

# **The 100 Next Leader Textile Industry Companies**

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## **The 100 Next Leader Textile Industry Companies**

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## About selected fields

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### Sustainability



#### **(Employee-friendly working environment)**

Companies which have established good relations with their employees, including technical apprentices, by engaging in dialogue with them and other measures. Companies which manage their supply chain appropriately, including not only their own working environment but also that of their suppliers, in order to ensure the prosperous coexistence of the supply chain as a whole, with a view to international standards.



#### **(Environmentally-friendly)**

Companies which are making progressive efforts in the textile industry to recycle resources, for example by reusing and upcycling surplus cloth, yarn and other materials. In addition, the companies which are highly evaluated both nationally and internationally through their public relations.

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### Digitalization



Companies which use digital technologies to improve inventory management and processes and to find their potential customers through the EC. Companies which have improved operational efficiency, productivity and other aspects through their internal digitization of production processes, etc.

## Creation of added value through technological and design capabilities



Companies which have won national and international awards before thanks to their advanced technology and design or supply products with unique appeal. Companies which use their high technical and design skills to create added values, leading to their increased sales.

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## Development of new businesses and services



Companies which use new technology and ideas to develop novel businesses and services. Companies whose excellent products and services lead to their increased sales.

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## Overseas business expansion



Companies which have exported abroad that have continuous transactions to date. Companies whose export business to foreign countries has led to their increased sales.

# The 100 Next Leader Textile Industry Companies

Hokkaido	1	Mizuno Somekojo Co. Ltd.	Ishikawa Prefecture	38	Kaji Nylon Inc.
Iwate Prefecture	2	IWATE MORIYA Co.,Ltd.	39	Kajirene Inc.	
	3	KYOYA somemonoten Inc.	40	San-etsu Co., Ltd.	
	4	SANWA DRESS CO., LTD.	41	SUNCORONA ODA CO.,LTD.	
Akita Prefecture	5	AKITA FIVE ONE INDUSTRIES,CO.,LTD	42	Shirae shokusan co.,Ltd	
Yamagata Prefecture	6	Sato Seni Co.,Ltd.	43	NOTOKINU CO.,LTD	
	7	TOHOKU SEIREN Co,Ltd	44	MAEDA CO.,LTD	
	8	NAKANO APPAREL Co.,Ltd	45	MARUI ORIMONO Co., Ltd.	
	9	MATSUOKA Co., Ltd.	Fukui Prefecture	46	INOUE RIBBON INDUSTRY CO., LTD.
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Tochigi Prefecture	11	Gachamanlab co.,Ltd.	48	Eiheiji Sizing Co.,Ltd.	
	12	MARUSYOSANGYO CO.,LTD.	49	Kazuma, Co., Ltd.	
Gunma Prefecture	13	Idaseni, LTD.	50	SAKAI AMIORI CO.,LTD.	
Saitama Prefecture	14	SAIBO CO.,LTD.	51	SAKASE ADTECH CO.,LTD.	
	15	Nogawa Senshoku Co., Ltd.	52	SHINDO Co., Ltd.	
Tokyo	16	Anything co.,Ltd.	53	DAIKI CO., LTD.	
	17	SEIKO CORPORATION	54	TOYOSHIMA TEXTILE Inc.	
	18	Maruwa Textile Industries Co.,LTD.	55	Nittoku Inc.	
	19	LEON INTERNATIONAL INC.	56	MARUSAN AI CO.,LTD.	
Kanagawa Prefecture	20	MIKASA.co,ltd	57	YONEZAWA-BUSSAN Co., Ltd.	
Yamanashi Prefecture	21	Terada Knit Corp.	Shiga Prefecture	58	Ohtsuka Sangyo Material Co., Ltd.
Nagano Prefecture	22	FLEXJAPAN INC.	Kyoto Prefecture	59	OMOTOSENKO CO.,LTD.
Shizuoka Prefecture	23	Furuhashi Weaving Co., Ltd.	60	colourloop Co., Ltd.	
Gifu Prefecture	24	ASANONENSHI CO.,LTD	61	Kawashima Selkon Textiles Co.,Ltd.	
	25	KAWABO TEXTURED CO., LTD.	62	DAITO SHINGU KOGYO Co.,Ltd.	
	26	GISEN CO., LTD.	63	Tomiya textile corporation	
	27	TOHKAI THERMO CO.,LTD	Osaka Prefecture	64	ISOTOPE CO.,Ltd
	28	MITSUBOSHI KEITO CO.LTD	65	AITOZ Corporation	
Aichi Prefecture	29	Aldex	66	ASAHIBO CO.,LTD.	
	30	OSIKA Co.,Ltd.	67	OTSU KEORI Co., Ltd.	
	31	SHINCO INC.	68	KINNO TOWEL CO.,LTD.	
	32	Chakyu dyeing Co., Ltd.	69	Sankei Meriyasu CO.,Ltd	
	33	Tsuyasei Kogyo Limited	70	FUJII WAKAMIYA SEIJU CO,LTD	
	34	NAKADEN KEORI CO.,LTD.	71	T. MASUMI & CO., LTD.	
	35	FUJII SEIJU CO. LTD	72	MIYAMA CO.,LTD.	
Toyama Prefecture	36	IAAZAJ HOLDINGS CO., LTD.	Hyogo Prefecture	73	Ueyama Orimono Corp.
	37	K.C.I WARP KNIT CO.,LTD	74	tamaki niime Co.,Ltd.	

Nara Prefecture 75 Valley, Inc.  
 76 Okamoto Corporation  
 77 Suzuki Kutsushita Co.,Ltd  
 78 NISHIGAKI SOCKS CO.,LTD  
 79 Knitwin Co., Ltd.

Wakayama Prefecture 80 INTERIX CO.,LTD.  
 81 A-GIRL'S CO.,LTD.  
 82 KANEMASA KNITTING Co.,Ltd.  
 83 MARUWA KNIT CO.,LTD.  
 84 YOSHIDA SENKO CO., LTD.

Shimane Prefecture 85 Iwamiginzan Gungendo Corporation

Okayama Prefecture 86 AKASHI School Uniform Company Ltd.  
 87 UCHIDA HOUSEI  
 88 KUROKI CO., LTD.  
 89 SHOWA CO., LTD.  
 90 SEISHOKU CO.,LTD.  
 91 NIYONICHI  
 92 Betty Smith Co.,Ltd.  
 93 MEIDAI Co., Ltd.  
 94 ACCÈS CO.LTD.

Hiroshima Prefecture 95 Asahicho Corporation  
 96 Sakamoto Denim co.,Ltd.  
 97 SANYO SENKO CO.,LTD.

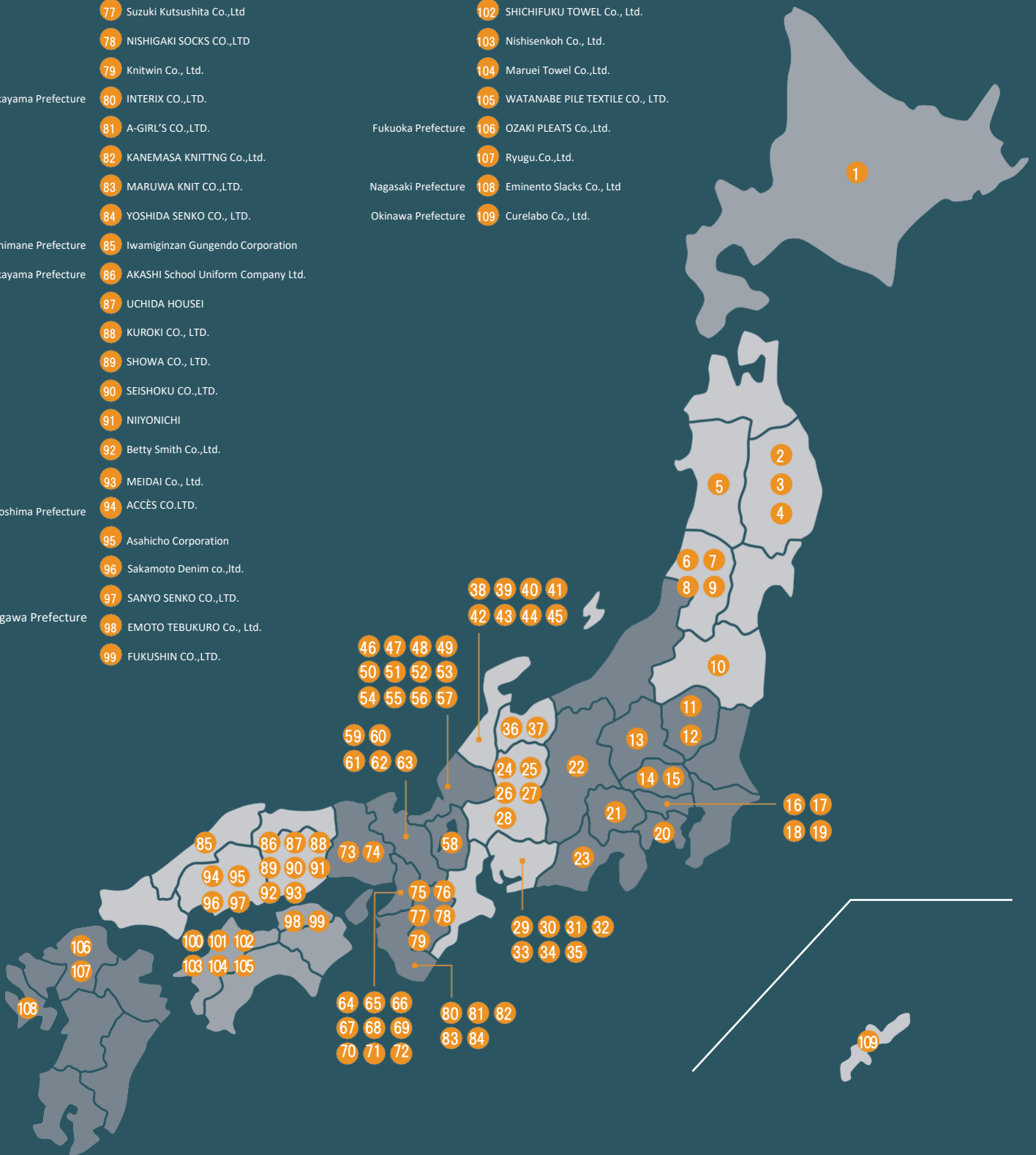
Kagawa Prefecture 98 EMOTO TEBUKURO Co., Ltd.  
 99 FUKUSHIN CO.,LTD.

Ehime Prefecture 100 IKEUCHI ORGANIC Inc.  
 101 KOBO ORIZA CO., LTD.  
 102 SHICHIFUKU TOWEL Co., Ltd.  
 103 Nishisenkoh Co., Ltd.  
 104 Maruei Towel Co.,Ltd.  
 105 WATANABE PILE TEXTILE CO., LTD.

Fukuoka Prefecture 106 OZAKI PLEATS Co.,Ltd.  
 107 Ryugu.Co.,Ltd.

Nagasaki Prefecture 108 Eminentto Slacks Co., Ltd

Okinawa Prefecture 109 Curelabo Co., Ltd.



# Company Introduction

\*The content of this case study has been prepared and edited based on information provided by the applicant companies.



The long-established company of traditional ink-dyeing becomes a creative company in a growing market by combining women, the youth, innovation and IT.

## Mizuno Somekojo Co. Ltd.



### Company information

Location 3 - 488 - 26, Taisetsu-dori, Asahikawa City, Hokkaido

Phone number +81 - (0)166 - 29 - 0000

HP <https://www.hanten.jp/>

Establishment 1907

Representative Hirotoshi MIZUNO, CEO

Number of employees 43



### Company overview

The company is a printing and dyeing company established in 1907. It has turned the disadvantage of being in a rural area and a world of male craftsmen into a growing company through the introduction of IT and other measures. It has initiated more than 10,000 different color recipes by combining tradition with the latest technology, created an environment for women and the youth by building a core management system, and utilized the internet in order to strengthen its D to C. Its products have been used in the Sanja Festival in Asakusa, and it has built a footprint in Tokyo and abroad at the forefront of consumption. It has also started to operate a place for experiential consumption and cultural experiences, and is taking on challenges to continue tradition for the future.



### Selected fields



Sustainability  
(Employee-friendly  
working environment)

A traditional and cultural company which leads women and young people in rural to a main role through management openness, learning and the use of information technology

The company has been working on increasing the number of female employees and other initiatives without being bound by the conventional industry practice. In order to break the concept of "young craftsmen who should experience from the lowest position," which was perceived in the world of traditional crafts, the company has developed manuals for dyeing techniques, recipes for over 10,000 different colors and manuals for handling orders for ink-dyed products, and has realized "craftsmen who can dye from their first year in the company." In addition, it has been practicing what it considers a "rewarding work environment," with an average age of 39 years along with 70% of female workforce. And it has been striving to become a traditional Japanese cultural company that will be handed down to future generations. During in-house study sessions held weekly at least one hour, all employees learn management theory, communication skills and the like in addition to knowledge and technical learning in the field of printing and dyeing. Each year, the company creates a management policy document to clarify overall, departmental and individual goals, which motivates the employees.

While the division of labor is major in this industry, it is engaged in integrated production from product planning => order receipt => manufacturing => shipping. This has created jobs in which women can play an active role, such as "product design," "order fulfillment," "sewing" and "shipping," and the percentage of women is higher than the industry average. In addition, in the dyeing process, which used to be a male-dominated society, the company promotes mechanization and has created work styles and environments where women can easily play an active role. Furthermore, in order to provide a corporate culture that encourages continuous learning and the work environments facilitating child raising, it has introduced such a core system as will enable integrated management from order receipt => manufacturing => shipping. It aims to grow traditional industries by eliminating the artisanal approach called "learn by sight" by promoting mechanization and IoT.



Women and young staff at work  
(Tailoring and cutting work)



Creation of added value  
through technological  
and design capabilities

**Contributing to the shortage of masks through technological diversion. Collaboration with a No. 1 company in terms of patents and other technological capabilities.**

1 In response to the insufficiency of masks, the company contributed to society by selling animal masks through the technological diversion: because of the shortage of non-woven masks under the COVID-19, it launched into manufacturing cloth masks in February 2020 and began selling them in March of the same year, taking advantage of its integrated production system from dyeing to sewing. The animal masks developed by the company were donated to the staff at the local Asahiyama Zoo and other zoos in Hokkaido. This helped the zoos, which had been exhausted by the Corona disaster, and received letters of appreciation. This initiative was reported in the TV news and newspapers, and the company received a great response, with inquiries for orders from all over the country.

2 Patent for dyeing method: the company obtained a patent as a "method to dye fabric on the back only by textile printing, with just metal powder left on the face of the fabric, by means of printing on a cotton fabric."

3 Collaboration with "SOMES SADDLE": the company made bags with sashiko fabric dyed by using leather of "SOMES SADDLE," the leader bag brand, and sold them for two days in Ginza, Tokyo, but they were immediately sold out. This was made possible by the company's abundance of color recipes and its technology for beautifully dyeing *sashiko*, a thick cotton fabric like judo wear.

4 Collaboration with Crypton Future Media, INC. and Tsugaru Straits Tuna Girls' Club: to commemorate the 10th anniversary of "Megurine Luka," Hatsune Miku's younger sister, a large fishing flag designed by an artist was made into a product using the company's technology of dyeing. The company realized this dyeing by the technology of "digitization of the mold-making process" and "fusion of hand-dyeing and machine-dyeing."



Animal masks  
(Taken at Asahiyama Zoo)

Aiming to create sensible clothing

# IWATE MORIYA Co.,Ltd.



## Company information

Location 13 - 3 - 3, Osaki, Natsui Town, Kuji City, Iwate Prefecture

Phone number +81- (0)194 - 53 - 5327

HP <http://www.iwatemoriya.com>

Establishment 1988

Representative Nobutaka MORIOKU, CEO

Number of employees 75



## Company overview

The company is a sewing company that manufactures high-end women's ready-to-wear clothing, including mainly jackets, coats and suits. Starting with fabric testing, it always aims to be at the forefront of apparel sewing factories with its sponging, CAD, CAM, the latest sewing equipment, complete self-manufacture and short-cycle support. It also works to improve and pass on skills within the company as well as it has established the Kita-Iwate Apparel Industry Promotion Association in order to promote the development of the sewing industry and the region, which conducts various projects in collaboration with industry, academia and government, thereby playing a role as a driving force enterprise for the region's future.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

### The Great East Japan Earthquake triggered energy-saving efforts and a significant reduction in electricity use

The company is located in Kuji City on the coast of Iwate Prefecture, and suffered damage from the Great East Japan Earthquake on March 11, 2011, including partial flooding of its headquarter plant. Although it took about a week for operations to be recovered, the company keenly felt the importance of having access to electricity and water and being able to work. Based on this experience, it began to reduce the use of electricity and water. It has been replacing its facilities with those of higher energy-saving performance, installing double sashes, and switching to LED lighting, and the effects have been increasing year by year. Electricity consumption and electricity rates were reduced as follows.

Electricity usage in 2010: 444,468 kWh => in 2020: 172,026 kWh, approx. 61% reduction

Electricity fee in 2010: 7,925,380 yen => in 2020: 3,667,392 yen, approx. 54% reduction

In recent years, there has been an increase in the use of renewable energy sources and other energy alternatives, as well as various factors have caused electricity prices to soar, however, the company has minimized the impact of these increases through energy conservation efforts. It believes that reducing the amount of energy used in the first place contributes to sustainability the most, and will continue to promote energy-saving initiatives.



Working on energy conservation by eliminating waste after the Great East Japan Earthquake



Digitalization

### The company works to improve efficiency by making specifications and other documents paperless and utilizing digital data through 3DCAD, etc.

The company has been working to reduce specifications and other paper-based documents through the use of tablets since 2013, nine years ago, and in 2018, four years ago, it distributed tablets to all employees for their use. In addition to the effective use of resources, digitization has enabled employees to check their own work by ensuring the process through video, and has also facilitated smooth communication between processes. Through the digitalization efforts, the company uses tablets for production control, which enables the employees to check production quantities and defects digitally. This has led to a better understanding of how the products which they are involved in are manufactured, which has also contributed to the improved quality.

The company is also working on CAD pattern automation using 3D CAD. It used to take 16 hours and 30 minutes to create a pattern for one jacket, but now it takes 8 hours and 50 minutes, which is a reduction of 7 hours and 40 minutes. In addition to the 3D CAD system, the company is one of the first in Japan to introduce a new rendering software called Keyshot. This software enables the finished products to be checked on the digital-basis after importing fiber and raw material. However, this system is only effective when both apparel makers and sewing factories use it. The company believes that the industry as a whole can realize more efficient production processes by promoting digitalization in the future.



Improved productivity by promotion of streamlining each process using tablets



Creation of added value  
through technological  
and design capabilities

## Realizing technical capabilities that allow for differences in the finished product even with the same materials and specifications

The company has introduced processes such as "kink removal" to fit the human skeleton and body lines to improve comfort and quality, even if the process is not included in the specifications. This process creates natural curves in the product, resulting in a silhouette that fits the human body. In addition, by incorporating fabric testing and sponging processes prior to the sewing process, the company is able to grasp the differences among fabrics for the same product in advance, and work to ensure that there are no differences in quality at the product stage.

In addition, the company also works on mechanization, and has improved the ratio of direct and indirect labors by automating the processes such as spreading and cutting through the use of IoT as well as by reducing labor through improving productivity. This has made it possible to use human labor for processes with high added values. One example of automation is the use of unmanned spreading machines, whereas in the past one person always worked on one machine. Besides, product information is now input with barcode although it used to be done manually, and this has improved input errors. This allows for the incorporation of human skills and sensibilities into the manual processes, which in turn leads to higher qualities and added values for the products.

The company also works to develop skilled human resources, including winning the grand prize at the "J Quality Awards," and encourages its employees to obtain national certifications. It continues to encourage the employees to obtain the first and second class technical certifications every year by providing them with a monthly allowance. In order to maintain and improve their skills over the long periods, the company actively recruits new high school graduates from the region to pass on their skills.



High-quality women's clothing sewn  
with advanced techniques

Re-editing lifestyles originating in Tohoku to reach today's consumers and offering them as new value

## KYOYA somemonoten Inc.

### Company information

Location 7 - 28, Otemachi, Ichinoseki City, Iwate Prefecture

Phone number +81 - (0)191 - 23 - 5161

HP <https://kyo-ya.net/>

Establishment 1918

Representative Yusuke HACHIYA, CEO

Number of employees 11



### Company overview

The company was founded in 1918. It mainly produces festival goods, such as hanten (the Japanese traditional coat to wear usually at home) and hand towels, as well as original fabrics for apparel brands, and distributes its original dyed products from Ichinoseki City, Iwate Prefecture, throughout Japan and overseas. It is one of the few dyeing factories in Japan that can handle the entire process from design to dyeing and sewing. In order to realize the wishes of its customers, it works on a wide variety of dyeing, from traditional dyeing to dyeing with the latest technology. Through dyeing, it aims to become a dye house that can contribute to the inheritance of Japanese culture and the creation of new possibilities.



### Selected fields



Development of  
new businesses  
and services

A 103-year-old dyeing store takes on challenges of developing the "Woodland Project," a lifestyle complex that allows visitors to experience Tohoku culture

The declaration of a state of emergency under the COVID-19 caused a sharp decrease in the order production volume of festival costumes. The company is accelerating its business restructuring project by utilizing the experience and know-how that has supported Tohoku culture for more than 100 years, and by transforming its business model into a lifestyle store that offers "food, clothing, shelter + knowledge" as it has always envisioned. Specifically, it renovates and constructs an old private house in the woodland near the newly built smart interchange in Hiraizumi, a World Heritage site, and prepares to open a "sensory experience complex store" in April 2023, with the following businesses as its mainstay; (1) select store business (curators with roots in traditional culture and folk crafts select good products from Iwate and other parts of Tohoku, and develop a product sales business that effectively communicates the appeal of these products), (2) workshops and marché business (workshops and talk events by inviting artisans, producers, researchers, etc. that match the vision of the business. A market of locally produced goods is held to provide a place for interaction between the producers and buyers.) and (3) a local camp tourism business (tourism and workcation business; (a) crafts and folk art production and agricultural experiences that allow visitors to feel the history and culture of the region, (b) workshop tours, (c) meals to be provided using local ingredients in woodland camps where visitors can experience the World Heritage site and nature, (d) experience for visitors about local attractions through folk performing art live performances). By combining products and experiences that tell a story, the company hopes to reevaluate the lifestyle and traditional culture of the Tohoku region, increase demand for products that utilize traditional dyeing techniques, and expand its business into new markets that could not be developed through its conventional business. These businesses are underway with the help of the 3rd Business Restructuring Subsidy.



Select stores

The company values the spirit of craftsmanship and brings together the passion and creativity of each and every employee to produce products that will last for generations to come.

## SANWA DRESS CO., LTD.

### Company information

Location 2 - 6 - 52, Higashisenboku, Morioka City, Iwate Prefecture

Phone number +81- (0)19 - 635 - 0090

HP <https://www.sanwadress.com>

Establishment 1966

Representative Takanori OSAWA, CEO

Number of employees 101



### Company overview

Since its establishment in 1966, the company has specialized in sewing and manufacturing of high-end women's mourning dresses, and has grown along with the spread of mourning dress culture. In recent years, the number of occasions to wear mourning clothes has been increasing due to the aging society, but the mourning clothes market itself has reached a plateau, and the company has taken advantage of its sewing technology to enter the casual light clothing manufacturing field. Products with distinctive processing are strongly supported not only in Japan but also in overseas markets, and it is expected that the market will continue to expand in the future.



### Selected fields



Creation of added value  
through technological  
and design capabilities

"Manufacturing is developing human resources," and the development of young employees is the key to increasing corporate values

Since 2001, the company has promoted participation in the National Skills Olympics (up to age 23) sponsored by the Japan Vocational Ability Development Association (JAVADA) under the jurisdiction of the Ministry of Health, Labour, and Welfare, with the aim of fostering young employees. Based on the philosophy that "it is better to learn a job from zero-based," the company has continued to hire new graduates and has competed continuously from the 39th Fukushima Conference in 2001 to the 60th Chiba Conference in 2022. The number of participants dispatched to date in total has reached 52, including 2 Gold, 8 Silver, 7 Bronze, and 15 Fighting Spirit Award winners. In the 42nd Iwate Conference and the 56th Okinawa Conference, the team swept all medals of "gold, silver, and bronze." The company has participated in the WorldSkills Competition (every two years) in Calgary, Canada (2009) and Kazan, Russia (2019), and in both competitions, the company has achieved excellent results, placing the 8th in the WorldSkills Competition. It focuses on educating young employees so that they can quickly work toward big goals on a daily basis. The training is provided by senior employees who competed in the WorldSkills Competition in the previous fiscal year. By continuing this system for many years, the company has been able to differentiate itself from its competitors. The company is proud that its technical capabilities from its skill-training system are among the best in Japan. It is the accumulation of technological capabilities through such "human resource development" that has resulted in the company's long track record as the leading manufacturer of the finest prêt-à-porter brands in the high-end women's mourning clothes market. Since its establishment, it has specialized in sewing high-end women's mourning clothes and has grown along with the spread of mourning clothes culture. In recent years, as the mourning clothes market itself has reached a plateau, it has taken advantage of its own sewing technology to enter the field of casual light clothing manufacturing. Products with unique processing are not limited to the domestic market, but also have strong support in overseas markets, and it is expected that the market will continue to expand henceforward more and more.



Products of Gold Medal Winner  
at the "56th WorldSkills Competition"



Advocate a "manufacturing team" with high technological capabilities, while developing multi-skilled workers in the sewing industry

## AKITA FIVE ONE INDUSTRIES,CO.,LTD

### Company information

Location	191 - 29, Shimoyabase, Yabaseaza, Akita City, Akita Prefecture	Establishment	1973
Phone number	+81 - (0)18 - 862 - 5141	Representative	Yoshihiro SAGA, CEO
HP	URL : <a href="http://www.a-fiveone.co.jp/">http://www.a-fiveone.co.jp/</a>	Number of employees	71



### Company overview

Since its establishment in 1973, the company has been engaged in OEM production (Original Equipment Manufacturing) of men's and women's suits, jackets and coats, and operates a sewing factory specializing in high-end products, mainly for designer brands. With "Human Factory" as its corporate philosophy, it is committed to establishing a production base that is "Made in Japan" with a quality-first policy. Most recently, as a part of efforts to improve productivity, it has been promoting and implementing IOT and engaging in joint research and development through industry-academia collaboration.



### Selected fields



#### Digitalization

#### Initiatives for the horizontal deployment of advanced technologies such as IOT in the sewing industry

The management issues to date have been "improving productivity by leveling the line balance through training of multi-skilled workers" in the direct process and "efforts to improve the defect rate through streamlining and visualization in the inspection department" in the indirect process. As a measure to improve such processes, the company set up the "In-house IOT concept," such as (1) improvement of productivity through optimization of work by building a "gross profit per man-hour," (2) paperless operation, and (3) quality improvement through the introduction of an "inspection management system," to improve productivity by investing in the digitalization of the entire company's production processes. As a result, "production line balance" and "inspection results" are realistically reflected on a large-sized display, and the progress status can be monitored, further enhancing the ability to respond to the trend toward multiple product types, small lots and short delivery times. In addition, the company is also planning to horizontally expand the industry through workshops held by the Akita Apparel Industry Promotion Council to improve productivity and operational efficiency, which is about the "development of a device to automate adhesive interlining work in sewing factories (patent pending)" as a joint research and development project through industry-academia collaboration undertaken this fiscal year as well as the "IOT project."



Improved productivity through visualization by large display layout

We are a comprehensive knitwear manufacturer with an integrated production system from spinning, dyeing, knitting and sewing to distribution.

## Sato Seni Co.,Ltd.



### Company information

Location 1 - 19 - 1, Motomachi, Sagae City, Yamagata Prefecture  
Phone number +81 - (0)23 - 786 - 3134  
HP <http://www.satoseni.com>

Establishment 1932  
Representative Masaki SATO, CEO  
Number of employees 230



### Company overview

The company was founded in 1932 as a wool spinning business, the second generation mechanized and modernized it as an industry, and incorporated it in 1954. The third generation launched a knitwear division during the high economic growth period and expanded the business as a subcontractor for major apparel companies. After experiencing the collapse of the bubble economy, the current president, the fourth generation, has developed new businesses ahead of the times, such as establishing its own brand of yarns and knits, wholesaling to retailers nationwide, operating directly managed stores (in famous department stores), exporting, TV shopping, Electronic Commerce and opening select stores.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Utilization of recycled yarns, leftover yarns, leftover fabrics, and introduction of sustainable production methods

The company has long been engaged in the production of yarns and knits, mainly from natural fibers such as wool. In recent years, from a sustainability perspective, it has been blending polyester yarn recycled from discarded clothing with wool and producing recycled polyester yarn twisted with Japanese paper. And it uses the yarn to manufacture and sell knitwear, which contributes to the realization of a circular economy.

The company used to dispose of half-full quantities of leftover yarn, leftover fabric and leftover fabric generated in the knit production process. However, it has developed small products to make effective use of them as new materials. Specifically, it entered a market of the baby field and has developed baby leggings that can be handled with a small amount of leftover yarn, which is not enough to produce knitted products for adults. It also develops and sells original, floor pillows, pouches, bags and other items, which are the only ones in the world, using leftover fabrics and scraps of knitted fabrics.

In recent years, the large amount of clothing waste resulting from the mass-production, mass-consumption apparel industry has become a problem. The company works to expand its make-to-order production system in order to produce the right amount of products without waste. New products are announced in the Electronic Commerce, a certain order period is set, and then they are aggregated, produced, and delivered to customers.

For knitwear, the company is strengthening its Whole Garment products. The Whole Garment is a seamless, integrated knitting method which eliminates the need for cutting and sewing. Therefore, only the necessary amount of yarn is used, leading to reduction in the yarn loss rate.



Colorful "Cotton Baby Leggings"  
made from leftover yarn



Digitalization

#### Strengthening Electronic Commerce business using social media due to the spread of COVID-19 infection

Since April 2020, the COVID-19 infection has spread, forcing department stores to suspend their operations for a certain period of time. The company had operated 20 directly managed stores in well-known department stores throughout Japan, but sales disappeared during that period. Therefore, it anticipated that the department store business and wholesaling to national retailers under the COVID-19 situation would continue to be sluggish, and sought to strengthen its business via the Internet.

First, due to a shortage of masks, a knit mask was hastily developed and sold through the Electronic Commerce, which was well received. Subsequently, for consumers who refrain from going out, the company created the "satoseni channel," a YouTube video introducing new products for each season to disseminate information. The president and employees appeared on the video as models, and explained in detail the threads, design details, features and coordination of the products.

In addition, the company's own brands for women, "M. & KYOKO" and "FUGA FUGA" were distributed weekly to induce viewers to order on the Electronic Commerce. Besides, the company developed knitwear in collaboration with famous influencers, disseminated information via the social media such as Instagram Live, and took orders via the Electronic Commerce (make-to-order method). As a result, the annual net sales increased, and the company could complement the decline in in-store sales.

The international exhibitions of yarn and knitwear were also cancelled, and export business was delayed due to the inability to travel. However, as mentioned above, the video explaining the new yarn and knitwear products was produced in-house (in English) and distributed to overseas buyers and designers with sample books, and orders were received via the Internet.



The YouTube videos to weekly introduce the  
company's brand "satoseni channel"





Creation of added value through technological and design capabilities

### Developing original products that cannot be imitated by other companies by taking advantage of our advanced technological capabilities

In order to overcome the hard times that followed the collapse of the bubble economy, the company moved away from being a subcontractor which simply made what it was instructed to produce, and began developing its own brands with high added-value. It converted its old spinning machines and developed many yarns that it wanted to make, yarns with unique designs. There is one such product, "Fuga," an ultrafine mohair yarn developed in 2006. The industry's limit was stretching 1 g of mohair yarn out 27 m, but the company succeeded in stretching it out to 52 m. Its lustrous and delicate yarns were used for the "NINA RICCI" cardigan worn by Mrs. Michelle at the former President Obama's inauguration in 2009 and the Nobel Peace Prize ceremony. In 2007, the company exhibited at "Pitti Filati" for the first time, the world's leading yarn exhibition held in Firenze, and has exhibited its creative and new yarns every year since then. There, the products are highly valued by designers and buyers of luxury brands from all over the world and the company receives many orders.

In knitwear production, it has developed 10 of its own brands, mainly for women, and has also demonstrated its creativity in joint development with major apparel makers. In 2018, it developed a new knitwear line with a major outdoor manufacturer, taking advantage of its advanced knitting technology using a seamless flat knitting machine called the Whole Garment. The new knitwear is a 3D seamless knit that captures the silhouette of the human body and is made of 100% polyester. It is light and airy, fits flexibly during exercise, and is beautiful even when at rest, making it a popular standard item.



The cardigan worn by the former first lady of the President Barack Obama was made with the company's ultrafine mohair yarn.



Development of new businesses and services

### Development of "luxury innerwear" for women through advanced yarn and knit technologies

Under the COVID-19 situation, apparel sales continued to decline because consumers refrained from traveling, going out, and dining out. While demands for formal outerwear from consumers and business partners decreased, inquiries for loungewear and innerwear, known as "one-mile wear," became stronger. In order to respond to these changes in market needs, and to cultivate customers base of young women, a segment that has been relatively thin until now, the company also takes advantage of its brand power and technological capabilities. It has entered the field of innerwear for the first time, developing products from the yarn stage.

Generally, acrylic, polyester, polyurethane and other synthetic fibers are used for innerwear because they are thin, soft, and stretchable. The company originally runs a spinning business using mainly wool and other natural fibers as raw materials, and in the area of innerwear, it has developed sustainable yarns, such as silk, which are gentle on women's skin and the earth.

It began introducing computerized flat knitting machines 20 years ago, and now has a dedicated a Whole Garment factory, where it has been advancing its seamless knitting technology. Women's brassieres are usually made by sewing 40 to 80 different parts together, including fabric, straps, wires, hooks and pads, but the company's inner wear products are seamless and have an excellent feel, thanks to the application of 3D, seamless technology. The knitwear is both fashionable and functional, and is characterized by its unique hold that accommodates the size of the bust and the difference between the left and right sides.



Original silk innerwear developed from threads in a 3D three-dimensional shape with no seams



Overseas business expansion

### Strengthening overseas exports through the company's original "Made in Yamagata" brand

The company developed its own original spun yarn and exhibited the yarn for the first time at the world-class yarn exhibition "Pitti Filati" in Firenze in 2007, and has exhibited it every year since. The company's yarns, such as those made from Japanese paper are not available in Europe or the U.S., and have been well received in the market. It develops new products every time, which are highly evaluated by designers and buyers from all over the world, and does business with most of the luxury brands. There are also ongoing large transactions with yarn merchants. In addition to the exhibition business, the company has agents in Europe, as well as the employees of the overseas business department at the head office and they travel overseas to conduct sales activities.

In knitwear, the company has delivered its own brand of knitwear with a taste not found in Europe or the U.S. at international exhibitions since 2001, including "Coterie" in New York, "Tranoi" in Paris and "Pitti Immagine Uomo" in Firenze. In addition, in cooperation with a partner company in Taiwan, the company operates four stores under its own brand name in famous local department stores, and also delivers its products to three stores in Paris. Furthermore, it has a showroom in New York, where it takes orders for new products each season. It does not outsource its overseas export operations to trading companies, but rather handles everything in-house, and its strength lies in the know-how and human network which it has built up over nearly 20 years of experience. During the period when the company is unable to visit overseas due to the spread of the COVID-19, it has produced videos to explain its products and is trying to maintain business transactions through the Internet.



The leading yarn exhibition in Firenze at world class Exhibits at "Pitti Filati" every year

"TRY THROW TOHOKU," a technical group that continues to challenge

# TOHOKU SEIREN Co.,Ltd

## Company information

Location 2736 - 1, Kubota, Kubota Town, Yonezawa City, Yamagata Prefecture

Phone number +81 - (0)23 - 837 - 6600

HP <https://www.tohoku-seiren.co.jp/>

Establishment 1961

Representative Hideyuki SHIBASAKI, CEO

Number of employees 46



## Company overview

The company is based in Yonezawa City, Yamagata Prefecture, famous for its Yonezawa textiles, and celebrated its 60th anniversary in 2021. Its main business is the consignment processing of "scouring," "dyeing" and "finishing" of fabrics gathered from various areas, including Yonezawa, Niigata, Hokuriku and Kiryu. It also offers OEM processing proposals for the planning and weaving of branded fabrics for its customers.



## Selected fields

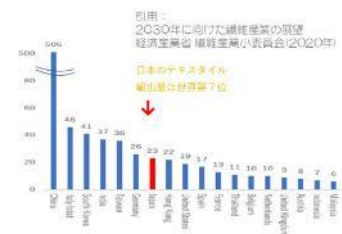
Creation of added value  
through technological  
and design capabilities

Creation of new sustainable textiles not found anywhere else in the world

The company aims to expand its sales channels to the domestic, Asian, and European markets with textiles that can only be made in Japan, as the first sustainable textiles to be produced in Japan. The textiles are uniquely developed by the company using its proprietary MVA process as the starting point. According to the "Outlook for the Textile Industry toward 2030" published by the Ministry of Economy, Trade and Industry, Japan ranks the seventh in the world in terms of textile exports. This tells us that it is an internationally competitive field.

Company A, a MVA technology expansion partner, had a large production base in China, but was unable to meet China's national "GB standard" for frictional fastness of cupra materials, and was facing challenges in its China market strategy. The MVA technology has cleared the GB standard, without losing the conventional texture, by modifying the weak points of sustainable fibers, such as the frictional fastness of Cupra, the improvement of shrinkage rates and form stability and the enhancement of tearing strength degrees, through dyeing technology processing. And this has greatly promoted Company A's strategy in China, as well as has made it possible to introduce Cupra to the world as a textile that consumers can use with confidence and ease, which greatly expanded the possibilities for the application and development of Cupra materials. As a result, the company believes that it will create not only added values and sales for itself, but also significant added value for a wide range of stakeholders, including downstream companies.

In addition, because Yonezawa is the "birthplace of recycled textiles" in Japan and has the soil to create sustainable textile development with local production teams, this contributes to the formation of a production cluster advocating Yonezawa as a town of sustainable textiles.



The export volume of domestic textile industry in the world

The company's management philosophy is "Sustainable sewing factories will bring innovation to the manufacturing culture!"

## NAKANO APPAREL Co.,Ltd

### Company information

Location 1 - 58, Koriyama, Nanyo City, Yamagata Prefecture

Phone number +81- (0)238 - 40 - 3331

HP [www.nakano-apparel.co.jp](http://www.nakano-apparel.co.jp)

Establishment 1988

Representative Kenji NAKANO, CEO

Number of employees 107



### Company overview

The company has a sewing factory that mainly sews and processes circular knitted products. It has developed together with its customers by constantly inventing new sewing techniques and aiming for the one-of-a-kind manufacturing, based with its head office in Yamagata and a factory in Wuxi, China. In October 2021, the company issued a "Sustainable Declaration" and has implemented measures in line with the declaration, including its management philosophy. In addition, a new sustainable factory in Vietnam was opened in November 2022.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

**Succeeded in completely recycling cutting scraps! And the great benefits has come with it**

Among initiatives related to the 2021 Sustainable Declaration, one of the concerns was the disposal of cutting scraps. There was no other way to dispose of the scraps after cutting, and the situation of having them landfilled in the mountains had been dismissed as unavoidable, but a consultation with a local manufacturer of waterproof sheet who saw the company's efforts on its website led to a solution to this problem. Until now, the used clothes have been crushed to utilize as raw materials, but the removal of accessories and other labor-intensive tasks became a bottleneck to start the reuse of cutting scraps. In addition to giving the company's staff a sense of satisfaction that they contribute to environmental recycling, this also saves a considerable amount of money annually because there are no processing costs. In FY2021 (October 2021 to September 2022), the amount of waste was 25 tons less than the previous year, and the cost was reduced by 1.36 million yen.

Since then, the factory has grown into a plant that can sort all kinds of waste in an effort to sort them more for better recycling. The company feels that this is exactly the kind of satisfaction that comes from the environmental response and practical benefits produced as a result of sustainability. This initiative has been covered by newspapers of the textile and paper industries and on local television, and has developed into a community-wide project since nearby sewing and dyeing factories also expressed an interest in participating.



Storage space of cutting scraps

Out technical capabilities that have supported Japan's silk industry for more than a century Delivering raw silk and textiles with high quality which are woven by our traditional technology

## MATSUOKA Co., Ltd.

### Company information

Location	20, Azanakamachi, Sakata City, Yamagata Prefecture	Establishment	1887
Phone number	+81 - (0)23 - 462 - 2222	Representative	Chikara SEINO, CEO
HP	<a href="https://matsuoka-sakata.jp/">https://matsuoka-sakata.jp/</a>	Number of employees	259



### Company overview

Since 1872, when about 3,000 members of the former Shonai Domain cultivated Matsugaoka, the Shonai region of Yamagata Prefecture has developed as an integrated production center for sericulture, silk spinning, weaving and silk products. The company has been engaged in yarn and textile manufacturing for more than 130 years since its establishment in 1887 as "Matsuoka Silk Mill." Currently, it is diversifying its operations to include aircraft interior component manufacturing and industrial machinery manufacturing. In order to pass on the tradition of silk to the next generation, it continues its business by launching new brands and products that enhance the functionality of raw silk.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Aiming to respond to manufacturing of a wide variety of products in small quantities and to produce the highest grade of 6A by downsizing the yarn reeling machine

The company uses automatic reeling machines, "Nissan HR II" (manufactured in 1972), which was also used at the Tomioka Silk Mill. With the declining demand for raw silk, there are only two places in Japan where this type of yarn reeling machines is still in operation. To keep this traditional technique alive, the company has been carefully maintaining them through its own repairs and renovations. In 2022, it attempted to respond flexibly to manufacturing of a wide variety of products in small quantities by reducing the original size: one unit to one-fourth. The smaller size shortened the distance travel of cocoons around the machine and reduced the load on the cocoons, resulting in the reduction in losses and the 10-20% increase in production efficiency. In addition, since only a small amount of cocoons is required for each operation, it is possible to produce thicker raw silk, leading to a wider variety of products to be handled. At the same time, the company also aims to improve quality. In the past, the thickness of yarn was controlled by relying on a fineness sensor, and cocoons were automatically replenished when the yarn became too thin during reeling, resulting in slight dispersion in thickness. To achieve the highest grade of 6A, which requires a standard with no irregularities or variations in thickness, it requires to confirm the decrease of cocoons by human eyes and manually replenish them before the yarn becomes too thin, so this was added to the process. In the future, "reeling with the constant amount of cocoons" can be delivered, in which the thickness of the yarn is always maintained at a constant level through dual management by machine and human operators to enable the stable production of raw yarn with a grade of 6A. As described above, the downsizing of yarn reeling machines will reduce costs and improve productivity, which will lead to the market expansion by responding to small-lot and a wide variety of products and improving quality.



Automatic yarn reeling machines to be downsized  
It can be expected to improve production efficiency and quality.

Innovation with Silk!

## Saiei Orimono Co., Ltd.

## Company information

Location 6-1, Azababa, Oazatsuruzawa, Kawamata Town, Date Village, Fukushima Prefecture

Phone number +81 - (0)24 - 565 - 2331

HP <https://saiei-orimono.com>

Establishment 1952

Representative Eita SAITO, CEO

Number of employees 17



## Company overview

Saiei Orimono Co., Ltd. is a manufacturer and a seller of silk fabrics. The company has incorporated the delicate techniques and sensibilities cultivated in the traditional Japanese culture of kimonos into the wedding and Western-style clothing markets, and has proposed products that are highly marketable and topical, taking advantage of its unique planning capabilities.



## Selected fields



Creation of added value  
through technological  
and design capabilities

Developed the thinnest silk (fairy feather) in the world and selling it domestically and internationally

The company innovated the textile industry with silk materials by researching and developing the thinnest silk in the world, which added a new value to silk fabrics: "the thinnest and lightest silk in the world." In the development, local resources and the company's technology were utilized to make weaving possible by reducing the speed of the yarn winder device (yarn reeling) and controlling the speed of the loom motor. Also, it established weaving technology to improve the tensioning device and lighten the weight of the tensioning device. This has resulted in the thinnest silk fabric (fairy father) in the world using ultrafine 8-denier silk yarn, the one-sixth of the thickness of a human hair. The company's unique technology of weaving with yarn-dyed and thin-weave produces a silk fabric with a lustrous, chambray effect (tamamushi) that stands out for its high quality and has become a topic of conversation around the world.



The thinnest silk in the world

Awards in 2012: The 4th Monozukuri Nippon Grand Award (Prime Minister's Prize), Good Design Award  
2014 China International Fabric Design Competition Best Colour Application 2015 Japan Gift Awards  
2017 The 2nd Fukushima's Economy, Industry and Manufacturing Award, Fukushima Governor's Award, Italy, A'Design Award  
2018 Human Power Award  
2019 Grand Prize for Manufacturing Expertise



Overseas business  
expansion

Seventy years of introducing Kawamata silk to the world

The company has been exporting silk fabrics overseas for more than 70 years since its establishment. It started with light double-layered silk specially produced in Kawamata (thick silk), and expanded to scarf fabrics dress fabrics and clothing fabrics, which has now shifted to silk fabrics for luxury brands. It also exports unique products to the U.S. and other countries using its ultrafine raw silk weaving technology. It continues to export a stable volume even under the COVID-19 situation, accounting for about 50% of its sales in the current term.

In Fukushima Prefecture's trade survey, the export volume of silk fabrics has been increasing year by year, which also contributes to raising the level of silk fabrics as a whole. In addition, the company actively and continuously participates in overseas exhibitions to cultivate new customers and other business fields. It develops its overseas sales channels in the United States, France, Italy, China and other countries. By continuing such efforts, it has created a new platform for silk that is not limited to the textile and fashion industry, and continues to evolve.



Overseas business expansion



Revival of "Meisen," clothing for commoners during Showa-era by means of the modern fashion

## Gachamanlab co.,ltd.

### Company information

Location 30 - 2, Yamagawa Town, Ashikaga City, Tochigi Prefecture

Phone number +81- (0)28 - 464 - 7676

HP <http://gachamanlab.com>

Establishment 2013

Representative Kimisato TAKAHASHI, CEO

Number of employees 3



### Company overview

The Japanese textile industry used to be so prosperous as to be ridiculed in a way: "with weaving a few times, even a million yen can be made." Gachamanlab co.,ltd. was founded in 2013 as a textile business in Ashikaga City, Tochigi Prefecture in an effort to recreate the active situation of those days. It received investment from a venture fund, and as it mainly manufactures silk fabrics, it is also involved in a D2C business that utilizes stocked fabrics, the revitalization of Ashikaga Meisen (warp ikat textile) and so on.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Revived the Ashikaga Meisen as a high-class clothing fabric through restoration and technological innovation

Meisen is a textile made using a traditional technique called "hogushi weaving" in order to enable a high level of kasuri expression by printing a pattern on the warp yarn before weaving. The decline of the kimono market had led to the cessation of its production in Ashikaga, but the company believed that the technology of printing on thread would greatly expand the expression of making clothes. Therefore, it undertook venture financing with the aim of revitalizing its business in the Western clothing market. It started technological innovation to expand the conventional standard, which is 37 cm of kimono fabric width with approximately 1,500 warp threads, to the standard for Western-style clothing, which is 112 cm of kimono fabric width with approximately 5,000 warp threads.

After about 6 years of trial and error, including overcoming the problems of yarn prints, such as weak dye fastness and slip resistance, and pursuing design expression with depth by combining jacquard weaving, the company has achieved marketability in the high-end fashion market in 2021. Since then, it has been used successively for fashion brands and official goods of popular games, and has become a major topic of conversation. And in recognition of these achievements, the regional trademarks of "Ashikaga Meisen" was registered for the first time in the Ashikaga region.



"Ashikaga City x Touken Ranbu -ONLINE- 2022" the official collaboration product  
"Ashikaga Meisen Pouch"

Developing various technologies, mainly basic technical capabilities in textiles and chemicals, in order to improve the environment and enhance our products for our customers

## MARUSYOSANGYO CO.,LTD.

### Company information

Location 171, Tajima Town, Sano City, Tochigi Prefecture

Phone number +81- (0)28 - 322 - 1901

HP <https://marusyosangyo.jp/>

Establishment 1923

Representative Kazuhiro KOKUBO, CEO

Number of employees 17



### Company overview

The company was founded in 1923 as a textile processing business, and under the corporate philosophy of "developing, manufacturing and selling products that contribute to the well-being of the global environment and humankind," it has developed and manufactured special yarns that do not break or burn, special clothing, and organic cotton products that can be used by babies and people with sensitive skin. In addition, it actively works to develop safe and secure products with high functionality and high added value that are friendly to people and the environment, such as special fiber products that can break down bacteria, odors, dirt and other contaminants with the power of nature.



### Selected fields



Overseas business  
expansion

Registered with STePP (Sustainable Technology Promotion Platform) of United Nations Industrial Development Organization at Tokyo Office and adopted as a countermeasure against the COVID-19 and other infectious diseases in Africa and Asia

The "Inviroshield M5," manufactured and developed by the company, is registered with the Sustainable Technology Promotion Platform (STePP) of the United Nations Industrial Development Organization (UNIDO) at Investment and Technology Promotion Office (ITPO), Tokyo (Tokyo Office). The product has also been selected for the "Strengthening the capacity of developing countries to mitigate the impacts of the COVID-19 pandemic through appropriate technology transfer from Japan." The company was selected for the "Strengthening the capacity of developing countries to mitigate the impacts of the COVID-19 pandemic through appropriate technology transfer from Japan" by the United Nations Industrial Development Organization (UNIDO) at Investment and Technology Promotion Office (ITPO), Tokyo (Tokyo Office), and conducted technology demonstration and transfer in Kenya, Nepal and Mongolia.

About "Inviroshield M5"

This is the infection control system which uses the "Inviroshield M5," a photocatalytic coating agent with a visible and light-responsive type to be developed for the purpose of infection control. The Inviroshield M5 was developed and manufactured in Japan as a coating agent with a visible and light-responsive type that can achieve a photocatalytic effect under indoor fluorescent light. Currently, the company supplies Inviroshield M5 mainly to Japan, China, Hong Kong, India, Singapore, Malaysia and other Asian countries. The Inviroshield M5 is expected to have antibacterial and antiviral effects against unknown bacteria and viruses that do not work with ordinary alcohol disinfectants, thanks to the high decomposition effect of the photocatalyst.



Inviroshield M5

Inheriting 1,300 years of historical techniques, the company expands the old and new fashion "samue" to the world.

