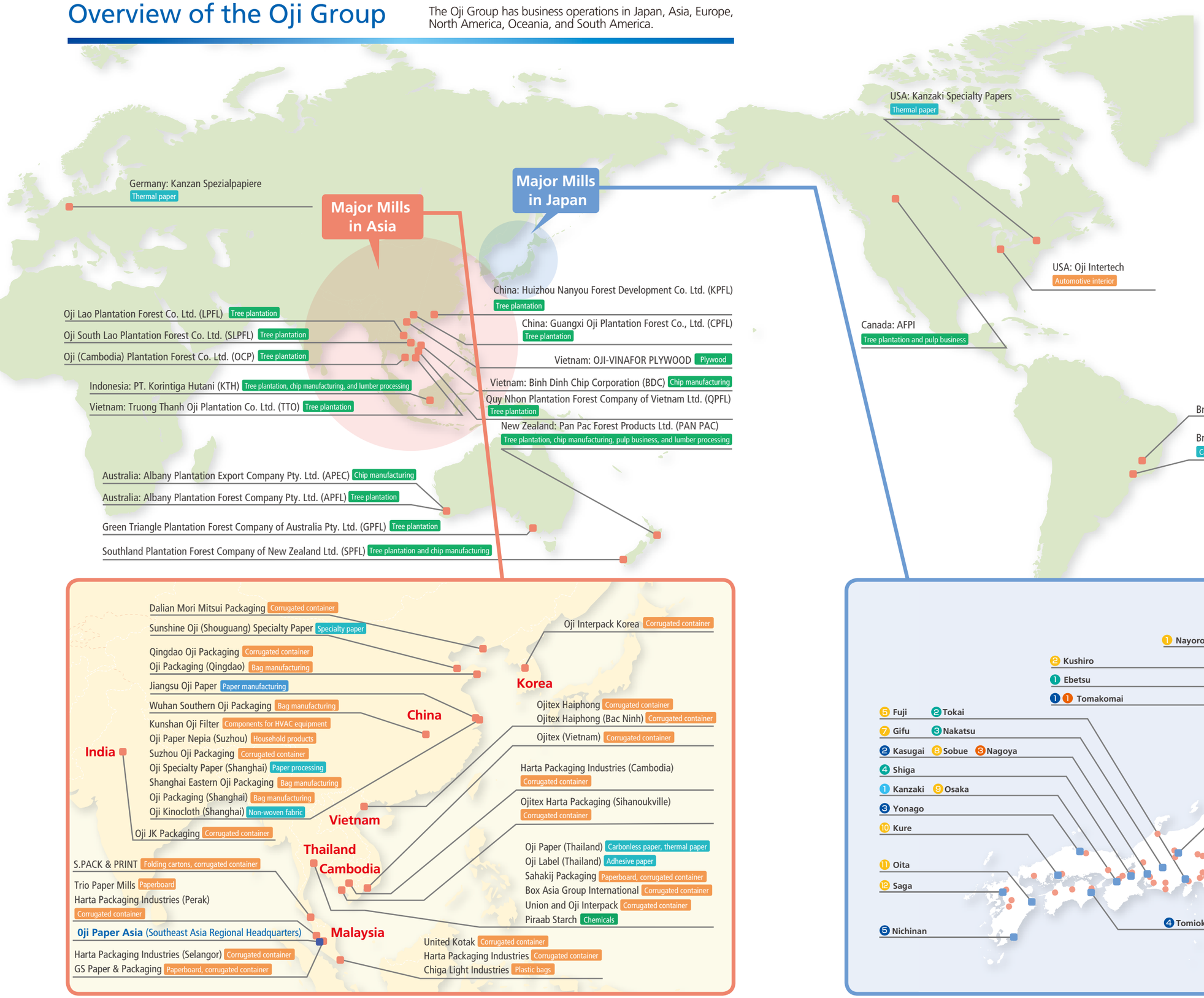
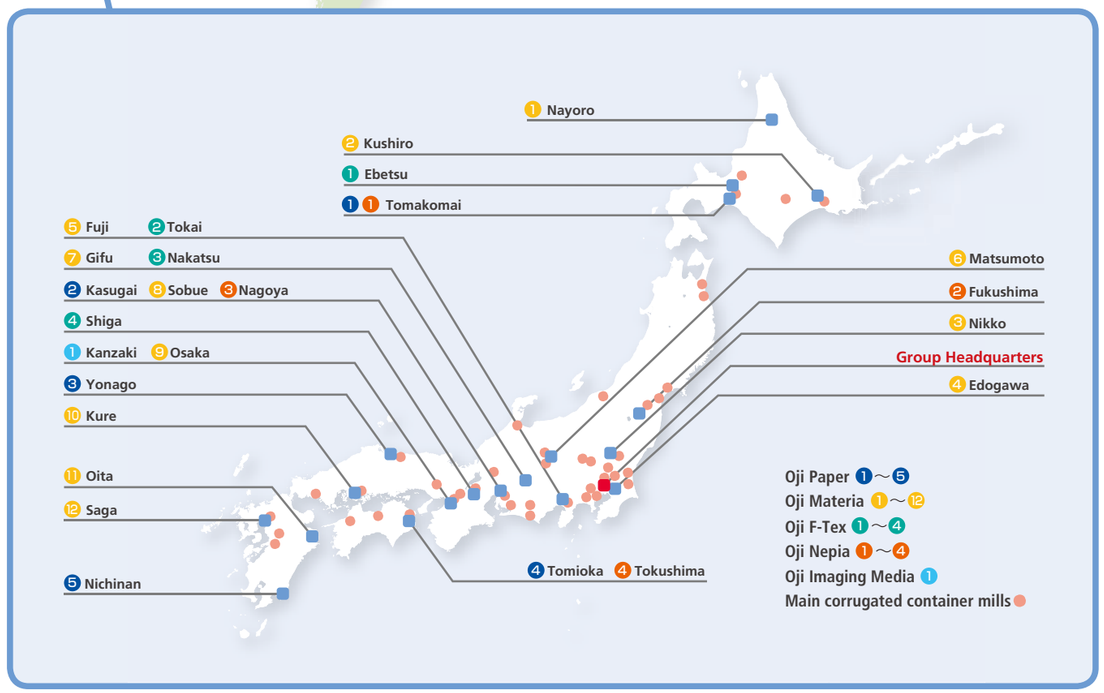
Overview of the Oji Group

