03 Chapter

Our Medium- and Long-Term Management Strategy

PHOTO
Japan / Rainbow Bridge

Aiming to achieve MSV by executing our medium- and long-term management strategy based on Asset Assembler model

Nippon Paint is implementing its medium- and long-term management strategy based on Asset Assembler model for pursuing MSV. On this page, Yuichiro Wakatsuki, Director, Representative Executive Officer & Co-President, explains the approach and direction of this unique management strategy along with the competitive advantages concerning M&A, financial and capital management strategy.

Yuichiro Wakatsuki

Director,
Representative Executive Officer & Co-President

Q.1

Please explain Group management strategy based on Asset Assembler model.

A We are implementing a strategy of expanding businesses by going beyond paint and coatings into adjacencies (Paint++) over the medium and long term. (See "Message from Co-President Wakatsuki" on page 17.) Our goal is to maximize EPS and PER by leveraging this unique business model that sets us apart from competitors.

Asset Assembler model is a model in pursuit of MSV which gives us a competitive advantage to accelerate growth at our existing businesses and additional businesses through new M&A deals.

The key point of this model is that our outstanding management team of every partner company can pursue autonomous growth within our Group through proactively leveraging various resources in our worldwide platform, such as technical capabilities, an extensive distribution network, purchasing power, know-how, and powerful brands, rather than being imposed from NPHD headquarters. This will allow the Group to acquire a broad range of expertise and create synergies within the Group. In addition, our platform is suited to bring in newly acquired companies. Our focus on the paint and adjacencies businesses, which are markets with huge growth opportunities, strong earnings and stable cash generating capabilities, will allow us to achieve faster growth with limited PMI risk following M&A. In particular, the adjacencies area including SAF (Sealants, Adhesives & Fillers) and CC (Construction Chemicals) can produce significant synergies due to overlaps with the characteristics of the paint and coatings market. Examples include the importance of distribution channels and brands for high entry barriers in the paint and coatings market.

As shown in the diagram on page 35, Nippon Paint Group as a whole will become larger and stronger as we build up earnings, brands and the knowledge of newly acquired companies on top of driving steady growth of existing businesses.

This unique model is backed by the following strengths: ① Focused on paint and adjacencies with significant market opportunities, ② Attractive risk-return profile of paint and adjacency arena, ③ An assembly of talented management and strong brands, ④ Japan domicile enhanced competitive strengths, and ⑤ Advanced governance. We will leverage these strengths for maximizing EPS and PER. (See "Strengths Underpinning Our Business Model" on page 37.) For information about specific actions and the growth strategy for each region and business, see "[Feature Article] Medium- and Long-Term Business Strategy That Reflects Regional Characteristics and Structural Changes in Markets" on page 61.

Q.2

Please explain the competitive advantages and strengths of the M&A strategy of Nippon Paint.

A Asset Assembler model is structured to produce synergies for growth at both existing businesses and newly acquired companies, which are different from the Western-style cost-cutting synergies model. This has resulted in accelerated earnings growth at these companies than prior to joinng our Group.

Generally speaking, not a few overseas M&A deals by Japanese companies result in impairment losses a few years after the acquisition. However, all our acquisitions after FY2019, when we started to conduct M&A in a more aggressive manner, have delivered better-than-expected results. This is due to the successful leverage of the five strengths underpinning Asset Assembler model.

Let me explain the key points of our M&A. The paint and coatings industry is characterized by sustained growth potential and very stable cash flow generation. In addition, companies can procure funds at lower interest rates in the current financial market in Japan compared to prior years. As a result, the market environment for M&A is very favorable.

The decorative paints market, which accounts for more than 50% of the total paint market, is characterized by local production for local consumption. As a result, the optimal business model for the decorative paints business differs significantly from country to country and market to market in terms of the procurement of raw materials, consumer preferences, distribution networks and environmental regulations.

Paint and coatings, and particularly decorative paints, have a very low threat of alternative products and strong local features. Due to these characteristics, the keys to success in the paint and coatings business are: ① strong brands, ② an extensive distribution network, and ③ operations by management well versed in local markets. If we acquire the No.1 market share based on those strengths, competitors cannot easily turn the tables. Then, the No.1 player can create a virtuous cycle of further increasing its market share and earnings.

Strengths of Nippon Paint Group's M&A based on the characteristics of the paint and coatings market are as shown in the diagram below. I cannot talk about specific target companies and regions. What I can tell you is this: the key criteria are that acquisition targets, regardless of business category and region, must contribute to MSV. In particular, acquisitions must contribute to EPS starting in the first year and have an attractive risk-return profile.

Our business model is not based on the Western-style global standardization and cost cutting program. Rather, we bring in excellent companies that have good prospects for a sustained contribution to EPS. We allow these companies to pursue autonomous growth while promoting collaboration with our partner companies worldwide and providing financial support. We believe this is the right business model for creating value over the medium and long term in the paint and adjacencies businesses, which are characterized by local production for local consumption. An overview of the successful Betek Boya acquisition is on the next page.

We have received questions from investors about how we examine and make decisions about potential M&A deals. What is the secret to our "ability to tell good from bad?" So, let me dig a little deeper into this. The only basis of judgment about a potential deal is whether it will contribute to MSV. For instance, we never consider an acquisition merely to make us bigger, to become the company with the largest revenue in the world, or based on an egoistic agenda of management to build a big track record. Even if we become No.1 in terms of revenue, it would be meaningless if our shareholder value is impaired in the process of reaching that point.

When we examine a specific acquisition, we make a judgment after holding multifaceted discussions on the degree of PMI and other risks involved with sound vigilance at all times. This is regardless of how attractive the target company may be. For Betek Boya, for instance, we thoroughly examined opportunities for potential post-acquisition growth led by excellent management, excluding from consideration

Key points of the M&A strategy

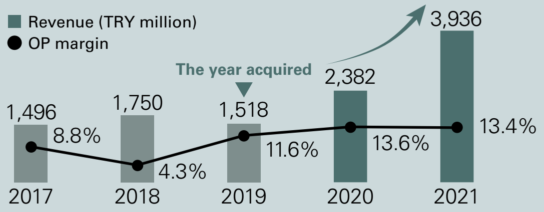
Targets	① Business segments: Paint (decorative/industrial) and adjacencies ② Geography: Not limited ③ Potential targets: Strong corporate/product brand and excellent management team	① Fundamentals of paint and adjacencies markets e.g. population growth and urbanization create enormous growth opportunities ② No restrictions in terms of target locations as long as acquisition contributes to MSV. Distant location to be carefully examined ③ Continue to build up assets leveraging strengths of our autonomous and decentralized business
Our Strengths	① Financial soundness ② Ability to finance in Japan, with stable currency and stable market ③ Full access to Nippon Paint Group's platform ④ Excellent management teams enabling autonomous and decentralized business model	① Stable cash generating ability and strong financial position ② Low interest rate borrowings, safety and liquidity of the stock market ③ Sharing expertise, products, and technologies within the Group ④ Minimize the PMI risk
Financial Discipline	① Contribution to EPS ② ROIC*1>WACC*2 ③ Sufficient leverage capacity ④ Debt financing prioritized; equity-based capital raising remains an option	① Aim to achieve EPS accretion in Year 1 after acquisition ② Take capital efficiency into consideration ③ Secure financial soundness to prepare for future M&As ④ EPS accretion also a must in rare case of equity financing

*1 Return on invested capital (after one-off expenses) *2 Weighted average cost of capital

M&A best practice: Betek Boya — Achieved revenue growth and OP margin improvement under Nippon Paint Group

Betek Boya
Acquired in July 2019

	Pre-acquisition	Post-acquisition
CAGR	0.8%*1	61.0%*2
OP margin	11.6% (2019)	13.4% (2021)



Synergies generated based on our autonomous and decentralized management

- Betek Boya utilized NPHD's low-cost fund-procurement capability to repay its entire high interest rate borrowings and allocated cash generated to aggressive investment in marketing activities, achieving market share gains (FY2019: 27%→FY2021: 34%*3)
- The acquisition enabled Betek Boya to share business growth know-how and best practice in developing countries as a member of NIPSEA Group and vice versa, achieving growth that significantly outperforms its pre-acquisition CAGR and the market growth
- Significantly reduced raw material cost in the first year following acquisition by sharing NIPSEA Group's raw material procurement sources
- Stepped up its multi-brand strategy through successful launch of new brand for its premium line by using high-profile NIPPON PAINT brand
- Shared Betek Boya's know-how in the ETICS business in the adjacency area within Nippon Paint Group, which led to faster growth of the ETICS business in our operating regions

*1 CAGR is for FY2017 to FY2019 *2 CAGR is for FY2019 to FY2021 *3 NPHD's estimates

geopolitical risks including inflation risk and the financial cost. As a result, we decided that the acquisition involved risk but that the expected returns would be greater in the medium and long term. Betek Boya's operating performance is impacted by the recent inflation and the weak Turkish lira, but its market share is nevertheless increasing. So, we are confident that the company has ample potential to deliver strong growth. Another key point is that one of our financial disciplines requires an acquired company to deliver EPS accretion starting in the first year. We never use optimistic assumptions that would rationalize acquisition synergies, hoping that the company can achieve EPS accretion three years after the acquisition.

Now, let me turn to the question about the pros and cons of delegating the management of operations to local management. As mentioned in "Letter to Investors about the Integrated Report 2022" on page 15, the Co-Presidents delegate authority to local management, which is accompanied by responsibility for delivering outcomes. Before delegating authority, we perform a study to confirm that we can Trust them based on their track records and aspirations for growth through constant communication. Sending management teams from headquarters can easily create a gap with the local staff. Replacing the local senior management with Japanese senior management could undermine the motivation of the talented local management team.

In addition to using a simple and quick decision-making approach of relying on local management, Nippon Paint Group as a whole has established a platform for supporting the local management by providing fund procurement, economies of scale, sharing of know-how, and a relationship where the local management can directly consult with the Co-Presidents. This platform enables the growth-oriented local management to fully utilize their managerial skills. In terms of governance, the local management are responsible for supervising their own companies based on our risk management framework. (For more information, see "Risk Management" on page 121.)

The performance of the major companies we have acquired since FY2014 has been strong both in high-growth and mature markets, as described in "Asset Management Report" on page 27. We have closed the acquisitions of Cromology and JUB in Europe, which are expected to contribute to our performance from FY2022 onwards. (For more information, see "Strategy for Mature Markets (Australia, New Zealand, PNG and Europe)" on page 67.)

By continuing to accumulate a track record of successful M&A deals, we will demonstrate the benefits of becoming a part of Nippon Paint Group to our M&A target companies, while fostering expectations in the stock market that Nippon Paint Group can consistently deliver high growth.

Q.3

Please give your thoughts about financial strategy that drives Asset Assembler model.

A We believe it is essential to secure stable funds through our financial strategy in order to maximize the benefits of Asset Assembler model that aims to accelerate growth through both existing businesses and M&A. We are therefore focusing on the management of a sound balance sheet by ensuring financial discipline and building an optimal capital structure.

The key elements of our financial discipline are the following: ①Prioritizing debt financing, ② Maintaining sufficient leverage capacity and enhancing engagement with financial institutions and rating agencies, and ③ Equity-based capital raising remaining an option with EPS accretion as a premise. The paint and adjacencies businesses have a very high cash generation capability. In addition, our Japan domicile gives us the ability to obtain funds at low interest rates to satisfy our strong demand for financing procurement as we pursue our aggressive M&A strategy. Accordingly, we prioritize debt financing over equity-based capital raising. Maintaining sufficient leverage capacity is essential to continuing to procure finance at low cost, which requires us to maintain our earnings growth through our existing businesses and M&A. Equally important is obtaining highly positive evaluations from the understanding of financial institutions and rating agencies. The use of debt financing and leverage will contribute to maximizing EPS through M&A. Equity-based fund raising remains an option assuming that the deal is EPS-accretive, and by selecting the optimal combination of financing methods, the company will pursue unrelenting growth without setting any upper limit.

We review the status of assets as necessary in accordance with change in the market environment to ensure a sound balance sheet and the efficient utilization of assets. Taking into consideration the impact of the pandemic, we are reviewing business terms in every region and business to improve our Cash Conversion Cycle (CCC). In addition, we are taking actions to respond to future credit collection risk by recording a provision for possible credit loss on the trade receivables of some real estate developers following the deterioration of conditions in the Chinese real estate market. Every year we examine whether or not it is reasonable to continue to hold cross-shareholdings, and we disposed of some of cross-shareholdings in FY2021.

Our property, plant and equipment, goodwill, and other assets are increasing every year as we continue to reinforce our manufacturing facilities and to aggressively execute M&A deals for future growth. At the same time, we have been taking measures to improve our asset efficiency and profitability, such as the transfer of the European automotive coatings business and the India businesses and the structural reform of the Japanese businesses and the marine coatings business. In addition, we are reducing the risk of impairment losses on goodwill by minimizing PMI risk through autonomous and decentralized management and building up excellent quality mergers and acquisitions.

As regards to the liability situation, we are prioritizing debt financing to secure the funds for growth by engaging in M&A and other investment activities. Accordingly, the net debt/EBITDA ratio, which indicates financial leverage, is expected to increase by about four times at the end of FY2022, from 3.4 times (after adjusting for one-off items) at the end of FY2021 before the completion of the Cromology acquisition. (See "Progress of the Medium-Term Plan (FY2021-2023)" on page 51). Basically, all our borrowings are in yen, with an average maturity of 5 years and an average before-tax interest rate of 0.4%, which means that they comprise an extremely stable debt composition. We will continue to procure finance at low interest rates and long-term maturities. We will also continue to pursue an optimal capital structure as well as to obtain highly positive evaluation and trust from lending financial institutions and rating agencies, in order to maintain sufficient leverage.

Based on our judgment that we need to reinforce our financial base to achieve further growth through M&A, we issued new shares through a third-party allotment in FY2021, thereby increasing capital. EPS accretion starting in the first year of acquisition is an important criterion for our judgment on M&A deals. Another key point is capital efficiency where we place emphasis on achieving ROIC that exceeds WACC.

The focus of our equity policy is to raise total shareholder return (TSR) through earnings per share (EPS) growth by prioritizing growth investments while maintaining financial discipline. As part of our effort to raise TSR, our policy is to maintain steady and consistent dividend payments with a target dividend payout ratio of 30% while taking full account of factors including the trend in earnings and investment opportunities available. In FY2021, we paid an annual dividend of ¥10 per share, including the special dividend of ¥1 per share to commemorate the 140th anniversary of the foundation of the company.

Balance sheet management policy

As of the end of December 2021

Assets

"Cash and cash equivalents" and "Trade and other receivables"
- Review the cash conversion cycle (CCC) in response to reflect the impact of the pandemic and deterioration of the conditions in the Chinese real estate market (e.g., review trade terms and conditions)
- Take actions to respond to future credit collection risk (e.g., recording a provision for possible credit loss in China)

"Assets held for sale"
- Examine the rationality of continuing to hold cross-shareholdings every year (disposed of some cross-shareholdings in FY2021)

"Property, plant and equipment"
- Take actions to improve asset efficiency and profitability through business divestiture and structural reform (e.g., transfer of the European automotive coatings business and the India business and structural reform of the Japanese businesses and the marine business)

"Goodwill" and "Other intangible assets"
- Minimize PMI risk based on autonomous and decentralized management and reduce impairment losses by building up excellent quality mergers and acquisitions

Assets		Liabilities	
Cash and cash equivalents	¥138.8 bn	Trade and other payables	¥209.7 bn
Trade and other receivables	¥266.9 bn	Bonds and loans payable	¥523.0 bn
Assets held for sale	¥3.9 bn	Total	¥986.4 bn
Property, plant and equipment	¥301.7 bn	**Equity**	
Goodwill	¥652.7 bn	Capital	¥671.4 bn
Other intangible assets	¥300.2 bn	Retained earnings	¥228.0 bn
Total	¥1,955.1 bn	Total	¥968.7 bn

Liabilities

"Bonds and loans payable" (Interest-bearing debts)
- Prioritize debt financing and maintain the leverage capacity (the expected net debt/EBITDA at the end of FY2022 is around 4x)
- Evaluation from credit agencies (maintained the "A" rating from R&I)
- Stable finance procurement capability in yen (low interest rate/long-term maturity)

Equity

"Capital" and "Retained earnings"
- Reinforce financial base to prepare for growth investment such as M&A (capital increase based on new share issuance through a third-party allotment)
- Equity-based capital raising remaining an option with EPS accretion as a premise
- Include capital efficiency in the consideration of M&A decisions, including achieving ROIC that exceeds WACC
- Aim to maintain the dividend payout ratio at 30%

Aiming to achieve our FY2023 revenue and operating profit targets through revenue growth and margin improvement

Building the foundation of Asset Assembler model

In the first year of our three-year Medium-Term Plan (FY2021-2023), we made progress on the establishment of Asset Assembler model for accelerating growth through the existing businesses and M&A. While accelerating autonomous growth of Group partner companies, we are aggressively pursuing growth through M&A in the paint and adjacencies businesses. At the same time, we are developing the foundation for even faster growth, as well as clarifying roles and reinforcing governance with the smaller headquarters at the holding company. We will continue to relentlessly pursue growth over the medium and long term based on Asset Assembler model.

Financial plan for FY2021-2023

(Billion yen)

	FY2021 Results*3	Feb. 2022 Forecast: FY2022 Forecast	Mar. 2021 Forecast: FY2023 Targets*4	Mar. 2021 Forecast: FY2021-2023 CAGR Targets*4	Mar. 2021 Forecast: FY2024 CAGR Targets
Revenue	998.3	1,200.0	1,100.0	10.0%+	In the high single digits
Operating profit	87.6	115.0	140.0	25.0%	Profit growth exceeding revenue growth
Operating profit margin	8.8%	9.6%	c.13.0%	c.+2.7pt	
EBTIDA*1	120.4	–	175.0	20.0%	
EBITDA margin	12.1%	–	c.16.0%	c.+1.8pt	
Profit attributable to owners of parent*2	67.6	81.0	105.0	25.0%	
EPS (yen)	29.41	34.49	45.00	25.0%	

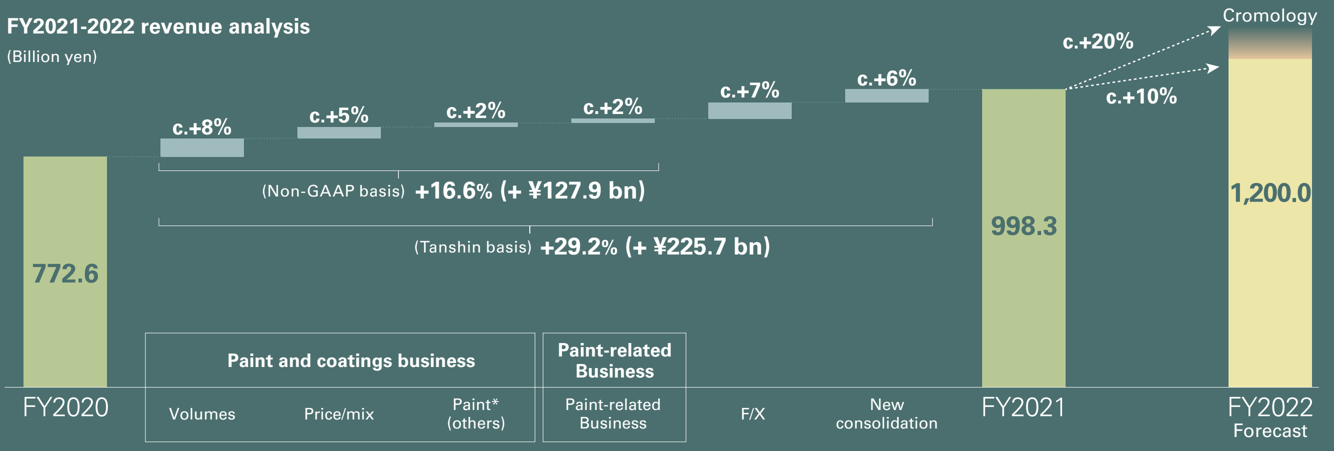
*1 EBITDA: Operating profit + depreciation and amortization + impairment loss + negative goodwill
*2 Targets for profit attributable to owners of parent are calculated by multiplying operating profit by effective tax rates
*3 Figures for FY2020 onwards have been retrospectively adjusted due to the classification of the European automotive coatings businesses and the India business as discontinued business following the transfer of these businesses to the Wuthelam Group (announced on August 10, 2021) and the change in accounting policy regarding cloud computing agreements beginning with FY2021 4Q
*4 Exchange rate assumptions: USD/JPY is at 106.0 yen; RMB/JPY is at 15.7 yen; AUD/JPY is at 75.0 yen; naphtha price: 40,000 yen/kl

FY2021-2022 revenue

Revenue reached a record high in FY2021 despite the pandemic, due to higher selling volumes and an improved price/mix, coupled with the effects of exchange rate fluctuations and new consolidation of the Indonesia business. Our strong performance in FY2021 reaffirmed the strengths of our high market share in all operating regions globally and our business model that respects the autonomy of Group partner companies. In FY2022, we forecast revenue growth of around 20% based on continued autonomous growth and contributions from M&A. Our plan is to achieve our Year 3 revenue target in the Medium-Term Plan of 1,100 billion yen one year early.

