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# STRATEGIES PRESENTATION MATERIAL

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November 6, 2024

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## 01 | Progress toward achieving Medium-Term Business Plan 2025

## 02 | Measures and Strategies to Achieve the Medium-Term Business Plan 2025

- Measures against Accelerated Demand Decline in Graphic Paper
- Expansion and Profitability Improvement of Daily-Life Products Business
- Restructuring Opal
- Management based on a Strong Awareness of Balance Sheet

## 03 | Enhancement of Sustainability Management

- GHG Emission Reduction Targets, Results and Plans
- Promotion of human capital management
- Growth strategy based on the Three Circulations



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

### Medium-Term Business Plan 2025

#### Basic Strategy

Acceleration of business structure transformation

#### Priority tasks

- 1) Improve profitability of Daily-Life Products Business
- 2) Strengthen competitiveness of Graphic Paper Business
- 3) Accelerate Reduction of GHG Emissions
- 4) Improve Financial Position

#### Target

Net sales	<b>¥1,200</b> billion or more
Operating income	<b>¥40</b> billion at an early stage
EBITDA	Stably <b>¥100</b> billion
Net Debt/Equity Ratio	<b>1.7</b> times
ROE	<b>5.0%</b> or more

### 2030VISION

- Realize sustainable growth of the NIPPON PAPER GROUP
- Build a circulation-oriented society that maximizes use of wood resources

#### Basic Policy

- 1) Shifting resources to growth businesses
- 2) Responding to drastic changes in social conditions, such as GHG reduction and other environmental issues

Backcasting

#### Target

Net sales	<b>¥1,300</b> billion
Daily-Life Products Business accounting for <b>50%</b> ( <b>650</b> billion yen) or more	
Including <b>¥65</b> billion of new businesses Overseas net sales ratio <b>30%</b> or more	
Daily-Life Products Business operating margin	<b>7%</b> or more
ROE	<b>8.0%</b> or more
GHG emissions	<b>54%</b> reduction (vs. FY2014/3 Scope1 + 2)



In the domestic business, each segment generally maintained the track to the Medium-Term Business Plan 2025. The overseas business is expected to return to profitability in the second half despite a loss in the H1.

(billion yen)

	FY 24/3 Results	FY 25/3		
		H1 Results	H2 Forecast	Full Year Forecast
<b>Net sales</b>	<b>1,167.3</b>	<b>584.5</b>	<b>615.5</b>	<b>1,200.0</b>
<b>Operating income</b>	17.3	2.1	20.9	23.0
Paper and Paperboard	11.7	3.5	6.5	10.0
Daily-Life Products Business	-8.1	-9.1	7.1	-2.0
Energy	1.6	1.7	1.3	3.0
Wood Products and Construction Related	9.8	4.0	4.5	8.5
Other	2.3	2.0	1.5	3.5
<b>Domestic business</b>	30.4	15.6	17.4	33.0
<b>Overseas business</b>	-13.1	-13.5	3.5	-10.0



Strengthened its profitability and turn it to positive in Q3

## Quarterly Operating Income for Overseas Business in FY2024

(billion yen)

Q1 Result	Q2 Result	H1 Result	Q3 Forecast	Q4 Forecast	H2 Forecast	Full Year Forecast
-3.9	-9.6	-13.5	0.3	3.2	3.5	-10.0

## Overview of Main Overseas Business in FY2024

Business Unit	1 <sup>st</sup> Half	2 <sup>nd</sup> Half
Opal Australian Paper [OAP] (Maryvale Mill)	<ul style="list-style-type: none"><li>After the adjustment of manufacturing footprint, optimizing operating conditions took more time than expected.</li><li>Conditions in Asia export paper markets continued to deteriorate.</li></ul>	<ul style="list-style-type: none"><li>Achieve stable operations, reduce fixed costs and improve sales mix.</li></ul>
Opal Packaging Business	<ul style="list-style-type: none"><li>Generally, demands of corrugated box market was weak.</li><li>Improved production efficiency with updating old converting machines.</li></ul>	<ul style="list-style-type: none"><li>Strengthen cardboards sales, improve production efficiency and reduce fixed cost.</li></ul>
NDP	<ul style="list-style-type: none"><li>Reduced production due to cold wave related issues in 1Q.</li><li>Extended shutdown for major maintenance and additional maintenance in 2Q.</li></ul>	<ul style="list-style-type: none"><li>Stable production from 3Q.</li><li>Steady demands in liquid packaging board and pulp.</li></ul>



## Measures against accelerated demand decline in graphic paper

- Maintenance of sales volume, cost improvement, and timely reorganization of production system

