ch.4 Sustainable Value Chain

4.1 Sustainable Supply Chain   4.2 Customer Relations Management

Material Topics of This Chapter	Sustainable Supply Chain Management	Conflict Minerals	Customer Relationship Management
Management Approach	Improve the quality of the supply chain and the stability of good supply, and deepen the corporate influence to sustainable development through engagement and cooperation with the value chain.	Take responsibility of corporate citizenship, jointly safeguard human rights, and realize responsible production.	Provide comprehensive after-sales services and create a sound, positive customer experience by responding to customer suggestions and requirements in a timely manner.
Policy and Action	▪ Issue the "GIGABYTE Guidelines of Sustainable Procurement". ▪ Track supplier-related risks and form corresponding policies. ▪ Establish supplier selection mechanisms based on environmental and social criteria. ▪ Launch of packaging reduction plan. ▪ Hold Supplier Conferences and launch the "Reduction. Sharing. Love the Earth Alliance	▪ Introduction of the Responsible Minerals Initiative (RMI) and investigation 3TG, cobalt, and mica usage at tier-1 suppliers	▪ Customer satisfaction surveys are conducted every year, and a sound customer complaints resolution process is put into place. ▪ Define the "Privacy Protection and Management Regulations" in accordance with the Personal Information Protection Act.
Vision and Goal	▪ Gradually extend the scope of supplier risk management aspects and develop responding mechanisms. ▪ Use supplier tier and evaluation results to determine preferred suppliers when ordering to reduce procurement risk. ▪ Non-use of disposable packaging from 2030. ▪ Increase the rate of the top 100 suppliers participating in the "Reduction. Sharing. Love the Earth Alliance". ▪ The reduction progress of Alliance members is periodically checked and provides incentives for meeting reduction targets.	▪ The status of conflict minerals usage at tier-1 suppliers is investigated each year. The long-term target for conflict minerals is 100% of suppliers conducting conflict minerals management.	▪ Annual customer satisfaction rating reaches above 95%. ▪ No leaks of customers' personal information.
2022 Major Achievement	[●] Launched a new supplier classification system and packaging reduction plan. Information sessions were also conducted for the relevant sales personnel and suppliers. [●] In 2022, suppliers that participated in the sustainability assessment accounted for 82.21% of all purchasing by amount. [●] Enforcement of supplier evaluation and continued tracking of defects and improvements. [●] The 2022 Supplier Conference was attended by 78 suppliers, and these accounted for 33% of our top 100 suppliers. [●] In 2022, 130 suppliers in the "Reduction Sharing. Love the Earth Alliance" joined the 333 Reduction Plan. These included 46 suppliers (35%) of our top 100 suppliers. [●] Out of the 51 suppliers in the Alliance that reported making progress on reductions, around 20% met the carbon reduction targets, while nearly 30% met the reduction targets for water and waste.	[●] 326 suppliers took part in the conflict minerals survey In 2022. [●] In 2022, 73% of our top 100 suppliers responded the conflicts mineral survey or made related declarations or actions.	[●] 2022 customer satisfaction rating was 95.6%. [●] There were no leaks of customers' personal information in 2022.

[●] Stage objective completed   [●] In progress   [○] Not yet implemented   [●] Stage objective not yet achieved

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4.1 Sustainable Supply Chain

4.1.1 Overview of Supply Chain

Businesses selecting local suppliers can not only fulfill their social responsibility to the community but also reduce the environmental impact resulting from transportation and distribution over long distances. In 2022, over 93% of GIGABYTE's tier-1 suppliers were located in Asia. Around 90% of partners were located in the same region where GIGABYTE's main production bases (Nanping Factory, Dongguan Factory, and Ningbo Factory) are based. GIGABYTE adheres to local procurement in order to maintain productivity and continuity of operations as well as improve local economic development.

GIGABYTE's local purchasing ratio at our main production bases has always exceeded 75% in previous years and amounted to 81.25% in 2022.

● Ratio of Local Purchasing[1] by Amount[2] in the Past 5 Years

	2018	2019	2020	2021	2022
Non-local purchasing	12.82%	23.63%	16.97%	23.92%	18.75%
Local purchasing	87.18%	76.37%	83.03%	76.08%	81.25%

Local purchasing ▇ Non-local purchasing ▇

[Note 1] Local: The purchased goods are produced in the areas where GIGABYTE's main manufacturing bases (Nanping Factory, Dongguan Factory, and Ningbo Factory) are located.
[Note 2] Procurement amount: Calculate based on the purchase amount of the year.

