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<https://www.nipponkayaku.co.jp/english/>



Our Company Logo

This logo symbolizes Nippon Kayaku's company policies.
The space at the center represents the cosmos, world, and expanses of the Earth.
The two soaring ellipses represent creativity and courage and the two circles are the confidence between Nippon Kayaku, which aspires to extraterrestrial space, and the public.



To realize the **KAYAKU spirit**, our corporate vision, the Nippon Kayaku Group promotes CSR management that fosters trust among all stakeholders and contributes to the achievement of a sustainable society.

Goal of corporate activities
||
Corporate vision

**KAYAKU
spirit**

Continuously providing society with the best products through ceaseless progress and the combined forces of our consciences.

Corporate activities

Business plans and business activities, action plans, activities that contribute to society and local communities, activities that reduce environmental impact

CSR management

Corporate activities to realize the **KAYAKU spirit**

Standards of conduct

Policy on attitude and conduct

Nippon Kayaku Group Charter of Conduct and Code of Conduct Group Action Guidelines

Business of the Nippon Kayaku Group

Business Vision

Continuing to provide the best products, technologies, and services that safeguard the life and health of consumers, and support a comfortable life

Safeguarding life and health



Pharmaceuticals Business

We contribute to society through improved patient outcomes achieved as a result of innovation using our technological expertise, the stable supply of high-quality pharmaceuticals, and the provision of information.



Safety Systems Business

Applying the technology we have cultivated in the automotive safety components field, we aim to provide more people around the world with safety by developing new safety components that are compatible with evolving mobility technology.

Supporting a comfortable life



Functional Chemicals Business

We contribute to the creation of an "Super Smart Society" and the realization of the SDGs by applying our core resin, colorant, catalyst and optical processing technologies to provide functional chemicals that offer special characteristics for the fields of information and communications, digital printing, energy and resource conservation, and sensing.



Agrochemicals Business

We will contribute to the sustainable development of agriculture by providing environmentally-friendly agrochemicals using our technologies and services to support the food supply.

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Editorial Policy/Reporting Period

Integrated Report 2020's purpose is to help our shareholders and investors and all other stakeholders understand our initiatives of CSR management aimed at realizing the **KAYAKU spirit**, the corporate vision for the Nippon Kayaku Group, in terms of both the mid-term and the long-term perspectives.

We have referenced the framework of the International Integrated Reporting Council (IIRC) in editing this report to deliver a comprehensive overview of non-financial

information, such as ESG (Environment, Social, and Governance) information, in addition to outlining our financial circumstances, management strategy and other related mid-to long-term initiatives.

This integrated report covers the results for the fiscal year ended March 31, 2020 (April 1, 2019 to March 31, 2020). It also contains information on prior fiscal years and after March 31, 2020 as part of the corporate information.

Forward-Looking Statements

This integrated report contains various forward-looking statements about future developments that are based on the current status of the Nippon Kayaku Group's assumptions and forecasts. They are subject to predictable and unpredictable risks, uncertainties, and other factors so that the actual outcome, including the Company's financial position, its development or performance, could differ considerably.

The Nippon Kayaku Group acts out of an awareness for CSR Key Themes (“Materiality”) for the realization of the **KAYAKU spirit**, our corporate vision.



The corporate vision of the Nippon Kayaku Group, **KAYAKU spirit**, is “Continuously providing society with the best products through ceaseless progress and the combined forces of our consciences.” **KAYAKU spirit** is a vision shared by the entire Group, calling for us to continuously contribute to society by providing the best products required in the world through ceaseless progress and the combined forces of our consciences.

The Group launched the three-year Mid-term Business Plan called **KAYAKU Next Stage** from the fiscal year ended March 31, 2020. The name of this plan contains the commitment to advance to the next stage of our vision by achieving net sales of at least 200 billion yen. In addition, we formulated and are now implementing the Mid-term CSR Action Plan linked with the Mid-term Business Plan based on our identification of CSR key themes (materiality). Under these plans, we will contribute to a sustainable society through business growth along with corporate activities that combine together consideration for the environment, co-existence with local communities and governance reform.

Our consolidated net sales for the first fiscal year of **KAYAKU Next Stage** totaled 175.1 billion yen, which marks a record high for us. However, with the outbreak of the COVID-19 from the fourth quarter, the Functional Chemicals Business and Safety Systems Business began to see an impact on their performance, resulting in issues that remain in terms of the growth strategy we envisioned at the start of the fiscal year. We believe that a time of major changes represents an opportunity to rethink our focus for achieving a sustainable society. Today, senior management, business divisions, and corporate divisions are working together to discuss and recompose our vision for the future.

There are two phases that we must implement aimed at the realization of this vision. In phase one, all executives and employees of the Nippon Kayaku Group will re-examine the current state and work daily to master even faster-paced Kaizen (improvement). Toward this end, we have launched top-down cost reduction activities now being pursued by all employees. In phase two, we will fully streamline R&D, manufacturing and sales processes to bring to market products that offer superior function and cost competitiveness. We have adopted a front-loading approach where we will invest resources in the initial stage of development processes in a concentrated manner to ensure we thoroughly reduce possible defects that could occur in back-end processes.

We will proactively implement these initiatives to achieve our vision and ensure employees work together as one so that we are recognized as a company that is truly indispensable to society.

Looking ahead, the Nippon Kayaku Group will implement **KAYAKU spirit** and strive to ensure that all of its stakeholders can feel a keen sense of happiness and joy.

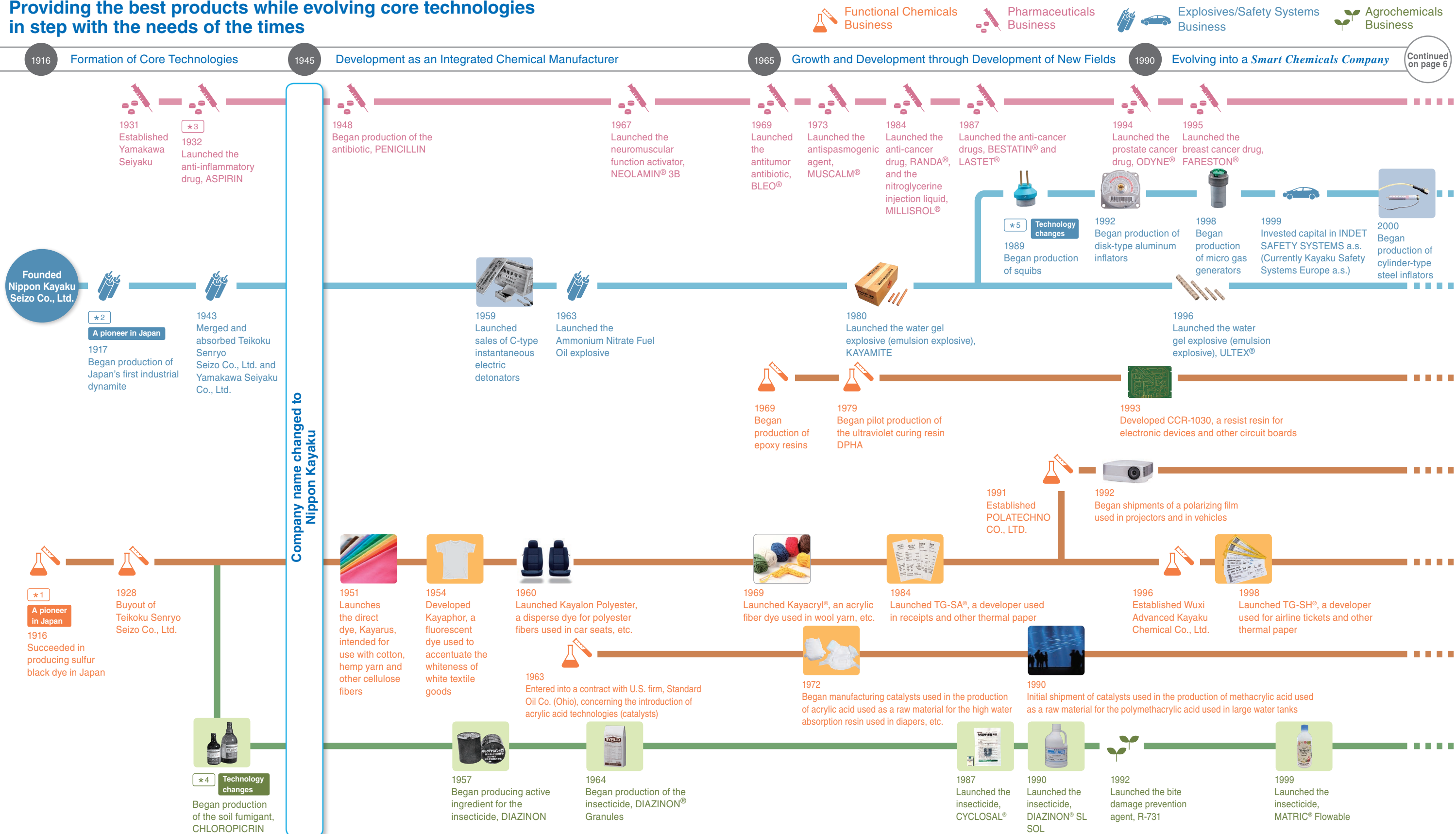
The Nippon Kayaku Group asks for the continued support of our stakeholders as we move forward.

October 1, 2020

President, Representative Director

A handwritten signature in black ink, likely of the President, Representative Director.

Providing the best products while evolving core technologies in step with the needs of the times



*1 | A pioneer in Japan

Origins behind the domestic production of synthetic dyes

From the Meiji period through to the early Taisho period, synthetic dyes in Japan were primarily imported from abroad. The cessation of imports following the onset of World War I caused a nationwide dye shortage, prompting the government to call for the domestic production of synthetic dyes as an urgent national issue. The successful domestic production of sulfur black dyes marked the dawn of a new age of domestically produced synthetic dyes.



*2 | A pioneer in Japan

Origins of industrial explosive production

The sudden outbreak of World War I in 1914 presented a sudden shift in the fortunes of the flagging Japanese economy. While mining production was booming, a reliance on the sale of unused military dynamite and imports resulted in extreme dynamite shortages. In response to the sudden industrial demand for privately-manufactured dynamite, Japan's first industrial explosives manufacturer, Nippon Kayaku Seizo Co., Ltd., was born in 1916.



*3 |

Answering the demand for Aspirin



Among the important medical supplies the Japanese government called for domestic production, Aspirin was the most sought after, and was a core focus of the Japanese Pharmacopoeia. At the time, imported medical products dominated the domestic market. In 1932, the analgesic anti-inflammatory drug, Yamakawa Aspirin, was released amidst calls for products by Japanese pharmaceutical manufacturers. Yamakawa Aspirin would later go on to carve out a majority share of the domestic market.

*4 | Technology changes

Shift in manufacturing away from synthetic dye technologies to agrochemicals

Production of the agrochemical, CHLOROPICRIN, a soil fumigant that applied the raw materials used in sulfur black dyes to produce a highly effective insecticide/anti-microbial, began in 1934. This contributed greatly as a remedy for soil pests that were difficult to control, and served as the foundation for the development of the Company's agrochemical business after World War II.

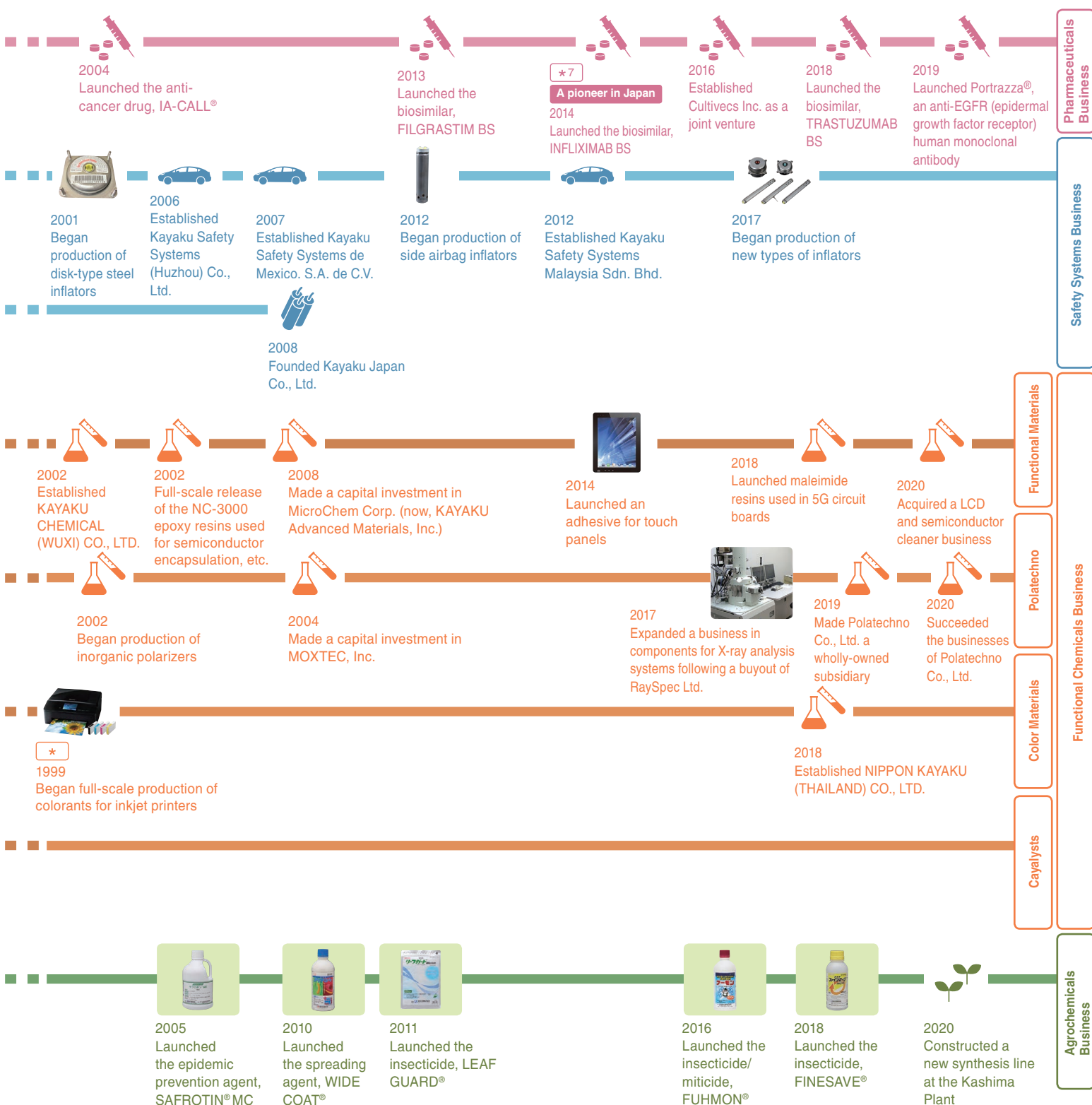
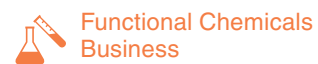


*5 | Technology changes

Application of technologies used in the development of explosives for automotive safety components

The Company applied its extensive experience with explosives technologies to begin production of squibs, the part used to ignition, in 1989, and airbag inflators in 1992. In 1998, the Company also began production of micro gas generators for seatbelt pretensioners, and has grown to become one of the world's leading automotive safety component manufacturers.





★6 Colorants for inkjet printers

With the spread in popularity of full color inkjet printers since the early 90s, the light resistant properties of colorants had remained an issue in the side of manufacturers. As a pioneer of colorants, Nippon Kayaku began colorant development for these printers, entering full-fledged production in 1999. While a newcomer to this field, these colorants were soon adopted by printer manufacturers, and have now become the colorant of choice for printer manufacturers the world over.



★7 A pioneer in Japan Development of the first Japanese antibody biosimilar

Nippon Kayaku began development on biosimilars of medical products that play a vital role in cancer treatments and treatments for autoimmune disorders. Nippon Kayaku followed the release of its first biosimilar, FILGRASTIM BS, in 2013, with the release of the first Japanese antibody biosimilar, INFILIXIMAB BS, in 2014, and the biosimilar, TRASTUZUMAB BS, in 2018.

Illustrated products of the Nippon Kayaku Group

While changing shape and form on the way to becoming the final product intended for use, the products of the Nippon Kayaku Group see use under various everyday circumstances.

Functional Chemicals Business

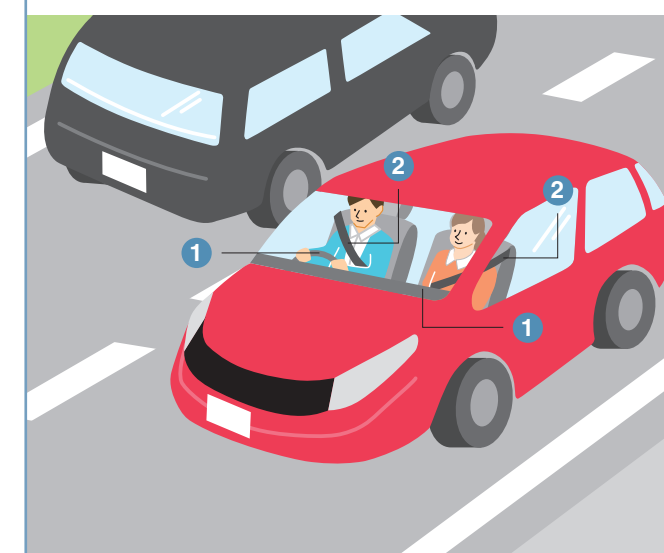
Products that help optimize the office and enrich and facilitate everyday living environments. Nippon Kayaku provides various chemical products used in the manufacturing of such products.



- 1 Projectors (polarizing films, inorganic polarizers)
- 2 PC monitors (ultraviolet curing resins, etc.)
- 3 Printers (colorants for inkjet printers)
- 4 Tags (paper dyes)
- 5 Smartphones (epoxy resins, etc.)
- 6 Airline tickets (developers for thermal paper)
- 7 Paper diapers (catalysts for the production of acrylic acid used as a raw material for high water absorption resin)
- 8 Clothing (dyes for textiles)
- 9 In-vehicle displays (LCD films, liquid crystal sealant)

Safety Systems Business

Nippon Kayaku provides automotive safety components that contribute to improving automotive safety.



- 1 Airbag inflators
- 2 Micro gas generators for seatbelt pretensioners
- 3 Squibs (ignition components included in 1 and 2)

Pharmaceuticals Business

Nippon Kayaku strives to achieve the stable supply of medical supplies leading to improvements in the level of healthcare on offer, and the streamlining of medical expenses.



- 1 Generic drugs
- 2 Biosimilars
- 3 Anti-cancer drugs
- 4 Active pharmaceutical ingredients
- 5 Diagnostic agents
- 6 Medical devices

Agrochemicals Business

Nippon Kayaku provides products that help produce a stable supply of agricultural products, and develop a hygienic environment.

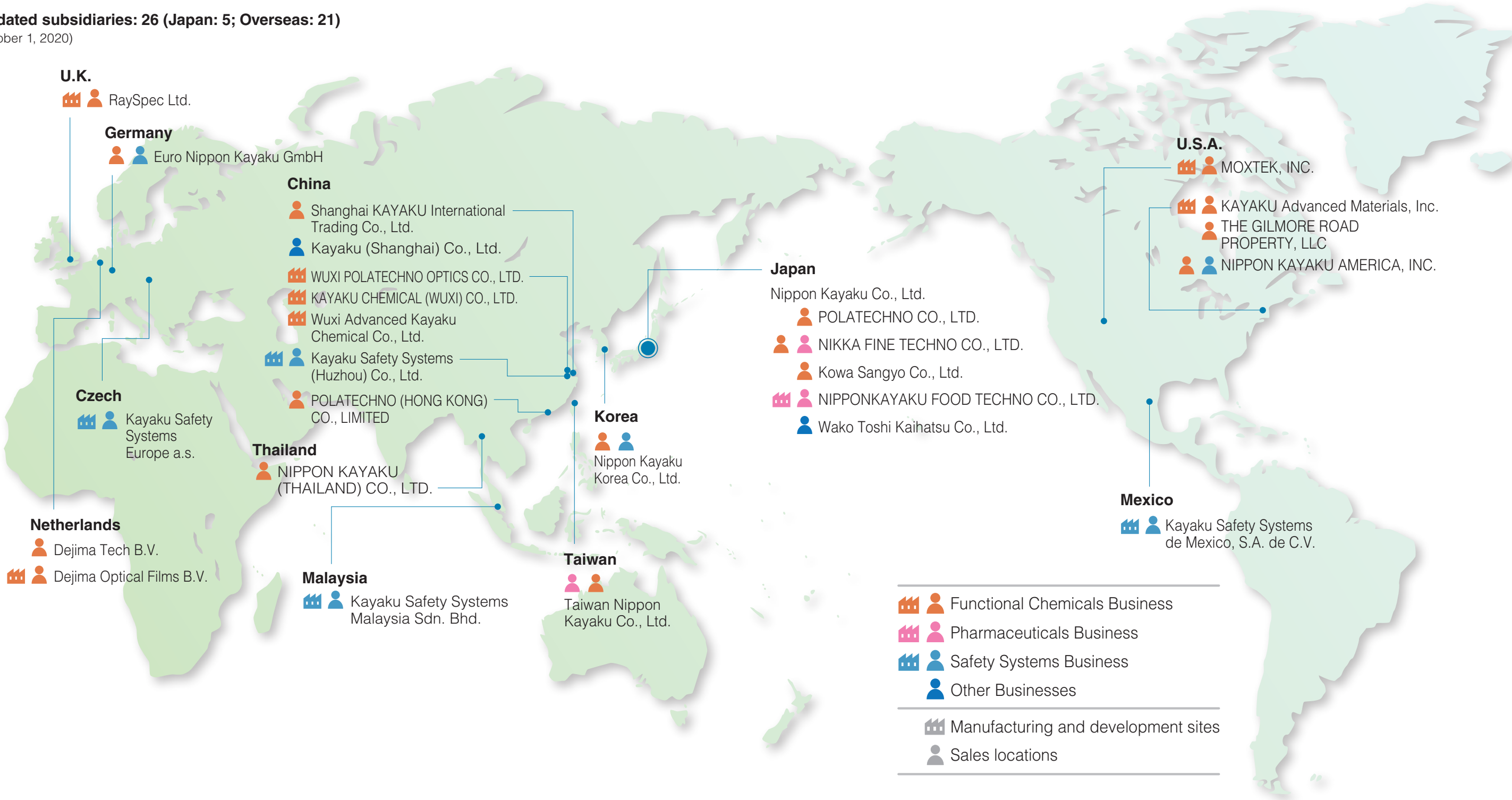
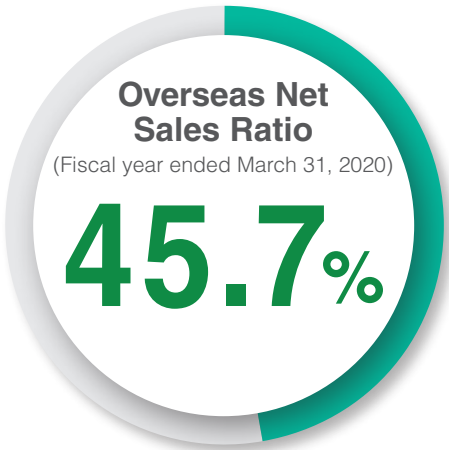


- 1 Insecticides
- 2 Herbicides
- 3 Soil fumigants
- 4 Rat poisons for cable protection
- 5 Epidemic prevention agents for pest control

Global expansion of the “best products, technologies and services” based on the concept of Global *SUKIMA* IDEAS.