The Oji Group has business operations in Japan, Asia, Europe, North America, Oceania, and South America.



Overview of the Oji Group (as of March 31, 2013)

Name	: Oji Holdings Corporation
Paid-in Capital	: ¥103,880 million
Headquarters	: 4-7-5 Ginza, Chuo-ku, Tokyo 104-0061, Japan
Established	: February 12, 1873
Director	: Kiyotaka Shindo, President and Chief Executive Officer
No. of Consolidated Subsidiaries	: 156 (86 in Japan, 70 overseas)
No. of Employees	: 27,360 on a consolidated basis (17,474 in Japan, 9,886 overseas)



Major Group Companies

Oji Holdings Corporation

Corporate Governance Division, Research & Development Division

Household and Industrial Materials Company

Boxboard, Packaging Materials and Containerboard
Folding Cartons, Paper Bags and Corrugated Containers
Household Products

Operating Companies in Japan

- Oji Nepia
- Oji Package Innovation Center
- Oji Materia
  - Hokuyo Shiko, Saga Paperboard, Kure Oji Shigyo, Shin Nippon Feather Core
- Oji Packs Partners
- Oji Container*
  - Musashi Oji Container, Nihon Seika Hoso, Kyodo Shiko, Wakayama Oji Container, Kansai Pack, Honshu Rheem
- Mori Shigyo Group*
  - Mori Kamihanbai, Hokkaido Mori Shigyo, Tohoku Mori Shigyo, Sendai Mori Shigyo, Niigata Mori Shigyo, Hitachi Mori Shigyo, Gunma Mori Shigyo, Hokuriku Mori Shigyo, Oi Paper, Nagano Mori Shigyo, Tokai Mori Shigyo, Shizuoka Mori Shigyo, Tottori Mori Shigyo, Shikoku Mori Shigyo, Kyushu Mori Shigyo, Aipax, Fuji
- Oji Interpack*
- Oji Packaging*
  - Oji Packaging Seibu
- Kyushu Packaging*
- Oji Seitai*
- Oji Adba*

*Subsidiaries of Oji Packs Partners

Operating Companies Outside Japan

- Oji Paper Nepia (Suzhou)
- Ojitex (Vietnam)
- Ojitex Haiphong
- Oji Interpack Korea
- Suzhou Oji Packaging
- Oji Intertech
- Oji Packaging (Shanghai)
- Oji Packaging (Qingdao)
- Wuhan Southern Oji Packaging
- Shanghai Eastern Oji Packaging
- Kunshan Oji Filter
- Union and Oji Interpack

Printing and Communications Media Company

Newsprint
Printing and writing paper
Communication paper

Operating Companies in Japan

- Oji Paper
  - Tomakomai Oji Shigyo, Tomakomai Kyowa Service, Tomioka Oji F & L, Nichinan Oji Shigyo, Oji Futo, Oji Shigyo, Yonago Oji Shigyo, Tomakomai Oxygen, Kikkou Tsuun

Operating Companies Outside Japan

- Jiangsu Oji Paper
- Oji Paper Trading (China)

Functional Materials Company

Imaging media
Specialty paper
Adhesive products, functional film

Operating Companies in Japan

- Oji F-Tex
  - Ebetsu Oji Shigyo
- Oji Imaging Media
  - Kanzaki Oji Shigyo
- Oji Functional Materials Processing Center
- Oji Tac
- New Tac Kasei
- Oji Kinocloth
- Shinomura Chemical Industry

Operating Companies Outside Japan

- Oji Specialty Paper (Shanghai)
- Kanzaki Specialty Papers
- Kanzan Spezialpapiere
- Oji Paper (Thailand)
- Oji Label (Thailand)
- Oji Papéis Especiais
- Oji Kinocloth (Shanghai)
- Sunshine Oji (Shouguang) Specialty Paper

Forest Resources and Environment Marketing Company

Lumber and tree planting
Pulp
Renewable energy
Raw materials and fuel

Operating Companies in Japan

- Oji Green Resources
  - Oji Green Energy Shiranuka, Oji Green Energy Nichinan, Oji Green Energy Ebetsu
- Oji Forest & Products
- Oji Ecomaterial
- Oji Trading
- Japan Brazil Paper and Pulp Resources Development
- Oji Saito Shigyo Paper
- Kyokushin Shigyo

