewage treatment plants and released to the environment although some could be released directly to rivers/oceans or land.

Because surfactants are biodegradable, even if released into the environment they eventually degrade to carbon dioxide and water by bacteria. To preserve the natural environment, products with high biodegradability are being developed and proactively used in Japan.

Proprietary Technologies of DKS



Basic Technology

Interface/surface control technology

A variety of applications can be achieved with surfactants, for example, emulsification, dispersion, solubilization, wetting/penetration, surface /interface tension control, foaming/defoaming and surface modification. The primary applications of surfactants are emulsification and dispersion for mixing together substances that normally are not mixed together. Emulsification and dispersion are conditions in which other substances exist in a liquid in the form of small dispersed particles; this is generally known as emulsion. Surfactants have a wide range of uses spanning from household to industrial. The most common is emulsion between various oils and water. Although water and oils will separate after being mixed, adding a surfactant as an intermediate between water and oils enables the creation of stable emulsion. The most familiar example of this phenomenon is washing dishes. When washing dishes to which oil residue has adhered, the surfactant is first absorbed into the oil residue, where it reduces the interface tension between the oil and dishwashing liquid. Next, the liquid enters between the oil residue and dishware via wetting/penetration. Finally, oil residue is separated from the dishware through physical force such as washing by hand. The residue is adsorbed into the micelles formed by the surfactant and then dispersed throughout the liquid, which prevents re-adherence of the residue. In this way, the surfactant's surface tension reduction function, wetting/penetration effect and other effects such as emulsification, solubilization and dispersion are major factors in the washing effect. Moreover, improving the wettability of paint and adding various functionality (e.g., leveling, water/oil repellent, antifouling, lubricity) can be included as types of technology for surface modification and interface control. These surfactants exhibit superior solubility in solvents and a high surface tension reduction function with a small amount of use. For example, fluoropolymers are widely used in water-and oil-repellent agents for textile. Our company is working to develop PFOA (perfluorooctanoic acid)-free fluoropolymers through the synthesis of various surfactants and the use of application technology. This makes it possible to respond to needs for surface/interface control, which had been difficult to achieve using conventional surfactants.

Alkylene oxide addition technology

This technology adds ethylene oxide (EO) and propylene oxide (PO) to raw materials of higher alcohols derived from natural sources such as coconut oil or palm oil, as well as phenols and amines.

Alkylene oxide functional design technology

Through the addition of alkylene oxide (AO), in addition to EO and PO sequencing such as random polymerization and block polymerization, this technology enables desired control for the number of added moles. This makes it possible to freely design a surfactant composition, which satisfies the required performance.

Urethanization technology

This technology synthesizes a urethane resin that is a polymer compound possessing urethane bonds in the main framework of the molecular structure. Through diverse combinations of the raw materials polyisocyanate and polyol, it is possible to change the type and length of the structural chain and to change the structure of both ends, thus creating a variety of physical properties. This makes it possible to create substances such as elastic urethane rubber and urethane elastomer, as well as soft/hard urethane foam in conjunction with foaming reaction. By utilizing these properties, these substances can be used in products such as cushioning, thermal insulation, molding and coating materials. In addition, water-based urethane resin can be obtained by emulsifying urethane resin. Our company's products can be broadly divided into nonreactive and reactive. Nonreactive water-based urethane resin is an emulsion product of urethane resin. Reactive water-based urethane resin is produced by using a blocking agent to protect the terminal isocyanate groups generated by the reaction between polyisocyanate and polyol and emulsify. Reactive water-based urethane resin is composed of the two basic structures of a soft segment and a hard segment, and it undergoes quasi-crystallization during the resin molding process. Consequently, it combines flexibility, toughness and elasticity and possesses superior solvent resistance and adhesion. Because the material combines safety and high functionality, it is used in a wide range of processes such as film, metal, paper and textile.

Cellulose modification technology

This technology synthesizes anionic water-soluble polymers with cellulose as the main raw material. The CMC (sodium carboxymethyl cellulose) synthesized via this technology can be used in various applications by changing the length of the molecular chain and the addition quantities of the carboxymethyl group. CMC is known as a food additive, is easily dissolved in either cold or hot water and becomes a viscous liquid that is colorless and transparent. It has an extensive record of use as a thickening stabilizer. Uses include as a thickening agent for food seasonings and a binding agent for fish feed and pesticides. CMC is known for functioning as a high-performance dispersion stabilizer. It is applied to products seeking an even higher level of functionality, for example, a dispersion stabilizer of lactoprotein in lactic acid bacteria beverages, an anti-redeposition agent in detergents and a dispersion/thickening stabilizer for toothpaste.

