

Overview and Initiatives by Business

Segment	Subsegment	Segment overview (FY2023)	Net sales and operating profit	Company plan for FY2030
Household and Industrial Materials	Industrial Materials	YoY: Increase in Sales and Profit 【Industrial Materials Business】 ● Japan: While sales volumes of such products as corrugated containers and boxboards decreased due to the restraint on consumption attributable to inflation, net sales increased due to price revisions. ● Overseas: Despite an increase in sales volumes of containerboards in Southeast Asia, net sales decreased due to deteriorating market conditions. Despite price revisions in Oceania, net sales of corrugated containers declined owing to sluggish demand in Southeast Asia.	Net sales (¥ billion) Operating profit (¥ billion) 2019 2020 2021 2022 2023 2024 (FY Plans)	Sales target ¥1,250.0 billion Key Points ● Further expand and enhance the packaging business in Southeast Asia and India and the corrugated container business in Japan ● Enhance branding and expand sales of household paper products in Japan ● Concentrate management resources of the disposable diaper business in Japan on adult use; expand sales and enhance the overseas disposable diaper business
	Household and Consumer Products	【Household and Consumer Products Business】 ● Japan: While sales volumes decreased due to the restraint on consumption, net sales of household paper increased as a result of price revisions. Although sales of disposable diapers for babies were essentially unchanged from the previous year, net sales of disposable diapers increased on the back of the upswing in sales volumes of disposable diapers for adult use as a result of acquisition of new customers. ● Overseas: Net sales of disposable diapers increased owing to the upswing in sales volumes attributable to sales growth.		
Functional Materials		YoY: Increase in Sales and Decrease in Profit ● Japan: Despite a decline in sales volumes of release paper and its base paper owing to sluggish demand for electronic devices, net sales of specialty paper increased due to the growth in sales of strategic products, including heat-sealable paper for major online retailers and non-fluorine oil-resistant paper, and price revisions. Net sales of thermal paper increased due to price revisions. ● Overseas: Despite the downturn in sales volumes of thermal paper owing to efforts to reduce inventories caused by such factors as rising interest rates and sluggish demand, net sales increased due to price revisions.	Net sales (¥ billion) Operating profit (¥ billion) 2019 2020 2021 2022 2023 2024 (FY Plans)	Sales target ¥400.0 billion Key Points ● Actively develop high-function and eco-friendly products ● Expand global sales of the imaging media business and enhance competitiveness including printing and converting
Forest Resources and Environment Marketing		YoY: Decrease in Sales and Profit ● Japan: Against an increase in net sales owing to the steady performance of dissolving pulp and the start of operations at a biomass power plant in Tokushima from December 2022, results were essentially unchanged from the previous year owing to weak demand for construction and packaging in the lumber business. ● Overseas: Net sales in the pulp and lumber businesses decreased due to the deterioration in pulp market conditions and restoration work under way at manufacturing facilities at Pan Pac Forest Products Ltd. in New Zealand following cyclone damage in February 2023.	Net sales (¥ billion) Operating profit (¥ billion) 2019 2020 2021 2022 2023 2024 (FY Plans)	Sales target ¥600.0 billion Key Points ● Enhance and expand the pulp business ● Promote the energy and lumber processing businesses
Printing and Communications Media		YoY: Increase in Sales and Decrease in Profit ● Japan: Despite the continued decline in demand, net sales of newsprint, printing, and communication paper increased owing to price revisions. ● Overseas: Net sales at Jiangsu Oji Paper Co., Ltd. in China were essentially unchanged from the previous year due to the slow economic recovery following the end of the Zero-COVID policy.	Net sales (¥ billion) Operating profit (¥ billion) 2019 2020 2021 2022 2023 2024 (FY Plans)	Sales forecast ¥150.0 billion Key Points ● Restructure the production system and enhance competitiveness through collaboration with other Group businesses

Household and Industrial Materials Businesses -Industrial Materials Business-

Through offering innovative proposals using sustainable paper packaging materials to protect the environment while increasing profits, we will respond to the trust of our stakeholders.

Oji Holdings Corporation
Executive Officer
President, Industrial Materials COMPANY

Akio Hasebe



Awareness of the Business Environment

- Increasing consumer awareness about environmental issues
- Growing interest in renewable materials with the trend toward de-plasticization
- Economic development in emerging markets such as Southeast Asia and India
- Expansion of the e-commerce market
- Soaring raw material and fuel prices and large fluctuations in exchange rates
- Changes in consumer behavior post-COVID-19

Our Strengths

- Stable supply and quality control system enabled by integrating base paper manufacturing and converting/processing
- Reduced environmental burdens through efficient base paper transportation, including at two integrated corrugated container plants in Japan
- Corrugated container processing bases at many locations in Southeast Asia and a strong base paper sales structure around these bases

Business Opportunities

- Expanding sales by proposing a switch to paper packaging materials
- Creating sales opportunities in collaboration with Oji Group companies in Japan and overseas
- Increasing market share through capital investment and M&A to meet rising demand
- Soaring raw material and fuel prices and passing the cost increase on to product prices
- Fluctuation of base paper market conditions in China and Southeast Asia

Risks and Response

(Risks : ▲, Response : ○)

- ▲ Conflicts, political turmoil, and other geopolitical risks
⇒ ○ Engage in organic information sharing and cooperative framework building among Group companies
- ▲ Paradigm shift to IoT
⇒ ○ Use paper and packaging as a tool to appeal to customers and consumers
- ▲ Increasing environmental awareness
⇒ ○ Build energy-saving, high-efficiency production systems

Business Overview

The Industrial Materials Business has production and sales structures that integrate material and converting from base paper manufacturing to product processing and packaging design for the packaging materials that are essential to industry such as corrugated containers, folding cartons, and paper bags and responds in a timely manner to customer needs.

Corrugated Container Business

As well as corrugated containers used in foodstuffs, daily products, electronics, and other areas, we also offer heavy-duty packaging materials used for transporting mainly industrial parts. We also provide automatic packaging systems adjusting the packaging dimension in order to fit each product size inside.



