

Creativity

Product Innovation and
Responsibility

Lifecycle assessment

Supply chain sustainability
management

Trust relationship with
customers



Product Innovation and Responsibility

> Innovation

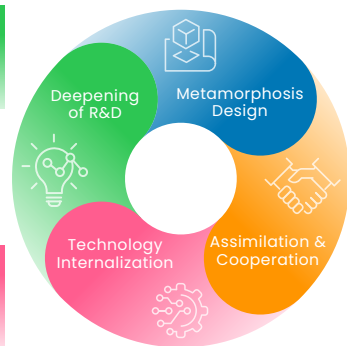
Qisda is an all-round, multi and cross-sectoral electronic design and OEM company. Our products and technology fields include high-end and professional displays, precision optics electronic products and industrial/commercial computers, machines and peripheral equipment. In recent years, we have actively accelerated the expansion of the medical industry and developed smart solutions in the hope of sailing towards the sea of markets with high value-added products. We have maintained in a leading position in the field of LCD displays and projectors around the world through advantages such as innovative and diverse capabilities of product design, profound R&D technical strength, high-quality and flexible manufacturing capabilities around the globe, capability of vertical integration for Group resources, and exceptional industrial design.

Keeping on leveraging the existing innovative momentum of R&D and strength in integration, we will adhere to product design and manufacturing applications as well as committing to energy saving and environmental protection in line with the corporate social responsibility to focus on the R&D and production of products and reduce emissions of all substances in a sustainable way. In the future, we will focus on four major strategies for R&D to move towards the Company's vision of "Bringing Enjoyment 'N Quality to Life."

Qisda's R&D Strategies

Account for the front-end R&D of products to ensure their quality and safety.

Keep on exploring and establishing new product technologies, and then applying them to product design and manufacturing.



Continue to introduce the idea of innovative design for products in order to meet the ever-changing requirements in the market.

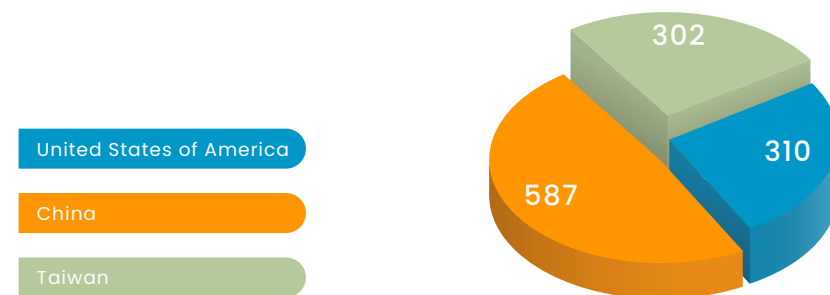
Continue the implementation of industry-university cooperation for the joint R&D of new technologies and products

Qisda spares no effort in innovation and development of products to maintain our competitive advantages. In the recent 4 years, we have invested an average amount of more than 2% of our revenue in the innovation and R&D of products every year. Moreover, the "Regulations for Rewarding Employees with Patents" has been established to encourage the employees to innovate, invent and apply for patents. Statistics show that in 2022, a total of 57 essential patents were obtained. As of the end of 2022, we had accumulated a total of 1,199 valid patents worldwide.

Item	Year	2019	2020	2021	2022
Funds invested in R&D (NT\$10 thousand)		198,068	216,174	227,559	257,286
Percentage of R&D funds in revenue (%)		2.01	2.34	2.18	2.52
R&D personnel (persons)		594	588	599	591
Percentage of R&D personnel in employees (%)		40.2%	40.3%	39.7%	40.5%
Number of valid patents		1121	1140	1192	1199
Number of patent applications		405	289	206	238
Reward for employees with patents (NT\$)		2,387,056	1,942,630	2,279,041	1,808,242

Note: Essential patents are defined as patents in the U.S. The goal is to obtain 100 essential patents per year by 2025.

Total Number and Regional Distribution of Valid Patents in 2022



Though industry–university cooperation projects, Qisda encourages professors and students in universities to jointly participate in the research in the field of AI and smart technology application. The industry–university technological research in 2022 focused on three major aspects: “Smart Location,” “Smart Medical Care” and “IoT.” In the same year, a total of 10 cooperation projects were implemented with more than 10 research students under training. The topics for the industry–university research included:




The material contents of Qisda’s cooperation with universities in 2022

Material Industry–University Cooperation	Type
<p>National Taiwan University</p> <p>6 patents</p>	<p>Application of AI: Development of (1) medical care, (2) electricity inspection, (3) edge computing and motion control, (4) radar beamforming, and other forward innovative technologies.</p> <p>Application of smart technologies: 1. The Smart Campus sports science–based teaching system (live recording with instant replay) 2. Safety monitoring devices and integration for campus</p>
<p>National Cheng Kung University</p> <p>4 patents</p>	
Application Results	

Utilizing forward R&D momentum, such as AI/MI and edge computing, in the application of products and technological innovation in different fields.


- With recorded videos and instant replay, we are able to effectively correct the erroneous postures of athletes in accordance with technological analysis. We record videos during the whole process from every angle, including left and right or even underwater and on the surface if in a pool. This can be used to teach athletes about postures. In addition, we collect statistics and calculate ball speed in order to provide recommendations on tactic development and collect data of situations in the future in the hope of enhancing athletic performance and reducing sports injuries.
- With the established cameras and 360-degree emergency helping booths, we combine the rolling doors, elevators and rooftop high-speed cameras of the Administration Building (Yun-Ping Building) and integrate the videos, sounds, emergency intercoms, remote monitoring and instant recording in the Situation Monitoring Center. Quick inquiry and video replay are available with the videos being stored for 30 days. With emergency helping booths, 24-hour 360-degree video and audio recordings are provided, and help can be requested by communicating with the Situation Monitoring Center via the button. Finally, cameras are installed across the eight campuses and the Administration Building (Yun-Ping Building) of NCKU for the integration of campus safety applications, namely, the smart campus and building PoC.

Successfully developed technologies/products in 2022




LCD Display Product

Curved QD–OLED displays, Ultra–fast (360Hz) IPS gaming monitors, cost-effective local dimming with 96 zones, the DisplayHDR 1400 certification, 4K/144Hz/Mini-LED backlit displays, 1,000R curved displays, OLED 4K/HDR, Thunderbolt 3 displays, borderless displays, displays for special purposes with eye-care technologies and Privacy, Portable and Eyesafe certifications, G-Sync R4/high refresh rate and night vision monitors for gaming, professional color management display (for photography and photo-editing), and the Display Arrangement Manager application.



Projector Product

The DMD or LCD panels of projectors are monopolized by TI, Epson, and Sony. Moreover, it requires a lot for companies to enter the light source industry, which has resulted in an oligopoly. The Company maintains close collaborative partnerships with manufacturers of material parts and components to ensure a stable supply of these items. Our projector products include high-brightness interchangeable-lens laser projectors for large venues, high-brightness 4K UHD laser projectors for business, 4K UHD laser projectors for small theaters, and 4K UHD ultra-short throw laser TV projectors.



Medical Service

We focus on the R&D of high-quality, reliable and innovative medical and care products as well as solutions to provided complete medical equipment, advanced medical services and personalized care for the creation of better lives.

The BenQ Medical Center in Nanjing acquired the IoT Hospital Certification and JCI Certification in 2020; it was also certified by the National Chest Pain Center, Stroke Center and Atrial Fibrillation Center. In addition to having a division for oncology, a key discipline in Suzhou City, the BenQ Medical Center has also committed itself to establishing key discipline units that include the Center of Critical Care Medicine and departments of orthopedics, obstetrics and gynecology, rehabilitation, gastroenterological internal medicine and cardiovascular internal medicine. In 2022, the BenQ Medical Center in Nanjing officially became a Tier 3, Grade A general hospital, making it the first Tier 3, Grade A private hospital in Nanjing.

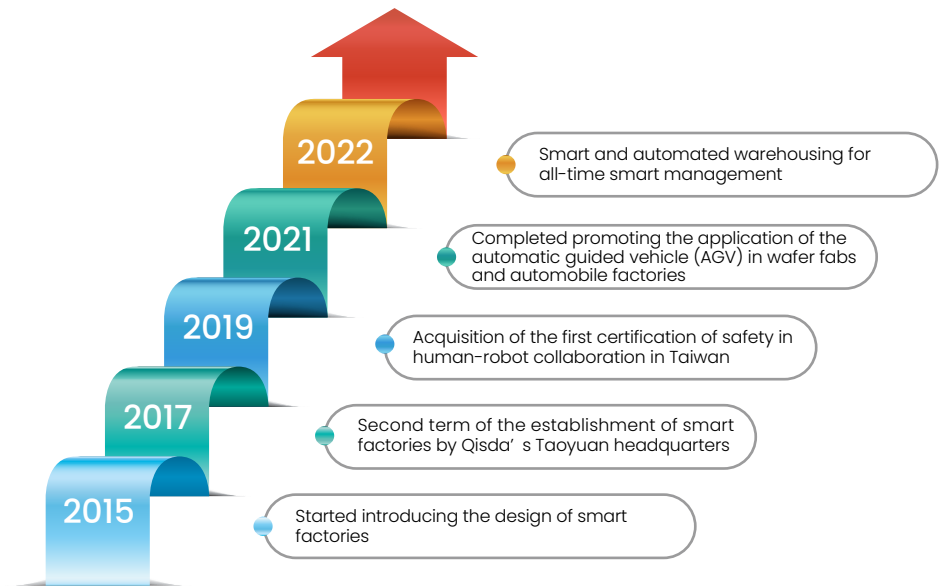
QISDA Corporate Sustainability Report 2022

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Smart Factory and Innovative Actions

In order to meet market demands and maintain competitiveness, Qisda has introduced the design of smart factories since 2015. By combining statistical analysis, robots, AI and other technologies during the production, we realize the production mode in which manufacture in factories is transformed to improve production efficiency and quality. We lead the industry in launching a production and manufacturing information system relevant solution, providing a platform that highly integrates hardware and software. In 2017, Qisda established the second term of the smart factory at the Taoyuan headquarters, and further designed three safety protection mechanisms with ISO 10218 and TS 15066 as the basis in 2019, through which we significantly enhance the safety of human-robot collaboration and have obtained the first certification of safety in human-robot collaboration in Taiwan. Through the setup of smart manufacturing solutions, the production quality can be improved while the waste caused by the sales per unit area can be reduced, which enhances the overall production efficiency of the plants. We had already promoted the application of the smart factory related technology – the automatic guided vehicle (AGV) – in wafer fabs and automobile factories in 2021. Further in 2022, we advanced to smart warehousing that allowed products to be placed and stored in the warehouse and then shipped from the dock. With this, we have realized unmanned operations and implemented smart inventory management throughout the entire process at the same time.

Development History of Smart Factories



> Green Product

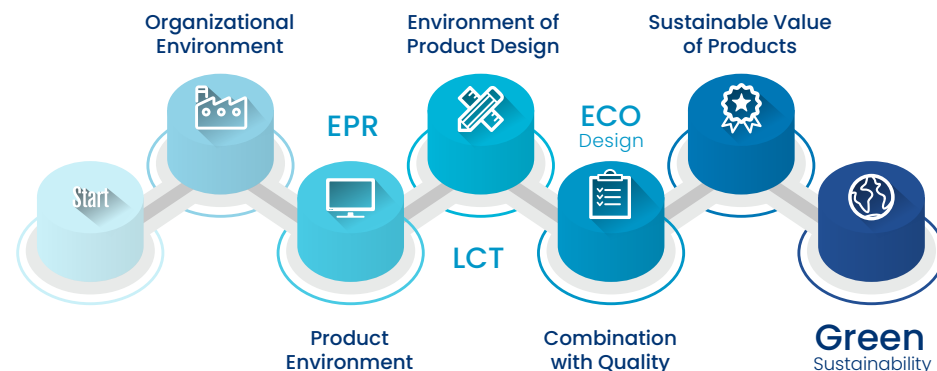
Qisda aims to maintain and implement the vision of corporate sustainable development (ESG): “Being an innovator for the design and manufacturing of ICT and medical products that boosts the quality of human life and stays friendly to the Earth.” The process of promoting green, sustainable products can be divided into different phases. We extend our vision from the organizational environment to the whole product environment and focus on the environmental impact of the products after they leave the factories. We implement big picture thinking and consider about the products’ impact on the environment during their life cycle.

Tracing from the product environment to the beginning of design, Qisda places importance on introducing the green elements since the beginning of design, believing that it is the only way to reduce the products’ impact on the environment at each stage of their life cycle. Qisda combines the methods of green design with the quality process, and further builds a close tie between them and the procedure of product design and R&D. We reach the highest efficiency by conducting inspections and adjustments at every stage of design.

Starting from 2010 (2009 as the baseline year), we have combined the elements of green design with the product design and R&D process, and established management systems with respect to the environmentally conscious design (IEC 62430) and the incorporated ecodesign (ISO 14006) guidelines.