The Nippon Kayaku Group consists of Group companies in Japan and 11 other countries and regions (for a total of 26 consolidated Group companies). These Group companies are engaged in four areas of business, functional chemicals, pharmaceuticals, safety systems, and agrochemicals and other. Nippon Kayaku strives to be an invaluable global company by applying core technologies, technologies which may even come to prominence in niche areas, to deliver the “best products, technologies and service” to fill out “*Sukima* (gaps)” in the global market.

Consolidated subsidiaries: 26 (Japan: 5; Overseas: 21)
(As of October 1, 2020)



Mid-term Business Plan

Corporate Value Creation Process

Taking into account its results to date, the Nippon Kayaku Group used backcasting from its vision for sustainable growth to establish the Mid-term Business Plan called **KAYAKU Next Stage** from the fiscal year ended March 31, 2020.

Vision for 2025 (fiscal year ending March 31, 2026)

- Realize the vision for each business and also expand the business base to support businesses
- Have a business structure that can continue to produce profits commensurate with invested capital

Numerical target for the fiscal year ending March 31, 2026

Net sales **250.0** billion yen
Operating income **30.0** billion yen
ROE **10** %

Numerical Targets for KAYAKU Next Stage

(Fiscal year ending March 31, 2022)

Net sales **210.0** billion yen
Operating income **22.5** billion yen
ROE **8** %

Realization of our business vision

OUTCOMES

Safeguarding life and health
Pharmaceuticals Business
Safety Systems Business

Supporting a comfortable life
Functional Chemicals Business
Agrochemicals Business

Contributing to the development of a sustainable society and environment

Represent the embodiment of a good and strong company

Business Activities

OUTPUTS

Best products, technologies, and services

INPUTS

KAYAKU spirit

CSR management

Nippon Kayaku Group Charter of Conduct and Code of Conduct
Group Action Guidelines

Mid-term Business Plan, KAYAKU Next Stage

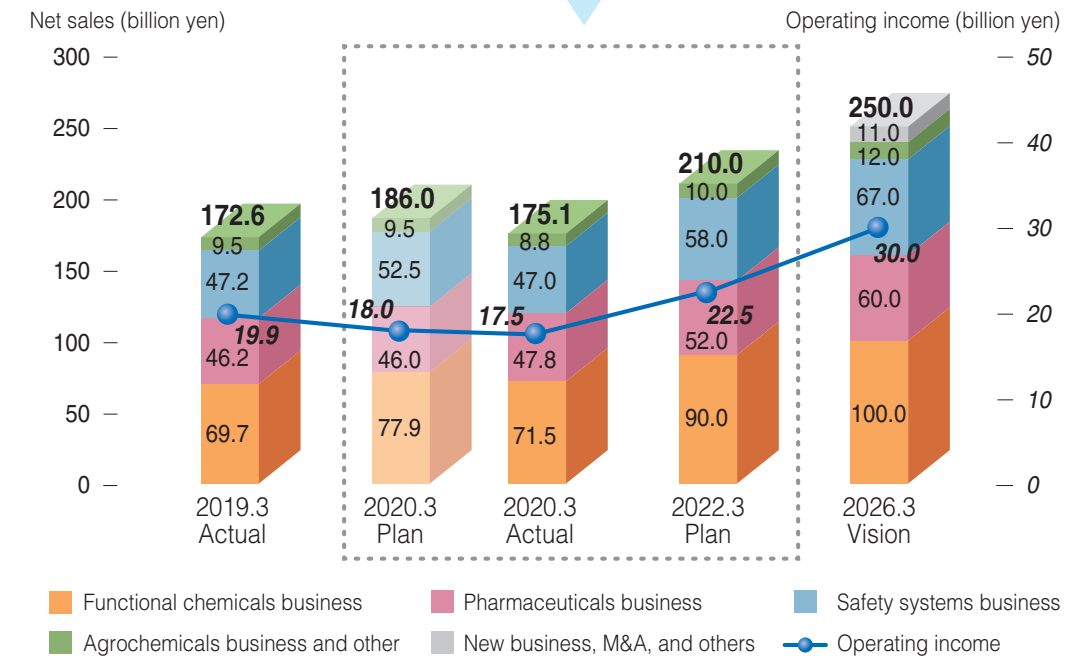
Our consolidated net sales for the first fiscal year of **KAYAKU Next Stage** totaled 175.1 billion yen. Biosimilars in the Pharmaceuticals Business saw particularly large growth among our product lines, but with the slowdown in overseas markets for the Functional Chemicals Business and Safety Systems Business as a major factor we fell short of our initial plan to reach net sales of 186 billion yen and operating profit of 18 billion yen. In addition, the Functional Chemicals Business and Safety

Systems Business impacted our business performance due to the outbreak of the COVID-19 in the fourth quarter.

Currently, we are working to respond to the changing situation quickly and accurately, with our efforts focused on the safety of our employees at Nippon Kayaku and across the Group as well as minimizing the impacts on our operations. We will quickly release the full-year earnings forecast for the fiscal year ending March 31, 2021 as soon as a forecast is possible.

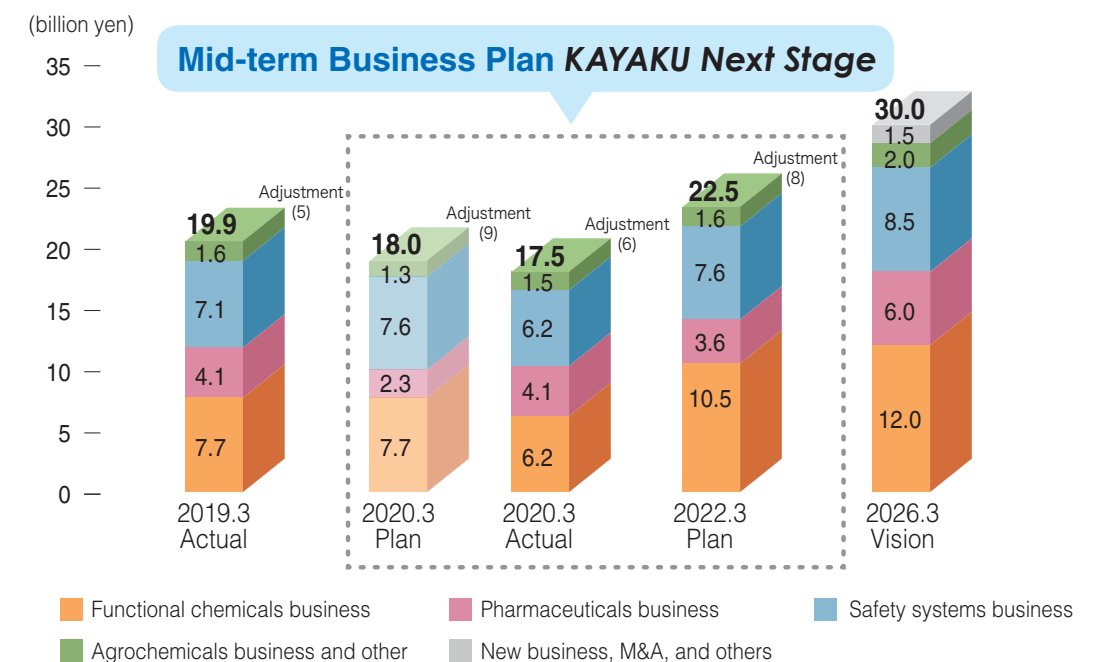
Net Sales/Operating Income

Mid-term Business Plan KAYAKU Next Stage



Operating Profit by Segment

Mid-term Business Plan KAYAKU Next Stage



Message from Head of Financial Group



Financial Strategy Aimed at Sustainable Growth

The Nippon Kayaku Group is building a robust financial foundation that will enable it to flexibly respond to a changing business environment in order to achieve sustainable growth well into the future. Under the CSR key themes (materiality) identified from the standpoint of CSR management, we will pursue business operations with an eye toward the Sustainable Development Goals (SDGs), aiming to become a company that is trusted by and earns the satisfaction of all stakeholders.

In the fiscal year ending March 31, 2021, the Functional Chemicals Business and Safety Systems Business are being impacted by the COVID-19 pandemic, but our policy to maintain a well-balanced portfolio around our three core segments remains unchanged. We will implement financial activities to maintain the optimal fiscal condition, which includes carrying out funding considerate of capital costs, while maintaining a stable equity ratio.

We will correctly grasp market needs in order to achieve the vision for each of our businesses, and seek to enhance corporate value by speeding up the development of new businesses/products and expanding our business globally, while clarifying the business and product domains where we will deploy our management resources.

Performance, Financial Status, Cash Flow for the Fiscal Year Ended March 31, 2020

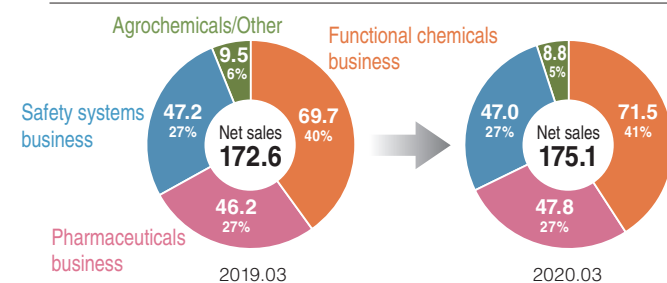
In the fiscal year ended March 31, 2020, the first fiscal year of Mid-term Business Plan **KAYAKU Next Stage**, although net sales grew compared to the previous year, profitability was impacted by the COVID-19 pandemic, trade friction between the United States and China, and NHI price revisions in the Pharmaceuticals Business. Meanwhile, we maintained our stable financial condition by generating sound cash flows.

1. Operating Results

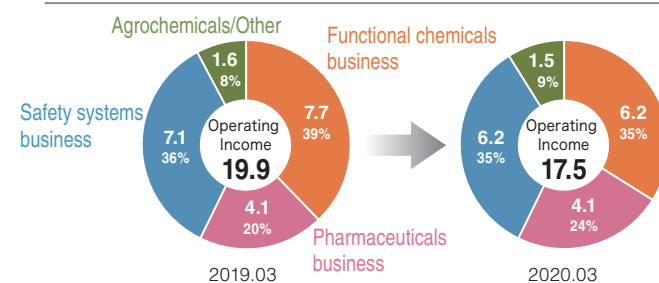
In the fiscal year ended March 31, 2020, we achieved record-high net sales of 175.1 billion yen. Operating income came in at 17.5 billion yen and net income at 12.8 billion yen, both down year on year. The ratio of net sales for our three core segments was 41% for Functional Chemicals, 27% for Pharmaceuticals and 27% for Safety Systems, indicating we continued to maintain a well-balanced portfolio.

By core segment, the Functional Chemicals Business saw profits decline, despite an increase in sales from the previous year due to soaring raw materials costs and a downturn in the China business. The Pharmaceuticals Business posted higher sales from the growth of biosimilars, but profits were on par with the previous year due to the impacts of NHI price revisions associated with Japan's consumption tax hike. The Safety Systems Business saw both sales and profits decline year on year due to the decline in new car sales overseas from the impact of trade friction between the United States and China.

Composition of Net Sales (unit: billion yen)



Composition of Operating Income (unit: billion yen)



2. Financial Position

We have continued to maintain a stable financial condition. Total assets as of the end of the fiscal year ended March 31, 2020 totaled 278.5 billion yen and net assets came in at 210 billion yen, both down compared to the end of the previous fiscal year. These decreases were attributed to investment securities for total assets and unrealized holding gains on securities for net assets, both impacted by weak Japanese stock prices at the end of the fiscal year.

Additionally, as an initiative aimed at the optimal financial condition considering capital costs, we acquired 2.35 million shares of treasury stock for 3 billion yen. Also, we raised funds of 12 billion yen through the issuance of bonds payable to meet demands for cash, including for the acquisition of shares of subsidiaries intended to strengthen our business.

Financial Position

Consolidated (Billion yen)	2019.03	2020.03	Change
Assets	293.6	278.5	(15.1)
Liabilities	64.5	68.5	3.9
Net assets	229.0	210.0	(19.0)
Equity	216.0	209.3	(6.7)
Equity Ratio	73.6%	75.2%	1.6%

3. Cash Flows

We exhibited sound cash management. Net cash provided by operating activities was at 27.3 billion yen, of which profit before income taxes was 18.1 billion yen and depreciation costs were 12.4 billion yen, both positive factors, while payment of income taxes at 6.1 billion yen was a negative factor. Cash flow from investing activities resulted in 17.5 billion yen in expenditures. Cash flow from financing activities was negative 13.9 billion yen, with 12 billion yen in income from the issuance of bonds payable, which was offset by expenditures of 13.8 billion yen for the acquisition of the shares of subsidiaries and 5.2 billion yen for the payment of dividends. Free cash flow was at 9.7 billion yen, with the net cash position of 24.8 billion yen, maintaining a condition of effectively no borrowings.

Cash Flows

Consolidated (Billion yen)	2019.03	2020.03	Change
Operating activities	26.8	27.3	0.5
Investing activities	(17.7)	(17.5)	0.2
Financing activities	(6.4)	(13.9)	(7.5)
Free cash flows	9.1	9.7	0.6
Cash and cash equivalents	52.7	46.7	(6.0)
Net cash	38.9	24.8	(14.1)

Financial plan for **KAYAKU Next Stage** and management results/financial status in the first quarter of the fiscal year ending March 31, 2021

We are now moving ahead under the three-year Mid-term Business Plan called **KAYAKU Next Stage** that began from the fiscal year ended March 31, 2020, with the goal of enhancing corporate value by realizing the business vision laid out in "our vision". As of October 2020, uncertainty still remains regarding the outlook for this fiscal year and the medium-term economic environment due to COVID-19. We will disclose the full-year forecast for the fiscal year ending March 31, 2021 as soon as a forecast becomes possible.

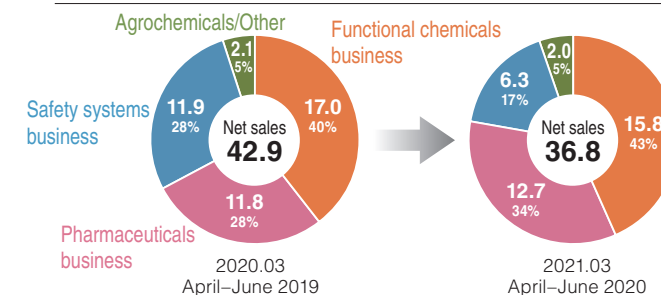
In the fiscal year ending March 31, 2021, we are making financial preparations with an eye toward significant changes in the economic environment that could occur in the future. Here, I would like to explain about the most recent situation from the first quarter of the fiscal year ending March 31, 2021 (April to June 2020; hereinafter, first quarter). Furthermore, the forecast for the second quarter (July to September 2020) is for net sales of 40.2 billion yen, which is down 2.5 billion yen compared to the previous second quarter (-5.9% year on year), but we expect net sales to increase compared to the first quarter.

1. Operating Results

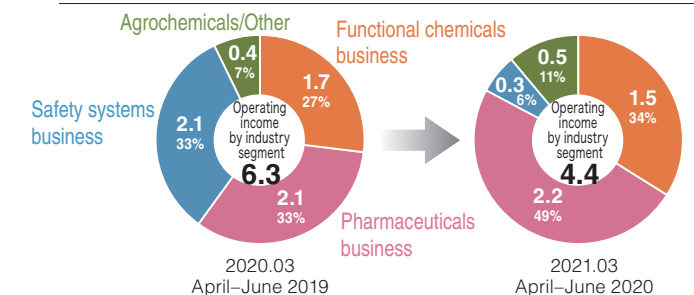
Net sales for the first quarter totaled 36.8 billion yen, down 6.1 billion yen from the previous first quarter (-14.1% year on year). Operating income was 2.8 billion yen, down 2.0 billion yen (-41.5% year on year). Net income totaled 1.7 billion yen, down 1.4 billion yen (-44.0% year on year).

By major segment, the Safety Systems Business, which sells automobile safety components, was greatly impacted by the COVID-19 pandemic in terms of both sales and profits. The Functional Chemicals Business, too, was impacted in terms of sales in overseas markets. Meanwhile, the Pharmaceuticals Business was only impacted slightly, as it saw sales increase year over year on the growth of sales of biosimilars.

Composition of Net Sales (unit: billion yen)



Composition of Operating Income by Industry Segment (unit: billion yen)



* Segment operating income prior to allocation of company-wide expenses to each segment is used as the profit indicator for each segment from the fiscal year ending March 31, 2021.

Financial Position

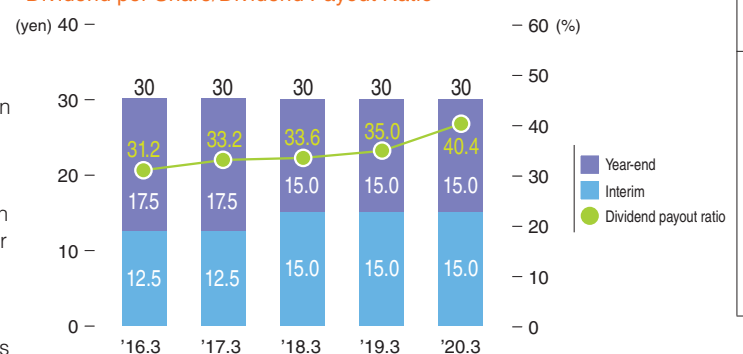
consolidated (Billion yen)	2020.03	2020.06	Change
Assets	278.5	287.4	8.9
Liabilities	68.5	75.6	7.1
Net assets	210.0	211.8	1.8
Equity	209.3	211.1	1.8
Equity Ratio	75.2%	73.5%	- 1.7%

View on Shareholder Return

We regard the return of profits to our shareholders as important. Our mid-term goal for the dividend payout ratio is 40% of profit attributable to owners of parent, while taking a stable and sustainable level of profit return and the level of retained earnings into consideration. Retained earnings are to be allocated for capital investment and R&D investment in growing businesses to enhance the value of the Nippon Kayaku Group.

Annual dividends in the fiscal year ended March 31, 2020 were 30 yen per share, with a consolidated payout ratio of 40.4%. Also, from November 2019 to March 2020 we acquired 2.35 million shares of treasury stock for 3 billion yen (1.44% of total number of shares issued [excluding treasury shares]). We also plan to declare annual dividends of 30 yen per share in the fiscal year ending March 31, 2021. This will consist of interim dividends of 15 yen per share and year-end dividends of 15 yen per share.