Folding Carton Business

For folding cartons used in a range of fields including confectioneries, cosmetics, and pharmaceuticals, we are combining aesthetically outstanding base paper with applicable structural design and appealing graphics, thereby further enhancing the value of our customers' products.



Paper Bag Business

We handle a wide range of customer needs—such as heavy-duty sacks for packaging used for safe and secure transport of various products, paper bags that are used for packaging of retail products which also play a role in sales promotions, and bags for home delivery, which are used for online shopping.



Challenges in Achieving the Medium-term Management Plan and Priority Measures for FY2024

Business Strategy

- Further expand and enhance packaging business in Southeast Asia and India
- Expand and enhance corrugated container business in the Greater Tokyo area, Japan

Challenges

- (Overseas) Build new plant, accelerate M&A
- (Japan) Expand business through our own plants in the Greater Tokyo area and enhance our market share through M&A in other regions
- Maximize the value of human capital

Measures

- (Overseas) Build a new plant in India
- (Overseas) Promote proactive capital investment
- (Japan) Plan M&A
- Promote headcount optimization and multi-skilling

Construction of a Corrugated Container Plant in Sri City in Southern India

We are building a new facility in Sri City Industrial Park located in Andhra Pradesh in southern India as the Group's fifth corrugated container plant, and plan to commence operation in 2024.

We will work to further expand the business in India given the outlook for continued growth.



Conceptual image of the corrugated container plant under construction in Sri City in southern India

Acquisition of a Folding Carton Company in Vietnam

In June 2024, in cooperation with IMURA & Co., Ltd., the Group completed the acquisition of a part of shares of SONGLAM TRADING AND PACKAGING PRODUCTION JOINT STOCK COMPANY. This company has more than 20 years of experience in manufacturing and selling folding cartons and other products in Vietnam.

Based on the business strategy of further expansion and enhancement of the packaging business as part of the Medium-term Management Plan, we will continue to further grow the packaging business.



Collaboration Products with IMURA & Co., Ltd.

- Paper file folders with a transparent-processed window into the envelope (awarded Award-winning at Sustainable category at STATIONERY OF THE YEAR 2024 in Japan) (left photo)
- Paper net envelope that protects packaged items with a paper net (right photo)

Initiatives to Enhance Corporate Value

As an Integrated Packaging Company

The trays to package large commercial-use air conditioners used to be assembled by manual due to their size and complex structure. In response, we have developed industry's a-first-of-its-kind auto-assemble structure in Japan together with tray design which enables to assemble automatically, eventually has been successful to increase lots of efficiency at customer end. This innovation was awarded the WorldStar Winner in the Worldstar Awards 2024 organized by the World Packaging Organisation (WPO).

We also provide branding services for customers. In the example of Farm Okoshi Co., Ltd., a strawberry farm located in Utsunomiya, Tochigi, Japan, we designed a package for gift strawberries and one for in-store displays as part of our branding by forming and embracing their sentiment to the strawberries.

The Oji Group has established a 'material to converting' integrated packaging production system such as from paper production to converting with package design, through which we deliver products to our customers.



The packaging tray and auto-assemble machinery for large commercial-use air conditioner developed together with Daikin Industries, Ltd.



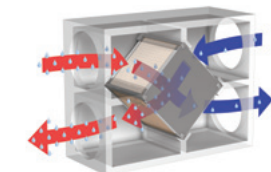
Packages for Farm Okoshi Co., Ltd.

Applying Paper Technology to Energy-saving Measures

Energy Recovery Ventilator (ERV) is a type of high-performance ventilation system which primarily is installed for air-conditioning in office and homes, and it is an energy-saving product by exchanging/collecting enthalpy (temperature and humid) from air-conditioning which is lost in ventilation. The performance of such system depends on the features of ERV element (mainly paper product) which is the core inside of ERV.

In addition to Nantong Oji Filter's plant in Jiangsu Province, China, we commenced operation at the Kadoma plant in Osaka in 2024 as a production facility for this element.

In Japan, Energy-Saving standard for housing will be required to comply with in 2025 and Net Zero Energy House (ZEH) will become the new standard in 2030. We will take initiative to respond to such growing environmental awareness.



Mechanism of ERV element
Energy-savings with the unique feature of paper by exchanging/collecting enthalpy (temperature and humidity) on the course of ventilation.



Kadoma Plant in Osaka commenced in January 2024

Household and Industrial Materials Businesses -Household and Consumer Products Business-

We will maximize the internal resources of the Oji Group to enhance the value of the “nepia” brand so that we can deliver products to our customers that respect people and the environment.

Oji Holdings Corporation
Executive Officer
President, Household and Consumer Products COMPANY

Takayuki Moridaira



Business Overview

Oji Nepia has developed the “nepia” brand of household paper and conducts its business activities while pursuing a new normal with the aim of being a brand that stands by people’s lives and the environment under the slogan “Kind to both humans and the earth.”

“Environmental quality” as in the adoption of FSC™-certified paper for forest conservation and a tie-up with the WWF. “Perceived quality for life” as in the seeking of good texture, comfort, and functionality. Oji Nepia pursues these two qualities by integrating the sales, marketing, and production functions. (FSC™ C018118)

▶ Oji Nepia official website (in Japanese) [“Kind to both humans and the earth”](#).

Household Paper Business

We manufacture and sell tissue paper, toilet rolls, kitchen towels, wet wipes, masks, and other products that are essential for everyday life.

And we pursue good texture and comfortable use by leveraging environmentally friendly materials.



Disposable Diaper Business

We manufacture and sell nursing care use, light incontinence care, and other types of disposable diapers for adults.

We provide disposable diapers designed specifically for hospitals and nursing care facilities, making them more convenient for those wearing them and for those providing care.