4.1.2 Supply Chain Risk Management

The "GIGABYTE Sustainable Purchasing Guidelines" were issued in 2018. The Guidelines apply to the Headquarters, Taoyuan Factory, China Factories, as well as the subsidiaries in Taiwan controlled by GIGABYTE. We commit to regarding the "Code of Conduct for Responsible Business Alliance" issued by the Responsible Business Alliance (RBA) as the highest guiding principle. 4 major management aspects (including 15 subgoals) and 4 zero tolerance regulations are set to assess the risk of a supplier.

● Supplier Management and Regulations

4 Zero-tolerance Rules

▪ Child labor

▪ Forced labor/prison labor

▪ Discharge of untreated toxic or hazardous substances/materials

▪ Behavior that causes immediate physical harm to employees

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Identification of High-Risk Suppliers

GIGABYTE evaluates all existing and new suppliers in accordance with the "Supplier Quality Management Operating Procedures" for tiered management. A new tiered management system for suppliers was introduced in 2022. The system incorporated the sustainable supplier evaluation mechanism that has been implemented since 2012 into the original supplier supply contract (CMRT, RBA) and material assessments (quality, delivery time, cost, and service) so that the evaluation can better reflect the overall sustainability performance of suppliers. Supplier CSR high-risk audits are also conducted every quarter to eliminate high-risk D-grade suppliers and ensure consistency of quality in the supply chain.

● Supplier Eraluation Processes

Supplier Evaluation

Conduct evaluation based on 4 major aspects:
- Quality, price, service, delivery
- Environmental management, occupational safety and health management
- Quality and RoHS system
- Corporate social responsibility practice

Tiering, Rating, and Re-Evaluation

Suppliers are divided into different tiers by their purchasing amount and then given an A -D rating based on their overall evaluation scores.

A: Qualified suppliers
B: Qualified suppliers
C: Suppliers under observation (improvement required within 60 days)
D: Unqualified suppliers (must be re-evaluated within 60 days and would be included in the cooperation list if the re-evaluation is Class C or above)

The suppliers that meet sustainability criteria are marked with a code S.

Monthly and Quarterly Evaluation

Continue to make monthly and quarterly evaluations based on the status of cooperation. Those with poor performance will be provided with counseling for improvement or replacement. Also, conduct on-site audits of factory areas and corporate social responsibility performance.

Conduct weight scoring according to cooperation situation, the status of return goods, and negative news in order to identify high-risk suppliers and include these factors in the considerations for procurement.

Track the latest issues and identify the potential risks at the location of suppliers every year. Keep expanding the scope of assessment to respond to any situation change to stabilize the supply chain.