Operating Companies Outside Japan

- Pan Pac Forest Products (PAN PAC)
- Celulose Nipo-Brasileira (CENIBRA)
- Alpac Forest Products (AFPI)
- Oji Paper International Trading (Shanghai)
- Southland Plantation Forest Company of New Zealand Ltd. (SPFL)
- Albany Plantation Forest Company Pty. Ltd. (APFL)
- Albany Plantation Export Company Pty. Ltd. (APEC)
- Quy Nhon Plantation Forest Company of Vietnam Ltd. (QPFL)
- Binh Dinh Chip Corporation (BDC)
- Green Triangle Plantation Forest Company of Australia Pty. Ltd. (GPFL)
- Guangxi Oji Plantation Forest Co., Ltd. (CPFL)
- Huizhou Nanyou Forest Development Co. Ltd. (KPFL)
- Oji Lao Plantation Forest Co. Ltd. (LPFL)
- Oji South Lao Plantation Forest Co. Ltd. (SLPFL)
- PT. Korintiga Hutani (KTH)
- Truong Thanh Oji Plantation Co. Ltd. (TTO)
- Oji (Cambodia) Plantation Forest Co. Ltd. (OCP)
- OJI-VINAFOR PLYWOOD
- Piraab Starch

Corporate Management Group
(including independent operating companies)

Operating Companies in Japan

- Oji Management Office
- Chuetsu
- Oji Cornstarch
- Apica
- Oji Real Estate
- Kyokuyo Pulp & Paper
- Ginpo Pack
- Fujikako
- Oji Hall
- Oji Paper Insurance Service
- Hotel New Oji
- Yupo Corporation
- Maruhiko Watanabe Construction
- Kokusai Pulp & Paper

Operating Companies Outside Japan

- Oji Paper Management (Shanghai)
- Oji Paper Asia
- GS Paper & Packaging
- United Kotak
- Harta Packaging Industries
  - Harta Packaging Industries (Cambodia)
  - Harta Packaging Industries (Selangor)
  - Harta Packaging Industries (Perak)
  - Trio Paper Mills
  - Ojitex Harta Packaging (Sihanoukville)
  - Chiga Light Industries
- S.PACK & PRINT
  - Sahakij Packaging
- Box Asia Group International
- Oji JK Packaging

Shared Service Companies

Operating Companies in Japan

- Oji Engineering
  - Oji Koei Chubu, Oji Koei Hokkaido
- Oji Logistics
- Oji Business Center

Management Strategy

We are making a great leap forward into the future under the branding slogan "Beyond the Boundaries."

Completion of Business Portfolio Restructuring with the Goal of Achieving Sustainable Growth

In its long 140-year history, the Oji Group has been astutely adapting to various changes in the business environment and has continued to be the leading company in Japan, the third largest paper and paperboard market in the world. More recently, while the markets in Asian countries continue to grow, the societal and business environment in Japan surrounding the paper manufacturing industry is undergoing major changes due to structural factors such as advances in information and communications technology, as well as an aging population and declining birthrate. To ensure that the Oji Group achieves sustainable growth, we have set "Completion of Business Portfolio Restructuring through Reform" as our basic management policy and are pursuing measures that allow us to flexibly and quickly respond to changes in the management environment.

Specifically, by implementing the six basic measures—growth through incubation of R&D-orientated business, expansion of overseas business, establishment of a material- and process-integrated business model, promotion of forest resources and environment marketing, enhancement of trading business, and enhancement of global competitiveness through aggressive cost reduction—we will minimize the amount of management resources to be allocated to existing business operations in Japan, limiting them to those necessary for renewal and cost-cutting measures. Meanwhile, we will selectively invest our management resources such as capital and human resources in segments important to our business portfolio restructuring, such as overseas business, R&D, new functional materials business, forest resources and environment marketing and downstream business.

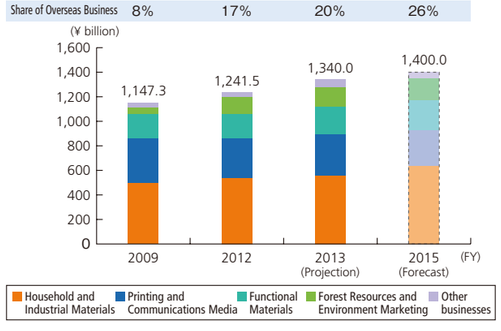
As for our businesses in Japan, we will continue to work on restructuring our production systems in response to changes in the demand structure in the printing and communications media business and corrugated container-related business. Meanwhile, we will expand and strengthen our other businesses, i.e., the household and industrial materials business, functional materials business, and forest resources and environment marketing, in order to strengthen the earnings basis of our existing businesses and develop new products and businesses.

As for our overseas business, we will accelerate expansion of businesses in high-growth countries and resource-rich countries. Through aggressive business expansion based on M&A, etc., we are aiming to achieve overseas sales of 25% or more in the future.

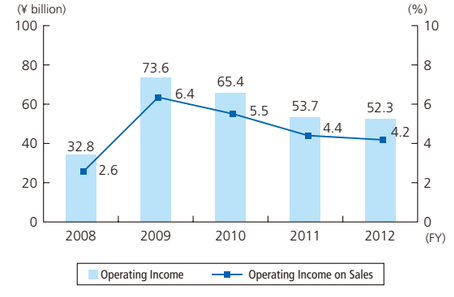
Under the umbrella of Oji Holdings Corporation, which became a pure holding company as of October 1, 2012, the Oji Group has clarified the management responsibility of each business group and is striving to maximize the corporate value of the entire group.

As a corporate group having at its core a household and industrial materials business, printing and communications media business, functional materials business, and forest resources and environment marketing, we will promote business portfolio restructuring even more strongly, with the goal of achieving operating income of at least ¥100 billion and net income of at least ¥50 billion.

