

# Rengo Group's Initiatives

The General Packaging Industry RENGO

Management Conference on November 17, 2023,  
Rengo Co., Ltd.

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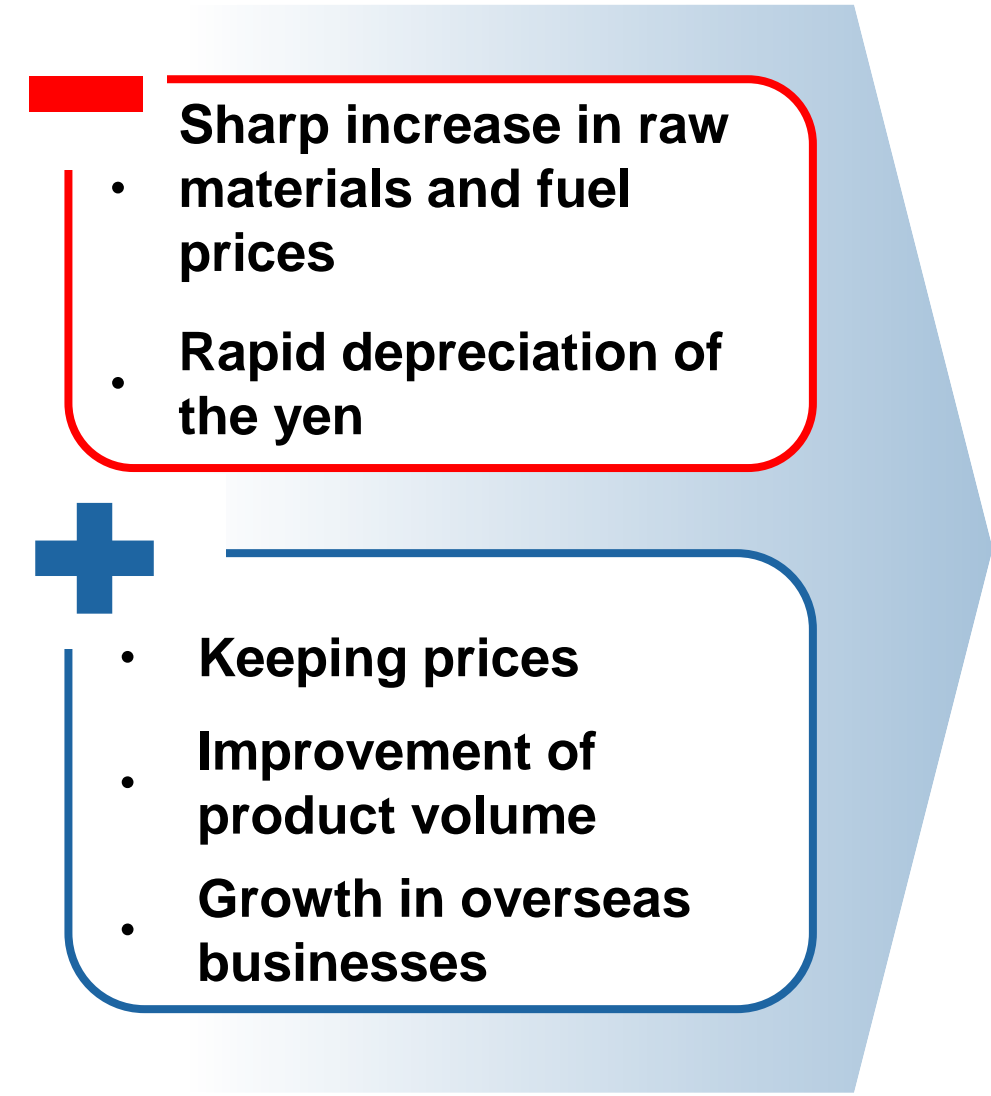
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# Financial results for 2Q FY3/2024 / forecasts for FY3/2024

## 2Q FY2023

(billion yen)

2Q23	Forecast	Results
Net sales	470.0	452.9
Operating profit	26.0	25.7
Ordinary profit	27.0	27.5
Profit attributable to owners of parent	17.0	18.4



## FY2023

(billion yen)

FY2023 Forecast
930
47
49
32

# Recognition of our corporate valuation

## PBR by Type of Industry (Prime-listed)

Industry	PBR (times)
Precision Instruments	1.6
Electric Appliances	1.8
Machinery	1.4
Pharmaceutical	1.3
Foods	1.3
Other Products	1.2
Chemicals	1.1
Glass & Ceramics Products	1.1
Rubber Products	0.9
Transportation Equipment	0.9
Textiles & Apparels	0.9
Nonferrous Metals	0.8
Metal Products	0.7
Iron & Steel	0.6
<b>Pulp &amp; Paper</b>	<b>0.6</b>
Oil & Coal Products	0.6

Tokyo stock exchange (as of July 31, 2023)

## Global Competitor's PBR

	Company	PBR (times)
Domestic	<b>Rengo</b>	<b>0.6</b>
	Oji Holdings	0.6
	Nippon Paper	0.4
	Daio Paper	0.8
Overseas	Packaging Corp of America	3.6
	Graphic Packaging	3.1
	Sonoco Products	2.6
	Greif	1.9
	Smurfit Kappa	1.8
	International Paper	1.4
	Mondi	1.2
	DS Smith	1.0

reuters.com (as of August, 2023)

