

Monozukuri gives Japan's niche players a competitive edge

While Japan has faced increasingly larger competition from the likes of China, South Korea and Southeast Asia in recent decades, many Japanese SME manufacturers have maintained large global market shares in B2B markets and niche fields characterized by high-mix, low-volume production. Working behind the scenes by supplying high-quality parts, materials and machinery, these niche companies are the so-called 'hidden champions' of Japanese manufacturing. They have and will continue to excel thanks to a strict adherence to the tenets of *monozukuri*, the Japanese manufacturing philosophy that centers around craftsmanship, excellence and the constant pursuit of innovation. From those engaged in automotives and electronics, to materials science, plastics, printing and textiles, these hidden champions have placed themselves at the forefront of global challenges such as sustainability and climate change.

"Japanese *monozukuri* brought about highly reliable and durable products. Japanese companies' success is also because of Japan's educational system and cultural standards," says Toshihiro Takai, President of Asano Laboratories, a leading manufacturer of thermoforming machinery that has made major headways in sustainability in the plastics industry. "The manufacturing industry in Japan is of such high quality because the people are very diligent and serious when it comes to manufacturing good-quality products. This is why Japanese companies are able to maintain competitiveness despite a harsh global market. Japanese SMEs excel in high technology, which allows them to maintain a high global market share."

Yoshinori Takahashi, President of New Cosmos Electric, agrees: "Japan has continued to successfully compete in a very competitive market by focusing on developing innovative products and consistently offering exceptional quality." New Cosmos' innovation has focused on alarm systems, with the company being the first to develop a long-life battery powered natural gas alarm using its proprietary MEMS gas sensor technology. "Senet and other communications providers like Itron have partnered with New Cosmos because our low power

consumption MEMS sensor offers a seven-year battery life (soon to be 10 years) and enough power to provide data to utilities via various wireless communication networks."

When it comes to high technology and innovation, perhaps the sewing industry would not be the first that springs to mind. Matsuya R&D, however, has pioneered automation and AI in the industry, with its high-tech machinery used to develop textile products such as airbags and medical devices, where safety is of the utmost importance. "Quality and performance are essential. This is why Japanese *monozukuri* is being used in the car and medical industries, where a simple mistake can cost a human life," explains Matsuya president and CEO, Hidetaka Goto. "Using all our sewing technologies, we produce sewn products such as blood pressure manometer cuffs, car seat covers, airbags and seat belts. We are proud to be the only company promoting production lines with fully automated sewing machines with AI technologies."

As highlighted above by Asano president Mr. Takai, culture and education are major factors behind Japan's manufacturing superiority; but so too is passion. "This passion for manufacturing that drives innovation in unexpected fields is a special feature of Japanese *monozukuri*," states Atsushi Nagai, President of Sintokogio, a 95-year-old company engaged in several areas including surface treatment, powder treatment and foundry solutions. "Our passion for manufacturing has been the driving force for our business since the beginning. The technologies we have developed over our history are now being used in completely different fields as technologies for the future. For example, a Japanese government consortium of major battery-related companies uses our casting technologies and machines for processes in battery production. For our surface treatment technology, we not only contribute to lighter-weight automobiles, but also to the production of solar panels and semiconductors. In addition, our powder and handling technologies are used in the development of smartphone parts."

Another key tenet of *monozukuri* focuses around listening, understanding and addressing customer needs, and Japanese companies like printing

press manufacturer Sakurai Graphic Systems work closely with customers in order to drive innovation. "In my opinion, *monozukuri* is about meeting the needs of the customer," says company president Ryuta Sakurai. "The most important thing is the customer's requirements rather than the technology and the market requirements. We are not only close to our customers, but they are also close to us, and we create together. This is for the benefit of both our company and our customers."

This co-creation process has enabled Sakurai to offer solutions tailor-made to client specifications, with its printing press machinery employed in a range of industries where the strictest standards are required. "We are looking at medical, security, automobile, electrical, wearable, or IoT sensor devices. Also, we are looking at biosensors, a sensor that determines and monitors blood sugar levels. We are focusing on the field of printed electronics, where conductive inks are applied. I believe that clients' requirements are becoming stricter and require higher accuracy," says Mr. Sakurai, while pointing out that "Sakurai's cylinder-type automatic screen-printing machines, which we have cultivated for some 60 years, have a global market share of over 90%".

Shigeharu Yamanaka, President of Okitsumo Inc., also sees working closely with the customer, in order to meet and even exceed expectations, as indispensable to *monozukuri* manufacturing. "We prefer to directly communicate with our customers for better product development. Our company has continued to develop a multitude of products by challenging the customers' ideas of their wants and wishes all the time. This attitude supports our *monozukuri* and differentiates us from our competitors," he reveals. Specializing in heat-resistant, heat-insulating and lubricant coatings, plus a range of other coating technologies, Okitsumo's acute understanding of market needs has seen the company develop carbon-cutting solutions for a range of applications, with Mr. Yamanaka's eye firmly on the growing electric vehicle (EV) market.

Indeed many Japanese manufacturers are gearing up for the shift towards EV and hybrid vehicles. "There will be higher de-



Yoshinori Takahashi,
President,
New Cosmos Electric Co., Ltd.

mand for materials with higher heat resistance, especially for EV and hybrid applications. We have procured these special materials and developed our processing and stamping technologies to process them," explains Masamitsu Uehara, President of Techno State, a renowned manufacturer of high-precision metal sealings for powertrains, engine and transmission assemblies. "Our capability in metal stamping and related mold and die technologies requires very high precision. These material processing technologies are what differentiates us from other manufacturers."

Tokuhatsu, meanwhile, continues to drive innovation to improve the efficiency of various types of vehicles, including EVs. "We want to make sure that more customers are aware of our technology and how it can be used in EVs," says company president Hitoshi Kotagiri. "In this sense, the technology we most want our customers to know about is the Ultra-Fine Texture Plate. Tokuhatsu has seen demand for its products combining ultra-fine texture technology and high-precision stamping double in five years. "The ultra-fine texture has excellent friction behavior and helps improve fuel consumption," adds Mr. Kotagiri. "Improving efficiency is an essential issue for EVs as well, so we believe our products can be used in units related to this kind of production."

A main supplier to Toyota, Futaba Industrial is the top company for exhaust systems in Japan. But with the shift to EV and hybrids, it has shifted more focus towards body parts, while also "investing funds and resources into developing new exhaust systems more suitable for the diversified power sources for pure internal combustion engine,

hybrid and plug-in hybrid cars," explains president, Hiroyoshi Yoshiki. Futaba has 30 production bases in North America, Europe and Asia, and has established a system to supply auto parts to major automakers in Japan and overseas. "The Futaba Group intends to maintain its position as a trusted and successful supplier," says Mr. Yoshiki. "Accordingly, we continue to enforce the basics of safety, quality and *monozukuri* to pursue optimization globally."

