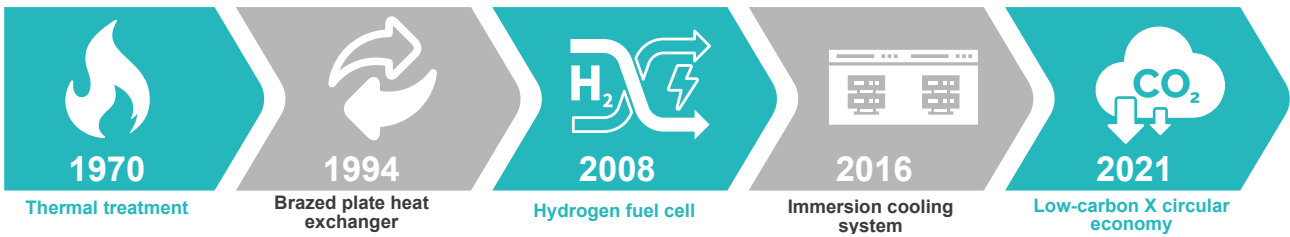
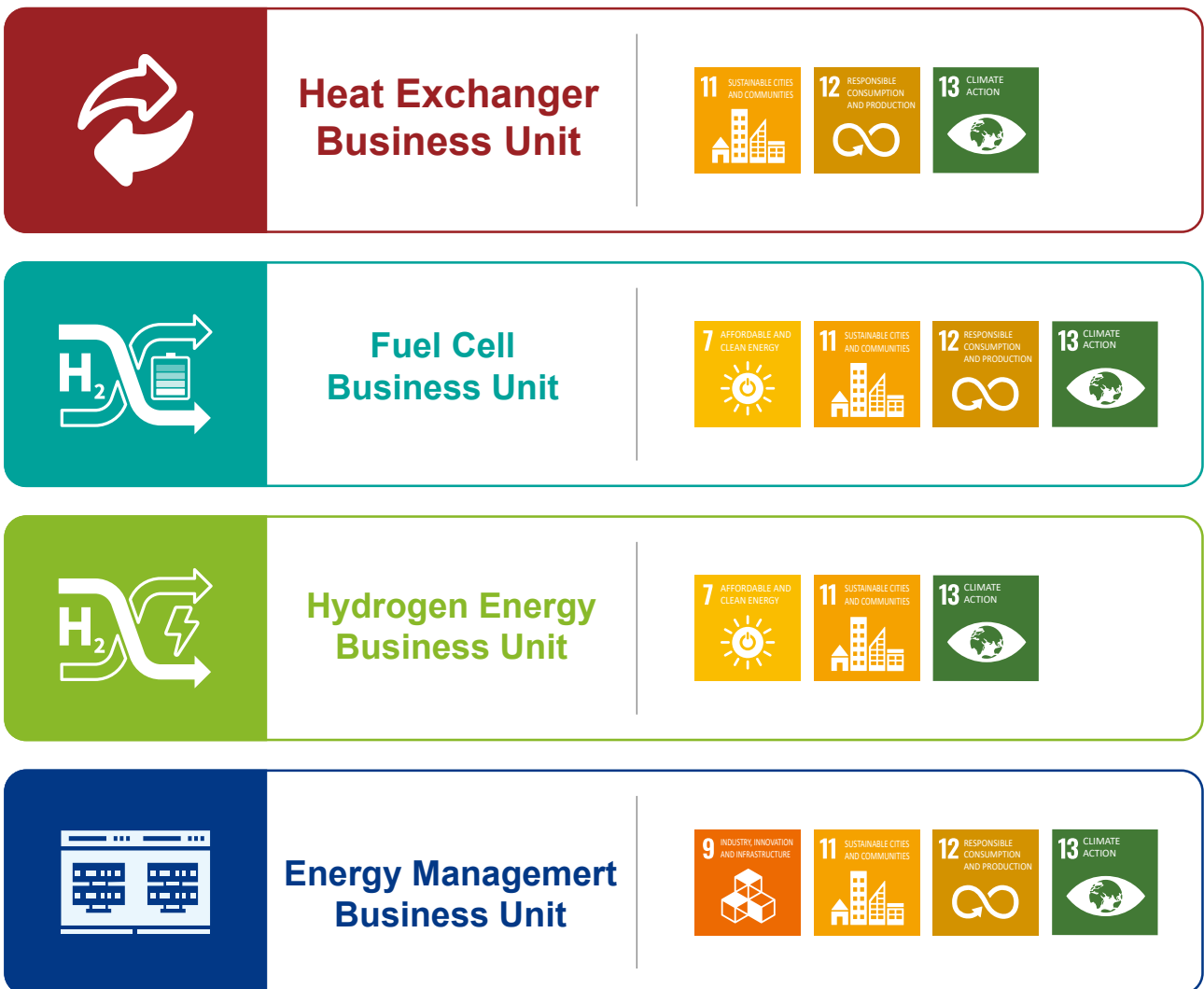


3.1 Innovative R&D

Kaori prides itself for being able to persistently innovate and support the industry's transition to net zero emissions.



The Four Main Business Segments Enforcement of UN SDGs



Sustainable Products



Brazed Plate Heat Exchangers

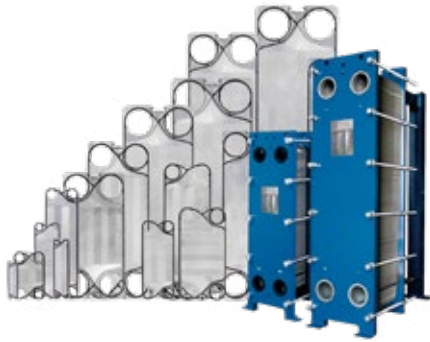
Featuring wave patterns stamped on 304 or 316 stainless steel materials, Kaori's brazed plate heat exchangers are made through multi-point brazing of stainless steel with copper or nickel in a vacuum furnace, thereby allowing them to operate under extreme pressure in a very small chassis while making them especially suitable for refrigeration and air conditioning systems. Meanwhile, the wave patterns stack on top of each other to form conduits that create a turbulent flow of the coolant even at low flow speeds. This enables the heat exchangers to achieve high thermal conduction efficiency in a small heat transfer area. In systems that require high efficiency, the use of brazed plate heat exchangers may further increase the coefficient of performance (COP) and reduce the overall space needed to install the modules, which in turn lessens the need for fluorinated greenhouse gases (F-GHG) and is a more efficient and environment-friendly design.

Industry Applications

- Air conditioning
- Semiconductors and electronics
- Refrigeration
- Energy and utilities
- Machinery
- Transportation
- Medical equipment
- Data centers

Technological Highlights in Environmental Sustainability

- B series heat exchangers reduce coolant requirements and increase the COP of heat pumps and chillers.
- Double-wall plate heat exchangers have been developed for use as heat pumps in European and American homes. Using a patented plate design, a special drainage is created within the heat exchanger so that any internal leakage of fluid on one side can be drained directly without mixing with fluid on the other side, which may damage important components or pose harm to the user. The product also offers multiple advantages such as low coolant requirement, high COP, and suitability for next-generation environment-friendly coolants and natural coolants.
- Kaori's 3-in-1 plate heat exchanger for high capacity refrigerant air dryer has completed technological and pressure resistance certification, and has the potential to save energy and reduce coolant requirements in high capacity units.