FY2021-2022 revenue analysis

(Billion yen)



* Products included in the Paint and Coatings Business such as semi-finished products and fine chemicals with unit price and volume significantly different from paint products. Disclosed separately from volumes and price/mix in the above graph to provide more rational data

FY2021-2022 revenue/growth rate

(Billion yen)

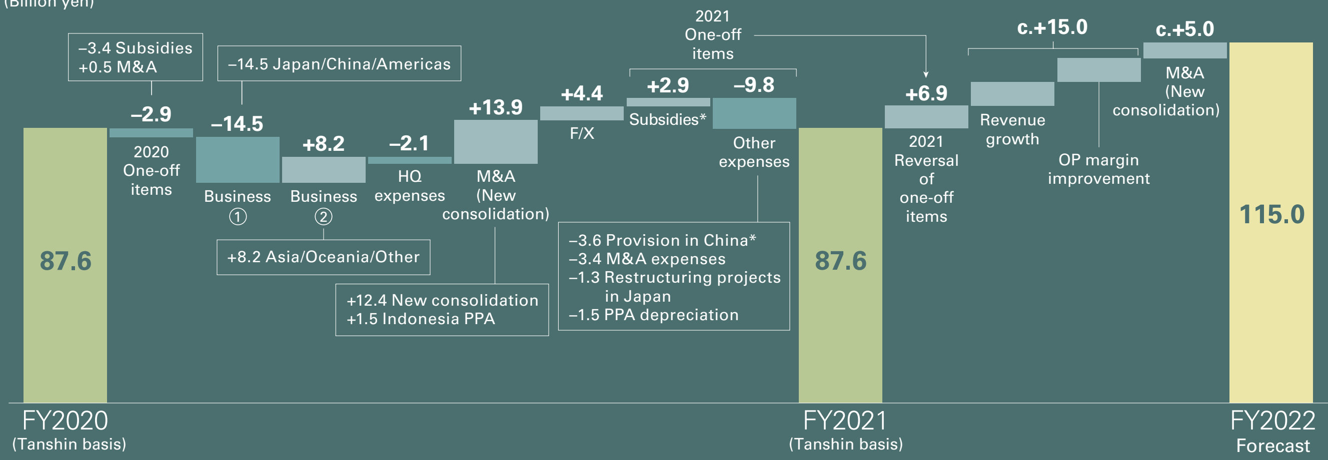
	FY2021 Results (Tanshin basis)	FY2021 Growth rate (In local currency)	Feb. 2022 Forecast: FY2022 Targets (In local currency)	Mar. 2021 Forecast: FY2021-2023 CAGR Targets (In local currency)
Japan	164.6	+1.6%	+10–15%	c.+5%
NIPSEA China	379.1	+27.3%	+10–15%	c.+10%
Asia (excepting NIPSEA China)	151.1	+74.9%	c.+10%	+5–10%
New consolidation (Indonesia)	39.5	+25.3%	c.+15%	c.+15%
Oceania	176.2	+5.9%	c.+5%	c.+5%
Americas	76.4	+4.9%	c.+10%	+5–10%
Other (Betek Boya)	49.2	+65.3%	+10–15%	+10–15%
Total	998.3	—	1,200.0 (Tanshin basis)	1,100.0

FY2021-2022 operating profit

We were unable to achieve a satisfactory operating profit in FY2021 due to raw material price increases and supply chain disruptions. However, we effectively achieved operating profit growth after excluding one-off items, backed by solid earnings growth in Australia, Türkiye, and Asia except China, along with the contribution from the newly consolidated Indonesia business. There were also significant savings of headquarters expenses compared with the initial plan as we moved towards the smaller headquarters at the holding company. For 2022, we forecast around 30% operating profit growth from efforts to improve margin by increasing selling prices and reviewing SG&A expenses, on top of the effects of higher revenue.

FY2021-2022 operating profit analysis

(Billion yen)



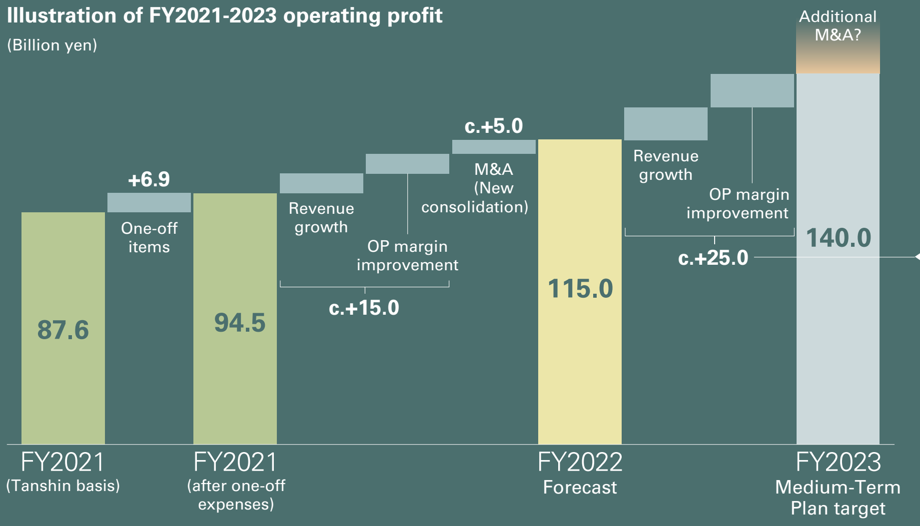
* Calculated using the exchange rate applied in FY2021

Towards FY2023—Year 3 of the Medium-Term Plan

We assume that we can achieve organic growth with operating profit margin in the high single digits to low teens in FY2022 and beyond by increasing our market share based on solid paint demand centered on Asia including China. If the raw material price inflation settles by the end of FY2022, we see good prospects for achieving our Year 3 operating profit target in the Medium-Term Plan of 140 billion yen even without an additional M&A deal, thanks to a significant contribution from margin improvement in FY2023, achieved through selling price increases.

Illustration of FY2021-2023 operating profit

(Billion yen)



Road map for achieving operating profit improvement of c. ¥25.0 bn from FY2022 to FY2023

(e.g. 1)
+10% revenue + +1.0pt OP margin

+10% revenue	=	¥1,320.0 bn
10% OP margin	=	+¥12.0 bn
+1.0pt OP margin	=	+¥13.2 bn
		+ c. ¥25.0 bn

(e.g. 2)
+15% revenue + +0.5pt OP margin

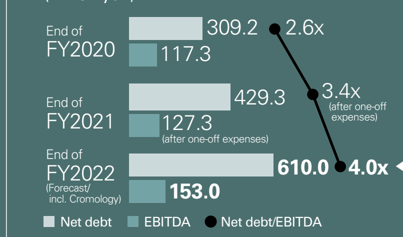
+15% revenue	=	¥1,380.0 bn
10% OP margin	=	+¥18.0 bn
+0.5pt OP margin	=	+¥6.9 bn
		+ c. ¥25.0 bn

FY2021 financial position

Looking at our financial position, interest-bearing debts are expected to increase toward the end of FY2022 due to the acquisitions of Cromology and JUB. However, we have maintained a long-term credit rating of A from R&I based on our ability to stably procure funds in yen. Operating cash flows underachieved our plan due to higher raw material prices. However, we maintain our target for a dividend payout ratio of 30% while maintaining capital investments for continuous revenue increase and growth.

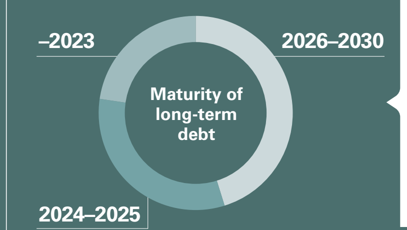
Net debt/EBITDA trends

(Billion yen)



As of end of FY2022, expect interest-bearing debt to increase due to borrowing of funds for the acquisition of Cromology and JUB.

Status of debt



- **Stable yen-based funds**
- **Average maturity at 5.0 years**
- **Average interest rate at 0.4%**
- **Long-term credit rating of A (R&I)**

Capital allocation

(Billion yen)

	FY2021 Results
+) Operating CF*	70.2
−) Capital expenditure*	49.5
−) Dividend	23.5
−) M&A (net cash of acquired companies)	98.8

* Amounts for continuing operations

Operating cash flow lower than expected due to higher raw material prices. Maintain capital expenditure aimed at continuous revenue increase and business growth. Aim to maintain a dividend payout ratio of 30%.

Capital expenditure

(Billion yen)

	FY2021 Results*	FY2022 Forecast
Japan	8.3	10.0
NIPSEA China	20.2	17.0
Asia (excepting NIPSEA China)	5.1	7.0
Oceania	4.3	5.0
Americas	8.2	6.0
Other	3.4	5.0
Total	49.5	50.0

* FY2021 results are on a Tanshin basis (amounts for continuing operations). Japan segment includes CAPEX at NPHD.

Focus on capex for new facilities and expanding production capacity in Asia and other regions with strong revenue growth, while Japan requires more renewal and maintenance capex. Overall capital expenditure to sales ratio to be c. 5%.

Actions for Profit Margin Improvement: Raw Material Price Increases and Our Responses

In order to achieve our Year 3 operating profit target in the Medium-Term Plan of 140 billion yen, we are taking actions such as strategic price increases and continuous reviews of SG&A expenses to respond to raw material prices that have moved up significantly and remained elevated due to the Ukraine crisis and other reasons. As a result of these actions, the operating profit margin is starting to recover.

Raw material prices

Crude oil and naphtha prices have increased following US and UK bans on Russian oil imports, coupled with continuing disruptions in international logistics and intermittent problems at some factories. Raw material prices increased further during the first half of FY2022.

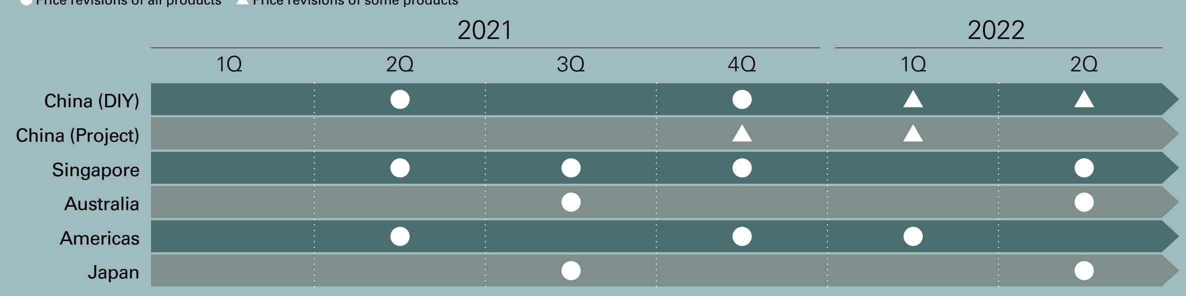
Crude oil/ naphtha	Crude oil and naphtha prices have increased beyond our assumptions at the start of FY2022 due to US and UK bans on Russian oil imports. These prices are unlikely to decline within the next few months or so.
TiO_2	The price of TiO_2 has increased further due to continuing ore price increases, logistics disruptions, and supply-and-demand imbalances. The Ukraine crisis may cause the cost of TiO_2 to increase even faster.
China	Raw material production and logistics have continued to be impacted by production restrictions and China's zero-COVID policy, coupled with electricity shortages.

Our responses in the first half of FY2022

With the high cost of raw materials impacting our operations worldwide, we are continually taking actions such as raising selling prices, procuring alternative raw materials, and reviewing SG&A expenses.

Selling price increase	We have been raising selling prices in the decorative paints business in major operating regions since 2Q FY2021. We have also conducted price negotiations in the automotive and industrial businesses while maintaining sound relationships with customers.
Procurement of alternative raw materials	Our R&D and production divisions in all operating regions are sharing information and knowhow about ways to procure alternative raw materials.
Review of SG&A expenses	We are reviewing SG&A expenses in all operating regions, which resulted in 1 pt reduction in the consolidated SG&A expense in FY2021, to 29.5% from 30.5% in FY2020.

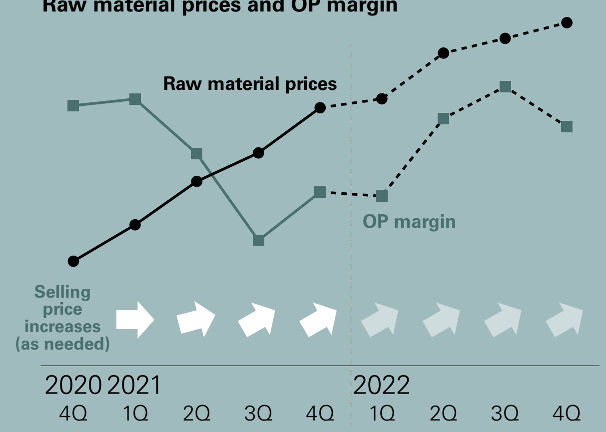
Selling price increases in major operating regions (decorative paints)



Road map for improving the OP margin

Our guidance for FY2022 announced in February 2022 assumed that the Japan naphtha price would remain above ¥60,000 through 1H FY2022. However, raw material prices have increased beyond our assumptions due to rising crude oil and naphtha prices caused by US and UK bans on Russian oil imports. We will continue to raise selling prices to keep up with raw material price increases, which we expect will result in continuous and gradual improvement of the operating profit margin. However, margin improvements may be delayed depending on crude oil and naphtha market developments. We are well positioned to restore the operating profit margin over the medium and long term through continuous selling price increases.

Raw material prices and OP margin



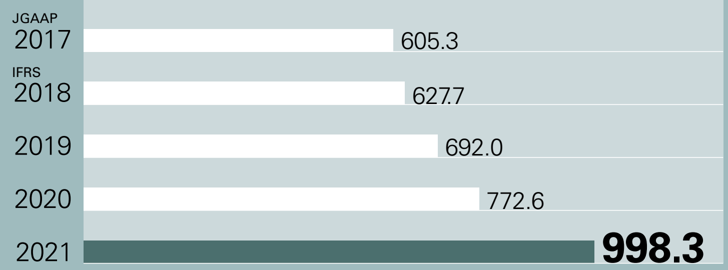
Financial highlights

Figures for FY2017 are based on JGAAP and figures for FY2018 to FY2021 are based on IFRS.

Financial base

Revenue

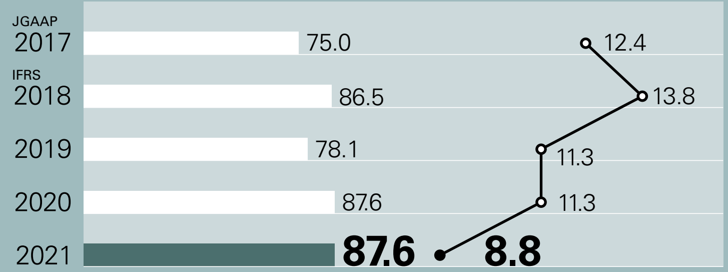
(Billion yen)



Nippon Paint Group has grown steadily through the acquisitions of paint manufacturers in the United States in FY2017 and in Australia and Türkiye in FY2019 along with the successful growth of the decorative paints business in China and other Asian countries. In FY2021, we achieved revenue growth for the fifth consecutive year and a record revenue due to the acquisition of the Indonesia business, selling price increases in every region, and the weaker yen.

Operating profit / Operating profit margin

■ Operating profit (Billion yen) ● Operating profit margin (%)



Group operating profit reached a record high in FY2020 due to the benefits of acquisitions and growth of the Chinese business. Group operating profit remained at the same level in FY2021 due to higher revenue and the reduction of fixed costs, despite raw material price increases and a provision for a potential credit loss in China. The operating profit margin in FY2021 decreased from the previous year due to an increase in the raw material cost contribution ratio.

Earnings per share (EPS)*

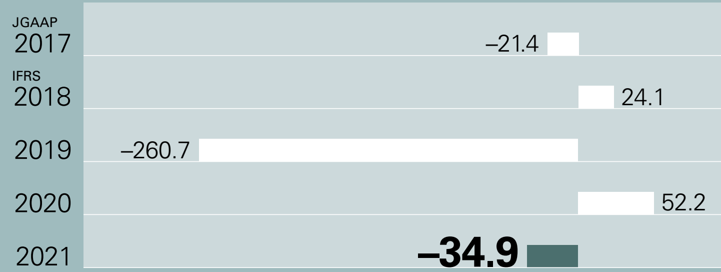
(Yen)

* Calculated assuming that the five-for-one stock split on April 1, 2021 was conducted in January 2017.

Earnings per share (EPS) rises or falls roughly in proportion to changes in earnings, such as operating profit. EPS increased in FY2021 due to a significant increase in net profit and despite the issuance of new shares through a third-party allotment to procure funds for the full integration of the Asian JVs and the acquisition of the Indonesia business.

Free cash flow

(Billion yen)

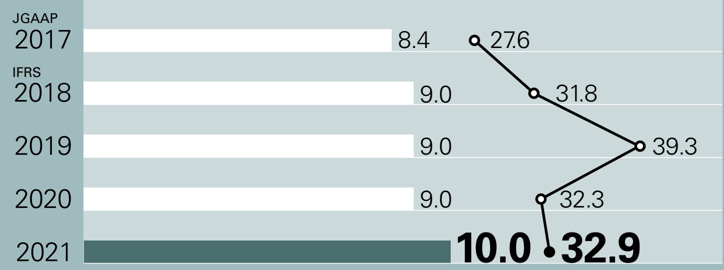


Capital investments in the paint industry are relatively low and positive cash flow is the norm. Free cash flow in FY2017, FY2019, and FY2021 were negative due to the acquisitions of overseas paint manufacturers. However, our operating cash flow has increased consistently every year.

Financial base

Dividends per share*1 / Dividend payout ratio (IFRS)*2

■ Dividends per share (Yen) ● Dividend payout ratio (IFRS) (%)

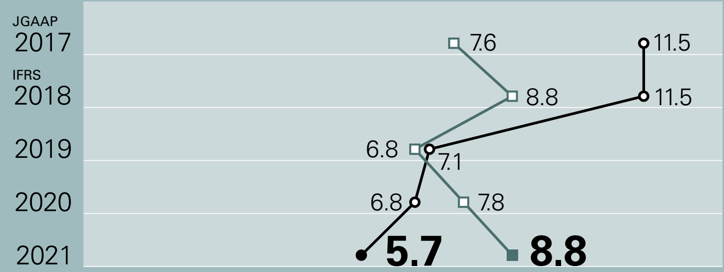


*1 Calculated assuming that the five-for-one stock split on April 1, 2021 was conducted in January 2017.
*2 Dividend payout ratio in FY2017 is JGAAP-based figures calculated after adjusting for amortization of goodwill.

Our basic policy is to pay stable and consistent dividends and maintain a dividend payout ratio of 30%. Our dividend payout ratio has been above 30% since FY2018. In FY2021, we paid an annual dividend of ¥10 per share including a commemorative dividend of ¥1 per share for the 140th anniversary of the company's founding. As a result, our dividend payout ratio was 32.9%.

Return on equity (ROE) / Return on invested capital (ROIC)*

■ ROE (%) ● ROIC (%)

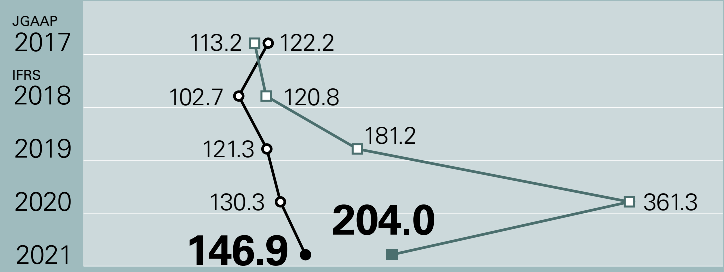


* ROIC (JGAAP): Operating profit after tax / (net debt + total net assets) ROIC (IFRS): Operating profit after tax / (net debt + total equity)

ROE has remained around 8% in recent years after declining in FY2019 because net profit decreased. ROIC has been declining since FY2019 because of lower turnover of invested capital caused by increases in interest-bearing debt and shareholders' equity. These increases were due to M&A activity in FY2019, FY2020, and FY2021 and the full integration of the Asian JVs in FY2021.

Total shareholder return (TSR)

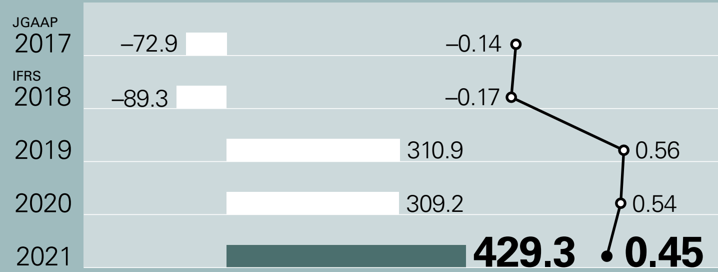
■ TSR (%) ● TOPIX (dividends included) (for reference)



The total shareholder return (TSR) has exceeded TOPIX (dividends included), a comparative benchmark, since FY2019 in line with the increase in dividends and the share price. TSR in FY2021 reached 204.0% due to a dividend increase.

Net debt* / Net D/E ratio

■ Net debt (Billion yen) ● Net D/E ratio (Times)



* Net debt: Interest-bearing debt (bonds and borrowings (current/non-current) + other financial liabilities (current/non-current)) - liquidity on hand (cash and cash equivalents + other financial assets (current))

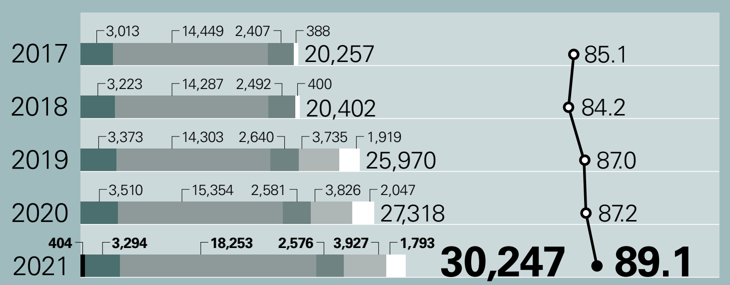
Due to relatively low capital investments in the paint industry, positive cash flow is the norm and our net debt has been consistently negative. However, net debt has been positive since FY2019 due to the loans from financial institutions to finance M&A. The net D/E ratio decreased in FY2021 because of the increase in equity capital as a result of the issuance of new shares through a third-party allotment.

Non-financial highlights

Human resources / organizations

Employees / Ratio of overseas employees

Employees (persons) ■ Consolidated total* ■ Japan ■ Asia ■ Americas ■ Oceania □ Other ● Ratio of overseas employees (%)

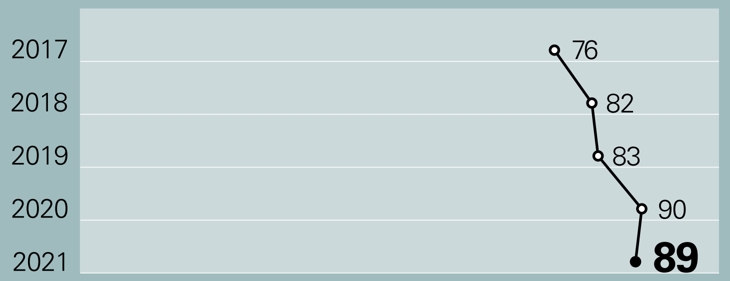


The ratio of employees at the Group's overseas operations has been increasing due to aggressive M&A, such as the acquisition of a US paint manufacturer in FY2017, the acquisition of Australian and Turkish paint manufacturers in FY2019, and the acquisition of the Indonesia business in FY2021. The ratio of overseas employees has increased by 4 pt. from 85.1% in FY2017 to 89.1% in FY2021. We are taking actions to reinforce and increase our workforce for further growth in Asia and Oceania.

* The number of employees of NPHD, which was previously included in the Japan segment, has been included in the Consolidated total (common) since FY2021.

