
STRATEGIES PRESENTATION MATERIAL

May 15, 2024

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○ **Medium-Term Business Plan 2025 and 2030 Vision**

○ **Current Situation and Actions for Medium-Term Business Plan 2025**

○ Strategies and Measures for Achieving Medium-Term Business Plan 2025

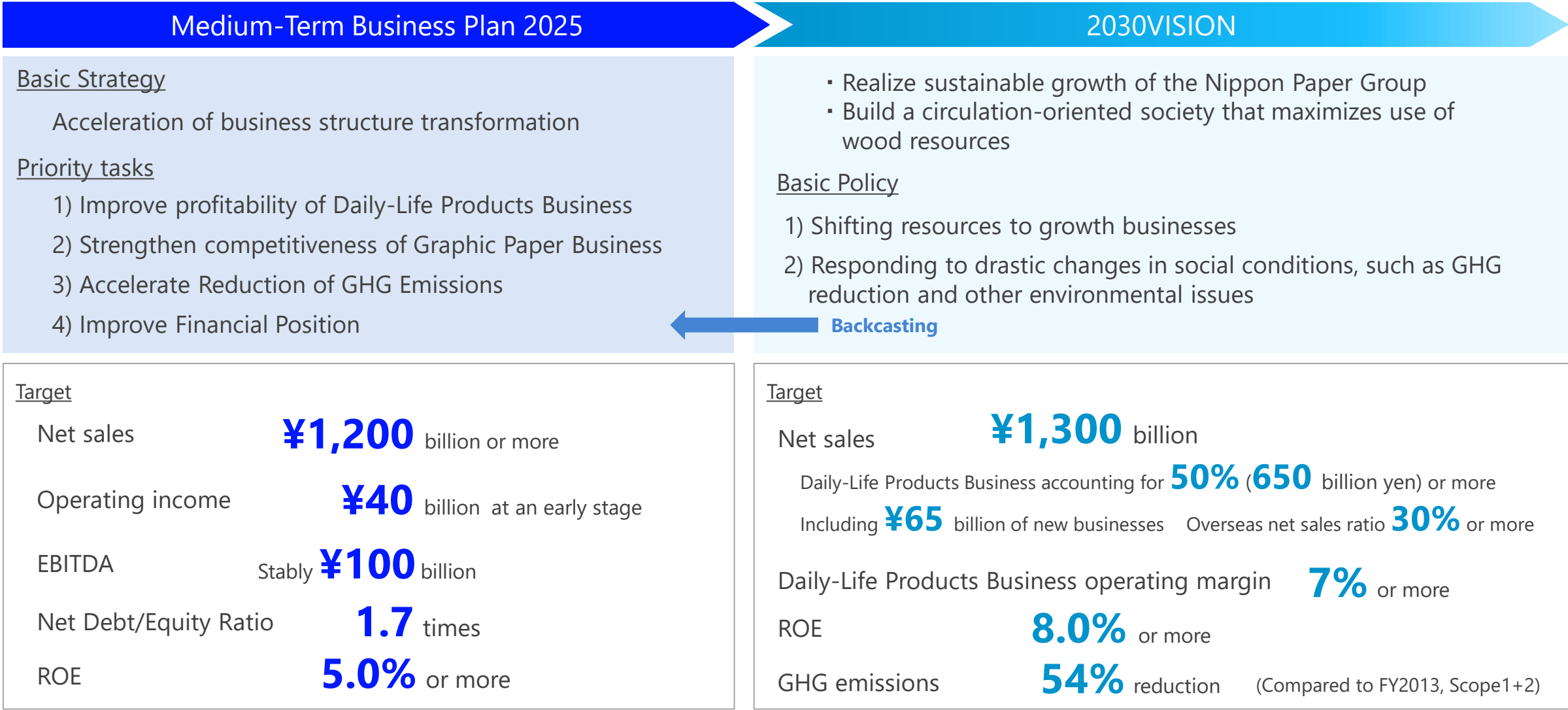
- Measures against Accelerated Demand Decline in Graphic Paper
- Expansion and Profitability Improvement in Daily-Life Products Business
- Restructuring Opal
- Profitability Improvement of other Overseas Business
- Management based on a Strong Awareness of B/S

○ Enhancement of Sustainability Management

- Initiatives to Reduce GHG Emissions
- Promotion of Human Resource Management
- Growth Strategy based on Three Circulations



Realize sustainable growth as a comprehensive biomass company shaping the future with trees



Business Results

(Billions of yen)

	FY2021 Results	FY2022 Results (a)	FY2023 Results (b)	FY2024 Forecasts (c)		(b-a)	(c-b)
Net sales	1,045.1	1,152.6	1,167.3	1,200.0		14.7	32.7
Operating income	12.1	-26.9	17.3	23.0		44.2	5.7
Domestic*	9.9	-22.2	31.1	30.0		53.3	-1.1
Overseas *	2.0	-1.9	-12.0	-7.0		-10.1	5.0
Eliminations*	0.2	-2.8	-1.8	0.0		1.0	1.8
Net income attributable to owners of the parent	2.0	-50.4	22.7	3.0		73.1	-19.7
EBITDA	81.5	42.8	84.8	90.0		42.0	5.2

* Simple calculations of totals

- Operating income recovered to profitability in FY 2023
- Domestic business profitability has significantly improved, but on the other hand, earnings deteriorated in overseas business



Domestic Business

- Returned to the track of medium-term plan in FY 2023 through price revisions and cost reductions
- Maintain and enhance profitability in FY 2024 and beyond

<Initiatives to Achieve Targets>

- Take measures against accelerated decline in Graphic Paper demand
- ➡ Maintain sales volume, reduce cost, and optimize manufacturing structure
- Expand Daily-Life Products Business and improve profitability
- ➡ Continuous capital investment and steady realization of benefits

Overseas business

- Profits deteriorated in FY 2023 at Opal and other overseas businesses
- Urgent need for profitability improvement to achieve the medium-term management plan

<Initiatives to Achieve Targets>

- Restructuring Opal
- ➡ Restructure Maryvale Mill and strengthen Packaging Business competitiveness
- Profitability improvement of other overseas business
- ➡ Improve profitability of Nippon Dynawave Packaging (NDP) and Jujo Thermal Oy (JTOy)

○Medium-Term Business Plan 2025 and 2030Vision

○Current Situation and Actions for Medium-Term Business Plan 2025

○**Strategies and Measures for Achieving Medium-Term Business Plan 2025**

- **Measures against Accelerated Demand Decline in Graphic Paper**
- **Expansion and Profitability Improvement in Daily-Life Products Business**
- **Restructuring Opal**
- **Profitability Improvement of other Overseas Business**
- **Management based on a Strong Awareness of B/S**

○Enhancement of Sustainability Management

- Initiatives to Reduce GHG Emissions
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Strategic volume maintenance and expansion

- Develop and expand sales of environment-friendly products that will be chosen by the market leveraging our high-level technology
Ex. Magazine paper N.Polaris43Mocha: GHG emissions reduced by approx. 20% throughout its lifecycle (compared to conventional products)
- Strategic expansion of exports in industrial paper (packaging, label applications, etc.)