Sucrose esterification technology

This technology is used to obtain sucrose fatty acid esters (SEs), a non-ionic surfactant that as natural sucrose is part of the hydrophilic group and as higher fatty acids such as stearic acid and oleic acid are part of the lipophilic group. The high safety of SEs is recognized by international organizations (Joint FAO/WHO Expert Committee on Food Additives), and SEs were approved as a food additive in Japan in 1959. In addition to food products, SEs are used in a wide range of products such as pharmaceuticals and personal care products. Examples include emulsifiers, viscosity modifiers, anti-aging agents for starches and texture modifiers. Synthesis methods of SEs can be broadly divided into an esterification reaction method that uses fatty acid chlorides and fatty acid anhydrides, a transesterification method with lower alcohol esters of fatty acids and an enzyme method using enzymes such as lipase as the catalyst. Among these methods, the transesterification method has been industrialized, with sucrose and fatty acid methyl esters used as the raw materials.

Cellulose nanofiberization technology

This technology is used to create the new material cellulose nanofibers (CNFs) by chemically or physically treating the naturally derived cellulose fibers to reduce the fiber width to a nano meter size. Our Company's CNFs are exceptional for their extremely fine fiber width on the single nano level. This fineness is achieved via chemical modification processing. Furthermore, by utilizing its exceptional characteristics such as viscosity behavior, emulsification and dispersion stability effect, our CNFs can be used in products such as cosmetics and general industrial products.

Emulsion/polymerization technology

This technology conducts polymerization by using surfactants to emulsify in water the monomers that do not dissolve in water. This enables synthesis of high molecular weight polymers that cannot be obtained via bulk polymerization or solution polymerization. Furthermore, because the polymer system is surrounded by water, it is easy to remove polymerization heat and perform stable temperature management. A polymerizable surfactant is a type of surfactant that possesses a radical polymerizable group. It is used as an emulsifier for emulsion polymerization. Through copolymerization with monomers during the process of the emulsion polymerization, it improves the mechanical stability, chemical stability, freezing/thawing stability and foaming property of polymer dispersion, and improves the water resistance of the polymer film.

Application Technology

Nano-dispersion technology

This technology stably mixes immiscible substances to bring out the diverse power inherent in materials. This technology is expected to support dispersants that enable dispersion in the nano range, various dispersion methods, and applicability to a wide range of materials such as inorganic powder, organic powder and oil. Nano materials can be broadly divided into carbon materials (e.g., fullerene, nano tubes, nano fibers, graphene), metals (e.g., gold, silver, copper) and metal oxides (e.g., silica, titania, zirconia), all of which possess diverse characteristics. This technology disperses these nano materials into mediums such as water, organic solvents and resins. However, as particle size of substances is reduced to nano size, the impact of the Van der Waals force becomes stronger, resulting in problems such as particles being prone to agglomeration and a decrease in transparency. Interface control is required to prevent agglomeration.

Function/usage: Electronic and electric equipment (touch panels for smartphones and tablets), cosmetics (sunscreen), eyeglass frames, etc.

Radiation curing technology

This technology instantly dries and cures coatings and other types of radiation-curable resin compounds by irradiating them with ultraviolet (UV) rays or electron beams (EBs). The technology is also called radcure (UV/EB curing). Radcure technology is used in a wide range of diverse fields due to its ability to conserve resources and energy and reduce environmental load. Its uses include clear coatings for construction materials and furnishings; anti-rust coatings for metal; resistance materials such as semiconductors, dry film and LCD displays; coatings for items such as mobile phones, optical fibers, plastics and paper; printing ink; plate-making materials; and adhesives. Our Company's monomers are made from the raw material alcohol using EO precision-addition technology. We offer a full lineup of products with added functionality (e.g., high hardness, low viscosity, low curling).

Function/usage: Adhesives, paints/coatings, printing/marking

Flame retardation technology

This technology adds/disperses compounds containing flame-retardant elements such as bromine, phosphorus, nitrogen, boron, silicon and/or antimony to/in polymer materials to make them flame-retardant by a chemical reaction and bonding resulting from it. Recently, out of consideration for the environment, attention is being placed on the use of inorganic compounds such as hydrated metal compounds (Mg hydroxide, Al hydroxide) and nano-composites (MMT, CNT). Flame retardants are broadly divided into halogenated and halogen-free products which are based on phosphorus or inorganic substances. Halogenated flame retardants have superior flame-retarding efficiency and therefore are most widely used as flame retardants for plastics. Our Company's products are brominated flame retardants that give sufficient flame retardancy with a small amount of use. Moreover, the products interfere little with the superior properties of plastic, namely, heat resistance, heat stability, UV stability, workability, mechanical strength and electrical properties. The products are capable of satisfying requirements for the flame retarding of plastics, which are increasingly diverse and have increasingly advanced functions.

