

# Innovation Model

The Nitto-style Innovation Model allows us to repeatedly verify hypotheses until we are convinced of our path to victory, enabling us to develop ideas into profitable businesses seamlessly. By guiding us to create a number of PlanetFlags/HumanFlags products as we pursue the Niche Top Strategy, it enables the Nitto Group to achieve sustainable growth. In each phase of this innovation process, we capitalize on our unique assets to take original approaches to promote innovation.



## Challenge and Diversity

In this phase, no new project themes are embarked on unless they look promising to be future PlanetFlags/HumanFlags products. In the three focus domains where the Nitto Group's strengths can be fully leveraged, employees take on challenges to generate ideas, which are subject to prompt hypothesis testing. Ones that are judged to offer promise will move on to the next phase to start a project.

### [Programs that Underpin Innovation]

- **Technology Kuruma-za:** Executives from the corporate technology division gather to discuss Nitto's technology strategy.
- **R&D Innovation Networking Conference (RINC):** R&D themes are widely shared from top management to the field in the early stages to accelerate theme promotion.
- **Nitto Innovation Challenge (NIC):** Invites all employees to offer ideas for new businesses. Outstanding ideas will receive support to form a project.

### Essential for the global environment and human society



### Essential for our customers and industries

#### Three Focus Domains



Power & Mobility



Digital Interface



Human Life

### Relevant Capital



Strong customer base



Diverse employees



Eight core technologies

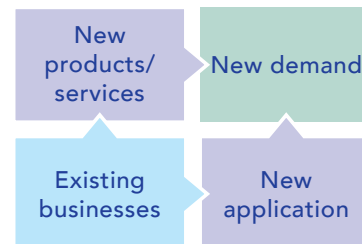
## Perfection + Speed

By integrating the eight core technologies and a pool of knowledge into promising project themes, new businesses and technologies are developed through collaboration across R&D, Production, Sales, and Administration. In addition to promoting the utilization of intellectual property aimed at expanding earnings, perfection and speed are enhanced through convergence approaches, including strategic alliances, rather than in-house resources alone.

- Internal convergence through Group-wide projects, etc.
- "Management funds" that enable timely resource allocation
- Strategic alliances, including M&As and capital injection in startup businesses

### Sanshin Activities

Nitto's unique marketing approach that creates new demand through the development of innovative applications and products



Strong customer base



Diverse employees



Eight core technologies



Healthy financial base

## Ability to Get Things Done

Through pursuing differentiation unique to Nitto, which is made possible by the Niche Top Strategy, we deliver "essential" products and services that meet the diverse preferences of our customers. It is this ability to get things done that enables Nitto to earn the trust and expectations of our valued customers. By commending employees for their efforts and achievements in the fields, we encourage them to take on challenges, which in turn will produce a chain of new ideas and project themes.

- **Global Sanshin Competition:** The most outstanding cases of *Sanshin* Activities are awarded. These programs also provide sales personnel with opportunities to learn from each other's approaches.
- **Group Activity Toward Excellence (GATE):** Continual improvement activities by small groups designed to solve problems with bottom-up approaches

### Niche Top Strategy

- In changing and growing markets identified by Nitto,
- we target the Niche fields within those markets,
- born from the co-creation between stakeholders and the integration of knowledge and technologies unique to Nitto,
- and by continuously creating essential products, functions and business models,
- Nitto's unique differentiation strategy aims for the No.1 market share.



Strong customer base



Healthy financial base









Safe and quality manufacturing



Sustainable use of resources

# Capital That We Leverage

To create new value, it is vital that we inject all sorts of capital. The Nitto Group is fortunate enough to have six kinds of capital that it leverages. Cultivated over a long period, they have consistently evolved to become robust. This unique set of Nitto's capital has underpinned the Group's innovation, differentiating positively from our industry peers.

	Detailed account (importance) of capital	Examples of initiatives
 <p><b>Strong customer base</b></p>	<p>As its business has changed over time, the Nitto Group has been fortunate enough to forge a bond of trust with many different customers. We cherish this hard-earned future-financial value as "customer relations assets." This close bond expanded beyond direct customers, i.e., business partners, to encompass end customers and suppliers, resulting in customer relations assets that extend throughout the supply chain. By fostering close relationships with customers and integrating sales, marketing, and technology teams to advance <i>Sanshin</i> Activities and the Niche Top Strategy, we are able to drive innovations.</p>	<ul style="list-style-type: none"> <li>• Global <i>Sanshin</i> Competition</li> <li>• Niche Top Strategy</li> <li>• NIC (New business creation event)</li> <li>• Signing strategic alliances (M&amp;As/capital contributions, partnerships)</li> </ul>
 <p><b>Diverse employees</b></p>	<p>Considering human resources as our most valuable assets, the Nitto Group seeks to recruit and develop a diverse workforce in accordance with the Basic Policy on Human Resource Management. We provide an environment where employees enjoy taking on challenges and an organizational framework that enables them to deliver their full potential, thus cultivating Nitto Persons worldwide who practice The Nitto Way and providing them with opportunities to excel. The value created by our human resources differentiates us from competitors and leads to sustainable growth.</p>	<ul style="list-style-type: none"> <li>• Engagement surveys</li> <li>• Career interviews and "Career Terrace"</li> <li>• Nitto Global Business Academy (NGBA)</li> <li>• FLOWER Program</li> <li>• Programs to bolster recruitment capability and increase the retention rate</li> </ul>
 <p><b>Eight core technologies</b></p>	<p>The Nitto Group has made constant efforts to combine and advance its founding technologies to develop diverse core technologies, which have since been applied to a broad range of products and services. In the three focus domains where these technologies and strengths are most impactful, and at the intersections of these areas, we hybridize our core and peripheral technologies to develop "essential" products and technologies, and maximize profits through intellectual property strategies.</p>	<ul style="list-style-type: none"> <li>• PlanetFlags/HumanFlags recognition scheme</li> <li>• NIC (New business creation event)</li> <li>• Signing strategic alliances (M&amp;As / capital contribution, partnership)</li> </ul>
 <p><b>Healthy financial base</b></p>	<p>The Nitto Group ensures sound financial conditions by balancing a solid equity base and adequate liquid capital on hand. This strategy not only secures a financial base that is protected from external influences and risk-resistant but also enables us to swiftly seize growth opportunities and access necessary funds, thereby catalyzing continuous growth.</p>	<ul style="list-style-type: none"> <li>• Promotion of ROIC-focused management</li> <li>• Optimal cash allocation</li> <li>• Shareholder returns (stable dividends, flexible share buybacks)</li> </ul>
 <p><b>Safe and quality manufacturing</b></p>	<p>"Placing safety before everything else," the Nitto Group remains committed to a safety culture. By ensuring the security and safety of every stakeholder involved in the process—from raw materials procurement to product development, production, and use—both inside and outside the company, we aim to increase their satisfaction through the pursuit of top-notch manufacturing quality. Furthermore, we ensure that human rights are respected throughout our supply chains when conducting business activities, thus earning trust from our stakeholders while assuring business continuity.</p>	<ul style="list-style-type: none"> <li>• Commitment to a safety culture – Placing safety before everything else</li> <li>• Small group activity, GATE</li> <li>• Safety Promotion Conference</li> <li>• Supply Chain Committee</li> <li>• Human rights due diligence</li> </ul>
 <p><b>Sustainable use of resources</b></p>	<p>Fully aware of the environmental impact of energy and resource consumption, as well as CO<sub>2</sub> emissions and waste generated during manufacturing, the Nitto Group is working to reduce these impacts through coordinated efforts among business execution departments, special function departments, and regional headquarters. By promoting environmental measures for decarbonization, 3Rs (Reduce, Reuse, Recycle), and pollution prevention while updating its businesses and technologies, the Nitto Group strives to realize a sustainable society while achieving business growth along the way.</p>	<ul style="list-style-type: none"> <li>• Declaration of Nitto Group Carbon Neutral 2050, support for SBT, joining RE100</li> <li>• Global Green Committee</li> <li>• Promotion of Negative Emission Factory Initiative</li> </ul>

# Progress in the Mid-term Management Plan

## Nitto for Everyone 2025

### Implementing Our Niche Top Strategy and ESG Strategy

In the mid-term management plan, Nitto for Everyone 2025, which kicked off in fiscal 2023, we are working on the four focus items below, under the slogan “Implementing our Niche Top Strategy and ESG Strategy.” To attain the 2030 Ideal State, i.e., an “essential top ESG company,” we are concentrating on the achievement of financial targets and future-financial targets as we carry out the mid-term management plan.

<p>Focus item <b>01</b></p> <p><b>Transformation of Business Portfolio to Contribute to the Environment and Humanity</b></p>	<p>Invest in “things that will grow” to generate economic value and social value in a bid to transform our business portfolio into one that contributes to the environment and humanity</p> <ul style="list-style-type: none"> <li>In response to the growing demand for the contract manufacturing business in the oligonucleotide therapeutics market, which is expected as commercialization progresses, we have made a total of over 30.0 billion yen in capital expenditures in the U.S. and Japan to open new plants with a manufacturing capacity large enough to fulfill commercial market demand.</li> <li>For the environment business, we are accelerating the development of negative emission technologies as part of the Negative Emission Factory Initiative, which aims to provide a total solution for reducing CO<sub>2</sub>.</li> </ul>
<p>Focus item <b>02</b></p> <p><b>Advancement of Innovation Model to Produce New Niche Top Products/Services</b></p>	<p>Advance the Nitto-style innovation model to create “essential Niche Top solutions”</p> <ul style="list-style-type: none"> <li>We are focusing our efforts on developing PlanetFlags/HumanFlags products including the 14 newly certified ones into Global Niche Top™/Area Niche Top™ products.</li> <li>In collaboration with Air Water Inc., we have commenced a new initiative to produce formic acid from CO<sub>2</sub> derived from livestock manure biomass.</li> <li>Through joint development with Crysalis Biosciences, we are promoting the use of bio-alternatives to acetonitrile, one of the key raw materials for oligonucleotide manufacturing.</li> </ul>
<p>Focus item <b>03</b></p> <p><b>Reformation of Organizational Culture to Accelerate Challenges</b></p>	<p>Promote human capital management to provide opportunities for taking on challenges to diverse talent and teams who bring about innovations</p> <ul style="list-style-type: none"> <li>The fiscal 2023 global engagement survey showed an increase in the engagement score to 81 (up by 7 points from the previous survey).</li> <li>In an attempt to increase expertise and diversity, we stepped up mid-career recruitment. In fiscal 2023, approximately the same number of college graduates and mid-career employees were placed on our payroll.</li> <li>We were selected for Human Capital Leaders 2023 and Human Capital Management Gold Quality in the Human Capital Survey 2023 and certified as a Best Workplace, the highest rank awarded by the D&amp;I Award 2023.</li> </ul>
<p>Focus item <b>04</b></p> <p><b>Transformation of Management Infrastructure to Anticipate Change</b></p>	<p>Build a resilient management infrastructure immune to external influences, placing safety before everything else</p> <ul style="list-style-type: none"> <li>Under the lead of the Supply Chain Committee, we addressed geopolitical risks and regulatory risks associated with chemical substances and drove forward the sustainable materials procurement ratio (future-financial target).</li> <li>We have made it clear what we will do to realize management conscious of capital cost and stock prices. Based on the concept of improving PBR from the perspective of both ROE and PER, we will focus on improving the net profit ratio and the asset turnover ratio in enhancing ROE.</li> </ul>

Financial Targets			
	2023 (results)	2025	2030
Operating profit	139.1 billion yen	170.0 billion yen	240.0 billion yen
Operating margin	15.2%	17%	-
ROE	10.9%	15%	20%

Future-financial Targets				
		2023 (results)	2025	2030
Product-related	Niche Top sales ratio The indicator measuring the expansion of essential Nitto products	44%	50%	At least 50%
	PlanetFlags & HumanFlags category sales ratio The indicator measuring the expansion of PlanetFlags/HumanFlags products	36% Flags certified products	40%	At least 50%
	New products ratio The indicator measuring the creation of new products	41%	At least 35%	At least 35%
Environment-related	Waste plastics recycling ratio The indicator measuring the progress toward circular economy initiatives	47%	50%	60%
	Sustainable materials procurement ratio The indicator measuring the procurement of materials considering the environment	16% In Japan (non-consolidated)	20%	30%
	CO <sub>2</sub> emissions The indicator measuring the progress toward carbon neutral initiatives	525 ktons/year	550 ktons/year	400 ktons/year
HR-related	Engagement scores The indicator measuring employees’ “sense of belonging,” “work environment,” and “physical and mental well-being”	81	78	85
	Challenge ratio The indicator measuring the percentage of employees who have taken on the challenge for value creation	37%	70%	85%
	Female leaders ratio The indicator measuring diversity initiatives	20%	24%	30%

# Progress in the Mid-term Management Plan

## Case 1 Transformation of Business Portfolio to Contribute to the Environment and Humanity

### PlanetFlags/HumanFlags Product Expansion

#### Background/Objectives

Proclaiming the policy of placing ESG at the core of our management, the Nitto Group identified its material issues for sustainability (materiality) in a bid to simultaneously solve social issues and create economic value. The PlanetFlags/HumanFlags recognition scheme is our attempt to put into practice measures for materiality.

Under the scheme, the Nitto Group's products are assessed according to our unique standards from the two perspectives of contributions to the environment and human life. Products that are recognized as

making particularly significant contributions are certified as either a PlanetFlags product or a HumanFlags product.

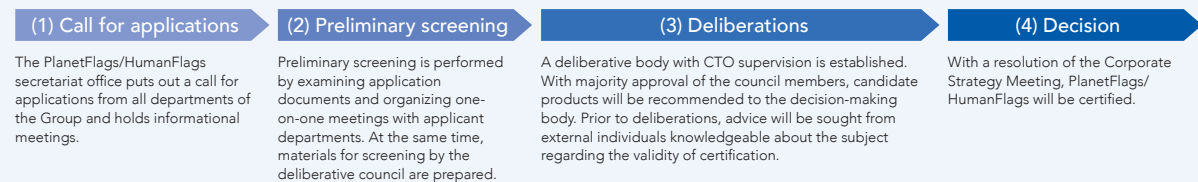
These recognition standards are also reflected in the selection of future projects in the development process. By allocating our R&D resources preferentially to products that are expected to receive recognition as PlanetFlags/HumanFlags, we will advance our efforts to simultaneously solve social issues and create economic value through business.

#### Recognition Standards



#### Screening and Recognition Process

PlanetFlags and HumanFlags products are certified once a year after the following internal recognition process:



#### Progress and Strategies

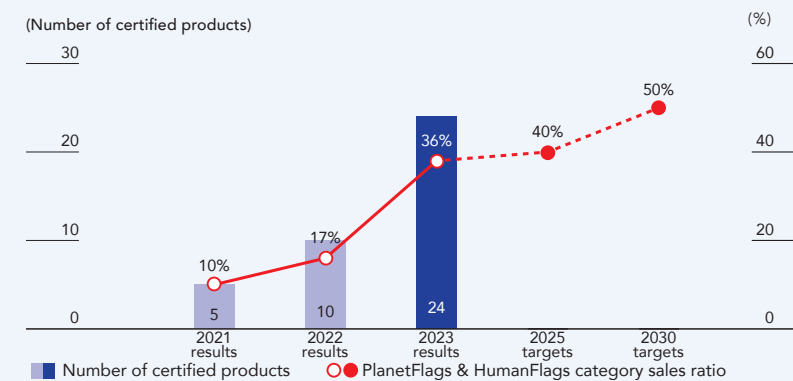
Through the creation of PlanetFlags/HumanFlags products, the Nitto Group aims to be a top ESG company that is essential for the global environment and human society. To visualize the progress in this endeavor, we set the PlanetFlags & HumanFlags category sales ratio as a KPI, shooting for 40% by fiscal 2025 and at least 50% by 2030. We will forge ahead with the achievement of these targets by exclusively focusing on selected project themes that are expected to be recognized as PlanetFlags/HumanFlags in the future, while evolving existing products into PlanetFlags/HumanFlags products. Furthermore, for those project themes that have been certified as PlanetFlags/HumanFlags, we will follow the Nitto-style Innovation Model (see P.15) to pursue both the solution of social issues and the creation of economic value by bringing those fledgling projects to the market by way of *Sanshin* Activities and the Niche Top Strategy, until they grow into Global Niche Top™/Area Niche Top™ products.

Some of the products certified as such in fiscal 2023 included polarizers with OCA (optically clear adhesive) (see P.29) to streamline customer processes, enhance energy efficiency, and significantly reduce

waste. Another key product was thermal conductivity insulation sheets for inverters (see P. 29), which are utilized in energy-efficient heat pump air conditioners to reduce thermal conductivity, thereby minimizing energy loss. The inclusion of these products contributed to a substantial increase in the PlanetFlags & HumanFlags category sales ratio, which rose to 36% (Flags certified products) from 17% in the previous fiscal year.

As concerns about climate change continue to grow, the development of PlanetFlags products that help address environmental issues is becoming increasingly urgent. For this to happen, we must seek collaboration with partners within and outside the company. Through the avenue of the Global Green Committee, which facilitates the decarbonization and resource recycling processes by way of technological changes, we will create new PlanetFlags products with the three axes of business divisions, regional headquarters, and functional departments cooperating organically. At the same time, we will work closely with business partners and suppliers to take diverse measures to accelerate the commercialization process, including gaining a stake in startups and venture businesses.

#### PlanetFlags & HumanFlags category sales ratio and number of certified products



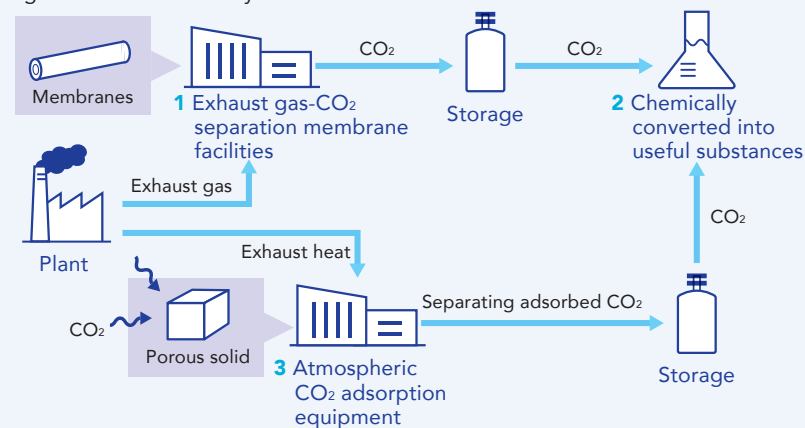
# Progress in the Mid-term Management Plan

## Case 2 Advancement of Innovation Model to Produce New Niche Top Products/Services

### Aiming to Realize the Negative Emission Factory Initiative

In addition to our ongoing campaigns to reduce energy consumption by shifting to solvent-free processes and energy conservation, the Nitto Group is accelerating development of negative emission technologies that capture CO<sub>2</sub> inevitably emitted during the manufacturing processes.

#### Negative Emission Factory Initiative



In May 2022, Nitto declared the Nitto Group Carbon Neutral 2050 out of the sincere wish to pass on this bountiful planet to future generations. In it, we make it clear that we will not only reduce our own CO<sub>2</sub> emissions but also help our customers reduce their CO<sub>2</sub> emissions through our products and solutions. As we work to establish technologies and businesses that allow us to achieve negative emissions, we are hoping to realize a sustainable environment and society.

One of the prime examples in this regard is our Negative Emission Factory Initiative, which leverages negative emission technologies for removing CO<sub>2</sub> from the atmosphere by capturing, absorbing, storing, and fixing atmospheric CO<sub>2</sub>. To ensure carbon neutrality by 2050, we will integrate the multifaceted technologies we have cultivated to target negative emissions by capturing CO<sub>2</sub> unavoidably released from our facilities.

#### Concrete Example 1

#### Development/Introduction of CO<sub>2</sub> Separation Technologies

Nitto is spurring the development of technologies utilizing polymer membranes to separate and capture CO<sub>2</sub> from factory exhaust gas. At the Shiga Plant, we have introduced a demonstration unit (capacity: 300 tons/year) that directly captures boiler exhaust gas (low-concentration CO<sub>2</sub>), which began trial operation in March 2023. Our plan is to put these technologies to practical application and expand capacity by the end of fiscal 2025.



The demonstration unit in service at the Shiga Plant

#### Concrete Example 2

#### Development of Technology for Chemical Conversion of Gas

To give the finishing touches to a total solution for CO<sub>2</sub> reduction, it is vital that we have a technology for converting captured CO<sub>2</sub> into other useful chemical substances. To this end, Nitto has developed an original technology producing formic acid. With a highly active catalyst, we have achieved world-class formic acid production efficiency. We have also reduced production costs through a method that facilitates the separation of the catalyst from the formic acid after producing the latter. We are currently working on its practical use.

#### Concrete Example 3

#### Development of Technology for CO<sub>2</sub> Direct Air Capture

To realize negative emissions, we need technology for capturing CO<sub>2</sub> from the atmosphere (Direct Air Capture), in addition to reducing CO<sub>2</sub> that we emit. Nitto is also active in this technological sphere. By adding

low-temperature desorption performance, which is not available from conventional technologies, we use exhaust heat to achieve desorption, which also helps to reduce energy consumption.

Nitto combines these multiple negative emission technologies to offer total solutions for CO<sub>2</sub> reduction. By providing a link between ESG initiatives and new business opportunities, we will remain committed to embodying a unique concept of Nitto's ESG management: seeking solutions to social issues and creating economic value simultaneously.

#### TOPIC

#### Introduction of a Negative Emission System in the Livestock Industry

We are working with Air Water Inc. (Headquarters: Osaka City) to efficiently produce formic acid from CO<sub>2</sub> and hydrogen using advanced conversion technology. Using a material derived from livestock manure biomass, this initiative is designed to achieve carbon-negative production of formic acid. Having built production equipment adjacent to a hydrogen production plant within Shikaoi Hydrogen Farm\* (Shikaoi Town, Hokkaido), a demonstration started in April 2024. Formic acid produced there is sent to dairy regions for use as additives to grass silage, which contributes to the realization of a sustainable society through the utilization of CO<sub>2</sub>.



Formic acid production equipment

\* A joint venture between Air Water Hokkaido Inc. and KAJIMA CORPORATION

Please refer to our corporate website for more details.  
[https://www.nitto.com/jp/en/press/2023/1219\\_02.jsp](https://www.nitto.com/jp/en/press/2023/1219_02.jsp)

## Nitto Group's Financial Strategy as per the Chief Financial Officer



### Creating Great Financial Value by Leveraging Future-Financial Capital and Maximizing Capital Efficiency Is Key to Achieving the 2030 Ideal State

Building a robust business portfolio immune to the external environment as we create essential Niche Top solutions through the optimal allocation of management resources.

#### Yasuhiro Iseyama

Director, Senior Executive Vice President, CFO  
General Manager of Corporate Accounting & Finance Division

#### Fiscal 2023 in Review

In fiscal 2023, the Nitto Group performed solidly once again, following the previous year when record profits were posted, with ROE (return on equity attributable to owners of the parent company)—one of the most important financial targets—topping the 10% mark for four consecutive years to reach 10.9%.

Nevertheless, it was also a challenging year for us, as we experienced a substantial decline in demand for products for high-end notebook computers and tablet computers, as well as CISFLEX™ for high-capacity HDDs used by data centers, in the electronics market—one of our mainstay markets. Despite these adverse circumstances, we were able to maintain the level of operational performance as some of our pre-emptive measures paid off, including aggressively allocating

management resources to fast-changing growth markets (automotive displays and VR [virtual reality] products being prime examples) and trimming costs incurred for low growth, less-profitable products as we remained on track for structural reform. Our stock price, too, hit a new all-time high since fiscal 2017, which we believe is a sign that the stock market has given a measure of appreciation to our initiatives for business portfolio transformation.

#### Converting Future-Financial Activities into Financial Value Through Nitto's Unique Approaches – Human Resources are the Core of Value Creation

To sustainably increase corporate value, the Nitto Group has a strong

commitment to “converting future-financial activities into financial value.” This approach has two distinctive features.