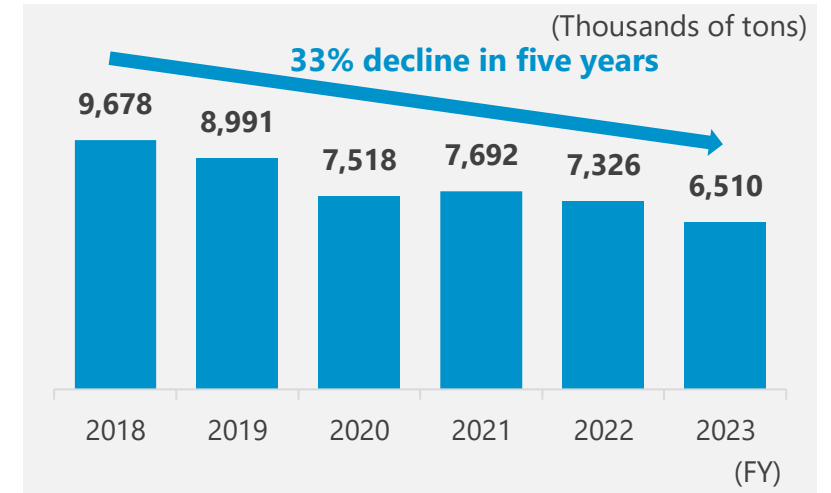
Strengthen competitiveness by cost reduction

- Improve operating efficiency by stable operation
- Continuous cost reductions such as energy saving and reduction of coal consumption

Accelerate reorganization of production system

- Establish a new reorganization plan for production system in the 1st half of FY 2024
- Consolidate graphic paper manufacturing bases into three locations around FY 2028
- Realize reorganization of production system, productivity improvement, and GHG reduction in an integrated manner

Shipments of Graphic Paper in Japan



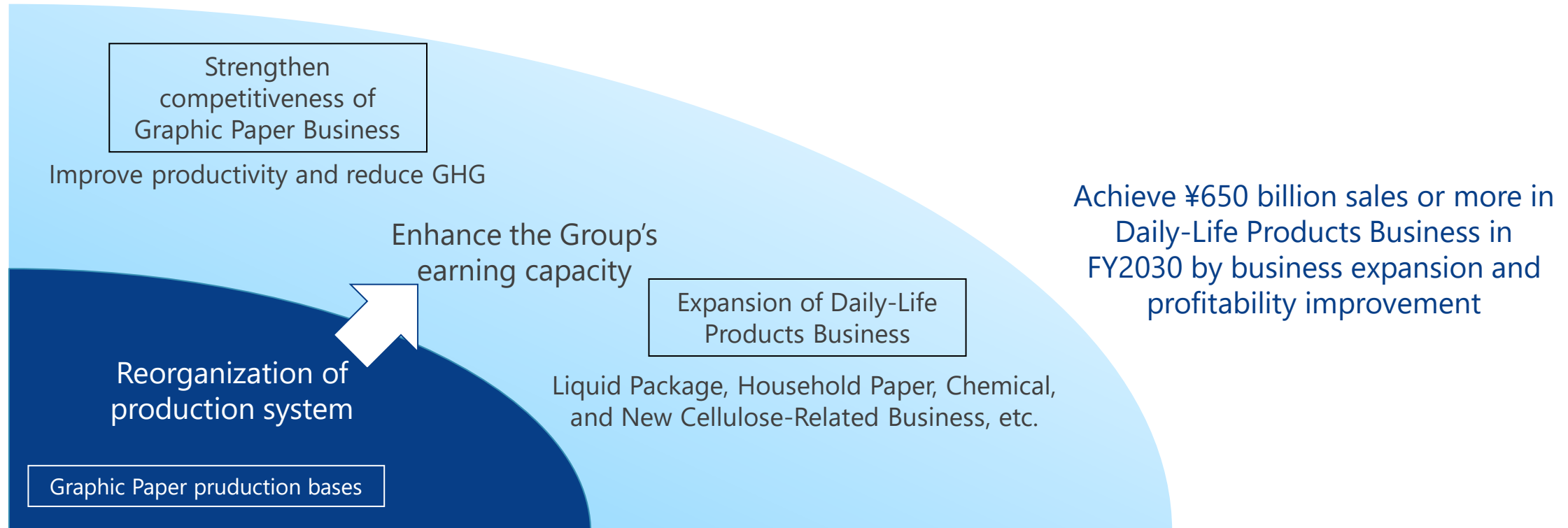
Source: Japan Paper Association
(Graphic Paper = newsprint paper + print, business communication paper)



Accelerate reorganization of production system

Reorganization of production system through business structure transformation

- Strengthen competitiveness by consolidating graphic paper manufacturing bases into around three locations
- Expand growing business such as Daily-Life Products Business by leveraging our existing resources (human resources, capability to provide utility and pulp, supply chain, etc.)



Liquid Packaging Carton

Domestic Thoroughly promote differentiation strategy utilizing integrated production system

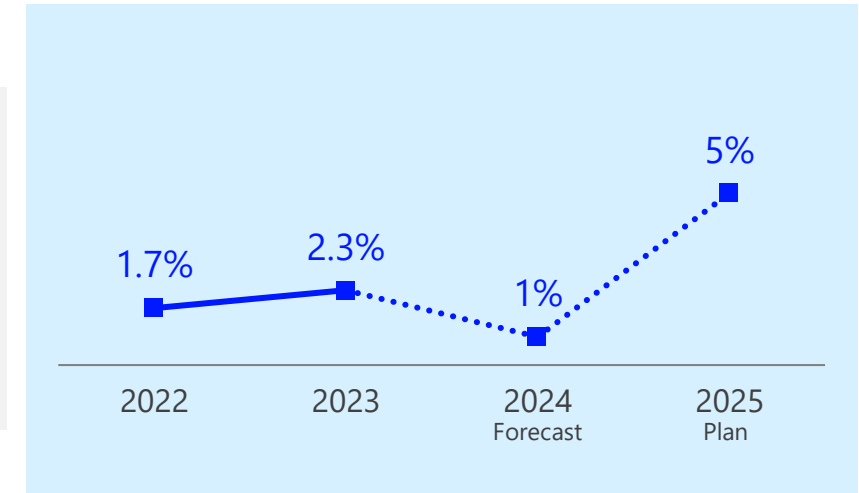
- Develop environment-friendly packaging board & cartons, and promote recycling
Ex. School POP®, Non-aluminium series, LiterLyte®, PakUpcycle® *
- Develop and launch new filling system jointly with Shikoku Kakoki Co., Ltd.
Ex. NSATOM, LA82 (filling machine), etc.
- Utilize domestic-made packaging board
- Enhance engineering services for filling machines