## Expansion and profitability improvement of Daily-Life Products Business

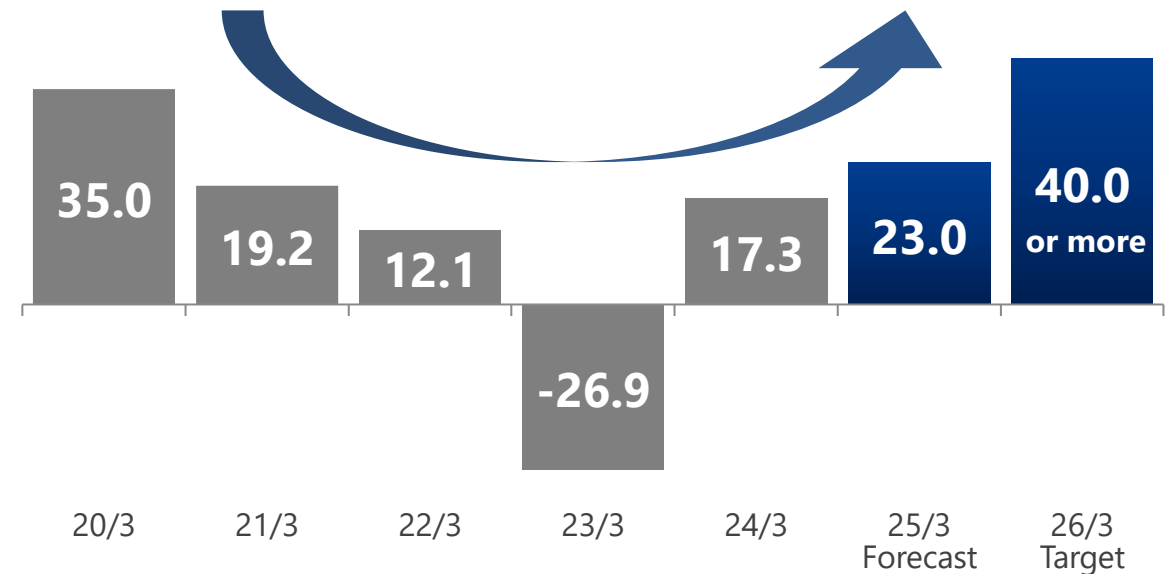
- Sales expansion through differentiation strategies such as high value-added products
- Enhancement of profitability of overseas business

## Management based on a strong awareness of balance sheet

- Streamlining of assets and reduction of net interest-bearing debt

## Operating Income

(billion yen)



## 01 | Progress toward achieving Medium-Term Business Plan 2025

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- Restructuring Opal
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## 03 | Enhancement of Sustainability Management

- GHG Emission Reduction Targets, Results and Plans
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## Measures against Accelerated Demand Decline

### Strategically expand and maintain sales volume

- Develop and expand lineup of environmentally-friendly products such as printing paper with reduced GHG emissions in its production process.
- Strategically expand exports of industrial paper (packaging, label applications, etc.)

### Strengthen competitiveness through cost improvement

- Promote cost reduction in Paper and Paperboard Business, including energy conservation.

### Timely reorganization of production system

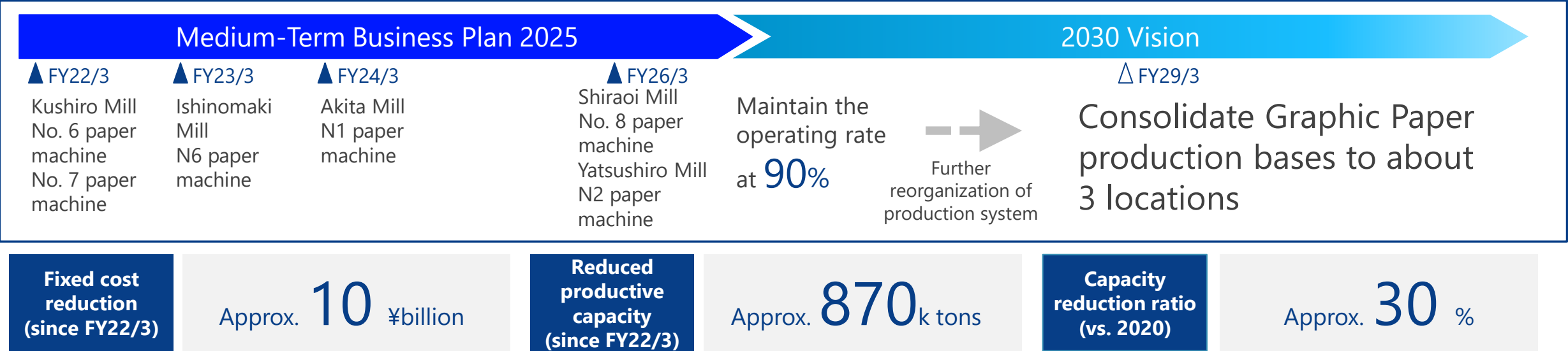
- No.8 paper machine at Shiraoi Mill and N2 paper machine at Yatsushiro Mill to be shut down in FY2026/3



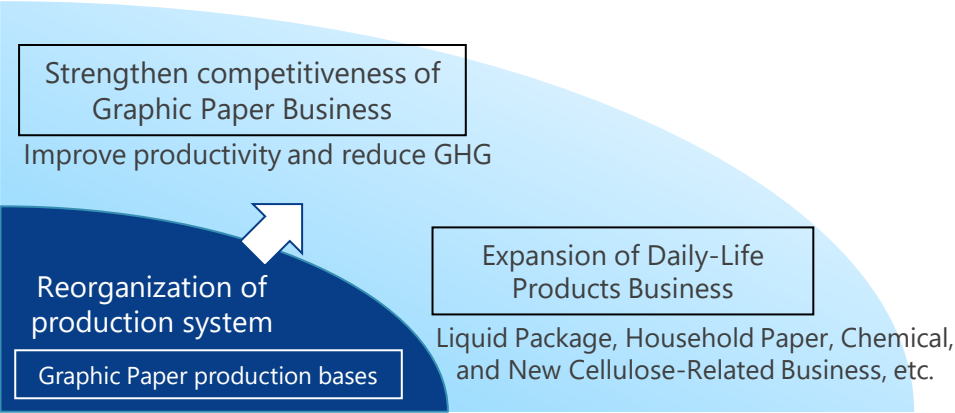
**Maintain profitability of Paper and Paperboard Business**



Plan and Progress of Production System Reorganization



Policy for Reorganization of Production System



- Strengthen competitiveness by consolidating production bases of graphic paper
  - Reduction of fixed costs such as depreciation, and improvement of productivity by maintaining and improving operating rates.
- Expand growth areas such as Daily-Life Products Business by leveraging existing resources (human resources, pulp and utility supply capacity, supply chain, etc.)
  - April 2024 Paper machine for household paper starts operation at Ishinomaki Mill.
  - FY2028/3 Household paper operations to begin at Yatsushiro Mill.