First, every unique initiative by Nitto functions organically to create financial value. For instance, the Niche Top Strategy, which is synonymous with Nitto, is a differentiation strategy that we hope will give us the leading market share based on our technological advantages and solid relationships with customers. This strategy helps us win a steady flow of orders at fair prices, which in turn increases our revenue and margins. *Sanshin* Activities, on the other hand, is the Nitto Group's traditional marketing approach designed to expand revenue by stimulating new demand through new application development and new product development. Through GATE, which has a very high percentage of employee participation, we have been able to establish a corporate culture where everyone constantly asks themselves how they can enhance productivity or reduce costs. We believe these unique activities sustain high margins and capital turnover, leading to increased ROE and ROIC.

The other thing that makes our approach so unique is that these initiatives of Nitto's hallmark have been instrumental in creating financial value out of future-financial capital, including human resources. Recognizing human resources as the core of our new value creation, we selected the challenge ratio and engagement scores as HR-related indicators for our management targets in the mid-term management plan. Going forward, by further advancing our corporate culture into one where diverse individuals enjoy taking on challenges spontaneously, we will further invigorate our unique initiatives and enhance engagement to accelerate innovations. Our goal is to see numerous PlanetFlags/ HumanFlags emerge from the company as a result of all this, and by developing them into Niche Top products, we will achieve the dual objectives of contributing to the global environment and human society while creating financial value.

#### Promoting ROIC Management Aiming for Higher Capital Efficiency

In our mid-term management plan “Nitto for Everyone 2025,” we are shooting for 15% ROE by fiscal 2025, the final year of the plan. To attain this target, we are closely looking at the net profit ratio and

asset turnover ratio and do not intend to use financial leverage aimed at short-term ROE improvement. Nitto refers to ROIC as an internal KPI for business management. Every year, we set a target ROIC for each business sector during the annual budgetary process, monitoring progress, and, if deemed necessary, consider improvement every quarter using the PDCA cycle. We also calculate WACC (weighted average cost of capital) for each business to set a hurdle rate for ROIC, in an effort to perform management by objectives with expectations of our stakeholders in mind. Since I took office as CFO in 2020, I have remained committed to propagating ROIC within the Nitto Group. Believing in the utility of executive-level training, I made it a rule to take time to explain the importance of this management indicator and share where we are when Nitto's senior executives gather every six months at the global conference. I do this because if they understand ROIC well and link it to management by objectives and personnel evaluation within their organizations, I believe that the entire organization will be better informed.

Also, in response to the Tokyo Stock Exchange's request to listed companies, we have announced our "Action to Implement Management

that is Conscious of the Cost of Capital and Stock Price." By including ROE among key management indicators, we will stay focused on management that is conscious of the cost of capital and stock price as we work to increase our corporate value over the medium to long term.

### Preferentially Allocating Cash to Growth Domains

Our cash allocation priorities are: 1. Capital investment, 2. Cash dividends, 3. M&As, and 4. Acquisition of Treasury Shares. Capital investment and M&As are aimed at transforming our business portfolio, and we will invest proactively in the three focus domains of Power & Mobility, Digital Interface, and Human Life.

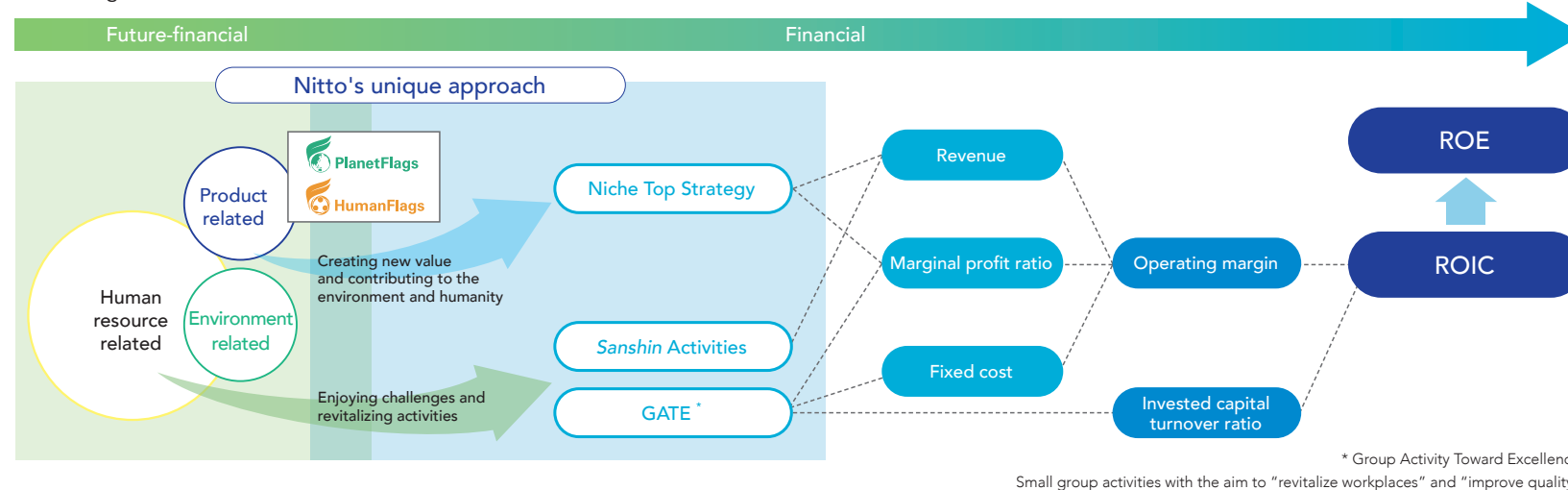
During the three-year period of the ongoing mid-term management plan, we plan capital investment totaling 270.0 billion yen. We regularly monitor the capital investment of each business division against their annual budget to analyze their progress and the specifics of their investments. Let me give you an example of our investment related to the environment. We are replacing coaters for applying adhesives with ones with minimal environmental impact to shift to solvent-free processes,

which reduces Scope 1 emissions. When we replace machines, we ensure that their value is enhanced by implementing efficiency improvements. This includes increasing productivity, consolidating the number of machines needed, and optimizing operator usage to streamline operations.

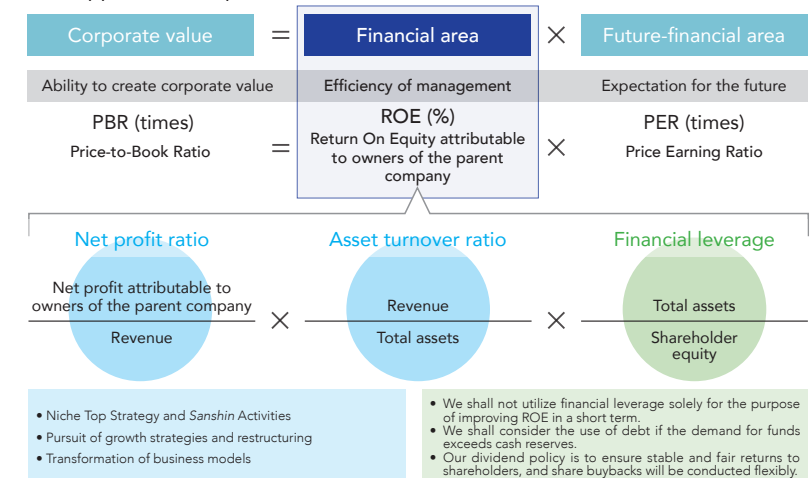
For this mid-term management plan, we have set aside a total of 150.0 billion yen for M&As. However, if we should have a project that we believe will benefit our future growth, we will respond flexibly, regardless of this budget. What we expect from our M&A partners is that they can create synergies with Nitto's technologies.

Our policy on shareholder returns is to pay dividends consistently and stably, encouraging long-term ownership. Our stance is to maintain stable dividend payments, regardless of short-term profit fluctuations, and recently, we have increased dividends for three consecutive years. From a long-term perspective, we consider it more appropriate to determine dividend amounts based on the ratio of dividends to capital rather than profits. Thus, we aim to keep our DOE (dividend-on-equity) ratio at 4% or higher.

### Converting Future-financial Activities into Financial Value



### Our Approach to Improve ROE

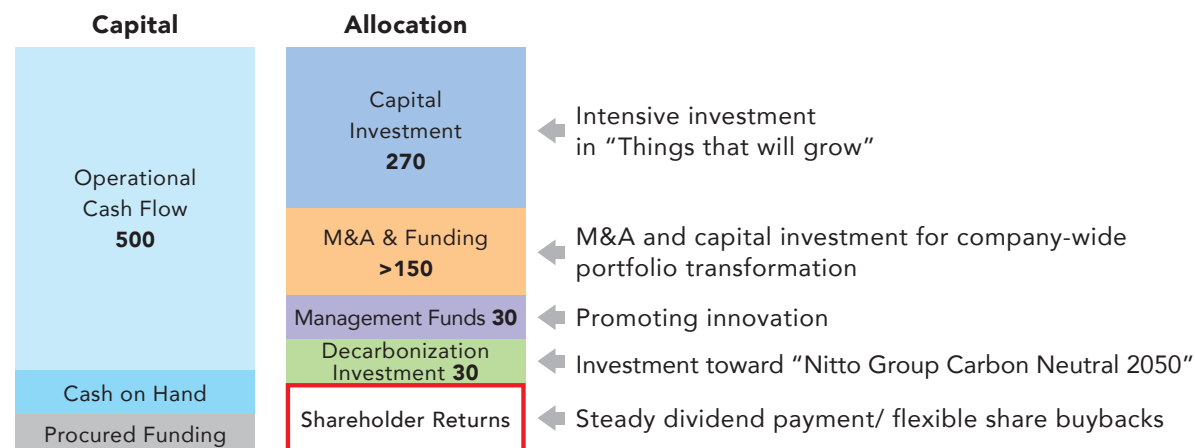


We acquire treasury shares if and when we have excess financial capacity. We have acquired treasury shares for two consecutive years in fiscal 2022 and fiscal 2023. Pursuant to the basic policy "The Company's treasury shares that have been repurchased will continue to be held on the condition that their specific uses have been clearly defined (e.g., remuneration for Directors), and cancellation will be considered for any shares exceeding the required amount," we have cancelled part of our treasury shares.

## Constructive Dialogues with Stakeholders

Nitto is open to constructive dialogues with stakeholders. In fiscal 2023, we spoke with a total of 590 institutional investors, an increase of 83 from the previous fiscal year. To help them deepen their understanding of the Nitto Group's initiatives for its mid-term management plan, we will continue having such dialogues with our stakeholders. The comments on Nitto they make during dialogues will be shared with management at Board of Directors meetings and other occasions, to reflect them in our

Cash Allocation (3-year cumulative total for 2023-2025)  
(billion yen)



management. To give you one such example, we have been reducing cross-shareholdings based on our own criteria for retaining or selling them. Having sold all of our cross-shareholdings by the end of fiscal 2023, we have established a "Zero-Cross-Shareholding Policy," which states that we shall not have any cross-shareholdings going forward.

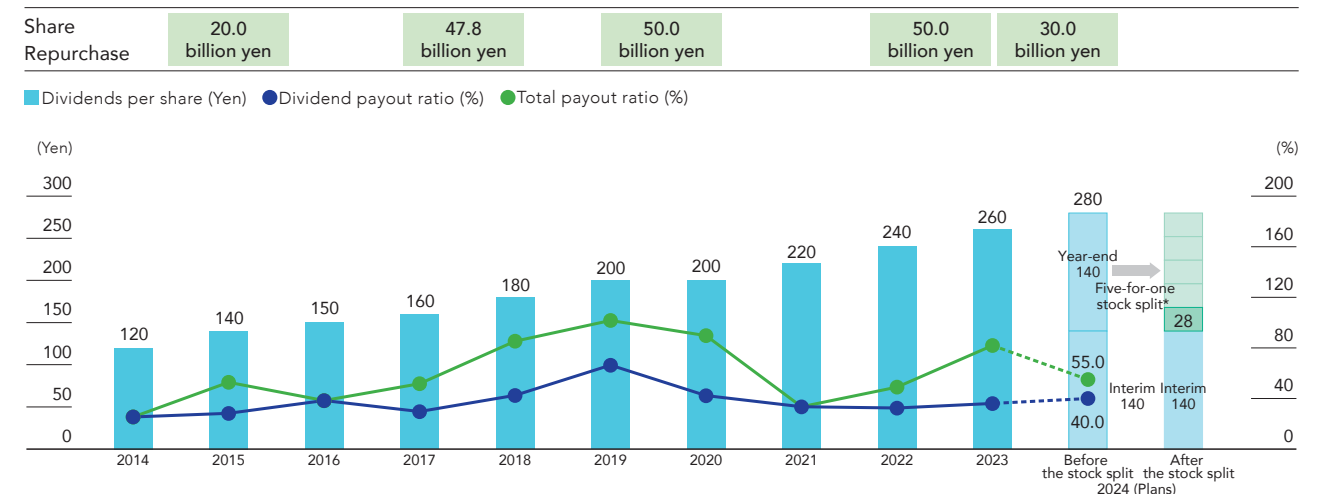
## In Pursuit of the 2030 Ideal State

The Nitto Group aims to be an "essential top ESG company," which is the 2030 Ideal State that we hope to reach. We believe that we can achieve this if we meet financial targets and future-financial targets laid out in the mid-term management plan "Nitto for Everyone 2025," and achieve simultaneously solving social issues and creating economic value. To this end, we have to consistently create "products," "functions," and "business models" that are essential for our customers, society, and the planet. As CFO, I believe it is my responsibility to allocate our

management resources to growing businesses and human capital, which are crucial for this growth. I'm also convinced that this is the way that leads us to build a robust business portfolio immune to the external environment.

We will remain focused on the enhancement of the corporate value of the Nitto Group through constant dialogues with our shareholders, investors, and other stakeholders.

## Shareholder Returns



\*The Company resolved, at a meeting of its Board of Directors on May 2024, to implement the five-for-one common stock split, effective as of October 1, 2024. The interim dividend for the fiscal year ending March 31, 2025, on the record date of September 30, 2024, will be paid based on the number of shares before the stock split. The year-end dividend forecast for the fiscal year ending March 31, 2025, describes both of dividend forecast before the stock split and after the stock split.



## Nitto Group's R&D Strategy as per the Chief Technology Officer



### Leveraging the Unique Future-Financial Value of Nitto to Establish an Innovation Process That Positions Us as a Top ESG Company

To create products and services that qualify for both PlanetFlags/HumanFlags and Global Niche Top™, Nitto proactively seeks to expand future-financial value. We will also make active use of digital technology to accelerate the conversion from future-financial to financial value.

#### Yosuke Miki

Director, Senior Executive Vice President, CTO  
General Manager of Corporate Technology Sector

#### Completed Drastic Change in Our Awareness to Be a Top ESG Company, We Will Expedite Transformation

In accordance with our management policy of “placing ESG at the core of management,” Nitto has committed to simultaneously solving social issues and creating economic value since fiscal 2021. Considering ESG initiatives as a way to invest in “future-financial” value that enhances corporate value over the mid- and long-term, we are making dedicated efforts to establish a scheme that amasses and expands “future-financial” value and converts the same to financial value, i.e., revenue.

Now, what we mean by “future-financial” value is intangible assets that are unique to the Nitto Group, which include Nitto’s core technologies

cultivated by many years of R&D efforts, intellectual property gained in the course of said efforts, and close relationships with customers forged through business. Every one of these is a source of competitive edge for the Nitto Group’s business. Another key “future-financial” value is Nitto’s unique corporate culture. Here, we have *Sanshin* Activities and the Global Niche Top™ Strategy, which are now part of the body and soul of all employees, an ever-positive mindset to take on new, challenging tasks, the cross-departmental convergence of a myriad of technologies, and open innovation through alliances with external parties to access new technologies.

Investment in R&D will be accumulated as part of Nitto’s unique “future-financial” value, which drives and propels the creation of new products and businesses. Our plan is to convert this “future-financial” value into revenue

through the three avenues of “creation of new businesses,” “expansion of existing businesses,” and “monetization by intellectual property strategies.”

In 2022, for every member of the technological development team to place ESG at the core of management in their own fashion, we established the recognition scheme for PlanetFlags/HumanFlags (products contributing to the environment and/or human life). We have also made it clear that we will not allocate resources to any new R&D project unless it aims to develop PlanetFlags/HumanFlags products.

Looking back, the announcement of this policy was met with surprise by the members of the technological development team, and I presume many were perplexed. This being the case, I took every opportunity to share my wish with the team: to make Nitto a company that inspires future generations to say, “I want to work at Nitto.” I would also repeatedly tell them that the first step to achieving this vision is contributing to the environment and humankind, which I believe is the direction Nitto should be pursuing. At the Technology *Kuruma-za* round-table talk, where executives from the corporate technology sector and development teams of each business execution department gathered, we thoroughly discussed how the Nitto Group should contribute to the environment and humankind, aiming to deepen mutual understanding. Thanks to these efforts, the new policy permeated the entire R&D team in a matter of six months, and it took us only a year or so before almost all our R&D projects had been replaced with those aspiring to create PlanetFlags/HumanFlags products. At the end of the day, the replacement went more smoothly than expected, which was greatly satisfactory.

When we try seeking solutions to social issues and creating economic value simultaneously, however, the latter is far more difficult. Making contributions to society is just the beginning; we also need to ensure that it makes business sense. The most challenging part is converting “future-financial” value into “financial” value.

Here, let me explain the rationale behind our attempts to monetize project themes aimed at PlanetFlags/HumanFlags recognition, followed by what we are doing to boost “future-financial” value, which is the driving force behind it all.

## Creating Products and Services that Qualify for Both PlanetFlags/HumanFlags and Global Niche Top™

One new business that we expect will combine PlanetFlags/HumanFlags and the Global Niche Top™ involves a project aimed at achieving carbon-neutral and carbon-negative operations. Its objective is to reduce CO<sub>2</sub> emissions by recovering CO<sub>2</sub> from factory effluents and converting the captured CO<sub>2</sub> into valuable resources for reuse. It even aims to capture CO<sub>2</sub> directly from the atmosphere.

This project has its origin in the water treatment membrane technology Nitto has been working on since the 1970s. We developed technology for producing ultrapure water for semiconductor fabrication lines in the 1980s and for seawater desalination in the 2000s. This business continued to expand, and in the 2010s, we came up with a water membrane module for zero liquid discharge.

For this new business, we applied the technologies and knowhow we have cultivated thus far to work out techniques for separating several different kinds of gases. The end result is a membrane module that separates and recovers CO<sub>2</sub> from factory effluents. We have installed a demonstration unit at our Shiga Plant, which is currently on a test run. We plan to launch this business in full swing sometime in fiscal 2025.

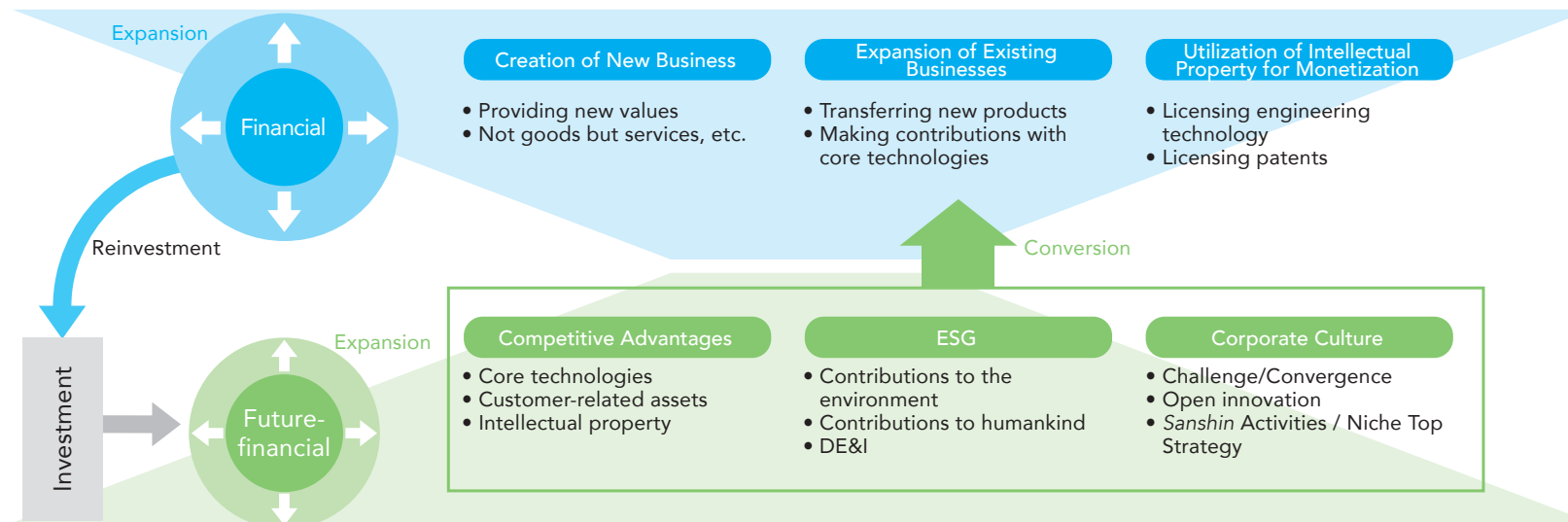
Another project that I wish to talk about here involves the development of technology for converting CO<sub>2</sub> into valuable products, ensuring efficient use of the recovered CO<sub>2</sub>. Jointly with an overseas research institution, the Nitto Group has successfully established technology for producing formic acid from CO<sub>2</sub>. Our proprietary catalyst design resulted in world-class formic acid production efficiency. We also added a new twist to process technology to significantly reduce costs. Widely used by dairy farmers to adjust the fermentation of livestock feed, formic acid is also attracting much attention as a carrier of hydrogen, the main ingredient of next-generation fuels.

With this chemical conversion technology, in fiscal 2023, we commenced demonstration tests for producing formic acid from CO<sub>2</sub> emitted in the process of producing biogas from livestock manure in Shikaoi Town, Hokkaido. Formic acid produced there will be used to adjust the fermentation of livestock feed again, completing a carbon cycle on the spot.

I have to say that monetizing environment-related projects may not be easy, but I believe we can solve a bottleneck if we can create a carbon cycle at the sources of CO<sub>2</sub> emissions. So, "local production for local consumption" also applies to CO<sub>2</sub>.

Because environment-related projects are considerably affected by regulations and the stance of local authorities in each region and country, we gather relevant information at our bases in Europe and the U.S. to keep updated on the latest trends. In cases where prompt decisions are needed, we designate a "technology fund," which grants the CTO authority to allocate funds up to a certain amount promptly. This allows us to act quickly and seize monetization opportunities without fail.

Concept of Converting from the Expansion of "Future-financial" to "Financial" Value



## A Variety of Initiatives to Enhance Future-Financial Value

Nitto is undertaking a variety of initiatives designed to enhance technology-related "future-financial" value.

In 2023, we began revisiting our core technologies. Before, we defined "adhesion," "coating," "polymer function control," and "polymer analysis and evaluation" as our core technologies. Some thirty years after they were defined as such, however, we began to hear people say, "It's hard to imagine Nitto's current business line" or "(These technologies) don't provoke any imagery for partnerships or alliances."

Having revisited the list for the first time in about thirty years, we have compiled a set of eight core technologies that we believe will give people a proper impression of Nitto today. They are: "adhesion," "optical design," "circuit formation," "thin layer formation," "porous formation," "separation," "oligonucleotide synthesis," and "DDS." Furthermore, we shed light on peripheral technologies linked to these eight core technologies, which should be continuously expanded and deepened as the sources of the Nitto Group's competitive advantages.

Also, we designated four technologies, "roll to roll process," "operando measurement\*," "simulation," and "AI" as our common technologies, which may not directly affect our competitiveness but are essential for business continuity.