## Initiatives at workplace leading to increase corporate value

Volume

**Differentiating from existing markets and Capturing growing fields**

Environment

**Leading the industry in environmental initiatives and promoting market transformation**

Price

**Realizing fair price and providing added value**

Social

**Building partnerships strategically in the supply chain**

Efficiency

**Improving workplace process efficiency and increasing Total Factor Productivity (TFP)**

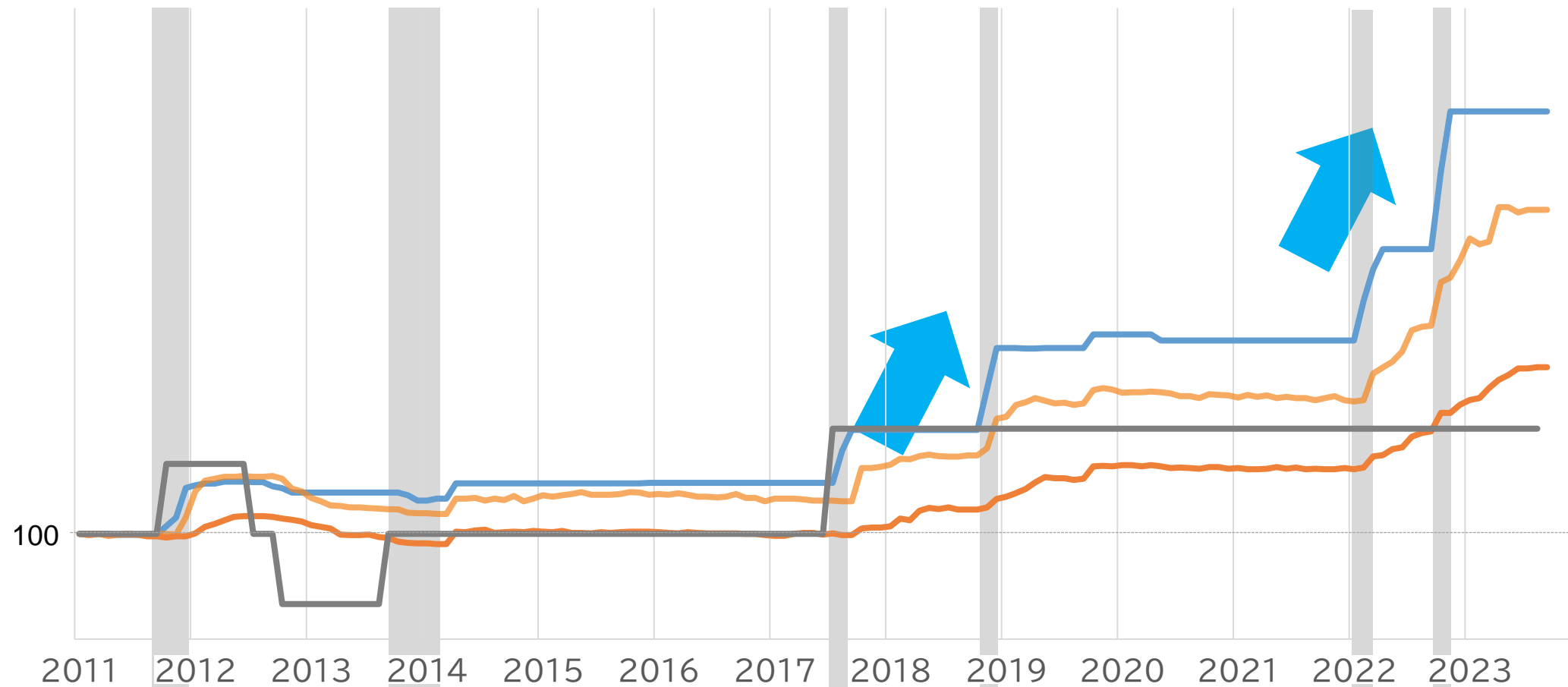


Realizing the creation of **the true corporate entity** we pursue

# Keeping a sustainable pricing system

(Initiatives in Paperboard and Packaging-Related Business)

## Corporate Goods Price Index changes 2011-2023



(January 2011 = 100)

<b>Containerboard</b>	<b>180.4</b>
Weighted average as Linerboard: corrugating medium = 6:4	
<b>Corrugated board</b>	<b>161.6</b>
<b>Corrugated box</b>	<b>131.7</b>
<b>OCC</b>	<b>120.0</b>
Calculation from Paper Recycling Promotion Center survey prices	

### Rengo group's price revision

**October first, 2011-**  
paperboard +7 yen/kg or more  
Corrugated board +8 yen/m<sup>2</sup> or more

**October first, 2013-**  
Containerboard price  
normalization

**August first, 2017-**  
paperboard +10 yen/kg or more  
Corrugated board negotiations

**November first, 2018-**  
paperboard +8 yen/kg or  
more  
Corrugated board  
negotiations

**February first, 2022-**  
paperboard +10 yen/kg or more  
Corrugated board negotiations

**October first, 2022-**  
paperboard +15 yen/kg or more  
Corrugated board negotiations

Being a **sustainable industry**, keeping a price system formed by a **good balance** (OCC, containerboard, and corrugated packaging)

# Added value provided by comprehensive proposal

(Initiatives in Paperboard and Packaging-Related Business)

Transport, display, promote - smart innovation in corrugated packaging

## Rengo Smart Display Packaging



Easy to open - reduce unpacking and displaying workload



The third linerboard meets the contemporary needs

## Smart Eco White



SMART ECO WHITE

Contributing to optimization of strength and cost

New texture linerboard fits the times

No bleaching or coloring

Environmentally friendly

**100% recovered paper**  
white linerboard



**DEGI-PAKE®** New value-added packaging that contributes to sales promotion

3

### Key Points

#### Beautiful Appearance

High printing reproducibility for highly detailed and expressive representations, fine print, and so on.

#### Well-Timed

Printable on paper rolls without printing plates.

#### Variable

Some or all of the design is changeable by variable printing.



Corrugated packaging becomes a POP sales promotion tool!

For gift and e-commerce packaging!



## Management Integration of Sun-Tox and Mitsui Chemicals Tohcello

(Initiatives in Flexible / Heavy Duty Packaging-Related Business)

## ■ Management integration of Sun-Tox and Mitsui Chemicals Tohcello's Packaging Solution business and making the integrated company "RM TOHCELLO" into a subsidiary