## Idaseni, LTD.



### Company information

Location 6-429-1, Sakaino Town, Kiryu City, Gunma Prefecture

Phone number +81- (0)27 - 744 - 9084

HP <https://idaseni.com/>

Establishment 1963

Representative Shigeru IDA, CEO

Number of employees 37



### Company overview

The company is a traditional Japanese clothing manufacturer which was established 60 years ago in Kiryu City, Gunma Prefecture, a traditional textile production area. From traditional fabrics to the ones with the latest technology, it manufactures and sells "samue" and "jinbei," which are carefully sewn by Japanese artisans at the company's own factories using a wide variety of domestic fabrics from all over Japan. Under the strict quality standards of its own brand, "Wasuian," the company offers products for a wide variety of uses and ones that suit modern lifestyles. The company is working hard to train young artisans so that they will be able to later take over the careful craftsmanship notable of the Wasuian brand.



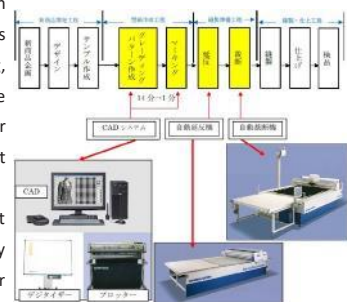
### Selected fields



#### Digitalization

#### Successfully developed new markets by manufacturing and selling traditional Japanese clothing with the latest technology

- Digitization of manufacturing: at the company's own factory, a 3D CAD system, an automatic spreading machine, and an automatic cutting machine have been installed for samue production. The company used to make paper patterns individually out of cardboard, but now uses a digitizer to convert them to 3D CAD as pattern data necessary for sewing, and connects them to automatic spreading and cutting machines through the use of IoT. These systems have reduced the minimum number of personnel required for cutting from two to one, and the construction of an innovative system for pre-sewing operations has reduced the time required for cutting to 1/3 of the previous time, resulting in a significant improvement in productivity and safety of cutting.
- Digitalization of inventory management: although samue is a niche product, the company boasts the largest product lineup in the world with more than 1,000 SKUs, its own standard products. The company has established its own inventory management system through the use of digital devices, QR codes and IT software. It also works with EC, brick-and-mortar stores and wholesalers. This has enabled it to automatically update inventory, eliminate short sales, and immediately respond to the manufacturing schedule of its own factories about delivery dates for products that are not in stock.
- Customized production at the company's own factory: the digitalization of its factory has enabled it to control production and accept customized orders. It built a B to B website for inns and hotels, which led to orders from high-end inns and hotels for the original samue, an "indoor wear that replaces yukata, which are easy to slip on and off." Its sales channels, once limited to kimono wholesalers, have expanded into new fields.



Automation and digitization of cutting operations



#### Creation of added value through technological and design capabilities

#### Established the samue brand, combining traditional techniques with modern functionality and design

- The Japanese-style design suited to the modern living environment: the company's own brand, "Wasuian" is a samue brand using the samue, which was originally a work wear that has been redesigned as an "everyday wear." This samue has continued to be developed and educated as a product. The fabrics are carefully selected from the threads and woven to suit samue in various historical production areas throughout Japan. In addition to the traditional wisdom of the Japanese people, the fabrics incorporate cutting-edge textile technologies, such as Japanese paper yarn, water repellency and antibacterial technology. The company develops products that are both functional and modern in design to suit the changing four seasons (spring, summer, autumn and winter) and modern lifestyles, and proposes chic kimonos that can be worn casually. Gradually, the recognition has spread and the orders have increased not only in Japan but also from around the world as the everyday wear, leading to increased sales.
- The Japanese dressmaking and high sewing technology: Unlike Western clothing, samue is designed with large parts sewn on the back to create a silhouette with sloping shoulders unique to kimono, without "fitting" at the shoulder peak even it takes more time and effort. Although it would be easy to sew the collar by sewing a top stitch with a sewing machine, the company follows the Japanese kimono tradition and uses a difficult method of sewing, relying on fingertip feel to place the machine just 1 to 2 mm away from the collar so that the stitches are not visible on the collar. This is to cherish the history of the Japanese people, who have always taken great care of their "collars," as in the common expression, "Straighten your collar." The company improves not only efficiency, but also respects Japanese traditions while passing on skills to younger artisans, and sells reliable MADE IN JAPAN products with a high level of quality and strict inspection standards to the world.



Japanese kimono design for modern living environments





Development of  
new businesses  
and services

### Developing products that did not exist in the world. Total coordination for casual Japanese attire.

- Development of kimono products tailored to modern life: there is no small demand to incorporate Japanese culture into the "clothing" of "clothing, food and shelter," which are the basics of daily life. Despite the fact that Japanese foods, Japanese rooms and Japanese interior designs are still popular, it is difficult to incorporate the Japanese style into clothing because some aspects of kimono and geta do not match modern life in terms of functionality. In order to incorporate Japanese culture into daily life, the company develops not only samue coats, samue shoes, samue scarves, socks, underwear and bags, but also various items focusing on samue, which are all made in Japan. It also creates products that have never existed in the world, and proposes a total coordination to create a Japanese lifestyle. Gradually, the awareness of the products has spread, and the company's overall sales have more than tripled, from only 2 types of products in the past to over 100 types today.
- A new type of indoor wear to replace yukata: the Japanese inns and hotels currently offer rooms with a "Japanese modern" taste, and there are more rooms with beds on tatami mats. Yukata have been the most common attire at Japanese inns in hot spring resorts, however, the yukata, which is difficult to fasten with an obi (belt) and easy to come undone, is not functional and comfortable for relaxing in such a modern Japanese-style guest room. Since the samue has a Japanese atmosphere and it is relaxing and functional, the company expects that there will be a demand to be worn as indoor wear. Therefore it began to produce the original customized samue to order, taking advantage of owning its factory. It produces catalogs and websites for inns and hotels with a new approach, and orders from high-end inns and hotels have increased in recent years.



WEB site for inns and hotels



Overseas business  
expansion

### Sending the message to the world to continue Japanese craftsmanship

- Successfully launched cross-border EC and developed sales channels in foreign countries: although the company has been manufacturing kimono including haori and obi as a kimono manufacturer since its establishment, the kimono market has declined dramatically from 1.8 trillion yen in the 1980s to one-eighth of that over the past 40 years, and the company could not survive on the domestic market for traditional kimono alone. It refined the samue, which had been sold as an additional item to the kimono, as "Japanese relaxing clothes" and sought to develop a completely different sales channel by considering the samue as its main product. It attempted to directly approach people who were not interested in Japanese traditional clothing in Japan through mail-order service and EC. Since 2017, it has begun to work not only domestically but also through cross-border EC, and started to sell traditional Japanese clothing as clothing that can be enjoyed in a casual manner.

It renewed its 5-year-old cross-border EC website in 2021 after directly interviewing overseas clients about points to improve through video interviews and other means and analyzing the site. Since then, it has focused on sales promotion, and with the tailwind of the yen's depreciation from 2022, it has achieved its sales 10 times higher than the same month of the previous year. It was featured as a successful case study in a book by a cross-border EC consulting firm, and was nationally covered in a broadcast news program on Japan Television as well. The manufacturing industry in Japan is in a transitional period due to the aging of the population and the lack of successors, but it hopes to continue to carefully produce traditional Japanese products with the help of Japanese craftspeople. To achieve this, it must create products that enrich the lives of people around the world and continue to sell them around the world at reasonable prices. This is now gradually being realized, with the ratio of overseas sales doubling, and further growth is expected in the future.



Renewed cross-border EC website

Hope to be a company that is supported by society, always in step with the times, contributing to the local community all the time, with the spirit of walking together

# SAIBO CO.,LTD.

## Company information

Location 1 - 1 - 70, Maekawa, Kawaguchi City, Saitama Prefecture

Phone number +81- (0)48 - 267 - 5151

HP <https://www.saibo.co.jp/index.html>

Establishment 1948

Representative Eiichi IIZUKA, CEO

Number of employees 98



## Company overview

Since the company's establishment in 1948, it has developed its business with a focus on the textile business and real estate utilization business. In the textile business, it has been active mainly in corporate uniforms, sports products, polyester and rayon yarn, as well as outdoor tent sales. In the real estate utilization business, it focuses on the construction of large-scale commercial facilities and enhanced medical facilities. It aims for the ESG management that truly enhances social value by practicing responsible actions that take into account social and governance issues.



## Selected fields



Sustainability  
(Environmentally-  
friendly)

Reducing CO2 emissions during dyeing by using recycled polyester for the top-dyed yarn

The dyeing process emits the most CO<sup>2</sup> in the production of textile products and requires a lot of heat, including boilers and drying. It also uses large amounts of water. By kneading the pigments that are the source of color into the polyester yarn at the spinning process, the "dyeing" process can be greatly reduced. The company started with 40 colors, but received complaints that the colors changed during the finishing process, and upon investigation, it learned that dyes were mixed in addition to pigments to produce subtle colors. Forty colors were examined one by one and the company limited to 18 colors that could be made only with pigments. It then delivers those yarns as high-fastness yarns. The original polyester is made from recycled polyester materials derived from plastic bottles. The pigments are kneaded into recycled polyester, which has lower strength than that of virgin polyester and this reduces the strength power. It took a lot of effort to find a border line that was just barely at the edge of commercialization, but this effort was completed. The company has also expanded its lineup of yarn counts from 150dr/72f to 75dr/36f to meet the needs of a wider range of customers, which has been well received by many of them.



Providing 18 colors of original recycled polyester filaments



Creation of added value  
through technological  
and design capabilities

By making full use of a rare Metalmeccanica embroidery machine made in 1966, a very precise design occurs with technical and design skills.

Linen fabrics have a history of 50 years and are made from yarn spun in China from European linen. The unique texture and quality are created by handling existing factories in Japan. The company develops not only spring and summer fabrics, but also a wide range of products, such as fabrics that combine Linen and wool for fall and winter, and cotton and linen corduroy. In addition, for embroidery lace, it still operates an Italian-made Metalmeccanica machine, the oldest in Japan, which slowly embroiders at a low speed to produce embroidery with a unique flavor. Unlike today's new and high-speed machines, the machine is characterized by its ability to produce delicate patterns that look like antiques from the good old days, and patterns that use a variety of eyelets (bowlers). Also, materials such as non-twisted yarns, wool yarns and Linen yarns, which other companies cannot produce, can be produced with the technology of Floria Corporation, a group company. In each season, new patterns are created, and the trend-oriented products are developed and disseminated. Since Floria's technology will last one's lifetime, the company will continue to pass it on and develop manufacturing that cannot be done elsewhere. As an outcome, Linen fabrics have been supplied to fashion brands such as "Papas" and are currently used by top domestic brands. The embroidered lace products are used by the following brands.

Domestic brands: Onward, Sanyo Shokai, United Arrows, Leilian

Overseas brands: COMME des GARÇONS, Giorgio Armani, Supreme, Oscar de la Renta, FUMIE=TANAKA, FACETASM



Metalmeccanica, made in Italy in 1966

The ultimate of 100 years of Bushu tradition

Handling everything from yarn dyeing to the final product, conveying the appeal of  
multilayered indigo dyeing

# Nogawa Senshoku Co., Ltd.

## Company information

Location 878, Sukage, Hanyu City, Saitama Prefecture

Establishment 1914

Phone number +81- (0)48 - 561 - 0368

Representative Masatoshi NOGAWA, CEO

HP <http://www.nogawasenshoku.com>

Number of employees 18



## Company overview

The company was founded in 1914. As "Bushu Sho-Ai Dyeing," a part of Japan Blue, it dyes yarn using indigo that focuses on natural fermentation, weaves fabrics on old-fashioned shuttle looms, and then integrates the entire production process, from cutting to sewing, in-house. In addition to manufacturing kendo clothing, which is its main product line, it also offers practical indigo yarn-dyed products for daily use. Its durable and long-lasting products have been well received by kendo players and general consumers nationwide, and in recent years, it has achieved overseas sales and collaborations with major brands.



## Selected fields

Creation of added value  
through technological  
and design capabilitiesDevelopment of products that convey the history of indigo yarn-dyed  
fabrics and materials for kendo as a production center

Indigo dyeing in this area has been practiced since the Edo period. It was called "Aojima (blue stripes)" and spread throughout the Kanto region as fabrics for farm work clothing, but the demand disappeared in the 1950s due to the mechanization of agriculture. The company also lost its market, but began manufacturing kendo clothing using manufacturing techniques for yarn-dyed textile as well as retail sales. It dyes indigo yarn repeatedly, starting with the oldest indigo and working up to more than 30 times in some cases. This causes the indigo component to adhere to the inside and outside of the yarn, which increases the strength. On the other hand, the frictional resistance of the yarn strengthens, causing warp breakage on innovative weaving machines that operate at high speeds, making it difficult to weave. The company emphasizes high quality and its attention to detail more than efficient production, and uses conventional shuttle looms to manufacture fabrics while making adjustments to machine speed and settings and dealing with daily maintenance. The stitching fabric used for kendo clothing was once done by hand, and is now woven using a process that reproduces the texture of hand stitching even on an automatic loom. This technique is now rare in Japan, and about 80% of all kendo fabrics domestically produced are made in Hanyu City, Saitama Prefecture. The stitch weaving, which is a mixture of thick and thin yarns that is rarely seen in other yarn-dyed textile production areas, has a depth of technique in its structure and weaving method.

These textile techniques, which have become rare, have been applied to the production and sale of clothing and bedding using fabrics that utilize the techniques, not only for the kendo industry, but also to protect and pass them on to the modern age.



Dyeing of indigo yarn

Bringing the traditional Japanese work wear, "MAEKAKE" to the future and to the world

# Anything co.,ltd.



## Company information

Location 1 - 7 - 10 - 902, Motoakasaka, Minato Ward, Tokyo

Phone number +81- (0)3 - 5843 - 0247

HP <http://www.anything.ne.jp/index.html>

Establishment 2000

Representative Kazuhiro NISHIMURA, CEO

Number of employees 10



## Company overview

The company was founded in Tokyo in 2000 and incorporated in 2004. In 2005, it began planning and selling Maekake, Japanese traditional work clothes. In 2015, the company began hiring young craftsmen in Toyohashi, Aichi Prefecture, where the clothes has been originally produced, to pass on the skills and techniques. A total of four young craftsmen were hired and trained, and a new weaving factory was established in Toyohashi in June 2019. The company still uses shuttle looms, which were made by Toyota and Suzuki about 100 years ago, and sells Maekake to 60 countries around the world, mainly in Europe.



## Selected fields

Sustainability  
(Environmentally-  
friendly)**Ten shuttle looms, which are more than 100 years old, are still used to produce Maekake with high-quality**

The company uses ten of conventional shuttle looms that are rarely used in the world; the looms are made over 80 to 100 years ago by Toyota (N type shuttle looms: manufactured by Sakichi Toyoda, the founder of TOYOTA Motor Corporation) and Suzuki (manufactured by Michio Suzuki, the founder of Suzuki Motor Corporation). In 2013, the company began dispatching young people to the soon to be closed down factory in Toyohashi, where has been the production center in Japan for Maekake. The goal was to master maintenance, repair and manufacturing techniques of the shuttle looms over a five-year period. Since the new factory was established in 2019, the company has accumulated its production skills. In addition to existing production methods, the company continues research and development aiming to create the products with new added value.

For energy efficiency, 10 shuttle looms are all powered by a single small motor called "group drive," a method that spread from the 18<sup>th</sup> century England, which allows the factory to run by little electricity.

Besides, all yarns are manufactured using only natural fibers (cotton, silk, wool, hemp and Japanese paper) under the theme of "manufacturing products that will return to the soil." Furthermore, the company produces fabric by using the thread made out of cotton waste, which had been discarded from its partner companies.



The factory for maekake opened in 2019 in Toyohashi, the production area

Creation of added value  
through technological  
and design capabilities**Expanded sales channels worldwide as a result of research and development of the highest quality the "No. 1 Maekake"**

The shuttle looms operated by the company can weave only one-tenth to one-twentieth as fast as the latest looms as well as they are inefficient because they require a lot of manual labor. Despite few negativities, they have the ability of producing the fabric that is rugged yet fluffy feeling with high density and durability. This is the reason it has been used as the fabric for "Maekake," the traditional Japanese work clothes since before the Second World War. Young craftsmen in their 20s and 30s conducted research on texture and quality that can only be expressed by such shuttle looms. As a result, the company began to produce a top-grade product called "No. 1 Maekake," which had not been manufactured since the 1970s.

The "No. 1 Maekake" is now sold at department stores such as Mitsukoshi and Isetan, and has been adopted by many companies that had never had business with, such as "Toyota Motor Corporation," "Studio Ghibli," "Suntory," and "Snow Peak." For overseas, besides select stores, it has been sold at the British Museum since 2017 and at the Museum of Modern Art (MoMA) in New York since 2020.

Over the past 10 years, the number of products have been manufactured and sales have increased approximately fourfold.



Research and development of the highest quality of No. 1 Apron, and various companies have adopted it



#### Overseas business expansion

**The Maekake, which was almost extinct, has been exported to 60 countries, mainly in Europe and the U.S.**

Since 2009, the company has exhibited in New York, the U.S., London, U.K., and Paris, France, and has continued to promote and educate the public about the traditional Japanese workwear, Maekake. To expand its BtoB sales channels, the company exhibited at the hotel restaurant shows in New York from 2009 to 2014, however, the sales were sluggish. It has changed when the company first exhibited at "TopDrawer," an exhibition of design goods in London, in 2015. With this exhibiton, the business switched its sales channel to BtoB to BtoC. The product was also used in the scene in the British movie "007," released in 2021, in which James Bond's colleague Q wears it. This expanded the overseas sales dramatically. The company has started to exhibit at Maison & Objet Paris in 2020, which is considered as the most prestigious exhibition in the world. The participation has not been stopped during COVID-19, and concluded the business mainly with by buyers of select stores, known locally as "concept stores," mostly in the U.S. and European nations, such as France, the U.K., Germany.

There are approximately 40 dealers in about 20 countries that have ongoing business, and the products have been exported to 60 countries.



Expansion of sales channels focusing on the "Maison & Objet Paris" exhibition in Paris



Continue to innovate for creative manufacturing

## SEIKO CORPORATION



## Company information

Location 1 - 13 - 14, Midori, Sumida Ward, Tokyo

Phone number +81 - (0)3 - 3634 - 6431

HP <http://seiko-co.co.jp/>

Establishment 1950

Representative Makoto OMI, CEO

Number of employees 29



## Company overview

The company was founded in 1950 to design, manufacture and sell men's and women's cut and sewn products. Since its foundation, it has practiced manufacturing that integrates materials, design, patterns and sewing. In 1984, it introduced TSS (Toyota Sewing System) for the first time as a cut and sewn manufacturer, and responded to small-lot and multi-item production. It constantly strives to improve quality and efficiency by pursuing a production management system and making improvements on issues and problems.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

Whenever you want what you want as much as you do, but with minimal loss

It was 38 years ago that the company started TSS (Toyota Sewing System) at its own factory. It continues to make improvements again and again to eliminate waste by identifying problem areas based on 5S. TSS has high productivity as well as production lead time (from cutting to shipping finished products) of 4 hours at the shortest. TSS, which enables small-lot, multi-product and quick delivery, can produce what you want whenever you want it as much as you do. Although there are restrictions on raw materials (yarns, fabrics and subsidiary materials), the company has theoretically made "market-linked production" possible, which minimizes unsold inventory. This is achieved by the complete Make To Order, which is a small quantity of products with no product inventory, and by minimizing the initial production volume in order to eliminate chance losses by producing additional products as monitoring sales in the market. It significantly reduced the unsold inventory of its own brand "IKIJI" by 78% compared to the previous year. It also proposes that this concept be permeated into the efforts of OEMs. In addition, the company works with Toyota Tsusho to complete a system in which scraps of cuttings that would normally be discarded are recycled into yarn and fabric, and then reused in the company's own factories to manufacture products again. It has progressed from yarn reclamation to trial knitting of the fabric, and is now in the test stage of trial production of products using the fabric.



In-house factory of Cucire, TSS sewing line

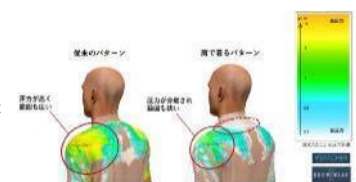
Creation of added value  
through technological  
and design capabilities

Innovation in manufacturing technology

It has been 30 years since the company launched its "Manufacturing Project," setting benchmarks on many famous brand-name products from around the world and analyzing them. The products were studied in three-dimensional detail, and prototypes were made over and over again. It is said that "good clothes are worn on the shoulders," and the company has independently researched and developed a three-dimensional master pattern for "wearing on the shoulders" that embodies this saying. The clothes for "wearing on the shoulders" distribute the weight of the clothes optimally to provide such comfort as will not make the wearer feel weighed down and allow them for ease of movement as well as to keep the clothes in place. The company's own brand

"IKIJI" is delivered on a full line of cut and sewn items from T-shirts to jackets, using these master patterns. The brand has also expanded overseas, where it has been very well received and sales have increased year after year. Currently, based on this "wear on the shoulders" technology, a new brand using 3D body scanners and 3D CAD is being planned.

In addition, the patented "stretchable cuffs" are designed to free the wearer from the tight opening and closing of buttons. With the buttons closed, the wearer can pull the cuffs up to one's elbows, and the cuffs can be removed as they are, which has been very well received.

Pattern verification for  
wearing on the shoulders



Development of  
new businesses  
and services

### "IKIJI," a factory brand launched by three manufacturers founded in Sumida, the birthplace of the Japanese knitwear industry

Three top Japanese manufacturers with quality and technical capabilities got together to launch the factory brand "IKIJI." The concept is to "modernize the Japanese style to match Western lifestyles." In order to figure out how well Japanese technology and the companies' technology are evaluated in the world, the companies have been exhibiting at the overseas exhibition, "Pitti Immagine Uomo" for the past seven years. As a result, overseas sales increased thanks to the recognition of the concept, design, quality and technology. The companies have also concluded a contract with a showroom in Paris and develop overseas sales channels. In Japan, the company operates mainly in stores and via e-commerce. Even though the reputation of Japanese brands in Japan is severely lacking, the number of customers is increasing year by year, and there are more people who buy one piece that repeat purchases of all the colors. As the company strengthens its efforts to disseminate information about the appreciative craftsmanship, the recognition of its products has gradually increased, including recent collaborations with influencers, and sales have also gained. The products, which have been constantly improved in product development, have been well received not only overseas but also domestically. Recently, the company has begun taking personal orders for cut-and-sewn clothing, utilizing 3D body scanners, 3D CAD and other resources. It has been well received, especially by those with distinctive body shapes, such as tall and short people.



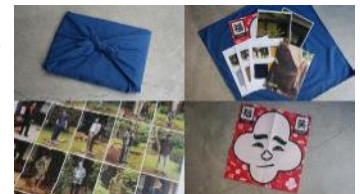
Business meeting at "Pitti Immagine Uomo"



Overseas business  
expansion

### Overseas expansion through the factory brand, "IKIJI"

In order to sell the factory brand, "IKIJI" overseas, the company has exhibited twice a year at the "Pitti Immagine Uomo" overseas exhibition for the past seven years, and has gradually increased its number of wholesale customers. Five years ago, it signed a contract with a showroom in Paris to introduce its products to buyers. Since it was unable to deliver sales activities in person due to COVID-19, it created a sales kit and sent it to buyers, resulting in a significant increase in orders from existing clients. In addition, to cultivate new customers, it searched the Internet for stores that match its brand, and, with the support of JETRO (Japan External Trade Organization), it strengthened its sales activities by utilizing "JOOR (the largest apparel online exhibition for BtoB in the world)," which resulted in an increase in new customers. The company is highly evaluated by overseas buyers for its design, appreciative materials and colors, quality and prices. Recently, it has been requested to respond to special orders, and the flexibility to accommodate the size desired by the customers to fit larger Westerners has resulted in an increase in orders from existing wholesalers, including wholesalers whose orders have doubled. It improves its own product development and quality from advice on products by interacting with overseas designers, influencers and buyers at overseas exhibitions. It receives positive feedback from customers and is highly evaluated by buyers.



Sales kit

The downtown's rocket for the sewing industry! A sewing factory in downtown of Tokyo, realizing the dream of "sending our technology into space" and connecting "smiles between wearers and sewers"

## Maruwa Textile Industries Co.,LTD.



### Company information

Location 1 - 8 - 6, Kamezawa, Sumida Ward, Tokyo

Phone number +81 - (0)3 - 3624 - 6611

HP <https://maruwa-tex-ind.co.jp/>

Establishment 1958

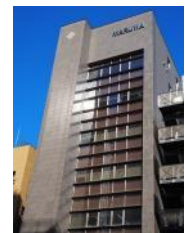
Representative Takao FUKUZAWA, CEO

Number of employees 39



### Company overview

The company was founded in 1956 as an underwear manufacturer. In the 1970s, it shifted its focus to outerwear manufacturing, and continued to design, manufacture and sell cut-and-sewn clothing to this day. It started its operations in Indonesia in 1991, and later also owned a sewing factory in China for overseas production, but since around 2014, it has focused on domestic production and makes efforts to preserve the Japanese excellent craftsmanship for the next generation through OEM and sales of its own brand products.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Realized the company's dream of "delivering its own products to the universe" through its technological and design capabilities Creating added value through amazing comfort that has attracted astronauts

The company has operated its business mainly as OEM, but has a sense of crisis that it must change its subcontracting structure. In May of 2009, in an effort to revitalize the company as a whole amid the industry downturn, the company declared, "We would like our polo shirts to be worn by Japanese astronauts." It continued to make prototypes, both in-house and with the help of outside companies, to find out what kind of movements would be made in the spaceship with zero gravity along with what kind of clothing would be the best for such activities, and conducted research and development with the aim of creating products that could only be made by ourselves. Fortunately, in September of 2009, there was a public call for the adoption of casual onboard clothing, and as a result of the application, the company's sewing and pattern technologies were recognized and adopted as the onboard activity wear for the spacecraft.

With the desire to "survive in the severe sewing industry with this technology and passion" and to "create products that can only be made in Japan," it launched an original factory brand of products using its patented 4dimension motion cutting system and sewing technologies. And then, its own brand products were created by analyzing skin movement and wrinkles during exercise and designed using a patented technology called 4DM cutting system, which reduces stress on the body from clothing due to joint movements such as lifting and lowering the hands. For example, the wearer can feel such a comfort as will make him/ her smile naturally with surprise at the fact that the hem of the shirt does not come out of the pants even when both hands are raised and the position of the hem hardly changes.



The downtown's rocket for the sewing industry to have given courage to subcontract factories in town



Development of  
new businesses  
and services

The company created a new business with a background in manufacturing.  
Created "Value Creation Laboratory" at Tokyo headquarter

In addition to sewing technology including its own patents, the company applies pattern design (paper template), which is improved through knowledge and technology, and manufactures jeans made for people in wheelchairs as well as uniforms for the medical industry.

In 2020, it developed products of Whole Garment with seamless construction; "no sewing even a single stitch" even though it has a sewing factory, using the "dynamic design" program for the first time in the world. It challenges itself to "solve problems around the world with fashion and enrich people's lives." In 2022, it launched "Value Creation Laboratory (commonly called as Value Creation Lab.)" at its Tokyo headquarter, which functions as a "place to create new values" of human resources and technology, such as training engineers, incubation function to support young designers and influencers, and recycling function to support remake and other activities.



Numerous initiatives to embody the concept of "enriching lives through fashion"





Overseas business  
expansion

## Sewing and pattern technologies recognized by foreign designers and brands of Paris Collection

The company has been engaged mainly in OEM business so far, but in recent years, it has received various requests for collaboration as it has developed a factory brand incorporating its patented "4DM cutting system and sewing technologies.

It covers collections from leading domestic designers, products developed overseas and collaborations with overseas designer brands. In addition, it actively communicates its manufacturing to the world by participating in overseas exhibitions through the Tokyo Knit Fashion Association, to which it belongs.



WHERE IT ALL STARTED  
FREDERICK J. SMITH FOUND AS I. LANTANA 1912 I. 1912 AND  
THE 1912-1913 LANTANA 1912-1913 LANTANA 1912-1913 LANTANA  
THE FIRST IVY BLAZER IN CAVALRY DE MAGLIA

Factory brand collaboration with world-class brands

Contribute to society by providing excitement and  
inspiration as a company which enjoys change and  
constant evolving

## LEON INTERNATIONAL INC.

### Company information

Location	UEST Aoyama Bldg. 5F, 1-20-26 Shibuya, Shibuya Ward, Tokyo	Establishment	2017
Phone number	+81 - (0)3 - 6712 - 6727	Representative	Shingo HAYASHI, CEO
HP	<a href="http://leon-intnl.co.jp">http://leon-intnl.co.jp</a>	Number of employees	67



### Company overview

The company is the one that mainly engages in OEM and ODM. Recently, it has focused on the digital field, and by implementing the functions, it has worked with overseas companies (such as Hong Kong-based VF Corporation's THE NORTH FACE and Timberland) and major domestic companies (such as GU and WORLD) as a planning company, establishing its position not only as an OEM company, but also as a planning company. Two years ago, it began to focus on developing its own brand and started to sell its products through wholesale, e-commerce and physical stores.



### Selected fields



#### Digitalization

Digital pattern software, CLO allows for digital representation of patterns that were previously printed out and checked on paper

The company can express more realistic samples digitally by combining CLO and APEX: CLO, which are assembled from the company's own pattern CAD that can check the appearance with digital images, and APEX, which enables the expression of materials to be expressed digitally. The actual sample can be checked digitally to see how the product will look before it is made. The software also makes it possible to modify and confirm the opinions of meeting participants during the meeting such as sample modification.

This has increased the number of new customers through the use of digital technology, and has significantly increased the efficiency of the planning process, as the company can confirm digitally to brands that do not have a lot of apparel knowledge, such as influencers and celebrities.



Use of apparel digital software



#### Development of new businesses and services

Work on sales strategies for the new era (Metaverse/ NFT) by utilizing digital patterns

In January 2023, the company released the collaboration between real and virtual space using its technology at ISETAN's "REVWORLDS" metaverse. In the Web 3.0 era, it is thought that the current EC sales will shift to an economic sphere centered on the metaverse. During this new era, the company has worked for several years to develop specialized software and technicians in order to respond to 3D fashion in the virtual world, where avatars can try on clothes at their leisure. It is going to deliver on the ISETAN's metaverse platform this time.

It also operates a select store, "AMERICAN RAG CIE," in the metaverse, and it announced its wholesale brand director, Mira Hasegawa, who is also active in the media as an SDGs top runner, and other creators from Generation Z present their activities in Metaverse as well.



Utilization for new sales  
methods in the WEB 3.0  
metaverse

Knitting machines from analog to digital

MIKASA.co,ltd, a sock manufacturer that creates the future

**MIKASA.co,ltd**

## Company information

Location 3 - 2 - 71, Hinominami, Konan Ward, Yokohama City, Kanagawa Prefecture

Phone number +81- (0)45 - 831 - 7011

HP <https://www.kk-mikasa.co.jp/>

Establishment 1962

Representative Shigenobu AMARI, CEO

Number of employees 81



## Company overview

This year marks the 60th anniversary of the company's founding as a sock manufacturer. The company's head office is located in Yokohama City, and its factory in Nara Prefecture, Japan's largest sock production area, where a wide variety of in-house products are planned. All knitting machines are the latest automatic models, and the company develops products to meet the needs of its customers. Its main customers are COOPs throughout Japan, and it conducts its daily operations with a commitment to quality control, including ISO 9001 certification.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

### "Menka-chan® Project" and other projects to procure materials in-house

In recent years, the company has strengthened its SDG initiatives, and has received superior certification under the Y-SDGs. In May of 2022, the company launched the "Menka-chan® Project," cotton cultivation which it seeds cotton to be used as a raw material for sock production. The seeds are sown on approximately 4,000 m<sup>2</sup> of the company's affiliated site in Nara Prefecture, Japan's largest sock production area, and are harvested twice a year. This cotton, called "Yamatotakada cotton," has flourished since the late Edo period, but is now on the decline. The company plans to revive this local industry tradition to create and commercialize new values for itself. It is easy to procure and manage raw materials in-house in the supply chain. At the same time, the company has installed specialized machinery for separating cotton into seed and cotton, and has a cooperative system that allows it to spin the cotton into yarn in cooperation with local yarn merchants. The raw materials are turned into yarn and commercialized at the company's own factory, and can be shipped nationwide from the its own distribution center. Therefore, the products are supplied to consumers as products with added values under the sustainable category. The company believes that this is an important field for the future growth in that it is able to complete its supply chain from raw materials to manufacturing and delivery almost entirely in-house and it procures necessary materials in-house. Both the head office and the factory make efforts to minimize waste by working with vendors, for example, to reuse the triangular paper cones on which the yarn is wound and to turn leftover yarn into products.



Started growing cotton (raw materials) in-house



Digitalization

### Renovated to a fully automatic knitting machine. Introduced "APEX": a seamless knitting machine, automatic linking and 3D design system

The company has renovated all the sock knitting machines in its own factory, shifting to the latest Italian-made "LONATI" knitting machines since 2021. There are many manual operation required to produce socks. In the conventional manufacturing method, the socks come out of the machine with the toes open and are sewn by hand, one by one, which took time and effort. The "LONATI" can automatically sew (linking) toes, which saves time and eliminates manual processes, contributing greatly to increasing productivity. The company has also introduced the "APEX," 3D design system from SHIMA SEIKI MFG., LTD. to refine its sock designs. This allows the machine to read the yarn itself and check the color and texture on the computer screen in a more realistic manner. This system has reduced the number of samples at the factory and has led to concrete proposals to customers, facilitating smooth progress in business operations. The conventional sock knitting machines generated a large amount of circular scraps, which were disposed of. However, the company has succeeded in reducing the amount of scraps by approximately 1,130 kg/ year by automating all the machines in its own factory.



All equipment to the latest in automation



Development of  
new businesses  
and services

To develop new avenues in the medical field Jointly developed with Nara Medical University, tentatively named "hand function strengthening gloves"

Last year, the company began working with Nara Medical University to develop gloves for medical use for the first time in the world. This is an initiative to contribute to industrial creation, regional development and community renovation by applying medical knowledge to companies in cooperation with Nara Medical University and the MBT Consortium Association. The company developed gloves by applying the sock knitting method and other techniques it has developed over the years. This allows the wearer to train simply by wearing gloves that are bent in the opposite direction of the finger joints, which constantly apply resistance to the fingers. The research at Nara Medical University has demonstrated the effectiveness of this gloves for those who have lost grip strength due to Parkinson's disease, and the detailed specifications will be worked out from now on, with sales to begin in 2023. This initiative has been covered in the trade press, and the company believes that it has a lot of potential and demand because it can contribute to the recovery of those who have weakened grip strength. In the future, the company hopes to obtain approval to manufacture and sell medical devices and move forward with further development of its business.

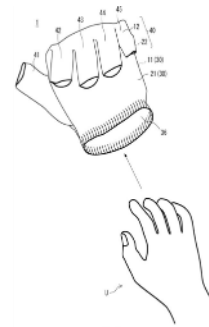


Fig. 1

Joint development project with Nara Medical University

Addressing textile industry issues through seamless knitwear

## Terada Knit Corp.

### Company information

Location	116, Shimo-Odorii, Ichikawamisato Town, Nishiyatsushiro Village, Yamanashi Prefecture	Establishment	1980
Phone number	+81- (0)55 - 272 - 3856	Representative	Mitsuhiko TERADA, CEO
HP	<a href="https://terada-knit.co.jp">https://terada-knit.co.jp</a>	Number of employees	35



### Company overview

The company has accumulated technologies and optimized its manufacturing processes since it introduced its seamless flat knitting machine in 2000. Currently, it produces almost all of its products on seamless flat knitting machines, and also focuses on the production of spring and summer products using high-gauge fabrics, aiming for constant production throughout the year. It also offers proposals for the development of products using natural materials.



### Selected fields



Development of  
new businesses  
and services

Launch of "cucumu," DtoC brand to develop and sell products that take advantage of the company's strengths

With a desire to "deliver good products directly to consumers at a reasonable price," and against the backdrop of the decline in sales in OEM business due to COVID-19, the company launched its own brand and entered the DtoC market to manufacture and sell products that it is satisfied with. It develops products under the theme of "human and environment friendly knitwear at a reasonable price" with its own strong technical capabilities and products made of natural materials. The Whole Garment method knits an entire garment directly from the knitting machine in three dimensions. This eliminates the need for post-processes such as cutting and sewing, and knitting can be done with the minimum amount of material required, excluding excess fabric scraps that would otherwise be discarded. The absence of seams allows for finishing without extra tugging that would prickle the skin. Also, "the desire to deliver knitwear with gentle materials to the skin as much as possible," with this in mind, the company carefully selects and knits knitwear from gentle natural materials from around the world according to the characteristics of each product.

The company is proud of the qualities and prices it can offer because "Terada Knit" has made knitwear for various brands. It addresses its business as it explores new possibilities in the textile industry with support for branding and environment building from a business restructuring subsidy and from digital creative agency of SHIFTBRAIN inc.



Products of our own brand, "cucumu"

What we can do for the global environment and our lives: "rebuilding and creating memories," transforming your clothes and fabrics into products by the hands of artisans, and weaving them together into the next form

# FLEXJAPAN INC.

## Company information

Location 2451, Yashiro, Chikuma City, Nagano Prefecture

Phone number +81 - (0)26 - 261 - 3000

HP [https:// www.flexjapan.co.jp/site](https://www.flexjapan.co.jp/site)

Establishment 1940

Representative Takao YAJIMA, CEO

Number of employees 278



## Company overview

"We are a group to think," this is the company's philosophy. Each one of us is fully aware of issues, thinks about them carefully and works on them sincerely. The company will sustainably provide products and services which are friendly to people and the environment that society and customers expect. The company believes that this will contribute to achieving goals of the SDGs.



## Selected fields



Overseas business  
expansion

### Aggressive overseas expansion of retail business

In 2015, the company began developing "Karuizawa Shirts," a shirt store in hot and humid Southeast Asia, where Japanese-developed shirts are highly competitive and adaptable. It currently operates six stores in Indonesia and six stores in the Philippines.

In response to rising wages and purchasing power in Indonesia, the company has shifted its local subsidiary's business from shirt production for the Japanese market to local sales. It has achieved top sales at each of the commercial facilities where it has opened stores and continues to receive requests to open new stores. Based on the achievements in Indonesia, it began to open stores in the Philippines, making local companies its franchisees. The company is working to gradually expand the number of stores and countries in which it operates.



"Karuizawa Shirt" in Indonesia



The art of textile drape. Pleasure for all five senses through natural materials.

# Furuhashi Weaving Co., Ltd.

## Company information

Location	3597, Yamazaki, Yuto Town, Nishi Ward, Hamamatsu City, Shizuoka Prefecture	Establishment	1928
Phone number	+81- (0)53 - 592 - 1249	Representative	Kaori FURUHASHI, President
HP	<a href="https://www.furuhashi-weaving.jp/">https://www.furuhashi-weaving.jp/</a>	Number of employees	6



## Company overview

Founded in 1928, Furuhashi Weaving has been a textile mill in Enshu for four generations. The company adheres to a traditional method of manufacturing, employing rare shuttle looms to produce exquisite fabrics. Its specialization lies in the creation of exceptional textiles using natural materials, with a primary focus on cotton. The company's commitment to utilizing the inherent characteristics of materials and achieving a unique touch earned a strong reputation among high-end apparel and designer brands, both in Japan and overseas. In 2014, its own brand was launched to revitalize the Enshu production area. By combining the sensibility of the new generation with the skills and craftsmanship of experienced artisans, the company strives to create innovative products.



## Selected fields



Creation of added value  
through technological  
and design capabilities

### Manufacturing value added products with shuttle looms

The company has been dedicated to specializing in shuttle looms since its inception.

While shuttle looms are approximately one-tenth as efficient as their innovative counterparts, they possess a unique capability to weave yarns at a relaxed tension and a slower pace, resulting in fabrics that maintain their structure while containing air. As a result, the woven fabric has a fluffy and rich texture. Moreover, when working with natural materials such as cotton, hemp, wool, and silk, the inherent qualities of each material can be fully utilized, resulting in a refined texture compared to fabrics produced by shuttle-less looms.

In the modern era, shuttle looms have become increasingly rare worldwide, and skilled technicians proficient in operating them are scarce. The company employs the Sakamoto style shuttle loom, which has been specifically modified to accommodate high-density fabrics. Furthermore, it specializes in handling premium materials like extra-long staple cotton, which is only available in limited quantities worldwide. Additionally, the company has developed its own yarns and materials, making it difficult for competitors to replicate its unique manufacturing process. The company is actively engaged in knowledge transfer, imparting the necessary skills to its younger employees.

By combining the inherited expertise passed down through generations with the fresh perspectives and sensibilities of younger workers, the company embraces the challenge of creating innovative products.



Exhibitions in Japan



Overseas business  
expansion

### Established direct sales channels in Europe since 2007

Between 2007 and 2010, Furuhashi Weaving actively participated in the "European Textile Export Business with Face of Weavers" program sponsored by the Japan Cotton & Staple Fiber Wearer's Association. Additionally, the company engaged in the JETRO (Japan External Trade Organization) mission program to Milan from 2008 to 2010. Subsequently, from 2010 to 2012, it joined the JETRO "Support Program for Identifying Promising Export Projects" exhibited in Milan, Italy, and Paris, France. Through these initiatives, successful business relationships were established with notable Italian and French designer as well as major brands.

Since 2014, Furuhashi Weaving has consistently participated in "The Japan Observatory at Milano Unica", representing the country's textile industry. In response to the COVID-19 pandemic, the company adapted with online exhibitions and material displays. After a three-year hiatus, it rejoined the "Milano Unica 2024SS", held from January 31 to February 2, 2023.

Currently, Furuhashi maintains direct business relationships with 30 companies across various locations, including Italy, France, Belgium, Spain, Portugal, the United Kingdom, Australia, Hong Kong, and others. Notably, many of these connections have been established for more than 5 to 10 years, indicating reliable partnerships. Despite the challenging circumstances imposed by COVID-19, the company has observed a surge in new inquiries via its website and Instagram. As a result, it aims to develop overseas sales channels to meet evolving customer needs.



Business meeting at "Milano Unica"

Indomitable yarn twister succeeds in developing and branding towels with high-function that people can't stop using once they have used! Challenging the world with the best twisted yarn technology

## ASANONENSHI CO.,LTD

### Company information

Location	875-1, Naka, Anpachi Town, Anpachi Village, Gifu Prefecture	Establishment	1969
Phone number	+81- (0)584 - 64 - 2279	Representative	Masami ASANO, CEO
HP	<a href="https://asanen.co.jp/">https://asanen.co.jp/</a>	Number of employees	47



### Company overview

In response to the recession in the textile industry, for the purpose of being the only one company in the industry, the company has developed and sold "Air Kaol" brand towels utilizing the advanced "Super Zero" yarn twisting method to break away from being a subcontractor. The cumulative sales exceeded 15 million sheets. The company has received numerous awards, including the 5th Monozukuri Nippon Grand Award (Minister of Economy, Trade and Industry's Prize). It constructs a factory and store, "Futaba Super Zero Mill" in Futaba Town, Fukushima Prefecture, to promote its "Super Zero" brand to the world, thereby contributing to the reconstruction of Fukushima Prefecture and, by extension, to the development of Japanese industry.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Developed highly functional towels using advanced twisted yarn technology and successfully expanded sales with its own brand.

"Super Zero," which it took five years to develop, is a yarn twisting technology that forms a fine space structure among fibers to give textile products softness, volume, light weight, water absorbency, quick-drying and long-lasting functionality. This is because when spun yarn fixed at the original twist is forcibly twisted twice in the reverse direction, the yarn twisted in the reverse direction tries to return to the original twist. In June of 2007, the company began selling the only towel in the world using "Super Zero" as its pile under its own brand name, "Air Kaol". It also offers products with high added value, such as clothing made of "Super Zero." The company's aggressive sales activities, including participation in exhibitions, have been highly evaluated for its technical capabilities, and have enabled it to develop sales channels with top companies in all industries, including TV and print mail-order businesses, department stores, specialty stores, mass merchandisers and drugstores. Since the advanced twisting technology and the market superiority of the final products have been recognized, the company has received numerous awards, including the "Minister of Economy, Trade and Industry Award" at the 5th Monozukuri Nippon Grand Awards in 2013, the "Science and Technology Award" from the Minister of Education, Culture, Sports, Science and Technology in the field of science and technology in 2014, and "Special Award" at the Good Company Grand Awards in 2021.

The company's sales were 236 million yen in FY2007 when it began selling "Air Kaol" in the face of bankruptcy. However, in FY2019, its sales recovered to 2,317 million yen, which is roughly 10 times greater, and it also succeeded in shifting from being a subcontractor. The sales for FY2021 are estimated to be 2,116 million yen. Although the market condition is severe due to the COVID-19, the company continues to take on new challenges as it responds to various changes in the business environment.



Brand towel, "Air Kaoru"



Developing highly original products by taking advantage of the integrated manufacturing process from yarn processing to weaving and knitting

## KAWABO TEXTURED CO., LTD.

### Company information

Location 544-17, Suka, Masaki Town, Hashima City, Gifu Prefecture

Phone number +81 - (0)58 - 393 - 0311

HP <http://www.3930311.co.jp>

Establishment 1964

Representative Kazuyuki KAWASHIMA, CEO

Number of employees 147



### Company overview

The company has manufactured and sold highly functional processed yarns for apparel and industrial materials since its establishment in 1964. It also manufactures woven and knit fabrics, and develops integrated production other than dyeing processes within the company. Its products are used mainly for apparel and general clothing, being adopted by famous brands, as well as for home interiors (curtains, etc.), office chairs and car seats, which are used in a wide range of applications. The company makes use of its strength in integrated production to create products full of originality.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Developing high-performance yarns that give fabrics expression by using recycled polyester for products in a variety of fields

Currently, the material to be used in the fashion industry rapidly shifts into recycling, for example, the sports apparel companies in the U.S. and Europe have declared that they will switch all polyester procurement to recycled materials. The trend is similar to other industries, and there are more needs for environmentally friendly materials in the interior and car seat industries as well.

The company uses recycled polyester to reproduce high-performance yarns that have the look and feel (texture, color, design, etc.) like natural fibers, and offers unique products with the added value of being environmentally friendly. In addition, it has developed colored yarn kneaded with pigments at the manufacturing stage. Since the fiber and pigment are integrated, the fabric is not only resistant to light discoloration, fading in color and friction, but also contributes to carbon neutrality by eliminating the need for dyeing processes and reducing CO<sup>2</sup> emissions by approximately 53% compared with piece dyeing. The company has a constant stockpile of 107 colors of domestic top class, which are used for car seats, curtains and other interior applications.

The Global Recycled Standard (GRS) is an international, voluntary, full product standard that sets requirements for third-party certification of recycled input, chain of custody, social and environmental practices, and chemical restrictions. The primary goal of GRS is to increase use of recycled materials in products and reduce the harmful social, environmental, and chemical impacts of production.



Environmentally friendly materials  
such as polyester colored yarn

Providing products and technologies with high added value domestically and internationally through the unique dyeing and processing technologies cultivated over many years

## GISEN CO., LTD.

### Company information

Location 758, Ushiki, Mizuho City, Gifu Prefecture  
Phone number +81- (0)58 - 326 - 8123  
HP <https://www.gisen.co.jp/>

Establishment 1943  
Representative Katsunori GOTO, CEO  
Number of employees 232



### Company overview

The company specializes in dyeing and processing of composite woven and knitted fabrics made of natural fibers as well as synthetic fibers including polyester, cotton, linen and polyurethane, which are widely used in uniforms for government offices, medical applications, luxury brand clothing and casual wear. The company has 55 brands of functional processing such as water repellency and deodorant, and 39 brands of sensory processing such as texture and visual appeal to provide products that meet customer needs. In addition, dyed veneer products based on fiber processing technology are used as parts for vehicle applications.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

"ECOMO," a product brand that takes into account environmental responsiveness in the manufacturing process and at the time of using of products

The company launched "ECOMO," a unified brand of products with keywords of sustainability. Dyeing process is an industry which consumes a lot of energy that has a high wastewater load. Therefore, based on energy-saving technologies developed over many years, RDF and RPF with low CO2 emissions are used for heat source boilers.

The company promotes the following of (1) to (3) for the ECOMO products.

(1) Efforts during manufacturing: the company develops and proposes to change the chemicals used in the manufacturing process from petroleum-derived ingredients to those which contain some naturally derived ones, to reduce the energy used in the process and to cut down water consumption. Its specific products include "Comoplant (dyeing process using naturally derived dyes)", "Comoguard FF (non-fluorine and water-repelling treatment using coconut-derived raw materials)" and "Comomelia JJ (flexible process using jojoba oil)."

(2) Reduction of environmental impact during using products: the company proposes products that reduce the amount of detergent and water used during washing by applying special treatments to fibers to encourage consumers to participate in the SDGs. Its specific product includes the "Comoclean series (stain-resistant finish)," which can reduce the number of washing cycles, shorten washing time and reduce the amount of detergent to be used because it is difficult for stains to adhere or easy for them to be removed.

(3) As ECOMOCLASS, the company uses its original printing technology to create aprons and other small items from dead stock that cannot be helped but discarded in the future, such as scrap materials generated during production and unfinished products, and sells them independently through EC.



Exhibition to introduce "ECOMO"



Development of  
new businesses  
and services

Wood bleaching and dyeing process, and flow forming technology

Gifu Prefecture has the second largest forest area in the main island of Japan, and the timber is one of its local resources. The company has developed technology to bleach and dye wood (veneer) by applying its processing technology for cellulose fibers as typified. The wood is used for the surface material of vehicle interiors and toy components, and the coloring that brings out the texture of the wood has been well evaluated. In addition, through joint research with the National Institute of Advanced Industrial Science and Technology (AIST), the company is developing a wood flow molding technology that allows wood to be formed into any desired shape in order to further utilize local resources.



Wood dyeing (left) and flow molding technology (right)

With the technology and knowledge cultivated through integrated in-house production  
Obtaining large shares worldwide regarding interlining and sunroof shading materials with  
high value-added markets

## TOHKAI THERMO CO.,LTD



### Company information

Location 4 - 53, Ohi, Ogaki City, Gifu Prefecture  
Phone number +81- (0)584 - 89 - 3111  
HP <https://www.thermofix.co.jp>

Establishment 1958  
Representative Keiichi ASANO, CEO  
Number of employees 170



### Company overview

The company was founded in 1958 as a latecomer to the Hair Canvas interlining and Fusible interlining industry, and developed through large orders and exports from Europe and the United States. As a differentiation strategy in the interlining business, the company targeted the global market for Japanese-made interlinings to cultivate the market. On the other hand, the new business of shading material products for sunroofs targeted the market in the U.S. with exports accounting for about 40% of total sales. In addition, the company aims to become a global niche leader through its technological capabilities in textile and adhesives and its ability to develop products that meet the needs of individual customers.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Complying with the sustainability requirements for interlining in Europe, and certified by audit institutes

One of the company's main export customers is Europe, but the European market is highly conscious of environmental and human rights management, and there are advanced efforts to address these issues, so the European market has high requirements for interlining products. In addition, the company itself is seeking ways to contribute to a sustainable society, and has developed and proposed products made from recycled polyester as well as raw fibers, which reduce the amount to be used in the manufacturing process by not dyeing for the purpose of reducing the environmental impact of its products during manufacturing processes.

