GIGABYTE™

2022 GIGABYTE Sustainability Report

Resilience X Low Carbon X Inclusion

GIGABYTE™

GIGABYTE 2022 Sustainability Report

Resilience X Low Carbon X Inclusion

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About the Report

Reporting Boundaries

This report covers the sustainability activities and performance of GIGABYTE's global operational locations from January 1 to December 31 in 2022, including the Headquarters, Taoyuan Nanping Factory, China Dongguan Factory, China Ningbo Factory (collectively named GIGABYTE below) and subsidiaries in Taiwan (G-STYLE LTD, GIGAIPC CO., LTD, Bestyield International, Cloudmatrix, Senyun Precision Optical Corp., and Selita Precision Co., Ltd.) that it controls. Cloudmatrix, Senyun Precision Optical Corp., and Selita Precision Co., Ltd.) that it controls. This report covers the same period as the annual financial report, but the reporting boundaries are not exactly the same.

The financial data disclosed in the report was collated from the consolidated financial reports of GIGABYTE and its subsidiaries (the scope is detailed in p.183 of the GIGABYTE 2022 Annual Report). The organizational GHG emission inventory and reduction data encompass the Headquarters, Taoyuan Nanping Factory, China Dongguan Factory, China Ningbo Factory, as well as the Taipei Silicon Valley Park Offices where the subsidiaries G-Style, GIGAPIC, Bestyield International, and Selita Precision are located. The disclosure scope for remaining sustainability indicators will be detailed within the report.

Report Editorial Principles and Reference Guidelines

This report has been prepared with reference to the latest GRI Standards, the Corporate Social Responsibility Best-Practice Principles for TWSE/TPEx Listed Companies, and the Sustainability Disclosure Indicators of the Financial Supervisory Commission. The report also takes reference from international guidelines such as the UN Sustainable Development Goals, Task Force on Climate-related Disclosures (TCFD) framework, Sustainability Accounting Standards Board (SASB) Standards, and UN Global Compact to compile and disclose GIGABYTE's corporate sustainability commitments, strategies and implementation outcomes for the reporting period.

Issue

The Sustainability Report is uploaded to GIGABYTE Sustainability Website after being approved and signed by the Chairman every year. Key extracts from the report are also published on each webpage. The latest sustainability news is published through the corporate website as well. We invite all stakeholders interested in GIGABYTE to use all the channels available to learn about our efforts and accomplishments in sustainability.
Issue time: September 2023
Last Issue time: September 2022
Next issue time: Scheduled in September 2024

Report Verification and Data Quality Management

Approved by the Chief Operation Officer, GIGABYTE entrusts BSI Taiwan to review the report's reliability and data with reference to AA1000 Assurance Standard (AA1000AS v3) Type I moderate Level. The independent assurance opinion statement can be found in the appendix.

- Financial Data: Referred to the financial report certified by the PwC Taiwan
- Organizational greenhouse gas inventory (ISO 14064-1: 2018): SGS Taiwan
- Quality Management (ISO 9001: 2015): SGS Taiwan
- Environment Management (ISO 14001: 2015): SGS Taiwan
- Work Safety and Health Management (ISO 45001: 2018): SGS Taiwan

Feedback

If you have any question or suggestion for the contents of the report, please feel free to contact us. Thanks.
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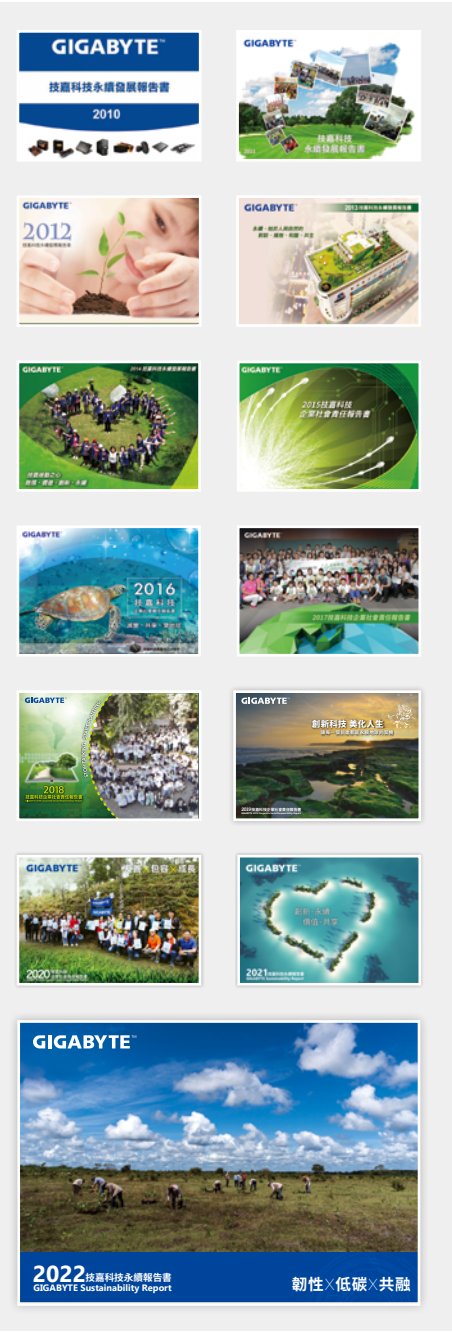
Allege Use of Pictures from UN's Sustainable Development Goals