Employee satisfaction level (Japan Group)*

(%)

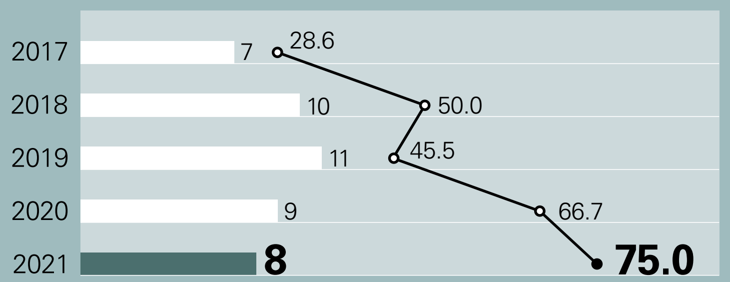


Nippon Paint Group's employee satisfaction has been increasing in Japan since FY2017. Employee satisfaction reached a record high in FY2020 and stayed at a high level in FY2021. Surveys show that employee satisfaction slightly decreased in the areas of understanding of the Group's vision and policies as well as trust and sense of comfort in their companies amid significant changes in the business environment. However, employee satisfaction improved in the area of comfortable workplace environments, which was identified as an area requiring improvement in FY2020.

* Surveys by Nippon Paint Labor Union

Number of Directors of the Board* / Ratio of Independent Directors on the Board*

■ Number of Directors of the Board (persons) ● Ratio of Independent Directors (%)



The Group is building an advanced corporate governance structure based on Asset Assembler model in order to achieve growth over the medium and long term and protect the interests of minority shareholders. We shifted to a Company with a Nominating Committee, etc. governance structure in March 2020. Also, we established a structure in FY2021 where the Lead Independent Director serves as the Board Chair and six of the eight Directors are Independent Directors.

* Number of the Directors who were elected at the Ordinary General Meeting of Shareholders held in March 2021. The FY2021 figure is the number of the Directors in office on or after April 28, 2021.

Customer base

Number of countries/regions where Nippon Paint Group has the No. 1 market share in decorative paints

Nippon Paint Group has held the top market position in Japan for many years. The aggressive expansion of the ASEAN business since 1967 has also steadily increased the number of countries and regions where the Group has the largest market share. The acquisitions of DuluxGroup and Betek Boya has also established us as the leader in the paint markets of Australia and Türkiye since FY2019.

Brands

Awarded the Gold Brand from a Chinese brand evaluation institution

The ongoing sales growth of our high-quality LiBang brand products since we entered the China market in 1992 has made it the top brand in China. The LiBang brand has won the Gold Brand for six consecutive years in the wall paint category of the C-BPI (China Brand Strength Index).

Nature / environment

CO_2 emissions in Japan (Scope 1 and 2)*

($t\text{-}CO_2$)

The Group is steadily reducing CO_2 emissions in Japan by taking actions, such as conducting energy-saving activities and introducing renewable energy towards the goal of reducing CO_2 emissions by 37% in FY2030 compared to the FY2019 level. The Group's CO_2 emissions in Japan (Scope 1 and 2) in FY2021 was roughly unchanged from the previous year despite the recovery of production volume.

* The survey coverage was six companies until FY2017: Nippon Paint Holdings (NPHD), Nippon Paint (NPTU), Nippon Paint Automotive Coatings (NPAC), Nippon Paint Industrial Coatings (NPIU), Nippon Paint Surf Chemicals (NPSU), and Nippon Paint Marine Coatings (NPMC). The survey coverage from FY2018 is seven companies: NPHD, NPTU, NPAC, NPIU, NPSU, NPMC, and Nippon Paint Materials (NPMJ).

Water use in Japan*

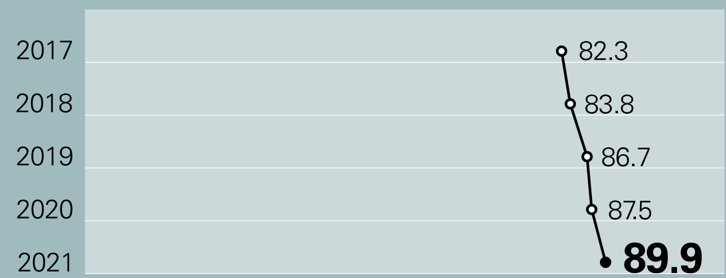
(thousand m^3)

The Group identified the efficient use of water as an item of Materiality under resources and environment, and is taking actions such as efficiently using water for raw materials as well as reducing water use and using recycled water in manufacturing processes. As a result of these actions, the water use in Japan decreased in FY2021 from the previous year.

* The survey coverage was six companies until FY2017: Nippon Paint Holdings (NPHD), Nippon Paint (NPTU), Nippon Paint Automotive Coatings (NPAC), Nippon Paint Industrial Coatings (NPIU), Nippon Paint Surf Chemicals (NPSU), and Nippon Paint Marine Coatings (NPMC). The survey coverage from FY2018 is seven companies: NPHD, NPTU, NPAC, NPIU, NPSU, NPMC, and Nippon Paint Materials (NPMJ).

Ratio of water-based paints in the decorative paints business (Global)*

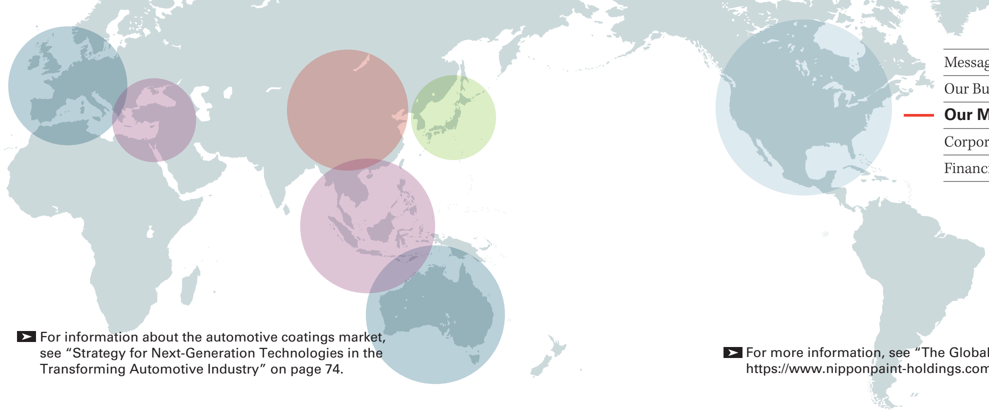
(%)



Demand for water-based paints is rising in line with growing environmental awareness and tighter environmental regulations around the world. The Group is using its technological strengths to develop highly competitive water-based paint products. The shipment ratio of water-based paints is increasing every year as a result.

* Calculated as water-based paint shipments divided by total paint shipments in units of 10,000 tons. Data for four companies: Nippon Paint (NPTU) and NIPSEA (beginning in FY2016), Dunn-Edwards (beginning in FY2017), and DuluxGroup (beginning in FY2019)

The global paint market has strong local features and huge growth potential over the medium and long term



For information about the automotive coatings market, see "Strategy for Next-Generation Technologies in the Transforming Automotive Industry" on page 74.

For more information, see "The Global Paint Market" page on our IR website.
https://www.nipponpaint-holdings.com/en/ir/results/market/

China —Decorative paints market

For information about Nippon Paint Group's responses and actions and growth strategy for the Chinese decorative paints market, see "Growth Strategy for Rapidly Growing Repainting Market in China" on page 61.

No change in medium- and long-term growth potential

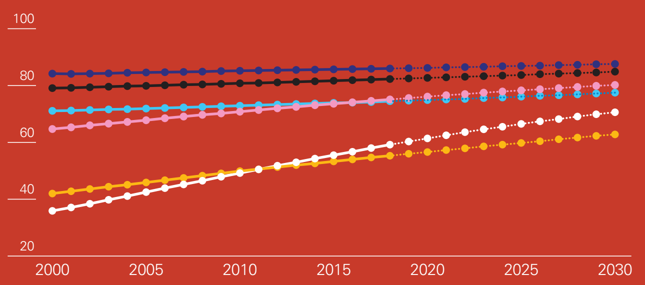
Paint demand in China is expanding as urbanization increases. The urbanization rate in China increased from around 50% in 2016 to between 60% and 70% in 2021, and is expected to continue to advance gradually (See Figure 1). Per capita paint consumption is still around one-third of the level of advanced countries. Consumption is expected to climb consistently at a GDP+α growth rate in line with the increase in disposable income as China's middle class expands (See Figure 2).

Rapidly expanding repainting demand

In China, the real estate market gained momentum with housing reforms in 1998. Since then, an enormous number of private housing units have been built. Private houses that were built in large numbers in the late 1990s are aging. As a result, repainting demand has been growing rapidly (See Figure 3). In response to this situation, the Chinese government announced a plan in 2020 to repair, reform and redevelop old urban residential communities in 39,000 locations with 7 million households nationwide. In addition, the government established the goal of completing the renovation of residential communities built in 2000 or earlier by the end of 2025. The government has asked residents to renovate the interiors of their homes and replace home electric appliances.

Backed by the present situation concerning existing houses and a push by the government for renovations, repainting demand is expected to continue to climb. Based on our estimates, repainting demand for existing houses is around one-third of total paint demand for housing in China and paint demand for new houses is around two-thirds. In urban areas, the rapid aging of houses has raised paint demand for existing houses to roughly the same level as paint demand for new houses.

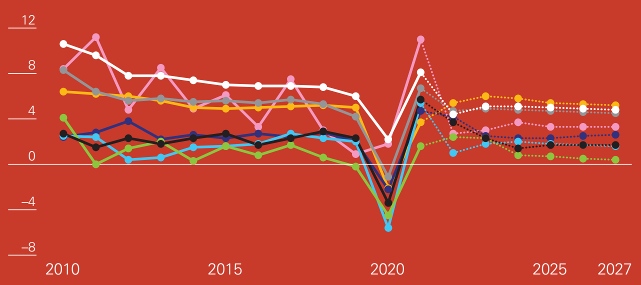
Figure 1 **Urbanization rates** (%)



China Indonesia Türkiye Europe USA Australia

Source: United Nations (data released in 2018)

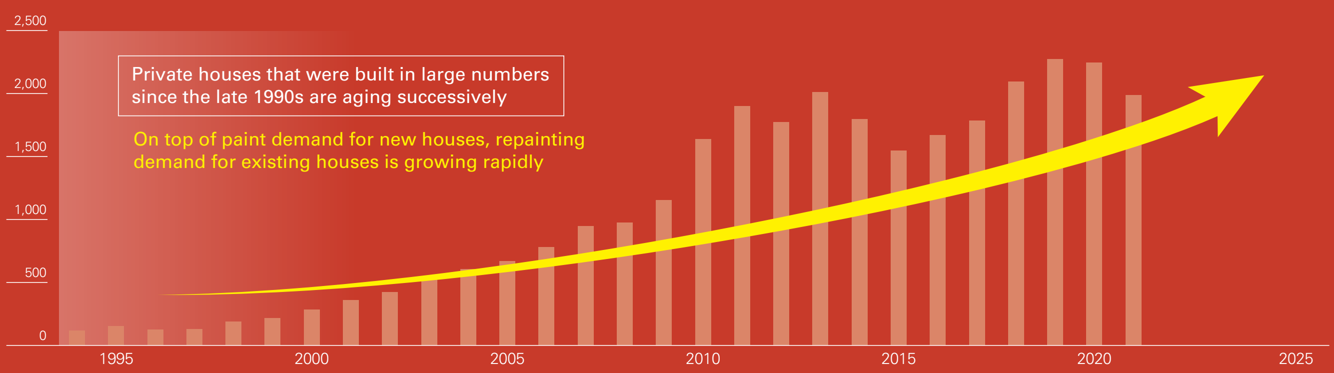
Figure 2 **GDP growth rates** (%)



China Indonesia Türkiye Asia Pacific
Europe USA Australia Japan

Source: International Monetary Fund

Figure 3 **The floor area of new housing starts in China** (Unit: million m²)



The floor area of new housing starts

Source: National Bureau of Statistics of China

High-growth countries (Indonesia and Türkiye) —Decorative paints market

For information about Nippon Paint Group's responses and actions and growth strategy for high-growth countries, see "Growth Strategy Deployment in High-Growth Countries (Indonesia and Türkiye)" on page 65.

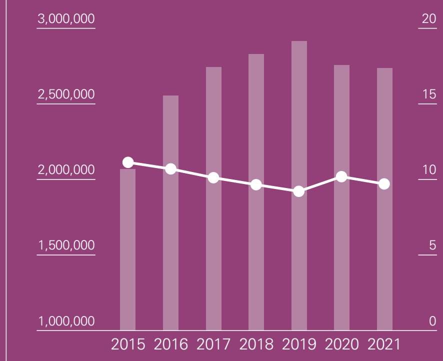
Strong growth continues driven by GDP growth, urbanization and government economic stimulus policies

The urbanization rates in Indonesia and Türkiye increased from 53% and 74%, respectively, in 2015, to 57% and 77%, respectively, in 2021. In addition, the urbanization rates in these countries are expected to increase further, similar to the situation in China, to 63% and 80%, respectively, in 2030 (See Figure 1).

In Indonesia, paint demand is expected to grow further driven by the government's stimulus measures, including infrastructure investments accompanying the capital city relocation project. In Türkiye, market growth is expected to continue despite the high inflation caused by the depreciation of the Turkish lira against major currencies. In addition, renovation and repair demand is expected to increase with GDP growth (See Figure 2).

Disposable income in both countries has been growing steadily (See Figures 4 and 5). In line with this trend, growth is projected in the premium market, on top of growth already taking place in the economy and standard markets. In addition, we expect growth of per capital paint consumption in these countries.

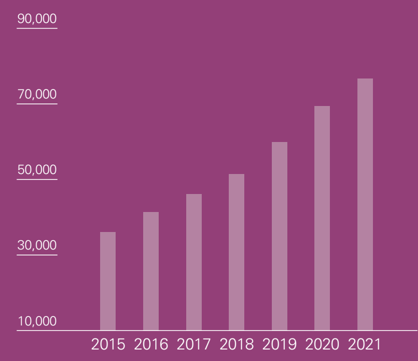
Figure 4 **Personal income in Indonesia**



Average wage (Indonesia rupiah)
Percentage of people in poverty (%)

Source: Statistics Indonesia

Figure 5 **Average disposable income per household in Türkiye**



Average disposable income per household (Turkish lira)

Source: Turkish Statistical Institute

Mature countries (Australia and Europe) —Decorative paints market

For information about Nippon Paint Group's responses and actions and growth strategy for the mature countries, see "Strategy for Mature Markets (Australia, New Zealand, PNG and Europe)" on page 67.

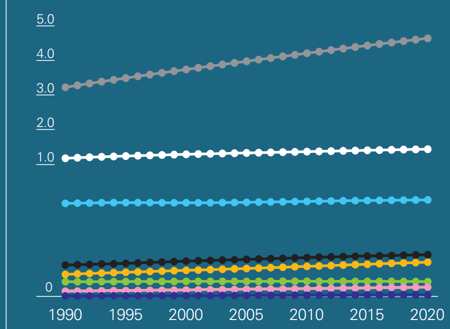
Expecting market growth driven by the recovery of the housing market and GDP growth

The population of Australia has been growing steadily (See Figure 6).

Private dwelling commencements declined both in Australia and Europe in 2020 due to the pandemic but a recovery has started as a result of government stimulus, albeit disrupted by supply constraints (See Figure 7).

Generally speaking, demand for decorative paints has a higher correlation to GDP growth than to private dwelling commencements as these mature markets are biased to existing home renovation and repair. Considering that GDP growth is expected to continue in Australia and Europe, we expect that solid growth will continue in the decorative paints market over the medium term (See Figure 2).

Figure 6 **Population** (billion people)

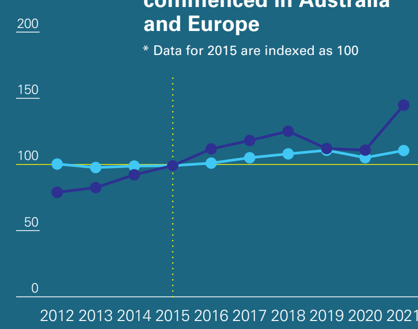


China Indonesia Türkiye Asia
Europe USA Australia Japan

Source: United Nations

Figure 7 **Private dwellings commenced in Australia and Europe**

* Data for 2015 are indexed as 100



Private dwellings commenced in EU
Private dwellings commenced in Australia

Source: Created by NPHD based on data from Australia Bureau of Statistics and Eurostat

Feature Article

Growth Strategy for Rapidly Growing Repainting Market in China

Eric Chung
CEO,
Nippon Paint China

PROFILE

Eric Chung is the CEO of Nippon Paint China, currently heading all its business units in Greater China. He held managerial roles in two subsidiary companies of Master Kong Holdings Co. Ltd. before joining Nippon Paint China in 2007. Armed with a clear business vision, he has spearheaded company-wide transformation in areas of corporate strategy, image, branding and product technology. He has also expanded Nippon Paint's scope, overseeing its evolution from paint manufacturer to a provider of overall coating solutions. Under his leadership, Nippon Paint China has achieved more than double digit growth for the past 10 consecutive years.

1. Growth opportunities and potentiality of repainting market in China

China's property market has entered the era of stock housing

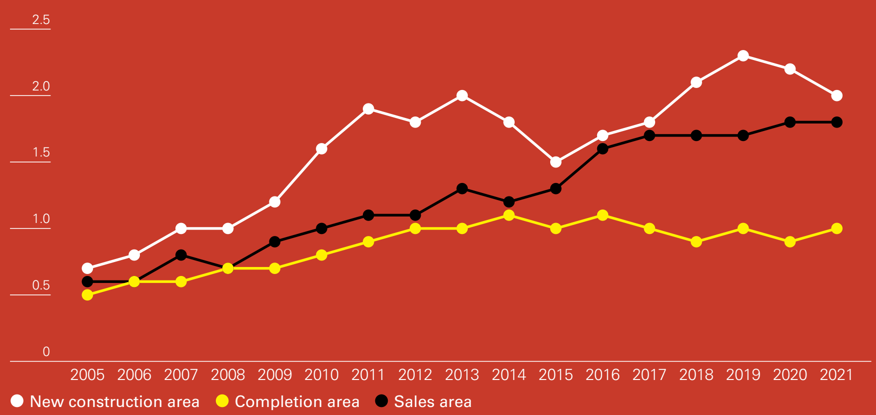
Under the influence of the "Domicile Not Speculate" policy, China's Property Market has plateaued. In 2021, China's property development investment made up 25.2% of total fixed asset investment, down by two percent points from 2020. In terms of construction scale, from 2005 to 2015, Compound Annual Growth Rate (CAGR) of property development investment was 20%, CAGR of project commencement was 8.5%, CAGR of housing transaction was 8.8%, and CAGR of project completion was 6.5%. From 2016 to 2021, these 4 indicators dropped respectively to 7.5%, 3.5%, 2.7% and -0.9%. It is estimated that in the next two decades, annual transaction volume of new property will drop to below 1B m², down 40% from its current level.

Sustained policy control has led to a decline of new property transaction volume, and consequently increasing the proportion of stock housing gradually in the property market. It is estimated that stock property housing will reach 350M units by 2025, and 420M units by 2030. As a key indicator of the arrival of stock housing era, since 2016, Resale Housing has made up over 40% of China's total housing transactions. In 2021, Resale Housing transaction was 41% of the total transaction.

China's Tier 1 cities have crossed over into Era of Stock Housing. Beijing's resale housing transactions are close to 70% of total property transaction, while in Shanghai it stands at 60%, while for Shenzhen and Guangzhou they are at approximately 50%. For Tier 2, 3 & 4 cities, resale housing transactions have made up over 30% of total property transactions and are also steadily increasing.

The 1998-2008 period was known as the Golden Decade of China's property market. Judging from the repair and maintenance cycle of 10-15 years, a large amount of stock housing has reached or exceeded the "Refreshing" threshold. Repainting of stock housing is set to overtake new property to become the key support for demand for home decoration. By 2025, it is estimated that renovation of stock housing will make up 42% of total demand of housing renovation. By 2030, this ratio will rise to over 50% of total renovation.

Property investment development (Billion square meters)

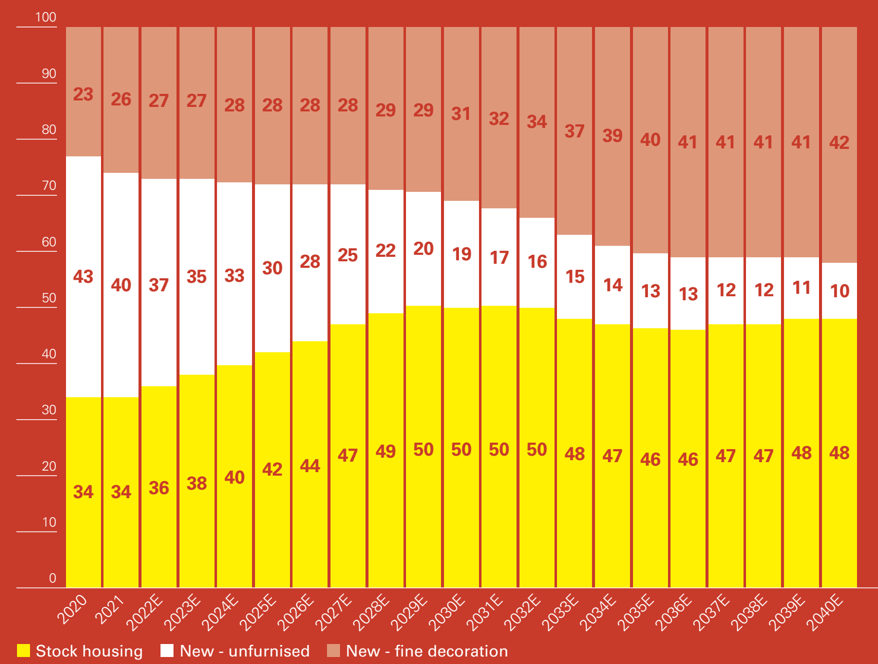


Stock housing era, coupled with government policies, pushes repainting to highs

In 2020, China's State House issued a Guide on Upgrading of Aged Housing Estates in Cities and Townships, which categorized the upgrading of aged housing estates into an initiative of social security housing and entitled it for subsidies from central government. The 14th 5 Year Plan, formulated in 2021, stipulates that housing estates completed before the end of 2000 will be upgraded within the 14th 5 Year Plan period. "City Upgrading" has been escalated to be a national strategy.

The 219,000 housing estates targeted for upgrading are estimated to have 4Bm² in construction area and bring about investment of 4 trillion RMB. The resulting market potential for construction materials will amount to 240B RMB, of which 40B will be in construction paint and coatings.