Overseas Global expansion based on collaboration between ELOPAK, Shikoku Kakoki, and our Group including NDP

- Enhance sales of NDP liquid packaging board with high-added value
- Expand exports from Japan to the Pan-Pacific market
- Utilize Australian subsidiary for sales of liquid packaging carton

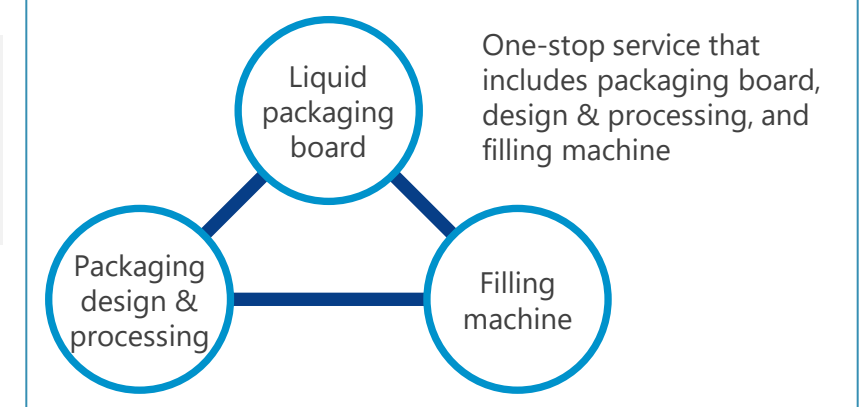
*PakUpcycle®
"Pak" (paper-pack for beverages) + "Upcycle" (processing and reusing used goods and wastes to increase their value as products)
A term to represent the recycling of liquid paper containers

Operating margin



*Domestic Paper Pack + Nippon Dynawave Packaging (NDP)

Integrated production system



Household Paper and Healthcare

Expand market share in Japan with differentiating products and enhanced sales functions

- Expand sales under the concept of "compact and large volume"
Ex. 3 times longer toilet paper rolls, Scottie Flower 250W, Poise Super Slim&Compact
- Sales expansion through e-commerce
E-commerce sales: 8.1 billion yen in FY 2021, 11 billion yen in FY 2023

Expand production capacity and reduce costs by starting operation of new papermaking machines

- New papermaking machine
Crecia-Kasuga (August 2023) , Crecia Miyagi Mill (April 2024)
- Improve productivity through state-of-the-art machines and reduce costs by utilizing in-house pulp

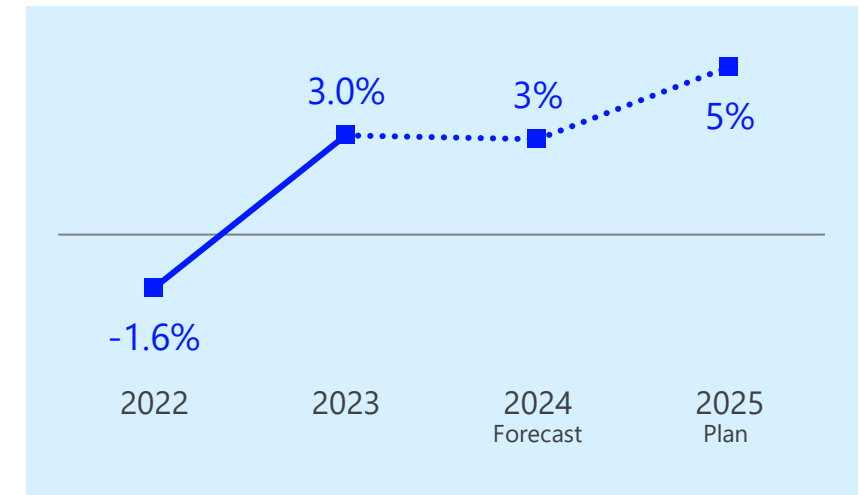
Secure appropriate prices

- Price revisions in line with the actual status of logistics and personnel expenses
Raised prices by 5 to 10% from April 22, 2024

Overseas expansion

- Consider overseas sales in collaboration with global partners

Operating margin



Product lineup based on the concept of "compact and large volume"

Chemical

Expand sales by capital investment

- Ensure the effects of capacity expansion implemented in FY2021-2023
(For functional cellulose, functional coating resin products, etc.)

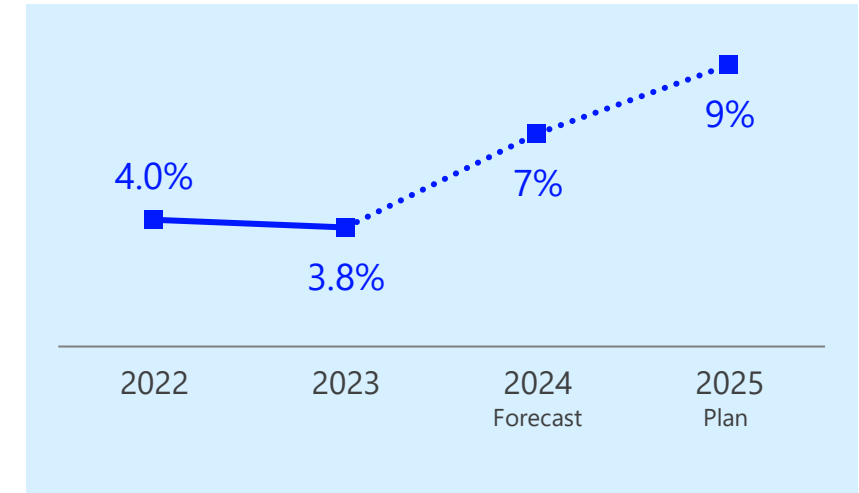
Expand sales through development of new applications and product development

- Expand sales of dissolved pulp for cellulose derivatives and other applications
- Develop new applications for Lignin related products
- Develop environment-friendly functional films etc.

Expand into overseas markets and increase exports

- Expand sales of CMC for LiB by local production (in Hungary)
(Scheduled to start operation in December 2024)
- Expand sales of functional coating resin to the Asian market etc.