Function/usage: Electronic and electric equipment, OA equipment, construction products, automotive products, railway cars, textile, paper, aircraft, marine vessels, etc.

Ionic liquid

Generally, ionic liquid is an ion pair compound that remains in a liquid state at/below 100°C. It has no vapor pressure and is nonflammable. Because ionic liquid has high safety and ion conductivity, it is used in electrolyte applications such as lithium-ion batteries and capacitors. Ionic liquid also is attracting attention as a next-generation material in the energy device field and as a green solvent that reduces environmental impact. Ionic liquid is a salt composed only of ions (anions, cations). It dissolves a variety of organic and inorganic compounds and can conduct ions.

Function/usage: Reactive solvents, extraction solvents; as electrolytes, dye-sensitized solar batteries, lithium-ion batteries, electric bilayer capacitors and actuators; lubricants, dispersants and antistatic agents, etc.

Special Technology

Glycidylation technology

This technology belongs to Yokkaichi Chemical. Via synthesis technology using glycidyl ether, which is a bifunctional aliphatic epoxy compound possessing a flexible framework in the center of the molecule, the technology generates compounds with improved flexibility, toughness and water resistance of cured materials.

Function/usage: Electronic material

Consolidated Financial Statements

Consolidated Balance Sheets

(Millions of yen)

Assets	FY2018	FY2019
Current assets		
Cash and deposits	11,523	7,485
Notes and accounts receivable—trade	16,515	17,872
Merchandise and finished goods	7,784	9,456
Work in process	31	29
Raw materials and supplies	2,134	2,451
Prepaid expenses	270	276
Other current assets	2,342	1,803
Allowance for doubtful accounts	(15)	(15)
Total current assets	40,587	39,361
Non-current assets		
Tangible fixed assets		
Buildings and structures	24,905	25,407
Accumulated depreciation	(13,563)	(14,451)
Buildings and structures, net	11,341	10,955
Machinery, equipment and vehicles	33,625	34,107
Accumulated depreciation	(27,497)	(28,754)
Machinery, equipment and vehicles, net	6,128	5,353
Tools, furniture and fixtures	3,659	3,795
Accumulated depreciation	(3,170)	(3,235)
Tools, furniture and fixtures, net	489	559
Land	8,933	9,182
Leased assets	1,542	1,470
Accumulated depreciation	(946)	(902)
Leased assets, net	596	568
Construction in progress	95	3,104
Total tangible fixed assets	27,584	29,724
Intangible fixed assets		
Goodwill	—	871
Others	378	477
Total intangible fixed assets	378	1,348
Investments and other assets		
Investment securities	3,672	4,037
Long-term loans receivable	420	268
Long-term prepaid expenses	208	232
Deferred tax assets	83	91
Net defined benefit assets	403	569
Other intangible fixed assets	326	277
Allowance for doubtful accounts	(6)	(6)
Total investments and other assets	5,108	5,472
Total non-current assets	33,071	36,545
Total assets	73,658	75,906

Liabilities	FY2018	FY2019
Current liabilities		
Notes and accounts payable—trade	12,222	12,926
Short-term loans payable	6,197	6,604
Lease obligations	313	227
Income taxes payable	893	704
Provision for bonuses	649	678
Accrued business office taxes	37	37
Accrued expenses	220	251
Other current liabilities	2,176	2,790
Total current liabilities	22,712	24,220
Non-current liabilities		
Long-term loans payable	17,665	16,862
Lease obligations	575	497
Deferred tax liabilities	307	298
Net defined benefit liability	107	98
Asset retirement obligations	73	73
Other non-current liabilities	256	264
Total non-current liabilities	18,985	18,095
Total liabilities	41,697	42,315

Net assets		
Shareholders' equity		
Capital stock	8,895	8,895
Capital surplus	7,223	7,237
Retained earnings	14,043	15,934
Treasury shares	(1,086)	(1,068)
Total shareholders' equity	29,076	30,998
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	531	28
Foreign currency translation adjustment	271	26
Remeasurements of defined benefit plans	279	271
Total accumulated other comprehensive income	1,082	325
Non-controlling interests	1,801	2,266
Total net assets	31,960	33,591
Total liabilities and net assets	73,658	75,906

Consolidated Statements of Income

(Millions of yen)