Gasket Plate Heat Exchangers

Offers better heat conduction in a smaller size compared to spiral type or shell and tube type heat exchangers. With proper design, gasket plate heat exchangers can be more efficient at transferring heat and easier to clean, maintain, disassemble, and install while retaining the potential for capacity expansion.

Industry Applications

- Petrochemical plants
- Oil refineries
- Steel
- Power generation
- Freight
- Semiconductors
- Metal processing
- Food
- Refrigeration

Technological Highlights in Environmental Sustainability

- Energy efficiency and conservation:
The special pattern design enables a high level of turbulent flow even at low flow speeds, therefore delivering a number of advantages including efficient heat transfer, reusability, and a longer lifespan of at least 10 years.
- Heat recycling:
Data centers, for example, may use a combination of immersion liquid cooling and gasket plate heat exchangers to recycle heat and increase overall energy efficiency by more than 40%.



Critical SOFC Components High-efficiency Fuel Cell Recuperators

Heat-resistant nickel-base superalloys are assembled using Kaori's proprietary brazing technology in conjunction with advanced TIG welding to allow heat transfer under high temperatures. The material achieves a thermal cycle efficiency of 60%. This demonstration of exceptional brazing and TIG welding techniques has gained recognition from green manufacturers worldwide and made Kaori a long-term strategic partner.

Industry Applications

A solid oxide fuel cell (SOFC) is a form of distributed energy system which involves generating and supplying power directly to local users based on their requirements. Kaori's solutions offer a high degree of versatility that make them suitable for medium- and small-size energy conversion systems of various purposes. Ships, for example, may install fuel cell power systems to replace diesel power.

Technological Highlights in Environmental Sustainability

- Advantages such as high performance, stability, low emissions, zero pollution, waterless, and long lifespan have been validated through commercial operation by reputable customers for more than 10 years.
- Thermal reactors for high capacity SOFCs increase power generation efficiency to 65% from the previous generation.
- Thermal reactors have been developed for hydrogen generation and energy storage.
- Application in vessels helps the shipping industry achieve energy and carbon reduction goals.



Reformed Methanol/Hydrogen PSA System

The hydrogen generator takes in a methanol solution and applies a process called pressure swing absorption (PSA) to purify and generate high-purity hydrogen (99.999%). It is widely used in industrial processes that make use of the gases generated, such as hydrogen reduction furnaces, heat treatment furnaces, semiconductors, and optoelectronics.

- 30-4.5 m³/hour
- Generates hydrogen at low pressure (<5 kg/cm²) with rigorous safety protection
- Uses methanol (<5%) as the raw material; the hydrogen produced can be used immediately and does not require a hydrogen storage tank
- Replaces pressurized hydrogen canisters; equipment investments can be recovered in as little as six months



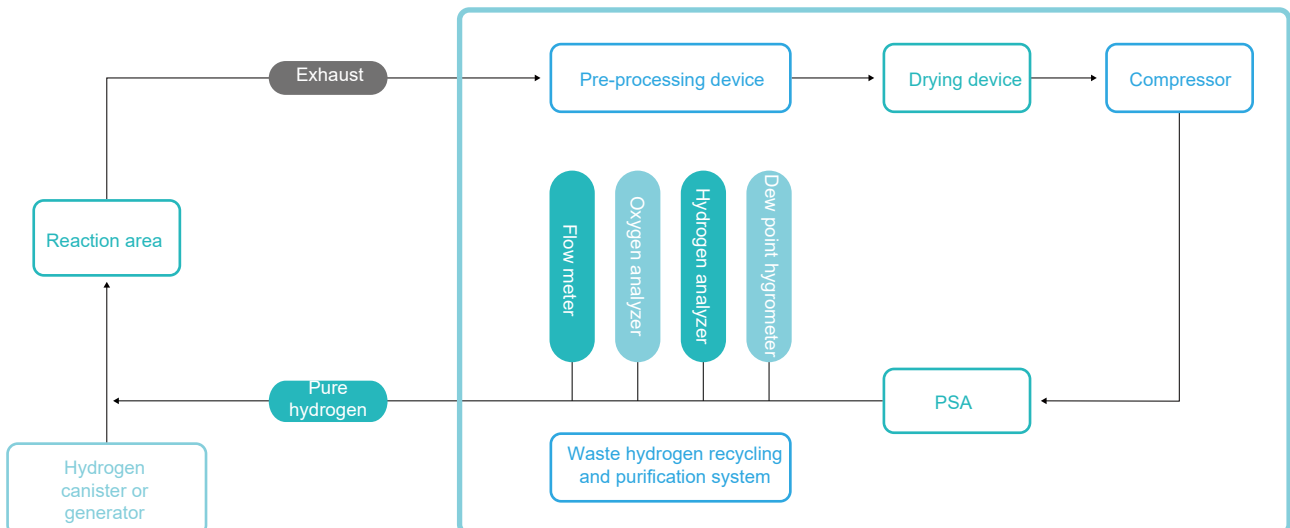
Reformed Methanol/Proton Exchange Membrane (Pem) Fuel Cell System/Ammonia Fuel Cell (AFC) System

- System size is 30-50% smaller compared to products of equivalent grade
- Energy consumption ≤0.5 kW and noises ≤ 65 dB (at 5 kW output)
- CO emission ≤20 ppm (low exhaust; no NOx and SOx)
- Safe and stable: Overall power and thermal efficiency >85%; continuous operation for >72hr
- Applications: Backup power for remote areas or disaster sites; reserve power for critical facilities



Industrial Waste Hydrogen Purification/Recycling System

- Recycling and reuse: eliminates the need to remove hydrogen or transport hydrogen in pressurized form; approximately 70% is recycled, which lowers carbon emissions
- Greatly reduces the need to supply hydrogen through tankers/canisters; can be replaced with Kaori's methanol hydrogen generators
- Recovery period of equipment investment is about 2.5 years





Organic Solvent Hydrocracking System

By treating organic solvent waste, hydrogen can be recycled and reused to generate base load power. Waste silicon from semiconductors and solar panels can be processed to produce hydrogen at 99.9% purity; using Kaori's purification system, the level of purity can be increased to 99.999%, which makes the hydrogen usable for industrial and power generation applications.

Industry Applications

- Supports hydrogen-based production procedures or by-product hydrogen: for example, hydrogen reduction furnaces, heat treatment furnaces, semiconductors, optoelectronics, powder metallurgy, metal wires, and steel industries.
- Organic solvent waste fluids of the electronics industry (semiconductors, circuitry, LCD panel, etc.) can be pre-processed and cracked at high temperature to separate hydrogen for power or heat.

Technological Highlights in Environmental Sustainability

- Ammonia cracking and hydro power
Clean energy research involving the use of ammonia as hydrogen fuel carrier has gained popularity around the world in recent years due to the ease of storage, ease of transportation, and better economic viability of ammonia compared to hydrogen.



Immersion Liquid Cooling System

Kaori's Thermal Energy Business has come up with an immersion liquid cooling system to cool the increasing number of cloud data center servers worldwide. When used in data center servers, immersion liquid cooling system is able to quickly disseminate heat buildup from high performance computing, and when used in conjunction with Kaori's plate heat exchanger, power usage effectiveness (PUE) can be kept below 1.1.