Operating margin



Functional cellulose



Dissolved pulp

New Cellulose-related Business

Expand the use of pulp/cellulose, a renewable resource

- Product development utilizing domestic lumber procurement network
- Expand into diverse applications by leveraging the Group's distribution channels
- Commercialize new items by strengthening cooperation system with other companies, research institutions, and other external organizations

New Products Derived from cellulose



CNF
(Cellulose nanofiber)



Cellulose Powder
CNF-Reinforced Resin

Bioethanol

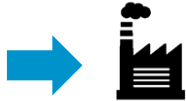


Sugar and ethanol



Material for SAF

Aircraft fuel
(SAF)



Green chemical raw materials

Feed and fertilizer-related products



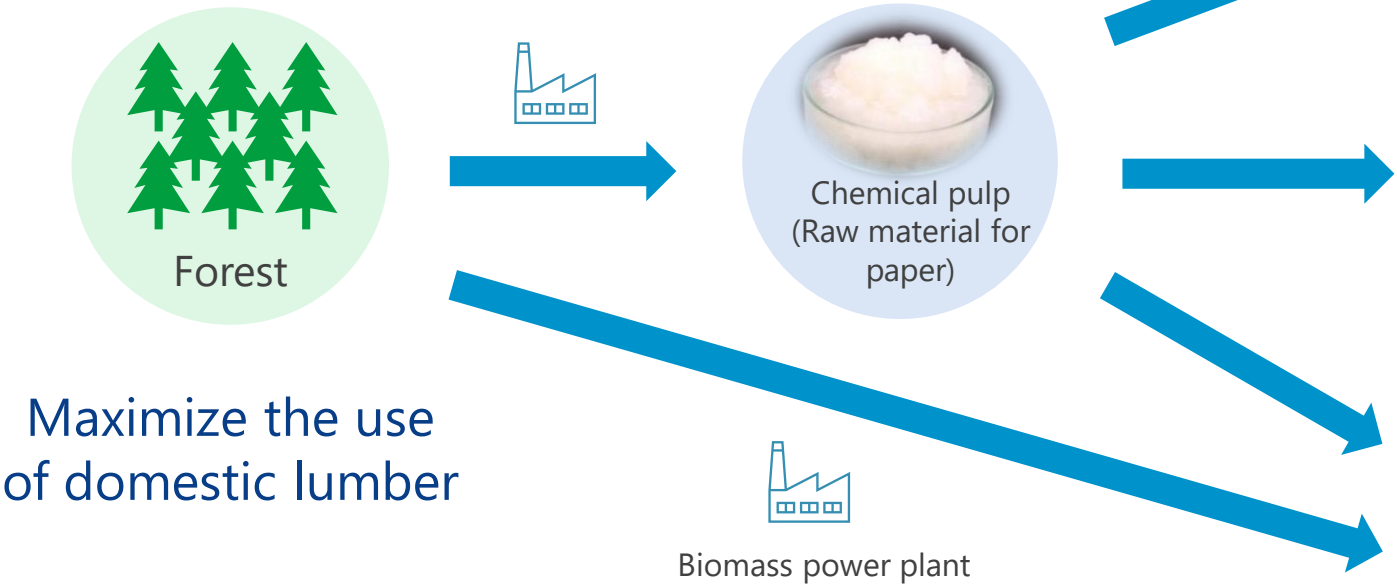
Wood feed



Feed additives
"Torula Plus®"



Fertilizer
"Biomass ash"



Restructuring Opal

Basic Policy and Priority Tasks

<p>Basic Policy</p>	<p>Recognising Opal’s business turnaround as the most important issue at hand Strengthen its efforts to rebuild the business through NPI group</p> <p style="text-align: center;">↓</p> <p>Establish a structure to return to profitability by the end of FY2024 <u>Aiming to earn positive profit in FY2025</u></p>
<p>Priority Tasks</p>	<p>Restructuring and profitability enhancement of Maryvale Mill Strengthen the foundation of packaging business and expand profits</p>

Opal’s Operating Income Trends (Forecast) (A\$ million)

	FY2023 Actual	FY2024 Forecast	FY2025 Forecast
Maryvale Mill (ex-AP)	-128	-90	-30
Packaging Business (non-AP)	-23	10	50
Opal Total	-151	-80	20

Structural Reform of Maryvale Mill and Strengthening its Profitability

Basic Strategy

- Optimize manufacturing footprint(pulp & paper)
- Fixed costs reduction
- Minimise volatile export sales



- Streamlined and competitive packaging paper mill
- Enhance the integrated packaging business by increasing internal paper sales
- Implement further profit improvement measures to achieve positive profits

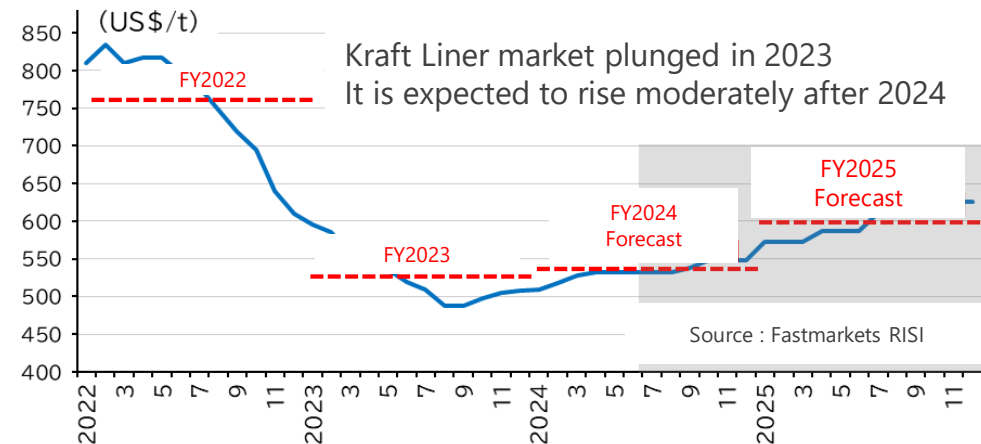
Overview of optimisation of manufacturing footprint

Type	Manufacturing footprint
Pulp	Continuous mill (Kraft Pulp)
	Batch mill (Kraft pulp) → closed
	Semi Chemical Pulp
	Recycled Pulp
Paper	Deinked Pulp → closed
	M1 (kraft grade etc.)
	M2 (bleached kraft grade etc.) → closed
	M3 (graphic paper ⇒ recycled paper/medium) → Production grade change
	M4 (kraft linerboard)
	M5 (graphic paper) → closed

Maryvale Mill's integration level

FY2022	FY2023	FY2024 Forecast	FY2025 Forecast
30%	47%	52%	Further increase

(Ref) Chinese Kraft Liner Board market



Structural Reform of Maryvale Mill and Strengthening its Profitability

FY2023-FY2025 Overview and Main Measures

	FY2023	FY2024・FY2025 (Forecast)
Optimisation of manufacturing footprint	<ul style="list-style-type: none"> Withdrawal from the graphic paper business resulted in the closures of 2 paper machines with 3 remaining machines operating for packaging grade Delayed pulp mill transition (from batch to continuous mill) to 2024 due to the time required to obtain development license 	<ul style="list-style-type: none"> Pulp mill transition completed in March 2024, improving daily pulp output and efficiencies
Fixed costs reduction	<ul style="list-style-type: none"> Reduction in personnel, repair and maintenance, etc. were generally implemented as planned 	<ul style="list-style-type: none"> Reduction effect contributes to full year. Execute company-wide headcount reduction
Sales	<ul style="list-style-type: none"> Market conditions in Asian export markets deteriorated significantly 	<ul style="list-style-type: none"> Driving export in non-Asia regions and integration
Strengthen group collaboration	<ul style="list-style-type: none"> Reinforcement of operational and technical support from Nippon Paper Industries 	<ul style="list-style-type: none"> Expand NPI group collaboration in sales