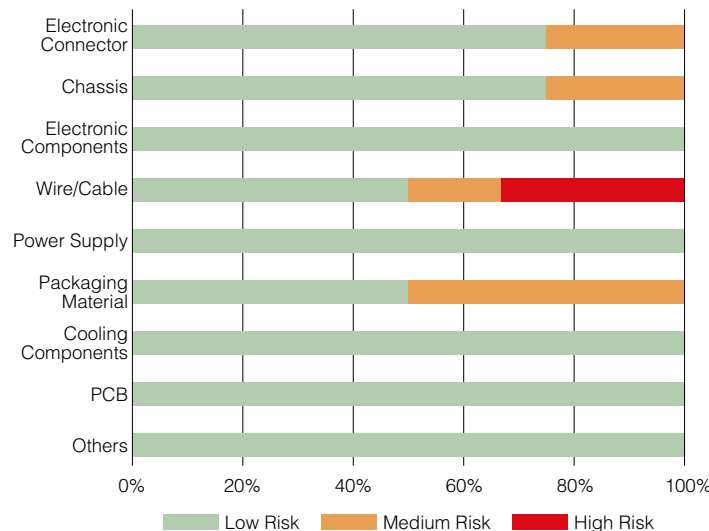### Annual Evaluation and Awards

The supplier with excellent performance will be awarded annually. GIGABYTE provides four Awards to well-performed suppliers:
- Corporate Sustainability Award
- Excellent Partner Golden Award
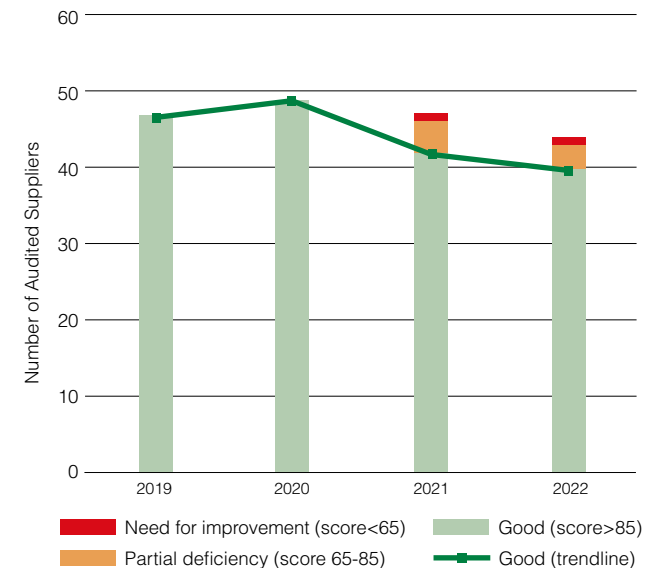- Best Partner Award
- Best Agent Award

By publicly commending the excellent suppliers, we encourage the suppliers to learn from each other.

In 2022, we audited 44 suppliers on RoHS, quality, and CSR. The audit identified 7 suppliers with moderate risk and 2 suppliers with high risk, with low audit scores for quality systems being the main problem. The suppliers were put on a registry by GIGABYTE and 2 suppliers had improved and been re-rated as low risk after a repeat audit. We will continue to tracking the situation with these suppliers in the future. For CSR, suppliers were assessed against the Responsible Business Alliance (RBA) Code of Conduct in 2022 and the outcome was good (score > 85) in 90% of the cases. The average score overall was 93.5 (out of 100). We will continue to promote related initiatives and projects in the future so that we can lead our supply chain partners in the fulfillment of corporate social responsibility.

● Audit Result of Quality System/RoHS

Legend: Low Risk | Medium Risk | High Risk

Categories: Electronic Connector, Chassis, Electronic Components, Wire/Cable, Power Supply, Packaging Material, Cooling Components, PCB, Others

● Audit Result of Supplier CSR Performance

Number of Audited Suppliers (y-axis 0–60); Years: 2019, 2020, 2021, 2022

Legend: Need for improvement (score<65) | Good (score>85) | Partial deficiency (score 65-85) | Good (trendline)

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4.1.3 Conflict Minerals Management

Tin, tungsten, tantalum, and gold (3TG) minerals are indispensable raw materials in electronic products. If these minerals are obtained from areas of forced labor, child labor, or armed conflict, they would be considered conflict minerals that oppress and harm of local human rights and living conditions. Therefore, GIGABYTE introduces the Responsible Minerals Initiative (RMI) under the RBA to investigate the use of 3TG minerals by first-tier suppliers and gradually traces the source through the Conflict Minerals Report Template (CMRT6.22 and EMRT 1.02) to further manage raw materials for the purpose of jointly safeguarding human rights and values. GIGABYTE investigated 326 suppliers during 2022 and found that 443 3TG and cobalt and mica smelters were used by GIGABYTE during this year. 406 of the smelters (92%) passed the test. Most were located in Asia, followed by Europe.

(For a detailed list of smelters/refineries, please refer to the GIGABYTE CSR website)

In 2022, 73% of GIGABYTE's top 100 suppliers of critical components, ranking by purchasing amount, had implemented conflict minerals management. We will continue to convey the importance of conflict minerals to suppliers through counseling and requirements, expand the scope of investigation year by year, and target to reach 100% implementation among suppliers for the sake of protection of universal human rights.