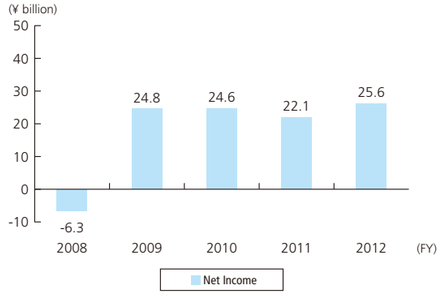
Sales by Business



Operating Income, Operating Income on Sales



Net Income



Amount Invested in Business Portfolio Restructuring

(Cumulative Total for FY2010 through FY2012)

1. Household and Industrial Materials Business	¥50 billion
2. Functional Materials Business	¥40 billion
3. Forest Resources and Environment Marketing	¥100 billion

By-region Details	
Japan	¥40 billion
Overseas	¥150 billion

By-project Details	
Completed	¥160 billion
In progress	¥30 billion

*Cumulative total for FY2010 through FY2012

Household and Industrial Materials Business — Actual investment* ¥50 billion

Paper Diaper Business

Adult tape-type paper diaper

January 2013 Began operation of new plant [Oji Nepia Fukushima Personal Care Plant]

Overseas Business

April 2010	Acquired paperboard maker GSPP	[Malaysia]
February 2011	Acquired United Kotak.	[Malaysia]
March 2011	Acquired folding carton maker S. Pack	[Thailand]
August 2011	Acquired Harta	[Malaysia and Cambodia]
October 2012	Acquired Box Asia	[Thailand]
October 2012	Established a corrugated container company (*Mill operation scheduled to start in July 2014)	[India]
March 2013	Began operation of new corrugated container mill	[Harta, Cambodia]
May 2013	Began operation of new corrugated container mill	[Ojitex, Haiphong, Vietnam]
July 2013	Began operation of new bag manufacturing mill	[China (Qingdao and Wuhan)]

Earthquake Disaster Recovery Business

Summer 2014 Facility enhancement planned [Oji Container Fukushima Mill]

An architectural rendering of the mill (Oji JK Packaging, India)

Functional Materials Business — Actual investment* ¥40 billion

Functional Materials Business

Thin film for capacitors

April 2013 Began operation of new facility [Oji F-Tex Shiga Mill]

Film and adhesive sheeting for smartphones

April 2013 Enhanced facility [New Tac Kasei Toyonaka Mill]

December 2013 Facility enhancement planned [Oji Tac Utsunomiya Mill]

Specialty Paper

Enhancements to specialty paper facility (release paper, oil-resistant packaging paper, etc.)

April 2013 Began operation of speciality paper facility [Oji F-Tex Ebetsu Mill]

Overseas Business

September 2011	Acquired Oji Papéis Especiais (OPE) (thermal paper business)	[Brazil]
October 2011	Added adhesive laminator	[OLT, Thailand]
October 2012	Established Sunshine Oji (Shouguang) Speciality Paper joint venture	[China]
March 2014	Thermal paper facility enhancement planned	[OPE, Brazil]

Thin film for capacitors (Oji F-Tex Shiga Mill)

Resources and Environment Business — Actual investment* ¥100 billion

Electrical Power business

Biomass power generation

March 2015	New facility to begin operation	[Oji Materia Fuji Mill]
	Same as above	[Oji Paper Nichinan Mill]
July 2015	Same as above	[Oji F-Tex Ebetsu Mill]

Hydroelectric power generation

November 2015	Enhancement work to be completed	[Chitose and Shiribetsu, Hokkaido]
April 2016	Enhancement work to be completed	[Higashibara and Kumakubo, Shizuoka]

Photovoltaic power generation

September 2013 Began operation of new facility [Shiranuka-cho, Hokkaido]

Biorefinery Business

March 2014 New facility to begin operation [Oji Paper Yonago Mill]

Overseas Business

June 2012	Made CENIBRA a subsidiary (pulp business)	[Brazil]
July 2012	Began operation of BC-TMP production facility	[PANPAC, New Zealand]
October 2012	Established OJI-VINAFOR PLYWOOD (plywood manufacturing business)	[Vietnam]

New photovoltaic power generation facility (Oji Green Resources / Shiranuka, Hokkaido)

Household and Industrial Materials Business

We will strengthen our profitability further by focusing on creating the value sought after by our customers and standing by our customer-first motto.

Ryoji Watari
President
Household and Industrial Materials Company

Business Strategy

[Business Strategy in Japan]

In the industrial material business, the paper processing departments are working with materials manufacturing departments to enhance and reorganize departments in Japan in order to provide on-stop shopping to our customers. By making comprehensive suggestions that embody the value sought after by our customers, we are aiming to make great strides as a total packaging company. We are also taking steps to strengthen our competitiveness by restructuring our production structure, such as deciding to enhance the capacity of Oji Containers' Fukushima Mill, announced in April 2013.

In our household materials business, which handles household products and paper diapers, every one of us is carrying out all business activities with the full awareness that our business depends on our ability to supply consumer goods and that customers come first. In our paper diaper business, we are strengthening our product brands by, for example, starting the Oji Nepia Fukushima Personal Care Plant, based on accurate assessment of market needs.

[Overseas Business Strategy]

Outside Japan, our packaging business has acquired five companies since 2010. Furthermore, our new corrugated container mills began operation in Cambodia in March 2013 and in Vietnam in May 2013. In 2014, a new corrugated container mill will begin operation in India.

We will continue to expand our business size, especially in Southeast Asia and India, through M&A or construction of new mills depending on each situation.