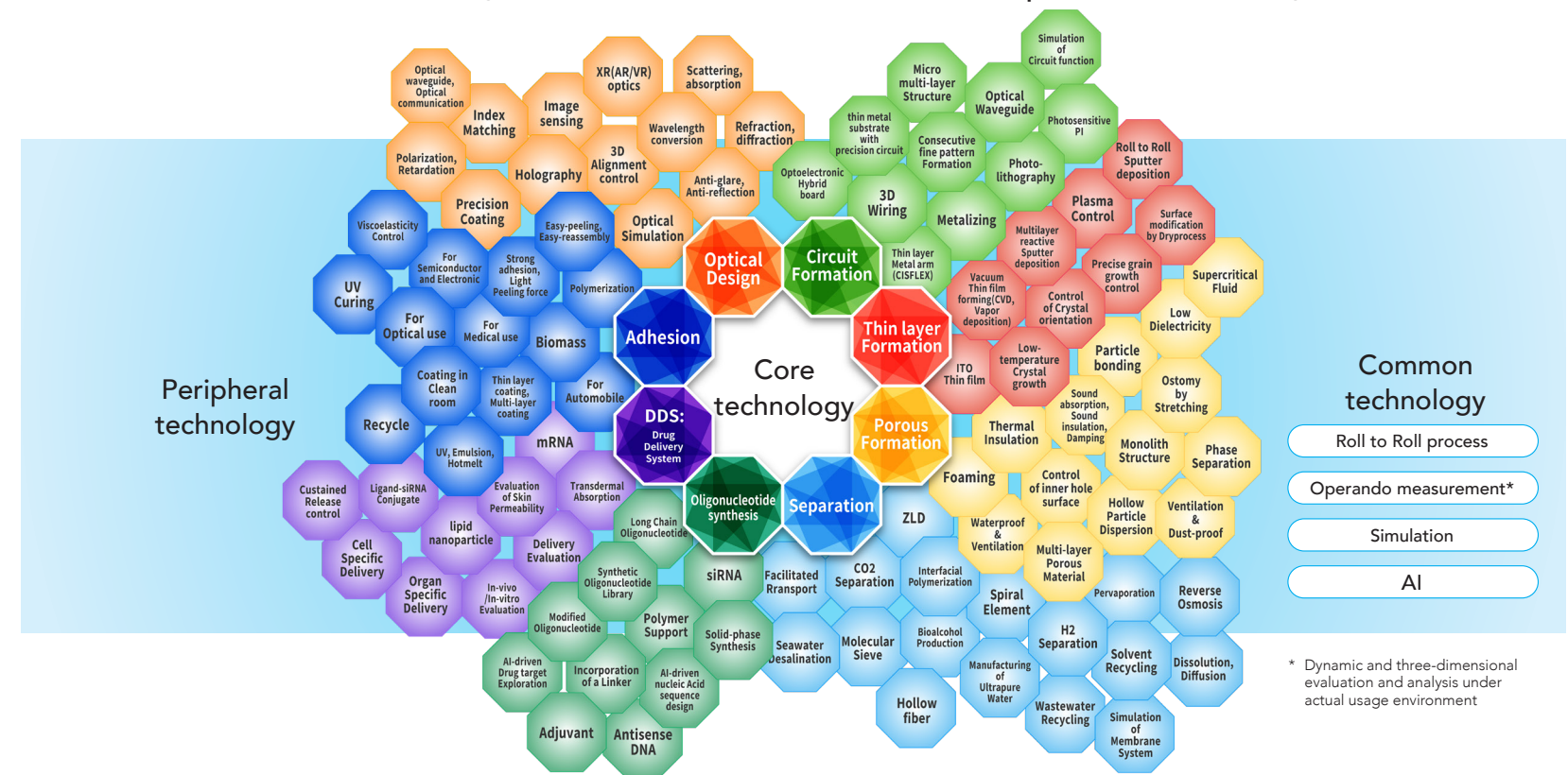
When we revisited our core technologies, our tech executives gathered together for lengthy discussions at Technology *Kuruma-za*. I feel that it is highly significant for us to reach a consensus that these eight core technologies are the source of the Nitto Group's competitive edge throughout the process. Technology *Kuruma-za* is an opportunity for Nitto's tech executives to discuss the ideal direction of Nitto's technology from a Group-wide perspective, stepping back from daily operations for a while. As I explained earlier, when the management policy of "Placing ESG at the core of management" was announced, we held exhaustive discussions on the topics related to contributions to the environment and humankind that Nitto should address, which played a major role in spreading the then new policy. I think it is safe to say that the very existence of Technology *Kuruma-za*, where everyone is invited to speak candidly regardless of which business division you represent, forms a critical part of the Nitto Group's "future-financial" value.

Other than that, the amicable relationships fostered with many customers over time represent a key future-financial value, which we call "customer relations assets." They say, "Nitto will help us solve our problems," "Nitto's solutions are always beyond my imagination," "Nitto never fails to deliver quality products," or "Nitto is agile and quick." We should never undermine the trust they place in us. One of the things that makes the Nitto Group different from its peers is that we have this kind of relationship with not only primary customers but also secondary customers or suppliers and beyond. As for open innovation, we are working with customers and suppliers, as well as research institutes and venture businesses. The circle of Nitto's customer relations assets extends to cover the entirety of supply chains.

We have been able to build such a great relationship because we have stayed close to customers for many years, promoting *Sanshin* Activities. With our sales, marketing, and engineering teams united, we remain vigilant in identifying the challenges our customers face and the potential "seeds" of technology our suppliers might offer, in an attempt to strategically position ourselves in the market.

Core Technology/Peripheral Technology/Common Technology

## Group-wide consensus on eight core technologies and shared recognition of them as sources of competitive advantages



I wish to also mention an event called Nitto Innovation Challenge (NIC), a convention dedicated to the creation of new businesses. At this event, all employees of the Nitto Group are invited to offer their ideas on new businesses and products. Promising ideas are given support from the company to further explore their feasibility. Every year, we have around 1,000 applications to NIC. This is its fifth year, and we have had more than 1,500 ideas. This participative event is playing a key role in cultivating Nitto's corporate culture, which is to "Enjoy challenges."

## Nitto's Unique R&D Digital Strategies

Let me now walk you through the Nitto Group's digital transformation (DX). At Nitto, we are aggressively working on new value creation by utilizing digital data, on top of the application of material informatics (MI), to shorten research and development lead time and improve operational efficiency.

Let me give you an example. Since 2008, we have implemented a business model called Roll to Panel™ for the business related to flat-panel polarizer for large-screen TV market. What we are doing is bringing our polarizing films directly to customers' production lines and laminating them on-site. By sharing detailed data collected while manufacturing polarizing films, we guarantee high productivity for customers. In those days, when not many persons were familiar with DX, an intermediate materials supplier like Nitto succeeded in an advanced attempt to utilize digital data to deliver high value, which gave us great confidence.

We hope to see more of such examples, but recruiting and developing digitally proficient personnel from scratch after they join us requires significant time and cost. To address this bottleneck, in 2018, we began collaborating with Shiga University, which established Japan's first Faculty of Data Science. This partnership aligns with our policy of accessing the digital technologies needed for our business through external collaborations to achieve efficient results. In 2022, we reinforced this partnership by establishing the Shiga University and Nitto Denko Digital Innovation Research and Development Center.

Setting up a special team, Shiga University has lost no time developing algorithms that we need for our business undertakings. What makes this partnership different from ordinary joint research attempts is that,

in addition to the opportunity it provides for dispatched engineers to acquire digital technologies, it helps raise the overall level of digital skills among the Nitto engineers through such opportunities as periodical workshops and lecture meetings. Another major benefit is that the students get to know Nitto's appeals through joint research, giving us opportunities to recruit talented engineers.

Nitto has also begun working on generative AI, which is attracting a considerable amount of attention for its rapid progress in recent years. As generative AI continues to evolve and becomes more widespread, all companies will eventually have access to similar tools that produce comparable outputs. Consequently, it will become increasingly challenging to achieve positive differentiation. Keenly aware of this risk, we plan to differentiate ourselves by bypassing the existing generative model and inputting Nitto's proprietary data.

We are fortunate enough to have a wealth of aforementioned future-financial values that we can use for data input. From technical reports that generations of our researchers and developers have authored in relation to our core technologies, to records of *Sanshin* Activities that have been pursued in a broad range of markets from agriculture to electronics and the resultant human network, these are precious assets that are only available to Nitto.

These kinds of information have hitherto been linked via humans, who then created value. Nitto's advantage here was that we are relatively more proficient at this, and with generative AI in our hands, we can create value more efficiently. At present, we are sorting out the Nitto Group's proprietary data and creating a database in a hurried move to establish an advanced value-creation process.

## Accelerating R&D with Both Forecasting and Backcasting Approaches

We have defined a set of eight core technologies. If we look back on how these technologies were established, it is evident that they evolved as a result of our sincere efforts to meet customer demands, often realizing only afterward how significantly we had progressed. Think hard what lies beyond their requests and proactively develop the necessary technology to keep abreast of customers' plans. This is one of the



beauties of *Sanshin* Activities, and I believe we have to keep exploring such endeavors. But at the same time, *Sanshin* Activities may not help us see the needs that customers do not expect from the Nitto Group, raising concerns that we may miss growth opportunities amid significant societal changes in the future. You may have noticed this, but our list of core technologies does not cover some elements that are expected to assume greater importance going forward, such as digital technology, data business, and system architecture. This is because we have yet to develop those technologies well enough to call them "sources of positive differentiation."

With this in mind, we plan to allocate more of our resources in a new direction: predicting changes in society and the environment of the future and then taking a backcasting approach to prepare necessary technologies. By advancing *Sanshin* Activities furthest in areas close to the field and forecasting future technology needs, alongside backcasting from the envisioned future society and the shape that the Nitto Group should take in it, we can anticipate technologies that may become necessary in broader fields. These two complementary approaches will help enhance the accuracy of our vision and increase our return on investment. You can count on Nitto as we move ahead.

## Round-table Talk: Passionate About Creating PlanetFlags/HumanFlags Products

### Visualizing Products' Contributions to the Global Environment and Human Life, and Advancing Toward Becoming an Essential Entity in the World Through Our Unique Approaches



#### Excelling in Our Core Competencies to Simultaneously Contribute to Society and Create Economic Value

› **Aoki:** In 2022, the Nitto Group established a PlanetFlags/HumanFlags (products contributing to the environment and/or human life) Recognition Scheme with the aim of simultaneously solving social issues and creating economic value. This forms the core of Nitto's unique ESG management. Prof. Managi has been involved in this program ever since its formulation. Looking back, what thought is in your mind?

› **Managi:** If I remember correctly, I was invited to join the process because I was reviewing integrated reports by businesses or otherwise at a time when I was involved in the IPCC\* at the United Nations. At that time, people began to take notice of human capital and natural capital, in addition to infrastructures, for the measurement of social value. Nitto led the way in this emerging trend and came up with the PlanetFlags/HumanFlags concept, which I found very appealing because it incorporated both viewpoints. In Japan, private enterprises often move faster than the national government, and I presume investors highly appraise businesses who take the initiative in everything, which I believe

is because they can entertain great expectations over the long term. I was told that two of you here from the field had the products certified as PlanetFlags/HumanFlags products. I am curious to know what your products are like.

› **Takao:** I was involved in developing highly durable polarizers for automobiles, which are used for a variety of displays in a car. To ensure maximum safety, this component must achieve high viewability, allowing drivers to see the display from various angles. Furthermore, polarizers for automobiles are exposed to a high-temperature environment, so they have to have high durability to keep their viewability higher than other displays. This product was certified as a HumanFlags product because of its outstanding durability.

› **Kinose:** I am engaged in sub-gasket products for fuel cells of commercial vehicles. Fuel cells are like electric dynamos. Electric vehicles powered by lithium-ion batteries are the most common environmentally friendly vehicles, and they are good for a relatively short or medium range. For commercial vehicles like long-haul trucks, on the other hand, fuel cells are often chosen for their charging time and economic efficiency, and the sub-gasket product seals the "heart" of this dynamo. This product received a PlanetFlags certification for its extended life, which is made possible by high durability. It extends fuel cells' stack lifetime, which results in a longer driving range. Nitto began developing this product even before any customer asked us to do so, offering it to the market before everyone else.

\* Intergovernmental Panel on Climate Change. Established in 1988 jointly by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP).

#### Marked Changes in the Development Team after the Launch of the Recognition Scheme

› **Managi:** That must be a very significant development. From what you hear from your customers, do you feel the need to address environmental and social issues is growing?

› **Kinose:** Definitely, yes. As the whole world becomes increasingly committed to contributing to the environment, I can see the breeding ground for innovation expanding. That said, the reality is that this world is so changeable and unpredictable, which greatly confuses customers. We can no longer rely on our traditional approach of

identifying and fulfilling customers' latent needs, as it often takes time. What we are now expected to do is imagine what the future market will want by understanding current customer desires and acting proactively to offer original solutions. We do have many such opportunities to offer our original proposals, which I perceive as great commercial potential.

› **Takao:** From the perspective of HumanFlags, I can say that the industry itself is moving toward creating comfortable living and promoting digitalization. Because Nitto originally concentrated most of its resources on products that contribute to humankind, we can tap into our traditional strengths to further drive these initiatives. We began receiving more customer requests for environmental contributions several years ago, but cost and functional characteristics inevitably took precedence. More recently, however, our products are chosen because of their environmental contributions in a greater number of cases, which leads me to believe that we no longer have to discuss what is “ideal,” but are ready to put our vision into practice.

› **Aoki:** Customer requirements are indeed tough, but it is important to first help satisfy their needs and solve their issues. Two years have passed since the scheme was launched. Have you noticed any change in your workplace?

› **Takao:** The Group has announced a policy of focusing on PlanetFlags/HumanFlags products, but it does not change anything dramatically overnight, and I guess it will gradually filter into our thinking. As we have more opportunities to have someone talk about this policy at recognition deliberative body meetings, commendation ceremonies, and other events, I can see the philosophy behind PlanetFlags/HumanFlags has settled naturally in our division. When we set about a new product development project, it is now the norm for us to first consider if we can use recycled materials when selecting materials or if there is any concern that the product may end up increasing CO<sub>2</sub> emissions, which makes me feel something has changed.

## Recognition Standards that Reflect Nitto's Essential Values

› **Managi:** I believe that we need to see diversity in product development as well. What do you value most when you select which products to recognize as PlanetFlags/HumanFlags products?

› **Aoki:** We have three criteria: necessity, level of solution, and level of industry-leading. First and foremost, such products must be able to solve Nitto's material issues for sustainability. We then assess them based on necessity, gauging potential demand and their ability to solve issues, as well as their level of industry-leading, which positions them to lead the industry. Each division sends entries, which are deliberated on by a deliberative body chaired by the CTO and certified as such by the Corporate Strategy Meeting.

› **Managi:** Nitto has many Niche Top products, and I presume they stand out in the market for their leading position in the first place.

› **Aoki:** All the more so, we were puzzled as to how we should balance traction in the market, which every Niche Top product is expected to have, and traction in society, that is, how much they contribute to the global environment and human life. This recognition scheme places paramount importance on contributions to the global environment and human life.

› **Managi:** I see. The yardstick for “traction” of PlanetFlags/HumanFlags products is heavily dependent on the magnitude of social issues they may solve. I think it is the quality that we can normally expect from Nitto: Setting detailed criteria to make an overall evaluation before granting recognition. Another thing that I think is very unique is that, over the entire product life cycle from procurement of raw materials to disposal of end products, each candidate is assessed for their impact on the environment. To screen candidates for PlanetFlags, you also need to take their Scope 3 emissions into account, right? This approach allows you to determine whether to address an issue by altering materials or tweaking the operation. I can see that those products are developed not to get recognition but to contribute to the global environment and human life for the benefit of stakeholders.

› **Aoki:** We also invite external specialists to the screening process to ensure objectivity. After all, it is our stakeholders outside of the Group who determine if our offerings are essential for them or not.

## Realizing Nitto's ESG Management

› **Kinose:** So, Niche Top products and PlanetFlags/HumanFlags products have different perspectives. Though, in fact, they both also need to be economically efficient. Working close to the market, I have observed that what customers really look for in eco-friendly products is economic efficiency.

› **Aoki:** Because fuel cells were originally developed for environmental conservation, their economic performance, specifically streamlining of production costs and enhancement of fuel efficiency, is crucial for gaining greater popularity in the market.

› **Kinose:** True. To this end, Nitto can provide high-performance intermediate materials at appropriate prices in our BtoB transactions, so that we can help customers lower the costs of their end products and accelerate their diffusion in the market.

› **Managi:** I suppose the environmental business itself is still a niche market, given all sorts of managerial issues facing private businesses.

› **Kinose:** This market is new and changing fast, and so it is quite difficult to foresee which technology will bring about what value. Furthermore, in the environmental sector, it is crucial to recognize that customers' future needs often evolve, so determining which customer base to serve is essential. Going forward, every player in supply chains will be required to reduce their CO<sub>2</sub> emissions more, which I believe will bring them closer to what Nitto is striving to achieve in terms of environmental contribution, like PlanetFlags products.

› **Takao:** We also think that even existing products that have a proven track record and economic performance need to be improved by adding environmental input. Polarizers for automobiles, for example, have undergone countless improvements. It is quite hard to keep raising the bar as we have to squeeze out novel ideas to push continued evolution, but the ideal situation is that recognized products come naturally as a result of continued endeavors. If we do so, we should see the percentage of products recognized as such eventually rise.

› **Aoki:** Developing products in line with the concept of PlanetFlags/HumanFlags and working to develop them into Niche Top products— This is what Nitto does for its ESG management. Our ultimate goal is to have PlanetFlags or HumanFlags products and Niche Top products all unified into one category, rather than remaining as separate entities.

# “Essential” Nitto Products

The Nitto Group delivers “essential” products that help to realize a sustainable future and support well-being for everyone by serving the global environment, humankind, and society as our “customers.”

Please refer to our corporate website for details of PlanetFlags/HumanFlags.  
<https://www.nitto.com/jp/en/sustainability/infocus/flags/>

**PlanetFlags**

**Energy-saving RO membranes\*1 for wastewater treatment**

- Expanded membrane area realizing higher efficiency and energy conservation

**Long-life NF membranes\*2**

- Wide flow channels that prevent foulant clogging, ensuring high efficiency and long life

**Recycle PET adhesive tapes**

- Environmentally friendly product packaging
- Accelerate decarbonization efforts

**COLOCOLO™ eco**

- Proactively use eco-friendly materials
- Designed to reduce trash








\*1 Reverse osmosis membrane  
\*2 Nanofiltration membrane

**PlanetFlags**

**Polarizers with OCA**

- Help reduce environmental impact and shorten customer processes




**HumanFlags**

**Highly durable polarizers for automobiles**

- High durability and wide viewing angles for enhanced automobile safety

**LUCIACS™ for automotive displays**

- Enhances viewability of automotive displays



**PlanetFlags**

**Sub-gasket products for fuel cells of commercial vehicles**

- Adhere to hard-to-bond adherends, meet future demand for high stability and long life




**HumanFlags**

**Thermal conductivity insulation sheets for inverters**

- Combine insulation with thermal conductivity (normally trade-off) to contribute energy savings to home electronics





## Impact on society

<b>NEW</b> Recycle PET adhesive tapes	<ul style="list-style-type: none"> <li>Life cycle CO<sub>2</sub> emissions: -56%</li> <li>Using recycled PET for material circulation</li> </ul>
<b>NEW</b> Energy-saving RO membranes for wastewater treatment	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions from wastewater treatment: -24%</li> <li>Contribution to water resource recycling and energy conservation by efficiently reusing wastewater</li> </ul>
<b>NEW</b> Long-life NF membranes	<ul style="list-style-type: none"> <li>Total waste disposed of: -33%</li> <li>Contribution to water resource conservation and reduced environmental impacts by lower frequency of cleaning and replacement</li> </ul>
<b>NEW</b> COLOCOLO™ eco	<ul style="list-style-type: none"> <li>Life cycle CO<sub>2</sub> emissions: -17%</li> <li>Eco-friendly adhesives, recycled paper, and ink contribute to resource recycling</li> </ul>
<b>NEW</b> Polarizers with OCA	<ul style="list-style-type: none"> <li>Life cycle CO<sub>2</sub> emissions: -13%</li> <li>Total waste disposed of: -50%</li> </ul>
<b>NEW</b> Sub-gasket products for fuel cells of commercial vehicles	<ul style="list-style-type: none"> <li>Total waste disposed of: -20%</li> <li>Contribute to realization of a hydrogen society and reduction in CO<sub>2</sub> emissions</li> </ul>
RO membranes for ZLD (Zero Liquid Discharge)	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions from wastewater treatment: -63%</li> <li>Contribute to water resource recycling and energy conservation by efficiently reusing wastewater</li> </ul>
Low VOC double-sided tape	<ul style="list-style-type: none"> <li>Life cycle CO<sub>2</sub> emissions: -41%</li> <li>VOC emissions: -90%</li> </ul>
Bio based adhesive tape with recycled films	<ul style="list-style-type: none"> <li>Life cycle CO<sub>2</sub> emissions: -45%</li> <li>Contribute to resource recycling with recycled film and bio based adhesive</li> </ul>



## Impact on society

<b>NEW</b> Thermal conductivity insulation sheets for inverters	<ul style="list-style-type: none"> <li>Solve energy supply issue</li> <li>Energy-saving air-conditioning to sustain comfort in living</li> </ul>
<b>NEW</b> Highly durable polarizers for automobiles	<ul style="list-style-type: none"> <li>High durability for safe driving</li> <li>Wide viewing angles for multi-functional, large-sized displays</li> </ul>
<b>NEW</b> LUCIACS™ for automotive displays	<ul style="list-style-type: none"> <li>High durability for safe driving</li> <li>Prevent displays from changing colors due to high temperature for enhanced viewability</li> </ul>
Contract manufacturing for bulk oligonucleotide therapeutic	<ul style="list-style-type: none"> <li>Accelerate oligonucleotide therapeutic development for pharmaceutical companies and drug discovery companies</li> <li>Contribute to promoting oligonucleotide therapeutics with advanced manufacturing technology</li> </ul>
Medical films	<ul style="list-style-type: none"> <li>Providing people with medical products of stable quality</li> </ul>
Thin-film metal base board CISFLEX™	<ul style="list-style-type: none"> <li>Indispensable for HDDs accounting for the majority data center of storage media</li> <li>Support people's comfort and convenience in a smart society</li> </ul>
Polymer beads for synthesizing oligonucleotides NittoPhase™	<ul style="list-style-type: none"> <li>Contribute to manufacturing oligonucleotide therapeutics with high purity and yield</li> <li>Contribute to developing new oligonucleotide therapeutics by synthesizing various oligonucleotides</li> </ul>
Glass anti scattering film for automotive displays	<ul style="list-style-type: none"> <li>Prevent glass shattering of in-vehicle displays in the event of a collision</li> <li>Reduce personal injury</li> </ul>
Optical films for VR	<ul style="list-style-type: none"> <li>Improve the image quality of VR devices and enhance the immersive experience</li> <li>Leverage VR technology in various social fields, such as education and medical care</li> </ul>
High precision circuit	<ul style="list-style-type: none"> <li>Improve the functionality of smartphones</li> </ul>



# Intellectual Property Strategy

## Our Approaches to Intellectual Property

Intellectual property plays the primary role in leading “future-financial” investment activities to final financial outcomes, i.e., revenue.

At the Nitto Group, we define intellectual property as something that includes technical skills and knowledge/knowhow of individuals and relevant information gained through market research, on top of industrial property rights, ensuring that such property is put to efficient use for business. How should we apply our intellectual property to secure an “essential position,” and do we have a portfolio of intellectual property rights that is extensive enough to make it happen? Always asking ourselves these questions, we seek ways to maximize our revenue, which is at the core of Nitto Group’s intellectual property strategy.

When administering *Sanshin* Activities as part of our intellectual property strategy, we must start by taking stock of the intellectual property we possess. Accordingly, for the eight core technologies that we have redefined, namely, adhesion, optical design, circuit formation, thin layer formation, porous formation, separation, oligonucleotide synthesis, and DDS, we will classify each intellectual property with the help of AI where necessary. Down the road, we envision engaging with our customers to demonstrate the potential value created by integrating various technologies.

## Nitto Group’s Intellectual Property Strategy

For several years now, the Nitto Group has been pursuing the patent application strategy and the owned patent utilization strategy on a company-wide basis in a bid to expand earnings through greater use of patents, manufacturing knowhow, and other intangible assets (= intellectual property).

