DKS Report 2024

DKS Co. Ltd.

Contents

DKS Report 2024 Editorial Policy

In 2016, the DKS Group began to publish its integrated 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*), which became part of the Value Reporting Foundation in a June 2021 merger.

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' 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.

* In June 2022, IIRC was integrated into ISSB, the IFRS foundation.

Organizations Covered by this Report

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

Period Covered by this Report

In principle, this Report contains our activities and data during fiscal 2023 (from April 1, 2023, to March 31, 2024).

Reference Guidelines

International Integrated Reporting Framework by the IFRS Foundation, "Guidance for Collaborative Value Creation 2.0" by the Ministry of Economy, Trade and Industry, "Environmental Reporting Guideline 2018" 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

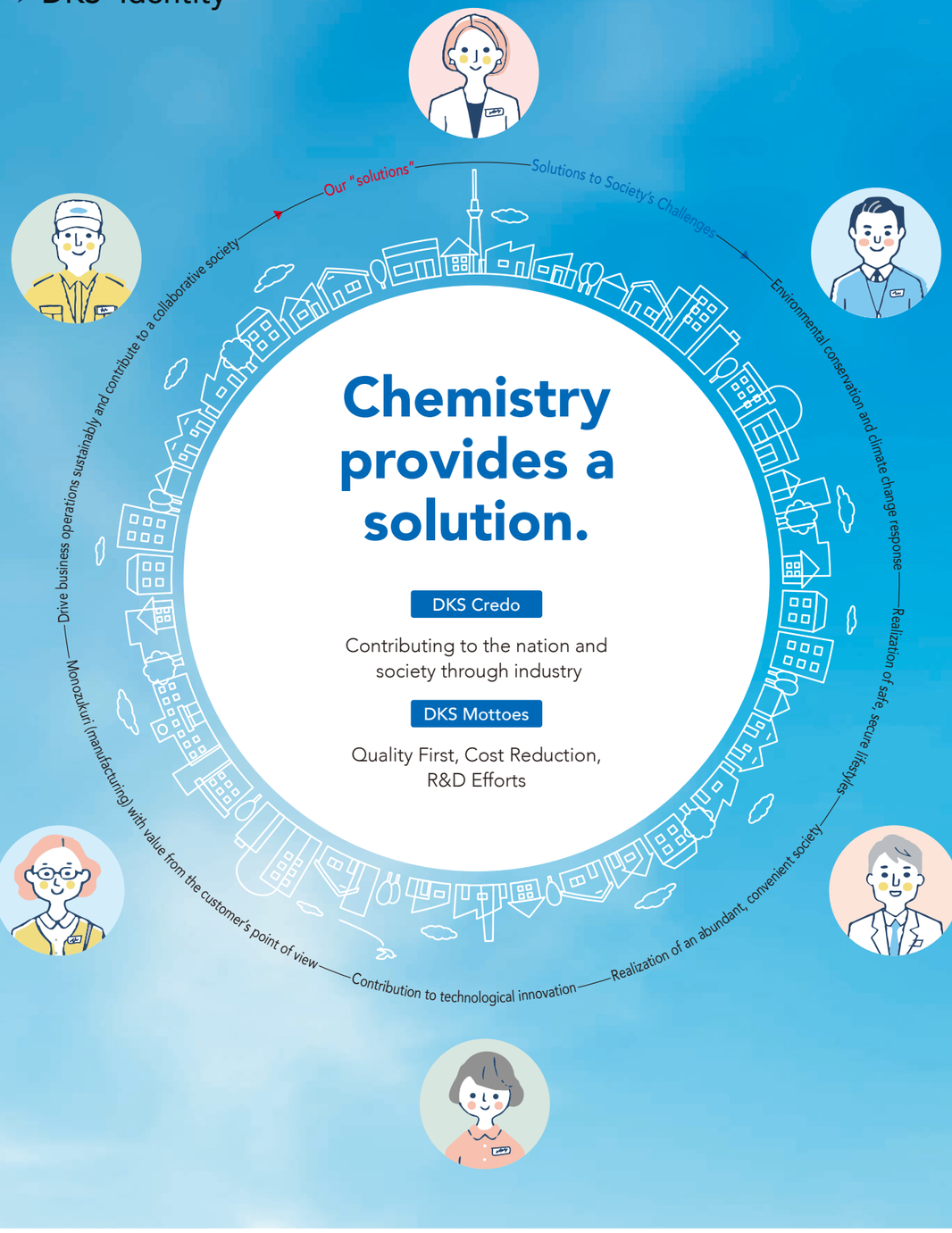
ESG Data Book

Initiatives for Sustainable Growth - Securing Safety 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.

DKS' Identity



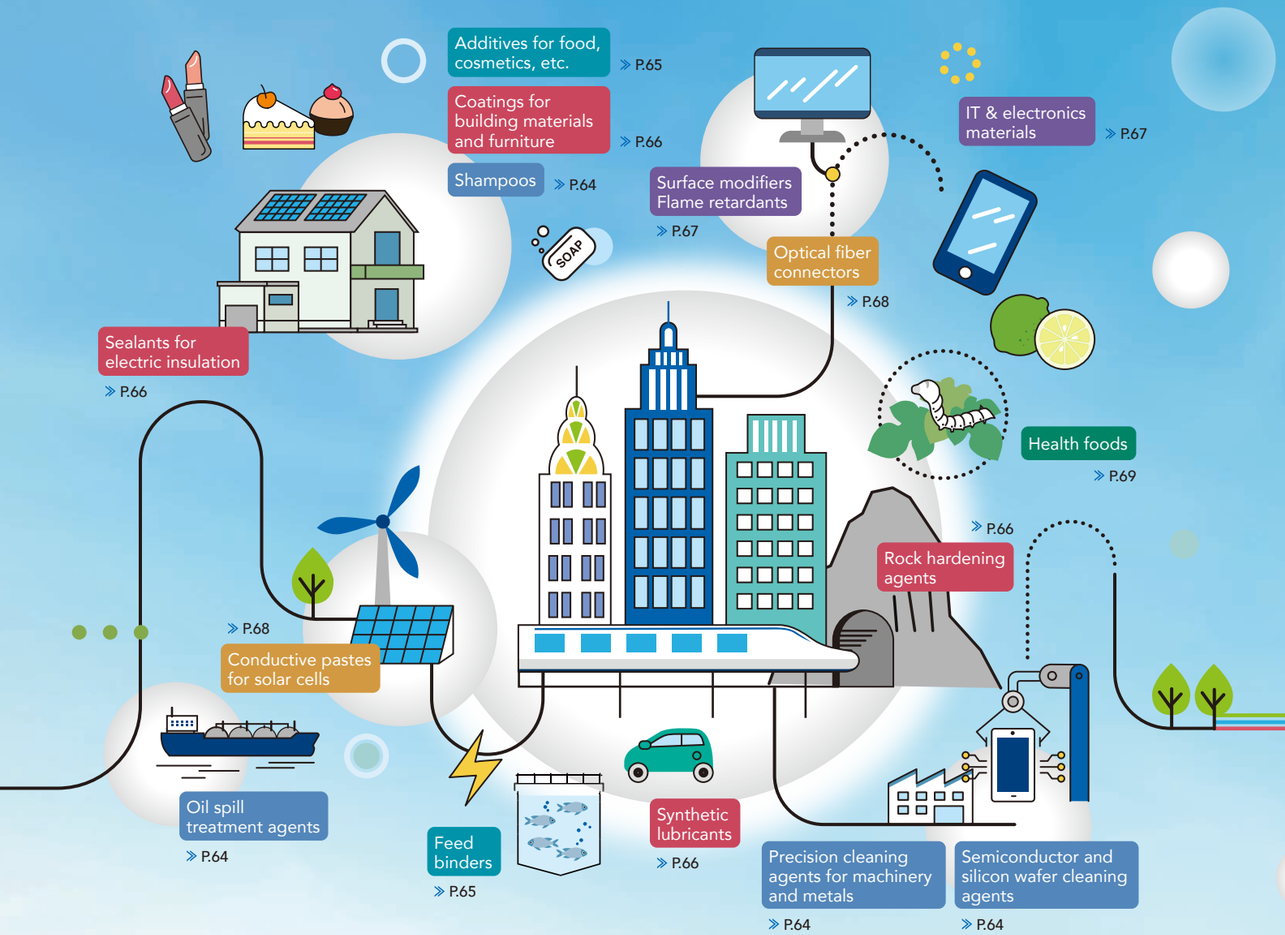
DKS Group Logo

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

DKS' Raison D'etre and Vision for 2030

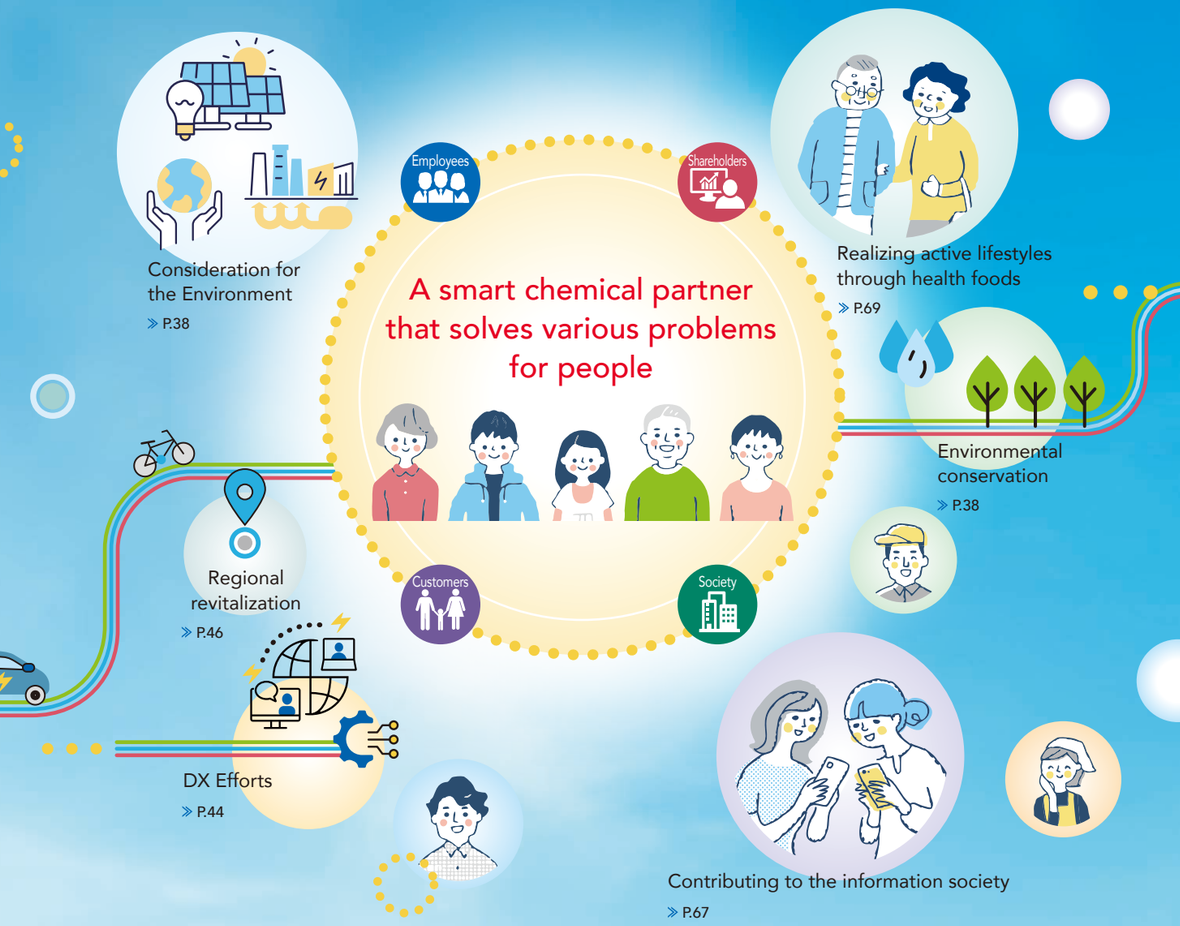
DKS Group Products Around Us

DKS Group products support a variety of other products used in our daily lives. Here are some examples found in society and our living environment.



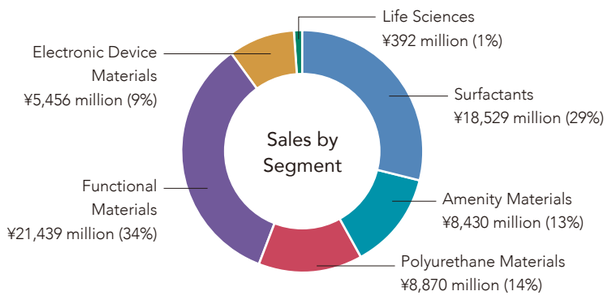
Vision for 2030

In the year 2030, Japan will be facing social challenges from major impacts to employment, health care, and social welfare from a shrinking workforce due to an aging and declining population. Environmental issues such as global warming, marine debris, biodiversity loss, and climate change are also important issues for companies to address. The DKS Group aims to use the power of chemistry to be a smart chemical partner solving various problems people face.



Six Core Business Segments

Net sales for the fiscal year ended March 31, 2024 ¥63.1 billion



Surfactants » P.64

We have been providing highly functional surfactants since the Company's founding in 1909.

Amenity Materials » P.65

We provide materials and peripheral application technologies necessary for a comfortable living environment.

Polyurethane Materials » P.66

We provide industrial materials and polyurethane raw materials, for example, paints, adhesives, civil engineering and construction materials, and electric insulating materials.

Functional Materials » P.67

We provide products such as flame retardants, radcure resins, and waterborne polyurethanes for applications in home appliances and daily necessities.

Electronic Device Materials » P.68

We provide ceramic materials and conductive pastes for applications in home appliances and electronics components.

Life Sciences » P.69

We provide naturally derived health foods and technologies for extraction, concentration, and powdering of natural products.

Value Creation Process of the DKS Group

Based on its technologies and trust accumulated over the past 115 years, the DKS Group applies originality and imagination to limited resources in delivering materials that enrich our way of life.

DKS Credo ▶ Contributing to the nation and society through industry

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

Inputs

Fiscal year ended March 31, 2024

Financial capital
Net assets: ¥41,297 million
Interest-bearing debt: ¥32,797 million

Manufactured capital
Manufacturing bases: 14 (including 4 overseas)

Intellectual capital
Patents held: 992
(of which held overseas: 542)

Human capital
Employees (consolidated): 1,111
(Ratio of female employees: 21.7%
Overseas employees: 201)
Employment ratio for people with disabilities: 3.12%

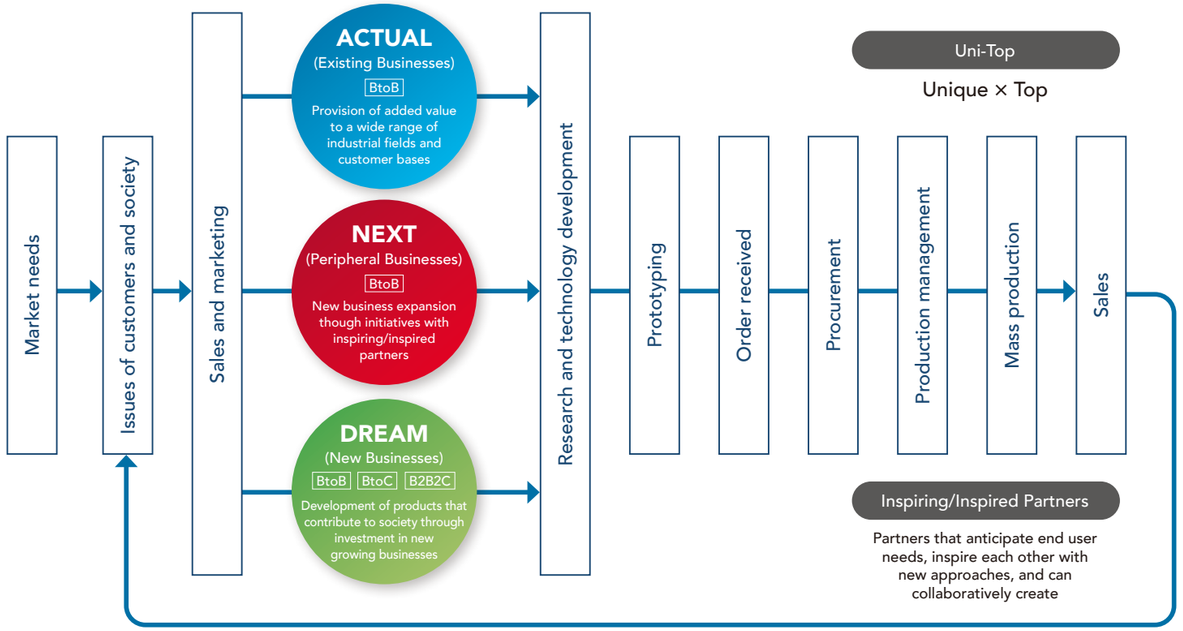
Social and Relationship capital
Inspiring/Inspired Partners (specific business partners with whom DKS can keep a mutually-inspiring relationship)
Cooperation with local governments & universities

Natural capital
Energy consumption: 20,700 kL/year
Raw materials used: Petroleum, coal, ore minerals, wood, plants, biological materials

Business Model

Uni-Top strategy

Aim for the top through uniqueness, without pursuing scale
— A company that is chosen by customers for its comprehensive proposal capabilities, including its technologies, quality and services —



Medium-Term Management Plan "FELIZ 115" » P.21

DKS' Seven Critical Issues of Importance (management foundation)

- Research and Development » P.28
- Human Resource Management » P.34
- Consideration for the Environment » P.38
- Regional Society Contributions » P.46
- DX Efforts » P.44
- Organizational Resilience » P.48
- Tackling NEXT and DREAM Businesses » P.69

ESG-based management initiatives

- **E**: Development and production of environmentally friendly products, 100-million mulberry tree planting campaign
- **S**: Appointment of female officers, Work-style reform
- **G**: Establishment of an Advisory Board, Promotion of information disclosure

Outputs

Six core business segments

- Surfactants » P.64
- Amenity Materials » P.65
- Polyurethane Materials » P.66
- Functional Materials » P.67
- Electronic Device Materials » P.68
- Life Sciences » P.69

Outcomes

Fiscal year ended March 31, 2024

Financial capital
Net assets: ¥94,537 million
Dividend per Share: ¥70
Free Cash Flows: ¥5,083 million
Total Shareholder Return for the Past 10 Years: 168.9%

Manufactured capital
Yokkaichi Chemical Co., Ltd.: expanded plant facilities
Capital expenditures: ¥2,724 million

Intellectual capital
Number of patent applications: 88 (of which held overseas: 41)
R&D expenses: ¥3,170 million

Human capital
Ratio of females in managerial positions: 11.6%
Retention ratio of employees with disabilities: 81.8%
Percentage of paid leave used: 74.6%
Selected as a Health & Productivity Stock for the fifth consecutive year

Social and Relationship capital
Regional revitalization, local community revitalization

Natural capital
Contributions to a recycling-oriented society (CN2050)
Energy reduction rate: 5.9%
GHG emissions: 39,900 tons (reduction of 3,100 tons)
Generated waste amount: 14,258 tons (reduction of 993 tons)

Explanation of the Value Creation Process

1 Business Model

DKS strives to be a company praised for its Uni-Top strategy: providing unique products that do not pursue scale. Our business operations are based on a value-chain cycle wherein understanding customer and market needs leads to marketing strategies that leverage the Company's strengths, which then lead to the development of products (prototypes, generating orders) grounded in our R&D prowess. This leads to efficient procurement to facilitate mass production, leading to appropriate production and management, which in turn leads to sales activities with strict adherence to delivery deadlines, which then leads to further understanding of market needs.

We have developed products with added value and close alignment with customer needs by leveraging expertise from our diverse technologies (see p.74), our transactions in a broad spectrum of industrial fields, and our ability to combine rich lineups of product groups that number in the thousands.

Our existing businesses (ACTUAL) encompass a broad B-to-B customer platform, while our peripheral businesses (NEXT) utilize R&D for specific customers, in addition to specialized production plants. In our relationships with inspiring/inspired partners in particular, we are pursuing development with emphasis on relationships where we anticipate end user needs, inspire each other with new approaches and can collaboratively create.

Furthermore, with regard to new businesses (DREAM) that are our medium- to long-term growth areas, we will continue to invest in new growth businesses, such as in life sciences, and pursue product development that enhances QOL and contributes to society in ways that help solve issues such as the aging population and environmental conservation.

2 Inputs

The following is an overview of the various types of capital that support DKS' business.

- **Financial capital:** Net assets as of the end of fiscal 2023 exceeded ¥41.2 billion. While maintaining a sound financial footing resting on a net D/E ratio of 0.5, we respond to future risks and opportunities from environmental changes (see p.8), and emphasize capital efficiency, including utilizing interest-bearing debt, that constantly keeps ROIC above WACC.
- **Manufactured capital:** With 14 manufacturing bases inside and outside Japan, we are leveraging our 115 years of technology and experience to manufacture products of value. Furthermore, with regard to capital expenditures, we have stepped up facility upgrades and growth investments since the fiscal year ended March 2015. In the 5 years preceding the end of March 2024, we have implemented cumulative capital expenditures of ¥18,400 million, with total depreciation surpassing ¥2,700 million (see p.22).
- **Intellectual capital:** Utilizing the range of expertise accumulated since our founding, and with over 1,000 patents held, we go beyond simply providing materials through our diverse product lineup. DKS has technological capabilities that allow us to customize the function and performance of products in line with customer requirements and to make proposals based on the ideal product combination.
- **Human capital:** Human capital is the most important business resource for DKS, and, based on the idea of valuing people, we have increased our consolidated workforce by 11%, mainly in Japan, over the past 10 years (see p.83). In order to meet increasingly diverse social needs, we aim to maintain talented human resources and diversity, and we strive to improve our human capital.
- **Social and Relationship capital:** We emphasize the improvement of our information gathering and R&D capabilities through trusting relationships built up over many years with our agencies and inspiring/inspired partners, as well as through collaboration with local governments and universities. We also aim to increase social recognition and establish our DKS brand through appropriate supply chain management and public relations activities.
- **Natural capital:** As a chemical manufacturer, we consume a variety of natural raw materials. We have devised creative approaches to using limited global resources efficiently and to contributing to a recycling-oriented economy. Through these efforts, and through continuous improvements to energy consumption and waste product management, we strive for environmental conservation and biodiversity preservation.

3 Outputs

While the products and services provided by DKS to society are quite diverse, they can be grouped into six core business segments: Surfactants, Amenity Materials, Polyurethane Materials, Functional Materials, Electronic Device Materials, and the Life Sciences.

Surfactants, a core business DKS has developed for more than 100 years, are used in a wide variety of fields and account for about 29% of consolidated net sales. The Amenity Materials business provides materials and peripheral technologies necessary for a comfortable living environment, while Polyurethane Materials business provides industrial materials such as paints, adhesives, civil engineering and construction materials, and electrical insulation materials, as well as raw materials for polyurethane. Each of these businesses accounts for about 13 to 14% of consolidated net sales. The Functional Materials business provides flame retardants, antistatic agents, lubricants, antioxidants, and radiation-curable monomers and oligomers for plastic materials, which are indispensable in enhancing the functionality of rubber and plastics used in PCs, smartphones, home appliances, and housing. Over the past 10 years, this business has almost doubled in growth, accounting for over 30% of consolidated sales. The Electronic Devices business, in response to the IT society, develops and manufactures ion-conductive polymers, ionic liquids, ceramic materials, lithium-ion battery materials, and conductive pastes for solar cells (For details on each business, see p.64-69.).

Uni-Top strategy

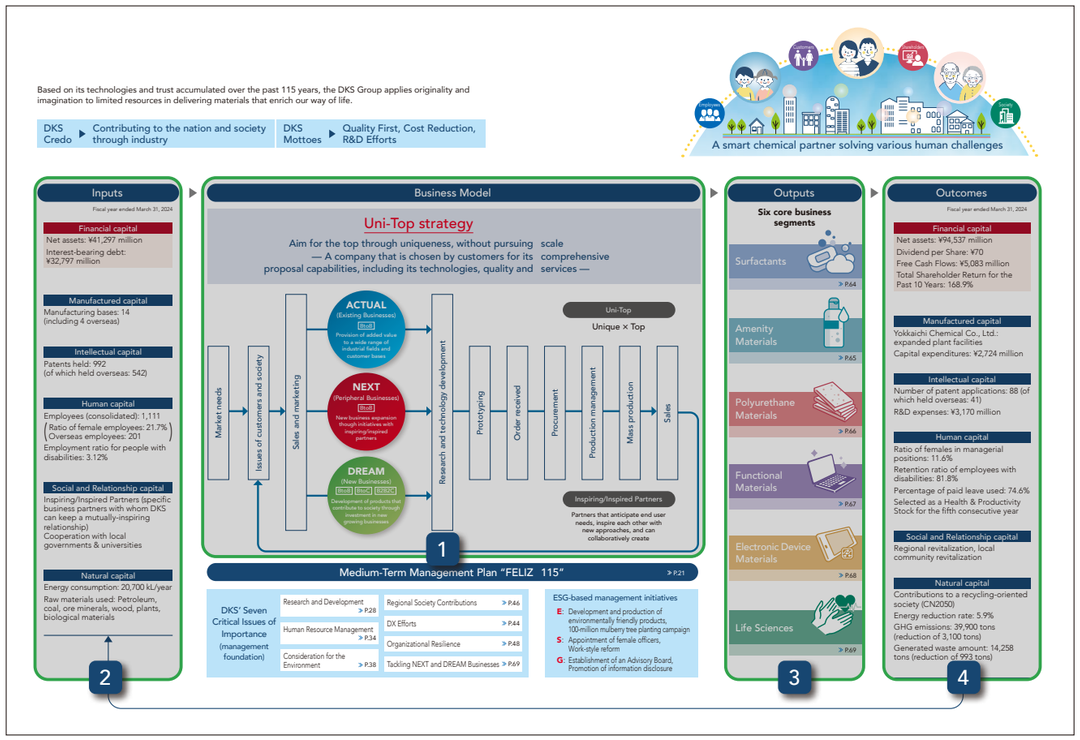
Unique × Top

- New value creation
- Sustainable technologies
- Stable quality
- Customer-centric approach
- On-trend products and services

Aim for the top through uniqueness, without pursuing scale

— A company that is chosen by customers for its comprehensive proposal capabilities, including its technologies, quality and services —

- Developing new products and processes from unique perspectives and providing new value to markets
- Adopting environmentally friendly, sustainable technologies and providing products that aim to achieve harmony between society and environment in the long run
- Maintaining high quality standards and providing reliable, high performance products
- Identifying customer issues and offering solutions to resolve them
- Providing pioneering, innovative products and services that anticipate future industry trends



4 Outcomes

The paragraphs before outline our primary value creation and returns on capital through business operations and outputs in the year ended March 31, 2024. We aim to create more value for our four stakeholders going toward 2030.

- **Financial capital:** We are targeting total assets and net sales of ¥100.0 billion, with plans for aggressive growth investments while maintaining the balance of capital and debt. Although our long-term annual TSR rate is in the double-digits, we aim to contribute to SDG 9 by leveraging future investments and technological innovation, building resilient infrastructure and facilitating sustainable industrialization, thereby boosting returns on financial capital.
- **Manufactured capital:** Although our sales volume for the fiscal year ended March 31, 2024 has plateaued at ¥2.7 billion, we will continue to expand new production capacity to achieve growth of ¥12.0 billion over five years, as planned under "FELIZ 115." In addition, SDG 12 is particularly important for a chemical manufacturer. By enhancing our manufactured capital, we aim for the efficient use and sustainable management of natural resources by reducing, recycling, and reusing waste.
- **Intellectual capital:** From the viewpoint of effective utilization and proper management of patents, the number of patents held at the end of the period slightly decreased, but the number of new registrations during the period remained high at 88 (see p.27). In our vision for 2030, we announced as part of our medium-term management plan "FELIZ 115" our goal of becoming a "technology developer pursuing progress and innovation." Through this, we will strive to boost our ratio of R&D spending to net sales to over 5%, so that we can deliver products and services with new value. In the Life Sciences business in particular, we will support economic development and the good health and well-being of people in order to contribute to expanding the technological innovation cited in SDGs 3 and 9.
- **Human capital:** Based on the plans laid out in "FELIZ 115," we will adopt a performance evaluation system that rewards contributions to the Company as we continue employee happiness-based management in order to help boost employee enthusiasm and satisfaction, thereby enhancing human capital and increasing corporate value (SDG 3). Additionally, as an outcome of efforts toward human assets, we will further promote diversity and emphasize our employees' health and higher satisfaction rates. (see p.34-37).
- **Social and Relationship capital:** We will strive for regional revitalization and local community revitalization, which are important social issues in Japan, and we would like to achieve collaborative value creation through strong ties with municipalities. Within this effort, Sericulture Innovation (see p.46) is one important activity, and we expect the establishment of effective public-private-civic partnerships will contribute to improving social value (SDGs 8 and 17).
- **Natural capital:** Responding to the 2050 carbon neutral goal (CN2050) and reducing energy consumption are urgent challenges. In addition to promoting the reduction of GHG emissions and waste generation, the DKS Group will implement the Life Science business, as well as Sericulture Innovation, with initiatives in cooperation with local governments such as mulberry tree planting and the effective use of mulberry trees and silkworms. Through these initiatives, we promote environmental conservation and CO_2 reductions, contributing to environmental and energy-related issues (SDGs 7 and 13).

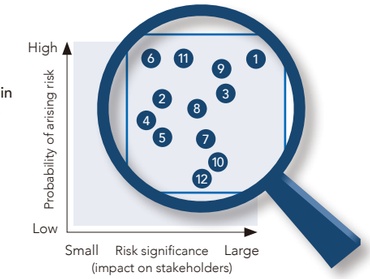
Risks and Opportunities

Although a risk event could damage the broad value of a company, risk might also lead to opportunities. While steadfastly avoiding and mitigating risks, DKS also identifies risks considered to be material and implements initiatives to transform them into opportunities.

Identifying Significant Risks

1	Confirmation of risks recognized in the organizational risk management system
2	Identification of risks that should be recognized at the six 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 material issues in the integrated annual report
5	Analysis of impact and response to those risks when they occur

Prioritization of the 1 – 12 significant risks in the table below



Significant risks	Impacts from risks/Impacts on stakeholders	Responding to risks	Opportunities
1 Raw material price fluctuations (primarily naphtha)	• Profitability changed by the rate of cost fluctuations • Price negotiations necessary to maintain and improve profit margin • (Sales) price negotiations Decline in market share, lost ground due to price negotiations • Increased procurement costs due to the introduction of a carbon tax on fuel Employees Shareholders Customers	• Survey trends of raw material and market prices • Survey trends of other companies • Gather information from customers • Implement prompt price revisions (securing profit) • Introduce pricing formula linked to raw material prices • Coordinate with dealers, suppliers, and customers	• Cost reduction • Gradual decrease in costs • Optimization of inventory levels • Pass on prices if self-help efforts are insufficient • Transitioning to non-fossil and renewable raw materials » P.28
2 Reliance primarily on external procurement for raw materials	• Easily impacted by raw material and market prices • BCP (Business Continuity Plan) measures become necessary • Inventory surpluses and shortages • Restrictions on procurement, use, and manufacturing of raw materials due to changes in regulations or social conditions in each country Employees Customers	• Diversify raw material procurement sources • Manufacturing systematically and procuring raw materials accordingly • Coordinate with suppliers • Promote business continuity plan (BCP) measures	• Reduce costs through procurement of low-cost raw materials • Diversify raw material procurement sources • Strengthen BCP measures » P.51 • Strengthen supply chain management » P.46
3 Environmental and human rights risks	• Restriction of business activities due to insufficient or delayed responses to environmental and human rights issues • Increase in costs due to introduction of carbon pricing • Growing demand for renewable energy Employees Shareholders Customers Society	• Assessment of impact of climate change on business and planning of countermeasures (scenario analysis) • Roll-out of initiatives based on green transformation (GX) strategy • Promotion of initiatives based on The Ten Principles of the UN Global Compact • Promoting supply chain engagement	• Expand initiatives with awareness of society-wide sustainability (strategic GX targets) » P.38 • Develop products that contribute to the environment and expand their sales » P.28 • Respect the basic human rights, diversity, personalities, and individuality of colleagues working in the Company, and create a rewarding workplace free of discrimination and harassment » P.42
4 Large number of customers	• Time taken and costs incurred to respond to each customer • Difficulty in narrowing in on target customers Employees Customers	• Select and focus on themes • Deepen market strategies (through "FELIZ 115") including revenue management	• Having customers in various fields makes it easier to obtain information from each industry » P.64-69 • Prioritize important themes » P.64-69 • Deepen relationships with inspiring/inspired partners » P.64-69
5 Product composition consists of a large variety of small-lot products	• Declining cost competitiveness due to rising production costs • Time required for response from each department (research, sales, and handling of complaints) due to the wide variety of products Employees Shareholders Customers	• Revise product composition under "FELIZ 115" • Thorough profit management for each product • Raise prices for products with a smaller contribution to earnings • Boost productivity by discontinuing products	• Possessing a lineup of products that can be used in each field enables a variety of solutions to be proposed » P.74 • Range of options for product increases » P.64-69 • Product composition that takes profit performance into account
6 Intensified competition due to growth in emerging nations (Growth opportunities are hard to seize on a global scale)	• Replacement by low-cost products from other companies • Risks of losing competitiveness in domestic and overseas markets due the improving technological level and productivity of neighboring countries • Concerns about patent infringements overseas Employees Shareholders Customers	• Promote a differentiation strategy through solution proposals, cost reductions, Japanese quality and customization • Open innovation with companies, universities, etc. • Strengthen the IP Department; strengthen IP asset management (investigate IP asset rights of other asset holders)	• Cultivate close relationships with customers and accelerating the shift towards high-profit products through solution proposals, product customization, etc. • Uni-top strategy (pursue uniqueness, not scale) » P.64-69 • Intellectual property strategies » P.31
7 Strengthened laws and regulations	• Cost and time impacts from switching to substitute products in order to comply with regulations Employees Customers Society	• Gather information on legal revisions • Strengthen internal oversight/checking systems • Reinforcement of the Company's compliance	• Improve market share through legally compliant product development » P.48 • Improve trust through rigorous compliance practices » P.52 • Promote the development and supply of environmentally and user-friendly products » P.28
8 Stricter quality controls	• Loss of trust from customers and society due to negligent quality control • Particular know-how needed to enter fields that require a higher level of quality control, such as energy, automobiles, pharmaceuticals, and food Employees Shareholders Customers Society	• Avoid liability risks through PL insurance • Ensuring food safety through FSSC 22000 certification • Meeting customer-specific requirements through core tool operations • Strengthening quality control systems	• Expand business opportunities by leverage of certification » P.50 • Provide product value to niche areas • Improve the level of trust from customers and deliver the feeling of security and assurance » P.48
9 Aging facilities/equipment	• Manufacturing trouble and quality issues arising from aging equipment • Rising rate of industrial accidents • Decline of productivity Employees Shareholders Customers Society	• Consider structural reforms through digital transformation (DX) • Promote production system enhancements and improved production efficiency by making the Kasumi Plant a mother plant	• An opportunity to make business continuity decisions, enabling the beginning of a portfolio review • Visualize aging factories with digital technology and improve profitability » P.44 • Perform regular repairs utilizing data and strengthen management of preventive maintenance » P.44
10 IT security	• Loss of trust due to leakage of internal information • Interrupted business activity from unauthorized external access • Business delays due to IT system failure • Pressure on earnings due to rising IT system operating costs Employees Shareholders Customers Society	• Implement security literacy education for employees • Create process for responding to serious incidents, such as unauthorized access • Confirm costs through IT asset management	• Establish digital infrastructure based on digital road map » P.44 • Improve efficiency and profitability by promoting DX » P.44 • Establish a security system trusted by customers » P.51 • Utilize new technology, such as generative AI » P.44
11 Impact on economic activity due to the spread of infectious diseases	• Interrupted business activity from employees contracting disease • Disrupted supply chain from suppliers/distributors contracting disease • Impacts on performance from delays/interruptions in product supply • Development delays due to reduced communication with customers Employees Shareholders Customers Society	• Strengthen measures based on BCP • Decentralize and review manufacturing and distribution bases, and decentralize inventory holding	• Promote work-style reform through working from home and telework » P.34 • Reduce fixed costs by consolidating and reducing bases • Increase operational efficiency by utilizing online meetings
12 Employment diversification; changes in the human resources market	• Intensifying competition for securing talented human resources due to a shrinking workforce • Increased turnover due to job mobility • Diversification of values with increase in number of foreign workers Employees	• Strengthen coordination with various associations and educational institutions to help secure human resources • Implement a human resources training program • Promote Health and Productivity Management • Promote diversity and respect human rights • Promote work-style reform (develop systems for working from home, child-care leave, reemployment after life events, etc.) • Accommodate hiring of senior workers and extension of retirement	• System reforms in response to societal changes » P.34 • Review and implement personnel system reforms » P.34 • Promote establishment of comfortable work environments » P.34 • Strengthen Health and Productivity Management » P.34 • Advancing human capital management » P.34

For reference, see our Risk Management: https://www.dks-web.co.jp/english/sustainability/governance/risk-management/

Material Issues

ESG Basic Policy

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 levels of comfort. To do these things, we believe that "chemistry provides a solution" and shall contribute to the establishment of a sustainable society.

Important Issue Identification Process

At DKS, we are identifying material issues, tackling important issues from a long-term perspective in management. Based on existing social issues and our corporate philosophy, we have identified seven important themes from the two perspectives of their significance to DKS and our stakeholders. At the same time, we have specified the material issues of challenges toward addressing these themes. In the identification of those material issues, we have referenced the UN's Sustainable Development Goals (SDGs), ISO 26000, and other global guidelines, given the important demands the international society places on DKS as we work to advance business globally.

Step 1 Identify the importance for the Company
Step 2 Identify the importance for stakeholders
Step 3 Draw a material issues map
Step 4 Identify the material issues

Important Issue Identification Aims

Issues for society

- Environmental issues
  Climate change, energy depletion, biodiversity, etc.
- Social issues
  Changes in social structure due to population growth, increased security risks due to technological advances and the advent of the information society, public health, food crises, elimination of disparities, etc.