Oji Nepia Fukushima Personal Care Plant

Main Businesses

Industrial Materials Business
[Boxboard, Packaging Materials and Containerboard]

The Oji Group retains a leading share of the Japanese market for three paper types, demonstrating the market trust we have earned over the years. This market includes: boxboard, which is used for food and confectionery packaging and coversheets of publications; packaging paper, which is used in shopping bags, envelopes, rice, wheat, barley and cement bags; and containerboard.

[Folding Cartons, Paper Bags and Corrugated Containers]

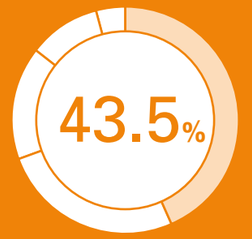
Product packaging has evolved with the times and now demands such value added features as design, functionality and environment performance. As a total packaging company that engages in every step of the value chain from materials manufacturing to design and assembly, we take a customer-centric approach to continually provide better products to customers across Japan through our extensive network.

Copyright : Yanase F·T·N

Household Materials Business
[Household Products and Paper Diaper Business]

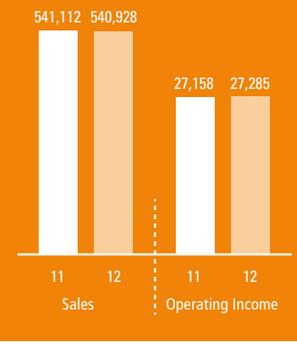
We deliver household paper products to consumers, such as tissue, toilet paper and paper diapers, under the well-known Nepia brand. Under the slogan, "Kind Heart Nepia," we provide products beloved by all ages to help consumers lead a comfortable lifestyle.

Sales by Business



Sales
¥540,928 million

Operating Income
¥27,285 million



In Focus

We made the decision to enhance the Oji Container Fukushima Mill, a prominent corrugated container mill in the southern Tohoku district.

Oji Container Fukushima Mill, located in Date City, Fukushima Prefecture, has been carrying out operations rooted in the local community for approximately 40 years. Since the Great East Japan Earthquake, the production level at the mill has been increasing significantly, partly to make up for lost production at the disaster-damaged Sendai Mill (Tagajo City, Miyagi Prefecture). Therefore, we decided to expand buildings in the Fukushima Mill site and carry out a project to add to and enhance the existing production equipment.

This project will substantially strengthen the infrastructure of the Fukushima Mill in terms of both quality and quantity, allowing the Mill to make significant contributions to the regional economy and local communities in Date City, Fukushima Prefecture and the Tohoku region as a whole, as a prominent corrugated container mill in the southern Tohoku district.

An architectural rendering of the New Fukushima Mill

[Overview of the New Fukushima Mill following enhancement]

Location	Inside the existing Fukushima Mill site (No. 100, Higashi-Nozaki, Hobaramachi, Date City, Fukushima Prefecture)
Approximate site area	60,000m²
Total floor area	Approximately 38,000m²
Major investment	Production equipment (gluing machines and carton formers), building expansion, photovoltaic power generation system, etc. The plant is laid out in a safety- and environment-conscious way and includes a visitor tour route.
Total investment	Approximately ¥6.5 billion
Operation start date	Planned for the summer of 2014 (The enhancement project will be carried out while operation continues with existing equipment.)
Remarks	This project has been approved by the Fukushima Industrial Recovery Corporate Location Fund.

Printing and Communications Media Business

We will modify our business portfolio to respond to the maturation of the Japanese market and the integration of East Asia markets.

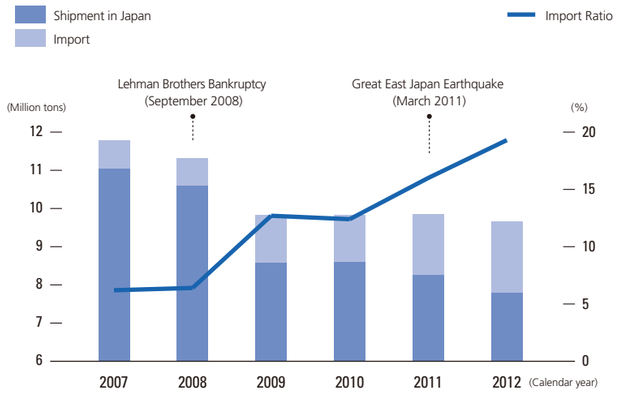
Kazuo Fuchigami
President
Printing and Communications Media Company

Business Strategy

The Japanese market is forecast to continue shrinking due to structural factors such as advances in information and communications technology, as well as an aging population and declining birthrate. The Japanese market will also be increasingly integrated with the Asian market, making strengthening of our competitiveness in the international market an urgent issue. Under this harsh environment, we will enhance our international competitiveness by continuing to build an optimized production structure and overhauling our cost structure.

We have been working to build an optimized production structure. For example, between fiscal 2008 and 2012, we stopped 14 paper machines and changed the product type on one machine. We will continue with these optimization efforts and implement all necessary measures while carefully monitoring on demand trends.

Demand for Printing and Communications Paper and Import Ratio Trends



Data source: Japan Paper Association

We will implement bold restructuring measures in response to the declining demand in Japan and implement fundamental earning improvement measures.