Our patent application strategy involves three policies: obtain patents that create an entry barrier for competing technologies, which should give us an edge over competitors, after making detailed research and analysis of such technologies; secure patents that protect Nitto’s business by establishing rights to the core of Nitto’s administration; and target patents that are found to be of any use following an investigation of the market and customer needs and trends, although Nitto may not commercialize them in the future. We aim to maximize earnings by creating a competitive advantage and becoming an “essential” entity in supply chains. At the same time, through cooperation with powerful partners, we might either curb or push back our up-front investments on the assumption of us utilizing their assets, so that we can monetize our patents early or prolong the duration of expected earnings.

The owned patent utilization strategy, on the other hand, gives due regards to four possibilities: utilizing patents for Nitto’s operations to generate earnings; gaining license revenue through the exercising of rights; receiving revenue by selling and transferring patents; and reducing costs by abandoning unnecessary patents. While working to make maximum use of our intellectual property and extend the period of earnings contributions after peaking, we assess how much each of our intellectual property rights contributes to business activities under common standards, so that we can save costs incurred for unnecessary or unused patents and allocate any surplus to the creation of intellectual property rights necessary for new business activities. This way, we ensure that resources invested in development activities are recouped and the Group’s earnings increase.

Furthermore, as in Global Niche Top™, by registering a trademark of our corporate strategy and business strategy to protect them, we aim to

promote them outside the company as one of Nitto’s brands, thereby enhancing the value of our brands.

## Initiatives for Sustainable Earnings Expansion

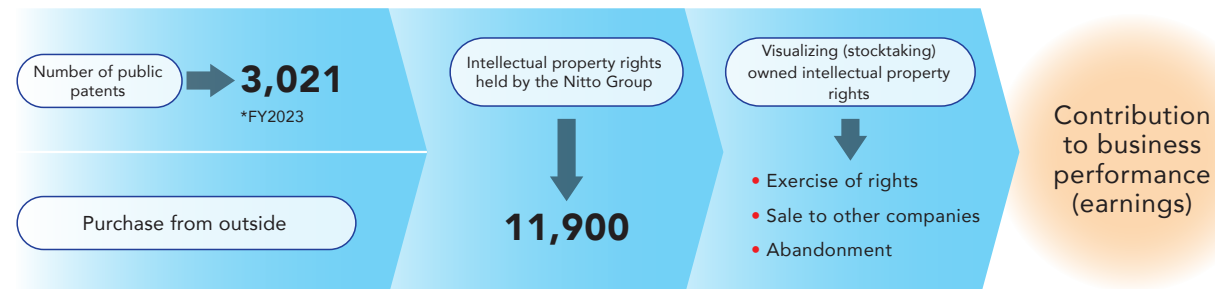
To expand business earnings and extend the life of business, we choose to open/close our portfolio of intellectual property rights depending on what stage the business is in.

Take the LCD optical film business, one of our mainstay businesses, as an example. When the business was in the introductory/growth phases, we focused on building a portfolio of its intellectual property rights that were necessary in target markets by obtaining one patent after another. This way, we established an “essential” position in the supply chain that included our customers, and used intellectual property to protect this advantageous situation in a “closed” system, thus maximizing earnings. As the business transitioned to the maturity/decline phases, we made an about-face to make our technologies “open.” By licensing out the portfolio of the intellectual property rights that we had built, we made it possible to gain benefits from the entire market.

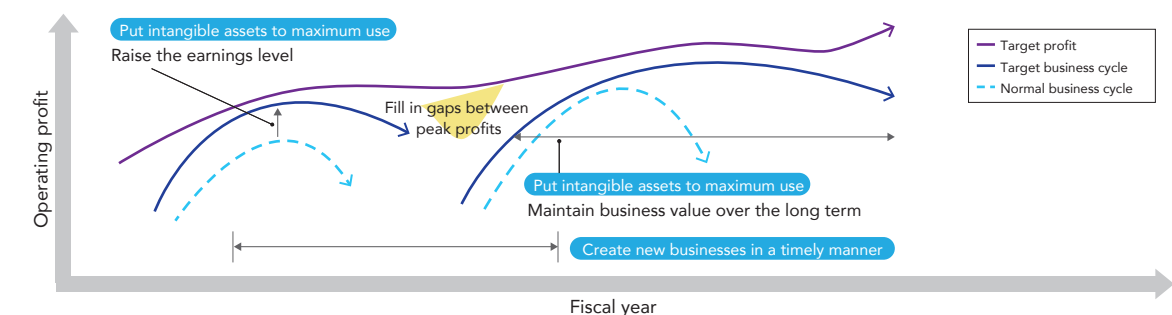
Similarly, we use different revenue models in the oligonucleotide therapeutics business, including contract manufacturing and licensing our drug discovery pipeline or DDS technology, to maximize financial value at the right times.

As described above, we ensure that intellectual property rights are put to good use for each business and that new businesses are created through *Sanshin* Activities in a timely manner, filling in gaps between peak profits and achieving continued earnings growth.

### Visualizing Intellectual Property Rights



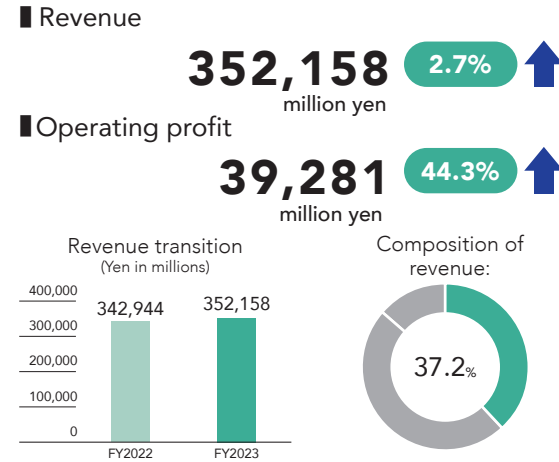
### Seeking Both Timely “New Business Creation” and “Utilization of Intangible Assets”



## Summary of Results by Segment

### Industrial Tape

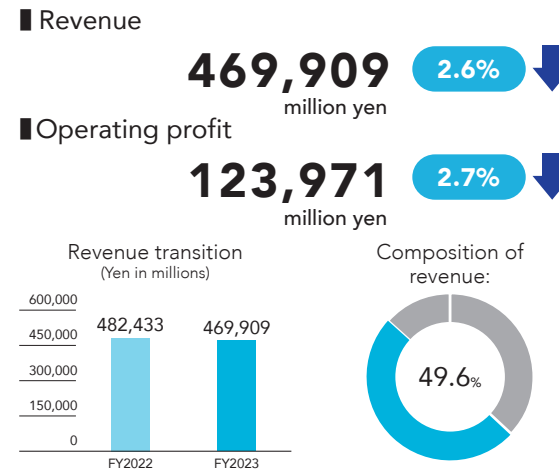
For Functional Base Products, revenue increased from the previous fiscal year. Demand increased for assembly materials for high-end smartphones following the launch of new products. Furthermore, demand increased for automotive products due to the recovery of automobile production mainly in Japan and Europe, aside from the NVH (Noise, Vibration, Harshness) business transferred in the first quarter. Demand for process materials used in the manufacture of semiconductor memories and ceramic capacitors bottomed out in the fourth quarter of the previous fiscal year and began a gradual recovery.



### Optronics

In Information Fine Materials, revenue did not reach the level of the previous fiscal year. Demand for high-end notebook PCs and tablet devices from people staying at home has run its course, and demand for optical film and transparent conductive film fell. Meanwhile, for high-end smartphones, demand for transparent adhesive sheets and process protection films as well as optical films remained strong. In addition, mass production of optical films for VR has started on a new production line.

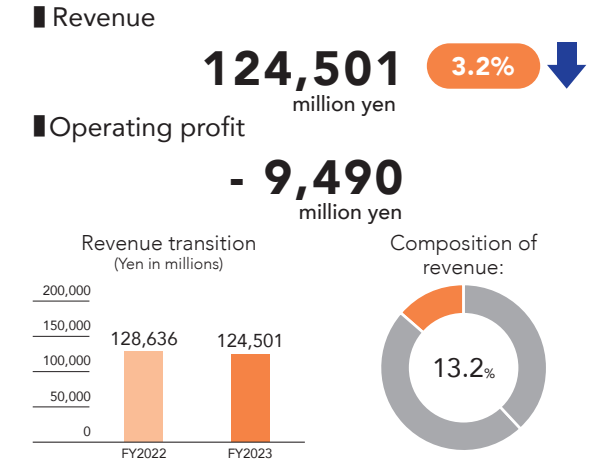
For Circuit Materials, revenue did not reach the level of the previous fiscal year. For CISFLEX™ demand for high-capacity HDD (Hard Disk Drives) for data centers decreased, and cost containment was promoted through utilization adjustments and other measures. There were more models equipped with high precision circuits for high-end smartphones than the previous fiscal year.



### Human Life

In Life Science, revenue did not reach the level of the previous fiscal year. In the oligonucleotide contract manufacturing business, demand for immunologic adjuvants declined as COVID-19 subsided. Meanwhile, commercialization of products for major diseases is expected on the nucleic acid drugs market. Prototype production has begun at a newly established plant at our Massachusetts base in the U.S. as a response to future demand growth. Nucleic acid drug discovery received notification in the second quarter from Bristol-Myers Squibb Company that it would not exercise its option right for an additional in-license following the results of a Phase II clinical trial for an idiopathic pulmonary fibrosis treatment. We also received notification from Bristol-Myers Squibb Company that it will discontinue the Phase II clinical trial for the treatment of non-alcoholic steatohepatitis (NASH) based on an exclusive license agreement with the Company for a formulation for liver fibrosis and cirrhosis. Regarding intractable cancer drugs, work continues to be ongoing on clinical trials for outlicensing. In Medical Products, demand for transdermal drugs recovered with the increase in the number of outpatients.

In Membrane, (high-polymer separation membrane) revenue did not reach the level of the previous fiscal year. Demand for membrane products for various

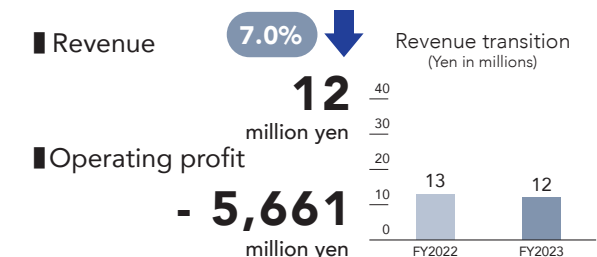


industrial purposes fell, particularly in China.

Revenue grew compared to the previous fiscal year in Personal Care Materials, with the personal care business of Mondi, acquired in June 2022, contributing throughout the year. In addition to key products for diapers, we are promoting the development of new applications utilizing the characteristics of functional films, our core material, and are working on the development of new environmentally friendly products using biodegradable technology.

### Others

Please note that this segment includes new products that have not generated sufficient revenue yet. Primarily, it is conducting kits sales of flexible sensor to developers.



\* The percentage is not shown because it is a small percentage of the total, as most of the businesses do not yet have sufficient sales revenue.

# Business Strategies by Segment

## Industrial Tape

Nitto's unique tape technology contributes to customers in reducing the environmental impact of their products and processes

### Overview

#### Segment Profile

The Industrial Tape segment delivers structural materials, process materials, porous materials, and insulation materials with thermal conductivity, among others, to a broad range of markets. Tapping into some of Nitto's core technologies, including "adhesion (easy peeling property, viscoelasticity control, etc.)" and "porous formation (waterproof & ventilation property, etc.)," this segment provides high-performance and high-quality materials that are aligned with customer needs.

More recently, we will proactively develop products that take advantage of easy peeling technology to address growing social demand for a circular economy, thus helping to reduce CO<sub>2</sub> emissions in the material life cycle.

Going forward, we will work to contribute further to our customers' value creation, focusing on the growing applications of information devices/displays, semiconductors and electronic components, and mobility products.

#### Strengths

- Making full use of two of Nitto's core technologies of "adhesion" and "porous formation" to provide essential products for customers
- Boasting global networks of production sites, R&D centers, and sales channels
- Having a full lineup of products that covers from commodity products to the most advanced functional materials.
- Outstanding capacity for development and solutions that meet a variety of customer requests



### Products

#### • For information devices and displays

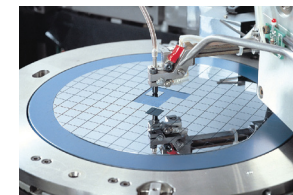
Nitto's primary offering here is double-sided tape for information devices, such as smartphones, notebook and tablet computers, wearable devices, and AR/VR devices. The source of competitive advantage for this application is our debonding technology, which, while maintaining superior adhesive quality by adding various properties to adhesive and base materials, allows the tape to be easily removed when needed. For example, Nitto's reworkable double-sided tape for fixing smartphone displays can be peeled with ease when heated to a certain temperature range, offering superior reworking performance for customers. We enhance the quality and functionality of customers' devices by incorporating key properties such as chemical and impact resistance, ensuring our products are designed to meet both customer needs and market demands comprehensively.



Reworkable double-sided tape for fixing displays

#### • For semiconductors and electronic components

Nitto provides adhesive tape that temporarily fixes workpieces at the semiconductor and electronic component manufacturing process (shave/cut). The tape provides strong adhesion for secure attachment yet can be easily removed without any stress after completion of the task by applying heat or ultraviolet rays. Benefitting from product design capabilities based on the Nitto Group's competitive adhesion technology and manufacturing prowess, our industrial tape accommodates customer requests and changes in production environments and processes, thus helping enhance productivity and facilitate new product launches.



Dicing tape that enables damage-free pickup of thin-film chips

#### • For mobility products

Nitto provides various products essential for the safe operation of automobiles and aircraft. Offered for use in automobiles are high-performance sealing materials that are airtight, watertight, and sound-insulating, tape for wire harness protection/binding, insulation materials for motors for electric vehicles (EVs), and pressure control parts that regulate differential pressure between inside and outside lamps and electronic units. For use in aircraft is a high-value-added tape that prevents rust from forming inside an aircraft even under extreme conditions where the difference in outside temperature during flight and takeoff/landing can reach 100°C.

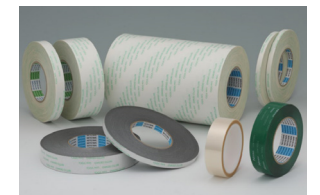


Tapes for protection and binding

Internal pressure adjusting material

#### • Base materials

Here, Nitto uses two of our core technologies of adhesion and porous formation to provide removable, highly double-sided adhesive tape, films protecting metal and resin surfaces, and heat-resistant sheets that offer high thermostability and insulation, and low friction. Preventing water from entering but allowing vapor to pass through, TEMISH™ fluorine resin porous film enjoys a high market share in the fields of healthcare, automobiles, and electronic devices. Nitto also offers many products that help reduce environmental impact, including low VOC (volatile organic compound) double-sided tape, which reduces CO<sub>2</sub> and VOC emissions during the product life cycle.



Low VOC double-sided tape

## Mid- and Long-Term Strategies

### Building a business foundation capable of generating consistently high profitability

- **For information devices and displays**

Nitto responds to changes in property requirements on the back of diversification and higher performance of information devices by continuing to develop new technologies based on our proven technologies. Some of the products currently under development include thinner tape for lighter, thinner devices, and products with the flexibility and optical properties required for flexible devices. Furthermore, we will invest in manufacturing technologies and infrastructures that help reduce CO<sub>2</sub> emissions in the cleanliness improvement process, which is indispensable for products for information devices. While propelling these activities to contribute to the environment, the Nitto Group facilitates recycling and reuse by customers through the expansion of products and technologies that achieve easy reworking and repairing, thus helping drive down environmental impact to achieve a sustainable society throughout its supply chains.

- **For semiconductors and electronic components**

Nitto provides a comprehensive range of process materials featuring various peeling technologies tailored for semiconductors and electronic components, with production intensively scaled to meet every demand in the market. Going forward, we plan to pursue development opportunities for process materials targeting the growing market for power semiconductors, which control and convert high voltages and substantial current, and advanced semiconductors used for high-performance smartphones and other devices.

Amid calls for products with a lower environmental impact, we expect the demand for CO<sub>2</sub> emission reductions and recycling to surface throughout the supply chain of the semiconductor sector. The Nitto Group is staying ahead of market trends by initiating discussions on collecting and recycling materials/devices and avoiding solvents, aiming to enhance functionality through our core technologies of adhesion and peeling while simultaneously reducing environmental impact. We will implement our capex plans by design at each production site around the world in tandem with the expansion of target markets and customer demand. We will

also invest in human resources that will make market expansion possible, thus continuously contributing to our customers and the market as we seek to increase recognition of our products for their environmental consideration.

- **For mobility products**

Nitto will pursue a new development theme of contributing to the realization of the next-generation mobility society, while remaining committed to enhancing the safety and comfort of mobility products. As an ongoing attempts to introduce self-driving and advanced driver assist systems, laws and regulations concerning automobile safety measures are being tightened. As truck transportation businesses are now required to equip their fleets with devices that prevent collisions with other vehicles and pedestrians, as well as audible reverse warning signals, we

will initially target this market to pursue business opportunities. In more concrete terms, we have launched a service providing radar cover shape design, which we hope will increase the detection accuracy of millimeter wave radars. In the field of fuel cells (FCs), whose practical use is eagerly anticipated as we create a carbon-free society, too, we are planning to invest in equipment for providing durable and long-life sub-gasket products for FCs to the market of ultra-large trucks often traveling for a long distance.

From a longer-time perspective, we will apply these FC technologies to enter a water electrolysis market while maximizing business opportunities by enhancing the recyclability of lithium-ion batteries and resin components.

- **Base materials**

Using solvent-free adhesives, low VOC double-sided tape is expected to see significant adoption increases in all sorts of situations, including automobile interiors, where its application is growing globally, and mobile devices. Nitto will seize these business opportunities while positively differentiating itself by making dedicated efforts to pitch other materials as well that help reduce environmental impact. In addition, we will keep updated on emerging needs and development themes in each country/region, driving the Niche Top Strategy as we develop products that cater to customer requirements. To stay alert to any such needs, we will make maximum use of the network of our sales offices and customer centers at key regions around the world, which respond to inquiries on any product from customers in a wide range of markets, including electronics, automobiles, medical and healthcare materials, and housing and construction. We also plan to replace production equipment to lessen the environmental impact and reduce the strain on workers involved in manufacturing.



# Optronics

Supporting a secure and accessible lifestyle and a sustainable circular society (Information fine materials)

One-of-a-kind technology to support the data business through contribution to the environment (Circuit materials)

## Overview

### Segment Profile

The Optronics segment is comprised of information fine materials, which include protection films for organic light-emitting displays (OLEDs) processes and polarizing films with superior optical properties and highly-transparent and -visible adhesive sheets, and circuit materials, including CISFLEX™ and high precision circuits. For the former sub-segment, we tap into our proven technology of processing various functional films to manufacture optical products, working with customers from their product design stage to present solutions. For the latter sub-segment, our key technology concerns printed circuit board formation, which combines micro wiring and high positioning accuracy that demonstrate the electric and mechanical properties required of HDDs and smartphones, thus allowing us to supply materials indispensable for our customers' business.

### Strengths

- Information fine materials: High penetration in the high-end market, where technological differentiation is sought after, and a stable business foundation established with licensing revenue from intellectual property
- Circuit materials: Technological prowess and high reliability proven by the overwhelming market shares of CISFLEX™ and high precision circuits



## Products

### • Information fine materials

Nitto offers a wide range of optical products used for displays, such as polarizing films and protection films for OLEDs, transparent adhesive sheets, and anti-reflection films. By leveraging our strong presence in each segment, we stay informed about potential market needs, allowing us to develop a steady stream of new products ahead of our competitors. Nitto's polarizing films for automotive displays, among others, have established competitive advantages in the market as they meticulously respond to new trends for larger or uniquely-shaped displays with their superior optical properties made possible by their high durability and wide viewing angle.

Nitto is also active in the non-display market, where we offer high-performance products. Using Nitto's unique sputter deposition method to achieve transparency and surface conductivity, transparent conductive film provides excellent adhesion and is used in applications ranging from light control sunroofs in automobiles to touch panels.

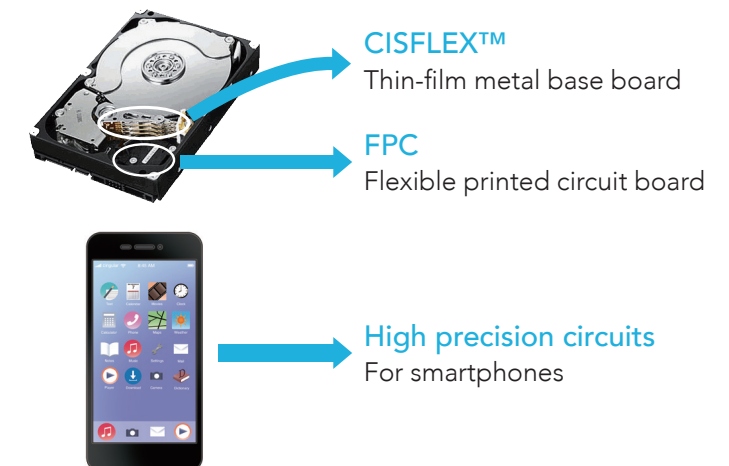
Transparent conductive film



### • Circuit materials

Key offerings here include CISFLEX™, a thin-film metal base board that plays a vital role in reading, recording, and exporting data on HDDs, flexible printed circuit boards, and high precision circuits for smartphones, with CISFLEX™ capturing the leading share in the HDD market.

The Nitto Group combines its macromolecule design with its in-house constituent materials that hold the key to functional expression, thus achieving miniaturization, thin films, and mechanical properties that no others can emulate. It is because Nitto uses its in-house constituent materials that we can perform elaborate control, which is necessary to fulfill ever-advancing property requirements. This approach forms the foundation for Nitto's ability to respond flexibly and swiftly to shifts in market and customer needs.



## Mid- and Long-Term Strategies

### Transforming the product portfolio to maintain high profitability of the business (Information fine materials)

### Implementing structural reform to concentrate resources on the creation of new products and build a resilient business (Circuit materials)

#### • Information fine materials

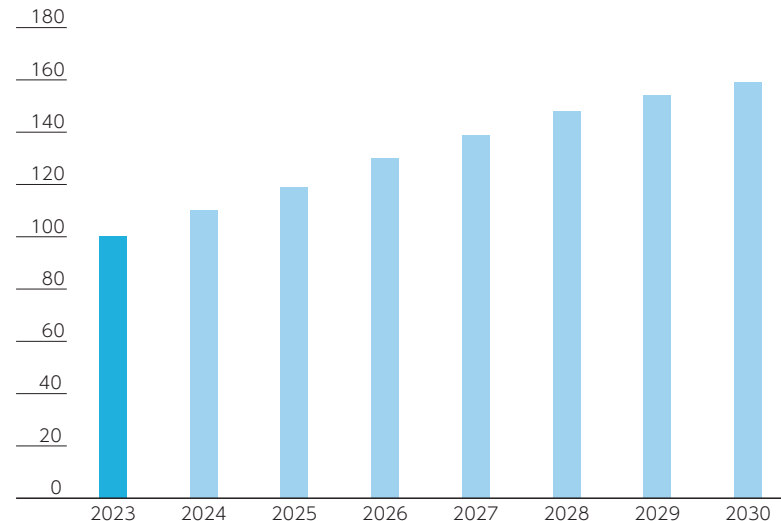
Nitto will make strategic investments designed to maximize customer value for the OLED and automotive product markets.

For polarizing films for smartphones and tablet computers, we will allocate our financial resources to building new process technologies for increased productivity. We will also propel our total solution business that combines multiple components needed to assemble displays, such as transparent adhesive sheets and protection films, both of which are based on our adhesion technology. Through these initiatives, we aim to increase our market share by expanding the number of components and devices used in each customer's product unit, thereby strengthening our presence in the OLED market.