Structural Reform of Maryvale Mill and Strengthening its Profitability

Variance Operating Income Analysis (year on year)

(A\$ million)

	FY2023	FY2024 Forecast	FY2025 Forecast
Decrease in marginal profit due to 2 paper machines closures	-101	-10	-
Improve production volume and raw material/energy usage per unit due to transition to continuous mill	-	+26	+15
Fixed costs reduction (personnel, repair & maintenance, etc.)	+78	+23	+30
Export sales market volatility	-53	-	+10
Sales mix improvement (Driving non-Asia region and integration)	-	+4	+5
Other	+1	-5	-
Total change from the previous year	-75	+38	+60
Maryvale's Operating Income	-128	-90	-30



Despite implementing production footprint optimization and fixed cost reduction measures, it is anticipated that FY2025 will still operate at a loss. ⇒ Explore additional profit improvement measures toward achieving profitability.

Restructuring Opal

Strengthen the Foundation of the Packaging Business and Expand Profits

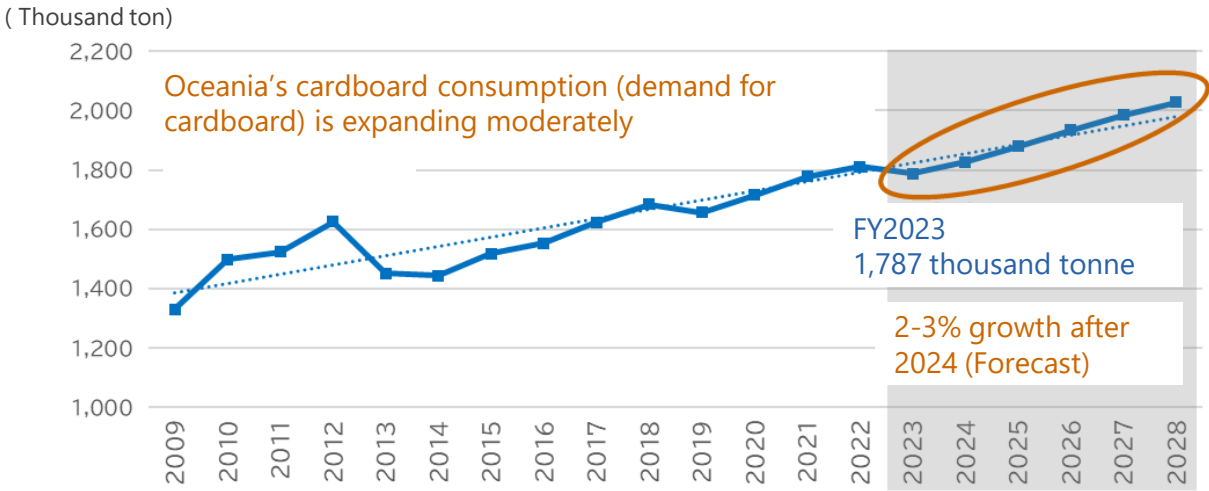
Basic Strategy

- Capital investment to increase production capacity and reduce costs
- Enhance sales system and reinforce customer service



Capturing demand in the moderately growing Oceania region
Acquire new customers and increase market share

Oceania region's consumption of cardboard base paper
(forecast after FY2024)

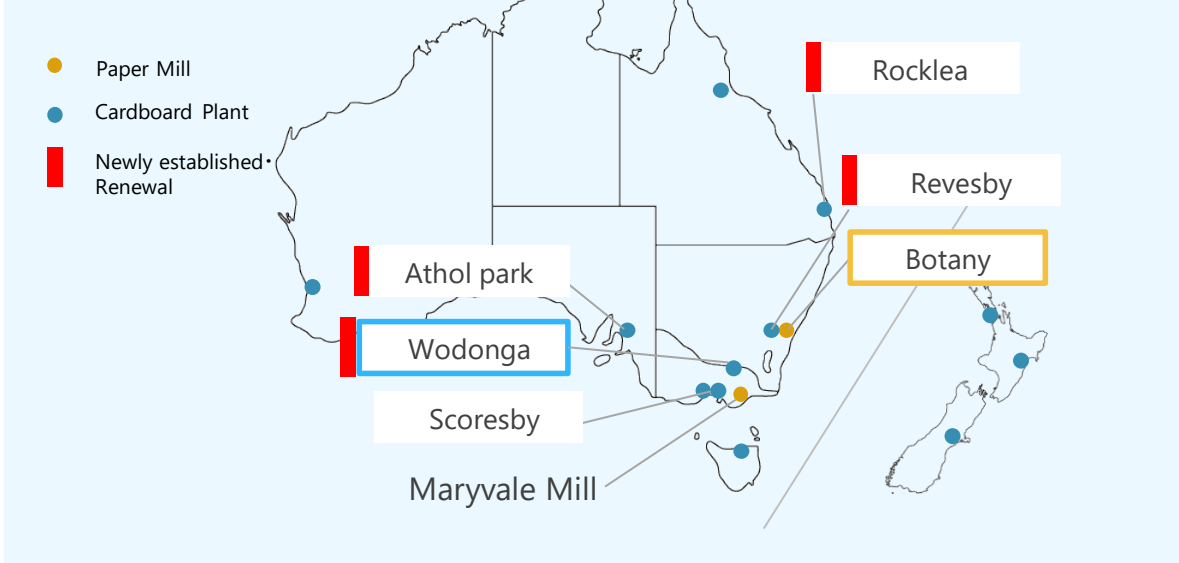


Source : RISI (World Containerboard Annual Historical Data, World Containerboard Forecast)

Increase sales volume in the Australian corrugated box business

- Increase production capacity by 22% until 2025 (vs. 2022)
 Improved productivity through the introduction of new converting machine
- Focus on capturing demand in the eastern coastal region of Australia by leveraging the location advantage of the Botany Paper Mill