Going global has become ever-more important for Japanese companies facing a dwindling domestic market and contracting labor force due to the nation's aging population – be it in search of new customers or production bases. "A declining population inevitably means a shrinking market, so we must grow together, including overseas. We would like to preserve and develop the essence of *monozukuri* in Japan while fusing it with overseas cultures," says Kazumasa Iida, President of spring maker Hayamizu Hatsujou. Another answer to the labor pool shortage is automation. "No matter what industry, digital processes and automation in factories are increasing and we are adapting to the changes

in all our Japanese and international manufacturing sites," Mr. Iida adds.

Dhowa Technos, a leading provider of solutions for the Japanese manufacturing industry for more than 70 years, is supporting many Nippon companies with the shift towards automation and DX. "There are many social problems, but right now there are not that many young people who wish to work in the factories in Japan; this is a fact," says president Hirokazu Ono. "For that reason, automation will improve the efficiency of production amid the lack of manpower. On the other hand, there is a need to employ people with specific knowledge who work behind the scenes to make sure the machines work accurately. From that point of view, IT and DX specialists are needed rather than factory workers. That is the only way to transform the operation of many companies in Japan."

As one of many Japanese players reorienting towards the overseas market, Yokoyama Kogyo established a base in Thailand, which, according to president Eisuke Yokoyama, has given the company "a chance to rethink our *monozukuri*".

"Our *monozukuri* continues to produce essential building mate-

rials and automotive parts, and although they may appear to be disparate businesses, our *monozukuri* is connected through metals and processing methods," he explains. "Our global experience in Thailand has given us a perspective on how to build many strengths in smaller details yet at a wider range. And I feel that Yokoyama Kogyo's ability to consider global market options when commercializing its new strengths has become a new starting point for our *monozukuri*."

Specializing in the area of functional chemicals, rubber products and molded products for a range of industries – including automotive, construction, semiconductors, pharmaceutical and medical devices – Kohyei Trading's global expansion is focused on India, where it is constructing a new factory. "Currently, our biggest focus is the Indian market, where we are focusing on selling our products to local companies and not Japanese-affiliated companies," says president Yoshihiko Tsuchihashi. "Our sales in India will be about \$23 million this fiscal year and \$30 million the next fiscal year. Japanese companies in India experience a

difficult phase because the Indian market is very cost-sensitive and also there are many competitors. However, we have an excellent local partner, and we are actively investing to increase sales."

For Japanese companies expanding to India, China, Southeast Asia and beyond, leveraging *monozukuri* as a competitive edge proves essential. Yoshihiro Watanabe, President and CEO of Toyo Seiko – a leader in peening surface treatment technologies for the automotive and aerospace fields – stresses that *monozukuri* gives Japanese companies a unique ability "to see things from the customer's perspective".

"Thinking about customers is the number one rule that describes Japanese *monozukuri* and that is what gives rise to our corporate philosophy in many ways, as well as the philosophies of many other Japanese companies. Japanese companies think about long-term perspectives and about what else the customers might want and what else might be needed in the industry. That is what results in the best quality and service levels possible; and how we win customers' trust."

FUTABA: Driving innovation in automotive body parts

Since 1945, Futaba Industrial has pushed Japan's automotive industry forward with its high-quality body frame parts and exhaust systems.



"We have pursued global optimization based on the basics of safety, quality and *monozukuri*."

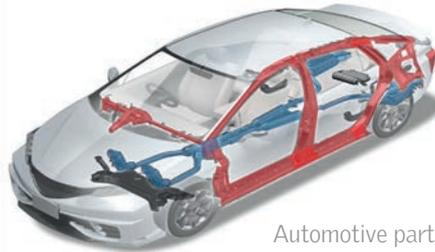
Hiroyoshi Yoshiki,
President,
Futaba Industrial Co., Ltd.

Automobiles are the true embodiment of a product being more than the sum of its parts, but the quality of these components is what allows this to happen. Through its high-performance

body frame parts and exhaust systems, Futaba Industrial helps Japanese automotive giants such as Toyota and Suzuki ensure quality in their vehicles.

Founded in 1945 by four engineers determined to dedicate themselves to the principles of *monozukuri*, Futaba is a valued supplier to Japan's automobile goliaths, utilizing its strong supply network and value-adding parts to help drive the industry forward.

The trust Futaba has developed with its customers has allowed it to expand across the globe, with 27 plants across North America, Europe and Asia. With this global presence, Futaba is able to keep its finger on the automotive pulse, working closely with clients to de-



Automotive parts

velop products such as ultra-high tensile cold press parts which require much less energy than parts made from aluminum or hot-pressed steel.



Exhaust system

The company is prepared for both the near and distant future of the automotive industry, as president Hiroyoshi Yoshiki explains: "Now we are trying to utilize modular exhaust systems for ICE (internal combustion en-

gine), hybrid and plug-in hybrid vehicles. We form combinations depending on the type of car, which gives us more flexibility in manufacturing and lowers capital investment."

The company's step into the electric vehicle (EV) market has been made alongside automotive manufacturers. Futaba plans to transform this change into opportunity by extending its value-adding domains beyond exhaust system parts, which have been its traditional area, into additional fields including body parts.

Through this combination of strong links with automotive manufacturers and innovative solutions, Futaba has ensured that no matter how technologies change, its business will always have a place on the road.

FUTABA
www.futabasangyo.com/en



Okitsumo's cutting-edge coating can cut CO₂ emissions by 20%

A company whose devotion to *monozukuri* is aligned with a commitment to caring for the environment, Okitsumo has been developing world-class coating technologies for nearly 80 years.



"*Monozukuri* is our philosophy and the foundation of our business. And for us, '*monozukuri*' is synonymous with 'challenge'."

Shigeharu Yamanaka,
President, Okitsumo Inc.

Okitsumo specializes in heat-resistant, heat-insulating and lubricant coatings, plus a range of other coating technologies, such as non-stick



Heat insulation coating and anti-corrosion agents. Founded in 1945, the company supplies clients in several sectors.

"Half of our annual turnover is from the automobile industry, including motorcycles," Okitsumo's president, Shigeharu Yamanaka, says. "The other half is divided into electronics, kitchenware and others."

Okitsumo's products are created following the principle of *monozukuri* – the spirit of perfection and innovation central to Japanese manufacturing. "*Monozukuri* is our philosophy and the foundation of our business," Mr. Yamanaka says. "And

for us, '*monozukuri*' is synonymous with 'challenge'."

Also key at Okitsumo is a commitment to a greener future. For example, the firm's revolutionary heat-insulating coating, HIP AERO, significantly cuts carbon emissions. "In some cases, its use in furnaces in the steel and non-ferrous manufacturing industries has reduced CO₂ by about 20%," Mr. Yamanaka explains.