In the automotive product market, we expect the number of displays in one vehicle and the need for uniquely-shaped, larger displays to increase, as self-driving technology evolves and designability improves. To address these trends, we will focus on further honing our competitive advantages

Forecast of Trends in the Area of the Automotive Display Panel Market (Nitto's forecast based on surveys)

\* The baseline year of 2023 = 100



in the market, as we maintain extensive market penetration by pursuing the development of new technologies and trimming costs. In the non-display market, on the other hand, we plan to capture more business opportunities as we leverage sputtering technology and polarizing technology and intensively allocate human resources there.

On top of all this, we continue to develop products on the premise that all new development projects seek to achieve PlanetFlags/HumanFlags certification. Specifically, we will actively reduce environmental impact by investing in product designs that minimize waste and CO<sub>2</sub> emissions, and in UV coaters that significantly reduce CO<sub>2</sub> emissions compared to existing coaters. At the same time, we will enhance the resilience of our business by using DX to optimize the allocation of personnel and production sites, while leveraging our core technologies to develop new products and establish a strategic intellectual property network. We will remain committed to responding to the market needs as we constantly apply our high technological prowess to offer new value to customers.

#### • Circuit materials

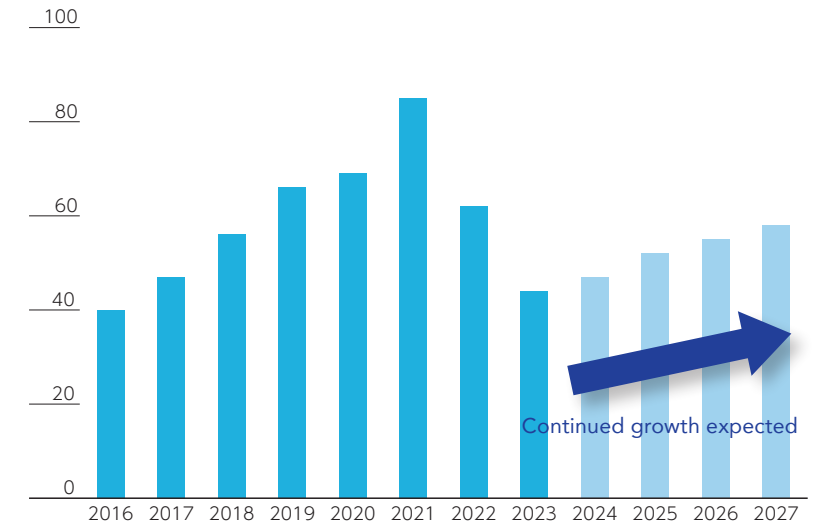
The expansion of a data-driven and "smart" society has heightened the importance of data centers, which we anticipate will result in increased data storage capacity. Having an overwhelmingly high market share with CISFLEX™, Nitto has a great deal of responsibility for its supply. This being the case, we will do our utmost to continue a stable product supply and focus on the development of technologies that achieve larger capacity HDDs. We will also take advantage of some of our technologies, such as miniaturization, thin films, and mechanical properties, to take a chance on new products and markets to expand our product portfolio.

The Nitto Group already has begun developing materials that achieve faster transmission in an attempt to add greater value beyond "conductivity." As such, we believe that we can interpret these changes in the market into business opportunities. We will continue to follow the current approach of developing one-of-a-kind technologies by combining element technologies that we have cultivated in the HDD market to bring about innovation. This should allow us to successfully meet requirements for 5G and 6G, and expand our business into new domains, including the sensing and semiconductor markets.

The Nitto Group has a pantheon of products with a large slice of their respective market. As such, we recognize our immense responsibility in supplying the market. For us to respond to the requirements from the HDD and smartphone markets, we will remain proactive in making capex in a bid to increase and secure production capacity. As part of this endeavor, in fiscal 2023, we implemented the expansion of the Vietnam Plant to ensure BCP and ramp up production capacity. We are also preparing to reduce environmental impact through water resource conservation, decarbonization, and waste reduction, among other measures. To treat a large quantity of water, which is indispensable for circuit board production, we have set aside investment in the water recycling facility for fiscal 2024, where we utilize the Membrane Division's water treatment membrane technology to make greater contributions to the environment. We will make continued efforts to create products that contribute to the environment as we leverage our core technologies to bring about innovation of both products and the environment.

High-Capacity HDD Unit Forecast (Nitto's forecast based on surveys)

HDD unit shipment (million units/year)



Continued growth expected

# Human Life

For coexistence with the global environment, better living, and a fulfilled life

## Overview

### Segment Profile

The "Human Life" segment is comprised of life science, membranes, and personal care materials.

For the life science sub-segment, the Nitto Group performs the manufacturing of polymer beads for oligonucleotide synthesis (NittoPhase™), contract manufacturing of oligonucleotide substances, and drug discovery, by leveraging our long-held knowledge of particle polymer synthesis technology. Our drug delivery system (DDS) transports medication directly to targeted areas within the body, heralding a new era in medical treatment. For the membrane sub-segment, we help conserve water resources and prevent water contamination by manufacturing and selling high-polymer separation membranes, which are used for wastewater treatment. For the personal care materials sub-segment, we produce and sell non-woven fabrics used in paper diapers and wet wipes, functional films, and other hygiene materials.

With these businesses under one umbrella, we are dedicated to realizing "accessible and user-friendly healthcare," "a society where anyone can function," and "a secure and safe future."

### Strengths

- Life science: One-stop service from manufacturing of NittoPhase™ to contract manufacturing, analysis, and formulation of oligonucleotide substances
- Membranes: A global sales system leveraging the Nitto Group's sales outlets and the brand strength that has led the market for more than three decades
- Personal care materials: A close relationship with the leading global player in the personal care product market



## Products

### • Life science

By combining the Nitto Group's core technologies and manufacturing expertise, we conduct to manufacture high-purity and high-yield of NittoPhase™, contract manufacturing of oligonucleotide substances, and the formulation services (aseptic filling). NittoPhase™ has the versatility to support a wide variety of oligonucleotides, NittoPhase™ captures a 65% of the market share. We are able to develop quick and accurate manufacturing processes by our over 1,200 projects experiences with oligonucleotide substances, and contributing to clinical development that requires speedy production transition. In the field of nucleic acid drug discovery, in addition to developing oligonucleotide therapeutics, we license our safe DDS technologies, which have been validated through extensive clinical trials.

### • Membranes

The Nitto Group produces and sells membrane products used in various water treatment applications, leveraging its large membrane surface area technology to contribute to energy and resource conservation. We also offer membranes for ZLD\* (Zero Liquid Discharge) in response to the relevant regulations that are being adopted in China, India, and other countries, as well as membranes for generating ultrapure water, which underpin the recent growth of the electronics industry. Another strength of the Nitto Group is expertise on reverse osmosis (RO) membranes and an original simulation technology, enabling us to propose and design membrane products that meet customers' specific requirements for post-treatment water quality.



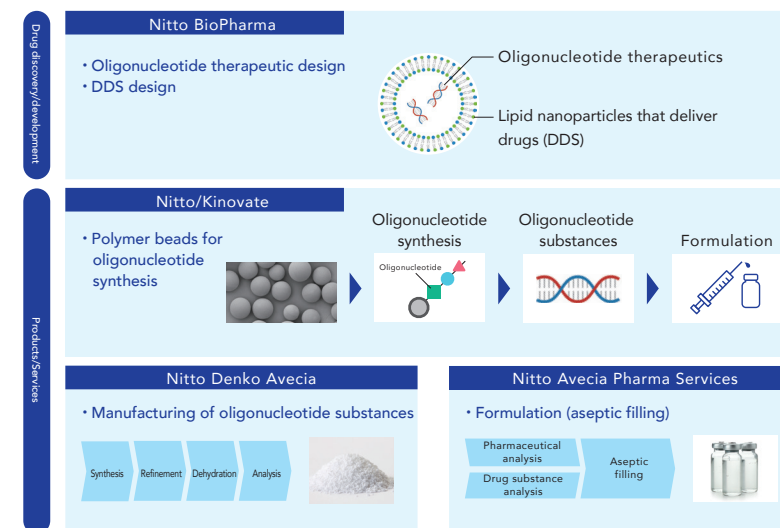
\* A system that recycles wastewater through multiple treatment processes to achieve zero liquid discharge

### • Personal care materials

We design, develop, produce, and sell non-woven fabrics and functional films in Germany, China, the U.S., and Turkey. Our product line includes a range of major products, including elastic films for paper diapers, labels for shampoo and laundry detergent bottles, non-woven fabrics for wet wipes and other wipes, and films for feminine care products. We develop films and non-woven fabrics as individual products and combined products as well as materials with added values required for hygiene products, such as elasticity, breathability, absorbency, and deodorizing properties, in cooperation with our customers.



Diaper-related product



## Mid- and Long-Term Strategies

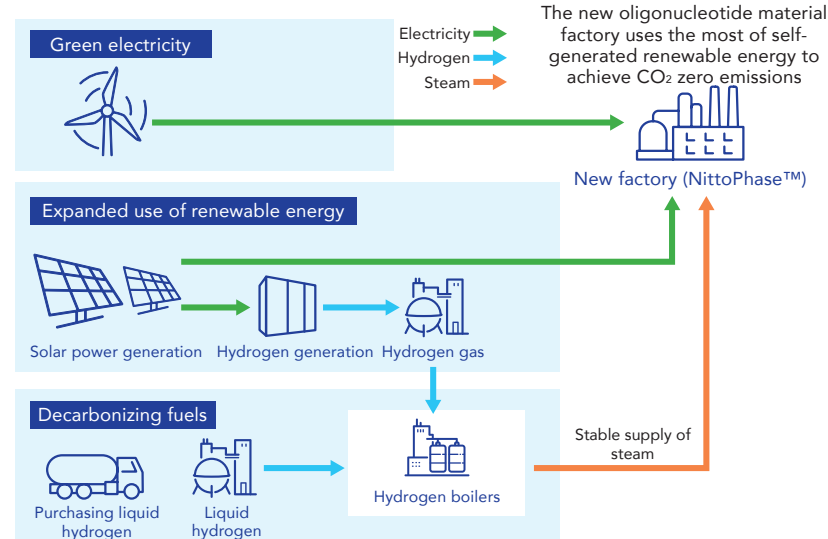
### Transforming the business portfolio to achieve further growth for strong performance

#### • Life science

The Nitto Group is executing investments with the growth of the oligonucleotide drug market. For supply capacity, in fiscal 2023, we launched a new factory in Massachusetts, U.S. with high-volume synthesis capacity for commercial drug production, and in fiscal 2024 and beyond, we will continue to expand low-volume synthesis capacity in Ohio, U.S. and operate new factory in Tohoku Plant (Miyagi, Japan) and California, U.S. to manufacture NittoPhase™ and linker loading. In addition to increasing supply capacity, we will also work to improve productivity through the AI and the establishment of new manufacturing technologies.

For environmental activity, the new factory in Tohoku Plant which completed in April 2024 and start full-scale operations in late 2024, will be the first plant of the Nitto Group using green hydrogen generated from solar power and purchased liquid hydrogen to generate the steam for the manufacturing process in a hydrogen boiler, achieving CO<sub>2</sub> zero emissions.

#### A Factory in Tohoku Plant Using Hydrogen to Achieve CO<sub>2</sub> Zero Emissions

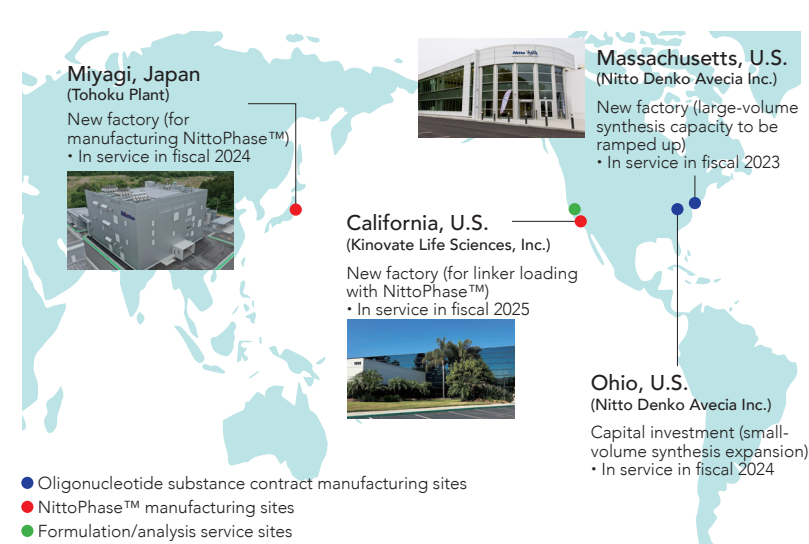


We are also seeking to minimize the environmental impact of our manufacturing process by reducing solvent use, recycling solvents, and using bio-substitutes to lower CO<sub>2</sub> emissions. We are considering replacing highly pure acetonitrile used in production processes with a bio-based solvent. In fiscal 2023, we commenced a joint development project with a U.S. biotech company to successfully manufacture bio-based solvents with small equipment. In fiscal 2024, we plan to introduce a larger-scale pilot machine to accelerate the development and verification of technology for manufacturing processes, which we hope will lead to a mass-production equipment scheduled for fiscal 2025.

For the long-term strategy, our plan is to drive business growth as we seek both the current mainstay of "treatment" with oligonucleotide therapeutics and the new target market of "prevention and diagnosis," thus enriching "Human Life," one of the focus domains of the mid-term management plan.

In the field of nucleic acid drug discovery, new treatment techniques, including mRNA therapeutics and gene editing, are expected to advance rapidly. Our strategy is to enhance our DDS technology, which is crucial

#### Supply Capacity Ramp-up Plan for the Oligonucleotide Therapeutics Business



to next-generation healthcare, and expand our licensing business.

In addition to intensively allocating expert human resources to focus areas, we will continue to invest in growth potential by accelerating joint research with startup companies to realize "accessible and user-friendly healthcare."

#### • Membranes

In response to the tightening of wastewater regulations in various countries, we will develop products for recycling factory wastewater in the key markets in Europe, the Americas, China, and India. Here, we assist customers' business undertakings by adequately treating their factories' wastewater under various conditions. In the electronics industry market, we will venture specifically into the field of ultrapure water used in the cleaning processes of LCD and semiconductor production lines. In addition, we intend to develop selective separation (NF) membranes for ZLD applications that cater to increasingly complex customer demands and energy-saving products that help customers reduce their CO<sub>2</sub> emissions.

Going forward, while making proactive investments in next-generation equipment for increased productivity and lower environmental impact, we aim to increase our share in the market by expanding the list of PlanetFlags products and through strategic alliances with external parties.

#### • Personal care materials

In the baby paper diaper market, there is increasing demand for premium products that are exceptionally gentle on the skin. By developing these high-value-added products, we will focus on expanding global sales channels to complement the current mainstay markets in Europe and the Americas.

Meanwhile, we will also expedite product development to reduce environmental impact. For the non-woven fabric business, in particular, we have begun using biodegradable materials. This will create sustainable and highly profitable products and achieve stable growth.

Our next growth strategy is to create synergies with other segments within the Nitto Group by leveraging the film design of personal care materials business. At the same time, we will also transform our business portfolio by starting development of new films for new fields such as mobility, life science, and mobile.



# Environmental Initiatives

## Basic Ideas

No manufacturing business can avoid impacting the environment through the use of energy and resources or the emission of CO<sub>2</sub> and waste. Meanwhile, climate change and other environmental challenges are rapidly emerging. Working to reduce environmental impact is a social mission for businesses and, as such, we must constantly apply originality and ingenuity.

The Nitto Group laid out in the Basic Policy on Environment its intention to aim at zero environmental impact by expanding the scope of its activities from within the Group to cover the entire supply chain and contribute to the realization of a sustainable society as it taps into its proprietary technologies and knowledge thus far accumulated.

## Promotion System

To solve environmental issues, the Nitto Group has built a governance structure where the Corporate Strategy Meeting plays the central role with instructions and supervision from the Board of Directors. It is with this structure that we draw up short-term and mid- and long-term strategies.

To enhance the effectiveness of our environmental initiatives, we have set up the Global Green Committee chaired by the officer in charge of environmental affairs. Working alongside departments that oversee ESG management and procurement, as well as business execution departments and regional headquarters, this Committee develops strategies and implements and promotes measures to solve issues.



## Targets and Achievements

We are working on environmental issues in accordance with the three environmental targets on CO<sub>2</sub> emissions, the sustainable materials procurement ratio, and the waste plastics recycling ratio.

### CO<sub>2</sub> Emissions (Scope 1 + 2)

Our CO<sub>2</sub> emissions for fiscal 2023 totaled 525,000 tons, ahead of our fiscal 2025 target of 550,000 tons. We are steadily reducing CO<sub>2</sub> emissions toward Nitto Group Carbon Neutral 2050.

### Sustainable Materials Procurement Ratio

Because of the changes in our product portfolio in fiscal 2023, the ratio came in at 16%. We will continue to collect highly accurate data on a global basis to promote the conversion of sustainable materials to achieve our fiscal 2025 target of 20%.

### Waste Plastics Recycling Ratio

The rate was 47% in fiscal 2023, and we are steadily promoting waste separation and reuse to achieve our target of 50% in fiscal 2025.

## Management Targets in the Mid-term Management Plan and 2023 Results

	2023 Results	2025 Targets
CO <sub>2</sub> Emissions (ktons)	525	550
Sustainable Materials Procurement Ratio (%)	16 In Japan (Non-consolidated)	20
Waste Plastics Recycling Ratio (%)	47	50

# Realizing a Decarbonized Society

## Support for the Decarbonization Initiative and the New Target toward 2030

Having achieved its fiscal 2025 CO<sub>2</sub> emission target in fiscal 2023 ahead of schedule, the Nitto Group has announced its support for the Science Based Targets (SBT) to further manage and reduce CO<sub>2</sub> emissions across its supply chains. With this, we have revised upward our target CO<sub>2</sub> emissions (Scope 1 + 2) for fiscal 2030 from 470,000 tons to 400,000 tons (down by 46% vs. fiscal 2020), which aligns with the Nitto Group Carbon Neutral 2050. Under the new targets based on the assumption of SBT certification, we will advance our decarbonization initiatives.

To facilitate our efforts to reduce CO<sub>2</sub> emissions through the use of renewable energy within the Group and the implementation of renewable energy throughout society, on May 23, 2024, we became a member of RE100 (Renewable Energy 100%), a global corporate renewable energy initiative committed to 100% renewable electricity. Accordingly, we will aim at 100% renewable energy on a global basis by 2035.

To ensure the achievement of the new 2030 target, we have set aside 80.0 billion yen for capital investment over ten years from 2021. Key initiatives in this regard include improving energy efficiency by optimizing equipment operations and replacing outdated equipment with more efficient models, as well as increasing the use of renewable energy by adding or expanding solar power generation systems.

## Initiatives to Reduce Nitto's Own CO<sub>2</sub> Emissions (Scope 1 + 2)

In fiscal 2023, the Nitto Group's CO<sub>2</sub> emissions (Scope 1 + 2) amounted to 525,000 tons, which is far lower than the target amount of 550,000 tons. This impressive achievement is attributable to greater use of electricity generated from renewable energy sources, as well as ongoing efforts toward energy conservation and deployment of solvent-free solutions at production processes. For these initiatives, we spent approximately 8.6 billion yen in fiscal 2023.

In 2024 and beyond, we will continue our initiatives to promote energy conservation and conversion to renewable energy. Our efforts here include converting products that contain solvents, which require significant energy for drying and recovery, to solvent-free alternatives, and conserving energy by utilizing waste heat and optimizing production control and planning.

We will also attempt to establish technologies for CO<sub>2</sub> recovery, among others, by strengthening our efforts to reduce Scope 1 emissions in order to achieve carbon neutrality by 2050 (Scope 1 + 2).

## Initiatives for Renewable Energy

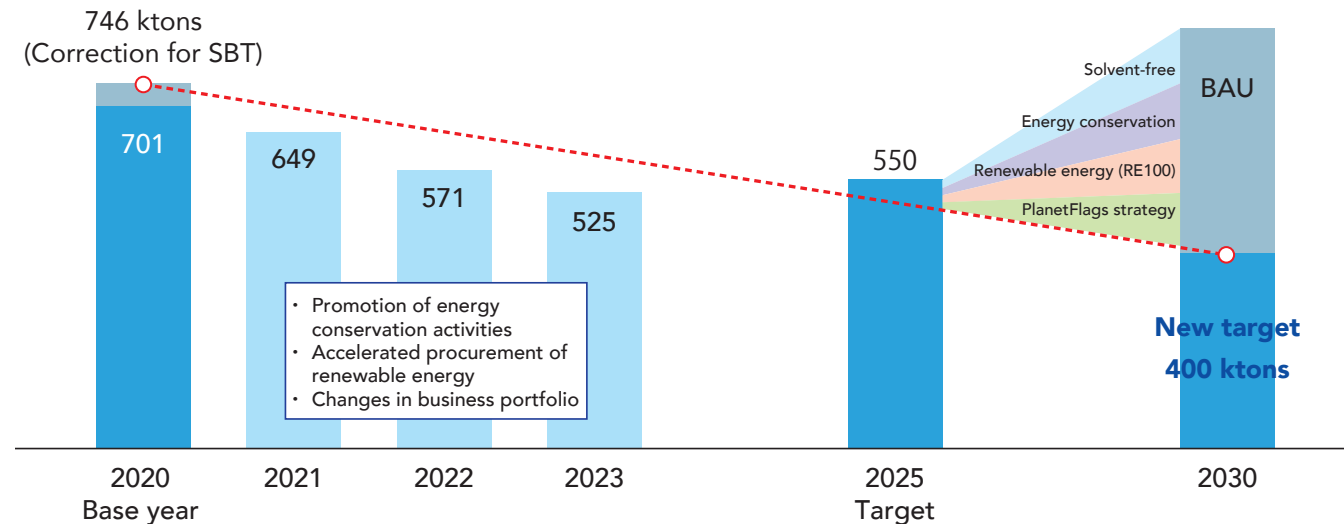
The ratio of renewable energy used was 41%, up from 38% in the previous fiscal year, which is interpreted into a reduction of CO<sub>2</sub> emissions by 30,000 tons.

Since 2005, the Nitto Group has aggressively introduced solar power generation systems for in-house power generation. As of the end of 2023, the annual power generation of the Group totaled 18,000 MWh, doubling the previous fiscal year's figures and increasing the ratio of in-house generated electric power to total power consumption to 2%. We aim to complete the installation of solar power generation systems at all possible sites by 2025.

Given the prospect of a short supply of renewable power in the future, we will accelerate its social implementation and work for its stable procurement from a long-term perspective. By 2030, we aim to establish a stable demand-supply environment for electricity derived from renewable sources by utilizing the power purchase agreement (PPA) model.

### Nitto's New Targets for Scope 1 + 2

- ① New 2030 target: 400 ktons
- ② RE100: Achieve by 2035



### Major Initiatives Through 2030

Solvent-free solutions: For products and market  
 Energy conservation: Use of exhaust heat, high-efficiency equipment  
 Renewable energy: Procure renewable energy globally

## Initiatives to Reduce CO<sub>2</sub> Emissions throughout the Supply Chain

To achieve carbon neutrality for the entire society, it is vital to manage and reduce CO<sub>2</sub> emissions throughout the supply chain, as well as within the Group. To reduce Scope 3 emissions, we must collect comprehensive data spanning from the procurement of raw materials through transportation, and on to the use and disposal by customers.

Because of this, with input from outside experts, we calculated our Scope 3 CO<sub>2</sub> emissions on a global basis in 2023, to get hold of actual amounts. Our Scope 3 CO<sub>2</sub> emissions for fiscal 2022 were found to be 2,622,000 tons, with emissions from the production of raw materials constituting the largest portion at 40%.

Our next step is to select categories, such as raw material production, in-house waste disposal, transportation of raw materials and products, and disposal of products, and proceed with reduction activities.

## Initiatives at Each Site

### Renewable energy

#### Commencement of Solar Power Generation (Ibaraki Plant)

In fiscal 2023, a new solar power generation system with a maximum generation capacity of 403 kW, consisting of 611 large panels, was introduced at the Ibaraki Plant and started generating power in January 2024. It is expected to generate up to 460 MWh per year. The Ibaraki Plant has achieved 100% conversion of purchased electricity to renewable energy by switching to PPA renewable energy electricity in fiscal 2023. With the introduction of this system, we will further promote the reduction of CO<sub>2</sub> emissions.