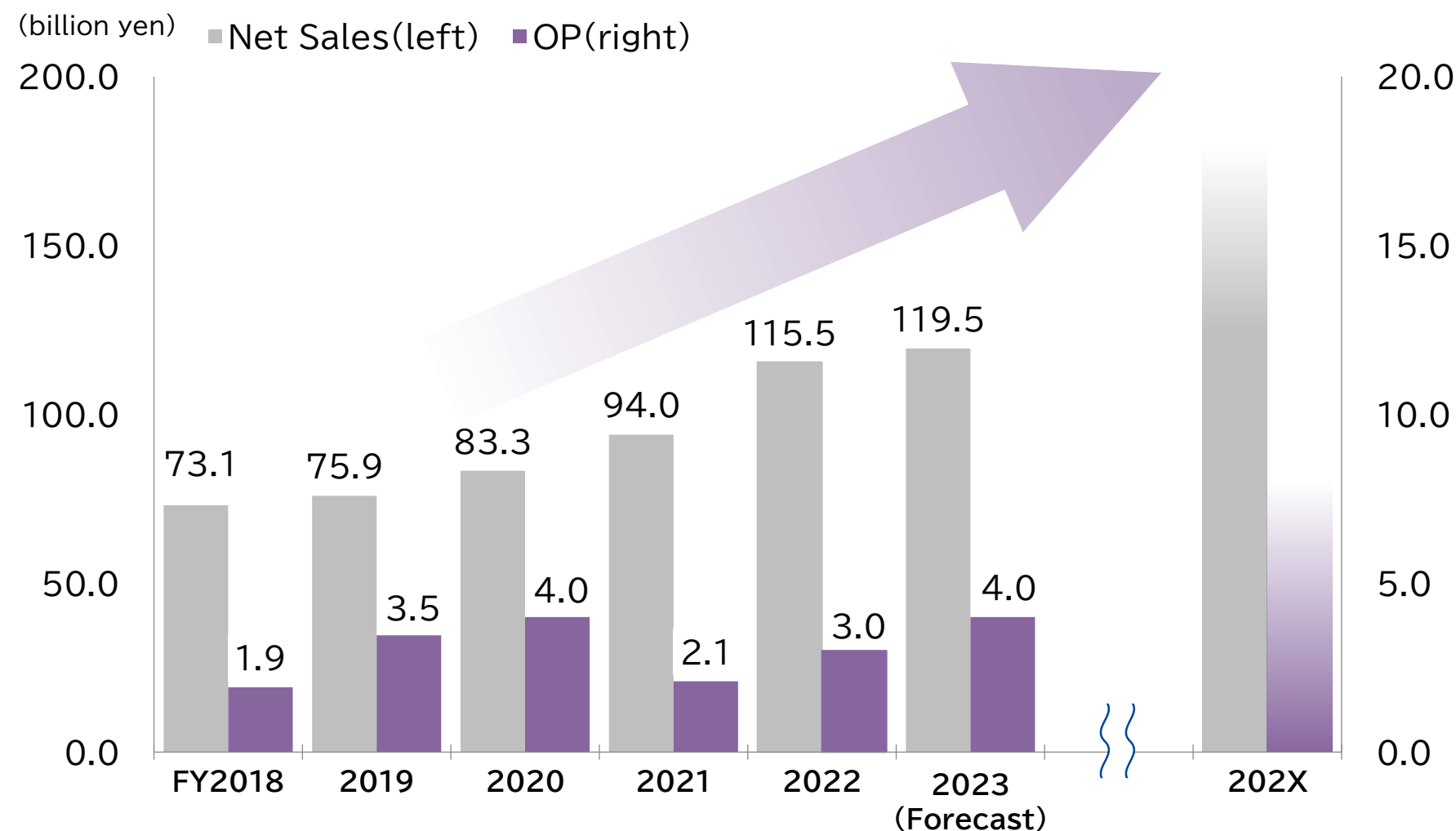
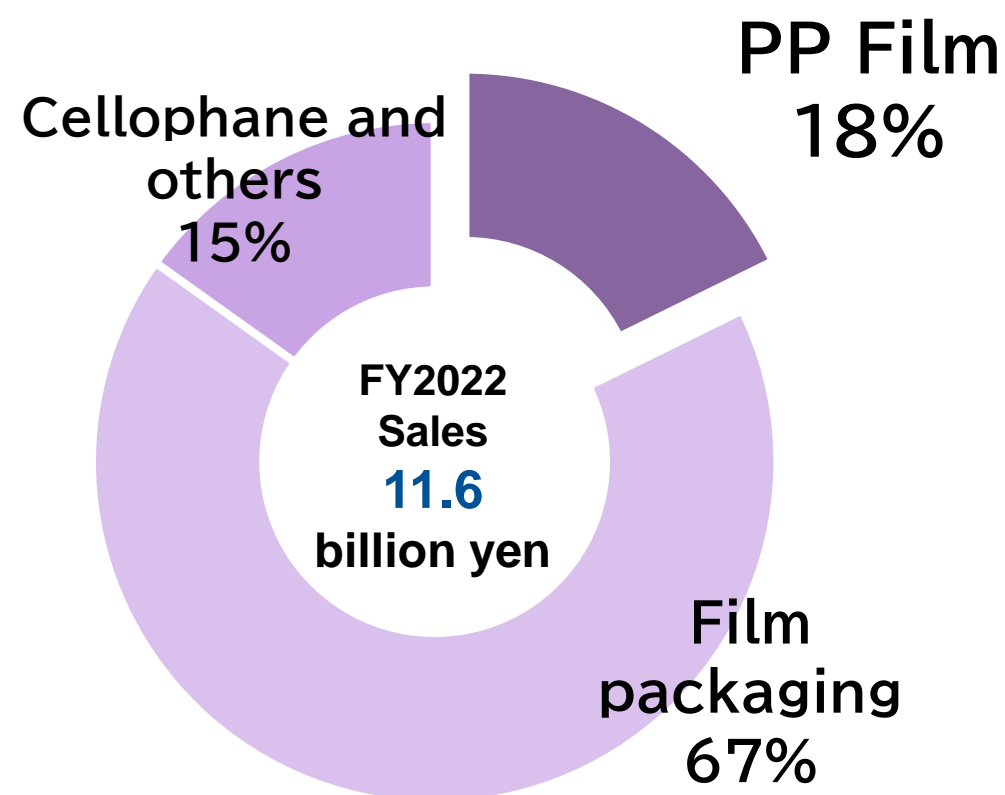
Trading name	RM TOHCELLO CO., LTD.
Head office	7 Kanda Mitoshiro-cho, Chiyoda-ku, Tokyo (present Mitsui Chemicals Tohcello's head office)
Production sites	Kanto Plant (Itako, Ibaraki), Tokuyama Plant (Shunan, Yamaguchi), Ibaraki Works (Koga, Ibaraki), Hamamatsu Works (Hamamatsu, Shizuoka), Anjo Works (Anjo, Aichi), Katsuta Works (Hitachinaka, Ibaraki) - Orange-colored sites are Mitsui Chemicals Tohcello's directly operated plants
Main subsidiaries	Shikoku Tohcello Co., Ltd. (Tokushima, Tokushima) SIAM TOHCELLO CO., LTD. (Thailand)



# Strengthening of Flexible Packaging-Related Business

(Initiatives in Flexible / Heavy Duty Packaging-Related Business)

## Composition of net sales by flexible packaging business product



### Upstream

Enhancement of film business allows flexible packaging business to expand in a good balance

### Downstream

Reorganizing water-based flexo printing business will accelerate the development of environmentally friendly products which can reduce **volatile organic compounds (VOCs)** and **emissions of CO<sub>2</sub>** compared to gravure printing.

# Tri-Wall Group's business development

(Initiatives in Overseas Business)

## Europe

2022 In Germany, acquiring TPS Group

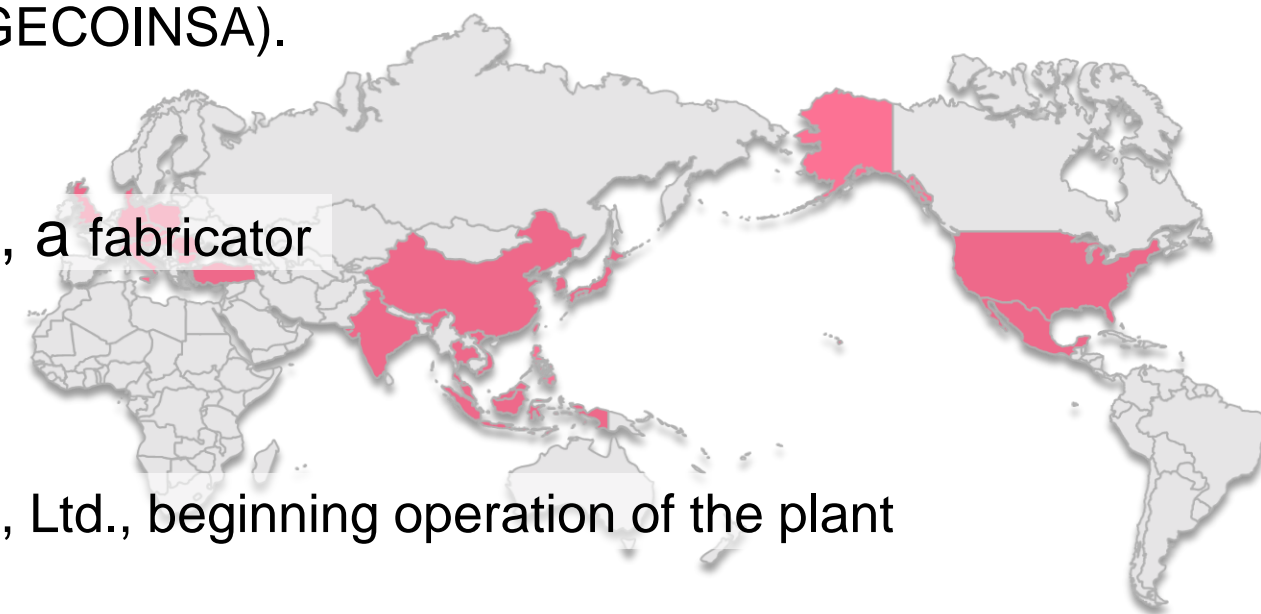
In U.K., acquiring Corrugated Case Holdings Limited (present name: TW Chesterfield)

2023 In Germany, TRICOR Packaging & Logistics started to build a new plant (to be completed in July, 2025)

In Spain, acquiring a 100% stake in Gestora Comercial Internacional, S.L.U. (GECOINSA).

## North America

2022 Establishing a fully owned subsidiary, Action Wood Solutions LLC, a fabricator  
(Acquiring 100% of the business assets of Action Wood Technologies, Inc.)