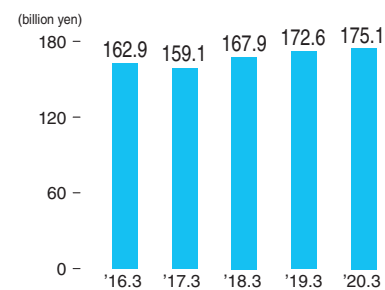
Dividend per Share/Dividend Payout Ratio



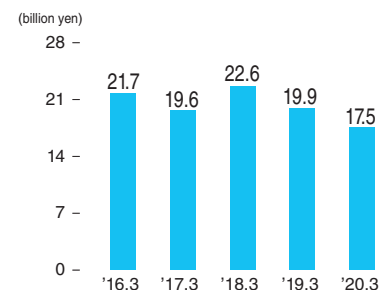
Financial and Non-Financial Highlights

Financial Highlights

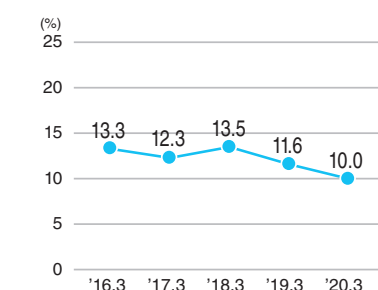
Net Sales



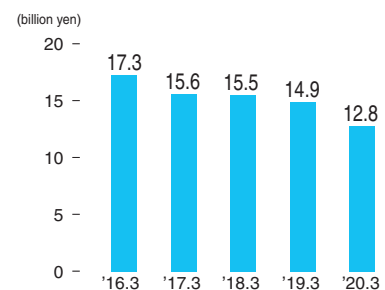
Operating Income



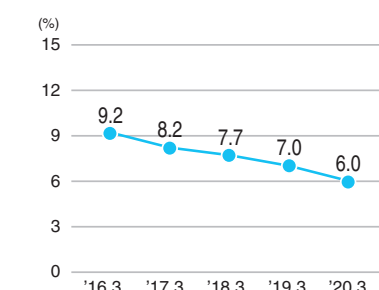
Operating Income Margin



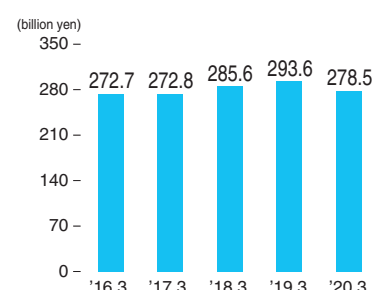
Profit Attributable to Owners of Parent



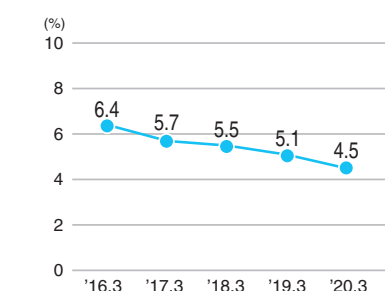
ROE (Return on Equity)



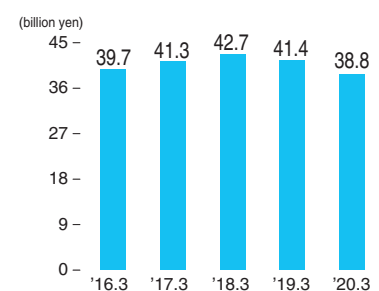
Total Assets



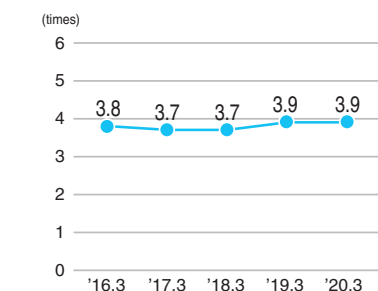
ROA (Return on Assets)



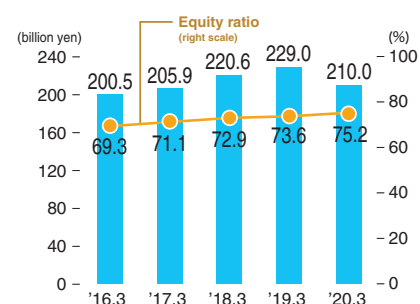
Current Liabilities



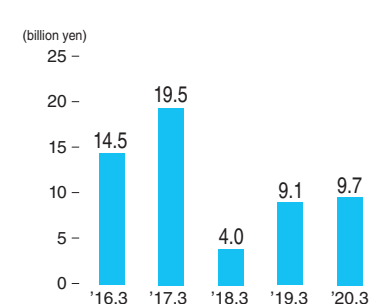
Current Ratio



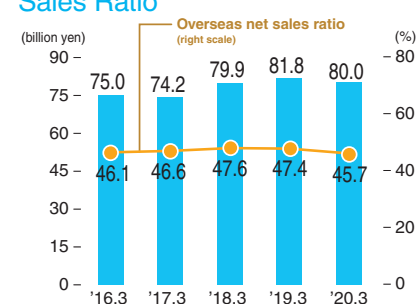
Net Assets/Equity Ratio



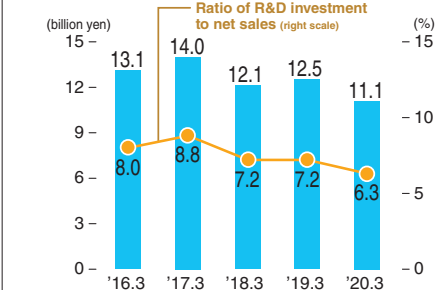
Free Cash Flows



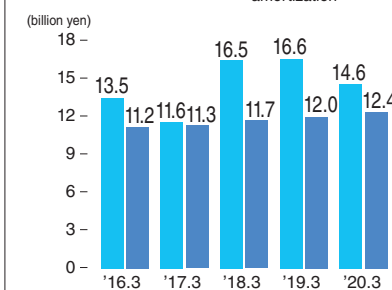
Overseas Net Sales/Overseas Net Sales Ratio



R&D Expenses/Ratio of R&D Expenses to Net Sales

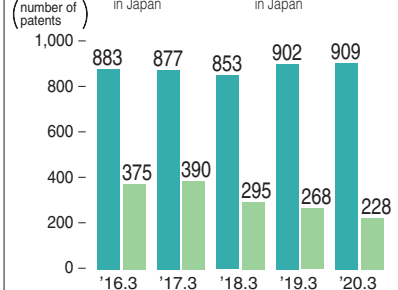


Capital Investments / Depreciation and Amortization

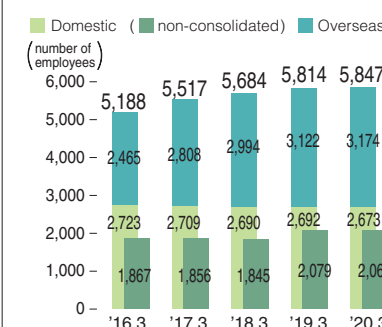


Non-Financial Highlights

Number of Patents Held/ Patent Applications

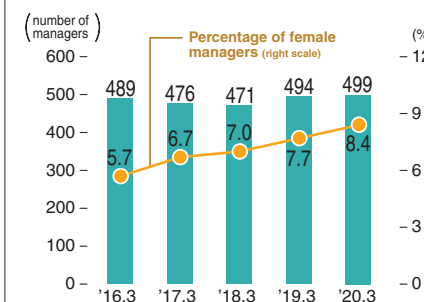


Number of Domestic/Overseas Employees

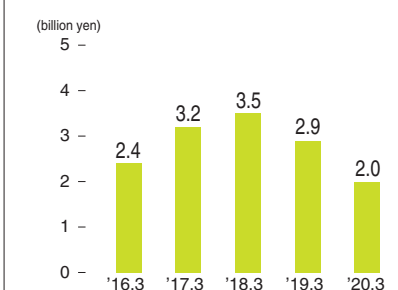


Number of Managers/Percentage of Female Managers

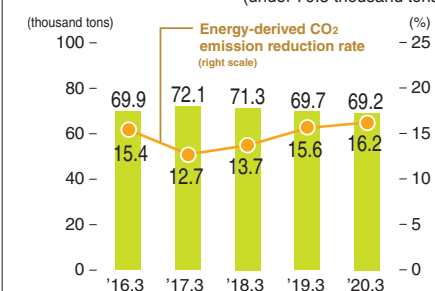
* Nippon Kayaku non-consolidated basis; excluding seconded employees



Environment Related Capital Investments

Energy-derived CO₂ Emission / Reduction Rate

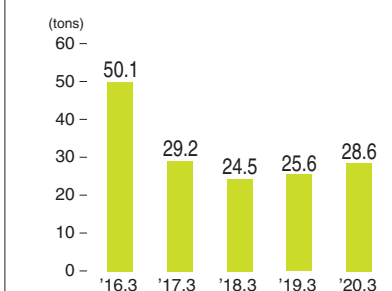
'21.3 target value: Reduction of more than 3.8% (under 79.5 thousand tons)



* FY 2006.03 has been set as the benchmark (82,600 tons).

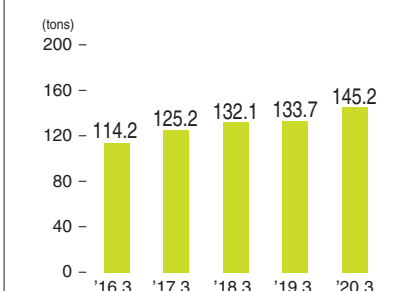
VOC (Volatile Organic Compounds) Emissions

'21.3 target value: Under 42 tons

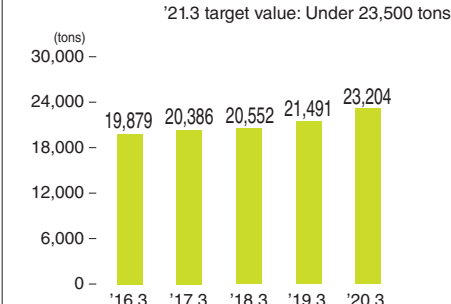


COD (Chemical Oxygen Demand) Emissions

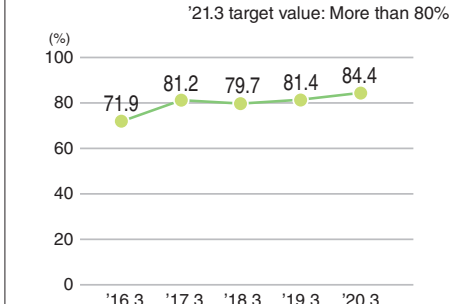
'21.3 target value: Under 150 tons



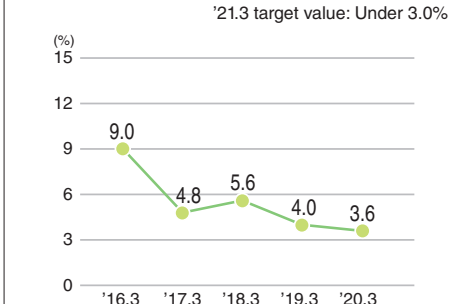
Total Waste Produced



Recycling Rate



Zero Emission Rate



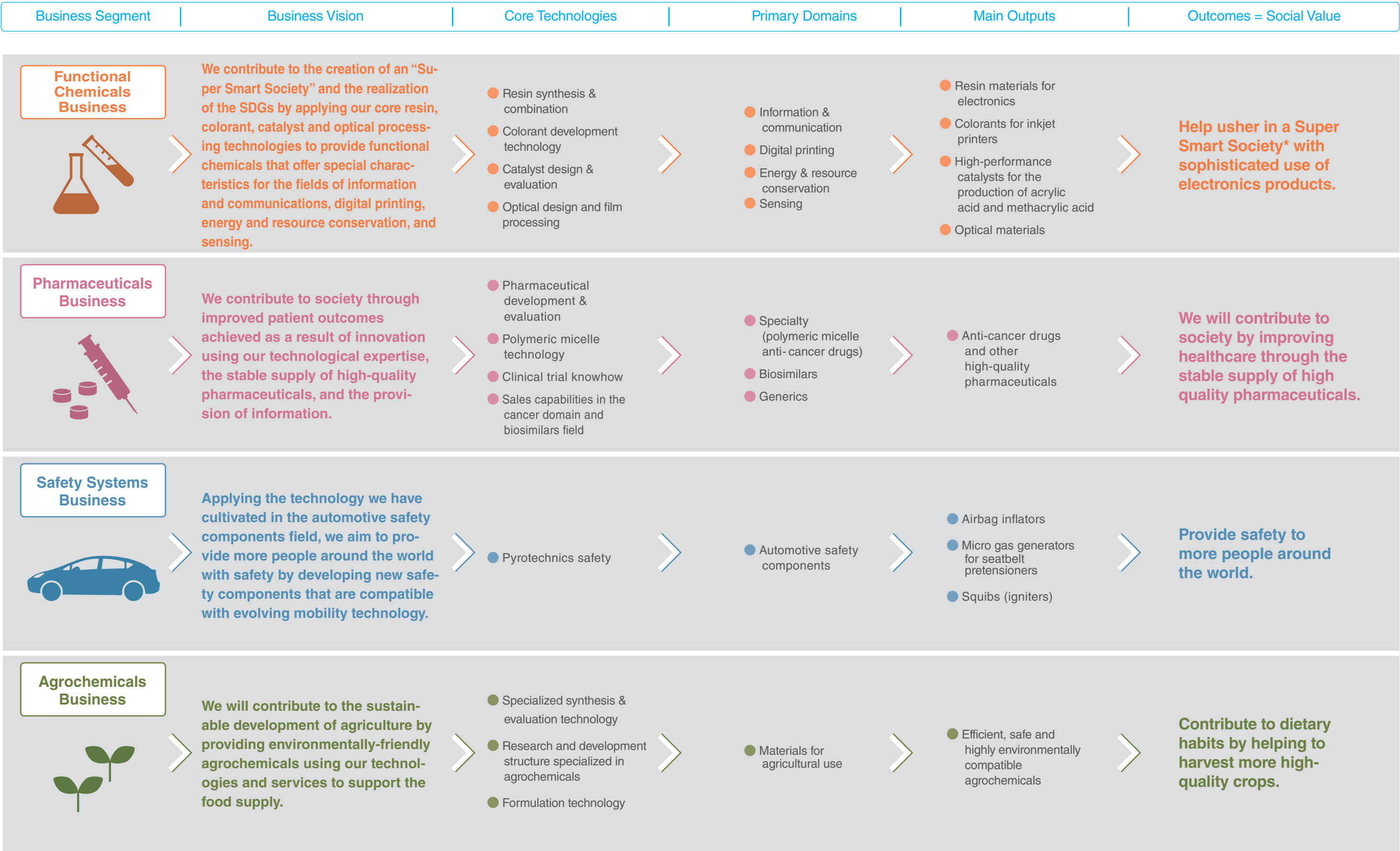
11-Year Summary of Consolidated Financial Data

Fiscal year ended ^{*1}	2020.3	2019.3	2018.3	2017.3	2016.3	2015.3	2014.3	2013.3 ^{*2}	2012.5	2011.5	2010.5
Results for the year (millions of yen)											
Net sales	175,123	172,639	167,888	159,117	162,922	161,861	160,080	128,104	147,109	148,879	141,032
Cost of sales	117,059	109,461	102,475	95,253	96,653	94,664	90,645	73,757	84,690	88,170	84,974
Selling, general and administrative expenses	40,587	43,238	42,791	44,213	44,570	44,890	45,332	37,278	43,031	39,880	40,060
Operating income	17,485	19,939	22,615	19,646	21,713	22,301	24,090	17,066	19,398	20,829	15,995
Profit before income taxes	18,141	21,283	22,061	22,397	25,148	23,972	25,388	19,816	18,427	21,308	11,099
Profit attributable to owners of parent	12,815	14,851	15,488	15,635	17,291	15,653	16,718	12,342	11,401	13,004	9,871
Amounts per share (yen)											
Profit attributable to owners of parent	74.25	85.77	89.45	90.23	96.09	86.38	92.25	68.09	62.89	71.70	54.39
Cash dividend applicable to the year	30.00	30.00	30.00	30.00	30.00	25.00	25.00	20.00	20.00	20.00	20.00
Net assets	1,225.71	1,247.75	1,203.23	1,120.73	1,075.56	1,030.16	918.35	828.87	745.30	704.57	663.88
Year-end financial position (millions of yen)											
Current assets	153,102	161,958	157,814	153,602	151,170	141,282	141,843	131,553	121,400	123,132	117,572
Current liabilities	38,800	41,412	42,746	41,321	39,740	38,915	41,271	39,857	38,909	40,893	42,947
Working capital	114,302	120,546	115,068	112,281	111,430	102,367	100,572	91,696	82,491	82,239	74,625
Property, plant and equipment	85,960	87,246	83,228	80,230	81,040	81,576	75,166	67,183	61,526	60,553	61,637
Total assets	278,496	293,571	285,600	272,791	272,679	265,126	247,592	224,705	204,674	205,110	202,641
Net assets	210,019	229,043	220,619	205,866	200,492	199,680	177,935	160,454	144,019	135,796	127,829
Year-end statistics											
Number of shares outstanding (thousands)	177,503	182,503	182,503	182,503	182,503	182,503	182,503	182,503	182,503	182,503	182,503
Dividend payout ratio (%)	40.4	35.0	33.6	33.2	31.2	28.9	27.1	29.4	31.8	27.9	36.8
Number of round-lot shareholders	12,090	12,437	13,048	8,629	10,815	9,257	10,174	12,516	14,597	15,732	16,469
Number of employees	5,847	5,814	5,684	5,517	5,188	5,165	4,794	4,619	4,583	4,406	4,224
Financial ratios											
Current ratio (times)	3.9	3.9	3.7	3.7	3.8	3.6	3.4	3.3	3.1	3.0	2.7
Equity ratio (%)	75.2	73.6	72.9	71.1	69.3	70.4	67.2	66.9	66.0	62.3	59.4
ROE (%)	6.0	7.0	7.7	8.2	9.2	8.9	10.6	8.7	8.7	10.5	8.4
ROA (%)	4.5	5.1	5.5	5.7	6.4	6.1	7.1	5.7	5.6	6.3	4.9
Sales by business segment (millions of yen)											
Functional chemicals business	71,540	69,688	67,664	64,029	68,788	73,558	73,610	60,320	68,149	71,759	64,299
Functional materials	21,073	20,217	19,794	18,914	18,398	18,559	18,378	10,929	12,363	14,881	15,128
Color materials	26,118	22,168	21,023	20,057	21,229	—	—	—	—	—	—
Digital printing materials	—	—	—	—	—	12,130	12,090	—	—	—	—
Color chemicals	—	—	—	—	—	9,909	9,536	7,195	8,599	9,057	8,632
Catalysts	6,759	6,406	5,650	4,188	4,990	7,525	8,710	6,303	8,163	5,978	4,179
Polatechno Group	17,589	20,896	21,196	20,869	24,172	25,434	24,896	—	—	—	—
Electronic materials	—	—	—	—	—	—	—	35,895	39,025	41,843	36,358
Pharmaceuticals business	47,774	46,231	47,485	47,648	50,200	48,932	50,898	41,115	49,389	50,339	49,692
Safety systems business	46,990	47,218	43,937	38,782	35,342	30,485	27,086	18,785	20,202	17,918	17,665
Other businesses	8,817	9,500	8,800	8,657	8,590	8,884	8,485	7,882	9,368	8,862	9,375
Agrochemicals	6,820	7,460	6,735	6,572	6,519	6,696	6,245	5,771	6,901	6,300	6,794
Other	1,997	2,040	2,065	2,084	2,072	2,188	2,240	2,110	2,467	2,562	2,582

★1 Consolidated fiscal year ended March 31 or May 31

★2 The closing date of accounts was changed from May 31 to March 31 beginning from the fiscal period ended March 31, 2013. As a result, the term of consolidation for the fiscal period ended March 31, 2013 consists of the 10 months from June 1, 2012 to March 31, 2013 for Nippon Kayaku and some of its subsidiaries.

Business Vision and Outcome



* Super Smart Society: a society that can respond precisely to its diverse needs by providing the required goods and services to the people who need them at the right time and in the right amount; also a society where people can overcome various constraints such as age, gender, geography and language to lead active, comfortable lives.

Business Overview and Operating Results

The Nippon Kayaku Group's products and services are categorized into four business segments: the functional chemicals business, the pharmaceuticals business, the safety systems business, and the agrochemicals business and other*.

* Other: real estate business

Consolidated Business Results

Fiscal year ended March 31, 2020

Net sales

175.1 billion yen

Operating income

17.5 billion yen

Profit attributable to owners of parent

12.8 billion yen

ROE

6.0 %

Overseas net sales ratio

45.7 %

Functional Chemicals Business



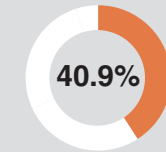
Business Overview for FY2020.3

- We have expanded the application of the core functional materials product of epoxy resins for semiconductor encapsulation and electronic device circuit boards for use on 5G-compatible circuit boards. In addition, we have launched maleimide resin, which is characterized by high heat resistance and low dielectric constant with an eye toward to spreading 5G commercial services in Japan.
- Despite the reduced sale of consumer-use colorant for inkjet printers as the core product in color materials, its industrial use, which we focused on, has expanded. Demand for developers for thermal paper used in labels and tickets was also strong.
- As for catalysts, demand for acrylic acid and methacrylic acid production remained strong and progressed as planned.
- We made Polatechno Co., Ltd., which handles dye-type polarizing films and components for X-ray analyzers, a wholly-owned subsidiary, and incorporated the business into Nippon Kayaku.