Renovation demand (%)

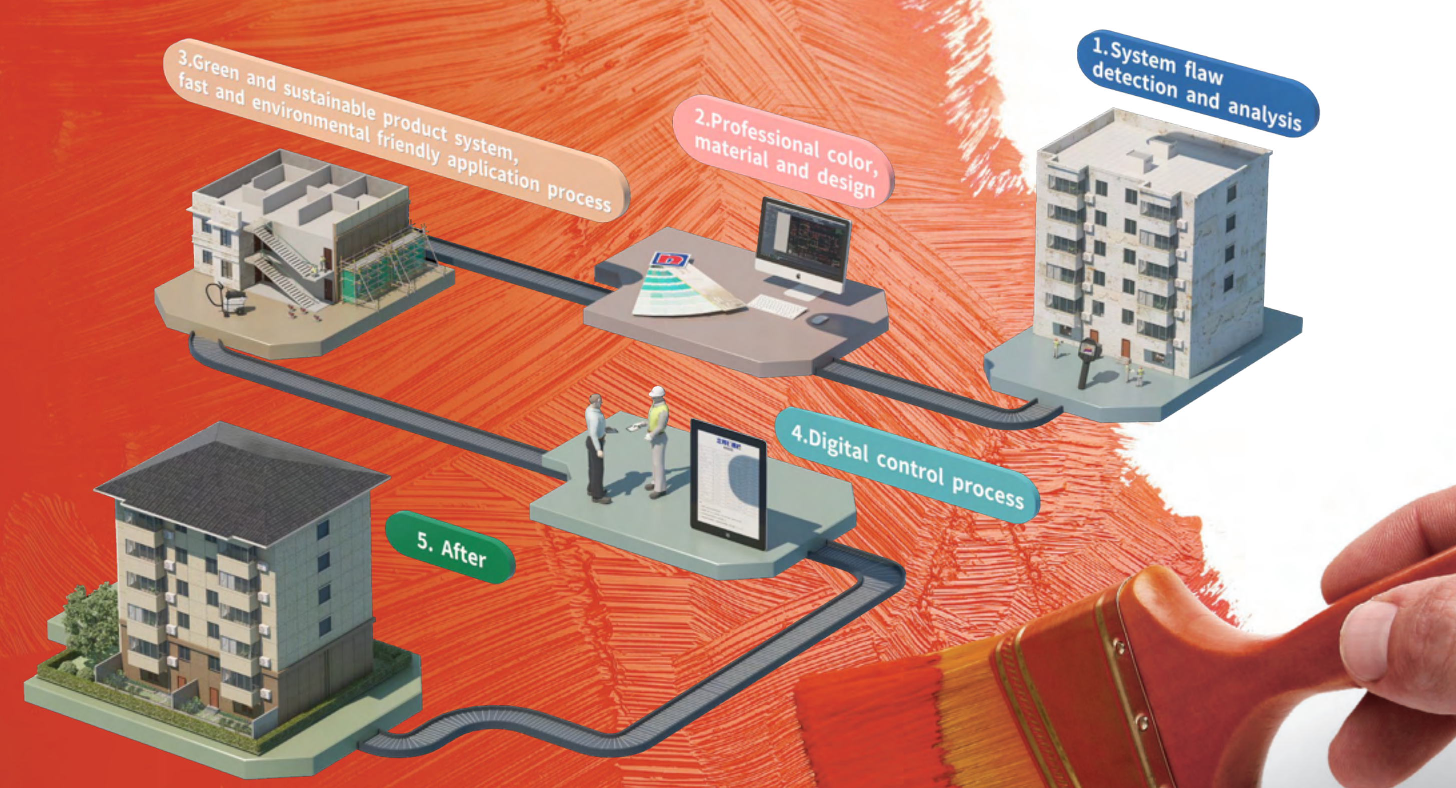



Project urban redevelopment: Shanghai Balin Community renovation

Project: Beijing Chaoyang Hospital redevelopment

Project urban redevelopment: application on-site

NP exclusive store



Scenario based solution provider

2. Business strategy that responds to the Chinese repainting market

Nippon Paint China adopts "Refresh and beautify the living spaces" as its corporate mission, and has a vision "To construct with technology a most valuable eco-system, to become the leader in paint and coating total solutions."

It is also in the value system of Nippon Paint China, to Enable Customer's Achievements, to Lead through Innovation, to Cooperate for Winning, and to Encourage Drive to Succeed.

As the leader of China's paint and coatings industry, Nippon Paint China is actively responding to China government's 14th 5 Year Plan, and drive the contribution of paint and coatings industry in City Upgrading, infrastructure upgrading, refreshing of aged housing estates and improvement of living environment.

Nippon Paint China aims to develop its business in repainting by exploring opportunities through Urban Revitalization Design, Scenario based solutions, Product technology upgrade, Service model innovation, Green and Carbon-friendly transformation & information system support, to deliver products, solutions and services which fulfill requirements of the country, customers and business partners.

As there are different emphasis in the needs of individual consumers and construction project customers, Nippon Paint China has tailored repainting strategies to these two domains.

NP refresh service wall polishing

NP refresh service exterior wall paint spraying

Retail Strategy

Focus on core business & core cities, strive for sustained growth
1. Focus on Art paints, to satisfy demand in consumption upgrade and individualized needs
2. Focus on high-potential cities, enhance efficiency to ensure high-yield

Uplift existing renovation model (Refresh)
1. Leverage on E channel: deep exploration of homeowners' needs, increase penetration of renovation through Refresh

Improve on Net Promoter Score (NPS)
1. Close-loop management of post-sale services, with enhanced service standards and delivery standards, setup supplier management and appraisal system

Multi-faceted innovation to drive growth
1. Business model innovation: Explore partnership system and find growth drivers
2. Eco-system innovation: form alliances in renovation with fellow producers of construction materials, collaborate with leading companies
3. Product innovation: develop product solutions for key scenarios in renovation, such as bathroom, window, balcony, exterior wall, sunroom, basement, rooftop

Project Strategy

Organization: form Upgrade project team
1. Form Upgrade project team, to coordinate strategies, plans and execution of upgrading, to streamline process of product offering, solutions, delivery and quality assurance

Channel: establish regional centers of competency and Upgrade partners
1. Establish centers of competency in sales regions, to develop technical and application expertise in supporting Upgrade
2. To recruit Upgrade partners & jointly manage project leads, promotion and development

Provide scenario-based products and solutions
1. Cloud-based, digitalized & smart systems for complete management of Upgrade projects
2. Establish partnership in Upgrade
3. Scenario based products & solutions

Growth Strategy Deployment in High-Growth Countries (Indonesia and Türkiye)

Market features and characteristics in high-growth countries (Indonesia and Türkiye)

The Indonesian and Turkish markets have proven resilient, having endured the impact of the COVID-19 induced recession and are now emerging as one of the top players in their respective regions. These countries are similar in many ways. They boast a sustainability-minded youth population – Indonesia's median age (as of 2021) is 31.1 whereas Türkiye is 32.2. This in turn has facilitated the growth of a strong middle class to sustain aggregate supply amid a boom in the retail internet economy. It is unsurprising since both countries have high levels of internet penetration – Indonesia at 73.7% and Türkiye at 82% – and are active players in the internet economy, especially e-commerce.

In 2021, compared to previous year, e-commerce volume rose by 69% in Türkiye and the ratio of e-commerce to general commerce was 17.7%. On the other hand, Indonesia's 202 million strong internet users contributed US$70 billion to the country's burgeoning digital economy in 2021 with forecasts indicating that this will more than double by 2025. This is music to the ears of those of us in the coatings industry. Coupled with strong growth figures – Indonesia (4%) and Türkiye (11%) – and rising post-pandemic income, there has been a noted uptick of product sales.

Much of this has also been undergirded by similarities in cultural motivations pertaining to home renovations. In the aftermath of a prolonged lockdown and COVID-19 movement restrictions, there has been a stated increase in hygiene awareness, prompting many to refurbish their homes and repaint them. In Indonesia, the repainting cycle has been found to be between 1.5-2 years compared to 2-3 years in Türkiye.

Growth strategy in Indonesia

Indonesia remains a vibrant market, and PT Nipsea is optimistic about our strategic growth outlook and focuses on delivering consistent results in this market. In line with this aspiration, our growth strategy is nested in three aspects – strategic industries, technological capacity and social media marketing.

One of the main areas for opportunities in the industrial segment is in automotive manufacturing. As more Indonesians recover from the economic effects of the pandemic, the return to the new normal will be coupled with a spike in car production, sometime beginning this August. This is a corollary to a growing middle-class segment with significantly higher wages than during the pandemic period, who will be its primary source of demand. As a result, there will be a surge in demand for automotive coatings as manufacturers race to meet the growing urbanization and travel needs of this segment of society.

The rise in technological capacity will also prove to be a gamechanger for the paint industry. The computerized colour tinting machine (CCM) is one such example. Where previous color mixers were done manually and were limited in choice of colors, this machine is able to tint up to 10,000 colors from just a handful of neutral bases in just over three minutes. These improvements have had a marked impact on efficiency and quality which has resulted in more satisfied consumers. PT Nipsea is also the first paint company to give a 100% Colour Accuracy and Colour Consistency Guarantee for all our CCM machine tinted products.

In terms of product marketing, it makes prudent business sense to leverage Indonesia's tech savvy population and gear towards social media marketing. Online activities and partnerships with social media celebrities have done plenty to enhance Nippon Paint's social media presence and overall public brand awareness. There is an opportunity to drive acceptance of our premium segment of decorative paints as well as our "Vinilex" line of paints (7 differentiated sub-products) which have a strong lead in the middle-income segment. By focusing on an online marketing approach and an aggressive distribution plan, we are then able to elevate the Nippon Paint brand name which translates to greater transactions of the products in the Premium and Middle-income segments.

Budi Fianto Buna
President Director,
PT Nipsea Paint and Chemicals

PROFILE

Budi joined PT Nipsea Paint and Chemicals Indonesia in 1970 and has been the President Director since 1990. Prior to that, Budi, who began his career as an HR & Payroll Executive, rose through a succession of leadership roles across areas including sales, marketing and general management. He was one of the pioneering team members who spearheaded the company's growth in the Indonesian market. Under his leadership, both Trade Use and Industrial Use divisions secured the number 1 position in market share for Decorative, Industrial OEM and Motorcycle coatings businesses. Budi obtained his degree in 1976 from a private university in Indonesia.

Tayfun Küçükoğlu
General Manager,
Betek Boya

PROFILE

Tayfun Küçükoğlu is the General Manager of Betek Boya Group. He has held various roles within Betek Boya, where he was a founding member in 1988 and is currently part of the Board of Directors since 1995. He also co-founded and helped make Filli Boya the market leader in 2001. He is acting as a pioneer member of the ETICS category in Türkiye. Küçükoğlu is part of the founding committee at the Paint Manufacturers Association (BOSAD) established in 2003. Between 2015 and 2017, Küçükoğlu served as the Chairman of the Board of Heat, Water, Sound and Fire Insulators Association (iZODER). Other positions he has helmed includes being the Chairman of the Board of Directors at IMSAD (Construction Materials Industry Association) since 2020.

Growth strategy in Türkiye

Leveraging its continued excellence in the Turkish market, Betek Boya remains steadfast in expanding its footprint in the market and delivering value to all our stakeholders. To that end, our goals are focused in the areas of expanding the External Thermal Insulation Composite System (ETICS) sector, developing a customer-centric approach to business and synergizing with investments in industrial coatings.

In addition, ETICS, which contributes up to one third of our revenue from paint, is ripe for further expansion into the Turkish market. With its 22.5 mm sqm annual ETICS supply in 2021, Betek Boya is the solid market leader, four times bigger than competitors in Turkish market and also has a leading position in Euro region.

As more home improvements are expected in the coming months, the demand for thermal insulation will skyrocket, leaving a huge potential for us to maximize. This is made even more pertinent as 40% of energy expenditure in the country comes from buildings as opposed to industry, and 80% of energy consumption from heating and cooling. With its thermal comfort and health-protecting features, thermal insulation allows for energy saving up to 60%. To use energy efficiently is to protect the world and the future of our children. Thermal insulation has a critical role in environmental health and anti-global warming.

As a flagship paint brand Filli Boya has the highest brand Top-of-mind score in all customer groups. The New Generation Dealer System and "Filli Ustam" painter loyalty programs are the most important features that differentiate experience-oriented interactions/strategies from the sector. Thanks to all these innovative strategies, it is the company with the highest and most efficient distribution scores and the widest painter loyalty platform.

The development of a customer-centric approach to our business is a natural continuation of Betek Boya's multi-brand strategy which has been in place since 1993, delivering solutions to all consumer needs in all socio economic segments. This strategy has helped propel us into building the largest product portfolio among any local and multinational paint manufacturers in the country and further augment the portfolio, allowing us to compete better with rivals in the region.

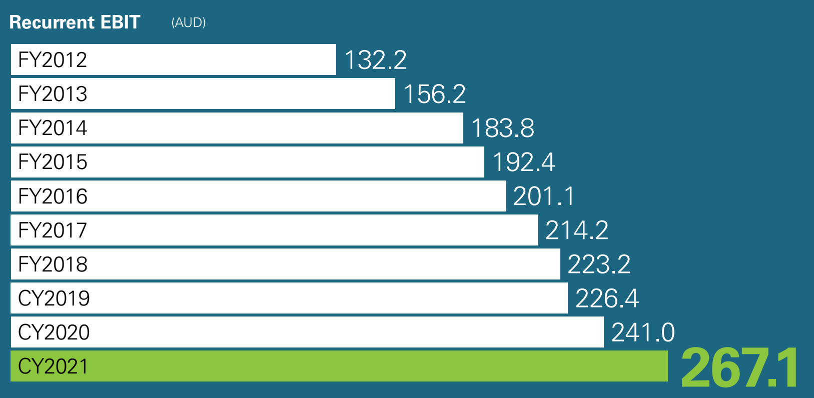
By consistently investing in this strategy, we do not allow any aggressive competition to gain place in the market. We place the customer at the core of our business in order to build positive experiences and foster long-term relationships which empowers our leadership further.

Industrial coatings is one aspect of business with immense synergy with cutting edge technology providers which allows us to stand head and shoulders above our counterparts in the same market. Our investments in this sector afford us the ability to provide coatings that protect against corrosion, UV light, and water – among others. This is complemented by adherence to strict protocols pertaining to sustainability measures which ensures that while we improve technologically, we do so in a manner which minimizes harm to the environment.

Strategy for Mature Markets (Australia, New Zealand, PNG and Europe)

Dulux has been voted the most trusted paint brand in Australia for the last 10 years in a row.*
* Reader's Digest 2022

DuluxGroup - Track Record of Consistent Profit Growth



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Patrick Houlihan
Chairman and Chief Executive Officer, DuluxGroup

PROFILE

Patrick joined DuluxGroup in 1989 and has been CEO since 2007 and also Chairman since 2019. Prior to becoming CEO, Patrick progressed through a succession of senior leadership roles across areas including R&D, sales, marketing and general management. Patrick is also the Chairman of the Murdoch Children's Research Institute, on the Board of the Australian Government's Industry Innovation and Science Australia, on the Advisory Council of St Mary's College at The University of Melbourne and is a member of the Australian Institute of Company Directors. He also represents DuluxGroup on the Business Council of Australia and Manufacturing Australia. Patrick holds a Bachelor of Science (Hons.) and an MBA.

DuluxGroup aims to continue delivering consistent, profitable growth by focusing on three strategic growth pillars:

1. Extending our market leading positions in the Pacific - Australia, New Zealand and Papua New Guinea (PNG);
2. Leveraging capability for growth into the mature European paint and coatings market; and
3. Leveraging capability for growth into global sealants, adhesives & fillers segments

1. Extending DuluxGroup's market leading positions in the Pacific

From its heritage dating back to 1918, DuluxGroup has evolved to become a leading marketer and manufacturer of premium branded products that enhance, protect and maintain the places and spaces in which people live and work. This is espoused in our core purpose - "Imagine a Better Place."

In relatively mature ANZ markets, DuluxGroup has invested in and leveraged its market leadership position and regional scale in well-structured market segments to deliver consistent and profitable growth.

In Australia and New Zealand, approximately 75% of DuluxGroup's business is comprised of Dulux paint & coatings and the Selleys sealants, adhesives & fillers businesses. They are complemented by other home improvement segment businesses Yates, B&D Group and Lincoln Sentry, which are each profitable market leaders.

DuluxGroup has also operated in Papua New Guinea since 1968, where it replicates its core Dulux and Selleys offers.

DuluxGroup's largest product market, decorative paints, historically grows volume at approximately 1% per year, and market leader Dulux has consistently grown value ahead of that, at an average of 5% a year over the past two decades. With strict margin and cost discipline, DuluxGroup has a strong track record of flow-through to profit, with year-on-year EBIT growth over many years.

Success underpinned by investment in, and focus on, the fundamentals

DuluxGroup's track record of consistent delivery has been underpinned by putting consumers and customers at the heart of everything we do, and by an evolving strategic focus whereby we:

1. Leverage and continue to invest in our core capabilities across our market leading businesses, particularly:
   - our premium brands,
   - consumer-led insights, innovation and marketing, and
   - growth through our retail and trade customer channels by focusing on service and experience.
2. Focus on well-structured markets and market segments that deliver consistent growth and strong returns, with an emphasis on the relatively stable existing home renovation and maintenance markets, typically 65% of Group revenue.
3. Focus on product categories that are premium branded – where consumer trust, quality, continuous innovation and supply chain excellence drive competitive advantage.
4. Continue to foster our strong culture, which is reflected in world-leading employee engagement levels and is underpinned by our Values and Behaviors and also recruiting, developing and retaining a diverse and talented workforce.

Organic growth supported by value generating M&A

Organic growth will be driven by ongoing investment in the fundamentals that have underpinned success to date. More specifically:

- generating increased participation in the renovation and repair market through strong marketing and innovation, including increased do-it-for-me services to consumers;
- increasing consumer engagement through digital platforms;
- promoting omni-channel and optimization of logistics for the trade/professional market; and
- focusing on premium brands, innovation and customer service with key retail partners

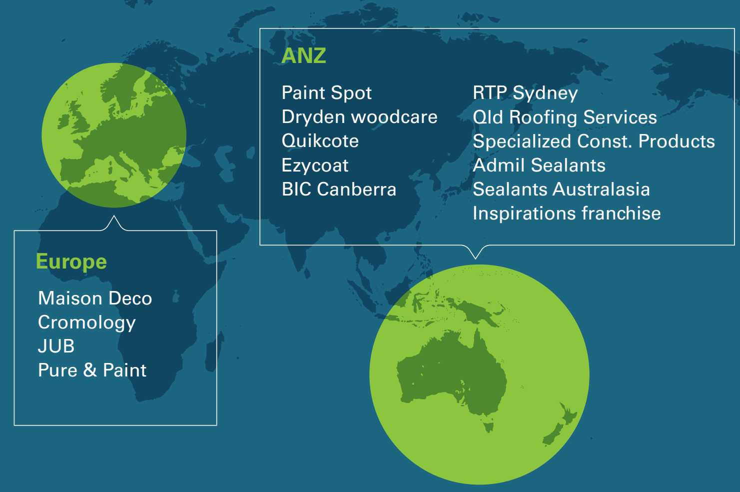
In the last three years, growth in DuluxGroup's existing businesses has been complemented by a number of bolt-on, earnings-accretive, acquisitions in ANZ.

Recent examples include: extending Dulux's reach into direct trade customer channels with the addition of "Paint Spot" outlets to Dulux's trade store network; growing technical capability for Selleys with the addition of Admil silicone sealants and adhesives; and Dulux's growing position in the roof restoration systems market with the acquisition of QRS Roofing Supplies.

Future bolt-on opportunities will continue to be focused on enabling the core strategies of DuluxGroup's strategic business units, while contributing to overall earnings growth.

To support growth, we will continue to invest in skills, capability and leadership development to ensure an engaged, motivated and committed workforce enabled to deliver on our growth ambitions.

Complementing organic growth with strategic M&A 2019-2022



DuluxGroup continues to invest in its company Trade supply chain and distribution network.

2. Leveraging capability for growth into the mature European paint & coatings market

DuluxGroup established foothold positions in European decorative paints markets with the acquisitions of Craig & Rose in the UK in 2016 and Maison Deco in France in 2019, followed by niche, eco-friendly, French brand Pure & Paint in 2020. With these relatively small-scale acquisitions, DuluxGroup has leveraged its expertise in premium brands and consumer-led marketing and innovation, along with its retail channel management capability, to progressively grow its presence in European Big Box consumer retail, complemented by other channels including online.

Cromology and JUB – a strong platform with scale and capable management to enable growth

The acquisition of major market leaders French-based Cromology and Slovenian-based JUB provides the market position and regional scale needed to drive DuluxGroup and Nippon Paint Group's growth ambitions in European decorative paints markets. They each have premium brands, leading market positions across western and central Europe respectively, capable management teams, local market know-how, strong trade and retail distribution, well-established manufacturing assets and supply chain capability.

Cromology and JUB, along with Maison Deco and Craig & Rose, provide DuluxGroup a substantial European decorative paints platform from which to deliver ongoing growth in the world's second largest decorative paints market (after China).

Symmetry with DuluxGroup – consumers, customers and market dynamics

Europe, like Australia, is a mature market where delivering consistent, year-on-year, organic growth is underpinned by ongoing investment in the core fundamentals of premium brands, consumer-led marketing and innovation, customer service and supply chain excellence.

DuluxGroup is the natural owner for Cromology and JUB. They have much in common in terms of their respective consumers (do-it-for-me and DIY), customers (Trade/own stores, Big Box and independent) and competitive landscape. While there are large global decorative paint market players in Europe, DuluxGroup already competes with many of these players in ANZ and has done so for many years.

Over time, we see compelling growth opportunities leveraging the product portfolio, technology, marketing and innovation, procurement and customer channel management capability of DuluxGroup along with the global scale and resources of the wider Nippon Paint Group.

DuluxGroup's European "partner companies" – Cromology, JUB, Maison Deco and Craig & Rose – will drive European decorative paints growth over the medium to long term, including through leveraging DuluxGroup's core capabilities, which have delivered above-market, profitable growth in Australia, New Zealand and PNG for many decades.

Enabling our European partner companies to drive organic and inorganic growth through:

- **Customer channels** – grow share in trade customer channels (e.g. omni-channel trade fulfillment) and continue to build a meaningful presence in DIY consumer retail (e.g. step-up Big Box presence) over time.
- **Product category extensions** – leveraging the wider DuluxGroup and Nippon Paint Group technology and product portfolio, including specialty coatings (e.g. wood, metal, concrete and texture coatings), ETICS and SAF.
- **Geographic extensions** – focusing on adjacent markets with similar market and consumer dynamics.

3. Leveraging capability for growth into global sealants, adhesives & fillers segments

DuluxGroup has successfully grown into paint adjacent categories in ANZ, most notably with its market leading Selleys sealants, adhesives & fillers (SAF) business.

DuluxGroup is now collaborating with NIPSEA Group, to help build a material, sustainable and market leading SAF business in Asia through transferring our Selleys capabilities including consumer insights, marketing, product, technical and supply chain expertise. We will continue to focus on this collaboration, building on its success to date.

Further, DuluxGroup aims to grow into global SAF segments in markets where structures are similar to Selleys ANZ experience and where we know we can successfully compete. Given DuluxGroup's European expansion in paint related distribution networks, we will continue to explore options to add local SAF businesses to generate growth in paint adjacent categories.