# Expansion and Profitability Improvement of Daily-Life Products Business

02 Measures and Strategies to Achieve  
Medium-Term Business Plan 2025



## Targets for Daily-Life Products Business for FY26/3

Upper row: net sales (billion yen) Lower row: operating margin (%)

Business	FY 24/3 Results	FY 25/3 Forecast (a)	FY26/3 Target (b)	Key Actions for Achieving Medium-Term Business Plan 2025
Paper containers and bags	103.8 2.3%	115.0 0.9%	120.0 5%	Expand sales of paper containers and secure stable earnings from NDP
Household Paper & Healthcare	104.8 3.0%	120.0 2.5%	130.0 5%	Further promote differentiation strategy Maximize the use of new facilities
Chemical Cellulose Products	55.0 3.8%	60.0 8.3%	60.0 9%	Realize the benefit of capital investment Accelerate development and sales expansion of cellulose products
Opal	173.2 -8.1%	185.0 -5.7%	190.0 1%	Structural Reforms at the Maryvale Mill Strengthen the foundation of the packaging business
Total	436.8 -1.8%	480.0 -0.4%	500.0 4%	

# Expansion and Profitability Improvement of Daily-Life Products Business



## Liquid paper containers

### Domestic: Expand sales through differentiation strategy using total system

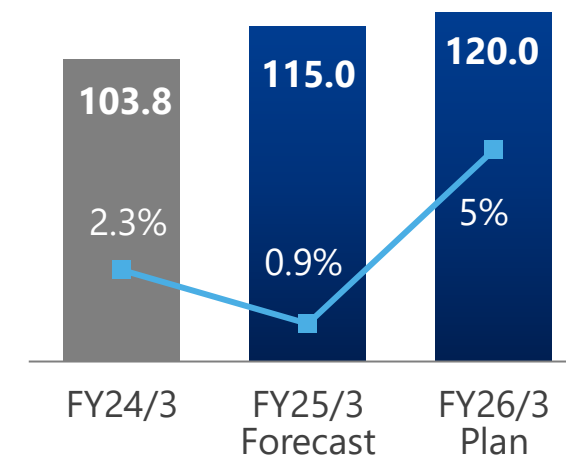
- Expand sales of environmentally-friendly base paper and containers
  - Further expand areas where School POP® straw-less containers are used.
  - Increase sales of environmentally-friendly paper cartons.
  - Early commercialization of the next-generation aseptic paper container system NSATOM®.
- Expand the use of domestically produced base paper within the Group

### NDP: Increase earnings through stable operations and maximized production and sales

- Maintain stable operations (realize the benefits of large-scale maintenance)
- Expand earnings by maximizing production and sales
  - Expand sales of liquid packaging board and base paper for cups based on stable demand.
- Expand sales of high value-added products

### Net Sales / Operating margin

(billion yen)



\*Domestic paper pack + Nippon Dynawave Packaging (NDP)

# Expansion and Profitability Improvement of Daily-Life Products Business

02 Measures and Strategies to Achieve  
Medium-Term Business Plan 2025



## Household Paper & Healthcare

### Expand sales by differentiation and enhancement of sales functions

- Sales expansion based on the concept of “compact & large volume”
- Sales expansion through e-commerce

### Strengthen profitability by reducing costs and securing fair prices

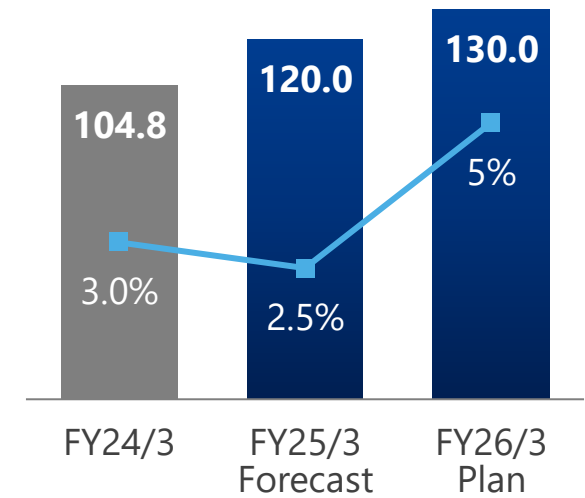
- Improve productivity with new cutting-edge machines, reduce cost by using self-manufactured pulp, and maximize group benefits
- Maintain fair prices in line with actual logistics and labor costs

### Promote overseas expansion

- Promote overseas expansion by strengthening cooperation with global partners

### Net Sales / Operating margin

(billion yen)



Product lineup based on the concept of "compact & large volume"  
(250 pairs of Scotty Flowers, 3x rolled toilet rolls, etc.)