(Simple absorption-type split: effective October 1, 2020)

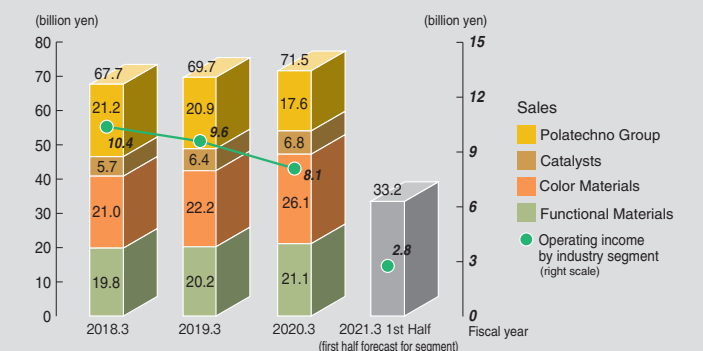
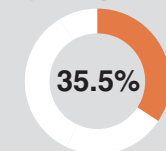
Fiscal Year Sales Ratio to Total Net Sales

2020.3 **71.5** billion yen
2019.3 **69.7** billion yen



Fiscal Year Operating Profit Ratio to Total Operating Income

2020.3 **6.2** billion yen
2019.3 **7.7** billion yen



Pharmaceuticals Business



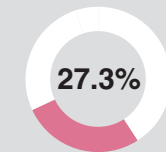
Business Overview for FY2020.3

- Despite the impact of NHI price revisions (October 2019 and April 2020), sales increased due to the growth of biosimilars and expanded core products in generic anti-cancer drugs.
- We launched generic anti-cancer drugs, GEFITINIB (June 2019) as well as Capecitabine and antiemetic drug Aprepitant (December 2019).
- We launched Portrazza®, a biopharmaceutical for treating squamous non-small cell lung cancer (November 2019).
- We signed a co-promotion agreement with Bayer Yakuhin, Ltd. on therapeutic drug for prostate cancer, NUBEQA®.

(Please also see page 25 for topics on new pharmaceutical products).

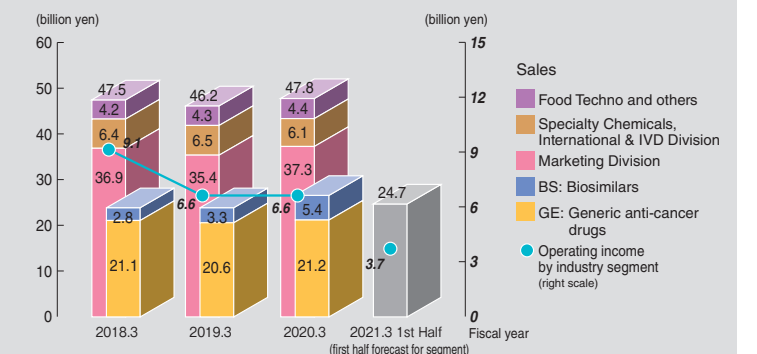
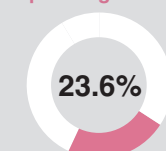
Fiscal Year Sales Ratio to Total Net Sales

2020.3 **47.8** billion yen
2019.3 **46.2** billion yen



Fiscal Year Operating Profit Ratio to Total Operating Income

2020.3 **4.1** billion yen
2019.3 **4.1** billion yen



Safety Systems Business

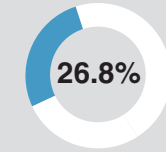


Business Overview for FY2020.3

- Global vehicle sales were stagnant as a result of the slowdown in the Chinese market from the middle of the fiscal year ended March 31, 2020 due to trade friction between the United States and China, and the slowdown in the European market affected by changes in test methods for vehicle exhaust gas, etc.
- Afterwards, the global automotive market was impacted by the COVID-19 pandemic in the fourth quarter.
- The performance of the safety systems business, which handles sales of automotive safety components, was also affected by these changes in business environment.

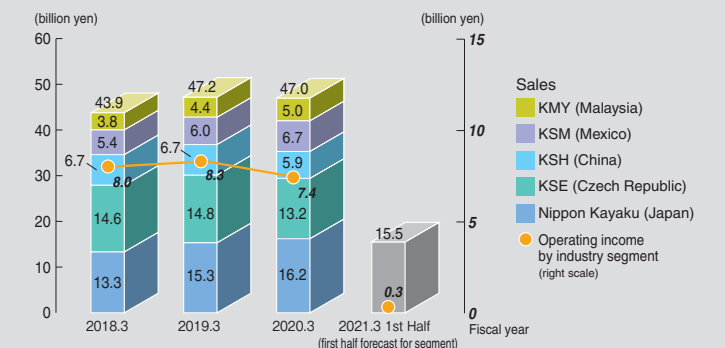
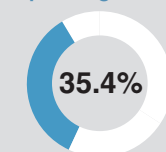
Fiscal Year Sales Ratio to Total Net Sales

2020.3 **47.0** billion yen
2019.3 **47.2** billion yen



Fiscal Year Operating Profit Ratio to Total Operating Income

2020.3 **6.2** billion yen
2019.3 **7.1** billion yen



Agrochemicals Business and Other

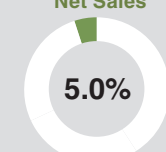


Business Overview for FY2020.3

- We strived to promote the popularization of insecticide FINESAVE launched in June 2018 both in Japan and overseas.
- We began the construction of a new synthesis line at Kashima Plant, aimed at improving profitability and contract manufacturing of raw materials in-house, which was completed in July 2020.

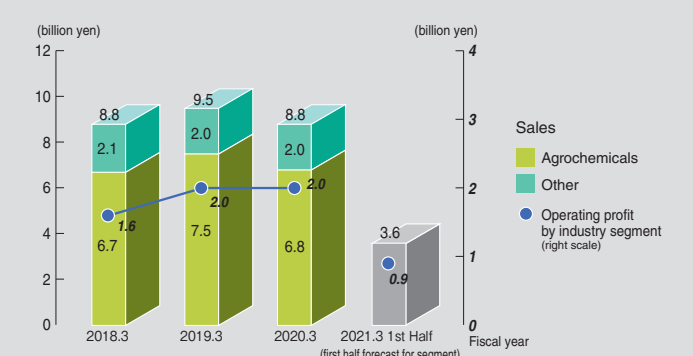
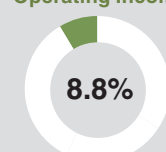
Fiscal Year Sales Ratio to Total Net Sales

2020.3 **8.8** billion yen
2019.3 **9.5** billion yen



Fiscal Year Operating Profit Ratio to Total Operating Income

2020.3 **1.5** billion yen
2019.3 **1.6** billion yen



* From the fiscal year ending March 31, 2021, profitability indicator of each industry segment will be operating income by industry segment, which is income before allocation of corporate expenses to each business segment.

* The forecasts for the first half of fiscal year ending March 31, 2021 use figures announced in July 2020.



Business Vision

We contribute to the creation of an “Super Smart Society” and the realization of the SDGs by applying our core resin, colorant, catalyst and optical processing technologies to provide functional chemicals that offer special characteristics for the fields of information and communications, digital printing, energy and resource conservation, and sensing.

Yukio Tachibana

Executive Vice President,
Representative Director,
Head of the Functional Chemicals Group,
Head of the Agrochemicals Division

Mid- and Long-term Outlook for the Business

The Functional Chemicals Group added the “Polatechno Division” thus starting a four-business unit system on October 1. This was done with the goal of contributing to the realization of an “Super Smart Society” and meeting the SDGs while continuing to provide distinctive products using resins, color materials, catalysts, and optical processing as core technologies. We have set targets of 100 billion yen in our business group sales as part of our “Vision” for 2025, which we will move toward by having each business unit undertake the initiatives set forth in the Key Themes and Roadmap step-by-step. The spread of the novel coronavirus starting at the beginning of the year has resulted in a stagnant global economy and a continued

drop in demand, which has put us in an extremely challenging business environment. However, to achieve growth amidst the post-COVID-19 “new lifestyle,” we will introduce new and differentiated products into the market, such as high-performance resins for 5G applications, ink-jet inks for food packaging materials, functional colorants for use in vehicles and sensors, high-performance petrochemical catalysts that contribute to CO₂ reduction, and high-quality X-ray materials. Beyond developing our own technology, we will also pursue possibilities for business partnerships and M&A with companies both in Japan and abroad, integrating marketing, research activities, manufacturing, and sales with the aim of realizing our “Vision” as a business group.

Initiatives under Mid-term Business Plan “KAYAKU Next Stage”

In the fiscal year ending March 2021—the middle year of “KAYAKU Next Stage”—we will launch our LCD and semiconductor cleaner business with the aim of expanding our presence in the field of semiconductors, an area which continues to enjoy steady growth. In addition, Polatechno, which last year was made a wholly-owned subsidiary and which we continue to operate integrally with this business unit, will provide high-function optical components such as polarizing films, X-ray materials, and more that can contribute to a diverse mobility-based society and a safe and secure lifestyle. We will furthermore strengthen our global development of new resin maleimides for 5G devices to support

the digital revolution, epoxy resins for CFRP used in aircraft, colorants for inkjet printers in industrial applications and new developers for thermal paper, and MMA manufacturing catalyst businesses. In “KAYAKU Next Stage”, we will promote these businesses aggressively, with all business divisions and group companies working together to achieve business group sales of 90 billion yen by the fiscal year ending March 2022, which is the final year of the mid-term business plan. The speed of new product launches must be accelerated in order to meet these goals, and thus both business divisions and R&D laboratories are working hard to achieve 5-year new product ratio of 20%.

Key Themes in Mid-term Business Plan

Theme	Details of initiatives
Establishing safety and quality management systems	Building integrated QMS operations (PLC, KCW, WAC, KAM)
Strengthening research and development	Advance R&D and improve training systems
Creating and providing intellectual added value	Optimize domestic and overseas production systems
Pursuing global management	Promote global marketing activities
Strengthening the business through internal and external partnerships	Avoid “going it alone”; collaborate with other companies and promote joint development with industry/academia
Building a strong business base capable of supporting growth	Enhance corporate governance structure at Group companies Improve capital efficiency (inventory reduction, short-term collection of accounts receivable)

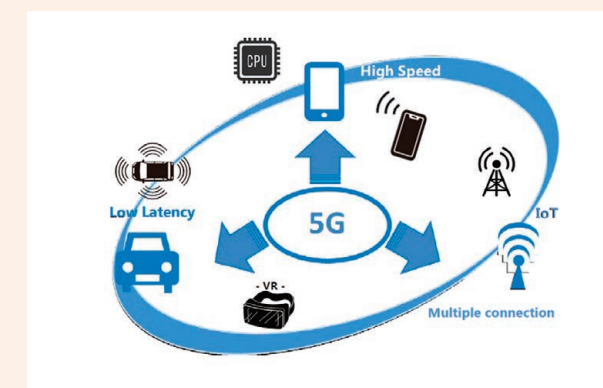
PLC: POLATECHNO CO., LTD.
KCW: KAYAKU CHEMICAL (WUXI) CO., LTD.

WAC: Wuxi Advanced Kayaku Chemical Co., Ltd.
KAM: Kayaku Advanced Materials, Inc.

Topics

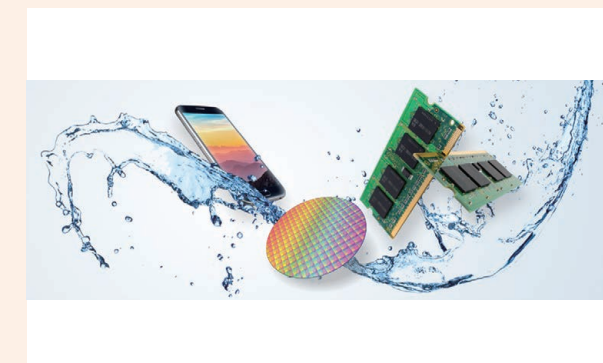
Launch of 5G compatible maleimide resins

We have developed maleimide resins as a new circuit board material for base stations of mobile terminals to adapt to the 5th generation mobile telecommunication system (5G), and have been collecting feedback from multiple customers. Our maleimide resins are praised for their high heat resistance and low dielectric property, and are expected to expand their application in 5G-compatible circuit boards for smartphone and in-vehicle use. We will utilize the expertise and sales network developed with our epoxy resins to actively meet the growing demand.



Acquisition of LCD and semiconductor cleaner business

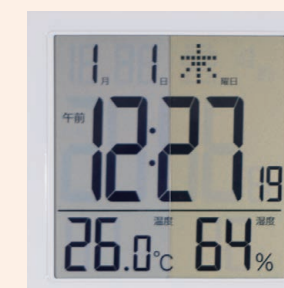
In April 2020, we took over the semiconductor and liquid crystal display (LCD) cleaner business of German company Henkel AG & Co. KGaA. As a semiconductor/LCD material manufacturer with the world's top share in epoxy resins for environment-friendly semiconductor encapsulants, we are also developing businesses including MEMS resist, LCD sealants, and solder resist acrylates. As cleaners are required in semiconductor and LCD substrate cleaning and development processes in circuit formation, we aim to expand our business scope by incorporating this segment into the functional chemicals business for a high synergistic effect.



Strengthening collaboration with Polatechno Co., Ltd.

In October 2020, we undertook an absorption-type split of the manufacturing and sales business of parts for liquid crystal display and liquid crystal projector handled by Polatechno Co., Ltd. for our optic film business, and incorporated the business directly into our business scope. Going forward, we will strive to make more effective use and optimal allocation of management resources, including the human resources, sales channels, manufacturing bases, and intellectual properties of both companies, accelerate the efficiency

of research and development through a consolidated R&D system, and strengthen governance in order to achieve continued growth of the functional chemicals business.



Display using the new achromatic polarizer (left)
Capable of displaying natural, grey background



Pharmaceuticals Business



Kazuto Koizumi
Member of the Board,
Managing Director,
Head of the Pharmaceuticals Group

Business Vision

We contribute to society through improved patient outcomes achieved as a result of innovation using our technological expertise, the stable supply of high-quality pharmaceuticals, and the provision of information.



Mid- and Long-term Outlook for the Business

In the field of cancer treatment, our goal is to provide a stable supply of high-quality, affordable generic drugs and biosimilars, which will allow us to contribute to society by improving the efficiency of healthcare spending. That said, sales and profit of pharmaceuticals in Japan are expected to be significantly affected by the annual drug price revisions, and competition among companies is intensifying as well. A key challenge for our pharmaceuticals business is to continually bring to market new products in the areas where we are strongest, and which our competitors cannot provide. To

that end, one of our goals is to help improve medical care by meeting a variety of medical needs, including researching and developing new anti-cancer drugs such as polymeric micelle anti-cancer drugs, improving the efficacy and reducing side effects of existing drugs, and more. We are furthermore aiming to build up our pipeline and grow our pharmaceuticals business over the medium to long term by exploring product introductions and licensing opportunities through cooperation with other companies.



Initiatives under Mid-term Business Plan “KAYAKU Next Stage”

The fiscal year ended March 2020 saw the launch of PORTRAZZA®, a new biomedicine for treating squamous cell non-small cell lung cancer. We also signed a co-promotion agreement with Bayer Yakuhin® tabs, a medicine used to treat prostate cancer. One of the key focus areas for this second year of “KAYAKU Next Stage” is to promote the specific benefits of these drugs and use them to provide new types of treatment for patients.

The sales of biosimilars are increasing as the next growth field after generic drugs. We are therefore aiming to further expand the sales of biosimilars, and collect and provide more information in this field than ever before. Meanwhile, in terms of advancing MR activities during the “new lifestyle” brought about by the pandemic, constructing a system which can handle remote sales has become an urgent issue.

In the area of R&D, we are moving forward with clinical trials of NK105 while at the same time promoting research

for creating new products from a long-term perspective. In the field of generic anti-cancer drugs, we are responding to needs in medical settings by taking on the challenge of developing the drugs in highly-complex and devised dosage forms. We will furthermore proactively create alliances to enhance our product lineup.

The stable supply of pharmaceuticals has become a concern, as factors such as regional conflicts abroad and the spread of the novel coronavirus threaten to stabilize supplies of raw materials and other items. It is essential that we build a solid supply chain and establish a comprehensive system to ensure products can be delivered in a stable manner.

Furthermore, as a pharmaceutical company, it is our mission to supply products that meet all regulations and provide a high level of quality. The entire business group is committed to working together to provide safety and peace of mind to our customers.

Key Themes in Mid-term Business Plan

Theme	Details of initiatives
Establishing safety and quality management systems	Always keep in mind the risks during operations and inspections Prevent reoccurrence and spread knowledge laterally by thoroughly investigating the causes of problems
Strengthening research and development	Pharmaceuticals Group unites to create new products that match medical needs in our areas of technical expertise and fields of specialty
Creating and providing intellectual added value	Create systems that enable the continuous introduction of new products to the market
Strengthening the business through internal and external partnerships	Expand pipeline by pursuing synergy in product launches, engaging in business alliances, and conducting M&A Expand export and contracted production business for the Specialty Chemicals, International & IVD Division
Building a strong business base capable of supporting growth	Practice compliance and adhere to regulations to improve our presence as a company contributing to cancer treatment and to distinguish ourselves from our competitors. Use management resources effectively to create a corporate structure capable of adapting to changes in the pharmaceutical industry Promote the transfer of technology and knowledge, and foster the development of the next generation of human resources to strengthen our R&D, manufacturing, and sales structures

Topics

Launch of new biopharmaceutical Portrazza®

In November 2019, we launched the anti-cancer drug and anti-EGFR (epidermal growth factor receptor) human monoclonal antibody “Portrazza® Intravenous Infusion 800 mg.” Eli Lilly and Company has been marketing this drug in Europe and the United States since 2015 as a treatment for advanced and recurrent squamous non-small cell lung cancer, and since we acquired its manufacturing and marketing rights in Japan in August 2019, we have been preparing for its release. We aim to enhance our product lineup in the oncology field by harnessing the strength we amassed through the marketing of 33 anti-cancer drugs, while we continue to focus on the manufacture, research and development of biopharmaceuticals, including biosimilars.



Signing of co-promotion agreement with Bayer Yakuhin, Ltd. on NUBEQA® tablets

In February 2020, we signed a co-promotion agreement in Japan with Bayer Yakuhin, Ltd. for the new drug for prostate cancer, NUBEQA® tablets. The drug is an androgen receptor inhibitor that has been approved for manufacturing and sale as a therapeutic drug for castration-resistant prostate cancer without distant metastasis by Bayer Yakuhin. The manufacture and sale will be conducted by Bayer Yakuhin, while information promotion at medical facilities will be conducted by medical representatives (MR) of both companies.

Since the launch of BLEO® in 1969, we have a

long track record of providing information on urinary tract tumors. With NUBEQA® tablets, we will contribute to improving medical care through collection of safety information and provision of information on appropriate use together with Bayer Yakuhin to expand treatment options.

Through this joint effort with Bayer Yakuhin to provide healthcare professionals with information on the proper use of NUBEQA®, Nippon Kayaku would like to expand treatment options for patients and further contribute to the improvement of healthcare.

Focus on expanding market share of Infliximab BS “NK” and Trastuzumab BS “NK”

We are focusing on biosimilars as a growth field following generic drugs. We aim to increase the market share of Infliximab BS “NK”, which is a biosimilar of Infliximab formulation, and Trastuzumab BS “NK”, which is a biosimilar of Trastuzumab formulation.

Going forward, we hope to contribute to society through increased streamlining of medical expenses with steady supply of high quality and economic biosimilars, and strive to provide and collect information in cultivating biosimilars as a major pillar of our business.



Safety Systems Business



Yoshitsugu Ishida
Member of the Board,
Managing Director,
Head of the Safety Systems Group

Business Vision

Applying the technology we have cultivated in the automotive safety components field, we aim to provide more people around the world with safety by developing new safety components that are compatible with evolving mobility technology.



Mid- and Long-term Outlook for the Business

As symbolized by CASE*, the automotive industry is undergoing major changes. Although automobile sales have been sluggish this year due to the spread of the novel coronavirus, they are expected to continue rising over the medium to long term, especially in emerging countries. As automobiles continue to evolve, there are more and more applications for automotive safety components which use explosive technology, such as airbags, seatbelt pretensioners, hood pop-ups, and current interrupters.

Pyrotechnic devices, exemplified by inflators and micro gas generators, are an area in which we expect continued growth, as they are being installed in an increasing number of locations in automotive safety components. The safety

systems business continues to supply safe and reliable products by refining our technologies for the igniters (squibs) which, along with these pyrotechnic devices, are necessary for automotive safety components.

We also intend to apply and build on our current automotive safety components to provide new safety devices which can be used in drones, which are a new type of mobility technology, as well as flying automobiles, which are likely to appear in the future. Adapting to the evolving mobility technology will allow us to contribute to the safety of people the world over, well into the future.

* CASE: An acronym consisting of "C" for Connected, "A" for Autonomous, "S" for Shared, and "E" for Electric.



Initiatives under Mid-term Business Plan "KAYAKU Next Stage"

The impact of the novel coronavirus is expected to significantly slow automobile sales in the fiscal year ending March 2021, the second year of "KAYAKU Next Stage". The first quarter in particular saw a major decline in sales around the world, and sales in the Safety Systems Group also fell sharply, down 47% year on year.

Meanwhile, in response to government directives, KSM*1 and KMY*2 temporarily suspended operations in order to curb the spread of the novel coronavirus, while the other facilities also suspended operations and made production adjustments to respond to changes in demand. It will likely be several years before automobile sales return to their original levels, and we expect competition to intensify further in the automotive and automotive components industries.

Although this is an extremely challenging business environment, it is also a good time to strengthen our manufacturing power. Rather than simply streamlining production lines, we are reviewing all processes, from parts procurement to manufacturing, inspection, and delivery, to create more efficient manufacturing systems. We will continue making improvements to ensure that when demand rebounds, we can supply automotive safety components with a higher production efficiency than ever before.