One of the company's pillars is interlining (Hair Canvas interlining and Fusible interlining), which forms the framework of the garment's silhouette, and the secondary materials (shoulder pads, inside belts, anti-stretch tape, sleeved cotton), each of which enables to produce environmentally friendly garments. Among these environmentally friendly products, "EF3700R," an adhesive interlining material made from 100% recycled polyester, has been certified by an auditing organization, enhancing objective credibility in terms of the environment. For some of the interlining products for the European market, the company manages the entire supply chain of its products, including the use of recycled materials from raw materials to each process based on customer requests and the strict non-use of banned chemicals.

In addition, the company receives audits of its human rights management status, which are separately required by European customers, from a designated external auditing organization and obtains certification of required compliance.



Environmental considerations  
(sewage treatment facilities)



Development of  
new businesses  
and services

Responding quickly to a new demand for shading material for panoramic sunroofs

The company has focused on the field of garment interlinings for a long time and cultivated its unique adhesive technology and know-how through the development and manufacture of adhesive interlinings. From around 2004, it began to search for a new core business that would take advantage of this adhesive technology, and this is the "laminating business." The purpose of this business is to give new function that would not be created with just one material by laminating different materials such as cloth and film together.

When the company first started producing panorama sunroof materials in Japan, a Japanese subsidiary which belongs to a global sunroof manufacturer looked at the "Laminating Business" section of our website. This led to an inquiry "to create a light-shielding material by laminating interior materials with other materials." The company's comprehensive knowledge of textile materials and adhesive technology were utilized to rapidly promote the joint development of new materials. The transaction subsequently expanded into another direct transaction with the subsidiary's customers in the U.S. and China in addition to the Japanese subsidiary because the quality of the company's products was recognized as superior to that of competitors.



Panorama sunroof



Overseas business  
expansion

The ratio of exports to total sales accounts for 40%, and major end-users are from the top European and U.S. companies

Since the company was established with Hair Canvas interlining and Fusible interlining business, it has focused on selling interlinings to overseas markets. Its customers are mainly in Europe and the U.S. over the years since its establishment, and it has established its own industrial network in those countries to this day. Therefore, it has a system in the company to handle all trade operations related with import and export, as well as an overseas sales department in charge of export business negotiations. The business of Industrial materials for car industries, which started as a new business, launched in the domestic market. The quality of the products was recognized, and the company's main focus has become the U.S. automotive industry, where there is high demand for these products. As a result, the company is now building an export business of products with added values such as interlinings made by famous European luxury brands and shielding materials produced by major OEMs as the main end users. In each business, the company has proactively conducted on-site business negotiations to gain insight into local conditions, and has developed new products which meet potential needs that local competitors could not supply through its unique response capabilities. And this approach brought it a high reputation.

On the background for the company to build its export business, there are networks with local people who are familiar with the local markets in Europe and the U.S. The networks have been built up over the years since the company was founded.



Exhibition at "Intertextile Shanghai"

Building a wonderful relationship between people and materials through manufacturing  
that is both sustainable and not enclosed to our company alone

## MITSUBOSHI KEITO CO.LTD



### Company information

Location	898, Teigai, Fuwaishikiaza, Masaki Town, Hashima City, Gifu Prefecture	Establishment	1948
Phone number	+ 81 - (0)58 - 392 - 4780	Representative	Shingo IWATA, CEO
HP	<a href="http://mitsu-boshi.jp/">http://mitsu-boshi.jp/</a>	Number of employees	20



### Company overview

The company plans and manufactures textile materials (woven and knitted fabrics) for apparel as well as develops its own brand business. It proposes clothing fabrics for men's and women's brands in Japan and abroad, focusing on natural materials and drawing out the characteristics of cashmere, silk, wool, mohair and other materials. The company was selected for Made in Japan Collection of Ermenegildo Zegna in 2015 and won the Grand Prix (Minister of Economy, Trade and Industry Award) at the Japan Textile Contest in 2019.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Launched a wool recycling project; ReBrith WOOL

The company has updated the traditional technique of "warp yarn," which is passed down in the Bishu region (a wool production area centered on Ichinomiya City, Aichi Prefecture, and Hashima City, Gifu Prefecture). The traditional technique is to recover clothes that are no longer in use and scraps from the manufacturing process into wool yarn.

1 Traceability: up to now, the main purpose of warp wool has been to produce wool-like fabrics, and it has been neglected where the raw materials come from, in other words, traceability. By using ReBrith WOOL, the company is able to confirm the information of the collector by collecting clothes directly from users, and it can track the destination of the recycled products by selling them directly to users with priority. In the future, the product can be collected and recycled again, and its reproduction can be repeated into clothing and miscellaneous goods.

2 Regeneration with 100% wool: until now, the common practice in Bishu has been to mix 30% polyester and other synthetic fibers with recycled warp wool to make the fabric stronger and more affordable. Once chemical fibers are mixed in, it is extremely difficult to regenerate the material, so ReBrith WOOL has developed a technology to regenerate 100% wool. This makes it possible to recycle the material over and over again for clothing, sundries, carpets and other items. The company will continue its research with a view to eventually converting it into fertilizer as compost.

The sustainable manufacturing as above has been highly evaluated and featured in "LBS" (Nihon Keizai Shimbun) and "The Signs" (NHK World), drawing an attention both domestically and internationally.



Image of ReBrith WOOL



Creation of added value  
through technological  
and design capabilities

#### Creating added values by crossing history with new sensibilities

The company received the Grand Prix in 2019 and the Innovation Award in 2022 at the Japan Textile Contest, the only and the most prestigious textile contest in Japan. In other fiscal years, it has won the Excellence Award, the Wool Award and the Bishu Award and has continued to pursue the possibilities of textiles ever since.

"Urushi Black," which the company jointly developed with ginza eikokuya, is the top-selling item for ginza eikokuya, which has seven stores across Japan. It is regarded as "the blackest fabric in the world" by the eikokuya that handles high-quality fabrics from around the world, and this is considered to be an example of the company's technological and design capabilities. In foreign countries, starting with being selected for the Made in Japan Collection of Ermenegildo Zegna, the transaction has expanded to luxury brands such as the LVMH Group and the Kering Group, and continues even after the COVID-19.

As of 2022, the company continues to receive fabric business negotiations and orders, mainly from high brands of Japan and abroad, which contributes significantly to its sales. The company believes that the reason it has been able to maintain direct business relationships with top European brands is because it is able to create products with high added values by collaborating with designers to combine the fabric design know-how it has accumulated since its founding with new sensibilities.



Received recognition for technical skills  
in various contests





Development of  
new businesses  
and services

### Launch of "Hitsuji Summit Bishu," an event to revitalize the entire production area

In 2021, the company initiated the "Hitsuji Summit Bishu" as an industrial tourism event centered on the production area mainly by the successors. Hitsuji Summit Bishu is an industrial tourism event designed to revitalize the entire production area so that the company won't stand alone. The five objectives of the event are: (1) industrial tourism, (2) regional co-creation, (3) sustainability, (4) business succession and (5) fostering the development of business leaders with over 50 local companies participating. The first year of the event was in 2021, and a total of 15,000 visitors were recorded (including 3,000 online viewers), and the 2nd Sheep Summit in Bishu was also held in October of 2022 (the number of visitors is currently being counted). Forty percent of the visitors came from neighboring cities such as Nagoya, and 10% came from remote areas such as Tokyo and Osaka. The event could disseminate the Bishu region not only within the production area but also nationwide.

In addition, many manufacturers took the opportunity of the Hitsuji Summit in Bishu to launch their own factory brands, and including workshops, the sales amounted to more than 10 million yen, which not only attracted customers but also had the effect of increasing the self-independence of manufacturers. The company's collaborative products were born as a result of the Hitsuji Summit in Bishu, and its efforts were featured in the business magazine, "Forbes." Furthermore, it collaborated with local restaurants and companies other than the textile manufacturers such as Cubu Electric Power Company, and prepared contents to promote Bishu Morning and sustainable urban development, which could generate synergy effects with the factory tours. As a result, a positive trend toward business succession has increased in the production area for the successors, and at the same time, it has led to developing business leaders, for example, guests who joined Hitsuji Summit Oshu have been employed by some of the companies.



Group photos of the founders of the  
Hitsuji Summit Oshu



Overseas business  
expansion

### Continues direct transactions with top overseas brands from mainly in Europe

The company exhibited solely at "Premiere Vision" in 2012, and began its overseas expansion. In 2015, the company was selected as the only wool brand for Made in Japan Collection of Ermenegildo Zegna, which led to the expansion of its business to prestigious brands such as LVMH Group and Kering Group. Even after Corona, the company continues to do business directly with them. It continues to deal directly with overseas brands through local agents in Paris, London and Milan, and its overseas sales account for less than 20% of its latest textile sales, which makes its overseas channels established as they are never a small scale.

The company has a particularly constant reputation for dark tones, and conveys the craftsmanship of Bishu through the subtle expression of black and dark blue to be adopted by 20 overseas brands as of 2022.



Exhibiting at "Premiere Vision"



Aldex which I produce

Manufacturing which starts with human resource development

**Aldex**

## Company information

Location	2-60, Komoguchi Town, Toyoashi City, Aichi Prefecture
Phone number	+81 - (0)532 - 31 - 3600
HP	<a href="https://www.aldex.co.jp">https://www.aldex.co.jp</a>

Establishment	1958
Representative	Tatsuzo YAMAGUCHI, CEO
Number of employees	77



## Company overview

The company combines the "skills of master craftsmen" with "IT and the latest equipment" to run a business of sewing the finest custom-made apparel for men and women. The company not only sews according to customers' requests, but also produces men's and women's clothing that satisfies customers who are particular about their needs. As a diversity factory, it provides 8,000 of high-quality garments a year by continuously improving its organizational structure and enhancing quality and efficiency, while training craftsmen who can carry on the skills of the master tailors.



## Selected fields

Sustainability  
(Employee-friendly  
working environment)

### Realization of a diversity office where all motivated employees can work comfortably

As a company that promotes the advancement of women, the company actively promotes women to executive officer and deputy factory manager positions and incorporates women's perspectives into corporate management and product development. At the same time, it abolishes the mandatory retirement age to continue hiring after age of 60 (the oldest employee is currently 80 with 45 years of experience) and strives to maintain a comfortable work environment for men and women of all ages as long as they are willing to work. Besides, the company actively employs handicapped people with lower part of bodies and hearing disabilities, as long as they do not have trouble with their eyes and hands. In line with this, the factory has been made barrier-free and the restrooms have been renovated to accommodate the handicapped. Various holiday systems and a flextime system have been introduced as well, and the company is striving to realize a diversity office where each employee can work comfortably to the best of his or her ability under the motto that manufacturing starts with human resource development. Furthermore, in order to pass on and nurture skills that are being lost due to the aging of craftsmen, the company established the "aldex Sartoria Takumi Juku" in 2002, as well as has provided a wide range of opportunities to learn knowledge and skills from experts both inside and outside the companies. The company also actively exchanges opinions with overseas manufacturers and young employees, fostering an open mindset that is not limited to within the company. And now, the first graduate of the Takumi Juku has become the company's factory managers, and the company is striving to train the next generation of technicians to carry on its traditions.



Scene at a meeting for workplace improvement where female employees actively speak out



Digitalization

### Introduction of proprietary CAD system and digitization of orders

In 1984, through an industry-academia collaboration with Meijo University and Mitsubishi Electric Corporation, the company introduced an apparel CAD system and automatic cutting machines exclusively for order-made suits in the runup to other companies, which significantly reduced the time required in the front-end process. As a result, the company is able to spend more time on sewing, which is mainly done by hand, and has achieved a manufacturing clothes with high added value through a fusion of digital and analog. Since then, it has continued to update its CAD system software and automatic cutting machines, and the CAD system enables to make corrections in 1 mm increments.

This has led to the acquisition of repeat customers, especially among executives, by offering custom-made suits that the company is proud to call "industrial craftsmanship," which are uncompromisingly sewn with the skills of master craftsmen. In addition, when receiving orders from suppliers, the company uses specially developed software to have suppliers enter the results of their measurements on a dedicated measurement sheet and send the sheet directly to the company, thereby eliminating the need for the company to manually enter the measurements again. In addition, as a result that the company has built a system that manages orders from suppliers in a database and can create patterns directly from the data to improve efficiency, the production time per garment in the factory has been reduced by approximately 10%, and productivity has been continuously improved in the last three years as well.



Importing order data into the order system and outputting CAD data to the automatic cutting machines



Creation of added value  
through technological  
and design capabilities

### Creation of new order-made suits through a high-level fusion of machine and craftsmanship

By combining traditional handmade with advanced digital and machine technology, the company does not simply rely on the machines, but maximizes the performance of them by human hands and lavishes the skills of experienced workers on areas that require further work to provide custom-made suits with high added values as it carefully responds to detailed requests from tailors and end-users. Specifically, the company utilizes its proprietary CAD system to respond to the body shape of the wearer and the detailed requests from the tailors of its clients. At the same time, it also considers the overall balance of the suit, making adjustments and corrections to take advantage of its master pattern designs, which are based on the latest trends, to create an order-made suit that sets itself apart from conventional pattern orders. For the original designs of the tailors of its customers, the factory's executive staff listens carefully to the customer's particular needs, operates the CAD system to create patterns that accurately reflect the customer's image, and provides correction and size instructions according to the body shape of the customers. Then, the company creates suits that are both extremely comfortable and designed to bring out the wearer's elegance, by lavishing its craftsmanship on the collar, shoulders' line and waistline, which clearly show the suit's quality. In addition, the company also offers highly skilled craftsmanship, such as hand-perforated buttonholes and hand-stitched stars, in response to the particular needs of clients and end users, which enables its sales to grow steadily by providing such products with high added values.



Milanese buttonholes with advanced craftsmanship



Development of  
new businesses  
and services

### Sublimation from manufacturing company of Make To Order with subcontractor type into proposing own-brand type

Since 2008 to 2017, the company has been trying to transform itself from a subcontractor of high-end apparel brands in foreign countries and to improve its business structure to a company that proposes its own brands. To this end, the company has been working to strengthen its customer service by (1) building relationships with client tailors, (2) gathering information from end users through DtoC and (3) proposing new products based on customer needs through these efforts.

Specifically, factory executives, who are highly interested in fashion and well versed in sewing techniques, visit tailors nationwide to build relationships of trust through face to face dialogue, and carefully listen to the latest trends and detailed requests of end users. In addition, the company has been involved in DtoC since its foundation and has been in direct dialogue with end users for many years by selling its own brand at its directly managed stores in Tokyo and Toyohashi. And the information gathered through those processes and feedback from the end users are provided to the monthly planning and development meetings of factory executives as well as directly-managed store managers to determine the master pattern for the next fiscal year. Based on this, the company presents and proposes its determined master patterns to tailors nationwide as prototypes and new products at annual exhibitions held at the head office and Tokyo store. These proposals have been well received by many tailors, and the company now has about 200 tailors nationwide with whom it does business. This has led to a significant increase in gross profit.



Exhibit display to be held annually  
(head office)



Overseas business  
expansion

### Development of order-made suits produced in Japan that can be accepted around the world

The company also expands its business overseas in order to make its made-in-Japan technology widely recognized throughout the world. Specifically, there are opportunities to make contact with overseas apparel professionals through *aiutante*, a joint company as subordinate business that imports and sells fabrics from overseas. The company has been accepting orders from Australian tailors and begun to receive orders and sell custom-made suits to the end users in Australia since July of 2020. In particular, Australia is located in the southern hemisphere and has a different season from Japan, allowing the company to fill its off-season period for domestic demand. In addition, the company's website is now available in English and Italian, as well as Japanese in anticipation of overseas expansion. It also uses social networking services to communicate the appeal of its made-to-order suits, and has received orders from overseas suppliers who have seen the site. For example, it has been doing business with South Korea since October of 2020, and with Singapore since January of 2022 as well as receiving inquiries from the U.S. and other countries. It has the technological capability to accommodate the body shapes and physiques of foreign people, which has also led to increased its sales overseas. Through such overseas development, it is going to continue to promote its high technical capabilities of made-in-Japan suits to the world henceforward, and to realize the enhancement of the status of suits produced in Japan and, by extension, the status of the Japanese businessmen who wear them in the world.

"Reviving Wool" - disseminating the regenerated wool culture of Bishu as the textile brand, "Keshichi" both domestically and internationally

## OSIKA Co.,Ltd.

### Company information

Location 3-6-7, Ichinomiya City, Aichi Prefecture

Phone number + 81 - (0)586 - 73 - 5131

HP <http://osika.co.jp/>

Establishment 1950

Representative Akihiro OSHIKA, CEO

Number of employees 16



### Company overview

The company has grown since its establishment in 1922, changing its business model from a machine shop through a fabric wholesaler into a manufacturer. In recent years, it has opened a retail store adjacent to the factory that sells its own brand of clothing. It has become an important base for directly communicating the charms of Bishu production areas. In addition, it has launched a textile brand, "Keshichi," and is considering a framework to properly communicate and pass on the value of the wool recycling culture that has continued for 60 years in this region.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Textiles made with recycled wool technology that has been used for more than 60 years in Bishu, a wool textile production area in the world

The "Keshichi" consolidates discarded wool products such as worn-out sweaters, leftover fabrics from the textile industry, leftover yarn and cutting scraps from all over the country. They are then turned back into cotton basis, spun into yarn and made into dough. This is a technology to reuse resources without wasting them, which was accumulated in Japan: a country that struggled with sheep farming and lacked a stable supply of wool. Furthermore, the fabric can be made without the need for dyeing because it is recycled by using products that have already been colored. Although the culture of recycled wool has continued in Bishu for more than 60 years, the image of "cheap virgin wool as a substitute" has come to stay only within the industry, and the correct value has not been communicated to consumers. In order to renew this image and appeal to the growing awareness of sustainability, "Keshichi" has designed a variety of promotional materials that share the same worldview, from the manufacturers to the end consumers, including a booklet that summarizes the manufacturing process, a brand name, a tag and a bunch book. As a result, the company has received regular orders from well-known brands, and as recognition has grown, many new accounts have been opened for apparel companies, including apparel companies, outdoor companies, design firms and lifestyle-related manufacturers. The sales of "Keshichi" in 2022 are expected to be 300% of the previous year.



Bunch books, hang tags and woven labels



Overseas business  
expansion

Recycled wool, "Keshichi" plays an active role in the snowy mountains of Montana, the U.S., and "Keshichi" shirts are exported to the U.S.

The company produces "Keshichi" shirts for "BERINGIA," an outdoor brand in Montana, the U.S. This is the third season for the 22FW delivery. As they are fascinated by the recycled wool from Bishu, they have developed a series called MOB (Master of BISHU) to introduce the "Keshichi" technique and disseminate its value.

It started with English text that was written alongside in the "Keshichi" booklet. The "BERINGIA" caught the eye of the owner, who has a business relationship with the company via another outdoor brand, and the owner took a look around the various processes of "Keshichi." The owner was impressed by the time-consuming process and the unique approach which had not been seen overseas. After that, I traveled to Montana, the U.S. to make a site visit. I visited stores that sell "BERINGIA" and saw beautiful cityscapes, which enabled me to imagine where "Keshichi" shirts are actually used, and I experienced the real outdoors by wearing the company's clothing to go hunting with the group. Over time, we developed trust in each other, which led to subsequent efforts as well. The brand was also featured prominently on the brand's homepage and on the local outdoor media. Since the first fiscal year, the volume of orders has doubled each season. Every season of deliveries, the more the company is informed that the products are sold out, the wider the techniques and values of Bishu production spreads through "Keshichi," and the more the reputation of Bishu grows overseas.



Keshichi's shirts which blend in with the land of America

A company that proposes affluence through "Sitting"  
and "Sleeping" materials

## SHINCO INC.

### Company information

Location	3-1, Fukufune Town, Nakagawa Ward, Nagoya City, Aichi Prefecture
Phone number	+ 81 - (0)52 - 362 - 2711
HP	<a href="https://www.sincol-n.co.jp/">https://www.sincol-n.co.jp/</a>

Establishment	1966
Representative	Kazuhiko YAOI, CEO
Number of employees	87



### Company overview

The only company in Japan which specializes in materials related to "sitting" and "sleeping." The company deals in anything as long as it relates to "sitting" and "sleeping" with a focus on chair upholstery fabrics. The company is particular about the characteristics of yarns and materials, and incorporates new techniques when necessary. It plans and develops its own products and delivers them directly to the shelves of its customers' warehouses with its own hands. It is because of this attitude that the company has been able to maintain a high market share in the industry and the trust of its customers for more than 50 years.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Planning, development and commercialization of chair upholstery fabrics using environmentally friendly raw materials and manufacturing methods

Based on the spirit of "Mottainai," the company plans, develops and commercializes chair upholstery fabrics using various environmentally friendly raw materials and manufacturing methods. Major examples of commercialization are as follows.

- Chair upholstery fabrics made by recovering leftover yarn, waste fiber and unwanted used clothing generated during fabric production and reusing them as fiber again by passing them through warp wool process.
- As the company has worked for more than 30 years, chair upholstery fabric made from recycled cotton, using the fallen cotton generated during the production of cotton yarns after cotton is harvested from cotton trees and without dyeing (i.e., raw yarn), which significantly reduces water and electricity consumption and CO<sup>2</sup> emissions instead of dyeing process to add color at the time of yarn production.
- A PVC leather manufacturer, who is the company's partner factory (OEM partner), manufactures PVC leather for chair upholstery use, and the company purchases the PVC leather to sell to its customer, a chair manufacturer. Then, the company takes the cut pieces from the chair manufacturer, and after crushing and sorting them, the PVC part of the cut pieces is returned to the PVC leather manufacturer, the company's partner factory in order to make it reused as a raw material for PVC leather.
- In addition, since the base fabric of the PVC leather is crushed at the same time when it is pulverized, the company actively promotes measures on environmental recycling with a view to prosperous coexistence and resource recycling not just by the company itself but also with the supply chain as a whole, for example, by proposing to reuse the waste fibers (crushed base fabric) as inner material of cushions by separating from the PVC resin. In addition, the company actively communicates these measures through exhibitions, the mass media and industry magazines to raise awareness of environmental considerations from the bottom throughout the entire industry.



Chair upholstery fabrics using environmentally friendly material such as anti-wool fibers



Helping to enhance the value of textiles with dyeing technology cultivated for 100 years

## Chakyu dyeing Co., Ltd.

### Company information

Location 31, Kariyasukamichi, Kaimeiaza, Ichinomiya City, Aichi Prefecture

Phone number + 81 - (0)586 - 45 - 2345

HP <http://www.chakyu.co.jp>

Establishment 1916

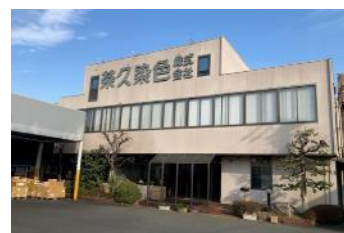
Representative Norihiko IMAEDA, CEO

Number of employees 70



### Company overview

Since its establishment in 1916, the company has been highly evaluated for its attitude of constantly solving customers' problems and its dyeing technology, and has been engaged in processing to dye yarns used for clothing and industrial materials and to add functional properties such as flame retardancy, water repellency, water absorption and deodorant. In recent years, the company has also entered new fields utilizing its traditional technologies, and has succeeded in developing conductive fibers and fibrous RFIDs using carbon nanotubes. The company will continue to bring color and comfort to everyone's lives with a spirit of gratitude.



### Selected fields

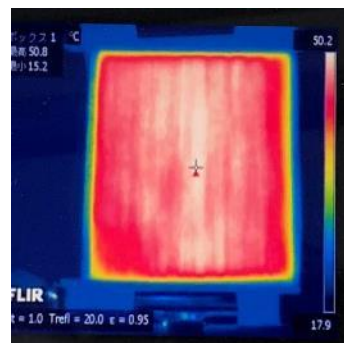


Creation of added value  
through technological  
and design capabilities

#### Development of new conductive fibers using carbon nanotubes

Carbon nanotubes (referred to hereafter as "CNT") are materials which excel in strength and electrical conductivity that are expected for the future, but their properties have made them very difficult to apply. However, the company has developed a technology to coat the CNT evenly on each polyester multifilament yarn by applying the water dispersion solution of CNT and utilizing the dyeing technology, which has been cultivated for 100 years in the company's history since its establishment. As a result, it has achieved a low resistance value (35k  $\Omega$ /m) with fibers other than metal composite conductive ones, which used to be unfeasible so far. It succeeded in developing the CNT-coated conductive fiber for the first time in the world. By using the yarn and weaving them into fabrics, the fabric heater that is thin, lightweight and flexible has been realized. This has enabled the company to confirm the heaters' uniform heating over a large area, which was the most difficult task for nichrome wire heaters, as well as their power-saving and far-infrared ray effects, and is contributing to the development such as snow-melting and ice-prevention. This development led the company to winning the Nanotechnology Grand Prize in the Nanotechnology Application Category at the International Nanotechnology Exhibition and the Minister of Economy, Trade and Industry Award at the 4th Monozukuri Nippon Grand Awards. This has been introduced in the media, including NHK. In addition, the company obtains five patents and one utility model patent for this development. These are adopted by NEXCO Central Nippon Services Company for the vehicle sensors of ETC gates and for melting snow on the electric bulletin boards. They were also used for snow-melting mats on the sidewalk from the main gate to the Information Center in Hokkaido University.

According to data from Hokkaido University, 20% of electricity effect was confirmed compared to nichrome wire heaters.



Heating elements with faces using carbon nanotube conductive yarns



Development of  
new businesses  
and services

#### New market development using flexible RFID tags in the form of threads, which has never been seen before

There has been an active movement in the medical field for some time to install RFID to prevent "retained accidents" during surgery. Although RFID are currently installed in many medical devices and instruments, the company learned that the installation of RFID in "gauze," which is the most common cause of the retained accidents, had not progressed well. In light of this, it paid attention to the installation of RFID in gauze and decided to enter into the manufacture of RFID tags for surgical gauze, taking advantage of its technical expertise in handling thread. Although the use of X-ray contrast media currently prevents the retained accidents, accidents still occur, and it is known that most of them are caused by "counting errors" such as "counting visually curled gauze" or "counting blood clots as gauze." Gauze equipped with RFID tags can significantly reduce "counting errors" and "counting time," minimize the use of X-rays in the examination on the retained accidents and reduce the risk of unexpected exposure of medical personnel and patients. However, it has not been widely used due to reasons that "it is high cost," "the part to be equipped is hard and there is a risk of injuring organs" and so on. The fibers containing RFID, which processed the IC chip with antenna into threads that the company developed, are tags to be soft and not to damage organs. And it reduces the cost to less than one-third of existing gauze with RFID tags. In addition to surgical gauze, the company develops new markets by taking advantage of the unique characteristics of RFID tags in the form of fibers.



Threaded RFID tags and surgical gauze

Creating a favorable environment, dyeing in vibrant colors,  
finishing with pleasing textures, and producing comfortable fabrics.

## Tsuyasei Kogyo Limited

### Company information

Location	29, Tenjinnishi, Sanjoasa, Ichinomiya City, Aichi Prefecture	Establishment	1950
Phone number	+ 81 - (0)586 - 62 - 3211	Representative	OSHIMA SEIJI, CEO
HP	<a href="https://www.tsuyasei.co.jp/">https://www.tsuyasei.co.jp/</a>	Number of employees	85



### Company overview

The company is a dyeing and finishing factory established in 1920. Its main business is processing women's clothing textiles, which requires high-quality control of colors and textures. Located in the Bishu production area, known for producing woolen fabrics, it primarily engages in dyeing and finishing synthetic fiber textiles. From early on, the company has been involved in the development of dyeing composite material fabrics consisting of synthetic filament yarns and natural staple fibers through collaboration with the Hokuriku production area. It holds a large share of the market for processing highly sophisticated 4-way stretch fabrics with brushed finishes. It also actively works on energy conservation and received the Energy Conservation Grand Prize in FY2021.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Embarking on Energy Efficiency from Everyday Initiatives. Realizing Investment in Energy-Saving Equipment through Subsidies. Achieving Advanced-Level Energy Savings as a Leading Case Study.

The company operates on the principle that the essence of environmental consideration in the manufacturing industry is primarily energy conservation and improvement of the energy intensity index. This is because the sales and profits necessary to sustain a factory can only be obtained through the production process.

In the textile dyeing and finishing industry, which is a high-energy consumption sector, the company has consistently carried out energy-saving activities and achieved steady results. It began voluntary energy-saving initiatives in 2014, such as eliminating steam central heating, installing heat insulators, and repairing air leaks. It also sought external expertise to enhance its understanding of energy use and energy-saving equipment. In 2018, the company took steps to invest in equipment through subsidies and other means. Here are some examples: waste heat recovery through the introduction of heat-recovery-type heat-setting machines, reuse of unused heat, installation of inverters on motors, and the adoption of high-efficiency transformers. As a result, the company achieved an energy-saving effect of approximately 15% after adjusting for production volume compared to the pre-implementation period. Furthermore, in 2020, the factory replaced its heavy-oil-fired fire-tube boilers with natural-gas-fired once-through boilers, resulting in a roughly 34% reduction in greenhouse gas emissions. These consecutive accomplishments led the company to receive the Energy Conservation Grand Prize for FY2021.

Textile industries form production clusters based on regional and horizontal specialization. Each factory collaborates with others specializing in different fields to manufacture highly sophisticated or functional fabrics. Any lacks in the manufacturing process make it impossible to sustain regional production clusters. Energy prices, such as gas and electricity, continue to rise significantly. Small and medium-sized companies in the production areas find it challenging to pass on higher costs to larger customers, resulting in economic downturns. Implementing energy conservation activities is an effective measure to mitigate the financial weakness and sustain the dyeing and finishing industries, production clusters, and textile industries as a whole.



Certificate of commendation and trophy for the Energy Conservation Grand Prize



NAKADEN manufactures and sells clothing fabrics in the woolen textile production area (Bishu), which is the largest in Japan.

## NAKADEN KEORI CO.,LTD.

### Company information

Location	1688, Gouchinishi, Sanjo aza, Ichinomiya City, Aichi Prefecture	Establishment	1960
Phone number	+ 81 - (0)586 - 61 - 3111	Representative	Kosuke NAKASHIMA, CEO
HP	<a href="https://www.nakadenkeori.co.jp/">https://www.nakadenkeori.co.jp/</a>	Number of employees	135



### Company overview

NAKADEN KEORI responds to a wide range of requests from domestic and overseas maisons by utilizing the strength of its integrated production system, which covers everything from yarn dyeing to weaving, knitting (circular and horizontal knitting) along with dyeing and finishing processes, both within the company and its relevant companies. In the woolen textile production area (Bishu), the company can also produce natural fibers and synthetic fibers other than wool.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Development, production and sales of recycled wool products (recycled wool) and sustainable manufacturing factories

The company manufactures fabrics using reworked wool (recycled wool), which are made by gathering selvages and leftover yarns. These are produced in the woolen fabric manufacturing process, as well as from defective fabrics and products of high wool content collected from stores. This enables not only the reuse of resources, but also a significant reduction in water and energy (gas and heavy oil used for boilers) required in the production process. And, as an environmentally friendly and sustainable material that contributes significantly to waste reduction, the company is receiving a high level of inquiries from apparel companies. There are more and more brands which would like to manufacture and sell new products by recycling discarded products collected in stores. Besides, recycled wool has been used for more than 50 years and is highly evaluated for its quality and texture by various brands. It is an environmentally friendly material that can be recycled many times, and even if the fiber length becomes too short to be recycled into yarn at the end, it will biodegrade and return to the soil in a few months.

Currently, the company handles 150 tons of recycled wool annually, the largest volume in Bishu, which is considered one of the world's three largest woolen textile production areas. It sells textiles made from recycled wool to major retailers as well as apparel and select shops.

Also, solar panels have been installed on the roofs of each woolen textile factory, and all fluorescent lights at factories and the head office have been converted to LEDs.

In addition, the factories are being converted to sustainable plants with the aim of reducing CO2 emissions by replacing air conditioners with energy-efficient ones.



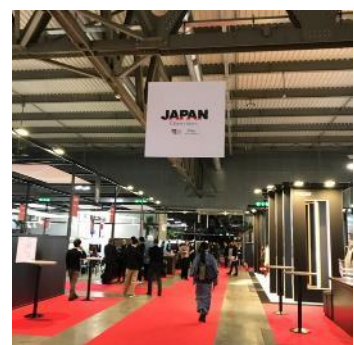
Solar panels installed at woven fabric factory  
(The inside of the factories are all LED)



Overseas business  
expansion

#### Exhibiting at overseas textile fairs and providing materials to designers participating in the New York and Paris Collections

The company has continued to exhibit at "Milano Unica," a trade fair for textiles with high added value held in Milan, Italy (at the jointly sponsored booth by JETRO and JFW: The Japan Observatory). The exhibition is an ideal occasion for developing overseas sales channels and expanding overseas business, with approximately 4,000 companies from Europe, the U.S. and Asia to gather over the three-day period. Each time, the company receives sample requests from 2 to 30 companies, and it exports textiles via Japanese export trading companies. Also, in collaboration with Japan Fashion Week, the company is developing and selling textiles with overseas designers flourishing in the New York and Paris collections. For the New York collections, the company developed coat fabrics for prominent New York designers, and for the Paris collections, it developed more than 10 looks of fabrics for French designers. The company gained its name recognition through collaborations with well-known designers and received development requests from European luxury brands. Overseas maisons and well-known designers recognize the advantages of Japanese materials and the company will continue to expand its overseas operations to increase its sales.



"Milano Unica," trade fair venue

This factory to dye and arrange all fabric types of textile and knitwear such as natural fibers and synthetic fibers, with focusing on wool

## FUJII SEIJU CO. LTD

### Company information

Location 10, Gounaka, Okucho, Ichinomiya City, Aichi Prefecture  
Phone number + 81 - (0)586 - 45 - 8161  
HP <https://fujiseiju.jimdosite.com>

Establishment 1890  
Representative Mitsuteru ISHIKAWA, CEO  
Number of employees 86



### Company overview

The company aims to become one of the top dyeing and finishing factory in Japan by combining its accumulated technology from Fujii Wool Textile in Senshu (130 years ago) with the latest processing machines and dyeing and finishing technologies. The company mainly uses batch-type machines, and operates with the motto of flexible quality and on-time delivery for small to large lots. With a combination of more than 30 types of processing machines and traditional craftsmanship, the company responds to customer needs as a dyeing and finishing facility for all types of garments.



### Selected fields



Creation of added value  
through technological  
and design capabilities

#### Traditional raising technology cultivated since the company's founding

The company was founded in 1962 in Bishu (Ichinomiya), based on the traditions and techniques of the Fujii Wool Weaving Company founded in 1890 in Senshu (Izumitsu). Since that time, the company has been engaged in dyeing and arranging, mainly processing the raising of luxury animal hair fabrics (cashmere, mohair, alpaca, etc.). As time went by, it changed its processing content, and from 1965 to 1974, it installed a series of equipment and began processing wool round knitwear. Later, from 1975 to 1984, the company's factory was equipped with liquid flow dyeing machines for high-pressure and heat-setting machines so that it could dye and finish synthetic fibers, which made it possible to dye and arrange fibers for all kinds of apparel applications. In recent years, the company has also introduced Italian fuller machines of water-saving and energy-saving types and invested in equipment in order to improve the quality of its products while taking the environment into consideration.

In terms of technology, the company aims to be the world's top technology provider under the tradition of the time when the company was founded. In particular, the company has inherited the traditional raising technique from masters of the raising technique in the post war period (from 1945 to 1954), and utilizes the English-style raising machines manufactured in Wakayama at that time while regularly maintaining them (or manufacturing those parts that are not available).

On the other hand, it advancedly implemented computer-controlled dyeing and sorting processing equipment to improve and stabilize quality. Furthermore, the company also focused on the development of chemical processing, and developed, for example, (1) non-fluorine water-repellent processing of an environmentally friendly type (Neo Proof Processing), (2) a form stabilizing processing for raised fabrics (Neo Eternal Processing) and (3) an anti-virus processing (V Shield) which is effective against influenza virus that is expected to be effective against corona virus as well. As a result, in 2022, it received the 44th Senken Prize.



English-style raisers manufactured  
from around 1950 to 1954

Let's create a company that we would want our children to join!

# IAAZAJ Holdings, Co.

## Company information

Location 11, Aoshima, Shokawa Town, Tonami City, Toyama Prefecture

Phone number +81 - (0)763 - 82 - 3030

HP <http://www.ichiamiaz.co.jp/>

Establishment 2014

Representative Hiroshi ODA, CEO

Number of employees 408



## Company overview

Our core business is not to sell goods, but to "manufacture" them. We have a system that enables integrated production within the group, starting from the knitting of fabrics to value-added processing such as dyeing, raising, and printing, as well as cutting and sewing. In sales, developing our own brands, we are improving processing technology that can only be done by our group, and preparing a system that allows us to offer our products to a variety of customers.



## Selected fields



### Digitalization

### Digitalization of tasks that relied on human skills (training, experience, abilities)

Beaker sample creation, numerical management by CCM, and color numerical management enable quick and accurate sample color proposals. In the past, customers had to visually check actual samples. However, by enabling beaker sample color matching and confirmation with numerical data, it is now possible to check color matching based on numerical hue and wavelength data with customers online. The effects of our efforts are as follows: the beaker coloring period has been reduced to less than half of the conventional period, and the provision of numerical data has made it possible to start color mixing tests on the same day; and automatic CCM calculation based on the in-house original configuration made it possible to offer accurate sample colors without the problem of different colors depending on the light source or color perception of the customer.

In addition, the implementation of the camera inspection system has also improved inspection efficiency. The conventional method of visual inspection by operators involved a high risk of missing something and relied on the ability of the inspector, which required a period of training and the right skills. It was difficult to put camera inspection into practical use for knit products, which have a high degree of flexibility, and there were no manufacturers selling camera inspection systems for those products. However, digitalization made it possible to detect irregularities, previously considered impossible, by analyzing a vast amount of past inspection data, data registration to the camera inspection system, and settings of standards. The results of these measures are as follows: even contamination as small as 1 mm, which was difficult to detect, can now be detected; and inspection time has been reduced to 1/5 that compared to visual inspection.



Hue data management screen



### Creation of added value through technological and design capabilities

### New development and application expansion of textile processing technology

We have developed and applied the following five new technologies.

1. Brushed textile: utilizing a special yarn that is only half the weight of ordinary yarn, we have achieved the commercialization of a brushed textile that is ultra-lightweight (1/2 the weight of conventional textiles) and has excellent air permeability while maintaining warmth. With its superior warmth and quick-drying characteristics, this product was selected for Toyama Products 2018.
2. Printing: our unique processing technology enables unrestricted printing of gradation patterns, fine lines, and photographic images on stretchy knit fabrics, which are difficult to print on due to the difficulty of adjusting ink penetration. Our products are used as OEM products for uniforms of major manufacturers.
3. Nanofiber nonwoven fabrics: development of nonwoven fabrics for the purpose of controlling agricultural and sanitary pests (patented).
4. Adhesive materials and products: development of adhesive materials that can be easily applied and removed, and can be continuously applied for long periods of time, including flexible joints (patented).
5. Bioabsorbable small-caliber artificial blood vessels: development of small-caliber self-regenerating vascular grafts made of nonwoven nanofiber membranes of biodegradable polymers, which will eventually replace human regenerated blood vessels through bioabsorbable function.

Printing process  
(Our inkjet pamphlet)

Kawada Knitting Group is pursuing the "infinite possibilities" of tricot.

## KCI Warp Knit Co.

### Company information

Location 2435 Rindo, Nanto City, Toyama Prefecture

Phone number + 81 - (0)763 - 62 - 2121

HP <https://www.kawada-knit.co.jp/>

Establishment 1969

Representative Tsuneaki KAWADA, CEO

Number of employees 70



### Company overview

We are one of the top manufacturers in Japan in terms of both sales and production volume, and we are engaged in the development, production, brushing, and sales of tricot fabrics. In Japan, our four group companies develop more than 700 products per year, which are used in a wide range of applications, including general clothing, special clothing, lining fabrics, lifestyle materials, and industrial materials.



### Selected fields



#### Digitalization

#### Implementing IoT solutions to increase production speed

With the objective of increasing production speed through accurate information sharing, CT sensors (electrical current sensors) were installed on all knitting machines so that operation information could be obtained from the in-factory gateway via the cloud. Using real-time operation status displayed on large monitors in each of the four blocks of the factory, the information could be shared within the factory. Based on this information, we were able to improve productivity by 3% by managing the production plan and the actual production status as shown below, and by eliminating the factors that were hindering the production time.

1. Visualization of production equipment operation: CT sensors (electrical current sensors) were attached to the power cables of knitting machines to determine the operating status by the presence or absence of electrical current. Unlike vibration, light, or motion sensors, the operating status can now be monitored with 100% accuracy. When a machine stops due to a malfunction, an alert (warning) is displayed real-time on a large monitor installed at the site, which allows the operators to see the operating status and understand where the trouble is occurring and how much time has passed. This makes it possible to quickly deal with the recovery work.
2. Predictive management of production plans: CT sensor ( electrical current sensor) log data from past years can be downloaded from the cloud service, enabling verification of operation results and analysis for each production plan in terms of causes, operators, and time periods.



CT sensor  
( electrical current sensor )

We are a company that is always thinking and acting for the future with the corporate message of "Energizing Japanese Textiles!"

## Kaji Nylon Inc.

### Company information

Location Ha-48, Umeda Town, Kanazawa City, Ishikawa Prefecture

Phone number + 81 - (0)76 - 258 - 2255

HP <https://www.kajigroup.co.jp/group/nylon/>

Establishment 1964

Representative Masataka KAJI, President

Number of employees 110



### Company overview

We are manufacturing highly processed yarn (temporary twisting), which in recent years has been widely used in sports and outdoor clothing products made with thin fabrics from fine count yarns. We specialize in compound temporary twisting and produce high value-added, high-quality products that combine different materials to create a variety of function and textures. We always consider and develop products by maximizing the strengths of the materials.



### Selected fields



Creation of added value  
through technological  
and design capabilities

By combining our company's "technical capabilities and design elements" as our materials, we create added value.

We are engaged in a B to C business that delivers the following two fashion brands directly to customers by combining the lightweight, wrinkle-resistant, and highly functional technology of a synthetic fiber manufacturer, outstanding design, and by utilizing influencers.

#### TIMONE (Traveling Factory Brand)

TIMONE is a textile brand that has been highly evaluated all over the world as a fabric that stimulates the senses, with its high functionality and supple touch. Our textiles are made with the knowledge and experience we have cultivated over many years by utilizing the processing technology of yarns that we have been thoroughly focusing on. TIMONE is a made-in-Japan factory brand made mainly from synthetic fibers, which is the result of the Kaji Group's textile development.

#### K-3B (simple, smart, and streamlined set-up brand)

Versatile, time-saving, and all-weather. A streamlined set-up brand that eliminates even the waste of time spent worrying about coordination.

With Mr. Yoshimasa Hoshiba as a creative director, the brand uses the latest functional materials created from Kaji-Nylon's technology. We create high added value by combining the power of design with high functionality.



Factory brand "K-3B" store



Development of  
new businesses  
and services

Creating factory brands with washi yarn products

2022 June, a group company, Kaji Knit, installed a washi compound yarn manufacturing facility, and started textile development and manufacturing at Kajirene. The Washi yarn products are being developed into Kaji Nylon's factory brands "TIMONE" and "K-3B".

Our washi yarn is a new value-added washi yarn that combines fine fiber washi yarn with a variety of core materials. Since ancient times, washi has maintained a comfortable environment in Japan's hot and humid climate through the power of its fibers that can breathe. We hope to make this property more comfortable with modern technology. In this industry, we manufacture washi yarn by twisting washi with synthetic fibers to create compound yarn, which is then used in the production of knit fabrics, as well as in the comprehensive development of woven fabrics and other products within the group.

In addition, by combining washi, a natural material, with eco-friendly and biodegradable materials, we aim to create sustainable products with a low environmental impact. In the future, we aim to create a business model in which only the necessary amount of products can be produced and reused at factories that have a low environmental impact.



K-3B brand shoes made of washi paper



We are a company that is always thinking and acting for the future with the corporate message of "Energizing Japanese Textiles!"

## Kajirene Inc.



### Company information

Location 75-2 Takamatsu Kahoku City, Ishikawa Prefecture

Phone number + 81 - (0)76 - 281 - 0118

HP <https://www.kajigroup.co.jp/group/rene/>

Establishment 1950

Representative Masataka KAJI, President

Number of employees 110



### Company overview

For more than 70 years, we have been manufacturing synthetic filament fabrics, and in recent years, many overseas outdoor and sports brands have adopted our products because of our superior thin and light weaving technology that takes advantage of the characteristics of fine yarns. By using our weaving technology to create various functions and textures, we produce high value-added and high quality products.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Reduce environmental impact through recycling and upcycling of C-Grade and leftover yarn from production

In response to the growing interest in sustainability in the international community and the increasing demand for eco-friendly and recycled products from European and U.S. brands, in April 2021, we sought and obtained GRS (Global Recycled Standard) certification. The GRS certification requires not only recycled materials, but also social, environmental, and chemical substance management, so we reviewed everything from the ground up, including the management system. Furthermore, we have also reformed our organizational structure and established a sustainability promotion committee to promote sustainability across the entire group.

From an environmental standpoint, we collaborate with Company A to regularly collect leftover nylon threads and C-Grade that were previously disposed of as waste. In this initiative, C-fiber (defective nylon fabric), which used to be disposed of in the past, is processed with Arimatsu shibori and reused (upcycled) as products such as drawstrings, Japanese-style accessories, and kimonos. In addition, we monthly collect numerical data on energy consumption, such as electricity and heavy oil, and on the amount of waste. This shows that we work to minimize waste, make effective use of resources, and reduce our environmental impact. The employees' awareness has been raised by grasping the actual status and setting reduction targets for the fiscal year.

On February 2, 2022, the collaboration among production areas led by Kaji-Group and Kaji Lene and efforts to reduce environmental burdens were featured on NHK Kanazawa Television's "Kaganoto Evening" program, which received a favorable response.



U-fabric (C-fabric upcycled)



Development of  
new businesses  
and services

Expanding business areas through new business challenges

We are expanding our business domains through our flexible carbon wire (FCW) business.

Carbon fiber has extremely high tensile strength but low friction and shear strength. By focusing solely on covering this weakness, we promoted research and development on the soft use of carbon fiber reinforced plastic (CFRP), which was previously seen only as a hard material to be covered with a hard resin. As a result, FCW was developed.

FCW is one-fourth as light as a SUS wire of the same diameter, but twice as strong, does not rust, and does not stretch or creep (gradually elongate under continuous tension) in hot weather. Therefore, we believe that FCW will be a solution that offers excellent long-term durability and greatly reduces human energy required for inspection, retention, replacement, and transportation. FCW has already been adopted as a tension member for power cables, and has been selected for a business restructuring subsidy in 2021, with production facilities to be installed this summer for commercialization. In addition to this, we are also developing intermediate materials in the tow prepreg sector. After being selected for the Ishikawa Prefecture Next Generation Business Creation Fund in 2022, we have also begun development of CF grids, which are significantly softer than conventional grids, for use in renovation methods for deteriorating manholes.



FCW (Flexible Carbon Wire)





Overseas business  
expansion

## Overseas sales expansion of textiles KAJIF and PPX (Paper Cross).

By working with Company B, we have been strengthening overseas sales of "KAJIF," our textile brand that has received high recognition in Japan and is expanding its sales. Specifically, KAJIF made its overseas debut with Company B at the Premiere Vision in Paris in July of this year, and we have begun to make strategic moves overseas. The brand has been particularly well received by Italian buyers, and we expect sales to expand overseas in the future. In addition, several business negotiations for KJF-PPX, a Japanese paper material under the KAJIF brand, have already begun through C

Company's agent channels in Europe and the United States, and we are planning to expand our export business to the outdoor/sports clothing industry in Germany and France. As for CFRTP/Flexible Carbon Wire, since last year, we have been exhibiting at "JEC WORLD" in Paris, the world's largest compound materials trade fair, with our own booth. We will exhibit again in April 2023 to gain a foothold for global business development in Europe and other regions.



KJF-PPX(paper cloth)

Yarn Innovation from Noto to the World

# San-etsu Co., Ltd.

## Company information

Location Hei 1-5, Takamatsu, Kahoku City, Ishikawa Prefecture

Establishment 1997

Phone number + 81 - (0)76 - 281 - 8110

Representative YEE-MAN SUN, CEO

HP [www.san-etsu.jp](http://www.san-etsu.jp)

Number of employees 96



## Company Overview

With a fundamental philosophy of "contributing to the textile industry by providing yarns that delight customers," we have built a solid corporate foundation and a reliable distribution network. In addition, by utilizing the latest specialized machines for development and circular knitting machines, we are developing high-functional yarns and stabilizing the quality of regular yarns. Under the slogan, "From Noto to the world," we will work with our business partners to develop differentiated yarns that only we can offer and to introduce "Made in Japan" high-value-added products to the world.



## Selected fields

Creation of added value  
through technological  
and design capabilitiesApplying technology to reproduce and evolve the fabrics of the new synthetic  
fiber boom by using a high-speed stretching temporary twisting machine

At the time of establishment, we were a company that manufactured and sold standard polyester processed yarn using a high-speed temporary twisting machine, but we improved the 33H (Murata Machinery SZ machine) with our own technology and developed a small winding yarn for lace.

Since then, we have made it possible to produce twin, three-ply, four-ply, and six-ply yarns, and have expanded our sales channels to the fields of vehicles, interiors, uniforms, sports, poultices, materials, and others. Although globalization has progressed in recent years, in April 2017, in order to reproduce and evolve the manufacturing of the new synthetic fiber boom (textiles) of the late 1980s, we introduced three cutting-edge ATF-1500 high-speed stretching temporary twisting machines (108-spindle machines manufactured by TMT Machinery), improved them, and began production. With the introduction of these machines, we were able to enter into the integrated materials for vehicles and the sports industry, where previously we had a low market share. In recent years, we have procured carefully selected raw materials from various countries in order to take advantage of the processing features of the new and old machines.

These include recycled yarns, compound yarns (conjugate), functional yarns (silver kneaded), and split fiber yarns. Our differentiated yarns, which can be produced using both old and new temporary twisting machines, include the following compound-processed yarns.

Thick & thin, Tight Spot, Wool like, Two Tone, Linen Like, Cotton Like, Different Shrinkage, Slub Yarn, High Stretch and, etc.