Qisda combines the concept of life cycle with the procedure of product design and R&D, setting up goals for green design at the early stage of design. We conduct inspections at every stage of design to ensure product compliance with the customers’ requirements and the importing countries’ laws. Moreover, we make self-improvements, improve energy efficiency of the products, and reduce resource consumption by doing so. Compared to our performance in 2015, we have saved 42.32% of energy, reduced 38.95% of material and resource consumption, and reduced 45.47% of carbon from 2016 to 2022. Qisda has mapped the future for 2025 and continued promoting the green design 555 (energy saving %, material reduction %, carbon reduction %) plan to reduce environmental pressure and increase the efficiency of products, further provide products of even better quality to customers and establish sustainable value in the products.

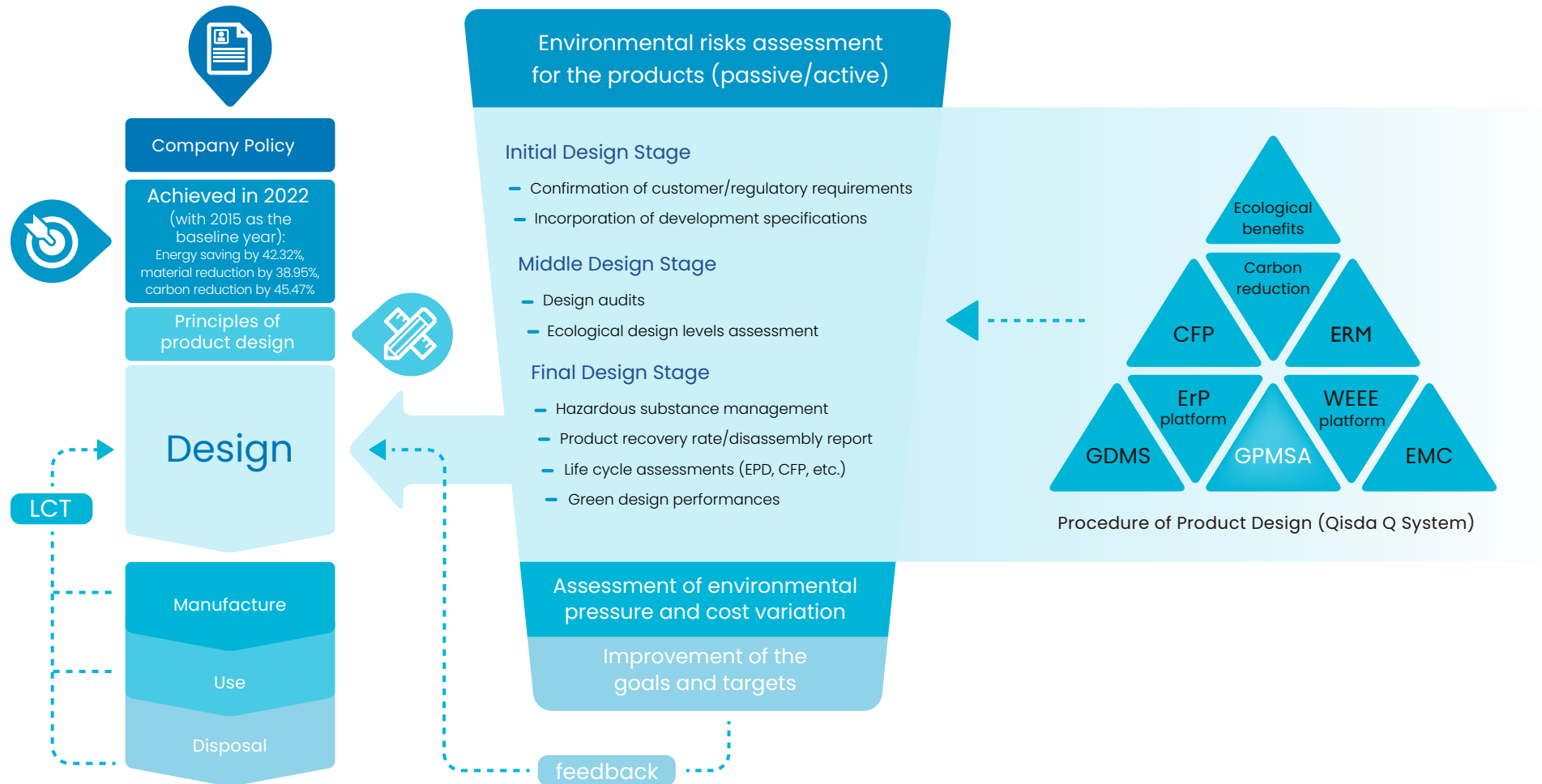
Qisda’s Green Product Evolution Stages



> Concept of Incorporated Design

Qisda has introduced the environmentally conscious design (IEC 62430) since 2010, and continued to promote the concept of product life cycle. We require that green design be included in the beginning of the product R&D to assess the potential environmental impact and risks caused by the designed products/components in different phases of the life cycle. Furthermore, we hope to simplify our design, so that we can reduce the environmental impact from the very beginning of the design. We believe that we should combine ecological design with quality management and produce products that are helpful to the environment with great functionality. Since 2013, we have combined the incorporated design (ISO 14006) with the environmentally conscious design (IEC 62430), the environmental management system (ISO 14001) and the quality management system (ISO 9001), and introduced them to the R&D process, establishing a structure of incorporated ecological design. Since 2013, we have received statements of the integrated design (ISO 14006) and the green design (IEC 62430) for products such as displays, projectors, smart phones, scanners, multimedia players and light fixtures.

Qisda's Structure of Incorporated Ecological Design



Concept

Principle/approach of ecological design

Requirements

Qisda requires that green design be included in the beginning of the product R&D to assess the potential environmental impact and risks caused by the designed products/components in different phases of the life cycle. We also requires implementation of proper management from the very beginning of the design. Thus, based on the status and experience in design of each product line, we established interdepartmental green design principles for the R&D staff as a guideline and a choice for related manufacturing procedure. We place importance on the four major green design approaches during the R&D stage, which are material reduction, hazardous substance management, energy saving, and reclaim. In the middle of design, we use the internal WEEE platform to make product recovery rate assessments, and see if the recovery rate of the product meets Qisda's basic requirement. The product can only move on to the next stage of the design process after confirmation.

Methods

1. Reduction of raw material consumption

Reduce volume and weight of the products and the packaging as well as the number of the products' components; take modular design into consideration. Until 2022, the weight and the materials of products had reduced by 38.95% in all production lines averagely.

2. Hazardous substances

For the chemicals that could be used in products or during the producing process and are harmful to the environment, Qisda has established the "Hazardous Substance Control List" according to the international regulations and the requirements of the customers. Qisda strictly manages the component and material approvals, and strongly inspects imported materials. We establish a systematized management mechanism to ensure that our products comply to international regulations and meet the customers' requirements. We hope to reduce the usage of hazardous chemicals year over year while avoiding damage to human bodies and the environment during product transportation, use and disposal.

3. Energy saving

Qisda especially focuses on increasing energy efficiency and reducing the energy consumption of shutdown and standby mode. We also compare the data of contemporary models with that of the previous generation models to confirm the achievement of energy saving performances. Qisda not only meets international requirements (such as ErP, TCO and Energy Star), but also takes self enhancement and continuous improvement as an aim, takes them into consideration and makes them our operation framework. Until 2022, all product lines had increased energy efficiency and saved energy by 42.32% on average.

4. Product disposal

Qisda especially considers the products' recovery rate and the difficulty in disassembling them since the product design process starts. We think about the way of composing the products from the beginning and avoid using materials and manufacturing processes that make products hard to dismantle, such as bonding, soldering or embedding. Products and samples with plastic components that weigh 25g or above should be labeled with a list of materials, and the plastic components used cannot be composed of more than two kinds of materials.

Concept

Process of ecological product design

Requirements

In order to implement ecological design for all models and meet the requirements of customers/importing countries while continuously promote material reduction, energy saving and carbon reduction, the design process of the machines can be roughly divided into three stages.

Methods



Initial Design Stage

- (1) **Confirmation of customer/regulatory requirements:** Confirm the regulations/versions of the customers and the importing countries, and submit the requirements to the system, sending them internally to the management units responsible for subsequent processes.
- (2) **Incorporation of development specifications:** Convert the regulations of the customers and the importing countries to design specifications as design inputs at the initial design stage.



Middle Design Stage

- (1) **Design audits:** Double-check the blueprints and prototypes to see if they meet the requirements and if there's any quality issue.
- (2) **Ecological design levels assessment:** See if the products meet other international requirements in addition to those of the customers and the importing countries, and label the products with golden, silver and bronze medals according to their ecological design status. The distribution of advantage and disadvantage of the product design is also provided as the improvement guide for next generation products.



Final Design Stage

- (1) **Hazardous substances management:** Provide corresponding reports for customers based on their requirements and check the compliance status of each component again.
- (2) **Product recovery rate/disassembly report:** Calculate the recovery rate of the models and make disassembly analysis reports through the internal WEEE platform.
- (3) **Life cycle assessment:** Collect internal and external information through Qisda's carbon management platform, and provide product carbon footprint reports and lists of recommendations for reducing carbon right after mass production.
- (4) **Green design performances:** Compare existing products with the previous generation models and make assessments of design improvement performances to see the status of achieving goals such as energy saving, material reduction and carbon reduction.

Concept

Environmental risks assessment for the products

Requirements

Based on the requirements of the customers/importing countries, Qisda actively assesses if the design of products can be further simplified to leave out unnecessary manufacturing process and parts. Every year, we perform periodical assessments on the environmental impacts of each product type. The current and new design specifications/process of the product line are taken into consideration when assessing the possible impacts and risks brought by it in each stage of the life cycle. We also make comparisons with the previous models or benchmark products in the industry to identify high-risk parts and manufacturing processes, and then establish affordable and feasible improvement plans to reduce environmental pressure. These plans shall be implemented for the next generation models.

Methods

Among the display products, the life cycles of models accounting for 12.1% of the Company' s revenue were fully assessed in 2022.

Other than that, models on which the simple life cycle assessment was conducted accounted for 9.3% of the Company' s annual revenue in 2022 (excluding the models that were already assessed in previous years).

The products for which the energy label (Energy Star 8.0) was obtained had a 56% share in the Company' s annual revenue in 2022. According to the calculation made based on the statistics on new and major Energy Star 8.0 models (accounting for 31% of the annual revenue) in 2022, the carbon emissions were expected to be reduced by a total of 64,958 tonnes.

Concept

Platform data integration

Requirements

In 2010, Qisda led the field in establishing carbon management platform. By using the bill of materials (BOM) system, we listed the corresponding components and integrated them with the component approval system to collect the material and process parameter of each component. Then, we imported the data into the Simapro system before mass production, generating a product carbon footprint report. This way, we immensely reduce the operation time. It used to take six months, and now the products are available right after mass production. We also establish the horizontal development of the carbon inspection, inspecting not only one model, but other product lines and models. Thus, Qisda has achieved the goal of providing carbon footprint reports for all main models since 2012. In the future, Qisda will also integrate the information of product disposal and energy consumption on the WEEE platform so as to present the carbon footprint of the products, from idea to disposal, in a way closer to completion.

In 2013, Qisda established the product-related environmental regulation management platform to completely connect with the customers' /company' s requirements. Based on the various requirements of each model, the system converts itself to suitable specifications for mandatory and optional design audits, offering audit lists at the subsequent design stages to ensure that our product design meets the customers' /company' s requirements, all the while avoiding rework costs.






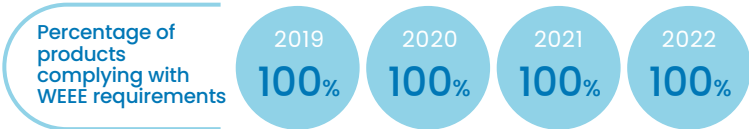
We will continue to connect/integrate Qisda' s systems and resources to make the most of information, and further reduce time on rework and sending information between departments.

Methods

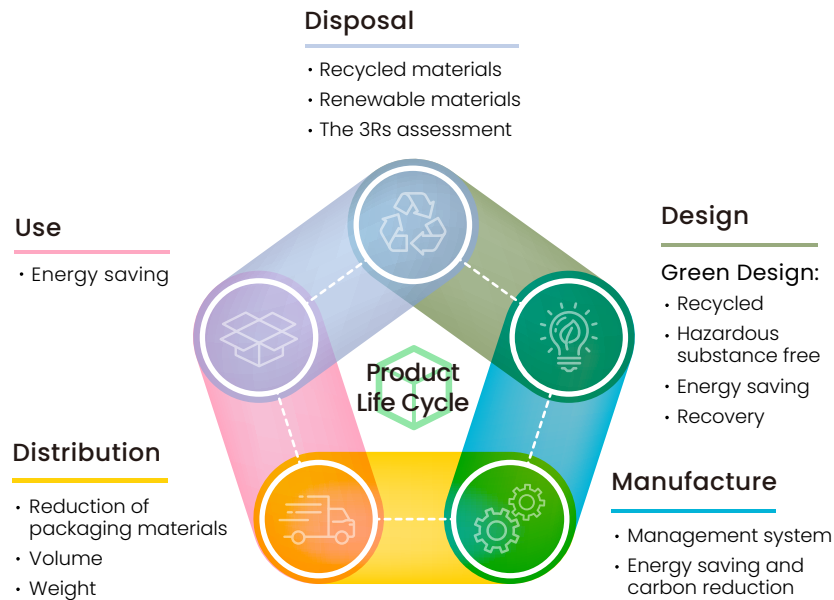
Continue to optimize the carbon footprint management system and avoid omissions with inspection reports.