Opal's main manufacturing bases



Strengthen the Foundation of the Packaging Business and Expand Profits

FY2023-FY2025 Summary and Main Measures

	FY2023	FY2024・FY2025 (Forecast)
Capital investment	<ul style="list-style-type: none"> • New corrugated box plant started operation from August 2023 in VIC state • Decision made to invest total of 5 converting machines (replace 8 ageing equipment) at 3 plants in NSW, QLD, and SA states 	<ul style="list-style-type: none"> • The new corrugated box plant is operating smoothly. Labor productivity is approximately double that of conventional plant • The new machines are scheduled to be in operation from April 2024
Fixed costs reduction	<ul style="list-style-type: none"> • Consolidation of bag manufacturing sites 	<ul style="list-style-type: none"> • Rationalisation of personnel by improving productivity through renewal of processing machines • Promote company-wide headcount reduction • Closure of paper container business bases
Sales	<ul style="list-style-type: none"> • Demand for corrugated packaging in Oceania grows moderately • Reinforcement of sales structure and sales personnel • The market in Asian export markets at Botany Mill also deteriorate 	<ul style="list-style-type: none"> • Expand market share of corrugated box market by increasing production capacity and improved costs through capital investment • Increase internal sales of base paper due to expanded sales of cardboard (decrease in exports)
Strengthen group collaboration		<ul style="list-style-type: none"> • New product development and sales expansion through NPI group collaboration

Strengthen the Foundation of the Packaging Business and Expand Profits

Variance Operating Income Analysis (year on year)

(A\$ million)

	FY2023	FY2024 Forecast	FY2025 Forecast
Expand sales of corrugated box (590 million m ² in 2023 to 660 million m ² in 2025)	+ 4	+ 15	+ 13
Price revision	+ 36	-	-
Export sales market volatility	-16	-	+ 10
Increase integrated sales of base paper (Decrease in exports)	-	+ 9	+ 9
Fixed costs reduction (renewal of converting machines, company-wide personnel reduction, consolidation of sites)	-	+ 30	+22
Price increase of raw materials, freight and others	-15	-21	-14
Total change from the previous year	+ 9	+ 33	+ 40
Packaging business operating Income	-23	10	50



Increase profits by enhancing production capacity, reducing costs, and expanding sales through capital investment and strengthening sales strategy

NDP (Nippon Dynawave Packaging)

■ FY 2023 Overview

- Profits deteriorated significantly due to factors such as sluggish demand in North America, production volume decline and poor efficiency caused by wood chip yard fire, etc.

■ Actions for FY 2024 and 2025

- Long-term outages from May to June 2024 for facility restoration
(Normal maintenance period: approx. 15 days → Over 30 days for this year Additional repair cost: approx. U\$15 million)
Large-scale maintenance of recovery boiler and other major facilities is in progress
- Profits will remain at low level in FY 2024 due to production cutbacks caused by cold weather in January 2024, in addition to the long-term outages.
- Current demand for liquid packaging board and pulp is stable
Plan to secure steady earnings from the second half of FY 2024 by stabilizing operation

JTOy (Jujo Thermal)

■ FY 2023 Overview

- Earnings declined due to high raw material & energy costs, as well as sluggish sales (decreased by 20% year-on-year) caused by economic slowdown in Europe

■ Actions for FY 2024 and 2025

- Expand sales outside Europe, further promote environment-friendly products, and improve cost for business recovery in FY 2024
- Expand earnings by implementing price revisions



Financial and capital strategies

Asset sales

- Transferred land and buildings in Kita-ku, Tokyo in March 2024
- Completed sale of nine cross-shareholdings in FY 2023

Strategic investment

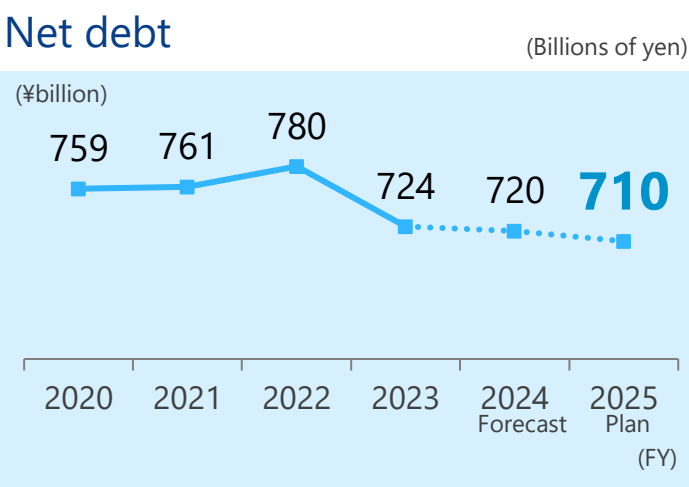
- Carefully select environmental and growth investments
- Curtail expenditure by using subsidies, etc.

Shareholder Returns

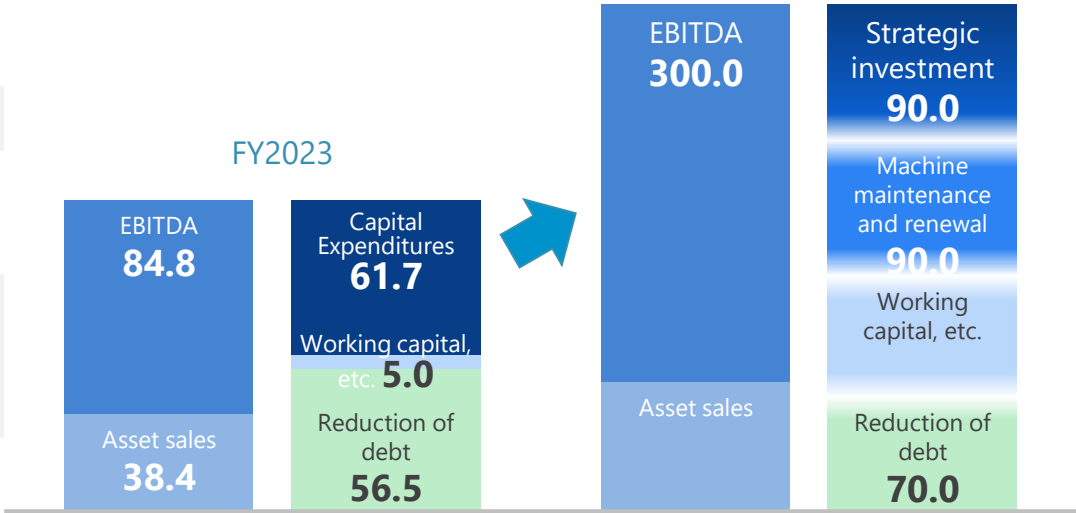
- Aim to maintain stable dividends

Reduction of net interest-bearing debt

- Net interest-bearing debt is expected to be 720 billion yen at the end of FY 2024.
- Improve Financial Position while Considering Financial Discipline



Cash allocation FY2023-2025 Plan



Enhance management that is conscious of cost of capital and stock price

Our Actions

- May 2023 Disclosed "Action to Implement Management that is Conscious of Cost of Capital and Stock Price"
- June 2024 To update "Action to Implement Management that is Conscious of Cost of Capital and Stock Price"

- Analyse current capital cost and capital profitability (based on the results of FY 2023)
- Identify issues and strategic initiatives to improve PBR
- Discussion by the Board of Directors