# Expansion and Profitability Improvement of Daily-Life Products Business



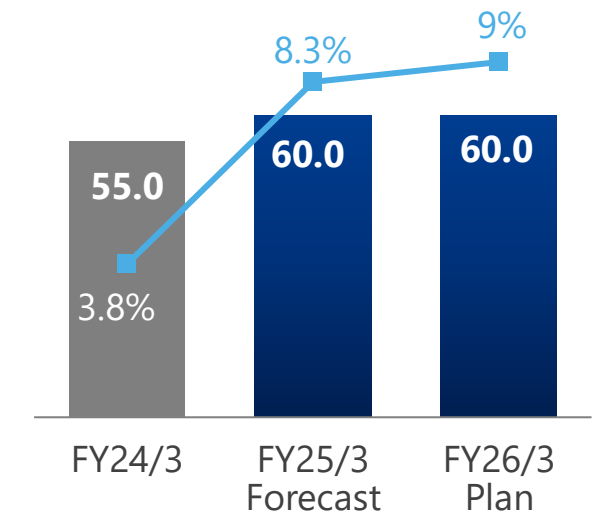
## Chemical

### Improve operating margin through capital investment and development & expansion of high value-added products

- Demonstration of the benefit of capital investment
  - Production increase in functional cellulose and functional coating resin through capacity enhancement.
- Expand sales of dissolving pulp (DP)
  - Volume expansion in Japan and overseas.
  - Improve production efficiency at Gotsu Mill by increasing production volume.
- Expand sales of functional cellulose and build a stable supply system
  - Market development and expansion of sales destination in food, industrial, and other high-demand applications.
  - Increase sales of CMCs for LiB through full utilization of new facilities at Gotsu Mill and start-up of new plant in Hungary (scheduled to start operation in spring 2025).
- Actions for other products
  - Functional coating resin ➡ Develop environmentally-friendly products and expand sales by developing new applications.
  - Functional Films ➡ Continue to develop products with high functionality and expand sales in the display market.
  - Lignin and other functional chemical products ➡ Expand market in industrial and agricultural sectors.

### Net Sales / Operating margin

(billion yen)





Basic Policy and Priority Tasks

Basic Policy	Aiming to earn positive profit in FY2025
Priority Tasks	<ul style="list-style-type: none"><li>Restructuring and profitability enhancement of Opal Australian Paper [OAP] (Maryvale Mill)</li><li>Strengthen the foundation of packaging business and improve profits</li><li></li></ul>

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

	2023 Actual	2024Forecast							2025 Forecast	※Announce in May 2024 Forecast
		1QActual	2QActual	1H Total	3Q Forecast	4Q Forecast	2H/Total	FY2024 Total		
Opal Australian Paper [OAP] (Maryvale Mill)	-128	-38	-27	-65	-20	-15	-35	-100	-30	-90
Packaging Business	-23	-13	-4	-17	-2	15	13	-5	50	10
Opal Total	-151	-51	-31	-82	-22	0	-22	-105	20	-80

- Despite negative profit in 2024 for both Maryvale Mill and Packaging Business, steady QTR on QTR profit improvement is shown.
- Turn Packaging Business positive profit in 4Q.



## Restructuring and profitability enhancement of Maryvale Mill

### Overview and Main Measures in FY2023 - FY2025

	FY2023-FY2024 1 <sup>st</sup> Half	FY2024 2 <sup>nd</sup> Half – FY2025
<b>Optimization of manufacturing footprint</b>  <b>Operating stabilization</b>	<ul style="list-style-type: none"> <li>• Closed 2 paper machines with 3 remaining machines operating for packaging grade.</li> <li>• Completed pulp mill transition (from batch to continuous mill).</li> <li>• Not achieved the initial plan of daily output and targeted yield due to delay in optimizing operating conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• Reinforce operational and technical engineering support from NPI.</li> <li>• Optimize operating conditions and achieve stable operation.</li> </ul>
<b>Fixed cost reduction</b>	<ul style="list-style-type: none"> <li>• Implemented reduction in personnel as planned.</li> <li>• Maintenance costs increased due to operating troubles.</li> </ul>	<ul style="list-style-type: none"> <li>• Continue to review headcount.</li> <li>• Reduce maintenance costs through operating stabilization.</li> <li>• End to end review of fixed costs for efficiency gain.</li> </ul>
<b>Sales mix improvement</b>	<ul style="list-style-type: none"> <li>• Deterioration of export market in Asia drove transition of sales mix to more profitable products and regions.</li> </ul>	<ul style="list-style-type: none"> <li>• Increase sales volume of profitable kraft papers.</li> <li>• Increase sales volume of internal-sales and non-Asia regions' export.</li> </ul>
<b>Strengthen group collaboration</b>	<ul style="list-style-type: none"> <li>• Reinforced operational and technical support from NPI.</li> </ul>	<ul style="list-style-type: none"> <li>• Expand NPI group collaboration including sharing group sales distribution channels.</li> </ul>



**Accelerate earnings improvement to build a structure that will achieve profitability urgently by operational stabilization, fixed cost reduction, and a review of the sales mix.**





## Strengthen the Foundation of the Packaging Business and Improve Profits

### Overview and Main Measures in FY2023 - FY2025

	FY2023-1 <sup>st</sup> FY2024 1 <sup>st</sup> Half	FY2024 2 <sup>nd</sup> Half – FY2025
<b>Capital investment</b>	<ul style="list-style-type: none"> <li>• New corrugated box plant in VIC state is operating smoothly.</li> <li>• Invest in 4 converting machines (3 plants in NSW, QLD and SA states) to replace 8 aging pieces of equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Fully utilize new corrugated box plant and new converting machines.</li> </ul>
<b>Fixed cost reduction</b>	<ul style="list-style-type: none"> <li>• Consolidated bag manufacturing sites and paper carton manufacturing sites respectively.</li> <li>• Rationalized personnel and improving productivity through renewal of converting machines.</li> <li>• Company-wide headcount reduction.</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidate corrugated box plants. (closure of 1 plant in QLD state).</li> <li>• Realize the full benefit of personnel rationalization.</li> <li>• Continue to review company-wide headcount.</li> </ul>
<b>Sales</b>	<ul style="list-style-type: none"> <li>• Despite weak market demand of corrugated box in Oceania, Opal's sales volume increased 4%-5% YoY.</li> <li>• Conditions in Asia export paper markets continued to deteriorate.</li> </ul>	<ul style="list-style-type: none"> <li>• Capital investment to increase productivity.</li> <li>• Differentiation through providing quality and customer service.</li> <li>• Expand market share of corrugated box market profitably.</li> <li>• Increase internal sales of paper (and decrease export)</li> </ul>