● Conflict Minerals Investigationin the Past 4 Years
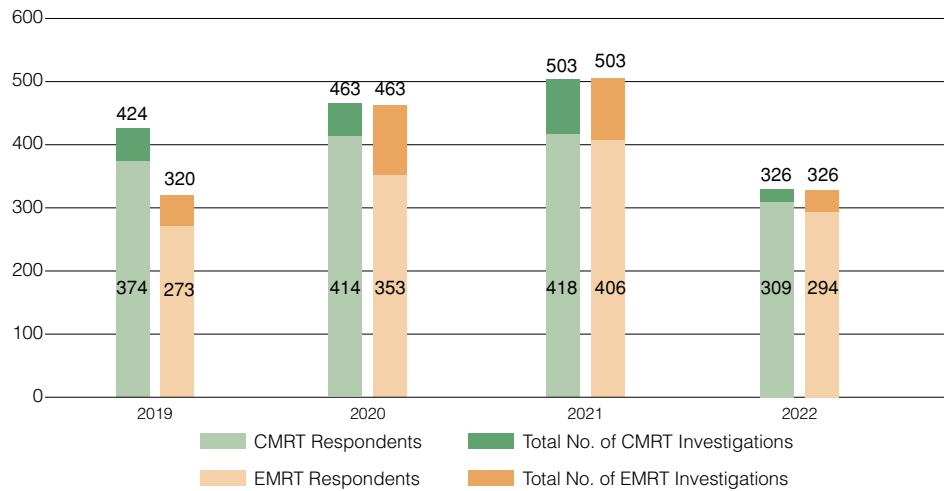
[Note 1] CMRT refers to the conflict minerals reporting template for 3TG (Tantalum, Tin, Tungsten, Gold) metals; the CRT cobalt metal investigation template has been replaced with the EMRT template for the investigation of cobalt and mica since 2022.
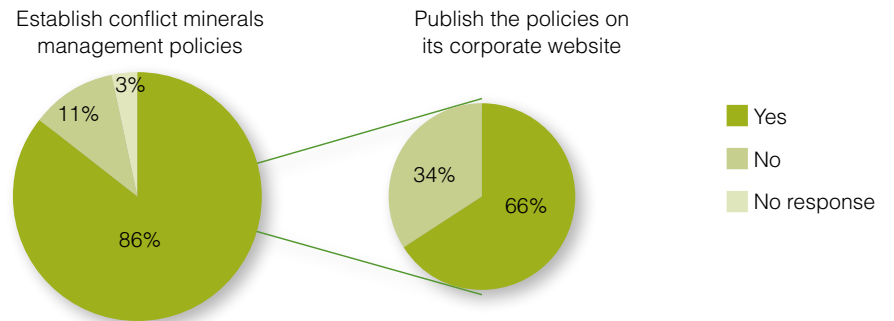
[Note 2] There was a decrease in the number of suppliers surveyed in 2022 due to mergers and acquisitions.
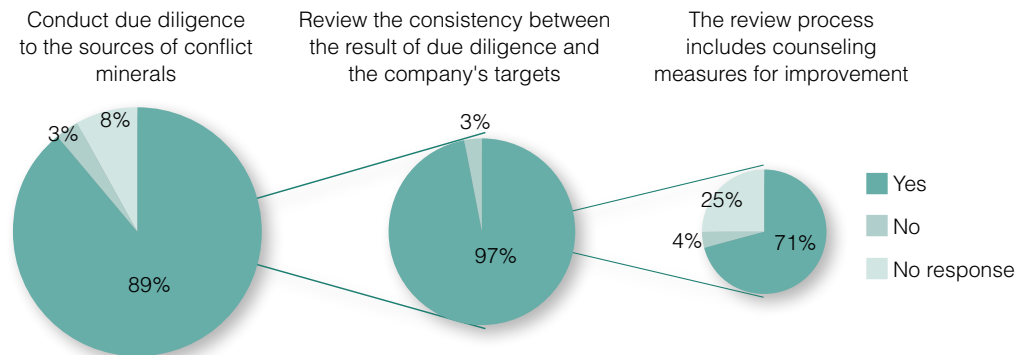
3TG Minerals

We further conducted statistical analysis on the CMRT responses to understand the actual management of conflict minerals by each supplier, and through their regulations and requirements for upstream to outline the use and management of conflict minerals by second-tier suppliers. GIGABYTE started by examining the conflict minerals management policy at all suppliers that responded for completeness. 85 suppliers were also identified as high-risk suppliers that use 3TG minerals from covered countries in their products or production processes. The integrity of their management policy was examined so that more timely control measures could be planned. The screening result found that only 5 high-risk suppliers had not defined a clearer conflict minerals management policy or conducted due diligence on their supply chains. GIGABYTE has drawn up a list and is formulating a follow-up tracking mechanism.