Industry Applications

- Cloud services/5G communication
- Edge computing
- Data centers
- Semiconductor EDA
- Artificial intelligence
- Blockchain
- Cryptocurrency (mining)
- Electric vehicle battery cooling

Technological Highlights in Environmental Sustainability

Power usage effectiveness (PUE) is an internationally accepted measurement for the power efficiency of data centers. PUE is calculated by dividing the "total data center power draw" by the "total IT equipment power draw". A low PUE indicates that the data center requires less power for cooling, which suggests lower power consumption and greater environmental friendliness.

- China's first data center with 5A green rating uses single-phase immersion cooling technology with insulated coolant to achieve high-efficiency cooling without the need for fans, air conditioners, or chillers. The solution reduces power used in cooling by 70% and lowers the PUE to 1.09.

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Strategic Goals for New Products and Technologies



Brazed Plate Heat Exchangers

1. For the growing heat pump market, Kaori will introduce asymmetric flow design into different models to support a greater range of heat pump applications, thereby **reducing the use of both natural and HFO coolants** while increasing equipment COP.
2. More attention will be directed to improving the plate pattern design for optimal flow resistance, which **increases heat exchange efficiency** in less surface to achieve better performance.



Hydrogen Power Clean Energy

1. Kaori cooperates with customers on various projects to increase product performance and is committed to promoting **hydrogen power circular economy**, so that customers may realize the energy and carbon reduction potential of SOFCs.
2. **Hydrogen application is an important step to reducing carbon.** Kaori hopes to first demonstrate the viability of the technology within the domestic market, and then export whole systems over the medium and long term while placing emphasis on the development of the hydrogen supply chain and potential applications on a global scale to create a new industry altogether.
3. Kaori is exploring ways to use hydrogen power for carbon reduction using existing resources and the foundation of the industry. **Attention will be paid to using zero/low-carbon fuel** and scaling the production of green hydrogen and blue hydrogen as means to achieve carbon reduction goals.
4. Fuel cells are the mainstream solution of the future. They will grow in popularity in household use and backup power over the short term and make their way into cogeneration over the long term.



Immersion Liquid Cooling Technology

1. Engage **critical CPU/GPU partners** in more in-depth collaboration.
2. Seek **technology certification** with server manufacturers.

Industry-Academia Partnerships

- Industry-academia collaboration:
 1. Kaori cooperates with National Central University and National Yang Ming Chiao Tung University to simulate and optimize the flow field and heat transfer within plate heat exchangers. A simulation model was developed in 2021 based on research data, and simulations on single-phase flow field were completed and validated in 2022. Kaori expects to progress into the simulation and validation of vaporization and condensation in two-phase heat transfer between 2023 and 2024.
 2. In 2022, Kaori cooperated with National Yang Ming Chiao Tung University on a study commissioned by the Ministry of Science and Technology titled “Experiment and analysis of two-phase flow data in brazed plate heat exchangers”, in which the researchers simulated and validated heat transfer in a two-phase flow setup in an attempt to improve the accuracy of measurements.
 3. In 2022, Kaori cooperated with National Central University on the study of boiling heat transfer in hybrid pattern plate heat exchangers, in which the researchers used different methods of flow resistance to increase the evenness of the boil.
 4. With regards to the optimization of new coolant systems, Kaori expects to test and determine a segregation design that achieves optimal distribution using different flow resistance in 2023, which will help improve the efficiency of plate heat exchangers.
- Professional talent:

Development of liquid CDUs for vertical-type and horizontal-type cloud data server cabinets requires professional knowledge in heat flows, mechanical engineering, and system control. Kaori was able to acquire seven R&D employees possessing the above expertise in 2021, two in heat flows, three in mechanical engineering, and two in system control.
- Intensive training:

Kaori invites professors from National Yang Ming Chiao Tung University and National Central University to organize professional courses according to product development needs.
- Professional associations:

Kaori assigns R&D personnel to take part in forums organized by the Taiwan Thermal Management Association and the Cloud Computing & IoT Association on a regular basis, so that they can keep up-to-date with industry trends and obtain the latest information.

Marketing Campaigns/Product Exhibitions in 2022

- 2022 HVAC&R Japan (02/01-02/04)



• Data Center Low Energy Development Trend - Immersion Cooling Technology Forum (03/18)

In response to the high energy consumption of data centers, Kaori Heat Treatment (8996) held an “Immersion Cooling Technology Forum” today (March 18) at its Zhongli office to discuss how the Company's low carbon, low energy, and low water consumption technologies can be used to help businesses save power and lower carbon emissions for “carbon neutrality”. The event saw hundreds of participants comprising industry representatives, government officials, and academic scholars.



▲ Chairman Hsien-Shou Han of Kaori Heat Treatment (5th from the left) invited Chief Shu-Fang Kao of Energy Conservation Team, Bureau of Energy, Ministry of Economic Affairs (4th from the left), and Commissioner Yu-Hsin Kuo of Economic Development, Taoyuan City Government (5th from the right), along with several industry experts and scholars, to unveil the technology forum.

• D Forum 2022 (05/12)



• Chillventa 2022 (10/11-10/13)



• TaipeiPLAS 2022 (09/27-10/01)



• Energy Taiwan 2022 (10/19-10/21)



• Data Centre World Asia 2022 (10/12-10/13)



Patent Applications in 2022

Submitted one application and was awarded an invention patent for a “Device and method of disposing and reusing organic waste fluids”.



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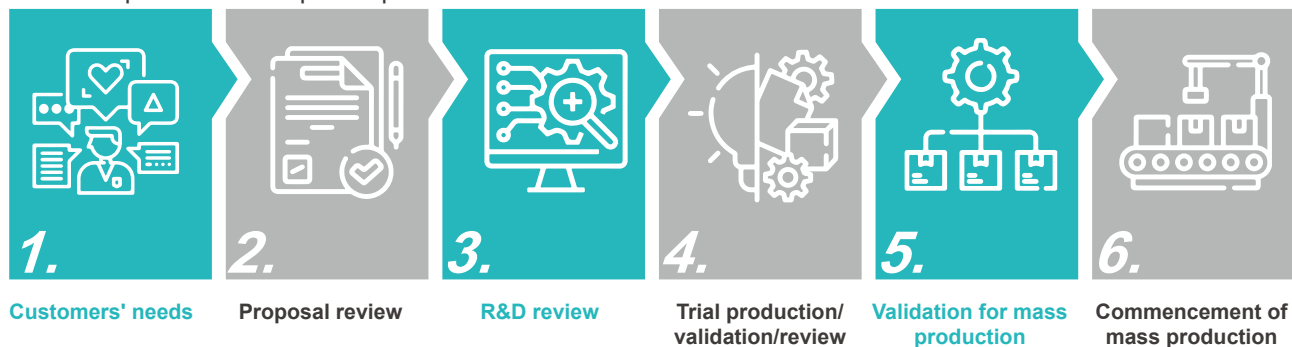
Environmental protection and inclusion

Collaborative Development

Technology Development Procedures

Kaori actively gathers the voices of customers and involves customers in the early stage of product development as a way to continually improve product creativity, design, and technological capacity. These involvements are useful for gaining insights into customers' core requirements, so that the Company can focus its development efforts on solving customers' problems. It has been a key factor to the success of the Company's product and technology development efforts. Customized solutions currently take up the majority of Kaori's development resources. As national policies and industry standards evolve, the Company will be able to introduce standardized product development processes and automated production lines.