Pictures of the UN's Sustainable Development Goals used in the report are downloaded from the publicizing materials of UN's Sustainable Development website.



From the Chairman

The last three years of pandemic restrictions, geopolitical conflicts, inflation, and interest rate increases not only changed how people live but also forced a restructuring of the globalization business model. Fluctuating market demand tested the ability of businesses to adapt and the resilience of their supply chains. At GIGABYTE, strategic agility, transformation, and upgrades kept our business on an even keel in these tumultuous times so that we could continue to follow the four sustainability principles of "Zero Waste & Zero Pollution", "Transition to Low-carbon Technology", "Sustainability Cycle and Sharing", and "Realization of Humanistic Value." This was made possible by the combined efforts of the management team and all GIGABYTE employees, as well as mutual assistance and cooperation with our business partners.

In response to the growing threat posed by extreme climate, GIGABYTE is not only continuing to hold all of our existing product lines to the exacting standard of "Technological Innovation and Stable Quality" and focusing on developing critical technologies. We are breaking new ground in the high-performance computing field by supporting the global push and government policy on net zero carbon emissions by 2050. The high performance, agility, and new levels of cooling power achieved by our industry-leading Immersed Cooling Computing Data Center has proven popular with our customers, companies, government agencies, and academic research units. With its help, our customers are able to successfully gain a foothold in green computing without compromising on operational performance and sustainability.

GIGABYTE knows teamwork is essential to the implementation sustainability. In addition to serving as an accelerator for net zero carbon emissions for our customers, we also used our industry leadership and experience to help suppliers develop their GHG inventory capability and build a low-carbon supply chain. We also reactivated the "Make Earth Green Again" project with the Plant-for-the-Planet Foundation to actively participate in voluntary ecological conservation and local empowerment. Internal talent is another important partner for corporate sustainability as well. GIGABYTE is committed to complying with international guidelines on protecting the human rights of workers in the workplace so that our employees can fulfill their potential in a diverse, inclusive, and happy workplace. We will also continue to cultivate awareness of ESG among our employees and build a greener corporate culture. At the social engagement level, GIGABYTE has long applied its core expertise to projects for promoting technology education, innovation and talent development. We also actively support charities and founded the "3unlight" volunteering platform in 2022 to encourage employees to support social topics and sow the seeds for positive change.

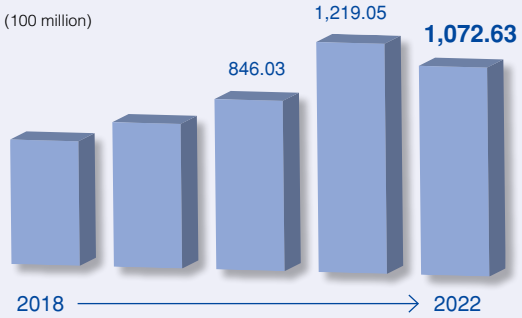
In an era where risk and opportunity coexist side-by-side, GIGABYTE will continue to move forward in an optimistic and cautious manner even as we uphold our core philosophy of "Upgrade Your Life" to create a better life for all humanity through our expertise in technology. Even as we pursue business growth, we will strive to fulfill our corporate responsibility on sustainability and invite our value chain partners to join us in maximizing our contributions on environmental and social topics.