6-ply yarn

A single thread can change the future - "Impannatore Spreading its Wings to the World" World-Class  
Organza and Cutting-Edge Manufacturing

## SUNCORONA ODA CO.,LTD.



### Company information

Location 81, Chikara, Kiba Town, Komatsu City, Ishikawa Prefecture  
Phone number + 81 - (0)761 - 43 - 2211  
HP <https://sunoda.co.jp/>

Establishment 1975  
Representative Tokio ODA, CEO  
Number of employees 167



### Company overview

Since its founding in 1955, the firm has been involved in continuous manufacturing with a vertically integrated converter system based on its unique "splitting fiber technology" as its core.

With curtains as its primary product, the company produces 2.05 million square meters (approximately 1.02 million windows) per month, maintaining the best quality and supply capabilities in the world. Furthermore, in the bridal field it has a domestic market share of more than 70%, mainly in the area of thin fabrics with high quality. As a new business, it also takes part in the research and development of carbon fiber composite materials applying fiber splitting technology, which is attracting attention as they are used in major sports shoes and other products.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Organza with top level quality in the world made of 100% recycled materials

The company has focused on sustainable materials, sensing the growing momentum toward sustainability and a circular economy, mainly in the European market. It developed "organza (a thin, transparent and taut fabric)" using two environmentally friendly materials. One is a material made from transparent PET bottles collected in Japan, which is significantly whiter and more durable than conventional recycled PET fibers. The other is recycled polyester fibers created through chemical recycling of used clothing and surplus fabrics from manufacturing; both are sustainable products that make use of existing terrestrial resources. The company developed "100% recycled organza" using these two materials and exhibited it at "Premiere Vision," which is the world's largest materials exhibition. The product was favorably received in the European market, which has a strong interest in resource recycling and the SDGs. On top of that, VOGUE magazine, a global source of information on the cutting edge of high fashion, has recognized the company as an "unrivaled player in the world in the production of high-quality, ultra-thin fabrics and a wide range of colors."



Organza made from recycled materials is available in a wide variety of colors



Digitalization

#### Improving efficiency by introducing a process management system in a sewing factory

The company installed tablet terminals at each step and developed a process management system in which workers read the barcode attached linked to each order to monitor the order's passing status. By connecting tablet terminals via a network and consolidating data, manual counting was eliminated and the work efficiency of employees was improved. In addition, by displacing the most recent amount of remaining work based on the collected data on a large monitor installed in the factory in real time, everyone in the factory has gained access to the progress status, allowing on-site managers especially to quickly make decisions on how to avoid work delays.

Ordered fabrics were checked from hundreds of product sample books during the cutting process to ensure that the originals were correct, but the search was time-consuming, and workers' misidentification caused a certain amount of constraints. By simply scanning the barcode using a tablet device to make it possible to output the photo sample books to the device, the risk of errors due to misplaced or incorrect assumptions about the product has been reduced as workers can now instantly check the exact color, pattern, and size of the product. Furthermore, by systematizing the compilation and analysis of sewing order data sent from various customers' contact points, the development of process plans and the information distribution to the field, which used to take three hours per customer, can now be completed in five minutes, resulting in increased productivity and sales.



Improved operational efficiency through systemization at sewing sites



Creation of added value  
through technological  
and design capabilities

## A company with the top share that has a strength in an integrated production system centered on its unique fiber separation technology

The company has a unique technology to separate multiple filaments of thick denier yarn (240 denier, 12 filaments) into 12 ultrafine yarn of 450 km without cutting the yarn. With this technology as its core, it has built an integrated production system from yarn to finished products. The company's curtain business, its core product, boasts qualities and supply capabilities that are among the best in the world, and it has an advantage over its competitors in that it efficiently conducts joint development with approximately 100 partner companies. It is currently a market leader in the industry, selling items to major interior furniture makers and other businesses. In addition, renowned designer Mr. Tomo KOIZUMI praised the ultra-thin and transparent "organza" fabric, and the environmentally friendly organza made from recycled fiber derived from plastic bottles, which the company has been focusing on developing in recent years, was used in the costumes of the singer who sang the national anthem at the 2021 Tokyo Olympics. In general, recycled materials are expensive, and price reduction is a concern; nevertheless, the company's ultra-thin organza, manufactured with its fiber separation technique, is low in weight ratio per unit and provides value in terms of both sustainable material design and reasonable price. The company has the largest market share in Japan for bridal costumes.



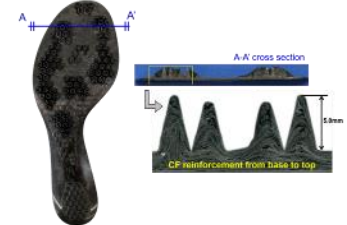
From yarn production to commercialization, impannatores are employed within the company



Development of  
new businesses  
and services

## Developed new products and expanded into new fields through industry-academia-government collaboration by applying yarn processing technology

The company successfully commercialized a new product as a new business by applying the "yarn separation" technology it had cultivated. The company has developed products using "CFRP (Carbon Fiber Reinforced Plastic)," an innovative material with lightweight and high-strength, through industry-academia-government collaboration, focusing on composite materials using carbon fiber, which is 10 times stronger than steel and one-fourth lighter than steel. The traditional CFRP struggled to combine the resin with carbon fiber in a consistent manner, resulting in imperfections in the quality. In addition, textile shapes, for example, can only be formed to simple shapes, and there were many issues in adapting to product mass production. In order to overcome such issues, the company applied its core technology (proprietary fiber splitting technology) to make carbon fibers as thin as 30  $\mu\text{m}$  in thickness with homogeneous. Furthermore, by strengthening partnership with other firms, the Kanazawa Institute of Technology, and other institutions, the company was able to focus on resin processing research and development and created a technique for infusing carbon fiber with resin in a consistent manner. By cutting, spreading and laminating tapes made of carbon fiber impregnated with a consistent resin, it developed "Flexcarbon," (patented and trademark registered) a thermoplastic random sheet, which is now used in products. This flex carbon enables the mass production of complex, high-strength shapes that could not be made with conventional CFRP by press molding. For example, in partnership with ASICS Corporation, the company produced "sole parts" of shoes for the next generation. Additionally, the product achieved first place in the Sports & Health Care category at the "JEC Composites Innovation Awards" held by "JEC WORLD2020," the world's largest composite materials exhibition in terms of technology.



Carbon fibers divided by Suncorona's technology flow into microscopic shapes as well



Overseas business  
expansion

## Continuously communicating the value of Japan Premium to the world

According to reports, 70% of the fabrics used by foreign super brands are created in Japan. In addition to synthetic thin fabrics primarily made of the company's unique spun yarn, the company is expanding its sales channels in the fashion and dress/bridal markets in France, Italy, and Spain by utilizing agents and its own converter system, with its unique Japanese technology that combines traditions, materials, and production areas. The company's positioning as a specialized trading company and its own original worldview have enabled it to develop a wide range of businesses. One of the company's strengths is the development of direct marketing and a global supply chain with an integrated system (converter system) from yarn to completed products.



Highly recognized at the world's largest exhibition in Paris

Make the world PEACE with PIECE in Silae

## Shirae shokusan co.,ltd

## Company information

Location 147-1, Takamatsufu, Kawoku City, Ishikawa Prefecture

Phone number + 81 - (0)76 - 281 - 0447

HP <https://s-shokusan.com>

Establishment 2021

Representative Tomoaki SHIRAE, CEO

Number of employees 18



## Company overview

The company was founded in 1978 and incorporated in 2021. As a parts manufacturer, the company contributes to the world by supporting product development in diverse markets in various countries by providing narrow fabrics to markets around the world under the slogan, "Bringing the technology of local factories to the world." The company has a proven track record in a variety of fields, including apparel, medical, hygiene products, automobiles, cosmetics, industrial products and miscellaneous goods, and pursues manufacturing that only it can produce with its stretchy, narrow fabrics.



## Selected fields



Creation of added value  
through technological  
and design capabilities

**Succeeded in transformation from apparel business with high added values in narrow tapes by various yarn types and technological capabilities**

(1) The company strengthened its domestic supply chain for masks, which had been strained by COVID-19, and launched joint development of high-value-added mask products with mask manufacturers, who had been concerned about market saturation due to new entrants into the market. And it developed "mask strings less likely to cause ear pain," using narrow woven fabrics with fine-tuning of stretchability by yarn type and structure, and started mass production in June 2020.

In preparation for the mass production, a factory was expanded in November 2020, and 20 weaving machines were installed to produce mask strings for 4 million masks, increasing sales by 80 million yen per year.

(2) Development of binder tape that is resistant to fluffing. By using design-twisted yarns and making the woven surface fluffy, the structure was made to be difficult to join with hook and loop fasteners (a hook and loop magic) often used for textile products, which eliminated the need for resin processing to result in lower product costs and higher productivity. This product is deployed in the supporter (medical) market, and mass production has started since around 2016, with sales of approximately 5.4 million yen to date.

(3) The company developed waist elastic with both water-absorbing and water-repellent function, which is used in high-end sports tights. By creating an uneven surface and making the part in contact with the human skin water-repellent yarn that is comfortable to the skin and the part not in contact with the skin water-absorbent yarn, it is realized that the waist elastic is comfortable to the skin while absorbing perspiration and water. The company produces about 2,000 garments a year, which are twice as high added-value products as ordinary waist elastic, with sales of 1.6 million yen to account for about 1% of its sales.

It has successfully transformed its business from 100% apparel to 20% apparel, 10% sportswear, 50% medical, 5% industrial materials and 15% others through the above developed materials.



Highly functional waist elastic with water-repellent and water-absorbent yarns woven into uneven surfaces



Development of  
new businesses  
and services

### Developed narrow woven fabrics based on new ideas, realizing for the first time in the world

(1) The idea of a new weaving structure without the warp was conceived and realized over a period of two years in collaboration with a loom manufacturer. The company is proud to say that this technology is the world's first. It has succeeded in mechanizing the production of "eyelashes (false eyelashes)," which had been produced manually at factories in Southeast Asia, and its production capacity is now 100 times greater than that of manual production. Immediately after the technology was established, the COVID-19 epidemic broke out, which is under delay for the commercialization of the technology for Europe. On the other hand, a specialized trading company that has been paying attention to this technology has requested to develop it into a brush for vacuum cleaners in October 2022, and the company has now begun prototype development.

(2) The challenge of eliminating plastic was taken up to realize in 2020 by using weaving technology to reproduce the cell tip (plastic), which are used at the end of shoelaces in order to make it easier to thread laces and cords through holes and to prevent them from fraying. Currently, we are working on cost reduction and commercialization.

(3) The company has developed narrow fabric with shape memory using monofilaments, which are used for nose fitters of masks, wedding dresses, bags (handles and zippers), supporters and so on.

This material greatly contributes to shortening the overall manufacturing process by eliminating the process of setting wires and metals after weaving, as well as not reacting to the inspection machine because it is not a metal. The company has begun mass production since around 2012, and through repeated improvements, it has expanded the range of applications, producing 700,000 m to date and growing sales to 28 million yen.



The world's first "eyelash" produced on a loom



A long-established weaving company with 135 years of history that weaves sustainable materials using advanced weaving techniques

## NOTOKINU CO.,LTD



### Company information

Location	7 - 40, Takaoka Town, Kanazawa City, Ishikawa Prefecture	Establishment	1967
Phone number	+ 81 - (0)76 - 263 - 1446	Representative	Yoshihiro NOTO, CEO
HP	<a href="http://www.notokinu.co.jp/">http://www.notokinu.co.jp/</a>	Number of employees	37



### Company overview

The company was founded in 1887 and specializes in weaving fabrics using long-fiber fabrics in air jet looms. It is one of the few Japanese weaving companies commissioned by major yarn manufacturer, Asahi Kasei Corporation to weave Bemberg® (Cupro) linings, and is highly regarded for its technical capabilities and quality. In recent years, it has also entered the field of industrial materials such as tea bags (tea filters), vehicle interior materials and tire cords, utilizing its advanced weaving technology.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Reduction of CO2 emissions and prevention of global warming by energy saving in production facilities

AJL (Air Jet Loom) is said to be more versatile than WJL (Water Jet Loom), which uses water jets, while the high cost of electricity is the biggest issue. The company uses 100% electric energy and emitted 7,728 tons of CO<sup>2</sup> in 2014, which consisted of 58% from compressor equipment, 18% from electric looms, 12% from air conditioning and 12% from other sources such as lighting. Therefore, from the viewpoint of sustainability of reducing CO<sup>2</sup> emissions and preventing global warming, the company has started thorough energy-saving efforts since FY2015 as it focuses on updating compressors and air-conditioning equipment, reviews piping routing and changes lighting to LED. In particular, since all compressors operate at constant speed, they consume about 40% of their rated power even when unloaded operation (operation without load) occurs due to a decrease in airflow. As such, there was an issue of high energy loss. Therefore, the introduction of three inverter-type compressors as a part of the facility's renewal has resulted in a significant energy saving effect. In addition, inverters are also incorporated in cooling water pumps and other devices in order to reduce power consumption by approximately 30% compared to conventional systems. In addition, the company has succeeded in reducing average CO<sup>2</sup> emissions from FY2015 to FY2019 by about 28% compared to that of FY2014 by installing 5 large cool air blowers in air conditioning equipment, converting all of 500 lighting fixtures to LED and installing 2 high-efficiency transformers. This achievement was recognized, and the company received the award from the Governor of Ishikawa Prefecture as an excellent energy management business in FY2020.



The award from the Governor of Ishikawa Prefecture as an excellent energy management business in FY2020



Creation of added value  
through technological  
and design capabilities

#### Developing new markets with advanced weaving technology by AJL (Air Jet Loom)

The company started Bemberg®, double-layered fabric weaving with Asahi Kasei Corporation soon after World War II, and from 1975 to 1984, it jointly developed AJL (Air Jet Loom) for Bemberg® linings with a weaving machine manufacturer and a parts manufacturer to introduce AJL earlier than any other company in the Hokuriku region. It succeeded in mass-producing and improving the quality of Bemberg® lining fabrics. It steadily increased sales and established itself as a woven fabric manufacturer specializing in lining, interlinings and other garment materials. For example, it also succeeded in weaving an interlining fabric using a fine filament yarn of less than 17 dtex (decitex), which was considered difficult without warp sizing (sizing). After the collapse of Lehman Brothers, it entered the industrial materials field (tea bags (tea filters), vehicle interior materials, tire cords, etc.), where it can expect more stable orders, utilizing its advanced weaving technology, and is expanding sales. In particular, from a perspective of sustainability, it is shifting for use in tea bags from polyester and nylon to yarn made from PLA (biodegradable plastic), which is made from corn and other grains. It is required to have a delicate weaving technique that minimizes the burden on the yarn by AJL, which has advantages over WJL (Water Jet Loom) in terms of hygiene. Thus, the company is leveraging its advanced weaving technology to expand sales (20 million yen/month in the second half of FY2019).



The company's own weaving factory (at the time of AJL's introduction)



Overseas business  
expansion

## Succeeding in China business and returning to domestic operations

The company aimed to capture a share of the Chinese interlining market through its technology for processed filament yarn weaving by AJL, which had been cultivated over many years. It established NINGBO NOTOKINU CO., LTD. in Zhejiang Province, China, in 2000 with a total investment of about 600 million yen, and began mass production of interlining fabrics using processed filament yarn the following year. The business has steadily built up a track record, reaching a sales volume of 23 million meters, a sales amount of 40 million yuan, and an ordinary income of 10 million yuan in the peak year of 2007. In response to a recommendation from the Ningbo government to relocate due to urban planning, the factory and its site, including production facilities, were transferred to a local joint venture company for 40 million yuan (about 600 million yen). Following the recommendation to relocate in May 2021, all negotiations and contracts were finalized in just four months, and the company successfully withdrew from the market in September of the same year. Initially, the company mainly supplied woven fabrics to Japanese interlining manufacturers such as Nitto Boseki Co., Ltd., TOHKAI THERMO CO.,LTD., and DYNIC CORPORATION, which entered the Chinese market at the same time. The technology of weaving fine nylon yarns of 17 dtex or less with non-sizing weaving has expanded exports to Europe, and they are used as interlining by renowned brand-name garment makers.

The company became profitable only a few years after its entry into the market, continued to pay dividends to Japan, and finally received proceeds from the sale of the company equivalent to its total investment. This is one of the success stories of textile manufacturing companies that have entered China. With the withdrawal, most of the business was transferred to the head office in Japan, but the results are being utilized in the non-sizing technology at the head office.



NINGBO NOTOKINU CO., LTD. (2000 - 2021)

Developing local and global businesses in the Middle East, Europe and the United States with textiles using the company's own original yarns

## MAEDA CO.,LTD

### Company information

Location 1-4-16, Hirooka, Kanazawa City, Ishikawa Prefecture

Phone number + 81- (0)76 - 231 - 4281

HP <https://www.maeda-inc.co.jp>

Establishment 1958

Representative Kazuto YAMAMOTO, CEO

Number of employees 54



### Company overview

The company was established in 1958 and is a textile trading company whose head office is located in Kanazawa City. The company offers fabrics for fashion apparel, uniforms, curtains, advertising banners and other products for the domestic market, and fabrics for ethnic costumes for the Middle East and sports and fashion apparel for China and Western countries for the overseas markets. It has three production factories in the group companies, Maeda Kogyo. co.,Ltd, Neotex. co.,Ltd, and Kashima Tecs.co.,Ltd. to manufacture and sell synthetic fiber fabrics, mainly nylon and polyester, in close collaboration with its core business and production bases.



### Selected fields



Overseas business  
expansion

Obtained contracts with overseas brands through vigorous participation in overseas exhibitions

The company has exhibited at "Milano Unica" for six consecutive years and at "Intertextile Shanghai" for 16 consecutive years, listening to the specific reactions and opinions of overseas buyers in order to develop new and improved synthetic fiber fabric products that will really be sold in the local market. Through these activities, it conveys the appeal of fabrics that can only be made with synthetic fibers, and these fabrics are accepted by major overseas brands in Europe, the U.S., and China. It is also highly regarded by buyers from the Middle and Near East who frequently visit exhibitions, and has been adopted as a fabric for ethnic costumes. The company's strength in yarn development lies in procuring raw yarns from Japan and overseas and producing differentiated textures and colors through its proprietary blended and twisted yarn technologies. In response to the SDGs, there is a rapid movement toward environmentally friendly fibers such as biomass-derived and recycled fibers for Europe and the U.S. The company is delivering textiles with added value, such as soft texture and unique luster, by processing its own original yarns based on raw materials that are highly valued by these buyers. For more than 20 years, the company has been developing fabrics for the Middle East for Muslim women's costumes, using its own original yarns and specializing in black textures and textures, and these fabrics have gained deep-rooted popularity. It conducts global sales activities using its proprietary yarn processing technology and drives about 20% of its sales through overseas exports in order to further expand its business in the future.



Exhibiting at "Milano Unica"  
and business talks

Aiming to be a textile company for the next generation by combining manufacturing with IT

# MARUI ORIMONO Co., Ltd.

## Company information

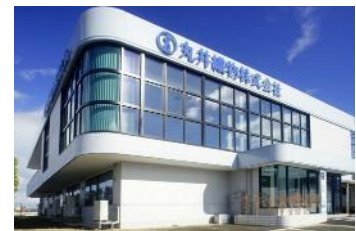
Location	15, Ibu kunogi, Nakanoto Town, Kashima Village, Ishikawa Prefecture
Phone number	+ 81 - (0)76 - 776 - 1337
HP	<a href="https://www.marui.co.jp">https://www.marui.co.jp</a>

Establishment	1956
Representative	Toru MIYAMOTO, CEO
Number of employees	307



## Company overview

The company is a synthetic fiber textile manufacturer with top-level technology and production scale in Japan, and provides the world with high-quality, high-performance textiles in a wide range of fields, including fashion, sports and industrial materials. It has adopted "fusion of manufacturing and IT" as its management strategy, and is working to quickly introduce IT and shift to IoT in its factories as well as has entered the IT business and is challenging the DX business model with web services that take advantage of its manufacturing capabilities, aiming to become a manufacturing company of the next generation.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

### Fabric brand, "NOTO QUALITY" and environmentally-friendly manufacturing

In 2016, the company launched the "NOTO QUALITY" brand of fabrics based on the concept of "super long-life functional materials." The brand is committed to being a material for users who will use clothes for a long time, and from the design stage, is committed to minimizing functional wear and tear over time and through use. The company's main products are recycled fabrics made from recycled yarns and processed in an environmentally friendly manner (water-based coating, CO water repellent, etc.). In 2019, the company obtained the Global Recycled Standard (GRS), an international certification standard, together with group company Sokoseiren Co., Ltd, and has established a GRS-certified production system, the only one of its kind in Japan for a synthetic fiber weaving and dyeing factory. At the production factory, it is actively promoting the reduction of environmental burdens, installing solar power generation systems in each factory's building and using recycled water for more than 50% of the water used in production. It transforms fiber waste generated in the mill into RPF (solid fuel) and recycles more than 70%, and will start upcycling to textile products in 2023. In addition, it has established a highly transparent traceability system by connecting more than 1,100 weaving machines to the Internet, monitoring production conditions in real time and accumulating data. On the other hand, it is promoting company-wide agility production that can handle any lot size, from small to large lots. With the concept of "making only what is needed, when it is needed," it is taking on the challenge of manufacturing products that eliminate loss and waste.

super Long-Lasting materials,  
"NOTO QUALITY"

Digitalization

### Update to the textile manufacturing business with digital technology for the next generation

The company has been actively promoting IoT in its factory since 2015 and is currently pursuing three phases as DX activities. The first phase is "visualization of factories," in which more than 1,100 looms and other facilities are connected via the Internet to visualize production data (operation, quality and delivery date). In addition to increased efficiency, traceability and real-time data have facilitated problem-solving. The second phase is called "optimizing smart factories" and the company promoted control and regulation through the use of data. It made digital modifications in-house, incorporating sensors, cameras and devices in line with the needs of the field as well as strengthened manufacturing that monitors conditions and controls with data through joint development with a loom manufacturer. In the inspection process, data linkage with upstream processes, introduction of automatic inspection machines, AI for tissue matching and other measures have improved the reliability of quality assurance. Meanwhile, in the office, RPA was put into operation, and groupware, business chat, and cloud-based accounting, financial and human resource software were introduced to promote the use of business and management data. The third phase is "creation of new business models," and in 2015, the IT Division was established to develop new businesses using IT technology. The company launched more than 10 Internet service businesses, including "Textile Mall" and "Michi Nail," and the on-demand service, "Up-T" has grown into scale to make the IT business a mainstay of the company's operations.



Real-time monitoring of all factory equipment

Adding value to customers' products by mastering ribbon manufacturing technology and bringing innovation to the textile industry

# INOUE RIBBON INDUSTRY CO., LTD.

## Company information

Location	2-6, Chihara Town, Echizen City, Fukui Prefecture	Establishment	1963
Phone number	+ 81 - (0)778 - 43 - 0810	Representative	Hiroyuki INOUE, CEO
HP	<a href="https://www.telala.com/">https://www.telala.com/</a>	Number of employees	152



## Company overview

The company specializes in woven fabrics with narrow widths such as tapes and ribbons, and plans, develops, manufactures and sells products in the apparel and industrial fields. It carries out integrated production in-house, from weaving to dyeing to finished products, and its products include woven tapes with narrow widths, knit products of affiliated companies and functional products, which are used in a wide variety of fields. In particular, its strength lies in its product development capabilities, and it conducts the entire process from planning and development to manufacturing with the latest technology for woven fabrics with narrow widths and a unique development process.



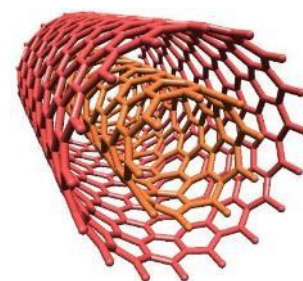
## Selected fields



Creation of added value  
through technological  
and design capabilities

Introducing products using nano carbon materials and other new materials in the rapidly growing fields of medical and e-sports wearables

The company aims to expand business opportunities by introducing clothing knitted with new nanotech materials such as carbon nanotube yarn (hereafter CNT-Y) for the medical IT wearable fields, which are growing at a rapid pace. The word of wearable means a wearable computer-equipped device that is able to be used by wearing, thus the name of wearable is derived from Wear (to wear) and Able (to be able to do) and people come to call it Wearable. Many wearable devices are interfaces which directly connect humans and electronic devices that are lightweight, small and wearable. CNT-Y is a carbon material (nanomaterial) for the next generation because of its thinness (diameter of 30 to 100 nm), lightness and flexibility. It is characterized by very high electrical conductivity, thermal conductivity and heat resistance as well. In addition, the company established a new joint company with a venture company that possesses CNT-Y technology and started in-house production of CNT-Y, which was approved as a business plan for regional economic traction. The company develops a method of weaving CNT-Y into base materials such as polyester in order to commercialize products by (1) combining with its patent No. 6621311 (technology for weaving special optical fibers), patent No. 3583373 (tape technology that combines breathability and design) and other technologies, and (2) incorporating CNT-Y into products with narrow widths. This is to advance efforts in the field of medical IT wearables, for which the company aims to expand into new applications.



Patented technology and CNT-Y structure diagram



People, color, future (changing the future with fiber processing technology)

**URASE CO.,LTD.****Company information**

Location 2-7-40, Kaminaka Town, Sabae City, Fukui Prefecture

Phone number + 81 - (0)77 - 854 - 8000

HP <http://www.urase.co.jp/>

Establishment 1970

Representative Toru MATSUDA, CEO

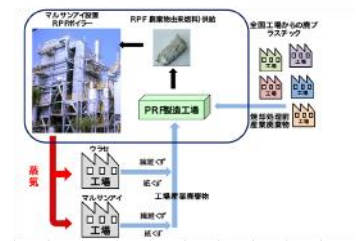
Number of employees 234

**Company overview**

The company was founded in 1918 as a yarn dyeing and is a dyeing and processing company with 100 years of history in Fukui Prefecture. Eight group companies, including overseas factories, are working to add values to fibers by using functional processing technologies in addition to dyeing and finishing technologies. The company has strengths in dark-dyeing for black formal wear and fireproofing for curtains, but in recent years, the company has expanded into a wide range of applications, including coated resin processing for outdoor sports and metal film processing for conductive yarns with excellent flexibility.

**Selected fields**Sustainability  
(Environmentally-  
friendly)**Initiatives for environmental measures in dyeing processes that have a large environmental impact**

The company introduced an RPF boiler (Refuse Paper & Plastic Fuel) in 2009 to recycle waste plastic. It also reuses fiber waste generated by itself as RPF fuel, which achieves 25% reduction in CO<sup>2</sup> emissions compared to heavy oil boilers. In addition, it works to reduce energy consumption by increasing productivity through a shift to low-energy processing technologies and loss-reducing intensive processing, and strengthens its efforts to achieve 30% reduction in CO<sup>2</sup> emissions by 2030 compared to that of 2018 as one of its environmental management targets. It works with a group of companies mainly led by SUSTAINA TECH Co., Ltd. and the University of Fukui to develop a dyeing process technology that uses supercritical carbon dioxide instead of water to reduce wastewater from dyeing processes, as part of NEDO initiative research program (2022 - 2023), with the aim of commercializing this technology in the future. In these R&D efforts, the technology is applied not only to the dyeing process, but also to pre-dyeing treatment (scouring) and post-dyeing treatment (functional processing, etc.), and the ultimate goal is to eliminate the need for water and wastewater in the dyeing process.

**CO<sup>2</sup> reduction efforts with RPF boilers**



Appealing to the world for safety and health by manufacturing 3D woven cushioning materials made from bio-based materials through an integrated system from spinning to sewing

## Eiheiji Sizing Co.,Ltd.

### Company information

Location	2-22, Higashifuruichi, Eiheiji Town, Yoshida Village, Fukui Prefecture	Establishment	1963
Phone number	+ 81 - (0)776 - 63 - 2203	Representative	Kuniaki KAWAI, CEO
HP	www.eiheiji-sizing.co.jp	Number of employees	16



### Company overview

The company has been in business for 100 years (59 years since its establishment), and in 2008, in order to pass on the traditional technology of Fukui textiles to the future, it has tried to develop 3D woven cushioning materials, a unique technology, and has developed them as a product specializing in safety and health, mainly for bedding. In recent years, it has developed chair materials for aircraft, a growing field, and humidification filters for home appliances. The company's strengths are its pursuit of sustainability through the use of bio-based raw materials and integrated in-house production from spinning to molding with the aim of shortening logistics time.



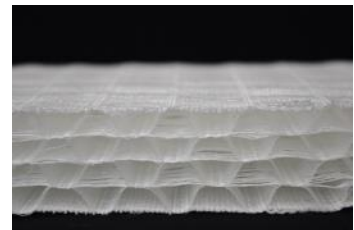
### Selected fields



Creation of added value  
through technological  
and design capabilities

**Lightweight, washable, one-of-a-kind cushioning material with excellent pressure dispersion**

Cushioning material for three-dimensional woven fabrics is the company's one-of-a-kind technology, and is also known as multilayered woven fabrics. It consists of five different types of yarns, including two types of warp yarns with different thermal shrinkage, and the flat woven fabric utilizes the distortion caused by two types of warp yarns with different shrinkage by thermal processing to make the yarns curved and transformed into a three-dimensional shape as cushioning materials. It is light, with a porosity of 97%, and features high pressure dispersion due to its mechanism of supporting body weight with a continuous arch of curved yarns. Therefore, since the bedding should be well ventilated to relieve local stress, it is sold in department stores nationwide as comfortable, clean and healthy bedding, and is used in many hotels and nursing care facilities. Besides, the company can develop its own thread shapes, materials and textile structures through integrated in-house production from thread making to sewing, and has been well received as a cushioning material with little sagging by manufacturing products with hardness and repulsive properties that meet the needs of each application. This technology won the "Kansai Frontrunner Award in 2008" from the Kansai Bureau of Economy, Trade and Industry, was selected as one of the "300 Vigorous Manufacturing from Medium and Small Companies (2009)," and received the "Good Design Award in 2012" from the Japan Institute of Design Promotion through Nishikawa Corporation, which commercialized the technology. The technology also received the "Red Dot Design Award in 2014 Best of the Best" from the Design Zentrum Nordrhein Westfalen. With the aim of promoting the dreams of the textile industry to the next generation, the company has begun development in the growing fields of aircraft seats and home appliances through the adoption of a support-in project since 2019 and a business restructuring subsidy since 2021.



Cross-sectional view of three-dimensional woven cushioning material

Enjoy challenges without fear of failure

# Kazuma, Co., Ltd.



## Company information

Location 105, Yaemaki Town, Fukui City, Fukui Prefecture

Phone number + 81 - (0)77 - 656 - 4006

HP <https://e-kazuma.jp/>

Establishment 1984

Representative Akiko KAZUMA, CEO

Number of employees 270



## Company overview

The company plans, manufactures and sells home fashion products centered on curtains in Fukui City, Fukui Prefecture. The company was founded in 1964 as a textile factory to produce lace fabrics, and was established in 1984. From there, its business expanded as a curtain manufacturer. Currently, it also expands its business into the apparel and industrial materials industries, and sells its products through its own stores and e-commerce.



## Selected fields

Sustainability  
(Environmentally-  
friendly)**Succeeded in recycling materials into plastic products with injection molding type by using waste fabrics generated in the process of manufacturing curtain**

In the company, about 200 tons of waste fiber (6 million yen in disposal fees) are generated annually, which are reused as thermal fuel, but this contributes to climate change and global warming. The company challenges to achieve zero industrial waste in order to contribute to the creation of a sustainable society (SDGs) so that all of us in the future and our children in the next generation can continue to live on a rich and clean earth. Specifically, as material recycling, discarded fabrics are reused as raw materials for new products. The raw material for curtain fabric is generally called "PET" and is also known as the raw material for PET bottles. Once the discarded fabrics are returned to the original, they are replaced with something new that is not fabric. As a result of activities based on the above background and objectives, the company succeeded in developing products which require recycling flow. It also obtained the effect of reducing the amount of virgin PET used by blending the crushed dough. Currently, as it proceeds with other product applications, it plans to sell its products through major mass retailers, its own stores and its e-commerce site and aims to establish a recycling-oriented production system that incorporates wastes generated not only by the company but also by its customers and the industry. The company disseminates information on its initiatives and progress on its own website.



Project name and portraits of project members



Digitalization

**Operation at sewing and knitting factories using IoT, AI and robotsEnvironmental improvement and productivity initiatives**

The company has improved size qualities by using an automatic adjusting machine in the cutting process. Fabric stretches and shrinks during transport, resulting in slippage in transport and errors in cutting size. Since it is difficult to make additional modifications to the existing cutting equipment, the company introduced a cutting equipment that incorporates the function necessary to solve the problem. There are meandering adjustment and correction function, which reduced 69 hours/ month (approx. 100,000 yen/ month) as an effect. In addition, an automatic device to measure the length of the products has saved labor and improved the quality of size inspections. The company developed and introduced equipment for automatic measurement using laser sensors in the pre-shipment inspection process.

- Automatic determination: product sizes are detected by a laser sensor to measure the sizes. By linking with the core system, the finishing size is obtained from the product control number, and the judgement whether the product is acceptable or not is made. The workers will be able to focus more on quality inspections.
- Data accumulation: expected to be used for product tracking and traceability. Furthermore, the company reduced overhead works by using terminals for sewing process management to visualize the progress of production.
- Terminals for process management: the company digitized the entire infrastructure at the factory, including Wi-Fi, and developed its own process management terminals, which enabled to automate the monitoring the production amount with manual work. This also led to improved productivity by reducing indirect operations. The company plans to use the data to track products, calculate process capacity and assign personnel in the future.



DX modification of in-house equipment



Creation of added value  
through technological  
and design capabilities

### Exploring the possibilities of fabric to be used in spaces with graphic designers, product designers and architects

A project to explore the possibilities of fabric in space was launched through design management support by the Kansai Bureau of Economy, Trade and Industry and Loftwork Inc. From there, it was derived into three joint projects: (1) the project of "development and construction of external curtains of Swedish style with high thermal insulation effect," an architecture x Kazuma aims to have no curtains in the room with high thermal insulation fused with Scandinavian architectural style, (2) the project of "development of curtains for houseplants," a graphic designer x Kazuma focus on developing curtains with a light shading rate of 50%, which makes it easier for plants to live, and (3) the project of "brushed-up development of panel-type curtains," a product designer x Kazuma develop panel-type curtains which can be attached to existing curtain rails that can be used not only as curtains but also to freely be installed as partitions in living spaces. The development of textile products is underway from the perspective of architects, artists and designers, rather than from the conventional viewpoint. The company plans to release the product after obtaining a patent, conducting various property tests and conducting test sales to general residences.



Picture of the project image



Overseas business  
expansion

### Developing the U.S., European and Australian markets for the company's patented "Unislat" products

The company has successfully developed "Unislat," a vertical-type curtain that uses its weaving technology, and the export sales to Korea and Australia now amount to approximately 200 million yen per year on an ongoing basis. When the product was first developed, sales channels did not expand in the Japanese market, and overseas sales channels widened as a result of the company's prior efforts to develop overseas markets. Currently, the company proceeds with negotiations with each foreign country and expands its sales channels to Europe and the U.S. It has a joint patent in partnership with a Korean company, which gives it a very high market advantage. The curtains are products like a fusion of vertical blinds and curtains, specializing in the window functions that customers demand, such as the clean appearance of blinds, easiness to switch lighting, easiness to enter and exit and a high level of safety.



Unislat on sale in overseas

50

Sabae City,  
Fukui PrefectureSustainability  
(Environmentally-  
friendly)

Digitalization

Creation of added value  
through technological  
and design capabilitiesDevelopment of  
new businesses  
and servicesOverseas business  
expansionFrom material development to sewing, and from product planning to finishing, please pay  
your attention to our business field**SAKAI AMIORI CO.,LTD.**

## Company information

Location 2-1-5, Sakura Town, Sabae City, Fukui Prefecture

Phone number + 81 - (0)77 - 851 - 4640

HP <https://www.sakaiamiori.com/>

Establishment 1954

Representative Masanori SAKAI, CEO

Number of employees 70



## Company overview

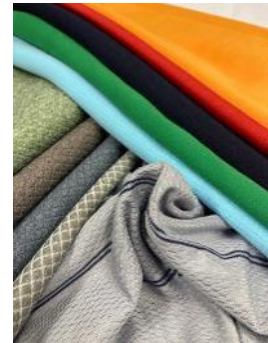
Since the company's establishment in 1954, it has contributed to the development of the industry through diligent efforts in the development and production of various knitwear products. It promotes environmentally friendly initiatives by establishing an integrated system from yarn to finished products, including yarn, circular knitting, warp knitting, secondary processing and sewing. In addition, the company believes that establishing factories in China and Vietnam as production bases and working to meet various consumer needs for "manufacturing" will lead to the promotion of new cooperation and product development.



## Selected fields

Sustainability  
(Environmentally-  
friendly)**Sustainability initiatives through integrated production from material development to print  
processing and sewing**

It works on the development of fabrics using recycled polyester yarn, the introduction of waterless sublimation printing and the reuse of cutting scraps as part of its sustainability activities. It uses recycled polyester yarns such as SD84T36: round cross section yarn, SD84T72: round cross section yarn, SD84T48: cross section yarn, SD167T48: round cross section yarn and so on, and in circular knitting, it produces standard fabrics such as jersey, smooth and corrugated as well as transformed fabrics including mesh backed, quilt-like and piquet style. The applications include T-shirts, wears for warm-ups and sports for school athletic wear, and in the medical field, products such as nursing care clothing, medical examination wear, patient wear and scrubs (medical lab coats). The company produces materials for tricot such as linings, shoe materials and chair materials utilizing half, satin raised, mesh and Queens court structures. With the introduction of sublimation printing, the use of "sublimation transfer" technology has made it possible to create a dyeing technique that does not produce wastewater, which has enabled the creation of a major advantage of not securing fabrics in a wasteful manner. For reuse of cutting scraps, the company is working with a specialized company to process them into wool and solid fuel (low rate of CO<sup>2</sup> emission). The company recognizes the importance of developing recycled products in order to realize a recycling-oriented society, and will continue to promote the development of eco-friendly products and focus on manufacturing products that contribute to sustainability.



Recycled materials



## Digitalization

### Creating tools to increase efficiency on per-site basis

The amount of work per process has increased significantly in response to "shorter delivery times and smaller lots" over the last 20 years. As a result, the handling operations could no longer keep up with the information to deal with during processing. In light of this, the digitalization of everything from management, such as "progress status," "inventory status" and "reporting items" to "data management methods" in actual operations, has realized significant time reductions and greatly improved accuracy.

- (1) Folder system: a system in which a dedicated folder is set up for each order form and information required by each process is smoothly exchanged through this folder (effectiveness: shortening time, reducing paper, improving work accuracy)
- (2) Real-time progress management: a system that enables visual confirmation of real-time progress status from various angles, including delivery date management until shipment of the next process and balance of each process (effectiveness: increased management efficiency and shortened time)
- (3) Barcode data inquiry: barcodes are used to enable each process to pick up data from more than 100,000 pieces of cutting data without error (effects: increased work efficiency, improved work accuracy and shortened time)
- (4) Barcode inventory management: accurately manages approximately 10,000 items of inventory through database management using barcodes (effects: reduced inventory loss, shortened work hours, improved work efficiency and increased work accuracy)
- (5) Tablet pick-up instructions: in case of picking up parts after cutting, a system that enables sorting and pick-up as workers refer to the parts classification instructions displayed on the monitor to ensure that no parts are picked up incorrectly (effects: improved work efficiency, improved work accuracy, reduced waste material loss and shortened time)



Production management through digitalization



## Overseas business expansion

### Production system that allows to select the country of origin according to the needs (delivery date, price range, etc.)

The company can sew in three countries (Japan, China and Vietnam), and can propose the selection of country of origin according to customer needs. Mostly, in Japan, the company can handle small lots and short delivery times; in China, it can deal with short delivery times on the basis of small to medium lots; and in Vietnam, it can handle low prices on the basis of medium to large lots and short delivery times, thus it can respond to various needs. All of the factories in three countries are wholly owned by the company, which makes it easy to control production and respond to unexpected requests. In addition, there are facilities for cutting, sewing, inspection and finishing in all factories, so it can respond with integrated production in the same factory. For planning, it creates the pattern data necessary for sewing in Japan using CAD and supplies it to each factory. It has automatic spreaders and high-speed automatic cutters of the same quality level at each of its factories, and by feeding data created in Japan into these machines, it is possible to cut at the same level of quality as in Japan. There are facilities at each factory that can handle a variety of materials, from light to heavy garments, depending on the need for sewing. The company has established a unique checking system for finishing by skilled workers, and inspects not only products produced in Japan, but also those produced in China and Vietnam through inspections in Japan to prevent the outflow of defective products. Recently, sewing factories in Japan are facing a serious shortage of labor, and the group is strengthening its operations so that it can supply better products on demand, with a view to responding to short delivery times overseas.



Expansion of factories in Vietnam and China

Developing a product business with lightweight, strong and collapse-proof structures with the world's only triaxial weaving technology with the same structure as bamboo baskets

## SAKASE ADTECH CO.,LTD.

### Company information

Location 14-10, Shimoyasuta, Maruoka Town, Sakai City, Fukui Prefecture  
Phone number +81 - (0)77 - 666 - 2115  
HP <http://www.sakase.co.jp>

Establishment 1988  
Representative Yoshiharu SAKAI, CEO  
Number of employees 16



### Company overview

The company is the only company in the world that conducts collaborative research and development based on "triaxial woven fabric" technology, and boasts a global share of more than 50% in geostationary orbital satellite antenna composite materials. As a company with special fiber processing and composite technologies, it develops and produces triaxial woven fabrics and triaxial woven composite materials optimized for industrial fields such as space materials, sports and leisure such as fishing rods, industrial products and cultural asset conservation and restoration. In recent years, the company has expanded its business field to include ultra-lightweight space large deployable structural products and building interior materials and their products.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Developed a polyester double-layered yarn and fused it with triaxial weaving to create an interior material which is aesthetically pleasing that has excellent design characteristics.

When the company developed a polyester double-layered yarn as a material that takes advantage of the curved surface tracking properties of triaxial weaving and was seeking to commercialize it, the TOKYO FIBER Executive Committee asked the company to participate in the "SENSEWARE Exhibition 09" held at Museum 2121. Mr. Ross Lovegrove, a well-known British industrial designer, joined as a partner for the exhibit. The company produced an ultra-lightweight backpack called "SEED OF LOVE" by combining the double-layer molding yarn, which has heat molding properties, with the three-dimensional molding properties of triaxial woven fabrics. This work is an ideal representation of dynamic surface changes in three dimensions. This work caught the attention of architect, Mr. Kengo Kuma, and was used for the ceiling and wall materials in his project, the store interior of "Hermes Shanshah" (Shanghai), which pursued design. Subsequently, a "globe with a maximum diameter of 14 meters" was produced at architect, Mr. Toyoo ITO's Gifu Media Cosmos in order to utilize the lightweight and shape-retaining properties of this interior material. The technology of this interior material was featured by those two famous architects, which attracted attention and led to the commercialization of the material as an interior material for buildings. In order to further improve its applications, the company has developed flame-retardant polyester double-layered yarn, added coloring in collaboration with a major printing company, and succeeded in commercializing a product using the origami technique. The technique converts the "method to fold membrane" studied in the space membrane deployment structure, which is expected to boost sales in the future. In terms of sales, it accounts for approximately 40% of tri-axial woven fabric sales (for the last three years).



Example of architectural interior material installation (the store interior of Hermes Shanshah (Shanghai), ceiling and wall surface)



Realizing cost reduction and environmentally friendly production as the company  
is aware of its global business strategy

## SHINDO Co., Ltd.



### Company information

Location 11-1-1, Ii, Awara City, Fukui Prefecture

Phone number + 81 - (0)776 - 73 - 7111

HP <https://www.shindo.com/en/>

Establishment 1978

Representative Tadanori FUKAMACHI, President

Number of employees 238



### Company overview

The company operates globally in three main fields: industrial materials, silicones and clothing accessories. For more than 50 years since its establishment in 1970, its core business has been narrow-width textile products, and the technology developed in this field has been used to create new products. The company will further strengthen its non-textile divisions of industrial materials and silicones. It offers products with high added value which are environmentally friendly that meet the needs of the times by building an organization centered on its employees. It will continue to take on the challenge of developing products that are unique in the world by integrating three different fields.



### Selected fields



#### Digitalization

#### Introduction of an automatic ordering system to optimize the inventory of the company's own brand, "S.I.C."

The company's trimming tapes and ribbons are used as secondary materials to differentiate sportswear and apparel (added values in terms of fashion, functionality and design), and in many cases the design and materials are determined at a stage close to the final process. The amount used is smaller than that of fabrics, and against the background of the trend toward smaller lots in clothing production, there is a demand for a wide variety of products, small lots and short delivery times. In addition, since make-to-order production alone is susceptible to fluctuations caused by external factors such as economic boom and bust, there were concerns that the company would be forced to review its employment situation, including restructuring, salary cuts and reductions in working hours, even if it survived the recession. The company's own brand, "S.I.C.," which is for the purpose of creating characteristics required for the secondary materials for clothing, was developed and realized based on the idea that it aims to be a sustainable company that can control production internally during off-season production periods in order to protect employment. "S.I.C." realized a high-mix, small-lot and prompt delivery system by taking the inventory risk in-house, but it had an issue to control inventory due to the large number of items in response to market trends, new product launches and part number reviews.

In light of this, the company developed and introduced its own system to maintain optimal inventories by integrating production and sales through (1) function to forecast demand based on past sales performance and future sales prospects, and (2) function to optimize production lead time and volume under consideration of off-season and facility capacity with its production advantage. Currently, the company stocks approximately 41,000 items all the time, and has succeeded in reducing inventory by approximately 22% as well as improving the shortage rate compared to that of five years ago.



The sample book of SHINDO ITEM CATALOG, "S.I.C."



Overseas business  
expansion

Expanding to 14 locations in 9 countries and striving for  
supporting both global and local presence

In 2005, the company participated in the textile trade fair "Première Vision/ Modermont," the world's largest textile trade fair held in Paris, as a pioneer of Asian companies, and has exhibited continuously up to the present day. Now, it has the largest booth and is positioned as one of the world's top companies in the field of subsidiary materials for clothing. The company is accepted by various companies in the textile industry, including designers and textile manufacturers, and is one of the top and few exhibitors among more than 300 exhibitors in terms of the number of booth visitors. In addition, the company continues to participate in major exhibitions in each country, including "MUNICH FABRIC START" (Germany), "Milano Unica" (Italy), "LA Textile" (U.S.) and "Intertextile" (China). In addition, the company delivers its products worldwide and has established sales offices not only in Japan but also in North America, Europe, China and Asia to enhance its sales network. Together with its production facilities in China, it has established contacts with stakeholders in all phases of the apparel supply chain, from upstream to downstream, and from product planning to retails. It will continue to strengthen its global expansion and steadily provide services with added values from the most suitable location for each customer. Its group companies in foreign countries have contributed more and more to the sales and profits over the years, and with the exception of the lockdown period of COVID-19, each of these offices has continued to grow since its establishment.



Global Network of SHINDO

With a motto of manufacturing which amazes the world  
Developing new products  
which do not exist in the world by using advanced technology

## DAIKI CO., LTD.



### Company information

Location 16-18, Gima, Maruoka Town, Sakai City, Fukui Prefecture

Phone number + 81 - (0)776 - 66 - 3200

HP <https://daikiweb.com/>

Establishment 1953

Representative Takayoshi YAMAMOTO, CEO

Number of employees 27



### Company overview

The company is located in Fukui Prefecture, a textile production center, and has been expanding into non-clothing fabrics (curtains, tablecloths, etc.) by taking advantage of the characteristics of synthetic fibers. It has begun to focus on the automotive interior materials field since around 1998 as a field where it can make the most of its accumulated technology, and currently operates mainly in the production of automotive interior materials. It proceeded with the development and sales channel cultivation and its products are now used in a wide range of models by almost all domestic automakers, which earns the tremendous trust for its development capability and quality.



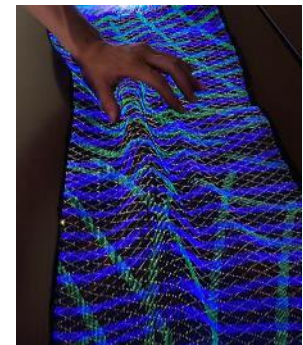
### Selected fields



Creation of added value  
through technological  
and design capabilities

The woven fabric of luminous Jacquard won the top prize at Kansai Monodzukuri  
Shin-Sen 2021

Around 2015, the company received a request from a major automobile manufacturer to develop a shiny fabric for the interior of vehicles (e.g., automatic driving, electric vehicles) for the near future. In response, the company developed a special technology that combined its long-cultivated Jacquard weaving technology with Karami weaving technology, and used this technology to develop "luminous Jacquard weaving," a glowing fabric with special optical fibers woven into the weft threads. This woven fabric is unprecedented in the world in that the surface of the fabric glows in accordance with the design by connecting woven light fibers to a light source, and is expected to be a new material that adds the function of "glowing" that has never existed before to textiles as the textile retains the flexibility and texture of woven fabrics. For example, by using this in the interior of an automated vehicle, it would be possible to have people enjoy the illumination function inside the vehicle on a daily basis, while to send dangerous signals and signs using light in the event of danger or abnormality. This product is attracting attention from various companies as a material that can solve the issues of "responding to abnormalities" and "creating a more comfortable cabin space," which are particularly considered to be challenges for automated driving vehicles. The above mentioned special technology has been patented both in Japan and overseas, and the production equipment has been specially ordered from an overseas weaving machine manufacturer, thus this product can currently be manufactured only by the company. As such a new technology and initiatives for the future were highly evaluated, the company received the Grand Prize in the "Kansai Monodzukuri Shin-Sen 2021" organized by the Kansai Bureau of Economy, Trade and Industry in January 2021, which is awarded to only one MVP company.



A glowing textile, "luminous Jacquard weaving (LightWeave®)"



Development of  
new businesses  
and services

### The luminous Jacquard weaving was adopted for the costumes exhibited at the Paris Collection AW2022- 23

The company's new product, "luminous Jacquard weaving," has been developed based on the automotive field. However, since the economic downturn, which was triggered by the expansion of COVID-19 from 2020, prompted the need to create a new business that does not solely focus on the automotive field, the company started to directly sell this textile in other fields such as interior design and apparel. As a result of winning an award at the Kansai Monozukuri Shin-Sen 2021, the company began marketing activities with support from various organizations including the Kansai Bureau of Economy, Trade and Industry, Fukui Prefecture and the Organization for Small and Medium Enterprises and Regional Innovation. The company is still developing new products by contacting companies in various fields, such as manufacturers of interior (indirect lighting and curtains) and building material (hotel and store interiors). As one of the projects, the company was directly contacted by Mr. Kunihiro MORINAGA, the designer of "ANREALAGE," a leading Japanese fashion brand, to develop costumes for the Paris Collection held in March 2022 by using luminous jacquard fabrics. This was the first attempt in the apparel field, and although it was a tough challenge with a short delivery time and a very high degree of difficulty, the company managed to successfully develop the product and exhibit them at the Paris Collection. The response was so great that the company was inundated with requests and is currently developing stage costumes and other products as well. At present, the company only makes profits from prototypes and has not yet reached the stage of mass production, but it is working to secure about 30% of the company's total profits in five years through direct sales of luminous Jacquard weaving as it continues to make prototypes.