Awareness of the Business Environment

- Low birth rate and super-aging society
- Economic development in emerging markets such as Southeast Asia
- Hygiene awareness established since the COVID-19 pandemic
- Increasing consumer awareness about environmental issues
- Soaring raw material and fuel prices and large fluctuations in exchange rates
- Change in consumer behavior due to successive price hikes of daily necessities

Our Strengths

- A wide range of environmentally friendly products, including FSC™-certified paper and filmless boxed tissues
- Stable supply and quality control system enabled by integrating base paper manufacturing and converting/processing
- Establishment of a finely woven product supply network with dedicated warehouses in the Greater Tokyo area

Business Opportunities

- Growing needs for environmentally friendly products
- Capturing firm demand mainly in the Greater Tokyo area in Japan by improving production and logistics systems and strengthening branding
- Improving competitiveness by optimizing the product lineup

Risks and Response

(Risks : ▲, Response : ○)

- ▲ Soaring raw material and fuel prices and passing the cost increase on to product prices
⇒ ○ Reprice tissue paper, toilet rolls, and other household paper products (Because it has become difficult to absorb the rise in manufacturing costs through independent efforts)
- ▲ Addressing logistics issues
⇒ ○ Reduce truck waiting times and drivers' burden by introducing pallet shipping, adopting scheduling systems, etc.

Challenges in Achieving the Medium-term Management Plan and Priority Measures for FY2024

Business Strategy

- Enhance branding and expand sales of household paper products in Japan
- Concentrate management resources on the domestic disposable diaper business of adult products
- Expand sales and enhance the overseas disposable diaper business

Challenges

- Develop products that respond to domestic demand fluctuations and further enhance the value of the “nepia” brand
- Respond to changes in the overseas disposable diaper market environment
- Strengthen cost competitiveness and sales capabilities

Measures

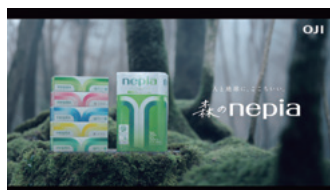
- Strengthen advertisement communication and in-store sales promotion
- Domestic household paper: Expand products using FSC™-certified materials, implement events for the 20th anniversary of “Hana-Celeb,” and renew existing household paper products
- Domestic disposable diaper: Further enhance quality and service, and promote sales through stronger tie-ups with partners
- Overseas disposable diaper: Develop products that meet the needs of local consumers, reduce costs thoroughly, and expand sales

Broadcasting the New Nationwide TV Commercial “The Episode of Forest Nepia”

As the only manufacturer of general consumer goods in the Oji Group, Oji Nepia formulated the new tagline in April 2024 “Kind to both humans and the earth.” This is because we are responsible for communicating to society the efforts of Oji Holdings in planting trees, growing forests, and appropriately using these as resources.

At the same time, the Company began regularly broadcasting television commercials in April 2024 under the theme of “Forest Nepia” to ensure that as many consumers as possible have the image that nepia products are “Kind to both humans and the earth.” The commercials feature Naomi Trauden along with synchronized images of the abundant forests grown by the Oji Group and the comfort offered by products borne from these forests. The commercials also feature an original arrangement of “All Living Things,” a grand yet delicate song written by Naotaro Moriyama, to express our passion for creating products that consider the global environment. Leveraging YouTube and other forms of digital media, we will seek to enhance the value of the nepia brand and aspire to a brand that is chosen by countless consumers.

- ▶ New TV commercial “[The Episode of Forest Nepia](#)”
(Oji Holdings official YouTube channel, in Japanese)



Initiatives to Enhance Corporate Value

Updating Packages and Formulating the nepia Environmental Mark System

Based on the environmental value, which provides environmentally friendly products, and the perceived value for life, which provides good texture and comfortable use, Oji Nepia aspires to be a company that improves people’s lives and the environment, and a commercial enterprise that embodies the purpose of Oji Holdings.

To embody these two values, Oji Nepia updated the packaging used for its tissue paper, toilet rolls, and kitchen towels in October 2023, and revised the design to emphasize a high-quality feel and attractive appearance by using gradations and color tones. Moreover, environmental value relies on product development that considers the environment in terms of everything from raw materials and packaging materials to product standards. The Nepia Environmental Mark is displayed on packages for products that meet these conditions.



The Nepia Environmental Mark



Products with the Nepia Environmental Mark

Launching YOSOIKI Moisturizing Soft Pack Pocket Tissue

Under the concept of “carry quality with you,” YOSOIKI was designed as a compact moisturizing soft-pack pocket tissue that is convenient for everyday life. And we make it usable without stress when on the go. Since the redesignation of COVID-19 to a Class 5 infectious disease, we have addressed the growing demand for carry-type pocket tissues as people increasingly go out. Made of a three-ply structure, these tissues are thick, silky, and have a smooth texture.



Launching the New KARADAOMOI Body-friendly 4-ply Toilet Roll

Targeting concerns over sensitive skin due to menstruation, diarrhea, and hemorrhoids, this delicate-care toilet roll launched in July 2024 is committed to providing a pleasant feel against the body.

With a smooth, comforting texture and a silky finish that minimizes friction, the four-ply structure, a first for the Company, quickly and fully absorbs moisture, allowing users to wipe themselves without placing a burden on their skin.



The KARADAOMOI Body-friendly 4-ply Toilet Roll

Functional Materials Business

Anticipating market needs, we aim to expand the business by developing value-added proprietary products and strengthening interaction with customers.

Oji Holdings Corporation
Executive Officer
President, Functional Materials COMPANY

Shigeki Aoki



Business Overview

Functional Materials COMPANY handles specialty and functional paper that is distinguished by its wide range of added value. Utilizing the Oji Group's core sheet development and coating technologies cultivated in the paper production industry, the COMPANY also manufactures a variety of films. We will lead the Oji Group's efforts to become an "innovative value-creating company" by strengthening our comprehensive proposal capabilities through the integration of the research and development, manufacturing, and marketing functions and promoting the development of high-value-added products.