● Conflict Minerals Management Status of All Responded Suppliers

Completeness of Conflict Minerals Management Policy among Tier 1 Suppliers
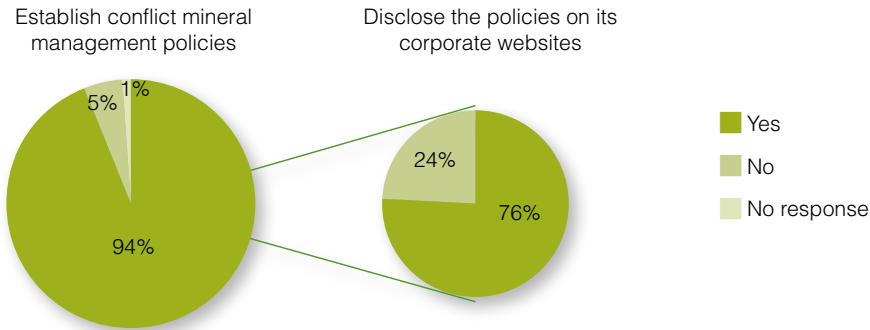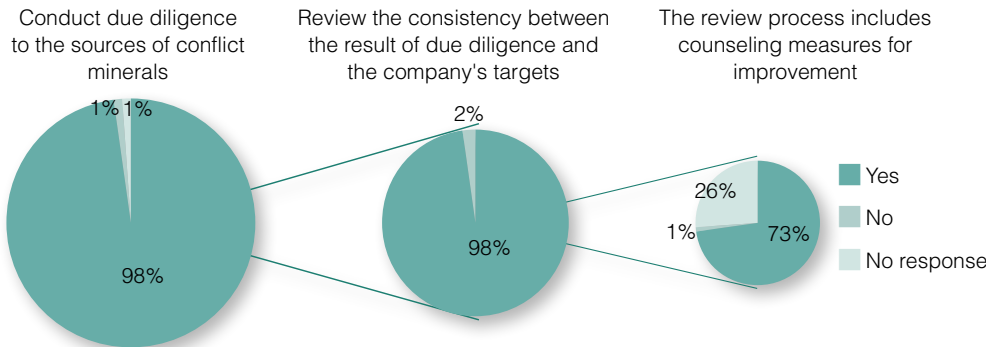

Conflict Minerals Management among Tier 2 suppliers

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3TG Minerals from Covered Countries[1]

Completeness of Conflict Minerals Management Policy among Tier 1 Suppliers

Establish conflict mineral management policies

1%
5%
94%

Disclose the policies on its corporate websites

24%
76%

- Yes
- No
- No response

Conflict Minerals Management among Tier 2 Suppliers

Conduct due diligence to the sources of conflict minerals

1% 1%
98%

Review the consistency between the result of due diligence and the company's targets

2%
98%

The review process includes counseling measures for improvement

26%
1%
73%

- Yes
- No
- No response

[Note 1] Covered countries: The Democratic Republic of the Congo and its neighboring area

Cobalt and Mica

In 2022, 294 of the tier-1 suppliers investigated provided a response on their cobalt and mica investigation. Cobalt was used by 66 suppliers, and mica by 6 suppliers in their production processes. 55 suppliers (83.3%) have already established conflict minerals management policies. Though cobalt and mica are not currently used as widely as 3TG metals, we will continue investigating the situation to eliminate the human rights abuses caused by conflict minerals.

4.1.4 Supply Chain Engagement and Communication

The reinforcement and maximization of impacts from corporate sustainable development depend on inter-connections and cooperation throughout the entire value chain. GIGABYTE reinforces engagement and communication with our supply chain through a variety of channels, such as evaluations, awards, education and training, and alliances. We strive to build a partnership beyond trade relations and realize the core philosophy of "Reduction. Sharing. Love the Earth" hand in hand.