	FY2018	FY2019
Net sales	56,955	59,574
Cost of sales	41,896	44,130
Gross profit	15,059	15,444
Selling, general and administrative expenses		
Selling expenses	4,277	4,577
General and administrative expenses	5,728	6,525
Total selling, general and administrative expenses	10,006	11,103
Operating income	5,053	4,341
Non-operating income		
Interest income	8	6
Dividend income	52	64
Share of profit of entities accounted for using equity method	68	63
Insurance income	6	35
Rent income	26	34
Other non-operating income	76	47
Total non-operating income	238	251
Non-operating expenses		
Interest expenses	242	196
Compensation-related expenses	185	–
Other non-operating expenses	138	220
Total non-operating expenses	566	417
Ordinary income	4,725	4,175
Extraordinary income		
Gain on sales of shares of subsidiaries and associates	–	141
Gain on sales of land	1,098	–
Total extraordinary income	1,098	141
Extraordinary losses		
Impairment loss	171	240
Loss on disposal of non-current assets	113	96
Loss on sales of buildings	29	–
Total extraordinary losses	314	337
Profit before income taxes	5,509	3,979
Income taxes—current	1,434	1,110
Income taxes—deferred	61	57
Total income taxes	1,496	1,168
Profit	4,012	2,810
Profit attributable to non-controlling interests	660	229
Profit attributable to owners of parent	3,351	2,581

Consolidated Statements of Comprehensive Income

(Millions of yen)

	FY2018	FY2019
Profit	4,012	2,810
Other comprehensive income		
Valuation difference on available-for-sale securities	386	(503)
Deferred gains or losses on hedges	2	–
Foreign currency translation adjustment	123	(326)
Remeasurements of defined benefit plans	62	(8)
Share of other comprehensive income of entities accounted for using equity method	5	(26)
Total other comprehensive income	580	(864)
Comprehensive income	4,593	1,945
Comprehensive income attributable to owners of parent	3,873	1,824
Comprehensive income attributable to non-controlling interests	720	121

Consolidated Financial Statements

Consolidated Statements of Cash Flows

(Millions of yen)

	FY2018	FY2019
Cash flows from operating activities		
Profit before income taxes	5,509	3,979
Depreciation	2,473	2,555
Amortization of goodwill	–	110
Increase (decrease) in allowance for doubtful accounts	5	0
Interest and dividend income	(61)	(70)
Interest expenses	242	196
Share of loss (profit) of entities accounted for using equity method	(68)	(63)
Impairment loss	171	240
Loss (gain) on disposal of tangible fixed assets	113	96
Loss (gain) on sales of tangible fixed assets	(1,068)	–
Loss (gain) on sales of shares of subsidiaries and associates	–	(141)
Decrease (increase) in notes and accounts receivable—trade	(1,645)	(1,277)
Decrease (increase) in inventories	(1,466)	(1,894)
Increase (decrease) in notes and accounts payable—trade	1,755	688
Increase (decrease) in net defined benefit liability	(188)	(185)
Other cash flows from operating activities	258	197
Subtotal	6,030	4,432
Interest and dividend income received	139	155
Interest expenses paid	(241)	(195)
Income taxes paid	(911)	(1,155)
Net cash provided by (used in) operating activities	5,017	3,236
Cash flows from investing activities		
Payments into time deposits	(116)	(43)
Proceeds from withdrawal of time deposits	83	49
Purchase of tangible fixed assets	(2,505)	(3,707)
Proceeds from sales of tangible fixed assets	1,822	–
Purchase of investment securities	(2)	(970)
Purchase of shares of subsidiaries resulting in change in scope of consolidation	–	(780)
Proceeds from sales of shares of subsidiaries resulting in change in scope of consolidation	–	130
Payments for loans receivable	(400)	(250)
Collection of loans receivable	3	1
Proceeds from subsidy income	100	80
Other cash flows from investing activities	(114)	(205)
Net cash provided by (used in) investing activities	(1,130)	(5,694)
Cash flows from financing activities		
Net increase (decrease) in short-term loans payable	(55)	(685)
Proceeds from long-term loans payable	4,000	5,918
Repayments of long-term loans payable	(4,800)	(6,005)
Redemption of bonds	–	(50)
Proceeds from share issuance to non-controlling shareholders	–	385
Repayments of lease obligations	(299)	(321)
Purchase of treasury shares	(1)	(0)
Proceeds from disposal of treasury shares	7	–
Cash dividends paid	(606)	(709)
Dividends paid to non-controlling interests	(38)	(41)
Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation	(62)	–
Net cash provided by (used in) financing activities	(1,858)	(1,510)
Effect of exchange rate change on cash and cash equivalents	78	(155)
Net increase (decrease) in cash and cash equivalents	2,106	(4,123)
Cash and cash equivalents at beginning of period	9,296	11,402
Cash and cash equivalents at end of period	11,402	7,278

Dialogue with Shareholders and Investors

Disclosing the necessary corporate information in a timely and appropriate manner, the Company attaches importance to the occasions for communicating with the wide range of people concerned.