- Stopped 14 paper machines. (Between fiscal 2008 and 2012)
- Production termination of low-margin products Shift to high-margin products
- Integration and reorganization of Oji Group businesses

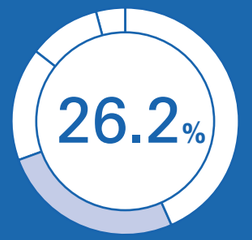
Main businesses

[Newsprint]
Newsprint has the strength to undergo the rigors of high-speed rotary printing and provides a beautiful finish for color printing. The Oji Group retains a 30% share of the Japanese market and continually strives to improve quality to meet the demands of newspaper companies throughout Japan.

[Printing and Writing Paper]
Publication paper used for books and magazines and printing paper for catalogues and manuals require varying levels of quality depending on the publication, contents, and specifications of the printer. The Oji Group strives to develop products that meet the needs of today and is expanding its lineup to fulfill the expectations of its customers.

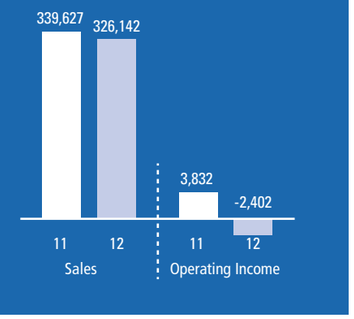
[Communications Paper]
In addition to our existing products, such as conventional form paper, carbonless paper, and plain paper copier (PPC) paper, we have developed high-performance printing paper for printing on demand (POD). Our paper is widely used by countless industries and sectors as printing media for information processing systems.

Sales by Business



Sales
¥326,142 million

Operating Income
-¥2,402 million



In Focus

Notebooks for People who Like Paper with Superb Writability

Our Premium C.D. NOTEBOOK features ultra-smooth "A.Silky 865 Premium" paper, jointly developed by Oji Paper and Apica[*1] in an effort to encourage users to select paper based on writability just as they choose pens based on writability. This paper offers a silky smooth feel when written on with a fountain or ballpoint pen. We also gave special attention to the binding method used for this notebook, adopting thread binding, which makes it easy to open. The resulting high performance helped the Premium C.D. NOTEBOOK win an award under the Function Category at the 21st Stationery of the Year Awards[*2] 2012.

*1 : Apica
Apica is an integrated paper stationery manufacturer in the Oji Group engaged in a wide range of businesses, from school supplies such as notebooks and workbooks to office and hobby supplies.
*2 : Stationery of the Year Awards
The largest stationery award in Japan. Every year, products that win awards create popular trends in stationery, producing many hit products in Japan.

A 2012 Event at the Ito-Ya Main Shop

Functional Materials Business

We will focus our management resources on business portfolio restructuring, create a development-focused business model where we develop new customer-centric products and technologies and cultivate new businesses leveraging our core technologies.

Takeshi Azuma
President
Functional Materials Company

Business Strategy

[Business Strategy in Japan]
In Japan, we will proactively invest our management resources in products with high added value and high-growth segments, and aim to achieve growth by forming an R&D-focused business through development of new technologies and materials.

Recently, we have enhanced our facilities for producing the polypropylene film for capacitors used in hybrid vehicles at the Oji F-Tex Shiga Mill, as well as facilities for producing film and adhesive sheeting for smartphones at New Tac Kasei.

We successfully produced the world's first continuous transparent sheeting of cellulose nanofibers.

We will strive for expansion by executing R&D-focused business, which forms the core of our efforts to restructure our business portfolio.

[Overseas Business Strategy]
Internationally, our company owns many production sites, including Oji Papéis Especiais (Brazil), which is planning to enhance its facility in preparation for expansion of demand; Kanzaki Specialty Papers (U.S.A.); Kanzan Spezialpapiere (Germany); and Oji Paper (Thailand), making us a world leader in the imaging media field, which includes thermal paper.

Additionally, we established Sunshine Oji (Shouguang) Specialty Paper, a joint venture with a local company, in Shouguang City, Shandong Province, China, and in October 2013 began production and sales of specialty paper for construction applications.

By adding Sunshine Oji (Shouguang) Specialty Paper to international sites, which have been primarily focused on the imaging media business, we are aiming to further enhance our functional materials business and improve our competitiveness.

Coating machine scheduled for enhancement (Oji Papéis Especiais)

Main business

[Imaging Media]
The Oji Group's thermal paper retains a leading market share internationally.

Using the diverse coating technologies for thermal and inkjet applications we have nurtured over many years, we are developing a wide range of communications papers and films that fulfill the varying needs of households, industries, logistics and medicine.

[Specialty Paper]
We carry is combined with resin to a wide range of advanced specialty papers. These include printing thin paper for dictionaries, highly expressive fancy paper, electronic material papers such as insulation for high capacity inverters, dried pulp non-woven fabric that is bulky and high in water retention, and glass paper used in construction materials and fiber-reinforced plastic (FRP) that provides highly stable dimensions and heat resistance.

[Adhesive Products]
Using our long-standing proprietary adhesive control technologies, we have developed an extensive lineup of products that spans everything from food and beverage labels and home delivery service labels, to adhesive tape for packaging, adhesive plaster, aluminum tape for construction applications, and tamper-resistant tape.

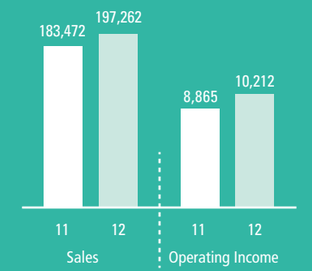
[Functional Film]
Our capacitor films are important materials used on the power supply unit of hybrid and electric vehicles, and our lineup starts from the world's thinnest at 2.5 µm.

Our optical clear adhesive and anti scattering film used in such devices as smartphones and tablets have seen rapid growth as of late.