Fashion for exhibiting  
at the Paris Collection AW2022-23  
(glowing costumes)



Overseas business  
expansion

### Succeeded in product development through direct dealings with a high-end Italian stationery manufacturer

The company was directly contacted by a textile designer, Ms. Yuri HIMURO and participated in the development of a new product for "Moleskine," a high-end Italian stationery manufacturer. It was decided to develop a new product, a notebook/ book cover with a cherry blossom motif, using Jacquard weavings, and based on Ms. HIMURO's design draft, the fabric was developed in direct contact with "Moleskin." The company had no experience in product development through direct contact with overseas manufacturers and had difficulties in terms of quality control and delivery time, but it delivered the planned quantity and products, and products using its fabrics were sold around the world. The product was well evaluated as the online stock ran out quickly and received high praise from "Moleskine" as well, and the company is also considering developing a different motif for the product. Separately, the company has begun doing business with overseas automobile manufacturers and is currently developing automobile interior materials using luminous Jacquard weaving. It proceeds mainly with the development of mass-produced vehicles to be unveiled in the near future, and is expected to be the world's first material capable of providing a healing space inside a car that cannot be expressed by conventional LED panel decorations. In addition, as the luminous Jacquard weaving is being developed for use not only in cars but also in accessories used by stage actors and singers, the company is developing products that fully utilize the characteristics of luminous Jacquard weaving, such as the "ability to emit light over a wide area with a small amount of power," "light weight," and "high flexibility."



Notebooks and book covers from  
"Moleskine" SAKURA series

Evolving fibers, supporting the world

**TOYOSHIMA TEXTILE Inc.****Company information**

Location 14-2, Miyaryo, Sakai Town, Sakai City, Fukui Prefecture

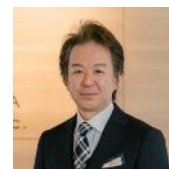
Phone number +81 - (0)776 - 67 - 1020

HP <https://www.toyoshima-seni.co.jp/>

Establishment 1963

Representative Masayuki TOYOSHIMA, CEO

Number of employees 85

**Company overview**

The company has an established reputation for its technology to weave ultrafine fibers into ultra-dense, high-quality fabrics. In particular, it achieved mass production of ultra-high-density woven fabrics (non coated fabrics) 10 years ago, and has continued to improve and further refine its technical capabilities. The ultra-high-density woven fabrics are fabrics for down proofing using 10d filament yarns as both warp and weft yarns, which are made of either polyester or nylon materials

**Selected fields**Creation of added value  
through technological  
and design capabilities**Development of ultra-high-density fabrics based on ultra-fine fibers**

Based on the processing technology and quality control for the production of high-quality fabrics for suit lining applications that the company has cultivated over the years, it began developing down-proof fabrics, the mainstay fabrics in the outdoor industry 20 years ago in anticipation of the future. It continued to take on the challenge of producing ultrafine fiber (10 denier), which was said to be impossible with the textile production technology at that time, and led to its mass production. There are four measures: (1) introducing a warp yarn preparation machine for low tension, establishing sizing agent selection and processing conditions and training technicians for adjustment, (2) establishing technique for adjusting different fiber weave in WJL (Water Jet Loom) weaving and training of adjusting technicians, (3) introducing production control and textile quality inspection systems for diversified production, and (4) rejuvenation of human resources involved in textile production and transmission of technology.

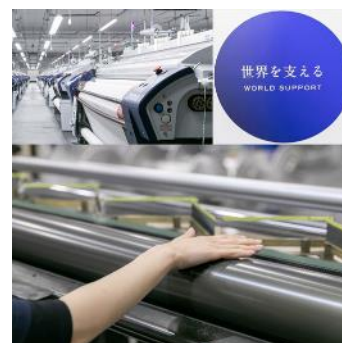
Traditionally, down-proof woven fabrics had to be treated with a resin coating process, which was done to the woven fabric to control the air permeability suitable for product performance. By using the company's ultra-fine fibers and ultra-high-density fabrics, the air permeability can be successfully controlled only with a cire (calendering) process without resin coating. As a result, the weight is further reduced, which contributes to reducing the burden on climbers.



The transparently thin, ultra-high-density woven fabric

Overseas business  
expansion**Quality and development capabilities that surprise and impress customers**

In the search for its own characteristics, the company has been doing market research at overseas fabric exhibitions such as "Outdoor Retailer Show", where it saw the future potential of the outdoor industry and from that it desired to produce lighter and stronger fabrics, which led it to update its technology and facilities. As a result, it has obtained the one-of-a-kind capabilities in quality and development of weaving ultrafine fibers at ultra high density, and has since continued production single-mindedly. The company's quality capabilities have attracted the attention of overseas apparel companies, and by reliably responding to development requests, production for overseas markets now accounts for more than 90% of its total production.



World-wide reputation technology

Small and Global

# Nittoku Inc.

## Company information

Location 10 - 1, Katase, Katsuyama City, Fukui Prefecture

Phone number + 81 - (0)77 - 987 - 3330

HP <https://www.nt-jp.com/>

Establishment 1954

Representative Tetsuro EMORI, CEO

Number of employees 245



## Company overview

Since the company's establishment in 1954, it has continued to provide a one-stop manufacturing service, from yarn purchasing to product design, sales and export. Starting from the habutae silk, it has delivered a variety of new products by taking advantage of its strength as a one-stop manufacturing company and its challenging spirit of "let's give it a try." Currently, it is engaged in the weaving of industrial textiles, mainly mesh for screen printing, but has recently expanded into areas not confined to "textiles," such as the manufacture of carbon fiber reinforced plastic for hydrogen tanks.

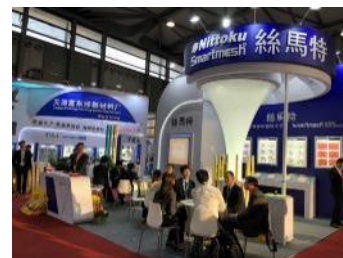


## Selected fields

Overseas business  
expansion

Small and Global

The company's mesh business manufactures and sells textiles for screen printing. Screen printing is a printing technique used in a wide range of fields, including pattern printing on T-shirts, printing on electronic substrates and printing on solar panel busbar. The market is not only in Japan, but also in China, the U.S., Europe and other countries around the world, but the Chinese market is the largest among them. Therefore, it was important to capture the Chinese market and established a local subsidiary in 1993 to develop major dealers in the Chinese market. The expansion of sales channels through local subsidiaries has increased the recognition of the "Nittoku brand" in the Chinese mesh industry. This has led to inquiries from China for mesh for use in solar power generation and other growth fields, and the company has come to export domestically manufactured mesh with high added values. This also has the effect of preventing technology outflow by domestically producing products used in specific product areas and high-density mesh. In order to expand its sales channels beyond China, it has made direct approaches to major dealers in various countries, and now boasts the largest market share in the high-precision industrial field in India, the next growth market. In addition, the company's products are delivered in 37 countries around the world, mainly in the U.S. and Europe, and overseas sales account for more than a quarter of the company's total sales (FY2021 results).

Booths and business talks  
at the exhibition in China



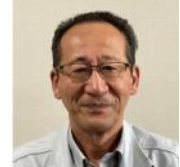
Processing lightweight and high-density fabrics with environmentally friendly dyeing, water repellency and coating technologies

## MARUSAN AI CO.,LTD.

### Company information

Location	2-8-64, Kaminaka Town, Sabae City, Fukui Prefecture
Phone number	+ 81 - (0)77 - 851 - 5111
HP	<a href="http://www.urase.co.jp/company/marusan-ai.html">http://www.urase.co.jp/company/marusan-ai.html</a>

Establishment	1954
Representative	Masaru SHIMIZU, CEO
Number of employees	132



### Company overview

The company was founded in 1957 to dye rayon fabrics, and is now an operating company of the Urasen Group with strength in dyeing and functional processing of lightweight high-density fabrics for casual sportswear applications. In 2009, the company introduced RPF boilers (Refuse Paper & Plastic Fuel) for the first time among dyeing companies, and has addressed sustainable product development ahead of the industry such as obtaining blue sign certification in 2011. Its activities are highly regarded by leading international apparel brands.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Proactive approach for sustainable supply chains in the textile industry

There are four international certification systems in the textile industry, and in 2011, the company became the first dyeing and processing company to obtain the blue sign, which is considered to be the strictest standard in the world. In 2021, it also acquired Oeko-Tex Standard 100 certification, which is the highest level of certification in the world. Currently, the company is working to get the Global Recycled Standard (GRS). It has jointly installed RPF boilers to recycle waste plastic with URASE CO.,LTD. since 2009. It also reuses (thermally recycles) fiber wastes generated by itself as RPF fuel, which achieves 25% reduction in CO<sup>2</sup> emissions compared to heavy oil boilers. In addition, it introduced in-house power generation using the decompression energy of the RPF boilers in 2011. Furthermore, it is strengthening its efforts to reduce energy consumption by improving productivity through a shift to low-energy processing technologies and loss-reducing intensive processing for the purpose of achieving 30% reduction in CO<sup>2</sup> emissions by 2030 compared to that in 2018 as one of its environmental management targets.



RPF boilers, power plant

Taking on the challenge of smart textiles, E-Textile by making full use of textile technology

# YONEZAWA-BUSSAN Co., Ltd.

## Company information

Location 1-13, Yaemakinaka Town, Fukui City, Fukui Prefecture

Establishment 1952

Phone number + 81 - (0)776 - 56 - 0135

Representative Toshinobu YONEZAWA, CEO

HP <https://www.yonezawa-bussan.jp/>

Number of employees 64



## Company overview

It has been more than 70 years since the company was founded. Since the first generation of industrial trading companies, the second generation has brought the manufacturing and dyeing departments in-house, developed textile materials mainly for the interior market, and introduced many patented products to the world. In the third generation, it has made a new effort to develop e-textiles with a major IT company in the U.S., which has been adopted by major apparel manufacturers in the U.S. and Europe, albeit in small quantities. As a new business, it is developing millimeter wave wireline for 5G/ Beyond5G using fiber technology, and has begun sample shipments.



## Selected fields

Development of  
new businesses  
and services5G/ Beyond5G applying braiding technologyFlexible  
waveguides for telecommunications applications

Metal waveguides are used in millimeter wave equipment as communication lines for 5G/ Beyond5G. However, because metal waveguides are heavy and unbending, there are major installation problems. Flexible waveguides, which are now shipping samples, are light and bendable to ensure flexibility of connection. The development of flexible waveguides began in 2007 by two engineers at the Industrial Technology Center of Fukui Prefecture. The joint research has started since 2016 when a medical device manufacturer noticed the technology in a presentation at an academic conference. The company announced its participation as a production and development division in 2017, and after exchanging information, the three parties began joint research in 2019. Subsequently, the company developed and introduced a special cord-making machine for flexible waveguides, and started sample shipments of flexible waveguides of the 60 GHz band in 2020. Sample shipments of V and E bands launched in 2021. The company began sample shipments of the W band in 2022. It started to deliver to universities and research institutes in Japan and abroad.



Flexible waveguide

A company that gives shape with textiles

# Ohtsuka Sangyo Material Co., Ltd.



## Company information

Location 1, Yawatanakayama Town, Nagahama City, Shiga Prefecture

Phone number + 81 - (0)749 - 62 - 3251

HP <https://www.otksm.co.jp/>

Establishment 1987

Representative Motoyoshi OTSUKA, CEO

Number of employees 140



## Company overview

In the early 1700s, the company began producing hemp mosquito nets in the Nagahama region. Since then, it has transformed itself as it meets the needs of the times, and now produces insert materials, which are reinforcement materials for urethane to be used in automobile seats. It indirectly supplies insert materials to all major domestic automakers, and has a domestic market share of over 60%. By applying the technology acquired through the production of insert materials, it manufactures a wide range of products, from consumables such as insoles and face sheets to packaging materials for pet robots used at home.



## Selected fields

Sustainability  
(Environmentally-  
friendly)**Collaborating with other industries to practice the process of transforming waste materials into revetment sheets**

The company has an proactive foundation in environmental initiatives originally based on the spirit of the Omi merchants, who believed in the three goods: the good for sellers, buyers and society. One of the most significant initiatives is zero emissions. In 1999, the company discontinued its own incinerator and began working toward its goal of zero emissions with a recycling rate of 100%. The goal was achieved for the first time in 2001 and the company has achieved it for 17 consecutive years. However, as environmental problems became more apparent in China, the import of waste materials as recycled materials was restricted, and the company lost its waste disposal route. Because the company could not find a domestic supplier in Japan, it was forced to dispose of the waste by landfill and incineration. Let alone zero emissions, because the environmental impact has increased dramatically, and the cost of treatment has jumped eightfold, after considering urgent measures, the company was able to secure a processing site for thermal fuel, and it came to be able to recycle approximately 95% of the waste material. However, there were some discussions within the company as to whether this could be called recycling, and it has been searching for a more environmentally friendly method of disposal. After approaching various companies to see if it would be possible to change the shape of the products and make them into other products, the company found a way to utilize them in the production of recycled material sheets through two companies. The production of this material does not increase profit ratios, and the processing time does not differ significantly from that of virgin material. However, since it is expected to reduce CO<sub>2</sub> emissions more by manufacturing from recycled material, the company decided to proceed with this initiative from the perspective of environmental friendliness. Due to processing capacity and demand, even though it accounts for only about 7% of the waste materials, the company annually converts about 50 tons of the waste materials into products. In recognition of this, it received the Incentive Award at the 5th EcoPro Awards (to be held in 2022).



Manufacturing of revetment sheets using  
non-woven fabric materials

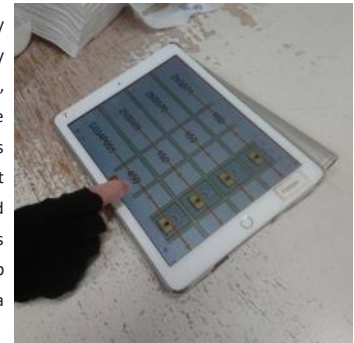


## Digitalization

### Information sharing through the use of tablets

In the past, managers typed up daily reports which workers wrote by hand on their computers, and used them for inventory control and other purposes. What items to fill in differs depending on the department, but in many departments, there are more than a dozen items that need to be filled in and typed each day. Therefore, the company decided to streamline its operations by using tablets to digitize the information. When the system was first introduced, there were some complaints from the site that it was not necessary to force a change, and some departments were adopting daily reports of handwritten basis at the same time. However, after an introduction phase, the company has now completely eliminated paper-based daily reports. The introduction of tablets has brought the following benefits. First is the reduction of input labor. This halved not only the amount of time spent on the work, but also eliminated transcription errors and improved accuracy. Next is the reduction of paper usage and expenses through paperless operations. The company could reduce by about 1/3, which was more than initially expected. The third is to speed up information sharing. The company provided tablets not only to in-house workers, but also to subcontractors, and built a centralized inventory management system which eliminated the need for confirmations.

Also, the company focuses on quality assurance, and by sharing incidents of defects, each employee has come to recognize them as "their own matters," which has been a significant change. In addition, the machine's operating rate has come to be able to be checked on a digital screen. When the company managed according to production time and number of products, it used to make extensive use of the machine with the highest production capacity that could produce large quantities at a time. However, once the company visualized the rate of machine utilization, it was found that the actual utilization rate was the lowest and work efficiency was poor, which led to a review of the operation. The company will further promote its efforts hereafter.



Digital management by using tablets



## Creation of added value through technological and design capabilities

### High evaluation for technology applications outside of areas where the company has its strengths

The company possesses its own "deep-drawing technology for nonwoven fabrics," which enables it to handle complex shapes. It utilizes this technology, and has an advantage in products related with automobiles, which account for about 80% of its manufacturing. Although the company did not have much experience in other areas, its experience in producing packaging for pet robots is now applied to all kinds of products, including products related with the automobiles. The company jointly produced the packaging with the ordering company and the material manufacturer in order to realize a design that reflects the particular needs of the robot manufacturer, the ordering company. The requirement level was high, and the design was required to be precise enough to fit snugly so that the delicate robot could withstand the impact. In addition, the detailed conditions were set for the materials to include recycled materials, and for the logo and recycling mark to be stamped on the lid and hydraulic core. Normally, errors with the design occur every time the process goes, but the company's technology was used to solve this problem by reducing the number of processes. In this way, the structure to absorb shocks, which prevents the robot from being broken even if it is dropped from the second floor, was realized as the case itself was rigid enough to make a banging sound when it is tapped.

In addition to its functionality, the product's design was also highly regarded, and the company was awarded the Minister of Economy, Trade and Industry's Prize in the Japan Packaging Contest in 2018. It has also been recognized worldwide as an Asia Star (sponsored by the Asian Packaging Federation) and a World Star (sponsored by the World Packaging Organisation). At the same time, the company teamed up with an office equipment manufacturer to produce mobile bags for free-address office. It was evaluated for its technology to fuse different materials: plastic parts and non-woven fabrics, as well as its seamless and smooth design. And the office equipment manufacturer was selected for the Good Design Award in 2019.



Deep-drawing technology for nonwoven fabrics

Fusion of analog and digital

**OMOTOSENKO CO.,LTD.****Company information**

Location	201, Yokoojisenryou Town, Fushimi Ward, Kyoto City, Kyoto Prefecture	Establishment	1975
Phone number	+ 81 - (0)75 - 621 - 8881	Representative	Kotatsu HAMANO, CEO
HP	<a href="http://www.omotosenko.com">http://www.omotosenko.com</a>	Number of employees	32

**Company overview**

The company runs a dyeing and fixing business (textile dyeing business) in Kyoto. It was founded in 1935 as a refining business. Since it converted into a textile dyeing business, it has expanded its business by aggressively investing in facilities for hand printing, flat screen and inkjet printing in response to the times. The company has a diverse customer segment that includes apparel, industrial materials, sports and general merchandise. In recent years, it has introduced transfer printers, UV printers and other equipment for the purpose of further expanding its business. It aims to further expand its customer base and increase sales by expanding the range of materials it can handle.

**Selected fields**

Digitalization

**Core operations from ordering through delivery to billing, and DX of production management and technical information**

The company has concluded an advisory contract with IT companies since 2020, and has been promoting DX, including the immediate sharing of in-house information through the introduction of a chat system, visualization of fabric inventory and IT training for in-house human resources. In particular, there are issues of information fragmentation and inefficient mechanisms due to the division of labor in complex commercial and production processes. For these issues, the company had promoted the construction of two major systems since 2020 and completed them by the end of FY2022.

**1 DX of core operations from ordering through delivery to billing**

By building an online order and supply system and linking with outsourcing partners via API, the company eliminates unnecessary paperwork, updates production information on a continuous basis, and opens a contact point for customers with a view to linking with API. Production progress information is also made available to customers, which leads to customer satisfaction. Also, delivery and billing operations can be completed online as well.

**2 DX of production management and technical information**

The company promotes the digitization of production progress and technical information, including online viewing of the above progress. The accumulated technical information is used as quantitative information to improve productivity, yield rate and to pass on technology.

In addition, the company is considering selling this system to other companies in the same industry in the future. It works to solve the problems of the textile industry as the center of the industry.



- (1) Processing slips before digitalization
- (2) Current processing slips and tablet screen for input
- (3) On-site work scene using tablets
- (4) Screen for managing processing progress

"Circulate materials with colour" Aiming for a new form of recycling that leads to a circular economy by separating waste textiles by colour to creatively reuse them.

## colourloop Co., Ltd.

### Company information

Location	2F-222, Daihachi Hase Bldg., 680-1, Omandokoro Town, Bukkoji-sagaru, Karasuma Street, Shimogyo Ward, Kyoto City, Kyoto	Establishment	2019
Phone number	-	Representative	Motoko UCHIMARU, CEO
HP	<a href="https://colourloop-jp.com">https://colourloop-jp.com</a>	Number of employees	2



### Company overview

In August 2019, the company socially implemented "Study on Effective Recycling System of Waste Textiles based on Colour" (Doctoral dissertation, Kyoto Institute of Technology), and through this, it was established with members of the Colour Recycle Network (researchers, designers, a molding and processing industry, a textile manufacturer, etc.) as shareholders. In order to make a sustainable society more enjoyable and prosperous, the company is networking to develop and offer a variety of materials and products by effectively sorting waste textiles by colour.

colourloop

### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Creation of a new textile recycling system that integrates engineering and design

The issue of waste textiles is a major challenge worldwide. Waste textiles in Japan amounts to 2 million tons per year. However, only a small percentage is recycled, and 3/4 of them are simply incinerated. Textiles are variously blended or mixed woven from various fiber materials, and it is difficult to improve the recycling rate by sorting materials. In addition, in conventional recycling, since the colours are miscellaneous and mixed, they are grayish-dark like dust and are mostly used as inexpensive industrial materials in the situation where they are not visible to the general consumers. However, in order to achieve a recycling-oriented society, it is required that the recycled materials be accepted by society as attractive and valuable, rather than being regarded as inexpensive materials. The company creates and offers attractive materials and products that are highly desirable by creating new values through the "Colour Recycle System ®," a new sorting method. This focuses on the colour of waste textiles, which are difficult to sort by material. This is an innovative recycling system that combines engineering with design, which can be a new approach to textile recycling.



Examples of materials upcycled  
from waste clothing



Development of  
new businesses  
and services

#### Developed the "Colour Recycle System ®" as a new form of recycling that "circulates materials with colour"

The "Colour Recycle System ®" is a textile recycling system with many possibilities. By conducting research-based color sorting with a high favorable rating, waste textiles, which have only been used for industrial materials out of sight, can be transformed into products, which the general consumers can enjoy as well. Since the materials and products created here use fiber as a coloring material, they have deep colours and an unique texture that cannot be found anywhere else because of the use of fiber. In addition, they are very sustainable materials since they do not undergo the environmentally burdensome process of decoloring, and the entire dye is reused. This system can be applied to a wide variety of waste textile issues, including not only discarded clothing, but also various textile products and mill ends. The company has successfully developed waste fibers into molded products, sheet materials, paper, and furthermore, felt and board. And it has also succeeded in developing yarn with the aim of horizontal recycling.

The "Colour Recycle System ®" is a new form of recycling that provides the market with attractive materials and products made from waste textiles so that a sustainable society can be more enjoyable and prosperous.



Overview of the "Colour Recycle System ®"



Creating new textile beauty by incorporating the expression and techniques of traditional technology into mass production

## Kawashima Selkon Textiles Co.,Ltd.

### Company information

Location 265, Shizuichiichihara Town, Sakyo Ward, Kyoto City, Kyoto Prefecture  
Phone number +81 - (0)75 - 741 - 4111  
HP <https://www.kawashimaselkon.co.jp/>

Establishment 1843

Representative Akira MITSUOKA, CEO

Number of employees 950



### Company overview

The company was founded in 1843 and celebrates its 180th anniversary in 2023 as a manufacturer of woven fabrics and textiles. It has provided a variety of fabrics and textiles to meet the needs of the times. It possesses both traditional and modern technologies, and has an integrated production system that handles planning, design, dyeing, arranging warps and weaving in-house. This is rare in the textile industry, where there is often a division of labor. The company lines up a wide range of products, from kimono sashes, theater and festival curtains to curtain carpets.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Taking a step forward from the development of environmentally friendly products to start efforts to obtain SBT certification

The company has been involved in environmental management from early on, including building together a water distribution and treatment facility when its factory was built in the 1960s. Currently, the company is working to contribute to the realization of a low-carbon and recycling-oriented society by supplying environmentally friendly products and services. It promoted measures such as the development of products using raw materials with low environmental impact, the use of renewable energy, the introduction of a system for collecting and recycling used products and the introduction of energy-saving equipment. And it achieved 9 % reduction in CO<sub>2</sub> emissions in the production area and 19 % reduction in the office area in FY2021 compared to those in FY2015. It also worked on the development of products using leftover cloth generated during product manufacturing, and has conducted test sales of such products. The company has expanded the calculation scope of supply chain emissions to include Scope 3 this year, and it is formulating a plan in line with targets to reduce greenhouse gas emissions consistent with the levels required by the Paris Agreement. At the upstream of the supply chain, the company is working together with suppliers and others in product planning and production to reduce CO<sub>2</sub> emissions, improve the efficiency of transportation and delivery and increase the efficiency of commuting and business trips. And at the downstream level, the company is working to reduce waste in product planning and production and to improve the efficiency of transportation and delivery related to sales. In order to serve as a model case for Kyoto Prefecture, the company also participated in the "Supply Chain Decarbonization Support Project" implemented by Kyoto Prefecture, and is working to obtain SBT certification with the cooperation of Kyoto Bank and others.

Besides, in cooperation with the Kyoto Chamber of Commerce and Industry and the Kyoto Board of Education, the company participates in the "Environmental Education Program for Elementary School Students," which aims to foster children's awareness of environmental issues and scientific minds, and it delivers classes on the theme of textiles and the environment.



System to collect and recycle order-made curtains and carpets

From Kyoto, Japan! We are committed to providing a good night's sleep and relaxation through a combination of bedding manufacturing and sleep knowledge to energize the world.

## DAITO SHINGU KOGYO Co.,Ltd.



### Company information

Location	66 - 2, Shimomisuyamaden, Yokooji, Fushimi Ward, Kyoto City, Kyoto Prefecture	Establishment	1925
Phone number	+ 81 - (0)75 - 622 - 6245	Representative	Toshiyuki OHIGASHI, CEO
HP	<a href="https://daitoushingu.shop/">https://daitoushingu.shop/</a>	Number of employees	21



### Company overview

The company was founded in 1925, and its mission is "Energize the world with sound sleep and relaxation". With its bedding manufacturing technology and ever-expanding sleep expertise, the company promotes health through the improvement of customers' sleep environments.

The company owns its own workshop, and emphasizes an omnichannel approach. It is developing B2C and D2C businesses through its brick-and-mortar shop and e-commerce, in addition to its conventional B2B business. Examples of its B2B customers include: Department stores, mail-order businesses, furniture and interior specialty stores, lodging facilities, design and architecture businesses, and sleep environment design.



### Selected fields



Sustainability  
(Employee-friendly  
working environment)

Promoting restructuring projects on a working style to reflect each thought in the working environment and the way we work

#### 1 Launching the restructuring projects on a working style

In 2018, upon participating in the "Challenge Program for Workplace Reform" promoted by Kyoto City, a project was launched by members from six departments within the company to promote reforms in its work style. In order to realize the ideas of the employees themselves, they propose improvements and reforms in the working environment and working style to the company, and it is the employees' initiative to reform the working style that everyone can agree with.

#### 2 Vision of the restructuring projects on a working style

The employees and the employer share the values together, increase productivity as a company and work on self grow and development.

#### 3 The effects of the restructuring projects on a working style and the institutionalized contents

- (1) Time management through reviewing and assessing the work of each person and each department, cutting out operations and sharing them, and implementing team building, etc.
- (2) Restarting the no-overtime day, which had become a dead letter, and continuing to operate it well every Wednesday.
- (3) Introduced and newly established a half-day paid holiday system to promote more flexible use of time.
- (4) Continuous periodic reviewing operations has evolved into 5S activities: a 5S project team has been established and is now active.
- (5) Planned and delivered study tours as the entire company to learn 5S in order to tackle it.
- (6) Diversity management: as a first step to commit diversity in human resources, started employing new graduates from overseas as highly-skilled human resources from 2021.
- (7) Shorter working hours for full-time work members who give care to their families. Started in 2022.



Creating a workplace environment  
where employees themselves want to work



Creation of added value  
through technological  
and design capabilities

## Branding products created from high technology by adding value through design strategies

### 1. Added values and branding results of the main products

Cotton-gauze bedding products, "KYO WAZARASHI MENSYA"

Characteristics: soft and comfortable as if the skin is embraced by air. The more it is washed, the fluffier it becomes.

Items: pajamas, loungewear, bed linens, towels, homeware, baby items, etc.

Technical skill: the Japanese traditional cotton scouring process and the sewing finish that overlaps the fabric make it safe even for atopic diseases. The air layer between gauze fabrics provides heat retention, breathability, and moisture absorbency.

Recognition and awards: 2007/ Kyoto City Oscar Recognition; 2012/ Special Award of Department Store's Living Buyer Prize from the SENKEN SHIMBUN CO.,LTD. ; 2015/ Selected for The Wonder 500 by the Ministry of Economy, Trade and Industry and Discover Kansai Project by the Kansai Bureau of Economy, Trade and Industry

Main clients: Kyoto Tawaraya Ryokan, ACE HOTEL KYOTO, and other luxury accommodations and luxury resorts in Japan.

#### (2) Beads cushion "Japanese sofa; tetra"

Characteristics: beads cushion utilizing the production technique of Kyoto-style seating cushion, which supports the sitting posture by dispersing body pressure and allowing the backrest to rise up in sitting down.

Recognition and awards: 2006/ selected as a Kyoto Design Superior Product, 2008/ certified as a Regional Resource Utilization by the Ministry of Economy, Trade and Industry, 2016/ selected as an OMOTENASHIHI Selection,

Main clients: Hoshino Resort, Hotel New Awaji, and other high-end lodging facilities, NHK TV, etc.

Collaborators: Nissan Motor Co., Ltd., Konica Minolta, Inc.



Cotton-gauze bedding products



Development of  
new businesses  
and services

## Proposed the total improvement of the sleep environment, from a single pillow to the creation of a bedroom

### 1 Business background

(1) Manufacturing: Since its establishment, the company has been manufacturing bedding, bedding products and home textile products.

(2) Personnel: all of the employees have a sleep health instructor certification, and the company is a group of people who have studied the knowledge of sleep. And it has human resources with expertise in addition to sleep knowledge that can be utilized in product development and customer service.(architects, interior coordinators, seismic assessors)

(3) Realization: the company takes care of "bedding," but in the process of acquiring knowledge about sleep, it realized the need to consider the "bedroom space" surrounding the "bedding," and expanded its business from interior decoration to home remodeling, and launched a construction business in 2012.

### 2 Suggestion about the sleeping environment, ideal bedroom and its space

(1) Realization of ideal in-bed environment: proposed bedding layering and KYO WAZARASHI MENSYA's products to maintain a temperature of 33° and a humidity of around 50%.

(2) Proposals for bedroom space: proposing a comfortable sleeping environment with lighting, sound volume, temperature and humidity control, indoor flow lines, barrier-free access, etc.

### 3 Activity as a group of sleep instructors

(1) Raising awareness of sleep knowledge: under the supervision of Dr. Soichiro MIYAZAKI of Chubu University, the company produced and published a sleep book for children, teens, working generation and seniors.

(2) Providing sleep workshops: sleep workshops are provided to local residents on topics and content in accordance with their requests.

(3) Results: educational institutions, companies and other organizations, for example, Kyoto Municipal Fukakusa Junior High School, Kyoto Prefectural Women's Association, companies engaged in health management, etc.



Top to bottom (left to right )

- Creating the ideal sleeping environment and bedroom
- Creating a comfortable bedroom space
- A sleep health instructor will help you choose suitable bedding
- Providing sleep workshops

Bringing you the joy of tying

# Tomiya textile corporation

## Company information

Location	428, Ichikanon Town, Kamigyou Ward, Kyoto City, Kyoto Prefecture	Establishment	1867
Phone number	+ 81- (0)75 - 463 - 1234	Representative	Yasuhisa TOMIIE, CEO
H P	<a href="http://www.tomiya.biz">http://www.tomiya.biz</a>	Number of employees	19



## Company overview

The company continues new creations as it cherishes its commitment to traditional craftsmanship, which supports the foundation of its manufacturing as well as materials carefully selected. It is a manufacturer specializing in obi fabrics, but it also produces film costumes, interior decorations and art fabrics. It was the first company in the world to succeed in weaving high-definition craft textiles like photographic images, and has been awarded the "Kyoto City Oscar" and the "Kyoto Technology Grand Prize." It has also received the "Kyoto's Long-established Business" award for a company history of more than 100 years.



## Selected fields



Creation of added value  
through technological and  
design capabilities

The only technology in the world to weave fabrics that look  
like photographs or paintings

The company has succeeded in weaving textiles that look like photographs and paintings by utilizing techniques of making obi (sash), which are exquisite Nishijin textiles. Specifically, yarn-dyed fabrics originally required the necessary colored yarns to be dyed separately and as many wefts as the number of colors, but this was achieved by arranging the colored yarns in dots, like RGB on TVs and CMYK on printers. In practice, overcoming the weaving technique was a bigger challenge than the theory, and without the foundation of traditional Nishijin techniques, it would not be possible to reproduce the craftsmanship to the level of a craft. In 2003, the company was awarded an "Oscar Recognition" by Kyoto City for its world's only special technology, which has pioneered the art textile market. The company is continuing to develop unique products in the kimono industry by feeding this technology back into obi production. Further technical development was carried out, and by 2021, weaving of fabrics with a width of one meter became feasible although it had previously been possible only with the shoulder width of obi looms. As a result, potential demand could be expanded significantly, and new possibilities could be explored in interior design and apparel. The current major weaving achievements include reproductions of famous masterpieces, woven portraits of city councilors for the council chambers, woven portraits of Diet members for the Diet building, goal tapes for the national women's relay race and high school relay race, woven frames as supplementary prizes for Kyoto Prefecture awards, woven statues and wall decoration for famous temples and shrines, and many others, which are all impossible with conventional techniques.



Weaving frame of 900mm × 700mm  
Reproduced Vermeer's masterpieces faithfully on  
Nishijin textiles

Utilizing domestic knitting technology to create FSC-certified products

## ISOTOPE CO.,Ltd

## Company information

Location 1-8-4, Ikeura Town, Oizumi City, Osaka Prefecture (head office factory)

Phone number +81 - (0)725 - 21 - 5171

HP <http://www.isotopegroup.com/>

Establishment 2003

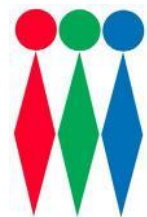
Representative Katsuya KANAZAWA, CEO

Number of employees 43



## Company overview

The company was founded in July 2000. It is a knit manufacturing company that supports the local industry, "knit production area" of Izumitsu City, Osaka Prefecture, which boasts the highest number of domestic knit production in Japan. The company has its own factory in Izumitsu City, and is committed to "Made in Japan" production through integrated production with local partner factories. In recent years, it has positioned itself not only as a wholesaler of its own products and forest *washi* products and an OEM producer, but also as a manufacturer of *washi* thread, distributing 100 tons of *washi* thread annually in the market.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

The company obtained FSC international certification for the first time in Japan for its forest *washi* paper. Creating environmentally conscious products at a one-stop service

The company's original product, "Forest *Washi*," a Japanese paper yarn developed by the company, obtained CoC certification under the FSC forest certification system. This is the first Japanese product of its kind made from Japanese paper, and is expected to lead to further value-added products. In foreign countries, the brands of Made in Japan are popular, and there are more SDGs and ethical users than in Japan, and this makes the market more attractive for growth.

What is CoC certification under the FSC Forest Certification System ?

The CoC certification is a system to certify that wood and paper products, which were produced from FM (Forest Management) certified forests, are properly managed and processed. It covers all entities that have ownership of the products from the FM-certified forest to the final product. Under the workflow, the company forms alliance partners with other companies to produce forest *washi* products. Reliable traceability of products adds values in terms of peace of mind.

"Environmentally conscious"

Manufacturing Japanese paper yarn from produced paper (*Washi*) by making raw materials from wood chips harvested in managed forests. Since wood is utilized as forest destruction is prevented, forest *washi* knit products reduce CO<sup>2</sup> emissions compared to conventional knit products.



責任ある森林管理  
のマーク

FSC® を  
選ぶことで  
責任ある森林資源を  
支援できます

FSC® マークのある  
アイソトープのニット製品は  
FSC® 認証製品です

Design of panels to be used in the  
exhibition held in the fall of 2022



Comfortable uniforms for all workers

# AITOZ Corporation



## Company information

Location	2 - 4 - 8, Kitakyuhoji Town, Chuo Ward, Osaka City, Osaka Prefecture
Phone number	+ 81 - (0)6 - 6262 - 8500
HP	<a href="http://www.aitoz.co.jp">http://www.aitoz.co.jp</a>

Establishment	1917
Representative	Takayuki ITO, CEO
Number of employees	213



## Company overview

The company is celebrating its 106th anniversary from its establishment in 1917. The company has domestic bases including the Tokyo and Osaka headquarters, Imabari and Sapporo as well as manufacturing factories in Shanghai and Dalian, China, Myanmar, Laos, and other countries. By conducting all planning, production, management and logistics in-house, it delivers safe, secure and high-quality products. It aims to be a company that constantly looks to the future of society and continues to take on the challenge of creating products and services that will lead to the next generation.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

Progressive and sustainable initiatives as a leading company in the industry

The company is an industry pioneer in sustainable initiatives.

### 1 "AITOZ/ BRING UNIFORM" system to reduce greenhouse gas emissions and recycle resources

Recovery and recycling of discarded uniforms: collecting uniforms discarded as industrial waste, recycling the cotton fabric into bioethanol fuel and removing impurities from the polyester. Then, after dissolving the polyester, returning it to solid pellets to make new work clothes from the threads again. Since the system was launched in 2017, the number of users has increased year by year, and in FY2021, more than 1,000 companies collected about 234,000 items (it is said that 70 million pieces of work clothes are disposed of annually, amounting to 160,000 tons). In addition, the company collects the number of transportation (orders for truck transportation) associated with this, and reduces the frequency of transportation to cut down on CO<sup>2</sup> emissions.

### 2 Support for users' initiatives on SDGs

The company is building a system for manufacturers, dealers and users to work together for the purpose of achieving the SDGs through the construction of the "AITOZ/ BRING UNIFORM" system, which adds eco-friendly materials to the company's products.

Creation of added value  
through technological  
and design capabilities

Product lineups are enhanced to meet the needs of customers by offering products with the same design and specifications but made of different materials

The company's "New MOBINCUT series" offer superior workability thanks to stretch fabrics and patented 3D cutting technology. In order to achieve even greater precision, the company introduced the industry's first electromyography measurement of the body's load during work. The results demonstrated that the set-in sleeve, no-fork and raglan sleeve specifications reduced the load on average by about 23%, 13% and 15% respectively. Before the model change, "MOBINCUT series" had a cumulative record of 9,240,000 items over 20 years, and became one of the most popular products in the industry, which has long been a favorite among users. Sales of AZ-6801, a typical blouson made of blended fabrics, have exceeded 77,000 pieces within three years since its launch in 2020. Uniforms have a wide range of benefits, such as improving work efficiency, encouraging a spirit of loyalty, fostering professionalism and enhancing the company's external image. In order to meet the individual needs of each department and to achieve a sense of uniformity, the company has meticulously responded to user needs by producing the same design in 65% polyester, 35% cotton blend, which is called the "golden ratio" of work clothes and in a fire-resistant of 100% cotton material.



New MOBINCUT series, mobility data

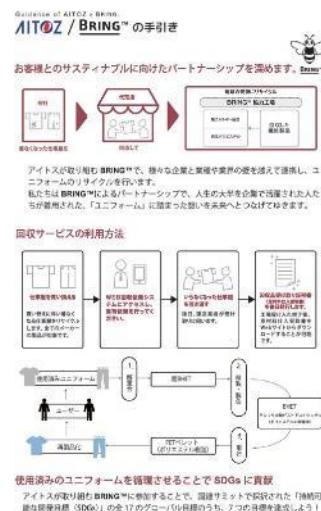




Development of  
new businesses  
and services

## Establishment of a collection scheme with an eye to LCA for uniforms

The company was quick to focus on the issue of clothing waste, and in partnership with JEPLAN, INC. and a shipping company, it offers the "AITOZ/BRING UNIFORM" service to collect and recycle discarded uniforms. If users request to have their items collected through a designated website, the shipping company will collect them at a designated location with an invoice for payment on arrival at the recycling factory. The company has a system in place to recycle polyester into "BRING Material™" and other recycled polyester products using "BRING Technology™," a technology owned by JEPLAN, INC. Since the company launched the collection service in 2017, the number of users participating in the scheme has increased year by year, and in FY2021, more than 1,000 companies and approximately 234,000 items have been collected. In the main business flow within the uniform industry (manufacturer => retailer => user), the company does not pass on the processing labor and costs of its products to retailers and users, so this highly convenient system has attracted much attention. In addition, by developing standard uniforms using fabrics made from recovered clothing and actively promoting sales, the company shares with retailers and users the feeling that "they are a part of society that aims to be recycling-oriented together."



Through materials

Breathing new breath into the fashion industry

**ASAHI BO CO.,LTD.**

## Company information

Location 4 - 1 - 53, Tarui, Sennan City, Osaka Prefecture

Phone number + 81 - (0)72 - 483 - 4081

HP [www.asahibo.co.jp](http://www.asahibo.co.jp)

Establishment 1948

Representative Kuniyoshi YABUUCHI, CEO

Number of employees 88



## Company overview

The company was founded in 1883 and has been engaged in cotton spinning since 1948, accumulating a wealth of information and know-how to contribute to the field of "clothing." In the fashion industry, where more innovative and higher quality materials are demanded, the company aims to provide materials that meet the consumers' preference to be changed day by day through the development and supply of new high value-added materials. In addition, the company has established cotton yarn recycling technology and is making efforts to produce environmentally friendly products.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

### Reuse of raw cotton discarded in the spinning process

In order to utilize limited resources as effectively as possible, the company has made it possible to express interesting yarn shapes and appearance by blending squash and fallen cotton, which are discarded at each stage of the spinning process, with virgin cotton. Also, it uses fabrics which are no longer used and raw materials produced by re-wooling (re-cottonizing) fabrics, and the company contributes to the effective use of limited resources and the reduction of waste. By reusing resources, it contributes to reducing waste and alleviating the burden on the global environment. It also obtained the GOTS certification, and aims to be a sustainable company by using organic raw cotton.



Reuse of flat strips (fallen cotton) at  
carding as blended cotton

Aiming to be the best wool spinner in the world for 100 years

Pursuing "Unique Value" with the wisdom of our predecessors and the power of our employees for the next 100 years

**OTSU KEORI Co., Ltd.**

## Company information

Location 17-24, Asahi Town, Izumiotu City, Osaka Prefecture

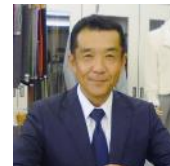
Phone number + 81- (0)725 - 33 - 1181

HP <https://otsukeori.co.jp>

Establishment 1917

Representative Kiyohiko USUTANI, CEO

Number of employees 92



## Company overview

The company has been in business for more than 100 years. It has its main factory in front of Izumiotu station, 20 minutes from Namba, Osaka. There is a factory for knitting and dyeing arrangement, together with another factory for spinning and weaving at a separate location with an integrated wool-spinning process. By using its worldwide network and its own technology and know-how to gather the best raw materials, it plans, manufactures and sells yarns, fabrics and bedding. In addition, it cooperates with domestic and overseas factories with its wide range of manufacturing know-how to create values through innovation.

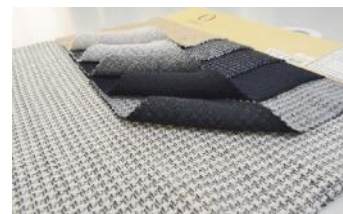


## Selected fields

Sustainability  
(Environmentally-  
friendly)**Achieving sustainability through product development that leverages the company's technological capabilities and by reviewing its facilities**

Woolen yarn can make almost all types of fibers into yarn, even short ones. Since ancient times, the company has produced yarn from anti-wool material made from short fibers that cannot be used for carding, fiber scraps and scraps from the process, used clothing and other materials which are converted back into fiber again. Besides, the various raw materials are blended, and can create new values. In addition to contributing to sustainability through this technology, the company is developing valuable products currently needed from a wide variety of raw materials by taking advantage of the fact that there are no other factories capable of integrated production any more and its top-class handling volume of raw materials for wool spinning in Japan. Also, the company has set up its own managed wool factory to ensure traceability of raw materials. The "OZMY ®," using recycled wool which has acquired the Eco Mark that is traceable, has been well received as a sustainable product with a soft texture. As for virgin raw materials, the company is producing yarns using non-dyed yarns that use originally colored sheep to produce color (colored wool), organic wool grown in consideration of the environment, and non-mulching raw materials that take animal welfare into account.

It is also making efforts to disseminate information on Instagram, YouTube and Facebook, which has led to new transactions and increased sales. In production facilities, it has responded to the sustainable era by replacing into once-through boilers using gas, installing heat insulators for steam pipes and adopting closed-type dyeing machines with low bath ratio to reduce any environmental impact such as air pollution, CO<sub>2</sub>, heat loss and water consumption volume.

**"OZMY ®," sustainable products  
using recycled wool**Creation of added value  
through technological  
and design capabilities**Adding functionality through technology to create new values in natural fibers**

In spinning, the company creates new values by combining existing products to meet market needs. The company has developed yarns that take advantage of its technological capabilities, such as "OK AIR YARN," a light and warm yarn which contains air that has become a hit product for the company, "Mule Spin ®," which uses raw wool finer than cashmere and "Nobi Nobi Yarn ®," which can produce comfortable fabrics. Valuable products in the luxury price range, which are unique to the company, require high quality, so the company trains skilled workers and produces with high operating techniques. This has made it possible to mass produce the Tasmanian Lamb series of high quality yarns with fine fibers such as 100% angora fiber and baby cashmere. In addition, the company is creating new values by adding various function to fabric processing, which leads to higher sales. The "My Washing ®," a chlorine-free process, was developed out of concern for the environment, whereas chlorine-based chemicals had been conventionally used for washable wool products. "Persimmon ck ®," with improved wash resistance and anti-pilling treatment and "Airfab ®," a lightweight and warm coat material by combining the company's unique spinning and dyeing technologies, have also received high evaluation. In addition, the company has developed "Aqua Drop ®," a durable super water-repellent finish that meets environmental standards for wool products and it has been adopted by major apparel makers for their signature products. It used to be difficult to apply a durable water-repellent finish to the wool products.

**Durable super water-repellent finish that  
meets environmental standards  
"Aqua Drop ®"**

The company has been committed for 88 years in Izumisano City, the birthplace of Japanese towels. It appeals to people in Japan and abroad about the quality of Senshu towels.

## KINNO TOWEL CO., LTD.

### Company information

Location 1-5-31, Hagurazaki, Izumisano City, Osaka Prefecture

Phone number +81 - (0)72 - 462 - 3801

HP <https://www.kinno.co.jp/>

Establishment 1934

Representative Yasuyuki KINNO, President

Number of employees 41



### Company overview

The company has been a long-established towel manufacturer since 1934. In terms of production, the company has 36 towel looms, including jacquard looms, to enable it to respond to a variety of design needs. In addition, it has an automated warehouse through computer control that can store up to 300 tons and has established a system for prompt shipments. Meanwhile, on the software side, it builds an original production inventory management system to rationalize production inventory management operations. The company also focuses on product planning and development as well as sales activities, and offers more than 5,000 SKUs domestically and internationally.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Manufacturing that considers how to create  
products that will make people happy

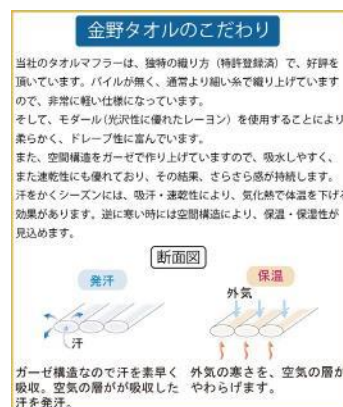
Towel looms cannot change the weaving width without rethreading the yarn. For this reason, towel manufacturers prefer to have versatile looms, such as 60 cm wide for bath towels and 34 cm wide for face towels. Furthermore, the latest towel looms are becoming larger and larger, and fewer units are required to fit within existing factories. The company retains looms from 1975 to 1984, has a large number of looms and owns looms for a variety of weave widths. The company offers weaving widths of 25 cm, 38 cm, 40 cm, 50 cm, 65 cm, 70 cm, 80 cm and 90 cm, which are not common among other companies. Although the capacity utilization rate for special sizes is lower because it depends on the order situation, this system is implemented to meet customer needs. In addition, towels are generally both-sided pile, but for printed products where the design is to be emphasized, the company uses gauze on one side to ensure that the design comes out beautifully. In addition, towel scarves are made without pile to prevent snagging. Patents obtained by the company include a special weaving method that uses triple gauze without pile to create a spatial structure that enhances water absorbency with retaining the warmth of the pile as well. Towel mufflers for summer absorb sweat quickly due to their high water absorbency to make them dry quickly and produce coolness by vaporization heat. They are also designed to provide heat retention when people do not perspire. When they first went on sale, they were picked up by the mass media (Machikado Joho Shitsu of NHK, Bistro SMAP, Wake Up Plus, News BIZ, etc.) because of the unexpected nature of scarves in the summer.



Development of  
new businesses  
and services

Promoted the power of products with original products that  
utilize the company's strengths

The company used to produce towels on an OEM basis for wholesalers in department stores, but after the burst of the bubble economy, wholesalers began to deal mainly in inexpensive towels from overseas, resulting in a significant decrease in orders. This led to a major shift to creating their own original products and selling to retailers that do not clash with existing wholesalers. Originally, the planning and design came from a wholesaler, but the company decided to think them in-house. It selected raw materials and made use of the know-how it had cultivated over many years in the production of products for department stores, but it could not go beyond the realm of just colored towels. As lifestyles change, there are fewer visitors who visit homes, and the company contracted with outside designer, Mr. Shinji KATO to attract users by focusing on products to be used at home into towels to be carried outside. A cute design was added. Currently, in addition to direct sales to retailers, the company also sells its products online and through a retail store next to its factory, and more than 60% of its products are original. The sales volume has decreased to one-third of the peak level due to the shift from mass production to wholesalers into direct sales to retailers and users. As the production volume decreased significantly, the company strived to secure profits through sales for downstream customers and managed to maintain profitability as it maintained employment by shifting excess human resources in manufacturing to shipment in small lots. After creating its own original products, the company's employees began to enjoy creating products themselves, and the fact that they are sold domestically and internationally with the company's own tags on them has made them more responsible and proud of their products, which led to an increase in sales.