2022 Status of Supplier Engagement

Host for 11 consecutive years

Supplier Sustainability Evaluation and Award Ceremony

Number of participated suppliers: 166

53 suppliers won awards, including 39 top 100 suppliers by purchasing amount

Percentage of top 100 suppliers by purchasing amount that won awards: 74%

Host for 5 consecutive years

"Reduction. Sharing. Love the Earth" Supplier Conference

Number of participated suppliers: 78

Participation rate of the top 100 suppliers by purchasing amount: 26%

Assess for 5 consecutive years

Reduction Performance of "Reduction. Sharing. Love the Earth Alliance" Members

Number of top 100 suppliers by purchasing amount that supported the Alliance: 46

Number of participated suppliers in reduction performance assessment: 41

Supplier Sustainability Award

GIGABYTE has been conducting annual supplier sustainability evaluations since 2012. The GIGABYTE "Sustainable Supplier Evaluation" process in 2022 started by asking suppliers to conduct a self-assessment of their performance in 6 key aspects, namely "CSR management", "environmental protection", "labor practices and human rights", "fair trade", "supplier responsibility", and "social/local contribution." A fair and impartial selection process was then carried out by the Supplier Evaluation Team from the Sustainable Development Office on the 4 aspects of completeness, rationality, level of cognition, and level of attention. The Excellent Partner Award is then publicly presented to suppliers at the end-of-year party. GIGABYTE hopes that the annual award presentation will encourage constructive competition between vendors and the pursuit of even more outstanding performance in sustainability. The theme for the 2022 GIGABYTE supplier end-of-year party and sustainability award ceremony was "The Era of Sustainability-Pioneering Technology Leads to the Crown". No enterprises can deviate from the shipping lanes of sustainability to the future. They must launch a business revolution that embraces sustainability and circularity if they want to sail this great shipping lane and become the new king.

● Winners of the 2022 Supplier Sustainability Awards

- LITE-ON Technology

- Chicony Power

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In addition to the awards, we also use purchasing to encourage CSR fulfillment by suppliers. In 2022, the purchasing amount from the suppliers participating in the supplier sustainability evaluation accounted for 82.21%. We will continue to increase our purchasing ratio in the future to give suppliers even more incentive to embrace sustainability and construct a self-sustaining supply chain.

Supplier Conference

Carbon strategy and ESG management are now key business disciplines. GIGABYTE shared our sustainability strategy and promotion of a zero-carbon value chain in response to international trends and customer requirements at the 2022 supplier conference. External experts were also invited to explain the risks and opportunities facing businesses brought about by climate change topics and analyze how benchmark enterprises effectively disclosed their ESG performance in sustainability reports to win the trust and interest of investment institutions.

Agenda of the Supplier Conference on September 15 in 2022
- Create a Sustainable Zero-Carbon Value Chain
- ESG Management and Sustainability Report Practice

Supplier Sustainability Practices and Training

GIGABYTE stands on the shoulder of giants to lead our supplier partners on the path to sustainability. 2 GHG inventory training workshops were held in 2022 to provide phased mentoring targeted at key suppliers. The workshops cultivated the GHG inventory capability of suppliers and provided them with standard inventory tools, examples, and practical resources. In the future, GIGABYTE will gradually start providing training of product carbon footprint inventory, raw material carbon emission data, and other information. We aim to help prepare our supplier partners for 333 Reduction and its integration with their operations to construct a resilient, low-carbon supply chain.
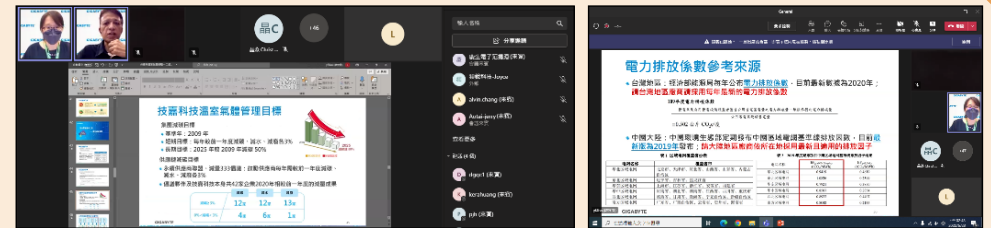

- 47 suppliers participated in greenhouse gas inventory training on June 23 and July 21 in 2022.

Reduction. Sharing. Love the Earth Alliance

GIGABYTE launched the "333 Reduction Plan" in 2016 and set a target of reducing carbon emissions, water use, and waste by 3% every year. We also invested in tree planting and afforestation to conserve the biodiversity of the earth. At the same time, we invited all of our suppliers to join the "Reduction. Sharing. Love the Earth Alliance" and reach the "333 Reduction" targets together with GIGABYTE. We also expect that the suppliers with significant reduction performance could share their experiences with others to stimulate peer learning and achieve general reductions across the entire supply chain.