At the same time, we have developed the high-level analyzing function to improve the capability of analyzing completely during the LCA as well as better presenting and improving the environmental impact in each stage of the product life cycle.

The requirements of each stage during the product life cycle are explained below:

Stage of Life Cycle	Requirements	Case
 <p>Raw materials</p>	<p>In addition to considering using parts that consume less energy and reducing the quantity of the parts used, parts in compliance with the EU Restriction of Hazardous Substances (RoHS) Directive or with the customer’s personal requirements for the prohibition and limitation of the use of hazardous substances must be adopted.</p>	<ol style="list-style-type: none"> In 2022, all of the raw materials of the new products were in compliance with the EU RoHS Directive. With 2015 as the baseline, the quantity of materials for product design in 2022 was reduced by 38.95%.
 <p>Manufacture</p>	<p>Qisda has implemented the environmental management system (ISO 14001) since 1997 and the occupational safety and health management system (ISO 45001) since 2001, committing to reduce the impact on the environment and potential risks during the production. We obtained the Green Factory Label in 2016 and established relevant energy saving as well as waste reduction performance indicators to implement goals of green operation.</p>	<ol style="list-style-type: none"> In our sites around the world, the carbon emissions per personal hourly electricity consumption were 1.92 kilograms of CO₂e in 2022, falling by 23% compared to that of 2021, which was 2.5 kilograms of CO₂e. The global energy consumption per million USD production value (kWh) was 29,436 kWh, which was 7% more than the 27,532 kWh in 2021. Qisda has been building solar power systems since 2022. In 2022, the systems produced electricity was about 5,200,534 kWh, and they helped reducing carbon for around 2,980 tCO₂e. The global water consumption per million USD production value was 106 tonnes in 2022, having an around 0.7% decrease in comparison with 2021. The proportion of recyclable waste reached 90% in 2022.
 <p>Distribution</p>	<p>Qisda thinks about reducing the volume of end-product packaging as well as utilizing parts produced by local suppliers at the early stage of new product design in order to reduce oil consumption during the stage of distribution and transportation in the hope of preventing more impacts on the environment.</p>	<p>In 2022, for the proportion of procurement in China, 73.8% of Qisda’s items were actually purchased in local areas.</p>
 <p>Use</p>	<p>Qisda not only meets international and customer brands’ requirements (such as the ErP, TCO and Energy Star), but also takes self enhancement and continuous improvement as an aim to keep on improving the design with respect to the energy consumption of products.</p> <p>In addition, we also establish the internal “design for service” and design verification systems to make sure that our products meet the customer brands’ requirements for after-sales services and reliability for use, hoping to satisfy the market demands.</p>	<p>With 2015 as the baseline, the energy consumed during product use reduced by 42.32% in 2022 thanks to the energy-saving design.</p>
 <p>Waste disposal</p>	<p>Qisda especially considers the products’ recovery rate and the difficulty in disassembling them since the product design process starts. We think about the way of composing the products from the beginning and avoid using materials and manufacturing processes that make products hard to dismantle, such as bonding, soldering or embedding. Products and samples with plastic components that weigh 25g or above should be labeled with a list of materials, and the plastic components used cannot be composed of more than two kinds of materials.</p> <p>In the middle of design, we use the internal WEEE platform to make product recovery rate assessments, and see if the recovery rate of the product meets Qisda’s basic requirement. The product can only move on to the next stage of the design process after confirmation.</p>	<p>From 2019 to 2022, the product recovery rate had been in line with the WEEE requirements.</p> <div data-bbox="1339 1249 2085 1377">  <p>Percentage of products complying with WEEE requirements</p> <ul style="list-style-type: none"> 2019: 100% 2020: 100% 2021: 100% 2022: 100% </div>

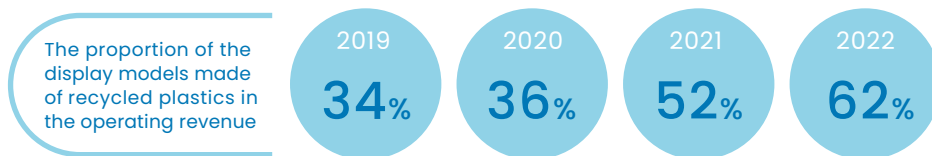
Qisda's Concept of Product Life Cycle



Recovery Benefits

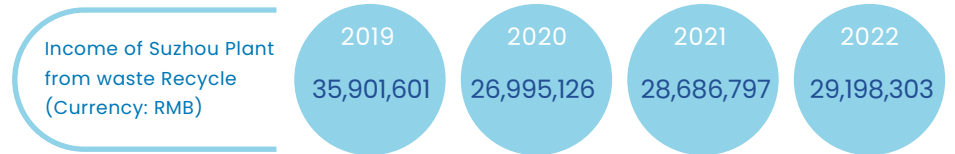
Raw material stage:

In response with the customers' requirements as well as Qisda's pursuit of eco-friendly operation, the use of recovered materials has been gradually increased. Between 2019 and 2022, the share of the display models for which recovered plastics were used in the operating revenue is shown below:



Manufacturing stage:

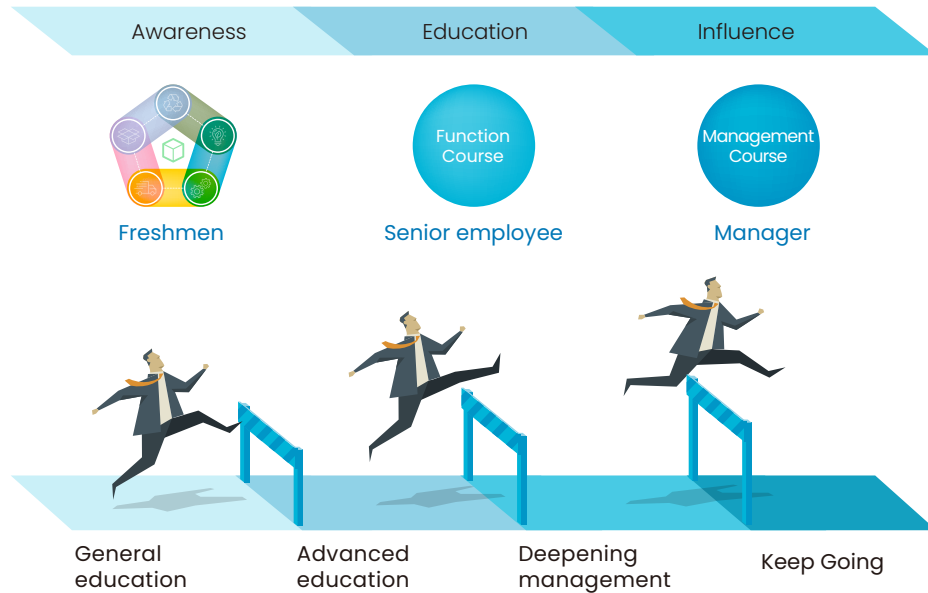
Waste from the manufacturing process can also generate economic benefits. From 2019 to 2022, the Suzhou Plant's income from waste recovery in each year is as follows:



Training for Green Talents

- For new R&D personnel: Qisda holds periodical general courses in green product design. Starting with product functional design, we gradually bring in the elements and directions of green design through simple games. Then, we approach the design process and actual cases of Qisda's green products. The examples include the concept of life cycle, applications of the life cycle concept, redesign of green products, the structure and elements of green products, and the corresponding documents for the Q process.
- For senior R&D personnel: We open professional courses according to the requirements of each department or project. The knowledge and skills are internalized as internal documents and SOP, and are passed on to the R&D personnel through the courses with the help of software platforms. For example, there are courses relevant to cognition and interpretation of international regulations, life cycle inspections and assessments, ecological design, design methods, product disassembly and analysis, application of software platforms, etc.
- For the R&D executives of management bodies: We provide courses about green management regularly to let them understand the management status of existing products and areas of enhancement for management. Moreover, the courses allow them to establish suitable management approach based on the status of each product line.

Plans for training green talents



Quality/Hazardous substance management

Qisda devotes itself to promoting the quality management system (ISO 9001), the medical devices quality management system (ISO 13485), the automotive quality management system (IATF 16949) and the hazardous substance process quality management system (IECQ QC 080000). We design and manufacture products that conform to laws, regulations and the requirements for customer safety and health. In the “Quality and No-Hazardous Substance Handbook,” we clearly disclose Qisda’s policies for quality and hazardous substance free, and the policies are verified by a third party.

The President of Qisda also serves as the person in charge of our quality/hazardous substance management system, who supervises and establishes different levels of QA teams and coordinators to promote the quality/hazardous substance free policies throughout the company and require the employees’ compliance. By using communication methods such as educational training, internal announcements on the official website, promotional cards, Qisda guides our employees to be aware of the importance of meeting the requirements of laws and regulations, the quality policies of the Company, the quality goals and the requirements of the customers. We also inspect the suitability of the management system and the usability of resources during management review meetings. We hope to improve the process continuously, reduce defects and waste, and make improvements in quality and productivity by pursuing continuous enhancement and precaution with the most economical methods. Meanwhile, we hope to meet the EU RoHS Directive and the customers’ requirements, and further have our products comply with society’s expectation and reduce negative impacts to the environment. In the recent 3 years (2019–2022), the customers had been updating their requirements for the hazardous substance control for products. In total, there were 15 updated versions and 49 additional substances for inspection. We had performed inspections in accordance with the requirements of customers and international environmental laws with both the inspection rate and the compliance rate reaching 100%. However, the customers have not demanded that we focus on the goal of hazardous substance reduction for OEM products in the next 3 years.

In 2022, there was no violation of laws or voluntary standards with respect to the health and safety impacts in the life cycle of products. There was also no violation of any information and labeling regulations or voluntary protocols with respect to products and services.

In 2022, a total of 19 models conformed to the voluntary standard of TCO Certified, generation 9, for displays and completed the application for certification to meet the customers’ requirements. In the aspect of management, Qisda converts reasonable requirements to implementation plans through the new product development system. We divide the process of product development, from idea generation to the final stage, into seven phases (Q00–Q60) based on the mission and management goals of each development stage. By doing so, we ensure the quality and reliability of the products. In addition, Qisda establishes internal product development process through the management system described above. We also ensure that all products produced by Qisda and delivered to the customers meet the following requirements:

According to the customer's requirements, Qisda can only start mass production after obtaining product-related certifications through tests in order to ensure that the customers can receive the products without concerns about product safety.

1. Product safety:

Reduction and precaution of product-related danger such as electrical leakage, energy and fire generated by short circuits, heat during operations, chemicals and radiation. For instance, the Taiwan BSMI certification, the U.S. UL standards (UL60950-1 E d. 2/ IEC62368-1/UL62368-1), the China CCC standards (GB 4943.1-2011/GB8898-2011), etc.

2. Electromagnetic compatibility (EMC):

Detection of electromagnetic radiation emitted by electronic products and its impact on human bodies, public electrical grid and other electronic products that function normally; testing of whether the electronic products function stably without being affected in electromagnetic environments. For instance, the U.S. FCC labeling, the Canada ICES-003 issue 7, the EU CE marking (EMC Directive 2004/108/EC, Low Voltage Directive 2006/95/EC), etc.

3. Energy consumption of product

Reduction of energy consumption during the product life cycle to improve efficiency and reduce energy use. For instance, the U.S. Energy Star, the EU ErP Lot 5, the EU Energy Label, and the China Energy Label (CEL), etc.



All products must meet the requirements of the "Non-hazardous Substance Process Management Procedures"



Prohibitive measures with respect to environmental hazardous substances have been implemented for all products produced by Qisda. In addition, we have presented requirements to the suppliers in accordance with relevant specifications to ensure the compliance with laws, regulations and Qisda's rules. With this, source management can be implemented.

Qisda's policy of quality/non-hazardous substance

1. Qisda complies with the goal: "Our products and services must conform to the promised quality, specification, cost and delivery date; We must devote ourselves to energy saving and environmental protection when designing and manufacturing the products, and fulfill the corporate social responsibility." We also comply with the quality/hazardous substance free policy and will spare no effort to promote and establish systems that meet the international standards, such as the ISO 9001 "quality management system" and IECQ QC 080000 "hazardous substance process quality management system." We strive for improving the process continuously, reducing defects and waste, and making improvements in quality and productivity by pursuing continuous enhancement and precaution with the most economical methods. Meanwhile, we are dedicated to complying with regulations related to hazardous substances (such as the EU RoHS Directive) and meeting the customers' requirements, and further complying our products with the society's expectation and reducing negative impacts to the environment.
2. Qisda also makes cards and built a mobile app (Qplay) about the quality policies for all employees to check them out anytime.
3. Relevant certificates are also stored on the internal and external websites.
4. Qisda verifies that its products comply with the EU Restriction of Hazardous Substances (RoHS) Directive and conform to the customers' personal requirement that we prohibit and limit the use of hazardous substances before mass production. Meanwhile, Qisda audits all suppliers regularly, strictly manages component and material approvals, and strongly inspects imported materials. By doing so, we establish a systemized management mechanism to ensure that the customers can receive the products without concerns about health.