● Explain the status of initiatives to stakeholders at appropriate times

- Review the assumed cost of capital
- Set KPIs that are appropriate for each business division to improve capital-efficiency
- Continuous discussions by the Board of Directors

Changes in PBR



- Medium-Term Business Plan 2025 and 2030 Vision
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Initiatives to Reduce GHG Emissions

Achievement and Target for GHG Reduction

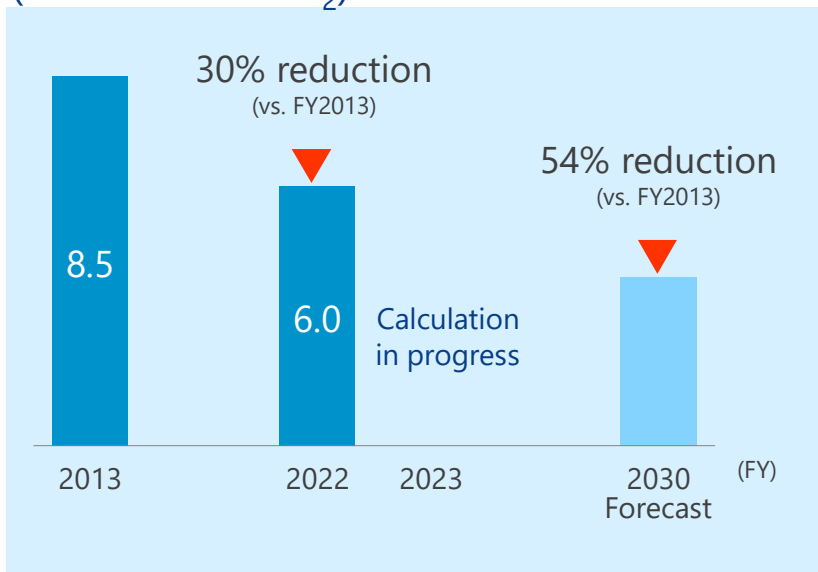
■ GHG reduction target for FY 2030: **54%** (vs FY2013 *Scope1+2)

- FY 2013-2022 achievement: 30% reduction
- FY 2023-2030 plan **24% reduction**

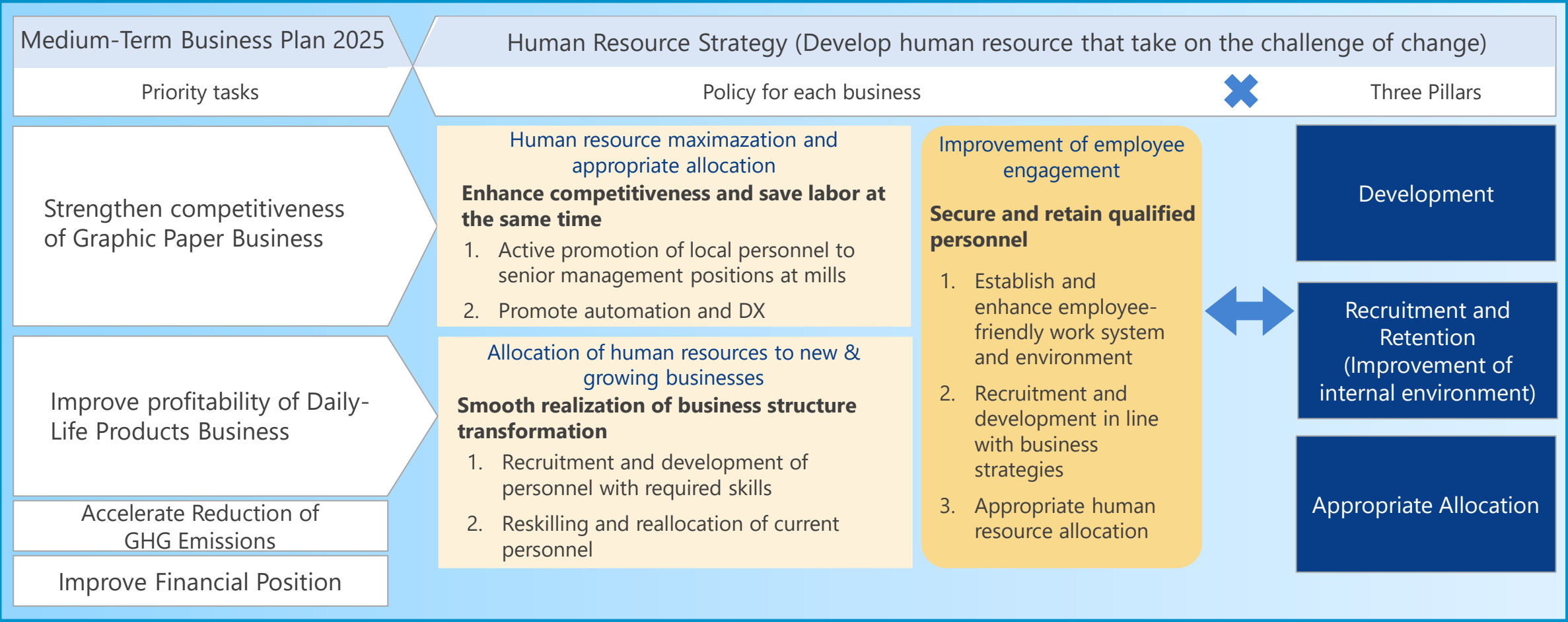
Measures for 24% reduction from FY 2023 to 2030

Nippon Paper Industries	Improve production efficiency by reorganization of production systems	6%
	Coal boiler shutdown along with the reorganization of production system	7%
	Maximize fuel conversion and black liquor use	5%
	Energy conservation measures	2%
Affiliated companies	Overall initiatives	4%

Forecasts of GHG reduction (Millions of t-CO₂)