*1 KSM: Kayaku Safety Systems de Mexico, S.A. de C.V. (a manufacturing and sales location in Mexico)

*2 KMY: Kayaku Safety Systems Malaysia Sdn. Bhd. (a manufacturing and sales location in Malaysia)

Product introduction

We deliver automobile safety components incorporated into air bags, seat belt pretensioners and other safety devices worldwide with reliable quality.

Inflator

Inflators are devices used to instantly inflate airbags. Airbags are loaded with a gas generating agent, which applies explosive technologies to control the speed at which an airbag deploys at within 1/1000th of a second at the point of impact.



Parts of a vehicle where our products can be found

- Disk-type inflator
- Cylinder-type inflator
- Micro gas generator

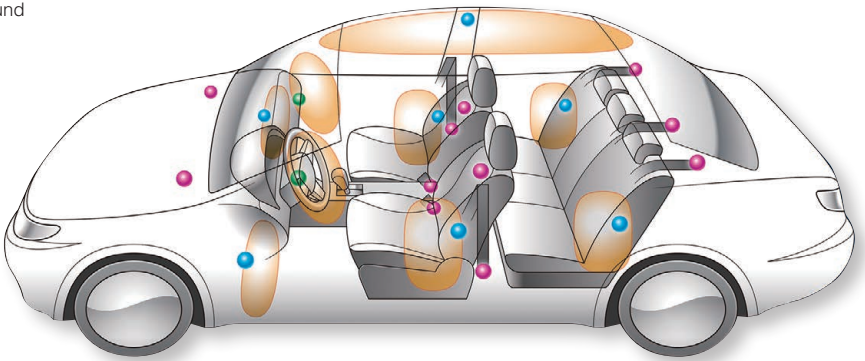
Micro Gas Generators

Micro gas generators are compact gas generating devices used for seatbelt pretensioners, which are devices to retract seat belts in the event of a collision, safely restraining passengers in place.



Squibs

A squib is an ignition device embedded in inflators and micro gas generators. It receives electric signals from impact sensors to operate safety devices.



Key Themes in Mid-term Business Plan

Theme	Details of initiatives
Establishing safety and quality management systems	Promote safety enhancement activities and permeate quality awareness among all workers
Strengthening research and development	Promote the development of safe products that match evolving market demands Promote development of safety devices for drones
Creating and providing intellectual added value	Establish Nippon Kayaku original pyrotechnics safety technology that combines Japanese and European know-how Promote automation of production and inspection processes, improve global production technology and production know-how
Pursuing global management	Strengthen reporting, contacting, and consulting between factories, aim for global uniform management Select and train global personnel in Japan and from overseas to foster the development of the next generation of leadership
Strengthening the business through internal and external partnerships	Strengthen global supply base Promote development based on external collaboration and strengthen alliances
Building a strong business base capable of supporting growth	Engage in timely capital expenditures that respond to demand Create a master plan for each site to promote business expansion

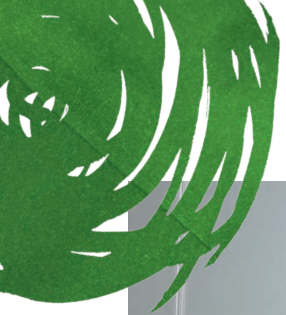
Topics

Initiatives to address diversifying needs for automotive safety equipment

Demand for automotive safety components continues to diversify with the increasing number of parts used on each individual vehicle. For example, micro gas generators and squibs are used for pop-up engine hoods that enhance safety by lifting the hood of an automotive to provide cushioning in case a pedestrian is struck, from the standpoint of protecting pedestrians, and for devices that shut off the high voltage power current of increasingly popular electric vehicles supplied from batteries to prevent electric shock in case of a collision.

Nippon Kayaku has begun selling its proprietary products for each of these applications, which are expected to see growth, in addition to the conventional areas of air bags and seatbelt pretensioners.





Yukio Tachibana
Executive Vice President, Representative Director,
Head of the Functional Chemicals Group, Head of the Agrochemicals Division

Business Vision

We will contribute to the sustainable development of agriculture by providing environmentally-friendly agrochemicals using our technologies and services to support the food supply.



Mid- and Long-term Outlook for the Business

As the world population grows and standards of living rise, the demand for food continues to increase. Expectations are high for agrochemicals that make a significant contribution to meeting this demand, and each year is seeing increased calls not only for effectiveness and low prices, but also for environmental friendliness, safety and ease of use.

As a specialist in vegetable and fruit tree pest control, the Agrochemicals Division will promote brand strategies for existing products, develop new products through formulation technologies, which is our forte, and furthermore expand the scale of business through product launches, subcontracted manufacturing, and more. With this, we are aiming for our business division sales of 10 billion yen as our "Vision" for 2025.

Meanwhile, as the global spread of the novel coronavirus increases the risk of disruption in existing supply chains, we hope to continue meeting our obligations to provide a stable supply of affordable products by rebuilding supply chains.



Initiatives under Mid-term Business Plan "KAYAKU Next Stage"

In our mid-term business plan, "KAYAKU Next Stage", we are aiming to increase sales of our key products of FINESAVE®, FUHMON®, and DIAZINON®, and strengthen brand equity by expanding the applications of these products, providing information on how to use them effectively, and creating new advertising using social networking services.

In new product development, we are fusing our own proprietary formulation technologies with internal and external technologies to provide new value that will delight our customers.

We will strengthen our supply chain by purchasing main raw materials from multiple suppliers, continue to emphasize safety and quality in our operations at the Kashima Plant, and introduce MFCA* to reduce both environmental impacts and costs.

We are also using projects to expand the scale of our business through product launches, subcontracted manufacturing, and so on.

* MFCA: Acronym of "Material Flow Cost Accounting," a method for visualizing the loss of materials such as raw materials and materials in production in terms of quantity and cost.

Key Themes in Mid-term Business Plan

Theme	Details of initiatives
Establishing safety and quality management systems	Reduce safety / quality process errors Reduce industrial waste
Strengthening research and development	Create new products
Creating and providing intellectual added value	Strengthen brand equity for core products
Pursuing global management	Promote development of flometoquin agents and strengthen sales structure
Strengthening the business through internal and external partnerships	Expand product line
Building a strong business base capable of supporting growth	Reduce costs for core products Secure stable supply of main raw materials

Topics

Construction of new synthesis line at Kashima Plant

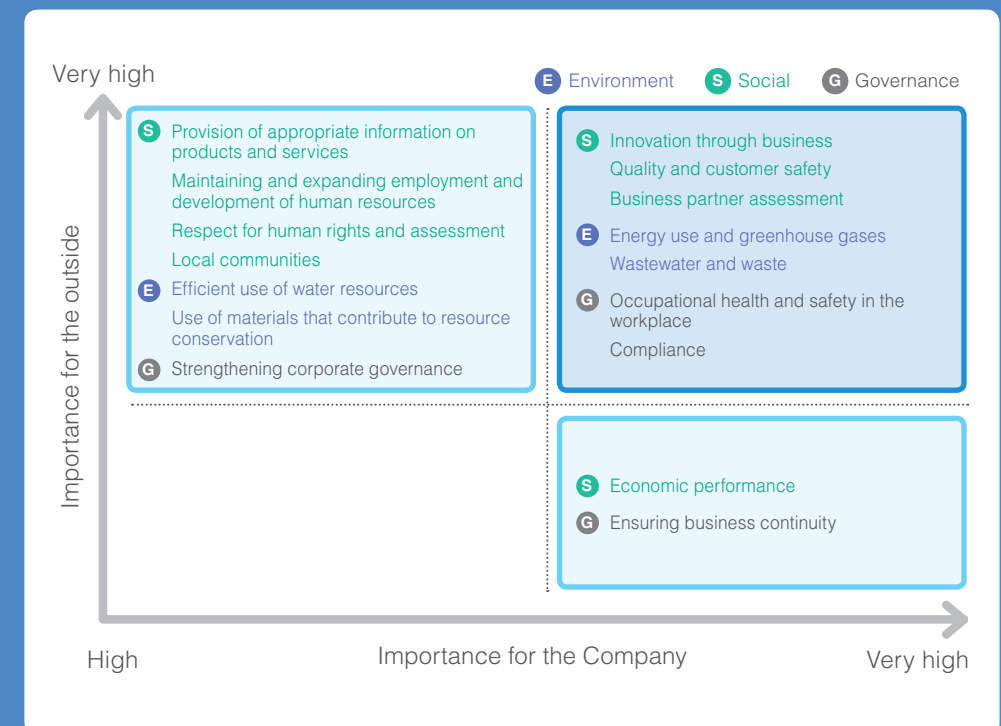
We constructed a new synthesis line inside the Kashima Plant, which was completed in July 2020, recognizing the importance of strengthening manufacturing technologies along with promoting R&D related to the agrochemicals business. With the position of our production bases in China unstable at the moment, our aim is to develop a stable supply system using in-house production, while refining organic synthesis technologies to expand the business for contract manufacturing from other companies for raw materials and intermediates. In addition, we intend to use this new location as a base for elevating the Nippon Kayaku Group's synthesis technologies with an eye toward utilizing it for other businesses, such as the Functional Chemicals Business, in addition to agrochemicals.



Management Foundation Underpinning Sustainable Growth

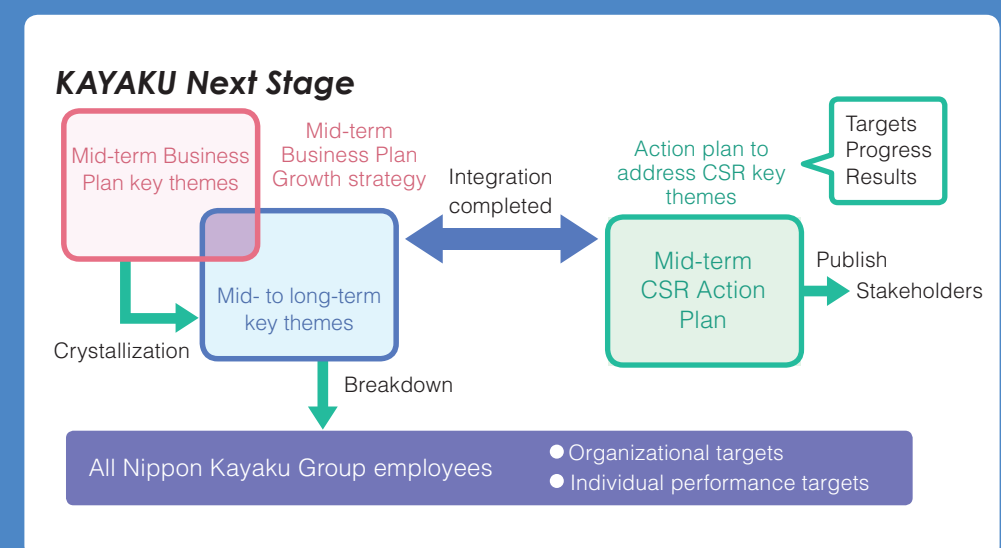
Nippon Kayaku Group's CSR Key Themes (Materiality)

In formulating the Mid-term Business Plan **KAYAKU Next Stage**, which began in the fiscal year ended March 31, 2020, Nippon Kayaku identified CSR key themes (materiality) after organizing the issues it should address aimed at contributions to a sustainable society and for the sustainable growth of the company.



Mid-term CSR Action Plan








































Based on the materiality identified, we formulated a Mid-term CSR Action Plan for 2019 to 2021 that contains specific targets for initiatives. The Mid-term CSR Action Plan represents initiatives for all stakeholders that will be implemented by all employees of the Nippon Kayaku Group in a concerted effort together with business strategy.



CSR Key Themes ("Materiality") and CSR Action Plan
<https://www.nipponkayaku.co.jp/english/csr/philosophy/actionplan.html>

Mid-term CSR Action Plan and Progress in the Fiscal Year Ended March 31, 2020

The following presents the details and results of initiatives implemented in the fiscal year ended March 31, 2020 under the Mid-term CSR Action Plan for 2019 to 2021 (fiscal year ended March 31, 2020 to fiscal year ending March 31, 2022) linked to the Mid-term Business Plan **KAYAKU Next Stage**.

	ESG No.	Important CSR issues	Mid-term CSR Action Plan 2019–2021(FYE2020–FYE2022)	Key Performance Indicator(KPI)	Goals for FYE2022	FY2020 Progress	Topics on FY2020 initiatives	Relevant SDGs	
Most important themes	S	1 Innovation through business	<ul style="list-style-type: none"> Business divisions will work as one team on pursuing R&D with an eye on exit to market, and create new products and businesses in core businesses and areas of synergy. Invest management resources in medium and long-term R&D themes while enhancing core technologies and meeting the future needs of society. 	Amount invested in R&D over three years	(C) ¥40 billion over 3 years	(Consolidated) ¥11.1 billion	<ul style="list-style-type: none"> Worked on various initiatives involving new products and businesses in all the Company's divisions 5Started mass production of the new maleamide resin for 5G telecommuni-cations Acquired an LCD and chip cleaning business Contributed to the fields of digital and conventional printing by developing industrial-use digital printing colorants Obtained approval for an additional indication for breast cancer treatment regimen B for our anti-cancer drug Trastuzumab BS Launched the anti-cancer drug PORTRAZZA® Injection, which is a human anti-EGFR monoclonal antibody Expanded sales of our new inflators that went on the market in FYE2019 Made progress developing drone safety devices, with an eye to their commercialization Worked on disseminating our new insecticide FINESAVE®, expanding its applications, and registering it overseas Promoted research for next-generation development that combines in-house and external technologies Organized a company-wide research symposium and other events for our business groups and research laboratories to discuss technology Studied ways to use various types of IT in production, quality management, R&D, and intellectual property 	      	Who We Are
		2 Quality and customer safety	<ul style="list-style-type: none"> Make ongoing improvements to the quality management system and work to strengthen local management capabilities, and create a stronger quality management and quality assurance system. Pursue quality management, improve the level of production technology and expertise, and work to reduce flaws in the process. 	Number of serious complaints by customers ¹ Number of serious flaws in processes ¹	(C) 0 complaints (C) 0 incidents	(Non-consolidated) 0 complaints (Non-consolidated) 0 incidents	<ul style="list-style-type: none"> Revised and distributed to our overseas Group companies our "Why Why Analysis Manual," which seeks to find the real causes of processing abnormalities and the like and fundamentally resolve them Beefed up our training program on the practical fundamentals of statistical analysis and quality management and e-learning offerings of product quality education 		
		3 Business partner assessment	<ul style="list-style-type: none"> Implement supply chain management that takes environmental and social aspects into consideration, based on the CSR Procurement Guidelines. 	Number of times assessments of main business partners are performed	(N) 50 times/year	(Non-consolidated) 74 companies	<ul style="list-style-type: none"> Implemented the scheduled audits Verified the following from 318 responses to a CSR questionnaire sent to 910 of our business partners Environmental protection initiatives: no negative environmental impact Social initiatives: No instances of harassment, discrimination, forced labor, inappropriate work hours or wages, or other anti-social or adverse behavior	  	
	E	4 Energy use and green-house gases Wastewater and waste Efficient use of water resources Use of materials that contribute to resource conservation	<ul style="list-style-type: none"> Pursue activities to save energy and combat global warming. Achieve the environmental targets for FYE2021 and formulate targets for FYE2031. Work to integrate ISO 14001 company-wide and advance environmental management that addresses both the risks and opportunities of environmental problems. 	Mid-term environmental targets <ul style="list-style-type: none"> Amount of CO₂ emitted from energy sources VOC emissions volume COD emissions volume Volume of waste generated Recycling rate Zero emissions rate Company-wide integration of ISO 14001 Formulation of FYE2031 environmental targets	FYE2021 Target 79,500 tons or less (N) 42 tons or less (N) 150 tons or less (N) 23,500 tons or less (N) 80% or higher (N) 3% or lower (N) 0% (N)	(Non-consolidated) 69,300 tons (Non-consolidated) 28.6 tons (Non-consolidated) 145.2 tons (Non-consolidated) 23,204 tons (Non-consolidated) 84.4% (Non-consolidated) 3.6% Under review Under review	<ul style="list-style-type: none"> Expect to accomplish FYE2021 mid-term environmental goals, with the exception of zero emission levels Worked toward attaining zero emissions by continuing negotiations with industrial waste disposal contractors so that we can switch from disposing of our industrial waste in land fill to recycling it Worked on setting our environmental goals for 2030, which will focus on reducing CO₂ emissions correlated with climate change; these will be announced in FYE2021 Considering companywide adoption of ISO14001; organized a setup whereby our business groups and plants collaborate in implementing the Responsible Care Policy and programs to stem climate change 	      	Financial and Non-financial Results
		5 Occupational health and safety in the workplace	<ul style="list-style-type: none"> Strictly follow basic rules on health and safety and improve equipment and work procedures to build a strong foundation for safe operations. Promote health management and provide a workplace environment that enables employees to work with enthusiasm and achieve work-life balance. 	Number of serious accidents ² White 500 certification Percentage of employees taking paid leave Percentage of employees who take mental health training Percentage of employees who undergo regular health check-ups	(C) 0 incidents (N) Maintain certification (N) 70% (N) 100% ³ (N) 100%	(Non-consolidated) 0 incidents Recognized as a Certified Health and Productivity Management Organization under the Large Enterprise Category (Non-consolidated) 60.1% (Non-consolidated) 100% (Non-consolidated) 100%	<ul style="list-style-type: none"> Gained recognition as an outstanding enterprise engaging in efforts to advance health and productivity management under the 2020 Certified Health & Productivity Management Outstanding Organizations Recognition Program's large enterprise category; although we did not receive White 500 recognition in FYE2020, we continue our efforts to promote health management Average monthly overtime at the Nippon Kayaku parent company was 12.7 hours 	 	
Important themes	S	6 Compliance	<ul style="list-style-type: none"> Exercise strict compliance, which is a basic principle upon which we conduct corporate activities, and operate the business in a fair manner. Establish a basic policy on preventing corruption, and maintain and strengthen an open and honest corporate culture with high ethical values. 	Number of serious compliance violations ⁴ Formulation of a basic policy on preventing corruption Coverage ratio of companies implementing compliance training	(C) 0 incidents Formulation 100%, domestic	(Consolidated) 0 incidents In perparation (Domestic) 100%	<ul style="list-style-type: none"> Gathered information for formulating a Basic Policy on Corruption Prevention and verified the state of implementation at other companies Amended the Nippon Kayaku Group Charter of Conduct and Code of Conduct 3,468 employees took e-learning training and other compliance training for domestic Group companies Held training sessions on anger management at all of our domestic Group companies 		Businesses
		7 Provision of appropriate information on products and services	<ul style="list-style-type: none"> Increase the presence of the Nippon Kayaku Group by complying with regulations in each business and providing appropriate information and technical services to customers. 	Regularly conducting customer satisfaction surveys	(N) Implementation	(Consolidated) Implementation	<ul style="list-style-type: none"> Administered a customer satisfaction survey for some Nippon Kayaku Group customers, including those of our overseas Group companies; the survey sample will be expanded in the future 		
		8 Maintaining and expanding employment and development of human resources	<ul style="list-style-type: none"> Promote diversity and inclusion by hiring diverse human resources and effective human resource allocation and exchanges. Pass down and strengthen technical capabilities in monozukuri (manufacturing) and achieve globalization in human resources through ongoing human resource development. 	Percentage of female managers Percentage of people with disabilities employed Amount invested in education and training per employee	(N) 8% ⁵ (N) 2.3% (N) Disclose results	(Non-consolidated) 8.4% (Non-consolidated) 1.97% (Non-consolidated) ¥76,000 / person	<ul style="list-style-type: none"> Achieved our goal of having women in 8.4% of our management positions one year ahead of time Offered language learning assistance and foreign-language study abroad programs, accepted foreign contract employees and technical interns 22 men took men's childcare leave Convened an expert committee on work hours with the labor union, which is considering programs on performance management and problem-solving measures at each business site; convened an expert committee on work practices with the labor union 	  	
	S	9 Respect for human rights and assessment	<ul style="list-style-type: none"> Operate businesses in a manner that considers the human rights of employees and all people involved in the supply chain. 	Number of training sessions held on human rights	(N) Once a year or more	(Non-consolidated) 2 times	<ul style="list-style-type: none"> Held two training sessions on human rights in association with our amendment of the Nippon Kayaku Group Charter of Conduct and Code of Conduct 	   	Financial Section
		10 Local communities	<ul style="list-style-type: none"> Actively communicate with local communities where our businesses are located and strive to co-exist and prosper together with them as a company rooted in the local community. 	Total number of informal community gatherings Expenditures on social contributions ⁶	(C) Disclose results (N) Disclose results	(Consolidated) 27 times (Non-consolidated) ¥269 million	<ul style="list-style-type: none"> Maintained constant communication between our place of business and local communities through such efforts as open houses at our facilities, clean-up campaigns, and social gatherings As part of our educational CSR, made school visits to local primary schools and took part in the classroom experiment event, Children's Summer Vacation Chemistry Experiment Show 2019 Supported ping pong's T League as an initiative for getting healthy through sports 	   	
		11 Economic performance	<ul style="list-style-type: none"> Generate stable profits and return profits to society while reinvesting profits as management capital to achieve sustainable growth and enhance corporate value. 	ROE Amount of tax paid Capital investments over three years	(C) 8% (C) ¥5.6 billion (C) ¥50.0 billion over three years	(Consolidated) 6.0% (Consolidated) ¥6.1 billion (Consolidated) ¥14.6 billion	<ul style="list-style-type: none"> Achieved sales of 175.1 billion yen and operating income of 17.5 billion yen; returned profit to shareholders as dividends Although share buybacks improved our capital efficiency, ROE declined due to lower profit Made 14.6 billion yen of capital investments for our future growth 	 	
	G	12 Strengthening corporate governance	<ul style="list-style-type: none"> Strengthen corporate governance of the entire group and manage in a highly transparent and sound manner. 	Number of times that the effectiveness of Board of Directors meetings is evaluated Number of times internal business audits are performed by the Audit Division	(N) Once a year (C) 45 times over three years	(Non-consolidated) Once (Consolidated) 13 times	<ul style="list-style-type: none"> Conducted an internal survey to assess the effectiveness of our Board of Directors, created an action plan incorporating the situations and issues that we identified, and are now implementing improvements Evaluated the internal control reporting systems (J-SOX) for nine Group companies that underwent reviews of their internal controls; no problem areas detected Disclosed our procedures for appointment and dismissal of officers and our guidelines for determining officers' compensation in our Securities Report Formulated our Basic Policy on Corporate Governance, which will be announced in FYE2021 Conducted group and e-learning training sessions on such topics as legal matters, information security, and security export control 		Corporate Information
		13 Ensuring business continuity	<ul style="list-style-type: none"> Ensure business continuity by responding to the many different risks associated with our businesses, maintaining the production structure, securing the appropriate materials, and strengthening disaster response measures. 	Implementation rate for the top five risk control activities Number of times BCP drills are conducted	(C) 100% (C) Once a year or more	(Consolidated) 100% (Consolidated) Once	<ul style="list-style-type: none"> Conducted Top 5 Risk Control initiatives at all of our business divisions, domestic affiliates, and overseas affiliates Conducted BCP training drills for our overseas Group companies at Central Headquarters for Disaster Countermeasures and at Kayaku Chemical (Wuxi) To deal with the novel coronavirus, established the Central Headquarters for Disaster Countermeasures headed by our president, which is putting priority on making sure our employees stay safe ahead of its business continuity initiatives 	  	