Standard product development procedures:



Outcomes of Collaborative Projects in 2022

Plate Heat Exchanger Business

In terms of product applications, the department coordinates with raw material suppliers to develop suitable materials or brazing alloys to meet customers' needs, market requirements, and legal standards. For individual customers, the department designs heat exchangers with exclusive sizes and features, and produces samples that work with customers' form factors before commencing mass production.

- Projects developed:

In 2022, the department worked with European heat pump manufacturers to develop the exclusive products B076, B080/B081, and B110 that offer advantages such as low coolant requirement, dual circuit design, and less installation space. The customer has decided to incorporate Kaori's solutions into its next-generation heat pumps.

- Future projects:

For fuel cell, residential heating, and water heating applications, the department will direct its R&D focus toward high temperature resistant plate materials and brazing alloys with low ion release and use them to develop high-efficiency heat exchangers.

Fuel Cell Business

By making adjustments according to customers' needs and contributing its own vacuum brazing technology, the department was able to improve the current fuel cell systems for more efficient power generation at lower costs. Adjustments have also been made so that the existing fuel cell systems are readily convertible into cogeneration systems. In the future, the department will continue contributing its own technology and working with suppliers as well as customers to develop products of greater diversity and higher commercial value.

New Business Development - Hydrogen Power

Backed by ten years of technical experience, the department has been successful in the development and production of reforming reactors and catalysts. The department is the ideal partner for customers with respect to hydrogen power due to the fast, high-quality, and cost-effective services it provides. The department also provides additional services such as installation of long-term test stations, performance testing, trial production, and procedure improvements according to the requirements of customers' systems.

- **Projects developed:**

The department completed validation of its first-generation organic solvent hydrocracking system in 2022 and helped customers acquire green power certificates.

- **Future projects:**

1. Kaori has been helping customers plan for the 2.0 version of the organic solvent hydrocracking system and build modularized equipment capable of processing 30 tons of organic solvent a month and chemical oxygen demand in the 1.5 million range, in two 20-foot containers.
2. The types of organic solvent waste processed have been increased and the sorting technology has been improved.

New Business Development - Thermal Energy

In a collaboration with a customer, the department contributed its advantages in metal brazing technique, heat exchanger design, and system control, and worked with upstream (metal parts/electronic parts suppliers) and downstream (server/electromechanical integrators) partners to successfully develop an immersion liquid cooling system for low-energy servers in data center applications. This vertical integration and development not only increased overall power efficiency, but also shortened the product validation timeline.

- **Projects developed:**

1. As a server parts supplier, Kaori completed performance and endurance validation in the 4th quarter of 2022 for products featuring fluorinated liquid
2. Development of immersion liquid cooling products

Future Development Plans

Plate Heat Exchangers

- Heat exchangers for fuel cell-related applications
- Heat exchangers for fresh water supply
- Heat exchangers for heat pumps
- Electric vehicle battery cooling modules and heat pumps/exchangers

For some of the above projects, the department will work with suppliers to develop materials and brazing alloys, and it will take advantage of the special characteristics of new materials to resolve issues when used in certain industries. For one of the projects above, the department will cooperate with the customer on a special design to improve heat pump efficiency, increase COP, and lower coolant requirements.

Hydrogen Power Clean Energy

- Thermal reactors for high-capacity SOFCs
- Thermal reactors for hydrogen generation
- Development and validation of pre-processing, cracking, and purification systems for hydrogen generation from industrial organic solvent waste
- Clean energy research involving the use of ammonia as hydrogen fuel carrier

Immersion Liquid Cooling Systems

Cooperate with server manufacturers and upstream parts suppliers for product validation

3.2 Quality Management

Kaori has developed its own quality management system in accordance with ISO 9001 Quality Management System, and implemented a series of management procedures and operational guidelines to guide quality management practices throughout the Company. Furthermore, Kaori has open communication channels in place to gather customers' opinions, quality feedback, audit findings, etc., for ongoing improvements. The Company will continue listening to customers' voices and adopting total quality management to satisfy customers' needs.

All product business departments of the Company are committed to obtaining and maintaining certification for international quality management systems for all products developed and produced. The Fuel Cell Business passed certification for AS9100D:2016, the latest quality management system standards for the aerospace industry, in February 2022, whereas other business departments all passed certification for ISO 9001:2015, the latest international quality management system standards, in 2020. At Kaori, we make persistent improvements to provide customers with the best quality and most trusted products and services. Kaori remains committed to its customer-centric service philosophy and refrains from all actions that compromise product quality or endanger customers' safety. By making quality a part of our corporate culture and employees' conviction, we strive to become customers' trusted partner and work with customers and suppliers toward sustainability. The Company encountered no product recalls due to safety concerns or otherwise in 2022 and suffered no financial losses from lawsuits concerning product safety.

Quality Policy



Quality excellence at reduced costs.



Timely delivery and satisfied customers.

The Ultimate Guiding Principles on Quality

- Offer safe and reliable products and services in conformity with customers' needs and the requirements of applicable laws.
- Establish preventive controls from a risk perspective to minimize adverse impacts.
- Adopt a process-oriented approach toward improving the effectiveness and efficiency of processes across departments.

Quality Management Procedures

To ensure the quality of products and services offered, Kaori adopts the process-oriented approach of the International Organization for Standardization (ISO) as a way to improve the quality performance of various departments. By implementing the Plan, Do, Check, and Act (PDCA) cycle and setting improvement targets, the Company continues to optimize its processes and enforce preventive control with a risk focus.

- Process-oriented approach:
From order taking, production, inspection to shipment, Kaori applies standardized procedures and persistently delivers products and services to customers' satisfaction.
- PDCA:
Ensure that every process is supported with adequate resources and is properly managed and improved upon on an ongoing basis.
- Risk perspective:
Adapt to changes in the internal and external environments, minimize probability of decision errors, and prevent possible losses; aim for total anticipation of opportunities and risks, and perform effective damage control after the occurrence of risk events for business continuity.

Promotion of Quality Awareness

Quality awareness is defined as how the employees, leaders, and managers of a business perceive and act in relation to the quality of their offerings. It is a common language that employees use to communicate in daily work activities, a value that inspires our behavior to the outside world, and a standard by which we measure our performance. By changing how employees perceive the work they do from within, we help them develop proper habits, which in turn contributes to the further strengthening of the quality culture.

Quality is key to the continuity of a business. It requires contribution from all employees and takes persistence in making improvements in order to satisfy customers' needs and accomplish corporate targets. There are also many aspects to quality, and under-performance in any aspect will compromise customer satisfaction and threaten business survival.

The Company holds the conviction that workforce competence is critical to the quality of products and services offered. Through education and training, the Company aims to develop strong quality awareness and consistent quality goals across employees. Kaori organizes a variety of training courses to improve the quality of products and services provided; progress for 2022 is summarized below:




- 100% of new recruits passed general knowledge training
- 100% of employees completed training for ISO 9001, AS 9100, and ISO 14001 quality systems
- 100% of employees completed specialist training; training courses were organized to educate employees on instrument calibration, ionizing radiation protection, legal requirements, etc., and to qualify those that require professional certification.

Quality Assurance

To bring traceability into the products manufactured, Kaori has adopted an enterprise resource planning (ERP) system and a manufacturing execution system (MES) that digitally integrate all processes from material purchase, storage, production, and quality management to financial management. These systems record the details of every production stage and ensure that accurate data can be generated quickly to support Kaori's commitment to quality assurance.