The mufflers with patents



Original product catalog

Knitting shop that has been in business for more than 95 years

The company challenges the world with manufacturing products made in Osaka  
by cherishing the connections between factories

# Sankei Meriyasu CO.,Ltd

## Company information

Location	2-3-28, Nakazakinishi, Kita Ward, Osaka City, Osaka Prefecture
Phone number	+ 81 - (0)6 - 6371 - 0498
HP	<a href="https://www.sankei.fm/">https://www.sankei.fm/</a>

Establishment	1926
Representative	Tokuo MIKI, CEO
Number of employees	14



## Company overview

The company is a knitwear sewing factory established in 1926. With a background of a 96-year history in business, the company works closely with factories in the Kansai region to manufacture products that can only be made in Japan. With distinctive and ancient machines along with technologies as the company's core, its manufacturing has received high reputation which is achieved only by itself through planning items that revive men's vintage production methods, as well as through the production of products with involvement from the process to create materials. This technological capability was well received, and the exports have increased with overseas sales now accounting for more than 30% of total sales.



## Selected fields

Sustainability  
(Employee-friendly  
working environment)

The company confronts the serious problems of local factories and revitalizes them through initiatives that leverage the power of young people

In recent years, factories all over Japan have experienced a serious shortage of human resources. The cause is a lack of successors. It is said that the average age of retirement for small and medium business owners is 70, but in case of some of the company's partner factories, it has exceeded that age. There are some people who are still involved in clothing manufacturing at the age of 80. The aging of the workforce is progressing in many familiar places, including inside of the company, and many craftsmen are around 70 years old. Some factories are closing due to lack of their successors. The manufacturing industry in the town requires specialized knowledge, which makes it difficult to pass on skills to the next generation and is the main cause of the labor shortage. The reality is that the next generation cannot bear the cost of becoming a full-fledged member of the workforce. Against this backdrop, the company aims for sustainable factory manufacturing, and is making use of its young workforce to achieve this. Last year, two young women, who are 19 and 22 years old that have no experience, joined the company as sewing craftsmen. Currently, they are working hard at their business with gaining experience while being taught techniques in the sewing field. Indeed, it takes time to master the advanced techniques to be acquired through years of experience, but the company decided to hire these craftsmen because it felt a sense of crisis that it would not be able to pass on its skills if it missed this opportunity that craftsmen are still in active. The company hired them not just as craftsmen but they also disseminate information about the factory and sewing methods through social media, which is a specialty of the younger generation, in an effort to revitalize the factory through new initiatives. In addition to acquiring skills, the company sends out information via social media, which enables young employees to be active even during the period until they become fully proficient in their skills. The company plans to continue hiring in the coming year, and is seeking to carry on the tradition by collaborating with young craftsmen in areas that have been difficult for traditional factories, such as creating videos that take advantage of the power of youth, while it searches for new factory management methods.



Young employees receiving technical instruction on special sewing machines from a skilled craftsman.



70

Izumiotu City,  
Osaka Prefecture

Sustainability

Digitalization

Creation of added value  
through technological  
and design capabilitiesDevelopment of  
new businesses  
and servicesOverseas business  
expansion

The company excels in raising technology for cashmere and other high quality animal hair, and has dyeing and arranging technology to create high quality fabrics

# FUJII WAKAMIYA SEIJU CO,LTD

## Company information

Location 8-2, Wakamiya Town, Izumiotu City, Osaka Prefecture

Phone number + 81 - (0)72 - 532 - 1007

HP Without

Establishment 1941

Representative Masashi SHIBAHARA, CEO

Number of employees 30



## Company overview

The company has a tradition of more than 80 years in the dyeing and finishing of fabrics. The company specializes in processing natural fiber materials (wool, cotton, silk) and is contracted by fabric manufacturers to process woven fabrics, circular knits, blankets, materials and other items. The company's basic philosophy is high-mix small-lot production and products with high added value, and its processing facilities are based on this philosophy as well. In addition, the company offers a wide variety of processing methods and products of high quality. In particular, it excels in raising and shrinking technology and has earned a top reputation in the industry.



## Selected fields



Creation of added value  
through technological  
and design capabilities

Processing of luxury coated fabrics with 100 years of  
history of raising technology

Izumiotu in Senshu is a production center of blankets and the birthplace of raising technology for woven blankets in Japan. The company has the longest history of processing raised wool coats by using its raising technology, and the company was the first to develop and produce 100% cashmere coated fabrics in volume. In addition, there are the following raised textile products with textures that are second to none in the world. (1) Finishing pile of duffle coat fabric with pile weave, (2) raised fleece finish in hairy, ultra-lightweight fabrics of alpaca, mohair, etc., (3) mufflers of 100 % cashmere with thistle bristles and waved animal hair, (4) 100 % silk with a brushed finish, (5) cashmere for circular knit knitwear, beaver finish for animal hair raw materials, milled finish, and (6) anti-dyed raised sheepskin finish on circular knit backing

In the Senshu area, the company and other companies in the region heavily rely on the raising techniques of their technicians, known as "raising masters," who have many years of experience and intuition in the raising process. For soft animal hair materials such as cashmere, old belt-type raising machines (more than 50 years old) are required to produce dense and fine fluff. As long as the wool of raw materials remains unchanged, the processing methods and facilities will not be fundamentally changed, and the transmission of technology from person to person and the training of technicians are important issues and policies, thus the company is engaged in its business with a sense of mission.



Raising process which the  
company most specializes in  
that is highly regarded by  
the industry



The company will continue to challenge itself in the field of garment materials and textile products, while never forgetting its pioneering spirit

## T. MASUMI & CO., LTD.

### Company information

Location	3-2-14, Bakuro Town, Chuo Ward, Osaka Prefecture	Establishment	1939
Phone number	+ 81 - (0)6 - 6252 - 2932	Representative	Kiichiro MASUMI, CEO
HP	<a href="https://masumitetsu.jp/">https://masumitetsu.jp/</a>	Number of employees	75



### Company overview

The company was founded over 70 years ago in Semba, Osaka, and is a manufacturer and wholesaler of clothing materials aprons, and kappogi (Japanese cooking aprons). Despite the changing market environment, the company has focused exclusively on clothing materials and textile products since its establishment. It will continue to work on product development with sincerity so that it can bring even one more smile to the world.



### Selected fields



Creation of added value  
through technological  
and design capabilities

A completely new clothing brand of "kapoc," inheriting the aesthetic sense and philosophy of the white kappogi

The company began branding kappogi with the goal of thoroughly pursuing its core business in 2016. Following in the footsteps of the smock, the kappogi brand of "kapoc" was launched in response to the question of how to make it more fashionable and acceptable. While it has the functionality of work clothes, it is also fashionable enough to be worn on the go, and has gained the support of many users. The price ranges from 1,000 to 2,000 yen for kappogi, but the company has gone beyond this concept and started selling kappogi for 18,000 yen by paying close attention to the details of design, fabric, sewing and materials used for it. This has allowed the company to develop a whole new sales channel, which is now the mainstay of its sales and continues to grow. In 2021, the company launched its kapoc online store, and won the prestigious "Nippon Culture Encouragement Award" at the Color Me Shop Awards in 2022. In addition, what is noteworthy about this product is that it has been supported by many people as a completely new fashion item by adding design to the traditional "kappogi" garment. The company aims to evolve the design aspect of its products on a daily basis, and has developed a new lineup of products that has been well received.



Kappogi brand of "kapoc"

Making only what is needed, when it is needed

**MIYAMA CO.,LTD.****Company information**

Location 1-10, Ikutamatera Town, Tennoji Ward, Osaka City, Osaka Prefecture

Phone number + 81 - (0)6 - 6772 - 1351

HP <https://www.miyama-tex.co.jp>

Establishment 1951

Representative Shinji MIYAMA, CEO

Number of employees 85

**Company overview**

The company is the first in Japan to establish a system allowing the sale of sewing and yarn-dyed knit yarns from a single skein. The company has been selling sustainable textile raw materials for more than 60 years to deliver what you need as much as necessary, whenever you need it.

**Selected fields**Sustainability  
(Environmentally-  
friendly)**WACS Project - Creating a recycling system that makes everyone happy,  
including the factory and the planet**

Nara Prefecture is the largest producer of socks in Japan. There are more than 75 million pairs of socks to be produced, and more than 180 tons of textile waste are generated during the production process. And almost all of these are incinerated as industrial waste at a cost of more than 18 million yen per year. In order to improve the situation as much as possible, a recycling project called WACS was launched this year. Several companies have already worked together on this project, and several apparel companies have adopted products made from this material. WACS is a project in which the company purchases B products and ringlets generated at client mills under certain rules, separates them by color and returns them to the spinning mills for spinning back into yarn. The yarn is then shipped back to the mills as raw material for textiles. The company believes that it can reduce the burden on manufacturers by reintroducing discarded items from factories back into yarn, thereby revitalizing the local community, and furthermore, by reducing the amount of waste incinerated, it can contribute to reducing CO<sup>2</sup> emissions. Although the number of companies that collect textile products from consumers in stores has increased, most of them are mixed with resins or turned into waste. The more the company tries, the more difficult it becomes to sort the materials. Chemical recycling is still too costly and impractical. The company considers the return to fiber as a premise since it is a company that handles textiles, and its relationship of trust with the mills enables it to separate and return to fiber with little human intervention.

**WACS Project**

Delivering Banshuori to the world

# Ueyama Orimono Corp.

## Company information

Location	681, Yachiyokushidehara, Taka Town, Taka Village, Hyogo Prefecture
Phone number	+ 81 - (0)795 - 371 - 135
HP	<a href="https://www.ueyama.net/">https://www.ueyama.net/</a>

Establishment	1948
Representative	Nobuyuki UYEYAMA, CEO
Number of employees	40



## Company overview

Through aggressive investment, the company is one of the top manufacturers in the Banshu production area in terms of the number and types of weaving machines. The company also has its own group companies and provides stocking services which plan, stock and sell its own products, and has received a good reputation both domestically and internationally for its product supply system. The company delivers a wide range of businesses, including a retail business centered on e-commerce, in cooperation with Japanese textile production areas (towels from Imabari, wool blankets from Senshu, socks from Nara, etc.).



## Selected fields

Sustainability  
(Environmentally-  
friendly)

### Planning and proposal of environmentally friendly product lines

The company has been promoting the use of organic cotton for more than 15 years, and is proud to say that it is one of the best in Japan in terms of the amount of organic cotton to be used and the number of products to be supplied as for yarn-dyed fabrics. As for dyes, since they are basically reactive dyes ( $\approx$  chemicals), the company is able to offer various organic products with partner companies. The company is also promoting efforts to realize a circular economy by recycling discarded fabrics and cutting scraps and reusing them as raw materials (yarns). In addition, the raw yarn and other scrap materials generated during the manufacturing stage are also reused as materials for car bumpers and other products through cooperation with collection companies. The company also offers its own brand of sustainability-conscious products, using organic cotton, recycled polyester and recycled wool, as well as biomass-derived packaging materials, and has received orders from well-known brands. The recycled paper which is kneaded with plant seeds is used for the paper material that comes with some of the socks of organic products. The company would like to give values to even casually discarded items, so six colorful flowers, including English Daisy and snapdragon, are randomly kneaded into the product, offering a playful proposal on environmental issues. It is conscious of sustainability not only in its efforts as a factory, but also in its retail business, and its ability to provide comprehensive services is a major strength.



Sustainability-conscious initiatives

Overseas business  
expansion

### Aggressive overseas expansion

The company has its own weaving factory and a broad product lineup, so expanding sales channels is the key to increasing sales. For this reason, it began its overseas expansion early (around 2006) and now has sales offices in the U.S. (L.A.), France (Paris) and China (Shanghai, Hangzhou, Shenzhen). In addition, it has been participating in overseas exhibitions since 2007 ("Première Vision" in France) and is constantly researching overseas markets. It has built a large number of fans by offering a wide variety of its original fabrics along with the stories of their production areas and factories (historic  $\approx$  sustainable). The company's track record of introducing its products to well-known brands in Europe and the U.S. has also become its selling points for expanding sales in China and Southeast Asia, creating a synergistic effect on overseas sales. It is rare to see both old and new looms in one place, as is the case at the company's factory, and many visitors from overseas come to see the factory. There has been some media coverage, and the company is regularly asked to provide materials (factory photos and interviews) to be featured on the websites of foreign brands. Although the company had to refrain from participating in overseas exhibitions during COVID-19 period, it has been expanding overseas wholesaling of its own product brands through its e-commerce site and continues to improve its brand power by acquiring trademarks overseas.



An example of overseas expansion

Mass-production-oriented approach for the only one, transformational manufacturing group, doubt the natural things, and enjoy every day of your life

## tamaki niime Co.,Ltd.

### Company information

Location 550-1, Hie Town, Nishiwaki City, Hyogo Prefecture

Phone number +81 - (0)795 - 38 - 8113

HP <https://www.niime.jp/>

Establishment 2006

Representative Sachie TAMAKI, CEO

Number of employees 90



### Company overview

The company creates works based on "Banshuori," a traditional local industry, in Nishiwaki City, Hyogo Prefecture. They manufacture and design a wide range of one-of-a-kind "ittenmono" shawls and clothing by integrating dyeing, weaving, knitting, sewing, sales and distribution. They also grow cotton without fertilizers or pesticides, and are involved in activities to expand the circle of domestic cotton production. They won the Good Design Award in 2021 as "a new way of monozukuri (craftsmanship) raises up from the production area." They advocate self-sufficient and recycling-oriented management, and are presenting their unique manufacturing to the world.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Building a management system that is close to nature and aims to pass on manufacturing to the next generation

There are many problems in the fashion and apparel industries, which fall into a negative cycle of mass production, mass consumption and mass disposal. The company sees this situation, which has become unsustainable worldwide, as a "distorted state of the earth" and believes that manufacturing that can coexist with nature is what manufacturing should be like. They renovated an old dyeing factory and used it as their headquarters, shops and workshops. They accept interns from all over the country and students in cooperation with fashion colleges and universities. The average age of employees is young in their 30s, and they focus on training up the next generation of craftsmen and designers. In the project to expand the circle of fertilizer- and pesticide-free cotton cultivation, the harvest volume was approximately 1,500 kg (results in FY2020), and they are building cooperative relationships with farmers and NPOs in and outside of the prefecture. Since FY2021, they have been involved in cotton cultivation initiatives with neighborhood children's schools and high schools, and are developing activities rooted in the local community. Spinning machine equipment has been installed this fiscal year. They started to create a system of "Made in Nishiwaki." From the next fiscal year onward, they are expected that all processes will be operated in Nishiwaki City, and they will build an environment that enables recycling within the region through manufacturing. They aim to establish a self-sufficient and recycling-oriented management system.



Growing organic cotton in Japan



Creation of added value  
through technological  
and design capabilities

Practicing new manufacturing possibilities through design and ideas in traditional industries

Surrounded by rich nature, not only design, but they also grow organic cotton, weave, knit, sew, dye, and sell, and they are fostering manufacturing that is earth-friendly, that they can think truly good and that they can continue for a long time. In the Banshuori textile production area, a textile production area, they produce "shawls" that can be worn by consumers. All of the pieces to be created are unique, "ittenmono" and are dyed in-house by using skeins of yarn. They conduct yarn-dyeing by artisans using anti-dyeing and squeezing techniques, and textile designers and weavers devise color schemes and weave structures. By using shuttle looms, dobby looms and jacquard looms, they produce rich colors and unique designs. The shawls and garments with feather-like lightness, which are created by making unique adjustments to vintage looms, have become synonymous of the company and contributed to the improvement of the image of Banshuori. They have sold their works in 15 countries all over the world and 200 stores in Japan.



Creating new possibilities in the Banshuori production area through unique manufacturing

They introduced eight circular knitting machines and six Whole Garment machines to produce one-of-a-kind cut-and-sew and knit works, and also cuts and sews in-house. They have created new possibilities for the production area with the yarn-dyeing technique of Banshuori. By integrating all processes from manufacturing to sales in-house, they shorten the time lag between planning, manufacturing and sales, and produces what is needed when it is needed. In 2015, they were selected for "THE WONDER 500" and "Hanayaka Kansai Selection 2016" by the Ministry of Economy, Trade and Industry. They received the Good Design Award in 2021 as a "new way of manufacturing that raises up from the production area."

**"Connecting Japanese sewing industry to the next generation"****Making one's life better for the artisans who make real clothes**

# Valley, Inc.

## Company information

Location	Matsui Bldg. 2-C, 1-8-5, Sakuragaoka, Kanmaki Town, Kitakatsuragi Village, Nara Prefecture
Phone number	+ 81 - (0)745 - 31 - 5156
HP	<a href="https://www.valleymode.com/">https://www.valleymode.com/</a>

Establishment	2016
Representative	Hideki TANI, CEO
Number of employees	35



## Company overview

The main business is "MY HOME ATELIER," where highly skilled sewers turn their homes into small sewing factories where they can do professional work with a single sewing machine. The company is promoting the cloud working of manufacturing in order to connect Japanese sewing technologies, which have been cultivated over decades for the future. With the vision of "connecting Japanese sewing industry to the next generation," the company brings smiles to customers' faces through the creation of clothing, and creates an environment where workers are rewarded for their efforts and can enjoy their work with a sense of fulfillment. With the mission of "bringing smiles to the faces of all people involved in our clothing production," it is actively engaged in new businesses.



## Selected fields



Development of  
new businesses  
and services

### Attendance service for making clothes even for beginners

The company offers a service that allows beginners and amateurs to create their own ideal clothing made in Japan. For those who have no experience in making clothes but are serious about it, the company provides support for what they cannot do on their own, including design drawing, pattern making, material proposals, sample production, production management and shipping agency services. Since "MY HOME ATELIER" enables small-lot production of clothing, this allows customers to take the first step into clothing production by starting with small-lot production, such as launching a brand that deals with diversity or starting a personal brand. In March 2022, Kobe Collection (Mainichi Broadcasting System, Inc.), SHOWROOM Inc. and the company collaborated on a project called "Watashi Made," in which the company supported not only designers who had been already running brands, but also students, drivers, idols and others in making clothes for the first time. In September 2022, the designs were presented on the runway of the Kobe Collection, and pre-orders were placed through pop-up stores in department stores, online stores and live commerce, with total sales of over 3 million yen. The company will continue to plan pop-up cards in department stores and various other projects to increase sales.



A project undertaken in partnership with  
three companies, Watashi Made



With the mission of "my socks, my style," Okamoto corporation focuses on improving socks to meet our consumers needs

## Okamoto Corporation

### Company information

Location	150-1, Otsuka, Kouryou Town, Kitakatsura Village, Nara Prefecture
Phone number	+ 81 - (0)6- 6539 - 1551
HP	<a href="https://www.okamotogroup.com/">https://www.okamotogroup.com/</a>

Establishment	1948
Representative	Ryutaro OKAMOTO, CEO
Number of employees	514



### Company overview

Since its establishment, the company has been sincerely committed to manufacturing while it deepens its own research and development with consumer satisfaction as its top priority. As a manufacturer specializing in legwear particularly socks, for all generations and people regardless of their age or gender, the company plans, develops, manufactures and wholesales a wide variety of legwear. For the vision of "To become a marketing-focused legwear manufacturer serving the international marketplace," the company continues to take on the challenge of change.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Revitalizing the sock market with products that address the problem of "Liner socks slip off"

Consumers and the industry have long been aware that "liner socks," which are short socks that cannot be seen from shoes, are "easy to slip off." The product that addresses this concern, "KOKOPITA - without slipping off," has sold more than 50 million pairs in total (based on shipments from January, 2018 to December, 2021) and received the 2019 Frontier Award for Consumer Science.

#### 1 Non-slip structure that responds to the "slipping"

The study was based on the shoes manufacturing process and focused on the "frictional force generated between the shoes, socks and feet." After repeated research on shoes, feet movement and the elasticity of materials, the company developed the "C-shaped gripper" (Patent No. 6449036), a new anti-slip structure for the inner part of the heel. Since the ankle flexes vertically and horizontally (externally and internally) during walking, the company devised a non-slip shape that suppresses both vertical and horizontal expansion and contraction. It realized such products as will respond to concerns by having the mounting location cross above the calcaneal ridge of the calcaneus (top of heel bone), with the lower end positioned below the height of the calcaneal ridge.

#### 2 Visual development that communicates "keep liner socks from slipping off" at a glance

The company developed the "sock puller" visual (Trademark Registration No. 6154125) as a measure to break the consumers' stereotype that "liner socks are easy to slip off" and their disbelief that "they can really be slipped off."

The company worked to communicate the benefits of its products to consumers in an easy-to-understand manner by consistently promoting them not only through product packaging and in-store promotional materials, but also through TV commercials and media coverage.



Non-slip structure to address the problem of "slipping off" and visual development to convey "keep liner socks from slipping off" at a glance



It has been 18 years since handmade socks were developed using "rice bran," which was loved and consumed as a beauty item from the ancient times.

## Suzuki Kutsushita Co.,Ltd

### Company information

Location 23-1, Oyanagi, Miyake Town, Shiki Village, Nara Prefecture

Phone number + 81 - (0)745 - 44 - 0132

HP <https://www.suzuki-socks.co.jp/>

Establishment 1958

Representative Kazuo SUZUKI, President

Number of employees 39



### Company overview

The company was founded in 1958, starting with the production of children's socks. Currently, the company manufactures soccer stockings for major sports manufacturers on an OEM basis, and in the past, has also worked on stockings for the Japanese national team. In addition, it focuses on the production and direct sales of socks, underwear, gloves and other products using rice bran fiber, which it has been developing by hand for the past 18 years. An information store will open in the spring of 2023. The company would like to be the one that discusses dreams, and is developing products as it pursues its dream.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Reusing rice bran that used to be thrown away.

Rice bran fiber created from the idea of agriculture × socks

The company's President worked at a factory founded by his father after graduating from university, and tried to propose yarn trading companies to make yarn from rice bran, but he gave up his idea when they did not take him up on the idea. Since he was unable to forget that feeling, 18 years ago, he began developing the product by boiling socks and rice bran in a pot and making it by hand. Rice bran fiber is made by blending an ingredient and oil extracted from rice bran with rayon. Rayon is an environmentally friendly fiber made from recycled wood chips, and rice bran is an environmentally friendly material made from recycled waste rice bran. They are materials which will not disappear as long as rice is produced that are friendly to the future.

- It contributes to the recycling of about 900 kg of rice bran per year. (From a recycling perspective)
- The amount of rice bran needed to make one pair of socks is roughly equivalent to the amount of rice bran produced to make one rice ball.

As for "development and verification from textiles," the company generally develops in cooperation with spinning companies and makes verification on its own. There are a few companies in rare cases that have their own materials, but they are all commissioned by spinning companies. Since there had been no precedents for companies to develop handmade with socks and rice bran in a pot, the company has made hypotheses about the characteristics of fibers, and has verified them one by one over time.

"Characteristics of materials and yarns" moisture retention, UV cut, antistatic nature, fabric antioxidant, deodorant, (all rice bran materials), antibacterial and deodorant (limited to spring/ summer materials)

"Material safety" certified by OEKO-TEX® (international standard) Class 1, baby-safe class and recommended by the Japan Atopic Dermatitis Patients Association



The one and only "rice bran fiber" developed based on our own experience from 50 years ago



Creation of added value  
through technological  
and design capabilities

Deodorant stockings for cabin attendants which was thought up by an experienced cabin attendant

The company's "Flight stockings," pantyhose were developed based on the experience of the experienced cabin attendant. In addition to the function of the pantyhose, the company also focused on the effective use of materials. A "message card with a fly-out picture book" was also developed for cabin attendants to use in the cabin based on an idea that only the cabin attendants could come up with. The feature is the finish where happiness ripples through the air. Mothers who boarded with their babies are energetic at departure, but all are limp at disembarkation. The mother seemed to be tired because she felt she was the only one to care for the baby. There are goods to freshen up babies on board, but they are often occupied, so this can be used in such cases. Since it is used in-flight, it also features a finish that can be created without scissors. It was born from the cabin attendants' idea that babies respond to things that move. If the baby is happy, the mother and the cabin attendants are happy as well. The joy ripples through the pantyhose. Another use is to provide English/ Japanese interpretation message cards for overseas visitors to communicate during their stay in Japan. Happiness is created through communication between the cabin attendants and passengers in the cabin and during their stay. As for the pantyhose function, cotton is woven into the soles and toes to improve perspiration absorption and with deodorant processing throughout the stockings, this product solves the problem of sweat and smell that has been a problem for Cabin Attendants. This is a proven product that has been repeatedly monitored by cabin attendants at work.



"Flight Stockings," deodorant stockings for cabin attendants designed by an experienced cabin attendant

**"Socks change lives"**

Aiming to contribute to the happiness of each individual and the local community through manufacturing

**NISHIGAKI SOCKS CO.,LTD****Company information**

Location 61, Ojiotani, Yamatotakada City, Nara Prefecture

Phone number + 81 - (0)745 - 52 - 0088

HP <https://www.nishikutu.co.jp/>

Establishment 1986

Representative Kazutoshi NISHIGAKI, CEO

Number of employees 38

**Company overview**

The company has been in business for 34 years in the local socks industry. It manufactures and sells high-function socks and supporters on an OEM/ ODM basis using its proprietary technology based on intellectual properties of 5 patents, 19 designs, 28 trademarks and 3 foreign patents. In order to deliver DtoC sales, the company established Econoleg Inc. The company sells its "Econoleg" brand for everyday life, "Socks Labo" to raise performance in sports, and "Dr. Ashisapo", a medical device with step compression under Type 3 medical device manufacturing and sales approval, through the Internet, newspapers, radio, catalogs and direct sales outlets.

**Selected fields**

Creation of added value  
through technological  
and design capabilities

1) Fatigue-free socks®, 2) Running socks with vertical foot taping, 3) Socks developed with the rugby club in Kyoto University, 4) Socks to correct flat feet

1 The company met with Osaka Chaos Co.,Ltd. (18 companies), a group of companies in the Osaka area, and began improving and developing conventional socks with a structure that prevents fatigue for people who use safety shoes and who work standing up. We achieved completion in September 2018, after two years of several samples and on-site monitoring. The "Fatigue-Free Socks®" demanded by craftsmen at local factories, including "Econo-Leg," which was established to plan and operate by women, is a product of strong solidarity that transcends industries and regions.

2 The joint development started in September of 2018 by asking the Department of Design, Faculty of Literature and Arts at Kinki University, where students learn everything from planning to design, and we planned and designed socks with patented vertical arch technology with a new sense of style. The most important feature of the socks is the unique vertical foot taping that complements the formation of the foot arch and assists the function of weakened foot muscles.

3 What the rugby team members in Kyoto University wanted was to integrate shoes, feet and socks. From the request that they wanted socks that would not slip in their shoes, we started development with the rugby club of Kyoto University in August of 2021.

4 The socks help and properly support both the longitudinal and transverse arches, which are the root of the cause of the problem. The vertical arch is supported by two strong taping knitting processes on the sole of the foot and a taping knitting process that supports the arch of the sole of the foot. Strong taping weave process supports the horizontal arch to prevent the root of the toes (feet) from spreading.



Tireless socks ® (top)  
Running socks,  
"AMENOKAK" (below)



Socks developed with  
rugby club of Kyoto  
University



Corrective socks  
for flatfoot

Change your day with socks, change the value with socks

Enriching the lives of consumers and makers by increasing the value of socks

# Knitwin Co., Ltd.



## Company information

Location 195-7, Kido, Katsuragi City, Nara Prefecture

Phone number + 81 - (0)745 - 48 - 4381

HP <https://knitwin.com/>

Establishment 1950

Representative Isato NISHIGUCHI, CEO

Number of employees 60



## Company overview

With the mission of "making socks that change your day," the company produces casual socks made of natural materials and widely distributes them domestically and internationally under its own brands of "NISHIGUCHI KUTSUSHITA," "hakne" and "memeri."

In the world full of things, the company continues to create products that make people feel like they are going to do their best today the moment they put them on, thereby the company changes the quality and values of the lives of consumers and makers sides.



## Selected fields



Creation of added value  
through technological  
and design capabilities

### Linen ribbed socks that can be knitted only by old machines

The company's main business is the production of casual socks made of natural materials. Among these, linen has a cool texture and dries quickly, thus it makes a perfect material for summer. However, because linen is made from hemp stalks, the yarn is uneven and knotty, which makes it impossible to knit on modern knitting machines. Yarn breakage and skipped knitting make it difficult to produce according to standards. There are two types of knitting machines: the newest knitting machines and the old machines commonly known. The latest knitting machines are controlled through computers, and patterns and fabric data are created on the computer and imported to the machine via USB for production. The old machines require to be done all by hands. It is like the difference between an automatic transmission and a manual transmission in a car. The company has a large number of old machines manufactured around the 1980s, and although they require advanced technology, fine adjustments can be made by shaving and heaping parts. By using this technology and old machines, the company is able to produce linen ribbed socks, the main summer product number for its "NISHIGUCHI KUTSUSHITA" brand. This technological capability and design have been recognized in the utilization of local resources, in the management confirmation plan, and been selected as one of the 300 of small and medium-sized enterprises and small businesses that flaps their wings in 2021. Currently, more than 15,000 pairs are shipped per year domestically and internationally, and 5,000 pairs are manufactured each year on an OEM basis. It has become widely accepted that linen socks are the socks of summer.



High technical skill makes it possible to knit  
linen yarns that are uneven and knotty.



Development of  
new businesses  
and services

### Developing NISHIGUCHI KUTSUSHITA, a standard sock brand made of high-quality natural materials

The socks industry has become a declining industry, and 90% of socks in Japan are now imported from overseas. Since the company thought that there would be no possibility for the future to compete in prices at overseas through OEM production, it launched the "NISHIGUCHI KUTSUSHITA" brand in 2017, a standard sock brand that lets customers feel the comfort of socks the moment they put them in addition to producing socks using natural materials, which is one of the company's strengths. There had been no standard brands emphasizing the quality and solidity of factory brands, as almost all of the socks were either price-oriented or designed as fashion accessories in the high-value-added segment. Therefore, based on the catchphrase "making your day extraordinary," the brand was developed by using natural materials with high-quality, through knitting methods that make the most of these materials and as a standard design that is not bound by time. The intrinsic brand value of "NISHIGUCHI KUTSUSHITA" has reached retail buyers and consumers alike, and the brand is sold in approximately 43 prefectures throughout Japan and is loved by many people. Today, its sister brands of "hakne" and "memeri" together account for 50% of the company's sales, and its overall sales have grown by about 1.7 times compared to those in 2012. The company has created a rewarding work environment by increasing the number of employees and salaries.



Socks made of natural materials with high  
quality based on the concept of  
"making your day extraordinary"



Overseas business  
expansion

With strong concepts and strong products, the company will be well-received in overseas markets

Since the population of Japan is expected to be less than 100 million by 2050, the company needs to establish its brand based on manufacturing that leverages its strengths in order to be recognized not only in the domestic market but also in overseas markets. The brand concept is especially important in overseas markets, and it is necessary to consistently communicate throughout the product what the brand would like to do. "NISHIGUCHI KUTSUSHITA" debuted at an exhibition in Paris in September of 2019 under the concept of something that makes your day better; "making your day extraordinary." The company then exhibited again in January of 2020, and the concept of both NISHIGUCHI KUTSUSHITA and products made from natural materials received high acclaim. The COVID-19 also caused the cancellation of overseas exhibitions, but the concept of "NISHIGUCHI KUTSUSHITA" reached many buyers through the website and social networking sites. Currently, the company does business with about 200 overseas stores in 30 countries, and 50% of "NISHIGUCHI KUTSUSHITA" sales come from overseas. From July of 2022, the company exhibited in Berlin, New York and London, and since January of 2023, it has continued to take on the challenge of Paris, New York, Florence, Berlin and London. It was selected as one of the 300 small and medium-sized enterprises (SMEs) that would be ready to take off in 2021.



**"NISHIGUCHI KUTSUSHITA" sold in 200 stores  
in about 30 countries**

SPA for custom-made curtains that handles everything from fabric planning and design to sewing, sales and installation in-house

## INTERIX CO.,LTD.

### Company information

Location 174-1, Sato, Wakayama City, Wakayama Prefecture  
Phone number +81 - (0)73 - 462 - 7724  
HP <https://www.interix.co.jp/>

Establishment 1990  
Representative Akito KIMURA, CEO  
Number of employees 345



### Company overview

The company was founded in 1990 as a sewing subcontract factory for manufacturers. The company currently operates 14 directly managed stores nationwide, as well as franchisees, wholesalers and OEM sales for manufacturers. Its sewing factory in Wakayama is the one specializing in custom-made curtains with the largest capacity in Japan. Since its establishment, the company has insisted on selling its products at the "10,000 yen per window" price and has grown rapidly as the top SPA in the industry. The company provides customers with "high sense, high quality and low price" products by selling custom-made curtains at the "flat price of 10,000 yen per window" in an unique and easy-to-understand manner.



### Selected fields



#### Digitalization

#### Visualization of real-time production status and improvement of efficiency/ quality by introducing BI tools

Although barcodes (QR codes) had been used in factories for a long time to capture manufacturing process data as history, production efficiency and other items could only be determined after the work was completed and tabulated by the sewing management system and there had been limited personnel who could check the data. Thus, the data had not been effectively utilized. Therefore, BI tools and 25 large digital signage systems were installed in the factory. By linking the company's sewing management system with the BI tool, a "process visualization" system was established to display the latest work volume and work efficiency of each work process on signage as well as the remaining work volume for the day and any defects that occurred. This allowed all staff in the factory to visually check the current status at a glance. The company made work process improvements, including stabilizing quality by means of: (1) appropriately assigning additional personnel to processes that were behind schedule based on work progress data to be updated on a real-time basis, (2) displaying data on fabrics that were defective or complained of on signage to share information and alert all staff members, and (3) ensuring that persons in charge of each process knows his/ her own workload and the amount of work remaining. The creation of a series of systems using this BI tools and signage resulted in 11.2% increase in work efficiency, 26.1% reduction in the raw material loss rate, and 12.5% reduction in the claims rate, which achieved a significant increase in productivity.



BI tools and digital signage in the factory



#### Development of new businesses and services

#### Business collaboration between custom-made curtain stores using IT and other industries

There is a wide range of products for custom-made curtains, and it is difficult to sell them due to the need for specialized knowledge. It takes a long period of training to become a full-fledged salesperson, and a chronic shortage of human resources has become an issue. To solve this problem, the company developed and deployed an unmanned order-made curtain sales system in retail stores, which allows order-made curtains to be sold without sales staff serving customers in the stores. The company attached QR codes to all curtain samples displayed in its stores, and when the QR codes are scanned with a smartphone, the images, product features and prices are displayed, as well as customers can purchase the products directly from the page. In addition, special devices to serve customers remotely were installed with curtain samples so that curtain advisors could directly serve end-users remotely on the spot if customers had any questions. The company has developed a service that can complete the sales of its custom-made curtains and follow-up services even for businesses that "do not have curtain sales staff in their stores" or "do not have expertise in curtains." This service was adopted by YAMADA DENKI CO., LTD., a chain of electronics retail stores, and it was realized that "electronics retail stores" and "order-made curtain shops" formed a cross-industrial alliance, creating unmanned order-made curtain stores within 53 Yamada Denki stores nationwide (as of October 2022). This service has been introduced by 104 stores of 12 companies and is still expanding. The company has succeeded in expanding its market by developing sales channels to different industries, and the service has grown to become a new pillar of sales for the company as a whole.



Unmanned curtain store and remote customer service in Yamada Denki stores



Fine textures; THE ESSENCE OF LUXURY

Amazing and delightful to the touch are packed into the fabrics of AGIRLS

**A-GIRL'S CO.,LTD.****Company information**

Location 3-2, Mikazura, Wakayama City, Wakayama Prefecture

Phone number + 81 - (0)73 - 444 - 1567

HP <http://www.agirls.co.jp>

Establishment 1972

Representative Tomohiro YAMASHITA, CEO

Number of employees 39

**Company overview**

The company is a textile manufacturer that develops and sells cut-and-sew knitted fabrics. The company supplies fabrics to both domestic and international brands, and operates more than 250 knitting machines owned by YAMAYO TEXTILE CO., LTD., a group company that has been in business for over 90 years. They also collaborate with dyeing and sewing factories in the neighborhood for the purpose of manufacturing and selling products that are made in Wakayama.

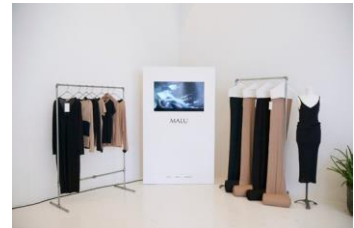
As a front runner in the Wakayama knitwear industry, the company is currently planning events and overseas exhibitions leading the way for the next generation of knitters into the global market.

**Selected fields**

Creation of added value  
through technological and  
design capabilities

**Started producing and selling seamless knitwear "MALU" which is carefully crafted with slow knitting vintage knitting machines that only remain in Wakayama**

Knitting began in Wakayama in 1909 with the import of five circular knitting machines made in Switzerland. Circular knitting machines have a structure in which round cylinders are lined with needles and rotate to knit fabrics. The company's brand "MALU," which was developed as a product that utilizes the knits natural stretch, provides the ultimate luxurious and comfortable feel to the wearer. MALU takes rare, vintage body width knitting machines that have been in operation for a hundred years. Knitting on these vintage machines puts very little stress on the yarns, allowing for the characteristics of the raw materials to come through. One of MALU's most popular products is made of 100% cashmere, which can be worn throughout the year. Although the yarn is delicate and easy to break, by designing cashmere from the yarn stage, the company has developed products that can be washed even at home. MALU, which is made to the body width produces very little waste as only a few parts need to be cut and sewn. The company strives to create high quality products, while at the same time providing a sustainable product.



MALU at brand exhibition



New businesses  
and services

**Eight companies producing circular knitwear in Wakayama held a pop-up event in New York City**

The company also operates "Textile Mirai Juku," which brings together the manufacturers who lead the next generation in textile making. In particular, they preside over activities that unite the young managers of knitting mills. The leaders of the next generation are exchanging new perspectives, learning from each other, and seeking to create manufacturing and sales systems at each company. In September 2022, the company held a pop-up event, "WAKAYAMA TERRY" in New York with members representing the next generation who will take charge of Wakayama. The company shared its accumulated overseas business experience with young managers of seven Wakayama knitwear companies in the same production area to start providing support to encourage expansion overseas. At the New York event, the venue was opened not only to buyers and designers, but also to the general public for the purpose of promoting Wakayama knitwear in a new BtoB and BtoC format. In addition, at the event, each exhibitor communicated its techniques and craftsmanship directly to consumers by determining the selling price and the number of pieces to be produced and sold. By experiencing actual sales, each company was able to learn the know-hows of direct sales in addition to evaluating customer's feedback to the materials. Customers who purchased a product went home with a gift of Wakayama soy sauce, a product that originated in Wakayama, linking the event to the PR of the Wakayama prefecture.

Event of WAKAYAMA TERRY  
in New York City





Overseas business  
expansion

## A-GIRL'S is the first circular knitwear company in Wakayama to win the Grand Prize at the Paris PV Awards

In 2004, the company exhibited at "Premiere Vision," the world's most prestigious international trade fair held twice a year in Paris, and luxury brands such as "Chanel," "Louis Vuitton" and "Prada" constantly adopt its materials. In 2016, the company's creative director was the first Japanese to be selected as one of the six most influential designers in fashion by "Premiere Vision." In the following year of 2017, it won the Grand Prize at the Premiere Vision Awards. This has made the high level of Wakayama's knitting technology recognized around the world. Although overseas exhibitions and businesses were put on halt during the COVID-19 pandemic, the company was able to meet the requirements for quality and delivery by holding regular remote meetings with clients leading to great trust of the company. It further increased its sales performance and achieved the highest sales amount of fabric in its history of more than 800 million yen in FY2021. In FY2023, it plans to further accelerate overseas exports and actively participate in overseas exhibitions. In addition to exporting fabrics, it starts a full-scale approach to Japanese products made from its own materials (OEM). In order to remain a sustainable company many years into the future, the company believes it will be necessary to communicate the strengths of the products that are being made, as well as boosting exporting, by promoting the value in products that are made in Japan.



Ceremony of PV Award Grand Prix

By utilizing the company's proprietary materials and knitting technologies, it brings smiles to the world with its one-of-a-kind and sustainable high-gauge knit fabrics.

## KANEMASA KNITTING Co.,Ltd.

### Company information

Location 129, Kozaika, Wakayama City, Wakayama Prefecture

Phone number + 81 - (0)73 - 423 - 1295

HP <https://kanemasa-inc.jp/>

Establishment 1964

Representative KAZUKI HYAKKENDANI, CEO

Number of employees 14



### Company overview

The company was founded in Wakayama City in 1964 as a manufacturer of knit fabrics. It provides the market with unique, high-quality, high-value-added products by utilizing its knitting technology, which is a local resource, and its proprietary knitting machines. The company realized high-density knitting by utilizing custom-made 44G and 46G Jacquard knitting machines, which are not owned by other companies, and tightening the knit of the fabric to the maximum limit.



### Selected fields



Creation of added value  
through technological  
and design capabilities

The one and only high-gauge knit fabric that combines the luxury of woven fabric with the comfort of knitted fabric thanks to its elasticity and other properties

As the company utilizes 44G high-gauge computerized Jacquard knitting machine and 46G super high-gauge Jacquard knitting machine, which are not owned by other companies, it realized high density of the fabric by stuffing the degree to the limit. It developed the first knit fabric that has both the luxurious weave pattern (jacquard knit) and the comfort of knitwear, which is the original strength of knitwear such as elasticity and elasticity recovery.

Furthermore, in the dyeing and finishing processes that are outsourced, a special resin is used unlike the knit resin process used in the past, and by adding a texture with firmness and crispness, the company was able to complete a knit fabric that has never been seen before.

The company entered the market of luxury outerwear with a higher rank, which is currently dominated by woven fabrics, and it offers knit fabric products with high added values under the brand name of "Marudeorie" (meaning like "woven fabric") to the market.

The company will be even more particular about materials in the future, and will use high-quality, rare and valuable extra-long staple cotton, "Suvin Recycled Organic" (SRO) procured by the company itself. And as it fully makes use of "ECONYL", sustainable yarns provided by Aquafil Company in Italy, it plans to exhibit at domestic and international trade shows and actively propose sustainability initiatives as well.



Coat utilizing the company's knit fabric

(Note) "ECONYL" is a valuable material made from 100% recycled nylon from discarded fishing nets and other materials. It was developed by Aquafil Company, which became the first company in Japan to conclude a license agreement to develop and use the knit fabrics.

The one and only fabric knitted by our own modified knitting machineInnovation in textile products created by "Balancircular"

## MARUWA KNIT CO.,LTD.



### Company information

Location	1164, Wada, Wakayama City, Wakayama Prefecture	Establishment	1934
Phone number	+ 81 - (0)73 - 471 - 1231	Representative	Yusaku TSUJI, CEO
HP	<a href="http://maruwa-knit.co.jp">http://maruwa-knit.co.jp</a>	Number of employees	41



### Company overview

The company was founded in 1934 by the great-grandfather of the current CEO. With the technology cultivated in Wakayama, a production center of circular knitting for four generations, the company has taken on the challenge of producing fabrics, starting with underwear, then for a variety of fields such as apparel fabrics for outerwear and fabrics for industrial materials. In particular, "Balancircular," the one-of-a-kind knitting fabric created by independently modifying Showa-era knitting machines, is a different knitting method from existing knit and woven fabrics, and the company is working to bring innovation to fashion apparel and a variety of other textile products.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Reduction of sample waste through reuse sales of unwanted knitted fabrics and creation of virtual samples

Since circular knitted fabrics are knitted and produced at the company's own factory, there are inevitably adjustment warps when it adjusts machines and accidental warps in mass production. Since these unorganized raw textiles can be reused as Wastes, the company regularly sells them to vendors and also offers them free of charge to the general public who may need them. In addition, since the company sells its fabrics after commissioning an outsourced dyeing and sorting factory to dye and finish the fabrics, some sample fabrics and accidental fabrics are disposed of as textile samples. As for this, since December of 2021, the company has renovated one of the raw fabric storage rooms on its factory premises and started selling cut fabrics to the general public and creators of western-style clothing in Wakayama Prefecture. In principle, the store is open every Thursday under the name of "Maruwa Kobo." In addition to the environmental aspect of reusing fabrics, the company is promoting the fact that Wakayama is one of the leading producers of circular knitted fabrics to the general public. At the same time, it strives local production and consumption of knitted fabrics. In addition, in September 2021, a design system, APEX-4, was introduced by a local company, SHIMA SEIKI MFG., LTD. Since virtual samples of knitted fabrics can be created from a single yarn scan, or virtual samples of knitted fabrics can be produced in different color schemes, this has led to a reduction in the number of actual fabric samples and prototypes. The introduction of virtual samples has not only improved production efficiency, but has also reduced the amount of sample materials that are no longer needed in the future.



Reuse sales and reduction of sample and other materials



Creation of added value  
through technological  
and design capabilities

### Unique knitting of fabrics by introducing used knitting machines Development of "Balancircular" and creation of added values

In 2000, the company encountered and introduced a used knitting machine that had been manufactured only from 1975 to 1984. Although the machine had an outlandish structure; "a circular knitting machine also knits warp yarns," and its structure was ingenious, the knitted fabrics produced with the machine did not have the quality to be offered to the market. In order to stabilize quality, the company reviewed the structure of the knitting machines and spent approximately two years improving each component part, thereby enhancing its proprietary technology. The improved knitting machine and the knitted fabric produced on it were named "Balancircular" to complete products. Balancircular is a "knit x knit" composition in which one warp yarn is knitted simultaneously on each of the 1,920 needles, even though it is knitted in the round. The basic appearance and its different characteristics were evaluated. Although it is knit, it does not stretch too much in the horizontal direction, and the silhouette of the final product is beautiful, lightweight, stretchy and easy to move around. The company's products are used in apparel and select stores in department stores in Japan as well as in famous European maisons overseas. In 2016, the company launched its own brand, "Bebrain" using only Balancircular knitted fabrics, which won the Grand Prix and the Minister of Economy, Trade and Industry Award at the "Japan Best Knit Selection" in the same year.

In addition, the company received a double award at the "GOOD DESIGN AWARD 2019" in 2019 for its Balancircular knitting machine and its packable jacket and pants by using the same knitted fabric. The company also received the "Grand Prize for Manufacturing Excellence of J Quality Award 2019."



Uniquely modified knitting machines  
and in-house production of warping  
machines



Development of  
new businesses  
and services

### In-house brands and innovations utilizing unique knitted fabric of "Balancircular"

In 2016, the company launched its own brand, "Bebrain," by utilizing its proprietary; "balancircular" knitting technology, which knits warp yarns as well as circular knit fabrics to develop BtoC sales channels focusing on e-commerce sales. Among them, the brand's jackets and pants have a sharp appearance which is hard to believe that they are cut and sewn, yet they have the elasticity and light weight of circular knitted fabric. By taking advantage of their wrinkle resistance, they can be carried in an A4-size pouch and can be washed at home in a washing machine using selected raw materials. They are well received by those who normally wear business suits, and can be worn as a substitute for suits, starting with business casual styles. In addition, for those who are concerned about the size of e-commerce products, fitting rooms were set up in the Tokyo sales office, and in January 2020, a showroom and fitting room of approximately 50 m<sup>2</sup> was set up in the main factory in Wakayama. The company delivered a factory tour to show the process of knitting Balancircular to visitors who came to the headquarter's showroom. Currently, the company is looking for ways to utilize the characteristics of knitted fabrics, which are lightweight, easy to move around in and machine-washable in fields other than fashion apparel, and has been challenging the field of student uniforms and other uniforms since 2020. In 2022, uniforms using Balancircular were adopted at two schools in Wakayama City through a local Wakayama school uniform manufacturer. The company still hopes to use its technological capabilities to bring innovation to products and items that were once thought to be difficult to move when they were worn or to be troublesome because they required ironing.



Apparel products with unique fabric of  
Balancircular

Somekara Amidas, "weaving out of dyeing," by YOSHIDA SENKO CO., LTD.

# YOSHIDA SENKO CO., LTD.

## Company information

Location 16, Maeda, Kishigawa Town, Kinokawa City, Wakayama Prefecture

Phone number + 81 - (0)736 - 64 - 3339

HP <http://yoshidasenko.co.jp/>

Establishment 1951

Representative Atsuo YOSHIDA, CEO

Number of employees 46



## Company overview

The company was founded in 1951 as a yarn-dyeing factory. It began dyeing cheese in 1968 and introduced an cheese dyeing plant with unmanned operation in 1992. As environmental measures, a subsidiary of Yoshida Kogyo treated wastewater to convert the boiler from heavy oil to LNG in 2007. In 2014, the company introduced a Whole Garment flat knitting machine in order to expand into the next process followed by yarn dyeing. It started product and fabric development on a flat knitting machine. Horizontal knitting machines are being added in series. In 2017, the company opened a Tokyo office.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

### Environmental measures: CO2 reduction and wastewater treatment

Dyeing factories use large amounts of energy and water, which is why the company's environmental measures are so important. The company established Yoshida Kogyo as a subsidiary for energy supply and environmental measures, and supplies steam and gas to Kishikawa Kogyo and YOSHIDA SENKO CO., LTD., which are knit fabric dyeing factories located within the company's premises, in order to treat wastewater from the two companies in a common pit. In the past, heavy oil was used as the energy source, but in 2007, the company converted to LNG, and reduced CO<sup>2</sup> emissions by 30%. The amount of water used in dyeing differs depending on the fiber, but cotton yarn, the company's main material for dyeing, is one of the most water-intensive fibers, using nearly 200 times as much water as the material to be dyed. After the large amount of wastewater is treated in-house to make it below standard values, it is discharged into rivers and eventually flows into Osaka Bay, which is regulated by the Seto Inland Sea. In order to comply with the strict regulation of the Seto Inland Sea and to operate in the agricultural area of Kishikawa, the company has been using large, high-capacity pits since its establishment, and has been operating with about 20% of the total amount to be allocated. The company is expanding its green space in 2021 to absorb more CO<sup>2</sup>, and by using treated wastewater for sprinkling water in green areas, it continues to strive to make the plant a recycling-oriented one. When an Italian apparel company came to visit the plant, it said, "There is a future here" in seeing the wastewater treatment pit, and the company's CEO tells that he will never forget that.

Wastewater treatment plant (foreground)  
and LNG tank (left)Creation of added value  
through technological  
and design capabilities

### Beyond the dyeing

The company is a yarn-dyeing factory, and based on the dyeing technology it has cultivated, it has taken the next step in the process. With yarn, products can be knitted directly on knitting machines. This is what Whole Garment knitting machines from SHIMA SEIKI MFG., LTD. are all about. The company has introduced Whole Garment knitting machines, and dyes its own yarns to form its products. The system, which allows the company to produce products as long as yarn is available, has not only enabled the company to break away from the consignment processing business, but has also made it possible to further demonstrate its appeal as a dyeing factory. As the company is able to produce small lots for exhibitions and support venture businesses, it can make products in flexible ways.