## China

2023 In Sichuan Province, establishing Tri-Wall Bozheng Packaging Technology Co., Ltd., beginning operation of the plant

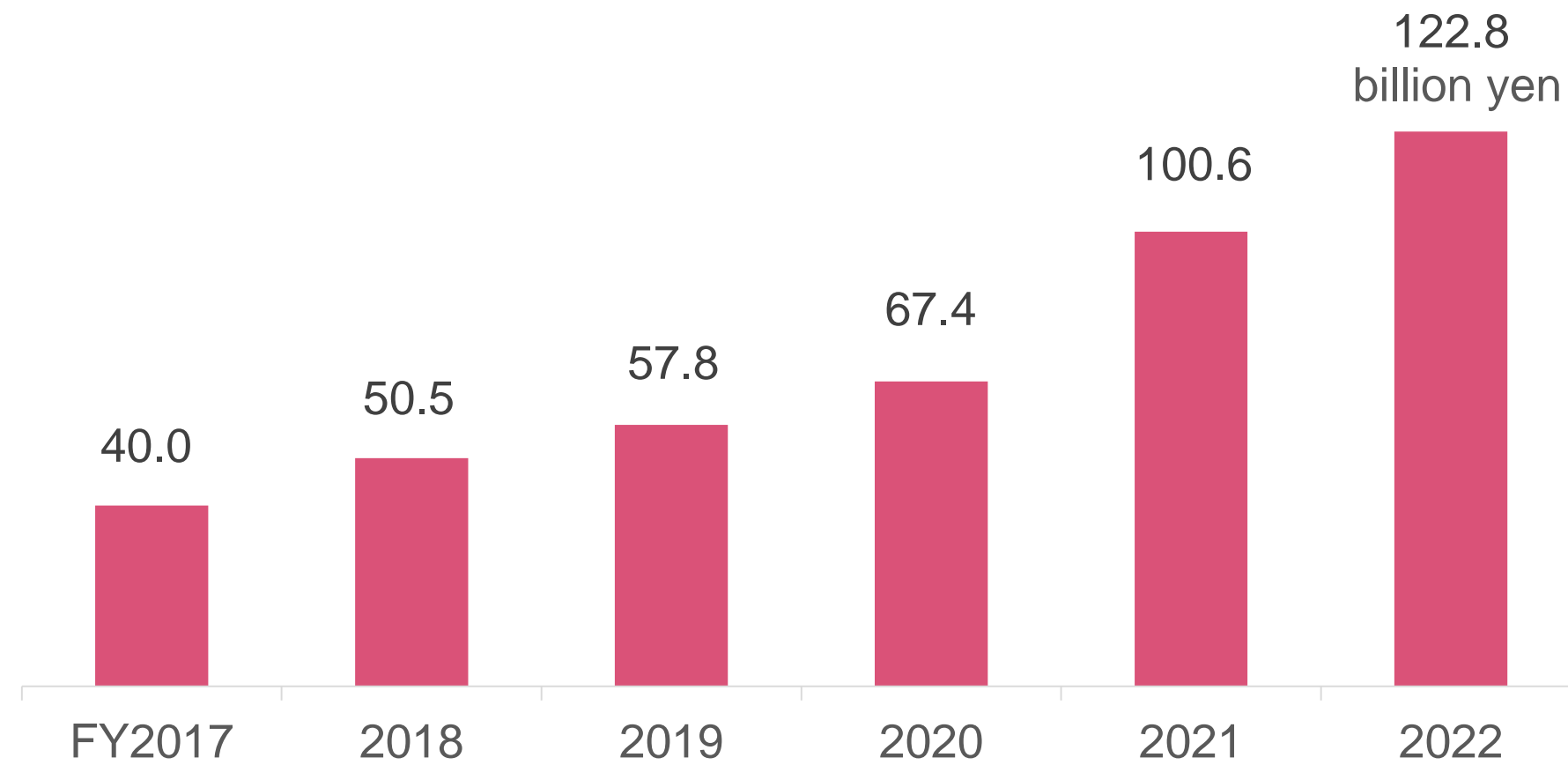
## India

2023 To expand fabricator network, planning to build 2 new plants adding to current 8 plants

# Evaluate market potential, continue to expand our business actively, and build strong network

# Strengthening of overseas heavy duty packaging business

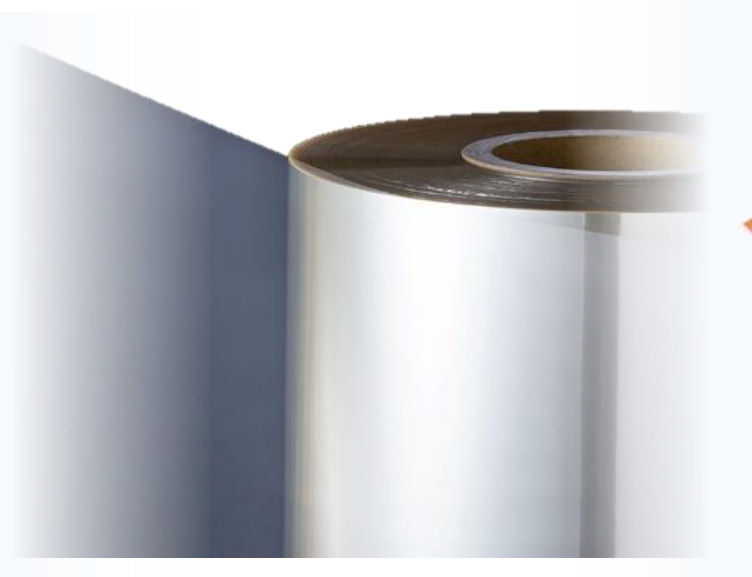
## Tri-Wall Group's Net Sales (simple aggregation base)



Rengo group's growth driver which aggressively continues expanding plants, establishing and acquiring new companies even after this period toward the future



# Products for developing new markets



Cellophane



REBIOS®



Viscopearl®

- April 1, 2023  
**Chemical Products and Cellulose Products Development Group** launched as a new business unit
- The new unit leads cross-divisional projects including marketing to new business prospects, planning and promoting new businesses (e.g. recycling plastic waste), commercializing new products, etc.



SAFLON®



From Bioethanol to **SAF**



# ESG policies and plans leading to Corporate Philosophy

## Environment

- Taking initiatives on environmental conservation efforts



Rengo Group Environmental Charter

Eco Challenge 2030

Rengo Group Environment Action 2050

“Less is more.”

## Social

- Earning the trust and satisfaction of our customers through dynamic business activities
- Contributing to society as a good corporate citizen
- Respecting the value of individual employees and striving to create safe and congenial work environments



## Supply Chain

Rengo Group's Fundamental Policy on Procurement

Procurement Policy for Wood Pulp

Conflict Minerals Policy

Statement attesting the Voluntary Action for Achieving Sustainable Logistics

CS Action Policies / Quality Policy

Basic Disaster Policy

Declaration of Partnership Building

Multi-Stakeholder Policy

## Human capital

Rengo Group Human Rights Policy

Rengo Good Health Declaration

Action Plan for Empowering Female Workers

Work Style Reform Action Plans

Declaration of Work Style Reform

Health and Safety Policy

## Governance

- Disclosing information proactively and accurately
- Acting always with integrity, maintaining high ethical standards and ensuring strict legal compliance