The numbers of models qualified for environmental certifications and applications in 2022 are as follows:










Environmental Certification	Number of Models Submitted in 2022	Remarks
 TCO Certified Displays 9	19 models	TCO Certified is a world-leading sustainability certification for IT products. Its criteria are designed to drive social and environmental responsibility throughout the product life cycle. Compliance is independently verified, both pre and post certification.
 U.S. Energy Star	109 models	The U.S. Energy Star program was launched by the U.S. Environmental Protection Agency in 1992 with the aim of reducing energy consumption and the greenhouse gas emission of power plants. Participation in this program is not compulsory. Companies voluntarily participating in the program are allowed to put an Energy Star label on their qualified products. In 2022, products with the Energy Star environmental label accounted for 56% in the total product revenue.








Environmental Certification	Number of Models Submitted in 2022	Remarks
 China Environmental Labeling (the Ten-Ring Certification)	10 models	The China Environmental Labeling is a certification launched by the government. Products certified with the label not only pass the quality standard, but also meet the requirement of environmental protection during the process of production, use and disposal. Compared to other similar products, the certified products have advantages in environmental aspects, such as low toxicity and hazardous substances, resource saving, and so on.
 RoHS	100% models	RoHS is a compulsory standard formulated by the EU, mainly aiming to restrict hazardous substances in electric and electronic devices and further protect human health. It also ensures proper recovery and disposal of waste for environmental protection. Qisda' s products that are in compliance with the EU RoHS Directives account for 100% in the total product revenue.



Products and Services in Response to the UN SDGs

To connect with the world, Qisda adopts the SDG Compass Guide as reference to set performance indicators for the potential risks that require prior management in the Company' s value chain. Moreover, with the existing core R&D strength and operating strategies incorporated, we also launch a variety of relevant products and services in accordance with the SDGs, in order to make corporate responses to the international trend of sustainable development.

Solution	Description	Applied Software and Hardware	SDGs
 <p>Smart Energy</p>	<p>BenQ Business Solutions, an affiliate of Qisda, is the only "ADR 2.0 Ready" certified energy saving technology company in Taiwan. It creates intelligent green energy and smart management for energy saving and full-time monitoring of IoT equipment used in the domestic manufacturing and service industries. In 2021, the service scope has been extended to include the energy creation and storage system; the customers are provided with one-stop energy management services, receiving our support to make plans and progressively fulfill the requirements of net zero carbon emissions that attract more and more attention.</p>	<p>Hardware PoE switch</p> <p>Software Automated monitoring system for energy saving of AC and lighting</p>	  
 <p>Smart Manufacturing</p>	<p>We are the first one in the industry to introduce the solution of production and manufacturing information system and provide a platform of high software and hardware integration. In 2017, we set up the Phase 2 smart plant at the headquarters in Taoyuan. As of 2022, AGVs have been adopted by several wafer fabs and automobile factories. Qisda's smart plant has received the first safe human-robot collaboration certification in Taiwan, and the Green Factory Label from MOEA for the second time. Through the setup of smart manufacturing solutions, the production quality can be improved while the waste caused by the sales per unit area can be reduced, which enhances the overall production efficiency of the plants.</p>	<p>Hardware Automatic guided vehicle (AGV)</p> <p>Software Warehouse management system (WMS), supervisory control and data acquisition (SCADA), smart environmental safety management (SESM), smart cloud situation room (SCSR), radio frequency identification (RFID), traceability, etc.</p>	 
 <p>Smart Education</p>	<p>Based on the core of offering big data learning and analysis services of flipped classroom model and education, the Company makes seamless integration of the software, hardware and teaching/learning experience, supports the learning application scenarios, and provides education cloud services. Ranging from the Campus Security Monitoring, School Administration & Student Information System to Smart Classroom System, we leverage our specialties in information system to comprehensively address the needs of school administration and of the parents, teachers and students.</p>	<p>Hardware School administration & student information system</p> <p>Software Comprehensive education cloud system Parent-Teacher-Student Platform and I-Campus APP Campus security monitoring system</p>	

Solution	Description	Applied Software and Hardware	SDGs
 <p>Smart Health</p>	<p>By combining rich clinical resources and professional technologies of medical equipment and materials, and incorporating the internationalized design capability and software/hardware integration services, we create opportunities for a quality and healthy life. The pandemic prevention and disinfection robots demonstrated their functions during the pandemic in 2022. The UV fluorescent tubes are capable of disinfecting in the hospital at a preset time and in a specified location. The trackless 3D laser and supersonic sensing equipment can work independently and provide additional introductory and transporting functions to reduce the risk of infection to the pandemic prevention personnel. The smart hospital wards, smart emergency room dashboard, clinic check-in and queuing management system and service desk management system all make the treatment-seeking process effectively organized; the efficiency has been boosted, the direct contact has been avoided, and the risk of infection has been reduced.</p>	<p>Hardware Medical display, ultrasound scanner, intraoral scanner, surgical table, transporting robots in operation rooms and disinfection robots</p> <p>Software Group fitness system, health management system, integrated operating room solution, 3D dental implant integration service, dashboard application, clinic check-in and queuing management system, service desk management system, etc.</p>	
 <p>Smart Retail</p>	<p>The Company satisfies the needs for diversified one-stop hardware shopping of the retail industry, and puts together a variety of software system services for precision marketing and interactive consumption. We have provided our customers with people flow analysis service for stores; with such support, the customers' revenues of the stores have increased by 20% compared to those of the time before the service implementation. Qisda's affiliates, Partner Tech Corp., LaFresh, etc., have integrated all the online and offline channel platforms in an active manner, providing highly integrated self-order, checkout and kitchen management systems for the stores of catering industry in the popular trend of food delivery and take-away under the pandemic. With systematic process management, such stores can fulfill the consumer needs for food ordering and taking processes that are more feasible and diversified in the pandemic era.</p>	<p>Hardware POS terminal, mobile POS, large commercial display, projector and other peripheral equipment</p> <p>Software Content management system (CMS), electronic shelf label, hotspot analysis</p>	
 <p>Smart Enterprise</p>	<p>Qisda's affiliate, BenQ Business Solutions, has mature software development capability. Certified by CMMI5, the company, with experience of serving more than 700 well-known customers on the both sides of the Taiwan Strait and top-100 companies in China, supports the customers to become smoothly operating smart enterprises by offering highly flexible modular services.</p>	<p>Software Human capital management (HCM), supplier relationship management (SRM), business process management (BPM)</p>	 

Life Cycle Assessment

According to ISO 14044:2006 life cycle assessment standards in the life cycle assessments, the product life cycle includes raw material acquisition, production, distribution, use, and end-of-life treatment stages. For LCD monitor products, the scope of the system boundaries has been defined as cradle to grave, which includes all stages of the full life cycle.

System boundaries

(1) Raw Material Acquisition Stage

Information regarding raw material stage on LCD monitor products includes the process of manufacturing main materials, auxiliary materials and packaging materials (referring to the raw material mining and manufacturing of the supply chain), and the related transportation to the manufacturing plant of Qisda.

(2) Production Stage

The process of production stage on LCD monitor products includes the energy used in the manufacturing and the related processes of waste treatment.

(3) Distribution Stage

The distribution information of the LCD monitor products includes the shipments from the manufacturing plant to the first-tier deliver points (or warehouse)

Due to the difficulty in collecting, data related to sales operations is not included.

(4) Use Stage

The energy consumption of LCD monitor products is calculated according to the use phase scenario and product lifetime. The power consumption under the consumer use phase scenario is defined based on the latest version of the Energy Star monitor testing standard.






(5) Waste disposal and recycle

Reporting of information such as dis-assembly reports and sales area recycling channels mentioned in the 3Rs report of LCD monitor products. It distinguishes the disposal methods of each component at the end-of-life treatment stage and includes the relevant processes of incineration and landfill in calculation.

The life cycle assessment software used for the carbon footprint calculation of this product is SimaPro v9.3.0.3 version, and its database is Ecoinvent 3.8. The life cycle impact assessment

The life cycle assessment software used for the carbon footprint calculation of this product is SimaPro v9.3.0.3 version, and its database is Ecoinvent 3.8. The life cycle impact assessment methodology follows the ReCiPe 2016 Midpoint methodology for product life cycle assessment analysis, revealing 18 environmental impact categories.

1. Calculation method of product environmental footprint: environmental footprint = activity intensity data × emission factor
2. The life cycle assessment is to check and calculate the product environmental footprint at each stage of the life cycle (from raw material mining/manufacturing, transportation, manufacturing, distribution, product use and product final disposal) and its supply chain emissions.

Life cycle stage	Allocation method
 Raw material acquisition	<p>The calculation of raw materials is according to the actual production quantity (weight) as the basic parameter.</p> <p>The calculation of raw material transportation is multiplying the above parameter by the actual transportation distance from the supplier's production site to Qisda's Suzhou factory.</p>
 Production	<p>At production stage, for input, output and emission data, we use "production weight" as the factor to allocate the data to the target product.</p>
 Distribution	<p>The actual weight of the target product shipped from the factory to the first distribution point (or warehouse) is multiplied by the transportation distance, and then allocated to a single product.</p>
 Use	<p>Allocation according to the sales proportion of each region.</p>
 Waste disposal and recycle	<p>The weight is used as the basic parameter for allocation according to the disposal way of each component after disassembling the product.</p>

The functional unit of this product is defined as an LCD monitor (24 inches). The functional unit is based on the LCD product category rules (PCR) announced by the Environmental Protection Administration. When the product is sold, one unit is used as the declared unit. According to the basis, Qisda completes product activity data inventory and environmental footprint quantitative analysis.

The analysis results show that the hotspots of environmental impact mainly occur at the stage of raw materials. Taking the carbon footprint as an example, the life cycle of this product generates a total of 182 kg CO₂e emissions of greenhouse gas. The raw materials acquisition stage

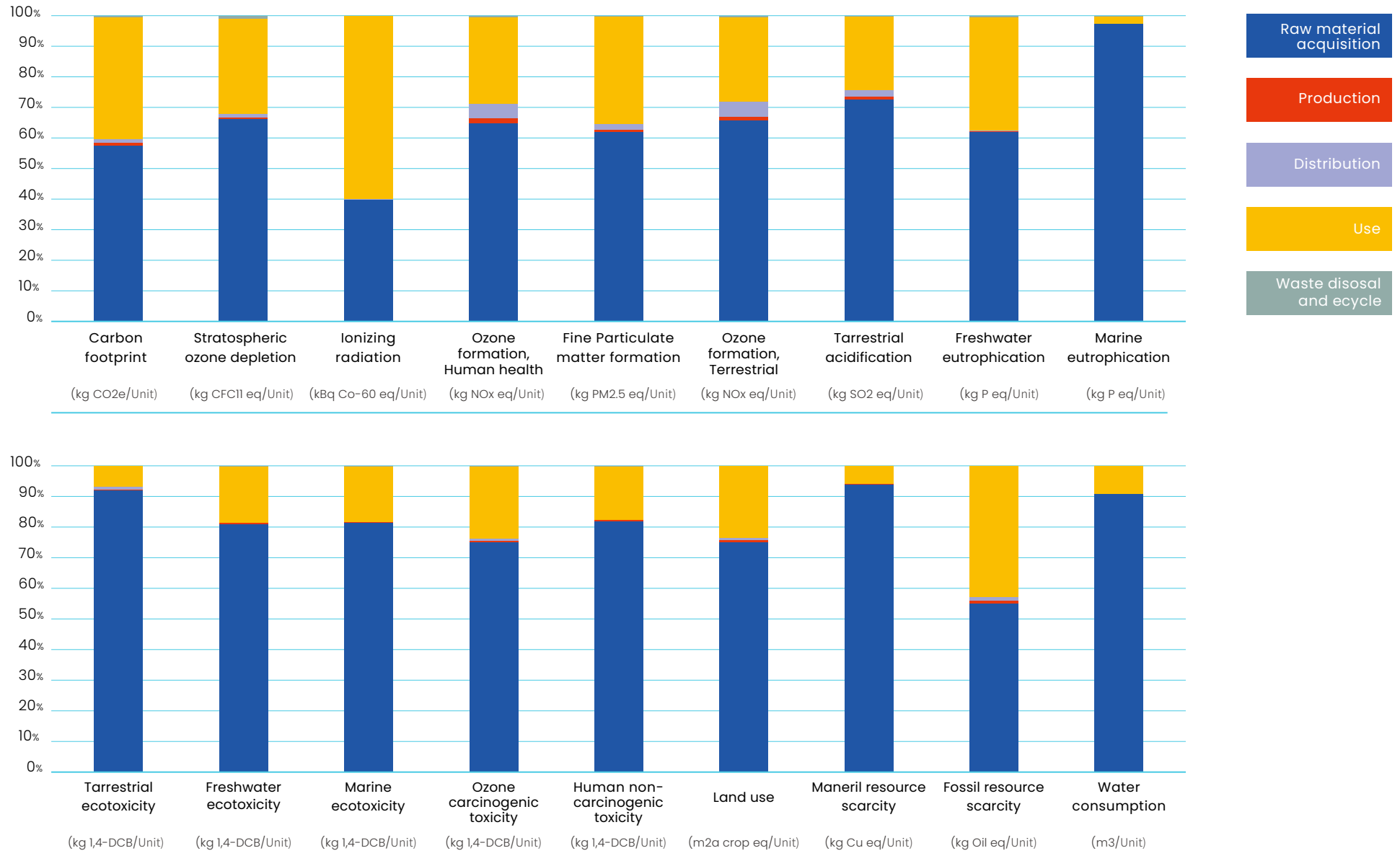
accounts for 57.6%. Among all kinds of components, LCD display module (LCM) (75.3%), housing (ASSY) (5.6%), printed circuit board (PCB) (4.8%) and integrated circuit (IC) (1.8%) have higher environmental hotspots.