**Improve profits by enhancing production efficiency, reducing costs, and expanding sales through capital investment and strengthening sales strategy**



## Improvement of financial stability

### Appropriate investment decisions

- Careful selection of projects by strengthening investment profitability management

### Streamlining of assets

- Consider utilization or sale of idle fixed assets
- Verify the significance of holding investment securities to reduce them

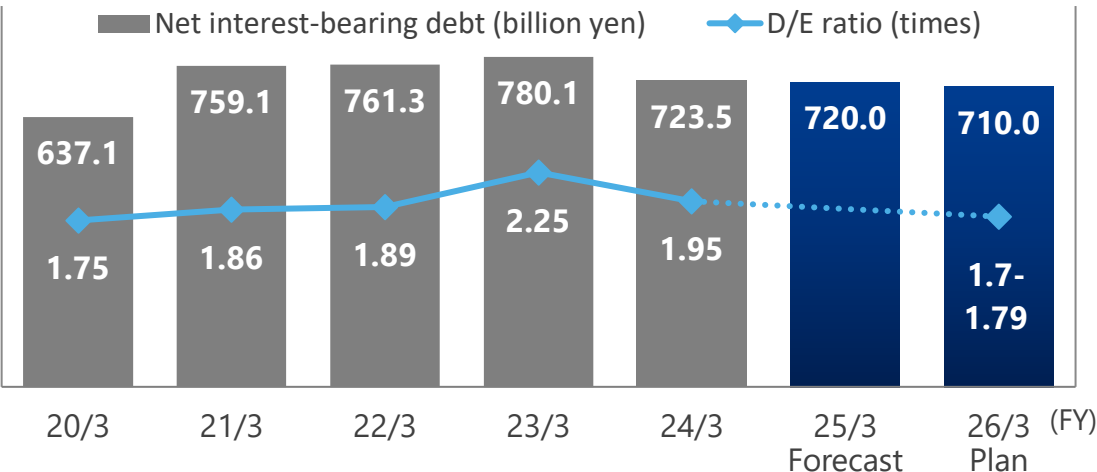
### Reduction of net interest-bearing debt

- Reduce net interest-bearing debt to 710 billion yen by FY26/3 end.
- Reduce working capital.
- Controll cash outflow with subsidies, etc.

### Introduction of internal management indicators to improve asset and capital profitability

- Direction will be disclosed within FY25/3.