Corporate Philosophy and Management Policy

- Corporate mission stated in the founding spirit and the Company Credo
- Happiness-based management

Priority Themes & Focuses of SDGs

Following the principles of our Company Credo and Company Mottoes, and taking into consideration the technologies and various experiences we have amassed over 115 years as a chemical manufacturer, we have taken the SDGs (17 goals and 169 targets) and linked them with specific themes related to contributions that DKS can make to solving social issues. From this, we identified five SDGs to which we will dedicate particular effort.

Five focus SDGs determined from discussions in 2017:

3: Health and Productivity Management, an aging society with a declining birthrate
7: Renewable energy, environmentally conscious raw materials
9: Development and provision of industrial materials for building social infrastructure
12: Environmental pollution, natural resource depletion
17: Inspiring/Inspired Partners

● Employees ● Shareholders ● Customers ● Society

	Priority themes	Material Issues for DKS	Relevant stakeholders	DKS initiatives	KPI	Recent performance
1	Research and Development ≫P.28	• Customer-oriented R&D framework aligned with Uni-Top strategies	● ●	• Establishment of research centers for each customer and Advisory Committee ≫P.28 • Strengthen initiatives with inspiring/inspired partners ≫P.28 • Promote customer-oriented R&D ≫P.28	• R&D expenses to sales ratio of 5.0% or higher	• R&D expenses to sales ratio of 5.0%
		• Developing products that contribute to the environment	● ●	• Promote product development with lower environmental impacts, such as additives for biodegradable plastics ≫P.29		
		• Promoting an intellectual property strategy	● ●	• Prompt applications for IP rights and aggressive pursuit of quick IP rights acquisition ≫P.31		
2	Human Resource Management ≫P.34	• Diversity (Diversity and Inclusion)	● ●	• Provide workplaces and opportunities for the active participation of female employees ≫P.34 • Appoint female officers and hire overseas employees ≫P.34 • Work-style reforms ≫P.35 • Implement personnel system reforms with an emphasis on outcomes ≫P.35 • Employment initiatives for people with disabilities ≫P.35 • Promotion of diversity and inclusion ≫P.58	• Female manager ratio of 10% or higher	• Female manager ratio of 11.6%
		• Human resource development	●	• Implementation of a DX human resource development program ≫P.45 • Secure and train global human resources ≫P.34		
		• Empowering profitability	●	• Strategic staffing ≫P.34 • Streamline productivity improvement ≫P.34 • Performance-based personnel evaluation system ≫P.34		
		• Health and Productivity Management initiatives	● ●	• Improve health awareness by adopting a health information app ≫P.35 • Efforts to establish exercise habits (DKS Calisthenics) ≫P.36	• Percentage of employees who exceed abdominal girth standards: 25.0% • Percentage of employees over 40 years at risk for or experiencing metabolic syndrome: 22.0% • Reduction of absenteeism ratio to 2.0% or less • Improvement of work engagement score of 51 (all targets for FY2024)	• Percentage of employees who exceed abdominal girth standards: 29.1% • Percentage of employees over 40 years at risk for or experiencing metabolic syndrome: 26.8% • Percentage of absenteeism: 1.1% • Standard score of work engagement: 50.8
3	Consideration for the Environment ≫P.38	• Responding to decarbonization and reducing environmental burdens	● ●	• Green transformation (GX) initiatives ≫P.38 • Expand use of renewable energy ≫P.41 • Develop products that contribute to the environment and expand their sales ≫P.29 • Promote modal shift ≫P.39 • Study switch to non-petrochemical and renewable raw materials ≫P.41	• Reduce greenhouse gas (GHG) emissions (Scope 1, Scope 2) for the entire DKS Group in Japan by 30% compared to FY2013 (FY2030 target) • Modal shift rate of 40% per the Eco Rail Mark criteria (FY2030 target)	• 23.1% reduction in GHG emissions (compared to FY2013)
		• Contributing to a recycling-oriented society	●	• Contribution to a recycling-oriented society through responsible care activities ≫P.38 • Traceability systems (review inventory volume, product loss rates, product profit margins)	• 10% reduction in waste generation per unit compared to FY2020 (FY2030 target) • Final waste disposal rate: 0.1% or less (FY2030 target)	• 19.5% reduction in waste generation per unit (compared to FY2020) • Final waste disposal rate: 2.1%
		• Appropriate management of chemical substances	●	• Respond to more stringent legal regulations ≫P.49 • Reduce emissions of PRTR Regulation-designated substance ≫P.39		
4	Contributing to a Collaborative Society ≫P.46	• Regional revitalization	●	• Promotion of initiatives with local governments ≫P.46 • Industry-government-academia collaboration ≫P.47 • Initiatives for Sericulture Innovation ≫P.46		
		• Co-prosperity with the supply chain	●	• Switch to renewable resources and natural materials ≫P.41 • Effective use of the peeled skins of sudachi (Japanese citrus) ≫P.47 • Work to improve added value throughout the supply chain from "Tier N" to "Tier N+1" ≫P.47		
5	DX Efforts ≫P.44	• Use and promote digital technology	● ● ●	• Create a digital roadmap to 2030 ≫P.44 • Promote cross-company DX projects ≫P.44 • Acquire DX certification ≫P.44	• Action plan execution based on digital roadmap • Advance company-wide DX project theme • Update DX certification	• Started operation of Integrated Work Management System 60% reduction in overtime hours in the Administrative Headquarters compared to the previous year • Started operation of management information platform Increased operational value by approximately 7,000 hours/year by reducing document preparation time • Implemented generative AI in Quality Assurance and Human Resources Departments • DX certification renewed (April 2024–March 2026)
		• Cybersecurity measures	● ● ●	• Strengthen security measures based on Information Security Policy ≫P.45 • Security literacy education for employees ≫P.45	• Review Information Security Rules and incident response flow • Provide security education to new employees • Conduct targeted attack e-mail training	• Provided security education as part of DX training for new employees • Conducted information security training for all employees every two months via e-learning (covering ID/password management, device management, incident response, etc.) • Implemented targeted attack e-mail training
		• Digital literacy education	● ● ●	• Use digital tools (RPA, workflow, BI tools) ≫P.44 • Acquire specialist skills ≫P.45	• Hold in-house study sessions and developer exchange meetings • Acquire relevant qualifications (Deep Learning for GENERAL (G-Certificate), Deep Learning for ENGINEER (E-Certificate), Fundamental Information Technology Engineer Examination, etc.)	• Number of DX training participants (cumulative total as of end of FY2023: 531) • Acquisition of relevant certifications (E-certified: 2, G-certified: 16) • Revised the guideline for the use of generative AI • Launched in-house communities (GPT Utilization Study Group, BI Tool Developers) • Held digital tool workshops and debriefing sessions to discover approaches for implementing generative AI
6	Organizational Resilience ≫P.48	• Thorough quality assurance system	●	• Continuous improvements through the quality management system ≫P.48 • Food hygiene management initiatives ≫P.50 • Strengthening change management (the Process Change Approval Committee) ≫P.48	• Reduction in complaints, objections, and anomalies	
		• Promoting occupational safety and health	●	• Continuous improvements through occupational safety and health management systems ≫P.43 • Implement hands-on safety education ≫P.43	• Zero occupational accidents (lost time)	
		• Further deepening of corporate governance	● ● ● ●	• Strategies for improving medium- to long-term corporate value ≫P.21 • Improve effectiveness of the Board of Directors and establish an appropriate remuneration scheme ≫P.54 • Strengthening dialogue with shareholders and investors ≫P.61 • Create a governance system in line with ESG strategies ≫P.52	• 10% increase in the number of dialogues compared to last year	
7	Tackling NEXT and DREAM Businesses ≫P.66-67, 69	• Development of the Life Science business	● ● ●	• Initiatives to extend healthy life expectancy ≫P.69 • Establish B-to-C business ≫P.69 • Notification of food products with functional claims ≫P.69 • R&D to improve cognitive function ≫P.69	• Sales of ¥1.5 billion in FY2024	• Sales of ¥390 million in FY2023
		• Development of the NEXT businesses	● ● ●	• Open innovation ≫P.28 • Respond to industry reorganization • Execute M&A that contributes to growth • Support diversification of consumer needs		

Message from the President

Heading into the final fiscal year of FELIZ 115 and towards 2030, we will accelerate research and development and achieve sustainable growth.

Heading into the Final Fiscal Year of Medium-Term Management Plan FELIZ 115

Our financial results for the first half of FY2023, the fourth year under our Medium-Term Management Plan FELIZ 115, were harsh. We posted unprecedented losses in face of recent major changes in our business environment. In the second half, the market recovered, and we continuously revised prices and made companywide cost-cutting efforts. As a result, our financial results for FY2023 showed improvement in profitability despite a slight decline in sales, with net sales of ¥63,118 million (down 3.0% year on year) and operating income of ¥2,077 million (up 75.1% year on year). In particular, growth of radcure resin materials for high-end servers in the Functional Materials segment contributed to the increase in operating income.

From the second half of FY2023, price revision activities became more widespread globally, gradually putting us in a position where we can also gain understanding from our customers; however, given that we are still being impacted by rising raw material costs and a weak yen, we will need to keep up activities going forward. We are also in the process of withdrawing from unprofitable business, accelerating new development, and strengthening segment management. Although profitability improved, a decline in sales volume is an issue that needs to be addressed, and we must develop new products and expand the applications of existing products. Last fiscal year, our price increase activities prevented us from actively pursuing sales activities and so, in FY2024, we intend to increase communication with customers to grasp changes in demand.

Initiatives in anticipation of growing demand

One of the fields we are focusing on under our FELIZ 115 plan is the electronics and information field. Currently, demand is trending up not only for radcure resin materials for high-end servers but also for semiconductor-related cleaning agents and electronic control-related sealing materials. We have already made capital investments in some areas and, during the summer-fall period, a dedicated plant will be completed and we will start sales in earnest. With 6G systems expected to launch by 2030, we anticipate that demand for 6G-related materials will increase when mobile phone base stations move to 6G. The point at which customers switch over to new materials in their products is a golden opportunity for us to propose our technologies and materials. We will work to strengthen relationships with customers, to ensure we can discuss such topics with them, without letting this business opportunity slip by.

The end users of our products have sites in Asia, China, Taiwan and other advanced economies. For example, China is positioned as an important market, partly because many of our customers operate there. We recognize that we need to monitor geopolitical risks such as tensions between China and Russia on the one hand, and Europe, the U.S. and Japan on the other.

Accelerating New Development as a Research and Development-Oriented Company and Strengthening Segment Management

In FY2023, we instructed our sales departments to make at least four new development proposals a year per employee, to accelerate the search for new development themes. We would like employees to look beyond the scope of their own responsibilities and make proposals from as wide a perspective as possible. We want them to put out feelers to universities, national and local governments, distributors and various other partners to find out what is troubling customers and to try to solve social issues. While themes should of course be related to business, they do not need to be directly linked to sales given that the medium- and long-term also needs to be taken into consideration. We have already received more than 200 proposals and are now looking forward to the final report.

We currently have a headquarters structure. Sales activities are conducted by field and research activities are managed by material and by product. We feel that, with a headquarters structure, unlike a business division structure, there is a tendency among headquarters to be self-contained and that this is an issue which needs addressing. To link our materials research to each field and to meet customers' needs, we need cross-functional capabilities, ensuring seamless communication between headquarters. This is segment management. We will develop a structure for cooperation and discussions among production, sales, research and administration departments and pursue development that meets the needs of markets and customers.

There is another reason for adopting segment management. As a company with many types of products, we are facing a different situation in each of our segments and at each of our manufacturing plants. For example, in cases where plant capacity utilization is low, we need to attach importance to volume in our development activities, and in cases where plant capacity utilization is high, it is better to focus on high value-added niche themes. Accordingly, manufacturing, sales and research departments need to decide on and commit to the order of priority for development at segment meetings. Our policy is to consider themes taking into consideration facts such as feasibility at each plant, or the need for the modification or outsourcing, and to maximize profitability for each theme.

Looking ahead to our next Medium-term Management Plan, we are aiming for sales growth of ¥30 billion and so, in addition to increasing the number of research themes, we need to increase the certainty of adoption of our research. The individuals chosen to lead important segment meetings are mainly young employees in their 30s. Our plan is to focus on important segments which especially need to be discussed and gear up for the next Medium-term Management Plan. We will manage segments based on

Message from the President

visualization of the whole picture, including the development schedules of customers and the manpower on the manufacturing, sales and research sides. Through this, we aim to reliably link research themes to business and accelerate new development. We expect DKS will achieve further growth and be able to tap into new market opportunities.

Meanwhile, the horizontal deployment of existing technologies is also an important aspect of research and development. Initiatives with inspired partners also give rise to themes that can be used in different fields and applications. We will anticipate the needs of end users and build a base of partners (customers) so we can inspire each other with new approaches and collaboratively create.

We believe our technologies are in no way inferior to those of other companies in the same industry and we would like our employees to also have confidence in this regard. However, our lack of understanding of the conditions in which customers actually use our technologies and how our technologies are evaluated is an issue that needs to be addressed. We want our research departments to have a sales-oriented approach and to go and ask for customer feedback directly. It is important for researchers to visit customers themselves and get some hints by asking customers about the conditions and facilities our technologies are used in. Depending on the field, researchers may not be given a detailed explanation; however, if they could perform laboratory experiments in conditions that resemble the actual conditions of use, then they will be able to make proposals with greater precision and speed. This would also enable them to immediately get to the cause of any complaint and arrive at a solution.

There was a time when we did not have enough direct communication with customers partly due to the effects of the COVID-19 pandemic; however, we have recently resumed activities in this regard. Such initiatives are also important after sales.

Seeking to Enhance Employee Happiness through Personnel System Reform and Health and Productivity Management

Our approach to our employees is rooted in the belief that “people are our assets and must be nurtured and treasured.” Accordingly, we now refer to employees as “human capital” instead of “human resources.” We consider human capital management to be a priority and are implementing a range of initiatives for the diversification of human capital (diversity) and the development of human capital.

Diversity does not just mean the active participation and career advancement of women. We encourage the active participation and career advancement of diverse human capital, including foreign nationals, persons with disabilities and the elderly, through their assignment to workplaces that draw on their respective characteristics and strengths. Several years ago, we began regularly hiring students who graduated from high schools in Mongolia and they are already working in our Production Headquarters. This year, we also welcomed Vietnamese nationals as new employees.

We have been quick to develop systems such as childcare leave to encourage the active participation and career advancement of women and support is available for both males and female employees, with male employees also entitled to take childcare leave for one month or longer. In terms of our female manager ratio, the government target of 30% is by no means easy for us to reach given that the ratio of female employees to total employees is in the 20% range. Rather than obsessing about numerical targets, we will encourage all our employees regardless of gender to take on challenges and we will adopt systems to ensure that appointments to responsible positions are based on an assessment of individual skill and aptitude.

We recognize calls for greater professionalism in recent years and the need for a system of compensation that reflects ability and results and for the refinement of skills mapping. For example, since the hiring of experts with specific skills from the external labor market may result in a pay gap between internal human capital and external hires, we will urgently develop a skills map that properly evaluates the skills of company employees.

Rebuilding the personnel system and evaluation system

The fact that it has taken too much time to rebuild our performance appraisal and compensation structure due to effects of deterioration in our business results and the extensive personnel reshuffle last year is also a major issue and we resumed our examination of this matter in earnest from FY2023. When new systems are established, they are never 100% perfect from the start. Instead of giving generous allowances for specific circumstances, we intend to win employees over by building a compensation structure that properly rewards individuals who produce results. We were, however, quick to revise housing subsidies and other support for young employees in the greater metropolitan area as part of employees’ welfare benefits. We will finish rebuilding our performance appraisal and compensation structure in FY2024 and will definitely implement it from the next fiscal year.

In FY2023, we overhauled our companywide awards system. Previously, final decisions were made by the Awards Committee; however, to make the selection criteria more transparent, we established the Corporate Value Enhancement Award. All employees watch the presentations

of the entrants and cast votes. There is no preliminary screening, and employees can vote for any of the teams that submitted entries. The representatives of candidate teams have three minutes to present key points and all employees score their presentations on a scale from 1 to 5. The team with the highest total points wins. We also intend to use this award as an opportunity for young employees to make presentations. In addition to this prize, there is also the Three Financial Statements Contribution Award and the President’s Award, which is awarded based on my subjective opinion. The President’s Award can be awarded to a winner of the other awards. We already have a research awards system and a patent awards system but, for all systems including these, we intend to adopt system designs that properly reflect the achievements and contributions of employees.

Aims of health and productivity management

We employed a company doctor the year before our incorporation in 1917 and introduced health checkups for all employees in 1919. We did all this more than 20 years before the government made health checkups mandatory in 1938. This shows how the business owner at that time attached a great deal of importance to the health of employees. In 1941, we established our own health insurance association and developed a system for actively focusing on the health management of employees.

We took the rating for Employee Health Management we were awarded by the Development Bank of Japan (DBJ) in 2017 as an opportunity for the companywide standardization of health management activities. As a result, we now have one of the highest ratings in the industry, being recognized as a Certified Health & Productivity Management Outstanding Organization (White 500) for seven years running and being selected as a Health & Productivity Stock for five years running.

We believe that maintaining and improving the health of our employees is fundamental to employees’ self-fulfillment, and that, by supporting this, a company can also grow together with its employees. While lifestyle-related disease indicators and smoking rates are also important, leaves of absence due to mental health issues are a huge loss for a company. We are taking action to address this issue, including setting a leave of absence rate of 0.20% as a Health and Productivity Management target for FY2024 and establishing a mental health consultation desk that employees can consult about their problems. One cause of problems is poor communication with managers and colleagues. Work styles and the aspirations and values of young people have changed following the COVID-19 pandemic. Time spent alone has increased and there are fewer opportunities to socialize with co-workers who joined the Company at the same time and other colleagues. We believe that, alongside the personnel systems we plan to introduce, it is essential to develop support systems that enable employees to stay in good shape physically and mentally and find fulfillment in their work.

Message from the President

Progress of DX

The digital transformation (DX) of our plants is well underway. While it is important to eliminate waste and increase efficiency through the use of DX, it is human beings who make judgments to use DX and so we have stressed that problems are not solved simply by introducing systems and DX. At our plants, we are also starting to see benefits such as preventive maintenance, remote monitoring with cameras and improvement in progress management; however, there is also the issue of overreliance on systems, which leads to errors during manual operations. Recently, a small leakage occurred during solvent cleaning. The oil barrier prevented any major damage but the use of DX to take care of the matter was suggested at the time. However, fundamental matters such as this should definitely be taken care of by people. We have stressed that DX is an aid and that the basics must not be forgotten.

The digitization of our head office, including development of the DKS Integrated Work Management System and introduction of the *Kaonavi* human capital management system, is also well underway. The recently introduced Management Information Platform offers real-time visibility into management information such as daily and monthly sales and operating income as well as expense and construction cost progress rates and the capacity utilization rate of each plant. We have succeeded in fostering attachment to achieving goals through the visualization of progress on a day-to-day basis via monitors installed in every department across the Company. In addition, executives and representatives from sales, administration and strategy departments share this information at sales status confirmation meetings held on a weekly basis. As a result, we are now in a position to be able to implement a range of countermeasures immediately. This initiative is one example of the successful introduction of DX.

Medium- to Long-Term Scenario and New Medium-Term Management Plan SMART 2030 (Tentative Name) Concept

When we conceptualize our next Medium-term Management Plan, 2030 will be the target year. The Company must continue to grow, generate profit and reward employees and their families. Next comes capital investment and then shareholder returns. Our financial targets are net sales of ¥100 billion, operating income of ¥10 billion and a total asset turnover of 1.0 x.

Currently, electronic materials for high-end servers in the Functional Materials segment are performing well; however, the product cycle is very quick and this field is sensitive to the raw material situation and market conditions. To reduce external impacts, we need to urgently establish multiple business pillars. For this, research and development is, of course, essential.

Under our next five-year plan, we will continue to focus on the information, electronics, environment and energy and life sciences fields. In Phase 1, the first half of the plan, we will make our existing facilities fully operational and in Phase 2, the second half of the plan, we will use capital investment and M&A to achieve growth and make a further leap forward. We will generate a further ¥30 billion in sales and achieve our sales target. Employees who have contributed will be rewarded with appropriate compensation and will work for us with greater job satisfaction, leading to further corporate growth. We intend to realize a corporate culture that gives rise to such a positive cycle.

In addition, we will fulfill our responsibilities as a company listed on the TSE's Prime Market by also attaching importance to society's ESG concerns. On the environmental (E) front, we aim to reduce our greenhouse gas emissions by 30% by FY2030, compared to FY2013. In addition to energy conservation and renewable energy, we will consider measures such as self-generation through solar panels; however, increased production volume will lead to increased greenhouse gas emissions. We have been actively focusing on energy conservation measures for a some time in our production activities and further reduction will require new ideas and expertise. Through a range of measures, including supply chain collaboration to increase the efficiency of logistics and transportation, etc., we will work to conserve energy. Under our next Medium-term Management Plan, we plan to accelerate sustainability initiatives by adopting a cross-functional organizational structure.

Sustainability initiatives are also business opportunities. We will contribute to the environment and the needs of society as a whole through the sale of environmentally friendly products such as environmentally friendly coatings, sucrose fatty acid ester, cellulose nanofiber and other naturally derived raw materials.

Playing a central role in the conceptualization of our next Medium-term Management Plan are our young employees, currently in their 20s and 30s. We have been holding meetings that bring together young employees to encourage them to seriously reflect on what needs to be done to ensure the Company's sustainable development in the future. Through frank discussions between executives and young employees, we are able to gain a quick glimpse of what our young employees really think. Young employees watch managers and the Company from a cool, calm perspective and they sometimes have sudden realizations. We will properly support our young employees through new training programs.

To Our Valued Stakeholders

Our business model (please refer to pages 4 and 5) stresses our three strengths, namely technological capability backed by a long history, combinations of diverse product groups, and broad customer base. These are springboards for us to realize growth and are elements we should continue to improve. We consider ourselves to be a company based on technology and we propose solutions to problems by mobilizing this technological capability and combining diverse product groups. To take advantage of collaboration with other companies and cooperation with universities and national and local governments and promote open innovation as well as to meet customer needs, we will strengthen relationships through close communication.

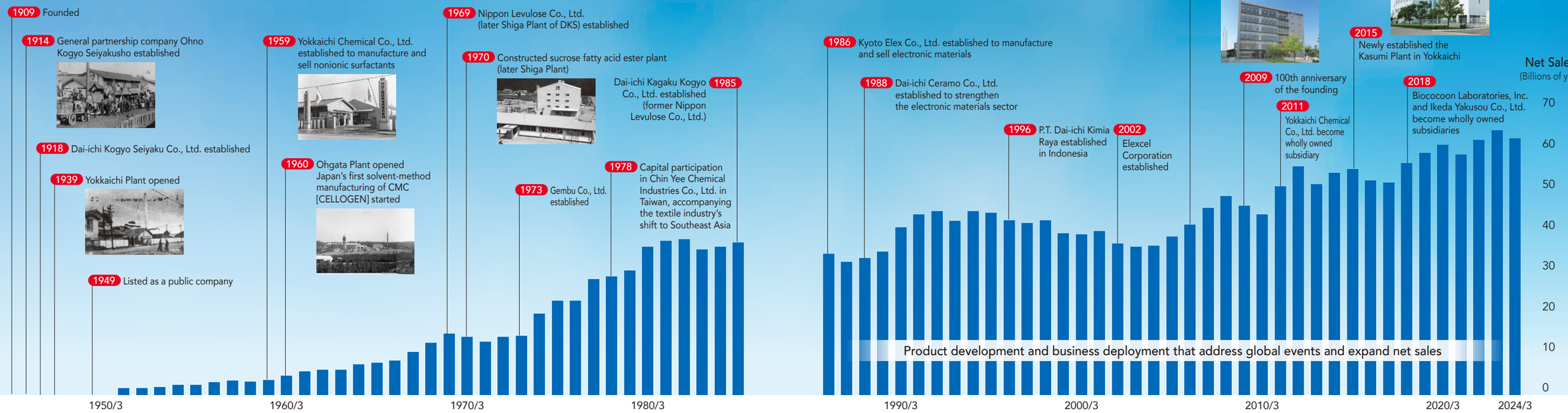
Currently, the same research departments that are in charge of examining improvements and dealing with claims related to existing product groups that have been transferred to plants are also in charge of new development. Accordingly, manpower tends to be allocated to the resolution of day-to-day problems, and we are then late in making a start on new themes. Next fiscal year, we will establish a production technology research institute to deal with problems with products groups that have been transferred to plants, productivity improvements and cost reductions. As a preliminary step, we established a Production Technology Department at our R&D Headquarters this fiscal year. By carving out existing products, we will seek to speed up the process from new development to mass production.

FY2024 is the final fiscal year of our Medium-term Management Plan FELIZ 115. Last fiscal year, we experienced unprecedented losses due to the fallout from geopolitical risks, including a weaker yen, rising raw material and energy costs and deterioration of the semiconductor market. However, in the third quarter of FY2023, we achieved a V-shaped recovery thanks to the cooperation of our customers and distributors and energetic price revision activities on the sales front as well as company-wide cost-cutting efforts. I would like to express my gratitude to our employees for giving their all.

We adopted "Commitment to results" as our motto for 2024. We are committed to achieving our FY2024 targets under the FELIZ 115 plan (net sales of ¥70 billion and operating income of ¥4.5 billion) and we will strive for sustainable growth and value creation as an R&D-oriented company, whilst fulfilling our social responsibilities. We look forward to your continued support.

Through companywide cooperation, we will build systems for quickly implementing necessary measures.

Philosophy in Practice—The History of DKS Business Development



DKS products that respond to societal changes

1900s
Rapid Growth of the Spinning Industry

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

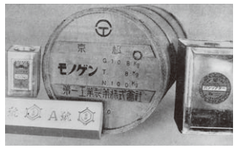
1909 SILKREELER cocoon unwinding agent (chemical agents for spinning)
1915 Gembu Marseille Soap (industrial soap for textiles)

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

1930s–1950s
Industrial Modernization, Shift to Synthetics

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.

1934 MONOGEN higher alcohol-based detergent
1950 CELLOGEN synthetic thickener
Nonionic surfactant NOIGEN
Cationic surfactant CATIOGEN



Main products of this time

1960s–1990s
Growing Environmental and Safety Concerns Lead to High-Value-Added Materials

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.

1969 PYROGUARD flame retardant for plastics
1970 DK ESTER food emulsifier
1981 NEW FRONTIER UV/EB-curable monomers and oligomers
1982 SUPERFLEX waterborne polyurethane
1990 EIMFLEX polyurethane resins
1992 HITENOL polymerizable surfactant

2000s
Highly Functional Chemicals Sector Developments Resolve Social Issues

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

2005 ELEXCEL IL ionic liquid
2013 RHEOCRYSTA cellulose nanofibers
2017 TRIBIO polylactic acid resin modifier
2018 I. Japonica-Bombyx Fungus (health food) Sudachin (citrus sudachi peel extract powder)
2021 Announcement of Naturido, a new active ingredient expected to improve cognitive function
2022 TENCHUKASOU (health food)
2023 Kainou Tochukasou (food with functional claims), NIOCAN deodorizing and disinfecting spray

Development of DKS

1909s–1950s
Founded as an Oil Agent Manufacturer, Aimed to Become a Comprehensive Chemical Industry Manufacturer

Founded in 1909 based on the "Dai-ichi Kogyo Spirit," the Company developed and sold the silkworm cocoon unwinding agent, a chemical for spinning waste cocoons. The Company responded to textile industry needs by developing and selling a number of textile oil agents using sulfation and compounding technologies.

In 1915, the Company introduced the first domestically produced soap, Gembu Marseille Soap, into the textile industrial soap market, which had been completely dependent on imported soap. The Company strengthened efforts to expand into household products such as shampoo and laundry and bath soap, which provided a breakthrough contribution to business performance during wartime and postwar turmoil.

With the development of the textile industry, the Company established a 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.

1960s
Establishing a Foundation for Future Growth

In the 1960s, 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.

1980s–1990s
Becoming a Leading Highly Functional Chemical Products Company

In the transition to high-value-added products, the Company enhanced 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.

2000s
Qualitative Change and Second Renaissance

Since 2004, the Company has constructed a business portfolio for a highly profitable structure and promoted the development and expansion of new businesses with high added value. With electronic and IT materials as the next generation of business pillars, the Company began to take steps to transition from a traditional surfactant company to a leading industrial chemical supplier.

In 2009, the 100th anniversary of our founding, the Company started a six-year management plan with the aim of qualitative change and promoted the transition to a business division system, management infrastructure development and non-petrochemicals, thereby strengthening our financial position. The Company transformed its corporate structure placing emphasis on the DKS Credo and created a platform for further growth.

In 2015, the Company formulated a five-year plan for new value creation, and in the same year, the new Kasumi Plant was constructed in Yokkaichi of Mie Prefecture, as a mother factory with the aim of integrating production, sales and development functions, preparing the foundation for a second renaissance.

Life Sciences Business Launched, Full-Scale Shift to DREAM Businesses

With its full-scale entry into the business field of life sciences 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, this has become the foundation for building the future that our Company is focusing on, together with the electronics/information and environment/energy fields.

In 2023, we completed the notification for a food with functional claims for a product using I. Japonica Bombyx Fungus, which contains Naturido. It has been reported to help with maintaining visual memory and cognitive speed.

The foundation of DKS

Dai-ichi Kogyo (DKS) Spirit and DKS Mottoes

The Dai-ichi Kogyo (DKS) Spirit states that "We must demonstrate the traditional spirit of the Japanese people—the Yamato spirit—in our industry, always realize coexistence and co-prosperity between ourselves and others based on the concept of service, and maintain sincerity to contribute to the prosperity of the nation, society and mankind." Sincere efforts to manifest this spirit continue to be passed down through our three Company Mottoes: "Quality First," "Cost Reduction" and "R&D Efforts.

Thoughts on Cost Reductions

To truly promote the spirit of service as a manufacturer, we must not only manufacture quality products, but also, as our founder says, we must "make our existing quality products widely known to the public," and at the same time "distribute quality products so that the public can purchase and consume them freely and easily." Since the Company's founding, the idea of not only pursuing cost reduction, but also doing business for the benefit of the world and people, has taken root.

A Corporate Culture of Respect for Quality

As early as 1922, uniform product standards were developed and the division of duties clearly stated that research staff were responsible for quality checks. In 1951, a quality management committee was established to cultivate a corporate culture of respect for quality and engage in organizational development. In the 1960s, QC circles were actively developed at plants across Japan led by young engineers, and in 1974, these activities were unified, and together with research efforts DKS established a reputation as a technology company.

Source of Original Technologies

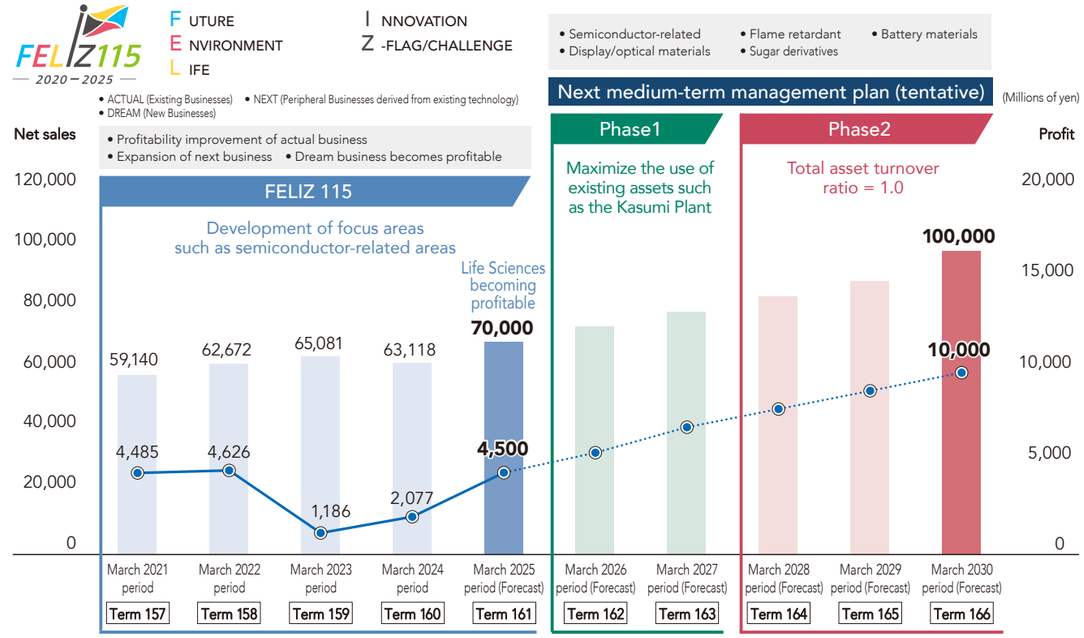
During the post-World War I recession, the Company constructed laboratories in 1918, research incentives were stipulated in 1919 and "inventor award provisions" were enacted one after another in 1920 to encourage the creation of new products. The Company created superior new products and patents and strove to conduct research. In 2002, the Company implemented a patent incentive system ahead of other companies, contributing to the development and creation of new businesses such as the current Life Sciences business.

Review of the Medium-Term Management Plans

	CHANGE100 Stage I — Changing the Corporate Culture — April 2009–March 2012		CHANGE100 Stage II — Expansion along with Earnings — April 2012–March 2015		REACT1000 — Act for a Leap — April 2015–March 2020	
Targeted Figures	Consolidated net sales ¥55 billion or higher	Ratio of ordinary income to sales 4% or higher	Consolidated net sales ¥60 billion or higher	Ratio of ordinary income to sales 5% or higher	Consolidated net sales ¥75 billion	Ratio of ordinary income to sales 8.0%
Slogan	"Each of Us Holds the Key to Success"		"Each of Us Holds the Key to Success"		"Act for a Leap"	
Vision	Building a Business Structure Necessary as a Leading Industrial Chemical Company		Staying Ahead of the Times as a Leading Industrial Chemical Company		Practicing the concept of "chemistry provides a solution," we will take up the challenge of carrying out our management plan REACT1000	
Management Policies	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		1. Create new corporate value 2. Create a clear corporate image 3. Ensure more profound corporate governance 4. Maintain and increase optimal ROE levels 5. Create advantages through collaboration 6. Accelerate and enhance mother plant functions	
Plan Outline	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				There are five priority qualitative targets for implementing the management policy. 1. **RETURN: pursuing profitability** = sharing returns with stakeholders (appropriate distribution of profits) 2. **EXPORT: improving overseas sales ratio** = global strategies responding to paradigm shifts (overseas sales ratio of 20%) 3. **ADVANCE: moving forward with new plant investment** = pursuing efficiency for core businesses (restructuring domestic bases) 4. **CREATE: establishing new businesses** = quickly commercializing newly developed materials (new business creation fund) 5. **TRAIN: systematic human resources training** = fostering personnel to pursue 'leaps' (coordinating with consulting companies)	
Review	The initial year saw lingering impacts from 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 31, 2012) consolidated net sales of ¥56.2 billion. In contrast, the Company was unable to reach the plan's final-fiscal-year operating income target due to sharp demand drops and ongoing high raw materials prices.		Although DKS aimed to increase net sales from ¥56.2 billion to ¥60 billion, the fiscal year ended March 31, 2015 (the final year of the plan) ended with 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.		On the quantitative side, sales were revised downward in the third year of the plan due to an extreme slump in solar cell sales, but the operating income target was left unchanged, and in the first half of the plan reached a record high for the third consecutive year. After that, however, rising production costs for 5G materials, which far exceeded expectations, insufficient response to soaring raw material prices, and the COVID-19 pandemic led to operating income of ¥4.1 billion in fiscal 2019, the final year of the plan, unfortunately resulting in our falling short of the targets. The 20 items in the matrix, which are qualitative elements, have all launched or are in progress. As a result, our view is that the foundation for creating the future has been laid according to plan.	
Evaluation	▲		●		▲	
Successes	• 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 Co., Ltd. a wholly owned subsidiary) to expand business fields, purchased land, began preparation for a new plant		• Expanded business peripheral areas (NEXT) and efforts to create new businesses (DREAM) • Focused on business development with new capital investment and R&D expenses • Changed the balance sheet composition and increased total assets 1.3 times compared with the end of the final year of the previous plan • Brought life sciences-related Biococoon Laboratories Inc. and Ikeda Yakusou Co., Ltd. into the Group • Laid the foundation for realizing business income and profits commensurate with total assets, including up-front investment in new businesses	
Issues	Improve the corporate culture to bring a profitability mind-set to the forefront Realize a balance in three areas (Balance sheet / business portfolio / human resources)		Maintain a robust and healthy balance sheet to increase earnings		1. Insufficient precision in market forecasting 2. Delays in reorganizing unprofitable businesses 3. Vague customer countermeasures (selection & concentration) 4. Negative effects of the business division system	

Evaluation criteria: ●: Achieved ▲: Partially achieved ✕: Not achieved

Progress of the Medium-Term Management Plan "FELIZ 115"



Outline of measures towards FY2025 goals

Improving profitability

1) Implementation of cost pass-through for raw material and energy
2) Promotion of high value-added product development

Focus area development

1) Expansion of information and communication-related material sales
2) Early reaping of battery materials
3) Promotion of new development for the semiconductor market

Life sciences becoming profitable

1) Expand B-to-C sales of products such as TENCHUKASOU, Kainou Tochukasou, Sudachin, health foods
2) Realization of B-to-B results through material sales
3) Expand Ikeda Yakusou's business and acquire contract projects by taking advantage of GMP certification

Review of the Fourth Year

	Priority Measures	Results/future goals
1	Withdraw from noncontributing businesses	• Implemented additional price revisions in response to rising raw material, logistics, and energy costs, building a profit base. • Continued restructuring the business portfolio through external collaboration.
2	Realize returns on advanced business investments in the Kasumi Plant and other areas	• Increased operational efficiency through improved segment management, combined with higher demand driven by market recovery. • We will continue to increase profitability by driving new development.
3	Accelerate alliances with partner companies and achieve rapid commercialization at the Kasumi Plant and in the Life Sciences businesses	• Launched Kainou Tochukasou containing the useful ingredient Naturido® as a food with functional claims. • Confirmed the efficacy of I. Japonica-Bombyx Fungus for improving sleep in humans; results published in an academic journal. We will continue to strengthen the evidence base. • Introduced NIOCAN®, a new deodorant designed for the Life Sciences field, by applying our existing technology.
4	Reorganize the corporate structure with an emphasis on customer orientation; shift to Company-wide organizational sales activities	• Published a sector-specific technology guide that clearly presents our products and technologies from the customer's perspective in the fields of mobility, industrial materials, and semiconductors, in addition to the three priority areas of electronics and information, environment and energy, and life sciences, as highlighted in the Medium-term Management Plan FELIZ 115.
5	Revise performance evaluation and remuneration systems to a system that evaluates contributions	• Introduced a goal management system for employees at or below the section manager level to increase commitment to results and cultivate a foundation of earning power. • Revised the incentive program, introducing new awards: the Corporate Value Contribution Award, the Financial Performance Award, and the President's Award. We aim to clarify employee contributions to business performance, enhance motivation through praise, recognition, and a sense of special achievement, and foster a culture of continuous results generation.
6	Establish SDGs/ESG-based management objectives; contribute to society through business activities; aim to enhance corporate value	• Recognized for our understanding and actions on environmental risks and impacts, earning a B- climate change score in CDP 2023. • Certified as an Eco Rail Mark company. • Reduced GHG emissions (Scope 1 and 2) by 22.7% compared to FY2020 across the entire DKS Group in Japan.
7	Continue employee happiness-based management; conduct activities to maintain the "Health & Productivity Stock" selection; create comfortable working environments	• Selected as a "Health & Productivity Stock" for the fifth consecutive year. • Certified as a "White 500 Organization" for the seventh year in a row. • Certified as a "Sports Yell Company" for the fifth consecutive year. • Received the highest rank in the DBJ Health Management Ranking Program for the seventh year in a row.