In doing so, we will focus on opportunities offering premium established brands, local product, locally compliant technology, strong supply chain capability, distribution reach, management talent and deep SAF experience. DuluxGroup will look to leverage its capability, including in Big Box retail, to generate long term sustainable growth.

Cromology

Loïc Derrien
Chief Executive Officer

PROFILE

Loïc joined Cromology in 2018, with deep industry experience, including at Hilti France, SigmaKalon and PPG where he acted as General Manager of Decorative Paints for EMEA South and Chairman of the Board of PPG Architectural Coatings France. Loïc has Engineering degrees from the École Centrale de Marseille and ISBA, and also an MBA from HEC.

Corporate data

Employees
3,184

Headquarters
La Defense, Paris, France

Ownership ratio
100%

Cromology geographic presence and market position

Cromology is Europe's fourth largest decorative paints company and a market leader in Western Europe, where it is in the top three in Italy, France, Spain and Portugal. With a portfolio of premium brands, broadly marketed through its extensive company store network, it is well positioned for growth opportunities into other customer channels, as well as adjacent product and geographic segments.

SWOT analysis

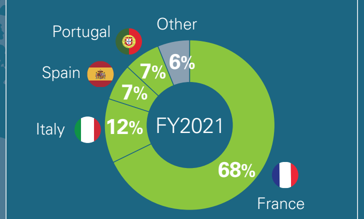
Strengths
- Leading market positions – top #3 in France, Italy, Spain, Portugal and Morocco
- Premium brands across a broad product portfolio
- Capable management
- Strong manufacturing footprint
- Extensive trade market distribution reach including 390 company owned stores throughout Europe

Weaknesses
- Like most companies, there are ongoing challenges from volatile raw material and other input costs. However, Cromology has demonstrated excellent cost and margin discipline in recent years
- Low consumer retail channel presence

Opportunities
- Build on strong trade position, leveraging DuluxGroup capability e.g., omni-channel fulfillment
- Step up retail channel position including Big Box presence
- Leverage Cromology's significant scale to expand the product portfolio using DuluxGroup and Nippon Paint Group capability
- Extend geographic reach
- Bolt-on M&A

Threats
- Markets are relatively mature, low growth
- Compete against larger global players
- Current disruption in global supply chains and volatility in energy markets, exacerbated by conflict in Ukraine

Geographic revenue mix



Performance[*1, 2] (Billion yen)

Revenue

FY2020	83.3
FY2021	91.9

Operating Profit (ex IFRS16)

FY2020	5.8
FY2021	8.2

JUB

Sašo Kokalj
President & CEO

PROFILE

Sašo has been CEO of JUB since January 2013. Since joining JUB in 2003 he has progressed through a series of roles across general management, production and business development, amassing deep industry experience. Sašo has a Bachelor of Engineering and a Masters of Business/Managerial Economics from the University of Ljubljana, and also a Bachelor of Production Management from the University of Maribor.

Corporate data

Employees
774

Headquarters
Ljubljana, Slovenia

Ownership ratio
99.83%

JUB geographic presence and market position

JUB has acquired a market leading position in interior paints and ETICS in central Europe, especially in the former Yugoslavia, and is strengthening its position in other central European countries, particularly in paints, leveling compounds and ETICS segments.

SWOT analysis

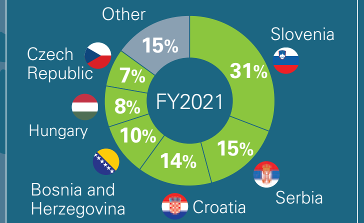
Strengths
- Strong market positions
- Premium brands, backed by strong R&D capability
- Capable management with excellent market know-how
- Broad product portfolio, including in-depth ETICS capability
- Extensive distribution

Weaknesses
- Smaller procurement scale, and will benefit from wider group buying power
- Like most companies, there are ongoing challenges from volatile raw material and other input costs, which will be managed through with margin discipline

Opportunities
- Step-up its position in Big Box retail, leveraging DuluxGroup capability
- Extend product portfolio and geographic reach over time
- Well positioned to benefit from ongoing economic maturity in Eastern European markets
- Platform to launch wider DuluxGroup product portfolio, including SAF and leveraging Betek Boya's portfolio, over time
- Broadening DuluxGroup's ETICS capability

Threats
- Current disruption in global supply chains and volatility in energy markets, exacerbated by conflict in Ukraine

Geographic revenue mix



Performance[*1, 2] (Billion yen)

Revenue

FY2020	15.6
FY2021	17.2

Operating Profit (ex IFRS16)

FY2020	1.8
FY2021	1.5

*1 Exchange rate applied: EUR 1=JPY 132.79 *2 FY2020 and FY2021 results are unaudited pro forma figures

Q&A with Co-President Wee about Actions for Improving the Profitability of the Japanese Businesses

Nippon Paint Group regards improving the profitability of the Japanese businesses as one of its management challenges. To tackle this challenge, we are implementing structural reforms based on the Co-President setup along with cooperation from our overseas partner companies. On this page, Director, Representative Executive Officer & Co-President Wee Siew Kim talks about challenges at Nippon Paint Group and the actions to overcome these difficulties.

Wee Siew Kim

Director,
Representative Executive
Officer & Co-President

Q.1

Please explain the reasons and background for the decline in the profitability of the Japanese businesses.

A The business landscape of today is very volatile. A global pandemic, international conflicts, disruption in supply chains, inflations and talks of a looming recession all have an impact on business operations.

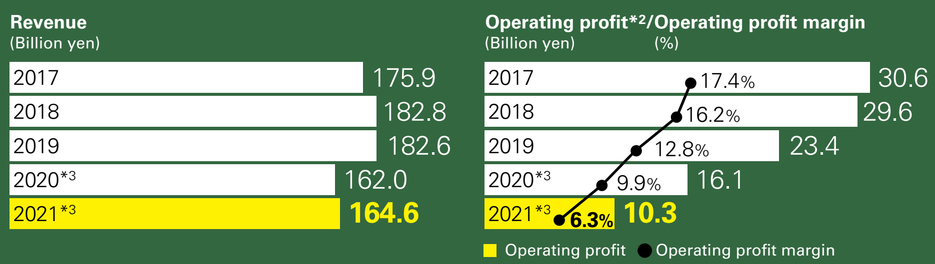
In Japan, the changes that we are seeing in our operations and business can be partly attributed to external factors such as decrease in automobile production and increase in raw material prices. From a more management analysis, a fundamental factor that has impacted the business is *bunshaka* or company splits along different lines of business in 2015. The concept of splitting the Group into its operating companies based on lines of business (automotive coatings, decorative paints, industrial coatings, and surface treatments) has proven to be beneficial to the Group. However, *bunshaka* caused partner companies to lose a sense of collaboration and that has affected the business operations in the long run. This also comes with several other considerations such as the capabilities of the partner companies to function independently, appropriate operational framework and the right investments in human resources to sustain the business successfully.

The total revenue of the Japan Group is approximately 160 billion yen, with revenue at each partner company accounting for about 40 billion yen. Therefore, individual partner companies cannot afford to adequately invest in manufacturing facilities, operational systems, and human resources. We also observed that with the business split, individual organizations focused on their own facilities, logistic networks, warehouses etc. which resulted in a bloated cost structure and operational inefficiencies.

Based on our analysis, this has become a major factor for undermining our competitiveness and profitability, as partner companies are often unable to make the right investments in areas that need further growth and expansion such as people development.

However, with our firmly established Asset Assembler model that has allowed the wider Group to sail through a chaotic business landscape, we are confident in revitalizing our Japan business and operations with a steadfast focus on innovation.

Operating performance of the Japan segment*1



*1 Figures for FY2017 are based on JGAAP and figures from FY2018 to FY2021 are based on IFRS
*2 HQ expenses are allocated to Adjustments from FY2020 onwards.
*3 Figures for FY2020 onwards have been retrospectively adjusted due to the classification of the European automotive coatings businesses and the India business as discontinued business following the transfer of these businesses to Wuthelam Group (announced on August 10, 2021) and the change in accounting policy regarding cloud computing agreements beginning with FY2021 4Q

Q.2

What specific actions have you taken to improve profitability in the Japanese businesses?

A In contrast to the paint and coatings market overseas where we are seeing continued growth, the Japanese paint and coatings market has shown decline over the past decade. Due to the market landscape in Japan, it therefore becomes important to build a cost and operating structure that is aligned with this mature market, requiring a management approach that might be different from other regions.

To continue the growth of our Japanese business and to enable profitability, we are currently looking at two major growth areas. Firstly, for our Japan business we will drive more focus on the marine coatings and automotive coatings businesses where we have identified prospects for positive structural changes in April 2021. Taking this into consideration, our immediate task was to restructure the two businesses for a recovery in their profitability and growth potential. In fact, we have reviewed the Japanese operations and merged the industrial and marine coatings businesses placing them under the leadership of Takeshi Shiotani, who will now serve concurrently as the President of Nippon Paint Industrial Coatings (NPIU) and Nippon Paint Marine Coatings (NPMC). Mr. Shiotani has established a proven track record and we are confident that his leadership and strong abilities will bring a positive transformation to the NPMC business. In his expanded capacity, he will ensure the implementation of best practices for cost management and sales distribution in the industrial coatings business with a laser focus on improving the business financials.

Secondly, we have also launched eight task forces to lead discussions and implement reforms after identifying issues to be addressed based on themes such as production, quality, and SG&A expenses, to eliminate the adverse effects of *bunshaka*. The key mission of the task forces is to drastically restructure and streamline the cost structure of the partner companies. We already have the results of the analysis necessary for achieving our goals. As part of Phase 1, every partner company will implement reforms based on the results of analysis, led by project implementation teams set up by the individuals in charge of the partner companies, over the next six to nine months.

The Phase 2 of cost structure reforms, which started in June 2022, has two pillars. The first is the consideration of reversing some measures implemented with the company split. For instance, agendas under consideration include integrating part of factories of each partner company and their supply chains in several locations in Japan that will improve efficiency of the Japan Group as a whole.

The second pillar is to transform the Japan Group's technology and innovation offerings. The Japan Group has constantly supplied high quality and innovative products to customers. To ensure that innovation across the Group continues to grow, we need to make adequate investments in our resources such as skilled engineers and people who display excellent technical capabilities. Continuous investment in human resources is a priority for the Group, not only in Japan but across all our other markets. Currently, we are re-examining our investments in human resources and working to build an agile and capable leadership team that has both technical abilities and management skills. This we believe is an important step to reinvigorate the innovation pipelines.

In the Phase 3 of our cost structure reforms, one of our focus areas will be to build a next generation leadership team for the Japan Group. This will include identifying top performing employees and enabling them to become executives over the next 2-3 years. This will not only introduce new ideas and philosophies within the management teams but will be a big step in introducing cultural reforms in Japan. We are already in process to create a tailored program at Nippon Paint Automotive Coatings (NPAC) where we select candidates for leadership training across areas such as production, quality, sales & marketing, technology, and development and give them the support they need to become next-generation leaders. We will also roll out similar programs across our partner companies to drive further growth for our Japan Group.

Eight task forces for profitability improvements of Japanese businesses

Production/ Quality	1. NPAU Production TF
	2. NPTU Production TF
	3. NPIU Production TF
SG&A	4. NPIU & NPMC SG&A TF
	5. NPAU SG&A TF
	6. NPTU SG&A TF
Finance	7. BSC TF
Marine coatings business	8. NPMJ TF

Q.3

What actions are you going to take to change the corporate culture and employee mindset?

A As I have mentioned previously, change is inevitable. For us to move forward, we must embrace change and work towards gaining excellence. In our growth forward, Japan will play a pivotal role in our growth transformation. One key area for transformation within Japan is letting go of conventional work approaches and leveraging a more transparent management style that gives everyone the confidence to share their thoughts and opinions.

In this manner, the mindset change that we are bringing about in Japan is very similar to NIPSEA Group's Lean for Growth (LFG) culture that ignites a spirit of growth within employees and gives them the ability to speak out and the courage to respond to change and agility.

In fact, we have even carved out a Japanese version for future action guidelines and mindset change called J-LFG that localizes the concept of our regional values in a manner that can be implemented to bring about the cultural and mindset changes needed for the Japanese business to achieve its next stage of advancement and innovation.

Six months into the implementation of J-LFG, I visited our office and factories in the Japan Group and took the time to speak with the employees there. It gives me great happiness to see that only within 6 months, employees can understand the significance and importance of J-LFG. One of the key concepts of J-LFG is to reduce redundancies and focus on tasks that create value for our customers. This will help us to constantly look forward, increase communication and breakthrough the silos and hierarchy of conventional management styles, allowing the organization to bring out the diversity and strength of each employee. I am looking forward to seeing how J-LFG will positively steer the ship forward in Japan and to share those successes with the wider Group.

NPAC Hirakata Office

Overview of J-LFG

J-LFG (Lean For Growth)

We provide higher added value to our customers than competitors with speed. All employees are committed to positive and lean efforts for Maximization of Shareholder Value (MSV) regardless of the business environment, allocating the extra resources thus created to actions for driving growth.

VITALS – six values and behaviors underpinning LFG

Vigilance	Keep your eye on the prize	Be prepared, be responsive, ever ready
Insatiable appetite	Hunger for more	Be ambitious, eliminate complacency
Teamwork	Work as one	Be strong together, be collaborative, no silos
Agility	Sense & respond fast	Be nimble, outwit the competition
Leanness	Back to basics	Be value-driven, be tenacious, make every bite count
Stamina	Can't stop, wont' stop	Be relentless, be resilient, unending quest

Positioning of J-LFG

Strategy for Next-Generation Technologies in the Transforming Automotive Industry

Structural changes in the automotive industry and impact on coatings

Unprecedented transformation taking place in the automotive industry

The automotive industry is undergoing the biggest change ever since its commencement. This change has created numerous business opportunities and prompted paint manufacturers including ourselves to revisit their conventional products, application processes, and supply chains.

Carbon neutrality is one of the biggest themes in the industry. To meet increasingly stringent environmental regulations globally, many automobile manufacturers have prioritized environmental impact reductions, including achieving zero CO_2 emissions, as a key agenda as they look ahead to 2050.

Carbon neutrality initiatives of automobile manufacturers are focused mainly on reducing CO_2 emissions from two sources: emissions from manufacturing and other activities within the company (Scope 1 and 2) and emissions across the supply chain outside the control of the company, ranging from material procurement to sales and the disposal of products (Scope 3).

Procuring alternative energy and simplifying manufacturing processes are some of the measures car makers are considering in order to reduce Scope 1 and 2 emissions. In the paint application process, they are looking to shorten the process and use alternative coating technologies to replace current coating application.

To reduce Scope 3 emissions, the automotive industry is economizing and increasing the efficiency of resources by shifting to new energy vehicles (electrification) and promoting car sharing services in order to reduce CO_2 emissions throughout the whole process of sales, use, and disposal of the vehicles.

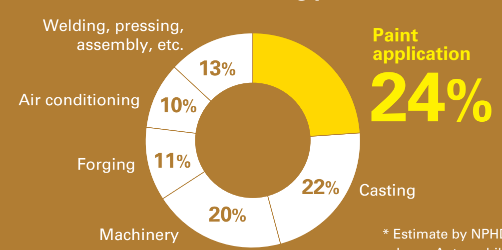
In addition, a paradigm shift is occurring in the industry, often represented by Connected, Autonomous, Shared, and Electric (CASE) and Mobility as a Service (MaaS). These shifts are expected to change the structure of the automotive industry demonstrated by new entrants from outside the industry in addition to current major players.

Changes in the paint and coatings spurred by evolution in the automotive industry

The automotive coatings industry is undergoing a significant transformation in line with changes in the automotive industry. The emergence of new needs are opening up numerous business opportunities. In other words, the future growth of paint manufacturers, including ourselves, will depend on whether we can break away from our conventional thinking and provide new value to our customers.

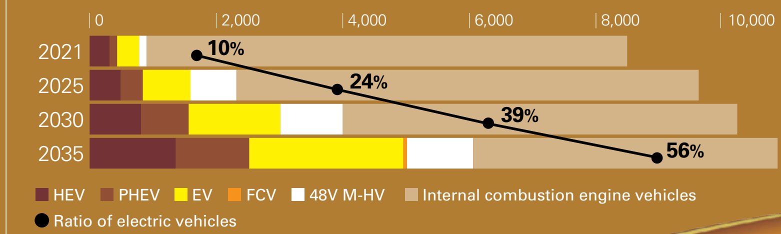
Carbon neutrality initiatives in the automotive industry are requiring paint manufacturers to speedily respond to such moves. In expanding our business opportunities, it is critical how quickly we serve our customers and help solve the problems they are facing. For instance, revisiting paint production processes and selection of raw materials, as well as developing environmentally friendly coatings which consume less energy in paint

CO_2 emissions in the automobile manufacturing process



* Estimate by NPHD based on data from Japan Automobile Manufacturers Association

Automobile sales by powertrain type
(10,000 units)



* NPHD's estimates

booth and drying furnaces.

Although CASE and MaaS may have only a limited direct impact on coatings itself, such shifts create various growth potential. In the electric vehicle segment, current car makers are expanding their business domains to fit to the new environments while totally different enterprises enter the sector, generating new markets for us to increase our sales and market share.

Automobile manufacturers, which are our existing customers, are pushing out the boundaries of their business beyond automobile manufacturing and into peripheral areas. This offers paint manufacturers new business opportunities that are not bound by our conventional business scope.

With advancing vehicle performances, the possibilities for value added by coatings are also expanding. For example, NPAC is developing decorative films that are transparent for light emitted by sensors, which are vital for self-driving vehicles and other applications. As the sharing economy grows, we also anticipate a change in end-user needs regarding vehicles, colors and functionalities such as coatings with vivid colors and coatings that can easily change car body appearance depending on users' preferences. The possibilities to be exploited are endless. In this environment, providing solutions to emerging needs in the new era as coatings technology specialists will give us the most critical competitive advantage.

Research and development activities at NPAC, aiming towards a global leading company

In the Volatile, Uncertain, Complex, Ambiguous (VUCA) environment, NPAC will continue proactive research and development activities for next-generation technologies. Our aim is to become a global leading company that can provide services and added value as a valuable partner to our customers by both refining the technologies we have accumulated over many years and also producing new ideas.

Research and development activities for next-generation technologies

NPAC is speeding up the shift to next-generation coatings, such as environmentally friendly coatings and coatings with anti-viral property, while also improving our existing products. Our goal is to help create a sustainable society and to respond to customers' needs involving CASE and MaaS. In addition, core technologies we have accumulated since our founding to develop new coating technologies should provide greater added value to our stakeholders.

Decorative film technology, one of our focus areas, can provide design flexibility that cannot be achieved through conventional coatings. Moreover, this technology is expected to help automobile manufactures cut back CO_2 emissions (Scope 1 and 2). Although our focus with the film technology has been on automotive interior Center Information Displays, film application is now considered to be a realistic option in exteriors, which are becoming more multi-functional, as well as in non-automotive applications. We see our decorative film as a technology that will allow us to constantly tackle social issues while meeting customers' needs. NPAC successfully launched functional decorative films covered with our coatings in February 2022. Further business development will be conducted to sell these films without restricting our scope to these activities to customers within Japan or in the automotive industry, in order to make decorative films one of our core businesses. Apart from film, NPAC is also a developer of in-mold coating technology, which is a direct coating process that does not require a paint booth or a drying furnace.

Our business is on a global scale. Therefore a global collaboration platform where our members provide technical assistance and exchange information is one of the key areas we are reinforcing. This enables us to respond more quickly to the needs of our customers around the world.

Global automobile production*
(10,000 units)

Year	Production
2019	8,895
2020	7,459
2021	7,719
2022 (Forecast)	8,036
2023 (Forecast)	8,730
2024 (Forecast)	9,098

* IHS Markit

Design creation by decorating film
(plate finish, auto body colors, patterns, matte finish, glossy finish)

Shinji Takedagawa
Representative Director & President, Nippon Paint Automotive Coatings Co., Ltd. (NPAC)

PROFILE

Shinji Takedagawa joined the former Nippon Paint Co., Ltd. after graduating from Rikkyo University College of Economics in 1984. After 38 years of experience in sales, planning, and management in the automotive coatings business. He transferred to Nippon Paint Automotive Coatings Co., Ltd. following its launch in 2015. Appointed as Managing Director in 2018 and the Deputy President and Executive Corporate Officer in January 2021. Current position from August 2021 and has since been leading the automotive coatings business of Nippon Paint Group. As the President of NPAC, he has the goal of driving growth of the company to become a global leading company in the automotive coatings industry as the most trusted partner for its customers.

Aiming to Improve Profitability and Strengthening Our Global Business Structure

Automotive production is continuing to decline, due to the influence of the pandemic and parts shortages such as semiconductor chips. The paint industry is also impacted by the ongoing price increases and unstable supply of raw materials and logistics bottlenecks.

Actions for improving profitability

We must rise to the challenge of improving profitability in the current market environment with rising prices of raw materials and sluggish car production. In order for us to become a growing company even in such harsh conditions, productivity improvement and optimization are key areas we are working on.

Against the backdrop of the structural changes in our industry, we must break away from the conventional business approaches. In fact, our operational process improvement is in progress across the company, pushing us to think outside the box. For instance, rigorous improvement activities are underway with the goal of streamlining operations. Examples include a bottom-up initiative where we solicit areas for improvements within the company and launch projects to tackle issues, the realignment of production and sales frameworks from a long-term perspective, and the consolidation of inefficient operations. For issues that require discussions among several divisions over the long term, cross-divisional projects are being formed in which measures for reform are being discussed on a daily basis.

In order to cope with rising raw material prices and manufacturing costs caused by numerous external factors, we are taking actions such as cost reduction activities and implementing an optimal procurement and production system from a global perspective. Our goals are to eliminate concerns about supply challenges and improve profitability. Adjusting selling prices in accordance with market conditions has also been one of our key initiatives.

Strengthening our overseas business infrastructure

In accordance with our strategy to integrate our business entities in Asia, in May 2022, NPAC has completed the integration of business entities in China. Aiming at creating synergies and reinforcing foundation, operations are integrated in China and other Asian countries where we anticipate a rapid growth. As new energy vehicles are increasingly accepted in Asia, we aim to quickly raise our market share by leveraging our extensive distribution and technical network without missing any opportunities that occur in the transformation of the automotive industry.

In the Americas, management structure was changed in April 2022, instituting the post of Chairman, who is responsible for overseeing operations throughout the Americas, including Mexico and Brazil. These measures have established a framework for creating synergies in the Americas while maintaining autonomous management in each country. In 2023, a new factory is slated for completion in Chattanooga, Tennessee, USA. The new factory, which is designed for energy conservation and advanced automation for next-generation manufacturing, will enable us to expand market share through unified activities throughout the Americas, strengthening existing businesses and shifting to local production of electrodeposition coatings.