## Net interest-bearing debt and D/E Ratio

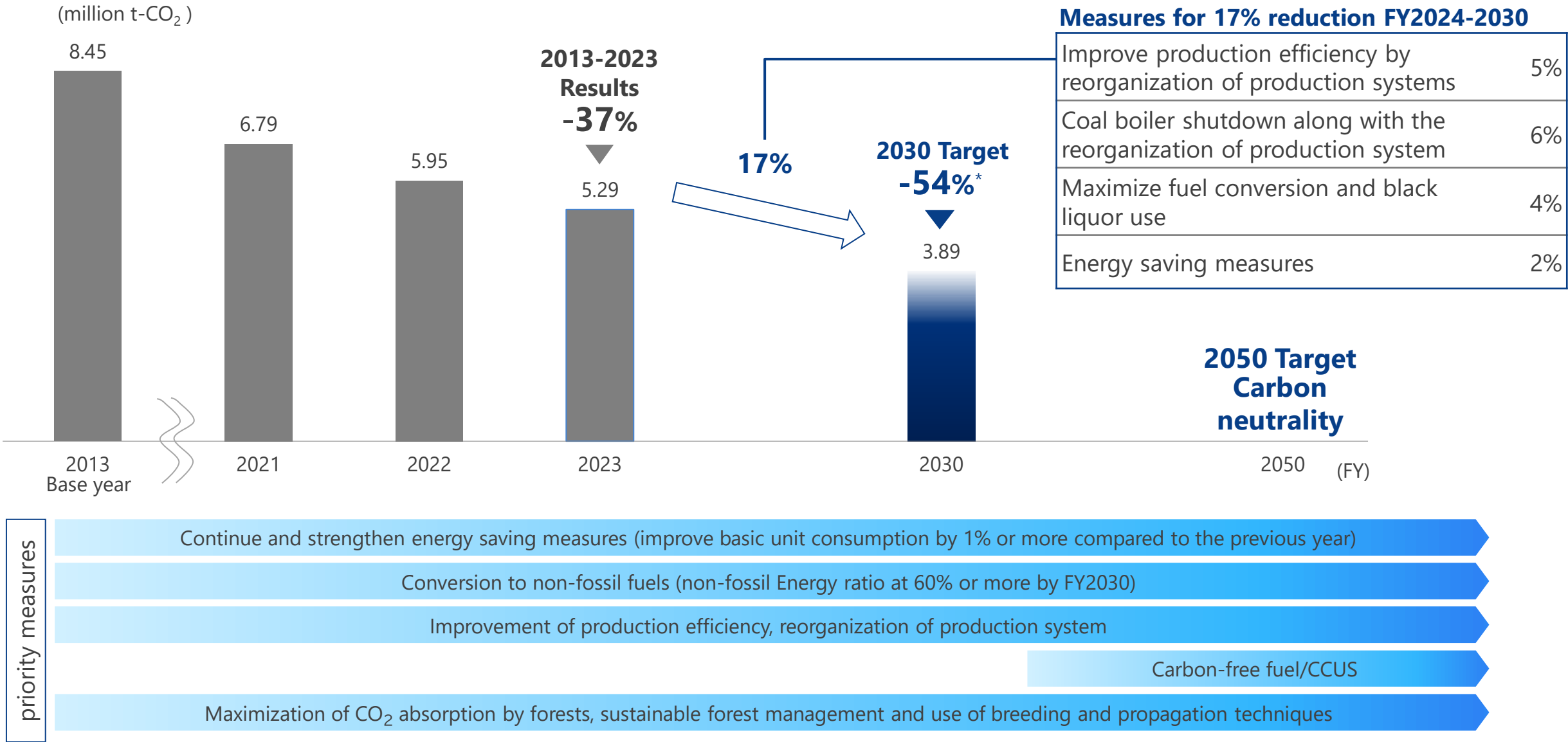


## Cash Allocation (FY24/3-26/3 Plan) (billion yen)



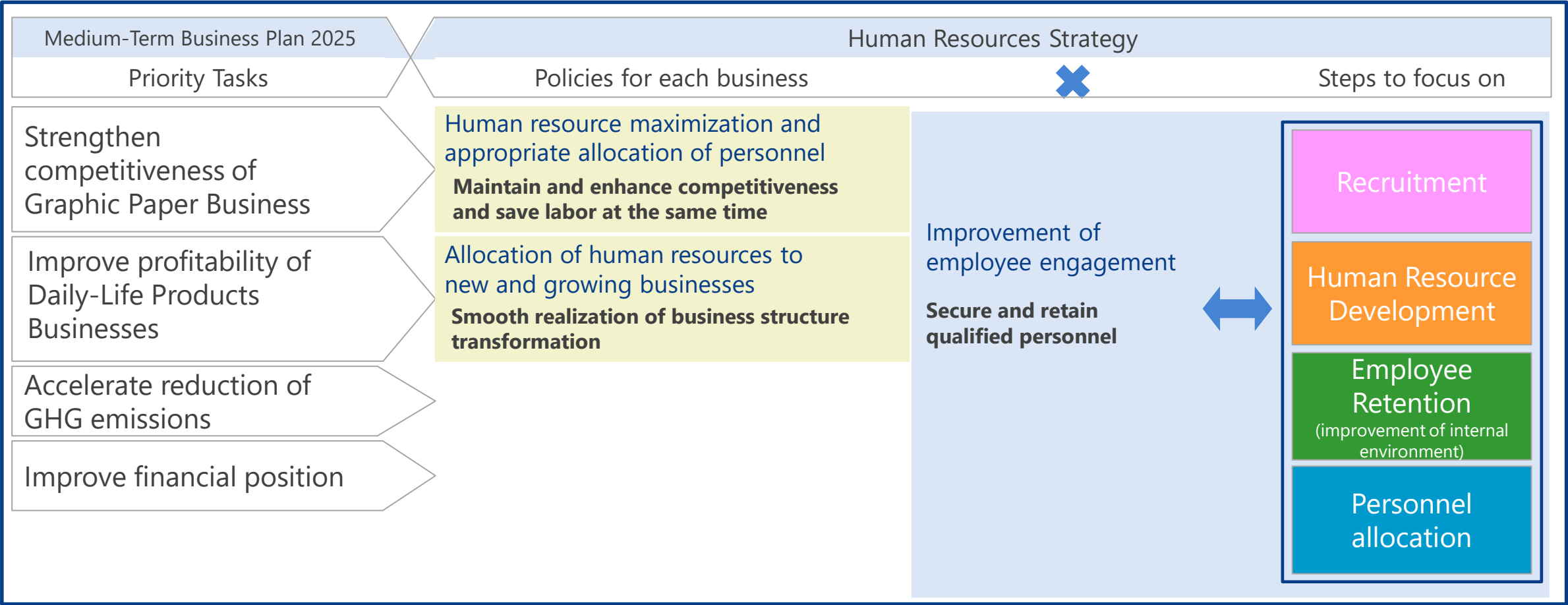
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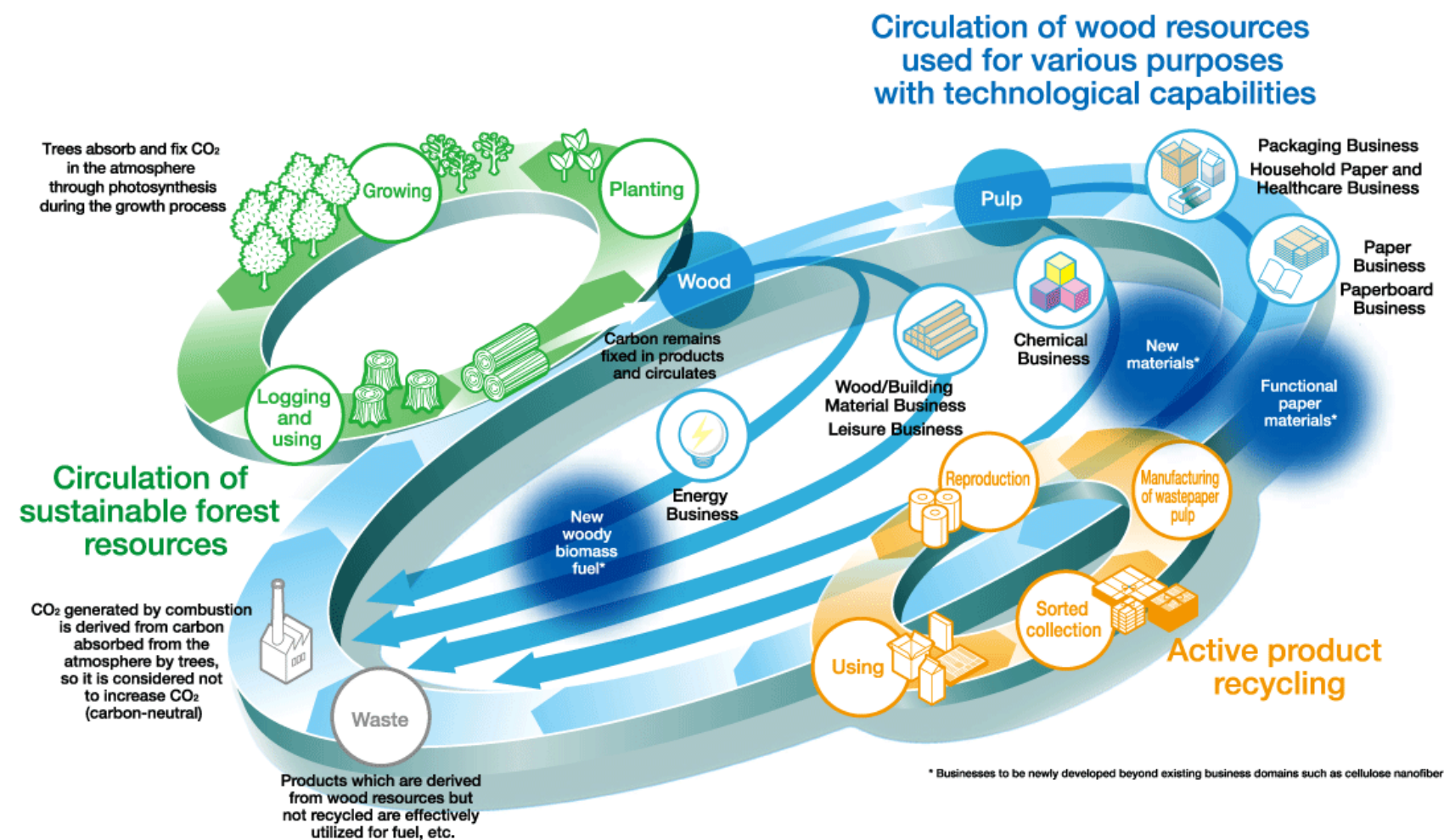
# GHG Emission Reduction Targets, Results and Plans