Dry-film lubricant coating

In addition, Okitsumo developed a photocatalytic coating that harnesses light energy to break down pollutants on surfaces and in the surrounding air.



PTFE nonstick coating, "Polygo"

A company with a growing global presence, Okitsumo now has overseas offices in Brazil, China, India, Spain and Thailand – and aims to widen its production network, too. "We have our own production facilities in China and Thailand, and would like to expand to Latin America, West Asia, Europe and Africa," Mr. Yamanaka says.



okitsumo

www.okitsumo.co.jp

Toyo Seiko making waves with next-generation surface treatments

Since its establishment in 1975, Toyo Seiko has developed into a global leader in "peening" surface treatment technologies for the automotive and aerospace fields.

We often think of innovation as providing a smooth transition into the future, with new devices and processes being integrated seamlessly into organizations and society as a whole. However, in reality it takes impressive and consistent results for new processes to really take hold in a market, and Japanese shot-peening company Toyo Seiko is a good example of this.

Shot peening is a surface treatment for enhancing metals and composites, and Toyo Seiko has

built its reputation by developing industry-leading high durability shot for its customers. This forward-thinking process actually led to an initial drop in exports for Toyo Seiko as its durability means customers don't need to repeat their orders as often.

However, company president Yoshihiro Watanabe understands that by providing high-quality surface enhancement technologies, Toyo Seiko can gain its customers' trust while increasing market

share. "Understanding what our customers want is the departure point for everything we produce," states Dr. Watanabe.

Peening is widely used in the automotive industry and has applications in a broad range of sectors, including aviation, nuclear power and infrastructure. Indeed, Toyo Seiko has expanded internationally with production plants in Thailand and the United States, where it aims to develop its presence by focusing on customer satisfaction with JIT (just-in-time) delivery.

The company also developed a one-of-a-kind portable pneumatic needle-peening device called PPP. The device offers innovative "shotless peening", especially useful for bridges, and the results can be checked by Toyo Seiko's Coverage Checker device, meaning customers do not have to



"The mission of Toyo Seiko is to popularize the shot peening process for a wide range of industrial fields."

Yoshihiro Watanabe,
President & CEO,
TOYO SEIKO CO., LTD.

rely on visual inspections to ensure the desired outcome.

Toyo Seiko's mission is to challenge the market with its originality, converting doubters into fans of peening through the quality and durability of its processes as it expands across the globe.



Coverage Checker



PPP



<https://toyoseiko.co.jp>

SINTOKOGIO: Total foundry and high-tech solutions from a global and proud workforce

Using its existing technologies as a foundation for those of tomorrow, Sintokogio has created a comprehensive support system, one that ensures the safe and stable operation of its customers' equipment around the world.

Ever since the company was founded in 1934, Sintokogio's corporate philosophy has been "giving form and life to process materials." This, explains company president Atsushi Nagai, has been the guiding principle for what is the only company that has managed to automate the entire casting process, providing total solutions for foundries.

Of course, the business has had to evolve with the times, but a passion for manufacturing has driven innovation in unexpected fields, as shown with Sinto Smart Foundry™, which offers several solutions through the digitalization and connection of equipment.

"We use these connections to create smart factories that focus on quality control, a safe environment and the constant availability of machines," Mr. Nagai says. "Focus has shifted to include the use of software with quality control with the customers' final product in mind."

While the business started with foundries, it has expanded to surface treatment and metalworking areas relating to engines, shipbuilding, steelwork, die casting, windmills, machine tools and robots.

"With these businesses based on our original foundry customer base, we continue to provide productivity and environmental solutions that apply across industries," the president states. "Our electric cylinders, for example, are not only compact and precise, they also contribute to increased workability and the overall reduction of CO₂ emissions on the site. We continue to provide products that respond to customers' needs as well as the global movement for sustainability."

That balance between technological advancement and environmental impact of their activities is shown in the surface treatment technologies used in the electric vehicle



"Through the unique blend of hardware and software, our businesses unify society and the environment, supporting the way people live and work."

Atsushi Nagai,
President, Sintokogio, Ltd.

(EV) industry, contributing to lighter parts.

"Along with motor-related parts, our technologies are also used for next-generation batteries for EVs," Mr. Nagai explains. "Strengthening the stacking of battery powder for better adhesion increases power and we provide processes for production to top-ranking dry-cell battery companies. In particular, Sinto is the only company in the world that can perform all these processes for all-resin batteries."

With an aging population in Japan, the Sinto Group's president sees an opportunity in contributing not only to the changing workforce but also to the way business is done, both domestically and globally.

"One product that supports the shifting workforce and alleviates labor shortages is our force sensor for automation, which allows robots to recreate the nuanced movements of skilled workers," he says. "Major manufacturers like Fanuc, Yaskawa, Denso, Kawasaki and Nachi, among others, have approved our product as their official accessory.



Solutions for automation and carbon neutrality



Processes for battery production in the EV era

"Now, through the partnerships and friendships that we have cultivated over the last 50 years, we will bring our force sensors and other products and services to the global market, responding not only to the demographic shift in Japan but also to changing industries around the world."

The creation of those international partnerships are key to the future of the company, and with 40% of the 4,000-strong workforce outside Japan, this is already well underway.

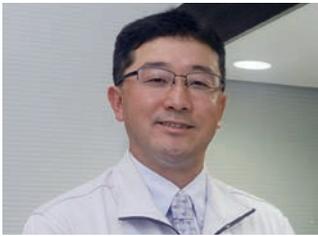
"There are two types of partners we are looking for," reveals Mr. Nagai. "Technical, to help us bring new ideas to life; and sales/marketing, to assist us in areas where we lack expertise. In Europe, the U.S. and Japan, our focus is on finding good partners in digital technology that we can combine with our technical strengths to provide the best solutions for customers.

"At the same time, we see production shifting to growing areas such as China and India, and we are adapting our original technologies to meet local needs. Markets around the world are greatly changing, so we need to shift the product mix to meet those requirements with our key technologies, developing partnerships and promoting co-creation with local companies that allows us to reach even more customers."

As the company edges closer to a century of business, Mr. Nagai has a powerfully inclusive objective in mind: "Our goal is for Sinto to be a career-building, life-enriching company, and I want everyone to say, 'My life was great because I worked for Sinto.'"

Yamaguchi Seiki: The *kaizen* kings of automotive plastic injection mold manufacturing

With over 50 years of expertise, Yamaguchi Seiki Kogyo has long been serving Japan's automotive sector, manufacturing high-quality molds through innovative methods and machinery.



"Our business philosophy revolves around *kaizen*, creativity, and human resource development to enable a sophisticated production system that satisfies our customer needs."

Taichi Yamaguchi, President, Yamaguchi Seiki Kogyo Co., Ltd.