Solar power generation system on the roof

### Energy conservation

#### Saving Energy in Clean Room (Nitto Denko Fine Circuit Technology (Shenzhen) Co., Ltd.)

Inspired by outdoor air handling units for bringing air into cleanrooms, Nitto Denko Fine Circuit Technology (Shenzhen) Co., Ltd. initiated activities for energy saving. By converting conventional electric heaters to heat pumps with higher energy efficiency, and recycling cool air from heat pumps for cooling chillers, they successfully reduced electricity consumption by 68% and annual CO<sub>2</sub> emissions by 399 tons. They have been actively promoting energy conservation activities, particularly for utility equipment, and the cumulative amount of CO<sub>2</sub> emission reduction from 2014 to 2022 is 5,900 tons.



Heat pump system

#### Optimization of the Exhaust Gas Treatment System (Nitto Advanced Film Gronau GmbH)

Nitto Advanced Film Gronau GmbH conducted activities to reduce the use of natural gas for regenerative thermal oxidizers (RTOs), which need to keep the heat storage tank at a constant temperature for sustained combustion treatment. As such, they must use natural gas as fuel when solvent concentration in exhaust gas is low at startups or when production fluctuates. By measuring exhaust gas concentration in real time to develop an efficient production plan that minimizes concentration fluctuations, they significantly reduced natural gas consumption. As a result, they were able to curb natural gas consumption by 40% and CO<sub>2</sub> emissions by 620 tons per year.



Regenerative thermal oxidizers (RTO)

## Realizing a Circular Society

### Waste Plastics Recycling

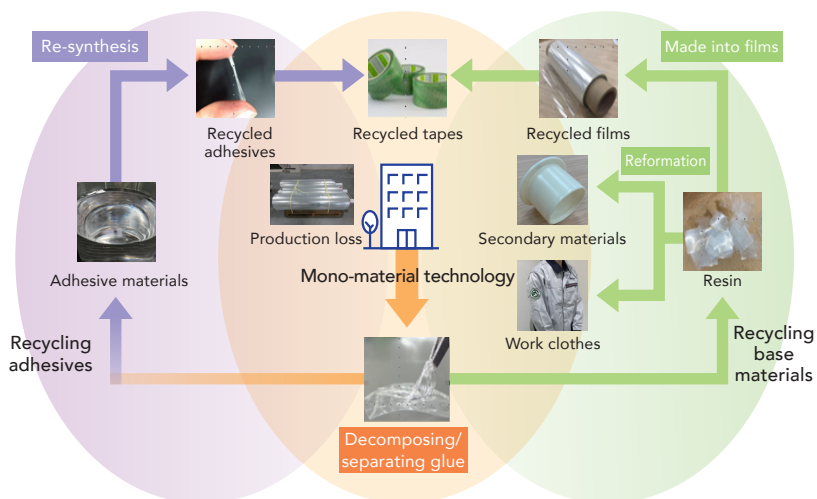
At the Nitto Group, approximately 50% of waste generated is petroleum-derived plastic waste. As such, we recognize cyclic use of resources as extremely important and pursue related activities, with the waste plastics recycling ratio being an environmental target.

In fiscal 2023, the waste plastics recycling ratio ended up at 47%. This increase is attributed to enhanced internal and external usage driven by improved sorted garbage collection practices.

To accelerate recycling, it is important to separate waste plastics into single material units (mono-materials) within the company. To separate products into mono-materials, the Nitto Group is currently working on material recycling technology. A good example is technology for separating tape products into adhesives and base materials. With this technology, we aim to separate and decompose glue adhering to base materials, recycle adhesives back into adhesive materials and convert base materials into resin for use in work clothes, secondary materials, and films.

By establishing these technologies for mass production, we aim to contribute to a circular society as we work on the 2030 targets.

#### Cyclic Use of Waste Plastics



## Conserving Biodiversity

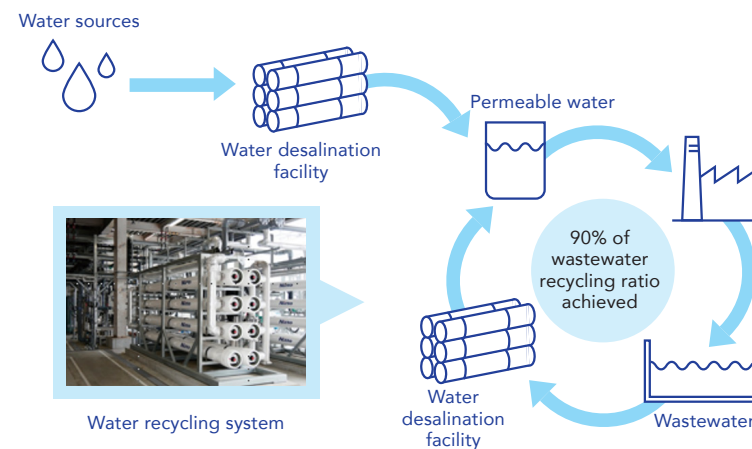
### Conservation of Water Resources

Amid growing water stress and deteriorating water quality on a global scale, we are committed to conserving limited water resources by using water efficiently in our business activities and promoting business continuity measures against water supply disruptions caused by natural disasters and abnormal weather, aiming to fulfill our supply responsibilities as a supplier.

In 2018, Nitto Shiga Plant announced its plan to become a “recycling-oriented green plant.” True to this plan, they recycle wastewater and effluents generated at the plant using water treatment technology made possible by the Nitto Group’s reverse osmosis (RO) membranes that purify water by filtering out impurities. Over the five years since this initiative began, they slashed water intake by 560,000 tons. As of March 2023, their wastewater recycling ratio reached 90% (vs. 50% in fiscal 2018).

Going forward, we plan to market our products that incorporate in-house established or verified technologies and schemes to countries and regions with high water risk, including emerging countries. By combining these water treatment technologies and other environmental technologies, we will contribute to solving social issues through business by ensuring access to secure and safe water and conserving water resources.

#### Cyclic Use of Water

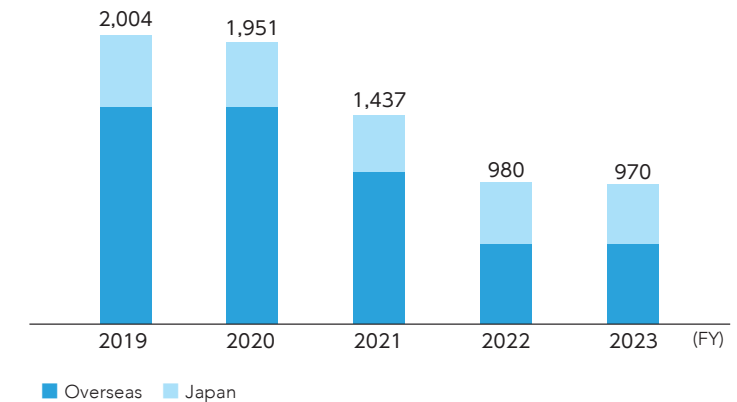


### Prevention of Air Pollution

Volatile organic compounds (VOCs) can cause PM2.5 and photochemical smog, and curbing their emissions poses a challenge. As part of its efforts to minimize any impact on the environment surrounding our plants and employees’ health, the Nitto Group is dedicated to reducing VOCs globally. In fiscal 2023, we reduced VOC emissions by 10 tons compared to the previous fiscal year.

We will further promote solvent-free manufacturing by utilizing ultraviolet (UV) curing and water-based adhesives while curbing the use of hazardous substances in accordance with voluntary control standards, thus making continued efforts to reduce VOC emissions.

#### Annual VOC Emissions (tons)



\* From fiscal 2023, the number of organic solvents included in the calculation has been expanded from 6 major solvents to 24 including other solvents used, therefore, the calculation figures for fiscal 2022 have been revised to the same standard.

# Disclosure Based on TCFD Recommendations



Recognizing that responding to climate change is an important management issue, the Nitto Group has strategically included such responses in its management agenda and announced its support for the recommendations by the Task Force on Climate-related Financial Disclosures (TCFD) in May 2022. After announcing our support, every year, we assess the impact that climate-change-related risks and opportunities may have on our business and make revisions as necessary. In fiscal 2024, we are refining our governance and risk management systems related to climate change, carefully considering the impacts on our business as we develop our responses.

## Governance

The Nitto Group has set “Realizing a decarbonized society” as one of its material issues for sustainability and is strengthening its efforts to combat climate change. To solve climate change issues, the Group is working to establish and promote short- to mid-term and long-term strategies by establishing a governance system where President-Director & CEO is appointed as the superintendent, and the Corporate Strategy Meeting plays the central role under the direction and supervision of the Board of Directors.

In addition, in order to increase the effectiveness of climate change initiatives, the Group has established the Global Green Committee led by the officer in charge of promoting climate change-related issues. We strengthen cross-organizational coalitions while examining strategies and implementing and promoting countermeasures against issues.

## Strategies

In line with external trends, as exemplified by the conclusion of the 2015 Paris Agreement and the Japanese government’s carbon-neutral declaration, the Group carried out a scenario analysis regarding transition risks and physical risks and opportunities expected due to climate change across the entire value chain, which includes not only the Group but also its suppliers and customers. The results of the scenario analysis have been incorporated into 2030 management indicators, including Nitto Group Carbon Neutral 2050, and into the mid-term management plan Nitto for Everyone 2025, confirming the effectiveness of the strategy. Meanwhile, the Group has revised its CO<sub>2</sub> emission target from 470 to 400 ktons based on scientific grounds, making it a higher target commensurate with 1.5°C. To achieve the goal, the Group will promote initiatives to remove solvents, save energy, use renewable energy, and create products that contribute to the environment, thereby minimizing risks and maximizing opportunities.

To realize a decarbonized society, the Group recognizes measures against climate change as its material management issue and strategically incorporates them into its management.

## Risk Management

The Group appropriately manages key risks and opportunities related to climate change that management recognizes may significantly impact its business activities and implements comprehensive management across the Group by combining them with other key risks that also significantly impact its business activities.

Regarding key risks and opportunities related to climate change, the Group understands the impact of changes in the internal and external environment; evaluates and selects (identifies) relative importance based on the “magnitude of impact” on business in the case of an incident and the “possibility of occurrence,” which actually occurs; and determines the priority of the risks and opportunities.

The key risks and opportunities related to climate change will be monitored by business execution departments and regional managers in collaboration, while the department responsible for environmental issues will assume responsibility for managing them. Information regarding monitored risks and opportunities, together with information managed by other special function departments, will be reported and deliberated monthly at the Corporate Strategy Meeting, which consists of Directors and Vice Presidents. The results of the deliberation will be instantly communicated to related departments, and countermeasures against risks and measures for opportunities will be promptly taken to strengthen controls. The progress of the implementation and improvement will be again reported to and monitored at the Corporate Strategy Meeting to increase the effectiveness of the Group management.

## Indicators and Targets

The Group has set “Realizing a decarbonized society” as one of its material issues for sustainability and believe that reducing CO<sub>2</sub> emissions, a cause of global warming, is essential for a sustainable growth and the realization of a sustainable environment and society, and that it is an important social responsibility.

Therefore, the Group ensure that the countermeasures are implemented to minimize risks and maximize opportunities and has established 2030 management indicators and targets to regularly monitor and manage the status of those countermeasures. The main indicators and goals, such as CO<sub>2</sub> emissions (Scopes 1 + 2), waste plastics recycling ratio, sustainable materials procurement ratio, and PlanetFlags & HumanFlags category sales ratio are also set as 2030 management targets and managed by the Group as a whole.

In addition, the Group aims to achieve net zero CO<sub>2</sub> emissions (Scope 1 + 2) by 2050 and has declared the Nitto Group Carbon Neutral 2050.

Type of risk/opportunity	Event	Assumed risks and opportunities
Transition risks	Policy and laws and regulations	An increase in transition costs (raw material costs) to low GHG-emitting raw materials
		A substantial increase in renewable energy procurement costs due to the spread of renewable energy
	Technology	An increase in capital expenditures (installation costs of renewable energy facilities) due to the spread of renewable energy
		An increase in GHG emission price
Industry/market	Transition to low carbon products due to investment in new technologies	An increase in taxation costs (operating costs) due to the increased introduction of carbon taxes and GHG emission levies
		A substantial increase in capital expenditures (installation costs of high-efficiency facilities) due to the development and introduction of high energy-efficient technologies
		An increase in petroleum-derived raw materials procurement costs due to soaring fossil fuel prices
Physical risks	Acuteness	An increase in petroleum-derived raw material costs due to carbon taxes and other taxes in the upstream of the value chain passed on to raw materials
		An increase in energy prices due to soaring fossil fuel prices
		Damage to the company’s buildings, facilities, infrastructure, etc., plant shutdowns, and lost opportunities (decrease in revenue) due to a flood, high tide, etc.
Opportunities	Products/services	Suspension of operation at the company’s plants, loss of opportunities (decrease in revenue) due to major suppliers being hit by a flood, high tide, etc.
		An increase in demand for low-carbon products (Change in preferences)
		An increase in revenue of products contributing to the environment due to increased demand for recycled products
		An increase in demand for medical-related products (response to infectious disease)
		An increase in revenue of medical-related products due to an increase in health damage, such as infectious diseases due to rising average temperature

# Safe Manufacturing

## Improvement of the Workplace Environment

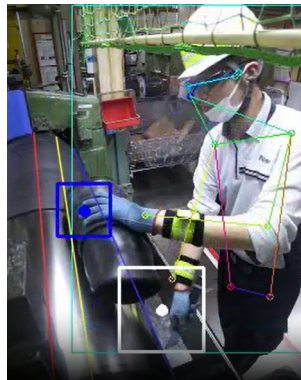
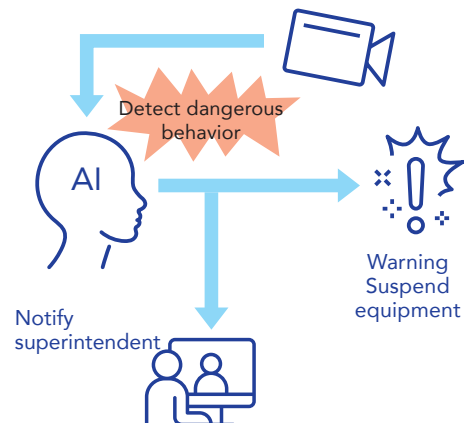
### Initiatives to Reduce Risks of Accidents and Injuries

Under the slogan, "We place safety before everything else," the Nitto Group is committed to creating a workplace environment where everyone who works on our premises, including our employees and those from subcontracting businesses or construction services, can attend to their duties in good health and without anxiety.

One of the current priorities to achieve this is an assessment of risks uniquely associated with machinery and equipment and the risks employees run while at work, to create a workplace environment that protects employees from suffering severe injuries. Those risks are rated on a scale of five grades (S, A, B, C, and D), and we are working hard to reduce such risks in a bid to eliminate "risks ranked A or above that can cause serious accidents" by fiscal 2030. We make the most of AI and other tools to develop new technologies to address complex risk mitigation challenges. One such technology was developed last fiscal year: the dangerous behavior / protective equipment detection AI system for mixing roll, which was certified for conformity with Safety 2.0<sup>\*1</sup> by the Institute of Global Safety Promotion (IGSAP).

In a similar vein, we conduct risk assessments to prevent accidents and diseases caused by chemical substances, aiming to eliminate risks ranked A or above. Since April 1, 2023, we are required to handle chemical substances under stricter regulations, and we are ensuring that the entire Nitto Group complies with these regulations on chemical substances without fail.

AI Detects Dangerous Behaviors and Non-existence of Protective Equipment from a Stationery Camera Video



Furthermore, to enhance captaincy for safety among those in managerial positions, in fiscal 2021, we introduced a safety officer program<sup>\*2</sup> in Japan. We have completed relevant training for all managers by fiscal 2023, and will make this training a required course for those promoted to managerial positions.

Along with these initiatives, we will continue to enhance safety awareness and foster a safety culture on a daily basis as we incorporate new training programs, thus eliminating risks ranked A or above.

<sup>\*1</sup> A technological measure to ensure safety where, through the use of information and communication technology (ICT), etc., people, machines, and the environment share information to achieve collaborative safety. Collaborative safety is a safety concept in which people, machines, and the environment cooperate to build safety by sharing information.

<sup>\*2</sup> A personnel training/certification program aimed at assessing the safety-related knowledge and comprehension of senior executives, including top managers, those in managerial positions, and staff employees

### Assessment of Safety Culture to Prevent Occupational Accidents and Injuries

At the Nitto Group, we aim to "achieve zero accidents and injuries." We are also working to foster a safety culture to achieve this goal. In fiscal 2022, we began assessing safety culture in order to effectively prevent occupational accidents and injuries. This is an assessment of the level of safety culture at each site through the four perspectives of "awareness," "system," "performance," and "actual status." This assessment process is designed to help each site understand their current safety status, identify the direction they need to improve in, and maintain or enhance their safety standards.

In Japan, a total of 14 sites were subject to assessment in fiscal 2022. We plan to assess all our global sites by the first half of fiscal 2025. To prepare for the global rollout, we had safety leaders in each region thoroughly scrutinize the content of the surveys so that we can make effective assessments by taking into account local cultures and customs in each country. In fiscal 2024, we will enter the implementation phase. With everyone in the Nitto Group uniting as one, we are doing our utmost to have a safety culture deeply ingrained in the organization by

pursuing process-oriented activities.

## Management of Chemical Substances

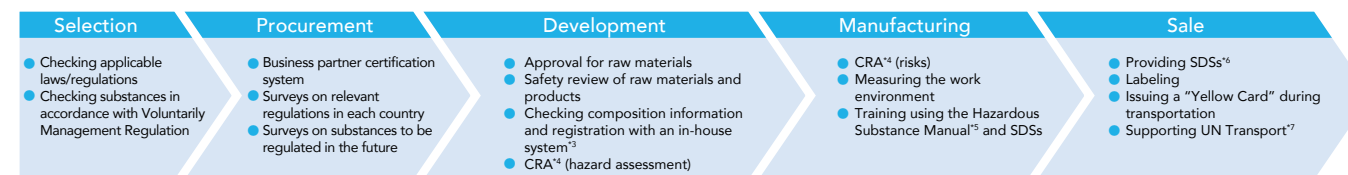
### Proper Management of Raw Materials and Responses to Regulations

The Nitto Group considers it our crucial responsibility to properly manage close to 4,000 varieties of chemical substances used as raw materials, ensuring compliance with its strict Voluntary Management Regulations in place. For raw materials purchased from suppliers, we have consistently monitored the use of prohibited substances by reviewing supplier reports. We are currently building a system to manage a greater scope of such checks that includes their manufacturing processes as well.

In response to the revision of relevant laws and introductions of new regulations in Europe and elsewhere, we reinforce our information collection in collaboration with our overseas sites, or produce and distribute monthly newsletters carrying the latest information on chemical substances, ensuring we stay informed daily and remain aware of relevant trends.

The PFAS (per- and polyfluoroalkyl substances) restriction proposal released in February 2023 as part of the European REACH Regulation has since given rise to similar movements to reinforce regulations in the Americas and other regions. Against this backdrop, the Nitto Group is preparing to provide relevant agencies with the necessary data in our capacity as an intermediate materials supplier. Additionally, we are collaborating with other players in the supply chain and trade organizations to submit a public comment to these agencies. On top of these external activities, we are checking if we can find alternatives for each material within the Group. Going forward, we will take appropriate and necessary action as we carefully determine the scope of regulations and engage with customers through dialogues to reach a consensus.

### Nitto's Chemical Substance Management System



<sup>\*3</sup> Nitto's unique management system for chemicals in products

<sup>\*4</sup> Chemical Risk Assessment

<sup>\*5</sup> Nitto's original chemical substance training tool

<sup>\*6</sup> Safety Data Sheets

<sup>\*7</sup> United Nations Recommendations on the Transport of Dangerous Goods

## Misconduct Regarding the Municipal Water Supply Membrane Module Certification System

In Japan, quality and safety standards for municipal water supply membrane module products are set by ordinance of the Ministry of Health, Labour and Welfare. Performance, quality, and other attributes of membrane module products are further enhanced by the certification program of the Association of Membrane Separation Technology, Japan (AMST), in which membrane products that satisfy its voluntary standards are recognized.

On January 5, 2024, Nitto announced that it had engaged in the misconduct related to the certification procedures of its municipal water supply membrane module products by the AMST. On January 9, 2024, the AMST cancelled its certification of Nitto's twenty membrane module products.

We would like to take this opportunity to express our deepest apologies for the considerable anxiety and inconvenience that this has caused our business partners, water utilities, water users, the AMST, and others concerned.

As soon as the case came to our attention via whistle-blowing on September 12, 2023, we lost no time confirming the safety of the products in question, as well as its causes and details, reported our findings to the AMST on November 28, 2023, and explained to the AMST the adoption of different procedures along with our remedial measures on December 21, 2023. We then decided that, in addition to investigating the causes of the incident and discussing future preventive measures, we should consider ways to improve the situation after seeking expert opinions once again on the safety of the products that we had delivered, thus establishing an Investigation Committee composed of external experts. In June 2024, we received the investigation report from the Committee, which is available for viewing on our website.

As of June 20, 2024, nine of our products have been re-certified, and we are proceeding with the necessary work and procedures for re-certification of the remaining products (excluding three that are no longer in use and do not require re-certification).

### Present State and Future Plans

In response to this incident, the Nitto Group shared the direction of its policy toward quality compliance at the Global Meeting, where senior executives attend. Aside from this, we have begun revisiting past cases at manufacturing and inspection processes in accordance with the 5-Gen Principle\* in order to identify latent issues on a global scale. Furthermore, we plan to conduct an in-house awareness survey on the quality of our products, in addition to the conventional surveys.

Going forward, based on the report findings by the Investigation Committee, we will plan more revisions and new preventive measures and implement them once they are ready.

\* A concept used by manufacturers that stresses the importance of *gen-ba* (the place where relevant activities happen), *gen-butsu* (relevant things), and *gen-jitsu* (actual conditions), collectively referred to as the 3-Gen Principle, as well as *gen-ri* (knowhow) and *gen-soku* (rules)

## Overview of the report by the Investigation Committee

### Details of the certification misconduct

For 20 varieties of Nitto's AMST-certified municipal water membrane module products, we have conducted certification tests in a different manner than what AMST has specified since 2001, when this certification system began, and have submitted the results of such tests to have the products continuously certified by the AMST.

### Establishment of the Investigation Committee

On September 12, 2023, an employee brought this incident to our attention through whistle-blowing. We immediately launched an investigation into the alleged certification misconduct to verify the whistleblower's claims. After confirming the safety and other attributes of the affected products, we reported these findings to the AMST on November 28 and December 21, 2023.

On January 5, 2024, we disclosed the inappropriate practices on our website and established an Investigation Committee consisting of external experts on March 1, 2024.

### Overview of the Investigation Committee

#### ■ Scope of activity

- Investigation of causes of why this incident occurred and continued
- Confirmation of safety of municipal water membrane module products that had been delivered before the certification was canceled
- How quality control should be and its present state
- Recommendation for recurrence prevention

#### ■ Members

Chair:	Masato Igoshi	(Attorney)
Member:	Hiroshi Yamasaki	(Attorney)
Member:	Michihiro Fujita	(Attorney)
Member:	Masahiko Munechika	(Professor, Faculty of Science and Engineering, Doctor, Waseda University)
Member:	Hiroshi Yamamura	(Professor, Faculty of Science and Engineering, Doctor, Chuo University)

#### ■ Period of activity

From March 1 to June 10, 2024

### Verification of products that have been delivered

These products do not impact municipal water supply users, as it is unlikely that they fail to meet the standards set by the Ordinance of the Ministry of Health, Labour and Welfare.