Specialty Papers Business

The Specialty Papers Business has a lineup of products with advanced special functions such as electrical material paper including insulation materials, dry pulp non-woven fabric excellent in bulkiness and liquid retention, and glass paper excellent in size stability and heat resistance.

Imaging Media Business

The Imaging Media Business at the Oji Group develops thermal recoding media that meet customer needs for household, industrial, logistic, medical, and other various uses, leveraging diverse coating technologies, boasting a top-class global market share.

Adhesive Products Business

Using proprietary adhesive force control technology, the Adhesive Products Business handles familiar products such as food/beverage labels, courier labels, adhesive tape for packaging, and wound dressings to less familiar, specialized applications such as aluminum tape for construction material and anti-tampering tape.

Film Business

The Film Business handles OPP films for film capacitors to be incorporated in the motor control PCUs of electric vehicles, developed based on its thin film technology that produces the world's thinnest films, and optical double-sided adhesive films and hard-coated films that are adopted for smartphones and other precision devices.

Awareness of the Business Environment

- Progress of global shift to a decarbonized society
- Growing interest in highly functional paper products with the trend toward de-plasticization
- Economic development in emerging markets such as South America and Southeast Asia
- Soaring raw material and fuel prices and large fluctuations in exchange rates

Our Strengths

- We have high levels of core technologies in "papermaking," "converting (functional and adhesive coatings)," and "film forming"
- Organizational structure for agile development of high-function, high-value-added products including environmentally friendly products
- Top global market share in the imaging media business
- Integrated production from base paper manufacturing to converting

Business Opportunities

- Increasing demand for capacitor-use OPP films due to the rapid popularization of electric vehicles
- Increasing demand for functional paper materials due to growing needs for environmentally friendly products for de-plasticization or reduced plastic use
- Growing demand for thermal paper in South America and for high-performance labels in the Southeast Asian region

Risks and Response

(Risks : ▲, Response : ○)

- ▲ Impact of fluctuations in foreign currency exchange rates and changes in domestic and overseas social and market conditions due to the diversity of production base locations
 - ⇒ ○ Expand operations in a wide range of countries
 - ⇒ ○ Establish regional headquarters and take proactive steps to address risks before they emerge



Glass paper (Oji F-TeX)



Thermal paper for tickets (Oji Imaging Media)



Biodegradable pressure-sensitive adhesive paper for labels (Oji Tac)



Optical double-sided adhesive films (OCA) (New Tac Kasei)

Challenges in Achieving the Medium-term Management Plan and Priority Measures for FY2024

Business Strategy

- Actively develop high-function and environmentally friendly products
- Expand global sales of the imaging media business and enhance competitiveness including printing and converting

Challenges

- Accelerate the development of high-function, high-value-added, and environmentally friendly products
- Expand business in Japan and the Asian region through M&A

Measures

- Realize at an early stage the effects of investment in capacitor-use OPP film facilities (Japan) and thermal paper facilities (Overseas)
- Increase market share by adding more value to existing products, developing "Only One" products, and strengthen interaction with customers (Japan)
- Initiate collaboration with the Adampak Group (Overseas)
- Realize synergies from the inclusion of the Walki Group (Overseas)

Initiatives to Enhance Corporate Value

Actively Develop High-function and Environmentally friendly Products

In Japan, we have worked to develop high-function, high-value-added, eco-friendly products. In non-woven fabrics, we developed "kinarito LEAF," a biomass material, and in the field of thermal paper, we developed "Alcohol-resistant Thermal Paper" and "Semi-Through" translucent thermal paper. We have also developed "O-hajiki," a non-fluorine oil-resistant paper, in response to concerns surrounding per- and polyfluoroalkyl substances and regulations surrounding organic fluorine compounds (PFAS). (P.57)

Moreover, we have promoted the development of a wide range of new products, including "CALFRESH," an OPP fruit and vegetable packaging film that reduces industrial waste and food loss; "OJI Sustainable Mulching Sheet," an agricultural paper mulching sheet that biodegrades in the soil after agricultural use; and "HyBioth," a biodegradable, water soluble non-woven fabric made primarily from natural pulp.

In response to the rapid popularization of electric vehicles, new production equipment for capacitor-use OPP films used in motor drive controllers begins operation at the Oji F-Tex Shiga Mill in FY2024 to increase production capacity.



Biomass slipper "kinarito LEAF"



Non-fluorine oil-resistant paper "O-hajiki"



Agricultural paper mulching sheet "OJI Sustainable Mulching Sheet"

SILBIO Series

The SILBIO series is a paper packaging material that we developed as an alternative to plastic packaging. The series lineup is well-suited to packaging applications across a variety of fields, and includes products with high barrier and light-shielding properties comparable to aluminum deposited film, products with both transparency and barrier properties, and products that do not require sealant processing such as PE^{*1}.

In the "SILBIO EZ SEAL" lineup, we offer four products. "SILBIO BARRIER," which has oxygen barrier properties comparable to EVOH^{*2} and moisture barrier properties equivalent to LDPE^{*3}, prevents the diffusion of moisture and odor from contents. "SILBIO ALBA" aluminum deposited paper material boasts high oxygen barrier, moisture barrier, light-shielding, and heat-sealing properties. In addition to barrier and heat-sealing properties, "SILBIO CLEAR" offers transparency. Despite the lack of barrier properties, "SILBIO EZ SEAL" specializes in heat-sealing functions and is ideal for secondary and delivery packaging for food, and industrial material packaging. The SILBIO series of products can bear a paper identification mark and is used in a variety of packaging materials for food, daily necessities, and industrial applications.

