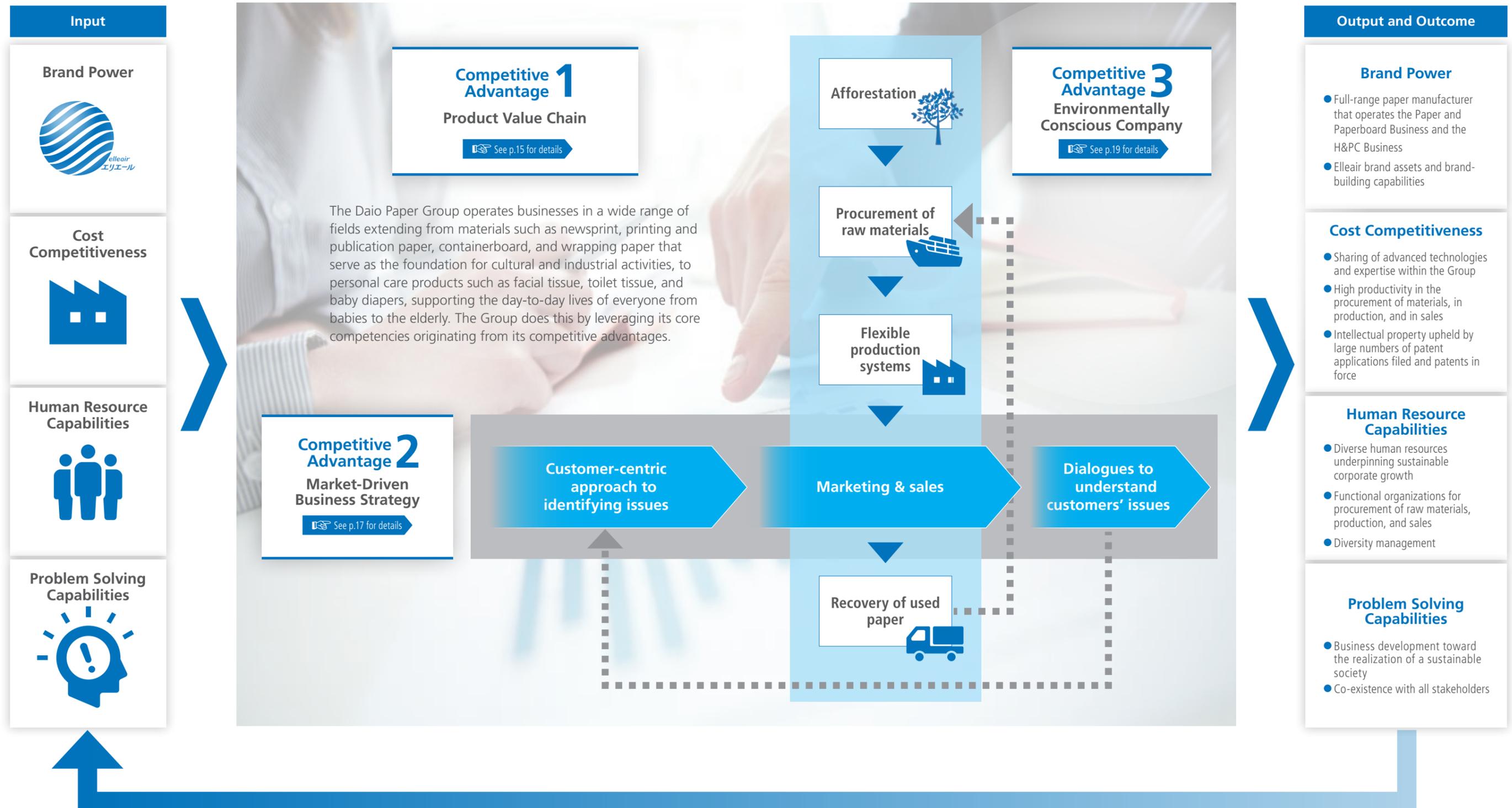


Daio Paper Group's Business Model

The Daio Paper Group, as a full-range paper manufacturer engaged in the manufacture and sale of paper and paperboard as well as home and personal care (H&PC) products, seeks to flexibly respond to changes in societal needs in the wide-ranging fields in which it operates. We conduct research and development and commercialize products that contribute to cultural and industrial development and the improvement of the quality of life.