Aiming to move away from outsourced processing  
by introducing a flat knitting machine

Enjoying “根のある暮らし”™ (NENOARUKURASHI) in Omori Town, Ota City, Shimane Prefecture, within the World

Heritage of Iwami Ginzan Silver Mine, and proposing things with a “復古創新”™ (FUKKOSOSHIN) perspective

## Iwamiginzan Gungendo Corporation



### Company information

Location 183, Ha, Omori, Oda City, Shimane Prefecture

Phone number + 81 - (0)854 - 89 - 0131

HP <https://www.gungendo.co.jp/>

Establishment 1998

Representative Yukiko MINEYAMA, CEO

Number of employees 177



### Company overview

The company was started with the production and sale of small cloth goods by a husband and wife team, and was established in 1998. It has grown to have stores all over the country through its unique sales promotion activities by reading the trends of the times with its local roots. The company became a pioneer in the "lifestyle industry," which proposes ways of being and living a life. With valuing the treasures at their feet, the company utilizes scrap wood for clothing accessories and other items, and has also started re-dyeing and repair service. The company considers how to "start and end" with responsibility from yarn development to the life of the product, and aims for a sustainable society as a company from Shimane.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Engaging in a "no-throw-away lifestyle" rooted in Japanese life and culture, and gaining sympathy through its nationwide stores, books, social media and TV programs

The company is committed to the "lifestyle without discarding" practiced by founder, Tomi MATSUBA, through the “群言堂”™ (GUNGENDO)™ brand. Iwamiginzan Gungendo's main store is an old private house in the Omori Town's townscape, which has been restored with the use of scrap wood and other materials, and proposes a lifestyle rooted in the town to be enjoyed by the residents. The company has proposed "cloth bundles" and "hagi-hagi blanket stoles" made from scrap materials, and has planned "chiku-chiku brooches" that the company has asked welfare workshops to sew. The “里山パレット”™ (SATOYAMA PALETTE), which offers a wide variety of colors using flowers and grasses collected in the local woodland, is popular among all ages. In response to recent environmental issues, the company has increased the percentage to use organic cotton and dye-free wool, launched a dyeing and alteration service to encourage customers to wear their clothes with care for a long time, and switched the sewing of some products to cotton threads. The company considers a series of efforts as the "life of a thread" and sees it as the responsibility of the company that produces the product to the final "end." The company communicates its initiatives to customers through sales staff at its 31 stores nationwide, and to society through books and social networking sites (the number of IG followers has increased from approximately 2,000 in 2014 to more than 13,000 at present). In March of 2022, the life of Ms. Tomi MATSUBA was broadcasted on NHK World-Japan's "Zero Waste Life," showing her living in a 230-year-old samurai house that had been restored into a lodging facility called "Takyo Abeke" (an affiliate company), and the program was viewed approximately 113,000 times. Aiming for not "maturity," but "growth" as a company, the company is seeking a sustainable way of being as it accompanies Japanese textile companies and the local community.



Hagi-hagi blanket stole (top left)

Knitted vest of dye-free wool inlay (top right)

Example of repair at favorite consultation room (bottom)





Creation of added value  
through technological  
and design capabilities

The "SATOYAMA PALETTE" to offer a wide variety of colors through the production of high-quality original fabrics that will be used for a long time and by utilizing local resources

The company focuses on the concept of “服薬” (FUKUYAKU) from the Chinese “the Shujing,” which states that the body is well adjusted when the clothes are well dressed, and it is engaged in the production of high-quality original fabrics.

Under the concept of “comfortable to wear, comfortable to look at, and cheer up for mind,” the company focuses on natural fibers and domestic production by striving for body-friendly comfort for people of all ages, especially seniors. The company has been working with local producers to create fabrics that demonstrate the technical capabilities of Japan's textile production areas, and has been producing its flagship product, Omi's “Momihogushi Hemp,” a hemp fabric that provides a comfortable fit from the first time you wear it for 18 years since 2004 (cumulative sales of 660 million yen since 2012, when data can be collected). Most recently, the company has collaborated with a spinning company in the prefecture to develop the yarn and commercialize it. The “Workwear,” a modern version of *kappogi*, a Japanese lifestyle culture, arranged in the Gungendo style, is also a long seller, and is popular because it offers different fabrics and colors. The catchphrase, “with a quick wearing on your head, your hair is done, it's our partner,” was carried in the “be” and “I want it by my side” sections of the Asahi Newspaper's morning edition, which generated a huge response. The “SATOYAMA PALETTE” uses flowers, plants and discarded resources which were collected in the satoyama of Omori Town and adjacent areas as raw materials for dyeing. The company has come up with a name that is unique to GUNGENDO, which is rooted in the local area, and has developed a wide range of color variations that are popular among all ages. The cumulative sales of the series since 2014 are 600 million yen. The “Palette Drop T-Shirt” was recognized as The wonder 500 by the Ministry of Economy, Trade and Industry in 2015.



Omi fir hemp blouse with 川緑(KAWAMIDORI) (right)

Image of “SATOYAMA PALETTE” (upper left)  
Workwear (middle left)/ Turban (bottom left)



Development of  
new businesses  
and services

Creating an ardent fan base with the synergistic effects of “community-integrated management” that accompanies the community and “textile x tourism” through new tourism

The founder couple discovered a treasure in a depopulated former silver mine town with a population of 400 people (as of today), and started with selling small cloth goods to disseminate “We are here.” The company's unique business model, which has been referred to as a lifestyle industry for some time, is also a key factor in its success in the next generation. However, it is working under the banner of “community-integrated management” to accompany and enliven the community together. In addition, in order to create synergy effects of “textile x tourism,” the tourism business was launched as an affiliate company in July of 2019. In December of the same year, a partnership agreement was signed with the Tourism Department of the Province of Padocaré, France, for mutual tourism promotion, which is expected to have an international effect after COVID-19. The founder, Ms. Tomi MATSUBA received the Grand Prize (Prime Minister's Award) of the “2020 Furusato Zukuri Grand Award” and has been actively giving lectures, appearing in the media and writing a recent book entitled “Depopulation Revitalization” to spread the word about Omori Town and her own history. In addition, despite the COVID-19 disaster, the company held a walking museum in Omori Town from July to November of 2020, and in October of 2022, it cooperated with an event in which top chefs from Tokyo and other cities around the country demonstrated their skills. Thus, the company is working to create a flow of people to Omori Town, promote sightseeing tours around the town, increase sales at the main store of Iwamiginzan Gungendo, and create ardent fans of “GUNGENDO” through activities not limited to ordinary apparel sales promotions. The company aims to create “mature” tourism that is not overtourism, but rather a “mature” type of tourism in which visitors spend a long and enjoyable time of sightseeing around the area and enjoy shopping at the main store of Iwamiginzan Gungendo during their stay.



Tomi MATSUBA receiving the “Hometown Creation Award” (top left) / Signing with the Tourism Bureau of Paducalé Province (top right) / Photos of townspeople (middle left: 1992, bottom left: 2022)/ Iwami Ginzan Walking Museum (bottom right)

## “Sustainable Quality for Future from Kurashiki”

The company supports children's learning and healthy growth through sustainable school uniforms.

## AKASHI School Uniform Company Ltd.



## Company information

Location	1-3-44, Kojimatanokuchi, Kurashiki City, Okayama Prefecture
Phone number	+ 81 - (0) 86 - 477 - 7702
HP	<a href="https://akashi-suc.jp/">https://akashi-suc.jp/</a>

Establishment	2014
Representative	Hidefumi KAWAI, CEO
Number of employees	568 (group: 1,500)



## Company overview

Our corporate message is “The Happiness of Wearing with Friends.” As a school uniform manufacturer, we aim to support children's learning and growth while bringing them happiness. Our company has founded in 1865 and is headquartered in Kojima, Kurashiki City, Okayama Prefecture, a textile town. We manufacture and sell uniforms for over 5,000 elementary, junior high, and senior high schools nationwide. With our extensive experience and network over our history, we specialize in athletic uniforms, nursing, and care uniforms. In addition to these specialties, we are branching into disaster reduction education as part of our new business development.



## Selected fields

Sustainability  
(Environmentally-  
friendly)Development of uniforms made of 100% recycled materials from  
PET bottles collected in Japan

Under joint development with a partner spinning company, we developed “+ LEAP100 (Plus Leap 100)” uniforms made of 100% recycled materials from PET bottles collected in Japan. Each jacket uses 25.5 PET bottles of 500 ml, resulting in a 61% reduction in greenhouse gas emissions. Because it is environmentally friendly and its raw material is the familiar PET bottle, it can be used as educational material. Although recycled PET bottle materials have existed for a long time, their high cost and inferior quality compared to conventional materials have made it difficult to use 100% of them in products. The key to solving these issues was a system for the domestic collection of PET bottles with high purity and advanced technologies for cleaning PET bottles. This technology is promoted by a major beverage manufacturer that is used for the horizontal recycling of plastic bottles and is applied to textiles. Using advanced technology to create recycled PET bottle material that is as clean as unused and unprocessed PET bottle material, the company has succeeded in minimizing costs and adding various functions such as ultra-super water repellency, lightweight, 360° stretch, and shower wash, as it meets the criteria essential for uniforms such as durability and dye repeatability. As an upcycled material that is not only environmentally friendly but also earth-, children- and parent-friendly, with functions that enhance comfort and ease of care, its adoption is increasing nationwide. As of October 2022, 8 schools (with a total of 960 students per school year) have decided to adopt it.

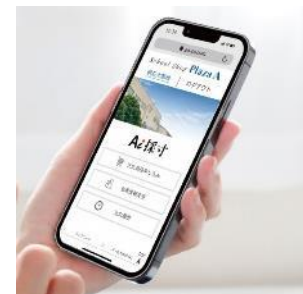


Digitalization

Improved efficiency by introducing “Ai Measurements,” a smartphone-based measuring  
and ordering system

We developed the “Ai Measurements” system, which allows customers to take and order uniforms and physical education uniforms via smartphone and succeeded in increasing efficiency by reducing the time and effort required to take measurements and place orders for new students, as well as the workload from order receipt to product shipment. Previously, employees would visit schools or nearby locations to take measurements and then prepare samples based on measurements. To take measures, students and their parents need to visit the venue and complete an application form including name, address, and contact details. It was common for customers to pay in cash on the same day or at a later date after the size, quantity, and other details of the ordered items were determined at a face-to-face measurement. On the other hand, “Ai Measurements” have two systems: “School Measurements” and “Home Measurements.” In the “School Measurements” service, orders are completed via smartphone at the measurement venue. Customers enter basic information and order quantity on the dedicated website at least one day before the measurement. On the measurement day, they are requested to enter the sizes determined in in-person measurements. Three payment options are available: credit card, convenience store payment, and delivery cash.

On the other hand, in the “home measurements” program, a measuring tape is sent to the home. Students and their parents take their measurements by following the on-screen measurement instructions, and by entering the measurements on the screen, Ai will determine the appropriate size. The system allows the entire process, from measurements to ordering to be completed online. The schools highly appreciated the program, as it eliminated the need to travel to the venue, avoided three congestion, and significantly reduced personnel and time. As of October 2022, 319 schools have adopted the system and will continue to introduce it in the future.



Ai Measurements



Creation of added value  
through technological  
and design capabilities

### "Nobi MAX" reduces garment pressure and improves comfort

We developed our own "Nobi MAX" technology, which adds power netting to the back of the jacket's shoulders to enhance wearing comfort. These uniforms are used in school uniforms throughout Japan, particularly in junior high and high schools. The uniforms produced by our company are highly acclaimed due to the accurate understanding of the local community characteristics and educational field needs, which in turn applied these needs using advanced technology. The "Nobi MAX" was also initially developed based on requests from the academic field. Students often lean forward in their daily routines, such as facing their desks during class or riding their bicycles to and from school. But, their clothes don't move in their body, leading to fabric pulling tightly. As per our verification of the jacket's comfort in an actual garment pressure test, it turned out that the pressure was applied to the back part of the shoulders when the students were in a forward-leaning posture. The "Nobi MAX" was born from the desire to provide uniforms that reduce the burden on the growing bodies of the students and allow them to move more efficiently and comfortably. Flexible power netting attached to body parts and its outstanding stretch reduce students' body pressure during movement. This technology has obtained a utility model patent and is unique to us. Teachers, students, and parents received the program very well; as of October 2022, it was adopted by 272 schools.



Nobi Max



Development of  
new businesses  
and services

### Promoting "disaster reduction education" to protect one's own life and save someone else's

Japan is one of the world's top disaster-prone countries with potential risk at any time and place. With the belief that early disaster reduction education is essential to act appropriately during a disaster, we launched an industry-academia collaborative project in 2017, utilizing the knowledge gained by Kobe Gakuin University, the only university in Japan with a social disaster reduction department, and our nationwide network of schools cultivated through the production of school uniforms. In preparation for increasingly severe and diverse disasters, our project focuses on developing and promoting disaster reduction learning materials and stockpiling products to enhance children's disaster reduction capabilities, protect their own lives and save someone else's. Disaster reduction materials, including books tailored to different age groups, are available for elementary, junior high, and high school students. The materials are highly evaluated for being easy to teach in a proactive, interactive way, and they also cover essential survival skills like self-help, mutual aid, public assistance, and disaster preparedness. In addition, fun and familiar activities like quizzes, backgammon, and KARUTA are included in workshop materials that teach about disasters chronologically. We also offer foldable and storable disaster reduction helmets and single-package emergency stockpiles, including preserved water and food for safety during emergency evacuations. We are also participating as a supporting member of the Society for disaster reduction education and hope to contribute to promoting it at schools and homes.



Business on disaster reduction education



Overseas business  
expansion

### Support for education in Cambodia to expand production bases overseas and improve children's literacy rate

Although the domestic market is the core of the company's business due to the nature of the products it handles, we are systematically expanding our overseas sewing bases, mainly in terms of production in Vietnam, Myanmar, Indonesia, and China. School uniforms are primarily produced in small lots of a wide variety of products, and the number of orders does not increase dramatically in a short period. However, due to its unique characteristics not found in other textile products, we can place orders with mills in scheduled quantities on a stable basis. To plan for the upcoming year, we surveyed how many new students would enroll. Using this data, we created an annual production plan. And we request each factory to provide quantities based on the agenda. The factory can forecast orders in advance and ensure a smooth flow of work to the production line, thereby reducing uncertainty caused by increases or decreases in the number of orders and contributing to the solid operation of the factory. On the other hand, the company's overseas sewing bases are also essential partners in ensuring its products reach consumers as the domestic sewing industry shrinks due to labor shortages and a lack of successors. We strive to provide the sound operation of our overseas factories and domestic plants. In the area of international cooperation, we donated a portion of the proceeds to the NGO Education and Research Center (NERC), which is engaged in support activities to improve the literacy rate of children in Cambodia to increase opportunities for children to come into contact with the written word, we are also working to deliver picture books produced in Japanese and English as well as Khmer, the official language of Cambodia, to the local communities. As we are involved in education, it also contributes to improving the educational standards of the international community.



Cambodia education support

Making jeans with a story behind the sewing technology cultivated over half a century

## UCHIDA HOUSEI

### Company information

Location 450, Niinoyamagata, Tsuyama City, Okayama Prefecture

Phone number + 81 - (0)868 - 36 - 2861

HP <https://uchida-factory.co.jp/>

Establishment 1982

Representative Masayuki UCHIDA, CEO

Number of employees 32



### Company overview

The company has been sewing denim products, mainly jeans, for more than half a century as a subcontracted sewing factory since its establishment in 1969. In 2016, it launched the factory brand of "UCHIDA HOUSEI." The company handles everything from product planning to sewing and promotion in-house, and offers products and services that delight consumers as it follows the sewing techniques found in the specifications of vintage jeans.



### Selected fields



Creation of added value  
through technological  
and design capabilities

#### Development of jeans using original denim fabric of our own design

An ordinary denim fabric consists of an indigo-dyed warp and an undyed white weft, and it is dyed with indigo using a process called rope-dyeing. In this method, the core of the yarn is not dyed but left white (core white), so when the yarn is worn and the color fades, the indigo on the warp surface peels off to expose the white inside. For the company's Rainbow Denim project, in collaboration with local companies, the warps are pre-dyed into colorful yarns before being indigo-dyed, and the yarns are then rope-dyed into indigo. Therefore, rainbow jeans made from this fabric look like ordinary jeans at first glance, but as they are kept being worn, colorful threads such as red, green and yellow appear between the core white threads, and they change over time into seven brightly-colored jeans. In March of 2022, the company challenged crowdfunding for the sales of the Rainbow Jeans (<https://www.makuake.com/project/uchidahousei-01/>), and the response was overwhelming, with more than 1,800 people supporting the project for more than 50 million yen in a 60-day period. According to the company's research, this was the best-ever record for crowdfunding in the denim/ jeans category in Japan at that time. Creating and offering products that were previously unavailable in the world have led to higher sales for the company as well as seizing the needs of consumers.



Rainbow Jeans (aged sample)



Denim dyed with Ihara's natural water for denim lovers around the world

# KUROKI CO., LTD.

## Company information

Location 5560 Nishiebara Town, Ibara City, Okayama Prefecture

Phone number + 81 - (0)866 - 63 - 1234

HP <http://www.denim-kuroki.co.jp/>

Establishment 1950

Representative Tatsushi KUROKI, CEO

Number of employees 72



## Company overview

In 1950, the company was renamed Kuroki Shokufu and began manufacturing and selling cotton fabrics for clothing and industrial materials. In response to changes in the times and business conditions, the company successively added weaving machines. In 1970, it started manufacturing and selling denim for jeans on a full-scale basis. Currently, the company is equipped with innovative facilities to meet the needs of the times, such as dyeing machines for yarn-dyed ropes, sizing machines, ultra-automatic weaving machines, sanforizing machines, and heat setters, and continues to make daily efforts to strengthen its quick response capabilities and to focus on further development of new products and creation of new technologies.

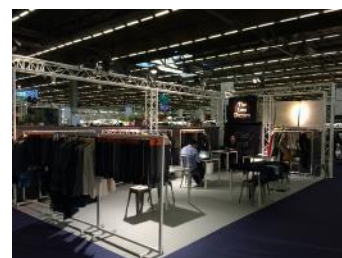


## Selected fields

Overseas business  
expansion

### Active participation in trade shows

The company has been exhibiting at the "Première Vision" for 17 years since 2006 as well as at the "Denim Première Vision" and "Kingpins Show" twice a year, and actively participates in other exhibitions, also, The company has been recognized for (1) its European showroom in Milan for smooth communication with foreign brands, (2) its ability to produce a wide variety of high-quality fabrics by spinning, dyeing, weaving and processing fabrics in Japan, and (3) its ability to sell fabrics at inventory risk so that the company can immediately respond to a wide variety of orders. Therefore, in recent years, approximately 60-70% of annual sales have been to overseas customers. In fabric making, the clear indigo and black colors made with natural water from Ibara City and premium fabrics on shuttle looms have also been highly acclaimed. The company will quickly grasp the needs of overseas brands, develop new products such as organic materials, and promote energy conservation and higher efficiency by upgrading protective and rapier weaving machines. At the same time, it is also making efforts to reduce its impact on the environment through solar power generation, sewage treatment facilities and other measures. The company is also working on acquiring sustainable certification, and is focusing on continuing transactions, expanding sales channels, and making "KUROKI" the world's favorite denim fabric brand, as its slogan shows: "Denim dyed with Ibara's natural water for denim lovers around the world."



"Première Vision"

Through textiles to enrich the hearts and minds of those who wear them  
Providing high quality products and delivering excitement to people around the world

# SHOWA CO., LTD.



## Company information

Location 2006, Kojimahieda Town, Kurashiki City, Okayama Prefecture

Phone number + 81 - (0)86 - 472 - 8181

H P [www.showatex.co.jp](http://www.showatex.co.jp)

Establishment 1941

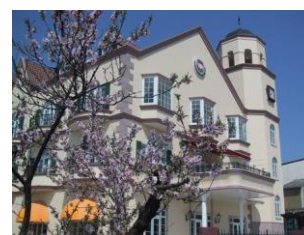
Representative Shinichiro KATAYAMA, CEO

Number of employees 31



## Company overview

It has been 117 years since the company was founded in 1905. With a strong commitment to manufacturing, the company has facilities and sales strategies that allow it to handle everything from fabric planning to raw material procurement, manufacturing and sales. The company's spirit to take on the world's firsts spreads throughout its business activities, and is characterized by a corporate style that combines old looms (Toyota GL-3) with the latest raw materials and dyeing technologies, both old and new.



## Selected fields



Sustainability  
(Environmentally-  
friendly)

**Sustaining the textile business with yarns that contribute to a recycling-oriented society with a low environmental impact**

The company has been focusing on organic yarns for the past 15 years and produces denim and double weave fabrics using organic cotton yarns. The use of chemical fertilizers and defoliants in the growing process of organic yarns is strictly limited, and the burden on the global environment is reduced. The fabrics and clothing made from organic cotton yarns are indispensable for people with allergic reactions and those with sensitive skin, as well as for infants and toddlers. The company also uses the highest grade of organic cotton yarn, which is highly regarded both in Japan and abroad for its skin-friendly texture. For recycled yarn, the company uses recycled cotton yarn made from fallen cotton, which is usually discarded in the production process at spinning mills, and recycled yarn, which is made from nylon denim that was left in bad inventory at the company after it was crushed and turned into yarn again. The use of recycled yarn has become a must for major leading apparel companies, mainly in Europe and the U.S., as they give preference to companies with a clear commitment to the SDGs. The company makes a significant appeal at its exhibitions for the effective use of discarded resources by using these recycled yarns in woven fabrics.

As a contribution to a recycling-oriented society, the company reuses recycled paper with a high recycling rate rather than recycling scraps that would otherwise be disposed of or excess yarn generated in the textile manufacturing process. The company is proceeding with the Circular Cotton Factory, a manufacturer dedicated to recycled paper. This activity will reduce unnecessary carbon dioxide emissions from incineration and contribute to a recycling-oriented society by making recycled paper for a wider range of uses.



Organic cotton (proposal book)



Creation of added value  
through technological and  
design capabilities

**Producing denim that has not yet been seen by dyeing yarn that is difficult to dye with indigo dyes**

The company adjusted dye conditions, dyed with indigo dye without dissolving, and developed the world's first 100% wool denim. At the "Première Vision" exhibition held in Paris in September of 2009, the company was awarded the "HANDLE PRIZE" out of four grand prizes from among 100,000 entries. Subsequently, there were orders from FIVE FOXES CO., LTD. in Japan and "Band of outsiders" in the U.K., which contributed to the increase in sales. Linen yarn is made from plant stems and, unlike cotton yarn, is not flexible, so it was difficult to use rope dyeing, which is a distinctive feature of denim production. The company took on the challenge to dye linen yarn with indigo dye under conditions where the linen yarn would not decompose, and developed a 100% linen denim. By dyeing and weaving with maintaining the firmness and elasticity of linen, the company received large orders from "Prada" in Italy and "BALENCIAGA" in Paris, which contributed to an increase in sales. Regarding nylon denim, the company used its own dyeing machines to adjust the temperature, reducing power, PH, oxidation speed during dyeing, and oxidation temperature of indigo dye (patented), and became the first in the world to dye nylon in dark indigo colors.

The company received a large volume of orders from the domestic outdoor brand, "The North Face" for the 100 % nylon denim produced using these dyed yarns, and in the midst of a slowdown in sales due to COVID-19, this contributed to the company's sales growth to account for more than 20% of its total sales.



PV Award, "HANDLE PRIZE"





Overseas business  
expansion

### Overseas sales strategy continued from 2005

Since March of 2005, the company has continuously exhibited at "Première Vision," the most exclusive exhibition of its kind in Europe. The company handles all aspects of the exhibition, from content review, preparation and reception at the exhibition hall, and further follow-up, sales and deliveries. And it is a pioneer in direct sales by Japanese factories directly to apparel companies in Paris. By continuing to sell directly to overseas customers, the company was able to establish a price advantage, shorten the time required to materialize customer requests, and increase the sense of trust with customers. As a result, the number of customers has increased tenfold since exhibiting at "Première Vision," and the number of fixed customers has grown to include "BALMAIN" in Paris, "KRIZIA" in Milan, and "Akris" in Switzerland, with orders coming in on a regular basis. As for overseas business, the company has started direct overseas business development and expanded its business mainly in Europe, North America and Asia. Currently, Europe (Italy, Switzerland, Paris) is the main export destination, with the highest export share at 25% and the lowest at 13% during the year. By promoting the company's technological and developmental capabilities as well as its sustainability initiatives such as SDGs, the company plans to increase the ratio of overseas sales to 25%-35% on a steady basis, even as its domestic business shrinks.



Exhibition view of "Première Vision"  
(the company's booth)

90

Okayama City,  
Okayama PrefectureSustainability  
(Environmentally-  
friendly)

Digitalization

Creation of added value  
through technological  
and design capabilitiesDevelopment of  
new businesses  
and servicesOverseas business  
expansionMade by laminating mass-produced waste cloth using patented technology  
Developed new upcycling material "NUNOUS ®"**SEISHOKU CO.,LTD.**

## Company information

Location 2-8-7, Nakai Town, Kita Ward, Okayama City, Okayama Prefecture  
(Head office: 234, Chaya Town, Kurashiki City) Establishment

Phone number + 81 - (0)86 - 224 - 3281

HP <http://www.seishoku.co.jp/>

Establishment 1880

Representative Akira HIMEI, CEO

Number of employees 110



## Company overview

The company was founded in 1880 and has a 143-year history. It is a long-established dyeing and processing company. It has developed a new material called "NUNOUS ®," which is upcycled materials with a patented technology by using "cloths out of shipping standards" generated in its mainstay dyeing business.

The company does not pulverize or dissolve unusable cloth, but recreates the colors and patterns of the cloth beautifully as they are, and provides new values that has never been seen before. The company simultaneously promotes solutions to social issues and environmental considerations, and expands into a wide range of industries of architectural design, not limited to textile-related industries.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

Developing new materials which have never existed before that are beautifully upcycled from discarded fabrics through innovative technology (patented manufacturing method)

The environmental impact of the textile and fashion industry is a worldwide problem, and in each process of mass production, scraps and substandard products are inevitably generated. These remain underutilized except for a few that are melted, defibrillated or crushed for use. One reason is that it is not easy to separate fiber materials from the various compositions, but the biggest reason for the lack of utilization is the inability to convert them into values. The company developed a new upcycling method called the "New Lamination Method," which can be used as a raw material for textile products made from a mixture of various fibers, including cotton, hemp, hair and polyester, and acquired a patent for this method in 2021. Materials recycled by a process that does not damage the appearance of the fabric have enabled a broad range of processing, including cutting, die-cutting, sewing, printing and adhesion, which has made it possible to use the material in a wide variety of fields. The surface cut out of the stacked mass, which retains the color and pattern of the material, has not only a high level of design as a decorative material, but also a story that reveals its origin.



New life for discarded cloth

Development of  
new businesses  
and services

Developing new materials which have never existed before that are beautifully upcycled from discarded fabrics through innovative technology (patented manufacturing method)

The company began accepting unused textile materials from other companies and entities and turning them back into the client's original "NUNOUS®." The returned "NUNOUS®" is used for space decoration, goods sales and the like. The resin used for upcycling is derived from plants (inedible component of sugarcane). This has become a new value of "using recycled materials that originate from oneself" and supports users' sustainable activities. The company received the Good Design Award 2022 and the 5th EcoPro Award for Excellence. The company is drawing attention from around the world as a manufacturer of new materials that create a new way of life for cloth to be discarded.



The one and only original new material

"Connecting" the earth to the future, Japanese technology and knowledge as well as the CEO's passion to the younger generation "Connecting" fashion and different types of industries, and people to people

## NIIYONICHI

### Company information

Location	2-1576-93, Kojimashimono Town, Kurashiki City, Okayama Prefecture	Establishment	1994
Phone number	+ 81 - (0)86 - 474 - 2900	Representative	Eiichi FUJII, CEO
HP	<a href="https://www.241co.com">https://www.241co.com</a>	Number of employees	17



### Company overview

Since the company's establishment in 1994, it has continued to produce casual clothing and accessories. The company has its own factory with a "laboratory" function to pursue sewing techniques and expressions. In addition to cutting and sewing, the company offers unique technologies such as special embroidery and an ozone bleaching process that recycles 100% of the water to be used. The company deploys not only OEM business, planning proposals and ODM business for well-known apparel makers, but also its own brand by utilizing local resources.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

"Development of equipment" to reduce environmental impact and  
"manufacturing" that makes use of such equipment

Apparel products take large amounts of water in the production process. In addition, the environmental impact of mass production and mass disposal has long been an issue. As a part of its SDG efforts, the company developed a facility for "ozone decolorization processing with 100% reuse of used water" in 2019 with the cooperation of an ozone production equipment manufacturer. Since its introduction in 2019, more than 96,000 products have been ozonated, and in the three years to date, the used water has been successfully recycled and utilized without being discarded. Furthermore, this ozone bleaching process can produce an uneven, used or vintage look, which is essential for creating fashionable and textured clothing, and can achieve both high design quality and reduction of environmental impact. The company has received high praise from sensitive domestic and overseas apparel manufacturers which target consumers seeking "fashionable and environmentally conscious clothing." Then, in February 2021, the company launched "e JEANS PET," a brand of pet care products which look good that are environmentally friendly. The brand's products are made from the company's large amount of unused stock and leftover fabric, and eliminate odors and bacteria by applying an "ozone decolorization process that recycles 100% of the water used" in the final process. The company also takes into consideration the health of pets and those who are not comfortable with the use of stock products. These efforts have not only received a positive response from existing clients, but also continued inquiries from new clients, which has led to the initiation of new transactions.



Products of "e JEANS PET"

Creating new values with the mission of building a Japanese jeans culture

# Betty Smith Co.,Ltd.



## Company information

Location 5-2-70, Kojimashimono Town, Kurashiki City, Okayama Prefecture

Phone number + 81 - (0)86 - 473 - 4460

H P [www.betty.co.jp](http://www.betty.co.jp)

Establishment 1962

Representative Yasuhiro OSHIMA, CEO

Number of employees 30



## Company overview

The company was founded in 1962. The company started as a manufacturer of ladies' jeans for the first time in Japan, and in 2003, built the country's only jeans museum. It engaged in industrial tourism early on and created the impetus for local industrial tourism. The company is constantly proposing new values, such as Japan's first order-made jeans, jeans with experience, and eco-bags that use leftover fabric from production process. The company's mission is to create a new sense of values through the creation of jeans culture.



## Selected fields



Creation of added value  
through technological and  
design capabilities

### Development of an unprecedented products with added value: order-made jeans

1 Products utilizing accumulated technology: from around 2000, customers asked us to make jeans for them because they used to wear jeans in the past, but now there are no jeans that fit their current body shape. At that time, jeans were a mass-produced item, and no company offered custom-made jeans, but the company decided to take on the project. Since then, the number of similar requests has increased, and from 2003, the company started the made-to-order jeans business for the first time in Japan as "Kurashiki Made-to-Order Jeans." The company made patterns for customers to choose denim material, buttons, rivets, pocket fabrics and other items freely, and the one-of-a-kind, fully custom-made jeans were made possible by the company's skilled craftsmen who combined their skills in pattern making, hand cutting and sewing.



Made-to-order jeans

2 Creation of added value: the price range for jeans had been 7,900 yen, but the price of 30,000 yen or more for a pair of jeans was set, which triggered the addition of high value to the company's own brand. In 2008, the company created a manual for order-made jeans, which had been handled only at its own stores, and began nationwide expansion to currently own 50 customers. There is no other company that supplies made-to-order jeans through this mechanism, and its share of the market is almost 100% to account for 10% of its sales. The company established dealers overseas, and the technology has helped to enhance the brand's image and create opportunities for overseas sales. This also leads to the transmission of skills by young craftsmen.



New businesses  
and services

### Initiatives for industrial tourism utilizing the company's facilities and experience-based jeans derived from these initiatives

(1) Development of new businesses and services: in 2003, the company opened the Jeans Museum for the purpose of giving elementary school students factory tours. After that, tourists began to come to the area, and in 2006, as the company renovated its facilities into the Jeans Museum & Village, it created a business model that incorporated industrial tourism as well as traditional manufacturing and wholesaling. The sewing factory is an open factory that can be viewed through glass windows, and currently attracts about 50,000 visitors a year from Japan and abroad. In the course of managing the facility, there were requests to try making their own jeans, so the company devised a hands-on jeans program. The customer can bring home unfinished jeans (jeans without buttons, rivets or leather patches) with 20 different combinations of buttons, rivets, and leather patches, which he or she can attach by oneself using a special machine. The company added the service of an experience to jeans as a product, and opened up a new category.



The experience-type jeans

(2) Increased sales and added value: the operation of the facility has led to an increase in profit margins by adding direct sales to the wholesale-centered business. Also, since the experience-type jeans are the first product (service) of its kind anywhere in the world, they are popular not only among domestic tourists but also among foreign tourists. The service has also been incorporated into experience-based tours such as "Jalan" and "Asoview," and the company has developed a new category by adding the service of experience to jeans as a product. The service is exclusive to the company and cannot be handled by any other companies, which is why it is often covered on TV. Sales volume is increasing every year, partly thanks to the boom in experience.



Overseas business  
expansion

Developing overseas sales by leveraging a composite of the company's resources, such as products, brands and production backgrounds that other companies do not have

(1) Overseas business expansion through export and licensing: manualized order-made jeans and development of overseas retailers (Long Dong, Hong Kong, Seoul, Australia). By developing products and services that cannot be found anywhere else, the company's brand image is enhanced, and as people become aware of the company's technology and historical background (the main factory was established in 1962 and is the oldest existing jeans factory in Japan. The factory uses both new and old sewing machines to produce jeans of the highest quality, and has a special production line that can sew a single pair of jeans to order.), more and more customers are interested in outsourcing their production to the company's factory.

(2) Increased sales from overseas sales: orders are currently coming in from the U.K., Canada and South Korea, which account for about 6% of sales. In 2021, the company signed a licensing agreement with a company in Shanghai to start a licensing business. In this way, the company does not only export its own brands, but also increases overseas sales through OEM, licensing and the jointly use of its own resources. On the other hand, the industrial tourism program that started with the Jeans Museum at its core in 2003 has grown to a facility that attracts 50,000 tourists a year. In 2019, before the COVID-19, about 10% of the visitors were from overseas, mainly from Asia, and the number of interviews from abroad is increasing. In 2017, the company built a workshop in Ebisu, in Tokyo to accommodate tourists more easily and disseminate information from Tokyo to the rest of the world.



Sample of made-to-order jeans parts

Developing a proposal-based style with a production system for small-lot, multi-variety orders through a wealth of knowledge and experience in developing fabrics that are difficult for other companies to imitate

## MEIDAI Co., Ltd.



### Company information

Location 484-1, Sobara, Kurashiki City, Okayama Prefecture  
Phone number + 81 - (0)86 - 485 - 1355  
HP <https://www.meidai.co.jp/english.html>

Establishment 1963  
Representative Toshitsugu OGAHARA, CEO  
Number of employees 34



### Company overview

Since the company's foundation, in the runup to the industry, it has excelled in proposing products with designs and textile structures that are difficult for other companies to imitate, such as by modifying looms and manufacturing original equipment. The company's core business includes (1) belt slings for cargo handling and transportation, (2) narrow fabrics for earthquake-resistant reinforcement and industrial materials and (3) the business of four-axis woven fabrics for the first time in the world, which was independently developed for stable business expansion in the future, and the company will focus on application development to make it the third pillar of its business. The company was selected as a company that will drive the future of the region by being recognized for its past efforts and future potential.



### Selected fields



Creation of added value  
through technological  
and design capabilities

The company pursues the required physical properties and workability, and provides them by devising weaving methods, manufacturing original equipment and sometimes using sewing techniques.

(1) Business of belt sling for cargo handling and transportation: around 1975, the company established its own brand for this business. Since that time, the company has established an integrated production system from woven fabric production to sewing and processing. Compared to conventional metal slings, fiber slings are lighter, easier to work with, and more popular in terms of safety, which led to an expansion of the market. It was highly evaluated for its short delivery time system, which is competitive with other companies, as well as for its proposals to select fabric materials and devise sewing methods in response to the issues (safety and workability requirements) at each site of cargo handling, which has led to the enhancement of its brand power. It is expected that sales will increase approximately 2% per year.

(2) Business of quake-resistant reinforcing belts: the company developed earthquake-resistant reinforcing belts using weaving machines that produce narrow woven fabrics for the belt sling business. While other companies in the same industry had been unable to commercialize the product after several years of efforts, the company succeeded in commercializing it in less than a year after repeatedly devising its own fabric structure and evaluating the conditions of the thermal stretching set machine (the company's original equipment) for woven fabrics. In preparation for the Nankai Trough earthquakes expected in the future, the company aims to achieve 15% of sales from not only public facilities but also hotels, inns, factories, office buildings and other private facilities, which are on the rise.

(3) Other business of narrow woven fabrics: in the textile industry, the domestic hollowing out of the industry has become evident as production bases have shifted overseas. In addition, the aging of business operators is becoming an issue within the industry, and this has caused some to withdraw from the business due to a lack of successors. Even under these circumstances, there is demand for textiles, mainly in the industrial materials sector, which is always necessary, albeit for small-lot projects. The narrow woven fabric business will continue to expand in the future, which takes advantage of the company's strong small-lot, multi-variety production system as well as advanced technological capabilities based on various experiences.



**Integrated production system that creates added values**  
(The company is able to meet the requirements by making full use of its experience in each process.)





Development of  
new businesses  
and services

Independently developed the four-axis weaving automatic loom for the first time in the world, and revolutionizing every industry as a new textile material with new characteristics

While the ordinary fabric have a biaxial structure consisting of warp and weft yarns, four-axis fabrics have a diagonal structure consisting of left and right yarns, and the company was the first in the world to successfully mass-produce this type of fabrics. Compared to ordinary biaxial fabrics, they have superior dimensional stability such as resistance to deformation, and their tearing strength, including tear resistance, gets much higher. In addition, since they form a multi-step fracture pattern that the diagonal yarns break after the warp yarns break, the energy absorbed by the shock has been dramatically increased. This developed four-axis weaving automatic loom can also combine different materials and colors. Therefore, there is potential in a wide range of fields that require these characteristics of four-axis woven fabrics, such as sporting goods, fashion and other hobbyist products as well as industrial materials that emphasize functionality. The goal of this business is to secure a stable sales ratio of 15% or more.

The "story behind the development of four-axis woven fabrics"

- Started mechanization of four-axis structures for hand-knitting from around 1970.
- In June of 1989, featured on the front page of the Nikkan Kogyo Shimbun (Japanese Business & Technology Daily Newspaper), but mass production was not achieved.
- In March of 1998, received the Medium and Small Business Machinery Development Award for "Development of Four-axis Loom."
- In the same year, collaborated with Bally Ribbon Mills, Inc. of the U.S. on the technology of the four-axis weaving automatic loom, and began development of a cushioning material for use with the heat-resistant panels on the chassis of the Space Shuttle (NASA). This led to the speedy development of an automatic four-axis weaving loom capable of mass production, which was used in Mizuno tennis rackets in 2003 for the first time ("Tetras," a four-axis woven fabrics, was registered as a trademark in October 2003).
- In December of 2006, started research and development with JAXA, and evaluation in a space suit is still ongoing.



**"Tetras", the world's only  
proprietary four-axis woven fabric**

We aim to be a company that continues to "create" "values" that truly delights its customers

## ACCÈS CO.LTD.



### Company information

Location 1-8-1, Kubo, Onomichi City, Hiroshima Prefecture

Phone number + 81 - (0)848 - 37 - 3629

HP <http://corporate.parigot.co.jp/>

Establishment 1947

Representative Takahisa TAKAGAKI, President

Number of employees 90



### Company overview

The company was founded in 1925. It operates mainly as a fashion apparel retailer, and launched the multi-brand store, "PARIGOT" in 1992, with seven stores nationwide. In 2003, the company opened "ACCÈS HIROSHIMA," a fashion building in the center of Hiroshima City, Hiroshima Prefecture, as its real estate developer business. It continues to attract leading multi-brand stores and promote fashion. In 2019, the company launched "JAPAN DENIM" as a regional contribution project and is working on a project for the world that will lead to the revitalization of the production area. In March of 2022, a flagship store of "JAPAN DENIM" was opened in GINZA SIX (Chuo-ku, Tokyo), which attracts many inbound customers, and has become a center of communication both domestically and internationally.



### Selected fields



Creation of added value  
through technological  
and design capabilities

Matching of technical skills x Design abilities of celebrated designers x Marketing capability

- Technological skills: (1) JAPAN DENIM utilizes many denim fabrics woven with indigo-dyed yarns using an environmentally friendly eco-dyeing system (i.e., less CO<sub>2</sub> emissions, heavy oil use, water use, etc.), (2) high reproducibility of indigo color, which is always in demand by brands, and (3) high level of sewing and processing technology in a production area that handles many denim products for luxury brands.
- Design abilities: The design is advanced and well-designed by a well-known designer brands that are successful during Milano, Paris, and New York fashion weeks.
- Marketing capabilities: All of the PARIGOT stores have a denim corner, and the company purchases denim from all over the world. The company has marketing know-how, as it has been conducting sales research and market trend surveys of denim products for many years.

JAPAN DENIM is a sustainable denim collection created by combining three pillars of wisdom: (1) the world-recognized technical skills of the production area, (2) the design abilities of the designers, and (3) PARIGOT's marketing capabilities. At the POP UP event held at GINZA SIX in late March of 2019, the company achieved record sales of the second highest in its history (at the time), and from 2019 to the present, it has produced approximately 12,000 denim products (at a retail price of approximately 320 million yen) using approximately 10,000 meters of denim fabric. This has contributed to businesses and local communities, while also contributing to the company's sales.



Denim jackets that match the technical capabilities of denim production areas with famous designers and marketing capabilities



Development of  
new businesses  
and services

Regional creation activities through Environmentally friendly business development and Traceability

In 2019, the "JAPAN DENIM" (trademark registered) was established as a social project to further enhance the value of Japanese denim to the world, centering on the Bicchu-Bingo region, a denim production area with 80% share of the domestic denim production. In "JAPAN DENIM," famous designers and brands in Japan and abroad are matched with denim producers (dyeing, weaving, sewing, washing, etc.) who boast the world's leading technical capabilities. And under the supervision of the company which has been purchasing denim from around the world for many years, the company develops and commercializes not only jeans but also various denim products such as jackets, skirts and dresses, as it considers the environment. It has been exhibiting at international trade shows since 2020, and is also expanding its wholesale business not only domestically but also throughout the world. In order to protect the natural environment, JAPAN DENIM is actively engaged in sustainable business activities, including the active use of fabrics woven with indigo-dyed yarns through an eco-dyeing system and environmentally friendly product processing. All products are labeled with the names of all companies involved in the development of the product and the place of origin on the quality label and tag to enable traceability and provide peace of mind, thereby increasing added value and creating a system that enables direct business approaches to companies in the global market. The tags also clearly indicate the sustainable points of each product as environmentally friendly points.



Environmentally friendly business development (from JAPAN DENIM official website)



Overseas business  
expansion

## Global sales development of JAPAN DENIM

Since 2019 year, JAPAN DENIM has started the following business development for international business expansion as a joint business with JAPAN DENIM's products and textiles.

- International trademark registrations: JAPAN DENIM has applied for international trademark registration for overseas expansion, and has been granted in the U.S., Taiwan, the Philippines, Hong Kong, Europe, Singapore, and Russia.
- POP UP events in MILAN(ITALY) : POP UP events were held at TENOHA MILANO STORE (MILAN, ITALY), which has a large selection of Japanese products, from February 4 to 9, 2020, attracting approximately 200 visitors.
- International exhibitions: (1) exhibited at the joint exhibition, "Tranoi" (Paris, France) from February 28 to March 2, 2020; (2) held a solo exhibition at ESCOGITA SRL (Milan, Italy) from January 26 to March 18, 2022. The number of business negotiations and contract amounts have also increased.
- Establishment of a virtual showroom: with cancellations of international exhibitions due to the Covid-19 disaster, a virtual showroom was established on the official JAPAN DENIM website in February of 2021 to present collections to the world (updated in February of 2022). The number of business negotiations has been growing as the market has begun to penetrate year by year.
- Cross-border EC live commerce event for the Chinese market: held for the first time at JAPAN DENIM's flagship store on March 8 to 10, 2022. The influence of the celebrity influencer appearances resulted in approximately 300,000 viewers, which led to sales to the Chinese market for the first time.



Exhibit at "TRANOY"  
(Paris, France, in February of 2020)

**"STAND BY WORKER"**

Developing safe, secure and comfortable workwear for workers

**Asahicho Corporation Hiroshima****Company information**

Location 110, Fukawa Town, Fuchu City, Hiroshima Prefecture

Phone number + 81 - (0)847 - 45 - 4354

HP <https://www.asahicho.co.jp>

Establishment 1937

Representative Kenji KODAMA, CEO

Number of employees 118

**Company overview**

Since the company's founding in 1937, it has placed the highest priority on quality and has provided advanced workwear that responds to the times and work environment. In recent years, the company has developed products that aim to be No. 1 in each category of occupational safety ("High Visibility Workwear," "Flame Retardant Workwear," "Assist Suit e.z.UP®," etc.) in order to deliver safety, security and reliability to workplaces throughout Japan. The manufacturing division has consistently emphasized domestic factories, and still maintains directly managed domestic sewing factories (6 factories).

**Selected fields**Creation of added value  
through technological  
and design capabilities**Development of assistive suits utilizing fabric mechanisms through industry-academia collaboration**

Because approximately 60% of occupational illnesses are caused by back pain, in 2015, the company began joint research with the Graduate School of Information, Production and Systems, Waseda University, for the purpose of reducing the burden on workers, and jointly started research on an assist suit for assisting lifting movements.

By holding regular meetings with the university at the company's main factory and repeating on-the-spot proposals, we successfully developed the assistive suit in a short period of time.

Feature (1): structure that assists not only the hips but also the arms in tandem.

Feature (2): increased support power depending on the degree of back bending with a 2-stage spring structure in the back.

Feature (3): retains support power by deforming the quadrilateral fabric on the back even in case of lifting movements from an oblique direction, Patent No. 6527629, 2019.

Received No. 19002 of Light Labor Technology Certification from the Light Labor Study Group in 2019.

Received the Eiji MUTO Award for Excellence in Design in 2019 from the Japan Society for Design Engineering in 2020.

Received the 22nd of Japan Society for Assistive Technology Technology from the Japan Society for Welfare Engineering in 2020.

Received the 2021 Japan Society of Mechanical Engineers Award for Technology from the Japan Society of Mechanical Engineers in 2022.

"Assist Suit e.z.UP®" has been delivered in a wide range of fields including manufacturing, logistics, construction, agriculture and nursing care, and sales are increasing every year. In addition to helping to reduce occupational diseases, it can also contribute to alleviating the burden of caregiving for the elderly and increasing the number of female workers. Besides, further opportunities for its use are expected to increase, such as its application to the creation of Age-Friendly Workplaces, where the elderly can work in a safe and healthy manner.



Myoelectric measurement test in  
industry-academia collaboration

Adding environmentally friendly technology to indigo dyeing technology and performing rope dyeing of mainly denim yarns

## Sakamoto Denim co.,ltd.



### Company information

Location 231, Hirano, Kannabe Town, Fukuyama City, Hiroshima Prefecture  
Phone number + 81 - (0)84 - 963 - 0029  
HP <http://www.sakamoto-d.co.jp>

Establishment 1892  
Representative Ryoichi SAKAMOTO, CEO  
Number of employees 65



### Company overview

The company was founded in 1892 as an indigo dyeing factory. In 1966, the company succeeded in developing the continuous warp dyeing process for the first time in Japan, and contributed to the production of denim made in Japan.

In 2011, the company established a dyeing system that does not use hot water or cleaning chemicals, succeeded in mass production of natural indigo dye colors, and recommended dyeing that reduces environmental impact. The company's corporate philosophy is "environmentally friendly manufacturing," and the company has established a recycling program that uses food scraps from employees' homes. It aims to be the most environmentally friendly dyeing factory with environmental awareness in the world.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Practicing environmentally friendly manufacturing, including eco-dyeing systems

- Initiatives: the company conducts in-house greening activities using compost made by bio-processing. This is a combination of a portion of wastewater sludge generated in the manufacturing process and food waste from employees' households. The company also promotes internal and external recycling activities and practices environmentally friendly manufacturing as a company. As an initiative for decarbonization, the company replaced its boilers with once-through boilers and introduced a boiler system to achieve a significant reduction in heavy oil consumption. At the same time, the company electrolyzed water to produce strongly alkaline electrolyzed water with high cleaning effects and strongly acidic electrolyzed water with high bleaching, sterilizing and color-removing effects. The company has developed an "eco-dyeing system" for use in the dye washing and neutralization processes. The company cut CO<sup>2</sup> emissions by not using warm water, and also reduced the wastewater treatment load by not using cleaning chemicals. The rate of CO<sup>2</sup> emission reduction varies depending on the brand and thickness of yarn, but the reduction is approximately 74.5 t/ CO<sup>2</sup> at the company's monthly production of approximately 500,000 m.
- Dissemination of initiatives and reactions: exhibited at domestic and international exhibitions, updated the website and added an English version of the website. When the eco-dyeing system was first announced in 2011, it was frequently covered in the mass media as an environmentally friendly approach, but the textile industry did not respond well, and it did not lead to business expansion. Since then, as the company has continued to practice and promote "environmentally friendly manufacturing," initiatives on SDGs have become more active around the world, and mass media coverage of the project has increased. This has led to an increase in orders since around 2021, approximately 10 years after development, and the company is currently receiving more orders than it can handle.



Utilizing with eco-dyeing  
Acidic and alkaline electrolyzed water



Creation of added value  
through technological  
and design capabilities

## Established mass production through a rope dyeing method of natural indigo based on indigo dyeing techniques

From an environmental perspective, rope dyeing was performed using natural dyes (natural indigo) instead of chemical dyes to achieve core white dyeing (core white dyeing is a dyeing method that leaves an undyed area in the center of the yarn, and is an important feature of denim yarn dyeing).

- Content of measures: regarding the selection of natural dyestuff, the company compared between Sukumo (dried and fermented indigo plants) and Indian indigo, and decided to use Indian indigo in consideration of its workability and cost. As for the improvement of the dyeing facility environment, the company limited the number of dyeing machines for natural indigo dyeing and installed a reserve tank for liquid dye beside the dyeing machines, thereby creating an environment in which the remaining liquid can be used without disposal. As the company manages and stores the residual natural indigo solution, it adds newly dissolved natural indigo dye to the solution and blends it. This technology allows the use of dyes without wasteful disposal of dyes, which is effective in terms of waste reduction.
- Uniqueness of measures: natural indigo was considered unsuitable for mass production because it is more expensive than indigo dye, a chemical dye, and it is difficult to produce dark colors. In addition, there is no liquid dye available on the market for mass production that uses only natural indigo as raw material, and overseas dyeing factories generally use liquid chemical dyes, which makes it impossible to use natural indigo for machine dyeing. The company has the technology to dissolve dyes and formulate liquid dyes in-house, which has enabled the mass production of natural indigo dye colors. The company is responding to the demand for more sustainable product production by combining with an eco-dyeing system. The company also plans its own "Hon-Ai Series" of denim fabrics in natural indigo-dyed colors, which are sold both domestically and internationally.