^{*1} Polyethylene, ^{*2} Ethylene vinyl alcohol copolymer, ^{*3} Low-density polyethylene



Sustainable packaging "SILBIO" Series

Expanding Global Sales of the Imaging Media Business and Enhancing Competitiveness Including Printing and Converting

Overseas, in 2021, we completed construction to expand facilities in Brazil, practically doubling production capacity, to address strong demand for thermal paper in South America, and completed construction work to increase capacity at thermal paper production facilities in Europe in January 2024. In September 2022, the Adampak Group, a high-performance label printing and converting company with business bases in Southeast Asia and China, became a member of the Oji Group. This addition of the high-performance label business for electric and healthcare products to the thermal paper and adhesive paper business already operating in Thailand and the high-performance label printing/converting and cutting/converting business in Malaysia has enabled the integrated production from base paper manufacturing to converting. In the Asian market, which is also expected to experience growth going forward, we will propose a wide range of timely and optimal label products and increase customer value by capturing a broad range of customer needs and feeding them back to upstream businesses.

In April 2024, Walki Holding Oy, a packaging materials converter with operations in Europe, joined the Oji Group. We will now initiate steps to expand business portfolios and markets.



Aident Corporation in Malaysia, a subsidiary of the Adampak Group

Forest Resources and Environment Marketing Business

We are enhancing our business by making comprehensive use of forest resources, including pulp, forest plantations, lumber processing, and renewable energy.

Oji Holdings Corporation
Executive Officer
President, Forest Resources and Environment Marketing COMPANY

Yuji Onuki



Awareness of the Business Environment

- Growing demand for pulp due to economic development in newly industrialized countries and the trend toward de-plasticization
- New, large-scale pulp facilities are coming online, but in contrast pulp manufacturers are going out of business due to difficulties in procuring raw material chips and the burden of high costs
- Normalization of cost inflation, encompassing raw material and fuel prices as well as labor, transportation, and other costs
- Intensifying competition in the acquisition of forest resources

Our Strengths

- Abundant and sustainable forest resources and know-how in forest management
- Integrated production from forest management to lumber processing and pulp
- Organization for production and sale of diverse types of pulp
- Accumulated operational techniques for pulp-related equipment
- Procurement and sales capabilities that leverage the Group's domestic and overseas bases

Business Opportunities

- Expanding and strengthening overseas business
- Business expansion and enhanced competitiveness through M&A and strategic investments
- Securing forest resources by expanding plantations
- Development of markets for highly functional, high-value-added pulp

Risks and Response

(Risks : ▲, Response : ○)

- ▲ Market fluctuation and cost increases
⇒ ○ Strengthen our competitiveness base, develop high-value-added products
- ▲ Competition for procurement of forest resources
⇒ ○ Promote more site acquisitions for forest plantations, improve growth rates for forest trees
- ▲ Natural disasters and geopolitical risks
⇒ ○ Implement production site disaster prevention measures, ensure diverse procurement sources/logistics

Business Overview

Starting with the forest plantation business, which aims to nurture healthy forests as well as produce sustainable forest resources, we are developing comprehensive businesses that utilize those resources, which include pulp manufacturing, lumber processing, and biomass power generation. We meet the needs of our customers with our domestic and international procurement, production, and sales networks and a diverse product lineup.

Pulp Business

We produce a diverse lineup of pulp grades, including hardwood and softwood kraft pulp, and dissolving pulp. With an annual production capacity of market pulp of 2.5 million tons, we sell our products globally, including in Asia, Europe, and North America.

Forest Plantation Business

In company-owned forests in Japan and overseas, we grow and manage sustainable forests. Harvested woods are supplied for pulp raw materials, as well as for a range of applications such as lumber, plywood materials, and biomass fuels.



KTH forest plantation (Indonesia)

Lumber Processing Business

We are expanding production capacity and strengthening the purchasing and selling of wood products, primarily in Asia and Oceania. In Japan, we are moving into the lumber production business and seeking to strengthen profitability through sales expansion into the building materials field.

Energy Business

We are promoting the electric power generation business by using renewable energy, including wood biomass, hydroelectric power, and solar power. Leveraging our sites in Japan and overseas, we are also working to strengthen the purchasing and market supply of biomass fuels.



Oji Green Energy Tokushima

Starch and Saccharification Business

We have been developing technologies for starch and saccharification products, primarily of corn, to provide products that meet the needs of our customers.

Fuels/Chemicals and Other Material Procurement Business

Centrally managing purchasing for the Oji Group as a whole, this business gives consideration to environmental and social aspects while promoting advantageous and stable procurement.

Challenges in Achieving the Medium-term Management Plan and Priority Measures for FY2024

Business Strategy

- Enhance and expand the pulp business as a “comprehensive pulp manufacturer”
- Propel the renewable energy and other energy businesses
- Expand the lumber processing business

Challenges

Pulp Business

- Strengthening of our competitiveness base to enable better responses to market fluctuations

Energy Business

- Strengthening of cost competitiveness, renewable energy business expansion

Lumber Processing Business

- Strengthening of sales capabilities for lumber products, lumber production business expansion

Measures

- Ensure stable operation on the back of pulp facility modernization, promote cost reductions, and consider increases in production capacities
- Promote stable power plant operations and energy conservation, strengthen procurement capabilities for fuels, and conduct studies of wind power generation projects on company-owned sites
- Promote integrated business that utilizes domestic lumber from materials to processing, and expand sales into the building materials field

Enhancement and Expansion of the Pulp Business

To reinforce business foundations that are resilient to fluctuations in pulp markets, we are continuing to implement strategic profit measures at key business sites while working to strengthen sales.

CENIBRA (Brazil)

- Further enhancement of cost competitiveness through installation of most advanced/labor-saving manufacturing facilities
- Consideration of increases in production capacities
- Building of global direct sales system, promotion of customer service improvements



CENIBRA Mill

Dissolving pulp

- Increasing production and sales of dissolving pulp in light of increasing demand for apparel
- Promotion of development/sales of high-value-added products

Pan Pac (New Zealand)

- Investment in recovery from cyclone damage, response to disaster risks
- Early recovery of sales volumes as production resumes

Oji Fibre Solutions (New Zealand)

- Implementation of measures to stabilize operations, improve yields, and conserve energy by introduction of the Oji Group's operational techniques and management methods

Initiatives to Enhance Corporate Value

Addressing Improvements in Forestry Operations through Mechanization

Whereas forestry operations are still largely done by hand, the Oji Group is working to mechanize operations in its forests both in Japan and overseas to reduce costs, improve safety, and alleviate labor shortages.