Site Management

- Safety management
 1. Zero hazard activities: safety rules, safety education, and safety inspection standards have been outlined.
 2. 5S management:

				
SEIRI	SEITON	SEISO	SEIKETSU	SHITSUKE
Separate useful items from useless items, and dispose of useless items.	Place useful items neatly and in the appropriate quantity, and label clearly.	Clean the workplace and prevent pollution.	Implement standards and rules for the 3S above, and enforce accordingly to deliver results.	All members of the organization shall follow rules and develop proper habits.

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- Operations management
 1. Standardized operations: standard operating procedures.
 2. Skill training: skill training and evaluation; skill evaluation standards, skill development program, and skill training standards.
 3. Improvements: A suggestion system has been implemented to encourage improvement plans for accomplishing business goals.
- Quality management
 1. Management during normal circumstances: Quality assurance standards have been implemented for operational staff and managers.
 2. Responses in the event of abnormal occurrences (whether discovered internally or externally): The Company has standard responses in place to respond to abnormal occurrences of which all employees have been made aware.
- Equipment management

Total productive maintenance (TPM): includes equipment inspection standards, inspection charts, inspection cycles, responses to equipment malfunction, and training materials for operators (work commencement checks, inspection standards, training data, etc.).

On-Site Education and Training

- On-site education: Kaori highlights and discusses abnormal issues in daily morning meetings and takes improvement measures and follows up on progress afterwards
- Special-purpose training: abnormal occurrences are analyzed and shared internally as case studies
- Specialist training: instrument calibration, internal audit, pre-brazing preparations, post-brazing test, incoming quality control (IQC), final quality control (FQC), etc.



 Quality Improvement Highlights for 2022

Kaori encourages all employees to participate in making persistent improvements and promotes quality awareness as a way to unite and motivate employees. An incentive program called “Quality Improvement Proposal” has been implemented to guide and encourage employees toward innovative thinking. The program invites all employees to contribute new ideas on ways to improve quality and business management, whether in terms of processes, products, or the organization, so that the organization can strive toward excellence and ensure continuity. A total of 28 improvements were proposed in 2022.

Plate Heat Exchanger Business

1. Document digitalization toward the paperless goal

As the businesses grow, the organization finds itself having to handle increasing volumes of trade documents and internal correspondence, which has led to nuisances such as delays in interdepartmental sign-off and business trip approval, build-up of physical documents, time-consuming searching during retrieval, and so on, thereby making document management a pressing matter across all departments. This was why the Plate Heat Exchanger Business made the first attempt to adopt digitalized management of documents, correspondence, and files, and took steps toward accomplishing the paperless goal.

2. Persistent improvement to production procedures and lowering costs

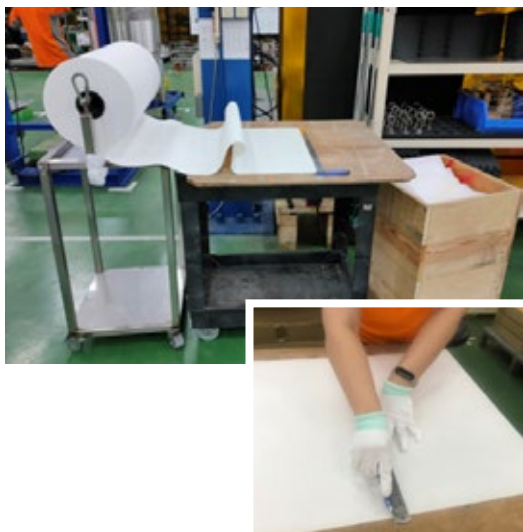
For small, standardized products, Kaori introduced new production procedures that eliminate the need for screws after the products have been pressurized in the vacuum furnace. This reduces the weight load and space previously taken up by screw molds, thereby allowing more products to be put into the furnace at one time, shortening the operating hours of the vacuum furnace, reducing costs, and increasing production capacity.

Fuel Cell Business

Ceramic fiber paper cutter 3.0: a show of insistence on improvements and quality production

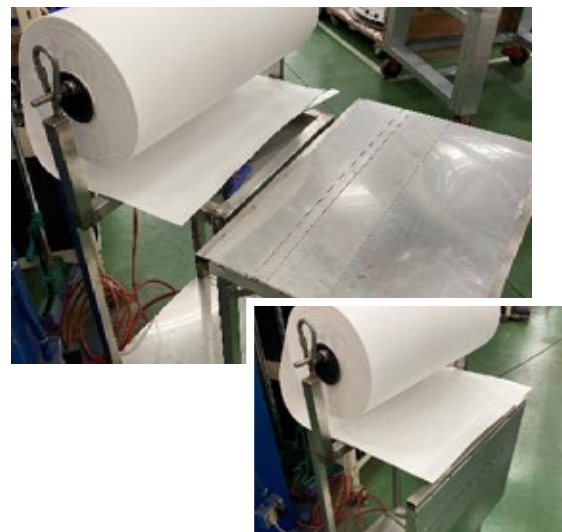
Before improvement

When cutting ceramic fiber paper, it was difficult to keep the roll and the work bench still and aligned throughout the process, and workers were at risk of cutting fingers



After improvement

1. Adopted a foldable workbench design to save space
2. The new workbench has a groove, and workers can simply slide the blade along the groove to cut the material
3. The length of the cut stays consistent



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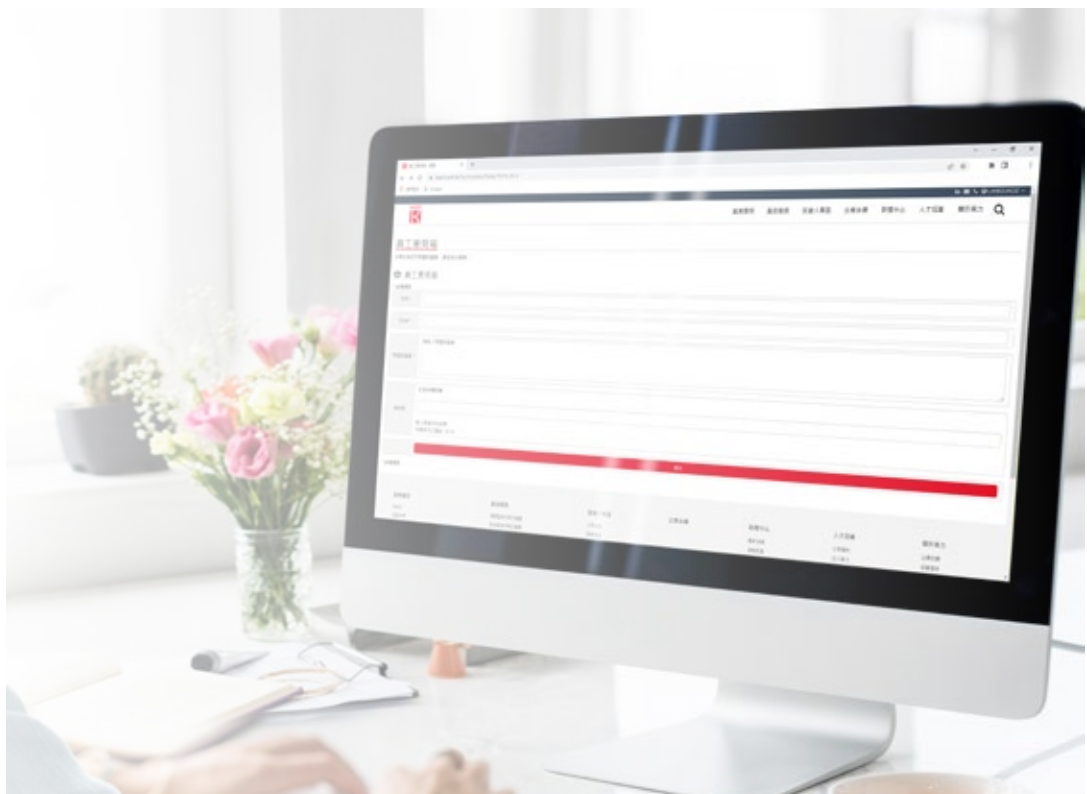
3.3 Customer Relations Management