Sales by Business

Sales
¥197,262 million

Operating Income
¥10,212 million



In Focus

World's First Continuous Transparent Sheeting of Cellulose Nanofibers.

Through a joint research project with Mitsubishi Chemical Corporation, we successfully produced the world's first continuous transparent sheeting of cellulose nanofibers in March 2013.

Cellulose nanofibers are produced by unraveling pulp (wood fibers) into nanoscale fibers. The newly developed system for manufacturing continuous transparent sheeting at approximately a 4 nanometer scale (4/million mm) uses Oji Group paper-making and sheeting technologies.

Promising applications for this lightweight and foldable sheet include large-size displays that can be unfolded when needed and solar cells.

Furthermore, compounding the sheet with a resin adds other beneficial characteristics, such as minimal shrinkage associated with temperature changes, durability, and flexibility, without losing the resin's transparency. Potential applications can be found in the electronics, transportation equipment, building materials, and medical fields.

Utilizing the newly developed continuous sheeting system, both companies plan to take steps toward the commercialization of cellulose nanofibers, with an eye toward developing a wide variety of applications.

Transparent sheet

Resin compound enhanced film

Forest Resources and Environment Marketing

The Oji Group will make full use of the forest resources it owns both in Japan and overseas as well as its long-standing proprietary paper manufacturing-related technologies to aggressively expand existing businesses and enter into new segments.

Gemmei Shimamura
President
Forest Resources and Environment Marketing Company

Business Strategy

[Business Strategy in Japan]
With a plan to start operation in March 2015 or later, we will build three biomass power generation plants , one each at Oji Materia, Oji Paper, and Oji F-Tex. In Hokkaido, we will remodel the hydroelectric power generation plants on the Chitose and Shiribetsu rivers. Additionally, in September 2013, we began operating a photovoltaic power generation plant in Shiranuka-cho, Hokkaido. In these ways, we are further expanding our electrical power businesses utilizing renewable energy sources, such as biomass fuel, hydropower, solar power, and wind power. We will also accelerate new businesses such as a biorefinery business (dissolving pulp and furfural)

In our agribusiness, we established Oji Granpa, a joint venture, in July 2013, commencing full-scale operation.

We plan to build six vegetable factories at the former site of the Forest Resources Research Center in Kameyama City, Mie Prefecture to start growing leafy vegetables, with the first shipment planned for February 2014.

With this project as a foothold for our entry into agribusiness, we plan to expand our business in this field.

[Overseas Business Strategy]
Internationally, we will expand our lumber-processing business by utilizing plantation trees, and strengthen our pulp business, especially in Brazil and New Zealand.

Currently, we are expanding our business primarily utilizing plantation trees from company-owned plantations, and plan to begin operating a plywood manufacturing mill in northern Vietnam.

In Focus

Expanding Renewable Energy Business

In addition to hydropower and solar power generation, we are driving forward our electrical power business based on biomass power generation that takes advantage of Oji Group's fuel procurement channels and operation expertise.

We plan to install biomass boilers at Oji Materia Fuji Mill and Oji Paper Nichinan Mill (with operation start planned for March 2015). We also decided to install a biomass boiler at Oji F-Tex Ebetsu Mill, located in Hokkaido where lumber resources are abundant (with operation start planned for July 2015).

All of these boilers will use woody materials, such as thinned timber (which have not been utilized until now) and low-quality timber, as their primary fuels, helping to preserve forests in Japan and revitalize forestry.

Biomass Power Generation Biomass Boiler Installation

Oji Materia Fuji Mill

Operation start	March 2015
Amount of electricity to be sold	105 GWh/year
Generation capacity	36MW

Oji Paper Nichinan Mill

Operation start	March 2015
Amount of electricity to be sold	150 GWh/year (enough to power 40,000 homes)
Generation capacity	25MW

Oji F-Tex Ebetsu Mill

Operation start	July 2015
Amount of electricity to be sold	150 GWh/year (enough to power 40,000 homes)
Generation capacity	25MW

Hydroelectric power generation Facility enhancement

Chitose and Shiribetsu Power Generation Stations, Hokkaido

Completion schedule	November 2015

Higashibara and Kumakubo Power Generation Stations, Shizuoka

Completion schedule	April 2016

Chitose No. 4 power generation station

Photovoltaic power generation Solar panel installation

Shiranuka-cho, Hokkaido

Operation start	September 2013
Amount of electricity to be sold	1.4 GWh/year
Generation capacity	1.3MW

We plan to install solar panels as needed at Group mills, such as Oji Containers Nagano Mill.

Shiranuka-cho, Hokkaido

Main Businesses

[Lumber and Tree Planting]
In the lumber business, we will proactively expand our timber-processing and commodities business through Oji Forest & Products, PAN PAC and KTH.

In the tree planting business (company-owned domestic forests and overseas plantations), we will enhance the value of our plantation trees by increasing sales for high value-added applications outside of pulp, such as lumber.

[Pulp]
We maintain global pulp operations through PAN PAC and CENIBRA, which we made a consolidated subsidiary in fiscal 2012, and are looking to expand our operations going forward.

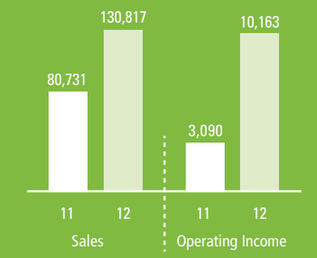
In addition to conventional pulp production, we are also looking to commercialize new pulp applications.