One recent initiative by CENIBRA of Brazil has been the successful development, in collaboration with a heavy machinery manufacturer, of an automatic planting machine that performs six tasks, such as planting and fertilizing, that had previously been done by hand. This machine was custom-made for CENIBRA's operations, making it a cutting-edge initiative on a global scale. The operators who would perform tasks with the new machine were recruited from among the Company's employees, including those who had previously performed the tasks manually, which also contributed to improving employee engagement.



Automatic planting machine during plowing-in operations

Pan Pac (New Zealand)'s Recovery Project – PHOENIX Project –

On February 14, 2023, Pan Pac's entire factory sustained damaged from cyclone Gabrielle, causing operations to halt for more than a year. Under the PHOENIX Project, which aimed to restore operations, all Pan Pac employees, as well as the head office management and related departments, came together to work toward restoration so that products could be delivered to customers as quickly as possible.

They aimed to use repaired and updated equipment to improve productivity beyond what it had been before the disaster. Also, by working in cooperation with the local government on a project to reinforce and extend levees, taking measures to prevent flooding on the factory premises, and building a multistory main office, they strove to improve the site's resilience against disaster risks.



Pan Pac Mill the day after the cyclone hit



Pulp mill facilities immediately after the start of post-recovery operations



Managing Director Tony Clifford (right) and Deputy Managing Director Josh Hanayama (left) in front of the plaque commemorating reconstruction

Printing and Communications Media Business

We will strengthen cooperation within the Oji Group and thoroughly manage cash flow by promoting the building of an optimal production system.

Oji Holdings Corporation
Executive Officer President,
Printing and Communications Media COMPANY

Takayuki Moridaira



Business Overview

We handle a range of paper products used as information transmission media, including newsprint, as well as printing and communications paper. In addition to meeting the quality demanded by our customers, we strive to develop new products and technologies that will create newer value and enrich society.

Newsprint Business

One of the world's leading newsprint mills, Tomakomai Mill produces high-quality newsprint with features requested by customers, such as lighter weight and improved print reproducibility, making full use of a wide variety of pulp. We hold an approximately 30% share of the Japanese market with a stable supply to customers throughout the country, including the Greater Tokyo area. Newsprint production using a large amount of recovered paper also contributes to paper recycling.

Printing and Publication Paper Business

We offer a wide range of printing papers to meet various needs, including art paper used for photo albums and high-end catalogs, coated paper used for magazines and flyers, and wood-free paper used for books, each of which play a role in the day-to-day communication of information. We also offer a full lineup of environmentally friendly printing paper, including FSC™-certified paper and products compliant with the Green Purchase Act.

Communication Paper Business

We provide various output media to support information processing systems, including copying paper and continuous paper. Produced with our carefully built quality design and quality control system, they can be used on printers with different printing methods and models. We offer high-quality products not only superior in printability and workability in converting but also capable of meeting the needs for printing at ever-higher speeds for productivity improvement.



Awareness of the Business Environment

- Increasing consumer awareness about environmental issues such as the green transformation (GX) concept
- Structural decline in demand associated with the progress of digital transformation (DX) and the declining birth rate
- Large fluctuations in raw material prices and exchange rates

Our Strengths

- Ownership of large-scale infrastructure, including pulp production and biomass power generation facilities
- The Group's collective strengths (e.g., procurement, capabilities, the sharing of know-how on cost reductions, the development of new products through collaboration within the Group),
- Full lineup of environmentally friendly products, including FSC™-certified paper
- Capabilities to develop products meeting market needs

Business Opportunities

- Advantages of paper as an information medium (e.g., visibility, readability, reliability, preservability, texture unique to paper, reproducibility of photographs)
- Growing demand for environmentally friendly paper products due to growing environmental awareness
- Reassessment of the value of paper due to de-plasticization or reduced plastic use
- Strengthening competitiveness through cooperation within the Group that transcends the boundaries of businesses

Risks and Response

(Risks : ▲, Response : ○)

- ▲ Greater than expected decrease in demand for graphic paper
⇒ ○ Restructure the production system by utilizing the Group's collective strengths and assets owned, strengthen exports, and focus on China/sales for processing applications and a wide range of environmentally friendly products, including FSC™-certified paper
- ▲ Soaring raw material and fuel prices and large fluctuations in exchange rates
⇒ ○ Revise product prices
- ▲ Recruitment difficulties due to labor shortages throughout society
⇒ ○ Secure and retain personnel by improving employee engagement
- ▲ Increase in equipment malfunctions due to aging of equipment, etc.
⇒ ○ Renovate facilities and implement DX-based automation of operations/facility management

Challenges in Achieving the Medium-term Management Plan and Priority Measures for FY2024

Business Strategy

- Production system restructuring and enhancement of competitiveness through collaboration with other Group segments by maximizing the use of assets owned

Challenges

- Utilizing owned resources effectively
- Implementing thorough cash flow management

Measures

- Continue with thorough cost reduction
- Maintain reproducible product selling prices
- Strengthen cooperation with other segments

Production System Restructuring and Enhancement of Competitiveness

We are working to deepen cooperation within the Oji Group and utilize pulp manufacturing facilities, biomass boilers, and other assets to the maximum extent while improving profitability and competitiveness. At the Tomakomai Mill, we converted a newsprint machine to a machine for manufacturing containerboard in October 2021 and started operation of a special liner and special paperboard machine relocated from the Nayoro Mill of Oji Materia in April 2022. One machine producing newsprint and printing paper was shut down in 2024. Overseas, utilizing existing pulp manufacturing facilities and biomass boilers, etc., we built a new household base paper machine at Jiangsu Oji Paper in China and started operations in 2020. Taking into account structural changes in the environment and trends in demand, we will advance the building of an optimal production system, implement thorough cash flow management, reduce fixed costs, and improve production efficiency.