Financial/Capital Strategies and Total Shareholder Return

Financial Position

Looking at our financial position as of the end of the fiscal year ended March 31, 2024, we had total assets of ¥94.5 billion (up 11.2% year on year), net assets of ¥41.2 billion (up 7.8% year on year), equity of ¥36.7 billion (up 7.0% year on year), and an equity ratio of 38.9% (down 1.5 percentage points year on year.) Regarding cash flow for the fiscal year ended March 31, 2024, operating cash flow was ¥7.0 billion (down 86.9% year on year), and since capital investment decreased slightly to ¥2.7 billion from ¥3.1 billion the previous year, investing cash flow was negative ¥2.0 billion, resulting in a positive free cash flow (FCF) of ¥5.0 billion. Financing cash flow was positive ¥1.6 billion due to a slight increase in long-term borrowings, and although interest-bearing debt also increased slightly to ¥32.7 billion (up 9.8%), the net D/E ratio fell from 0.54 to 0.40 due to improvement in on-hand liquidity. As a result, the cash balance at the end of the period increased from ¥9.0 billion in the previous period to ¥15.9 billion.

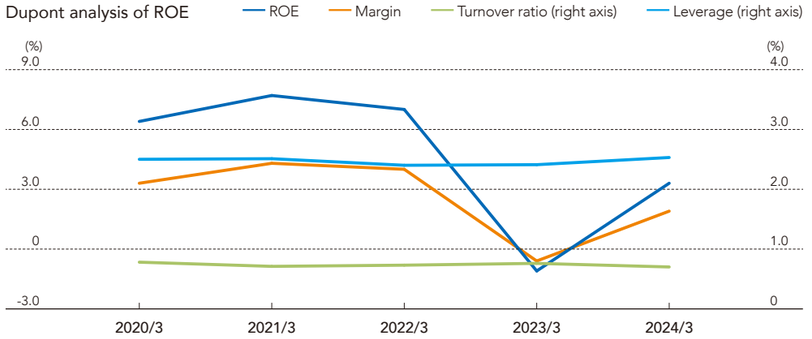
Financial Analysis of the Past 5 Years

We posted record-high profit in the fiscal year ended March 31, 2018 and our net sales subsequently remained in an upward trend; however, in the fiscal year ended March 31, 2023, we reported a net loss. Our financial results from the fiscal year ended March 31, 2020 to the fiscal year ended March 31, 2024 are as follows. Return on equity (ROE) has remained at a low level for the past two years.

(Millions of yen)	April 2019–March 2020	April 2020–March 2021	April 2021–March 2022	April 2022–March 2023	April 2023–March 2024
Net Sales	61,456	59,140	62,672	65,081	63,118
Operating Income	4,154	4,485	4,626	1,186	2,077
Ordinary Income	3,524	4,314	4,192	1,200	2,060
Net Profit	2,014	2,563	2,492	(407)	1,174
Capital Expenditures	6,138	4,617	1,925	3,172	2,724
Depreciation	2,724	3,263	3,430	3,295	3,216
R&D Expenses	2,748	2,821	2,946	3,236	3,170
Net Cash Provided by (Used in) Operating Activities	3,766	4,955	5,520	724	7,091
Net Cash Provided by (Used in) Investing Activities	(5,842)	(3,804)	(2,700)	(2,883)	(2,008)
Free Cash Flow	(2,076)	1,151	2,820	(2,159)	5,083
Equity Capital	31,677	34,648	36,767	34,346	36,747
Total Assets	81,736	85,033	86,469	85,025	94,537
Interest-Bearing Debt	29,946	28,529	22,763	29,865	32,797
ROE	6.4%	7.7%	7.0%	(1.1%)	3.3%

The graph shows a breakdown of ROE using the Dupont model. It is clear from this analysis that the decline in the profit margin has a major impact. In the medium term, we aim to achieve an ROE greater than the cost of equity by improving the operating margin and aiming for a total asset turnover ratio of 1.0 x.

Dupont analysis of ROE

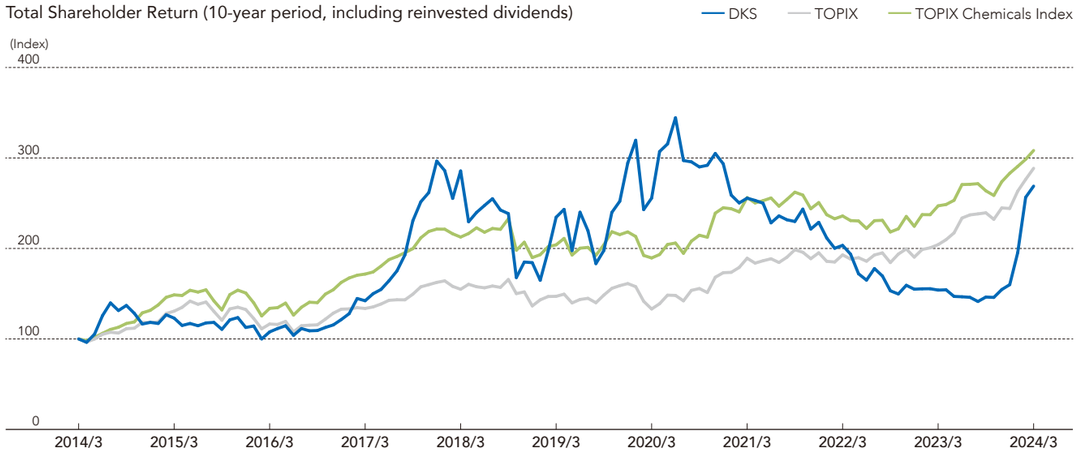


	April 2019–March 2020	April 2020–March 2021	April 2021–March 2022	April 2022–March 2023	April 2023–March 2024
ROE	6.4%	7.7%	7.0%	(1.1%)	3.3%
Margin	3.3%	4.3%	4.0%	(0.6%)	1.9%
Turnover ratio	0.78	0.71	0.73	0.76	0.70
Leverage	2.50	2.51	2.40	2.41	2.53

Total Shareholder Return for the Past 10 Years

Total shareholder return (TSR) based on dividends and share price growth is as follows. Our 10-year TSR is 10.4%. This is a medium-to-long-term return that is greater than our assumed cost of equity (around 6.0 to 7.0%); however, since 2020, unfortunately, our stock price has undergone drastic adjustment and performed poorly compared to the performance of market stocks.

Total Shareholder Return (10-year period, including reinvested dividends)



Note: Share price trends including dividends (closing price data for March 31, 2014 = 100)

Future Financial Strategies/Shareholder Returns

	1 year	3 years		5 years		10 years	
		Cumulative total	Annual rate	Cumulative total	Annual rate	Cumulative total	Annual rate
DKS	98.1%	5.8%	1.9%	15.9%	3.0%	168.9%	10.4%
TOPIX	41.3%	52.5%	15.1%	96.2%	14.4%	188.6%	11.2%
TOPIX Chemicals Index	24.8%	20.4%	6.4%	51.1%	8.6%	208.3%	11.9%

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

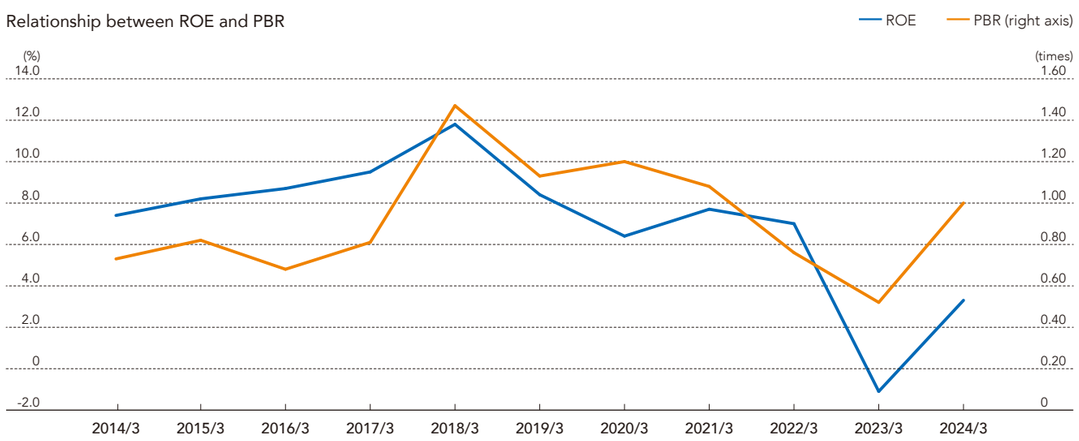
Financial/Capital Strategies and Total Shareholder Return

Initiatives for Improvement of Capital Efficiency

Our financial targets for 2030 are net sales of ¥100 billion, operating income of ¥10 billion and a total asset turnover ratio of 1.0 x. We recognize that if we can achieve these targets, we will be able to achieve our goal of ROIC greater than WACC (ROE greater than cost of equity) and PBR above 1.0, and that TSR, in other words, our returns to shareholders, will also exceed expected returns.

With management that is conscious of cost of capital and stock price currently under the spotlight, the most important indicator for capital efficiency is ROE, and if ROE is greater than the cost of equity, then PBR can be expected to exceed 1.0 x. However, if we look at the relationship between our ROE and PBR in the past, from the fiscal year ended March 31, 2014 to the fiscal year ended March 31, 2017, even though our ROE was 7.0% or more, our PBR was less than 1.0 x. This may be because the cost of equity was higher than expected or because our stock price was trading at a discount. In contrast, in the fiscal year ended March 31, 2018, we posted record-high profit and since our stock price formation has reflected the level of ROE. Going forward, we will ensure that ROE remains stable at 7% or more and we will aim for even higher capital efficiency.

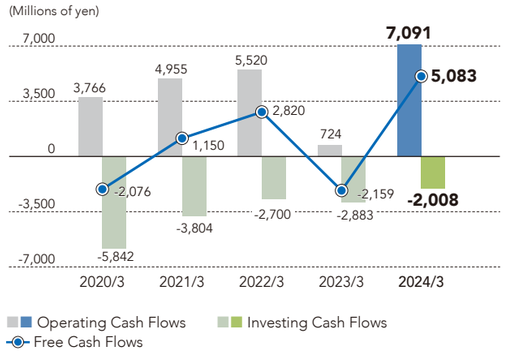
Relationship between ROE and PBR



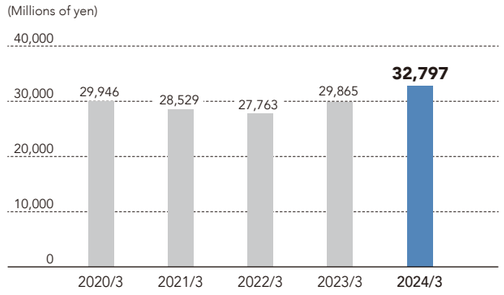
Trends in Cash Flows and Interest-Bearing Debt

Looking at our cash flows (CF) for the fiscal year ended March 31, 2024, operating CF was ¥7.0 billion, and since capital investment decreased to ¥2.7 billion (from ¥3.1 billion the previous year), investing CF was negative ¥2.0 billion, resulting in positive free CF of ¥5.0 billion. Financing CF increased slightly to ¥32.7 billion due to a slight increase in long-term borrowings.

Cash Flows



Interest-Bearing Debt



Measures to Implement Management Based on an Awareness of Cost of Capital and Stock Price

The DKS Group has been in a situation where PBR is below 1.0 x since the fiscal year ended March 31, 2022. We have implemented a range of measures such as passing through costs to prices and cutting costs as well as developing new products, creating a better profit structure. As of the end of the fiscal year ended March 31, 2024, our PBR had improved to over 1.0 x. Going forward, we will continue to be aware of the weighted average cost of capital and aim to achieve ROIC and investment returns greater than this.

Growth strategy towards 2030

2024 → 2025 → 2026 → 2027 → 2028 → 2029 → 2030

- Pass through costs to prices
- Net sales: ¥100 billion
  Operating income: ¥10 billion
- Move life sciences business into profit
- ROIC≧WACC
  PBR = 1.0 times
  Total assets turnover = 1.0
- Maximize use of available assets such as Kasumi Plant, improve capacity utilization rates, and increase sales volume
- Make capital investments in priority fields
- Accelerate development of priority fields such as semiconductors, information and communications, battery materials, and life sciences

Non-financial strategy

1. Dialogue with stakeholders

- Two-way dialogue between investors and management through company briefings, etc. (at least 4 times a year)
- Enhancement of shareholder returns
- Enhancement of disclosures and improvement of recognition

2. Setting of tangible, specific ESG and sustainability targets

- Strengthening of initiatives for achievement of sustainability targets
- Active disclosure of non-financial information about development of human resources, etc.

3. Measures to improve employee engagement

- Overhaul of personnel systems (job grades, assessment, pay)
- Development of framework and educational programs to foster career development
- Review of in-house awards system
- Implementation of measures based on Health & Productivity Management strategy map (maintenance and improvement of employee health)

4. Promotion of the career advancement of diverse human capital

- Implementation of reallocation of management resources
- Introduction of new systems to secure professional human capital
- Achievement of female manager ratio target (12% or more by 2025)

Future Financial Strategies/Shareholder Returns

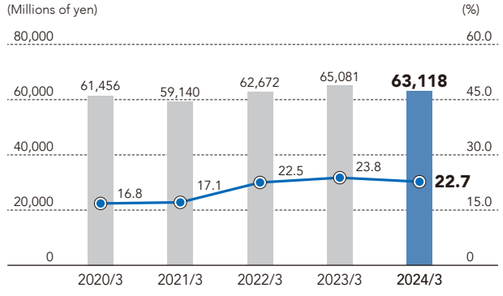
In the medium-term management plan “FELIZ 115,” the goal was to maximize total assets to grow sales and achieve a total asset turnover ratio of 1.0 times by the fiscal year ending on March 31, 2025. However, harsher than expected circumstances have put pressure on the profit structure, including economic stagnation due to the spread of the novel coronavirus infection and rising raw material and energy costs triggered by Russia and Ukraine’s military conflict, and this resulted in a major collapse of the assumptions made when formulating the plan. Therefore, we have a revised our aim to achieve a total asset turnover ratio of 1.0 times in the second phase of the next medium-term plan (FY2027 to FY2029.) We will continue to be conscious of the shareholder capital cost and implement financial and capital policies that support the realization of TSR that exceeds that cost.

Regarding dividends, our Company’s basic policy is to maintain long-term, stable dividends to our shareholders while reconciling this with internal reserves necessary for future business development. We will strive to increase our corporate value by actively utilizing internal reserves for future business development that will strengthen our international competitiveness and lead to new growth.

Financial and Nonfinancial Highlights

Financial Highlights

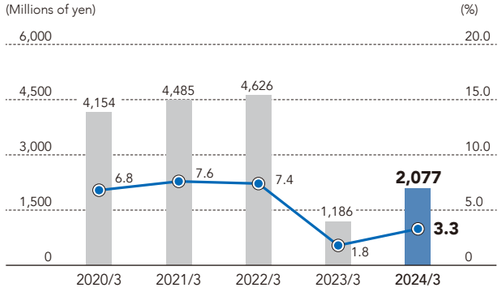
Net Sales/Overseas Sales Ratio



Net sales for the fiscal year ended on March 31, 2024 were ¥63,118 million (down 3.0% year on year) given a sharp decline in overseas sales of flame retardants, despite a significant increase in sales of radcure resin materials in the Functional Materials segment.

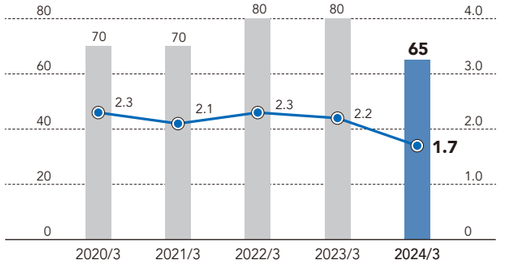
The overseas sales ratio was 22.7% (down 1.1 percentage points year on year).

Operating Income/Operating Margin



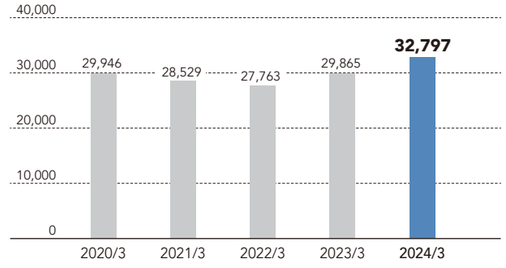
In the fiscal year ended March 31, 2024, operating income was ¥2,077 million (up 75.1% year on year), benefiting from increased demand due to market recovery, price pass-through, and cost-saving measures, leading to an operating margin of 3.3% (up 1.5 percentage points year on year).

Dividend per Share/Dividend on Equity (DOE)



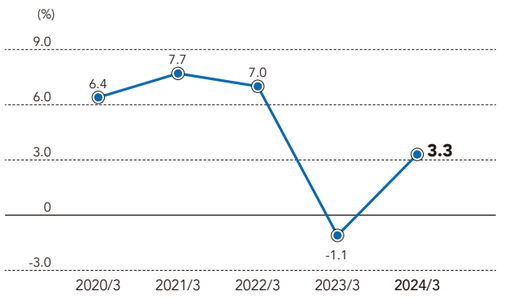
The annual dividend per share was comprehensively set at ¥65 in consideration of the Company's financial conditions, future business development, and enhanced shareholder returns.

Interest-Bearing Debt



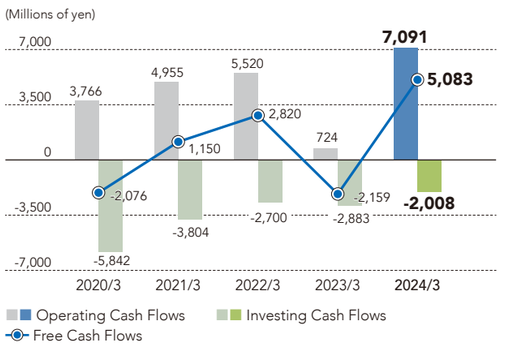
Interest-bearing debt at the end of the fiscal year ended March 31, 2024 increased by ¥2,932 million to ¥32,797 million due to an increase in long-term borrowings.

ROE



Net sales declined more than the increase in total capital, leading to a decrease in the total capital turnover ratio. However, with higher profits and an improved profit margin, ROE increased from the previous year to 3.3%.

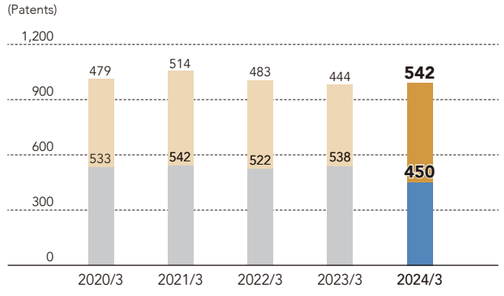
Cash Flows



▷ For more details, see p. 22.

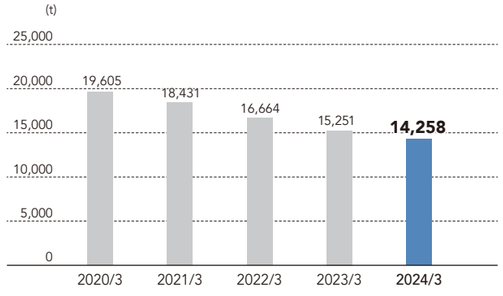
Nonfinancial Highlights (Group/Non-consolidated)

Number of Patents Held (Group)



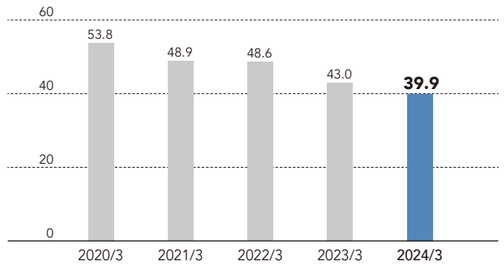
The number of patents held increased by 9 from the previous year to 992, reflecting our proactive efforts to file and obtain intellectual property rights based on R&D findings for future business expansion.

Amount of Waste Generated (Group)



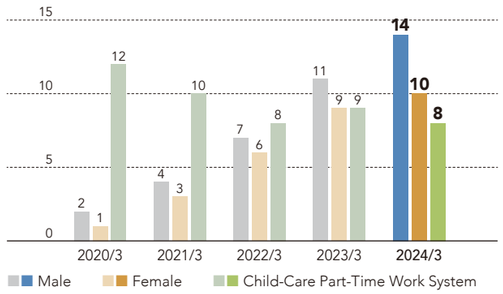
The amount of waste generated was 14,258 tons (down 993 tons year on year).

Geenhouse Gas Emissions (Group)



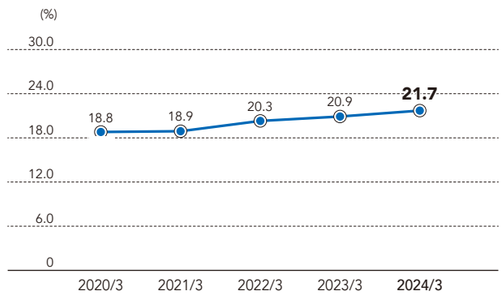
Greenhouse gas emissions totaled 39,900 tons (down 3,100 tons year on year). In order to help prevent global warming, we will continue our efforts such as those for improving our energy efficiency.

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



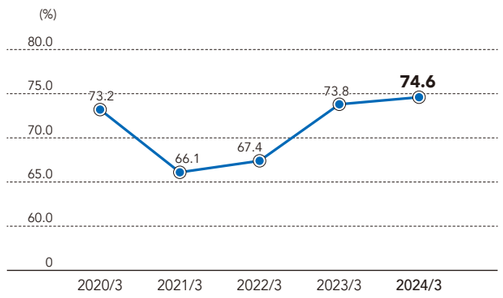
In terms of employee benefits, 24 employees used the child-care leave system (up by 4 from the previous year), while 8 used the child-care part-time work system (down by 1).

Ratio of Female Employees (Non-consolidated)



The ratio of female employees to total employees was 21.7% (up 0.8 percentage point year on year). We will continue to carry out measures aimed at promoting women's active participation and advancement.

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



The percentage of paid leave used was 74.6% (up 0.8 percentage point year on year).

Research and Development

Material Issues
- Customer-oriented R&D framework aligned with Uni-Top strategies
- Developing products that contribute to the environment
- Promoting an intellectual property strategy

DKS' technological strength is that we have the ability to customize the function and performance of products in line with customer requirements as we make proposals based on the ideal product combination, and technology is an important intellectual capital that supports our management strategies for sustainable growth. We are refining our technologies in pursuit of the concept, "chemistry provides a solution."

The Strengths and Advantages of DKS' R&D

As a leading 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 this philosophy, we focus on the research and technological development, particularly in high value product sectors such as electronics and information, environment and energy, and life sciences.

We have diverse and wide-ranging technologies, and we have the expertise to know-how to combine technologies to create functionality and differentiation, which leads to our uniqueness.

In pursuit of a sustainable society, we are committed to adding value by leveraging our expertise in technology integration to formulate innovative solutions. These solutions are designed to cater for the specific functions and performance criteria demanded by our customers, all within the framework of our ESG conscious management strategy.

Customer-oriented R&D Framework

DKS aims to manage its business by making the most of its technology, which is subject to operational profit management.

The Advisory Committee within the R&D Headquarters is an organization made up of members with expertise in research and manufacturing. Optimal allocation of research resources and shortened R&D timeframes will contribute to generating profit by maximizing ROI from our research and technology development.

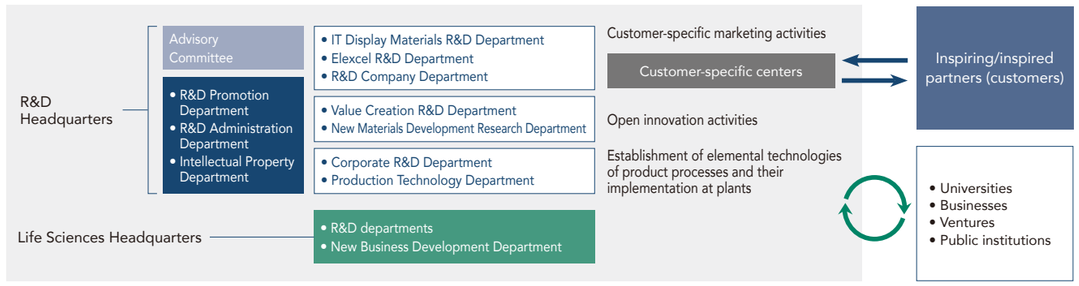
The R&D staff performs their work with a customer-centric focus while fostering partnerships with inspiring/inspired partners. As part of this effort, we have established research centers for each customer. In order to identify needs more quickly and accurately, the centers assign lead researchers to target customers to implement research themes with top priority. Cross-departmental teams are formed as needed, aiming for the shortest schedule while ensuring flexible and efficient team operations.

We are working on research and technology development of high value-added products in the fields of electronics and information, environment and energy, and life sciences as key areas. We established a new IT Display Materials R&D Department as an organization specializing in the electronics and information fields to strengthen applied technology development together with the Elexcel R&D Department, which develops battery materials in the environment and energy field. The Life Sciences Headquarters will accelerate business development by building a system tailored to B-to-B and B-to-C.

The Value Creation R&D Department and the New Materials Development Research Department will create new business through the introduction of technology based on open innovation with the aim of developing new materials with novel functions.

The Corporate R&D Department and the Production Technology Department will aim to speed up human capital development as well as R&D by holding study sessions both inside and outside the Company that incorporate the knowledge of external experts, for instance on the use of fundamental process and analysis technology and data science.

In pursuit of a sustainable society, we are committed to adding value by leveraging our expertise in technology integration to formulate innovative solutions. These solutions are designed to cater for the specific functions and performance criteria demanded by our customers, all within the framework of our ESG conscious management strategy.



DKS Proprietary Technologies and Research and Technological Development Strategy

DKS aims to solve social issues and provide new value to customers by creating new technologies through the hybridization and combination of various technologies, including surfactant and sugar/cellulose derivatization technologies (p.30, 74).

DKS Credo: Contributing to the nation and society through industry

Developing products that can contribute to a sustainable society

Contribution to a digital society

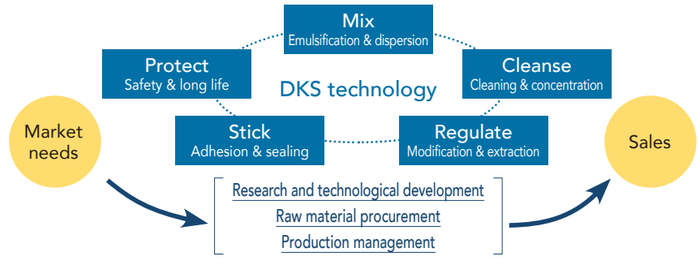
Electronics & Information
- High-speed data communication components (5G, 6G)
- Displays
- Semiconductor-related
- Optoelectronic components
- Edge devices
- Sensors

Contribution to a decarbonized society

Environmental & Energy
- Electric Vehicles (EV)
- Battery components
- Solar panel components
- Biomaterials
- Environmentally-friendly resins
- Recycling

Contribution to a sustainable society

Life Sciences
- Health foods, pharmaceuticals & cosmetics
- Nutrition
- Food additives
- Aroma business
- Sericulture Innovation
- Upcycling



We are working to provide environmentally friendly products and develop technologies in order to contribute and provide value to a sustainable society.

Category	Products	Values we deliver	Contribution to achieving the SDGs
Reduction of greenhouse gas emissions	• Conductive paste for solar cells • Lithium-ion battery materials	• Reducing CO_2 • Promoting green energy	
Energy saving	• Solvent-free radcure materials • Heat dissipation materials	• Reducing the steps in manufacturing processes • Increasing efficiency through thermal management	
Extending the useful life of products (reducing waste)	• Sealing materials for circuit boards • Polylactic acid resin modifier	• Extending the useful life of applicable products • Delivering highly biodegradable products • Solving the problem of plastic waste	
Considering the environment (water, resources)	• Cellulose nanofiber • Sucrose fatty acid esters • Oil spill treatment agents • Low aquatic toxicity, easily biodegradable surfactants	• Delivering products with low environmental impacts by using renewable raw materials • Reducing water pollution	
Improving work environment	• Reactive surfactants for waterborne coatings • Waterborne polyurethane resin	• Limiting health effects, air pollution, and the like by lowering VOCs*	
Health and safety	• Naturally derived health foods (I. Japonica-Bombyx Fungus, Sudachin)	• Improving cognitive function • Effectively using unexploited resources	

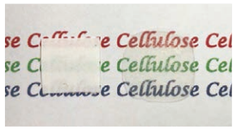
* Volatile organic compounds (VOC): A general name for organic compounds that evaporate in air. Volatile organic compounds include toluene, xylene, and ethyl acetate.

Research and Development

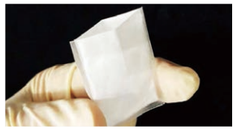
TOPICS

Achievement of thermoplasticization and flame retardancy of cellulose while maintaining its crystalline structure in joint research project with the University of Tokyo

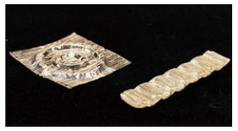
DKS and the Graduate School of Agricultural and Life Sciences, The University of Tokyo succeeded in achieving the thermoplasticization and flame retardancy of cellulose while maintaining its crystalline structure through a simple process in a joint research project on advanced utilization of cellulose. Cellulose is being reevaluated as a material for realizing carbon neutrality, and we plan to proceed with applied research with a view to collaboration between companies in related industrial fields such as resin fillers, packaging materials, and interior materials.



Thermoforming of thermoplastic cellulose (Left: before heat pressing, Right: after heat pressing)

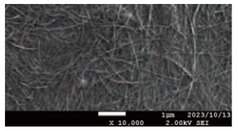

Heat sealability of thermoplastic cellulose

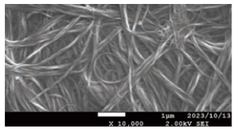

Combustion test of flame-retardant cellulose (Left: pulp, Right: flame-retardant cellulose)


Thermoformed shapes of thermoplastic cellulose nanofiber

New development of carbon nanotube dispersion with excellent dispersion stability and heat resistance by using carbon nanotube bundles with small diameter

Carbon nanotubes (CNTs) have exceptional electrical conductivity, heat resistance, tensile strength, lightweightedness and heat conductivity, and are expected to be used in a wide range of applications including electromagnetic wave shielding materials, battery materials and sensor materials. We succeeded in developing the ELEXCEL PCC Series of CNT dispersion products that have excellent dispersion stability and heat resistance by using CNT bundles with a smaller than usual diameter. Products in the ELEXCEL PCC Series have high electrical conductivity and improve electromagnetic shielding effectiveness when applied to electronic devices, etc. Additionally, when used as a conducting agent for high capacity lithium-ion secondary batteries, the ELEXCEL PCC Series maintains the conductive path even after repeated charge and can, therefore, extend the useful life of batteries.





Observation-based evaluation of dispersion using Field Emission-Scanning Electron Microscope (FE-SEM) (Left: ELEXCEL PCC Series, Right: General-use products)

Winner of Best Poster Award for biocompatible waterborne polyurethane poster

At the 45th Annual Meeting of the Japanese Society of Biomaterials, we received the Best Poster Award for a poster entitled "Properties of waterborne polyurethane film and its biocompatibility." The developed waterborne polyurethane resin is rated for having antithrombotic properties and allowing regulation of the rigidity and flexibility of the films obtained. It has also been found to be effective in suppressing protein adsorption and can also be expected to be applied in cell culture basal media.

Winner of the NEW ENERGY x FRaU Ethical Award for NIOCAN deodorizing and sanitizing spray

At the Creation Festival, NEW ENERGY TOKYO, NIOCAN deodorizing and sanitizing spray won the NEW ENERGY x FRaU Ethical Award. The award is given to brands that have ethical production backgrounds and are changing the world through familiar, everyday items in recognition of their creative ideas and initiatives.

6 winners out of 250 entries

Confirmation of sleep improving effect of I. Japonica-Bombyx Fungus

The fall in the average sleep time among Japanese people is a social issue that is said to be causing problems such as falling productivity, economic loss, and increased risk of accidents and illness. DKS conducted a clinical trial to verify the efficacy of I. Japonica-Bombyx Fungus in improving sleep and confirmed that I. Japonica-Bombyx Fungus helps people stop waking up in the middle of the night and helps them to get to sleep and improves the quality of sleep. We will work to solve social issues by conducting further research into I. Japonica-Bombyx Fungus as a food ingredient that helps improve QOL and extend healthy life expectancy. Our research findings were featured in a paper published in *Anti-aging Igaku* (October 6, 2023 edition), a journal published by the Japanese Society of Anti-Aging Medicine.

Proposal for a super environmentally friendly hybrid system won the Outstanding Paper Award

DKS' proposal for a super environmentally friendly hybrid system combining cricket oil and oil palm waste won the Outstanding Paper Award in the FY2023 Oil & Fat Industry Paper Awards organized by the Oil & Fat Industry Kaikan. This is the second year running we have won the Outstanding Paper Award. Our paper proposed a super environmentally friendly system for manufacturing polyhydric alcohol through a reaction between oil extracted from crickets and polylactic acid extracted from corn and transporting this using wooden pallets made from oil palm waste. We are discussing the effectiveness of the proposed system based on verification of benefits in terms of helping to reduce CO_2 emissions and address the problem of food waste.

At the Keidanren Kaikan on February 21

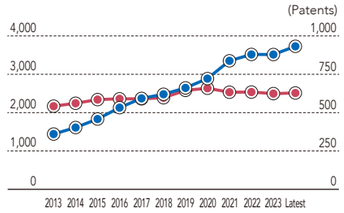
Winner of the Encouragement Prize for Invention at the FY2023 Kinki Regional Invention Awards for fluorinated ionic liquid and its manufacturing method

Flat panel displays (FPDs), which are in growing demand in recent years, are required to have increasingly large screen sizes, more features and higher performance, and the problem of static electricity, which poses the risk of a buildup of electric charge on an object and can cause accidents, is becoming more serious. ELEXCEL AS-110, an antistatic agent for optical adhesives developed by DSK, is effective in preventing static even with a small dose and maintains color tones over long periods of time, helping extend the useful life of FPDs. Going forward, DKS will continue working to solve the problems faced by customers, under the banner of antistatic agents that are effective even with a small dose.

DKS' Intellectual Property Strategy

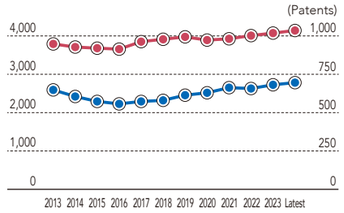
Based on the evaluation using the Patent Score provided by Patent Result Co., Ltd., it is evident that the value of the DKS Group's patents is steadily on the rise, signifying the enhancement of our technological assets. Furthermore, in contrast to other companies in our industry, we manage a more streamlined collection of patents characterized by greater inherent worth. This strategic approach enables us to further advance our Uni-Top technology, aligning it with our customer-centric approach to drive technological competence and profitability.

Value of DKS Group patents



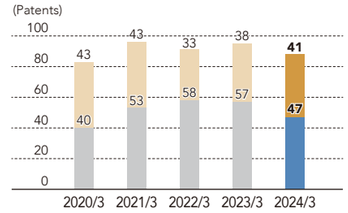
DKS Group: Rights holder score (left axis)
DKS Group: No. of active patents (right axis)

Value of patents of five Japanese peer companies (average)



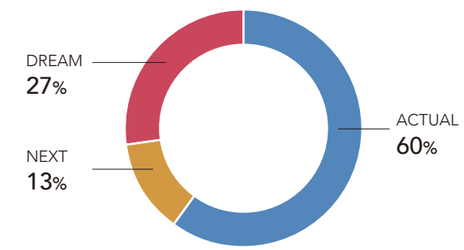
Domestic industry peers (five-company average): Rights holder score (left axis)
Domestic industry peers (five-company average): No. of active patents (right axis)

Number of Patents Held (Group)

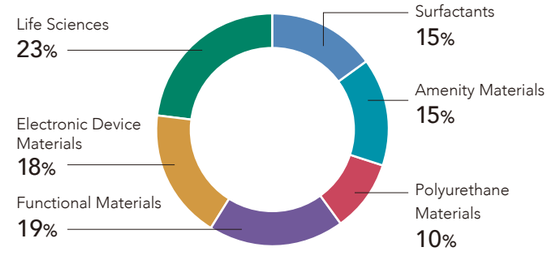


* Five domestic industry peers: Five major companies belonging to Japan Surfactant Industry Association
* Created by BizCruncher® (Patent Result Co., Ltd.)