Kaori adopts a “customer-centric” business approach and maintains strong relationships with customers in order to learn their needs and make appropriate adjustments. The Company also cooperates in customers' audits and makes improvements where necessary to ensure that customers' needs are satisfied, which in turn enables profit maximization and mutual benefit. We pay particular attention to product quality and after-sales service to achieve the above goals. In terms of marketing and promotion, we comply with relevant regulations and refrain from selling disputable products that do not meet environmental protection standards.

Kaori values every one of its customers. To ensure the quality of service to customers, the Company frequently gathers customers' opinions through satisfaction surveys and makes adjustments accordingly.

Customer Satisfaction Survey Process

We have placed our focus on offering top-quality products and services to key customers and working with their strategic partners to develop high-end, specialized materials. This is why Kaori pays particular attention to customers' satisfaction and organizes satisfaction surveys on product quality, product delivery, service quality, and professionalism in the fourth quarter of each year. A dedicated unit has been assigned to gather and analyze satisfaction scores and present them for discussion during meetings. For aspects that do not meet the required scores, the Company conducts in-depth discussions with customers and has the Quality Assurance Center provide relevant information such as customers' monthly supplier evaluation sheets, complaints, or records of returned goods to help identify the causes of dissatisfaction and verify the survey results.



Results of the Customer Satisfaction Survey for 2022

Kaori observes the customer satisfaction clause of ISO 9001 Quality Management System and conducts a customer satisfaction survey in the 4th quarter of each year (to be completed before the end of year) to ensure that data is not skewed due to the timing of the survey. The survey can be carried out via e-mail, phone interview, fax, and other channels, and respondents' responses are recorded in the "Customer Satisfaction Survey Form". The survey questions are designed based on the characteristics of the products offered by the respective business department. Using a scale of 1 to 5, satisfaction is rated with 5 being most satisfactory and 1 being least satisfactory, whereas importance is rated with 5 being most important and 1 being least important. Employees have been instructed to determine accountability immediately for any unsatisfactory response or any score of 2 and lower indicated in the survey. The accountable employees then have to analyze the underlying causes and explore improvements according to the "Company's Correction and Prevention Procedures".

Brazed Plate Heat Exchanger Department

Survey subjects:

Based on the amount of sales accumulated from January to September, the Company shortlists its top 20% customers and picks the top 20 customers to survey.

Survey coverage:

Product quality, delivery timing, service, professionalism, competitiveness

Survey results:

1. Questionnaire recovery rate of 96.67%
2. Overall average score for 2022 of 4.04
3. "Product delivery" was an aspect in which Kaori received a rating of 2 or lower in 2022. The Company has since followed up and analyzed the underlying causes and provided feedback to customers about the improvement measures that have been taken.

Fuel Cell Business

Survey subjects:

Customers ranking top 3 or top 20% in the amount of goods delivered

Survey coverage:

Product quality, product delivery, service quality, professionalism

Survey results:

1. Questionnaire recovery rate of 100%
2. Average customer satisfaction of 4.2 in 2022
3. No aspects rated 2 or lower in 2022

New Business Development - Hydrogen Power

Survey subjects:

Customers ranking top 3 or top 20% in the amount of goods delivered

Survey coverage:

Product quality, product delivery, service quality, professionalism

Survey results:

1. Questionnaire recovery rate of 100%
2. Average customer satisfaction of 4.82 in 2022
3. No aspects rated 2 or lower in 2022

New Business Development - Thermal Energy

The department currently has less than 5 main customers, and it convenes weekly meetings to keep customers up-to-date on project progress. A platform has also been created to facilitate real-time interaction.

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Customer Data Confidentiality

Privacy has become an important issue at a time when technology plays a dominant role in our lives. Due to our relationships with business partners, department employees often come into contact with product secrets and customers' personal information. Kaori received no complaints concerning violations of customers' privacy or secrets in 2022. Kaori has restricted access to its document management system by project relevance. For example,

- Only the system administrator may create and modify customer profiles, and sales representatives may make requests for creating or changing profiles only after submitting application forms and seeking proper approval.
- Documents furnished by customers are managed according to the "Document and Record Management Procedures". Schematics furnished by customers are placed on the server inside department-exclusive folders and made accessible only to authorized personnel.
- Supplies provided by customers are stored in a dedicated warehouse; all placements and withdrawals are controlled using the ERP system and forms.
- Confidentiality agreements are signed as required by customers or the Company. Parties that the Company discloses confidential information to for the performance of duties are prohibited from revealing such information to others or using it for purposes outside of work. The same applies after employees resign.
- The Company values intellectual property rights and is committed to protecting its intellectual properties and those of others (including patents, trademarks, copyrights, and business secrets), particularly during the transfer of know-how and production experience.

Customer Complaints and Improvements in 2022

The speed at which customers' complaints are addressed is key to raising customers' satisfaction. In addition to implementing customer sales policies and complaint procedures, Kaori also assigns dedicated personnel to maintain communication with customers and to investigate the underlying causes and accountability of all complaints raised. All complaints received are followed up quickly with effective solutions and improvement measures to prevent recurrence. Through productive communication, the Company is able to maintain good customer relations and ensure the quality of products delivered. Furthermore, transparent and efficient consumer grievance channels have been implemented to cater to customers' requirements for the products and services offered.

Customers are able to raise complaints to various departments using the contact number or e-mail disclosed in the Stakeholders section of Kaori's portal. We have made the number customer complaints one of our key performance indicators (KPI). Complaints are analyzed by cause and customer type and raised for discussion during annual management review meetings to serve as reference for next year's quality improvement goals. A total of 14 customer complaints and 11 customer service requests were received in 2022; all of which have been improved upon with preventive measures taken.

3.4 Sustainable Supply Chain Management

As the general public and global partners have become increasingly aware of corporate social responsibilities, they now require suppliers/contractors to exert social influence and act in the interest of social issues, environmental protection, and social responsibilities, in addition to meeting conventional performance measurements such as product quality, technological capacity, delivery, collaboration, and other factors directly associated with service and production. Kaori requires new suppliers/contractors and existing suppliers to comply with social, environmental, economic, and ethical regulations, thereby responding to the public's expectations.

Suppliers are important partners in Kaori's operations, and in order to promote green products, it is especially critical for the Company to manage the supply chain at the source. In addition to quality, delivery, and collaboration, Kaori has also begun assessing suppliers for issues such as worker rights and socioeconomic contributions. By exerting influence over suppliers, the Company hopes to promote the sustainable growth of the entire supply chain and enforce sustainability to the benefit of all parties involved.