Since its foundation in 1968, Yamaguchi Seiki Kogyo has been a leading supplier of plastic injection



Thanks to its mold manufacturing for the bumper fascia of the third-generation Toyota Century, one of the most popular chauffeur-driven cars in Japan, Yamaguchi Seiki has earned a reputation as a top-level company engaged in innovative mold design engineering, CNC machining and mold making.

tion molds, focusing on the manufacture of motor vehicle parts and accessories for Japan's automotive industry.

"Bumper molds for the exterior are our core products," says Taichi Yamaguchi, President of Yamaguchi Seiki Kogyo. "In order

to ensure quality, we make each mold up to its conclusion. We have a system in which each process is completed meticulously, and we call this 'self-completion'."

Renowned in the industry for its meticulousness about the design and production of its products, the company's molds are created using machinery, but finished by hand to achieve a superiorly smooth curved surface.



"As a mold manufacturer, *monozukuri* is about providing molds that satisfy and cater to our customers' needs. To achieve this, continuous improvement based on the *kaizen* philosophy is crucial. We have had

weekly *kaizen* meetings for the past 15 years to improve our competitiveness," explains Mr. Yamaguchi.



"Our strength is in acting with customer satisfaction foremost in mind and meeting their quality requirements. We will never say that we cannot do something for them, but rather we will think positively about how we can do it and take it as a challenge."



Springing into international markets

For over 60 years, Hayamizu has been making high-quality springs for a number of vital domestic and industrial uses. Now the company is focused on expanding its international presence.



Engine starter recoil spring

Whilst Hayamizu started out in 1953 making spiral springs for clocks – before going on to manufacture spring parts for various household items – nowadays, the company makes spring components for many different products in several industries.

"We are proud to say that we are the go-to company for spiral springs and constant force springs in Japan," says company president Kazumasa Iida. "We strongly believe that the spring has potential uses in a variety of industries. We are always ready to meet the needs of these different clients and sectors, and have the expertise to respond to customers' high technical demands."



Constant force spring

As proof of the company's technical capabilities and flexible and responsive processes, Hayamizu boasts a record in meeting strict quality requirements for seat belts, an industry in which it holds the top market share in Japan for spiral spring parts. With bases in China, Indonesia and Mexico,

the business is now aiming to further expand its presence overseas in order to meet a wide variety of international demands through deliv-



Cord reel

ering high quality and low price springs, serving a whole range of products and industries.

"Somewhere in your life as a consumer, it's likely that we support you through our spring components in products and machines," says Mr. Iida. "Based on our advanced technical expertise and experience as a

global company, we support the lives and safety of people around the world – from automobiles and industrial equipment to medical devices and domestic products."



Seatbelt



"We possess creativity, imagination and passion for manufacturing, and will invent brand new items with our unique technology."

Kazumasa Iida, President, Hayamizu Hatsujou Co., Ltd.



www.hayamizu-hatsujou.co.jp/english

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ZHUHAI POWER SPRING INC.

www.powerspring.cn/index.php?l=en-us

A strong *monozukuri* ethos brings Ultra-Fine Texture Plates to the world

Tokuhatsu, an NHK Spring Group affiliate, holds a dominant market share for spring washers in the Japanese automotive sector. However, its next target lies abroad.

You may not yet have heard of Tokuhatsu, but the company, led by its president Hitoshi Kotagiri is quickly making a name for itself as a niche leader in the spring washers arena, especially in the automotive industry where it has around 80% domestic market share. But with competition rife, Tokuhatsu has had to adapt to stay ahead of companies that imitate Japanese manufacturing.

"One answer to this challenge was the development of the Ultra-Fine Texture Plate, which can, for example, improve efficiencies for various types of vehicles, including EVs," says Mr. Kotagiri about the hugely significant strategic investment. "Another was the construction of the Sanda plant."

"Tokuhatsu has always excelled at delicate manufacturing," he continues. "Every single washer is made to



Ultra-Fine Texture reduces friction

respect not only Japanese Industrial Standards, but even stricter criteria to make it easier to use in our customers' assembly lines."

With those standards and expertise in place, the company now looks to future expansion.

"There is room to explore new possibilities in our Chinese subsidiary," Mr. Kotagiri says, with a caveat that there are geopolitical risks. "As for other overseas markets, we need to think about this



Spring washers and Tokuhatsu's products

as we move towards our 100-year target of reaching JPY 25 billion in revenues by 2038."

Making this goal a reality, while fulfilling the company's social and environmental responsibilities, will of course come down to the people that make Tokuhatsu what it is today, something Mr. Kotagiri is clear about.

"I want this to be a company whose employees are proud to



"We want to sell Ultra-Fine Texture Plates to the world."

Hitoshi Kotagiri, President, Tokuhatsu Co., Ltd.

work here, where they are nurtured to face the challenges ahead."



tokuhatsu.co.jp/en

Techno State: Precision parts manufacturing for an ever-evolving future



"Material processing technologies are what differentiate us from other manufacturers. We've accumulated a lot of know-how in 100 years."

Masamitsu Uehara, President, Techno State Co., Ltd.

Techno State's iconic products are retention nuts and sealing caps, demand for which is still expanding even to this day, some six decades after the company obtained a manufacturing method patent in 1960. "We are a specialized manufacturer of metal sealing and fastener parts

As a core element of the industry's supply chain, Techno State has focused on *monozukuri* to streamline processes and ensure that customer needs are met.



Bracket parts (complex shape) and our competitive advantage lies in our unique manufacturing technology and the special materials we use," says company president Masamitsu Uehara.

Techno State has collected production information and technical data globally for 100 years, and manages this data by creating a database at its DX Information Center. "At our Advanced Technology Center, we promote the development of new materials and propose high-spec

technologies and parts to our customers in order to respond to the energy transformation of powertrains," adds Mr. Uehara.

As the company president highlights, "the automobile industry is amidst a once-in-a-century transformation period" and "energy and material innovation is key" for the future. In addition, he emphasizes that "in order for Japanese SMEs to improve productivity in-



Reliable craftsmanship

vestment and labor share, the Japanese government must change Japan's unfair business practices."

"By building an industrial circulation structure between large companies and SMEs, Japan's industrial base can be strengthened and domestic production of daily necessities can be started immediately in case of emergency," he adds.

With development in automobile and 5G/6G technologies, evolution into a proposal-based solution business model can take Techno State forward. As Mr. Uehara concludes: "Our goal is to be a pioneering manufacturing company for the next 100 years."



www.techno-state.co.jp



Best-selling parts

Developing the next generation of machine tools for the needs of a changing world



"We feel that our global partners are waiting for technological innovation, and our technology will contribute to the growth of our customers."

Yoshihiko Otake,
President,
KIRA CORPORATION

Kira Corporation's knowledge, skills and capabilities have grown during its 80 years of history, with the company designing and building complete manufacturing systems using their CNC production centers.