Number of patents held by portfolio



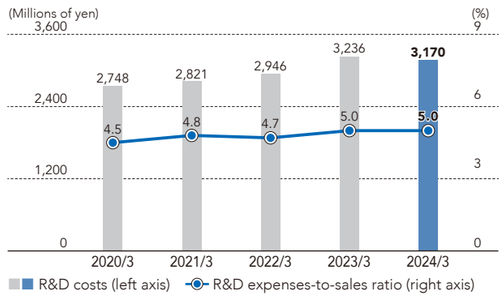
Number of domestic patent applications (last five years)



R&D Investments

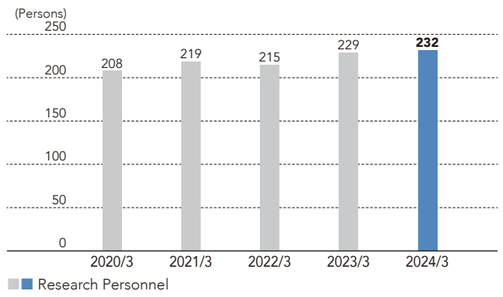
Under our medium-term management plan "FELIZ 115," which targets an R&D expenses-to-sales ratio of 5.0%, we will engage in R&D spending focused on key projects.

R&D Costs



For fiscal 2023, the result was the targeted 5.0%.

Research Personnel



The increase in R&D personnel in fiscal 2023 is due to an increase in the number of employees to accelerate the Company's R&D.

Research and Development

Sustainability Efforts

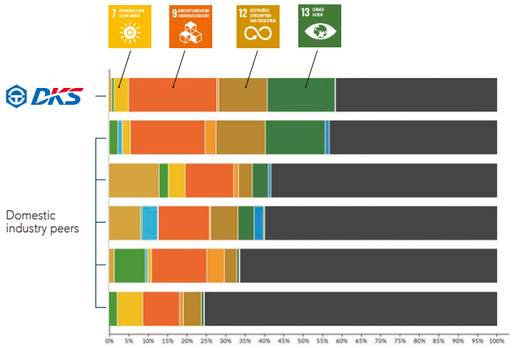
In recent years, our emphasis in R&D has been on sustainability efforts, and having established key themes, our continued focus has been on the development of new products and processes to achieve the goals of our medium-term plan. Sustainability is an area of specialty for DKS. In the handling of intermediate chemicals, our proactive approach will contribute to sustainability in a wide range of industries. As a result of analyzing the patents held by the DKS Group using the LexisNexis® PatentSight®[1], an externally provided patent analysis tool, more than half were found to be related to SDGs[2]. They were also found to be of high technical value.

We will continue to monitor the relationship between R&D activities and the SDGs through analysis using this tool.

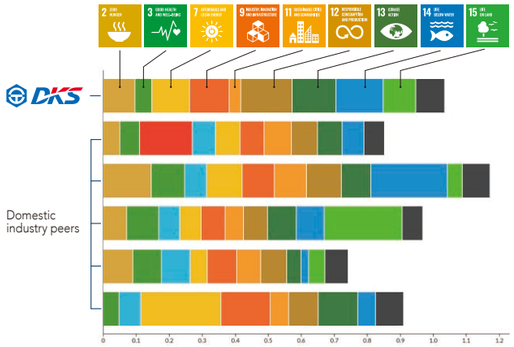
DKS Group patents are characterized by their high contribution to SDGs 9, 12, and 13. This is made possible by our advanced technological capabilities, particularly in battery technology. We also hold many SDG-related technologies and have equal or superior technical capabilities with regards to the SDGs compared to our peers.

1. Provided by PatentSight Japan, LexisNexis Japan
2. Sustainable Development Goals adopted at the UN Summit in 2015

Percentage of SDG-Related Patents



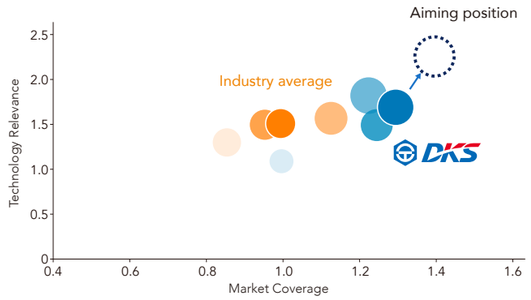
Technical Value of SDG-Related Patents



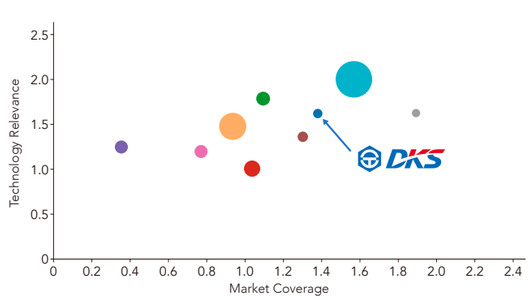
Patent Topics (Battery Adhesives)

As shown in the figure on the right, we do not have as many patents for SDG-related technologies for battery adhesives as other companies; however, we can be described as technologically advanced. Also if we look at changes over time, as shown in the figure on the left, our technological capability in said technologies, the impact of each patent and the number of patents can be said to be in an upward trend, and we intend to improve this further going forward.

Bubble size: Competitive Impact



Bubble size: No. of patent families

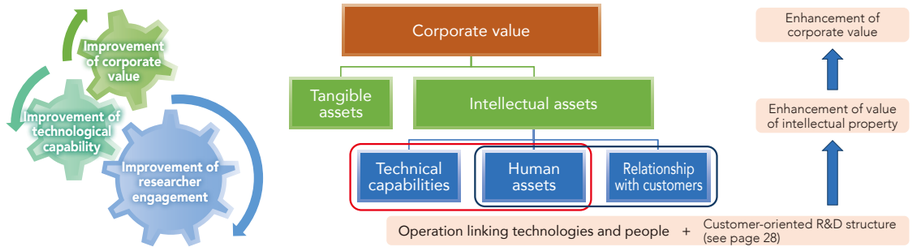


Created using the LexisNexis® PatentSight® (Provided by LexisNexis Japan)

DKS' Intellectual Property (Technologies and Human Capital Assets)

The technologies owned by DKS are supported and underpinned by many experts such as the following members. These experts actively collaborate with other experts both inside and outside the Company to create new technologies. In addition, our young researchers, who are the next generation's human capital, are working hard, aiming to become experts.

By linking technologies and people, in other words, by exercising corporate management from a bird's eye view based on an understanding of both the technologies that are our intellectual property and our human capital, we will simultaneously achieve improvement in our technological capability, improvement in our corporate value, and improvement in researcher engagement.



Technologies underpinned by experts

Satoshi Murakami — General Manager, IT Display Materials R&D Department

Polymer function designing | Ionic liquid | Radiation curing technology

I play a central role in electronic and information technologies, which are a priority field under the FELIZ 115 plan. I have the broad range of knowledge required for these technologies and my technological capability has been widely recognized, for example, I won the Encouragement Prize for Invention at the FY2023 Kinki Regional Invention Awards. I also draw on the technologies of other departments to develop our unique DKS products.

Yuji Hoshihara — Head of Kyoto Research Group, Elexcel R&D Department

Battery evaluation technologies / Battery assembly technologies | Polymer function designing | Ionic liquid

I play a central role in environmental and energy technologies, which are a priority field under the FELIZ 115 plan. I have extensive knowledge spanning material design and battery evaluation, and draw on the wealth of experience I gained in OEM business to help develop innovative materials. I develop products and propose solutions that meet customer needs based on an assessment of the entire value chain.

Toshiya Kimura — Deputy General Manager, Research Department, Gembu Co., Ltd.; Head of Aroma Business Research Group, Research Company, R&D Headquarters, DKS Co., Ltd.

Deodorizing technologies

I am certified as an olfactory measurement operator in Japan and also have knowledge gained from extensive experience working with deodorizing technologies. I was the main person in charge of developing NIOCAN, which has gained a great deal of attention, including winning the NEW ENERGY x FRaU Ethical Award. I propose ways to deal with odors depending on location and circumstances, with the aim of creating comfortable living environments.

Daisuke Saito — Head of Basic Research Group, New Business Development Department, Life Sciences Headquarters

Extraction and drying technologies | Food product application evaluation technologies

I play a key role in the research and development of I. Japonica-Bombyx Fungus. Drawing on a wide range of knowledge stemming from actual experience of plant manufacturing, I have developed technologies for extracting active ingredients. I am also engaged in research into the functionality of Kainou Tochukasou, which contains the useful ingredient Naturido contained in I. Japonica-Bombyx Fungus, and I. Japonica-Bombyx Fungus in terms of increasing testosterone and improving sleep.

Kazutoshi Umeda — Head of Intellectual Property Group, Intellectual Property Department

I am an AIPE-certified intellectual property analyst (patents). The Intellectual Property Department is also engaged in the research and analysis of a wide range of internal and external technical information in addition to patents and I play a central role in this work. I use the results of my research and analysis when communicating with customers and deciding various policies.

Note: The technologies mentioned are those depicted in the diagram on page 74.

Human Resource Management

Material Issues
- Diversity
- Boosting human resource capabilities
- Health and productivity management initiatives
- Earnings power

KPI
- Female manager ratio of 11.6%
- Percentage of employees who exceed abdominal girth standards: 28.8%
- Percentage of employees over 40 years at risk for or experiencing metabolic syndrome: 27.0%
- Reduction of absenteeism ratio to 1.0%
- Work engagement score of 50.8

Human capital is the most important asset for DKS, and we aim to maintain talented human resources and diversity based on the idea of valuing people. We recognize the growth of employees to be the driving force for the development of the Company, leading to a wide range of enhancements in corporate value.

Initiatives to Enhance Human Capital

Strategic Personnel Allocation
We are working on the appropriate allocation of personnel as a measure to utilize our human capital fully. We have launched a project to look into the optimal allocation of personnel at each site, business division, and segment and will work on optimization accordingly.

Results-oriented Personnel Evaluation System
In fiscal 2023, we fully introduced a goal management system for employees at or below the manager level section. Goal management is set in a top-down manner, and one-on-one interviews are conducted to deepen mutual understanding of the goal. In addition, in fiscal 2024, we plan to revise our overall personnel system, including performance evaluation, education, and training. Through this system revision, we are also reviewing the compensation structure to better reward employee contributions.

Target Setting for Human Capital Disclosure Items
This fiscal year, we will set medium- to long-term targets for the figures disclosed in this DKS Report to establish an effective action plan. In addition, if we identify indicators that can energize human capital, we will incorporate them flexibly as we strive for enhanced disclosure.

Promoting Diversity, Human Resource Development and Education

Human Resource Development and Education
Our Company develops human resources who can contribute to our business and customers. The three pillars of our human resource development and education programs are in-house on-the-job training, off-site education to learn technical skills and abilities, and support for self-improvement.

In recent years, we have conducted a fundamental review of the training of new employees and have implemented new methods with a view to making them ready to work immediately after joining the Company. This fiscal year, we plan to energize existing employees by providing them with voluntary business contribution training. Going forward, we will set to work on a two-pronged revamping of our education system consisting of a standardized education system and selective education system.

In addition, we continue to work on company-wide digital transformation (DX) for corporate reform that will revolutionize the way we conduct our business and operations, and we are developing human resources through our "DX Human Resource Development Program" to accelerate DX throughout the Company. By fiscal 2022, approximately 60% of our employees have received DX human resource development training. This has contributed to improving in-house technical skills, including an increase in the number of employees with E-Certification.

Total annual training hours (FY2023)

Number of attendees	Hours of attendance
272 attendees	9,578 hr.s

Initiatives to Promote Diversity
Having set up an Employee Participation and Advancement Promotion Committee chaired by the top management, we are aiming to become a human capital group capable of successfully contributing to improvements in Company performance. We are creating environments in which we can maximize the abilities of diverse employees, and enable them to take an active part in our Company.

Promotion of women's participation and advancement
In addition to work friendly environments that allow female employees to remain at work for many years, we are maintaining employment environments that enable women to develop their careers.

We have implemented measures aimed at having 10.0% or more of managerial positions occupied by female employees. As of March 31, 2024, this figure was 11.6%.

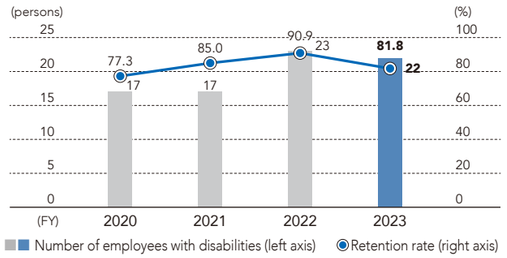
Since fiscal 2019, we have created an environment conducive to the active participation of women at our manufacturing sites, and female employees are taking advantage of their diverse skills in various workplaces in the manufacturing sites, such as the administrative departments, Quality Control Section, and Production Section.

Gender pay gap
As of fiscal 2023, we have publicly announced the gender pay gap. The results are 76.9% for regular workers, 90.2% for non-regular workers, and 77.4% for all workers.

	Women	Men	Pay gap
Regular workers	5,629,905	7,323,027	76.9%
Non-regular workers	3,162,465	3,505,079	90.2%
All workers	5,435,501	7,020,834	77.4%

Employment of people with disabilities
DKS has been working to assign people with disabilities to workplaces that leverage their individual personalities and strengths, and they are currently working as valuable assets in various departments, such as our Personnel Department, General Affairs & Legal Department, and Digital Strategy Department. In February 2022, the DKS Challenge Center was created as a specialized task force for the employment of people with disabilities. We are working to ensure smoother collaboration by sharing the information and expertise from each business site and centralizing operations. In September of the same year, we received recognition from Kyoto prefecture for actively employing individuals with disabilities; this certification is known as "Kyoto Disability Employment Promotion Company" (commonly referred to as "Kyoto Heartful Company"), and our efforts have been well-received and acknowledged.

Number of employees with disabilities and their retention rate



Retiree reemployment system
In reemploying retired applicants as Senior Challenge Staff, DKS conducts *monozukuri* (manufacturing) by handing down senior employees' techniques and skills that make the best use of the experience they have accumulated over many years.

Senior Challenge Staff employment

FY	Number of retirees	Number of reemployments	Reemployment rate
2021	8	6	75.0%
2022	9	8	88.9%
2023	8	8	100%

Promote Work-Style Reform
To support the balance between work and home life, we introduced a telecommuting system in fiscal 2019 and a flextime system in fiscal 2020. DKS is always aiming to improve the work-life balance of our employees.

Total overtime hours for fiscal 2023 were 107.2 hours per employee. As one of the priority measures of "FELIZ 115," we are also working to reform the personnel system to transform our corporate culture to one that reliably rewards those who contribute to the business.

FY	Annual overtime hours	Telecommuting rate (Utilization rate of telecommuting system)*	Rate of annual paid leaves actually taken
2021	151.1 hours per person	14.0% (62.9%)	67.4%
2022	124.9 hours per person	11.8% (62.7%)	73.8%
2023	107.2 hours per person	9.6% (64.2%)	74.6%

* Telecommuting rate = total telecommuting days ÷ total work days × total telecommuting workers × 100
Utilization rate of telecommuting system = system users ÷ total employees × 100

We introduced a new awards system from last fiscal year and held a performance awards ceremony based on the new arrangement in June 2024. The purpose of the changes to the system was to involve not only award winners but also non-award winners through our performance awards, putting in place a framework under which we motivate and inspire each other and continue to create results.

To increase employees' sense of involvement and selection transparency, we adopted an arrangement whereby entrants give presentations and employees then cast votes. This made employees feel that they are part of the process as judges and significantly helped increase their sense of involvement.

In addition, the awards ceremony serves as an opportunity for award winners to communicate their knowledge and know-how directly and for executives to praise and thank them directly, motivating and encouraging both award winners and non-award winners.

By further improving and promoting such initiatives going forward, we will create a positive cycle in which all employees praise each other and also aim to win awards, helping change our corporate culture.

Health and Productivity Management

DKS has a proactive corporate culture toward employee health management, as evidenced by the fact that in 1919, the year after its founding, DKS began implementing health checkups on all employees. Underlying this is our corporate philosophy that people are our assets and must be nurtured and treasured. In 2017, DKS announced its Healthy Company Declaration and began Health and Productivity Management initiatives. One of the goals of our medium-term management plan "FELIZ 115" is the improvement of employee happiness, and we are working to maintain and improve the health of our employees, which is essential to achieving this goal.

Human Resource Management

Healthy Company Declaration: Regarding its employees as Company assets, DKS will strive to maintain and improve their health.

YAMAJI Naoki, President COO, DKS Co., Ltd.

Concept of Health and Productivity Management

Health and Productivity Management ("Kenko Keiei") Initiatives

We aim to bolster the Company's productivity, and thus its corporate value, by maintaining and improving the health of our employees.

Health and Productivity Management ("Kenko Keiei") is a registered trademark of the NPO Kenkokeiei.

These initiatives are reported to meetings attended by officers in charge to obtain approval for plans formulated based on these results.

Efforts in Health and Productivity Management

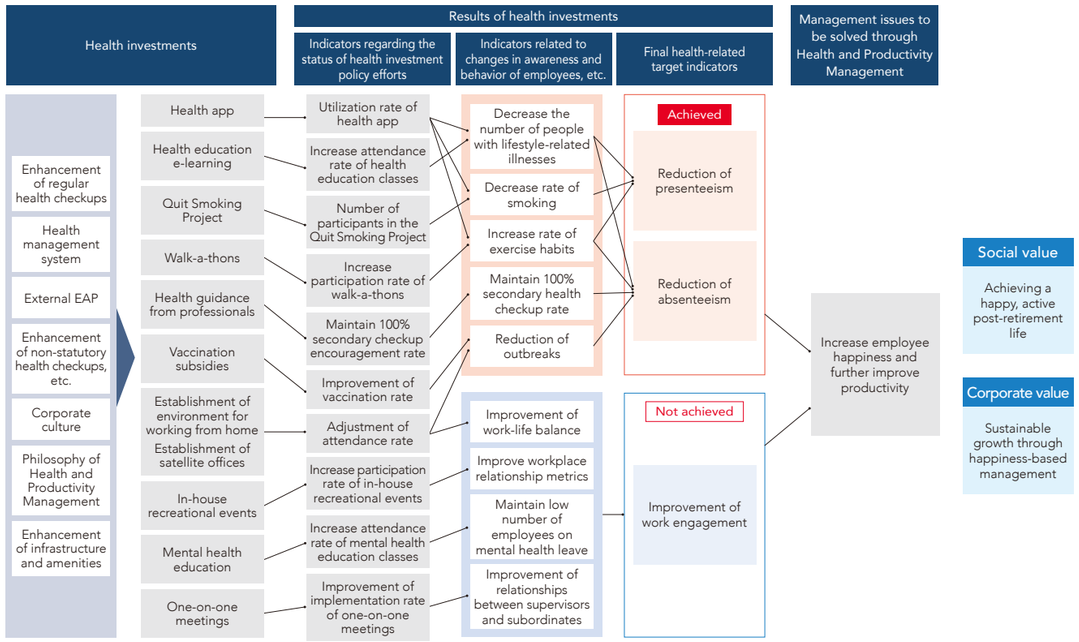
We believe that efforts to maintain and improve the health of our employees will enhance our corporate value in the future. From a managerial perspective, DKS is striving to maintain and improve the health of its employees under its Healthy Company Declaration. We have clearly stated specific healthy actions for employees in our Employee Healthy Action Guidelines, and have established a Health and Productivity Management Promotion Committee to promote health across the Company.

Efforts to establish exercise habits

We are working to establish exercise habits by using an app that registers the number of steps taken on a daily basis. We hold company-wide walk-a-thons regularly and motivate employees by establishing rankings for each individual and department. In addition, we have implemented a system to increase physical activity during the workday, which includes radio calisthenics before work and DKS Calisthenics (a DKS original) at 3:00 p.m., as a preventive measure against illness. As part of efforts to improve not only exercise habits but also eating habits, we encourage the use of health guidance to employees who meet the criteria for metabolic syndrome or pre-metabolic syndrome and provide support to help them make improvements (measures to prevent serious illnesses among those at high risk). In addition, we hold physical fitness seminars for older employees to help them create an environment in which they can continue to exercise. As a result of these efforts, the percentage of employees aged 40 and over with exercising habits increased from 13.6% in fiscal 2016 to 24.5% in fiscal 2023.

Practicing DKS Calisthenics

Strategy map



DKS Trim Waist Award

After distributing DKS original measuring tape to all employees and educating them about abdominal circumference, we have employees self-report changes in their abdominal measurements over time and give out Trim Waist Awards. In addition to DKS Calisthenics, which incorporates movements focused on reducing belly fat, we also support walk-a-thons, No Snacking Day, and Teetotal Day to raise awareness of the need to reduce abdominal circumference.

Collaborative health with insurers

Five individuals took part in an exercise program project at the Kyoto branch of Japan Health Insurance Association. For around two months, participants went to the gym after work and took part in training consisting of flexibility training, aerobic exercise and non-aerobic exercise, without any dietary restrictions. As a result, benefits were observed in areas such as weight loss, relief of shoulder and neck stiffness, improvement of back pain, improvement of physical strength, improvement in sleep quality, and improvement of blood pressure.

Mental health measures

As a mental health measure, DKS has introduced an external Employee Assistance Program (EAP), which provides employees with counseling for their concerns via e-mail, video call, telephone, and in-person sessions. Around-the-clock counseling is available to employees and their relatives up to the second degree of kinship. In fiscal 2023, EAP services were used in 220 cases.

In addition, the participation rate of employees in hierarchical mental health training, which is conducted at milestones such as promotions, was 100%, and the participation rate of mental health education for all employees was 88.0% (both fiscal 2023 results).

Health and Productivity Management Targets

Status of three targets (KPIs and results) for sustainable corporate growth through the implementation of happiness-based management

	Targets for FY2024	FY2019	FY2020	FY2021	FY2022	FY2023
Reduction of absenteeism[1]	Maintain at 2.0% or below	1.6%	0.8%	0.9%	1.2%	1.1%
Reduction of presenteeism[2]	Maintain at 2.0% or below	2.5%	1.3%	1.0%	1.0%	1.4%[4]
Improvement of work engagement[3]	Achieve a normal distribution T-score of 51 or more	49.8	50.8	50.9	50.8	50.8

Please see the glossary p.78- for details on terminology.
1. 2. For measurements, we aggregate data in our labor management system.
3. We use the work engagement measurement values included in the stress check service offered by Advantage Risk Management Co., Ltd.
4. Following a change in measurement method from September 2023, figures are for the period from April to August 2023.

Health Management Targets

Status of four targets (KPIs and results) regarding employee health issues

	Targets for FY2024	FY2019	FY2020	FY2021	FY2022	FY2023
Prevention of health issues among healthy employees: Percentage of employees who exceeded abdominal girth standards	25.0%	30.7%	31.6%	29.2%	28.8%	29.1%
Prevention of aggravation among high-risk employees: Percentage of employees 40 years or older at risk for or experiencing metabolic syndrome	22.0%	26.6%	28.9%	24.7%	27.0%	26.8%
Prevention and early detection of employee mental health issues: Ratio of leave taken by employees with mental health issues	Maintain at 0.20% or below	0.16%	0.00%	0.15%	0.45%	0.14%
Creation of environment leading to quitting smoking: Percentage of employees who smoke	11.4%	21.5%	20.1%	20.5%	19.2%	19.2%

Third-Party Review of Health and Productivity Management

In recognition of its efforts, DKS was selected for the fifth consecutive year as a "Health & Productivity Stock." Also, our affiliate Yokkaichi Chemical Co., Ltd. was certified for the fourth consecutive year as a "Corporation with Excellent Health Management."

Efforts in Health and Productivity Management
https://www.dks-web.co.jp/english/sustainability/society/health/

Yokkaichi Chemical's Efforts in Health and Productivity Management (In Japanese only)
https://yg-chem.co.jp/company/health-management/

Consideration for the Environment

Material Issues
- Responding to decarbonization and reducing environmental burdens
- Contributing to a recycling-oriented society
- Appropriate management of chemical substances

GX Strategy Targets (FY2030, Group)
- Greenhouse gas emissions: 30% reduction (compared to FY2013)
- Energy consumption per unit: 10% reduction (compared to FY2020)
- Generated waste amount per unit: 10% reduction (compared to FY2020)
- Rate of final waste disposal: 0.1% or less (zero emissions)

The Company states its environmental and safety philosophy as "contributing to the sustainable development and realization of happy societies by considering human health, safety and environmental preservation throughout the lifecycle of each product, from development to scrapping," and promotes responsible care activities.

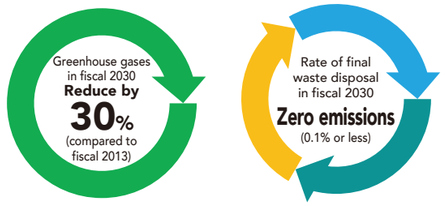
For more information about our responsible care activities, please visit our website.→
https://www.dks-web.co.jp/english/sustainability/governance/responsible-care/

Environmental Conservation Efforts

Long-Term Environmental Vision

To protect lifestyles and increase safety and comfort, DKS contributes to the realization of a sustainable society through our belief that "chemistry provides a solution."

As we look to achieve carbon neutrality by the year 2050, we will reduce the Scope 1 and Scope 2 greenhouse gas emissions of the entire DKS Group in Japan by 30% by fiscal 2030, compared to fiscal 2013. In regard to the rate of final waste disposal, we will aim for zero emissions (0.1% or less) over the entire DKS Group in Japan by fiscal 2030.



Initiatives Based on GX Strategy

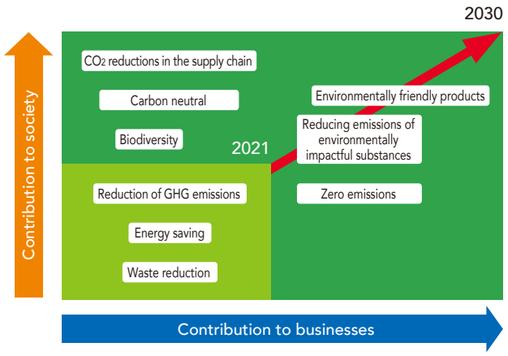
In March 2021, the Company devised green transformation (GX) strategies for aiming toward carbon neutrality by 2030 and beyond 2050. Starting in fiscal 2021, we have been shifting to a forecasting and analysis approach that is informed by these strategies. As we strengthen our current initiatives, we will also expand our targets to initiatives that take the sustainability of broader society into consideration.

In fiscal 2023, we focused on improving process efficiency at our high-energy consuming plants, optimizing equipment operating hours, and increasing the efficiency of our distillation towers used for solvent recovery. We also installed energy-saving equipment, such as LED lighting and high-efficiency steam traps.

As a result, we reduced greenhouse gas emissions 7.2% compared to the previous fiscal year and 23.1% compared to fiscal 2013. To achieve carbon neutrality, we will continue to promote energy-saving initiatives, increase the procurement of electricity generated from renewable energy sources, and install solar power systems.

Additionally, we sold waste solvents, reducing our waste per unit by 4.8% year on year. We also systematically promoted the recycling of sludge from wastewater treatment facilities, improving the final disposal rate by 1.5 percentage points.

GX Strategy Targets



Biodiversity Conservation

We use raw materials derived from palm oil in the production of some of our products. Although palm oil is efficient to produce due to its high yield per unit area, there are concerns regarding deforestation and human rights violations associated with palm plantation development.

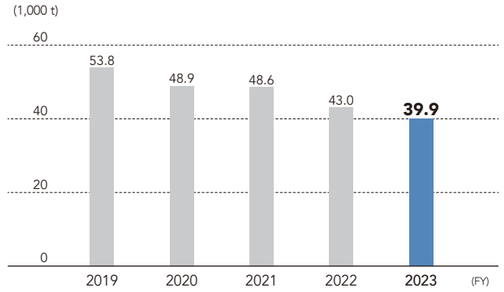
Since 2014, we have been a member of the Roundtable on Sustainable Palm Oil (RSPO) and have obtained Supply Chain Certification. By expanding our lineup of sustainable RSPO-certified products, we aim to contribute to the conservation of biodiversity.

CERTIFIED SUSTAINABLE PALM OIL™ RSPO

2-0889-18-100-00

Changes in Greenhouse Gas Emissions

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

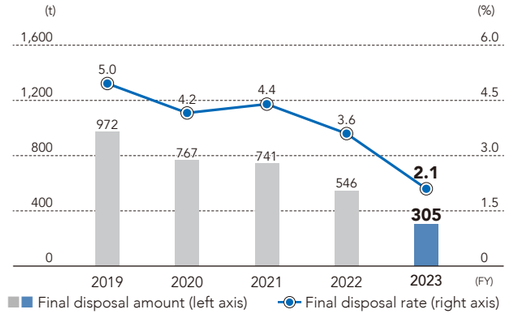


Notes:
1. Administrative departments include fuel for company-owned vehicles.
2. Subsidiary companies include Yokkaichi Chemical Co., Ltd., Kyoto Elex Co., Ltd., Daiichi Ceramo Co., Ltd., as well as Ikeda Yakusou Co., Ltd. as of FY2019 and Biococoon Laboratories, Inc. as of FY2020.

* Greenhouse gas emissions for fiscal 2023 were calculated based on the revised Act on the Rational Use of Energy.

Changes in Final Disposal Amount and Final Disposal Rate

(Yokkaichi, Ohgata, Shiga, Tanagura, Kyoto, domestic subsidiaries)



Notes:
1. The final disposal rate is the ratio of the final disposal amount to the total amount generated.
2. Subsidiary companies include Yokkaichi Chemical Co., Ltd., Kyoto Elex Co., Ltd., Daiichi Ceramo Co., Ltd., and Ikeda Yakusou Co., Ltd. as of FY2019.

Environmental Targets and Fiscal 2023 Results

Evaluation A: Significant result B: Result in line with the target C: Target unachieved D: Underperformed by a wide margin

Target parameter	Reference years	FY2023 targets	Medium-term environmental targets (FY2024)	GX strategy targets (FY2030)	Target scope	FY2023 results	Evaluation
Greenhouse gas emissions[1]	FY2013	9% reduction	12% reduction	30% reduction	Group	23.1% reduction	A
Energy consumption per unit[2] *Based on the standards of the Act on the Rational Use of Energy	FY2020	3% reduction	4% reduction	10% reduction	Individual	18.5% reduction	A
					Group	5.9% reduction	B
Generated waste amount per unit *To amount produced	FY2020	3% reduction	4% reduction	10% reduction	Group	19.5% reduction	A
Rate of final waste disposal[3]	–	0.1% or less	0.1% or less	0.1% or less	Individual	0.2%	C
	–	1.7% or less	0.5% or less	0.1% or less	Group	2.1%	C

Target parameter	Management items	FY2023 targets	FY2023 results	Evaluation	FY2024 targets
Reduction of environmental impact substance emissions	SOx emissions	Reduce emissions of environmental pollutants into the air	Down 11.3% YoY	A	Reduce emissions of environmental pollutants in the air
	NOx emissions		Down 4.3% YoY	B	
	Dust emissions		Up 0.4% YoY	C	
	Water discharge	Reduce emissions of environmental pollutants into water	Up 3.1% YoY	C	Reduce emissions of environmental pollutants in water
	COD emissions		Down 14.7% YoY	A	
Proper management of chemical substances	PRTR Regulation-designated substances emissions	Reduce emissions of PRTR Regulation-designated substances	Down 28.5% YoY	A	Reduce emissions of PRTR Regulation-designated substances
Promotion of green procurement		Improve green procurement ratio for paper and stationery	58.1% (down 12.1 percentage points YoY)	D	Improve green procurement ratio for paper and stationery
Elimination of disasters/accidents		Achieve zero environment-related accidents	Zero accidents	B	Achieve zero environment-related accidents
		Comply with environmental laws and regulations	Violation of environment-related laws and regulations: 1	D	Comply with environmental laws and regulations
Environmental management system		Promoting our environmental management system	Maintained	B	Promoting our environmental management system

1. Derived from energy use in the production and administrative departments. Greenhouse gas emissions for fiscal 2023 were calculated based on the revised Act on the Rational Use of Energy.
2. Energy consumption per unit for fiscal 2023 was calculated based on the revised Act on the Rational Use of Energy.
3. The ratio of the final disposal amount to the generated waste amount

▶ For detailed data on energy, waste, environmentally impactful substances, and chemicals subject to the PRTR Regulation, see the ESG Data Book (https://www.dks-web.co.jp/english/ir/library/index.html)

TOPIC

Eco Rail Mark Certification

We transport products from our factories to customers and logistics centers across Japan by land. As the CO_2 emissions per unit of rail freight are about one-tenth of those of truck freight, we are promoting a modal shift to rail container transport for long-distance shipments to reduce emissions. As of November 10, 2023, we were certified as an Eco Rail Mark company, with 25.4% of shipments over 500 kilometers transported by rail. Our goal for fiscal 2030 is to increase the share of shipments transported by rail to at least 40%.

エコレールマーク

DKS has been certified as an Eco Rail Mark company by the Eco Rail Mark Administration and Evaluation Committee established by the Ministry of Land, Infrastructure, Transport and Tourism and managed by the Railway Freight Association. This certification recognizes companies that significantly use environmentally friendly rail freight transportation.

Initiatives to Tackle Climate Change

Material issue
- Responding to decarbonization and reducing environmental impact

In March 2022, DKS pledged its commitment to the Task Force on Climate Related Financial Disclosures (TCFD), based on a recognition of how important the risks and opportunities of climate change are to our business. We will promote the disclosure of information regarding the impact that climate change has on the business activities of the Company, and aim to achieve a sustainable society by striving to realize a decarbonized society throughout the entire supply chain.

TCFD TASK FORCE on CLIMATE-RELATED FINANCIAL DISCLOSURES

TCFD Consortium

For details on the disclosure of information related to climate change, see our company website →
https://www.dks-web.co.jp/english/sustainability/ecology/climate-change/

1 Governance

DKS has established the Sustainability Committee, comprised of members of the Management Committee, with sustainability-related committees and meetings falling under its remit. The Sustainability Committee decides on policies, deliberates on matters to be discussed, makes decisions, and confirms the status of company activities. It also considers and promotes initiatives together with the Climate Change Working Group, the Human Capital Management Working Group, and the Human Rights Working Group which all come under the Committee. Findings and progress reports are made to the Board of Directors at least once a year with strategies, targets, and plans reviewed accordingly.

2 Strategy

Because the impact of climate change is highly likely to become apparent in the medium to long term, we are working on deepening our understanding of the major risks and opportunities related to climate change, which are expected to financially impact our business in the medium- to long-term. In regard to the evaluation of climate change risks and opportunities, we refer to the climate change scenarios of the International Energy Agency (IEA) and Intergovernmental Panel on Climate Change (IPCC) to identify the risks and opportunities that will affect our entire business. While improving our understanding of the expected risks and opportunities from a medium- to long-term perspective, we will plan and execute strategies across a timeline.

3 Risk Management

In regard to overall risk management at DKS, we systematically promote activities by periodically holding Risk Management Control Committee meetings attended by representatives of subsidiaries and each department, and headed by the executive officer in charge of risk management.

4 Indices and Targets

We have defined our long-term goals, including consolidated net sales of ¥100 billion and the reduction of greenhouse gas emissions, in a new management plan for the year 2030, called "SMART 2030 (tentative title)." The process for achieving our long-term goals involves creating a medium-term environmental plan for the years up to fiscal 2024 based on the "FELIZ 115" medium-term management plan, and working to save energy, reduce greenhouse gas emissions, and reduce waste. We have also formulated long-term green transformation (GX) strategies that aim to achieve carbon neutrality by the year 2050, and are promoting efforts for decarbonization. Yokkaichi Chemical has switched to carbon-free electricity at its Rokuromi Plant from June 2022. Chin Yee Chemical Industries in Taiwan installed 1,328 solar panels at its Guanyin Plant and began generating electricity at the end of 2022. In addition to conserving energy, we will expand the use of renewable energy and reduce greenhouse gas emissions.

Target

Reducing the Scope 1 and Scope 2 greenhouse gas emissions of the entire DKS Group in Japan by 30% by fiscal 2030, compared to fiscal 2013

GHG emissions (Scope 1-3)
(DKS non-consolidated)

(1,000 t-CO_2e)

Scope / Category			FY2023 emissions
Scope 1			12.6
Scope 2			11.5
Scope 3			184.0
	Category 1	Purchased Goods and Services	158.2
	Category 2	Capital Goods	4.3
	Category 3	Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	10.3
	Category 4	Upstream Transportation and Distribution	5.8
	Category 5	Waste Generated in Operations	5.1
	Category 6	Business Travel	0.1
	Category 7	Employee Commuting	0.2

To evaluate greenhouse gas emissions throughout the entire supply chain, we calculated Scope 3 emissions (Categories 1 to 7). Of our total Scope 1, 2, and 3 emissions, Scope 3 emissions are the largest, accounting for 88% of the total, with Category 1 emissions (purchased goods and services) being 86% of Scope 3 emissions. Moving forward, we will pursue initiatives to reduce Scope 3 emissions. Additionally, we will expand our scope of calculation from DKS individually to include the entire Group.

Scenario Analysis

Impact Evaluation Based on Scenario Analysis

To assess the impact of climate change risks and opportunities on our business activities and strengthen the resilience of our business strategies toward these impacts, we conduct scenario analysis in line with the TCFD recommendations. In reference to climate change scenarios published by the IEA, IPCC and other organizations, we use a less than 1.5°C/2°C scenario for transition risks, which presupposes tighter measures such as carbon pricing, and a 4°C scenario for physical risks, which presupposes more severe disasters. In assessing the impact these scenarios would have on our business, we evaluate and rank in order of priority the degree of impact on our business and finances and their degree of urgency for when the impact becomes apparent. As a result of the scenario analysis, we found that there would be significant impact from policy risks such as the introduction of carbon pricing, especially a significant impact from higher prices passed on to raw materials with the introduction of a carbon tax. Meanwhile, the impact on factories due to the increasing severity of disasters as a physical risk is expected to increase over the medium to long term. In preparation for the transition to a decarbonized society, we will continue to conduct scenario analysis and respond appropriately to risks and opportunities.