Daio Paper Through the Years

Competitive Advantage 1 Product Value Chain

Development of a flexible production structure capable of meeting the diverse needs of consumers as a full-range paper manufacturer

1943

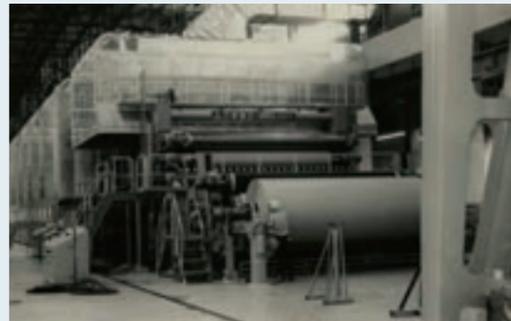
Developed as a newsprint and containerboard manufacturer

Established business foundation

Daio Paper was established in 1943 through the merger of Shikoku Paper Corporation and 13 other paper companies for the purpose of manufacturing and selling washi (traditional Japanese paper).

1973

Built the New Mishima Mill Started operation of the N3 wide trim width newsprint machine and the N1 and N2 linerboard machines



N2 paper machine at the New Mishima Mill

1979

Making a leap forward as a full-range paper manufacturer

Daio Paper completed its foundation as a full-range paper manufacturer in 1979 when it entered the household paper market with the Elleair brand and concurrently increased capacity to improve productivity and ensure a stable supply of a wide variety of papers, such as printing and publication paper and communication paper, in addition to its mainstay newsprint and paperboard products.



1983

Acquired Nagoya Pulp (now Kani Mill)

1989

Established Forestal Anchile LTDA.

See p.20 for details

1996

Established Iwaki Daio Paper Corporation

See p.19 for details

2007

Started operation of the integrated coated paper production facility (N10 machine) at Mishima Mill



N10 paper machine (on-machine coater)

Source of Competitiveness

Mishima Mill accounts for approx. 8% of total paper and paperboard production in Japan

The Mishima Mill, the Daio Paper Group's core paper mill, engages in fully integrated production ranging from pulp to paper and paperboard. Its annual production is approx. 2.1 million tons, or some 8% of Japan's total paper and paperboard production. By combining all types of pulp with a variety of paper machines, Mishima Mill has developed a flexible production and sales structure aligned with market needs.



2007

Acquired the Attento brand disposable adult diaper business from P&G

2011

Global development and multi-category business expansion through local production for local consumption

See p.25 for details

Daio Paper established disposable baby diaper production and sales companies in Thailand, China, and Indonesia.



2011 Thailand (Rayong Province)



2012 China (Nantong City)



2014 Indonesia (Cikarang)

2014

Installed an additional containerboard machine at Iwaki Daio Paper Corporation (Rebuilt and relocated a paper machine from Kani Mill)



N3 paper machine at Iwaki Daio Paper

2017

Acquired the paper products business of Nisshinbo Holdings Inc.

Daio Paper incorporated their household paper products, such as toilet tissue for bidet toilets and the Cotton Feel brand, and fine papers into its product lineup and now offers those high-value-added products nationwide.



2017

Acquired Miura Printing Corporation

2018

Started operation of a new household paper machine at Kawano Mill

2019

Made progress in the development of applications of cellulose nanofiber (CNF)

See p.27 for details

Competitive Advantage 2 Market-Driven Business Strategy

Paper and Paperboard Business

To adapt flexibly to changes in market trends, Daio Paper leverages the strength of its Mishima Mill (Ehime Prefecture), one of the largest coastal paper mills in the world capable of producing a wide range of pulps, paper, and paperboard products, to promote a shift of production and sales mix in its Paper and Paperboard Business. Through the integrated operations of the Group's companies with Mishima Mill at the core, we share technologies and information on improving productivity and reducing energy costs and work to provide high-value-added products and reduce environmental impact.