### Analysis of causes

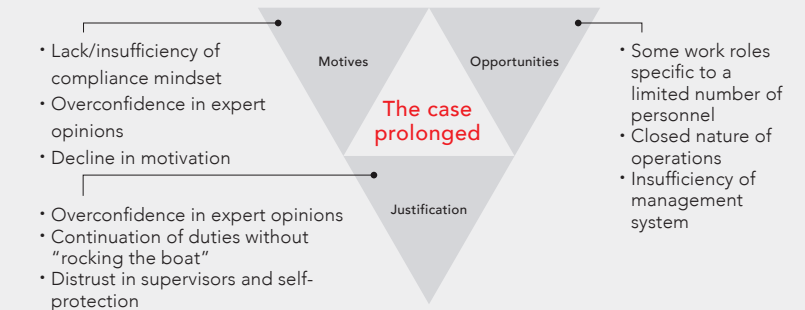
#### ■ Human-related

- (1) Some work roles specific to only a limited number of personnel
- (2) Prevalence of a "don't-rock-the-boat" mentality
- (3) Lack of far-sighted imagination

#### ■ System-related

- (1) Responsibilities and authorities of each department not clearly determined
- (2) Lack of the succession process
- (3) Unavailability of operating procedures
- (4) Indifference of supervisors
- (5) Lack of a workplace culture for human resource development

### Triangle of inappropriate practices



### Recommendations for recurrence prevention

- Management's profession of the need for mindset reform
- Acquisition of expert knowledge, skills, etc.
- Establishment of a department with competence in certification-related services
- Creation of a job hand-over system
- Need to receive certification by AMST
- Optimized personnel allocation
- Information sharing
- Proactive use of *Kuruma-za*
- Understanding of basic approaches to quality and enhancement of quality management systems

Please refer to our corporate website for details. (Japanese only) [https://www.nitto.com/jp/ja/press/2024/0610\\_02.jsp](https://www.nitto.com/jp/ja/press/2024/0610_02.jsp)

# Nitto Group's Human Resource Strategy as per the Chief Human Resources Officer



## To the Future: Beyond an Organization Where Diverse Employees Enjoy Challenges

Aiming towards "Reformation of organizational culture to accelerate challenges," the Nitto Group will create a workplace culture where diverse talents can enjoy taking on challenges. By creating a work environment where everyone feels rewarded and satisfied with what they are doing, we will dedicate ourselves to realizing "The 2030 Ideal State."

### Yasuhito Ohwaki

Director, Senior Executive Vice President, CHRO  
General Manager of Corporate Human Resources Division

### Aligning Human Resource Strategy with Corporate Management Strategy

The Nitto Group sees human resources as its most valuable asset. Accordingly, we ensure that our business strategy and human resource strategy are consistent with each other and that initiatives for DE&I (Diversity, Equity & Inclusion) receive due attention, thus propelling ESG management and human capital management.

For a business to ensure a sustainable flow of output, it is vital that its human resource strategy is linked to its corporate management strategy. We aim to be an essential top ESG company by promoting the "creation of a work environment where everyone feels rewarded and satisfied with what they are doing," aligning this initiative with our Niche Top Strategy and ESG Strategy.

With up to 80% of the Nitto Group's revenue coming from outside of Japan, demand from our customers and end users is shifting overseas. Since taking charge of Human Resources Management Division, I have deepened mutual understanding through dialogues with business divisions. In line with each region's specific requirements and needs, we established an agenda for our division and executed our human resource strategy, while ensuring governance throughout the process. To deepen conversations with members of the Human Resources Management Division, who put this strategy into practice, we set up town hall meetings to explain the state of Nitto's management and business, what each business division wants from our division, and the objectives of each human resource initiative.

Progress in each initiative is reported at the Board of Directors meetings, where advice from Outside Directors is used for our future programs. Additionally, the selection and placement of the next generation of talent to take on management roles, and the talent that will follow, is being discussed with Directors at the Human Resources Development Meetings.

### Key Success Factors for Creating New Value

One of the focus items of the current mid-term management plan, Nitto for Everyone 2025, is "Reformation of organizational culture to accelerate challenges." In line with this, we are implementing individual programs to "enhancement of job satisfaction," "enhancement of employee engagement and motivation by reforming organizational culture," "development of global leaders and individuals initiating change," and "recruitment/retention of human resources."

In order to create a work environment where everyone feels rewarded and satisfied with what they are doing, we believe that we can tap into our strengths more if we hone our teamwork, customer-oriented approaches, and individual skills. To make this happen, we think it crucial that diverse human resources gather together for in-person dialogues to understand and respect each other.

For example, the Nitto Global Business Academy (NGBA) provides its participants with opportunities to discuss various challenges and to learn about each other's cultures, values, and perspectives to deepen mutual understanding. After the program concludes, participants actively work on resolving issues within their own workplaces.



We also provide many different forms of opportunities and events where everyone, from managerial levels to frontline workers, can actively communicate and exchange ideas as they take on challenges. At the NIC, we invite innovative ideas on new products and businesses, while at the GATE small group activity, members present proposals for workplace improvements. Many employees participate in these annual events, with some particularly enjoying the experience. Furthermore, when it comes to horizontally deploying selected best practices, employees communicate with each other, exchange information, and work on them, which leads to even more new ideas.

One challenge that we are currently addressing is talent portfolio management.

As customers become more diverse, we need to change accordingly. We have introduced a global HRIS (Human Resources Information System) to visualize our talent portfolio, but what is important here is how we put such data into use. To optimally assign talent, we identify candidates through a globally shared job grade policy based on job descriptions and expected roles. We hope to make it easier for the members of our management team and those in managerial positions to manage our talent in collaboration with the Human Resources Management Division.

## Working to Achieve the Three HR-related “Future-Financial” Targets

Our “future-financial” targets for 2030 in HR include the female leaders ratio, employee engagement scores, and challenge ratio. Our policy for these targets is to index them whenever possible and actively disclose numerical data. By openly disclosing what has yet to be achieved and committing to targets, we are able to quickly implement actions for improvement.

### Female Leaders Ratio

We define leaders as those in managerial positions who oversee subordinate members. Our target of female leaders ratio is 30% by 2030. For Nitto to respond to the diversification of customers, we believe that there are many more opportunities for women to be empowered that have yet to be tapped into. Instead of focusing solely on numbers, we are committed to developing female talents who can fulfill leadership roles effectively.

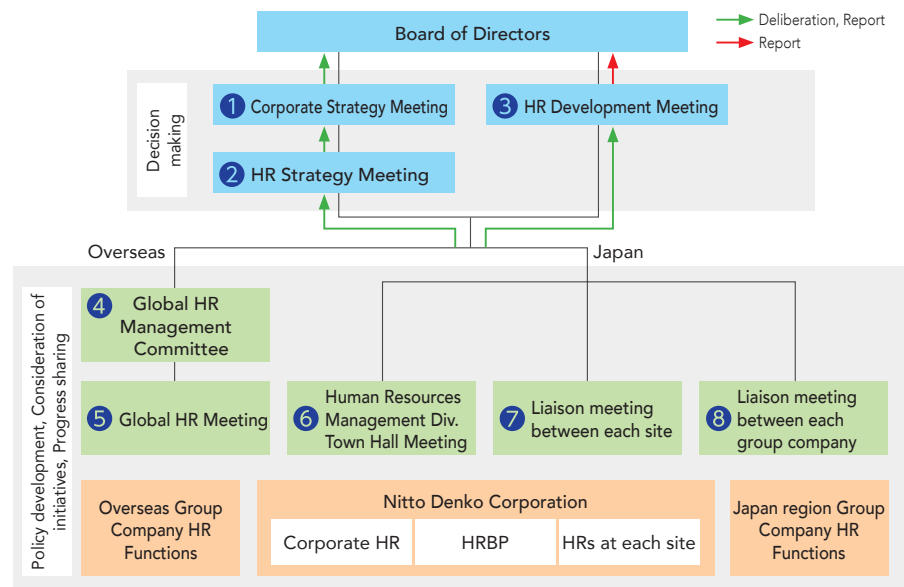
In response to a low ratio of female leaders in Japan, we initiated the FLOWER Program\* in April 2022 to cultivate female leaders who can drive organizations and teams within Japan. We encourage program participants to come face-to-face with their career and, even while parenting, attempt professional challenges, such as overseas assignments and extended business trips, as they communicate frequently with their supervisors. We are also active in inviting female leaders from outside the company to give training sessions to build leadership mindsets. These are just some of the training opportunities designed to broaden their experiences.

\* Female Leaders Ownership Empowerment Program is designed with the hope that individuals of any gender can flourish, embodying the program's vision of everyone blooming into magnificent flowers.

### Engagement Scores

We conduct an employee engagement survey once every two years. For the third survey in fiscal 2023, we broadened the scope to include production sites at our overseas locations, carrying out the survey at all Group sites. The score showed an improvement from the previous survey. To elevate employees’ motivation, we aim to increase job satisfaction by implementing programs that satisfy employees with various aspirations,

### Human Resource Management Structure



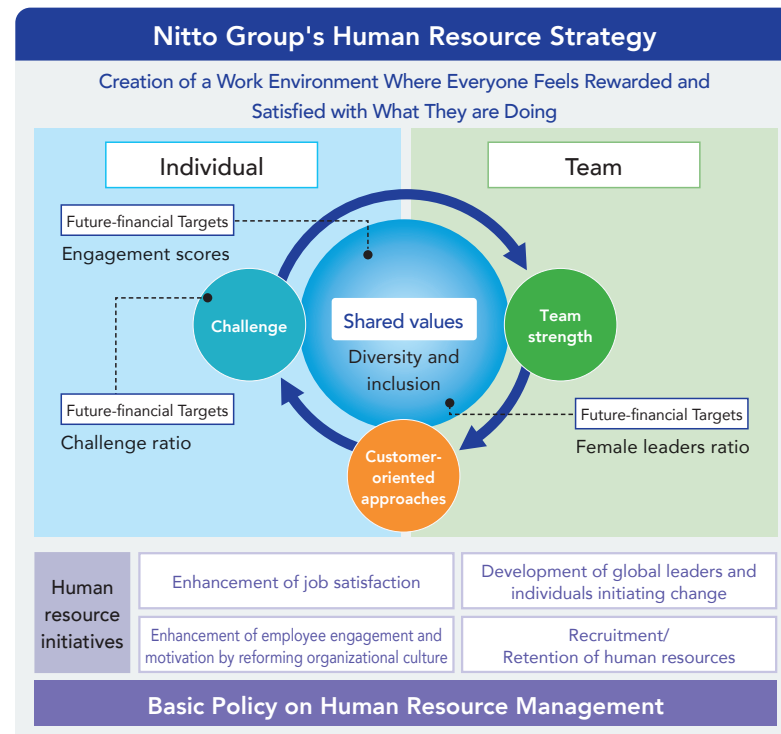
### Descriptions of Each Meeting

Meeting Name (freq.)	Meeting purpose, participants
1 Corporate Strategy Meeting (monthly)	Focus; HR policies Members: President, each Executive Officer
2 HR Strategy Meeting (monthly)	Focus; HR policies & procedures Members: General Manager of Human Resources Management Div., each manager of Human Resources Management Div.
3 HR Development Meeting (annual)	Focus; Talent development, promotion, etc. Members: Directors, Human Resources Management Div.
4 Global HR Management Committee(semi-annual)	Formulation of global HR strategy Members: Each Region Director, Nitto HQ HR
5 Global HR Meeting (quarterly)	Focus; Global HR initiatives Members: Each Region HR Leader, Nitto HQ HR
6 Human Resources Management Div. Town Hall Meeting (monthly)	Focus; Company-wide management situation Members: All members of Human Resources Management Div.
7 Liaison meeting between each site (monthly)	Focus; Japan regional HR initiatives Members: Human Resources Management Div., member of each office HR functions
8 Liaison meeting between each group company (monthly)	Focus; Japan regional HR initiatives Members: Human Resources Management Div., member of each office HR functions, member of each group company HR functions



such as pursuing a career they envision or striving to contribute to society. Our current goal is to raise the score to 85 by 2030.

If I were to identify factors for higher engagement over the last two years, I would say it was because of the increase in opportunities for the president and other officers to engage in having conversations with employees, the expansion of flexible work arrangements, measures to improve employee health and welfare programs, and the cultivation of a culture of mutual praise. We also ensure that we offer various opportunities for our employees to shape their careers autonomously, including job postings, second job programs, overseas trainee programs, and career interviews, which our employees rate highly satisfactory. Furthermore, a large number of our employees in Japan and overseas, join GATE and NIC. We believe that providing everyone with



opportunities to make casual proposals has resulted in high engagement.

On the other hand, upon examining the results by position, we observe a trend where scores decrease progressively from general managers to managers and then to associate managers, which presents a concerning challenge. To assess the management at Nitto, such as whether supervisors effectively communicate the purposes and objectives of work to their subordinates, we conducted a 360-degree survey involving general managers and managers. Based on the findings of the survey, we ask them to take relevant training sessions and review their management styles.

#### Challenge Ratio

Our 2030 target for the challenge ratio is 85%. The Nitto Group has a "culture of supporting challenges," but recently we have been telling our employees that we want to make it a "culture of enjoying challenges." While we naturally encourage employees to take on challenges on an individual level, the Nitto Group is unique in that we also encourage our employees to take on challenges as a team.

In fact, one employee who applied for and participated in a short-term overseas training program, which is actually included in the challenge ratio, said, "The hands-on experience on-site broadened my perspective as I realized the same information can be interpreted differently. Through interactions with people from diverse cultural backgrounds, I learned the importance of taking action, which I am now applying to my current work." Another employee who took up e-learning said, "I acquired specialized knowledge in fields that interest me in order to pursue my own growth and career advancement," which delighted me profoundly. Sometimes, knowing there are people like them is inspiring. We are committed to providing full support to employees who are eager to grow personally and explore new realms.

#### Impact on Business: From "Future-Financial" to "Financial"

We are currently engaged in detailed discussions on demonstrating the connection between "future-financial" and "financial" values, specifically how the former transitions into the latter. Take GATE as an example. In the past, group members were requested to present the monetary value that their activities had saved them. With the challenge ratio, it is now possible to show how the percentage of employees who joined GATE, the monetary amount saved, and the impact on profitability are interrelated. On the other hand, from the perspective of long-term impact, we can see how different parameters, such as the number of participants in selective training programs, business opportunities created, impact on profitability, and new businesses created, relate to each other.

All in all, we assume that "challenges" are a major factor that can impact Nitto Group's management. In linking future-financial value to financial value, we believe it is important to show the expected output for actions while carefully verifying correlations and causal relationships and deriving Nitto's unique formula.

For the Nitto Group to make great strides and keep growing, we will advance our work environment so that we can empower those who can incorporate diversity into the Nitto mindset they have diligently developed and constantly take on the challenges to lead progressive initiatives.

Furthermore, as diverse employees actively engage in various challenges, we will advance our Global Niche Top™ strategy, a key strength of our business, and strive for "Creating Wonders" at all of our workplaces through *Sanshin* Activities, robust customer relationship approaches, and unified efforts across R&D, Manufacturing, Sales, and Administration.

# Empowering Diverse Employees

## Themes and Target Indicators for the Human Resource Strategy

To create a work environment where everyone feels rewarded and satisfied with what they are doing, the Nitto Group is focusing on four human resource initiatives with the aim of achieving HR-related future-financial targets for 2030.

Described below are some of the noteworthy initiatives that were implemented in fiscal 2023 as part of the four programs.

Program	Theme	Key Initiatives in Fiscal 2023	2030 Management Targets
Enhancement of job satisfaction	Meaning of working and development of a work environment	ESG and Corporate Philosophy <i>Kuruma-za</i> , campaign to raise awareness of a "corporate culture where employees enjoy challenges," development of a work environment that supports flexible work styles	<ul style="list-style-type: none"> <li>■ Female leaders ratio <b>30%</b></li> <li>■ Engagement scores <b>85</b></li> <li>■ Challenge ratio <b>85%</b></li> </ul>
	Enhancement of productivity	DE&I lecture session, small group activity GATE, review of how meeting bodies should be administered	
	Health and productivity	A walking event <i>Teku-teku</i> Torino, drawing up of the Eleven Nitto Health Actions	
Enhancement of employee engagement and motivation by reforming organizational culture	Empowerment of younger employees and middle management	Engagement survey, career interviews, opening of Career Terrace, expansion of eligibility for job postings, overseas trainees, expansion of training programs	
	Proactive rotation of human resources	Introduction of Human Resource Business Partner (HRBP), strategic rotations	
Development of global leaders and individuals initiating change	Strategy/vision-focused leaders	Selective training NGBA and KLIP, 360-degree survey and management transformation training, introduction of a training platform NGL, ESG training	
	Innovation initiators	New business creation convention NIC	
Recruitment/retention of human resources	Promotion of diversity in human resources and work styles	FLOWER Program for development of female leaders, development of work environment that encourages male employees to take childcare leave	
	Recruitment of human resources and increase in their retention	Building a global talent pipeline of regional management candidates (succession, talent pool), visualization of turnover at Group companies, <b>measures to bolster recruitment capability and increase retention rate</b> , improvement of compensation of those in managerial positions, revision of annual working hours and the number of days off	

## ■ Enhancement of Job Satisfaction

As we practice The Nitto Way, we aim to create a fulfilling, sound work environment that ensures the well-being of employees, in an attempt to revitalize the organization by motivating employees and enhancing productivity.

### ESG and Corporate Philosophy *Kuruma-za*

To ensure that every employee reflects on their behavior and aligns their actions with the Corporate Philosophy, Nitto is globally organizing the ESG and Corporate Philosophy *Kuruma-za*. In fiscal 2023, we hosted a series of discussions where supervisors “cascaded down” to their subordinates the importance of each employee embodying the Corporate Philosophy to achieve the mid-term management plan, Nitto for Everyone 2025. On those occasions, we segmentalized the Group’s targets and strategies into individual operations to foster concrete action and understanding. In Japan, a total of 691 sessions were held.

In addition to this, we plan and implement region-specific Corporate Philosophy penetration activities, which are customized with the culture and environment of each country in mind.

### DE&I Lecture Sessions

In order to promote understanding and penetration of DE&I, as well as work style reform, we invited a panel of experts and organized a lecture session titled, “Why Not Strive Equally for Personal Lives and Work Results? Arrest the Time Robber!” To the managerial audience, the lecturer shared tips on how to support subordinates’ private and work lives while fully enjoying their own work, private, and social lives. For non-managerial staff, the focus was on leading a fulfilled private life and achieving work results, grounded in DE&I and work style reform. Many participants voiced their view that the session provided them with an opportunity to look at themselves in a different light.

We will promote work style reform while organizing more of these events, to enhance employees’ job satisfaction.



The lecture session

### GATE Activities

The Nitto Group has traditionally embraced a corporate culture of taking bottom-up approaches to work on improvement. Since 2006, this tradition has persisted in the form of small group activity, GATE, which plans and implements bottom-up initiatives designed to enhance productivity, quality, and safety and reduce costs. Such initiatives are being deployed across regions, and outstanding projects are commended at an annual global convention.

A recent example from our Group company in Thailand highlights a significant cost reduction achieved through DX-driven enhancements in HR management affairs. Since fiscal 2023, we have linked GATE activities with the challenge ratio, one of the future-financial targets, to give an additional push to this small group activity.

## ■ Enhancement of Employee Engagement and Motivation by Reforming Organizational Culture

To make Nitto an “essential top ESG company,” we are actively building a foundation that enables every employee to feel satisfied and motivated; this involves encouraging them to stay engaged, leverage their strengths, and embrace challenges.

### Enhancement of Engagement

As part of our effort to build an organization that listens carefully to what its employees have to say and addresses company and departmental issues effectively, ensuring that every employee feels content in their roles, we conduct a Global Engagement Survey once every two years. The fiscal 2023 survey (94% response rate, 23,776 respondents) scored 81, up 7 points from the previous survey, showing that activities in each company and site paid off.

Likewise, scores for the questions on safety and Corporate Philosophy remained high as in the previous survey, reminding us of the source of the Nitto Group’s strengths.

Meanwhile, scores for the questions on talent management, leadership, and operational efficiency increased over the previous survey, but we still have room for improvement. As the scores vary among respondents’ positions at the company, boosting the engagement of associate managers, who would shoulder Nitto’s business in the coming generations, poses an important challenge we should address. We will stimulate the motivation of this specific group by providing support focused on each individual.

### Career Interviews and Career Terrace

To support employees in their autonomous career development, our HR team organizes career interviews for recent college graduates in their first to third years at Nitto, as well as for mid-career employees—an opportunity to candidly discuss their problems and concerns at their workplaces or their future careers. In fiscal 2023, a total of 716 employees were invited to join the interview.

Meanwhile, we have compiled a career interview support handbook to start “career interviews between supervisor and subordinate,” a different opportunity for dialogue from existing personnel evaluation interviews (associate managers only in fiscal 2023, after which the scope will be expanded).

Based partly on requests from employees, we set up a career support consultation office (Career Terrace) in fiscal 2024. Anyone who wishes may avail themselves of this service and speak with Nitto’s qualified career consultants. Through this opportunity, employees may deepen self-understanding and become aware of what has escaped their attention.

## ■ Development of Global Leaders and Individuals Initiating Change

The Nitto Group orchestrates its talent development programs by position and role in an effort to train talent who enjoy challenges and bring about transformation.

### Development of Manager Candidates

An avenue to train global leaders of the future generations, the NGBA offers a couple of programs for those selected from all Group companies: one for candidates for Nitto executive officers of the next generation (approx. nine months) and the other for developing candidates for senior executives (approx. 12 months). The programs include action learning sessions on business visions and management challenges, leadership coaching, and joint workshops with other companies. After the program is over, we continuously monitor the trainees’ activities and provide opportunities for them to develop leadership skills.

For associate managers up for higher managerial positions, the Kakaricho Leadership Improvement Program (KLIP) is offered. This position-specific program encourages trainees to set action plans that address challenges for their departments and, while implementing the action plans, acquire skills for producing results as an organization, thus enhancing their leadership.

### Enhancement of Leadership

The engagement survey results have highlighted the urgent need for transformation among managerial staff. Accordingly, since 2022, we have conducted an annual 360-degree survey for general managers and managers, which subject them to evaluations by multiple employees like supervisors and subordinates whose positions differ from theirs. This multi-angled survey gives them an opportunity to view their management style objectively and improve it, as necessary. Additionally, each year, forty employees in managerial positions are selected to participate in a management reform training seminar that lasts approximately six months.

### Global Expansion of Training Platform and Enrichment of Training Programs

As a new initiative for the entire workforce, the Nitto Group in fiscal 2023 introduced the Learning Management System (LMS), a common training platform for the Group, in Japan. Starting in fiscal 2024, this platform is being rolled out throughout the Group under the new name of the Nitto Global Learning Lab (NGL). All internal training seminars may be applied via NGL. Allowing trainees to manage a list of suggested training courses on My Page, NGL is expected to help foster employees' awareness of the importance of active learning.

In addition to the development of this system, we are adding more learning opportunities in many different ways, such as introducing new training programs. This expansion has led to an increase in the number of employees actively pursuing self-development and skill improvement.



The top page of NGL

### Recruitment/Retention of Human Resources

The Nitto Group sees human resources as our most valuable assets. In order to constantly create new value and achieve sustainable growth, we are working hard to recruit and retain diverse talent.

### Empowerment of Female Employees

Shooting for a female leaders ratio of 30%, one of the 2030 management targets, in April 2022, we launched the FLOWER Program in Japan, which aims at developing female employees who take the lead of their organizations or teams. The program encourages understanding that it is acceptable to have diverse leadership models or to develop one's own perspective. It adopts a dual approach, focusing on enhancing business skills and fostering a mindset conducive to leadership. The program includes lecture sessions led by former managers from both within and outside the company, management skill development training, and mentorship opportunities. After the nine-month schedule, 80% of the participants think positively about the importance of demonstrating their leadership. We will remain committed to retaining female leaders and enhancing their job satisfaction.



The FLOWER Program

### Enhancement of the Ratio of Employees Taking Childcare Leave

The Nitto Group is dedicated to providing its employees with a superb environment for childcare. Beyond enhancing related systems like paid holidays for childcare, paid holidays by hour, and work-from-home options, we actively promote these initiatives by organizing round-table discussions among male employees who have taken childcare leave and sharing their experiences on the intranet. This helps cultivate an organizational culture that supports easy access to childcare for all employees.