Classification	Risk / Opportunity	Urgency Level	Impact Level	Impact on Business	DKS Countermeasures
Transition	Increasing environmental awareness (changes in demand)	Medium Term	Medium	• Increase in demand for products with low environmental impact • Decrease in demand for petrochemical-derived products	• Development and wider sales of eco-friendly products • Move to non-petrochemical derived and renewable raw materials • Expansion of life science business centered on natural materials
Transition	Introduction of carbon pricing	Short Term	Medium	• Greater tax burden due to introduction of carbon tax • Increase in costs due to emissions trading	• Reductions based on GHG emissions plan • Securing and utilizing appropriate credit • Operation of internal carbon pricing
Transition	Development of energy saving technology	Long Term	Medium	• Less energy consumption with introduction of new technologies • Lower power generation costs with more widespread use of renewable energy	• Planned introduction of energy-saving equipment • Expanding the use of renewable energy • Conversion to new energy (hydrogen, ammonia fuel use, etc.)
Transition	Rise in raw material prices	Medium Term	Large	• Increase in procurement costs due to carbon tax passed on to raw material prices	• Switching to non-petrochemical derived raw materials • Risk diversification from multiple purchasing channels for raw materials
Transition	Rise in fuel prices	Medium Term	Small	• Increase in logistics costs due to carbon tax passed on to fuel prices	• Improving load factor in transportation • Promoting modal shift
Physical	More frequent natural disasters	Medium Term	Medium	• Higher risk of suspended operations at plants and with suppliers • Higher risk of disruption to logistics network (raw material procurement, sales)	• Strengthening measures based on business continuity plans • Multiple purchasing channels for raw materials • Wider range of locations and review of manufacturing sites and logistics bases to spread out inventory holdings
Physical	Rising temperatures, rising sea levels	Long Term	Small	• Higher risk of flood damage from rising water levels • Changes in the price and quality of plant-based raw materials • Higher risk of damage to employee health	• Strengthening measures based on business continuity plans • Exploration and development of raw material alternatives • Strengthening work environment and heat countermeasures

Urgency Level Short Term within 5 years Medium Term within 10 years Long Term within 30 years
Impact Level Large At least ¥3bn impact on profits Medium At least ¥1bn impact on profits Small Less than ¥1bn impact on profits

Initiatives for a Decarbonized Society

As a result of scenario analysis, we confirmed that there will be greater demand for products with a low impact on the environment due to increased environmental awareness.

Our products and technologies give us an opportunity to expand our business by identifying new market needs for climate change countermeasures. We are mitigating the progression of climate change related risks through products that contribute to energy-saving by shortening manufacturing processes and products that contribute to the realization of clean energy for preventing global warming. As a smart chemical partner solving climate change issues through the power of chemistry, we contribute to the realization of a sustainable society.

Market needs	Value provided	DKS technologies and products
Energy and resource saving	Saving energy by shortening manufacturing processes	Solvent-free UV-curable materials
	Preventing product deterioration	Polyurethane resin sealants for electric insulation
Preventing global warming	Achieving clean energy	Binder for lithium-ion batteries, gel electrolyte polymers, conductive paste for solar cells
	Reducing greenhouse gas emissions	Environmentally friendly synthetic lubricants related to CFC regulations

Initiatives to Ensure Respect for Human Rights

Material issues
- Diversity
- Promoting occupational safety and health
- Co-prosperity with the supply chain
- Further deepening of corporate governance

Basic Policy on Human Rights

The DKS Group (DKS Co., Ltd. and its Group companies, hereinafter the "Group") believes that respecting human rights is an essential part of its fulfillment of its social responsibilities and the achievement of its credo of "Contributing to the nation and society through industry." With this in mind, the Group has established the Corporate Ethics Charter and the Declaration of Conduct for Executives and Employees to promote human rights initiatives. To uphold the rights of all individuals affected by our business activities and fulfill our responsibility, we have formulated the DKS Group Human Rights Policy based on international human rights standards.

We recognize that respecting human rights is fundamental to all of our business activities, and we are committed to respecting the rights of all people. The Group supports and adheres to international human rights standards, including the United Nations International Bill of Human Rights, the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work, and the ten principles of the United Nations Global Compact (UNGC). Our Human Rights Policy is aligned with the United Nations Guiding Principles on Business and Human Rights and the Japanese government's Guidelines on Respecting Human Rights in Responsible Supply Chains. We will continue to advance our efforts to respect human rights.

For more information about the DKS Group Human Rights Policy, please visit our website. →
https://www.dks-web.co.jp/english/sustainability/society/human-rights/

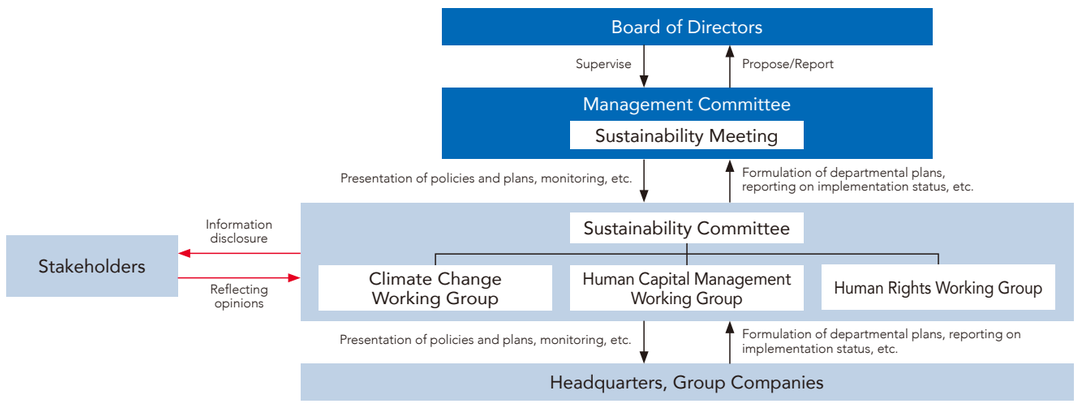
Implementation Structure

The Sustainability Committee, chaired by the Executive General Manager of the Administrative Headquarters and overseen by the Board of Directors, reviews the human rights policy, related initiatives, and the status of their implementation. Subordinate to this Committee, we have established three specialized working groups (WGs) focused on climate change, human capital management, and human rights. These groups conduct in-depth discussions focused on their respective areas.

Based on the discussions of the Sustainability Committee and the Board of Directors, Group-wide initiatives are implemented by Headquarters and Group companies.

Sustainability Committee

Composition	
Chair:	Executive General Manager, Administrative Headquarters
Members:	Business Administration Department, Quality Assurance Department, Human Resources Department, Public & Investor Relations Department
Convened:	Monthly
Working group members:	Research Department, Human Resources Department, Procurement Department, Sales Department, Quality Assurance Department, Public & Investor Relations Department, etc.



Support for the Global Compact

Human Rights Due Diligence

The Group has established a human rights due diligence (HRDD) framework based on the United Nations Guiding Principles on Business and Human Rights and the Japanese government's Guidelines on Respecting Human Rights in Responsible Supply Chains. Through the HRDD process, we identify, prevent, and mitigate any actual or potential negative impact our business activities may have on human rights. We also assess the effectiveness of these measures and disclose how we address any impact our activities may have. If it becomes evident during the HRDD process that our business activities have been the cause of or contributed to any matter negatively impacting human rights, we will take appropriate corrective actions, implement mitigation measures, and prevent the recurrence of similar issues to fulfill our responsibility to respect human rights.

Additionally, even if our own activities have not been the cause of or contributed to any matter negatively impacting human rights, if it is discovered that our business, products, or services are directly linked to anything negatively impacting human rights, we will make efforts to prevent or mitigate this by exerting influence or providing support to the companies responsible.

Remedial Measures

The Group has established both internal and external channels for stakeholders to report human rights issues or other concerns or seek advice regarding them.

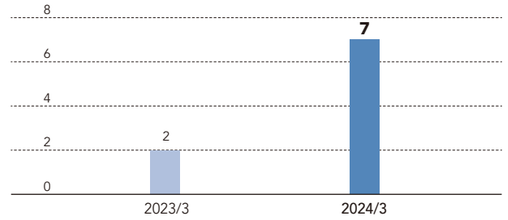
If it becomes evident that our business activities have been the cause of or contributed to any matter negatively impacting human rights, we are committed to taking corrective and remedial actions.

COMMUNICATION ON PROGRESS
UN GLOBAL COMPACT
This is our **Communication on Progress** in implementing the Ten Principles of the **United Nations Global Compact** and supporting broader UN goals.
We welcome feedback on its contents.

Overview of Human Rights Initiatives

Three actions	Specific initiatives
Commitment under the policy	Establishment of a human rights policy • Establishment of the DKS Group Human Rights Policy
Conducting HRDD	Evaluation of impacts on human rights • Evaluation of the negative impact of business activities on human rights • Identification of key human rights risks Development and implementation of countermeasures • Review, evaluation, and improvement of existing initiatives • Development and implementation of additional measures • Offering education and training, etc. External disclosure • Information disclosure through the website, the DKS Report, etc. Implementation of monitoring (follow-up investigation) • Regular review of the progress in initiatives and improvements
Establishment of remedies to address human rights violations	Establishment of grievance mechanism • Establishment of consultation channels for internal and external stakeholders

Number of Times the Hotline Has Been Used



Occupational Safety Initiatives

Continuous Improvement through the Occupational Safety and Health Management System

We recognize that ensuring the safety and health of our workers is the foundation of our business activities. To this end, we have established policies subordinate to the Environmental Conservation, Health and Safety Management Regulations. We have also obtained the certification of the Occupational Safety and Health Management Systems (JIS Q 45100) at our three domestic plants.

In 2023, the Group experienced lost workday injuries at the same level as the previous year, resulting in a steady occupational accident frequency rate (lost time). We have taken appropriate corrective actions and implemented thorough measures to prevent recurrence. In 2024, we aim to achieve zero occupational accidents (lost time) by strengthening our risk assessments and other safety activities.

Implementation of Hands-on Safety Education

Established in February 2017, our safety training center at the Yokkaichi Branch Kasumi Plant is equipped with hands-on training devices designed to enhance employees' awareness of potential abnormalities and dangers. A mini-plant has also been established to help employees better understand the basic principles of equipment and processes. In fiscal 2023, a total of 70 employees participated in hands-on safety training and related programs using these facilities.

For our FY2023 Initiatives for Sustainable Growth – Securing Safety and Disaster Prevention, please visit our website. →
https://www.dks-web.co.jp/english/ir/library/index.html

DX Efforts

DX認定

Material issues
- Utilization and promotion of digital technology
- Cybersecurity measures
- Digital literacy education

KPI
- Launch of the Integrated Work Management System
- Launch of the Management Information Platform
- Implementation of security training for the Risk Management Control Committee
- Addition of security training to the DX Human Resource Development Training program for new employees
- Hosting of DX training sessions
- Acquisition of relevant certifications

DX at DKS aims to increase added value, improve work efficiency, and eliminate inefficiencies. In order to realize these ideas, we are implementing reforms for client contribution, business contribution, and data-driven management, and promoting the creation of the foundation for achieving our next medium-term management plan, with the tentative title of "SMART 2030" (tentative title).

Company-wide Project

Aim of DX Project

The goal of the seven priority measures set forth in our medium-term management plan "FELIZ 115" is to reform the value chain and build a highly productive, profitable, and high-speed foundation that is free of inefficiencies, waste, and irregularities.

Digitalization is an essential part of the construction of this foundation, which is why we launched a company-wide DX project in 2021. To implement the basic concept of the DX project, we are working on three key themes:

(1) Digitalization of work
(2) Digital monitoring of work progress
(3) Building digital data for intra-organizational activities

To support the digitalization of our operations, we have created approximately 1,200 workflows across the Company. These workflows are digitally monitored by registering them, which enables us to track work progress. This has resulted in a 60% reduction of overtime at the Administrative Headquarters, which manages over half of these workflows. Lastly, to accumulate digital data for intra-organizational activities, we have developed a Management Information Platform, which provides a daily overview of orders, inventory and expenses. This has created an environment where management and on-site teams can access the same data, which reduces the workload for report preparation.

Through our DX project, we are leveraging digital technology to transform productivity and work styles, both in the office and in the field, creating new value and paving the way for our next management plan as we head toward 2030.

Basic Concept of DX Project

1. DX from management perspective: Reform the corporate culture from the perspectives of the customer, profit, and overall optimization

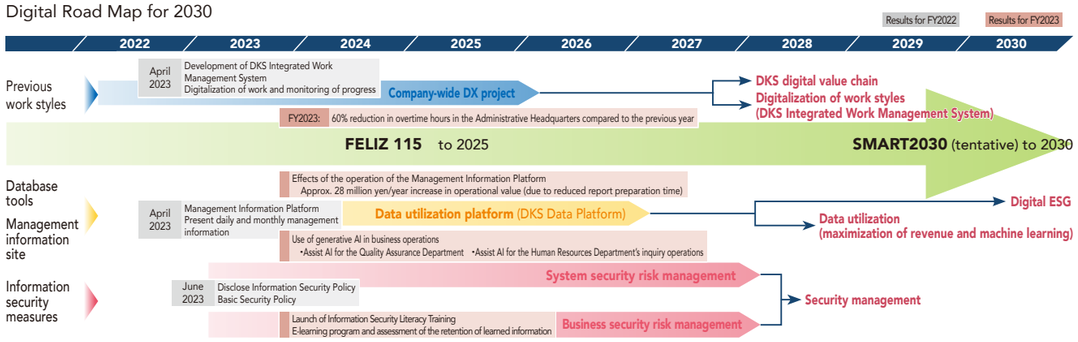
(1) Build and digitalize a value chain in line with the essence of a fine chemical manufacturer
(2) Digitalize solutions to the problems faced by the Company
(3) Promote DX from the five perspectives* that management wants to focus on
* Perspectives of the customer, finance, work processes, human resource cultivation and reform, and SDGs
(4) Clarify and promote the financial statement improvement effect of the themes we are working on
(5) Minimum required investment (effective utilization of in-house human resources)

Transform into the Most Valuable Solution Provider

2. Priority of activities: Prioritize the efforts for transforming the corporate culture

Priority 1 DX for solving company-wide issues: Promote intra-organizational activities as a company-wide project consisting of members of relevant departments
Priority 2 DX for solving unique issues faced by each Headquarters: Promote in each headquarters
Priority 3 DX for solving unique issues faced by each department: Promote in each department

Digital Road Map for 2030



Security Management

The advancement of digitization has transformed the way we conduct business and operate, as well as the way we engage with stakeholders, not just within the Company but also throughout the entire value chain. This shift has created a need for more comprehensive security measures that go beyond traditional approaches to information security.

At DKS, we have established the Information Security Policy as our fundamental framework for security management. Based on this policy, we have revised and implemented our information security rules. Employee security training and the development of response protocols for various incidents are among other measures we are taking to protect our systems as a part of our broader DX efforts.

Information Security Policy

(1) Management responsibility
We will work to improve and enhance information security under the leadership of management.

(2) Establishment of internal systems
We will establish an organization to maintain and improve information security, and will work systematically and continuously on information security measures.

(3) Employee engagements
Our employees will acquire the knowledge and skills required for information security and will ensure information security efforts.

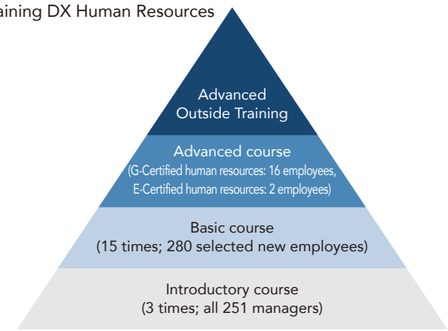
(4) Compliance with laws, regulations and contractual requirements
We will comply with all laws, regulations, codes, and contractual obligations related to information security, and meet the expectations of its customers.

(5) Response to violations and accidents
In the event of violation of laws, regulations, contracts, or an accident related to information security, we will take appropriate action and work to prevent recurrence.

DX Human Resources Development and Implementation

DKS provides a comprehensive training system to ensure that all employees acquire essential skills for digital literacy. Each year, we offer a basic DX Human Resource Development Training course, primarily for new employees, covering the basics of programming and information security. In the advanced course, we support employees obtaining certifications, such as the JDLA Deep Learning for GENERAL (G-Certificate) and ENGINEER (E-Certificate) certifications to help visualize their skills. Our trained employees are also given opportunities to use their skills to improve business processes by developing apps using low-code tools. To date, we have developed approximately 80 apps using BI tools, leading to an annual reduction of 7,000 hours of work. In our production facilities, we are developing apps to support 5S activities in the workplace and to track the work progress, with some locations currently testing these apps. By sharing these success stories internally, we aim to inspire further improvement, foster a community of internal developers, and facilitate the exchange of best practices. We encourage employees with advanced skills to collaborate across departments to promote the improvement of business, providing more opportunities for our trained workforce to contribute.

Training DX Human Resources



*Total recipients through fiscal 2023

TOPIC

Utilizing Generative AI: Quality Assurance Department Assist AI

Our Quality Assurance Department prepares more than 10,000 documents annually for our customers. This process requires employees to search through a large number of internal records, including raw material and quality inspection data, and multiple team members are involved in content review, making it a time-consuming process. By using a generative AI-driven system to streamline this process, we have reduced search time by up to 90%.

Following this success, several other departments suggested applying the system in other areas, leading to the development of a company-wide Assist AI initiative.

We will continue to use generative AI to improve operational efficiency.

Contributing to a Collaborative Society

Material issue
- Regional revitalization
- Co-prosperity with the supply chain

The population concentration in cities and regional depopulation are major social problems for Japan. In order to solve these problems, we work to promote regional revitalization through our business and promote business in alignment with the philosophy of the SDGs together with all stakeholders in our supply chain.

Efforts for Regional Revitalization

Efforts for Sericulture Innovation

Biococoon Laboratories Inc., one of our Group companies, advocates "Sericulture Innovation" that adds the perspective of chemistry to traditional sericulture. This initiative aims to achieve a healthy long-lived society by developing together with our primary industry operators and local governments. It aims to utilize sericulture resources such as mulberry trees, silk, cocoons, silkworms, and pupae to achieve regional revitalization via farmers, whose numbers have been declining*. Furthermore, the 100-million mulberry tree planting campaign aims to create a healthy long-lived society by generating a cycle of reducing CO_2 emissions by planting trees, effectively utilizing abandoned fields and rice paddies, creating regional employment opportunities for seniors, securing stable incomes, and establishing a supply chain for I. Japonica-Bombyx Fungus.

Furthermore, we aim to expand into the cutting-edge fields of pharmaceuticals, foods, cosmetics, and other areas that are currently receiving attention, with a focus on reducing healthcare costs through the prevention of dementia and frailty.

In August 2021, the Company signed a comprehensive partnership agreement with Yabu City of Hyogo Prefecture to work on regional revitalization for the goal of contributing to the SDGs through Sericulture Innovation. The agreement aims to create abundant value via the utilization of physical resources and the mutual interaction of human and intellectual resources, and promotes the development of regional industry, sericulture business including the cultivation of mulberry trees, and research into cognitive functions and dementia.

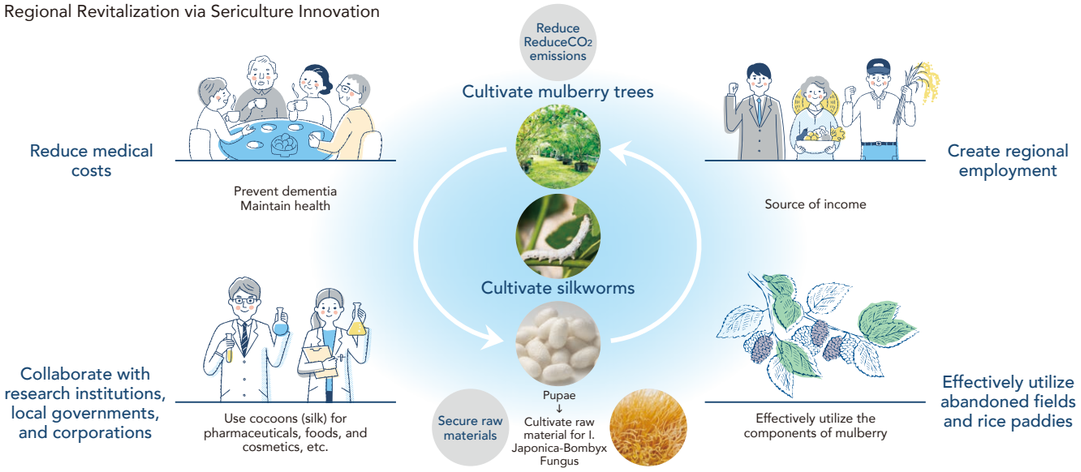
* Number of sericultural households in Japan decreased from 3,280 households in the year 2000 to 61 households in 2021
Source: The Dainippon Silk Foundation

Sericulture Innovation and Expected Effects

Description of activity		Expected effects		
Cultivate mulberry trees to feed silkworms		• Create regional employment (income)	• Create sense of purpose for senior generation	• Vitalize regional community
		• Effectively utilize abandoned fields and rice paddies	• Reduce medical costs by preventing dementia and frailty	• Reduce CO_2
Cultivate silkworms		• Create regional employment (income)	• Revitalize the sericulture industry	• Reduce medical costs by preventing dementia and aging frailty
		• Passing down ancient Japanese sericulture techniques	• Create sense of purpose for senior generation	
Cocoons are utilized for various purposes	Silk	• Utilize in silk products	• Adopt for cutting-edge fields in the pharmaceuticals, foods, and cosmetics industries	
	Pupae	• Utilize as raw material for I. Japonica-Bombyx Fungus manufactured and sold by DKS		

* Sericulture Innovation is a registered trademark in Japan of Biococoon Laboratories Inc.

Regional Revitalization via Sericulture Innovation



Initiatives to Effectively Utilize Industrial Waste

Tokushima Prefecture considers waste a new resource and has implemented the Tokushima Prefecture Recycling Certification System, which certifies recycled products made from waste and business sites actively working on the 3Rs[1].

Ikeda Yakusou, our subsidiary company located in Tokushima Prefecture, is promoting a Sudachi Innovation Business (sudachi is a Japanese citrus fruit) that thoroughly utilizes sudachi peels within its industry-government-academia collaboration with Tokushima Prefecture and Tokushima University. In March 2022, it became a Tokushima Prefecture Certified 3R Model Business Site in recognition of its work manufacturing and selling Sudachin and sudachi essential oil, which are upcycled[2] products that effectively utilize industrial waste (sudachi peels after juice extraction).

In the summer of 2023, the company added essential oils made from the peels of the Japanese citrus fruits yuzu and

yukou to its product lineup. It will continue to develop products based on the concept of environmentally friendly products loved by the community by utilizing unused resources that would otherwise go to waste.

1. Stands for Reduce, Reuse, and Recycle
2. Upcycling refers to transforming waste and unused items that would have been thrown away into new products

2023 Japan Food Hygiene Association Chairman's Award Received

In October 2023, we were honored with the 2023 Japan Food Hygiene Association Chairman's Award for excellence in food hygiene at the National Food Hygiene Conference organized by the Ministry of Health, Labour and Welfare and the Japan Food Hygiene Association.

This award is given to facilities that maintain high sanitation standards, ensure employees receive thorough health management and food sanitation education, and have excellent comprehensive hygiene management.

Ikeda Yakusou has consistently maintained strict quality control at its pharmaceutical-grade facility.

This recognition of our long-standing efforts in food management, hygiene awareness, and employee health management inspires us to continue to reinforce our quality control practices and provide safe, reliable products.

Co-Prosperity with the Supply Chain

As part of efforts to replace petrochemical materials with renewable resources, DKS reviews natural materials such as plants and microorganisms and transforms them into highly functional materials to meet customer needs.

Furthermore, we promote corporate activities together with all stakeholders in our supply chain to address the problem of food waste, such as our efforts for effectively utilizing the residue left over after extracting the juice of sudachi. We also promote appropriate supply chain management via our trusted relationships cultivated over long years with our dealers and inspiring/inspired partners. In October 2021, we announced our "Building Partnerships Declaration." We will aim to build new partnerships by promoting cooperation and co-prosperity with businesses working to create value and our partners in the supply chain.

The Company states the following individual actions in this declaration:

- **Contributing to efforts for regional revitalization**
  We aim to grow together with the region by contributing to efforts for regional revitalization.
- **Assisting Health and Productivity Management**
  We will implement and promote Health and Productivity Management and assist our business partners in their Health and Productivity Management activities.

パートナーシップ構築宣言

TOPIC

Gembu Receives Letter of Appreciation from the JAOE for Supporting Earthquake Relief on the Noto Peninsula by Providing Free Deodorizer Supplies

Letter of appreciation and plaque presented to Gembu

On April 11, 2024, Gembu Co., Ltd., a subsidiary of DKS, received a letter of appreciation from the Japan Association on Odor Environment (JAOE) for its contribution to the earthquake relief efforts on the Noto Peninsula through its donation of deodorizing products.

Following the Noto Peninsula earthquake on January 1, 2024, the Ministry of the Environment requested that the JAOE assist in disaster relief efforts. On January 9, the association reached out to its corporate members, including Gembu, requesting the free provision of deodorizing, air-freshening, and odor-eliminating products for temporary toilets and evacuation shelters to help improve the living conditions of displaced residents.

In response, Gembu provided 300 eco-friendly gel deodorizers and 60 Osoji-Ban vomit cleaner products to Nanao City in Ishikawa Prefecture, along with 84 bottles of DKS' NIOCAN® deodorizing and sanitizing agent. Additionally, upon further request, Gembu supplied 100 more eco-friendly gel deodorizers to Noto Town in the Hosu District of Ishikawa Prefecture.

The DKS Group will continue to strive to develop products that improve everyone's living environment.

Quality Management

Material issues
- Thorough quality assurance system
- Promoting occupational safety and health

To meet the needs of customers and society and earn their trust, it is essential to improve the quality of the products and services we provide. At DKS, we consider quality from the four perspectives of "design and development," "production," "sales," and "customer service," and we are working to improve quality in cooperation with our customers and suppliers.

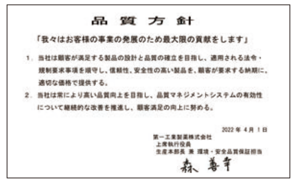
For details on quality and safety management, please visit our website. →
https://www.dks-web.co.jp/english/sustainability/governance/quality-management/

Quality Assurance/Quality Policy

As a chemical partner conveying the essence of high functionality for the future, we will provide customers with safer, higher-quality products that maximally contribute to the development of their business. To realize this, we engage in quality control using the PDCA cycle based on our fundamental quality assurance and quality policy in an effort to improve quality and customer satisfaction.

Fundamental Quality Assurance

1. We establish quality-related management standards for each department that cover the entire process, from product planning to customer service through design and 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, operate, and maintain a quality management system and promote initiatives for ongoing improvements.
3. All our employees must observe this basic concept of quality assurance and carry out tasks in accordance with the Quality Assurance Management Regulations.


品　質　方　針
「我々はお客様の事業の発展のため最大限の貢献をします」
1. 当社は顧客が満足する製品の設計と品質の確立を目指し、適用される法令・規制要求事項を順守し、信頼性、安全性の高い製品を、顧客が要求する納期に、適切な価格で提供する。
2. 当社は常により高い品質向上を目指し、品質マネジメントシステムの有効性について継続的な改善を推進し、顧客満足の向上に努める。
2022年4月1日
第一工業製薬株式会社

DKS Quality Assurance System

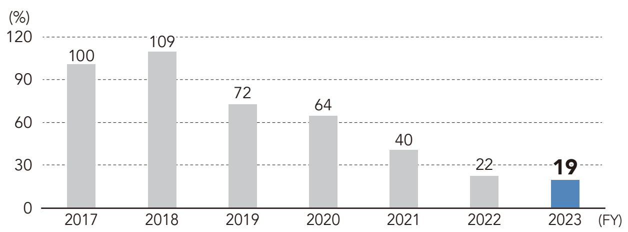
DKS promotes quality assurance activities by each department in charge of the process of product design and development, manufacturing, sales, and customer service. With the President serving as the highest authority for quality assurance, the environment, safety, and quality assurance staff have the authority to raise quality assurance issues, formulate solution and make recommendations, and are responsible for overseeing the quality management system in order to ensure quality assurance. The QA Department General Manager oversees quality assurance in general and establishes and strengthens a quality assurance system through comprehensive coordination between other departments, and the Quality Assurance (PL) Meetings set the direction of quality assurance and quality control activities.

In line with diversifying customer demands and 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.

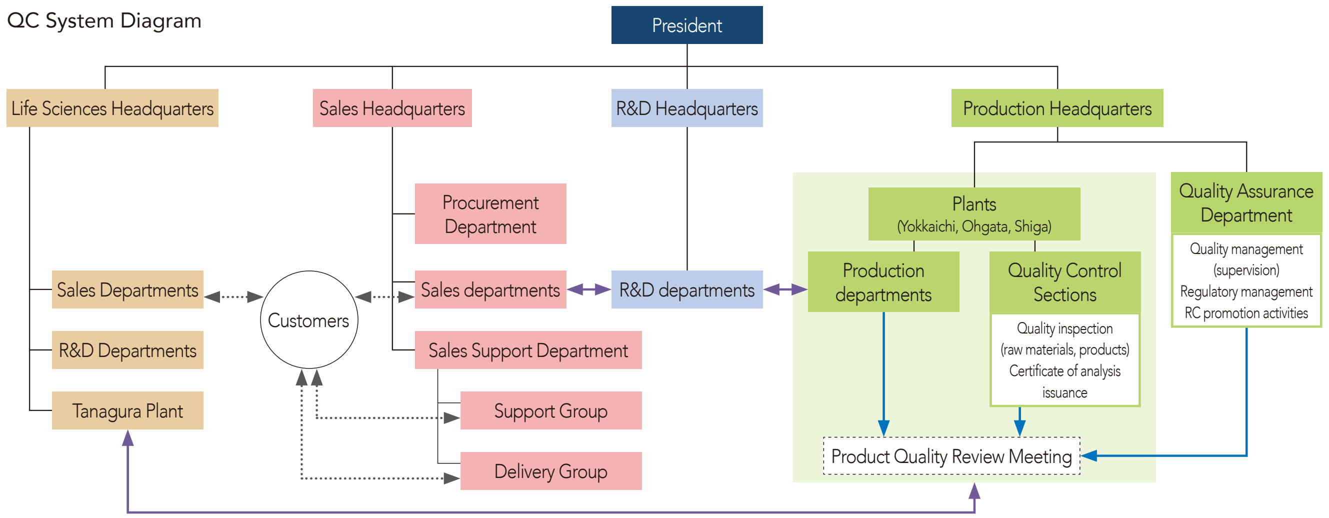
Quality Control System

As a chemical product manufacturer, DKS uses ISO 9001 as the basic tool of our quality management system to maintain and improve quality, and provide products and services that comply with customer requirements and laws and regulations through the PDCA cycle. Furthermore, through careful daily activities (production management, corrective actions for nonconformities such as complaints and abnormalities, confirmation of effectiveness, change management, audits, education and training, etc.) and continuous review and improvement of the management system, we are working to improve customer satisfaction. In 2019, we reconstructed the customer complaint database and visualized progress throughout the Company, including cause investigations, recurrence prevention measures, and reports to customers. In 2023, we reviewed and clarified vague statements in our work standards to eliminate the source of issues. As a result, the number of complaints was reduced to 19% in fiscal 2023 compared to fiscal 2017.

Number of complaints (compared to FY2017)



QC System Diagram

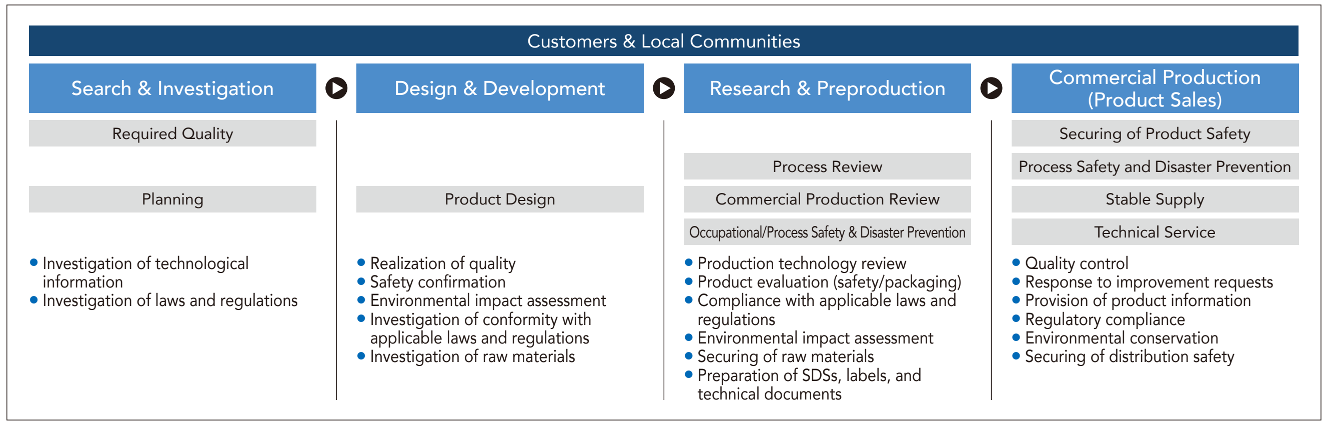


Product Safety Mechanism (chemical substance management from design development)

At each stage of product development, from research and exploration to prototyping and mass production, DKS conducts surveys of laws and regulations as well as evaluations of environmental impact, and carries out design and development with the utmost consideration for product safety. In addition, by introducing a chemical substance management system, we conduct GHS[1] classification, perform regulatory compliance checks, create multilingual SDS[2] and labels, investigate substances contained in items such as our products, and strive to ensure the appropriate communication of information regarding our products.

1. Globally Harmonized System (GHS) of Classification and Labeling of Chemicals
2. Safety Data Sheet (SDS): A sheet containing information on the properties and handling of chemicals when transferring or providing them to other business operators

Product Safety Mechanism



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. An SDS provides information on items such as hazards to ensure safe handling of the product. For products exported to the US, EU, and Asian countries, we are promoting compliance with the laws and regulations of each country, issuing SDS in compliance with GHS, and displaying product labels. We are also sequentially revising SDS and labeling in line with amendments to laws such as the Chemical Substances Control Law, the Industrial Safety and Health Act, and the Poisonous and Deleterious Substances Control Act. In addition, we are providing information on chemical substances in products by utilizing chemSHERPA (a common scheme for communicating information on chemical substances in products that can be used throughout the supply chain).

When introducing our products, we strive to maintain close communication with our customers through daily business negotiations, and provide information through product pamphlets and technical documents.

Food Hygiene Management Initiatives

Manufacturing Kainou Tochukasou in an HACCP certified plant in Japan

HACCP is an international food hygiene control method developed in the United States in the 1960s to ensure the safety of space food. By complying with HACCP, businesses will be able to manage the most important processes to eliminate and reduce hazards in all processes from the arrival of raw materials to product shipment, and will be able to improve safety. The Food Sanitation Act was revised in Japan, and from June 2021, hygiene management in line with HACCP has become mandatory.

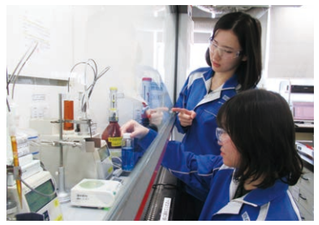
The Tanagura Plant has acquired the JFS-B standard, which includes full implementation of HACCP procedures. In addition to controlling critical processes to reduce risk factors, the plant has strict controls from receiving raw materials to shipping products.

The plant manufactures the raw material for Kainou Tochukasou, the first such fungus to become a food with functional claims, meeting the ever-increasing demand for food safety and security.

The Shiga Branch, which manufactures products such as sucrose fatty acid esters (SE), has also acquired HACCP certification.


Tanagura Plant


The Shiga Branch, which manufactures sucrose fatty acid esters (SE) and other products


Quality control

Initiatives Towards a Management System Equivalent to Pharmaceuticals

Strengths of being a GMP-certified facility

Ikeda Yakusou Co., Ltd. performs consignment work such as the powdering of items such as health foods and chemical products. Since products that come into direct contact with the human body, such as personal care products, are often required to be managed in the same manner as pharmaceuticals, the company has established a quality assurance system based on GMP certification*. In particular, the "extraction area" and "first spray drying area" have acquired GMP certification, and both manufacturing and quality are managed in accordance with GMP certification in the same way as pharmaceuticals. In addition, all production areas are equipped with the latest air conditioning equipment that maintains thorough temperature and humidity control and a clean environment. By equipping each major piece of equipment with a cleaning-in-place (CIP) function to ensure thorough and safe cleaning, we have established a cleaning system to prevent contamination. Being a GMP-certified facility has been a major advantage, which led to an increase in demand.


Ikeda Yakusou's GMP-certified plant

* GMP certification: GMP is an abbreviation for Good Manufacturing Practice, a manufacturing process control standard that ensures that products are manufactured safely and that a certain level of quality is maintained in all manufacturing processes. GMP certification is done by a third-party organization that objectively evaluates the implementation status of manufacturing and quality control in accordance with guidelines.

Risk Management

Material issues
- Further deepening of corporate governance

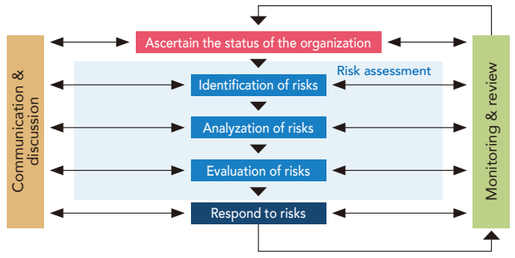
Recognizing that conducting proper risk management is an important management issue, our Group established the Risk Management Control Committee, chaired by the responsible executive officer and composed of representatives of related departments and Group companies, and is methodically moving forward with activities by regularly holding committee meetings.