In the future, Qisda will continue to expand the coverage of LCA for products, establish an operating procedure for LCA, offer professional courses, and internalize knowledge and technology into internal documents and SOPs. Meanwhile, Qisda will train R&D members via software platform to understand the current management status of products and to improve low-carbon products design by analyzing carbon emission hotspots through LCA.

Environmental Impact Assessment Results at Every Stage of the Lifecycle

Impact category	Unit	Environmental impact results					
		Raw material acquisition	Production	Distribution	Use	Waste disposal and recycle	Total
Carbon Footprints(Climate change)	kg CO ₂ e	1.05E+02	2.03E+00	1.81E+00	7.31E+01	3.73E-01	1.82E+02
Stratospheric ozone depletion	kg CFC11 eq	6.85E-05	4.19E-07	1.28E-06	3.18E-05	9.41E-07	1.03E-04
Ionizing radiation	kBq Co-60 eq	7.69E+00	2.99E-02	3.07E-02	1.14E+01	9.88E-04	1.91E+01
Ozone formation, Human health	kg NO _x eq	2.70E-01	5.36E-03	2.10E-02	1.17E-01	6.62E-04	4.15E-01
Fine Particulate matter formation	kg PM _{2.5} eq	2.38E-01	2.93E-03	7.00E-03	1.35E-01	1.27E-04	3.83E-01
Ozone formation, Terrestrial ecosystem	kg NO _x eq	2.84E-01	5.43E-03	2.12E-02	1.19E-01	6.65E-04	4.30E-01
Terrestrial acidification	kg SO ₂ eq	5.84E-01	6.60E-03	2.10E-02	1.91E-01	3.46E-04	8.03E-01
Freshwater eutrophication	kg P eq	8.40E-02	3.66E-04	3.05E-04	5.02E-02	2.83E-04	1.35E-01
Marine eutrophication	kg P eq	1.35E-01	2.66E-05	8.62E-06	3.40E-03	1.98E-05	1.38E-01
Terrestrial ecotoxicity	kg 1,4-DCB	1.73E+03	2.25E+00	1.82E+01	1.27E+02	1.04E+00	1.88E+03
Freshwater ecotoxicity	kg 1,4-DCB	2.23E+01	6.87E-02	2.48E-02	5.02E+00	4.36E-02	2.95E+01
Marine ecotoxicity	kg 1,4-DCB	2.89E+01	8.66E-02	4.28E-02	6.37E+00	5.96E-02	3.55E+01
Human carcinogenic toxicity	kg 1,4-DCB	1.30E+01	6.48E-02	7.83E-02	4.09E+00	2.62E-02	1.73E+01
Human non-carcinogenic toxicity	kg 1,4-DCB	3.66E+02	1.03E+00	7.28E-01	7.72E+01	7.80E-01	4.46E+02
Land use	m ² a crop eq	4.95E+00	2.88E-02	5.96E-02	1.52E+00	9.60E-04	6.56E+00
Mineral resource scarcity	kg Cu eq	1.71E+00	2.48E-03	3.58E-03	1.05E-01	4.12E-04	1.82E+00
Fossil resource scarcity	kg Oil eq	2.54E+01	3.76E-01	5.75E-01	1.96E+01	1.14E-02	4.59E+01
Water consumption	m ³	4.55E+00	5.31E-0	2.28E-03	4.53E-01	6.65E-04	5.01E+00

Results of environmental impacts at various stages and their percentage share

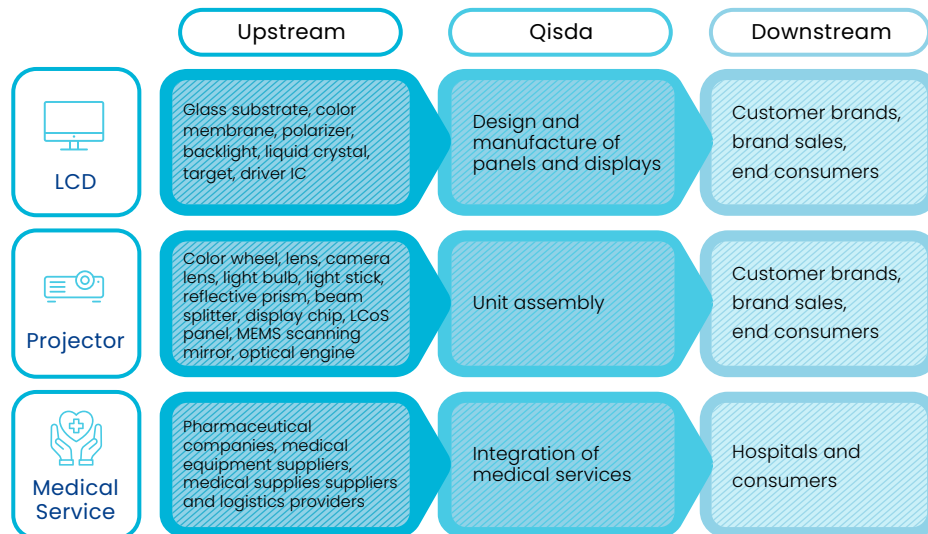


Sustainable Supply Chain Management

Under the premise that industries around the world are closely connected and the customers' requirements must be satisfied, the suppliers have become the most important partner of Qisda. Playing the leading role of the alliance, Qisda bears the responsibility of leading the supply chain in marching toward sustainable development. Hence, we establish a systematic sustainability management mechanism for the supply chain. Internally, we raise the level of supply chain management and improve the management process; externally, we stimulate the suppliers' sustainability actions and performance step by step to create mutual benefits and co-prosperity in the industrial chain together. Alongside the suppliers, we move towards the vision of "Bringing Enjoyment 'N Quality to Life."

Qisda provides ODM/OEM services for electronic products, such as consumer electronics and products applicable for commercial, industrial and medical use as well as daily applications. For our major business, we focus on three major aspects: LCDs, projectors and medical services. Upstream mainly refers to the suppliers of different types of parts, components and equipment, while downstream mainly refers to customer brands and end consumers.

Main Industrial Chains of Qisda's Products/Services



Overview of Supply Chain

The headquarters of Qisda are located in Taiwan. Our suppliers are from countries including Taiwan, Japan, mainland China/Hong Kong, Singapore, South Korea, Malaysia and Vietnam. Additionally, these suppliers have operations across regions including in Asia, America, Europe and other regions. Overall, we had 1,107 suppliers in 2022. With a selection mechanism, we removed the customers and spot dealers with a transaction amount of less than NT\$1 million, making the number of Tier 1 suppliers 718. We disaggregate the suppliers into categories including panel, electronic parts, parts and components, and packaging materials. Through focused supplier relevant conditions, we selected 313 focused Tier 1 suppliers in 2022. We also investigate the conditions of the non-Tier 1 suppliers. In 2022, we controlled the conditions of a total of 145 significant non-Tier 1 suppliers.

- **Supplier:** Referring to product-selling suppliers.
- **Definition of a focused supplier:** A focused supplier is a single supplier that provides key materials, is ranked top 95% in terms of procurement amount, and leads in technologies. Customers, spot dealers and suppliers with a transaction amount of less than NT\$1 million are not included.
- **Definition of a high-risk supplier:** We perform risk assessment on the suppliers based on four major aspects: "sustainability action," "labor," health and safety" and "environment." High-risk suppliers are then identified according to the comprehensive assessment

Overview of Tier 1 Suppliers in 2022 (Region)

Asian countries	China	Taiwan	Japan	Others	Subtotal
Number of suppliers	536	131	18	24	709
American countries	USA	Canada	Others	Subtotal	
Number of suppliers	3	1		4	
European countries	Germany	Italy	Switzerland	Others	Subtotal
Number of suppliers	2	2	1		5
Total					718

Overview of Focused Non-Tier 1 Suppliers in 2022 (Region)

Asian countries	China	Taiwan	Japan	Malaysia	Singapore	Others
Number of suppliers	119	16	1	1	1	138
European countries	Czech					
Number of suppliers	1					1
Total						139

Number of Tier 1 Suppliers and Percentage in Procurement in 2022

Product	Asia	Europe	America	Subtotal
Panel				
Number of Tier 1 suppliers	24	0	1	25
Number of focused Tier 1 suppliers	15	0	1	16
Percentage of focused Tier 1 suppliers (%)	2.1%	0%	0.14%	2.23%
Percentage of focused Tier 1 suppliers in procurement amount (%)	22.08%	0%	0.01%	22.09%
Electronics				
Number of Tier 1 suppliers	230	3	3	236
Number of focused Tier 1 suppliers	109	0	3	112
Percentage of focused Tier 1 suppliers (%)	15.2%	0%	0.3%	15.6%
Percentage of focused Tier 1 suppliers in procurement amount (%)	22.51%	0%	6.25%	28.75%
Parts and components				
Number of Tier 1 suppliers	372	2	0	374
Number of focused Tier 1 suppliers	155	1	0	156
Percentage of focused Tier 1 suppliers (%)	21.59%	0.14%	0%	21.73%
Percentage of focused Tier 1 suppliers in procurement amount (%)	36.61%	0.06%	0%	36.67%

Type and Number of Focused Non-Tier 1 Suppliers in 2022 (Product)

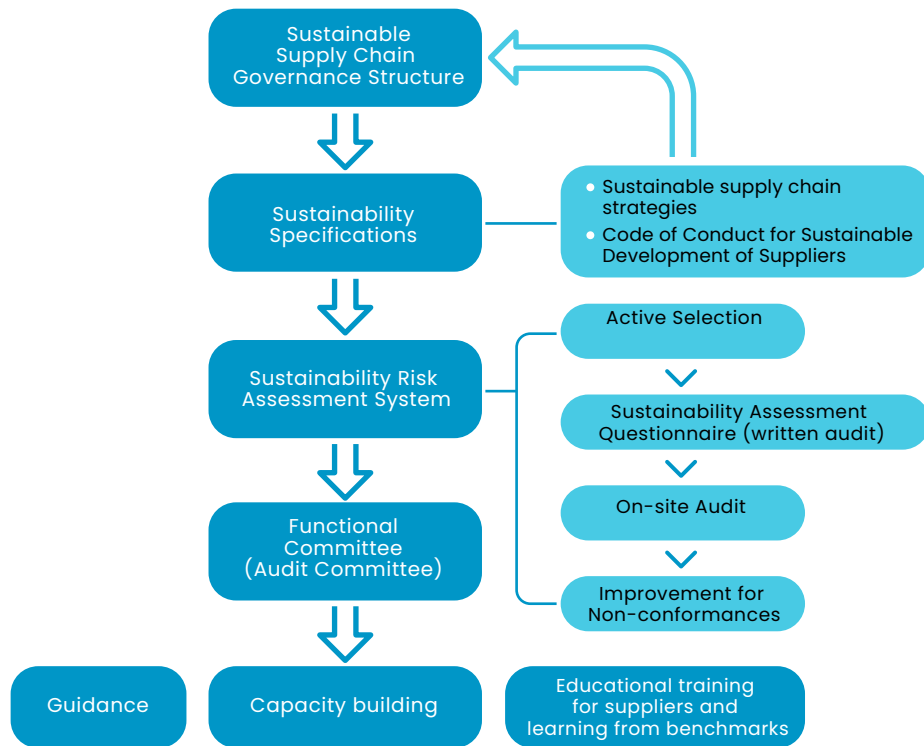
Procurement	Electronics	Parts and components	Packaging materials
Number of focused non-Tier 1 suppliers	24	90	25

Product	Asia	Europe	America	Subtotal
Packaging materials				
Number of Tier 1 suppliers	57	0	0	57
Number of focused Tier 1 suppliers	23	0	0	23
Percentage of focused Tier 1 suppliers (%)	3.2%	0%	0%	3.2%
Percentage of focused Tier 1 suppliers in procurement amount (%)	5.4%	0%	0%	5.4%
Consumables				
Number of Tier 1 suppliers	26	0	0	26
Number of focused Tier 1 suppliers	6	0	0	6
Percentage of focused Tier 1 suppliers (%)	0.84%	0%	0%	0.84%
Percentage of focused Tier 1 suppliers in procurement amount (%)	0.17%	0%	0%	0.17%
Total				
Number of Tier 1 suppliers	709	5	4	718
Number of focused Tier 1 suppliers	308	1	4	313
Percentage of focused Tier 1 suppliers (%)	42.9%	0.14%	0.56%	43.59%
Percentage of focused Tier 1 suppliers in procurement amount (%)	86.76%	0.06%	6.26%	93.07%

Framework for Sustainable Supply Chain Management

Qisda establishes a complete framework for sustainable supply chain management. First, we explicitly notify the suppliers about the sustainability specifications and ask them to ensure compliance with relevant requirements. Then, we assess sustainability risks in different aspects through the sustainability risk assessment system for suppliers, and review the risks that the supply chain is facing. Finally, we perform counseling and capacity building regarding the supply chain based on the problems it faces as well as the important strategies of the industry' s and the Company' s future development in the hope of improving alongside the suppliers and moving forward to a sustainable future.