While actively conducting dialogues with its many investors, the Company has been able to seize opportunities for dialogue involving stories about its creation of value.

Through the words of the Chairman himself, the Company arranges regular large and small meetings with investors. In addition, with regard to explaining financial performance and business scope, the personnel in charge conduct interviews and offer direct explanations as part of their everyday tasks. As this Report serves as a tool for sustainable and constructive dialogue, we are working to improve corporate value, including mutual understanding through active communication.

Ordinary General Meeting of Shareholders

On June 25, 2019, the Company held its annual Ordinary General Meeting of Shareholders at the hall at the Company's corporate Headquarters building. The shareholders who attended that day numbered 109, including some who had traveled long distances to be there. After the conclusion of the general meeting, the Company held a management briefing session given by the CEO and an informal gathering.

Using the valuable time to directly explain management's way of thinking and direction through mutual dialogue, the Company regards the general meeting as an important occasion for the management team to earnestly obtain feedback directly from shareholders and for that feedback to be subsequently reflected in management.

The Ordinary General Meeting of Shareholders held on June 25, 2019

Number of shareholders who attended **109** shareholders

Percentage of those exercising voting rights **79.3**%

Dialogue with Shareholders and Investors

Dialogue with Institutional Investors and Analysts

We hold briefing sessions for investors covering the first-half and full-year periods.

In the fiscal year ended March 31, 2019, large meetings were held at the Securities Analysts Association of Japan and smaller meetings were at the Company's Tokyo Headquarters. There was a total of 103 attendees for the first-half and full year, and the Company hosted a relaxed dialogue via a Q&A format.

Number of dialogues in the fiscal year ended March 31, 2019

190 meetings

Dialogue with Individual Investors

Immediately after the General Meeting of Shareholders, we held an informal gathering at our Headquarters and heard opinions from our shareholders firsthand. On July 5, we held a management briefing session in Otemachi, Tokyo, geared toward shareholders in the Kanto region. In the years to come, the Company will continue to host occasions at which to convey its direction in a more easily understood manner.

Number of attendees at management briefings in 2019

134 attendees

● **Dialogue-Based Activities in the Fiscal Year ended March 31, 2019**

Results briefing	2
Small meetings for institutional investors and analysts	87
(Of which, meetings with overseas investors)	(10)

Domestic/Overseas Network (As of March 31, 2019)

Domestic Network

Head Office/Laboratory

Shiga Branch

Location: 427 Gokasho Hiyoshi-cho, Higashiomi, Shiga
Area: 106,813 m²
Main products: Sucrose fatty acid esters, food additives, metal surface treatment agents, surfactants, solvent-alternative aqueous and non-aqueous detergents