Chairman

Corporate Governance Aspect

- Consolidated revenue was **NTD107.263 billion**

Revenues exceeded NTD100 billion for 2 consecutive years



- Winner of the global investor trade publication IR Magazine's **2022 Best Investment Relations Officer Award in Greater China**
- Obtained **103** patents in 2022
  Cumulatively **2,832** patents obtained to date
- **104** employees were awarded the Group's patent incentives
- Hosted **189** sessions of ethical management and anti-corruption training with **2,879** participants

Environmental Aspect

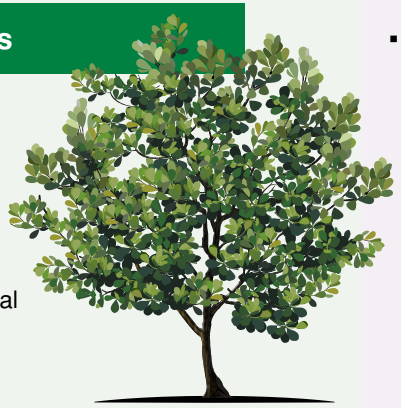
- Target to cut 50% of carbon emissions by 2025 since 2009, and had reached **42.99%** in 2022
- Carbon and Waste reductions in 2022 both met the **333 Reduction** targets

Building a Low-carbon Supply Chain

- Continued disclosure of climate-related financial information in accordance with the **TCFD** framework and conducted **Water Resource Risk Assessments** for the Group and suppliers
- Hosted **2** workshops on supply chain GHG inventory attended by **47** supplier partners
- Continued to execute the Sustainability Fund with proposals received in 2022 reducing carbon emissions by approximately **1,328** metric tons
- Electronic waste recycling services reduced electronic waste by **774.2** metric tons

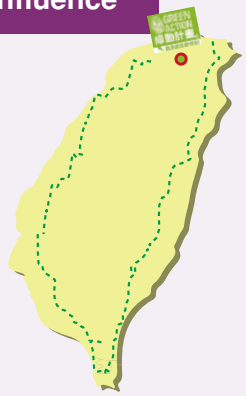
Non-Stop Climate Actions

- Partnered with the international organization from Germany again to continue supporting voluntary tree planting and ecological conservation
- Planted **3,125** trees in 2022.
- **13,692** hours of environmental education in the year



Social Aspect

Continue to Strength Social Influence



- Corporate volunteers: **Thousand Mile Trek-Go Green Taiwan** round-island and trash-picking project
  Accumulative distance **1,106.76** km
  Service hours **31,991** hours
  Removed trash **15,722.38** kg
- Hosted the **SDGs Carnival** to promote the **Circular Economy, Disaster Prevention, and Traffic Safety**, as well as reuse **590.2** kg of goods
- Hosted 5 types of technology education
  A total of **129** sessions were held with **3,271** participants

Upgrading Life through a Happy Workplace

- Employee Assistance Plans (EAP) hosted **11** events attended by **761** people
- Joined the "**Family-Friendly Enterprise Alliance**" to promote work-family balance for employees

Sustainability Awards

A- (Leadership) in 2022 CDP Climate Change (achieved a rating of Management or higher for 7 consecutive years)
- A (Leadership) in 2022 CDP Supplier Engagement Rating (SER)
- B (Management) in 2022 CDP Water Security

- 2022 Global Views CSR and ESG Award Role Model Award for the Electronics and Technology Industry (be nominated for 7 consecutive years)

- 2022 3rd Taiwan Circular Economy Award Outstanding Award of Innovative Service Awards (Bestyield International)

- SGS 2022 Excellent Quality Practice Award in the Quality Improvement Category (Bestyield International)

- IR Magazine
  2022 Best Investment Relations Officer of Greater China

Outstanding Brand

- 2022 Best Taiwan Global Brands Brand value of USD89 million

- 7 products recognized at 31th Taiwan Excellence Awards

台灣精品
TAIWAN EXCELLENCE

- 4 products received the Reddot Design Award

reddot design award
product design

- 4 products received the iF Design Award

- 2 products received 2022 COMPUTEX Best Choice Award

COMPUTEX
TAIPEI

Social Care and Happy Enterprise

- Occupational Safety and Health Administration, Ministry of Labor
  2022 Top 10% Enterprise
  Active Evaluation of OHS Indicators in Corporate CSR Report