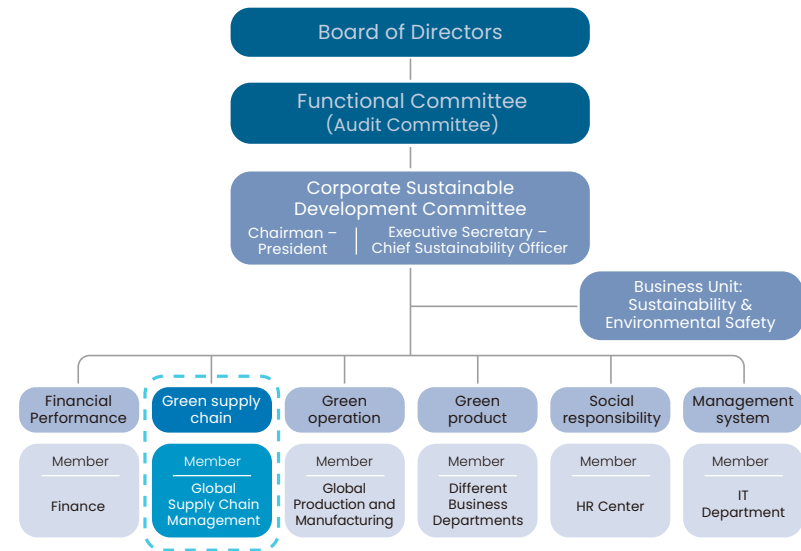
Framework for Sustainable Supply Chain Management



Governance Structure

Qisda continues to focus on the development and management of the supply chain. Not only do we report the daily management performance at the quarterly ESG Committee meeting, but the Chief Sustainability Officer also reports the implementation results and performance of the sustainable supply chain to the Board of Directors annually. At the same time, the Board of Directors guide and make decisions for the development of the sustainable supply chain to make sure that the management of the sustainable supply chain complies with the Company' s overall sustainability strategy.

Organizational and Management Structure of the ESG Committee



Qisda' s Training for Internal Personnel

Every year, all of Qisda' s procurement personnel undergoes sustainability related education and training, including awareness courses and ethics training as well as educational training for intellectual property management and specifications, information security, health and safety, and risk management based on the RBA' s Code of Conduct and SA8000 Social Accountability Standards. This is to let the procurement personnel continue the improvement of the professional capabilities that sustainability requires, and further apply these to sustainable supply chain management. During the process of participating in supplier

relevant inspections for selection, regular evaluation, sustainability risk assessments, identification of high-risk suppliers, audits, counseling and improvement, the procurement personnel can leverage their professional capabilities and facilitate the sustainable development of the supply chain.

With respect to the aforementioned sustainability related education and training courses, there were a total of 1,469 procurement personnel who should participate in the training in 2022, all of which had completed the courses, meaning that 100% of the procurement personnel was covered in the training. The total training hours reached 1,188 hours.

Sustainability Specifications

Sustainable Supply Chain Strategies

Qisda believes that promoting sustainable supply chain management is important to the development of the Company. Thus, we establish sustainable supply chain strategies as the highest principles for compliance. In addition to quality, speed, innovation/technical capabilities, delivery and cost, we include ESG into the strategies and persist in promoting them to increase the overall sustainable value of the supply chain.

Code of Conduct for Sustainable Development of Suppliers

With reference to relevant international specifications and initiatives including the RBA' s Code of Conduct, social accountability standards (e.g. SA8000), the UN Guiding Principles

on Business and Human Rights, the UN Universal Declaration of Human Rights and the Ten Principles of the UN Global Compact, Qisda has established the "Code of Conduct for Sustainable Development of Suppliers" that includes labor, health and safety, environment, ethics and management systems. We even add biodiversity and zero-deforestation commitments in the environmental aspect to reduce environmental impacts. We require that all suppliers understand the content of the "Code of Conduct for Sustainable Development of Suppliers" as well as complying with its requirements. We also include the suppliers' implementation status in the major assessment items for procurement-related decisions. At the same time, Qisda asks the suppliers to develop their own specifications/Code of Conduct regarding sustainability and communicates our requirements to them, ensuring the sustainability of the overall value chain.

Sustainability Risk Assessment System

Active Selection

The suppliers' performance on sustainability affects our reputation indirectly or becomes a potential risk. Hence, we establish new assessment conditions for the selection of suppliers, actively selecting suppliers to reduce relevant risks. The assessment factors include ESG, operation, located country, industry, product, etc. Where a major international event happens, we investigate and understand the status of the region, industry and source of supply that are involved in the major event.

Aspects of Qisda' s "Corporation Code of Conduct for Sustainable Development of Suppliers"

Labor

- Human rights risk situations
- Freedom to choose an occupation
- Child labor and teen workers
- Work hours
- Wage and welfare
- Humane treatment
- Anti-discrimination/anti-harassment
- Freedom of association
- Dismissal

Health and Safety

- Occupational safety and industrial hygiene
- Emergency response
- Occupational injuries and diseases
- Manual labor and machine protection
- Public sanitation, food and housing
- Communication and complaint

Environment

- Approval and report
- Prevention of pollution and resource saving
- Hazardous substance
- Waste and exhaust
- Water management
- Material limitation
- GHG & energy consumption
- Biodiversity

Ethics

- Business ethics
- Prohibition/recusal of improper benefits
- Information disclosure
- Property rights
- Fair trade, advertisement and competition
- Whistleblower protection
- Responsible procurement
- Information security and Privacy

Management System

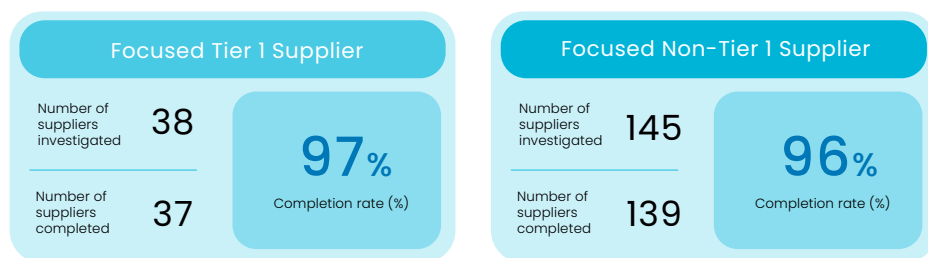
- Commitment and responsibility
- Risk management and improvement targets
- Awareness, communication and complaint
- Assessment, correction and documented record
- Supplier responsibility

Item	Content
Environmental	Document of control over non-hazardous substances, carbon footprint investigation, probable VOCs related carcinogens, investigation into compliance with the US TSCA regulation regarding the five PBT substances
Social	Human rights, ethics and labor rights
Governance	Financial status, operational competitiveness, conflict minerals investigation
Operation	Basic information, product information, major customer, production and equipment status, investment, and continuous product planning
Located country	Status of the supply (whether it is affected) in the located region, conflicts between countries (military and coup related problems), local restrictive policies, natural disasters and epidemic
Industry	Investigations of the RBA' s Code of Conduct and sustainability risks
Product	Procurement amount, types of products provided

Sustainability Assessment Questionnaire (Written Audit)

In order to continuously control the conditions of sustainability risks in the supply chain, starting from 2022, Qisda has started to distribute sustainability assessment questionnaires (SAQ) to Tier 1 and non-Tier 1 suppliers and require them to fill out the questionnaire as well as submitting relevant evidence. The sustainability assessment questionnaire (SAQ) has four major aspects: "sustainability action," "labor," health and safety" and "environment" with a total of 58 questions. It also collects relevant written data. Through continuous distribution and recovery, we will collect and analyze the results gradually in the hope of identifying potential high-risk suppliers and further performing management. As of March 2023, we had distributed 183 questionnaires to the focused Tier 1 and non-Tier 1 suppliers, and recovered 176 of them with a recovery rate of 96%.

Overview of Sustainability Assessment Questionnaire in 2022



On-site Audit

To confirm the status of supplier risks, we plan to confirm the risks with four methods such as written audit, on-site second-party audit, on-site third-party audit and assessment based on industry relevant standards to further control the suppliers' sustainability risks. In 2022, we mainly adopted written audits and industry relevant standards (e.g. RBA VAP) to confirm the status of sustainability regarding the suppliers.

Audit Methods	Description
Written audit	Assess the status of supplier risks through the data recovered from the sustainability assessment questionnaire.
On-site second-party audit	The supplier or consultant conducts on-site audits on its upstream suppliers.
On-site third-party audit	An independent third-party verification agency performs on-site audits.
Industry relevant standard	Conduct written or on-site audits in accordance with industry relevant standards or specifications.

According to the audit results with respect to 37 focused Tier-1 suppliers in 2022, Qisda made statistics of non-conformance in the five major aspects: labor, health and safety, environment, ethics and management systems. In addition, we disaggregated non-conformances by priority and other levels. During the audit, we did not identify any priority non-conformances of focused Tier 1 suppliers. For non-conformances at other levels, the aspect of health and safety had the highest percentage in total non-conformances at 76.33%, followed by the labor aspect, which occupied 14.79%. The management system aspect had 5.33% while the environment aspect accounted for 2.37%. The ethics aspect had the lowest percentage, accounting for 1.18% of total non-conformances.

Statistics of Non-conformance in Audits for Focused Tier 1 Suppliers in 2022

	Labor	Health and safety	Environment	Ethics	Management system
Incompliance of prioritized deficiencies	0%	0%	0%	0%	0%
Incompliance of other deficiencies	14.79%	76.33%	2.37%	1.18%	5.33%

Improvement for Non-conformances

With respect to non-conformances after audits, Qisda requires the suppliers to propose action plans within the time limit. Then, we provide suggestions for improvement and counseling to the suppliers in order to complete the improvement as soon as possible. In 2022, Qisda provided counseling to a total of 37 suppliers, all of which were focused suppliers, to complete improvement.

Non-conformance Improvement Actions for Supplier Audits in 2022

Aspect	Topic	Improvement Action
Labor	Anti-discrimination/ anti-harassment	Cancel age restrictions in recruitment advertisements and enhance anti-discrimination education and training
Health and safety	Occupational injuries and diseases	Renew the expired drugs in first aid kits
	Safety at work	Order relevant personnel to put on protective equipment in line with regulations
	Emergency response	Mark emergency assembly points on evacuation diagrams
Environment	preparedness	Attach labels to hazardous waste in accordance with regulations
	Hazardous substance	Use secondary containers that prevent leakage for chemicals and disseminate this to the personnel
ethics	Solid waste	Classify solid waste and enhance the dissemination and explanation of waste classification
Management system	Identity protection and prevention of retaliation	Place the complaint mailbox outside the monitored spaces
	Management duties and responsibilities	Train department heads again in terms of occupational disasters
	Improvement targets	Establish and implement target management procedures and plans

Supplier Sustainability Improvement

Educational Training for Suppliers

In December 2022, the BenQ Qisda Group held the Joint Carbon Reduction Meeting and Workshop for ESG Sustainability Action. We not only committed ourselves to the

comprehensive use of renewable energy by 2040, but also intended to reach the goal of net zero by 2050. We actively collaborated with the alliance as well as our 400 suppliers to reduce carbon and support the carbon reduction advocacy. By doing so, we showed our actions on sustainability to be in line with international standards. During the meeting, three experts were invited to provide lectures on themes such as “Challenges of ESG and Net Zero,” “Analysis of ESG Competitiveness” and “Net Zero Emissions and Reduction Practices,” allowing the suppliers participating in the activity to gain a deeper knowledge of sustainability requirements and planning. Furthermore, Qisda awarded the 29 suppliers that were deemed outstanding in sustainability performance during the assessment with the “Qisda Outstanding Supplier in Sustainability Award” at the meeting. By doing so, we not only recognized their efforts and achievements in the field of sustainability, but also encouraged all suppliers to follow their examples.