Chitose Plant, Yokkaichi Branch

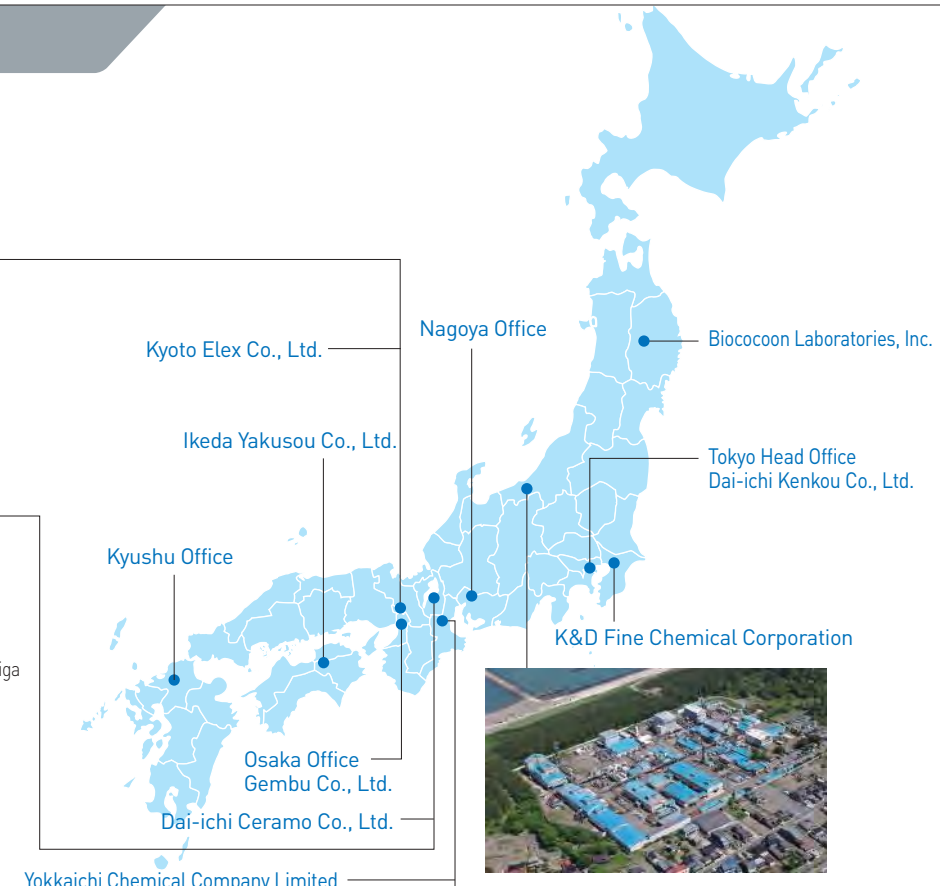
Location: 7 Chitose-cho, Yokkaichi, Mie
Area: 17,355 m²
Main products: Polyether polyols, urethane prepolymers, EV/EB-curable monomers/oligomers, anionic surfactants, cationic surfactants

Kasumi Plant, Yokkaichi Branch

Location: 1-23-5 Kasumi, Yokkaichi, Mie
Area: 101,138 m²
Main products: Polyurethane materials, functional materials

Ohgata Branch

Location: 230 Saigata, Ohgata-ku, Joetsu, Niigata
Area: 87,732 m²
Main products: CMC, waterborne polyurethanes, professional detergents, polyvinylpyrrolidone



Subsidiary and Affiliated Companies (Japan)

Company name	Location	Business activities
Yokkaichi Chemical Co., Ltd.	2-1 Miyahigashi-cho, Yokkaichi, Mie 510-0843, Japan Phone +81-59-345-1161 Fax +81-59-345-1159	Production and sales of surfactants
Gembu Co., Ltd.	2nd Floor, Osaka Asahi Seimei Kan, 4-2-16 Koraibashi, Chuo-ku, Osaka 541-0043, Japan Phone +81-6-6229-1840 Fax +81-6-6229-1845	Sales of detergents, finishing agents and equipment for professional laundry, sales of industrial/professional-use deodorants
Dai-ichi Kenkou Co., Ltd.	8th Floor, Yaesuguchi Daiei Building, 1-3-1 Kyobashi, Chuo-ku, Tokyo 104-0031, Japan Phone +81-3-3275-0583 Fax +81-3-3275-0604	Production and sales of agents for civil engineering and construction
Dai-ichi Ceramo Co., Ltd.	432 Gokasho Hiyoshi-cho, Higashiomi, Shiga 529-1403, Japan Phone +81-748-48-5377 Fax +81-748-48-5322	Production and sales of materials for ceramics and injection molding
Kyoto Elex Co., Ltd.	1 Ogawara-cho, Kisshoin, Minami-ku, Kyoto 601-8391, Japan Phone +81-75-326-2883 Fax +81-75-326-2884	Production and sales of electronic materials
K&D Fine Chemical Corporation	1 Niihamacho, Chuo-ku, Chiba, Chiba 260-0826, Japan Phone +81-43-262-2039 Fax +81-43-262-4396	Production and sales of surfactants and organic/inorganic chemicals
Biococoon Laboratories, Inc.	4-3-5 Ueda, Morioka, Iwate 020-8551, Japan Phone +81-19-613-5564 Fax +81-19-613-5570	Wide-ranging research and development from pharmaceuticals to health care ingredients Production and sales of foods as well as health care products
Ikeda Yakusou Co., Ltd.	1808-1 Nakazu, Shuzu, Ikeda-cho, Miyoshi, Tokushima 778-0020, Japan Phone +81-883-72-5320 Fax +81-883-72-5005	Production of drug substances and various ingredients used in health foods Production and sales of life sciences products including pharmaceuticals and quasi-pharmaceutical products

Overseas Network

Operation Bases (World)