- 2022 Taoyuan City Excellent Enterprise Award- Good Wellbeing Enterprise Award and Gender Equality Award

- Received Healthy Workplace certification in 2022
  Badge of Accredited Healthy Workplace

- New Taipei City Disaster Prevention - Outstanding Enterprise

- Bronze Award for Permanent Exhibitions
  15th Arts & Business Award, Ministry of Culture

Overview of GIGABYTE

Material Topics of This Chapter	Financial Performance
Management Approach	Be responsible for shareholders, and take into consideration environmental and social aspects for financial performance.
Policy and Action	▪ Hold regular Shareholders' Meetings and Institutional Investor Conference to provide transparent information. ▪ Establish and improve the internal audit system and appoint accountants to ensure the proper use of the Company's financial resources. ▪ Track industry trends to ensure that product research and development is advancing with the times.
Vision and Goals	▪ Maintain stable profitability, strengthen sufficient capital for Company operations and innovation. ▪ Actively research and develop new products, explore new fields, expand product lines and market positioning.
2022 Major Achievement	[●] 2022 revenues were second highest in recent years and surpassed TWD100 billion again. [●] Continued to develop emerging technologies and services of servers, autotronics, AI and edge computing in order to expand the markets for intelligent solutions and reverse logistic services.

[●] Stage objectives completed [●] In progress [○] Not yet implemented [●] Incomplete objective

● GIGABYTE Profile

Listing	First listed on the Taiwan Stock Exchange on September 24, 1998 (Stock Code 2376)
Company Name	GIGA-BYTE Technology Co., Ltd.
Capital	NTD6.36 billions
Number of Employees	7,269 employees worldwide
Date of Establishment	April 1986
Manufacturing Factory	Taiwan Taoyuan Nanping Factory, China Dongguan Factory, China Ningbo Factory
Operating Headquarters	No.6, Baoqiang Rd., Xindian Dist., New Taipei City
Operating Locations	Taiwan, China, America, Europe, Asia, and other regions of the world
Key Products and Services	Motherboards, graphics cards, AORUS Tactical Gaming range, AERO series products for content creators, BRIX Ultra compact computers, computer peripherals, high-performance servers
	Reverse logistic solutions, smart application solutions
Chairman	Yeh, Pei-Chen
General Manage	Li, E-Tay、Lin, Yin-Yu

GIGABYTE was founded in 1986. "Upgrade Your Life" has always been the mission and goal of GIGABYTE. We strongly believe that continued progress depends on the continuous creation of new value – and quality can only be realized through the pursuit of perfection.

As a leading global technology brand, GIGABYTE drew on more than three decades of R&D experience in motherboards and PCs to expand into new fields and craft solutions to meet industry requirements. We have more than twenty years of experience in server development and the cloud industry that align with the latest and most important technology trends today, such as AI, edge computing, and data centers. GIGABYTE is now making great strides towards cloud and 5G with our customers to explore the unlimited possibility of technology.

(For more intelligent technology applications, please refer to GIGABYTE INDUSTRY)

Thanks to active and effective integration of strengths and resources from each department, GIGABYTE has now developed many innovative, high-tech products, such as our data center offering better energy efficiency, lower power consumption, and thus less GHG emissions. These more eco-friendly, secure and high-performance cloud communications products provided to public sector, private sector, and even individual users help reduce unnecessary waste of resources and also encourage the industry to adopt a wider range of environmental initiatives. In terms of consumer electronic products, GIGABYTE's AERO series of content creator notebooks and the AORUS premium e-sports brand not only provide users with a great sensory experience but also facilitate the formation of sustainable supply chains by upstream/downstream suppliers.

GIGABYTE strives to create environmental and social value in addition to economic value. Several sustainability initiatives were launched by GIGABYTE in 2022, including: mitigating the environmental impact of business operations by mentoring the supply chain on greenhouse gas inventory as well as partnering with the Plant-for-the-Planet Foundation from Germany again on tree planting and ecological conservation; hosting Group sustainability courses, launching the "3unlight" volunteering platform, and hosting the annual flea market. Cultivating the sustainability awareness of employees and encouraging them to put sustainability into practice help strengthen the corporate sustainability culture through everyday activities and promote the sustainability philosophy in the local community.