(E) Environment (S) Social (G) Governance

*1: Losses of 10 million yen or higher *2: Accidents resulting in time off work for three or more people simultaneously or accidents resulting in death

*3: Cumulative amount over the three year period from FYE2020 to FYE2022

*4: Number of incidents deemed serious by the Ethics Committee or the Risk Management Committee

*5: Target for the end of FYE2021 *6: Expenses for donations, Asunaro House activity expenses, plant festivals, and other local events

CSR Key Themes (Materiality)

Innovation through Business

Global *SUKIMA* IDEAS

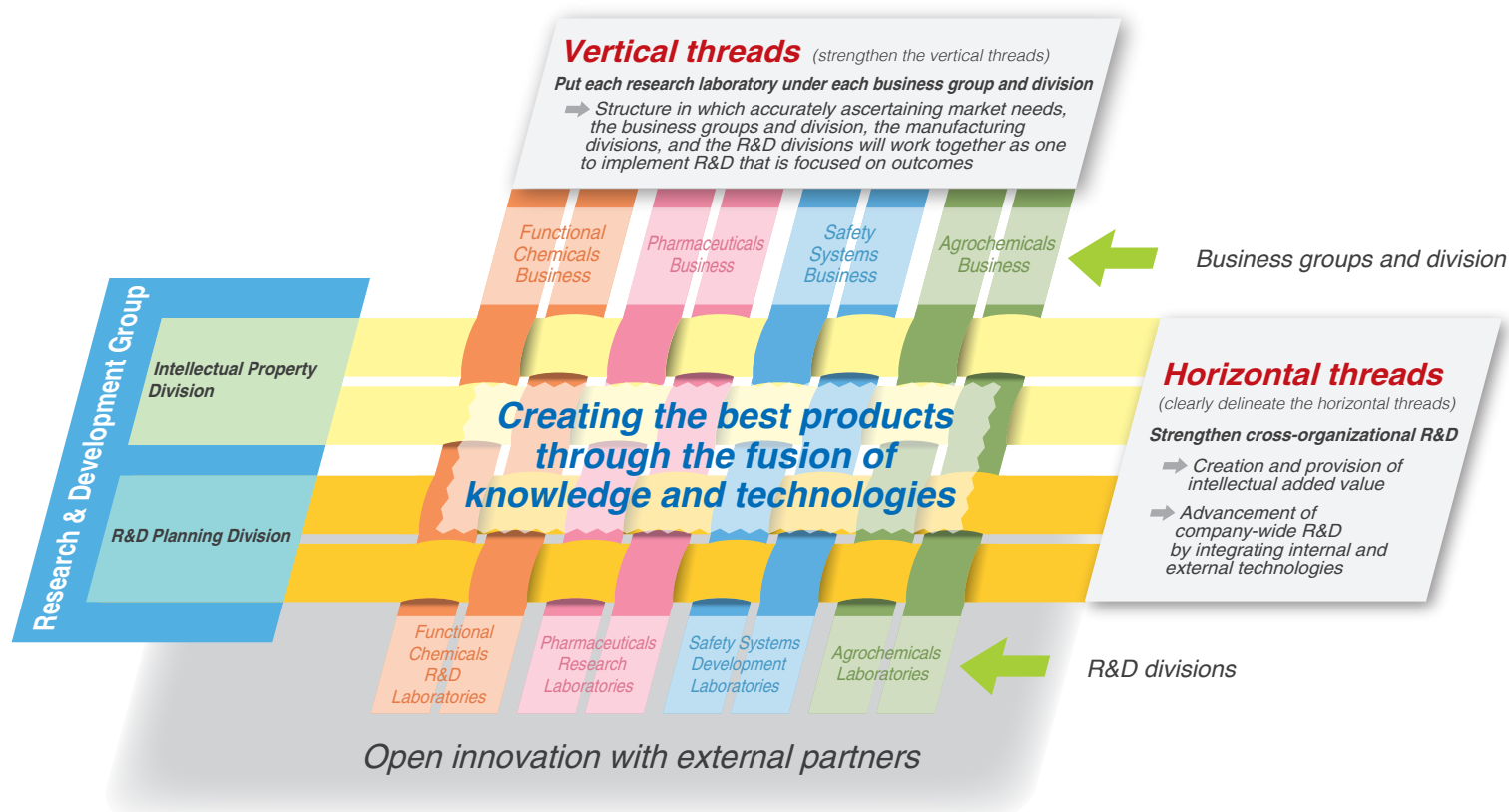
The Nippon Kayaku Group develops high value added products born from a fusion of core technologies and intellectual property—assets which may even come to prominence in niche areas—in four core areas of business, functional chemicals, pharmaceuticals, safety systems and agrochemicals.

Research and Development Policy

Following on from the previous Mid-term Business Plan *Take a New Step 2016*, the Mid-term Business Plan *KAYAKU Next Stage* starting in the fiscal year ending March 31, 2020 continues to outline strengthen R&D as a key theme, with each department uniting under the same banner to pursue research and development and create new products with outcomes to market in mind. We will also look to pooling our management resources toward mid- to long-term research and development themes while boosting our core technological capabilities in order to better meet the needs of tomorrow's society.

Research and Development Structure

Nippon Kayaku works to create the best products based on a robust research and development structure that interweaves “vertical lines” of development, led by each Group, which integrates the research and manufacturing departments as one, and “horizontal lines” of research, which are collaborative, organization-based research activities led by the Research & Development Group.



(1) Implement R&D Integrated with our Business

Each division of research and development, sales and manufacturing will work together as one with the business groups and division to strengthen our system of product development so that it captures market needs accurately. To achieve this, we created a structure that put the Functional Chemicals

R&D Laboratories, Pharmaceuticals Research Laboratories, Safety Systems Development Laboratories and Agrochemicals Laboratories directly under each business group and division, and we are working to strengthen the “vertical threads” that these represent.

Functional Chemicals R&D Laboratories



The Functional Chemicals R&D Laboratories uses resins, colorants and catalysts as core technologies to develop original materials and products that combine multiple materials.

We develop epoxy resins with a high heat resistance, maleimide resins and other distinctive materials that contribute to the realization of Society 5.0—which calls for a 5G information communications society and other such technological advancements.

Moreover, we look to further our extensive base of knowledge of colorant synthesis technologies in the development of colorants for inkjet printers and other feature-led functional colorant materials as a step towards realizing the objectives set by SDGs.

In addition, we are furthering development of high-performance catalysts for manufacturing basic chemicals such as acrylic and methacrylic acids, and we are successively putting them on the market.

Voice!

Development Team No. 3, Group 2, Functional Chemicals R&D Laboratories, Functional Chemicals Group

Rima Akanuma In charge of evaluating color materials



I've been involved in R&D for color materials used for digital printing since joining the company. Although I'm a researcher, my job duties are wide ranging. They include many activities and time outside of the laboratory, including attending specimen testing at the plant and visiting customers.

As part of my experience to date, I actively worked to gather information on the truly indispensable needs and challenges of customers overseas using our technical guidance as a jumping off point. Regarding product usability and necessary characteristics, there also have times where I proposed a solution to resolve a customer issue. The information I gained from this experience is benefiting the developing of color materials even today.

This made me keenly aware of the importance of gathering information by having researchers talk directly with customers inside and outside of Japan.

Nippon Kayaku has the longest history of any company in Japan with dyes, which represent the roots of our business. The data and know-how that has been cultivated and passed down to date represents a strength that cannot be mimicked by competitors. Utilizing this strength, in addition to digital printing, which the Functional Chemicals Group is focusing on, I hope to further pursue the potential of utilization of color materials in other arenas and move ahead with research that benefits the environment and more convenient lifestyles.

Pharmaceuticals Research Laboratories



At the Pharmaceuticals Research Laboratories, we are vigorously moving forward with the research and development of polymeric micelle anti-cancer drugs through the use of nanotechnology. In response to extremely high prices for biomedicines, Pharmaceuticals Research Laboratories has become involved in the development and introduction of

biosimilars as the low-cost formulations that society needs. In line with this, we are attempting to obtain the technology to manufacture biomedicines that are of a high quality and highly productive. Furthermore, we are actively working on the development of generic anti-cancer drugs that cater to medical needs.

Voice!

Pharmacokinetics Team, Biological Evaluation Group, Pharmaceuticals Laboratories, Pharmaceuticals Group

Ai Kijima In charge of evaluating pharmaceuticals under development



Before a pharmaceutical is brought to market, many departments are involved in the development process including search, synthesis, formulation, and clinical development. The Pharmacokinetics Team is responsible for testing and evaluation of the relationship between efficacy and side effect and drug dynamics understood based on data such as blood concentration. The results are then shared with and become data useful to everyone involved in the development. Therefore, the Pharmacokinetics Team not only implements appropriate

evaluation but also serves as a bridge for other departments and facilitates overall collaboration.

The anti-cancer drugs we supply save lives and will continue to be in demand by society. I was assigned to my choice of the Pharmacokinetics Team utilizing the specialization I studied at university. While pharmaceutical development appears difficult with a long product development period, I look forward to taking each step forward towards our goals through working collaboratively with others on relevant development themes.

Safety Systems Development Laboratories



At the Safety Systems Development Laboratories, we are furthering development of devices that make use of our explosive technologies. These devices include disk type inflators for driver and passenger seat airbags, cylinder type inflators for side, curtain, seat cushion and knee airbags, micro gas generators for seatbelt pretensioners, as well as micro gas gener-

ators for a mechanism that raises the hood so as to protect pedestrians. We are also creating a research and development system to provide low-cost, high-quality safety components in a timely manner to customers spread across the globe by combining the technology of safety components from production bases located around the world.

Voice!

Group Leader, Development Group 1, Safety Systems Development Laboratories, Safety Systems Group

Yasuhiro Araki In charge of development of automobile safety components (inflators, etc.)



The Safety Systems Business provides automobile safety components that protect lives in emergencies. Such responsibility for the market and industry is very serious, but also gives me a sense of reward as our solutions ultimately benefit society.

In research and development, there is a constant demand for reducing cost and improving quality, and also an aspect of customer-driven demands. In order to promptly address these needs, we also conduct evaluations by looking ahead to accurately and swiftly capture the essence of challenges faced by customers. Also, as

reliable safety is required, we are expected to not only produce experimental results but also match these results with theory.

In order to quickly move forward with highly difficult development, it is crucial to maximize the team's potential. As products require a wide range of research expertise from mechanics to chemistry, the direction of a product is defined through discussions among highly knowledgeable specialists. We aim to continuously create high quality and advanced products by combining the expertise and skills of each team member.

Agrochemicals Laboratories



FINESAVE®, a new insecticide for vegetables and fruit trees that Agrochemicals Laboratories had been working to bring to the market, was launched in June 2018.

In order to promote the greater use of FINESAVE®, we are actively looking for new agro-

chemicals and developing unique formulations that are safe and easy to use, in addition to proposing smart ways of using our products. We are also continuously expanding the applications of current products.

Voice!

Biological Research Group, Agrochemicals Laboratories

Tadahide Fujita (pictured at middle) In charge of evaluations of agrochemicals under development



The Agrochemicals Laboratories engages in the research and development of agrochemicals through teamwork involving the Biological Team, Synthesis Team and Formulation Team. The role of the Organics Team is to evaluate agrochemicals appropriately, including not only the effectiveness of products under development, but also the causes if a product is not effective against a pest. We engage in daily research with the combined knowledge of each team, aiming to create new agrochemicals that are useful to the future of agriculture.

Close communication both inside and outside the company is important to research. We gain various knowledge from our actual interactions with

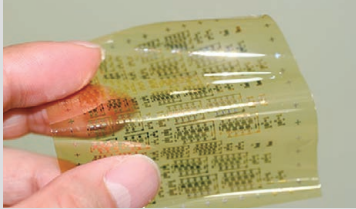


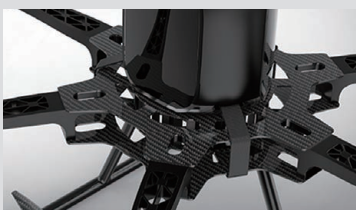
farmers and the staff of testing grounds. By asking these individuals about their use of existing agrochemicals, including their needs and any negative impacts, we check the appropriateness of product concepts and strive to be aware of unexpected risk as soon as possible. Development of agrochemicals requires a great deal of time until market launch. There is a need to believe in the results and persevere through countless tests. Regardless of the outcome, researchers discuss matters frankly and they look forward to the experience in a positive light. I believe that this time is a very important aspect of research. I feel that this is a driving force behind theme promotion and my motivation at work.

(2) Company-wide Coordination and Promotion of R&D

For coordination across organizational boundaries in research and development, we are clarifying the horizontal lines that the Research and Development Group are responsible for as “horizontal threads.” The Research and Development Group oversees the integration of internal and external intellectual property, intellectual property strategy, and integration of R&D laboratories. The Research and Development Management Committee is involved in research and development overall as a

company-wide management issue. In research and development aimed at the creation of new products and new businesses, we are actively promoting corporate research—such as the strategic allocation of company-wide business resources, and the integration of internal and external technology, products and intellectual property—toward subjects we expect to be major growth areas in the future.

Corporate Research

Theme	Details	
Organic Electronics		Using the technology of functional colorants, we are promoting the development of organic electronic materials that hold promise for flexible device transistors and sensor materials.
Light-controlled Film		We are developing our own light-controlled film that makes use of film fabrication and coating technology to reflect and absorb light of a specific wavelength, and we are working hard on the development of special high-functioning films for applications in the fields of automotive head-up displays and eyewear.
Manufacturing Technologies for Biomedicines		Cultivacs Inc., our research and production base for antibody drugs, was established as a joint venture with Mitsubishi Gas Chemical Co., Inc. We are advancing development while integrating our knowledge with the goal of establishing the core manufacturing technologies for domestic antibody drugs production.
Safety Device for Drones		We conduct research and development into a parachute-type emergency safety device for drones (unmanned aerial vehicles) applying pyrotechnics we have cultivated through the development of automobile safety components. Development is progressing with a view to rolling out the product in 2021.

Cross organizational coordination

● Meeting of research laboratory heads

A meeting of research laboratory heads is held twice a year, serving as a place to draw on the organizational capabilities of each research laboratory and bring underlying technologies together. These meetings are used to investigate opportunities to implement the successful measures applied in each research laboratory at other research laboratories, and in the development of researchers, while also reviewing the elemental technologies and core technologies used Company-wide, and discussing the appropriate placement of personnel.

● Company-wide research presentation meeting

Every July researchers and engineers from each research laboratory gather to give oral presentations and poster based presentations on the elemental technologies and core technologies held by each research laboratory. The exchanges between researchers working in different fields is used as an opportunity to gain hints toward the creation of new applications for developed items, and invaluable insight provided from an objective point of view.

● Exchange meeting for analytical evaluation technologies

An exchange meeting for analytical evaluation technologies is held every October as a place for analytical evaluation researchers and engineers in different business areas to gather for discussion and to exchange opinions, while sharing success stories and issues faced. This meeting is attended by a large number of researchers and engineers from the Research & Development Group, and various research laboratories and plants, with presentations given on analytical evaluation technologies and quality assurance, and introductions to instruments and equipment used.



Scene from the Company-wide research presentation meeting

Intellectual Property

Intellectual Property Strategy and Policy

In order to promote the “creation and provision of intellectual added-value”—a key theme of **KAYAKU Next Stage**—the Intellectual Property Division has outlined “the effective utilization of the intellectual property strategy in business strategy, having it serve as the driving force for business development through the creation of new intellectual property” as its mission over the course of the plan, focusing on the following four areas of activity.

- 1 Filling high-quality patents
- 2 Applying the intellectual property strategy to business activities
- 3 e-Intellectual Property Division
- 4 Global management/support structure

Voice!

Target! Proposal-driven Intellectual Property



Akira Kunugise
General Manager
Intellectual Property Division

The Intellectual Property Division uses four performance indicators: 1) quality improvement of rights with the attention of other companies or the importance for our company as indicators, 2) actively roll out and link IP strategies as indicators of business strategies, 3) active consideration and implementation of SDI* strategies incorporating AI, and 4) fulfillment of core function in IP management including information strategies for domestic and overseas Group companies.

Of these, the SDI strategy utilizing AI has yielded some results, which is making it possible to sort notable patents of other companies. In addition, we are especially focused on the link between intellectual property strategy and business strategy, and by analyzing the big

data of patents, which relates to the utilization of big data being attempted in recent years, we are hoping to come up with research and business fields to be proposed to management for our company to pursue. To that end, it is necessary to take an inventory of the technologies where we excel as well as to analyze industry trends, including market research and technology surveys. I hope to come up with proposals for new business fields that will support the future of the Nippon Kayaku Group, while promoting analytical abilities through database research and human resources training.

* SDI (Selective Dissemination of Information): refers to periodic checks on patent information that matches preset criteria, and the collection and management of necessary data.

IP Topics

Proactive IP Strategy Capitalizing on the IP Landscape

We are actively making use of the IP landscape, which comprehensively analyzes intellectual property and market information in order to switch from a defensive approach that retains many intellectual properties to prepare for conflicts to a proactive approach utilizing quality intellectual properties in business operations.

In this changing business environment, we are predicting industry trends through analysis of the market and competitor information, and comparing companies for potential M&A based on the intellectual properties they hold with their competitors in terms of technical evaluation and examining their synergistic effect to assist in business and management decision making. In research and development, we conduct macro and micro analysis around our products in order to find new applications for existing technologies and propose new business themes. Going forward, the Intellectual Property Division will work in unison with business, management, and research and development departments in utilizing the IP landscape to look for new applications, and aid in decisions on M&A, business partner selection and other decision making.



CSR Key Themes (Materiality)

Energy Use and Greenhouse Gases

Climate Change Initiatives

With climate change having a growing impact in the form of more serious damage from storm and flood, countries are taking action in response to COP21 (the Paris Agreement) adopted in 2015 and are working to keep the global rise in temperature since the Industrial Revolution below 2°C. As a producer of chemical products, we believe the Nippon Kayaku Group must actively fulfill our responsibility toward the environment given our awareness that climate change is an important issue facing the international community. We will continue to work towards helping resolve global environmental issues, such as climate change, by setting mid- to long-term plans that strive to integrate environmental initiatives into management and business activities, based on the identification of risks and opportunities.

Environment, Health and Safety, and Quality Assurance Management System

To ensure the environment, health and safety and to sustain and improve quality assurance at the Nippon Kayaku Group, the Environment, Safety, Quality Assurance Management Committee chaired by the company president plays a pivotal role in central environment, health and safety diagnostics and central quality assurance diagnostics conducted at business locations in Japan and overseas plants.

The Declaration on Environment, Health and Safety, and Quality

Enacted November 7, 1995
Amended May 22, 2017

The Nippon Kayaku Group, under its corporate motto of “KAYAKU spirit,” which calls for continuously providing society with the best products through ceaseless progress and the combined forces of our consciences, we will contribute to the realization of a sustainable society that safeguards the life and health of customers, and supports a comfortable life.

Fundamental Policies

1. We will strive to maintain and improve the environment, people's health and safety across the entire product lifecycle, from R&D to production, distribution, sales, recycling, and disposal.