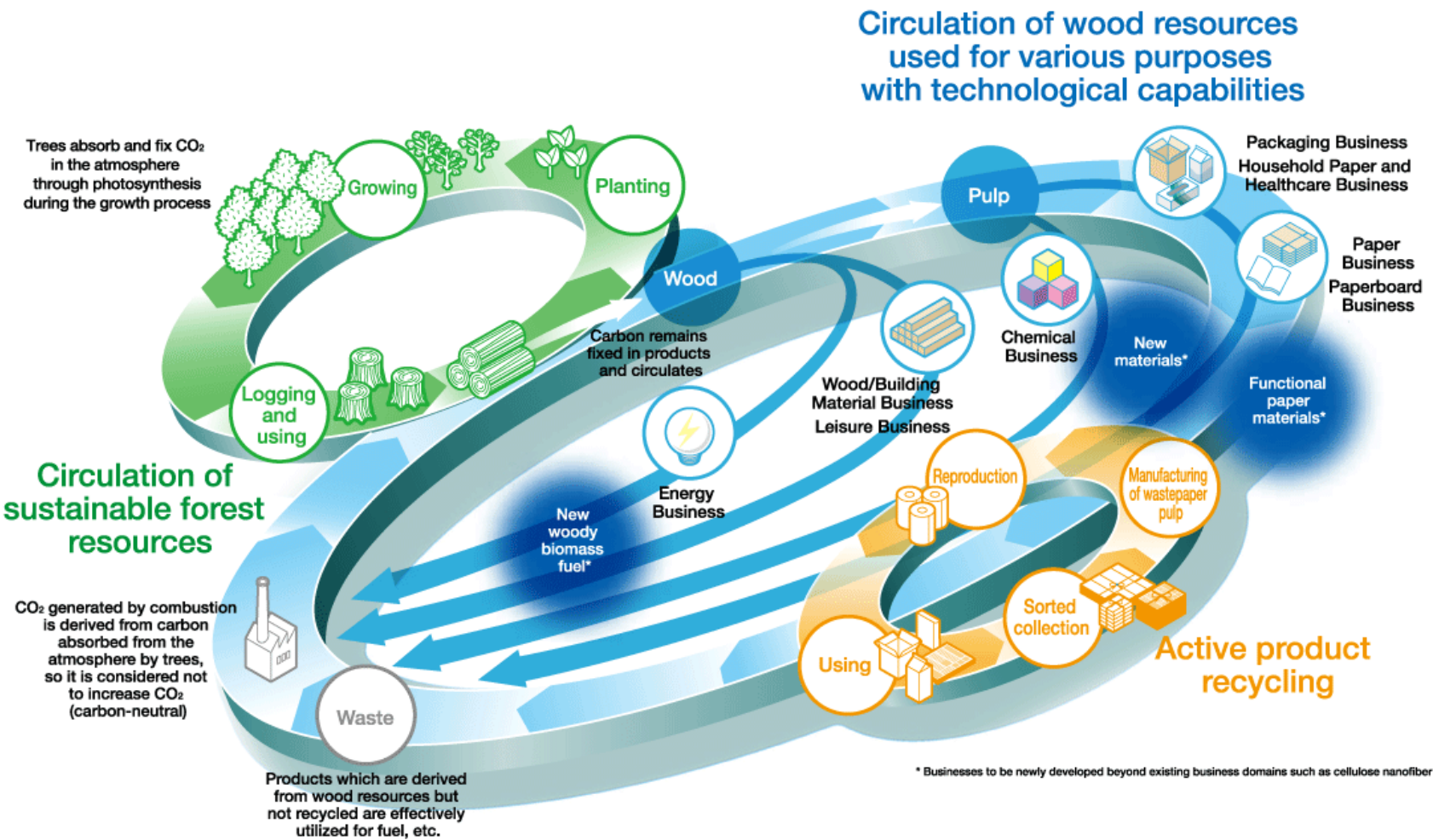
Linking Business Strategies and Human Resource Strategies



Growth Strategy based on Three Circulations

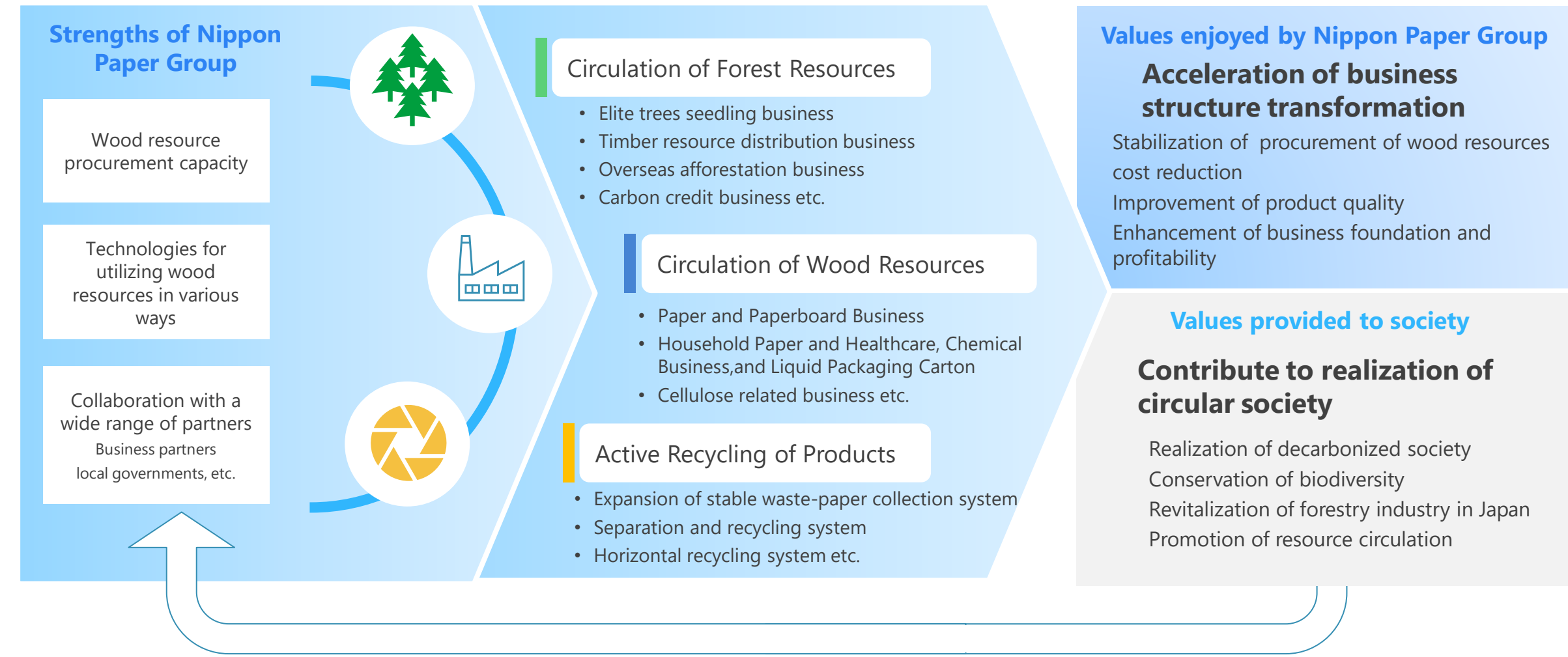
Aiming to Build a Recycling-Oriented Society through Sustainable Growth of the Nippon Paper Group and Maximizing the Utilization of Wood Resources

Nippon Paper Group's Business Development as a Comprehensive Biomass Company "Three Circulations"



Growth Strategy based on Three Circulations

Leverage the Nippon Paper Group's Strengths to Contribute to Realization of a Sustainable Society



The Nippon Paper Group aims to contribute to better living and cultural progress everywhere it does business.

<Disclaimer>

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