Company name	Location	Business activities
P.T. Dai-ichi Kimia Raya	Jl. Maligi II Lot G-2 Kawasan Industri KIIC, Karawang Barat, Jawa Barat, Indonesia Phone +62-21-8904574 Fax +62-21-8904576	Production and sales of textile agents, paper processing agents, flame retardant for plastics and food additives
Chin Yee Chemical Industries, Co., Ltd.	11F Lidye Commercial Building, 22 Nanking West Road, Taipei, Taiwan Phone +886-2-2556-9353 Fax +886-2-2558-6833	Production and sales of surfactants and plastic materials
DKS (Shanghai) International Trading Co., Ltd.	Room #1104, New Town Center Building, 83 Loushanguan Rd., Shanghai, P.R. China Phone +86-21-6236-8080 Fax +86-21-6236-8700	Trading
Sisterna B.V.	Belder 30A 4704 RK Roosendaal, The Netherlands Phone +31-165-524730	Application development and sales of sucrose esters
Chin Yee Chemical Technologies (Wuxi) Co., Ltd.	Plot 88-C, Wuxi National High & New Tech Industrial Development Zone, 214028, Wuxi, Jiangsu, P.R. China Phone +86-510-85200156 Fax +86-510-85204878	Production and sales of plastic materials
Dai-ichi Kogyo Seiyaku (Singapore) Pte. Ltd.	80 Robinson Road #10-07 Singapore 068898 Phone +65-6420-6810 Fax +65-6826-4092	Trading
DDFR Corporation Ltd.	25th Floor, One Capital Place 18 Luard Road, Wanchai, Hong Kong Phone +852-2827-7761 Fax +852-2824-1502	Sales of plastic additives, e.g., flame retardants

Corporate Data (As of March 31, 2019)

Corporate Name	DKS Co. Ltd.
Foundation	April 1909
Incorporation	August 1918
Paid-in Capital	8,895 million yen
Number of Employees	512 (consolidated: 985)
Total Number of Shares Outstanding	10,684,321 shares
Share Unit Number	100 shares
Number of Shareholders	4,007
Stock Listing	Tokyo Stock Exchange
Securities Code	4461
Date of Record	Every year on March 31, and other dates as necessary and publicly announced in advance
Annual Meeting of Shareholders	Every year in late June
Shareholder Registry Administrator	Mizuho Trust & Banking Co., Ltd. 1-2, Yaesu 1-chome, Chuo-ku, Tokyo

Headquarters / Laboratory
5 Ogawara-cho, Kisshoin, Minami-ku, Kyoto 601-8391, Japan
Phone: +81 75 323 5911 Fax: +81 75 326 7356

Main Branch
55 Nishishichijo Higashikubo-cho, Shimogyo-ku, Kyoto 600-8873, Japan

Tokyo Headquarters
8th Floor, Yaesuguchi Daiei Building, 1-3-1 Kyobashi, Chuo-ku, Tokyo 104-0031, Japan
Phone: +81 3 3275 0561 Fax: +81 3 3275 0599

Osaka Branch
2nd Floor, Osaka Asahi Seimei Building, 4-2-16 Koraibashi, Chuo-ku, Osaka 541-0043, Japan
Phone: +81 6 6229 1717 Fax: +81 6 6229 1793

Nagoya Office
7th Floor, Nagoya International Center Building, 1-47-1 Nagono, Nakamura-ku, Nagoya 450-0001, Japan
Phone: +81 52 571 6331 Fax: +81 52 586 4539

Kyushu Office
4th Floor, Hakata Ekimae Daiichi Building, 1-2-3 Hakata-eki Minami, Hakata-ku, Fukuoka 812-0016, Japan
Phone: +81 92 472 6353 Fax: +81 92 472 4989

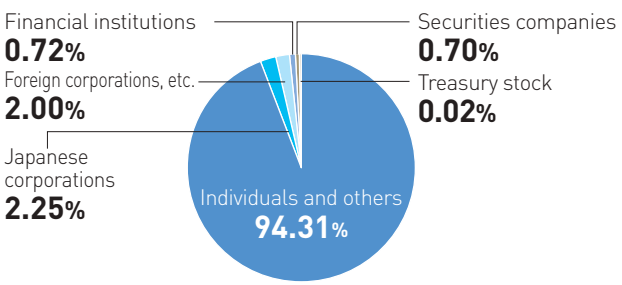
List of Major Shareholders (Top 10)

Shareholder Name	Number of Shares	Ratio of Shareholding (%)
Japan Trustee Services Bank, Ltd. (Trust account)	1,438,400	14.16
The Master Trust Bank of Japan, Ltd. (Trust account)	670,500	6.60
The Dai-ichi Life Insurance Company, Limited	613,400	6.04
Mizuho Bank, Ltd.	427,000	4.20
The Bank of Kyoto, Ltd.	417,000	4.10
Asahi Mutual Life Insurance Company	339,400	3.34
Shareholding Association of DKS's Business Partners	278,100	2.74
DKS Employee Shareholding Association	255,325	2.51
DFA International Small Cap Value Portfolio	178,400	1.76
RE FUND 107-CLIENT AC	149,838	1.47

Notes: 1. The Company has 523,435 of treasury shares that are excluded from the major shareholders above.
2. The ratio of shareholding is calculated after subtracting of treasury shares.