2. We will strive to conserve the environment by introducing and developing technologies that are useful toward reducing waste, carrying out the appropriate disposal of waste, conserving resources, conserving energy, and implementing global warming prevention measures.

3. We will actively provide business partners with information needed for the safe usage and handling of our products and for conserving the environment.

4. We will enhance the quality of not only products, but operating processes as well, and also work to enhance customer satisfaction.

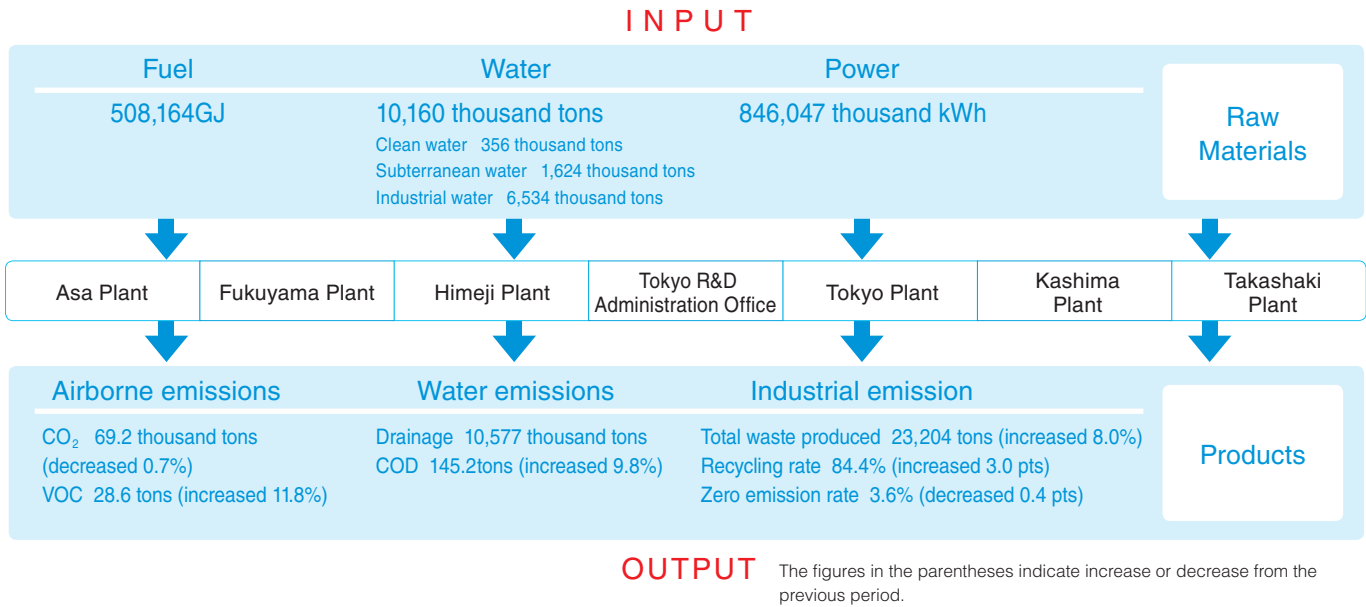
5. We will heighten employee knowledge and skills through education and training and achieve our goal of zero pollution, zero injuries, zero accidents and enhanced quality.

6. We will disclose information so that stakeholders correctly understand our business activities and also strive to engage in dialogue with local communities and government authorities.

June 25, 2019

President & Representative Director, Nippon Kayaku Co., Ltd.,

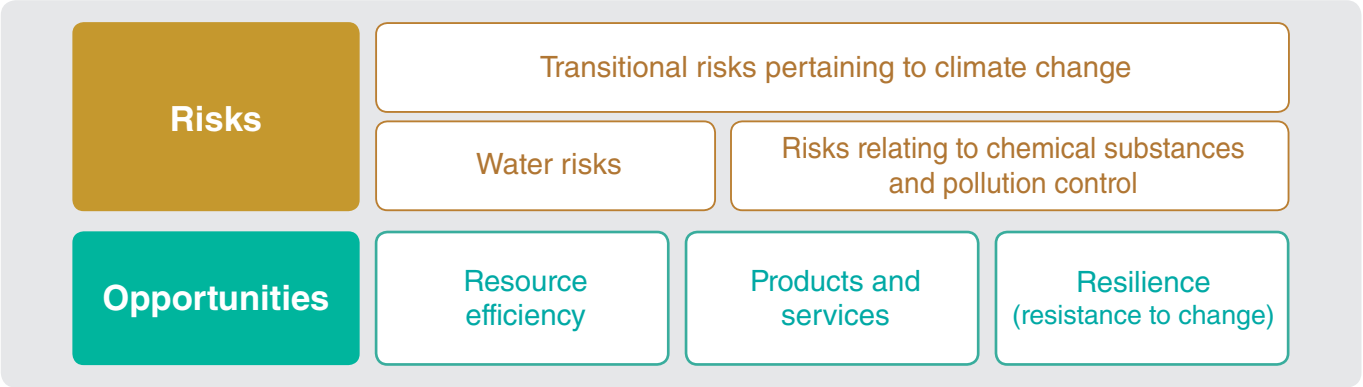
Overview of Business Activities and Environmental Impacts (Object organization: Nippon Kayaku non-consolidated basis)



Identification of Environmentally-related Risks and Opportunities

The Paris Agreement was adopted at the 2015 United Nations Climate Change Conference (COP21) held in Paris, France, in December 2015, establishing a new international framework for the reduction of greenhouse gas emissions from 2020 onwards. This Agreement sets out a worldwide long-term target of limiting the global rise in temperatures since the Industrial Revolution to below 2°C (the 2°C target). The reduction of “energy consumption and greenhouses gases” has been raised as a form of “materiality” of the Nippon Kayaku Group, and we are currently pursuing measures for tackling global warming. The Environmental Protection & Safety Division is currently taking the lead in establishing and implementing

studies and action plans drawn up so that we can contribute to meeting the 2°C target.
In addition to an analysis of environmentally-related risks and opportunities addressed by ISO 14001, in the fiscal year ended March 31, 2019 we also carried out an analysis of risks and opportunities, including transitional risks pertaining to climate change, based on TCFD*¹ recommendations. As a result, we clarified concerns relating to risks posed by capital investment increases and other issues concerning the tightening of GHG*² reduction obligations.
*1 TCFD ... Task Force on Climate-related Financial Disclosures
*2 GHG ... Greenhouse gases



Mid-term Corporate Master Plan for the Environment for FY 2030 (fiscal year ending March 31, 2031)

We deliberated on the specifics of Mid-term Corporate Master Plan for the Environment for FY 2030 based on identification of risks and opportunities following the mid-term CSR Action Plan, which calls for “pursuing activities to save energy and combat global warming, and achieve the environmental targets for FY 2020 and formulate targets for FY 2030.”
As a result, the scope of tabulation for environmental targets has been expanded from Nippon Kayaku alone to the entire Group including overseas Group companies, and the reduction of greenhouse gas emissions in business

activities (scopes 1 and 2) by 32.5% in FY 2030 compared to FY 2019 has been set as the mid-term target. This goal was set out to receive recognition by the international Science Based Targets (SBT) initiatives in the future.
We will take action aimed at reaching the target, including the initiative of incorporating GHG reduction evaluation items into internal environmental awards, proactive development of CO₂ reduction methods that also enable cost reduction in the production process, and switching to use of electric power with lower emission factors.

Target of Mid-term Corporate Master Plan for the Environment for FY 2030

Reduce greenhouse gas emissions (scope 1 and 2) by 32.5% in FY 2030 compared to FY 2019 for the prevention of global warming.

Disclosure of CO₂ Emissions Data (scope 3) throughout the supply chain

In recent years, there is a growing international trend calling for reports that cover the supply chain for diverse business activities (scope 3) not limited to activities within the Group itself as a countermeasure against climate change. Given the current situation where business activities are expanding globally, data that includes the supply chain is important for precise accounting and analysis.

Nippon Kayaku not only calculates scope 1 and scope 2 emissions, which we have been summarizing and keeping

record of, but also CO₂ emissions (scope 3) in the supply chain.

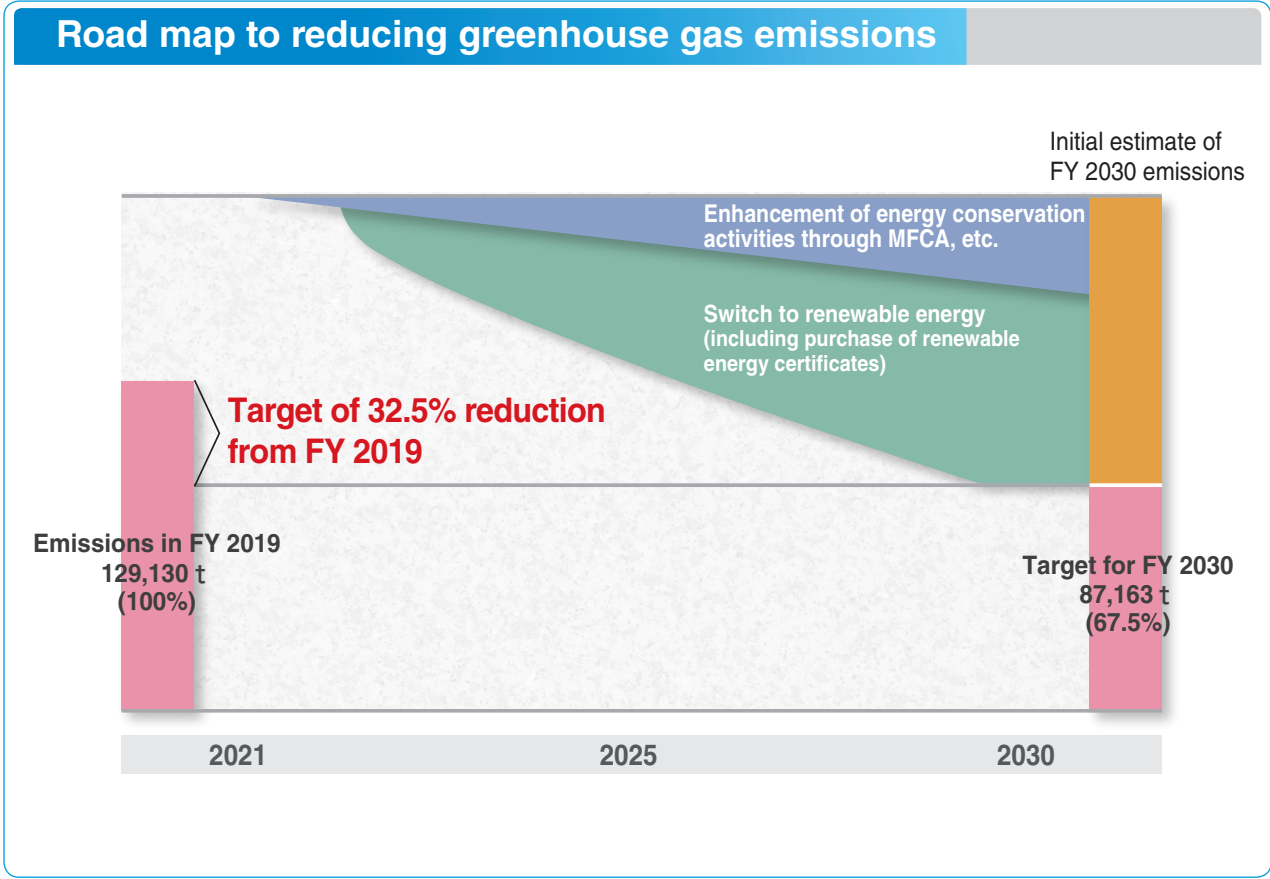
While the current tabulation reflects Nippon Kayaku alone, we aim to expand the scope to include domestic and overseas Group companies. Going forward, we plan to systematically implement initiatives to reduce CO₂ emissions across the entire supply chain by continued data collection and management based on the "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain" issued by the Ministry of the Environment.

- Scope 1** Direct emission of CO₂ from emission source that the business owns or manages (emissions from fuel use, manufacturing process, etc.)
- Scope 2** Indirect emission from the use of electricity, heat, and steam supplied by another company (use of purchased electricity, etc.)
- Scope 3** Indirect emissions outside of scope 2 (procurement of raw materials, employees' commute, business trips, waste treatment consignment, use of products, disposal, etc.)

CO₂ emissions data of the entire supply chain (scope 3)

Category		Emissions (thousand tons-CO ₂ /year)	
		FY 2017	FY 2018
1	Purchased goods	57.0	53.7
2	Capital goods	18.3	22.6
3	Fuels and energy related activities not included in scope 1 and 2	7.9	7.9
4	Transportation and distribution (upstream)	8.6	8.3
5	Waste generated in operations	16.0	16.5
6	Business travel	0.3	0.4
7	Employee commuting	0.7	0.8
8	Leased assets (upstream)	0.8	0.7
9	Transportation and distribution (downstream)	0.7	0.7
10/11	Processing/use of sold products	Excluded	Excluded
12	End-of-life treatment of sold products	8.9	8.4
13	Leased asset (downstream)	0.4	0.4
Scope 3 total		119.7	120.4
Scope 1		30.8	29.2
Scope 2		43.1	42.9
Total of Scopes 1+2+3		193.5	192.5

*Tabulation results for FY 2019 are scheduled to be announced in June 2021.



The Nippon Kayaku Group aims to reduce GHG emissions through strengthening energy-saving activities by adding the MFCA approach to conventional measures and expanding the efforts company-wide. In addition, we will promote the switch to renewable energy including purchasing green energy certificates, in hopes of reaching the mid-term environmental target for FY 2030 as a whole.

Going forward, we will continue to verify the effectiveness of costs and effects of environmental investments, work to improve resilience while recognizing climate change related risks, and propose measures aimed at linkages with business opportunities.



You can learn more about the Nippon Kayaku Group's environmental initiatives at our website.
<https://www.nipponkayaku.co.jp/english/csr/environment/environmental-stress.html>

Topic

Ongoing initiative for material flow cost accounting (MFCA) and energy visualization

We have continued to apply the method of material flow cost accounting (MFCA) in our product production processes in order to further reduce GHG emissions. MFCA is used to visualize raw material and material loss throughout the production cycle in terms of volume and cost. The reduction in material loss that has been identified through the application of MFCA not only directly ties back to cost reductions, but also helps reduce environmental impacts through the more efficient use of resources.

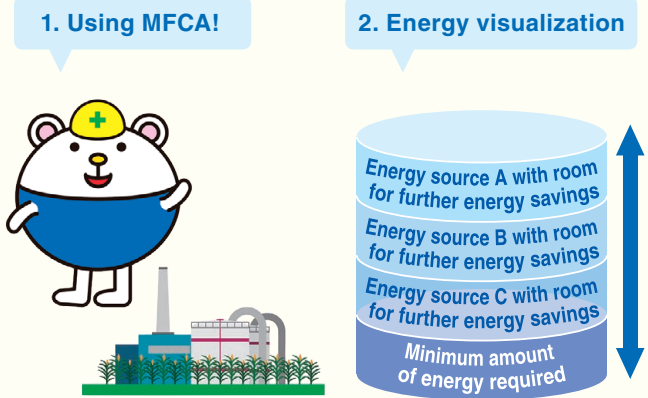
In FY 2019, the scope of application was expanded to include other products under consideration at Fukuyama Plant, following its success in the previous year, as well as to

the products of Asa Plant. The capability to clearly define the cost of unknown losses has made it possible to identify cost reduction targets, and has greatly contributed to reducing energy consumption prior to the start of fully fledged production. Looking ahead, we will look to broaden the initiative to achieve a company-wide roll out.

We are also tackling the issue of energy visualization to better ascertain whether production plants are utilizing energy in an effective manner. While energy consumption at plants typically increases as production volume increases, there would still be a presumed set level of energy consumption, even if production volume were to be hypothetically reduced

to zero. This fixed energy should ideally be reduced as much as possible, and analyzing a breakdown of this energy consumption helps us find areas where energy could be further reduced which could otherwise easily go overlooked. This energy visualization at the Fukuyama Plant has led to several actual energy saving activities, which serve as a good practice for other plants and Group companies to follow.

We strive to reduce GHG emissions from the Nippon Kayaku Group as a whole through expanding resource and energy saving activities in the production processes of each business and continued implementation of MFCA and energy visualization.



CSR Key Themes (Materiality)

Occupational Health and Safety in the Workplace

Occupational Health and Safety Management

The Nippon Kayaku Group has explicitly outlined initiatives for the elimination of workplace accidents and the promotion of health and productivity management within the Responsible Care Policy of the Nippon Kayaku Group. Moreover, The Declaration on Environment, Health and Safety, and Quality (p. 36) contains information pertaining to the health and safety of employees.

In daily health and safety activities, we are striving to prevent accidents and disasters by thoroughly identifying

potential risks through actions of pointing and calling, KYT (risk prediction training), and risk prediction (KY) prior to start of work. Also, we are working to enhance safety awareness at overseas Group companies through training including KYT and near miss accidents.

We are conducting safety inspection and risk assessment in the development and design stages for new products and new equipment.

Safety performance for the fiscal year ended March 31, 2020

Item	Individual performance of Nippon Kayaku	Group companies
Serious accidents/casualties	0	0
Serious environmental accidents	0	0
Accidents requiring time off work	2	0
Accidents not requiring time off work	3	1
Injury-free accidents	0	0
Vehicle accidents caused at work* ¹ or when commuting	Serious accidents	0
	Personal injury	3
	Property damage	14
	Self-inflicted injury	17

*¹ Vehicle accidents caused at work or when commuting: Only applies to MRs in the Pharmaceuticals Group that use vehicles for sales activities



Nippon Kayaku Group Responsible Care Policy

<https://www.nipponkayaku.co.jp/english/csr/environment/index.html>

Certification in the 2020 Health & Productivity Management Organization Recognition Program

This year Nippon Kayaku was again recognized as an outstanding enterprise engaging in efforts to advance health and productivity management under the 2020 Certified Health & Productivity Management Organization Recognition Program's large enterprise category (White 500) following similar recognition in 2019. The honor is conferred jointly by the Ministry of Economy, Trade and Industry (METI) and the Nippon Kenko Kaigi. The certification in 2020 was awarded for our efforts in identifying tasks for improving health, as well as initiatives to enhance health examination results by holding interviews with industrial doctors for those with a test finding, and hosting of health awareness event against secondhand smoke and health improvement for all employees.

We believe that increasing the health of employees will contribute to enhancing corporate value and stakeholder satisfaction, and we are committed to implementing continuous initiatives to promote health management and certification.



Initiatives for Occupational Health and Safety (Promoting Health Management)

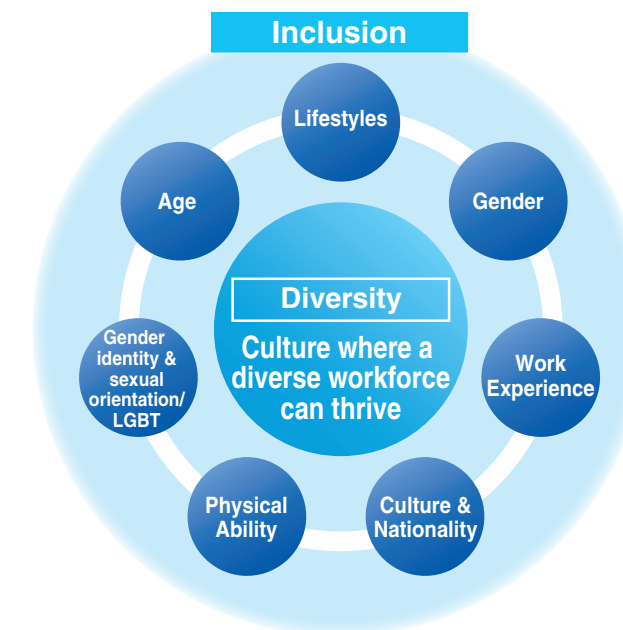
<https://www.nipponkayaku.co.jp/csr/social/employee.html>

CSR Key Themes (Materiality)

Maintaining and Expanding Employment and Development of Human Resources

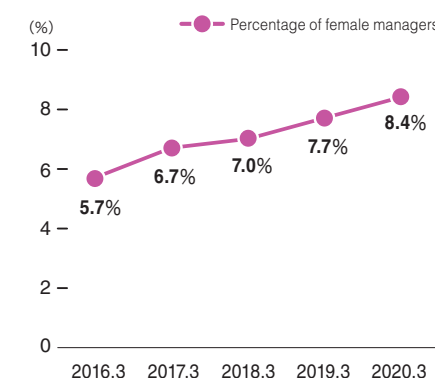
Promotion of Diversity and Inclusion

The Nippon Kayaku Group promotes diversity and inclusion to create a workplace where employees can thrive by contributing their qualities and skills to the fullest extent and can feel rewarded and fulfilled. We aim to become a "company trusted by society" and "good and strong company" through developing a workplace environment and corporate culture that embraces the diverse characteristics and values in each individual in the work force, and enables them to maximize their traits and skills.