Overview of Supply Chain Partners

Kaori had a total of 667 supply chain partners in 2022 and made purchases amounting to NT\$2.225 billion. Of the purchases made, 77.84% were for raw materials, followed by outsourced manufacturing. The percentage of localized purchases (from local suppliers in Taiwan) was reported at 38.57%. Suppliers can be classified into six main categories: sundry services, outsourced manufacturing, raw materials, consumables and spare parts, equipment, and components. The upstream consists of steel mills or customer-designated material suppliers, whereas the downstream consists of small, direct processing plants. Kaori's suppliers include steel mills and foreign providers of advanced technologies and products, all of which are capital-intensive businesses and have imposed high standards on environmental protection, green energy, and public interest. Kaori operates in the midstream of the industry and provides end customers with products that are processed and assembled from the above-mentioned materials.

Major Procurement Incidents in 2022

The price of nickel surged by more than 300% in March alone, forcing raw material suppliers to suspend quotations, which negatively affected the production schedule. In response, Kaori has taken the initiative to sign long-term procurement contracts with local suppliers for enhanced resilience.

For the identification of key suppliers, Kaori first examined the amounts purchased according to the various categories of suppliers and then determined the cutoff point based on supplier count and amount purchased. Using this cutoff point, a total of 57 key suppliers were identified for 2022.

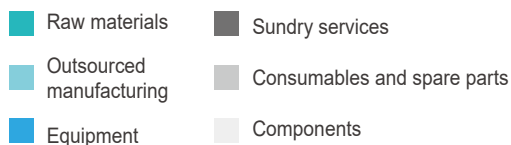
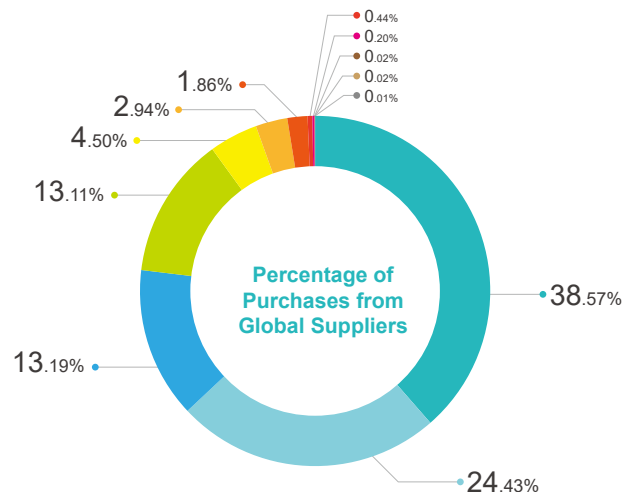
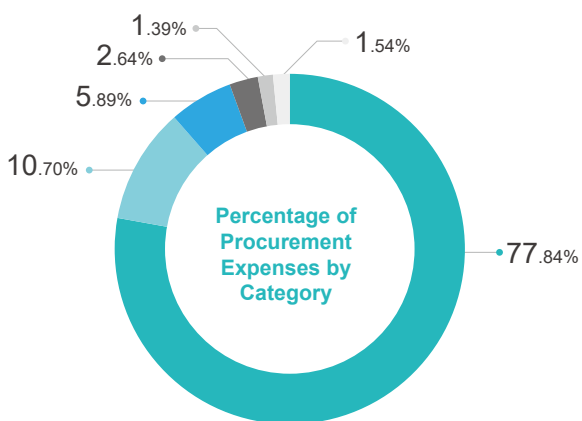
Supplier Regional Distribution and Procurement Percentage

- There was no material change compared to 2021

Unit: NT\$

Supplier region	Category	Purchase amount
Taiwan	Raw materials	411,809,857
	Outsourced manufacturing	238,023,181
	Equipment	121,895,818
	Sundry services	58,771,375
	Consumables and spare parts	18,449,298
	Components	9,223,453
USA	Raw materials	510,538,568
	Components	14,937,979
	Consumables and spare parts	12,112,041
	Equipment	6,089,837
Japan	Raw materials	306,355,406
	Equipment	3,092,555
	Consumables and spare parts	83,661

Supplier region	Category	Purchase amount
Germany	Raw materials	288,192,488
	Components	3,459,114
China	Raw materials	93,662,728
	Components	6,403,949
	Equipment	10,521
Italy	Raw materials	65,373,214
The Netherlands	Raw materials	41,362,079
Malaysia	Raw materials	9,837,254
India	Raw materials	4,404,045
Switzerland	Raw materials	521,288
Korea	Consumables and spare parts	366,090
Thailand	Components	218,341



Supplier Management Policy

- Procurement policy:

Select business partners primarily based on the quality, timeliness, and consistency of goods/services supplied and their willingness to commit to long-term relationships.

- Supplier selection system:

Kaori conducts annual supply audits for effective management and maintenance of relationships with qualified suppliers. Suppliers are evaluated on product quality, delivery timing, service, technological background, and the quality management system. Furthermore, Kaori requires suppliers to present quality system certificates issued by independent third parties, and to complete questionnaires on the management of hazardous substances. All raw material suppliers are required to sign a commitment to ethical conduct and anti-bribery. Suppliers are evaluated not only for the prices they offer, but also for their overall contribution to Taiwan as well as their ability to complement the Company's role and position. With the introduction of the sustainable supply chain management system in 2022, Kaori will gradually replace suppliers that are found to be incompetent, thereby creating a more resilient and sustainable supply chain.

Steps of Sustainable Supply Chain Management



- Preamble
- 1 Sustainability and development
- 2 Honor and Integrity
- 3 Innovation and quality
- 4 Responsibility and care
- 5 Environmental protection and inclusion

Sustainable Supply Chain Management System

Kaori introduced a sustainable supply chain management system in the 4th quarter of 2022 and held a supplier conference in September 2022 to convey its philosophy on sustainable governance and to teach suppliers on the completion of self-assessment questionnaires, which had an attendance rate of 100%. In October, Kaori held two internal training sessions for procurement staff and conducted document review of sustainability self-assessments on 30 suppliers immediately afterwards, including one on-site inspection.

- Implementation of the sustainable supply chain management system

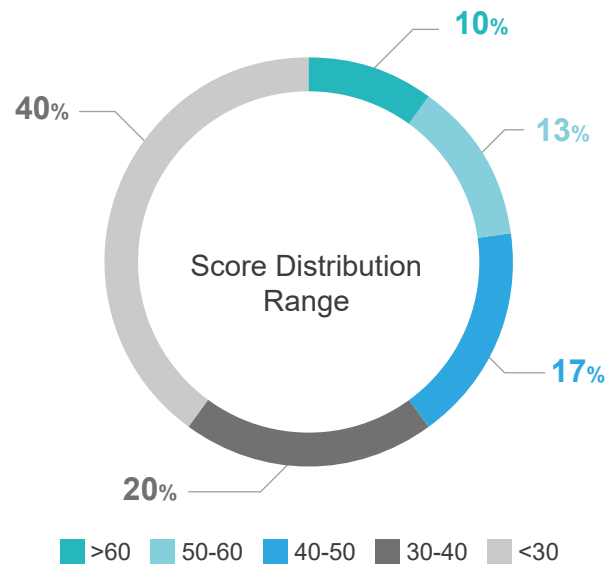
After taking a comprehensive inventory of documents used in the procurement system, Kaori added five new documents: “Supplier Sustainability Management Policy”, “Supplier Behavior Guidelines”, “Supplier Statement on Sustainability Development”, “Sustainability Evaluation Sheet for New Suppliers”, and “Supplier Sustainability Review and Improvement Suggestion Form”. One document was amended: “Supplier Control Procedures”. A set of key performance indicators has been developed based on the aforementioned procurement system while taking into consideration the industry standard and the Company's current practices to enforce sustainability management over suppliers.