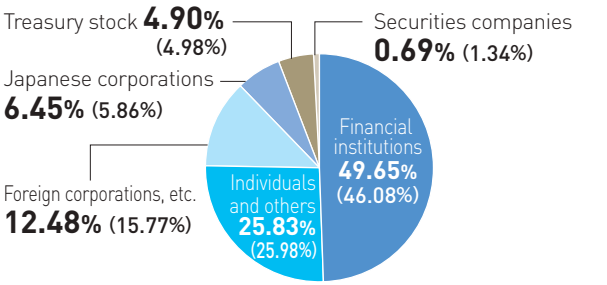
Shareholder Distribution

Composition by Shareholder



Composition by Shareholdings

Note: Figures as of March 31, 2018, are indicated in ( )



On Publishing the DKS Report 2019

This issue marks the fourth time the DKS Group has published its integrated report since the initial report in the fiscal year ended March 31, 2017. We believe the report is an important way to communicate information related to the creation of value at DKS to our stakeholders. Taking a long-term perspective, the reports look at the current situation and explain the Company's growth strategies in an easily understood manner. As we move into the first year of the Reiwa era in Japan, which envisions opening the door to "beautiful harmony," we are renewing our efforts to provide a clear and complete introduction of the Company.

DKS celebrated the 110th anniversary of the Company's founding in 2019. Since the foundation, the Company's motto has been "contributing to the nation and society through industry." I believe this encapsulates the theme of the Sustainable Development Goals (SDGs) for 2030 adopted by the United Nations at its summit in 2015. Among the 17 SDGs, DKS prioritized five that play to the strengths of the Company. With a focus on achieving these goals, we aim to contribute to the resolution of social issues while achieving sustainable improvements in corporate value.

We believe it is important to produce an integrated report that supports constructive dialogue between the Company and its investors. With the Corporate Governance Code being revised in June 2018, DKS has reconfirmed its position relative to the principles in the revised code and has provided careful explanations of such to its stakeholders. We also note the importance of climate-related financial disclosures, as outlined by the TFCD, as an indicator for chemicals companies. With this in mind, we have included explanations of our initiatives in technology development and the provision of environmentally friendly products.

The DKS Report 2019 comes in the final year of our 5-year management plan. As a key milestone, we have been focused on clearly identifying risks and opportunities distinct to DKS. For example, our business model adds value to consumers by bringing in new customers through the Company's full-fledged entry into the life sciences business. Our next 5-year management plan, dubbed "FELIZ 115," will begin in the fiscal year beginning April 1, 2020. With the goal of instilling happiness (feliz means happy in Spanish) in the management of our business, the new plan should be completed by December 2019.

We look forward to the feedback from our stakeholders that will allow us to produce even more substantial and meaningful reports in the years ahead.

SAKAMOTO Takashi
Chairman, CEO
September 2019

Editing

Launched at the same time as our 5-year management plan, the Company's integrated report now has reached its fourth issuance.

In recognition of the fact that companies can no longer expect to last long if they are not in harmony with society, we have adopted the Uni-Top strategy, which focuses on the Company's innovative technologies to resolve environmental and social issues. Amid growing calls for enhanced disclosure, including relative to non-financial data, we have focused on making this report readily available not only outside the Company but also inside the Company so that it can be used to share information and promote further understanding.

With a new team under a new system, we took a different perspective in the production and editing of this year's report. First, we identified important risks and opportunities based on management strategies in line with a business model centered on value creation. We then sought to devise a clear and consistent story reflecting the DKS vision on the important issues supporting its business and corporate activities. At the same time, we sought through cooperation with the production company to improve the report from a visual perspective, making it easier to read.

We would like to take this opportunity to express our gratitude to all the parties concerned for their cooperation in the editing. We also welcome the frank opinions from readers as we work toward the issue for the next fiscal year.

Public & Investor Relations Department

DKS Co. Ltd.

5 Ogawara-cho, Kisshoin, Minami-ku, Kyoto 601-8391, Japan
TEL: +81 75 323 5911 FAX: +81 75 326 7356
https://www.dks-web.co.jp/english/index.html

Published: October 2019
Printed in Japan