A company known for its devotion to the Japanese concept of *monozukuri*, Kira Corporation was established in 1944 and has been a leading light in the machining centers industry since the 1980s, having sold products to clients in more than 40 countries around the world.

But as global society changes, Kira Corporation must change with it. With 90% of the company's clients coming from the rapidly shifting automotive industry, adaptation will be key.

Far from being problematic, however, company president Yoshihiko Otake views the industry's transformation as a major opportunity: "Kira will be one of the answers when the shift to EVs (electric vehicles) progresses and parts and manu-

facturing methods change drastically."

Providing advanced production systems to developed countries globally, Kira aims to expand its international operations, with successful service-providing sites already established in China, Thailand, Indonesia and the U.S.A.

As well as investing more resources in the Internet of Things, a move which sets Kira apart from other machine tool manufacturers, the company is also looking to the fragile material sector that deals with glass and ceramics, and according to Mr. Otake, is "particularly targeting the semiconductor field."



KIRA
www.kiracorp.co.jp

To that end, the development of an electrostatic chuck processing machine used in wafer manufacturing for the semiconductor industry would appear to augur well. Already, Mr. Otake states, it represents a "new pillar of earnings."

The company's future, in short, looks assured. In an age of rapid technological advancement, the coming generation of employees will inherit technology cultivated in the past, enabling them to create new market value with unique and innovative ideas – a development that, according to Mr. Otake, "is easy to imagine."

Asano Laboratories: Propelling plastic forwards

Through its industry-leading thermoforming machines and innovative techniques, Asano Laboratories is driving the plastics industry into the new world of sustainability and innovation while fulfilling its customers' needs.



FLC GS model

Pioneers push society forwards, but also assume responsibility of changing the course of when needed. Japanese thermoforming machine manufacturer Asano Laboratories is a prime example, a world leader in its field that understands the need to revolutionize the plastics industry.

Since its founding in 1954, the company has been designing, manufacturing and selling high-performance thermoforming machines, with an emphasis on new techniques and designs. Its products include a large-scale high-speed pressure and vacuum thermoforming system equipped with a camera and automatic packaging machine to detect defects on products; a pressure and vacuum thermoform-



"We can contribute to society by understanding the demands of the market, developing necessary products, and satisfying customers."

Toshihiro Takai, President,
Asano Laboratories Co., Ltd.



PLS GS model

ing machine (FLC); and a continuous trimming machine (PLS).

In line with its plastic recycling strategy, Asano Laboratories focuses on stretched PET (polyethylene terephthalate), whose strengths have enabled it to be used in the VRV (Virgin Recycle



TFH-1211-UD-EX

Virgin) sheet layer, which can be recycled as a single material.

Asano's innovative solutions with PET and biomass plastics (such as its heat set molding technology) have prompted its expansion overseas, with the company having provided more than 5,000 machines companies in 26



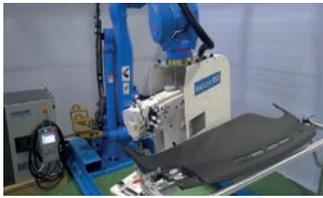
FIR for refrigerator door liner countries. Company president Toshihiro Takai understands the importance of local knowledge in new markets, having signed agent contracts with companies in China, Korea, Taiwan, Thailand and India. Asano is always looking for new partners, be they engaged in the upstream or downstream.

The company's new factory (set to start operation in April 2024) will increase production capacity by 50%, while its R&D team will continue to focus on environmental solutions and EV-based products. "We improve our machines and technologies to meet the demands of the ever-changing market," Mr. Takai concludes.

ASANO LAB
www.asano-lab.co.jp/eng/

Matsuya R&D: Japan's innovator of automated sewing systems

An R&D-focused enterprise, Matsuya is blazing a trail with cutting-edge automated sewing machines and robotics with built-in AI and efficient production at its core.



Automatic 6-axis sewing robot arm for car interiors

"Made by artisans for artisans, with every stitch precise and flawless." That is how the products of Matsuya R&D are described by its president and CEO, Hidetaka Goto.

With four decades of experience in the development, manufacturing and sale of sewing equipment, which is designed in-house, and with 1,500 employees globally, product design is at the heart of the business.

If automated sewing is the company's DNA, the modern organism is complex and wide reaching, with lines



Fully automatic driver airbag sewing station

in the automotive, medical and transport industries — including airbags for drones and cuffs for blood pressure manometers — and covering everything from stock control through to shipment.

"Our company has a unique business model," Mr. Goto explains, as its healthcare and automotive-sector clients can testify. "At first, we were just selling our machines, but now we produce our customers' products in-house.



Large-scale sewing machine (2500 x 700 mm)

They install machines purchased from Matsuya at our factories, so all the equipment in our factory is theirs. We only need to provide the workplace and the workers," he continues. In this way, growth ambitions are being realized.

"We are expanding throughout Asia while selling our machinery and automated robotics globally, with business in Central Europe, the U.S. and Mexico. We are also establishing a new subsidiary in Poland, although Japan will remain our base."

Quality and reliability are fundamental to Mr. Goto's goal of returning the industry to Japan. "In baseball, it takes three strikes



"We offer one-of-a-kind value as the leading company for sewing automation by utilizing our robot and IT software technologies."

Hidetaka Goto, President, Matsuya R&D Corporation

before you are out," he says. "But if an airbag malfunctions, one strike and you are out. Our services demonstrate our finesse."



XL Twin Laserhead CM

EMIC: The solutions partner for vibration and environmental testing

With test equipment and test solution services, EMIC is the partner trusted for improving the quality, reliability and safety of industrial products.



Shock Testing System for EDR

Safety is paramount in many industries, and this safety is usually ensured through high quality testing. Japanese firm EMIC is one of the companies pushing the world of

vibration and environmental testing forward, with its customers ranging from those in the automotive industry to space exploration.

Founded in 1971, EMIC has built its reputation as a manufacturing and solution-finding leader, testing in niche fields through a clear focus on quality. The company sources the most reliable parts available for its products and adheres to the strictest criteria in its testing to ensure its standards remain high.

The automobile industry provides a key pillar of EMIC's business. The

Nippon firm works with automotive giants Toyota, Nissan and Honda as they develop the electrification of their vehicles. EMIC understands that working on electric vehicles means respons-



Combined Environmental Reliability Test System

ing to the increased awareness of environmental issues around the world. As such, the company has also developed its groundbreaking Eco-Vibe system which can reduce energy consumption by up to 36%. As company president Seiji Ohno explains: "Tests require a huge amount of electricity, and Eco-Vibe is able to optimize energy consumption depending on the testing conditions."