Basic Policy on the Protection of Personal Information

Basic Policy on the Protection of Specific Personal Information

Fundamental Policy on Information Disclosure

Fundamental Policy on Information Security

# Toward achieving the Vision 115

## Packaging Provider

## Vision115

Forecast

FY2023

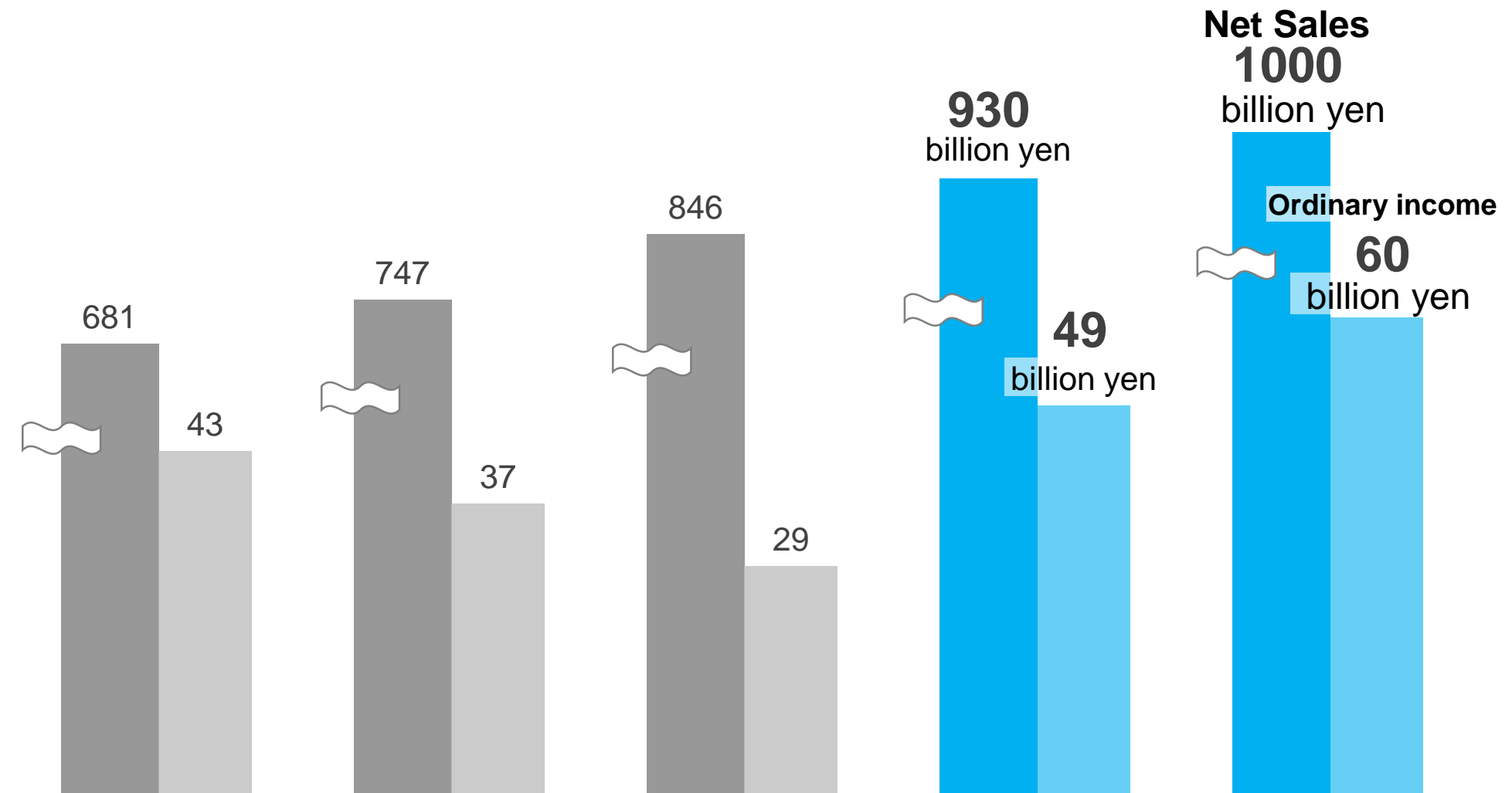
FY2024



FY2020

FY2021

FY2022





“The **best** packaging provider  
in the **world**”



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## Business Environment and Group Strategy

Management Conference

Rengo Co., Ltd

November 17, 2023

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# Since the post-war reconstruction through the Lost Three Decades

Post-war reconstruction

High Growth - Bursting of the Bubble

The Lost Three Decades



### From Postwar Reconstruction to High Economic Growth

Technological innovation, export expansion, and breakthroughs in the heavy/chemical industries lead the country to be an economic power in the world

### Bursting of the bubble economy

Speculative bubbles in real estate and financial products burst lead to prolonged deflation

### COVID-19 Global Pandemic

#### Ukraine Crisis

Soaring energy prices leads to a sudden inflationary phase

## From "Dedicated to Corrugated" to "General Packaging Industry"



Poster of "Clothing storage box" created during the post-war reconstruction period



January 1972  
Changed the company name from Rengo Shiki to Rengo.



April 1999  
Merged with Settsu



April 2024  
GPI Rengo celebrates its 115th anniversary

Volatility  
 Uncertainty  
 Complexity  
 Ambiguity

# The VUCA Era

## Biological changes

- ▶ **Biodiversity Crisis**
- ▶ **Rising Geopolitical Risks**
  - Protracted **Russia-Ukraine** Situation
  - Military conflict between the Islamic organization Hamas and **Israel**

## Economic changes

- ▶ **Slow economic recovery**
  - Inflation and yen depreciation have the economy swing "back and forth"
- ▶ **Major restructuring**
  - **Smurfit Kappa's** acquisition of **WestRock**
  - Large-scale reduction of **International Paper**

## Societal changes

- ▶ **Highly challenging environmental issues**
  - Transition to a **low-carbon society**
- ▶ **Highly challenging societal issues**
  - **Worsening labor shortage** and **2024** problem in the logistics industry

## Technological changes

- ▶ **GX (Green Transformation)**
  - Transition to a **decarbonized society**
- ▶ **DX (Digital Transformation)**

# Biological changes

## Biodiversity Crisis



Image: © Blue Ocean Initiative



- Destruction and overexploitation
- Abandonment of cultivation / reduction of satoyama landscape
- Invasive species and pollution
- Climate change

## February 2022- Ukraine Crisis

Image: © Atlantic Council



## Ukrainian 'Kamikaze' Corrugated drone attack aircraft



Image: © Al Jazeera







## October 2023- Israeli-Palestinian military conflict

# Rising Geopolitical Risks

# Economic environmental changes

## Slow economic recovery

Year-on-year Growth rate of real GDP  
(forecasts)

	2023	2024
 India	<b>6.3</b>	6.3
 China	<b>5.0</b>	4.2
 US	<b>2.1</b>	1.5
 Japan	<b>2.0</b>	1.0
 EU	<b>0.7</b>	1.5
 UK	<b>0.5</b>	0.6

Source: World Economic Outlook, IMF, Oct 10 2023

Inflation and yen depreciation have the economy swing "back and forth"



### Large-scale restructuring in International Paper

By the end of 2023, the 800,000-ton corrugated paper mill in Orange, Texas, and two pulp mills in the U.S. mainland (500,000 tons) to be shut down, approximately 900 employees to be subject to dismissal

## Major restructuring

### Smurfit Kappa acquires WestRock

By the end of 2024, a huge company with sales of over 5 trillion yen and production volume (papermaking) of over 20 million tons to be established