NPAC strives to improve our global market presence and expand our businesses. By reinforcing our global network, we seek to be the best partner to our customers operating on a global scale.

Contributing to MSV with a sustainability strategy that has stronger links to business activities

Sustainability strategy linked to materiality

For more information about “Materiality” see page 41.

	Materiality (Related SDGs)	ESG agenda	ESG action examples
Environment & Safety	Climate change	●Reduction of greenhouse gas (GHG) emissions ●Identification of risks and opportunities	●CO_2 reduction (Scope 1&2) ●Calculation of Scope 3 emissions ●Disclosure based on TCFD ●Utilization of renewable energy
Environment & Safety	Resources and environment	●Waste/water resource consumption/pollution management	●Establishment of global policy statements for waste materials and water ●Establishment of KPIs for each partner company based on policy
Environment & Safety	Safe people and operations	●Disaster (fire accident) prevention and process safety ●Fatality and injury prevention	●Establishment of a global policy statement for safety for our people and operations ●Establishment of KPIs for each partner company based on the global policy
People & Community	Diversity & Inclusion	●Increase the percentage of women in management posts ●Improvement of employee engagement	●Gender diversification for directors/managers ●Visualization of human capital ●Implementation of human rights risk assessment
People & Community	Growth with communities	●Strategic implementation of social contribution activities	●Establishment of the NIPPON PAINT Group Global Outreach Program to enhance social contribution activities ●Establishment of 3E (Education/ Empowerment/Engagement) action policy through business activities as a priority area
Innovation & Product Stewardship	Innovation for a sustainable future	●Promotion of cross-industrial collaboration ●Development of products that benefit society ●Stricter management of chemical substances	●Establishment of the definition of sustainable products and data collection ●Stricter management of chemical substances and development of alternative products for harmful substances ●Development of products that benefit society and are environmental friendly ●Promotion of open innovation

Contribution to MSV

- Expansion of revenue/earnings from products with a low carbon footprint
- Sustained growth through investment in human capital
- Reinforce branding through investment in communities
- Risk reduction through safety education and use of technology
- Revenue growth through acceleration of innovation

(Example)
- Provision of education programs by job level
- Conducting the international AYDA Awards competition for architectural and interior design students
- Launch of the anti-viral and anti-bacterial brand PROTECTON
- Launch of FASTAR next-generation antifouling paint for ship hulls

ESG Statement

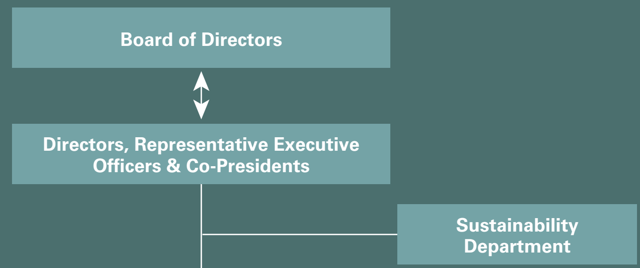
At Nippon Paint Holdings Group we aim to conduct our business activities to support and enable sustainable development everywhere we operate. We aim to include the three elements – economic, social and environmental– in a balanced and integrated manner.
Creating paints and coatings to add color, comfort, and safety to people everywhere has been our mission since the company was founded. Finding solutions to global sustainability challenges is our responsibility to future generations and is a driving force for our continued growth and success. To achieve this, we will:

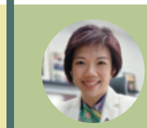
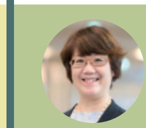
- Pursue technologies across the value chain to create sustainability benefits through innovative products and services, and new business opportunities.
- Engage and work with our stakeholders to meet their expectations and together deliver on our shared sustainability commitments, responsibilities, and challenges.
- Establish effective governance frameworks to ensure the transparency, objectivity, and fairness of the management of our company and earn society’s trust everywhere we operate.
- Respect, support, and enable our diverse employees and company associates to achieve their full potential and create innovative, sustainable value for all.
- Support the 2030 Agenda for Sustainable Development Goals (SDGs) through delivery of sustainability improvement plans that create new business opportunities and maximize shareholder value (MSV*).

* MSV is defined as maximizing shareholder value that remains after fulfilling our obligations to customers, suppliers, employees, and society.

Autonomous sustainability structure

Based on Asset Assembler model, we updated the sustainability structure in 2022 by shifting to an autonomous structure with a stronger link with business operations, away from the structure where the headquarters led our sustainability initiatives. Directly under the Directors, Representative Executive Officers & Co-Presidents, four materiality-based global teams have been formed for carrying out sustainability strategies on a Group-wide basis. By having team leaders directly report progress and proposals to the Co-Presidents, and the Co-Presidents, who further submit reports to the Board of Directors whenever necessary, sustainability activities are overseen by the Board of Directors.



	Environment & Safety	People & Community	Innovation & Product Stewardship	Governance
Global Team	Environment & Safety	People & Community	Innovation & Product Stewardship	Governance
Scope	●Minimize the carbon footprint ●Ensure the safety of employees and stakeholders	●Invest in the well-being of employees ●Build and enable better communities for all our stakeholders	●Promote sustainable products ●Drive innovation towards UN SDGs and carbon neutrality	●Maintain the most advanced governance system possible as a listed company, including integrity, internal controls, and risk management
Global Team Leader	 **Brad Hordern** DuluxGroup Executive General Manager of DuluxGroup Supply Chain. Prior to joining this company, he was Group Manufacturing Manager for SCA Australasia, Logistics Director for Campbell’s Arnott’s Australia.	 **Gladys Goh** NIPSEA Group Senior Vice President of Strategic Innovation & Marketing, NIPSEA Group and Deputy President of Nippon Paint Marine Coatings. Prior to joining this company, she was in charge of marketing of Coca-Cola Malaysia as Group Brand Manager.	 **Hong Jiang** NIPSEA Group / NPCS Chief Technology Officer of Japan Group and NIPSEA Group. Prior to joining this company, he was in charge of technological development of automotive coatings as a technical director of Axalta Coating Systems (China).	 **Yuri Inoue** NPHD / NPCS Managing Executive Officer and GC of NPHD and Managing Corporate Officer of NPCS, Japan Group GC. Prior to joining NPHD, she was responsible mainly for legal affairs and internal controls as a Corporate Executive Officer of Showa Shell Sekiyu K.K. and Senior Executive Officer of Idemitsu Kosan Co., Ltd.

Activities to determine KPIs

In addition to the risks and opportunities identified for each materiality, our Group formulates sustainability policies and strategies based on the characteristics of every region and market in which it operates as well as on the demands of stakeholders. KPIs are also selected as necessary in line with policies and strategies. Progress toward reaching the KPI targets is monitored.

With regard to climate change initiatives, KPIs are reviewed and established for each country and region to achieve the medium- to long-term net zero target. At the same time, best practices are shared with partner companies in Japan and overseas to formulate and implement action plans.

Environment & Safety KPI

	CO_2 emission reduction (long-term target)	CO_2 emission reduction (interim target)	Reduction of waste	Reduction of accidents at factories
Japan	Net zero 2050	37% reduction by 2030 (compared to the 2019 level)	Waste discharge less than base year level (base years vary from partner companies)	Zero serious incidents
Asia	Net zero 2060	5% reduction every year through 2030	5% hazardous waste reduction (per ton) every year	●Zero fire/smoke incidents in 2021-2023 ●Zero occupational illness in 2022
Oceania	Net zero 2050	●50% reduction by 2030 (compared to the 2020 level) ●50% renewable electricity by 2030	50% landfill waste reduction (per ton) by 2030 (compared to the 2020 level)	●Serious near misses < the FY2021 level ●Serious injuries < the FY2021 level
Americas (Dunn-Edwards)	Net zero 2050	Under consideration for setting targets	Under consideration for setting targets	To be identified once lead indicators identified

Environment & Safety

Strengthening climate action through our global team

Brad Hordern
DuluxGroup

Addressing Nippon Paint Group's most material sustainability impacts is a key imperative and priority for the organization to ensure Maximization of Shareholder Value (MSV). Within the sustainability aspects of environment and safety, the identified priority material impacts are climate change, resources and environment (especially waste and water), and safe people and operations.

During 2021 each Partner Company Group (PCG: Nippon Paint Group companies grouped by region or business) has continued to make progress on their individual ambition, targets, and priorities within each of these impact areas. This report includes a small number of newly consolidated Nippon Paint Group metrics for these impacts and while it is pleasing to observe that there was improvement on prior years for most of them, safety performance provided a sobering reminder of the need for improved management of significant risks. Comparing 2021 performance with the prior year, this progress includes:

≪Global metrics≫
- Climate Change: 8% reduction in Scope 1 and 2 greenhouse gas emissions and 14% reduction in energy consumption
- Resources and Environment: 6% increase in waste generation, 4% increase in waste recovered (recycled, reused), and 4% reduction in water withdrawal
- Safe People and Operations: Three fatalities (versus none in 2020) and 10% reduction in lost workday case injuries

While many of these results are encouraging and provide a strong foundation for further improvement progress in the coming year, the occurrence of three fatalities (one employee, two contractors) in NIPSEA Group reinforces the increased importance of effectively managing safety to protect everyone who works for us. Our sincere thoughts are with their families and work colleagues. Further details and highlights of individual Partner Company Group progress in these impact areas are highlighted in the following pages.

Our priority in 2022 is to work more closely together via a newly established working group comprising senior environment and safety leaders from each PCG. The focus will be on identifying the top risks, opportunities, and improvement priorities across the broader Nippon Paint Group and facilitating sharing of best practice, benchmarking, learning, and action plan implementation to drive meaningful long term improvement in the identified material impacts. This will include determining where group-wide approaches or standards may be appropriate, together with development of additional performance metrics to enhance our understanding of progress and improve disclosure to the organization's stakeholders.

Climate change

Climate change is beginning to have a serious impact on our lives every year. To mitigate the impact of climate change, we will work to reduce greenhouse gas (GHG) emissions and minimize business risks caused by climate change.

Climate change is causing serious impacts to our lives in recent years. Recognizing that climate change is a critical social issue that must be addressed sincerely, Nippon Paint Group has established a global policy on climate change and energy in order for the entire Group to mitigate and adapt to its impacts. Our global policy states that we proactively reduce the intensity of energy consumption and increase renewable energy to meet global Net Zero carbon requirements.

Pursuant to this global policy, the Group is now working to rein in its greenhouse gas (GHG) emissions and minimize business risks caused by the progression of climate change. The reduction of energy used in the paint manufacturing process and proactive use of renewable energy will not only help to combat climate change by controlling GHG emissions, but also make a difference in the issue of energy resource depletion.

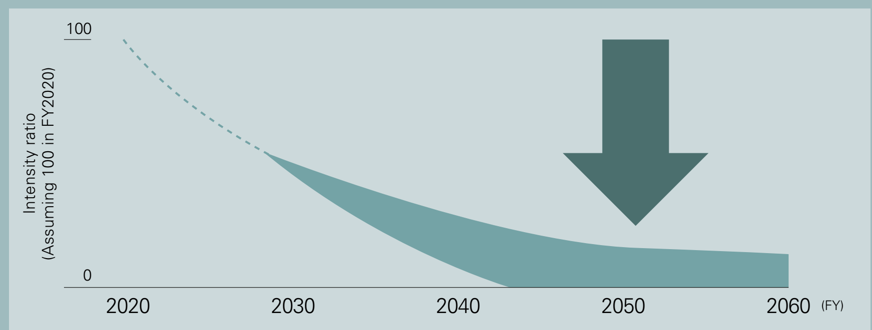
Report based on the TCFD recommendations

In September 2021, Nippon Paint Group expressed its support for the final report of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. With the goal of achieving MSV, we are working to enhance climate change-related measures and information disclosure.

Governance

Nippon Paint Group has shifted to an autonomous management structure based on Asset Assembler model with a new sustainability structure launched in 2022 designed to enhance sustainability initiatives with business activities, rather than initiatives led by the headquarters. We have set up four Global Teams based on Materiality including climate change directly under the Directors, Representative Executive Officers & Co-Presidents, in order to implement sustainability strategy aligned across the Group globally. The Global Teams will directly report to the Co-Presidents their progress and make suggestions on actions related to climate change. Then the Co-Presidents will report the information obtained from the Global Teams to the Board of Directors as necessary. In this manner, the Board of Directors oversees the Group's sustainability actions.

Nippon Paint Group's CO_2 emissions reduction target (Scope 1 and 2)



Strategy

We have identified climate-related risks and opportunities that are critical to the Group's strategies and are working to assess their financial impacts.

In light of the increasing interest in climate change countermeasures in recent years, there are concerns that global warming taxes will be hiked, resulting in higher energy costs and additional costs related to capital investment and technology development for decarbonization.

In addition, in the event of the greater severity and frequency of floods and other events caused by extreme weather, there is a risk that sales could decline due to damages to our plants that result in the suspension of production.

In the meantime, we are considering taking actions that lead directly to businesses, such as entering new markets by developing products that contribute to reducing CO_2 emissions using the Group's technologies

We are incorporating our analysis of these climate-related risks and opportunities in formulating the medium- and long-term growth strategy of the Group.

Although our energy intensity is not significant compared to many other manufacturing businesses, our group scale means we still collectively consume a considerable amount of energy and therefore seek to actively reduce our energy consumption. This includes cooling water required in the process of dispersing and stabilizing pigments and other raw materials. We have identified carbon taxes as the greatest risk that could directly affect our operations and anticipate cost increases due to higher carbon prices. Therefore, we have started considering the sourcing of renewable energy as a workaround. Carbon taxes have already been introduced in some countries and it is expected that the tax rates will be hiked gradually to achieve the net zero targets of each country.

In terms of climate-related scenarios, the Group has conducted reviews on the 2-degree and 4-degree scenarios. According to a report by the International Energy Agency (IEA), we will continue to incur certain costs both in a scenario where we will shift to a decarbonization process worldwide (the 2-degree scenario) and a scenario where the current policies for decarbonization go unchanged globally (the 4-degree scenario), unless we make progress with lowering our CO_2 emissions assuming our CO_2 emissions remain unchanged from

2020 levels. There are concerns that carbon prices will have an even greater impact on operating costs, given the potential increase in emissions associated with the Group's future business expansion.

Global warming is of interest to society as a whole, including the Group's major customers. While it entails physical and regulatory risks, global warming can be linked to opportunities to expand our business by addressing its impacts strategically. Specifically, such opportunities include expanding sales of products that improve ship fuel efficiency, help reduce CO_2 emissions at automobile manufacturing plants, and mitigate the rise of road surface temperature.

For instance, ATTSU-9 ROAD®, which produces a highly reflective asphalt pavement, is expected to contribute to reducing CO_2 emissions by counteracting the heat island effect. We have estimated the financial impacts of road pavement coatings, including degree of contribution to earnings, based on the market growth forecast for these coatings.

Risk management

The Global Team that works directly under the Co-Presidents identifies and assesses risks, including their importance, based on the criteria of factors directly related to our operations (the amount of raw materials used, energy, water, and CO_2 in the manufacturing processes) and external factors (users' application-based needs and product feature needs).

Once identified and assessed, the Global Team proposes risks and opportunities and their action plans to the Co-Presidents. The Co-Presidents set targets and propose the targets to the Board of Directors. These targets, after approval by the Board of Directors, are set as group-level targets. Group partner companies formulate business plans in line with these group-level targets and action plans.

The Audit Committee has identified the effectiveness of responses to ESG and SDGs initiatives as an issue to be addressed based on the effectiveness evaluation, and is deliberating on this agenda from the perspective of MSV.

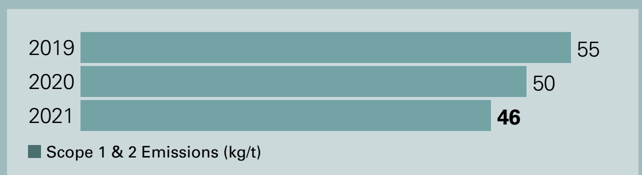
Metrics and targets

We will accelerate our response to climate change by conducting activities to reduce CO_2 emissions based on the net zero targets and the carbon neutral policies of the government of each country and contributing to net zero in our operating regions around the world. As concrete measures, we will focus on reducing emissions intensity in emerging countries, where markets are expanding, by introducing renewable energy and replacing equipment with energy-saving and electrified models.

By taking these actions, our Japan Group, DuluxGroup in Australia, and Dunn-Edwards in the U.S. will aim to achieve Net Zero by 2050 and NIPSEA Group by 2060.

We currently calculate Scope 3 emissions from our operations in Japan and DuluxGroup in Australia, and have taken steps to expand the coverage to our global operations.

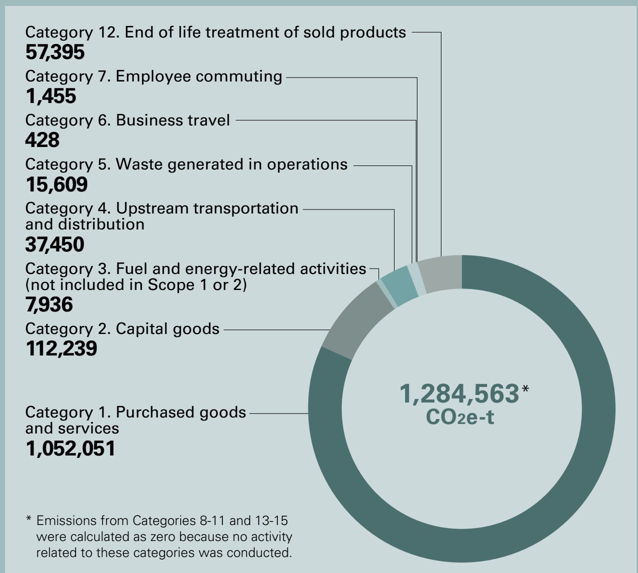
Greenhouse gas emissions - scope 1 & 2 (Global)



Energy consumption (Global)

* Coverage of Global data: NIPSEA Group, DuluxGroup, Japan Group, and Dunn-Edwards. Scope 1 and 2 (Global) exclude Dunn-Edwards. The same applies to pages 83, 84 and 86.

Scope 3 category 1-12 (Japan Group)



* Emissions from Categories 8-11 and 13-15 were calculated as zero because no activity related to these categories was conducted.

Interim targets and actions for net zero emissions

NIPSEA Group

- Formulated NIPSEA Green Plan 1.0, the movement to advance the agenda on sustainable development –Profit, People, Environment
- Aim to reduce energy intensity by 8% by 2025 against a 2021 baseline, with a yearly reduction target of 2%. Also aim to reduce emissions intensity (Scope 1 and 2) by 15% by 2025, with a yearly reduction target of 4%
- Use a combination of renewable (hydro turbines and solar panels) and non-renewable (petrol and diesel) sources of electric energy to power both operations-related and non-production related activities
- Introduced battery-operated forklifts

DuluxGroup

- Agreed DuluxGroup targets of 50% renewable energy consumption and 50% CO_2 emissions reduction by 2030, plus net zero carbon by 2050
- Commenced development of detailed action plans to achieve the 2030 targets in the first half of 2022
- Commenced pilot program of specialist energy efficiency studies at two factories to identify reduction opportunities
- Achieved a 5% reduction in energy consumption intensity in 2021
- Reduced the CO_2 emissions intensity (Scope 1 and 2) by 5% in 2021, achieving the minimum value

Case studies

Introducing hybrid fleet at DuluxGroup

DuluxGroup has more than 970 fleet vehicles primarily used by our customer facing employees across Australia and New Zealand, and collectively they account for 34% of our total energy consumption. Adoption of hybrid vehicles is one opportunity available now on the transition pathway to our 2030 and 2050 targets, until electric vehicles and the required infrastructure are readily available. The selected vehicles are estimated to save around 700 liters of petrol and 1.6 tonnes of CO_2 per 100,000km travelled, which will make a substantive difference across our large fleet. The transition commenced in 2021 and to date 8% of our Australian fleet and 68% of our New Zealand fleet are hybrid vehicles, which equates to 18% of the total fleet.

Hybrid fleet

Dunn-Edwards

- Adopted software in 1H 2022 to track company-wide Scope 1, 2 and 3 emissions in order to achieve true metrics for net zero carbon (Scope 1 and 2) by 2050
- Discussed operating new corporate office on generated renewable energy
- Committed to reducing energy usage through efficient lighting and EnergyStar™ equipment
- Committed to providing electric vehicle charging resources
- Used renewable energy supplied in each state (at least 34% of energy supplied in California was renewable energy)

Japan Group

- Agreed Japan targets of 37% CO_2 emissions reduction (Scope 1 and 2) by 2030 from 2019 levels, plus net zero carbon from our domestic operations by 2050
- Purchase renewable energy in Japan. 100% renewable energy at Osaka headquarters in FY2021, about 7% of electricity used in Japan in FY2022. Afterwards, increase gradually
- Consider energy-saving and use of renewable energy to reduce the impact of carbon taxes
- Implement energy saving (e.g., from heavy oil to LNG to start operation at Okayama Plant in January 2022)

Global CO_2 emissions and energy consumption from operations

Total energy consumption (gigajoules per tonne of production) across the Group decreased 14% during 2021, despite a significant increase in production associated with inclusion of recent acquisitions and business sales growth. This improvement was primarily driven by a 2% reduction in NIPSEA Group, who accounts for 57% of the Group consumption, and a 7% reduction in DuluxGroup, who accounts for 8% of the Group consumption. Consumption in other areas of the business was steady. Consistent with the decrease in energy consumption, Scope 1 and 2 greenhouse gas emissions (kilograms per tonne of production) across the Group decreased 8% during 2021. This excludes Dunn-Edwards where emissions data is not currently available; however this is not significant as they account for 1% of the Group energy consumption. All partner company groups have now established Scope 1 and 2 emissions reduction targets which will drive further improvement in coming years. For Scope 3 greenhouse gas emissions, DuluxGroup and the Japan Group continue to determine their annual footprint, while other partner company groups plan to do this in the near future. This will enable consolidated group reporting of these emissions in future, together with an improved understanding of risks, opportunities, and reduction plans across the partner company groups

CO_2 emissions and energy consumption from operations in Japan (results)

We continued with production adjustment and working from home arrangements due to the pandemic in FY2021.

Compared to the previous year, energy consumption increased slightly following the slight recovery of production volume but CO_2 emissions remained roughly unchanged.

Scope 3 is becoming more important in understanding business risks and opportunities, so we are refining the calculation method. Processing of sold products (Category 10) and Use of sold products (Category 11) are outside the scope of calculation in accordance with WBCSD's Chemical Sector Guidance.

Resources and environment

Effective use of resources such as water, energy, and raw materials, and prevention of environmental pollution are important matters for sustainable business. We will advance these efforts throughout life cycle of products.

The Group has identified "Resources and Environment" as one of its materiality items. In the paint manufacturing process, we not only comply with all relevant laws and regulations, but also take a proactive approach to preventing pollution.