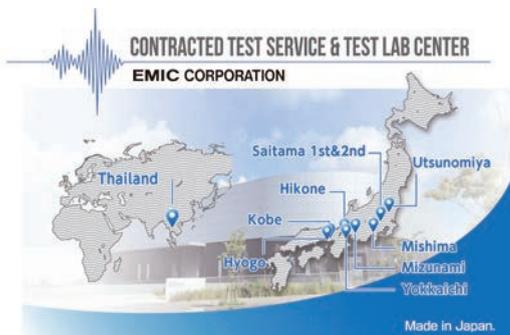
EMIC's dedication to quality has allowed it to expand its operation to Thailand, China, and the U.S., where it opened a subsidiary in 2017 that carries out installations and maintenance work on its products. The company also has a joint venture in China and is always



"As a company, we are very willing to accommodate clients' needs. Any segment which is related to testing equipment is a top priority for EMIC."

Seiji Ohno, President, EMIC Corporation

on the lookout for similar-minded companies with knowledge of local markets, with whom it can work as it continues its global expansion.



Realizing innovation with printing solutions for flexible packaging materials

For more than 50 years, Think Laboratory has been providing solutions for flexible packaging materials to more than 250 companies in 38 countries thanks to its ability to respond quickly to the diverse needs of its customers.

A mid-sized corporation with a reputation for environmentally-friendly solutions, Think Laboratory has been a significant player in the packaging industry for more than half a century.

However, it's the company's latest initiative which has the potential to cement its standing in the sector. The FX-eco project, which allows clients to obtain samples and print their own packaging and branding materials without the need for a specific printing company, might sound controversial.

In fact, as Think Laboratory presi-

dent Tatsuo Shigeta explains, far from creating disquiet in the printing sector, cutting out third party companies has turned out to be a "mutually beneficial" model: "For large-scale companies, it's not really effective to do business on a small-lot level. They don't want to have to take orders that require a rapid response on a small scale."

Besides, the company's reach extends beyond mere printing. Mr. Shigeta again: "What's important for us is to really be able to ensure that we can provide services that

are not just limited to printing itself, but also take care of any after-sale services that are involved." These include packaging, laminating and the various stages in between.

While COVID-19 has had an impact on the way Think Laboratory does its business, it has also provided a much-needed opportunity for the firm to reflect systematically on its practices. To this end, the company has already responded to the need to optimize energy efficiency and reduce ink consumption.

However, well-documented social issues such as Japan's population decline and labor shortages mean the printing industry



Print samples by FXIJ



FXIJ type 1000 FullAuto SP Inkjet Printer with water-based ink

is changing rapidly in other ways too. The current system may not be tenable in ten years' time. Think Laboratory's FXIJ model, if successfully implemented, could offer a clear path forward.



Tatsuo Shigeta, President, Think Laboratory Co., Ltd.



www.think-lab.com/en

A new innovative approach with Silk Screen Technology



Sakurai Graphic Systems is a long-established Japanese printing press manufacturer that has been in business for 75 years. The company has a 90% share of the global market for cylinder-type fully automated screen printing technology and is widely known by customers in the automobile, biosensor, wearable device, and security-related industries. Amid the COVID-19 pandemic, Sakurai is taking advantage of the know-how it has accumulated over the years to take on the challenge of creating a fresh business model within our industrial field. This new model is a "prototyping and contract manufacturing" business that supports customers' new product development.

There are a wide range of needs, demands and issues on the market – for instance, when outsourcing contractors will not accept a client order because the order quantity is too small, or when customers are unable to inspect samples when dealing with a large number of different products.

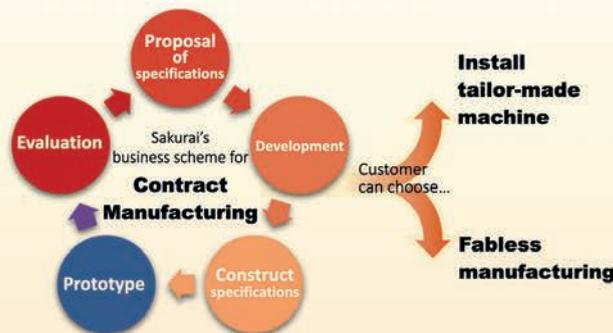
Sakurai will hear and address such needs, constructing a tailor-made manufacturing line which perfectly matches the specifications that the customers require. After the customers evaluate the effectiveness of a prototype, Sakurai will start mass production and install the line in the customers' factories. As

part of this process, Sakurai can assist clients through all stages of production beginning with product development.

Aside from this, Sakurai also has a process in which it conducts product development and the initial mass production independently as a contract manufacturer, and delivers the line after verifying its viability. One of the advantages of this process is that the customers are able to develop a product without making the initial investment. The other advantage is the customers can start the production earlier because of the more prompt delivery of the production line.

In both cases, Sakurai is confident that this tailor-made production system enables customers to develop new products without restraining costs. Sakurai has already entered into a contract based on this business model with a major chemical manufacturer, and has also received inquiries from companies in several industries.

This model will undoubtedly establish a win-win relationship between Sakurai and its customers, since they will be able to expand their business through utilization of Sakurai's skills and manufacturing facilities.



Clean room in Sakurai's Gifu factory for contract manufacturing

This clean room is a 60-meter-long isolated area with an extremely low concentration of airborne particles that pose contamination risk. The room boasts not only printing machines, but also laminating and punching machines.

For more information, please contact Hideyo Itoh
Email: h_itoh@sakurai-gs.co.jp or TEL: +81-3-3643-0490



DHOWA TECHNOS: The manufacturing industry's most trusted supplier

Factory automation and optimization to remain high priority as respected company gears itself up for overseas expansion and structural change.

Founded in 1948, Dhowa Technos has been a leading provider of solutions for the Japanese manufacturing industry for more than 70 years.

A company that prides itself on obtaining customer satisfaction, Dhowa has been able not only to adapt to the social changes that have characterized much of Japan's post WWII transformation, but to predict such shifts before they occur.

Take automation, for example, a development which, according to company president Hirokazu Ono, "has been in the minds of many Japanese enterprises for a long time now". By foreseeing problems such as population decline and labor shortages, Dhowa was able to get ahead of competitors by making automation accessible to smaller-sized businesses, rather than focusing exclusively on companies with big budgets and global brands.

Much of the debate surrounding automation is misunderstood, in any case. Social issues may be a factor, but, as Mr. Ono states, it's also about "scaling up production size to the level of efficiency that best serves the needs of customers". As for potential job losses, he is sanguine. "The fact is that right now there are not many young people who wish to work in factories in Japan."

Not that Dhowa is a closed shop when it comes to human employees. Far from it. The fact that factory automation and optimization remain a focal part of the company's business means there will always be a place for workers with specific knowledge, such as IT and DX (digital transformation) specialists.

This is particularly true of the steel industry where alongside China and India, Japan is an established global player. In the face of international competition, Dhowa has been providing solutions to those companies facing new challenges, and has recently introduced drones with



"It is crucial to have partners and it is crucial to have them provide the best solutions to customers."