(For more annual milestones, please refer to the GIGABYTE CSR website)

Membership of Associations

GIGABYTE is an active participant in many international organizations. We are a Supporting Organization of the Open Infrastructure Foundation and a founding member of MLCommons. We invest in developing open-source architectures and data sets so that organizations worldwide can have equal access to key technologies. We also hope to recruit more technical experts from around the world and contribute what we learned to the common knowledge platform shared by all mankind.

At the same time, GIGABYTE plays an active role in important domestic industry associations, including the Taiwan Electrical and Electronic Manufacturers' Association (TEEMA), Taipei Computer Association (TCA), and Taiwan Excellent Brand Association. We actively participate in association events as well. GIGABYTE has been a partner in the Trans-Action Award for 8 consecutive years and strives to cultivate talented individuals for the industry.

In addition to technological developments, GIGABYTE joined the New Taipei City Disaster Prevention Association and helped organize community disaster prevention activities; took part in the CDP while also adopting the Responsible Business Alliance (RBA) Code of Conduct, the Task Force on Climate-related Financial Disclosures (TCFD) framework, and Sustainability Accounting Standards board (SASB) Standards. The voluntary standards are used by GIGABYTE for the transparent disclosure and reporting of our efforts in social and environmental responsibility.

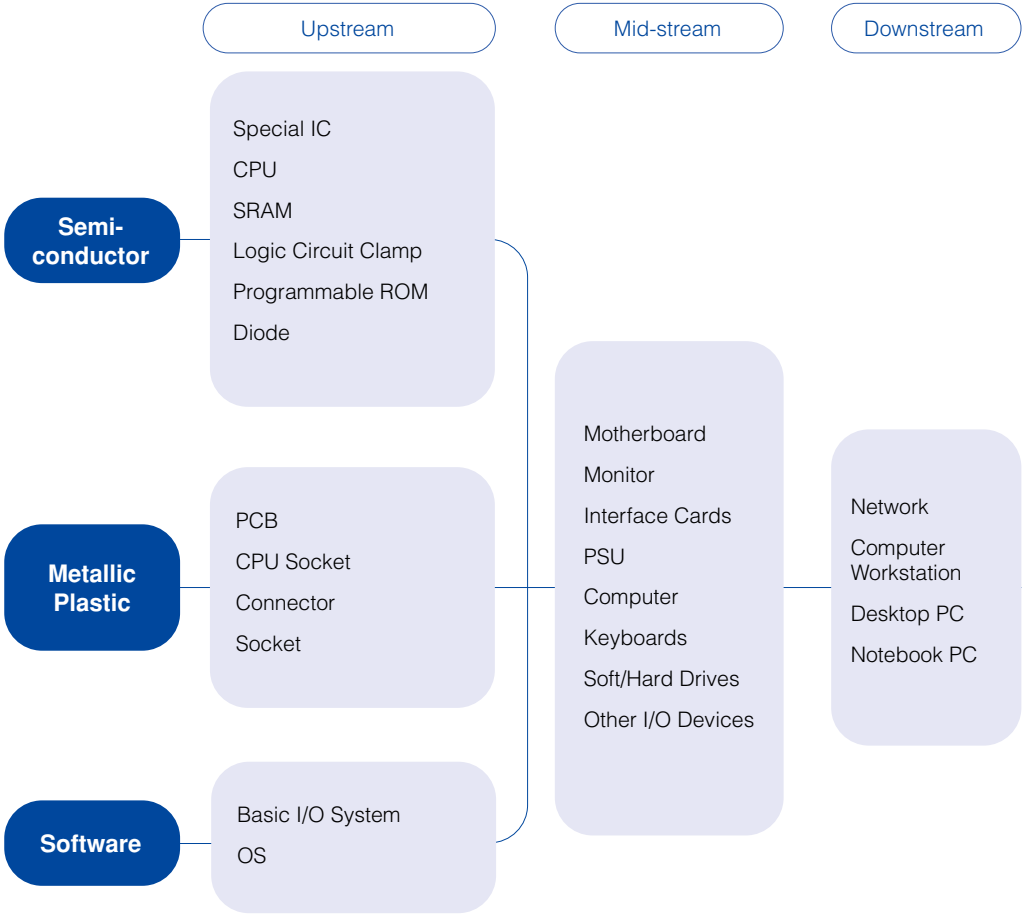
Industry Overview and Business Performance

Overview of the Industry

High inflation, new COVID-19 variants, and the Russo-Ukrainian War triggered a global supply chain crisis in 2022. People beginning to revert to their old, pre-pandemic lifestyles after working/studying from home also contributed to a structural imbalance in supply-and-demand for consumer electronics. Gartner estimated a 16.2% drop in 2022 global PC shipments compared to 2021, a trend expected to run through to early 2024. Fortunately, thanks to our agile market strategy, GIGABYTE's inventory destocking time and cycle for consumer electronic product lines were shorter than our competitors, so export sales remained strong.