# Societal issues






## Highly challenging environmental issues

### Transition to a low-carbon society

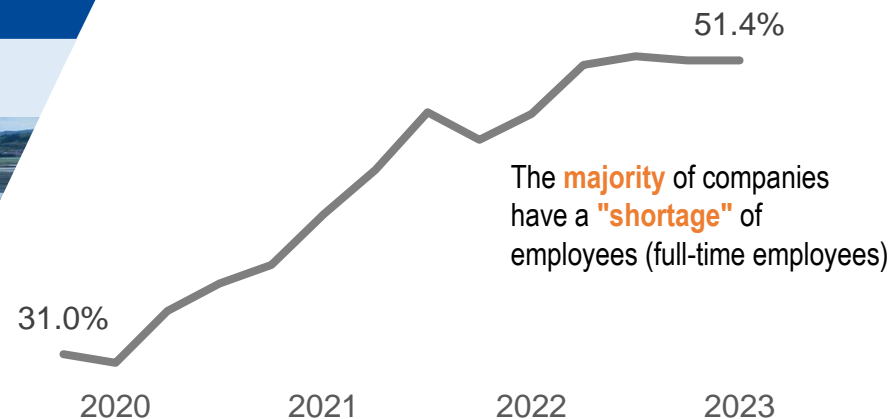


#### Nationally Determined Contributions (NDCs) to reduce emissions by Country

##### Reduction Targets

	China	Reduce CO <sub>2</sub> per unit of GDP by	<b>65%<sup>&lt;</sup></b>	by 2030 (compared to 2005)
	EU	Reduce GHG emissions by	<b>55%<sup>&lt;</sup></b>	by 2030 (compared to 1990)
	US	Reduce GHG emissions by	<b>50-52%<sup>&lt;</sup></b>	by 2030 (compared to 2005)
	Japan	Reduce GHG emissions by	<b>46%<sup>&lt;</sup></b>	by FY2030 (compared to 2013)
	India	Reduce CO <sub>2</sub> per unit of GDP by	<b>45%<sup>&lt;</sup></b>	by 2030 (compared to 2005)

### Worsening labor shortage



Source: Teikoku Databank "Survey of Corporate trends for labor shortage" April 2020 - July 2023 Survey Results (11,265 valid responses)

## Highly challenging societal issues

### Logistics 2024 Issues

It is estimated that there will be a **12.1%** shortage of transportation capacity in the paper industry.\*

\*Estimated calculation based on 2019 data by NX Logistics Research Institute and Consulting



# Technological advances

## GX (Green Transformation)

"The **great transformation** in industrial and energy policy in the postwar period"

"Strategy for Promoting the Transition to a Decarbonized Growth-Oriented Economic Structure" (Cabinet Decision in July 2023)



### Transition to a **decarbonized society**

 Achieve **net-zero** greenhouse gas emissions by **2050**

#### Expected Technology

- Improving the efficiency of power generation facilities
- Promotion of hydrogen-ammonia mixed-incineration and mono-incineration
- Maintenance and Enhancement of Pumped-Storage Power Generation
- Promoting the introduction of storage batteries
- CCS (Carbon dioxide Capture & Storage)

### Toward Society 5.0

November 2020

Formulation of the Digital Governance Code  
(Ministry of Economy, Trade and Industry)

September 2022

Revision of the Digital Governance Code

- Added items related to the development and retention of digital human resources

(Excerpt from Digital Governance Code 2.0)

The power of digital technology contributes not only to **improve existing businesses** through IT aimed at improving efficiency and saving labor, but also to **improve the added value** of existing businesses that will lead to new profits and **creating** new digital businesses.

(Subtitle of "DX White Paper 2023" by Information-technology Promotion Agency, Japan)

"**Digital** has begun to advance, while **transformation** has been stagnant"

## DX (Digital Transformation)

# Rengo Group's "GDP"

**G**

**G**roup management

## Strengthening Group Management

In April 2024, a new company, RM Tohcello, will be set up through the business integration of SunTox and Mitsui Chemicals Tohcello.

**G**reen initiatives

## Initiatives for Green Transformation

Rengo aims to achieve net-zero GHG emissions by 2050 through fuel conversion, including the phase-out of coal at its Kanazu Mill and Marusan Paper Mfg.

**D**

**D**igital transformation

## DX Promotion Initiatives

"Logistics DX" and "Production site DX" achieve "white logistics" and "productivity improvement."

**D**evelop overseas business

## Overseas operation expansion

Expanding the scope of the heavy-duty packaging business as a growth driver. Aim to improve profits with the keywords "selection and concentration."

**P**

**P**roductivity improvement

## Productivity Improvement Initiatives

In addition to improving production efficiency by setting up new plants and renovating plants, we also reduce time buffer by leveling the load at each plant.

**P**eople-oriented approach

With people-oriented approach as the pillar of management, we will work to achieve sustainable growth and to improve productivity through investment in and development of human resource.



# Strengthening Group Management

(As of the end of September 2023)

			Upstream	Downstream
Paper-board	Corrugated Packaging	Folding Cartons	Marusan Paper Mfg. Osaka Paper	Yamato Shiki Settsu Carton, etc.
<b>Rengo Co., Ltd.</b>				
Flexible Packaging			<b>Sun-Tox</b>	Howa Sangyo Takigawa Corporation
Heavy Duty Packaging			Taiko Paper Mfg.	Nihon Matai, etc.
Overseas Operations			(Paperboard) VKPC, etc.	(Corrugated Packaging) Dalian Rengo Packaging, etc. (Flexible packaging) Jiangsu Zhongjin Matai Medicinal Packaging, etc. (Heavy Duty Packaging) Tri-wall, etc.
Other Businesses			Transportation business (Rengo Logistics, Sanyo Jidosha Unso) Nonwoven products (Rengo Nonwoven Products) Packaging machinery (Rengo, Yamada Kikai Kogyo) and other companies	