Risk Management System

We have established a Risk Management Control Committee to reduce risks that could impede the achievement of our business objectives to an acceptable level. The committee oversees risk mitigation efforts through our risk management system. We also maintain and strengthen our crisis management system to ensure that, in the event of an emergency, risk information is swiftly communicated to all relevant parties, both domestically and internationally, enabling timely situation assessment and appropriate responses.

In fiscal 2023, we continued to focus on risk mitigation, including the mitigation of potential security threats in Taiwan and information security vulnerabilities. We also revised and enhanced our earthquake-related Business Continuity Plan (BCP), provided training, and conducted disaster drills and safety confirmation exercises to ensure prompt and appropriate action in the event of a disaster.

Basic Process for Risk Management



Crisis Management

Having positioned implementing countermeasures to corporate risk as a priority issue, we set Risk Management Procedures to address the prevention and mitigation of potential and manifest risks. We created basic policies and a Risk Management Manual as supplementary material for conducting Risk Management Control Committee activities and managing corporate risks, and operate the system as stipulated in the Risk Management Procedures.

In the Risk Management Manual, we establish risk management levels and stipulate that the responsible person for the particular risk level is tasked with implementing risk management. Furthermore, for risks that impact lives and business, we are implementing and strengthening appropriate responses. There has been an upward trend in the frequency of earthquakes, water damage due to torrential rains, long heat waves, and natural disasters accompanying abnormal weather, such as massive snowstorms. To respond to the impact of these on business, we use information-sharing tools to ensure prompt information dissemination among all parties involved, enabling us to respond quickly in accordance with the management level.

Information Security Policy

To fulfill the expectations of customers and society, DKS conducts information security based on the following policy to protect its information assets and those entrusted by its customers from accidents, disasters, crime, and other threat.

(1) Management responsibility
We will work to improve and enhance information security under the leadership of management.

(2) Establishment of internal systems
We will establish an organization to maintain and improve information security, and will work systematically and continuously on information security measures.

(3) Employee engagements
Our employees will acquire the knowledge and skills required for information security and will ensure information security efforts.

(4) Compliance with laws, regulations and contractual requirements
We will comply with all laws, regulations, codes, and contractual obligations related to information security, and meet the expectations of our customers.

(5) Response to violations and accidents
In the event of violation of laws, regulations, contracts, or an accident related to information security, we will take appropriate action and work to prevent recurrence.

Corporate Governance

Material issues
- Further deepening of corporate governance

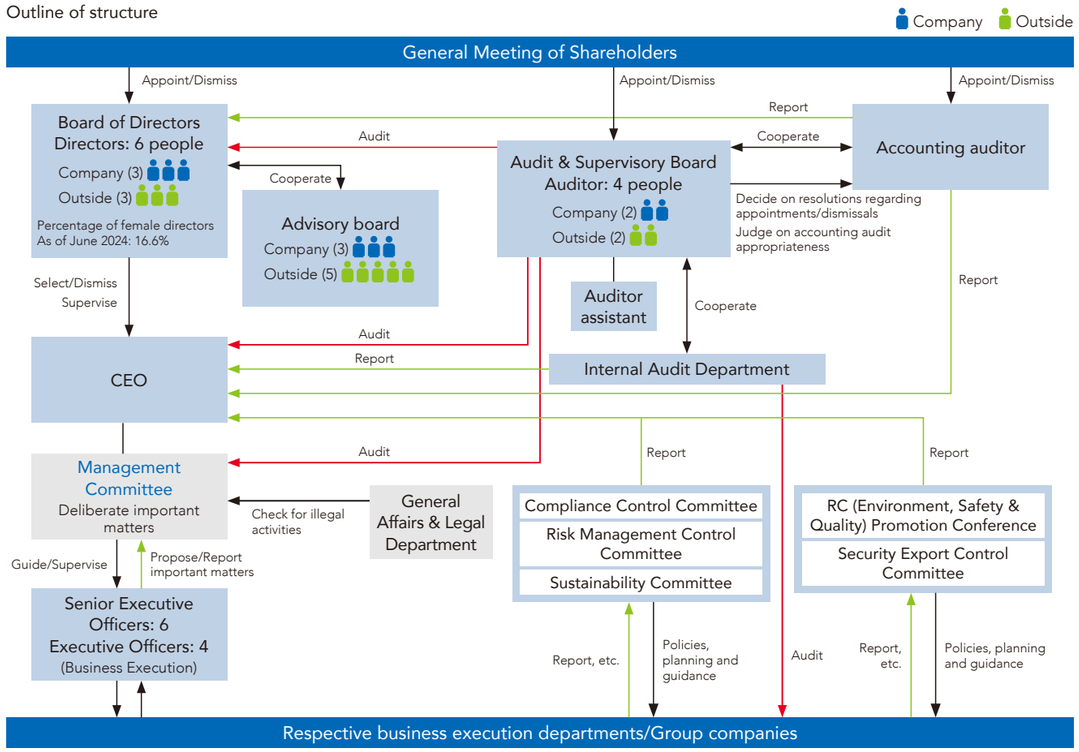
Deepening DKS' Corporate Governance and its Distinguishing Features

DKS engages in 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 embody the spirit of our founders. Our basic concept on corporate governance is to establish a management foundation able to earn and maintain the trust of society, as well as to conduct transparent and fair corporate activities that are rooted in corporate social responsibility (CSR). Consequently, we pursue higher governance as management policy and position it as one of our most important tasks.

Further deepening of corporate governance

Year	Month	Details
2014	June	Appointment of independent outside director: 1 person in total Establishment of new provisions for putting Board of Directors resolutions in writing
2015	May	Establishment of an Outside Officers Committee
2017	June	Appointment of independent outside directors: 2 people in total
2018	June	Disclosure of shareholder meeting materials over the Internet
2020	May	Online exercising of voting rights made available
	June	Partial disclosure of English-version of the notice of convocation of general meeting of shareholders
2021	May	Adoption of an online voting platform for institutional investors
	June	Establishment of an Advisory Board Appointment of independent outside directors: 3 people in total (3 of 8 directors are independent outside directors)
2022	June	Increase in the number of directors by 2, appointment of 4 independent outside directors (1 of the 4 is a woman), and disclosure of English-translation of the full summary of financial results
2023	June	2023 June Appointment of independent outside directors (1 of the 4 is a woman) 4 of 8 directors are independent outside directors
2024	June	Appointment of three independent outside directors (including one woman), with the six directors being independent outside directors

Outline of structure



Organizational composition and roles

Board of Directors

To ensure the implementation of management policies, in June 2024, we reduced the number of directors by two to facilitate quick and strategic decision making. The Board of Directors currently consists of six directors, three of whom are outside directors. As a rule, the Board of Directors, which is chaired by the Chairman CEO, meets once a month and decides such issues as matters important for the Group.

Management Committee

The Management Committee, which is chaired by the President COO, is comprised of three internal directors, two fulltime Audit & Supervisory Board members, and six senior executive officers, and generally meets twice a month. The committee reviews and considers items which need approval prior to the Board of Directors (primarily accounts, finance, and performance-related matters), as well as important resolutions and reports based on the Official Regulations of Administrative Authority and the Official Regulations of Accounting and Finance. The committee also undertakes coordination and management for the whole Company. In principle, matters brought before the Board of Directors are first given careful review by the Management Committee, which endeavors to check their compliance with laws, regulations, and the Articles of Incorporation, in order to facilitate rational decision making.

Advisory Board

The Company voluntarily established an Advisory Board as a supplementary body with the goal of improving the fairness, objectivity, and transparency of the decision making process of the Board of Directors. The Advisory Board is comprised of internal directors and outside officers, with a majority being independent officers. An independent outside director serves as chair. By establishing an Advisory Board, we are encouraging outside officers to gain an understanding of the industry and ensuring opportunities for them to participate and provide advice.

In fiscal 2023, the Advisory Board met four times. To facilitate more in-depth board discussions, each executive general manager from headquarters presented explanations and updates on the Company's strategic projects, enhancing the board's understanding of ongoing initiatives. Additionally, updates were shared on the status and challenges faced by our domestic and international Group companies.

Expected Skill Matrix

To undertake proper decision making and management supervision at a higher level, the Company appoints directors and Audit & Supervisory Board members taking into consideration the balance of such factors as business-related extensive experience, performance, and expertise.

For outside directors and outside Audit & Supervisory Board members, multiple candidates with extensive experience with management, advanced expertise, and broad knowledge and experience are appointed.

For Audit & Supervisory Board members, at least one who has experience in the finance or accounting departments or possesses equivalent experience is selected.

The following is a matrix of what we expect of our officers on the fields of skills and expertise. Up to three for each officer is listed, but not all the skills and specialized knowledge possessed by each officer is given.

Name of officer		Outside	Independent	Fields that directors and Audit & Supervisory Board members are expected to particularly contribute to					
				Corporate management	Accounting and finance	Legal affairs and risk management	Personnel and labor management Human resource development	Research technology and DX	Business strategy and marketing
Chairman CEO	SAKAMOTO Takashi			○		○	○		○
President COO	YAMAJI Naoki			○			○	○	○
Director	SHIMIZU Shinji			○	○		○		○
Director	OKUYAMA Kikuo	✓	✓			○	○	○	○
Director	HASHIMOTO Katsumi	✓	✓	○	○	○			○
Director	NAKANO Hideyo	✓	✓	○		○	○		○
Audit & Supervisory Board Member	ONISHI Hideaki				○	○	○	○	
Audit & Supervisory Board Member	FURUSAWA Yoshiyuki				○	○	○	○	
Audit & Supervisory Board Member	TAKAHASHI Toshitada	✓	✓	○	○	○		○	
Audit & Supervisory Board Member	MIYANAGA Masayoshi	✓	✓	○	○	○			○

Reasons for Selection of Outside Directors

Name	Reasons for selection and expected roles of contribution
OKUYAMA Kikuo	Mr. Okuyama has extensive knowledge and experience particularly in the field of nanotechnology from his many years involved in research at university. After taking up the position of outside director of the Company, he has played an appropriate role in overseeing business execution as an outside director by actively providing his opinions on the Company's R&D and Life Science fields, among other subjects. The Company deems that, going forward, he will do his utmost to realize industry-academia-government collaboration and continue to contribute to sustainable growth and greater corporate value.
HASHIMOTO Katsumi	Mr. Hashimoto has extensive experience and advanced, specialized knowledge of finance and accounting from his many years as a certified public accountant. Having actively expressed his opinions regarding matters such as the management strategy at Board of Directors meetings based on his broad knowledge and experience, the Company deems that he will make useful proposals related to overall management from a broad perspective.
NAKANO Hideyo	Ms. Nakano has experience as a member of management of an investor and public relations support company, whose purpose was to develop investments, and from her many years involved in investment operations at an asset management company. In particular, she possesses specialized knowledge related to investor and public relations activities from a global market perspective. As an outside director, she plays an appropriate role in the Company's Board of Directors by actively expressing her opinions on the Company's IR field and business strategies, as well as supervising the execution of business operations. The Company deems that she can contribute to sustainable growth and greater corporate value of the Company by making use of her extensive experience and high expertise.

Overall Efficacy of the Board of Directors

[Summary]

DKS conducts an annual evaluation of the Board of Directors to verify that the Board is functioning properly and to further strengthen its effectiveness. We also conduct a mid-year survey to ensure that the PDCA cycle is thoroughly implemented for the issues raised in the previous evaluation.

Evaluation

(1) The Company deems that the effectiveness of the Board of Directors in fiscal 2023 was generally appropriate and that the effectiveness of the Board of Directors was ensured.
(2) Although there were improvements in "provided material and explanations" and "reporting from each department," it was evaluated to be room for further improvements.

Issues and Main Future Efforts

The following issues to address in fiscal 2024 were identified: Further improvement of information materials and discussions regarding related subsidiaries and opportunities for information sharing outside of the board meetings.
To address them, we will revise the format of the information materials, deepen discussions regarding related companies at board meetings, and encourage active discussions on management strategies within the Advisory Board. We will also create more opportunities for dialogue between our senior executive officers and outside officers.

Methods of Evaluating Effectiveness

Questionnaire by the Office of the Board of Directors

(1) Conduct survey
- Questionnaire sent to all directors and Audit & Supervisory Board members
- Questionnaire consists of a total of 16 items, and confirms items to be discussed and time for discussion, provision of information, and content of statements, etc. (questionnaire items are reviewed annually, with emphasis on continuity and taking into account performance, social trends, etc.)

(2) Aggregation by the Office

▼

Analysis and evaluation by outside directors and full-time Audit & Supervisory Board Members

Analysis and evaluation of the effectiveness of the Board of Directors by outside directors and full-time Audit & Supervisory Board Members based on the results of the questionnaire

▼

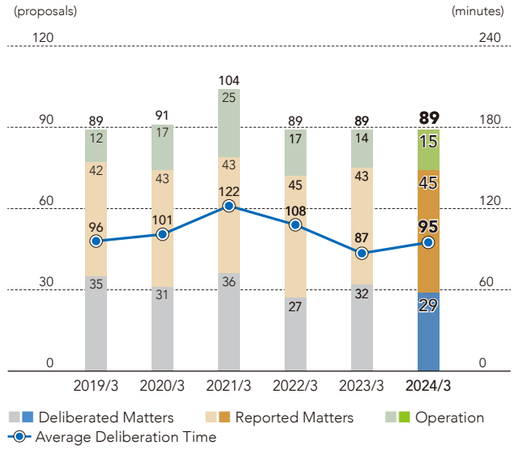
Sharing of evaluation results at Board of Directors' Meetings

Results of the evaluation are shared and discussed at the Board of Directors' Meeting by the independent outside director who chairs the Advisory Board

▼

Consideration of issues for the next year and action

Time spent on deliberations by the Board of Directors and number of proposals



Main deliberations at the FY2023 Board of Directors meeting
- Medium-Term Management Plan "FELIZ 115"
- Growth Strategy (R&D, new businesses, and capital expenditures)
- Business Base Strategy (personnel system strategy, digital strategy, risk management, and sustainability management)

Officer Remuneration

Remuneration decision process

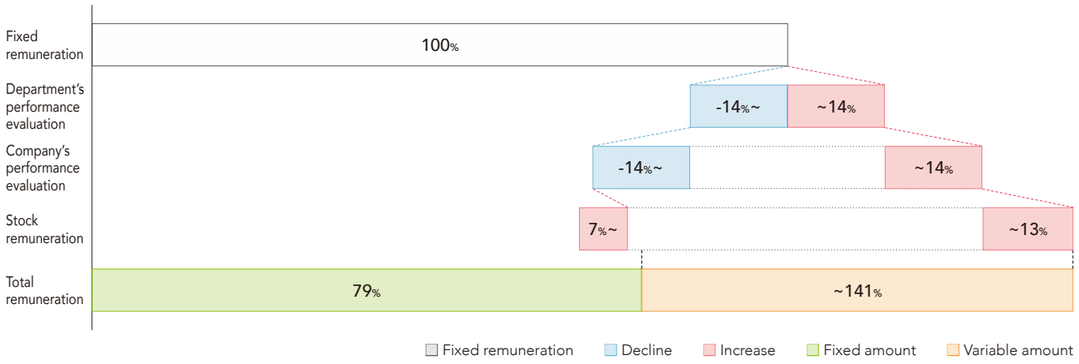
The basic policy regarding director and Audit & Supervisory Board Member remuneration involves a) appropriate compensation for execution of duties, b) remuneration that encourages actions to improve business performance and maximize corporate value, and c) remuneration that deepens value-sharing with shareholders. The following are the KPIs used to determine each type of remuneration and their weight in the amount of remuneration.

Composition of remuneration

a. Fixed remuneration: amount set based on the size of the role of each officer and position and paid monthly.
b. Performance-linked remuneration: Paid monthly, based on two evaluations: the Company's performance from the previous fiscal year, assessed annually, and the achievement of targets set at the start of the fiscal year by each director (excluding the CEO), assessed twice a year.
c. Stock remuneration: Restricted shares are granted based on the size of the role of each officer and position.

Items		Percentage	Chairman	President	Directors	Outside Directors	Audit & Supervisory Board members
a. Fixed remuneration	–	–	○	○	○	○	○
b. Performance-linked remuneration	Target performance evaluation	If the fixed remuneration rate is 100%, the amount of remuneration is set between -14% and +14% depending on the degree that targets for a fiscal year were achieved.	–	–	○	–	–
	Company's performance evaluation	If the fixed remuneration rate is 100%, the amount of remuneration is set between -14% and +14% depending on the degree that improvements were made to net sales and income compared to the previous fiscal year.	○	○	○	–	–
c. Stock remuneration	–	If the fixed remuneration rate is 100%, the amount of stock remuneration for one fiscal year is set at approximately 7%–13% of fixed remuneration for each position.	○	○	○	○	○

Composition of remuneration



Calculation method for performance-linked remuneration

Performance evaluation index	Performance evaluation coefficient	Allocation method
Consolidated net sales	0.6%	Calculate 0.6% of the year-on-year change in consolidated net sales for the current fiscal year.
Consolidated ordinary income	5%	Calculate 5.0% of the year-on-year change in consolidated ordinary income for the current fiscal year.
Consolidated cash flows from operating activities	0.3%	Calculate 0.3% of the year-on-year change in consolidated cash flows from operating activities for the current fiscal year.
Total variable remuneration for officers	—	Calculate the ratio of the total adjustment amount above to the base amount for calculating officer remuneration. Use this ratio to adjust each position's total remuneration (excluding department performance-linked portions). The base amount for calculating officer remuneration is the sum of the remuneration for directors who are in office as of June each year (excluding those who resigned in June).

Remuneration amount

Officer position	Total remuneration (Millions of yen)	Total remuneration by type (Millions of yen)			Number of applicable officers (persons)
		Basic	Performance-linked	Stock-based	
Director (excluding outside directors)	162	186	-41	16	5
Audit & Supervisory Board Member (excluding outside Audit & Supervisory Board Member)	43	39	—	3	3
Outside Directors	19	18	—	1	4
Outside Audit & Supervisory Board Members	7	7	—	0	2
Total	233	251	-41	23	14

Notes
1. The recipients include one internal director who retired upon the expiration of their term at the conclusion of the 159th Ordinary General Meeting of Shareholders on June 23, 2023, and one internal Audit & Supervisory Board member who resigned.
2. This does not include the salary of employees who concurrently serve as directors.
3. KAWAMURA Ichiji, who retired as a director and became an Audit & Supervisory Board member at the conclusion of the 159th Ordinary General Meeting of Shareholders on June 23, 2023, is included in the total amount and number of recipients listed above. His compensation is categorized as Director (excluding outside directors) for the period he served as a director, and as Audit & Supervisory Board Member (excluding outside Audit & Supervisory Board Member) for the period he served in that role.

Succession Plan

The succession plan for officers such as the CEO was formulated by the CEO. Succession planning for the CEO is the most important matter for the survival of the Company, thus it is critical to identify actual and potential capabilities of management. Therefore, the succession plan is the exclusive responsibility of the CEO, who is familiar with all aspects of the Company. The CEO proposes successor candidates, and the Board of Directors, including three independent outside directors, decides on the successor after fully deliberating the issue.

DKS believes it is desirable to hear the opinions of outside officers regarding the qualities and aptitude of successors, thus our successor training committee and our Advisory Board, which include outside officers as members, provide opportunities to appropriately incorporate the advice and participation of outside officers.

Cross Shareholdings

The Company holds the shares of customers and financial institutions for various purposes, including strengthening the relationship between the two entities. In addition to conducting a verification of holding the shares from a medium- to long-term perspective based on such factors as risk and return, we continue to review whether to hold the shares (appropriateness of holding the shares) taking into comprehensive consideration factors such as the purpose for holding the shares, rationality, and amount invested. As for cross shareholdings as of March 31, 2024, it was judged appropriate to continue holding the shares based on the Board of Directors' verification of holding the shares.

Number of shares and balance sheet amount

Number of issues	23
Total amount appearing on balance sheet	¥5,161 million

Discussion with Outside Director and Senior Executive Officer

Outside Director
NAKANO Hideyo
Career Summary
Served as Senior Portfolio Manager and Head of Private Investment at Cititrust and Banking Corporation and Director and Head of Investment Division at FuNNeX Asset Management Inc. before establishing Trias Corporation and taking up the position of President (current). External Director of HOCHIKI CORPORATION and NS TOOL CO., LTD. Ms. Nakano has been involved in investment operations at an asset management company for many years. As President of an IR and PR support company that aims to develop long-term investments, she has specialist knowledge of IR and PR activities from a global perspective.

Senior Executive Officer and General Manager, Strategy Headquarters
SAKAMOTO Mami
Career Summary
Ms. Sakamoto was engaged in textile chemical research for 22 years, after joining our R&D Division in 1988. She later served as General Manager of West Sales Department, Surfactants Business Division, General Manager of the President's Special Mission Office, General Manager of the Public Relations and Investor Relations Office, and General Manager of the Administrative Headquarters. She became an Executive Officer in 2020, and Senior Executive Officer in 2024 (current). She skillfully balances work with life events such as marriage and caring for parents, and contributes to improving the level of comfort at work for women, as a pioneer in female managerial positions. She is also an active promoter of diversity.

Please tell us about the current state of DKS' efforts to promote diversity, and challenges being faced.

NAKANO At DKS, women play active roles in engineering positions at sites, but the situation differs with regard to managerial positions. From recruitment to training and career advancement, there are still various issues to be addressed in designing systems that enable diverse human capital to step up and play active roles.

SAKAMOTO In 2020, I became DKS' first female Executive Officer, but there are still no women in the executive ranks (directors, etc.), and there are not many general managers either. To begin with, the ratio of female employees in our Company is around 20%. We have set a target of increasing the percentage of women in managerial positions to 10.0% or more, and by the end of March 2024, it reached 11.6%. If we consider this, I think we are quite progressive in the chemical industry.

When I joined the Company, Japan was still enjoying its bubble economy, and it was common for women to get married and retire within a few years of joining the Company. At that time, most female hires were in clerical roles, and in research most of them were as auxiliary support for male researchers. In sales, we had just started hiring women who were referred to as "sales ladies." The Company had more annual holidays than other companies, and had a good welfare program. Systems for maternity leave and childcare leave were also created at an early stage, and I felt that the Company was a particularly easy place for women to work, so I thought it would be a real shame to see talented senior employees and colleagues get married and retire.

I joined the Company because I wanted to conduct experiments. As the textile industry covered by my department declined, more and more of our male researchers were headhunted by other departments. I was driven into a situation where I had to think and act for myself, and that was an opportunity for personal growth. I was also lucky to have the understanding of my colleagues and superiors. It was a time when it was not considered acceptable for women to go on business trips with overnight stays, but my boss at the time did not mind at all, and allowed me to do so. Thanks to this, I had the opportunity to travel all over the country and listen directly to the voices of customers. It was unusual for a woman to come along on technical service calls with a salesperson, so I was in a position to receive a lot of information.

Not long after the establishment of the Act on Promotion of Women's Participation and Advancement in the Workplace in 2015, the Employee Participation and Advancement Promotion Committee was established, with then-president Takashi Sakamoto (now Chairman CEO) as chairperson. As a company, we have identified issues in promoting women's participation and advancement in the workplace, and have been working to improve work styles and work environments for women at manufacturing sites. Recently, many women who have graduated in scientific disciplines from universities, graduate schools, and technical colleges have been assigned to research and production sites, and are playing active roles on the front lines of our business. The recruitment of non-Japanese personnel who have graduated from overseas technical colleges is also progressing, and we have created an environment in which talented human capital can demonstrate their abilities, regardless of gender or nationality. Mid-career female employees with specific skills are also active as department managers. We believe that there is an urgent need to provide opportunities and career plans for motivated people, regardless of gender or nationality, and to create a system that rewards their achievements.

Please tell us about the future prospects and challenges for personnel system reform and human capital development that will lead to value creation.

NAKANO DKS is considering the introduction of a personnel evaluation system with an emphasis on performance. Together with the new medium-term management plan, which begins next fiscal year, I feel that President Yamaji and Executive Officer Sakamoto are working seriously to reform the Company. In formulating the new medium-term management plan, we are discussing the introduction of a personnel system with an eye to human capital management, and we believe that this will be at the core of the plan.

SAKAMOTO One of our basic management policies is to give back to our employees when they achieve results. We would like to create a personnel system that creates a positive cycle, in which the growth of each employee is directly linked to the growth of the Company. Currently, we hold one-on-one discussions for employees with their supervisors on evaluation feedback and plans for the future. Going forward, we will create individual career plans according to each employee's skills and characteristics, and provide an education system to help them acquire the necessary skills.

NAKANO Managers must also understand the essence of human capital and improve their ability to provide opportunities for growth, such as job rotation, and coaching to their subordinates. In Japanese companies, highly capable people often take on both on-site work and management roles, and I have the impression that they are often too busy to work at developing human capital. I see that reforming the personnel system is also part of the challenge to address this issue.

SAKAMOTO We recognize that it is difficult to build systems to a high degree of completion from the beginning. Employees often ask whether the results of their work will be fairly evaluated, and we are keenly aware of the importance of setting goals and unifying them. It is important to train and educate managers in how to evaluate their subordinates. We would like to optimize the system while incorporating the opinions of employees.

NAKANO I believe that it is difficult to evaluate existing businesses and new businesses using the same criteria. Even if an attempt at something new fails, if you evaluate it as a challenge for future business success, employee motivation will increase, and this will give rise to new innovation. There was a time when DKS held back on business investment, and there are some generations that have not had many successful experiences. When those generations become bosses and leaders, it will be important to create an environment for pushing the generation supporting the future of DKS to take on challenges and accumulating successful experiences.

SAKAMOTO This year, we have made major changes to our in-house awards system. In the past, evaluations were conducted by a limited number of members, such as executives and general managers. Starting this fiscal year, commendations were divided into two categories, Corporate Value Contribution Award and Financial Performance Award, with employees commended for the latter giving a three-minute presentation of their achievements. All employees participated in the evaluation, and the award ceremony was a great success. The Personnel Department took the leading role in planning the award ceremony, and I feel that we were able to foster an awareness of making changes on our own.

Please tell us about your health and productivity management initiatives and the improvement of employee engagement, which are also listed under human capital management, which is one of the Company's material issues.

NAKANO DKS has a relatively high retention rate for new employees. Since its founding, a management philosophy of taking care of employee health has been instilled within the Company, and I believe that this has contributed to the retention of human capital. I highly rate the fact that DKS is seriously engaged in health and productivity management involving employees throughout the Company, such as in identifying issues with the help of experts, designing systems to solve them, and setting KPIs, and I believe that this sets it apart from other companies.

SAKAMOTO Yes, I agree. We have set targets for absenteeism and presenteeism, linked the health of our employees to the sustainable growth of the Company, and are considering these issues from a management perspective.

NAKANO I have heard that the Group is also considering introducing a system to accumulate data from health checkups and manage it according to the same standards throughout the Group. This is a great initiative to ensure that employees can live a healthy and enjoyable second life after moving on from DKS.

SAKAMOTO We provide employees with an app that allows them to enter the amount of exercise they take and the diet they follow, with an AI that gives them appropriate advice on health management. Accumulating points gives employees incentives such as discounts on movie tickets, restaurants, and accommodations. We also hold regular walking events, with a competition between departments to see who can count the most steps, to increase employees' interest in exercising. When employees use the app to see company-wide rankings, it encourages a sense of competition. I feel that—maybe because there are many people who don't like to lose—the number of employees who engage in it as a matter of personal pride has increased, and health activities have taken root.

At the same time, I try to pay as much attention as possible to the words and actions of department members. If I think something is a little off, I try to talk to them as soon as possible and take action, as a matter of everyday practice.

NAKANO I think it's okay for everyone to have their own management style. It is important to balance what your subordinates want to do with what the Company requires. I hope that women can leverage their strong communication skills to excel in management positions.

What is the current state of constructive discussions leading to sustainability management?

NAKANO Recently, I had the opportunity to participate in the Miriai Kaigi ("Future Conference")*. Many opinions were expressed, such as what needs to be changed, and I found that the generation that will lead DKS into the future has a high level of awareness of these issues. The Board of Directors also conducts multifaceted and constructive discussions based on their specialist knowledge. I think the question of how to incorporate diverse opinions and reflect them in management will be an issue for management going forward.

SAKAMOTO Recently, strongly overseas-oriented female employees have raised their hands and asked to be posted overseas. To achieve active participation with diverse human resources, regardless of gender or nationality, I would like us to first achieve personnel system reform at all costs, so that the growth of each and every employee is linked to the sustainable growth of the Company.

* Mirai Kaigi ("Future Conference"): A meeting body established for the purpose of developing human capital who will lead DKS in the future by calling on young employees selected from each division, fostering management acumen, and helping them to become aware of the external environment.

Stakeholder Engagement

Communication with Stakeholders

Since the Company's founding in 1909, we have been committed to the DKS mottos of Quality First, Cost Reduction, and R&D Efforts. Today, as interest in SDGs and ESG management grows, we always keep in mind how we can bring happiness to our employees, shareholders, customers, and society, the four stakeholders of the Company, under our corporate credo of "Contributing to the nation and society through industry." Through continuous communication, we aim to create new value together with our stakeholders.

	Engagement with stakeholders	Means of dialogue	Department in charge
Employees	We are committed to employee happiness-based management, and our most important asset is human capital. As such, we aim to secure excellent human resources and diversity based on a philosophy of valuing people. We recognize employee growth to be the driving force behind the Company's development, leading to broad improvements in corporate value. In addition, under the medium-term management plan FELIZ 115, we have set the goal of the improvement of employee happiness and are promoting health management initiatives to maintain and improve the health of our employees. (▷ P.34 Human Resource Management)	● Training for employees (on-the-job training, off-the-job training, new employee training, self-development support) ● DX human resource development program ● Health and Productivity Management initiatives (exercise habits, mental health measures, etc.) ● Publication of in-house portal site, digital in-house magazine "TUNAG," and in-house magazine "DKSCOM" ● Whistleblower hotline ● Compliance awareness survey	Human Resources Department General Affairs Department Digital Strategy Department Public & Investor Relations Department
Shareholders	We believe the proper communication of information to be a prerequisite for constructive dialogue with shareholders. The Public & Investor Relations Department plays the central role in creating opportunities for dialogue, as shown on the right. (▷ P.22 Financial/Capital Strategies and Total Shareholder Return)	● Financial results briefing sessions and small-group meetings for institutional investors and securities analysts ● Company briefing sessions for retail investors ● One-on-one meetings ● General meeting of shareholders, management briefing sessions ● Website (IR & investor information) ● DKS report (integrated report), shareholder newsletter ● Video distribution via YouTube and the Company's website ● Nationwide live radio broadcasts	Public & Investor Relations Department General Affairs Department
Customers	We are a chemical materials manufacturer, known as a leader in industrial chemicals. We are working to develop technologies and products with the goal of becoming a Uni-Top, a company recognized for its distinctive uniqueness. In 2018, we entered the life science sector in earnest. Through activities such as those on the right, we strive to build long-term relationships of trust with our customers by responding to their requests. (▷ P.28 Research & Development)	● Daily sales activities ● Zenkoku Ichi-Ko Kai (exchange meeting with agencies) ● Explanation of research & technology ● Thorough quality assurance system ● Product exhibitions and product press conferences ● Website ● Company newsletter "Takuto" ● Technical exchanges with inspiring/inspired partners	Sales Department Department in charge of each business Research Department Production Department
Society	We are working to address the social issues of urban population concentration and depopulation in rural areas through regional revitalization through our business. We are also working to build new partnerships by collaborating with every partner in our supply chain to promote mutually prosperous co-existence, and together we are conducting business that is consistent with the principles of the SDGs. In addition, we are focusing efforts on local contribution activities to obtain a greater understanding of our business and to build a relationship of trust with the local communities in which our offices and plants are located. (▷ P.46 Contributing to a Collaborative Society)	● Efforts in cooperation with local governments ● Efforts for a healthy and long-lived society ● "Building Partnerships Declaration" for mutually prosperous co-existence with suppliers ● Presentations and speeches at conferences, forums, and seminars ● Factory tours ● Science seminars for local children and school visits ● Participation in and sponsorship of community events ● Community cleanup activities by employees	General Affairs Department Department in charge of each business Research Department Production Department

Dialogue with Stakeholders

Dialogue with employees

Continuing to treat employees based on the philosophy that people are our assets and must be nurtured and treasured

We treat employees based on the corporate philosophy that people are our assets and must be nurtured and treasured. We believe that the maintenance and improvement of employee health is the foundation for their self-realization, and that the Company can grow together with employees by supporting them in this endeavor. Since maintaining and improving employee health is an important management issue for the Company, we expressed these ideas in our Healthy Company Declaration in September 2017.

Our approach to health and productivity management is to prevent illness and mental disorders through health management, to work and live in a safe and hygienic environment, and to promote specific operations in accordance with the PDCA cycle. One key achievement in fiscal 2023 was a 0.4 point improvement in the percentage of people who exceeded standard abdominal circumference as a result of walking events implemented from a preventative perspective. With employees commenting that their awareness of health has increased, we will continue to promote the health of our employees.


Dialogue between the president and employees

Dialogue with our investors

Dialogue with institutional and retail investors: Creating value together through constructive dialogue

We strengthened the Public & Investor Relations Department and put in place a staffing structure that enhances the efficiency and credibility of IR activities. In addition to financial information, we endeavor to provide investors with high-value-added information on management strategies and issues, risks and opportunities, governance, and other nonfinancial information.

We hold briefings and small-group meetings for institutional investors twice a year, covering the full-year period in June and the first-half period in November. In fiscal 2023, 57 investors participated in these events. In fiscal 2024, we will also continue to host briefings for retail investors, a practice begun in fiscal 2022. We believe that constructive dialogue is built on the proper communication of information. The Public & Investor Relations Department will continue to play a central role in maintaining our commitment to the timely and appropriate disclosure of relevant corporate information while fostering open communication with a broad range of stakeholders.


Tokyo management briefing session

To access briefing videos and key Q&A sessions, please visit the IR Library on our website (in Japanese only).
https://www.dks-web.co.jp/ir/library/library02.html

Dialogue with local communities

Presentation on addressing odor issues during disasters at a local disaster preparedness event

In recent years, the increasing frequency of severe natural disasters has highlighted the need to increase children's disaster awareness. Additionally, cooperation within local communities is crucial during disasters. In Sugayadai in Miyagi Prefecture's Rifu town, the local residents' association hosted a summer disaster preparedness event with the goal of fostering the next generation of children's disaster awareness and strengthening neighborhood relationships. DKS gave a presentation on solutions for odor issues during disasters and donated its NIOCAN deodorizing and sanitizing* spray as part of emergency preparedness kits.

The local association's initiative to support certified disaster relief specialists is unique and has not been seen in other regions. This event, which showcased the community's efforts to inspire children to become local disaster leaders, was featured on khb Higashi Nippon Broadcasting.


Local disaster preparedness event (Miyagi)

* Does not kill all types of bacteria.
NIOCAN is a registered trademark of DKS Co. Ltd.

Board of Directors, Audit & Supervisory Board Members, and Executive Officers

Board of Directors (as of June 25, 2024)

1 Chairman CEO
SAKAMOTO Takashi
April 2022 Chairman and Executive Director (current)

Number of shares held: 46,049 shares

2 President COO
YAMAJI Naoki
April 2022 President COO (current)

Number of shares held: 17,123 shares

3 Director
SHIMIZU Shinji
June 2022 Director (current)

Number of shares held: 6,456 shares

4 Director (outside)
OKUYAMA Kikuo
June 2021 Director of DKS Co. Ltd. (current)
June 2022 Auditor of Hosokawa Powder Technology Foundation (current)
June 2022 Vice President of The Information Center of Particle Technology, Japan (current)

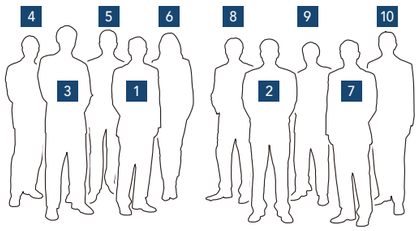
Number of shares held: 500 shares

5 Director (outside)
HASHIMOTO Katsumi
July 2019 Established Hashimoto Accounting Office as a Representative (current)
June 2022 Director of DKS Co. Ltd. (current)

Number of shares held: 571 shares

6 Director (outside)
NAKANO Hideyo
March 2004 Established Trias Corporation; took up position as CEO (current)
June 2021 External Director of HOCHIKI CORPORATION (current)
June 2022 Director of DKS Co. Ltd. (current)
June 2023 Independent External Director (Audit & Supervisory Committee Member) of NS TOOL CO., LTD. (current)

Number of shares held: 389 shares



Audit & Supervisory Board (as of June 25, 2024)

7 Audit & Supervisory Board Member
ONISHI Hideaki
June 2021 Audit & Supervisory Board Member (current)

Number of shares held: 15,731 shares

8 Audit & Supervisory Board Member
FURUSAWA Yoshiyuki
June 2024 Audit & Supervisory Board Member (current)

Number of shares held: 806 shares

9 Audit & Supervisory Board Member (outside)
TAKAHASHI Toshitada
June 2020 Independent Outside Director Standing Audit and Supervisory Committee Member of ITmedia Inc. (current)
Audit & Supervisory Board Member of DKS Co. Ltd. (current)

Number of shares held: 571 shares

10 Audit & Supervisory Board Member (outside)
MIYANAGA Masayoshi
April 2017 Director of FALCON Research & Consulting Ltd. (current)
June 2017 Outside Director of Universal Entertainment Corporation (current)
April 2023 Specially Appointed Professor of Chuo Business School (current)
June 2023 Outside Director of S.T. CORPORATION (current)
June 2024 Audit & Supervisory Board Member of DKS Co. Ltd. (current)

Number of shares held: 200 shares

Executive Officers (as of April 1, 2024)

Senior Executive Officer	SAKAMOTO Mami	General Manager, Strategy Headquarters
Senior Executive Officer	NISHIGUCHI Isao	Executive General Manager, Life Science Headquarters
Senior Executive Officer	MORISHIMA Kazuto	Executive General Manager, Administrative Headquarters
Senior Executive Officer	KITAO Masahiro	Executive General Manager, Sales Headquarters
Senior Executive Officer	HASHIMOTO Masayuki	Executive General Manager, R&D Headquarters
Executive Officer	MORI Yoshiyuki	Executive General Manager of Production Headquarters and in charge of Environment, Safety, and Quality Assurance
Executive Officer	WATANABE Kyo	Production Headquarters General Manager, Yokkaichi Plant
Executive Officer	YOKOHASHI Takao	Production Headquarters General Manager, Ohgata Plant
Executive Officer	KUZE Takuya	Production Headquarters General Manager, Shiga Plant
Executive Officer	SHIMIZU Koji	Vice Chairman, Chin Yee Chemical Industries Co., Ltd.