130 suppliers supported the 333 Reduction plan in 2022 / **51** suppliers provided their 333 reduction performance

" **Status of the Reduction. Sharing. Love the Earth Alliance Advocacy** "
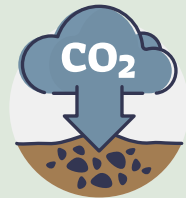
58.8%
Have concrete carbon reduction targets

60.8%
Have concrete water reduction targets

52.9%
Have concrete waste reduction targets

41 suppliers
expressed their willingness in becoming tree-planting partners

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"Reduction. Sharing. Love the Earth Alliance" Reduction Performance

After the Alliance was established, GIGABYTE started to investigate the efforts to reduce carbon emissions, water use, and waste by each Alliance member in 2018. Every effort made was to practice the Alliance's core value of reduction. Furthermore, with an outline of the overall reduction trends, we can then develop a more practical strategy for the future. In 2022, we continued to track the reduction statistics from the previous year. The subjects of the study were 52 companies, including partner advocates and GIGABYTE itself. The reduction outcomes from 2021 compared to previous years are shown below.

	Emissions Reduction	Water Reduction	Waste Reduction
Rate of Reduction ≥ 3%	**11** suppliers	**17** suppliers	**15** suppliers
0% < Rate of Reduction < 3%	**4** suppliers	**4** suppliers	**2** suppliers

Explanation of Reduction Analysis Result

The outcomes from 2022 found that around 20% of companies met their carbon reduction targets, while nearly 30% met their water and waste reduction targets. Measures for reaching targets included formulation of environmental policy, setting of explicit reduction targets and deadlines, and implementation of related projects; concrete actions included replacement with energy-efficiency equipment, use of renewable resources, circular reuse of resources, and routine employee education on reduction; the majority of vendors already regularly track their environmental performance through third-party verification or the incorporation of environmental topics into their business operations and risk management. 52 suppliers (67%) have obtained third-party verification in accordance with ISO 14064 for their greenhouse gas emission inventories.

(For more details on reduction performance, please refer to the GIGABYTE CSR website)

● "Reduction. Sharing. Love the Earth" Alliance Coastal Cleanup on March 12, 2022

137 supplier partners, GIGABYTE employees, and their dependents mobilized to clean up 1,339 kg of marine trash

GIGABYTE employees have long been volunteering for environmental protection actions. We also join the academia and industry in supporting related initiatives. Since 2020, supplier partners have been recruited to take part in the "Reduction. Sharing. Love the Earth Alliance" coastal cleanups. GIGABYTE hopes that our supplier partners can join us in paying attention to topics, such as the ocean environment and plastic contamination, and incorporate awareness of such topics into their value chain thinking so we can work together to reduce the environmental impact during our product life cycles.

In 2022, GIGABYTE hosted the 3rd "Reduction. Sharing. Love the Earth" Alliance coastal cleanup at the Dayuan-Shalun section of Taoyuan's coastline that we adopted, and 67 supplier representatives answered the call. This event also supported the Business Today "Project Blue 1095" marine trash recycling program to re-manufacture recovered plastic bottles into new blue-and-white citizen sandals.

GIGABYTE will continue to promote sustainable supply chain management in 2023. In addition to enhancing mutual cohesion by holding beach clean-up events and tree-planting, we will carry out the 6th "Reduction. Sharing. Love the Earth" supplier conference and expect that more suppliers will join the alliance and amplify the benefits from reduction
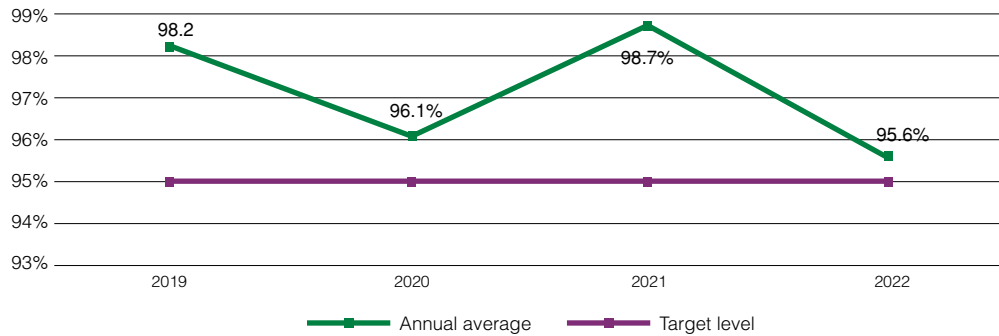
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4.2 Customer Relations Management