In line with our commitments along with the goal of collaborating with the alliance and reducing carbon with the supply chain partners, the BenQ Qisda Group has especially established the “Workshop for ESG Sustainability Action.” Through the BenQ Foundation’s platform, we start with GHG inventory and hired professional lecturers to open educational training and courses on it. We expect to arrange 20 batches of online educational training courses on ISO 14064-1 with 60 participants per batch in 2023 for all suppliers to participate. By the end of 2023, the training on GHG inventory will expectedly be completed for 1,200 suppliers, thereby enhancing their capabilities of inventorying GHG emissions. We will also help the suppliers set up carbon reduction targets, manage energy effectively and implement actions for carbon reduction in the hope of facilitating our movement forward the goals of energy saving, carbon reduction and common good.

Benchmark Learning of Suppliers

During the Joint Carbon Reduction Meeting, Qisda invited chairpersons of benchmark suppliers, which were “major panel manufacturers,” to share their extensive practical experience in energy saving and carbon reduction, including:

- Green design:** Adding green elements in the stages of purchase of raw materials, manufacturing, design and recycling.
- Organization promotion:** Processes and ideas of long-term deployment such as the establishment of the CSR committee in 2013 as well as the establishment of the Sustainability Headquarters and appointment of the Chief Sustainability Officer in 2018.

3. **Green business opportunities:** Subsidiaries' actual performance in transforming crises into opportunities. For example, the subsidiary that specializes in wastewater recovery begins to conduct carbon inventory and management for other companies while AI relevant digital technologies are used to help companies improve manufacturing processes and efficiency, further achieving energy saving and carbon reduction.

By inviting benchmark suppliers to share their outstanding performance and experiences, Qisda allowed all suppliers to learn and grow together.

Supplier Capacity Building

To enable the suppliers to improve continuously in terms of sustainability performance, Qisda has initiated supplier capability development projects. For each project, collaborations and resource investments are implemented for more than 6 months in the hope of enhancing the sustainability performance of the suppliers.

Supplier Sustainability Project

Qisda hopes to develop stable partnerships with the suppliers, continuously improve the resilience of the overall supply chain, and practically implement responsible procurement. Therefore, in daily procurement operations, we not only take costs, quality and technical capability into consideration, but also assess the overall sustainability value created by the supply chain. We work with the suppliers and grow persistently, and further spread this to the entire supply chain. In recent years, various projects with respect to responsible procurement and improvement of diverse sustainable supply have been launched. Through the comprehensive implementation of these projects, we collaborate with the suppliers and realize a sustainable future.

Name of Capacity Building Project

Carbon Inventory of Suppliers

We have assisted three suppliers in capacity building in terms of GHG inventory. Relevant educational training, guidance and communication has been implemented since July 2022, aiming to cultivate the suppliers' capability to perform GHG inventory. During this period, Qisda's personnel responsible for the projects has helped confirm the GHG emissions inventory results of each supplier in 2021, and assisted the suppliers in planning the GHG inventory and third-party verification schedules for 2023. This is to accompany the suppliers during relevant processes and establish their capabilities in inventorying themselves in the future.

Name of Capacity Building Project

Continuous Improvement Program

In 2022, Qisda collaborated with 12 suppliers in H1 and with another 12 in H2, totaling 24 participating suppliers, and launched a 6-month "Continuous Improvement Program (CIP)." The Program focused on various themes, such as improvement of operational efficiency and product design as well as customers' satisfaction of the product. Qisda worked with the suppliers and analyzed causes of problems, established and implemented improvement measures, and evaluated the benefits of the Program. In this Process, we not only optimized our existing approaches, but also trained the suppliers and improved their capabilities of problem analysis and solving.

Introduction of Water-based Eco-friendly Paint

Goal

Meet the requirements of the customers and local transformation policies in response to global sustainability related revisions and appeals; improve competitiveness and comply with global sustainability strategies in response to the rise of awareness of environmental sustainability.

Indicator

Prohibition of all suppliers from using volatile organic raw materials.

Benefits

A total of 1,101 suppliers were inspected, 1,095 of which had signed the Statement of Compliance with Water-based Paint. Six non-compliant suppliers were replaced, meaning that water-based paint had been introduced to the whole supply chain. We also ensured that the Company's products comply with laws and regulations, and that the shipment was not affected.

AOI/VRS Defect Rate Improvement

Goal

Improve the PCB yield rate and reduce scrapped PCBs as the PCB manufacturing process is a key source of pollution in the technology industry.

Indicator

Decrease in scrapped PCBs, process, broken and short circuit issues; reduction of the defect rate from 1.3% to 0.65%.

Benefits

By reducing the size of developer rollers, dry films and developer filters for AOI/VRS as well as setting a unified specification, the product yield rate was reduced from an original 1.3% to 0.62%.

Small Panel Yield Rate Improvement

Goal

Goal: Reduce the panel scrap rate and material waste to increase the customers' satisfaction with product quality.

Indicator

Decrease in the defect rate from 6.08% to 1%.

Benefits

By improving the stirring time of the DOE silver paste, changing the diameter of needles, and improving the dispensing process, we reduced the product yield rate from 6.08% to 0.58%.

Introduction of Materials Recovered From Plastic and Iron Parts

Goal

Use eco-friendly materials for product design, and use recovered materials that contain 15%, 35%, 85% and 90% plastic as well as recovered materials that contain 13% and 15% iron.

Indicator

Use of recovered plastic/iron for product design every year.

Benefits

30% recycled content in plastic: NT\$ 36.593 million
 35% recycled content in plastic: NT\$ 164.7774 million
 65% recycled content in plastic: NT\$ 5.259 million
 85% recycled content in plastic: NT\$ 325.74 million
 90% recycled content in plastic: NT\$ 21.53 million
 13% recycled content in iron: NT\$ 1.2604 million
 15% recycled content in iron: NT\$ 1.167 million
 Total amount: NT\$ 556.3million

Enhancement of the Supply Chain's Compliance With the Toxic Substances Control Act (TSCA) of the U.S. EPA

Goal

Inspect whether the manufacturing (including imports), processing and/or distribution related requirements of the five chemicals: DecaBDE, PIP, TTBP, HCBP and PCTP are met.

Indicator

Inspection of all suppliers involved in transactions for the use of volatile organic raw materials, and signature of declarations.

Benefits

For the safety and sustainability of the whole supply chain, your company should make sure that the requirements of the Act are fully met, and disclose to Qisda the use or involvement of the five chemicals or any relevant substance during the manufacturing and/or supply of your products. Furthermore, in 2021, the suppliers were required to sign declarations, make compliance reports, and replace non-compliant suppliers and suppliers with potential risks. A total of 1,168 suppliers were inspected.

Supplier Rewarding and Elimination Mechanisms

Qisda has established supplier rewarding and elimination mechanisms to encourage the suppliers to accelerate and march towards sustainable development. Through relevant evaluation systems, we identify suppliers with outstanding performance in sustainability and provide them with a higher proportion in procurement along with priority in adopting their new products. We eliminate suppliers with poor performance in order to facilitate joint improvement and growth in the industrial chain.

Rewarding Mechanism

Dimensions of evaluation:

quality, innovation/technology, speed/response, delivery, cost leadership and ESG. Serving to select and manage the suppliers, this mechanism has 5 levels ranging from A (over 90 points) to E (lower than 60 points). It also includes ESG relevant factors such as sustainability, health, labor, environment and green products, which occupy 21.6% in grading.

Frequency: semi-annual

Rewarding measures:

According to the evaluation results, excellent suppliers ranked Level A may have a higher proportion in procurement and priority in the adoption of new products after being confirmed by the review team.

Elimination Mechanism

For the suppliers ranked Level D or below, we not only reduce their proportion in procurement depending on the situation, but also require them to devise improvement plans and perform stricter incoming inspections. The elimination mechanism is as follows:

- The suppliers ranked Level D (or below) twice in a row will be required to undergo the supplier selection and management operation again at the discussion meeting of the evaluation. Based on the results, discussions over whether the suppliers shall be disqualified for future collaborations with Qisda will be made.
- The suppliers ranked Level E twice in a row will be disqualified for future collaborations at the discussion meeting of the evaluation.

KPI Goals for Sustainable Supply Chain and the Performance Achievement

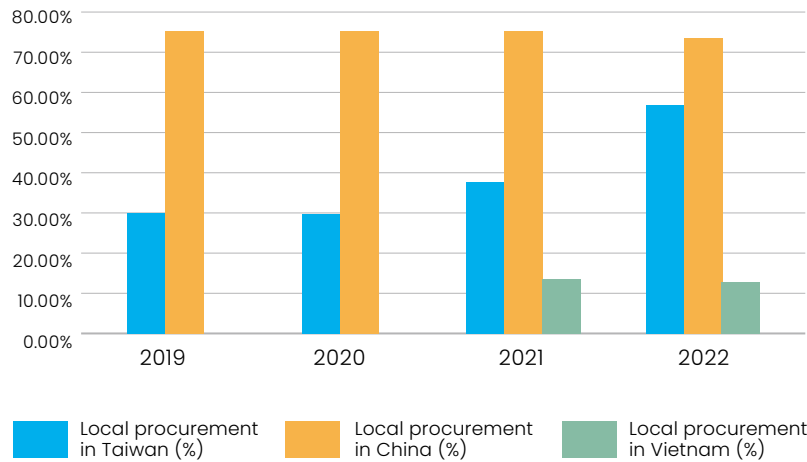
Sustainable Supply Chain KPIs	2022	
	Performance	Goal
Number of audited suppliers or percentage of audited focused suppliers (%)	97	100
High-risk/focused supplier audits	37 suppliers	38 suppliers
Non-conformance improvement counseling in supplier audits	37 suppliers	37 suppliers
Supplier capacity building	24 suppliers	24 suppliers
Written inspections of human rights, environment and labor behavior for new suppliers	100%	100%
Written inspections of conflict minerals for new suppliers	100%	100%

Reason of goal-failure in high-risk/focused supplier audits: A supplier failed to cooperate in the inspection.

Local Procurement

Qisda dedicates itself to realizing the idea that “the purpose of a company’ s existence is to create sustainable value that can contribute to human society and further bring positive effects.” As the flagship company of the alliance, we strive to improve the resilience of the supply chain and move toward sustainable development as well as the vision of “Bringing Joyment ‘ N Quality to Life” together with the overall supply chain. We set up a supply chain protecting environment, human rights, safety, health and sustainable development with suppliers in a responsible and proactive manner. To work more closely with them, Qisda also strives to implement local procurement to improve the efficiency of material supply and support local economic development. In 2022, the local procurement percentage in China was 73.8%*, the local procurement percentage of the plant in Vietnam was 12.7%*, and the local procurement percentage of the plant in Taiwan was 57%*, which significantly increased by 24% compared with the same period last year.

Local Procurement of Qisda

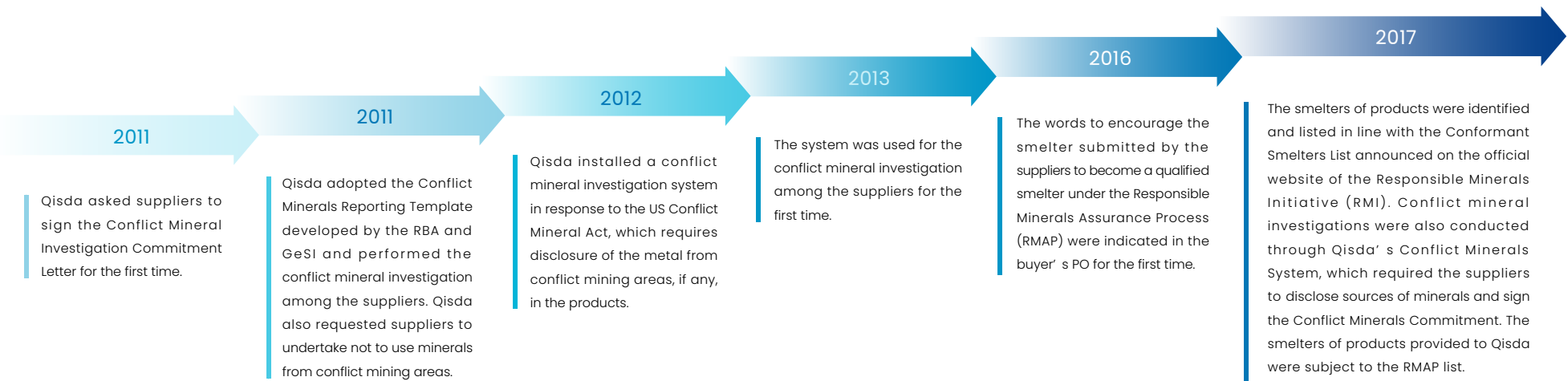


Region	Type of Procurement	2019	2020	2021	2022
Taiwan	Local procurement (%)	29.8%	38%	32.8%	57%
	Non-local procurement (%)	60.2%	62%	67.2%	43%
Mainland China	Local procurement (%)	75.3%	75.3%	73.7%	73.8%
	Non-local procurement (%)	24.7%	24.7%	26.3%	26.2%
Vietnam	Local procurement (%)	N/A		13.5 %	12.7%
	Non-local procurement (%)	N/A		86.5%	87.4%