In 2021, we established (1) a policy on waste and effective use of resources, (2) a global policy for the prevention of environmental pollution, and (3) a global policy for the effective use of water with the Global Working Team (currently, the Global Team) under the then ESG Committee.

Global policy on waste and effective use of resources

We proactively reduce waste through a "Reduce, Reuse, Recycle" philosophy and comply with laws and regulations in each country/area including managing hazardous waste responsibly.

Actions to reduce waste

We believe reducing waste and effectively using resources are important for sustainable business operations, and are taking steps to properly manage waste and effectively use resources.

For instance, NIPSEA Group accounts for a significant proportion of the Group's total waste generated. To manage this effectively, NIPSEA Group has introduced an information management system that enables them to carry out environmental performance assessments and pollutant emission index forecasting to identify areas for improvement. This system also keeps them up to date with annual pollutant discharge statistics, coupled with an automated function to calculate environmental taxes, in accordance with the latest guidelines and information released by the Chinese government.

Dunn-Edwards participates in the PaintCare program which receives and recycles left over paint. This program is operated in the PaintCare states including California and Oregon based on fees collected based on paint container size designated by each PaintCare state.

Global waste generation (results)

Total waste generation (kilograms per tonne of production) across the Group increased 6% during 2021, which was primarily driven by improved data capture in NIPSEA Group's China businesses, together with a 3% generation increase in the Japan Group. NIPSEA Group and the Japan Group account for 80% of waste generation across the Group, while performance across the other partner company groups was steady. Consistent with this generation increase, total waste recovered for recycling and reuse (kilograms per tonne of production) decreased 4%, while DuluxGroup improved waste recovery by 5%.

Case studies

Recovery of waste solvent at DuluxGroup

The DuluxGroup Rocklea manufacturing site historically created more than 500 kiloliters of waste solvent each year as a by-product of process equipment cleaning, before being disposed of via an external waste processing company for incineration. A new solvent recovery plant successfully constructed and commissioned at the site now enables 80% of the waste solvent to be reused, with the purchase of new cleaning solvent reduced by 86%.

Waste solvent from the factory process cleaning is transferred to the recovery plant's distillation vessel which separates the solvent from paint process residues before it is transferred back to the factory for use as fresh cleaning solvent. Vapor emissions from the distillation process are also fed through a bio-filter, minimizing emissions to the environment.


Recovery of waste solvent

Actions for reducing waste and effectively using resources in Japan

In Japan, the Group uses an integrated waste material management system compatible with the electronic manifest system based on the idea that waste reduction and effective use of resources are important for sustainable business operations. We make Group-wide efforts to reduce waste such as management of waste generation and proper disposal and effective use of waste generated.

Waste materials generated increased in FY2021 due to the increase in production volume from FY2020.

The recycling ratio increased from FY2020, and we will continue to promote recycling. The Plastic Resource Circulation Act took effect in April 2022. The Group falls under plastic-emitting business operators, and therefore will step up actions for reducing emissions and recycling.

While the number of leakages decreased, there were two accidents involving leaks outside of the premises. In both cases, prompt response prevented impacts to water and soil. Following the change in the classification of accidents from FY2020, the data on accidents have been updated.

In FY2021, Nippon Paint Group was not subject to any fines or other forms of punishment due to violations of environmental laws or regulations.

Prevention of air and water pollution

Nippon Paint Group has been carrying out initiatives that prevent environmental pollution as it serves as the foundation of business development and management. In order to address the changing social situation as well as further meet the expectations and demands of stakeholders, the Group is promoting initiatives on a global scale and established a global policy on the prevention of environmental pollution. Based on this policy, the Group will strive to prevent pollution of the air, soil, and hydrosphere.

At NIPSEA Group, to reduce the amount of Volatile Organic Compounds (VOC) as compared to our current oxidation methods, we are collaborating with research centers to develop non-burn technology through electrolysis. In parallel, to reduce VOC volatilization, we continue to optimize our product composition towards water-based and solvent-free paint products. This involves investing in treatment facilities to improve our technological capabilities in recycling and reusing unavoidable VOC.

Group policy on the prevention of environmental pollution

We care for the environment to avoid polluting the air, soil, and water*

* Refers to oceans, lakes, groundwater, etc.

Water risk

Water resources affect not only the water used in the production process but also the procurement of raw materials. Droughts, floods, and water quality deterioration might also affect our production activities. We will implement specific initiatives, including thorough management and effective use of water consumption and wastewater discharge, reuse of water and water conservation following this policy.

Group policy on water

We strive to use water efficiently and manage wastewater responsibly.

Global water withdrawn (results)

Total water withdrawn (kilolitres per tonne of production) across the Group decreased 4%, driven by a 24% reduction in DuluxGroup and a 9% reduction in the Japan Group.

Actions on air and water conservation in Japan

The Japan Group complies with all laws and regulations pertaining to air and water pollution by establishing its own voluntary reference values and conducting periodic pollution load measurements.

In FY2021, there was no significant change in the pollution loads of air and water compared to FY2020 levels, while the amount of water used and wastewater discharged declined. We will continue our efforts to reduce environmental loads.

Water stress is defined as facing persistent difficulties in water intake. Each plant of the top seven locations of water consumption within the Japan Group locations (Chiba, Takahama, Osaka, Hirakata, Okayama, Tochigi, and Toyoake) has been assessed for water stress level using the Aqueduct tool provided by World Resources Institute (WRI), and the results confirmed a low water stress level in terms of water intake.

Water intensity can be roughly divided into two categories: 1) water intensity used in the production process and 2) water intensity for raw materials.

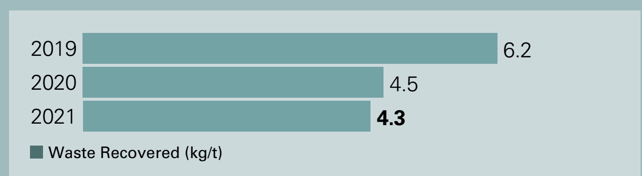
In order to reduce water intensity in the production process, we are managing and assessing the specific amount of water usage in cleaning equipment at some plants, as well as have begun initiatives to reduce water intake by recycling coolant water. Moreover, we have included checks on water saving efforts as part of the safety patrol (checks for leakage and overflow) and started to effectively utilize rainwater and treated water from wastewater treatment plants.

As for the reduction of water intensity for raw materials, while the amount of water used (water intake) for raw materials will unavoidably increase as paint becomes water-based, we are considering the development of replacement with nonvolatile materials in the paint to reduce water content.

Powder paint is one example of a product with reduced water intensity in raw materials. Powder paint, which does not contain water as a raw material, does not use any organic solvent and is recyclable and reusable as an uncoated paint; thus, generates zero water. In addition, powder paints are conducive to labor-saving and automation. As such, the powder paint market is expected to grow. In 2019, the Japan Group newly launched operations of the Chiba Plant, which is primarily involved in the manufacturing of powder paint. Moreover, we are considering a recovery system for paint that does not use water and chemicals for products other than powder paint.

Waste generated (Global)

Waste recovered (recycled, reused) (Global)



Water withdrawal (Global)

Safe people and operations

As a chemical manufacturer, we still believe that accidents and health damage caused by handling chemical substances are major risks. We will ensure the safety of employees and everyone involved in our business, and will educate and make investments to minimize risks.

The Group has designated Safe People and Operations (occupational safety and health) as one of our materialities. Workplace safety and protecting and promoting the health of all employees is a fundamental part of our corporate management, and all Group companies implement occupational safety and health initiatives.

In FY2021, the Global Working Team (currently the Global Team) set up under the then ESG Committee established a global policy on occupational safety and health.

NIPSEA Group ensures that its health, safety, and environmental (HSE) efforts cover the following areas: 1) Raising employee awareness on the importance of health and safety measures, 2) Objective and target setting on key HSE performance indicators (KPIs), 3) Regular reviewing of HSE performance, 4) Resource planning for HSE implementation, maintenance, and improvement, and 5) Availing grievance mechanisms. As actions covering the area 1), NIPSEA Group utilizes a variety of communication tools to raise employee awareness of health and safety measures, as well as the roles and responsibilities of top Management, the HSE committee, Heads of Departments, and employees themselves. We also ensure that employees are well-informed on the relevant HSE precautions through workshops and briefings held on subject matters like chemical and PPE safety, machine use, and lifesaving and occupation first-aid techniques that are taught by internal or external professionals.

The Dunn-Edwards approach to safety is to assess, analyze, implement, and evaluate. Assess the workplace, analyze the data/observations, implement corrective actions, and evaluate the corrective actions. For FY2022, Dunn-Edwards is focusing on three main areas: Vehicle Safety, Facility Safety, and Lifting Safety. For instance, they are focusing efforts to reduce lifting injuries due to the frequency/severity of injuries related to lifting. Efforts include training, mechanical assist devices, and exercises.

Manual handling is the most significant non-fatal injury risk at DuluxGroup, including Dulux Trade Centers where employees who serve customers lift and carry paint cans every day. Significant investment to reduce these risks has been undertaken over recent years, such as installation of pneumatically operated hook lifts at tinting stations. As part of Dulux Trade Australia's "Fit for Life" program, new wearable technology was utilized in conjunction with Curtin University during 2021 to analyze manual handling stresses experienced by employees whilst doing their normal daily duties. This data provided a range of evidence-based insights, such as identifying specific high-risk tasks, showing the impact of distraction on risk levels.

Global policy on occupational safety and health

We care for the health, safety and well-being of everyone.

Global occupational safety and health

Sadly, there were three fatalities in 2021 compared with none in the prior two years, reinforcing the imperative of ensuring effective identification and management of high consequence risks in all of our workplaces. The separate incidents occurred in NIPSEA Group and involved one employee and two contractors. Injuries to employees and contractors that resulted in lost workdays (number of cases per 200,000 hours) across the Group decreased 10%. This was driven by a 13% reduction in DuluxGroup and a 9% reduction in NIPSEA Group, with both businesses accounting for 53% of injuries across the group. Dunn-Edwards accounted for 43% and has experienced a significant increase in cases over the last two years, which has been driven by COVID infections in the workplace.

Results of actions for occupational safety and health in Japan

Based on the idea that a business is not viable if it is not safe, the Japan Group puts safety first and foremost and implements measures to prevent injury accidents before they occur. The number of injury accidents decreased in FY2021 compared to FY2020 levels, but the number of accidents that resulted in lost time increased by four.

Following the occurrence of one heat stroke case requiring long lost time, the Japan Group has taken actions such as reconfirming the risk of heat stroke and reviewing preventive measures throughout the production locations within the Group in order to prevent the recurrence of accident.

Based on risk assessment, which is the basis of occupational safety and health activities, we took steps to prevent disasters and accidents involving getting pinched or caught, contact with hazardous materials, which increased in number in FY2020, as priority targets. In addition disasters and accidents that occurred in Group production locations in Japan and overseas were shared within the Group in order to strengthen accident controls by reviewing production site rules and safety measures and providing education of production site workers.

Supply chain management

Approach to the procurement of raw materials

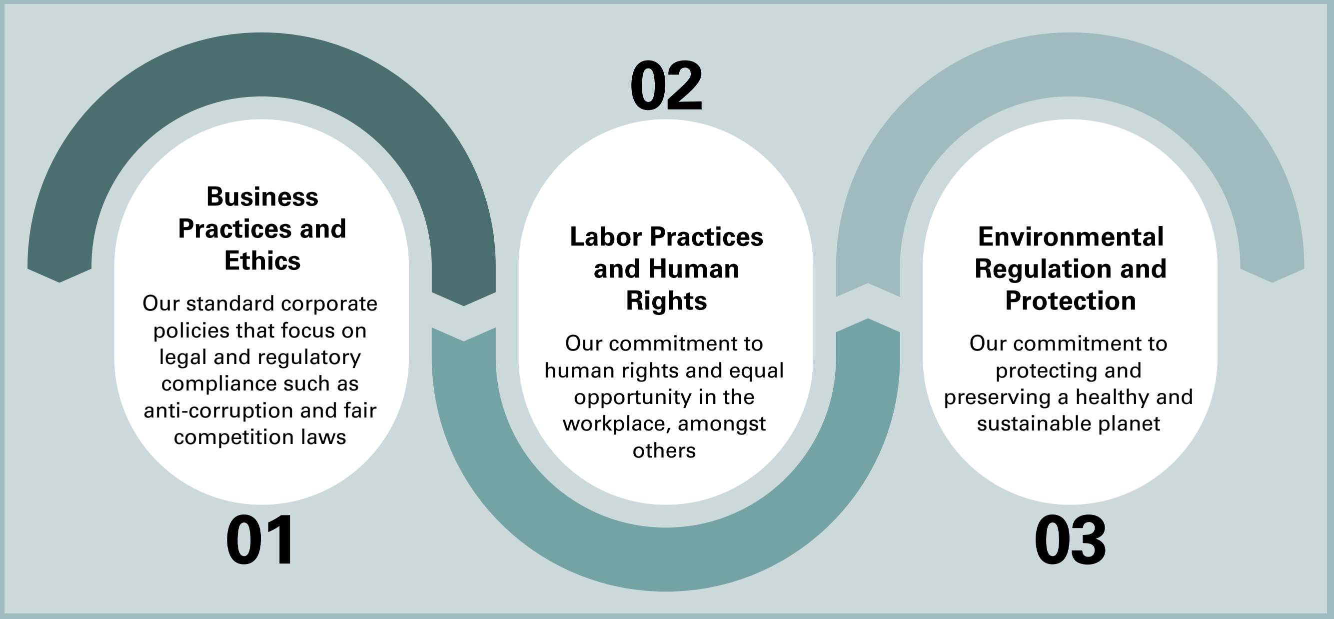
The Group's businesses depend on supply of raw materials, equipment, supplies, information services and various other products and services. Maintaining healthy cooperative relationship with suppliers is therefore essential to our sustainable growth. The Group has established and disclosed the procurement policy that is aligned with its basic approach to business transactions. The Group also aims to ensure that all Group employees and its suppliers understand and follow this approach and policy.

To ensure that procurement activities are performed responsibly, the Group established procurement guidelines based on a policy that further clarifies the definition of the items that must be observed by suppliers and members of the Group. Procurement activities of the Group place priority on quality, cost, and delivery time (QCD) as well as the environment, society and governance (ESG) aspects, with the goal of further emphasizing the sustainability of our supply chains.

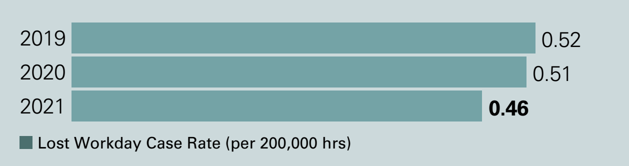
NIPSEA Group remains committed to operating as a responsible business that is held to high standards and strives to create a positive impact on sustainable development. Our Supplier Code of Conduct, which outlines clear business conduct expectations for new and existing suppliers, ensures that our business partners uphold the same high standards that we do. The Supplier Code of Conduct covers three main areas (See the chart below).

At NIPSEA Group, the Procurement department evaluates its suppliers on an annual basis. This supplier evaluation exercise includes an environmental assessment to ensure that they meet its required Standard Operating Procedures ("SOPs") in managing environmental matters. In the event that suppliers fall short of the expectations NIPSEA Group has of them, the group provides solutions and guidance to help them improve their processes.

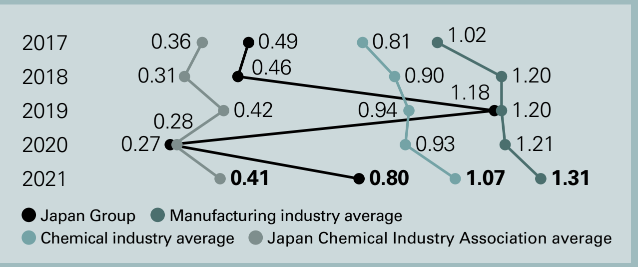
NIPSEA Group Supplier Code of Conduct



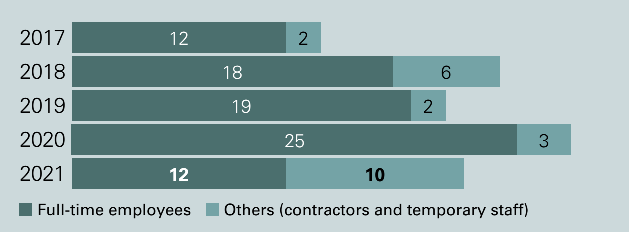
Lost workday case rate - employees & contractors (Global)



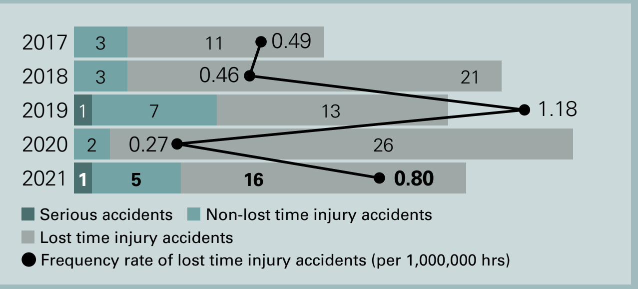
Frequency rate of lost time injury accidents (Japan Group)



Number of accidents by employment type (Japan Group)



Number of workplace accidents (Japan Group)



People & Community

We will pursue MSV on the strength of our human capital

Gladys Goh
NIPSEA Group

As a Japan-origin global corporate group operating in 30 countries and regions worldwide, including in China and other parts of Asia, Nippon Paint Group is committed to contributing to Maximization of Shareholder Value (MSV) by leveraging the diversity and strengths of its human capital, as well as fulfilling its obligations to its stakeholders, which is the premise of MSV.

The People & Community Team conducts activities around two items of Materiality: Diversity & Inclusion as well as Growth with Communities. Our activities are conducted in each country and region with focus on the three pillars of (1) Increasing the ratio of women in managerial positions, (2) Celebrating diversity, and (3) Building and enabling local communities.

The outcomes of these activities are reflected in our benchmarks such as the ratio of female managers in Group companies, as well as in employee satisfaction level which the Group regards as one of the key benchmarks. Employee satisfaction level affects the cost of hiring and retaining human resources and the productivity as it relates to maintaining and increasing employee motivations. Considering these, the Group partner companies are taking autonomous actions according to their own situations.

Diversity & Inclusion

Respect for the people around us and active acceptance of diverse values are important for our sustainable growth. We place great importance on the diversity of employees and other people involved in the business and respect human rights.

Human capital for sustained growth

For Nippon Paint Group to grow in a sustainable manner, it is essential that we secure skilled human resources and offer a corporate culture and working environment in which it is comfortable and rewarding to work, thus allowing people to leverage their individuality and capabilities to the fullest. The Group promoted the enhancement of human resources by investing in human capital through the intensification of training programs developed autonomously by each partner company according to the challenges faced. Expanding training programs can expect to lead to improving competitive advantage in hiring new college graduates and mid-career people and reducing the turnover ratio. Accordingly, it is a key initiative for enhancing the human resource portfolio.

DuluxGroup offers a comprehensive learning program for everyone from those who are newly appointed to senior leaders to develop the skills they need to operate as global leaders and to foster ongoing learning, building capability along their career journey. They encourage employees to "Own their Growth" and to take the initiative to access the learning that they need to improve their skills and specialist knowledge. DuluxGroup continually revises and improves the curriculum to ensure it remains relevant, effective and aligned to DuluxGroup's growth ambitions. The Group currently offers programs such as "Leading in Complexity," "Commercial Acumen" in partnership with Harvard, and a full Sales Capability and Marketing curriculum.

The NIPSEA Group adopts a group-level learning framework that ensures the holistic development of our employees through upskilling their capabilities and competencies required at differing job levels. Training and educational programs are uniquely tailored at the country level depending on the needs identified from our annual training needs analysis. NIPSEA Group's provision of diverse training and educational programs ranges from technical to leadership upskilling to better equip our employees with the necessary skills in today's ever-evolving business landscape. In FY2021, we clocked a total of 387,243 hours for our employees, with an average of 15.0 hours per employee.

In Japan Group, we offer training (training for prospective hires, new employee induction training, follow-up training, training for newly appointed managers, and annual training, etc.) to all employees as appropriate to their current career stages and the roles it is hoped they will play. In FY2021, total training hours for selection training and group training by job level at Group companies in Japan reached 32,000 hours. The increase in training hours was the result of expanding and enhancing the target of training programs and training schedules by improving the on-boarding training we offer to new mid-career hires and opening a business college with the goal of strengthening the business literacy of our executives.

Ensuring and enhancing diversity

Assembly of human capital with diversity is one of the primary basis of Asset Assembler model. Nippon Paint Group Global Code of Conduct established in January 2022 states that the Group embraces diversity. In addition, the Group partner companies worldwide implement human resource management with the goal of ensuring and enhancing diversity.

The NIPSEA Group is continuously working in Asian countries to improve gender representation in its management team and the Board of Directors. Hiring local talent in countries and regions where we operate businesses not only leads to strengthening the competitiveness for acquiring market share but also contributes to the creation of employment opportunities in local communities. The percentage of people hired from local communities to senior manager positions has reached 57.1%.

DuluxGroup has doubled the number of women in the senior leadership team of all business divisions in the last five years, implementing programs for increasing the ratio of women in each position level, focusing on improving the gender balance in particular among senior managers.

Dunn-Edwards has increased female representation among its leadership ranks from 20% to 30% over the past five years and successfully mirrors the ethnic demographics of each of the diverse communities they operate in.

In Japan Group, we are conducting activities for promoting female employees to managerial positions by taking reference from success cases of the Group partner companies overseas. Specifically, we have been sending female employees selected through internal entry system to external training programs for cross-industrial exchanges. We are working to develop executives by fostering a leadership through collaboration with members in other industries, and by encouraging autonomous career development by providing opportunities to meet a variety of role models. We are also actively promoting the appointment of management and executive personnel with high expertise from outside the company. As of 30 June 2022, two female Director of the Board, one female Executive Officer, and one female Corporate Officers were appointed to Nippon Paint Holdings.

Improvement of employee engagement

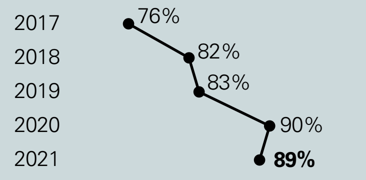
Improving employee engagement can lead to excellent human resources to continuously perform at their fullest potential. We regularly monitor and review the employee satisfaction levels of partner companies which newly joined the Group based on Asset Assembler model (cf. success cases at DuluxGroup).

Dunn-Edwards uses employee feedback to drive initiatives targeted at attracting, developing and retaining a workforce that will provide a competitive advantage. Historically, data shows that the first 2 years of employment, as well as advancement during that time, are the most critical to create a connection with the company. Based on this information, salary, retirement plan (401(k)), and leadership from front line managers are the most important factors. As a result, we have structured compensation, healthcare benefits, tuition assistance, vacation, and retirement plan policies to ensure attractive and competitive offerings in these areas, and we continue to adapt and develop training for career advancement at all levels.