Building of a production system for 2020 onward

- In July 2020, started operation of household base paper machine in Jiangsu Oji Paper in China.
- In October 2021, we converted a newsprint machine to a containerboard machine at Tomakomai Mill.
- In April 2022, we started operation of a special liner and special paperboard machine relocated from Nayoro Mill of Oji Materia at the same mill.
- In February 2024, we shut down a newsprint and printing paper machine at Tomakomai Mill.



The #L-1 machine (converted from the #N-5 machine) at Tomakomai Mill



Jiangsu Oji Paper Household base paper machine (TM1)

Initiatives to Enhance Corporate Value

While working to strengthen the profitability and competitiveness of our existing businesses, we are also actively advancing our GX strategies. As part of our GX strategies, we are utilizing clean energy that is renewable and emits no greenhouse gas from power generation, produced by the Tomakomai Mill-owned industrial hydroelectric power plant that is the oldest in Japan. We have also begun joint studies with the Tokyo Gas Group on the production and use of e-methane, which utilizes green hydrogen produced using this renewable energy-derived electricity and carbon-neutral fuel-derived CO₂. (P.61) Usable as an alternative fuel to natural gas, e-methane will make a significant contribution to improving Japan's energy self-sufficiency because it is entirely domestically produced. We are looking ahead to full-scale capital investment for commercialization from 2030 onward. We will accelerate our efforts to realize a decarbonized society through sustainable energy solutions.



Tomakomai Mill-owned
Chitose No. 1 Hydroelectric Power Plant

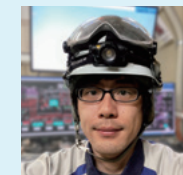
VOICE

Message from a young employee

—Valuable experience gained from a production system restructuring project—

As part of a production system restructuring project, a special liner and special paperboard machine (#12 machine) was relocated from Oji Materia Nayoro Mill to the Tomakomai Mill in 2022. As a project member, I was involved in modifying the DCS (Distributed Control System) and adjusting various chemicals, but what made the biggest impression on me was the paper strengthening agent addition equipment. Because some of the equipment could not be relocated, it became necessary to review the dosing and control methods. To enable the chemicals to be added at stable concentrations and flow rates, the dilution method was changed and the dosing equipment modified. Also, because the machine and additive equipment were located far apart due to differences in building structure, we worked to automate the chemical additive and shutdown procedures and to implement remote operations via DCS to reduce the workload. Although there were some unfamiliar aspects to this new operation, we worked closely with the relevant parties and went through a process of trial and error. Accordingly, operations have been trouble-free since it began in April 2022.

Gaining knowledge about the board machine-related equipment through this project and deepening communication with the on-site operators and other related parties was a valuable experience. I would like to draw on this experience as I work toward cost reductions and facility improvements.



Tomakomai Mill Papermaking
Department (Joined in 2018):
Qu Tianrui



#12 machine prior to its relocation

Overview and Initiatives
by BusinessHousehold and Industrial
Materials BusinessesFunctional Materials
BusinessForest Resources and
Environment Marketing BusinessPrinting and Communications
Media Business**Feature: New Business
Development Initiatives**

Feature: New Business Development Initiatives

**Driving innovation and creating technologies
for a sustainable, circular future.**

Director of the Board, General Manager,
Corporate Business Development Division
Oji Management Office Inc.

Toshiya Hirose



The Corporate Business Development Division underwent a reorganization in April 2024. As part of the structural reforms toward achieving the Long-term Vision goals, we are developing businesses that will contribute to building a sustainable society and growing those businesses into future earnings pillars. We will put in place a structure to promote new businesses from multiple perspectives in a bid to roll out and expand new businesses. This includes the Packaging Businesses Development Department that contributes to the reduction of plastic use, the Liquid Packaging Carton Department as part of our environmental response business, the Oji Forest Value-Creation & Promotion Department to maximize the value of company-owned forests, and the New Business Development Department to drive open innovation.

Acquisition of Walki Based in Finland

In April 2024, Oji Holdings acquired Walki Holding Oy, a packaging materials converter based in Finland, to solidify the Group's platform in the packaging business. Walki is a converter that specializes in sustainable packaging materials. Its core products comprise a range of paper-based environmentally friendly packaging materials that combine recyclability and barrier properties. The company is distinguished by its high profitability in the European market, where environmental regulations are becoming increasingly stringent. This acquisition will further strengthen the Group's business foundation as a global supplier to meet the worldwide demand for conversion to sustainable packaging materials.

With the PPWR* about to take effect, demand for recyclable, reusable, and compostable packaging materials is rising sharply in Europe. Walki is particularly strong in sustainable material conversion technologies and leading manufacturing know-how in packaging materials that comply with EU packaging regulations.

Walki Holding Oy Overview	
Established	1930
Annual Sales	€705 million (¥111.4 billion FY2022)
Business Activities	Manufacturing and sales of coating on paper, lamination, printing and other processing
Location	Espoo city, Finland
Manufacturing Sites	17 plants in 8 countries mainly in Europe
Number of Employees	Approx. 1,700

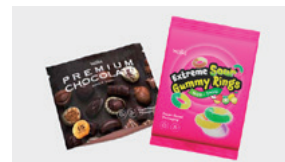
* Packaging and Packaging Waste Regulations (PPWR): EU regulation for a 50% recycling rate for packaging materials by 2025. Binding targets are proposed for the recycling rate for each material (85% by the end of 2030 for paper and cardboard).

▶ [Sustainable packaging / Packaging and Packaging Waste Regulation \(in Japanese only\)](#)

Walki's Three Businesses Areas

Consumer packaging

Recyclable paper packaging materials
with barrier properties for food and
FMCG*¹ products



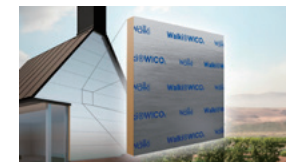
Industrial packaging

Environmentally friendly paper packaging
for industrial products (e.g., functional
corrugated container)



Engineered materials

High-performance heat insulators for the
construction industry, automotive skin,
etc.