Maximization of production at Mishima Mill and shift from graphic paper to packaging paper

- 2007** Started operation of the integrated coated paper production facility (N10 machine) at Mishima Mill
- 2014** Relocated the N3 paper machine from Kani Mill to Iwaki Daio Paper and rebuilt it as a containerboard machine
- 2019** Repurposed the N7 paper machine at Mishima Mill as a containerboard machine



N3 paper machine at Iwaki Daio Paper

Shift to high-value-added products through M&A

- 2017** Acquired the paper products business of Nisshinbo Holdings
Acquired Miura Printing Corporation



Miura Printing Corporation

Decarbonization and plastic-free initiatives

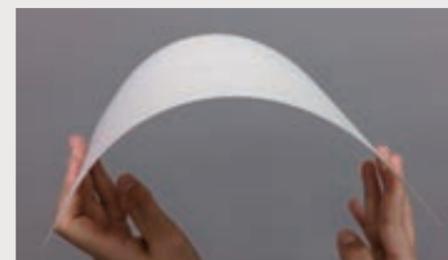
- 2017** Built large-scale warehouses on sites adjacent to main domestic mills
Replaced three woodchip carriers with eco-ships
- 2019** Launched *EliPla* (eliminate plastic) Paper, a high-density heavyweight paper alternative to plastic
[See p.39 for details](#)
- 2020** Plan to start operation of a biomass boiler at Mishima Mill under the FIT scheme



Examples of applications of *EliPla* Paper high-density heavyweight paper

New value creation from wood resources

- 2016** Started operation of a cellulose nanofiber (CNF) pilot plant
[See p.27 for details](#)
- 2017** Developed and offered a range of CNFs in slurry, dry powder, and molded sheet
- 2019** Developed a high-performance table tennis racket using CNF as a component, used CNF as body panels of an electric car



Development of a molded sheet with high CNF content

Home and Personal Care (H&PC) Business

Daio Paper has leveraged newsprint and containerboard papermaking technology to enter the household paper market, and thereafter leveraged B2C marketing expertise gained from selling household paper to enter the market for disposable diapers, feminine care products, wet wipes, and other related products. As a result, now it pursues a unique market-driven business strategy as a manufacturer with a portfolio of both household paper and absorbent products.



Acquired a dominant market share in the household paper category

- 2011** Launched Elleair Zeitaku Hoshitsu lotion tissue
- 2013** Launched Shoshuu+ deodorizing toilet tissue
- 2018** Captured the No. 1 market share in paper category (facial tissue, toilet tissue, kitchen paper)
Tapping a new market: Launched i:na double length toilet tissue



Brand strategy and a shift to high-value-added products through M&A

- 2007** Acquired the Attento brand disposable adult diaper business
- 2017** Acquired the paper products business of Nisshinbo Holdings



Yoru Ichimai Anshin overnight incontinence pads
Shitagai Soukai+ underwear-type adult diapers
Cotton 100% incontinence pads

Securing a stable supply structure through increase in production capacity

- 2016** Started operation of the N8 household paper machine at Kani Mill
- 2018** Started operation of the KN1 household paper machine at Kawano Mill
- 2021** Planned start of operation of the KN2 paper machine at Kawano Mill



KN1 household paper machine at Kawano Mill

Full-scale entry into overseas markets Multi-category business expansion with disposable baby diapers, household paper products, and other products

- 2011** Established Elleair International Thailand Co., Ltd. (EIT) in Thailand (Rayong Province)
- 2012** Established Elleair International China (Nantong) Co., Ltd. (EICN) in China (Nantong City)
- 2014** Established PT. Elleair International Manufacturing Indonesia (EIMI) in Indonesia (Cikarang)
- 2017** Opened a representative office in Turkey
Launched Light Plume ('Guangyu') baby diapers for the ultra premium segment in China
- 2018** Opened a representative office in Russia



Angel ('Tianshi') super premium baby diaper
Light Plume ('Guangyu') ultra premium baby diaper

Daio Paper Through the Years

Competitive Advantage 3 Environmentally Conscious Company

Further evolution into an environmentally conscious company to contribute to the realization of a sustainable, recycling-oriented society

1998

Iwaki Daio Paper Corporation received the "Nikkei Superior Trend-Setting Factories and Offices Award"
 First in the industry to begin manufacture and sale of newsprint made from 100% recovered paper
 Increase of the biomass power generation ratio from 70% to 100% (planned)