Percentage of women

	Employees	Management post
NIPSEA Group	24.9%	25.1%
Dunn-Edwards	29.6%	30.1%
DuluxGroup	34.7%	32.9%
Japan Group	22.0%	6.1%

Employee satisfaction level (Japan Group)



* Surveys by Nippon Paint Labor Union

Number of employees

	2019	2020	2021
Japan	3,373	3,510	3,294
Asia	14,303	15,354	18,253
Oceania	3,735	3,826	3,927
Americas	2,640	2,581	2,576
Other	1,919	2,047	1,793
Consolidated total*	—	—	404
Total	25,970	27,318	30,247

* The number of employees of NPHD, which was previously included in the Japan segment, has been included in the Consolidated total (common) since FY2021.

The Group companies in Japan are encouraging men to take childcare leave to support men actively participating in childcare. In addition, these companies have established flexible working systems in step with the life events of their employees, including work-from-home systems and systems allowing paid leave to be taken in hourly increments, shortened working hours, and childcare and nursing care. We have introduced a working from home system in order to respect and assist the work motivation of employees by developing a working environment that allows employees to bring out their full potential without being constrained by working hours and geographic location of employees. As measures to prevent COVID-19 infections, we apply the working from home system to employees without limiting the employees who are allowed to work from home and the frequency of usage. The questionnaire survey of employees of the Group companies in Japan conducted in February 2022 had positive responses, such as working from home system improves work efficiency by making it easier to schedule a meeting with overseas attendants; and the use of web conferencing system facilitates smooth information sharing and decision making.

Case studies

Employee engagement scores at DuluxGroup

DuluxGroup's engagement score reached 80% in 2021, which was 8 percentage points higher than the score in the previous survey, which was conducted prior to joining Nippon Paint Group, and is well above industry and high performing norms.

The high engagement score reflects the passion that DuluxGroup people have for their brands, with 97% of employees recommending DuluxGroup products to their family and friends. DuluxGroup employees understand their part in the bigger picture and understand how their job contributes to the business strategic priorities. Their continued high scores are driven by leaders at a local level, who are empowered to work with their teams to drive high performance. DuluxGroup enables this by investing heavily in leadership development.

Basic policy for respecting human rights

The Nippon Paint Group has clearly stated in the Nippon Paint Group Global Code of Conduct that we respect the human rights of employees and stakeholders.

Due diligence in human rights

For the past two years, DuluxGroup has published its Modern Slavery Statement in compliance with Australian legislation. DuluxGroup is committed to identifying, assessing and addressing modern slavery risks within its operations and throughout its supply chain. Modern slavery is a serious violation of a person's basic human rights. DuluxGroup opposes modern slavery in all its forms, and respects and supports the human rights and freedoms of workers within our operations and throughout our supply chain.

The Group companies in Japan utilize self-diagnosis (the UN Global Compact SAQ Survey) provided by UN Global Compact Network Japan to facilitate awareness of supply chain risks, in an effort to survey and understand the status of various ESG-related supplier activities. This survey assesses the level of an organization's initiatives with regard to corporate governance, human rights, labor, the environment, fair corporate activities, quality/safety, information security, supply chains, and coexistence with local communities.

DuluxGroup office in Melbourne

Growth with communities

We will invest in communities through our value chain and to achieve sustainable business growth based on market growth, brand strengthening and good relationships with local communities.

Our mission from the Company's very beginning has been to create innovative paint and coating solutions that bring colors and joy to people's everyday lives. The Group will contribute to supporting and promoting sustainable development of communities through its business activities. We have set three priority areas, which we call the "Three Es," under Nippon Paint Group's global CSR umbrella, "Coloring Lives," for conducting activities to promote the Growth with Communities: Education, to foster our stakeholders of the future; Empowerment, to develop our industry through activities to support and provide vocational training to socially vulnerable people and to discover talent among younger generations; Engagement, to work together with local communities and stakeholders.

Potential opportunities from the Group investing in society are increased business opportunities in flourishing local communities generating economic growth, increased employee engagement and commitment to our Group companies, and strong connections with local communities, which contributes to MSV. On the other hand, we have identified potential risks from the Group neglecting its obligations to stakeholders, which include a loss of trust from local communities leading to decreased ability to attract and retain talented employees and favorable business partners, lower consumer and customer loyalty – and ultimately – loss of shareholder confidence and reduced opportunity to deliver on our promise of MSV.

Global promotion system

In FY2020, we launched a global conference to create closer links among Group companies for closer information sharing and mutual consultation. The conference is the centerpiece of the NIPPON PAINT Group Global Outreach Program designed to enhance social contribution efforts throughout the Group. Based on this program, we have implemented outreach programs in 20 countries across Asia and Europe as well as in Australia, New Zealand, the United States, and Japan. Progress is shared globally to upgrade our initiatives across the Group.

The resources used, results, and impact of our activities are briefly summarized in the following table. In FY2021, the Group used funds amounting to over US$7.08 million for roughly 204 activities that positively affected the lives of some 290,000 people worldwide. In Japan Group, the Group used over ¥269 million for social contribution activities, including some ¥5.22 million in donations to NPOs and other organizations.

Pillars (focus areas) and examples of social contribution activities

Pillar	Description	Example of activities
Education	Activities for children and students who are our potential future customers or employees	Industry-University Collaboration Activities with the University of Tokyo (Japan Group); AYDA Awards conducted annually (NIPSEA Group: International competition and awards platform for architectural and interior design students who are our future customers); Smiling Mind (DuluxGroup: program using color to create mindful spaces at elementary schools); Off the wall Graffiti (Dunn-Edwards: art education program for urban artists through after school programs, events and in-school curriculum)
Empowerment	Support activities and vocational training for socially vulnerable people, and activities to find talented individuals	Nippe Fun Farm (Japan Group: support for employment of persons with physical disabilities); Rural Revitalization for Chengde County (NIPSEA Group: repainting village external walls); Pet Refuge NZ (DuluxGroup: Helping to build refuge shelters for pets of people who are escaping domestic violence situations.; Tradeswoman (Dunn-Edwards: program aims to increase the number of women in construction and related trades)
Engagement	Collaborations with local communities and stakeholders, cooperation with NGOs, and disaster relief	Color Way of Life - ART+(NIPSEA Group: Raising students' awareness of art and color as well as their culture through painting); Department of Conservation Trail Huts (DuluxGroup: protecting historical buildings and local community assets); Martin Auto Museum (Dunn-Edwards: donation for painting a new machine school for teenagers)

Investment in social contribution activities and its results and impacts

	FY2021	Data collected	Results
Global	Country/region		20
	Number of projects		> 204
	Resources input	Money spent on the activities	> 7.08 million USD
		Time spent on the activities	> 61,000 hours
		Employees and volunteers who participated in the activities	> 2,100 participants
		Paint used in the activities	> 0.64 million liters
	Results and impacts	People impacted	> 0.29 million people

Innovation & Product Stewardship

Promote the development of sustainable products while pursuing innovation

Hong Jiang
NIPSEA Group / NPCS

The purpose of Nippon Paint Group is enriching our living world through the power of Science + Imagination. It describes our commitment to creating innovations that bring benefits to our society, by using our technical strengths and intellectual assets, including intellectual property, organizational capability, and technology networks, across Nippon Paint Group. One recent example is that, since the outbreak of COVID-19 pandemic in 2020, the Group has significantly increased investment in anti-viral technology, and developed a range of paint products to address this social challenge.

Our technology mission is to drive and sustain growth and market share in Japan and globally through striving to be a leading technology organization for coatings and its adjacent markets. There are three pillars in our innovation strategy: 1) build adaptive organization; 2) develop core enabling technology competency, and 3) grow into adjacent and emerging markets. It is the implementation of our Group vision for Maximizing Shareholder Value from a technology perspective. We believe that our technology organization's culture of being customer centric, socially responsible and collaborative is the key driver to success.

Importantly, the technology collaboration and intellectual property sharing among our partner companies around the globe is under the principle of Asset Assembler model, which Nippon Paint Group strategically employs to manage the business of partner companies. The technology teams of partner companies possess high autonomy to effectively address the needs from their respective markets and customers. On the other hand, in order to drive technology sharing and capability leveraging among partner companies, the Global Technology Council (GTC) was established, to promote technology exchange platforms and cross-PC projects. We have built up adaptive ways to enhance global technology collaborations to enhance added value of intellectual property. The technology teams in decorative paints have formed the global technical community to share best practices and leverage research capability in joint technology development projects, helping address the needs from local consumers in each respective country. Our major automotive customers are global accounts, and our technical staff in automotive coatings around the globe were unified and became ONE team in 2021 under Nippon Paint Automotive Coatings (NPAC).

Innovation for a sustainable future

In today's society, problems that are difficult to solve with past methods are becoming more and more apparent. We will strengthen our innovation output with active utilization of partnerships.

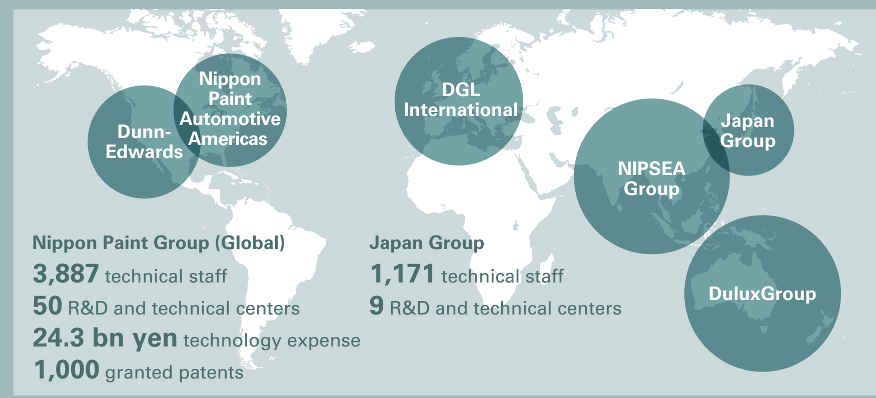
Significance of R&D activities in our paint and paint related businesses in utilizing and adding value to intellectual property

Worldwide there are 3,887 technical staff working in Nippon Paint Group, with 1,171 in Japan. They are our strong innovation power and core competitiveness for achieving sustainable business growth in the marketplace. Our technical staff are working in 50 R&D and technical centers to serve our domestic and global customers and consumers, including our major R&D centers in Tokyo and Osaka in Japan, Shanghai in China, Singapore, Melbourne in Australia, Los Angeles and Cleveland in the US, and France in Europe. In 2021, the total technology related expense in Nippon Paint Group is above 24.3 bn yen. In 2021, Nippon Paint Group has filed 200 new patents, and by end 2021 owned 1,000 granted patent rights.

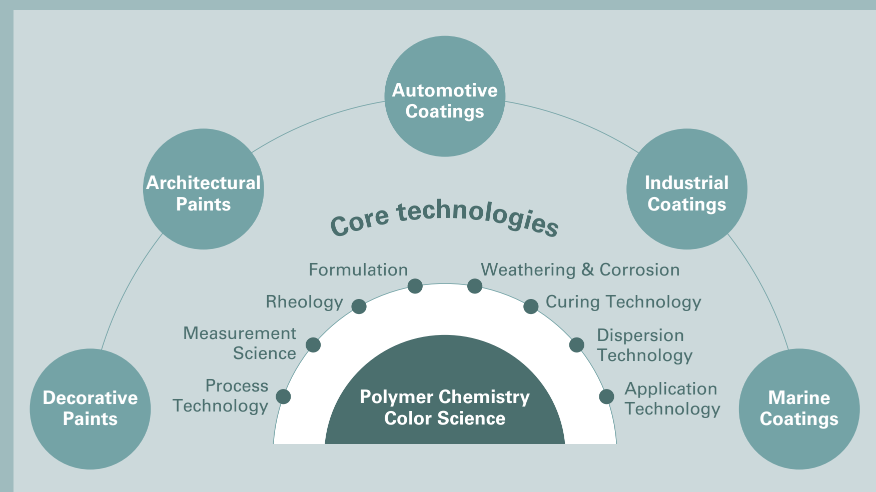
Nippon Paint Group has classified its core technologies related to paint and coatings and manages its intellectual property portfolio in 10 categories, which are polymer chemistry, color science, formulation, curing technology, dispersion technology, application technology, process technology, rheology, weathering and corrosion, and measurement science. Subject matter experts are working in core R&D teams in the R&D centers, and collaborating with scientists from the global network of technical centers to support product development across the group.

Nippon Paint Group possesses a broad open innovation network with universities and academic research institutions worldwide. In 2020, the strategic research partnership with The University of Tokyo was initiated, with the University of Tokyo & Nippon Paint joint laboratory established. The partnership aims to create innovative coating technologies in three fields, infectious disease risk reduction, social cost and environment burden control, and contribution to smart society. In Singapore, NIPSEA Group has been collaborating with the research institutes of A*STAR (Agency for Science, Technology and Research) for decades. Recently, NIPSEA Group has strategically joined hands with A*STAR to develop disruptive technologies in the fields of smart surface enabling autonomous driving, and applying artificial intelligence in coating research.

R&D organization



Core technologies



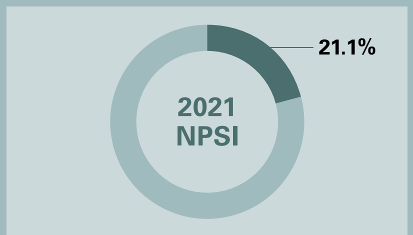
Innovation initiatives and programs

New Product Sales Index (NPSI)

New Product Sales Index (NPSI) is one of the indicators for measuring technology output. In Nippon Paint, we have established well-designed NPSI system with tools, to track the sales revenues generated from new products commercialized in the past three years. New products are categorized ranging from products upgrade by incremental improvement, to new-to-market products by disruptive innovation. NPSI is achieved with joint efforts of technical teams with business and supply chain operation teams, where strong collaboration brings together our commitment to Maximization of Shareholder Value.

NIPSEA Group started to implement NPSI in 2018. In 2021, Japan Group and NIPSEA Group together have achieved NPSI of 21.1%, and launched 18,000 new products in the same year.

2021 New Product Sales Index (NPSI) of Japan Group and NIPSEA Group (%)



Sustainability of our products

In Nippon Paint, we regard that sustainable features are essential factors for our products to benefit human society and thus achieve long-term business success. We define the product sustainable advantages in the principle of product life cycle and according to the framework of The United Nation's Sustainable Development Goals (UN SDGs). It is a systematical approach, covering the three main stages of product life cycle, eg.

1. product production,
2. products in application, and
3. products in service.

Furthermore, in each stage, the advantages over the mainstream products in the market are assessed by translating UN SDGs to the attributes of paint and coating products. In the stage of product production, manufacturing efficiency, raw materials, logistic and packaging, are the key aspects for assessment. In the stage of products in application, the advantages are helping customers and consumers when using the products, by reducing energy and material consumptions, chemical emissions, and chemical hazards. In the stage of products in service, the products are assessed in product service life, used in clean technologies, contribution to health and well-beings, as well as end-of-life treatment.

Under those sustainability principles, Sustainability Scoreboard for new product assessment has been developed and started implementation in NPSI systems of partner companies, Japan and China Group. In 2021, of new product sales of Japan Group and China Group together, 38% were contributed from newly developed sustainable advantaged products.

Meanwhile, Green Design Review has been developed and started implementation into R&D project management systems of Japan Group and NIPSEA. From our project portfolios of Japan Group and NIPSEA, 40% of R&D projects are in the focus areas of creating sustainable benefits according to the Green Design Review principles.

Management of chemical substances

In 2021, Japan Group launched the chemical substance management system named "Green 30," in order to minimize the impact on environment and human health. The system is developed to manage chemical substances not only from Japanese chemical regulations, but also chemical substances of global concern from international treaties such as REACH regulations. We classify the chemical risks in three categories according to the laws and regulations in the countries where our business operates: prohibited, restricted for new introduction, and avoided for new introduction. The system started in operation in Japan in 2021, and the practice is being introduced to our partner companies outside Japan.

Alkylphenol ethoxylates (APEO) are surfactants and include a subcategory of nonylphenol ethoxylates (NPEO/NPE). These types of nonylphenols (NPs) are being regulated by the EPA and REACH. Nippon Paint has been steadily phasing out APEO-containing surfactants. In 2021, we eliminated the use of the nonylphenol compounds in our products in Europe. Dunn-Edwards continues to phase out APEO-containing surfactants through product improvement and ensures that no new APEO-containing raw materials are allowed in the newly developed products.

In addition, we have been substituting the UV absorbers that are being considered as persistent organic pollutants (POPs). Our next plan is to completely phase them out in all products for Europe by the end of 2023.

In DuluxGroup, managing the risks associated with hazardous chemicals used in the formulation of the products is an important priority for our businesses. We have developed a management approach to ensure that substances with potential for long term health or environmental effects (chemicals of concern) are identified, with their risk evaluated. Improvement actions, such as formulation changes or improved packaging and labelling, are put in place to reduce or eliminate the risk of harm. Chemicals of concern are identified from information on supplier safety data sheets, regulatory lists such as the European "Substances of Very High Concern" and stakeholder sustainability program listings (e.g. Living Building Challenge Red List).

Whenever a new ingredient is proposed for introduction, it is reviewed against the Chemicals of Concern criteria and existing listing. If identified as a chemical of concern, a risk assessment is undertaken to determine if the chemical can be safely used in the specific product and by the intended end-user or if additional controls or an alternative formulation is needed.

Scientific knowledge, regulations and community concern related to chemicals are constantly evolving. To keep our knowledge up to date, DuluxGroup has also established a process for monitoring and reviewing stakeholder and regulatory reviews of chemical classification so that emerging concerns can be picked up and acted on pro-actively.

The effectiveness of our program is measured by tracking the usage of priority chemicals of concern (in kilograms per $000 sales) and the proportion of chemicals that have had a risk management plan developed. Since 2018, DuluxGroup has had a 17% reduction in the usage of priority chemicals of concern, despite the addition of some new substances to our chemicals of concern listing. Some examples of our chemicals of concern initiatives in 2021 include:

Dulux Protective Coatings: Congard product is now Cobalt and Meko free.

Dulux Protective Coatings: Formulation of a new toluene-free epoxy primer, Durepon 66.

Dulux Porter's: Reformulation away from crystalline silica in its product range.

Case studies

Innovation cases

While we are facing major challenges nowadays, such as uncertainty in economic growth, high industry dynamics, and increasingly stringent environment regulations, we firmly believe there are also huge opportunities for innovative products that offer sustainability advantages to tackle those challenges, especially contributing to a carbon neutral society and in line with UN SDGs. Thus, our innovation directions are toward environmental friendly, energy efficient and economically viable paint products.

Innovations in anti-viral paints

In the Japan market, Nippon Paint launched PROTECTON® brand in September 2020, named after the function to "PROTECT" people's lives from threats of viruses and bacteria + to turn the function "ON" to the surfaces of all things. Since then, we have combined all of Nippon Paint Group's paints, coatings and surface treatment technologies to offer a lineup of products for industrial, DIY and household use.

In February 2022, Nippon Paint (NPTU) released "PROTECTON Interior Wall VK Coat" and "PROTECTON Floor VK Clear" and Nippon Paint Automotive Coatings released "PROTECTON Car Interior VK Coat." Three of these new products have been added to PROTECTON brand. In addition to the "Interior Wall series" for interior walls, "Floor VK Clear," a water-based clear paint for floors, is expected to be effective when droplets containing viruses adhere to floor surfaces. "Car Interior VK Coat" is expected to have sustained anti-viral function with excellent appearance due to its uniform application property to the car interior and its high adhesion to the substrate.

In addition, our group and the University of Tokyo have jointly conducted research activities on coatings technologies with anti-viral and anti-bacterial functions to reduce the risk of infection. This is one of the joint research themes under the industry-academia co-creation agreement concluded in May, 2020.

It is a joint effort across the globe in Nippon Paint Group to fight against viruses. Nippon Paint China launched "ClearShield" antimicrobial technology, which means "Virus Clear, Health Shield," in October 2021. The innovative coating products and film using this technology have color change resistance and good anti-viral performance in accordance with Chinese anti-viral coating code. In January 2021, Nippon Paint China released antimicrobial Kid's Paint, which can reduce the bacteria (S. Aureus, E. Coli, etc.) and virus (H3N2, EV71, Human-corona virus 229E, etc) pollution on the coating surface, with added functions of HCHO abatement, low VOC and low odor performance.

In Nippon Paint Malaysia, "VirusGuard" was developed with silver ion technology to persistently inhibit the growth of viruses and bacteria on the coated surface, decreasing the spread of contagious illnesses including, Hand, Foot and Mouth Disease (HFMD), H1N1 as well as COVID-19. Nippon Paint Singapore has also launched "VirusGuard" and "VirusGuard+" coating products, based on the silver and cuprous technologies, respectively.

Dulux UltraAir®

In response to broader societal concern about indoor air quality, DuluxGroup Australia has launched the UltraAir® interior wall paint range. The products have ultra low odor and ultra low chemical emissions. Going beyond low VOC, UltraAir® has achieved GreenGuard Gold certification. This is a third party certification that tests for over 10,000 chemicals and volatile organic compounds (VOC) and demonstrates that UltraAir® helps reduce indoor air pollution. These new advanced formulations have also achieved Global GreenTag GreenRate Level A and Platinum Health certification and can contribute to the achievement of green building project certifications such as WELL and Green Star. UltraAir® has a verified Environmental Product Declaration (EPD) that quantifies the environmental footprint of the product. The availability of EPDs along with GreenTag certification is well regarded in the commercial sector in Australia while reducing odor and fumes is important to both trade and household consumers, meaning the UltraAir® product has significant appeal across all market sectors.

Chromium (Cr) free primer for construction industry

With the recent issuance of different regulations regarding pollution control for VOCs and heavy metals, environmental protection has been gaining more focus in the construction industry. Nippon Paint has developed chromium (Cr) free primer for coil coatings, which has now become an important element in industrial applications. This environmentally friendly coating can be widely applied to large areas of metal for decoration and protection.

Occupational Safety and Health Administration (OSHA) studies have determined that hexavalent chromium poses significant medical risks to users. Not only is it considered a potential lung carcinogen, but it can also cause nose, throat and lung irritation, with prolonged exposure resulting in ulcers and perforation of the septum. The new Cr free coil coating primer can help to eliminate the medical risks to users and meet the regulatory requirements. This new technology also exhibits excellent corrosion resistance and mechanical properties compared to those obtained in industrial oil-based primers.

The new Cr free primer products have been introduced to our customers in China as the largest coil coating market. Nippon Paint has completely phased out Cr containing primer products for coil coatings in China.

Innovations in anti-viral paints

Dulux UltraAir®