\*Emissions related to manufacturing excluding the Energy Business sector

## Human Resource Strategy Linked to Priority Tasks Set Forth in the Medium-Term Business Plan 2025





### Monetary value of public interest functions of company-owned forests in Japan

Nippon Paper Industries' company-owned forests in Japan

Approx. 90,000 ha

Valorization of public interest functions of the company-owned forests in Japan

Approx. 350.0 billion yen\*.

\*Estimates based on "the 2017 ecosystem service value evaluation related to corporate biodiversity preservation activities" published by the Ministry of the Environment.  
Figures are taken from the figures already published on page 24 of the NIPPON PAPER GROUP Integrated Report 2022.

### Public interest functions of forests

- Water resource conservation (water resource cultivation)
- Landslide disaster prevention
- Biodiversity conservation
- Global warming prevention
- Cultural, health and recreational functions
- Forming comfortable environment

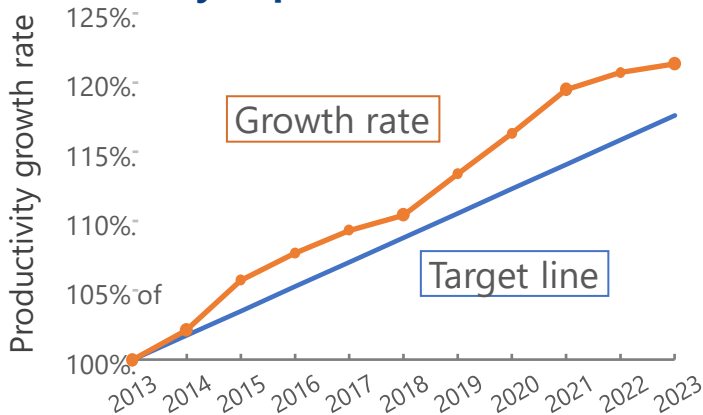
### Improving productivity in overseas forest plantation

- Leveraging forest tree breeding technology using genome information
- Significantly shortened the selection period for superior strains (from 12 years to 5 years)
- Improvement in productivity and CO<sub>2</sub> fixation rate

CO<sub>2</sub> fixation efficiency improvement target (vs. 2013)

30%

### Productivity improvement (AMCEL)





# Growth Strategy Based on the Three Circulations

## - Expansion of forest and timber related businesses



### Strengthening Wood Procurement Foundation by utilizing Collection & Supply System and Proprietary Technologies and Capturing New Demand

#### Promoting use of domestic Wood

- Maximize nationwide wood collection & supply system
- Further expand national top-class domestic wood handling volume

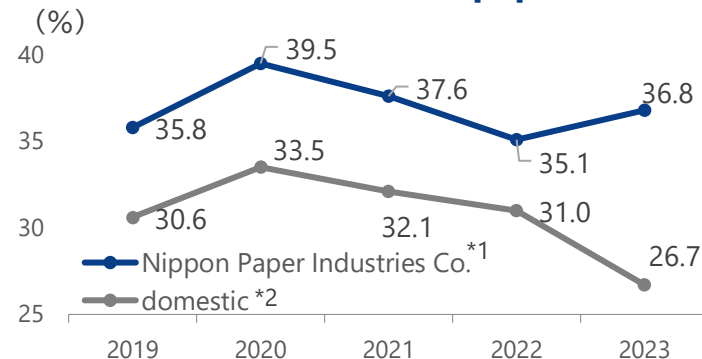
#### Stable supply of fuel wood chips

- Increased demand for fuel chips due to increase in biomass power plants
- Focus on stable supply of fuel chips and capturing new demand