April 2024

Sun-Tox and Mitsui Chemicals  
Tohcello to be merged

**RM Tohcello** to be set up

Packaging Provider



Consolidated companies

**187** companies (53 in Japan, 134 overseas)

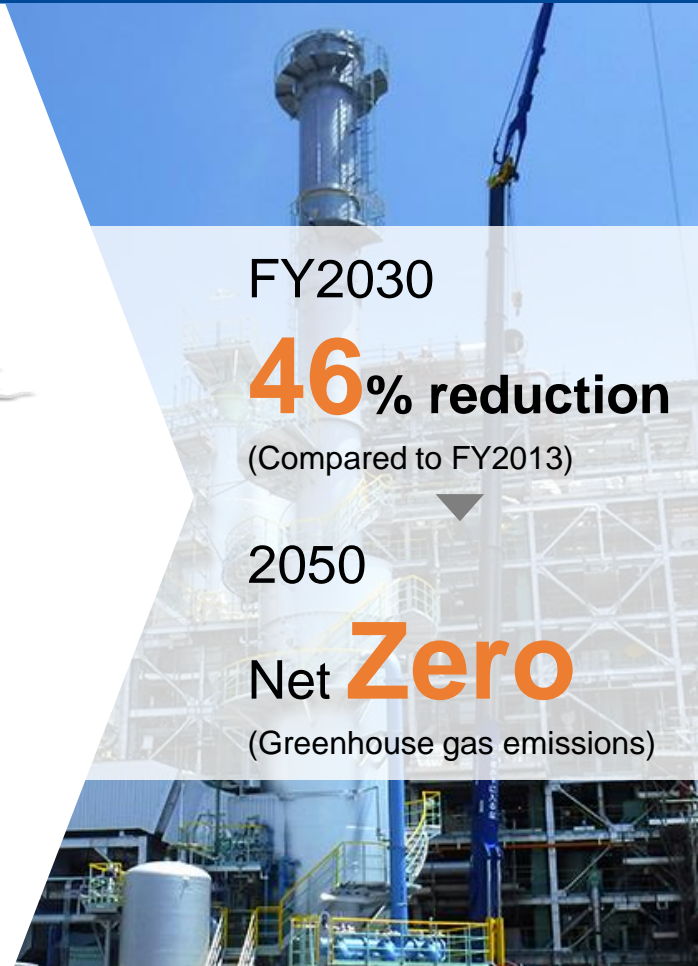
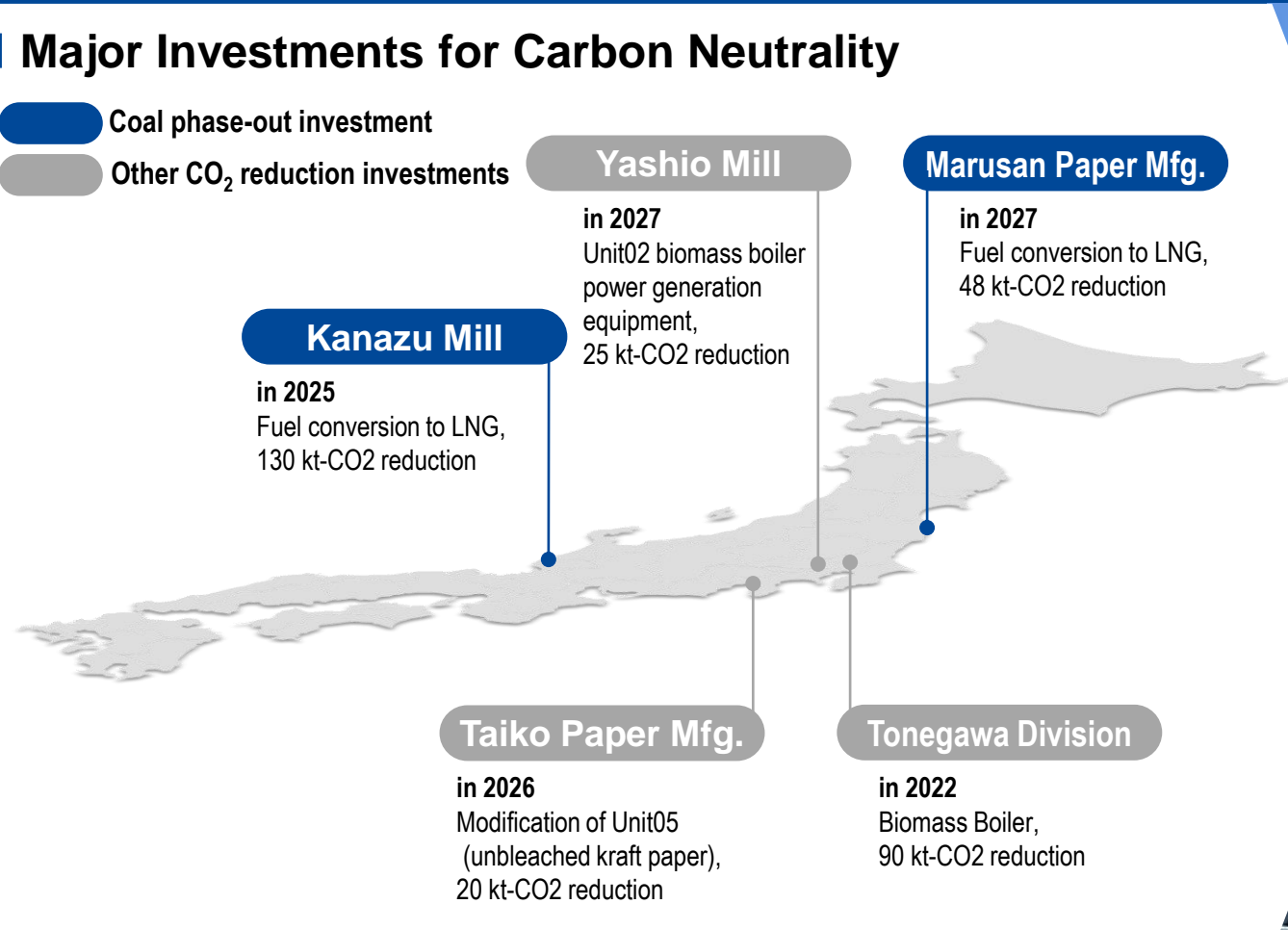
**17** equity-method affiliates

# Initiatives for Green Transformation

## Major Investments for Carbon Neutrality

**Coal phase-out investment**

**Other CO<sub>2</sub> reduction investments**



FY2030

**46% reduction**

(Compared to FY2013)

2050

Net **Zero**

(Greenhouse gas emissions)

# DX Promotion Initiatives

Logistics DX	<b>“catmotion”</b> (Truck queuing system)	Truck and shipment orders are linked and registered, and the truck queuing is managed on a warehouse-by-warehouse basis. It is also linked with other systems to achieve <b>smooth operation management</b> .
	<b>Picking app</b> (Loading management)	A specialized picking app to be equipped on the clamp fork lift. In conjunction with "catmotion," cargo handling can be proceeded by the arrival time of the trucks.
	<b>Unmanned automatic clamp fork lifts</b>	It is the first lift in Japan to be equipped with AI to handle containerboard rolls. It can transport one ton of a roll, and 24-hour automatic operation <b>saves manpower</b> .
	<b>RFID</b>	It is possible to read the product information recorded in the internal IC chip without touch. Consistent data management during the distribution process can be efficiently achieved.
DX at the production site	<b>Automated containerboard roll change</b>	Predictive control based on automatic data analysis makes it possible to change the containerboard roll (change the type of containerboard) while that is set fully automatically and to significantly <b>reduce the production losses</b> .
	<b>Containerboard strength prediction system</b>	Machine learning makes it possible to predict the strength of the containerboard from data collected in real time that can contribute to <b>quality improvement</b> and loss reduction.
	<b>RenDATA</b> (Data collection platform)	The platform collects raw data on the operational status and quality of each plant and open data (e.g. weather data). It is also used for <b>IT literacy</b> education using data collected.

Achieving  
**sustainable logistics and productivity improvement**

Building a **CPS** (Cyber-Physical System) on the harmony of digital and people

# Developing Overseas Business

## September 2016

(before entering the overseas heavy-duty packaging business)

Expanded in **7** countries, mainly in Asia

Consolidated companies

**54** companies (41 in Japan, 13 overseas)

**9** equity-method affiliates



FY 3/2017

Overseas Business

Net sales: **¥26.8** bn. / Operating profit: **¥0.8** bn.

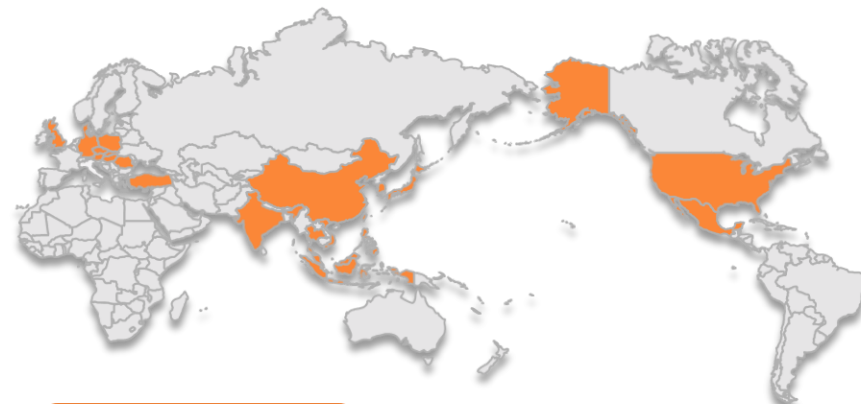
## September 2023

Expanded in **23** countries, mainly in Asia

Consolidated companies

**187** companies (53 in Japan, 134 overseas)

**17** equity-method affiliates



FY 3/2024

Forecast for Overseas Business\*

Net sales: **¥196.3** bn. / Operating profit **¥8** bn.