For more information, see the ESG Data Book on our website.
https://www.dks-web.co.jp/english/ir/library/index.html

Business Activities Report

Surfactants

Material Issues (P.10)	Initiatives
1 Research and Development	• Building a sales framework and strengthening sales for environmentally friendly paints and coloring material applications
7 Tackling NEXT and DREAM Businesses	• Strengthening relationships with inspiring/ inspired partners and targeting sales expansion for IT and electronics material applications

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 of fields and applications, including soap and detergents, IT and electronics, rubber and plastics, paints and coloring materials, and energy through their emulsifying, dispersing, solubilizing, penetrating, wetting, foaming and defoaming, and surface modifying functions. In recent years, we have also been promoting the development of products that are compatible with the globally increasing consideration for the environment. We currently manufacture these products with petrochemicals and oils/fats as key raw materials primarily at the Yokkaichi Branch (Kasumi Plants), the Shiga Branch, and Yokkaichi Chemical Co., Ltd.

Review of FY2023 and initiatives to solve issues

Net sales in this segment in the fiscal year ended March 31, 2024 were generally weak.

In Japan, sales were sluggish in IT and electronics applications, but remained firm in rubber and plastic applications, and paint and coloring applications. Sales for soap and detergent applications fell significantly. Overseas, sales for rubber and plastic applications and paint and coloring applications were firm. Going forward, we will strengthen our Uni-Top strategy and continue to focus on delivering customized products that meet customers' demand.

Issues facing this segment are as follows:

1. Declining earnings and lower relative value for DKS' products due to intensifying market competition in soaps and detergent applications
2. Accelerating the development of markets for environmentally friendly products

DKS' strengths

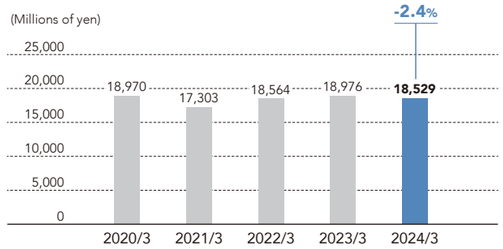
This segment leverages the Company's many years of experience and accumulated technologies. Typical products are widely used to enhance the performance of polymer dispersion films produced using reactive surfactants. Growth is expected in the paints and coatings field as well as adhesives, and other industrial fields. On the other hand, there are various competitors in this business, such as manufacturers of detergents, emulsifying and dispersing agents, and other chemicals both in Japan and overseas. However, 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 and create new added value.

Connection with materiality

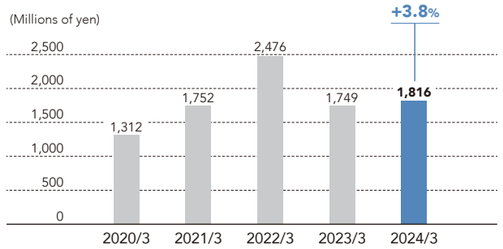
To develop products for a more environmentally conscious world, we have been working in recent years to research and develop highly-biodegradable environmentally-friendly products that do not cause water pollution, while taking into consideration their toxicity to aquatic organisms.

We are developing a reactive surfactant that, after functioning as an emulsifier for emulsion polymerization, improves the water resistance and other properties of polymer films. We will focus on market development of this product, which is Japanese technology, and work to expand the market for environmentally-friendly water-based resin products for our customers.

Net Sales



Operating Income



Column **Continue to create value under the banner "Chemistry provides a solution"**

The typical function of surfactants is to clean (i.e., dirt removal), which is represented in soap, a well-known item. Surfactants act on the surface of substances that do not mix, such as oil and water, and demonstrate emulsifying and dispersing properties to remove dirt. Recently, however, the functions that the Company's customers require from surfactants have evolved beyond simply cleaning to more sophisticated and unique applications that reflect advances in the particular industry. The surfactant synthesis, analysis, and evaluation technologies that we have developed over our more than 110-year history has enabled the Company to provide performance and functions tailored to customer needs through our diverse product lines and combinations of these products. This technology unifies goods and wisdom, and realizes the combination of different fields and industries.

① IT and electronics materials
② Soaps and detergents
③ Paints and coloring materials

Amenity Materials

Material Issues (P.10)	Initiatives
3 Consideration for the Environment	• Actively contributing to carbon neutrality through naturally derived raw materials
4 Contributing to a Collaborative Society	• Making social contributions utilizing RSPO certification
7 Tackling NEXT and DREAM Businesses	• Developing solution business for the battery field

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, personal care (cosmetics), energy, toiletries, fisheries/ livestock, textiles, pulp/paper, civil engineering, agrochemicals, and agro-materials. In particular, products made from naturally derived raw materials, such as sucrose, fatty acids, and pulp, are delivered to our way of life as safe and reliable materials.

Review of FY2023 and initiatives to solve issues

Net sales in this segment in the fiscal year ended March 31, 2024 were generally firm. In Japan, sales of cellulose polymers were sluggish in energy and environmental applications, as were sales of vinyl polymers for rubber and plastic applications. Sales of sucrose fatty acid esters were robust in food applications. Overseas, sales of sucrose fatty acid esters were robust in food applications and personal care (cosmetics) applications.

Issues facing this business are as follows:

1. Expanding sales channels in the cellulose nanofiber (CNF) business
2. Further developing energy applications
3. Expanding into the field of high-value-added SEs

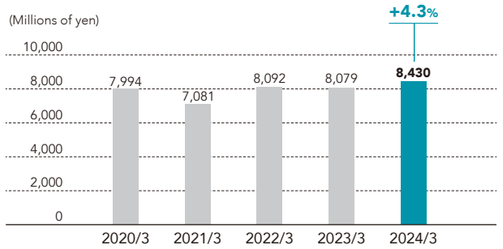
DKS' strengths

With more than 70 years of experience in CMC using pulp, and more than 50 years of experience in SE using sucrose and fatty acid esters, the Company has a long history in product development and is developing markets based on the basic and applied technologies accumulated to date. Among these, SEs have the distinguishing characteristic of being an edible surfactant that contributes to flavor. SEs are used as an emulsifier for oil/fat and cream and as a texture modifier, for example, in cookies and snack foods. In addition, we established novel cellulose technologies to produce a new material called CNF, and are pushing forward with further efforts to use biomass in advance ways.

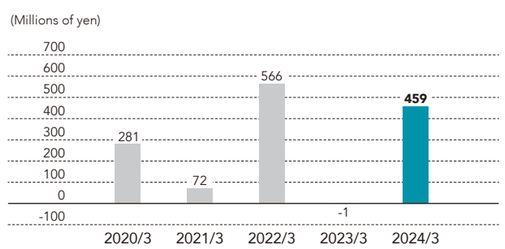
Connection with materiality

We anticipate continued demand for good tastes and comfort in Japan and overseas, and will strive to ensure stable sales and profitability while maintaining our customer base. We will continue to unlock new customers in the growth fields of food, personal care, and energy with the aim of expanding product sales and improving lifestyle comfort by providing high-functional products.

Net Sales



Operating Income



Column **Continue to create value under the banner "Chemistry provides a solution"**

This segment targets industrial fields that place an emphasis on safety, such as food, personal care products, and pharmaceuticals, all of which are end products that are placed in the mouth, come into contact with skin, or stimulate the five senses.

In the area of cellulose derivative technology, we sell naturally derived cellulose nanofiber (CNF). On account of its characteristic viscosity and emulsifying, dispersing, and stabilizing properties, CNF is a noteworthy material that is becoming widely used, notably in personal care and electronic material applications.

We have also been expanding into the field of energy, and our proprietary technologies include methods for manufacturing and testing water-soluble polymers for conductive pastes in lithium-ion batteries.

① Personal care (cosmetics)
② Food
③ Energy

Business Activities Report

Polyurethane Materials

Material Issues (P.10)	Initiatives
3 Consideration for the Environment	• Selling rock hardening agents for large Shinkansen line projects • Providing polyurethane materials that can contribute to the carbon neutrality of electrical components in vehicles, home appliances, etc.

This segment provides a wide range of industrial materials, including paints and adhesives, and raw materials for urethane with a focus on civil engineering and construction, and electrical insulation materials. In addition, we possess technology to produce high-elasticity urethane elastomers, as well as soft/rigid urethane foam. Leveraging these technologies in a composite manner, we supply various high-functional urethane products such as sealants for electronic circuit boards, cushioning, thermal insulation, and coating materials.

Rock hardening agents used for mountain tunnel projects such as roads and railways are an essential product for upgrading infrastructure. The primary raw material for this segment is petrochemical raw materials, and the products are primarily manufactured at the Yokkaichi Branch (Kasumi Plants).

Review of FY2023 and initiatives to solve issues

Net sales in this segment in the fiscal year ended March 31, 2024 were generally firm. Sales of environmentally friendly synthetic lubricants related to CFC regulations were sluggish, while sales of engineering chemicals related to public works remained strong. Demand for functional polyurethane was firm for IT and electronic applications.

Issues in this business segment are as follows:

1. Improving the operation rate of No.3 Plant of the Kasumi Plant
2. Promotion of new development
3. Strengthening relationships with inspiring/inspired partners

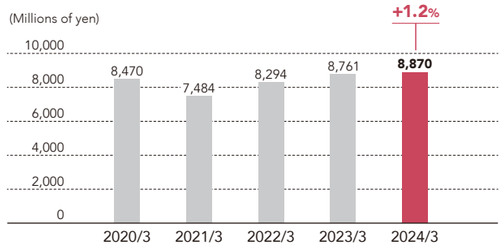
DKS' strengths

The Company's urethane materials are used in civil engineering and construction, electrical insulation materials, paints, and adhesives. With the recent diversification of electric appliances and the incorporation of IT in automobiles, electronic components are being used under increasingly severe conditions. Meanwhile, there is a need for electronic components to be lightweight, compact, and to have a long service life, all of which are challenging performance requirements. In this context, our electrical insulation materials are recognized for their superior balance of insulation, heat-resistant, and flame-retardant properties, as well as for the protection they offer against physical and chemical influences, ensuring that strength and durability are not compromised. Our products are therefore used in a wide range of applications from home appliances to transport equipment components to meet the exacting needs of customers.

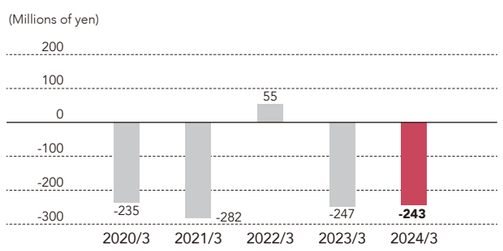
Connection with materiality

Sales growth for rock hardening agents is expected due to the progress of construction on expressways and Shinkansen lines. Additionally, by further deepening initiatives with inspiring/inspired partners, we will pursue development and expanded sales of products for IT and electronics materials manufactured at No.3 Plant. At the same time, we will accelerate activities for meeting the final fiscal year targets of the medium-term management plan ending in March 2025.

Net Sales

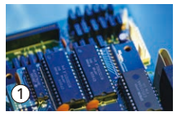


Operating Income



Column **Continue to create value under the banner "Chemistry provides a solution"**

No.3 Plant, which manufactures functional polyurethane resin, commenced operations in December 2019. Against this backdrop, we have redoubled our initiatives with our inspiring/inspired partners. We are also striving to promote new development of IT and electronics material applications for the electrification of mobility components prompted by the spread of EVs. 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.



① IT and electronics materials

② Civil engineering

③ Automotive industrial

Functional Materials

Material Issues (P.10)	Initiatives
1 Research and Development	• Expanding sales of biodegradable polymers
3 Consideration for the Environment	• Contributing to carbon neutrality
7 Tackling NEXT and DREAM Businesses	• Expanding sales of products for IT and electronics materials and securing profit • Accelerating next-generation product development with inspiring/ inspired partners

The Functional Materials segment provides technologies and materials contributing to advanced performance, including resins used in daily necessities, as well as IT and electronics materials often used in personal computers, smartphones, and home applications. For example, the segment's products include plastic flame retardants, antistatic agents that control static electricity, lubricants, anticlouding agents, antioxidants, and radiation-curable monomers and oligomers that use radcure (UV- or EB-curing) technology. In recent years, radcure resin and flame retardants have been used to contribute to high-speed, large-capacity data communications (5G), which are becoming increasingly popular.

These products are manufactured at the Yokkaichi Branch (the Chitose and Kasumi Plants) and the Ohgata Branch.

Review of FY2023 and initiatives to solve issues

Net sales in this segment in the fiscal year ended March 31, 2024 were generally sluggish.

In Japan, sales of radcure resin materials for IT and electronics applications grew significantly. Sales of waterborne polyurethane for IT and electronics applications were firm, but those for textile applications were sluggish. Sales of flame retardants for rubber and plastic applications fell significantly. Overseas, sale of radcure resin materials for IT and electronic applications grew substantially but sales of flame retardants for rubber and plastic applications fell significantly. 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.

Issues facing this business are as follows:

1. Expediting the recovery of capital invested on No.4 Plant of the Kasumi Plant
2. Expanding earnings of the waterborne polyurethane resin business
3. Expanding earnings of the flame retardants business

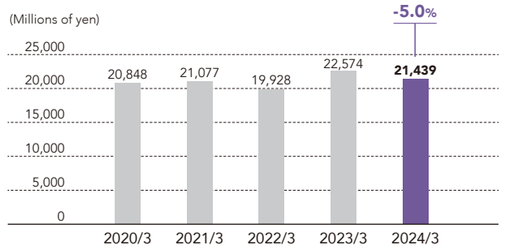
DKS' strengths

Radiation-curable monomer and oligomer technology enables instantaneous drying and curing of a resin composition by irradiation with ultraviolet light (UV) or an electron beam (EB). It is used in a wide range of fields and applications, such as in resin materials for semiconductors, liquid crystal displays, and the like, as well as in coatings for cell phones, optical fibers, and plastics, contributing to resource and energy conservation and reduction of environmental impact. Waterborne polyurethane resins are used in optical film primers, automotive applications, metal surface treatment agents, inkjet agents, and other applications that require adhesion, chemical resistance, toughness, and flexibility. Brominated flame retardants are more stable and highly flame resistant than phosphorous- or inorganic-based flame retardants when dealing with materials such as rubber and plastics.

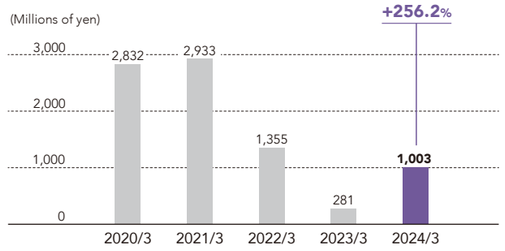
Connection with materiality

Additionally, by further deepening initiatives with inspiring/ inspired partners, we will pursue development and expanded sales of IT and electronics materials. At the same time, we will accelerate activities for meeting the final fiscal year targets of the medium- term management plan ending in March 2025.

Net Sales



Operating Income



Column **Continue to create value under the banner "Chemistry provides a solution"**

While many urethane resins are based on organic solvents, DKS is also researching and developing waterborne polyurethanes, in which the polyurethanes are dispersed in water. From the perspective of reducing emissions of volatile organic compounds (VOCs) and preventing air pollution, demand continues to increase for waterborne materials for use in adhesives, paints and coatings due to the need for non-solvents. In addition to being safe for the environment and people, these products allow high-performance finishing in a variety of applications, including paper and metal processing, as well as film processability. As such, this is a field in which we can demonstrate our strength both in Japan and overseas. While there is a need for non-solvents, there is also a growing social demand for greenhouse gas reduction and carbon neutrality. We aim to further resolve issues with our unique technologies and proposal capabilities.

① IT and electronics materials

② Flame retardants for plastics

③ Film materials

Business Activities Report

Electronic Device Materials

Material Issues (P.10)	Initiatives
3 Consideration for the Environment	• Expanding business in the solar cell market
7 Tackling NEXT and DREAM Businesses	• Supporting diversification of consumer needs • Accelerating next-generation product development through collaboration

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 ionic liquids, ceramic materials, and lithium-ion battery materials, as well as conductive pastes for solar cells.

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 Co., Ltd. (Kyoto) and Dai-ichi Ceramo Co., Ltd. (Shiga).

Review of FY2023 and initiatives to solve issues

Net sales in this segment in the fiscal year ended March 31, 2024 fell significantly overall. Sales of ionic liquids for display applications were firm, but sales of conductive pastes for solar cell applications fell significantly.

Issues facing this business are as follows:

1. Improving profitability of products for ceramic materials applications
2. Aggressively expanding conductive pastes to solar cell market
3. Concerns for risks such as stricter environmental regulations in China, aggressive pricing by local Chinese manufacturers, and raw material supply shortages

DKS' strengths

As for compound technologies that combine high viscosity and special conditions, our advanced know-how is a strength that makes it possible to supply materials that meet the demands of customers. Conductive pastes, which are primarily made from precious metals, also include non-organic fillers and soluble binders. They provide functionality to electronic devices and components used in items such as solar cells, automobiles, and smartphones. In addition, 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 smartphones and other electronic devices, precision components for items such as watches and medical devices, and automotive and optical communication components.

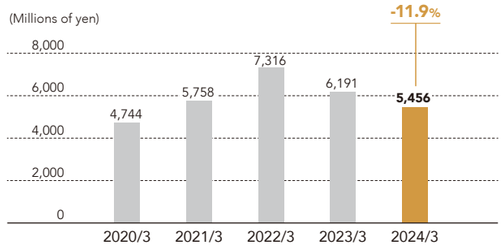
Connection with materiality

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.

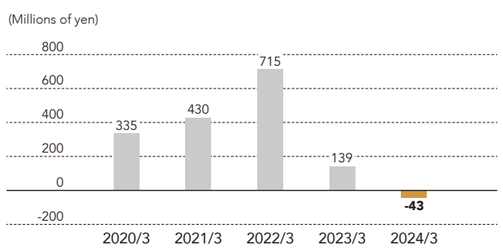
Kyoto Elex manufactures a variety of high performance conductive pastes for electronic components, solar cells, and the like. In particular, our conductive paste for heterojunction technology (HJT) high-efficiency solar cells has been well received by users. We will provide our proprietary technologies, R&D capabilities, and solid quality to drive growth.

Dai-ichi Ceramo has applied its existing compound technology for injection molding to the development of ceramic and metal powder 3D printer materials for material extrusion (MEX). Two types, a pellet type and a filament type, are available for use by a wide range of customers. After 3D modeling, relatively large metal and ceramic sintered bodies can be obtained by degreasing and sintering in the same manner as existing injection molding processes.

Net Sales



Operating Income



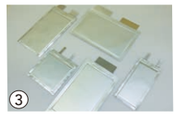
Column **Continue to create value under the banner "Chemistry provides a solution"**

Graphite is the main anode material for lithium-ion secondary batteries used in mobile devices, etc. Recently, a small amount of silicon material (SiO, SiC, Si) has been added to graphite to increase capacity. Silicon material can expand up to four times during battery charging, and when it contracts during discharge, the electrode structure is destroyed and the battery deteriorates, which was an issue. We are developing adhesives that suppress this expansion and contraction and prevent battery deterioration (see p. 29).

In display parts and materials, which are in growing demand, static electricity is considered to be a serious problem, and high performance anti-static agents are highly sought after. At the same time, moves are underway to tighten regulation on PFAS, which are used in a variety of fields and applications. Our PFAS-free ionic liquids are highly rated as anti-static agents that can work with a small dose.

① Solar cells

② Displays



③ Lithium ion battery cells

Life Sciences

Material Issues (P.10)	Initiatives
4 Contributing to a Collaborative Society	• Promoting SDGs by revitalizing local communities through sericulture (Sericulture Innovation)
7 Tackling NEXT and DREAM Businesses	• Developing health foods and general-use food products (and later, pharmaceutical products) using Kainou Tochukasou, Naturido, and Sudachin • Establishing and promoting of B-to-C business that will be the core of new businesses (DREAM)

With our full-scale entry into the Life Sciences business in September 2018, DKS acquired two companies, Biococoon Laboratories, Inc. and Ikeda Yakusou Co., Ltd., as wholly owned subsidiaries. Advancing research and product development with a focus on natural raw materials, extraction and high concentration technologies from natural products, and mass production technology, this segment supplies health food products that include I. Japonica-Bombyx Fungus and Sudachin (a peel extract powder made from sudachi, a citrus fruit). The company Biococoon Laboratories is promoting the quantification of a new substance that it is hoped will have an effect on dementia and the laboratory is proceeding with the search for high production conditions. Having established extraction and high concentration technologies from natural products, Ikeda Yakusou is also working to stabilize product quality and deliver products to customers with the priority being safety and reliability. In addition, from June 2023, we started selling NIOCAN, using DKS neutralizing deodorizing technology.

Review of FY2023 and initiatives to solve issues

Net sales in this segment in the fiscal year ended March 31, 2024 decreased by ¥105 million year on year, to ¥392 million. The OEM business for pharmaceutical additives and health foods made through the concentration and pulverization of extracts from natural materials was sluggish. By March 31, 2025, we aim to make our life sciences business profitable through the following measures: (1) B-to-C, focusing on our product, Kainou Tochukasou, which went on sale in August 2023 as a food with functional claims that helps maintain cognitive function speeds and visual memory that are part of the cognitive functions in middle-aged and senior individuals; (2) B-to-B, targeting sales of materials such as I. Japonica-Bombyx Fungus powder and sudachi fruit peel extract; and (3) expanding the OEM business of Ikeda Yakusou, our group company.

Issues facing this business are as follows:

1. Establish B-to-B and B-to-C business and quickly generate earnings
2. Expand new contract manufacturing business

DKS' strengths

The manufacturing plant for Kainou Tochukasou has acquired HACCP certification, an international standard for sanitation management, and we have further enhanced quality control systems to provide customers with safe and reliable health food products. After publishing a paper in the international journal PLOS ONE (Neuroscience) in January 2021, we proceeded with human clinical studies and published a paper in the Japanese Journal Brain Supplement in September 2022. Additionally, on October 6, 2023, research findings on the sleep improving effect of I. Japonica-Bombyx Fungus were featured as a paper in Anti-Aging Igaku a journal of the Japanese Society of Anti-Aging Medicine.

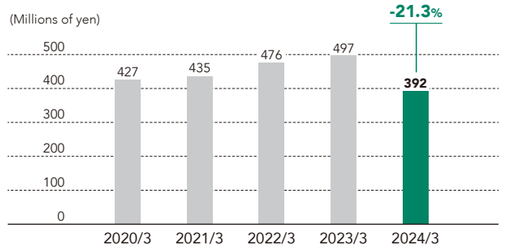
Ikeda Yakusou manufactures and provides safe and reliable products from facilities that have acquired GMP certification for pharmaceuticals. Sudachin tablets, an Ikeda Yakusou product, have been certified as a Shikoku Health Support Food (commonly referred to as "Health Four"). The Company also undertakes contract manufacturing business for products related to drug substances, cosmetics and chemical products foods based on high-quality extracting and powdering technologies. Also, able to handle chemical products, Ikeda Yakusou can provide products with various levels of performance and functions that match customers' requests.

NIOCAN is a product created through the application of olfactory measurement skills developed to eliminate odors in industrial spaces to the control of odors in living spaces. The neutralization method, which is the mechanism used to eliminate odors, is highly unique, and NIOCAN has been highly rated not only as everyday solution but also as a product for the inbound tourism market.

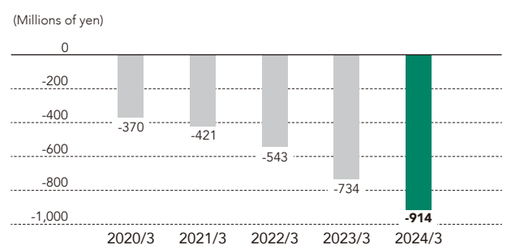
Connection with materiality

Currently, we have launched the "food with functional claims" Kainou Tochukasou in August 2023, as a product containing Naturido, an ingredient discovered from I. Japonica-Bombyx Fungus. In addition, we are taking steps to obtain "foods with functional claims" certification for Sudachin, a substance extracted from the peels of sudachi (citrus fruit) with benefits against diabetes and obesity.

Net Sales



Operating Income



Column **Continue to create value under the banner "Chemistry provides a solution"**

I. Japonica-Bombyx Fungus developed by Biococoon Laboratories, a venture company from Iwate University, is a health food that has the potential to help address the rise in dementia patients, a social issue taking hold in Japan.

Developed by making effective use of the peeled skins of sudachi, which is a representative and previously untapped regional resource of Tokushima Prefecture, the peel extract Sudachin arose through industry-government-academia collaboration with Tokushima University and Tokushima Prefecture. We are considering registering Sudachin as a food with functional claims. In addition, we are working to establish B-to-B and B-to-C businesses for I. Japonica-Bombyx Fungus and NIOCAN, aiming for the early generation of earnings.

Kainou Tochukasou [now on sale]
(I. Japonica-Bombyx Fungus)

This is the first "food with functional claims" that contains a component derived from I. Japonica-Bombyx Fungus (Naturido) as a functional ingredient. (In Japanese only)
https://dkslife.jp/kainoutouchukasou_lp01

Sudachin®

NIOCAN®

Special Feature The Excitement of Princess Kaguya: Connecting the Three Elements

Message from the CEO

SAKAMOTO Takashi
Chairman CEO

DKS has now marked the 115th anniversary of its founding. When I wrote the 100-year history of the company, I re-read the old 30-year and 50-year histories, which I had read many times. After reading the introduction to our 30-year history, I felt a renewed sense of inspiration. There's a passage that follows the three corporate mottoes. It says that we will be united in our commitment to putting health first. Essentially, it spells out a message about the company's long-term strategy and approach to solving problems. First, it focuses on our understanding of the 21st century, then our approach to the life science business, then finally, DKS's value creation.

I hope that the three elements — analysis, materials, and medicine — will be the foundation for unraveling the mysteries of life.

I. What will happen in the 21st century?

The Showa era (1926-1989) which lasted 64 years, is by no means the distant past. There was a world that I was obsessed with during my childhood. It was the world of manga: comic book stories drawn by artists like TEZUKA Osamu, ISHINOMORI Shotaro, and FUJIO Fujiko. *Astro Boy*, *Cyborg 009*, and *Doraemon* are the signature works of each artist. Fifty years have now passed since then, and the 20th century has drawn to a close and turned into the 21st century.

Ninety percent of the future society they envisioned has already become reality. Stories that were thought to be just dreams have come true. Ever since I was a boy, I have always believed that the world, our society, is divided into three elements. Those three elements are essentially space (the distance between things), time (the flow of time), and people (humans). These three elements have changed dramatically from the previous 20th century heading into the current 21st century. The imaginations of the three manga artists mentioned earlier have become reality. The world economy is essentially the overall sum of everything that humans—one of the three elements—make. Scientific advances in the 20th century made it possible to control space, or distance. This led to significant growth in the global economy.

There is a book by British journalist Hamish McRae entitled *The World in 2050: How to Think About the Future*. It contains a graph of total GDP per capita for 1,000 years up until the 20th century. The growth of the scale of the economy, which had been very moderate up until the 19th century, increased dramatically in the 20th century, with the global economy expanding by a factor of 15 compared to during the 19th century. The development of industrial infrastructure that progressed during the Industrial Revolution, the widespread adoption of electric power during in the 20th century, and the invention of the computer all contributed to stimulating rapid growth. So, how will the global economy change during the 21st century? In *The World in 2050*, the author predicted that the expansion during the 100 years of the 21st century would be only 15%.

One theme comes to mind. Will generative AI—artificial intelligence—surpass human intelligence? Humans essentially placed space, another of the three elements, under their control during the 20th century. For the second element, time, it seems unlikely that we will be able to travel back in time, even during the 21st century. I believe that the 21st century is the time for us to reaffirm the starting point for humans, the third element after space and time.

As a keyword for the 21st century, I would choose the letter "X," which represents transformation. There are terms like GX, DX, and SX: green transformation, digital transformation, and sustainable transformation. The gradual 15% growth will be driven by the perpetually transforming United States. Japan's progress will continue hand in hand with it. The vision for DKS is clear: a company that does not attempt to chase after this growth in scale, and which is appreciated for its originality. At our third founding in 2015, we declared our aim of becoming a "Uni-Top" company, aiming for the top through uniqueness. Then, at the beginning of the 21st century, we began to pursue new areas which we did not have as a chemical materials manufacturer. In 2018, we established a new life science business handling pharmaceuticals and health materials, which we had wanted to do for some time. This new field, which already been in operation for five years, will support the future of the company. The transformation of the digital world that weaves the fabric of space and time questions the analogue of the sensibilities and inspiration of life. How can companies that support the economy fulfill their mission of survival? Here, the words of our founder that I mentioned at the beginning shine through. I am confident that "health first" is the solution to this "X," this new era of transformation. The life sciences business plays an important role.

II. Initiatives in the life sciences business

In 2016, I met a person who wished for eternal youth and longevity and continued to pursue cures for dementia. This person was Dr. SUZUKI Koichi of Biococoon Laboratories, Inc., who I like to call a 21st century hermit. The professor discovered a new substance from Japonica-Bombyx Fungus. It is named "Naturido," which means "new life." Professor Alois Alzheimer announced that amyloid beta (*ß*) proteins that occur in brain cells impair cognitive function. That was in

Special Feature The Excitement of Princess Kaguya: Connecting the Three Elements

1906. Professor Suzuki discovered that Naturido acts on glial cells, which are involved in the elimination of amyloid *ß*, and also stimulates the growth of nerve cells. As a result, it has been found to be effective in improving cognitive function. I made many visits, and this eventually led to Biococoon Laboratories joining the Group. It was an expansion into a business field that bears the company name of pharmaceutical manufacture given by the founder.

It took ten years to acquire the two vital components needed to make the business profitable. The first was Biococoon Laboratories, which conducts research in the life sciences with a focus on Japonica-Bombyx Fungus. The second was the addition of Ikeda Yakusou—a GMP-certified pharmaceutical and functional foods manufacturing company—to the Group. Ikeda Yakusou had a track record of being able to turn a profit of 200 million yen from 1 billion yen in sales from its contracting business. We then developed a business concept for Biococoon Laboratories. When the factory is operating at full capacity and sales reach 500 million yen, we plan to make a profit of 100 million yen. Our plan was to somehow grow the business to profitability in five years. Certain circumstances have prevented us from making that level of progress. Firstly, Ikeda Yakusou's clients shifted to in-house manufacturing. Also, Japonica-Bombyx Fungus was sold to an unspecified number of consumers, and we ran into a wall with advertising costs. Now that we are in our sixth year, Ikeda Yakusou has a view to new contracts with top sales to influential customers. Japonica-Bombyx Fungus has begun to bear fruit in a different niche, and small lot transactions with specific companies have begun to yield results. We will focus our efforts on achieving profitability within the next three years.

Biococoon Laboratories is good at experimenting with cells and animals. They have published numerous papers on the causes of threats to human, and mechanisms that contribute to their treatment. The name of the project that makes use of these characteristics and functions is called *Kaguyahime* (Princess Kaguya).

In an old Japanese folk tale, when Princess Kaguya—a princess from the Moon—returned to Moon City, she left an elixir of eternal youth and immortality to the old couple who took care of her. The couple put the medicine on a high mountain. Legend has it that the Japanese word for immortality, *fushi*, became the name of the mountain, Mount Fuji. The bamboo that the princess points to turns into gold, and makes the old couple rich.

DKS is a chemical manufacturer that provides all kinds of materials related to humans. Thirty-four years before our founding, Japan's first modern company was established. Shimadzu Corporation will celebrate its 150th anniversary next year. The company's founder learned analytical techniques at Seimikyoku (the Chemistry School) which was established to revitalize Kyoto, the population of which had drastically declined due to the relocation of the capital to Tokyo. Two long-standing chemical companies in Kyoto are now working on new businesses that support life. Juntendo University also joined in the field of medicine, and the three parties agreed to a joint agreement for collaboration. I hope that the three elements of analysis, materials, and medicine will be the foundation for unraveling the mysteries of life.

III. Thoughts on the 115th anniversary of the new head office / continued value creation at DKS

On the occasion of the 115th anniversary of our founding, I would like to make three points about DKS, which continues to create value. In writing the integrated report for our anniversary year, I re-read Jacques Attali's predictions for the future in 2030. Does his name echo reality? As Attali's name would suggest, his predictions are often correct. (In Japanese, the word *attari* or *attali* means that a guess or prediction is correct.) In his 2016 book, he predicted Russia's invasion of Ukraine as the detonator for a global war. This unfortunate invasion, which none of us wanted to happen, started on February 24, 2022. His book also contains ten predictions for survival. It clearly states that health management should be a top priority. As a company selected as a Health & Productivity brand for five consecutive years, DKS will continue to engage in management that is appropriate for the era of 100-year lifespans. We have increased the number of members of the sales force in the Life Sciences Department. I am encouraged by the growing interest shown in Japonica-Bombyx Fungus by companies that have strengths in the specific field of brain science. In the first half of the next medium-term management plan, we will begin to consider capital investment in the life sciences business. We will work with the determination to make it account for one-third of our total business performance by 2030.

The chemical industry is one of 33 industries on the Tokyo Stock Exchange, but it is a unique group of companies within the manufacturing industry. Innovating to survive means creating new products. Typically, after a certain period of time, it is essential to implement a product model change. Within the manufacturing industry, however, materials manufacturers make few such model changes. Even if there is a model change, the reality is that changes to materials do not happen very often. Even when there is a model change, it can be said that materials relating to function and application do not change. Chemical materials themselves are used for a long time. Resistance to change is also a characteristic of materials chemistry. While they are expected to last, there are challenges. The ratio of sales in the three years after the launch of a new material catering to a specific function or application to the total is called the new product conversion rate. At present, this rate is sluggish. I'm talking mainly to the research department. This year, I am delighted to see that young employees are starting to work on new themes.

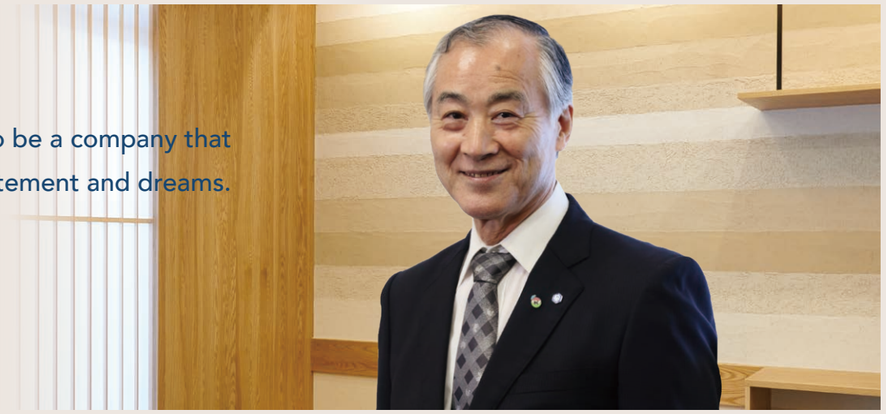
I will explain about green innovation, another "X," and CN2050 (carbon neutrality). As a chemical material manufacturer, DKS has been using non-fossil resources from an early stage. Plant-derived pulp and sugar, and more recently, Japonica-Bombyx Fungus grown by mulberry feeding. In preparation for CN2050, we are reviewing our manufacturing sites and working to bring them closer to regulatory standards. From the perspective of decarbonization, we will seek to secure energy through solar cells. The Kibi district of Okayama, the sunniest prefecture in Japan, is a digital strategic special zone. In the middle of that district, we have land covering an area 2.5 times that of Koshien baseball stadium. While there are some issues relating to power transmission, we are considering solar power generation for DKS and joint ventures with other companies. Let us dig deeper into the meaning of "green."

I took an interest in anthropology and got to know the bonobos, a species of anthropoid apes. They are a pacifist group, with male-female equality. The unresolved issues of the 21st century are geopolitical dynamics and war. On the 115th anniversary of our founding, we thought about the biological world, and decided to establish a life sciences business. There are pathways to integrate or combine chemistry and biology.

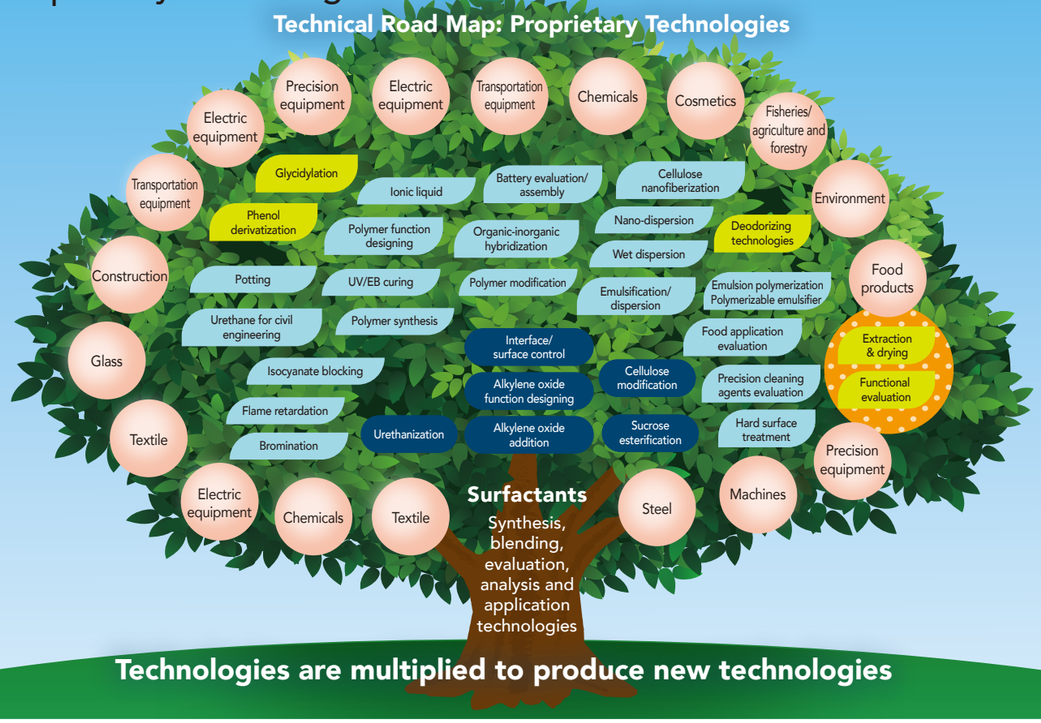
IV. Conclusion

At the beginning of the 21st century, DKS lost its research laboratories, factory, and headquarters, which were located on a 26,446m² plot of land in Shichijo-Senbon Minami, Kyoto. The chimney, visible from anywhere in the city, collapsed. Apparently, employees picked up the bricks and took them home to keep with loving care. This year, our 115th anniversary, we have established a new headquarters near to Kyoto Station. The pillars on the seventh floor are made of brick, perhaps because the designer heard about this from someone. We will never forget the company's founding ideals. I explained this to the whole company as a symbol of unity. Continuing to be a company that nurtures excitement and dreams.