#### Expansion of Elite Tree Seedling Business

- Steadily supply of seedlings with excellent properties, including 1.5 times the normal growth rate
- Contribute to enhance competitiveness of Japanese forestry industry by shortening payback time and reducing afforestation costs
- Aim to build a production system for 10 million trees/year

#### Changes in the rate of domestic wood utilization in materials for paper



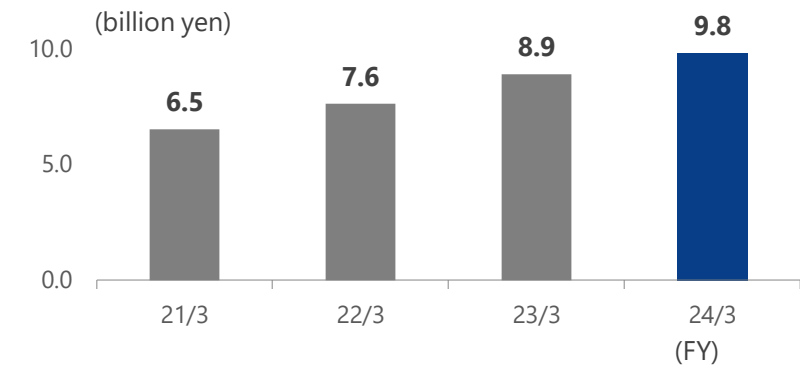
\*1 Rate of domestic wood utilization in materials for paper (NPI). Calculation includes waste wood chips from domestic sawmills.

\*2 Self-sufficiency rate for wood used for pulp and chip production. Source: "Pulpwood Supply and Demand" Japan Paper Association

#### Elite Tree/ Production of quality seeds in closed seed gardens



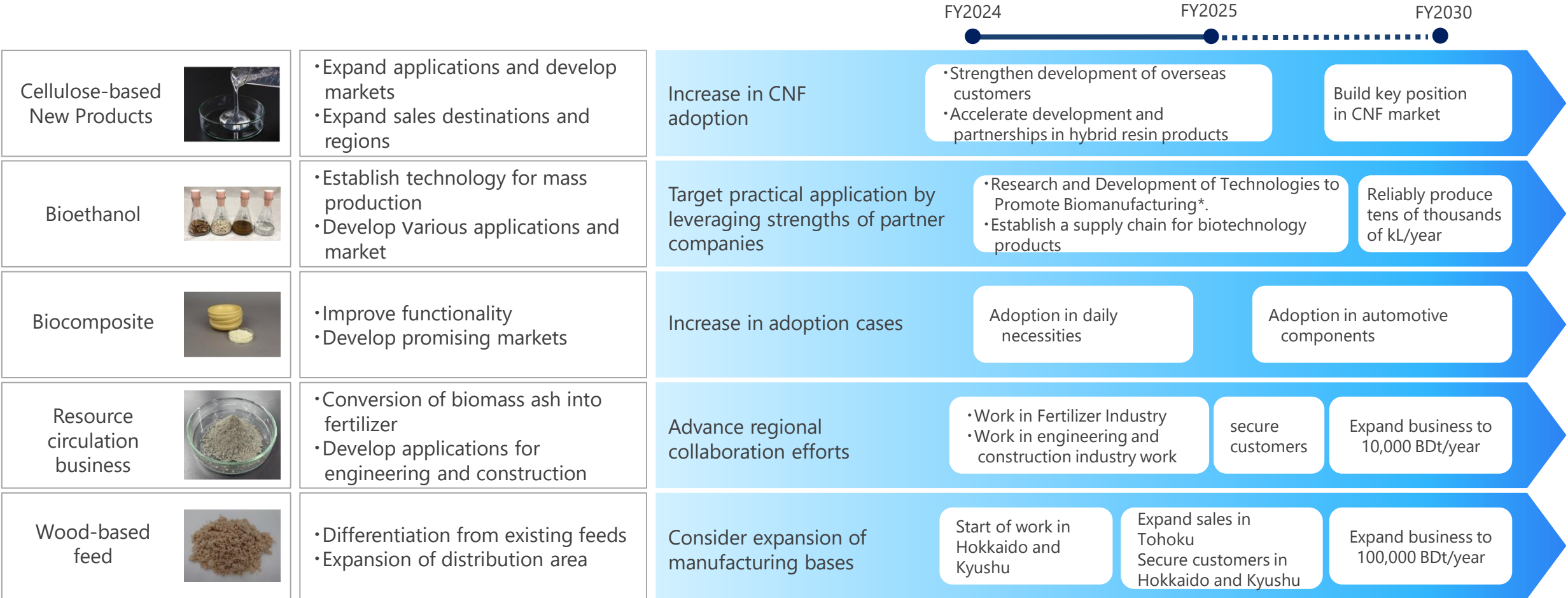
#### Operating income of Wood Products and Construction Related Business





### Roadmap for New Businesses and New Materials

Develop and distribute products that contribute to solving social issues such as food security and reduction of GHG emissions by effectively utilizing domestically- procured wood resources.



\*Selected as an R&D theme for Research and Development of Technologies to Promote Biomanufacturing by New Energy and Industrial Technology Development Organization (NEDO)

**The NIPPON PAPER GROUP aims to contribute to better living and cultural progress everywhere it does business.**

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