Walki has a competitive advantage in barrier paper packaging for direct food contact, applying a special coating to form an ultra-thin barrier layer on the paper. This ensures the necessary product protection while allowing brand owners to achieve fully recyclable paper packaging. Paper products processed with Walki's technologies are used by many leading European brand owners in a wide range of applications, mainly for food products. The Company is steadily increasing its share in the European environmentally friendly packaging material market.

The combination of Oji's barrier technologies and Walki's advanced technical lamination will accelerate the development of environmentally friendly fiber-based solutions.

*¹ FMCG: Fast Moving Consumer Goods

Business Promotion for Environmentally Friendly Paper Packaging

The implementation of packaging material regulations, which first took effect in Europe, is expected to reach Asia, India, and Oceania, where the Group's principal business bases are located, in earnest by 2030.

In anticipation of growing demand for reducing plastic use for container packaging, Oji Holdings invested in Deluxe Technology Group Co., Ltd., a high-end molded pulp packaging equipment and product manufacturer in Taiwan, in June 2024, and acquired global sales rights for Deluxe's products and equipment. The Oji Group will leverage Deluxe's manufacturing technology to produce premium quality sustainable packaging for a wide range of applications as an alternative to plastic molded products, particularly for electronics, cosmetics packaging, and food containers, which require rigid quality standards.

We will incorporate the industry-leading expertise of various companies into our packaging business. This includes the base paper conversion technologies of Walki that comply with the relevant EU regulations and the production technology capabilities of Deluxe that have earned the support of numerous global brand owners. In putting in place a business structure that spans a broad upstream (raw materials) to downstream (packaging materials conversion) range, we will lead the global market as a total packaging provider of sustainable materials.

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Liquid Packaging Carton Business

Chilled Business

In the field of chilled cartons the establishment of a joint venture, Ishizuka-Oji Paper Packaging Co., Ltd., has enabled the Oji Group to achieve a fully integrated production system within the Group, covering the entire process from manufacturing base paper to carton conversion. We consistently supply high-quality products to customers in Japan and overseas.



Chilled cartons manufactured
using base paper by the
Oji Group

Aseptic Business

In 2023, Oji Holdings acquired IPI S.r.l. (Italy) in the field of aseptic packaging cartons, which can be stored for an extended period at room temperature. IPI S.r.l. manufactures and sells converted paper and filling machines for aseptic packaging and has customers mainly in Europe, Africa, and the Middle East.

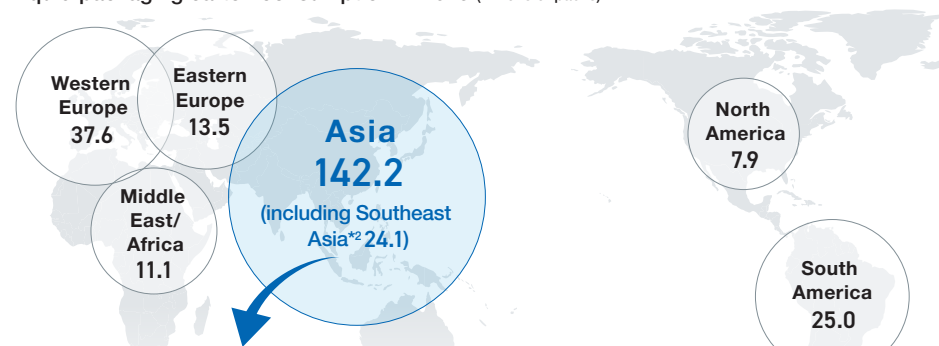


IPI S.r.l.'s filling machine

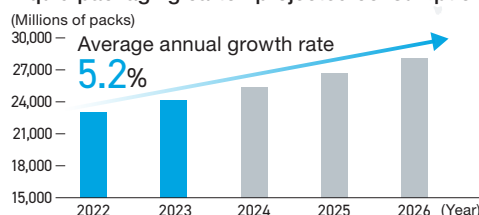


IPI S.r.l.'s aseptic product
lineup

Liquid packaging carton consumption in 2023 (Billions of packs)*1



Liquid packaging carton projected consumption*3 in Southeast Asia*2



*1 Company aggregate value

*2 Scope of countries covered: Indonesia, Malaysia, Vietnam, Thailand, the Philippines, and Singapore; includes total consumption by major users in these countries.

*3 Actual data up to 2023; forecasts from 2024 onward

Expanding into Southeast Asia

Against the backdrop of growing global demand for liquid packaging carton, we are aiming to establish a production system, including setting up a new base, and strengthen sales activities in Southeast Asia. We anticipate substantial market growth in the region and are committed to expanding the chilled and aseptic businesses.

Product Development That Anticipates Needs

As for the aseptic business, we will develop and propose products that align with global environmental regulatory trends. Leveraging the Group's technological capabilities, this includes high-performance filling systems and environmentally friendly aluminum-less cartons that are easy to recycle. Through these efforts, we aim to contribute to the realization of a sustainable society.

Creating New Businesses through Start-up Collaborations

Oji Holdings is targeting net sales of more than ¥2.5 trillion under its Long-term Vision. To achieve this target, we are working to develop new materials and products from forest resources and to evolve our business through the structural transformation of our portfolio. We are also promoting the creation of an open innovation mechanism in collaboration with start-ups in Japan and overseas and are striving to create new businesses. By combining Oji's technologies, equipment, and resources with start-up companies' development technologies, we will acquire technologies in new areas and speed up the timeline from development to commercialization.

In kicking off these endeavors, we invested ¥500 million in the UMI III Fund, a venture capital fund specializing in the materials and chemical industries. Our goal is to create new businesses that leverage the resources of the Group through collaboration with start-ups and academia. Moreover, we will promote the development of human resources who are capable of promoting this activity by utilizing the secondment acceptance program provided by UMI.