Hirokazu Ono,
President,
Dhowa Technos Co., Ltd.



Inspection and flight services by Dhowa Techno's Drone Business



Collaboration with Kitakyushu System Integrator Network for Robot Innovation



Robotization for FA, consulting firm for all small and medium-sized enterprises



Explosion-proof submersible motor by EIM ELECTRIC CO., LTD. (Group company)



Contributing to the U.N. SDGs through development of the fast food freezing business

surveillance and maintenance features. With digitalization and decarbonization increasingly important aspects of the steel industry, Mr. Ono is keen to

highlight the "crucial" role that DX plays in data management.

While Mr. Ono sees potential stumbling blocks when it comes to Dhowa forging foreign alli-

ances with other companies, international expansion is still very much on the company's immediate agenda. "Number one target areas are ASEAN and Southeast Asian countries," says Mr. Ono, pointing to the fact that company operations have already been established in Thailand, a country that is experiencing similar demographic issues to Japan.

America, of course, remains an attractive prospect. EIM ELECTRIC, a Dhowa group company which obtained explosion-proof certification for submersible motors in 2008, is planning to expand their U.S. base in the coming year.

There is much to celebrate at home too, however. While some Japanese companies arguably spread themselves too thin, there is room for significant domestic collaboration. Mr. Ono elaborates: "We feel the need to have synergies throughout many business profiles, as it allows us to connect with many other partners and companies that do similar work or even have technologies that Dhowa Technos lacks."

More recently, collaboration has occurred between Dhowa and a venture company specializing in freezing technology. Addressing issues such as food shortages through cooperation with other firms is helping industry players to work towards achieving the U.N. Sustainable Development Goals.

As Dhowa looks forward to its 80th anniversary, Mr. Ono is very clear that change is afoot. "I would like to change the perception of the company," he says. "We want to be known as a consultancy from now on."



Yokoyama Kogyo: Leaving its stamp on the automotive and construction industries

The developer of patented 'smart forge press' technology, Yokoyama Kogyo is at the leading edge of innovation in the metal stamping industry.



Press process

Yokoyama Kogyo is a leading Japanese specialist in metal stamping and welding. Founded in 1951, the company initially focused on supplying the construction industry – it manufactured roofs, walls and gutters – before branching out into automobile parts, specializing in metal parts for automobile seats.

Yokoyama's automotive division has recently developed proprietary stamping and polishing technology called the 'smart forge press' (SFP), a cutting-edge system that incorporates the latest advances in automation.

There are two advantages of Yokoyama's SFP. One is the quality of its cross section. The quality of surface roughness is akin to polishing, so polishing can be



Smart forge press

replaced by stamping. SFP can also stamp high-tensile steel easily, so it can help to reduce the weight of vehicles.

The benefits of the SFP are felt in another area of business at Yokoyama: the manufacture of cocktail preparation tools for BIRDY., the firm's bartending products brand.

The technology's metal polishing capabilities lead to



BIRDY.

ultra-smooth cocktail shakers that blend ingredients more effectively. "Currently, BIRDY. products are exported to 22 countries. I am delighted with this achievement as it proves the success of our innovation," Mr. Yokoyama explains.

In 2010, Yokoyama established Yokoyama Kogyo Thailand which focuses on automotive parts, and as it seeks to grow its international presence and its portfolio of clients, the company is targeting expansion both in Asia and beyond.



"Our goals for the next ten years are for our automotive business to start doing business with European mega-suppliers, and for BIRDY. to be exported to 50 countries."

Eisuke Yokoyama, President, Yokoyama Kogyo Co., Ltd.

"Our goals for the next ten years are for our automotive business with European mega-suppliers, and for BIRDY. to be exported to 50 countries," Mr. Yokoyama says.



www.yokoyama-co.com/e/

High-quality shafts for a raft of industries

While many regional competitors replicate Japan's manufacturing process with lower quality standards, YSK is maintaining its status as a leader in shaft manufacturing, providing high-quality products to the world.



YSK's factory in Thailand

A small firm established over 50 years ago, YSK is still mixing it with the biggest players in the linear motion technologies sector. Its secret? Ease of use. Achieving comfort for those tasked with assembling YSK shafts is vital.

As company president Naoto Ishikawa explains, this is done by "exploiting the exact tolerance of the material and applying that consistently to all shafts".

As for facing up to Japan's well-documented demographic issues (with the aging population prompting a contraction in the workforce), Mr. Ishikawa has a clear solution: "At YSK, we are thinking about

how women can contribute to changing the way of thinking and doing things in Japan, where business is male dominated."

At the same time, the concept of *monozukuri* will be essential in maintaining high levels of quality in production across existing factories in Japan and Thailand. Ac-



High-frequency hardening machine



Linear shaft

cording to Mr. Ishikawa, workers "should think about how our products will be judged by our customers, and that we need to develop them so that they will be praised by users".

While COVID-19 has impacted YSK's international strategy, the firm has pledged both to continue making high-quality shafts at affordable prices and to enter into a joint business venture with a Chinese firm. Key for Mr. Ishikawa is ensuring that "industry leaders" across the globe employ YSK sliding shafts.

Employee satisfaction is just as important, however. To this



"We tell our workers, whether in Japan or Thailand, to be proud of implementing *monozukuri*, which is the bedrock of the manufacturing process."

Naoto Ishikawa, President and CEO, YSK, Co., Ltd.

end, Mr. Ishikawa hopes one day to build a new company headquarters that YSK workers can be proud of.



www.shaft.co.jp/english

Kohyei Trading: More than the sum of its parts



"A sense of ownership: this is the key to our success."

Yoshihiko Tsuchihashi,
President,
Kohyei Trading Co., Ltd.

Kohyei Trading – a trading company founded in 1926 and based in Kobe – has advanced to the present day specializing in functional chemicals as the core of its business.

"Among our product line up, raw chemicals sell the most," says Yoshihiko Tsuchihashi, the

Combining expertise in specialized trading, chemicals and raw materials, Kohyei Trading provides total support, from upstream to downstream production.

company's president. "We have been able to develop a certain synergy within our multiple divisions. For example, we purchase synthetic rubber from various synthetic rubber companies and sell it to automotive companies.

"But we also provide these synthetic rubber companies with the raw material and chemicals needed to manufacture rubber. We started off just buying rubber from them, but later began selling upstream materials to them too.

He adds: "We also supply our customers with raw materials so that they can provide us with rubber polymer and we send that rubber to another company to make products such as industrial components, machinery and devices. We then take these products and sell them to end-users."

Combining its expertise in such specialized trading, chemicals and raw materials, Kohyei

Trading today provides total support, from upstream to downstream production. "Being present at every phase of production has helped us expand our molded and composed products," says Mr. Tsuchihashi.