Metaverse applications are now all the rage around the world. The commonality between 3D metaverse developments in applications such as gaming and social networking is set to become the next trend nexus. GIGABYTE has responded by launching PC gaming motherboards, graphics cards, notebooks, and e-sports peripheral products. These have garnered GIGABYTE many international awards, such as the iF and Red Dot product design awards in Germany and the CES Innovation Award. The server business has been growing at breakneck speed in recent years. Here, GIGABYTE has continued to develop new application markets in the spirit of constant innovation. We now supply a wide range of high-quality products and services in fields such as immersion cooling technology, AI, and HPC based on modular GPU architecture and ARM64 architecture. Their popularity is widely recognized by academics, research, government agency, and enterprise customers, making GIGABYTE an outstanding leader in the industry. In 2023, the Networking & Communication BU will be formally spun off to become Giga Computing and also all customer service centers will be transferred to the subsidiary Bestyield International. We hope the increased specialization will deliver better quality products and services to our customers while also enhancing our core competitiveness as a whole.

● Upstream and Downstream Linkages of Key Products



● Generation and Distribution of Direct Economic Value in the Past 3 years

Unit: NTD Thousand

Operational Performance	2020	2021	2022
Generation of Direct Economic Value			
Operating Income	84,602,841	121,905,357	107,263,644
Distribution of Direct Economic Value			
Operating Cost	70,138,404	92,315,325	90,647,566
Employee Salary and Benefits	6,860,068	10,670,727	4,822,550
Payments to Investors	1,398,516	2,542,756	7,619,807
Income Tax	1,119,570	2,778,226	1,910,892
Retained Economic Value	5,086,283	13,598,323	2,262,829

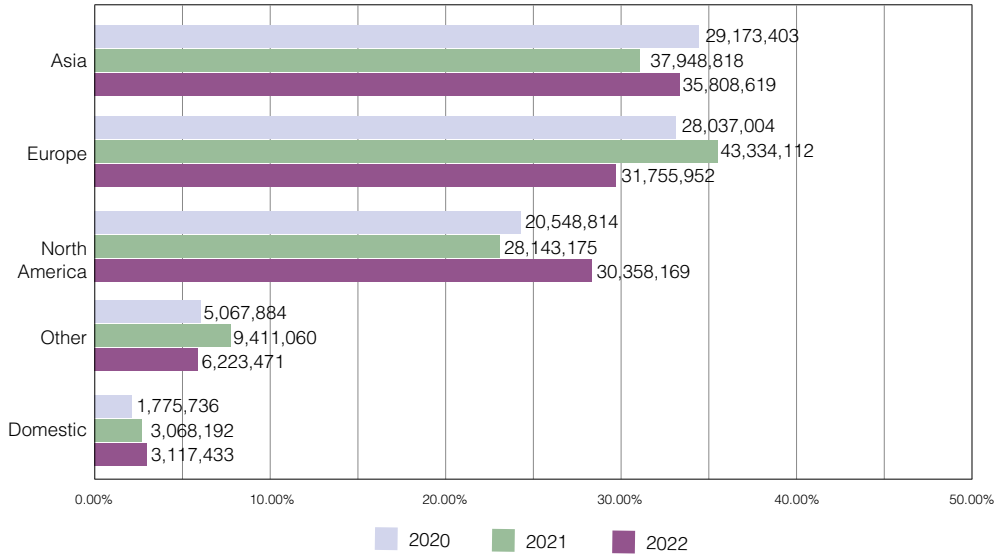
● Production Output and Value in the Past 3 Years

Unit: 1000 pcs, NTD Million

Key Products	2020		2021		2022	
	Output	Value	Output	Value	Output	Value
Motherboards and Graphics Cards	18,990	55,328	17,630	63,641	15,167	67,375
Other	1,630	12,895	3,646	32,216	3,880	25,649
Total	20,620	68,223	21,277	95,856	19,047	93,024