Customer Service and Satisfaction

A positive customer experience is based on not only high-quality and innovative products but also comprehensive after-sales service and timely responses to customer suggestions and requirements. This is an important part of GIGABYTE's service standards and values. In addition to defining the "Customer Complaints Handling Procedure" and "Customer Questions Handling Procedure," GIGABYTE also conducts periodic satisfaction surveys with an annual customer satisfaction rating of over 95% as the management goal.
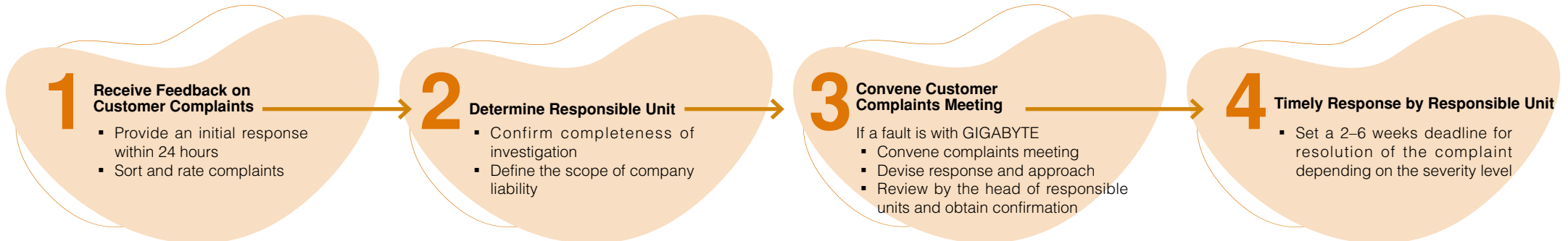
● Customer Satisfaction in the Past 4 Years

Handling of Customer Rights

A sound customer complaints resolution process has been established by GIGABYTE. There were 5 customer disputes in 2022 mainly from customer complaints over product quality and support process. GIGABYTE reached out to the consumers and resolved the disputes through appropriate responses or product replacement.

● Customer Complaints Handling Procedure

1 Receive Feedback on Customer Complaints
- Provide an initial response within 24 hours
- Sort and rate complaints

2 Determine Responsible Unit
- Confirm completeness of investigation
- Define the scope of company liability

3 Convene Customer Complaints Meeting

If a fault is with GIGABYTE
- Convene complaints meeting
- Devise response and approach
- Review by the head of responsible units and obtain confirmation

4 Timely Response by Responsible Unit
- Set a 2–6 weeks deadline for resolution of the complaint depending on the severity level

Customer Privacy Protection

GIGABYTE respects the personal information and privacy of our customers. A Personal Information Protection and Management Committee is established in accordance with the government's "Personal Information and Protection Act" to define and enforce the "Personal Information Protection and Management Regulations". Proposals for making future improvements to personal information risks are also developed ad hoc to protect customer information. There were no leaks of customers' personal information in 2022.

● Privacy Protection and Management Regulations

Define the Scope of Personal Information
- Establish a response team to the Personal Information Protection Act
- Set internal personal information inventory plans
- Consult with professional advisory counselors

Personal Information Risk Assessment and Management Mechanism
- Evaluate personal information leak risk and carry out tiered management
- Include personal information protection in audit processes
- Employees are required to sign personal information protection agreement

Incident Prevention, Reporting, and Response Mechanism
- Regularly inspect personal information security
- Conduct simulated drills on personal information leaks (e.g., case occurrence, reporting processes)

Information Security and Personnel Management
- Hard-copy documents and database management
- Security management for company environment, servers, and firewalls

Personal Information Awareness Education and Training
- Carry out ad hoc education via the internal website and e-mails
- Provide PIPA education and training for newcomers

Information Security Audit Mechanism
- Define audit scope, organization, timing, and methods