In fiscal 2023, the ratio of male employees taking childcare leave\* reached 94.8% (non-consolidated). In recognition of the outcomes of these initiatives, we received the *Kurumin* certification, which is conferred to childcare-supportive institutions by the competent minister.

\* The percentage of male employees who took childcare leave, etc. combined with company-specific parental leave

### Bolstering of Recruitment Capability and Increase in Retention Rate

We are hiring talent knowledgeable about machinery and electricity/electronics, expertise that is indispensable for future business growth. We are also hiring more technical college graduates in the hope that they can hit the ground running. In our recruitment process, we engage interns in actual job roles and conduct plant tours to help prospective employees gain a concrete understanding of our business operations, employee activities, and corporate culture. This approach allows candidates to envision their potential future with the company more clearly. To help new recruits form relationships with their future colleagues even before starting at the company, we create many opportunities for prospective employees to meet and interact in the hope of them building connections early in their career journey with us. After they have joined us, we carefully monitor how new recruits are doing by organizing training opportunities and surveys up to their third year, to increase the retention rate.

#### TOPIC

### Topics on Human Capital Management

Nitto was selected for Human Capital Leaders 2023 and Human Capital Management Gold Quality in the Human Capital Survey 2023, which was jointly conducted by HR Technology Consortium, HR Research Institute (ProFuture Inc.), and MS&AD InterRisk Research & Consulting, Inc. Nitto was also recognized as a Best Workplace, the highest rating in the D&I Award 2023, which recognizes companies committed to D&I, organized by JobRainbow Inc.



## Round-table Talk: From Supporting to Empowering: Transitioning to a Corporate Culture Where Employees Enjoy Challenges Driven by an Unbroken Line of Corporate DNA to Attempt Challenges It's Our Collective Passion for Challenges that Enriches Personal Experiences and Fosters the Growth of Each Organization and the Group



### GATE and the Safety Promotion Conference—Embodying the Employee-Centric Corporate Culture of Enjoying Challenges in the Field

› **Tsuchimoto:** At Nitto, we all have corporate DNA that prompts us to take on challenges. Originating in 2006, both GATE and its spin-

off, Safety Promotion Conference, are global activities that showcase Nitto's distinctive corporate culture. For many years now, Quality Circle Activities, which are employee-led small group activities for quality control/improvement, have been popular in the manufacturing sector in Japan. GATE is Nitto's improvement activities that employ bottom-up approaches to streamline production processes, on top of improving quality. Meanwhile, because safety activities often adopt both bottom-up and top-down approaches to improvement, we

initiated Safety Promotion Conference in 2020 with the aim of promoting safety activities at each site and workplace. To ensure that employees who have contributed to various forms of improvement are commended as they should be, both activities incorporate an employee commendation system. All of you here have been awarded at GATE or Safety Promotion Conference. What are your thoughts on this achievement?

› **Yamazaki:** I was honored individually at Safety Promotion Conference in 2023 for my achievements while I was at the Tohoku Plant. To be honest, I was involved in putting together this individual commendation program. It was an attempt to embody one of the values of the Nitto Group, namely, "Place safety before everything else," in Nitto's unique corporate culture of praising others. I feel incredibly delighted knowing that commending employees contributes to a stronger focus on safety within the Nitto Group, and I am very proud to be honored as one of the safety team members. As I envisioned while designing this program, I anticipate that it will evolve into one that encourages individuals recognized at their sites to ambitiously strive for recognition on a larger regional or global stage.

› **Kubota:** I was commended at GATE for my project to visualize the residual quantity of solvents, which are found at various locations within the Toyohashi Plant, and to develop an electronic solvent order system. In the past, we had to walk around the premises to check how much solvent was left at each location or place orders using order sheets or via e-mail. Now, this system allows us to check the order status online, which helps increase the productivity of routine work.

› **Tanaka:** I work at the Manufacturing Division of the Information and Communication Technology Sector. The project for which I was commended at GATE was concerned with improving the production yield and budget situation for manufacturing. With cooperation from the production engineering and design team members and input from the manufacturing team, I managed to work out an improvement. The production yield directly affects business revenue, and so it was gratifying to discover an improvement.

› **Tsuchimoto:** What was the feeling you had when you got over your challenge?

› **Tanaka:** I was elated! It is not just outcomes. While working on the project, I made many presumptions; some were right and others were not, but every milestone brought me joy and motivation nonetheless.

› **Kubota:** I felt overwhelmed initially because I was new and did not know how the organization operates. I needed to go out and speak with persons from many different sections, which helped me broaden my communication skills. I was moving around to do research, but every experience taught me something interesting.

› **Yamazaki:** I felt so satisfied to know that I got evaluated better for the tangible result I achieved. We all started from a really small group, and it is wonderful that some of the activities went across departments like the one Kubota-san did.

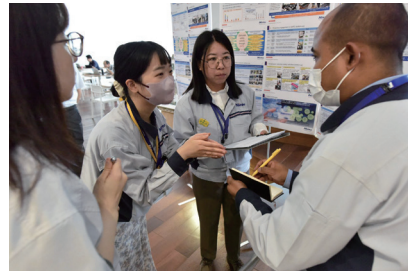
## Revolutionary Ideas Were All this Intermediate Material Manufacturer Had to Outperform Competitors

› **Tsuchimoto:** GATE originally started by encouraging each and every employee to act autonomously by tackling the improvement of issues that are familiar to them. Every year, employees are increasingly eager to participate, resulting in this activity spreading from the manufacturing floor to the back-office operations. Now, we invite outstanding teams from each region to Japan to deliver a presentation. It has since become an opportunity for qualifying teams from each region to share their stories of improvement with their peers across the globe. It has been almost 20 years since GATE kicked off, and I can say that this event truly embodies the Nitto Group's culture of enjoying challenges.

› **Yamazaki:** I think everyone views GATE not as a special initiative but as a natural and expected part of our operations. I also think it relates to Nitto's tradition of encouraging experimentation, where ideas are not immediately dismissed but rather given consideration.

› **Tanaka:** I was honored at GATE this time, but I got commended for what I am doing on a daily basis, that is, working toward targets by taking the size of expenses incurred into account. If someone takes the lead in taking on challenges, I feel that improvement will surely accelerate.

› **Tsuchimoto:** The Nitto Group's business can be traced back to tape. Depending on how you use it, however, tape can fulfill many different functions. Coming up with new applications depends on the



The poster session of GATE

quality of ideas, which I believe explains why Nitto cherishes free thinking of individuals. The same holds true for *Sanshin* Activities. We keep saying that we support those who challenge themselves, and what truly sets us apart is our steadfast policy of allowing each employee to pursue their desire to take on challenges. It is always the field workers who understand the realities of manufacturing most, and we should not compromise on this insight.

› **Yamazaki:** When we do a safety patrol in the field, we make it a rule to ask them if there is any tricky operation, and one of the common pieces of feedback we receive concerns work procedures that fail to accommodate left-handed operators. I understand that many companies prioritize adhering to existing procedures. However, Nitto performs risk assessments and considers revising the procedures for safety so long as it does not affect product quality. I believe this flexible response to changes that concern the entire Group is another source of our strength.

## Transitioning to a Stage Where Every Employee Further Embraces the Desire for Challenge Embedded in Our DNA

› **Tsuchimoto:** One of the future-financial targets is the challenge ratio. Some challenges start because of recommendations by the company, but what makes this initiative unique is that challenges initiated by individuals are also counted. GATE is open to everyone, and anyone can participate if they have a project they want to work on. We count those employees to calculate the challenge ratio. Taking on challenges is in Nitto's DNA, but we are hoping to move forward to a stage where our employees spontaneously "enjoy" challenges more, rather than us merely cheering each individual.

› **Kubota:** I do not think it necessary to try redefining "challenge" seriously. So long as it is a challenging attempt by individuals, enrolling in a training seminar that they have never joined before counts, too. With this very favorable environment for us to take on challenges, I think it is easy for anyone to take the first step.

› **Yamazaki:** Those working for back-office operations should typically find it difficult to discover something that directly leads to their evaluation. This being the case, I think the key to this indicator of the challenge ratio is that it is all about challenges initiated by employees themselves.

› **Tanaka:** I work on the manufacturing field and am committed to making every improvement, big or small, to enhance our workplace. I think it is also a challenge to ask around if anything is annoying them, based on which we come up with a proposal for improvement. In this respect, it is already well-rooted in our corporate culture.



Award Ceremony at Safety Promotion Conference

› **Tsuchimoto:** When I visit our overseas sites, I am always made to realize that those who are working in the field understand their issues and problems the best. So, the first step that should be taken is for such employees to enjoy challenges without being afraid of making mistakes. This approach enriches their experience, which in turn facilitates the Group's growth. All we need to do is have a little awareness of issues to see all the opportunities that await us. I want everyone to seize every opportunity and actively pursue challenges.

› **Yamazaki:** Because every inch of my personal growth is interpreted into this company's growth, I feel that everyone in this company is backing me. Recently, many young people are switching jobs to discover their new potential. Given the numerous opportunities to try something new within the Group, this policy of encouraging employees to embrace challenges may also help retain our workforce.

› **Kubota:** Recently, I have taken my share of household chores and child-raising, and sometimes, I think it is not easy to maintain a good work-life balance. Now that I have the support of everyone at my workplace, though, I am determined to successfully complete a project I have committed to while still being a dedicated, family-oriented father.

› **Tanaka:** I assumed the position of foreperson this April and I will take the initiative to prompt members of my team to take on challenges and prepare myself to follow up with them should they fail in their attempts. In the meantime, I will take up a new challenging project myself, just as they do.

# Upholding and Respecting Human Rights

## The Nitto Group's Approaches to Human Rights

To continuously fulfill the Nitto Group's Mission, "Contribute to customers' value creation with innovative ideas," we uphold The Nitto Way, a set of values that we should live up to. Among these values is "diversity & human rights." By valuing integrity and modesty, as well as respect for the diversity and rights of all people, we seek to remain a company that earns trust from society and is chosen by customers. In order to achieve sustainable growth as an essential presence for humanity, society, and the world, we have also set "upholding and respecting human rights" as one of our material issues for sustainability (materiality).

## Nitto Group's Basic Policy on Human Rights

All employees of the Nitto Group share a respect for "diversity & human rights," one of the values of The Nitto Way. Also, we prepared the Business Conduct Guidelines (BCG), which includes a code of conduct on human rights, ensuring that each and every one of our employees is aware of it. To help all employees raise their awareness of respect for human rights, we organize periodic e-learning training courses using the BCG for the entire workforce, including officers, and invite experts in this field to give lectures for our employees.

The Nitto Group supports international rules and regulations concerning human rights\* and specifies the actions we are expected to take in the Basic Policy on Human Rights, so that we can reduce any negative impact on human rights throughout our supply chains. In addition, all of our sites, post the Basic Policy on Human Rights in the language of their respective countries and regions so that employees are fully aware of the policy.

## Basic Policy on Human Rights

<https://www.nitto.com/jp/en/sustainability/social/human/>

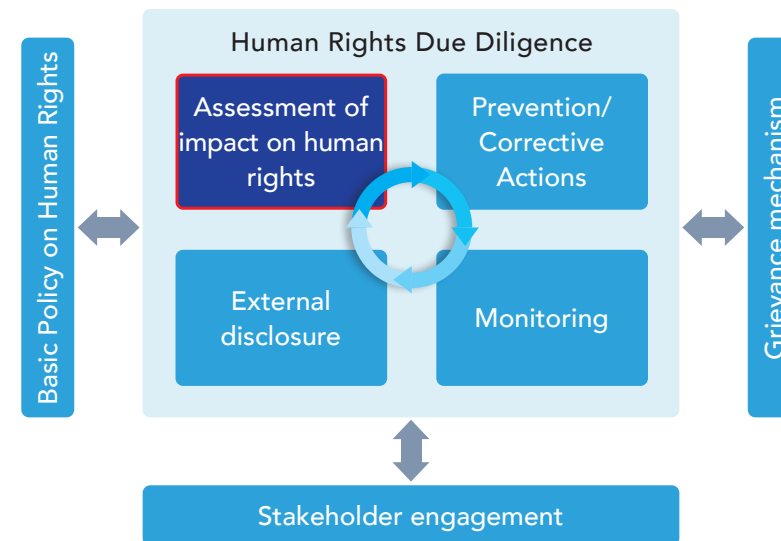
\* The Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, core labour standards as set forth in the ILO Declaration on Fundamental Principles and Rights at Work by the International Labour Organization (ILO), and the UN Guiding Principles on Business and Human Rights

## Human Rights Promotion System

The Nitto Group addresses issues concerning human rights by establishing a dedicated department among special function departments. To enhance the effectiveness of the initiatives in this regard, we set up a council composed of representatives from departments responsible for the promotion of ESG management as a whole, human resources, and procurement, as well as each geographical region, thus strengthening cross-sectoral collaboration. This council, structured with site-specific, region-specific, and global teams, manages human rights risks, develops relevant strategies, outlines necessary programs, and monitors the implementation and progress of these programs. This multi-layered approach is tailored to accommodate the unique circumstances of each region and site. For more details on the council, please see the page on Compliance (P.71).

## Human Rights Due Diligence

In line with the aforementioned approaches to human rights, the Nitto Group has built a human rights due diligence management system pursuant to the UN Guiding Principles on Business and Human Rights, with a view to preventing or reducing any negative impact that our business undertakings might have on human rights.



## Actions in Fiscal 2023 (Determination of Human Rights Issues)

In fiscal 2023, the Nitto Group began to identify potential human rights risks by reviewing the general situations, industry landscape, overview of our business, and an update of supply chains in regions where we operate from a broader perspective.

For certain human rights issues, we identify risks that emerged from the findings of self-assessments conducted by Group companies in Japan and compliance surveys carried out by all Group companies.



The workshop

The identified human rights issues were reviewed in a workshop not only with domestic related parties, but also with persons overseeing human rights affairs in each area at overseas Group companies. During the workshops, we discussed issues unique to each region and identified human rights issues that require priority attention. Going forward, we will prioritize human rights issues based on insights from third-party experts and dialogues with stakeholders, ensuring we address the most pressing concerns effectively. We also plan to strengthen the grievance mechanism in order to accelerate the drive to prevent and reduce any negative impact. We plan to disclose risks and important human rights issues thus identified on our websites.

# Building Resilient Supply Chains

## Improved ability to anticipate and respond to supply chain risks

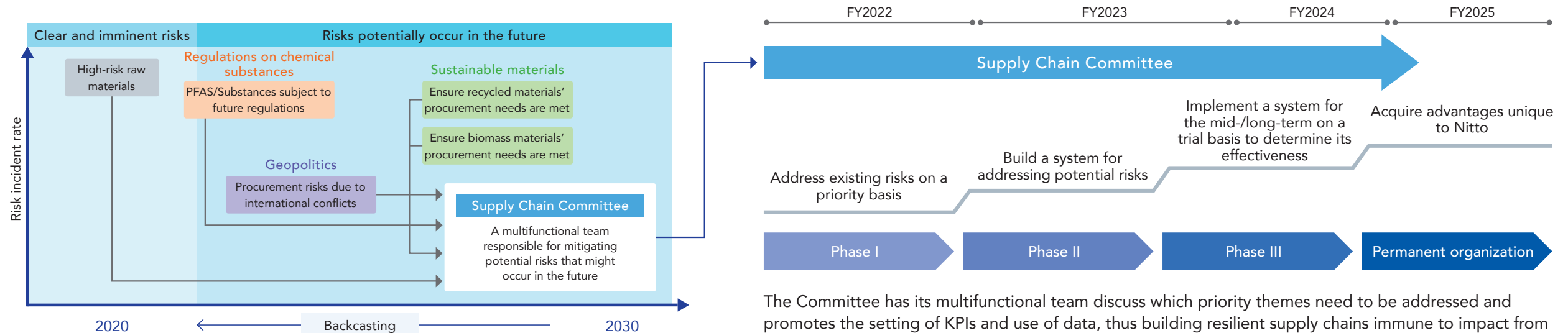
Cooperation throughout supply chains is essential to implementing our Niche Top Strategy and ESG Strategy," which we declared in the current mid-term management plan. Environmental challenges and human rights issues that require urgent responses, tighter regulations on chemical substances, geopolitical risks, industry reorganization, and withdrawals from business—we find ourselves in constantly changing external environments, and we realize that supply chain risks stemming from these changes pose significant managerial issues. To ensure a stable product supply and fulfill our responsibility to customers, it is crucial to not only address materialized risks but also to enhance our foresight into potential risks and establish systems and structures in advance that allow for flexible responses when risks emerge. As a solution to this challenge, in the second half of fiscal 2022, the Nitto Group established the Supply Chain Committee, a multifunctional organization under the command of the top management. This Group-wide Committee places all sorts of risk information under a single umbrella and shares its findings with the management team while conceiving measures to reduce risks and monitoring the status of responses taken throughout the Group.

The Committee's initiatives are in progress with three main phases.

- Phase I (the second half of fiscal 2022): Shared risks associated with raw materials procurement that might occur in the future with management team, sorted out existing risks from potential risks based on their trends over time and incidence, and identified the following priority tasks. 1. Take precautionary action against raw materials potentially posing a high risk for the Group; 2. Address geopolitical risks; 3. Ensure compliance with regulations on chemical substances; and 4. Secure access to sustainable raw materials.
- Phase II (the first half of fiscal 2023): Began addressing existing risks, set up a subcommittee for each type of risk classified in Phase I, and drew up the following measures from both the short-term and mid- and long-term perspectives.
  - High-risk raw materials: Built a framework for assessing risks associated with supply of such raw materials. By performing annual risk assessments not only during the product development stages but also after mass production has commenced, prevented procurement risks from emerging. At the same time, aimed to convert high-risk raw materials into strategic raw materials.
  - Geopolitical risks: Identified areas with such risks to implement short-term measures against high-risk raw materials that had emerged. Incorporated the criteria for geopolitical risks into the aforementioned framework for risk assessment to prevent potential risks from surfacing.

- regulations on chemical substances: Based on information on relevant laws/regulations collected and shared by the specialized department, asked suppliers to conduct investigations without fail under the instruction of the persons in charge of chemical management in products appointed at each business sector, to determine their impacts on business. The current focus is being placed on the PFAS restriction.
- Sustainable raw materials: In order to achieve the sustainable materials procurement ratio of 20% by fiscal 2025 (future-financial target), created a conversion roadmap for each raw material.
- Phase III (the second half of fiscal 2023 – the first half of fiscal 2024): Implement the measures drawn up in Phase II on a trial basis

After the results of Phase III are out, each business sector will implement the measures on a full scale from the second half of fiscal 2024. These activities will leverage the Niche Top Strategy to secure a competitive advantage for the Group while reinforcing our resilience against changes in the external environment.



The Committee has its multifunctional team discuss which priority themes need to be addressed and promotes the setting of KPIs and use of data, thus building resilient supply chains immune to impact from external environments.



## Building Resilient Supply Chains

Nitto Group's Sustainable Procurement	<b>Risk Management</b> <ul style="list-style-type: none"> <li>• Detection of supply risks caused by changes in external environments</li> <li>• Proactive action to contain risks</li> <li>• Initial response in emergencies</li> </ul>	<ul style="list-style-type: none"> <li>■ Analysis, assessment, and response to risks (geopolitics, chemical substances regulations, divestment) by the Cross-sectoral Supply Chain Committee</li> <li>■ Confirmation of the safety of and determination of impact on suppliers via systems</li> </ul>
	<b>CSR Procurement</b> <ul style="list-style-type: none"> <li>• Fulfilment of corporate social responsibility</li> <li>• Building of supply chains that care about human rights, occupational safety &amp; health, the environment, and corporate ethics</li> </ul>	<ul style="list-style-type: none"> <li>■ Presentation of policies and code of conduct via the CSR-Based Procurement Guidelines</li> <li>■ Evaluation of suppliers by CSR assessment and corrective actions</li> <li>■ Continued practice of CSR-based procurement (door-to-door surveys, human rights due diligence, conflict minerals)</li> </ul>
	<b>Green Procurement</b> <ul style="list-style-type: none"> <li>• Promotion of procurement of materials with minimal environmental impact</li> <li>• Ban on the use of, reduction of, and control discharge of hazardous chemical substances</li> </ul>	<ul style="list-style-type: none"> <li>■ Presentation of the policy via the Green Procurement Standards</li> <li>■ Survey of CO<sub>2</sub> emissions</li> <li>■ Chemical substance investigation and control of information thereof</li> <li>■ Promotion of the use of biomass and recycled materials</li> </ul>

In order to maintain/continue the Nitto Group's business undertakings and fulfill our corporate social responsibility throughout our supply chains, we defined the Nitto Group's sustainable procurement and act accordingly.

For risk management, under the lead of the Supply Chain Committee, we proactively identify potential risks that may be caused by changes in the external environments, such as geopolitical risks and chemical substance regulations, and take necessary action to stabilize business. In the event that natural and other disasters occur, we use the safety confirmation system to get a picture of our suppliers' situations.

For CSR-based procurement, we conduct CSR assessments while communicating to suppliers the Nitto Group's policies and what we want our suppliers to observe.

For Green procurement, we conduct surveys of CO<sub>2</sub> emissions and investigate chemical substance contamination to procure materials with minimal environmental impact, and promote the use of sustainable materials, one of the future-financial KPIs for the mid-term management plan.

### Strengthening CSR Assessment

In a bid to build supply chains that care about human rights, occupational safety & health, the environment, and corporate ethics, the Nitto Group sends a CSR-based procurement survey to suppliers annually in accordance with the CSR-Based Procurement Guidelines. After feeding the survey results back to the suppliers that responded, we ask suppliers whose procurement is found to have issues to correct them. Eighty-seven percent of the suppliers who were requested to correct their issues

responded by saying they would. In fiscal 2023, no critical issues were found. Furthermore, we continue with on-site investigations. Working together with suppliers, we are dedicated to enhancing CSR.

In fiscal 2023, we introduced a platform provided by EcoVadis, a third-party rating service, to begin ratings in Japan and China using their assessment method. In fiscal 2024, we plan to roll out the platform to Europe, the Americas, and South Asia.

Utilizing the CSR-based procurement survey, CSR assessment by EcoVadis, and corrective actions, we will work with our suppliers to achieve sustainable procurement throughout supply chains.

### Partnership Meetings

We believe that collaboration with suppliers is essential to realize sustainable procurement. In fiscal 2023, we held Partnership Meetings in Japan, China, and Europe to share the Nitto Group's policies and expectations concerning CSR-based and green procurement with our suppliers. These meetings encouraged our suppliers to join us in fulfilling our shared social responsibilities. We plan to continue these meetings, providing suppliers with opportunities to network and collaborate.

## Increasing Efficiency in Logistics

The Nitto Group regards the improvement of logistics in its supply chain as one of its key managerial issues.

In response to the "2024 Issue," we are proceeding with activities and verification from multiple points of view to offer solutions to the long working hours of drivers and labor shortages. Currently, by setting the "reduction of the standby time of shipping trucks to 30 minutes or less" as a KPI, we are implementing various measures, including quick movement of finished products to the shipping station where trucks stand by or making it a rule to contact logistics services in advance in cases of delayed shipment. As a result, in fiscal 2023, the average standby time at the seven sites, including two of our Group companies, was reduced to 7.0 minutes, down by 7.2 minutes from the previous year. We will roll out this proven program to other Group companies. Also, we are continuously conducting investigations toward optimizing delivery (hub-and-spoke system) by way of realigning the logistics network. By consolidating warehouses currently scattered across the country by area, we aim to increase loading efficiency per service and reduce the total number of shipments. Also, taking into account the findings of a survey on long-distance, long-hour trucking routes, which began in fiscal 2022, we will launch hub-and-spoke distribution from fiscal 2026, thus increasing efficiency in logistics in a coordinated manner.

Another key issue as far as logistics is concerned, we are working to reduce our CO<sub>2</sub> emissions. As a result of our efforts to promote a modal shift from trucks to railways, for example, we were able to reduce our logistics CO<sub>2</sub> emissions in Japan by 58.9 tons, achieving a 1.04% reduction in fiscal 2023 compared to the previous year, thus surpassing our self-imposed KPI of a 1% reduction.

### Reorganization of the Logistics Network