\*Forecast as of May 2023

# Productivity Improvement Initiatives

## Plans to renovate directly managed corrugated plants

- Scheduled to be completed this fiscal year
- Scheduled to be completed in FY2024
- Scheduled to be completed after FY2025

Matsuyama Plant to be relocated, newly established as

### Ehime Toon Plant

Scheduled to start operations in **January 2024**

### Tokyo Plant

**March 2026**

Replacing deteriorated box making room building, expanding product warehouse, and integrating Packaging Technology Center and PCS scheduled to be relocated

### Eniwa Plant

**December 2024**

Expansion of containerboard warehouse

### Nagano Plant

**December 2024**

Warehouse expansion and office renewal

### Oyama Plant

**February 2025**

Expansion of warehouses and production facilities

### Shiga Plant

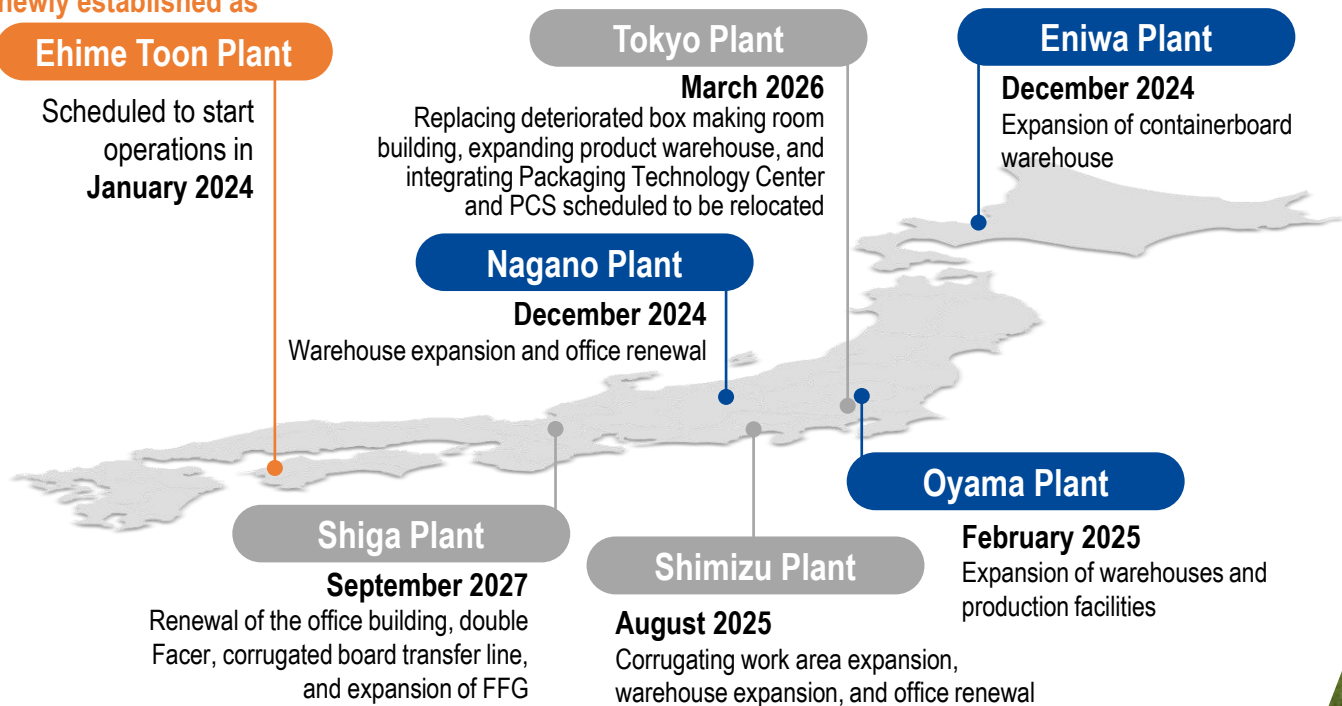
**September 2027**

Renewal of the office building, double Facer, corrugated board transfer line, and expansion of FFG

### Shimizu Plant

**August 2025**

Corrugating work area expansion, warehouse expansion, and office renewal



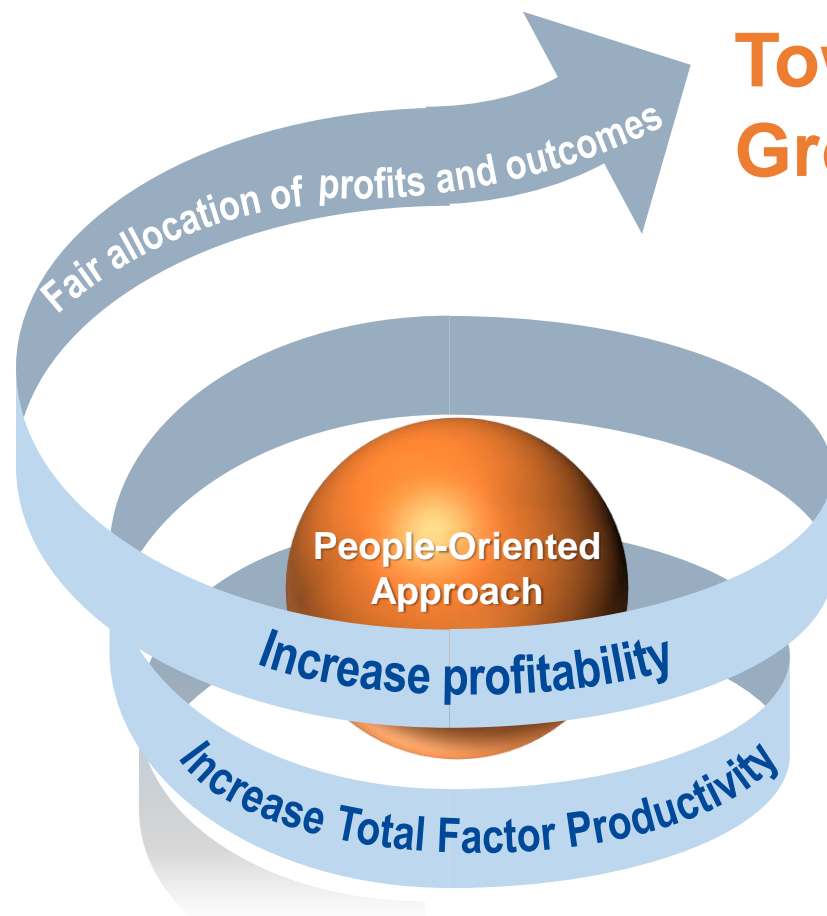
Setting up a new plant and renewal of aging plant improve

**production efficiency**

**Load leveling** for each plant reduces time buffer

Improving **TFP** (Total Factor Productivity)

# People-Oriented Approach



## Toward a Virtuous Cycle of Growth and Distribution

**SUSTAINABLE  
DEVELOPMENT  
GOALS**

- Five Ps**
- P**eople
  - P**lanet
  - P**rosperity
  - P**eace
  - P**artnership



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The General Packaging Industry RENG0