Continuing to be a company that nurtures excitement and dreams.



Proprietary Technologies of DKS



Basic Technologies

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 do not mix together. For example, 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. 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, it 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. Moreover, improving the wettability of paint and adding various functionality (e.g., leveling,[1] water/oil repellent, antifouling, lubricity) can be included as types of technology for surface modification and interface control. For example, fluoropolymers are widely used in water- and oil-repellent agents for textiles. 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. ▷See p.64

1. To make the surface smooth and even

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, waterborne urethane resin can be obtained by emulsifying urethane resin. Our Company's products can be broadly divided into nonreactive and reactive. Nonreactive waterborne urethane resin is an emulsion product of urethane resin. Reactive waterborne urethane resin is produced by using a blocking agent to protect the terminal isocyanate groups generated by the reaction between polyisocyanate and polyol and emulsification. Reactive waterborne 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 textiles.

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 by the addition of quantities of the carboxymethyl group. CMC 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 in general, and other uses include as a binding agent for fish feed and pesticides. CMC is also known for functioning as a high-performance dispersion stabilizer. It is applied to products seeking an even higher level of functionality, for example, as a binder for lithium-ion battery cathode paste.

Sucrose esterification technology

This technology is used to obtain sucrose fatty acid esters (SEs), a non-ionic surfactant where natural sucrose is part of the hydrophilic group and 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 are approved as a food additive in Japan since 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.

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[2] 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[3]. 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.

2. A reaction in which two or more molecular compounds having a simple structure are combined to form another compound having a large molecular weight. A molecular compound before polymerization is called a monomer.
3. The production of vinyl polymer is an important reaction and refers to addition polymerization in which the growth chain is a radical (free group).

Application Technologies

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,[4] nano tubes, nano fibers, graphene[5]), 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 the particle size of substances is reduced to nano size, the impact of the Van der Waals force[6] 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 tablet PCs), cosmetics (sunscreen), eyeglass frames, etc.

4. Carbon atom cluster
5. Hexagonal lattice carbon allotropes
6. Attractive and repulsive forces acting between molecules

Radiation curing technology

This technology instantly dries and cures coatings and paints 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. This technology is utilized in our urethane oligomer, and 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 and coatings, printings and markings

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[7] (MMT[8], CNT[9]). Flame retardants are broadly divided into halogenated and halogen-free products that 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, textiles, paper, aircraft, marine vessels, etc.

7. A general term for composite materials in which one material is atomized to a size of 1-100 nm and then kneaded into another material and diffused.
8. Montmorillonite
9. Carbon nanotubes

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.[10] 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 cells, lithium-ion batteries, electric bilayer capacitors and actuators; lubricants, dispersants and antistatic agents, etc.

10. An electronic component that stores and emits electricity (electric charge), also called a condenser. In addition, there are some electric double layer capacitors that have an order of magnitude larger capacitance than conventional capacitors.

Special Technology

Glycidylation technology

This technology belongs to Yokkaichi Chemical Co., Ltd. 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 materials

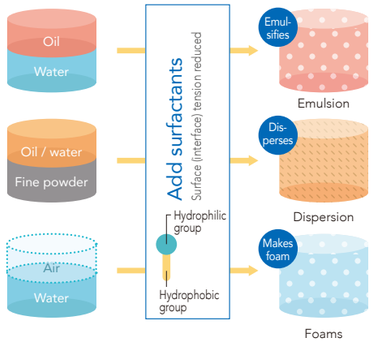
Fundamental Knowledge of Surfactants

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.

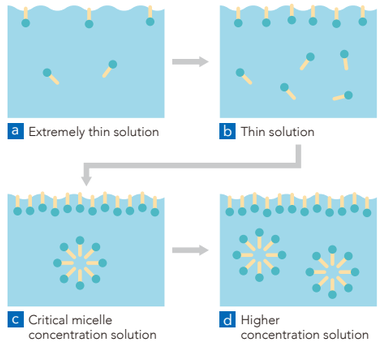
Basic Structure of Surfactants

Surfactants have a unique chemical structure that has both hydrophilic (water-attracting) and hydrophobic (oil-attracting) 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). When surfactants are dissolved in water and the result is a low-concentration solution, their molecules can easily gather and assemble on the interface (surface) of the solution through a phenomenon called "adsorption." If the surfactant concentration is increased, the surfactants form molecular aggregates or micelles (spheres) when they reach what is called "critical micelle concentration" (see illustrations "c" and "d" below). Once micelles have formed, if you add non-water-soluble oil to the solution, the oil can be encircled (solubilized) by the micelles so that from the outside, it looks like the oil has dissolved in the water.

Functions of surfactants by reducing surface tension



Surfactant solutions



Surfactant Types

Surfactants have four main structural types based on the functions they are molecularly 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 when dissolved 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	Flagship Product Line
Anionic surfactants	• Superb emulsifying and dispersing properties • Good foaming • Not susceptible to temperature	Laundry detergent / Shampoo / Body wash	HITENOL series products
Cationic surfactants	• Absorbed by textiles, etc. • Antistatic effect • Sterilizing effect	Hair conditioner / Fabric softener / Disinfectant	CATIOGEN series products
Amphoteric surfactants	• Non-irritative to the skin • Superb solubility in water • High compatibility with other surfactants	Body wash / Dishwashing liquid / Shampoo	AMOGEN series products
Nonionic surfactants	• Easy to adjust the balance of hydrophilic and hydrophobic properties • Superb emulsifying and solubilizing properties • Low foaming • Susceptible to temperature	Laundry detergent / Emulsifier and solubilizer / Dispersant / Metal processing oil	NOIGEN series products

Main Actions and Applications

Function		Actions and effects	Applications	
Emulsification	Mixes incompatible substances	Mixes water and oil to form emulsions.	Food, cosmetics, paints, dyes	
Dispersion	Breaks solid particles into finer pieces and disperses them evenly in a dispersion medium	Mixes inorganic fillers into a dispersion medium to produce nano-dispersions.	Battery materials, information electronic materials, cosmetics	
Moistening, permeating, wetting	Facilitates substrate wetting and liquid permeation	Enhances the wetting properties of a leaf for uniform, thin pesticide application.	Agriculture, pesticides, textile paints, dyes	
Making, removing foam	Makes and/or removes foam	Uses a foaming agent to introduce air into concrete for molding.	Civil engineering, construction soaps, detergents, food, cosmetics	
Cleaning	Removes dirt	Adsorbs onto dirt, penetrates between the dirt and the substrate, loosens it, breaks it into smaller particles, emulsifies it, and prevents it from reattaching to the substrate.	Soaps, detergents, electronic component cleaners	
Softening, smoothing	Softens and smooths	Creates soft fabric with gentle feel on the skin. Improves the smoothness of yarns in the spinning and/or knitting process.	Fiber finishing agents, metal processing oils	
Antistatic	Prevents static electricity on substrate surfaces	Adsorbs moisture from the air onto substrate surfaces and reduces electrical resistance.	Electronic substrates, films, resins	
Rustproofing	Prevents rust on metal surfaces	Forms a protective film that adheres to metal surfaces to block oxygen and water, which cause rust.	Metal surface treatment films, electronic wiring	
Sterilizing	Removes bacteria	Uses the positive charge of the surfactant to adsorb negatively charged bacteria, disrupting their cell membrane.	Disinfectants, soaps, detergents	

Environmental Impact of Surfactants

Most household wastewater that contains surfactants is collected and treated at public sewage treatment facilities and released to the environment, although some may 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.

Glossary

Terminology	Description
Absenteeism	A situation in which, due to mental or physical distress, an employee is frequently absent from work or misses work without notice.
Antistatic agent	A compound to prevent the electrification of synthetic fibers and plastics caused by static electricity, for which a surfactant is mainly used. It is applied to the surface of target materials by spraying and lets static electricity escape.
BCP	An abbreviation for Business Continuity Plan through which, in the event of a disaster or other crisis, companies do not allow critical operations to go offline. Even if business activities are unavoidably interrupted, important functions can be restarted within the targeted recovery time, and strategic preparations for continuing business are carried out in advance to minimize the risks involved in interrupted operations.
Carbon neutrality (CN)	Balancing greenhouse gas (GHG) emissions and absorption. The Japanese government has pledged to aim for carbon neutrality by reducing greenhouse gas emissions to net-zero by 2050.
Cellulose Nano Fibers	Very thin nano-sized fibers prepared by detangling cellulose, which makes up the cell walls of plants. The width of the fibers is about 10 nm (nano = one billionth). They are made from wood-derived pulp, and when used in plastics and rubbers, they enhance the strength of these materials while reducing thermal expansion/contraction.
CNF	An abbreviation for cellulose nano fibers. *See "Cellulose Nano Fibers."
Cocoon unwinding agent	An agent to spin silk yarn from silkworm cocoons.
COD emissions	COD is an abbreviation for Chemical Oxygen Demand. The value indicates the oxygen volume needed for oxidizing underwater objects and is one of the major indicators used for water quality.
Conductive paste	Paste that conducts electrical current and is used in solar cell panels.
Digital transformation (DX)	A response by companies to drastic changes in the business environment by transforming their products, services, and business models through the use of data and digital technologies, based on the needs of customers and society. The objective is to rethink work tasks, organizations, processes, and corporate culture and climate in order to secure a competitive advantage.
Diversity and inclusion (D&I)	A term emphasizing the importance of embracing diversity (where people of different genders, ages, abilities/disabilities, and nationalities participate in the same organization) and inclusion (where diverse individuals respect and recognize each other, working together to contribute to the unity of the organization).
Energy consumption per unit	A figure for expressing energy efficiency. It refers to the overall volume of energy consumption, such as electrical power and fuel, needed to produce a given unit or amount of goods. Generally, it is used as an indicator showing the progress of energy saving measures.
GMP	An abbreviation of Good Manufacturing Practice, which is a set of rules and a system that cover all processes from stocking raw materials to manufacturing and shipping, and ensure consistent quality and safe manufacturing of pharmaceutical products, food products, and the like.
Green purchasing	The practice of selecting products and services whose environmental impact is smaller, considering both necessity and environmental impact when making purchases. This approach encourages environmentally friendly consumer behavior and promotes the development of low-impact products by companies, potentially transforming all economic activities.
Green transformation (GX)	The concept of transforming the global environment by converting to non-greenhouse gas (GHG) emitting green energy, such as renewable energy.
HACCP	An abbreviation for Hazard Analysis Critical Control Point, which is a hygiene approach for ensuring the safety of food products.
Health & Productivity Stock	The Ministry of Economy, Trade and Industry, in collaboration with the Tokyo Stock Exchange, selects listed companies that take strategic initiatives and carry out efforts with regard to employee health from a management perspective, recognizing them as Health and Productivity Stocks. The aim is to encourage companies to take health management initiatives by introducing them as attractive companies to investors who place importance on improving corporate value from a long-term perspective.
Inspiring/Inspired Partners	Specific business partners of DKS who intuit the needs of end users, collaboratively inspire new approaches, and provide each other with a spark.
Material issues	A term that refers to how essential something is. Originally, it referred to the general rule of importance in the accounting field for items that could have major effects on financial affairs. Recently, important issues in CSR activities are also identified as "material issues," and many companies are using this approach when conducting CSR activities and reporting the results in integrated reports.
Modal shift	Switching or changing from one mode of transport to another, especially to a means of transport with less impact on the environment.
Naturido	A new and useful ingredient discovered by Biococoon Laboratories, Inc. from medical fungus grown on the pupae of domestic silkworms obtained using sericulture technology.
Organizational Resilience	The capacity, and initiatives related thereto, for adapting to changes in the business environment and for handling natural disasters.
PPM	An abbreviation for Product Portfolio Management, which is a method for determining investment and allocation of management resources by plotting businesses and products on a graph whose axes are market growth rate and market share.
Presenteeism	The act or state of employees coming to the office and continuing work despite dealing with some type of disease, disease symptoms, or mental/physical distress.
Resist	A protective film, or a substance used to create a protective film, against physical or chemical processing, mainly in industrial applications.
Responsible Care (RC) activities	Voluntary control activities by the companies in the chemical industry that promote the safe handling of materials in every step of the process from manufacturing to distribution, consumption and disposal. First proposed by the Chemistry Industry Association of Canada in 1985. The Japan Responsible Care Council was founded in 1995.
Rock hardening agents	Agents used to prevent structural collapse during tunnel construction for bullet trains, expressways, and the like.
ROIC	An abbreviation for Return on Invested Capital, which allows for confirming the extent to which funds (invested capital) used for business activities efficiently lead to profit for the company.
RPA	An abbreviation for Robotic Process Automation, which is technology for automating routine tasks people perform on computers.
RSPO	An abbreviation for Roundtable on Sustainable Palm Oil. Founded in 2004, a group of seven organizations, including the WWF, responding to the global increase in voices calling for sustainable palm oil that takes environmental impacts into account.
SDS	An abbreviation for Safety Data Sheets. The same materials previously were called Material Safety Data Sheets (MSDS), however, since April 2012, all have been designated as SDS as used in the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS).
Skills matrix	A table that organizes the skills of the members of the Board of Directors visually by area of expertise.
Sucrose fatty acid ester	A nonionic surfactant produced from natural sucrose and fatty acids. It is also known as sugar ester (SE).
TCFD	Task Force on Climate-related Financial Disclosures. This was established by the Financial Stability Board (FSB) at the request of the G20 to consider how to handle climate-related information disclosure and the responses of financial institutions.
United Nations Global Compact	A global framework for achieving sustainable growth announced by then United Nations Secretary-General Kofi Annan at the 1999 World Economic Forum (Davos). The framework states 10 principles in the four areas of human rights, labor, the environment and anti-corruption.
VOC	An abbreviation for Volatile Organic Compounds. VOC is a general term for organic compounds that are volatile and exist in a gaseous form in the air, and the term encompasses a wide variety of compounds such as toluene, xylene and ethyl acetate.
WACC	A popular method for calculating cost of capital that weights and averages the cost of borrowing and the cost of procuring stock.
Waterborne polyurethane	Polyurethane resin is an overall term for polymer compounds possessing urethane bonds. Industrially, they result from a polyaddition reaction between polyisocyanates and polyols, and waterborne polyurethane resin results from the emulsification of this polyurethane resin.
Work engagement	A term that refers to a positive and fulfilling mental state that one has toward one's work.
Zero emission	A concept proposed by the United Nations University in 1994 with the goal of achieving zero waste emissions. The goal is to eliminate landfill waste by having industries reuse waste from other industries.

Domestic/Overseas Network

Domestic Network

Laboratory

Ohgata Branch

Location: 230 Saigata, Ohgata-ku, Joetsu, Niigata 949-3116, Japan

Area: 87,639 m²

Main products: CMC, waterborne polyurethane, professional detergents, polyvinylpyrrolidone, plastic additives

Headquarters

Shiga Branch

Location: 427 Gokasho Hiyoshi-cho, Higashi-ohmi, Shiga 529-1403, Japan

Area: 106,805 m²

Main products: Surfactants, sucrose fatty acid esters, food additive formulations, acrylic polymers, professional detergents

Yokkaichi Branch Chitose Plant

Location: 7 Chitose-cho, Yokkaichi, Mie 510-0051, Japan

Area: 16,303 m²

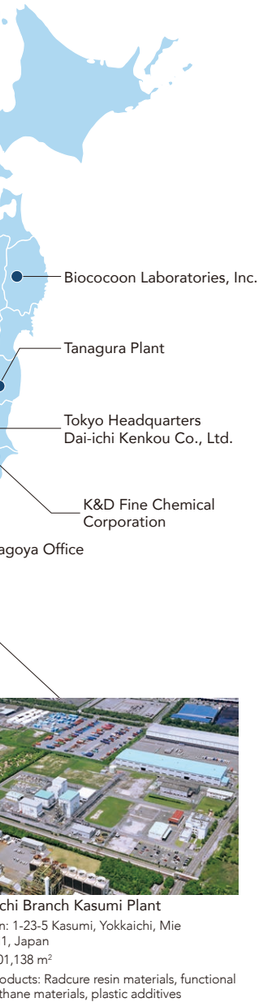
Main products: Radcure resin materials

Yokkaichi Branch Kasumi Plant

Location: 1-23-5 Kasumi, Yokkaichi, Mie 510-0011, Japan

Area: 101,138 m²

Main products: Radcure resin materials, functional polyurethane materials, plastic additives

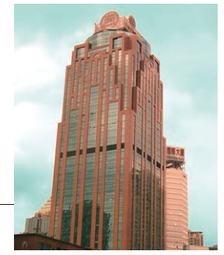


Subsidiary and Affiliated Companies (Japan)

Company name	Location	Business activities	Voting rights ratio
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	100%
Gembu Co., Ltd.	5 Ogawara-cho, Kisshoin, Minami-ku, Kyoto 601-8391, Japan Phone +81-75-323-5740 Fax +81-50-3153-1621	Sales of detergents, finishing agents and equipment for professional laundry Sales of industrial/professional-use deodorants	100%
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 [Partner] DOWA Electronics Materials Co., Ltd.	50.03%
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 feedstock for powder injection molding	100%
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	100%
Biococoon Laboratories, Inc.	4-3-5 Ueda, Morioka, Iwate 020-8551, Japan Phone +81-19-613-5564 Fax +81-19-613-5570	R&D regarding drugs and health care ingredients Production of foods and health care products	100%
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 ingredients for health food Production and sales of life sciences products, such as drugs and quasi-drugs	100%
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 [Partner] JFE Chemical Corporation	50.0%

Overseas

Sisterna B.V.



DKS (Shanghai) International Trading Co., Ltd.

Chin Yee Chemical Industries Co., Ltd.

KYOTO ELEX (Suzhou) Co., Ltd.

P.T. Dai-ichi Kimia Raya

Operation Bases (World)

Company name	Location	Business activities	Voting rights ratio
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/electronic materials	51.0%
Sisterna B.V.	Belder 30A 4704 RK Roosendaal, The Netherlands Phone:+31-165-524730	Application development and sales of sucrose fatty acid esters	94.9%
P.T. Dai-ichi Kimia Raya	Jl. Maligi II Lot. G-2 Kawasan Industri KIIC, Karawang Barat 41361, Jawa Barat, Indonesia Phone +62-21-8904574 Fax +62-21-8904576	Production and sales of textile agents, paper processing agents, plastic additives and sucrose fatty acid esters	91.53%
DKS (Shanghai) International Trading Co., Ltd.	Room #1104, New Town Center Building, 83 Loushanguan Road., Shanghai, P.R. China Phone +86-21-6236-8080 Fax +86-21-6236-8700	Trading	100%
KYOTO ELEX (Suzhou) Co., Ltd.	1F, No.6 Building, New-Tech. Industrial Park, No.98 Hengshan Road, Suzhou New District, Jiangsu, China Phone +86-512-6871-2900 Fax 86-512-6871-2901	Production and sales of electronic materials	94.2%
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	50.0%

Financial and Nonfinancial 11-Year Summary

Financial Data (Millions of yen)	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
Net Sales	54,614	55,597	52,782	52,254	56,955	59,574	61,456	59,140	62,672	65,081	**63,118**
Surfactants	20,359	21,573	20,779	19,793	21,416	21,838	18,970	17,303	18,564	18,976	**18,529**
Amenity Materials	7,141	6,856	7,208	6,986	7,502	8,031	7,994	7,081	8,092	8,079	**8,430**
Polyurethane Materials	9,564	9,442	8,934	9,093	9,115	9,026	8,470	7,484	8,294	8,761	**8,870**
Functional Materials	10,680	11,216	11,259	12,517	14,070	16,239	20,848	21,077	19,928	22,574	**21,439**
Electronic Device Materials	6,868	6,508	4,600	3,862	4,850	4,199	4,744	5,758	7,316	6,191	**5,456**
Life Sciences	–	–	–	–	–	239	427	435	476	497	**392**
Overseas Sales (relative to net sales ratio %)	8,103 (14.8)	8,743 (15.7)	9,131 (17.3)	8,794 (16.8)	9,929 (17.4)	10,139 (17.0)	10,350 (16.8)	10,135 (17.1)	14,076 (22.5)	15,506 (23.8)	**14,303 (22.7)**
Operating Income	2,477	2,944	3,439	3,944	5,053	4,341	4,154	4,485	4,626	1,186	**2,077**
Ordinary Income	2,374	2,717	3,200	3,773	4,725	4,175	3,524	4,314	4,192	1,200	**2,060**
Profit Attributable to Owners of Parent	1,336	1,782	2,198	2,489	3,351	2,581	2,014	2,563	2,492	(407)	**1,174**
Capital Expenditures	1,512	3,948	8,485	3,786	2,467	5,802	6,138	4,617	1,925	3,172	**2,724**
Depreciation	2,104	2,153	2,087	2,335	2,473	2,555	2,724	3,263	3,430	3,295	**3,216**
R&D Expenses	2,506	2,439	2,380	2,393	2,307	2,765	2,748	2,821	2,946	3,236	**3,170**
Net Cash Provided by (Used in) Operating Activities	3,553	2,322	4,197	3,750	5,017	3,236	3,766	4,955	5,520	724	**7,091**
Net Cash Provided by (Used in) Investing Activities	(1,793)	(3,229)	(7,687)	(3,336)	(1,130)	(5,694)	(5,842)	(3,804)	(2,700)	(2,883)	**(2,008)**
Cash Dividends Paid	298	474	528	608	710	711	711	712	814	840	**573**
Amount of Treasury Shares Acquired	0	0	0	1,000	1	0	0	0	0	1,500	**0**
Net Assets	19,886	26,156	26,745	28,044	31,960	33,591	34,265	37,404	40,383	38,296	**41,297**
Total Assets	57,570	64,420	66,057	69,046	73,976	75,906	81,736	85,033	86,469	85,025	**94,537**
Interest-Bearing Debt[1]	20,680	21,322	23,228	24,594	23,863	23,466	29,946	28,529	27,763	29,865	**32,797**
Per-Share Data (yen)[2]											
Net Profit	156.60	193.44	208.18	236.98	330.29	254.11	198.17	251.97	244.81	(41.87)	**122.81**
Net Assets	2,200.01	2,362.01	2,425.27	2,649.71	2,970.75	3,082.83	3,114.97	3,405.28	3,610.31	3,593.49	**3,839.89**
Cash Dividend	35.00	45.00	50.00	60.00	70.00	70.00	70.00	70.00	80.00	80.00	**65.00**
Major Indices											
R&D Expenses to Sales Ratio (%)	4.6	4.4	4.5	4.6	4.1	4.6	4.5	4.8	4.7	5.0	**5.0**
Operating Margin (%)	4.5	5.3	6.5	7.5	8.9	7.3	6.8	7.6	7.4	1.8	**3.3**
Return on Equity (ROE) (%)	7.4	8.2	8.7	9.5	11.8	8.4	6.4	7.7	7.0	(1.1)	**3.3**
Return on Assets (ROA) (%)	2.4	2.9	3.4	3.7	4.7	3.5	4.5	3.1	2.9	(0.5)	**1.3**
Equity Ratio (%)	32.6	38.7	38.8	38.9	40.8	41.3	38.8	40.7	42.5	40.4	**38.9**
Net D/E Ratio (times)	0.58	0.36	0.52	0.54	0.39	0.48	0.57	0.45	0.38	0.54	**0.40**
Dividend Payout Ratio (%)	22.4	23.3	24.0	25.3	21.2	27.5	35.3	27.8	32.7	–	**52.9**
Total Return Ratio (%)	22.4	26.7	24.1	64.6	21.2	27.6	35.4	27.8	32.7	–	**53.0**
Year-End Stock Price (yen)[2]	322	387	328	427	875	3,480	3,750	3,680	2,759	1,885	**3,670**
PER (times)	10.3	10.0	7.9	9.0	13.2	13.7	18.9	14.6	11.3	(45.0)	**29.9**
PBR (times)	0.7	0.8	0.7	0.8	1.5	1.1	1.2	1.1	0.8	0.5	**1.0**
Dividend Yield (%)	2.2	2.3	3.1	2.8	1.6	2.0	1.9	1.9	2.9	4.2	**1.8**
Nonfinancial Data											
No. of Employees (consolidated) (persons)	969	944	982	967	976	985	1,032	1,061	1,096	1,104	**1,111**
No. of Employees (non-consolidated) (persons)	514	508	495	486	497	512	531	560	571	584	**585**
No. of Employees Outside Japan (persons)	170	163	219	199	213	170	177	178	197	198	**201**
Ratio of Female Employees to Total Employees (non-consolidated) (%)	16.0	15.9	17.0	17.5	17.5	17.8	18.8	18.9	20.3	20.9	**21.7**
Number of female managers (persons)											**18**
Ratio of female managers (%)											**11.6**
Gender pay gap (non-consolidated) (%)							84.3	84.6	81.9	78.7	**77.4**
No. of Employees Who Utilized the Child-Care Leave System (non-consolidated) (persons)	8	11	9	6	12	7	3	7	13	20	**24**
No. of Employees Who Utilized the Child-Care Part-Time Work System (non-consolidated) (persons)	8	9	10	13	10	10	12	10	8	9	**8**
Annual Paid Leave Rate (non-consolidated + assigned employees) (%)	63.7	61.0	64.5	62.4	67.4	68.5	73.2	66.1	67.4	73.8	**74.6**
No. of Patents Held (outside Japan) (patents)[3]	668 (246)	735 (297)	763 (316)	855 (378)	924 (427)	961 (453)	1,012 (479)	1,056 (514)	1,005 (483)	982 (444)	**992 (542)**
Generated Waste Amount (tons)	12,724	13,876	13,191	17,364	20,779	21,658	19,605	18,431	16,664	15,251	**14,258**
CO_2 Emissions (Scope 1, 2) (thousands of tons)	52.0	51.3	50.4	51.7	53.6	52.6	53.8	48.9	48.6	43.0	**39.9**

1. Lease liabilities 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.

Consolidated Financial Statements

Consolidated Balance Sheets

(Millions of yen)

Assets	FY2022	FY2023
Current assets		
Cash and deposits	9,128	16,126
Notes receivable—trade	345	271
Accounts receivable—trade	14,759	18,027
Electronically recorded monetary claims—operating	2,218	2,364
Merchandise and finished goods	13,131	11,029
Work in process	16	20
Raw materials and supplies	3,489	3,091
Prepaid expenses	369	403
Other	1,956	2,282
Allowance for doubtful accounts	(3)	(2)
Total current assets	45,411	53,614
Non-current assets		
Property, plant and equipment		
Buildings and structures	30,640	31,396
Accumulated depreciation	(17,805)	(18,812)
Buildings and structures, net	12,834	12,583
Machinery, equipment and vehicles	35,272	37,499
Accumulated depreciation	(30,621)	(31,782)
Machinery, equipment and vehicles, net	4,650	5,717
Tools, furniture and fixtures	4,285	4,647
Accumulated depreciation	(3,484)	(3,708)
Tools, furniture and fixtures, net	800	939
Land	9,748	9,948
Leased assets	4,582	4,759
Accumulated depreciation	(2,244)	(2,644)
Leased assets, net	2,338	2,115
Construction in progress	2,369	1,162
Total property, plant and equipment	32,743	32,467
Intangible fixed assets	341	290
Investments and other assets		
Investment securities	4,274	5,641
Long-term loans receivable	14	10
Long-term prepaid expenses	512	346
Deferred tax assets	299	127
Retirement benefit asset	1,063	1,601
Other	371	437
Allowance for doubtful accounts	(6)	(1)
Total investments and other assets	6,529	8,164
Total non-current assets	39,614	40,922
Total assets	85,025	94,537

Liabilities	FY2022	FY2023
Current liabilities		
Notes and accounts payable—trade	9,972	11,979
Electronically recorded obligations—operating	379	562
Short-term borrowings	6,516	7,847
Lease liabilities	474	516
Accrued expenses	308	278
Income taxes payable	232	361
Accrued business office taxes	41	41
Provision for bonuses	712	823
Other	2,002	2,747
Total current liabilities	20,639	25,159
Non-current liabilities		
Corporate bonds	6,000	6,000
Long-term borrowings	17,348	18,950
Lease liabilities	2,131	1,823
Deferred tax liabilities	196	880
Retirement benefit liability	79	85
Asset retirement obligations	74	74
Other	259	266
Total non-current liabilities	26,089	28,081
Total liabilities	46,729	53,240

Net assets	FY2022	FY2023
Shareholders' equity		
Capital stock	8,895	8,895
Capital surplus	7,276	7,266
Retained earnings	19,250	19,851
Treasury shares	(2,488)	(2,462)
Total shareholders' equity	32,933	33,551
Accumulated other comprehensive income		
Valuation difference on available-for-sale securities	467	1,670
Foreign currency translation adjustment	765	1,073
Remeasurements of defined benefit plans	180	452
Total accumulated other comprehensive income	1,413	3,196
Non-controlling interests	3,949	4,549
Total net assets	38,296	41,297
Total liabilities and net assets	85,025	94,537

Consolidated Statements of Income

(Millions of yen)

	FY2022	FY2023
Net sales	65,081	63,118
Cost of sales	52,120	49,733
Gross profit	12,960	13,385
Selling, general and administrative expenses		
Selling expenses	4,198	4,083
General and administrative expenses	7,574	7,223
Total selling, general and administrative expenses	11,773	11,307
Operating income	1,186	2,077
Non-operating income		
Interest income	10	11
Dividend income	105	138
Share of profit of entities accounted for using equity method	36	–
Foreign exchange gains	144	163
Rent income	35	35
Other	89	170
Total non-operating income	421	520
Non-operating expenses		
Interest expenses	199	258
Corporate bond interest	37	37
Share of loss of entities accounted for using equity method	–	3
Other	170	237
Total non-operating expenses	407	537
Ordinary income	1,200	2,060
Extraordinary income		
Gain on sales of investment securities	50	408
Total extraordinary income	50	408
Extraordinary losses		
Impairment losses	786	66
Loss on disposal of non-current assets	102	58
Amortization of goodwill	137	–
Total extraordinary losses	1,027	125
Profit before income taxes	224	2,343
Income taxes—current	459	485
Income taxes—deferred	(185)	214
Total income taxes	274	700
Profit (loss)	(49)	1,642
Profit attributable to non-controlling interests	357	468
Profit attributable to owners of parent	(407)	1,174

Consolidated Statements of Comprehensive Income

(Millions of yen)

	FY2022	FY2023
Profit (loss)	(49)	1,642
Other comprehensive income		
Valuation difference on available-for-sale securities	286	1,203
Foreign currency translation adjustment	356	562
Remeasurements of defined benefit plans, net of tax	(238)	268
Share of other comprehensive income of entities accounted for using equity method	21	(20)
Total other comprehensive income	425	2,013
Comprehensive income	375	3,656
Comprehensive income attributable to owners of parent	(110)	2,957
Comprehensive income attributable to non-controlling interests	486	698

Consolidated Financial Statements

Consolidated Statements of Cash Flows

(Millions of yen)

	FY2022	FY2023
Cash flows from operating activities		
Profit before income taxes	224	2,343
Depreciation	3,295	3,216
Bad debt expenses	0	1
Amortization of goodwill	213	–
Increase (decrease) in allowance for doubtful accounts	(2)	(6)
Increase (decrease) in retirement benefit liability	(249)	(129)
Interest and dividend income	(115)	(150)
Interest expenses	199	258
Corporate bond interest	37	37
Share of loss (profit) of entities accounted for using equity method	(36)	3
Impairment losses	786	66
Loss (gain) on disposal of property, plant and equipment	102	58
Loss (gain) on sale of investment securities	(50)	(408)
Decrease (increase) in trade receivables	(722)	(3,199)
Decrease (increase) in inventories	(1,362)	2,684
Increase (decrease) in trade payables	(321)	2,150
Other	(442)	509
Subtotal	1,556	7,436
Interest and dividend income received	240	168
Interest paid	(234)	(296)
Income taxes paid	(838)	(216)
Net cash provided by (used in) operating activities	724	7,091
Cash flows from investing activities		
Payments into time deposits	(78)	(178)
Proceeds from withdrawal of time deposits	78	80
Purchase of property, plant and equipment	(2,834)	(2,502)
Proceeds from sales of property, plant and equipment	10	–
Purchase of investment securities	(2)	(2)
Proceeds from sales of investment securities	70	596
Proceeds from withdrawal of investments in affiliated companies	–	141
Collection of loans receivable	1	3
Other	(128)	(145)
Net cash provided by (used in) investing activities	(2,883)	(2,008)
Cash flows from financing activities		
Net increase (decrease) in short-term borrowings	174	(293)
Proceeds from long-term borrowings	7,700	8,603
Repayments of long-term borrowings	(5,879)	(5,534)
Repayments of lease liabilities	(531)	(451)
Purchase of treasury shares	(1,500)	(0)
Dividends paid	(840)	(573)
Dividends paid to non-controlling interests	(152)	(103)
Net cash provided by (used in) financing activities	(1,030)	1,646
Effect of exchange rate change on cash and cash equivalents	89	165
Net increase (decrease) in cash and cash equivalents	(3,099)	6,895
Cash and cash equivalents at beginning of period	12,151	9,051
Cash and cash equivalents at end of period	9,051	15,947

Corporate Data (As of March 31, 2024)

Corporate Name	DKS Co. Ltd
Foundation	April 1909
Incorporation	August 1918
Paid-in Capital	8,895 million yen
Number of Employees	585 (consolidated: 1,111)
Total Number of Shares Outstanding	10,684,321 shares
Share Unit Number	100 shares
Number of Shareholders	4,684
Stock Listing	Tokyo Stock Exchange
Securities Code	4461
General Meeting of Shareholders	Every year in late June
Shareholder Registry Administrator	Mizuho Trust & Banking Co., Ltd.

Headquarters	48-2 Higashikujo-Kamitonodacho, Minami-ku, Kyoto 601-8002, Japan Phone: +81 75 276 3030 Fax: +81 75 276 3031
Main Branch	55 Nishishichijo Higashikubo-cho, Shimogyo-ku, Kyoto 600-8873, Japan
Laboratory	5 Ogawara-cho, Kisshoin, Minami-ku, Kyoto 601-8391, Japan Phone: +81-75-323-5911 Fax: +81-75-326-7356
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
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Please refer to our website for the list of major shareholders and the distribution of shareholders (in Japanese only).→
https://www.dks-web.co.jp/ir/library/library04.html

On Publishing the DKS Report 2024

The DKS Integrated Annual Report is now in its ninth edition since its first publication in 2016. It is a vital platform for communicating the value we create to all stakeholders. Our goal is to clearly explain our growth strategy, both present and future, with a focus on medium- to long-term perspectives.

In fiscal 2023, we united as a company to transform into a highly profitable organization that is resilient to economic fluctuations and market dynamics. This effort enabled us to adjust product pricing in response to rising raw material costs and achieve significant progress in the development of electronic materials for high-end servers, which contributed positively to our profitability.

As part of our sustainable growth strategy, we are strengthening our sales proposals and R&D capabilities while accelerating development to drive sales in our three key areas: electronics and information, environment and energy, and life sciences. We are also reforming our organizational structure and corporate culture, including our personnel system. These efforts include expanding our performance recognition program to enhance the motivation of the young employees who will be the future leaders of our company. We are also making steady progress in the revision of our personnel evaluation system.

In August, we opened our new headquarters in front of Kyoto Station's Hachijo Exit. The integration of our Osaka branch into our headquarters brings our management and sales teams closer together, creating a headquarters that is a valuable hub for sharing customer information and information about business developments. By revitalizing our corporate culture and fostering stronger communication, we are increasing morale and positioning ourselves as a more competitive company.

Fiscal 2024 is the final year of our current medium-term management plan, FELIZ 115. Guided by our annual slogan, Commitment to Results, we are determined to achieve our targets, sales of ¥73.0 billion and operating income of ¥5.0 billion, bringing this phase to a successful conclusion.

In this Message from the President, I have emphasized the importance of strategies for value creation. As the person responsible for this report, I confirm that all of its contents are truthful and appropriate. Looking ahead, we remain committed to further enhancing our transparency and our disclosure of information. I welcome your candid feedback and opinions.

October 2024
President COO
YAMAJI Naoki

Editor's Note

This is the ninth edition of our Integrated Report, and we have also entered the final year of our FELIZ 115 medium-term management plan.

Amid the prolonged geopolitical risks and concerns regarding a global economic downturn, we have carefully considered how best to communicate DKS's value creation story to stakeholders under our Uni-Top strategy, which prioritizes uniqueness over scale. To address key ESG-related social issues, such as biodiversity and diversity and inclusion, we reassessed our risks, opportunities, and material issues to identify the challenges we must overcome to generate new corporate value. This year, we have enhanced our disclosure of information about our R&D and intellectual property strategies, exploring the connection between our technology and medium- to long-term value creation.

We also sought to cooperate with the production company to improve the report's appearance and structure, showcasing the content in a more enhanced way. It is our hope that this integrated report will serve to deepen dialogue with our stakeholders.

We would like to take this opportunity to express our gratitude to all parties concerned for their cooperation in the editing of this report. We also welcome frank opinions from readers as we prepare for the next fiscal year's publication.

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