2018

Revised the Daio Global Environmental Charter

About Iwaki Daio Paper

High utilization rate of recovered paper and in-house power generation with biomass boilers
 Iwaki Daio Paper began operation in 1997 as a paper mill with the concept of making maximum use of recovered paper from the Tokyo metropolitan area. In 1998, the company became the first in the industry to begin manufacturing and selling newsprint made from 100% recovered paper and it received the Nikkei Superior Trend-Setting Factories and Offices Award from Nikkei Inc.
 Today, Iwaki Daio Paper produces containerboard made from 100% recovered paper in addition to newsprint and uses approximately 50,000 tons of recovered paper monthly. The company also promotes the use of hard-to-recycle recovered paper, such as paper cores. In addition to using biomass as a papermaking raw material, it also plans to increase the ratio of biomass energy used at the mill from the current level of approximately 70% to 100%.

Recycling of recovered paper



Promotion of the use of recovered paper use has emerged as an important theme in the context of the papermaking industry's efforts to help address social issues such as the need to conserve resources and reduce the volume of trash.

Supply of electricity and steam

Waste generated in papermaking processes

Recycling of fuel

Recycling of waste materials

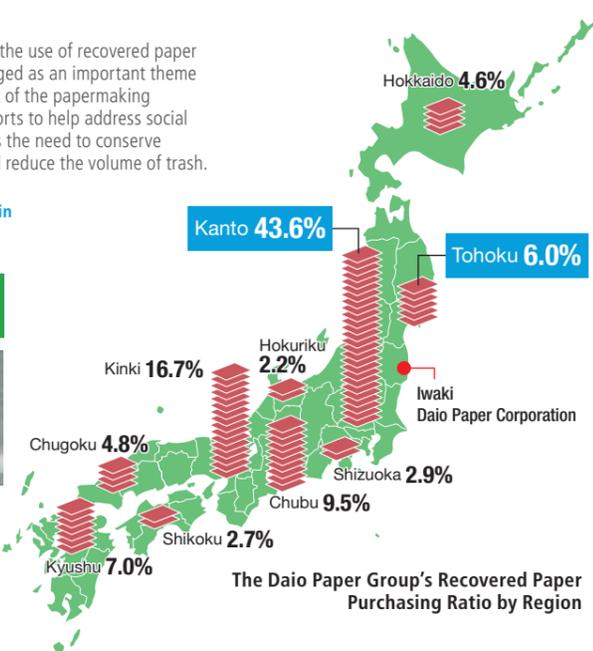


We have led the way in the papermaking industry in introducing biomass boilers at in-house power generation plants that supply electric power used in the mill and are seeking to reuse all kinds of waste in pursuit of efficient thermal recycling.

Use as fuel for power generation



We process and recycle vinyl and other waste and fine fibers discharged in papermaking processes and use them mainly as fuel for power generation.



Source of Competitiveness

Sustainable forest management

In 1989, Daio Paper established a forestry company, Forestal Anchile LTDA. in Chile, South America. The company owns 59,000 hectares of forest, approximately the same area as Tokyo's 23 wards. We have preserved 28,000 hectares, about half of the landholding, as native forest and are working on the conservation of biodiversity.



2017

Switched to eco-ships



PRINCESS HARU (launched in July 2017)

2018

Improved logistics efficiency by consolidation into large-scale logistics centers



Elleair Logistics Center Fuji-Nanryo

2020

Planned start of an electricity sales business utilizing the FIT scheme

*FIT scheme: Scheme under which electric utilities purchase renewable energy at a fixed price

2020

Planned installation of a biomass fuel production facility that uses papermaking wastewater at Mishima Mill

Facility to Produce Biomass Fuel Using Papermaking Wastewater

The Mishima Mill has engaged in biomass power generation using black liquor generated in the pulp making process. In this new project, the facility recovers methane gas from methane-containing kraft pulping wastewater and effectively uses it as an alternative to heavy fuel oil. This is expected to result in the following benefits: 1) environmental load reduction such as reduction of CO₂ emissions and effluent load and 2) the reduction of manufacturing costs. This project was selected as a leading project on the utilization of renewable energy by the Ministry of Economy, Trade and Industry under its FY2018 subsidy program to support private enterprises installing facilities to utilize renewable and thermal energy.