[New Businesses]
We are further expanding our electrical power business that utilizes renewable energy sources, such as biomass fuel, hydropower, solar power, geothermal energy, and wind power. We will also accelerate new businesses such as our biorefinery business (dissolving pulp and furfural) and agribusiness.

Sales by Business

Sales
¥130,817 million

Operating Income
¥10,163 million



Research and Development

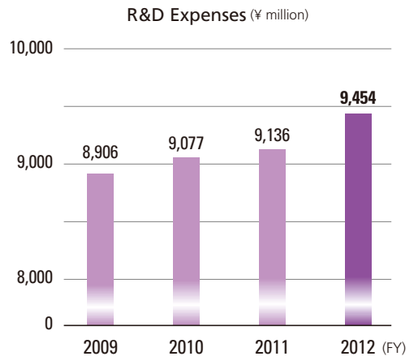
Aiming for growth by incubating R&D-oriented business, the Oji Group will join market needs with R&D seeds for commercialization, utilizing its accumulated technologies to develop new products and technologies for the future.

Key R&D Strategies

① Creation of Future Businesses
We are creating businesses that will contribute to the future. For example, we are using nanoscale fine dot structures to improve the light extraction efficiency of LEDs and organic EL displays, and developing a bioethanol manufacturing technology that uses our unique simultaneous saccharification and fermentation technology.

② Acceleration of New Product Development
Working with the development, manufacturing, and sales departments of Group companies, we are quickly responding to diversifying customer needs, discovering customers' latent needs, and developing proposal-based products that anticipate future needs.

③ Enhancement to Core Technologies
Utilizing our core technologies related to pulp, paper manufacturing, coating, and the environment, we are working to stabilize the quality and operation of existing products at various mills, while reducing cost and strengthening and improving our core technologies.



Research & Development Division

- New Business & Product Development Center
  - Project Planning Office
  - Project Management Office
- Advanced Technology Laboratories
  - Bioethanol Section
- Functional Materials Laboratories
  - Film Research Section
  - Optical Materials Section
- Core Technology Laboratories
  - Printing Section
- Forestry Technology Laboratories
  - Medical Plant Section
- Material Analysis Center
- Intellectual Property Department

Advanced Technology Laboratories
The goal of the Advanced Technology Laboratories is to contribute to the future business of the Oji Group by focusing on the use of nano-structures and creating new added value through the physical or chemical modification of wood materials, while developing new technologies for the future. Specifically, we are developing optical elements and nanofiber cellulose, designed using nano-structures, and conducting bioethanol manufacturing verification tests.

Functional Materials Laboratories
The Functional Materials Laboratories develops new products for the Functional Materials Company and conducts R&D to strengthen its competitiveness. Leveraging the Oji Group's core sheeting and coating technologies, we are developing functional sheets equipped with a wide range of functions, such as specialty fiber sheets created by sheeting various types of specialty fibers, functional films in which specialized functions are added to the film itself, and optical sheets having excellent optical characteristics.

Core Technology Laboratories
The goal of the Core Technology Laboratories is to create and improve core technologies for quality improvement, cost reduction, resource saving, and environmental countermeasures in the areas of pulping, paper manufacturing, and coating. We also leverage Oji Group’ s long-standing technologies to enhance the competitiveness of its existing products, and are developing new products and technologies created from technology development in the existing fields.

Forestry Technology Laboratories
The Forestry Technology Laboratories develops superior clones of trees that are fast growing and can be variously used for lumber, plywood, and pulp for promoting the total forestry business in Southeast Asia. To identify and properly manage superior clone interactions and to quickly discover new superior clones, the Laboratories also develops biomarker technologies and frontline applications through detailed analysis of the genome information of trees.

In Focus

Establishment of the Medical Plant Section

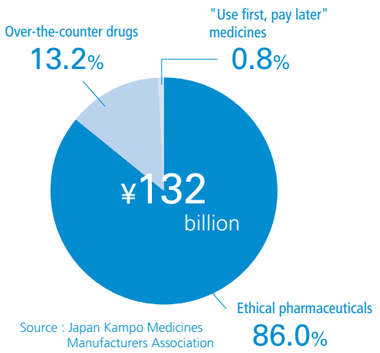
With an eye toward research related to medical plants and future commercialization, we recently established the Medical Plant Section inside the Forestry Technology Laboratories.

Focusing on the fast-growing Chinese herbal medicine market, this new organization is responsible for R&D on medical plants that will be used as ingredients for Chinese herbal medicines.

Up to now, the Oji Group has developed cultivation technologies and selected superior fast-growing, disease/pest-resistant varieties for the plantation trees that become raw material for paper manufacturing. In that process, we have also accumulated technologies and expertise related to tissue culturing and gene analysis.

From now on, we will also apply this knowledge to medical plants that will become ingredients in Chinese herbal medicines, in order to grow through incubating R&D-oriented business.

Chinese herbal medicine production value (fiscal 2011)



Source : Japan Kampo Medicines Manufacturers Association

[Overview of the Medical Plant Section]

Location	Ichinohashi, Shimokawa-cho, Kamikawa-gun, Hokkaido
Research facilities	Farm field (approximately 9,000 m^2), greenhouse (using biomass heat)
Research staff	Three full-time researchers plus one medical plant cultivation specialist invited from outside the Oji Group
Main research goals	Development of original cultivation technologies and acquisition of original seeds and seedlings Application of the Oji Group's long-standing tree-breeding technologies (e.g., DNA markers) to medical plants Joint research with pharmaceutical companies, universities, and research institutes