Management of conflict minerals

As the research reports of SOMO and Enough, two international non-governmental organizations point out, the Congo has been facing the most serious death conflict since the second world war, and this conflict is attributable to the demands of the electronics

Qisda's Conflict Mineral Management Progress

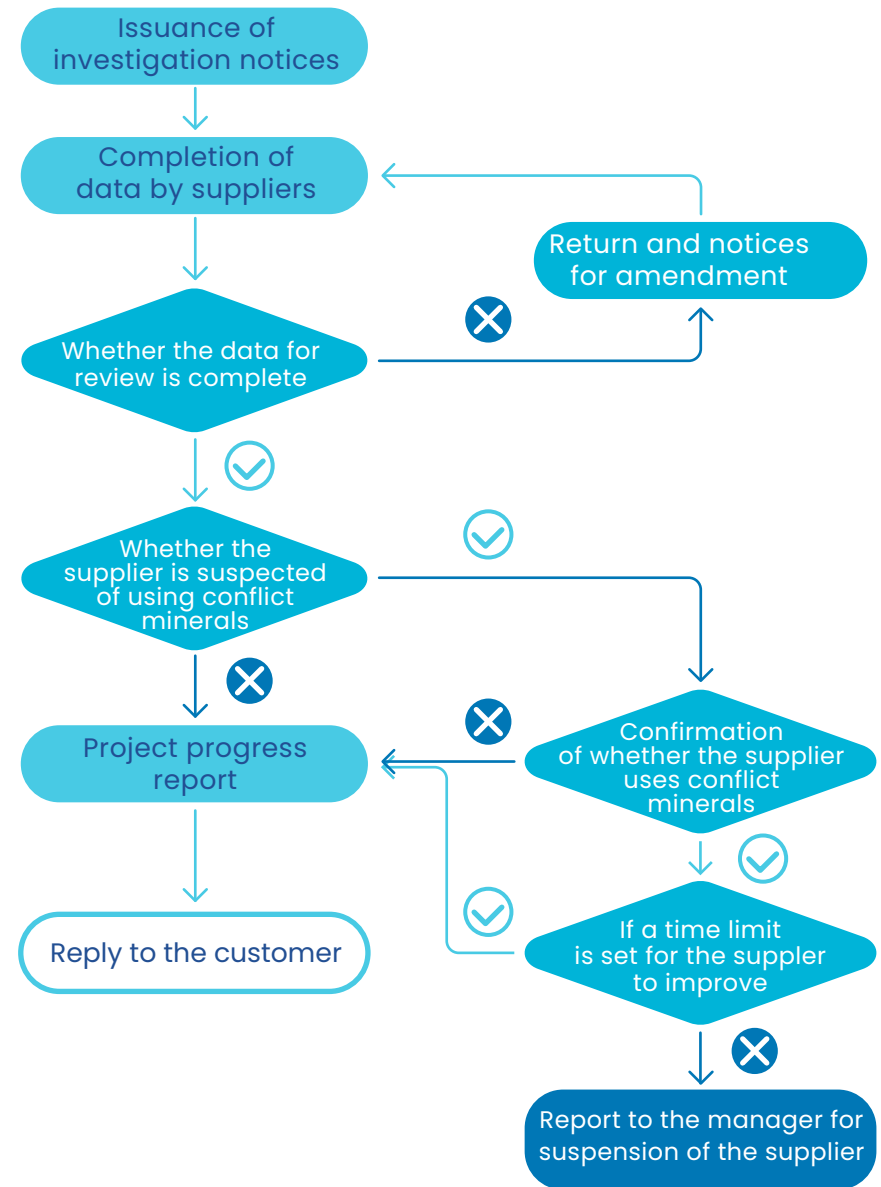


industry for the rich metal mines in east of the Democratic Republic of the Congo. The behavior of an electronics company that uses the metal mines procured from the conflict mining area in the Congo is equal to a support for these conflict actions. For this, the Responsible Business Alliance (RBA) and the Global e-Sustainability Initiative (GeSI) request their members to perform a responsible purchasing procedure to ensure the metal purchasing process meets the requirements of the social and environmental responsibilities.

Qisda, being a global citizen, supports the boycott activities of the international society for conflict minerals and establishes the Qisda Conflict Mineral Commitment. In addition, we refer to the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas of the Organization for Economic Cooperation and Development and work with the suppliers to perform conflict mineral investigations in order to prevent direct or indirect purchase of the conflict minerals by the suppliers. We have developed an internal management procedure. After the review, we return the documents to the suspected supplier for confirmation. In case of confirming that the supplier uses a smelter not listed in the Responsible Minerals Assurance Process (RMAP), we will ask it to fill in the implementation plan and inform it of related risks. In 2022, a total of 206 suppliers were investigated, making the completion rate of the investigation 73.3%.



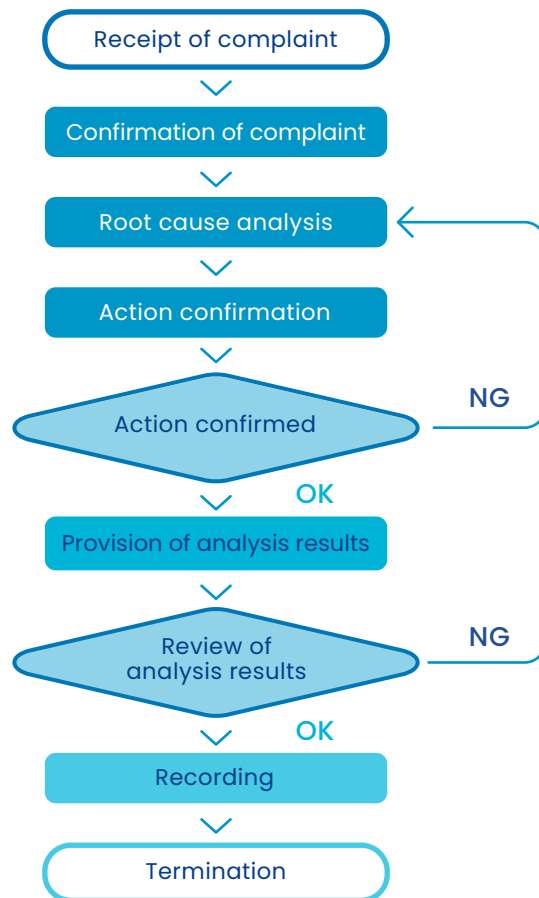
Implementation Process of Conflict Mineral Investigations



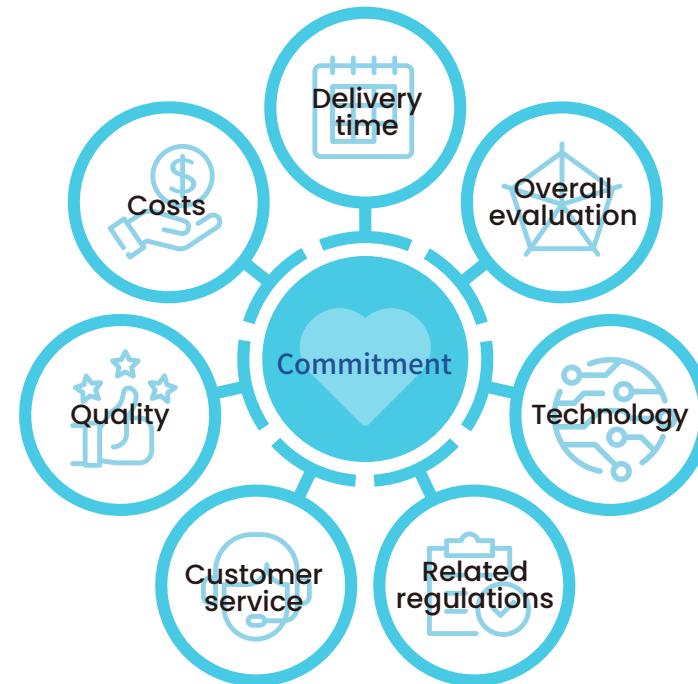
Trust in Customer Relationships

With the enhancement of satisfaction of our customers and business partners as the top priority, Qisda has conducted surveys through questionnaires to learn about the customers' and our business partners' scores for our commitment to delivery time, costs, technology, quality, customer service, related regulations, and overall evaluation to constantly ensure that the customer demands are met. To promptly respond to and meet the various

demands from the customers, Qisda has set up a Customer Service Division (CSD) to listen to the voice of customers thoroughly and solve their problems. The customers can provide feedback through the communication mailbox on the Company's website. In 2022, we received a feedback message in which the customer recommended that we add contents of communications in the ESG Report, and we had responded within 24 hours.



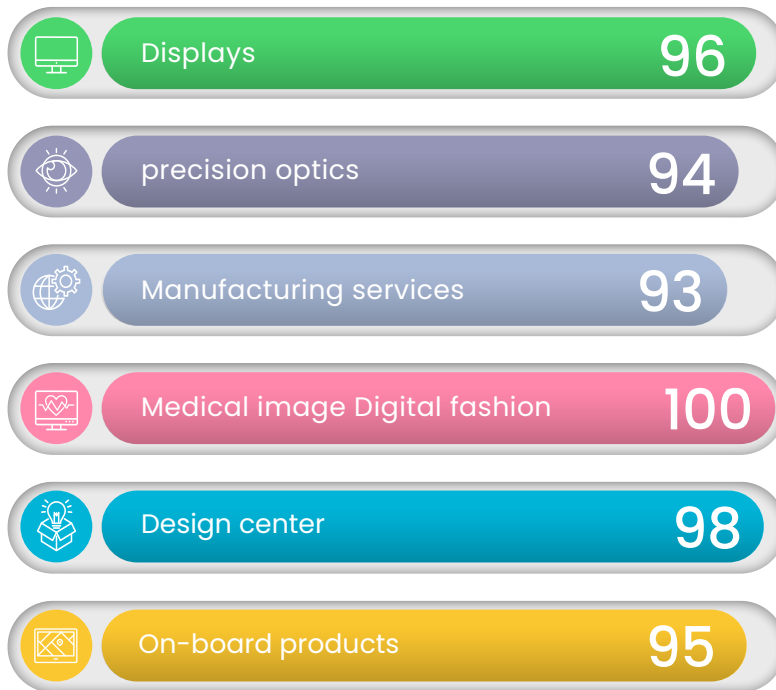
Customer Commitment



Customer Satisfaction Survey

To ensure that the customer demands are understood and satisfied, Qisda carries out a full-scale customer service satisfaction survey on January and July every year. The CSD sends notification emails to the contact persons of the customers, inviting them to give ratings at Qisda’s questionnaire survey system. The rating results are collected by the CSD and then delivered to the responsible departments, which then work with high-level executives to review the customer feedback according to the survey results, and thereby work out improvement measures for the enhancement of product and service quality. Qisda scored 96 points in average according to the customer satisfaction survey results for each product line in 2022, showing that Qisda’s performance on customer service and satisfaction had won the great recognition from customers.

2022 Customer Satisfaction Survey Results (Points)



Customer Satisfaction in the Most Recent 4 Years

	2019	2020	2021	2022	Goals for 2022
Customer satisfaction score (points)	95	95	95	96	92
Customer coverage rate (%)	100	100	100	100	100


Privacy Protection

Qisda values and strives to protect privacy and personal data. Referencing to local laws and regulations related to protection of the right to privacy of each operation location along with the EU “General Data Protection Regulation (GDPR),” we have established privacy policies to protect all personal data. We also required the subsidiaries, joint ventures, suppliers, contractors, external consultancies and subcontractors to meet the policies in the hope of protecting the right of the personal data owner.

For private information collected and used for business needs, Qisda has set specific collection/addressing/utilization purposes and the scope of personal data as well as restrictions of sharing, cross-border transfer, a data protection system and the data retention period to make sure that the protection for the right to privacy and personal data is implemented. At the same time, we include the right to privacy in the scope of risk management. The Risk Management Committee implements monitoring and management based on the policy of risk management, and control risks by including the overall system in the scope of internal control. If there is any question about the privacy policy, please direct it to the specified responsible unit. To protect the right of the personal data owner, please file the complaint or disclosure by calling (03) 359-8800, faxing to (03) 359-9000, or emailing to Grace.Wu@qisda.com if there is any opinion or question related to the right to privacy.

In 2022, Qisda provided two courses relevant to the right to privacy with the title of (1) Personal Data Protection Act and (2) GDPR_Manual for Personal Data Protection and Management respectively. Every worker had to participate in the courses, and 6,000 employees were trained for 6,000 hours.

To ensure the effectiveness of current management methods, we regularly verify whether there are any incidents of data losses occurring each year. Should there be any, we will launch a full-range review. In 2022, no complaint was received due to the occurrence of incidents related to data loss or leak. We only utilize the collected data within the scope where it is necessary and do not use the personal data twice.

 Number of complaints about personal data leaks	2019	2020	2021	2022
	External agency	0	0	0
Customer reflection	0	0	0	0



Process of Personal Data Processing and Reporting