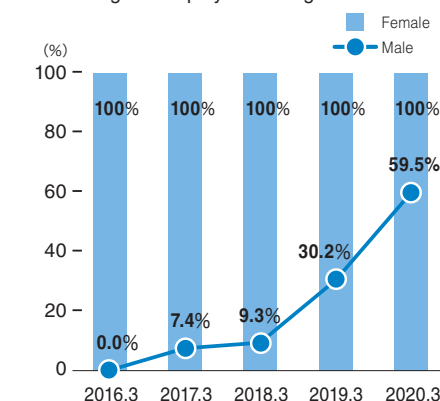
Encouraging Diversity

Percentage of female managers



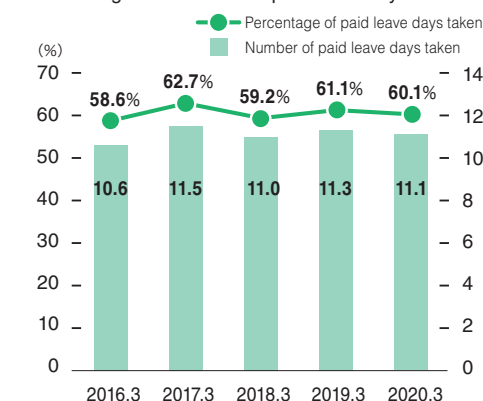
Gender Equality

Percentage of employees taking childcare leave



Work-life Balance

Percentage and number of paid leave days taken



	Fiscal year ended March 31, 2019			Fiscal year ended March 31, 2020		
	Total	Male	Female	Total	Male	Female
Employment rate of persons with disabilities (yearly average) (%)	1.82			1.97		
Retired employee reemployment rate (%)	62.74	58.69(*)	100.00	70.58	68.75(*)	100.00
Employee turnover rate (%)	2.18	2.14	2.42	1.75	1.50	3.09
Average continuous years of service (years)	14.65	14.45	15.68	15.20	14.19	16.21
Number of new graduate hires (employees)	64	60	4	57	49	8

* The re-employment rate for retirees desiring re-employment has reached 100%



Initiatives for Employees

<https://www.nipponkayaku.co.jp/english/csr/social/employee.html>

CSR Key Themes (Materiality)

Quality and Customer Safety

Based on the materiality “Quality and customer safety”, the Nippon Kayaku Group strives to improve its production technologies and know-how by promoting quality-oriented management, and continually improve quality management systems and enhance on-site capabilities to establish a more robust system for quality management and quality assurance.

Functional Chemicals Business

Introduction of Lab Information Management System (LIMS)

The level of quality management and quality assurance demanded by customers regarding functional chemicals continues to rise. At the Functional Chemicals Group, the Quality Assurance Division at company headquarters is responsible for supervising quality assurance both inside and outside the Company, and manages and supervises quality management processes and results at each plant.

As part of efforts toward enhancing the quality management and quality assurance system, the Laboratories Information Management System (LIMS) will be adopted at plants involved in product manufacturing for the Functional Chemicals Business. With the aim of establishing data integrity through central management of quality control workflows, we have launched the system at Asa Plant (Sanyo Onoda City, Yamaguchi Prefecture) in order to respond to the recent increase in demand from customers for quality control and quality assurance. We will proceed to launch the system at Fukuyama Plant (Fukuyama City, Hiroshima Prefecture) and Tokyo Plant (Adachi-ku, Tokyo).

Going forward, we will continue to implement improvements in our quality management system in both soft and hard aspects in order to deliver product specifications and quality satisfactory to customers.



Quality Management Building responsible for quality assurance and management functions at the Fukuyama Plant

Pharmaceuticals Business

Medical Information Service Center and Securing Customer Trust

At the Medical Information Service Center, we operate various toll-free phone services for the Nippon Kayaku Group's pharmaceuticals and medical devices, including anti-cancer drugs, autoimmune disease therapeutics and embolization materials, to answer inquiries by patients and medical professionals. The center's personnel take care to respond to each and every inquiry with precise and polite responses, while we also conduct a questionnaire on whether our responses are meeting customer expectations.

In addition, while we endeavor to provide patients with useful information by coordinating with medical representatives who visit medical facilities, we send reports and suggestions to relevant in-house departments on customer requests and opinions. To better medical care, we follow our slogan to “provide proper usage information and improve customer satisfaction in all situations.”



Medical Information Service Center

Safety Systems Business

Enhancing the Global Quality Assurance System

The safety systems business, which provides automobile safety components from five global bases in Japan, Europe, China, Mexico, and Malaysia, must ensure that the products manufactured and shipped from each base maintain the same level of quality.

The Himeji Plant plays a central role as the mother plant in promoting “robust design*” that is variation-resistant given the unique requirements of each base with different conditions such as culture, language, and technology, to ensure we provide products of the same global quality. At the same time, managers and line workers are selected from the staff of each global base to undertake long-term training at the mother plant to acquire knowledge and skills and then return to each base to pass on their newfound knowledge and skills to local employees.

We are promoting the improvement of the global quality assurance system of the Safety Systems Business as a whole by enhancing the skills of each employee.

*Robust Design: A design method that minimizes changes in the performance and quality of products due to external factors and errors, thereby reducing their impact.



Training session in progress at the Himeji Plant



Initiatives with Our Customers
<https://www.nipponkayaku.co.jp/english/csr/social/>

CSR Key Themes (Materiality)

Business Partner Assessment

The Nippon Kayaku Group places a focus on “Business partner assessment” in establishing Basic Procurement Principles and Basic Procurement Policies, working alongside business partners in implementing CSR procurement activities.

Basic Procurement Principles

In order to realize the **KAYAKU spirit**, Nippon Kayaku Group will pursue mutual and sustainable growth with suppliers based on the understanding they are important business partners who help us produce products of the best quality. Based on our basic procurement policy, Nippon Kayaku and our affiliates conduct our transactions with fair, just and sincere attitude following with the laws and the social norms all the time.

Basic Procurement Policies

At Nippon Kayaku Group, all procurement operations will be carried out in accordance with the Basic Procurement Policies as set out below.

Compliance with Relevant Laws, Social Norms, and the Nippon Kayaku Group Charter of Conduct.

1. We will comply with all relevant laws and regulations when conducting procurement operations.
2. We will judge the propriety of procurement activities based on Nippon Kayaku Group Charter of Conduct and the Nippon Kayaku Group Code of Conduct and Group Action Guidelines.

Open-door Policy, Fairness, Impartiality, and Transparency in Business Transactions

3. We will conduct procurement-related business transactions in a fair, impartial, and transparent manner, and follow an open-door policy with respect to businesses at home and abroad.
4. We will build partnerships with suppliers based on mutual understanding and trust, pursue mutual sustainable growth.
5. In order to ensure transparency in all our procurement activities, we will undertake due procedures based on written documentation or electronic purchasing systems in accordance with the procurement operations standards.

Protection of Information

6. We will protect supplier-related information obtained in the course of our operations, and strive to prevent any information leakage.

Concern for the Environment

7. We will promote the procurement of eco-friendly goods and materials.

Basic Criteria for Selecting Suppliers

8. When selecting goods and materials, we will give due consideration to economic factors such as quality, price, and date of delivery. We will also consider other factors such as the supplier's operating foundations technological competitiveness, and stability of supply.
9. When selecting suppliers, we will give due consideration to their commitment to corporate social responsibility (CSR), including their observance or relevant laws and regulations, respect for human rights, concern for the working environment, disaster preparedness and safety measures, efforts toward environmental conservation, and other efforts designed to fulfill their CSR.

BCP Initiatives

10. In addition to the above, we will give due consideration to whether or not the potential supplier has a risk management system such as BCP (Business Continuity Plan)

Promotion of CSR Procurement

In addition to communication with suppliers using our CSR Procurement Guidelines, which contains details on the Nippon Kayaku Group Charter of Conducts, Basic Procurement Principles and Basic Procurement Policies, we also conducted a CSR survey of our suppliers (approximately 900 companies) in the fiscal year ended March 2020. We confirmed there was no negative environmental impact from suppliers who responded

(318 companies) and confirmed their environmental conservation initiatives. In addition, in terms of social initiatives, we confirmed there was no anti-social behaviors, etc., such as harassment, discrimination, forced labor, inappropriate labor hours, and compensation. We will continue these activities going forward as part of risk management.

CSR Key Themes (Materiality)

Local Communities

Initiatives for Local Communities

The Nippon Kayaku Group actively communicates with local communities in the pursuit of a form of prosperous co-existence as a Company firmly rooted in its local community for the mutual development between the Company and local communities both inside and outside Japan where there is a Company presence.

CSR Educational Initiatives

We run CSR educational initiatives to teach the children who will grow up to run our world about what makes chemistry interesting.

School visit : We've developed a unique educational program based on elementary school curriculum guidelines that we run at elementary schools near our factories.

Site Visits : We invite elementary school students near our business locations to take a basic tour and join interactive lessons.

Events : We join community festivals and summer vacation events for children, where we use the unique traits of our business locations to organize classes and lectures to show what makes chemistry interesting.

Activities to Deepen Interaction with the Local Community

At Group companies and business sites both inside and outside Japan we strive to provide an understanding of our Group's business activities among everyone in the local community by opening up our facilities and plant festivals to the public, as well as organizing cleanup activities and social gatherings.



Event: Participated in the Summer Children's Science Experiment Show hosted by Dream, Chemistry-21 Committee as a company holding an interactive class (Tokyo R&D Administration Office/Head office)



A hands-on event for elementary school students held at the Kamisu Festa "Consumer Lifestyle Exhibition" sponsored by Kamisu City, Ibaraki Prefecture.



Donation drive for orphanages by the proposal of staff at Kayaku Safety Systems in Europe



Initiatives for Local Communities
<https://www.nipponkayaku.co.jp/english/csr/social/society.html>

CSR Key Themes (Materiality)

Corporate Governance

At the Nippon Kayaku Group, we believe that our management functions more effectively owing to the implementation of a corporate governance system that consists of consensus-based decision-making by the Board of Directors and adoption of the Audit & Supervisory Board system. The Nippon Kayaku Group recognizes that disclosing information to our shareholders and investors in a timely and fair manner, and ensuring the transparency of our management by reinforcing our check functions, are issues of great importance to realize the Kayaku spirit, our corporate vision. Going forward, we will continue to expand and strengthen our corporate governance.

Initiatives since Fiscal Year Ended March 31, 2020

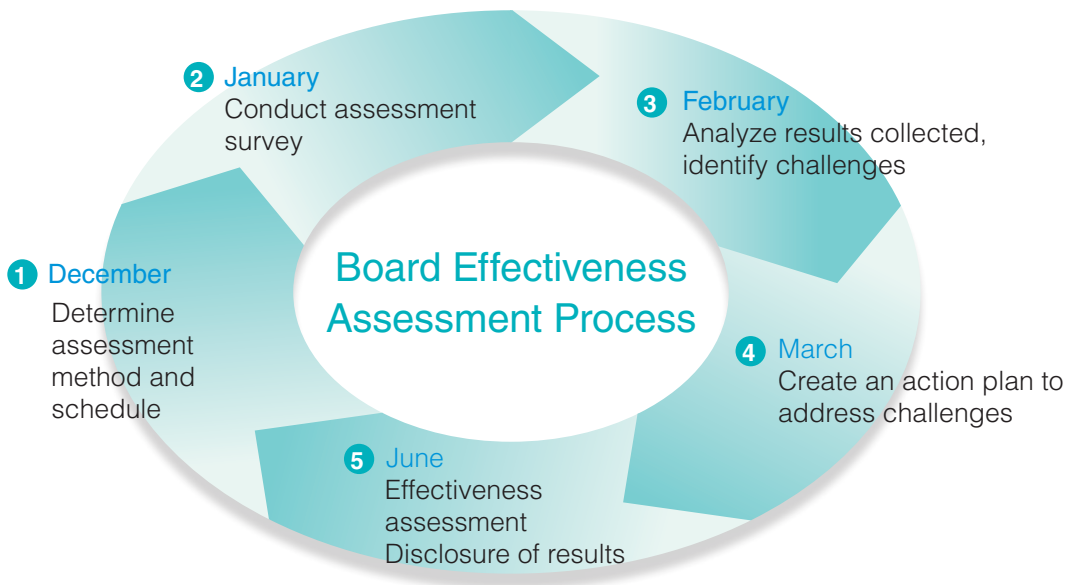
In the fiscal year ended March 31, 2020, we assessed the effectiveness of the Board of Directors by formulating an internal survey as part of activities to expand and strengthen corporate governance. In addition, we developed a basic policy on corporate governance based on the survey results and established the Nomination and Remuneration Advisory Committee.

Assessment on the effectiveness of the Board of Directors

Since the fiscal year ended March 31, 2018, the Nippon Kayaku Group has conducted surveys to assess the effectiveness of the Board of Directors and implemented improvements for the operations and initiatives of the Board of Directors' secretariat. Additionally, in the effectiveness assessment survey conducted in the fiscal year ended March 31, 2020 covering all directors and Audit & Supervisory Board members, we asked the respondents to self-evaluate on the composition, function, and management of the Board of Directors, as well as the provision of information to outside directors and outside Audit & Supervisory Board members, and asked for their frank feedback on the Board of Directors. The results were analyzed and evaluated by the Board of Directors.

As a result, the effects of various improvements so far have been seen, and it has been confirmed that the Board of Directors is effectively fulfilling its roles and responsibilities. On the other hand, we have discussed items that are believed to need improvement, and formulated a basic policy on corporate governance, while establishing the Nomination and Remuneration Advisory Committee.

Moreover, we recognize the need to implement further measures to enhance internal control and risk management as well as ensure diversity on the Board of Directors, and included the task in the Action Plan for the fiscal year ending March 31, 2021. Going forward, we will continue our efforts to further increase the effectiveness of our Board of Directors.



Pages 5 and 6 of our Corporate Governance Report (Analysis and Assessment of the Effectiveness of the Board of Directors)
https://www.nipponkayaku.co.jp/media/pdf/english/ir/esg/files/governance_report.pdf

Formulation of the Basic Policy on Corporate Governance

The Nippon Kayaku Group announced its Basic Policy on Corporate Governance in June 2020. The Policy aims to achieve continued growth and enhance medium- to long-term corporate value based on our corporate vision, the KAYAKU spirit. It consists of seven sections following the articles of all principles in the Corporate Governance Code.

While we have already announced our basic consideration on corporate governance in the past, on this occasion, we have clearly defined the terms as a

basic policy announced to all of our stakeholders.

By establishing this basic policy, we believe that we are able to respond to the disclosure of basic ideas and policies regarding corporate governance and proactive information dissemination required by the Corporate Governance Code.

Going forward, we will strive to instill the policy both internally and externally, and make revisions as appropriate to clarify standards and processes for appointment and dismissal of directors.

Basic Policy on Corporate Governance

Section 1 General Rules

Section 2 Relations to Shareholders

Section 3 Appropriate Collaboration With Stakeholders Other Than Shareholders

Section 4 Appropriate Information Disclosure and Transparency Assurance

Section 5 Responsibilities of the Board of Directors, etc.

Section 6 Dialogue With Shareholders

Section 7 Other

Click URL

Basic Policy on Corporate Governance
<https://www.nipponkayaku.co.jp/english/ir/esg/governance.html>

Establishment of the Nomination and Remuneration Advisory Committee



We established the Nomination and Remuneration Advisory Committee in June 2020 to further strengthen the company's corporate governance and enhance the fairness, transparency, and objectivity in processes concerning the nomination and remuneration of directors.

Members of this committee are chosen from the Board of Directors, with three or more members, with over half consisting of independent external directors. The committee will respond to inquiries from the Board of Directors concerning the appointment and dismissal

of directors, Audit & Supervisory Board members, and representative directors, as well as their remuneration, in addition to any other item deemed necessary by the Board of Directors, through deliberation.

Traditionally, matters concerning the appointment and remuneration of directors have been settled through comprehensive deliberation by the Board of Directors. We believe the establishment of this committee will further ensure fairness, transparency, and objectivity, which forms a structure that further meets the requirement of the corporate governance code.

Corporate Governance (Nomination and Advisory Committee, Japanese Release)
<https://ssl4.eir-parts.net/doc/4272/tdnet/1836356/00.pdf>

CSR Key Themes (Materiality)

Compliance

The Nippon Kayaku Group places a focus on compliance, broadly viewing this as meeting the requirements expected of the Group from society and social norms, in addition to complying with the laws and regulations in place. We continue to strive to disseminate and foster an awareness of compliance across the entire Group, including overseas Group companies.

Revision of Pamphlet on the KAYAKU spirit and Dissemination across the Group

In order to disseminate the corporate vision for the Nippon Kayaku Group, the **KAYAKU spirit**, defined as “Continuously providing society with the best products through ceaseless progress and the combined forces of our consciences,” among all employees of the Nippon Kayaku Group in global locations, we have prepared a pamphlet outlining the corporate vision and conduct guidelines for the Group, which is translated into the local language of the business site and distributed throughout all Group locations. In FY2019, we revised the pamphlet with more concise descriptions.

In addition, we have created various opportunities to disseminate the **KAYAKU spirit** among employees globally, such as through management strategy meetings, sharing the platform of mid-term business plans, group training sessions, and e-learning tools. Nippon Kayaku aims to achieve a unified form of group management founded on sharing its corporate vision among employees all over the world in various working environments, including manufacturing, development, sales and management.



Revisions to the Nippon Kayaku Group Charter of Conduct and Code of Conduct



The Nippon Kayaku Group established the Nippon Kayaku Group Charter of Conduct and Code of Conduct in 2000 as a priority matter for compliance efforts in business activities. Later, it was revised in 2011 based on ISO 26000 (guidance on social responsibility). We decided to make further revisions in 2020 so that we can make voluntary efforts toward achieving a sustainable society.



Nippon Kayaku Group Charter of Conduct and Code of Conduct
<https://www.nipponkayaku.co.jp/english/company/vision/conduct.html>

Disseminating and Fostering an Awareness for Compliance

The Nippon Kayaku Group is undertaking specific activities to disseminate and foster an awareness of compliance, including education and training as well as formulating compliance action plans for each workplace.

In addition to utilizing the compliance survey held every October, which is set as Compliance Promotion Month, and conducting analysis from an external perspective, compliance training in Japan is conducted, including study sessions and case study training in each workplace as part of regular meetings and other such gatherings with a specific theme each year.

We provide training opportunities and programs to all employees via e-learning tools, group training sessions and DVD-viewing training sessions.



Compliance
<https://www.nipponkayaku.co.jp/english/csr/philosophy/compliance.html>

Business Risks

The Nippon Kayaku Group works to minimize risk by preventing the various kinds of risk that accompany the operation of our business from arising, dispersing risk, and other means. Risks which could potentially have a significant impact on the business performance and financial status of the Group are listed as “business risks” in the Annual Securities Report.

The content of the Annual Securities Report submitted in June 2020 was completely revamped mainly by the Internal Control Management Division. In addition to risks directly related to business, we identified management risks from all organizations spanning the Strategic Corporate Planning Group, Research and Development Group, Administration Group, Financial Group, and Technical Operation Group. After assigning a priority ranking following the level of importance of each risk, we compiled each risk and its countermeasures.

As a chemical manufacturer, “5. Product quality” and “6. Accident occurrence” are risks that we must be aware of constantly. “7. Research and development” and “8. Intellectual properties” are also risks that are deeply related to our sustainable growth. “9. Raw materials procurement” is an important risk for management because it relates to the elevated prices of raw materials and procurement difficulties in China that occurred in the fiscal year ended March 31, 2020. Also, “12. Information leakages” and “13. Suspension of computer systems” related to the main operations of the Financial Group are recognized as risks with a major impact on the entire Nippon Kayaku Group.

Business Risks Appearing in the Annual Securities Report Submitted in June 2020

*For details of each risk, see pages 14 to 18 of the Annual Securities Report.

Number			Risk category			Number			Risk category		
High importance ↑ Overall business risks	Risks of each business	1	Functional Chemicals	High importance ↑ Other risks		9		Other risks	9		Raw materials procurement
		2	Pharmaceuticals			10			10		Changes in regulations/policies
		3	Safety Systems			11			11		Foreign exchange volatility
		4	Agrochemicals			12			12		Information leakage
		5	Product quality			13			13		Suspension of computer systems
		6	Accident occurrence			14			14		Infectious diseases
		7	Research and development			15			15		Climate change
		8	Intellectual properties			16			16		Natural disasters



Annual Securities Report (Japanese)
https://ssl4.eir-parts.net/doc/4272/tyuho_pdf/S100IU7H/00.pdf

Global Risk Management Activities

At the Nippon Kayaku Group, the Internal Control Management Division leads global risk management activities, having defined the development of the BCP framework of overseas Group companies as well as training and drills as important themes. Until now, we have conducted initial response drills at overseas Group companies based on the scenarios of reporting a disaster and safety confirmation of employees. As part of global risk management activities, we have completed the compilation of BCP manuals for four Group companies in China. We select one or more locations from among those Group companies with a manual in place to conduct BCP drills locally in the presence of staff of the Internal Control Management Division.

In October 2019, we conducted a drill at Kayaku Chemical (Wuxi) Co., Ltd. based on the scenario of a fire. This drill included initial response, restoration, and even revisions to the production plan. Based on the issues brought to light through the drill, we established an improvement plan including making changes to the BCP manual and reviewing approaches to

emergency response organizations. This plan is now being implemented using the PDCA cycle.

Looking ahead, the Safety Systems Business, which demands an even higher level of safe operations, will take the lead in expanding these activities to Group companies in regions outside of China, while working closely with each business segment.



Business continuity plan (BCP) training drill conducted at Kayaku Chemical (Wuxi) Co., Ltd. (KCW)



Risk Management
<https://www.nipponkayaku.co.jp/english/csr/riskmanagement.html>