Hon-Ai series of natural indigo-dyed colored  
denim fabrics planned in-house



Expanding business in various fields such as textiles, products and retails by leveraging the strength of mainstay dyeing business under the theme of "Tradition and Innovation"

## SANYO SENKO CO.,LTD.



### Company information

Location 6-1, Ichimonji Town, Fukuyama City, Hiroshima Prefecture

Phone number + 81 - (0)84 - 953 - 2828

HP <http://sanyo-senko.co.jp/>

Establishment 1925

Representative Soichiro MATSUMOTO, CEO

Number of employees 90



### Company overview

The company was founded in 1925 and has one of the leading dyeing factories in Japan with a monthly production capacity of 2 million meters, which can handle the entire process from raw fabric to bleaching, plain dyeing, printing and finishing. The company has received high acclaim from domestic and international brands for its unique technologies such as "Indigo Fabric Dyeing" and "Gradation Discharge Print ®," which inherit the lineage of Bingo Kasuri, as well as for its high quality control, which received awards from world-class certification organizations.



### Selected fields



#### Digitalization

#### Creating added values through the fusion of analog and digital technologies

The company is actively pursuing digitalization as a solution to the retirement and staffing shortages of veteran employees. The company aims to "create products" that combine the "flexibility and ingenuity of analog technology," such as craftsmanship and sensitivity, with the "convenience and accuracy" of digital technology. First, a "digital data acquisition system" was introduced by installing various sensors in each tank of the rinsing machine, which is a key element of the entire process. This enables accurate and continuous data acquisition of operating status instead of visual confirmation of meter readings. In addition to checking for abnormalities in operating conditions, investigations into the causes of defects, which used to rely only on the sense and memory of craftsmen, can now be conducted efficiently and with clear evidence. The company has become more aware of the problem as a whole, and since its introduction, it has shown positive results, such as "achieving a 10% reduction in the defect rate for the company as a whole." Next, the company is working to introduce a "system to efficiently search for dough carts," of which there are several hundred in the factory. RFID systems, for example, require a large capital investment.

The company pursued affordable cost and operability that is easy for even craftsmen to understand. As a result of considerations, a system was developed and tested for installation; when a craftsman calls up the appropriate cart from a tablet at hand, the terminal notifies the location of the cart with sound and light. The company succeeded in reducing the time required to search for the cart by "more than 80%," although it was a small-scale demonstration experiment. Currently, the company is expanding the scale of its capital investment and is conducting experiments with 100-unit scale. It is expected to reduce waste and defect rate (approx. 20%). The company plans to continue to expand the scale of these projects henceforward by obtaining competitive prefectural and municipal funding.



Presentation of experimental results  
at Fukuyama University



Creation of added value  
through technological  
and design capabilities

**Advanced the technology that has been in place since the company's founding, and developed products to start selling them in-house**

The company is developing the "Gradation Discharge Print ®" and products that use it, and is working to develop original processing technology to avoid price competition with overseas companies. With "Discharge Print," which the company obtained a patent on for the first time in Japan, it enabled the mass production of Bingo Kasuri in the Taisho Era. Furthermore, the company developed "Gradation Discharge Print ®" in 2014, which refined and evolved the "Discharge Print" technology. This technique to remove color by adding gradations of several different densities is extremely rare in the world, and the company is said to be the only factory capable of mass-producing it. In order to further promote this technology, the company began developing original products. Through the "X-SANYO (Cross SANYO)" initiative, which develops products in cooperation with local manufacturers, the company has developed a series of highly original products, including shoes, jackets and pants, denim shirts and other items. In addition, the company also conducted test marketing and sales of 6 products through crowdfunding sites such as "Makuake" and "Kickstarter." The company feeds back its know-how through product development and the characteristics of the crowdfunding purchasers to the dyeing and processing clients. By means of this, the company also utilizes this information in its proposal sales activities for contract processing. As a result of these efforts, the percentage of "sales to casual" with high added values has increased significantly from 20% to 40% for the past five years. In addition, the developed product has been adopted as a return gift for tax payment by Fukuyama City, and is helping to promote Fukuyama City, which has the largest share of the denim fabric market. (Awards received: the 11th Furusato Appare Certification "Grand Prize" (Okayama Branch Office of JR West Japan))



Denim shoes  
using Gradation Discharge Print technology



Overseas business  
expansion

**Continued to exhibit at "Milano Unica" even during COVID-19 in order to cultivate overseas sales channels for the company**

The company has established a Textile Department to develop direct sales channels overseas. The company predicted that it would be difficult to secure orders in the shrinking domestic market with only contract processing, so it established the Textile Department in May, 2015 to develop a system to sell textiles (fabrics) using the company's processing technology. In addition, for the purpose of appealing the company's technical capabilities directly to overseas luxury brands and winning orders, the company established a team to develop overseas sales channels. The company has gained experience through JETRO's business meetings with overseas buyers, and has continued to exhibit at "Milano Unica," an international textile exhibition since 2019. From 2019 to 2022, the company utilized Japan Brand Development Project and exhibited in cooperation with denim companies in the production area. In addition to promoting the region of origin, the company has succeeded in attracting the attention of overseas buyers with its wide variety of fabrics and processing. While it was difficult to travel overseas from 2020 due to the COVID-19, the company has been working hard to retain customers by collaborating with local partner companies and utilizing online business negotiations, which has led to the securing of real business opportunities since 2023. Although the company has received orders indirectly through domestic trading companies with whom it does business, it is now possible to directly exchange detailed explanations of technology, lots and processing conditions. As a result, the company has been able to secure direct orders, as well as export transaction through existing fabric trading companies has been on the increase because the company's name got well known overseas. In FY2021, the sales to overseas customers, which were led by the company itself, doubled compared to that in the previous year.



Booth at "Milano Unica"  
(February, 2022)

EMOTO TEBUKURO creates a regional community to share the joy through its glove brand, "Haku", which protects and nurtures glove craftsmen.

## EMOTO TEBUKURO Co., Ltd.

### Company information

Location 2724, Hiketa, Higashikagawa City, Kagawa Prefecture

Phone number +81 - (0)879 - 33 - 3165

HP <https://www.emoto-tebukuro.jp/>

Establishment 2017

Representative Tomoaki TABE, CEO

Number of employees 4



### Company overview

As the company inherits the spirit of its founding in 1939 and the spirit of launching the regional glove industry, it has been working on its second foundation since 2017, aiming for transformation of its business from dependence on OEM orders into self-sufficiency by developing its own brand with its own products. While it preserves the traditional craftsmanship of glove making, the process of changing into a glove manufacturer necessary for the coming age has been highly evaluated from various fields, and the company has come to be asked frequently to appear in the media and to give lectures.



### Selected fields



Sustainability  
(Employee-friendly  
working environment)

Transformed from manufacturer of mass production type into that of creating added value type

In the past, the company used to operate in the field of products for mass retailers and department stores, focusing on cost reductions through mass production. However, in 2016, the bankruptcy of a client, which the company depended on for 70% of its orders, it turned its profit structure around by developing its own brand through a business model that does not keep inventories. At the same time, it successfully switched to the OEM orders for small-lot and high-added-value by utilizing its technology. Specifically, as a part of efforts to "protect and nurture glove craftsmen," the company has set the outsourcing wage, which has remained unchanged in the industry for 50 years, at 1.5 times and hired one new graduate to train glove craftsmen. In this context, the company offered glove-making courses at clothing colleges for the first in the industry, and take initiatives to promote glove-making by having the company's veteran craftsmen serve as lecturers. Craftsmen who confidently convey glove making to young people really shine, and their appearance gives hope to new employees, making them feel pride and hope in their craftsmanship. The company also holds presentation meeting on its management policy every year, which is attended not only by employees but also by business partners and community stakeholders, to openly share the company's management situation, outlook and plans, including its financial statements. Among its own product initiatives, it adopted a box as a gift box from a local box store that had been its customer for a long time, and worked to improve the local business partners together. However, since there was a trend for some businesses to close their service due to COVID-19, the company realized the need to accelerate business development with community building in mind, and will continue to work on it.



The class of glove making at the clothing college for the first time in the industry

Aiming to be a manufacturing company with smile of circulation under the company philosophy of "spinning many smiles"

## FUKUSHIN CO.,LTD.



### Company information

Location 78-1, Shirotori, Higashikagawa City, Kagawa Prefecture  
Phone number +81 - (0)879 - 25 - 2285  
HP <https://www.fukushin.co.jp>

Establishment 1977  
Representative Jiro FUKUZAKI, CEO  
Number of employees 75



### Company overview

The company was founded in 1977 as a glove distributor with its headquarters in Higashikagawa City, Kagawa Prefecture. The company's main business is the manufacture and wholesale of knit products such as gloves, socks and neck warmers. Working closely with their wholesale partners, the company focuses on maximizing sales through the efficient use of floor space, speedy delivery of products and reasonable pricing. As global warming progresses, they have launched a new brand, "ecuvo," as part of their initiative to reduce their environmental impact.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

#### Commitment to SDGs and working towards a circular economy

The company's original sustainable brand, "ecuvo," uses only recycled and natural raw materials, and has developed products dyed using organic produce scheduled to be discarded (coffee beans, blueberries, red turnips, etc.), thereby reducing waste and eliminating the need for chemical dyes. The company has also employed a number of initiatives aimed at breaking the destructive cycle of fast-fashion; rather than bringing out new designs each season and discarding unsold products, the brand aims for timeless designs which can be enjoyed for years to come. The company also offers a 'Lifetime Repair Warranty' on all ecuvo, products, promising to carry out any feasible repairs free of charge. In addition, customers can purchase single replacement items if they lose a glove or sock, meaning they don't have to purchase another pair. Finally, the company headquarters, including the factory where ecuvo, products are manufactured, is powered by 100% renewable energy. The consideration for the environment which forms the basis of the ecuvo, brand has also had a visible effect on individual employees. Inspired by the president's hobby of 'plogging' (picking up trash while jogging), for example, many now take part in beach cleanup activities. Through such initiatives and activities as these, the company aims to be one which is both enriched by and enriches the local community.

#### ARM/LEG COVER



Products of "ecuvo," SS dyed using food products scheduled to be discarded.



Digitalization

#### Discovering potential customers and expanding into new markets through the use of EC and social media.

The company is continually striving to improve customer satisfaction and differentiate itself by offering unique products. Utilizing their expertise as glovemakers, for example, they have developed a series of 5-fingered socks with the aim of maximizing comfort and warmth. They achieve this using their three-dimensional knitting technique, creating a shape which fits snugly around each toe.

The company has also put great effort into enhancing their online presence, developing their e-commerce sales platform and digital marketing through social media. By responding to individual needs and gradually building their customer base, they have increased their e-commerce sales by more than seven times since 2015.

The superior comfort and fit that comes with their seamless sewing techniques has made many of their products a big hit, especially among those sensitive to the cold.

The company also utilizes a total picking system. It has a well-organized and spacious warehouse, and are continually updating their automated system to reduce the lead time between receipt of order and delivery of product.



Application of total picking system



Creation of added value  
through technological  
and design capabilities

### Reducing environmental impact through use of raw materials, manufacturing process and timeless designs.

When developing the original sustainable brand, "ecuvo," the company has taken their environmental impact into consideration in their selection of raw materials, manufacturing process and design.

The company has also developed their own technique which uses the fruit of the chisel plant to carefully brush the fibers of the inner lining and create a 'napping', or a fluffy layer of fiber which gives a soft touch and improves heat retention.

The company aims to provide greater value through their 'Whole Garment Knitting' technology, which improves comfort and durability by virtually eliminating seams. Their investment in knitting technology has also allowed them to improve efficiency and reduce waste by minimizing the discarded yarn generated during the knitting process.

All products in the "ecuvo," brand received the "Good Design Award 2021." The Autumn & Winter line was also awarded the "Omotenashi Selection", while the face masks and Spring & Summer line were given the "Taru Award" (Excellence Award) and "Kagawa Food Loss Reduction Award" respectively.

To ensure that the products can be used and loved by the whole family for years to come, the same timeless designs are available in men's, women's and kid's sizes.

Other initiatives such as the permanent repair warranty and single replacement items have also contributed to their popularity among consumers.



Reusable packaging made from recycled paper and natural materials



Development of  
new businesses  
and services

### Manufacturing that prioritizes environmental friendliness and added value.

Located in Higashikagawa City, a city rich in nature nestled between mountains and the Seto Inland Sea, and engaged in the production of cold-weather goods, the company has long been concerned about climate change and global warming. To reduce their own environmental impact, the company has adopted SDGs management and launched a sustainable brand, "ecuvo." The brand aims to differentiate itself by adopting a business model which is not aimed at increasing sales through replacement demand but at gaining favor among environmentally conscious buyers and increasing fans of the brand through added value. Initiatives such as tackling food loss and environmental damage through the use of organic waste to dye their products, reducing discarded yarn through their "zero waste knitting method", use of simple permanent designs, permanent repair warranty and single item replacement service have all gathered attention from shoppers seeking more eco-friendly products.



"ecuvo," products for Autumn and Winter made from recycled fibers



100

Imabari City,  
Ehime PrefectureSustainability  
(Environmentally-  
friendly)

Digitalization

Creation of added value  
through technological  
and design capabilitiesDevelopment of  
new businesses  
and servicesOverseas business  
expansionTowel maintenance to deliver towels that can be used for  
10 years**IKEUCHI ORGANIC Inc.**

## Company information

Location 762, Engi-kou, Imabari City, Ehime Prefecture

Phone number + 81 - (0)898 - 31 - 2255

HP <http://www.ikeuchi.org>

Establishment 1953

Representative KEISHI IKEUCHI, CEO

Number of employees 47



## Company overview

The company is a manufacturer of Imabari towels made of 100% organic cotton based on the philosophy of "maximizing safety and minimizing environmental impact." It covers the power consumption of its factories and directly-managed stores with 100% of its electricity from wind power generation. In 2014, the company changed its name from Ikeuchi Towel to IKEUCHI ORGANIC, and all products are certified as safe for babies' mouths. Based on the idea that products the company produces are food, it has set a goal of producing towels that are safe for babies to eat by 2073, the 120th anniversary of the company's founding.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

### Sustainable manufacturing that pursues minimal environmental impact

With the philosophy of "maximizing safety and minimizing environmental impact," the company has manufactured sustainable towels for 23 years, and its precision has improved year by year. The organic cotton to be used is strictly adhered to the following basic principles: (1) no pesticides for more than three years, (2) no genetically modified seeds and (3) fair trade. The company was the first among to acquire the "Eco Mark" certification, which was created in 1989. In 1992, the dyeing factory was jointly built, which is one of the best in the world to be said, "Producing wastewater that is clearer than river water." Since then, wastewater has been returned to nature at an astounding level of less than COD15ppm. In 1999, the company became the first natural fiber manufacturer in Japan to obtain ISO 14001 certification. It also obtained ISO9001 certification the following year. In 2014, all products obtained the international certification OEKO-TEX®STANDARD 100 of Class 1, a level that is safe for babies to put in their mouths. Since 2014, the company has been specializing in organic cotton, and everything from name tags to sewing thread has been organic. Since 2002, it has been using 100% green electricity for production and sales, and is often nicknamed as "towels to weave with the wind." It uses 250,000 KW of wind power per year and reduces carbon dioxide emissions by about 100 tons annually. In 2013, it became the first company in Japan to receive the international environmental label, "WindMade" certification. The company is thoroughly committed to environmental considerations such as dyeing towels based on the concept of low-impact dyeing, which is safe for the human body and has a low environmental impact.

Commitment to materials and manufacturing  
in consideration of the environmentOverseas business  
expansion

### The company's own brands to sell directly to more than 20 countries around the world

In 1999, the company developed its own brand, "IKT" for the overseas market. The company moved its base of operations to New York from 2002 onward after exhibiting at the "California Gift Show" in January 2001. In the initial stage, it starts handling the products at high-end stores such as "abc carpet & home" by setting up local offices. In 2002, it was awarded the Best New Product Award at the "New York Home Textile Show," which is one of the largest home textile shows in the U.S., for the first time among Japanese products. This led to the establishment of an "IKT" corner in the ISETAN Shinjuku store in 2003, and the brand became well-known in Japan as a returnee brand. All the export sales operations are completed by in-house staff, and the company is committed to its policy of direct sales, even overseas. The company also collaborates with overseas companies on a wide range of products, such as supplying 100% organic cotton towel fabric from IKEUCHI ORGANIC to Germany's "Adidas" as material for the inner lining of their high-end sneakers. In 2020, the company opened two stores of IKEUCHI ORGANIC TAIWAN (IKEUCHI ORGANIC stores) in Taiwan. In 2021, the export ratio accounted for about 18%, and the products are sold in select stores at the "New York Home Textile Show" in more than 20 countries around the world. The company plans to completely strengthen its overseas development, mainly through its WEB STORE, by completely revamping its website.



Received "New Best Award"



A workshop which creates unique and original textiles using conventional looms and techniques which are more than 100 years old that have undergone modifications

## KOBO ORIZA CO., LTD.

### Company information

Location 55, Onibarakou, Tamagawa Town, Imabari City, Ehime Prefecture  
Phone number + 81 - (0)898 - 55 - 2564  
HP <https://oriza.jp/>

Establishment 2010  
Representative Masatoshi TAKEDA, CEO  
Number of employees 12



### Company overview

The company was founded in 2005 in Imabari City, Ehime Prefecture, a famous towel production region. In Imabari, where innovative looms are common, this workshop has restored and modified century-old shuttle looms at the oldest, and continues to produce scarves and caps with unique weaving techniques and shapes. Except for dyeing, it is possible for the company to manufacture all products in one process. The company mainly manufactures and sells its own brands. In addition to its representative clothing and sundry goods brand of "kobo oriza," it also offers the towel brand of "suifutosha" and the daily sundry goods brand of "CUON:E."



### Selected fields



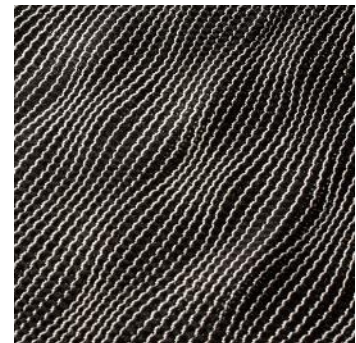
Creation of added value  
through technological  
and design capabilities

Modifying shuttle looms to expand sales channels with its unique ideas and advanced technology

"Tate-yoko yoroke mojiri weaving" was conceived even before the company was founded. The world's first fabric, which overturned the conventional wisdom that the basis of textiles of the warp and weft yarns must be straight, modified the 100-year-old "Toyoda Y-type" loom, and succeeded in mass production in 2007 through a process of trial and error.

The company was also selected for the "Minister of Economy, Trade and Industry Award at the 2009 Monozukuri Nippon Grand Awards." During the exhibition at "Ambiente" in 2016, the company received high acclaim in Europe and began doing business overseas. Another representative product, the "Cotton Cap," for which the company obtained a design registration (No. 1296495), has been in production since the company's establishment. The company paid attention to the mechanism of the shuttle loom, in which the weft yarns run back and forth while still connected, and applied double-twill weaving technology to create a completely seamless finish. Using its twisting machines, it researched materials that produce elasticity even in cotton called high-twist yarn. After repeated adjustments to the degree of shrinkage and other factors, the company succeeded in mass-producing of 100% cotton caps which fit the head well that do not give wearers a constrictive feeling. They are comfortable to the skin, do not steam easily, and are easy to wash. In addition, they can be used as a reversible cap, a neck warmer, a turban, a mini scarf and other items in eight different ways. They are a long-selling item, with shipments increasing every year and are sold overseas as well. The company also offers many other products filled with unique ideas. In general, manufacturing companies tend to seek efficiency in mass production. However, with the opposite in mind, as the company looks ahead to an era of declining population and diversification, it has modified all nine looms it owns in order to give each one its own individuality.

The company's technical capabilities to produce a variety of weaves and its ability to develop its own materials using in-house twisting machines have led its sales growth.



Tate-yoko yoroke mojiri weaving

Promoting sustainability by eliminating loss and waste and utilizing materials  
overseas with unique technology and design

## SHICHIFUKU TOWEL Co., Ltd.



### Company information

Location 1-2-2, Tomitashinko, Imabari City, Ehime Prefecture

Phone number + 81 - (0)898 - 36 - 6020

HP <https://www.shichifuku-towel.co.jp/>

Establishment 1959

Representative Taizo KAWAKITA, CEO

Number of employees 77



### Company overview

The company receives favorable reviews from its customers for its "Seven Lucky Brands" towels, which are fashionable and full of sensitivity through (1) stylish and creative design in partnership with the high-quality Imabari towel brand and (2) lifestyle brand, "isso ecco" and creative techniques utilizing 62 years of accumulated skills and materials. In recent years, it has been actively developing OEM business with overseas companies that evaluate the quality and design of its products. It also focuses on sustainable businesses that conserve nature and resources.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Realization of circular economy through utilization of yearleftover yarn, recycling of discarded ears, etc.

Under the slogan of "conserve resources," all employees are striving to reduce industrial waste to zero, and are taking on the challenge of thoroughly using usable resources. Specifically, leftover yarn, discarded ears and other scraps generated in the manufacturing process are usually disposed of as waste, but the leftover yarn is reused and commercialized, and scraps of fabric are used as raw materials for paper products in cooperation with the local paper industry. And the "discarded ears" are sold to handicrafts enthusiasts to increase the recycling rate of resources. In addition, the company is committed to conserving resources by selling and donating surplus products and B-grade products to local organizations and individuals at low prices. It also engages in product development and material research under the motto of "cherishing the richness of nature. In particular, it actively uses recycled fibers made from 100% bamboo, which is a fast-growing material that can reduce deforestation, and eco-friendly materials (such as starch glue and olive vans) that take advantage of the bounty of the earth in order to avoid water pollution as much as possible. It is said that refining yarn with olive soap reduces the environmental impact of factory wastewater. In addition, the cotton dust ("windblown cotton") generated at the factory, which is normally incinerated, is collected in one place by a dust collector for use in the manufacture of recycled paper. These efforts have realized a circular economy of "no loss, no waste," and have contributed to environmentally friendly operations as well as to securing a supply chain in cross-industrial cooperation with neighboring regions (with the paper industry).



Towels of "Revive" made by reusing leftover yarns are colored differently for each individual towel



Creation of added value  
through technological  
and design capabilities

### Developing the company's own brand with unique technology and design capabilities, and passing on skills through the use of conventional looms

The company's accumulated weaving techniques and its original material research have allowed the Imabari towel brand to gain high reputation in the market for its high quality products. In particular, the sensitive designs created in cooperation with the prestigious lifestyle brand, "Isso Ecco," are fused with high technology and have gained many fans as the unique "Shichifuku Brand." Specifically, Imabari towels are often "plain (white)" in terms of production efficiency and cost, but the company has deliberately chosen to use "multi-color" facilities and personnel in order to fully demonstrate the advantages of "yarn dyeing before bleaching," which is a characteristic of the Imabari towels. Therefore, it actively uses multicolor jacquards, which other companies tend to escape from, and excels at multicolor fabrics woven by skilled craftsmen who spend a lot of time and effort to weave them. This enables creative expression in design and creates new value that matches the diversification of lifestyles. The company also uses a variety of yarns (ultra-fine, ultra-thick, low-strength, etc.) by taking advantage of the characteristics of the conventional looms that remain in the old factory, and produces fabrics with a low rotation speed (e.g., products using molle yarn in the weft), which is unique to older models, which has received an evaluation higher than expected as a rare and valuable product not only in Japan but also in foreign countries. In addition, the company is developing its own original materials and focusing on product development that addresses social issues such as environmental friendliness and resource recycling. The conventional looms are used by skilled weavers as teaching materials to train young technicians for the purpose of acquiring weaving skills and passing them down to the next generation.



**Producing towels with "multi-color" designs that are highly regarded in overseas markets, both under the company's own brand and on an OEM basis.**

Aiming for the global market with an integrated production system based on high technological capabilities cultivated in dyeing

## Nishisenkoh Co., Ltd.

### Company information

Location 4-5-1, Minamidaimon Town, Imabari City, Ehime Prefecture  
Phone number + 81 - (0)898 - 22 - 2588  
HP <https://nishisenkoh.com/>

Establishment 1968  
Representative Toshiaki YAMAMOTO, CEO  
Number of employees 60



### Company overview

The company was started in 1954 as a dyeing and finishing company in the towel production area of Imabari City, Ehime Prefecture. In 1968, it was founded. In 2007, in order to improve its business structure from being only a dyeing-related contractor, it established an integrated manufacturing and sales system from product planning to manufacturing and retailing (SPA) by developing its own products, acquiring international certification, building sales channels, introducing manufacturing equipment such as weaving machines and producing finishing processes in-house. Today, it is actively involved in a diverse range of fields with a view to the global market.



### Selected fields



#### Digitalization

#### Digitalization initiatives to support an integrated production system

Although the domestic textile industry is said to be in decline, the company has been working to maintain and improve its business by establishing an integrated production line system to become a planning, manufacturing and retailing (SPA) company since 2007, rather than remaining in the division of labor that has been the norm in the textile industry. In addition to machines for dyeing and sorting, which are the company's core business, the company currently has eight weaving machines, inkjet printers, sewing machines, needle-pickers and other types of machines, enabling it to produce finished products in-house. In order to improve operational efficiency, an order management system has been in place since 2021 in order to promote efficiency and visualization of internal administrative processes. Before introducing the system, the company had to manually record two types of documents: processing instructions to the work site and ledgers of goods to be received and to ship, both of which are managed in the office. The introduction of the order management system has made it possible to process the instructions and the ledgers of goods in a single system. This system has succeeded in improving operational efficiency because the time required to process vouchers has been reduced to less than half of the original time required. In addition, by linking product lot numbers with machine operating hours in the system, the current processing status of products and the operating status of machines on the integrated production line can be checked and, in the event of a problem, the situation can be analyzed to find the cause. Furthermore, since the system can also manage inventory and process vouchers for its own products, it can handle not only large BtoB shipments but also detailed BtoC shipments through the company's EC site, while at the same time eliminating discrepancies during inventory.



The order management system to be introduced

We offer a total coordination of towels with the highest quality of "earnest craftsmanship."

## Maruei Towel Co.,Ltd.

### Company information

Location	1-2-30, Minamikouge Town, Imabari City, Ehime Prefecture	Establishment	1958
Phone number	+ 81 - (0)898 - 22 - 4176	Representative	Seiji MURAKAMI, CEO
HP	<a href="https://www.maruei-towel.com">https://www.maruei-towel.com</a>	Number of employees	80



### Company overview

The company was founded in 1958 in Imabari City, Ehime Prefecture, the largest towel production area in Japan. It manufactures and sells sewn products such as towel handkerchiefs, towel baskets, bathrobes and towel shirts. In 2004, it established "idee zora" as a private brand that proposes a rich towel lifestyle, and currently operates nine directly managed stores in the Kanto region under the name "imabari yokkin" to develop its SPA business.



### Selected fields



Sustainability  
(Employee-friendly  
working environment)

SDGs declaration, adoption as a corporation with excellent health management and certification of enhancement plan for business continuity

In consideration of the environmental aspect of the SDGs declaration, the company has installed solar panels on its rooftop and uses renewable energy. Its factories provide a worker-friendly design. LED lighting has been introduced to create a bright environment which facilitates inspection and saves energy. The huge beams required for warping has been installed so that even women can easily move, and stored directly in the beam warehouse. For the machine and finishing sites, the company has installed air conditioning of full-airflow type so that small fibers floating in the air during work are sucked under the floor to ensure a comfortable work environment. Cases that are completed on the third floor are simply placed on a conveyor belt and transported to the shipping terminal on the first floor, which dramatically reduces the amount of heavy lifting work required. In addition, the company uses organic cotton, which is free of pesticides and chemical fertilizers, as a raw material to promote environmentally friendly manufacturing. In terms of social and community contributions, it supports child-rearing through its "Sukusuku Project," which offers a 20% discount on purchases from the time of pregnancy until the child reaches his or her third birthday. Since babies' skin is very delicate, it has introduced the use of towels made of good cotton to reduce stress caused by friction as much as possible and to encourage the use of good quality products from a young age. The company has an in-house gymnasium and holds yoga classes to promote employees' health, and was adopted as a corporation with excellent health management. As for the enhancement plan for business continuity, it has been certified by the Ministry of Economy, Trade and Industry (METI) as a plan that enables the company to continue its business even in the event of a crisis situation.

For delicate baby skin.  
implemented Sukusuku  
Project



Creation of added value  
through technological  
and design capabilities

Using towel fabrics to enter the apparel business

The company has overturned the conventional wisdom that "shirts should be made of flat fabric" and produced shirts made of toweling fabric. The fabric is created and sewn using a very sophisticated technique that produces flat surfaces and tiny loops on the reverse side. Despite the shirt's appearance, the reverse side has excellent heat and moisture retention properties, and even when you sweat, it does not stick to the skin, creating a revolutionary shirt that can be worn without an inner layer. The company received the 21st Century Ehime Traditional Craft Award. It constantly pursues the "comfort" of its users and always strives to create products without giving up on the excitement and put it in practice. It also uses this fabric to make other apparel products such as tunic dresses.



Imabari towel's pile shirt with flat fabric on the front and loops on the back

"A towel to make your day softer. "

It is what you use every day and every time that has the power to make your daily life a little better

## WATANABE PILE TEXTILE CO., LTD.



## Company information

Location	8-1, Minamihorai Town, Imabari City, Ehime Prefecture	Establishment	1963
Phone number	+ 81 - (0)898 - 66 - 5108	Representative	Chitose WATANABE, CEO
HP	<a href="https://www.watanabe-pile.co.jp/">https://www.watanabe-pile.co.jp/</a>	Number of employees	25



## Company overview

The company was founded in 1963 in Ehime Prefecture. The passionate craftsmanship inherited from the first generation, "We would like to create towels that have never existed before," still lives on in every single step of the towel-making process. In addition to "weaving," the company continues to challenge new possibilities for everyday towels by visiting cotton-producing regions and holding discussions with craftspeople from the spinning process, including those who are involved in twisting, dyeing, sewing and the like, to maximize the quality of the material.



## Selected fields

Sustainability  
(Environmentally-  
friendly)

## Upcycle from disposal to products

- Measure: started an initiative to recycle defective inventory and materials that had been disposed of as finished products.
- Outcome:

Case 1. Converting leftover fabric and yarn that were to be disposed of into a product: instead of discarding the leftover fabric and yarn generated during production, the company started a project to see if it would be possible to reuse them as a product. The leftover cloth was adopted by a cosmetics association as upcycled handkerchiefs, which were sewn into mini handkerchiefs and decorated with original embroidery. Ten thousand handkerchiefs were sold. In addition, a bath mat with a "hot spring mark" pattern made from leftover yarn has become a popular product with an eye-catching retro design.

Case 2. Turning leftover fabrics into yarn: a domestic spinning company has started to reprocess leftover fabrics made for apparel into yarn by spinning them into yarn. Samples were made as sustainable towels. They have been well received, and the company assumes that it can make efforts to recycle leftover cloth instead of throwing it away.

Case 3. Turning discarded yarn waste into paper production: instead of throwing away the discarded ears' parts to be generated during production, the company works with a local yarn factory to use the surplus cloth and yarn to reinforce the paper production process. The amount of waste is about 400-500 kg per month, and since it used to be incinerated, this has led to a reduction in CO<sub>2</sub> emissions.



Bath mat made from leftover yarn



Digitalization

## Inventory reduction with digital technology of e-commerce

Using e-commerce to sell products, the company has succeeded in selling defective inventory that it used to throw away.

- Measure: the company uses an e-commerce platform, which it has traditionally used to sell its regular products, and holds sales events to sell towels and fabrics that are no longer in stock as "special-priced products."
- Outcome: At in-person sales meetings, there are expenses for labor, location and other costs. However, the use of e-commerce eliminates the need for in-person customer service and locations, and successfully reduces expenses. This allows for more efficient reductions in bad inventory. In addition, the limited publication of information has made it possible to notify only customers whom the company would like to notify, which has enabled the company to reduce bad inventory without lowering the value of the brand.

As for attracting customers, in the case of events held in Ehime, where the factory is located, the main customers are residents of Chugoku and Shikoku regions, but the use of e-commerce has made it possible to sell to consumers in all regions of Japan. This has led to the acquisition of new customers, and there have been more cases where customers are willing to buy the regular products even during non-sale periods.



Screen to sell special price products of towels and fabrics which are no longer in stock





Creation of added value  
through technological  
and design capabilities

## Accumulation of craftsmanship and research results

- Measures:

- Weaving technology

Since different types of looms produce different densities and piles, the loom (shuttle loom, rapier loom, dobby loom) is selected according to the pattern and texture image to be expressed. In addition, Jacquard technology enables the expression of a variety of patterns. A shuttle loom made in Imabari in 1961 is still in operation, which makes it possible to develop fabrics using delicate raw materials. Since it requires skills to operate the shuttle loom, the company is working to pass on these skills to younger employees.

- Sizing technology

In the sizing process to give strength to yarns, it was difficult to apply the sizing evenly in the conventional sizing process, which limited the number of yarns that could be woven. The company introduced a "sizing winder," which allows each thread to pass through a paste to give uniform strength to the thread, and this has expanded the range of fabrics that can only be produced by the company. In addition, since the recipe for paste concentration differed depending on the type of yarn, it was necessary to consider the optimum sizing method, and the accumulation of unique sizing recipes has made it possible to develop one-of-a-kind fabrics.



Weaving of the shuttle loom



Development of  
new businesses  
and services

## Development of materials for apparel with towel loom

- Measure: the company has been developing apparel materials using towel looms for nearly 30 years since 1990. It is major to use cotton as a raw material for towels, which are required to have water absorbency as a function. But the company is developing apparel materials using various raw materials, mainly natural fibers such as cashmere, yak and silk.

- Outcome: currently, the company is working with several domestic brands, including Maison brands and jointly developing fabrics with them. By dealing directly with suppliers, not through trading companies, the company and its suppliers respect each other and work as a team to manufacture products. The company's efforts to develop not only towels but also apparel fabrics have resulted in the creation of unique products, which has led to increased sales for the company.

- Outline of history

1990: started research and development of clothing fabrics

1999: exhibited at "Textile Network Exhibition"

2002: exhibited at "JFW Japan Creation," won a prize at the JFW Japan Creation Textile Contest

2004: exhibited at the "Creation Business Forum" and began developing clothing fabrics in collaboration with young Japanese designers.

2007: awarded Lenzing Fabric Competition Japan

2008: won JFW Japan Creation Textile Contest

2012: established "Textile Mirai Juku." Training young textile managers as a member of the management committee, and starting joint development with other textile producing regions that specialize in knitwear and dyeing.



Apparel products using the company's fabrics



Overseas business  
expansion

## Entrusted with production through manufacturing tailored to the client's needs

- Measure: after understanding the concept and image of each client, samples are prepared for each brand and presentations are delivered. By producing products as close to the end client as possible, the company is able to clarify the client's image of what they would like to produce, and by sharing the technology and capacity that the company can provide, it is possible to implement transactions smoothly.

- Outcomes:

Case 1: the company is entrusted with OEM production of fabrics for the French maison. The measure has started since around 2010, and the company gives proposals for fabrics according to each season's theme, and after sample production, the fabrics are produced in bulk. They take yarns and materials not normally used in towels and bring closer to the image of the recipient, which has become a mainstay of fabric sales.

Case 2: the company is entrusted with proposing and OEM production of towels suited to the local market for the U.S. brand. It has started making towels since around 2015. It modifies looms according to the standards of sizes, which are not available in Japan, and manufactures them. The patterns are changed every season and the OEM production continues.

Case 3: the company proposes fabrics to the street fashion brand based in New York, the U.S., and produces them on the OEM basis. The company's director is still in close contact with the designer, whom he met during an internship in New York in 2015, and regularly sends fabric samples, which are mainly used as hat fabric.



Jacquard fabric developed for overseas clients

We pursue new clothing possibilities with our original patented technology of pleating natural fabrics.

## OZAKI PLEATS Co.,Ltd.

### Company information

Location 3-5-19 Noma, Minami Ward, Fukuoka City, Fukuoka Prefecture

Phone number +81 - (0)92- 555 - 7744

HP <https://www.ozaki-pleat.com/>

Establishment 2016

Representative Yoshiyuki OZAKI, CEO

Number of employees 39



### Company overview

Founded in June 1979. The founder, Yoshiyuki Ozaki (current president and CEO), dedicated himself to researching the pleating process for natural fabrics for 20 years and finally succeeded in developing the technology. The technology he developed led to the acquisition of a Japanese patent. By utilizing a consistent downstream process which covers planning, proposal and sewing, the company is engaged in manufacturing based on the company motto: "Pleats are a gift from ancient times, and an eternal theme that envisions the beauty of women"



### Selected fields



Creation of added value  
through technological  
and design capabilities

#### New pleating processing achieved with two patented original technologies

The following two patented technologies have enabled the creation of new designs and added value

1. MAX PLEATS: A technology that makes it possible to pleat any natural fabric and retain the pleats even after washing. Natural fabrics are inherently difficult to pleat. With conventional techniques, materials may be limited, the pleating may disappear after washing, or the texture may change. However, MAX PLEATS has solved this problem.
2. pli-ORIORE: A technology that produces pleats and non-pleats in a single fabric by folding and pleating a mixed-weave fabric. What used to be possible only by joining two fabrics together can now be expressed with a single fabric, making it possible to create new designs. We were able to develop this technology after 20 years of trial and error, mixing a variety of chemicals with fabrics and conducting tens of thousands of tests.

These technologies have made it possible to pleat a variety of fabrics and to create diverse forms of pleats, enabling the creation of new fashionable women's clothing, which has been highly evaluated by major apparel companies and well-known brands. In addition, we also develop and sell eco-friendly bags that do not lose their shape even after being washed in water more than 100 times.



Process of creating  
pleated products

Pasima, comfortable and evidence-based pure Japanese-made absorbent cotton bedding, started from the weaving process by an absorbent cotton manufacturer

## Ryugu.Co.,Ltd.

### Company information

Location 278 Niiharu, Yoshii Town, Ukiha City, Fukuoka Prefecture

Phone number +81 - (0)943 -75 - 3148

HP <https://pasima-japan.com/en/>

Establishment 1957

Representative Kozo KAKEHASHI, CEO

Number of employees 43



### Company overview

Founded in 1947 with special spinning, we have been involved in the manufacture and sale of medical absorbent cotton and medical gauze for more than 60 years. As the first in Japan to use absorbent cotton for bedding, we devised the manufacturing method, production, and improvement of the product, and developed our original commercialized health bedding, "Pasima ®" (sheets) 30 years ago. Pasima was the first Japanese brand of bedding to receive "Oeko-Tex Class I" certification, which means that it is safe even if infants lick it, and it has been highly praised for its "good sleeping conditions" and "relaxing sleep."



### Selected fields



Creation of added value  
through technological  
and design capabilities

Developed a unique, high-value-added bedding with know-how  
that only a manufacturer of absorbent cotton can offer

By utilizing the experience of an absorbent cotton manufacturer, we developed the unique bedding "Pasima®" over a 10-year development period based on the idea that bedding made of medical absorbent cotton would be safe for the human body. Pasima® has the advantages of absorbent cotton's water absorbency (more than 1.5 times that of cotton blankets), moisture absorption, and heat retention with the flexibility and breathability of gauze, as well as reduced dust, ability to withstand more than 100 washes, and the absence of harmful substances, making it suitable for a wide range of people from infants with sensitive skin to the elderly. There is also evidence of good sleep effects through joint research with universities and other organizations. All processes, from cotton manufacturing to production, are done in Japan, and the company is committed to quality at the expense of productivity. We meticulously perform thorough refinement, removing oil and impurities from the raw cotton material. Through our unique expertise, we dedicate an entire day to the process that other companies complete in approximately one hour. We meticulously regulate water quality, temperature, and pressure to purify medical-grade, high-purity absorbent cotton. In the process of wrapping the absorbent cotton with gauze, we use our own know-how to strengthen the resistance of the absorbent cotton to washing without compromising its absorbency and other functional properties. We achieve both a needle pitch of half the regular size, measuring 2.5mm, and the desired strength for mattress pads. To ensure thorough removal of foreign substances during the cotton processing stage, we conduct visual inspections with utmost reliability. Due to our commitment to excellence, our products have a unique value proposition that sets them apart from conventional bedding. Despite being priced approximately 50% higher than regular products, we have garnered positive word-of-mouth through channels such as online shopping magazines and websites. As a result, our sales have been steadily expanding. We have received numerous accolades from countries and organizations, as well as the most stringent certification of "Oeko-Tex Standard 100" in its highest Class I category. The stylish "Pasima Baby" and the "pasimaZEN" brand, designed specifically for the French market, are also highly popular as gift options.



The three-layer structure  
of Pasima®

We respond to diversifying demands with the skills of experienced artisans and the latest equipment from Matsuura, Nagasaki to the world. Through speedy production of high-quality products, we provide the market with Japan's famous slacks we can be proud of for the next generations.

## Eminente Slacks Co., Ltd

### Company information

Location 1676-2 Uramen, Shisa Town, Matsuura City, Nagasaki Prefecture

Phone number +81 - (0)95 - 672 - 0326

HP <https://www.eminento.jp/>

Establishment 1960

Representative Shuji MAEDA, CEO

Number of employees 175



### Company overview

The company was founded in 1969 as the first company to be invited to Matsuura City, and we have provided more than 40 million pairs of pants to the Japanese market over the past 53 years. We have thoroughly studied the physique of Japanese individuals and differentiated ourselves through a meticulous 123-step process, creating three-dimensional silhouettes using our original pressing machines. In 2017, we launched "WESTORY", a MADE IN Nagasaki factory order suit brand consisting of three companies in the northern area of Nagasaki Prefecture. We aim to revitalize the economy and create employment by taking the most out of our advanced textile sewing technology.



### Selected fields



Overseas business  
expansion

Exporting Japanese-made slacks overseas to promote recognition of Japanese craftsmanship and company branding

We have been exhibiting at the world's largest men's wear exhibition held in Florence, Italy, once every six months as a manufacturer specializing in slacks with "Japanese craftsmanship," and have exported to 35 customers (retailers) in 14 countries so far, gaining high evaluation from retailers around the world. Slacks are considered to be items that lead to repeat purchases due to their product value and stable quality. Many long-standing business partners since the early stages of our exhibition have testified to the company's expertise and high quality. As for exporting areas, we export to Italy and other European countries, as well as to New York, Canada, and other fashionable areas. We also export to Asia and Africa, including Zimbabwe and Nigeria, where demand is expected to increase in the future, and we are building a base for further market expansion in the future. A major factor in our evaluation is the company's unique value created by the fusion of its deep attention to detail (deep knowledge of materials, silhouette, as well as other details), which is unique to a pants manufacturer, and the company's technological capabilities that support this approach. In addition, we expect further expansion of demand in the future due to more efficient production system (personal orders) and quick production solutions.



Exhibition at  
"Pitti Immagine Uomo"

A company that develops sustainable materials by upcycling unused resources from the world's largest agricultural crop, "sugarcane"

## Curelabo Co., Ltd.

### Company information

Location 2-14-7 Minatogawa, Urasoe City, Okinawa Prefecture

Phone number +81 - (0)98 - 988 - 3100

HP <https://www.curelabo.co.jp/?lang=en>

Establishment 2021

Representative Naoto YAMAMOTO, CEO

Number of employees 6



### Company overview

Our main business is upcycling bagasse, the residue of sugarcane, and developing fibers as a substitute for high-environmental-impact materials. Our main business is the development of textiles as an alternative to environmentally hazardous materials, from material development through to the development and sale of products using these materials. In addition to bagasse, we also produce fibers from various food residues such as pineapple leaves and malt feed using our patented technology. With Okinawa as a base, we are contributing to solving regional issues by converting unused resources throughout Japan into fiber.



### Selected fields



Sustainability  
(Environmentally-  
friendly)

Upcycling unused resources from the world's largest agricultural crop, sugarcane



















































































































Sugarcane, the key agricultural crop in Okinawa Prefecture, is the most widely produced agricultural crop in the world. It is also said that it has two to three times of the CO<sub>2</sub> absorption capacity as much as other plants, making it a plant that has a significant impact on the global environment. The "bagasse" generated during sugar production is mainly used as fuel in sugar refineries, but not all of it is used up, making it an unused resource for which effective utilization is still being sought. We purchase surplus bagasse from sugar mills in Okinawa Prefecture, dry and pulverize it, and then process it into *washi* paper in Mino City, Gifu Prefecture. *Washi* is processed by slitting and twisting it to produce bagasse *washi* yarn, which is then woven into fabrics in Fukuyama City, Hiroshima Prefecture. Fabrics made from bagasse are characterized by their unique luster and lightness. It also has excellent moisture absorption and quick-drying properties. It is also known to have deodorant and antibacterial effects due to the characteristics of *washi* paper and bagasse. All surplus bagasse and other materials generated during production are collected and processed into charcoal, which is then returned to farmers and sugar mills as soil conditioner and fuel, thus creating a circular economy in the sugarcane industry. Currently, as a fiber development other than *washi* yarn, we also are developing a recycled fiber made by extracting cellulose from bagasse. In addition, through joint research with Tokyo City University, we are working on our own LCA to determine the current greenhouse gas emissions (about 14.0 kg for jeans and 2.2 kg for Kariyushi wear), and by reducing these figures in the future, we aim to produce more environmentally friendly textiles and products. Furthermore, Kariyushi wear made from bagasse fiber received an award of excellence in the Okinawa Prefecture Superior Prefectural Product System in FY2022.




















































Upcycling of unused  
resource "bagasse"

# The 100 Next Leader Textile Industry Companies


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	18	Maruwa Textile Industries Co., Ltd.	  
	19	LEON INTERNATIONAL INC.	 
Kanagawa	20	MIKASA co., Ltd	  
Yamanashi	21	Terada Knit Corp.	
Nagano	22	FLEXJAPAN INC.	
Shizuoka	23	Furuhashi Weaving Co., Ltd.	 
Gifu	24	ASANONENSHI CO., LTD	
	25	KAWABO TEXTURED CO., LTD.	
	26	GISEN CO., LTD.	 
	27	TOHKAI THERMO CO., LTD	  
	28	MITSUBOSHI KEITO CO. LTD	   
Aichi	29	Aldex	    
	30	OSIKA Co., Ltd.	 
	31	SHINCO INC.	
	32	Chakyu dyeing Co., Ltd.	 
	33	Tsuyasei Kogyo Limited	
	33	NAKADEN KEORI CO., LTD.	 
	35	FUJII SEIJU CO. LTD	
Toyama	36	IAAZAJ HOLDINGS CO., LTD.	 
	37	K.C.I WARP KNIT CO., LTD	
Ishikawa	38	Kaji Nylon Inc.	 
	39	Kajirene Inc.	  
	40	San-etsu Co., Ltd.	
	41	SUNCORONA ODA CO., LTD.	    
	42	Shirae shokusan co., Ltd	 
	43	NOTOKINU CO., LTD.	  
	44	MAEDA CO., LTD	
	45	MARUI ORIMONO Co., Ltd.	 
Fukui	46	INOUE RIBBON INDUSTRY CO., LTD.	
	47	URASE CO., LTD.	
	48	Eiheiji Sizing Co., Ltd.	
	49	Kazuma, Co., Ltd.	   
	50	SAKAI AMIORI CO., LTD.	  
	51	SAKASE ADTECH CO., LTD.	
	52	SHINDO Co., Ltd.	 
	53	DAIKI CO., LTD.	  
	54	TOYOSHIMA TEXTILE Inc.	 
	55	Nittoku Inc.	
	56	MARUSAN AI CO., LTD.	
	57	YONEZAWA-BUSSAN Co., Ltd.	



Shiga	58	Ohtsuka Sangyo Material Co., Ltd.	  
Kyoto	59	OMOTOSENKO CO.,LTD.	
	60	colourloop Co., Ltd.	 
	61	Kawashima Selkon Textiles Co., Ltd.	
	62	DATO SHINGU KOGYO Co., Ltd.	  
	63	Tomiya textile corporation	
Osaka	64	ISOTOPE CO., Ltd	
	65	AITOZ Corporation	  
	66	ASAHIPO CO., LTD.	
	67	OTSU KEORI Co., Ltd.	 
	68	KINNO TOWEL CO., LTD.	 
	69	Sankei Meriyasu CO., Ltd	
	70	FUJII WAKAMIYA SEIJU CO., LTD	
	71	T. MASUMI & CO., LTD.	
	72	MIYAMA CO., LTD.	
Hyogo	73	Ueyama Orimono Corp.	 
	74	tamaki niime Co., Ltd.	 
Nara	75	Valley, Inc.	
	76	Okamoto Corporation	
	77	Suzuki Kutsushita Co., Ltd	 
	78	NISHIGAKI SOCKS CO., LTD	
	79	Knitwin Co., Ltd.	  
Wakayama	80	INTERIX CO., LTD.	 
	81	A-GIRL'S CO., LTD.	  
	82	KANEMASA KNITTING Co., Ltd.	
	83	MARUWA KNIT CO., LTD.	  
	84	YOSHIDA SENKO CO., LTD.	 
Shimane	85	Iwamizawa Gungendo Corporation	  


Okayama	86	AKASHI School Uniform Company Ltd.	    
	87	UCHIDA HOUSEI	
	88	KUROKI CO., LTD.	
	89	SHOWA CO., LTD.	  
	90	SEISHOKU CO., LTD.	 
	91	NIIYONICHI	
	92	Betty Smith Co., Ltd.	  
	93	MEIDAI Co., Ltd.	 
Hiroshima	94	ACCÈS CO. LTD.	  
	95	Asahicho Corporation	
	96	Sakamoto Denim co., ltd.	 
	97	SANYO SENKO CO., LTD.	  
Kagawa	98	EMOTO TEBUKURO Co., Ltd.	
	99	FUKUSHIN CO., LTD.	   
Ehime	100	IKEUCHI ORGANIC Inc.	 
	101	KOBO ORIZA CO., LTD.	
	102	SHICHIFUKU TOWEL Co., Ltd.	 
	103	Nishisenkoh Co., Ltd.	
	104	Maruei Towel Co., Ltd.	 
	105	WATANABE PILE TEXTILE CO., LTD.	    
Fukuoka	106	OZAKI PLEATS Co., Ltd.	
	107	Ryugu Co., Ltd.	
Nagasaki	108	Eminente Slacks Co., Ltd	
Okinawa	109	Curelabo Co., Ltd.	


 Sustainability  
(Employee-friendly  
Working Environment)

 Digitalization

 Development of new  
businesses and services

 Sustainability  
(Environmentally-friendly)

 Creation of added value  
through technological and  
design capabilities

 Overseas business expansion