Supplier Sustainability Review for 2022

Score Overview

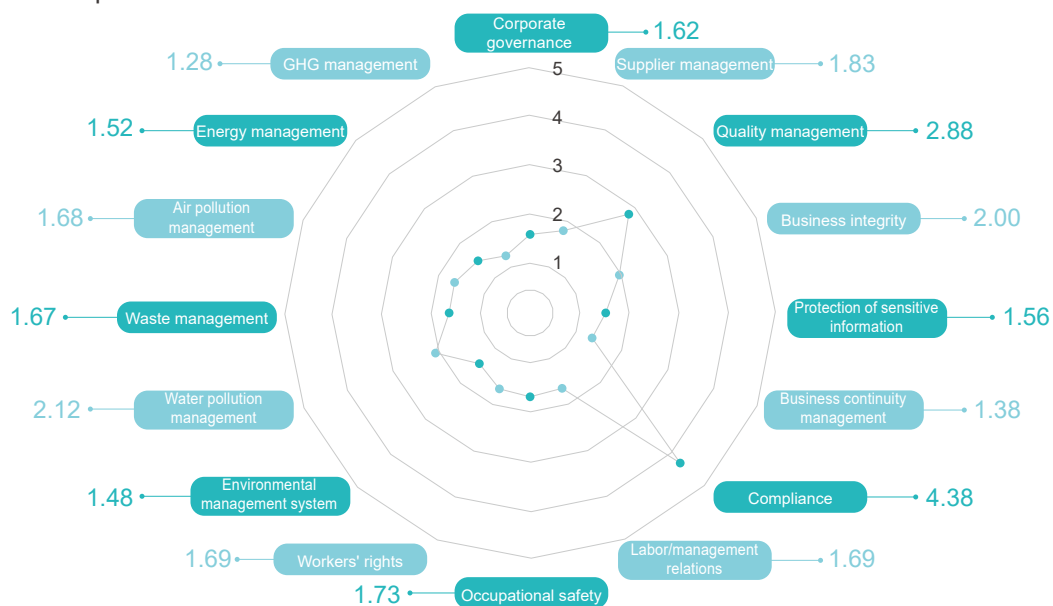
- 100% of supplier questionnaires were reviewed.
- Suppliers averaged a score of 40.0; a total of 3 suppliers (10%) scored above 60. 40% of suppliers were in the lowest score range, indicating that most suppliers willing to participate in the survey did not know how to complete the questionnaire properly. 23% of suppliers scored 50 or higher, all of which have implemented some form of ESG system.



- Governance, social, and environmental issues
Suppliers scored highest in the governance aspect and lowest in the environmental aspect

Score distribution by category

“Compliance”, “Quality management”, and “Water pollution management” were the categories that suppliers scored the highest in, indicating that suppliers have undertaken robust management practices with regards to compliance, quality, and industrial effluents. “Greenhouse gas management”, “Business continuity”, and “Environmental management system” were the categories that suppliers scored the lowest in. Many scores in the environmental aspect were lower than average, indicating room for improvement; occupational safety is an issue that all manufacturing suppliers must pay attention to, and it will be at the top of Kaori’s requirements.



- Preamble
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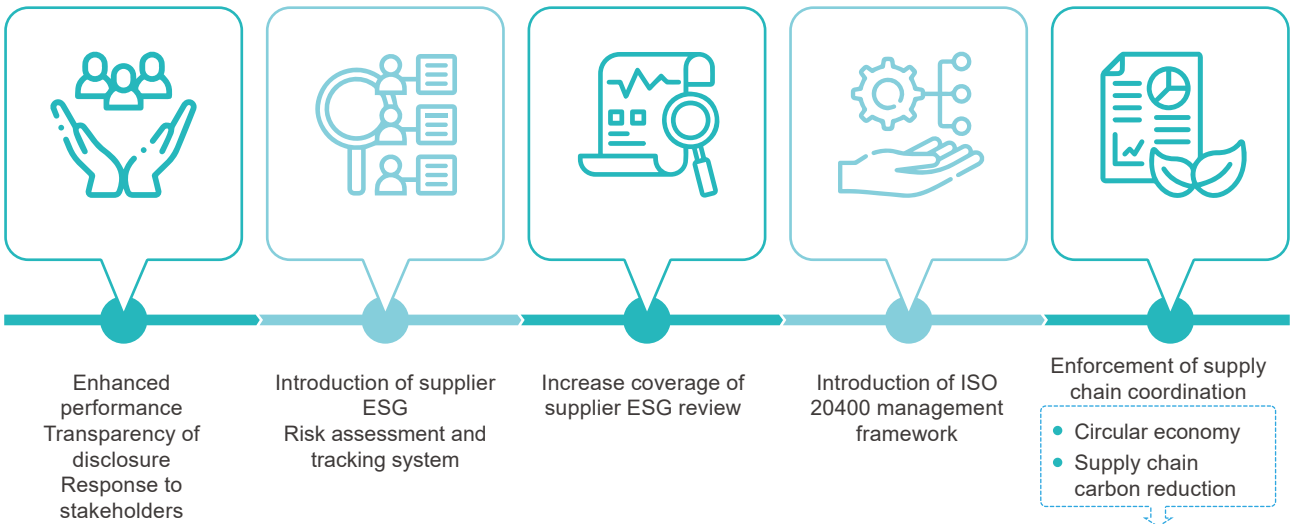
Future Improvement Plans

- For non-responding suppliers
 1. Kaori will engage them in greater depth so that they will be able to understand and appreciate the importance of issues concerned and become more willing to take part in the survey
 2. Introduce rewards/incentives/penalties
- For the low score group (below 40)
 1. Kaori will help respondents understand the content of the questionnaire and guide them through the instructions while answering whatever queries they may have.
 2. Respondents will be given more time to reply, as well as reminders and assistance to prepare supporting information.
 3. Additional resources (such as external courses and materials) will be provided to help suppliers develop relevant systems.
- For the medium score group (40 or higher)
 1. Sustainability performance awards will be introduced to serve as encouragement for suppliers.
 2. Suppliers will be offered suggestions to devise development plans over several stages and to improve documentation or practices in areas of weakness identified through the scoring exercise.



Future Sustainability Supply Chain Management Roadmap

1. Enhance sustainability performance, make transparent disclosures, and respond to stakeholders
2. Introduce a supplier ESG risk evaluation and tracking system
3. Increase coverage of supplier ESG review
4. Introduce the ISO 20400 management framework
5. Coordinate with suppliers to achieve the circular economy and supply chain carbon reduction. Draw product life cycle charts and identify emission hot spots through carbon footprint surveys, and make preparations for the circular economy and low-carbon products.



Draw product life cycle charts, identify emission hot spots through **carbon footprint** surveys and make preparations for the circular economy and low-carbon products