Having taken over the business as a descendent of its founder, Mr. Tsuchihashi has always considered contributing to society to be a matter of course in the business of making raw materials, describing the company's philosophy with the phrase "*Cho Ni-ryu*".

"Cho Ni-ryu is entirely my own term for what we do. In Japanese, it broadly means being more than the sum of your parts. The idea is that, while we on an individual basis are not necessarily the elite, our teamwork as a business makes us something even greater. We are focused on building a value system of our own, with self-re-

liance as a company, and without being swayed by society's existing standards."

In addition to investing in training, organizational response and cultural reform, Mr. Tsuchihashi says Kohyei Trading invests in its personnel with an eye on further improving efficiency, as well as systems development. "This is all to help our employees absorb our groundings as a trading firm specializing in chemicals, and to strategically acquire expertise and know-how," he says.

"Going forward, it is my intention to transform this company into one that more broadly and more profoundly meets the diverse needs of all of our trade partners, including our clients and suppliers, with our services."

 **Kohyei Trading Co., Ltd.**
kohyei.com/en

ZipperTubing: Meeting the needs of industry

ZipperTubing's wire shielding supports safety in semiconductor manufacturing, construction machinery and many other key sectors.



Heat-shielding products

ZipperTubing – the associate company of Kohyei Trading – is a manufacturer of EMI shielding, specialized heat shrink, cable bundling and heat shielding. From re-enterable wraparound to pull-through jacketing, and from snap button to continuous zipper closures, ZipperTubing meets the needs of a wide range of industries and application requirements.

"Whether it is a cable bundling solution that will be installed on a robot or an EMI shielding solution that will be used on a spacecraft, Zipper-



Shield foam

Tubing creates the solutions for our customers," says Yoshihiko Tsuchihashi, President of parent company, Kohyei Trading.

With ZipperTubing this year celebrating its 50th anniversary, the manufacturer today has set its sights on achieving greater overseas expansion and strengthening its market positioning domestically. "Internationally, we will focus on India and Southeast Asia because of the population growth in these regions," explains Mr. Tsuchihashi. "The mid-term plan would be combining two factories into



Shield tubing

one. We will have a bigger production area and can allocate specific areas to manufacture products for Kohyei Group and Kohyei Trading."

Through R&D, the company is also now aiming to transition from a product-oriented approach to a market-oriented approach. "What we are now aiming for is that Kohyei Trading can determine the needs of a required product, and for ZipperTubing to make the product," says Mr. Tsuchihashi.

"ZipperTubing and Kohyei Trading are already a collabora-



Thermal barrier 3D-sewn products

tion. Kohyei Trading has a dedicated sales team for ZipperTubing products, and we have other sales teams for other departments such as chemical products and molded products. All these departments take care of the customers' needs and demands in the automotive and construction fields in a cross-sectional way. Based on those needs, we delegate which division will sell which product."

 **ZIPPERTUBING(JAPAN), LTD.**
ztj.co.jp/en

Nihon Handa: Tailor-made soldering solutions of the highest quality

Nihon Handa manufactures reliable, leading-edge soldering and sintering materials, working closely with its clients to ensure complete satisfaction.



Offering reliable products for versatile applications

Founded in 1910, Nihon Handa is a major Japanese supplier of soldering and sintering materials, chiefly delivering to manufacturers in the electric appliance, electronic equipment and automotive sectors.

At Nihon Handa, establishing a close partnership with clients is key. "We've distinguished ourselves in the soldering industry for many years because we listen carefully to our customers' needs and offer them tailor-made solutions," Chairman Makoto Asami explains.

"To meet the customer's request, it's important we provide a comprehensive solution. We want to know all about the end product and how it's being made – and we might even propose a new construction method."



Always looking for solutions for customers

For Nihon Handa, keeping pace with product miniaturization has been a major challenge over the past 50 years. "As parts have gotten smaller over time, soldering processes and technology have also adapted and we have contin-

ued to innovate," says President Hidetomo Asami.

Nihon Handa's innovation is not limited to soldering materials. "We were among the first to develop a silver sintered bonding material that has been attracting attention in recent years. We also launched the MAX series, which enables non-pressure bonding by heating at 200°C: It has been used as a die attachment material for optical devices such as LEDs and high-frequency devices used in 5G," adds Hidetomo Asami.



Innovative silver sintering paste MAX series

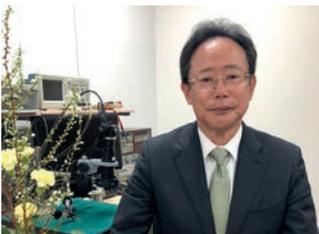
"We've been distinguished in the soldering industry for many years because we listen carefully to our customers' needs."

Makoto Asami, Chairman & CEO (left),
Hidetomo Asami, President & COO (right),
Nihon Handa Co., Ltd.

Furthermore, Nihon Handa has also developed a new product that allows wide-area chips to be directly bonded to copper electrodes without pressure in the MAX series. This new product is expected to be applied to power devices for in-vehicle applications where large currents flow.

NihonHanda
www.nihonhanda.com

Sankyosha champions analog solutions as a key to future innovation in a digital world



"We've decided to team up with startups through this open innovation platform, and that is something that we are really looking to do more proactively moving forward."

Toshiaki Kawanabe,
President, Sankyosha Co., Ltd.

In an increasingly digital globe, software has come to dominate in the world of digital circuit products, but true craftsmanship

With Japan's highest skilled engineers in the field of analog circuits, Sankyosha can successfully support cutting-edge technologies reaching their highest potential.

can still be found at the analog level. One of the distributors continuing Japan's long history of expertise and artistry in analog solutions is Sankyosha.

Founded in 1958, Sankyosha prides itself on not only providing distribution for its customers, but also offering technical advice and support across a wide range of industries. Company president Toshiaki Kawanabe explains Sankyosha employs Japan's finest analog engineers, adding: "When our clients have a question, they can contact our engineers directly and we will answer their questions extremely thoroughly."

The company's dedication to the principle

of *sampo yoshi* – ensuring every entity involved in a business should prosper – means its sales division is also highly trained in diagnosing issues clients face with their analog solutions ahead of time, and works with customers to solve these problems. Sankyosha's strategy involves targeting a multitude of startups and SMEs, helping it avoid the fluctuations and fortunes of being tied to a single larger client.

SOXAI



Sankyosha collaborates with companies from a wide range of sectors, recently working with SOXAI Inc. to develop an IoT wearable ring and RIVERFIELD Inc. to develop a surgical assist robot for example, and it is currently involved in over 50 such projects. President Mr. Kawanabe sees the medical, healthcare and safety industries as the company's priority sectors moving forward as it works to drive innovation in the field of analog circuit design through its comprehensive distribution work with SMEs and startups.



RIVERFIELD's surgical assist robot

As a distributor which offers technical advice,

SANKYOSHA
www.sankyosha.co.jp/en