● GIGABYTE Sales and Distribution by Regions in the Past 3 Years

Unit: NTD Thousand



ch.1 Sustainable Development Commitment and Communication

1.1 Sustainable Development Promotion Goal and Strategy 1.2 Organization for Promoting Sustainable Development

1.1 Sustainable Development Promotion Goal and Strategy

1.1.1 SDGs X CSR Strategy Map

GIGABYTE adopted "Upgrade Your Life" as its core philosophy and hopes to apply our expertise in technology to bring a better life for all humanity. Even as we seek to expand on our market accomplishments, we know that sustainability is now a topic that no business can afford to ignore. We therefore looked at our current business operations and the degree of stakeholder concern to arrive at four sustainability visions: "Zero Disposal, Zero Pollution," "Transition to Low-Carbon Technology," "Sustainability Cycle and Sharing," and "Realization of Humanistic Values." These serve as our long-term goals in sustainable development and shape the value we expect to create - reduction in operational footprint, cultivation of innovation prowess, building of a friendly brand, and creation of shared value. These four response strategies to economic value and ESG form a complete sustainability roadmap.

In 2015, the United Nations established 17 Sustainable Development Goals that drew up a clear roadmap to sustainability for governments, businesses, non-profit organizations, and individuals. GIGABYTE adopted the methodology developed by SDG Compass to identify 6 high-priority goals and 3 voluntary goals most closely aligned with our core abilities. The core spirit of each goal was then incorporated into the 4 visions of our CSR strategy map, and the guiding principles were adjusted accordingly to ensure that every sustainability action was connected to the global consensus for co-prosperity. (For more detailed responses to SDG targets, please refer to the GIGABYTE CSR Website)

6 Responding Goals with High Priority

3 Voluntary Responding Goals

Zero Waste & Zero Pollution x Transition to Low-carbon Technology x Sustainability Cycle and Sharing x Realization of Humanistic Values

Governance Aspect	Economic Aspect	Environmental Aspect	Social Aspect
Sustainable Governance	Green Innovation	Environmental Management	Happy Workplace
Integrity Management	Friendly Products	Climate Change	Social Engagement
Risk Management	Sustainable Supply Chain	Resource Circulation	Sustainability Promotion

We consider the Sustainability Report to be an effective method for reviewing the performance of our operational strategy and use it to determine whether the sustainability practices of GIGABYTE contribute to the realization of our sustainability vision. Therefore, each chapter in this report corresponds to the operating strategy for a core direction in the CSR roadmap, and all efforts are made to provide stakeholders with clear, accurate and comparable information.※Click on an operating strategy to review the corresponding chapter on GIGABYTE's sustainability initiatives.

CSR Strategy in Practice - Green Action Plan

The "Green Action Plan" was developed by GIGABYTE as our response to the three aspects of ESG and to realize our four sustainability visions. A target time frame divided into 3 phases was drawn up in 2009 based on the core philosophy of "Start from the Heart." A sustainable governance policy was created through the defining of standards and organizational behaviors; our operational environmental impacts are reduced through the installation of a sustainable eco-roof, the development of low-carbon products, and the promotion of packaging reductions; we cultivated sustainability awareness among employees through green activities such as seminars, environmental volunteer services and the Sustainability Fund. The GIGABYTE Green Action Plan entered Phase 3 in 2022. We continue to launch a variety of projects in response to our corporate mission of "Upgrade Your Life" to generate sustainability influence.

		2009~2015 Green Action Plan	Phase 1 2016~2018 2016 Green Action Plan 2.0	Phase 2 2019~2021	Phase 3 2022~	Long-term Target
Zero Waste Zero Pollution	Environmental Impact from Operation	▪ Inventory of total water consumption and waste production at each operating location	▪ Drew up the 333 Reduction Plan in 2015 to cut carbon emissions, water, and waste by 3% every year. ▪ Promoted a plastic reduction plan at the staff canteen of the Headquarters to progressively prohibit disposable straws and cutlery	▪ Launched a packaging reduction plan to reduce the use of disposable materials.	▪ Launched packaging reduction plan to reduce use of disposable materials. **Water reduction: ↓ 35.17% compared to 2010** **Waste reduction: ↓ 11.99% compared to 2010**	▪ Reduce water use by 20% in 2030 compared to 2010. ▪ Reduce waste generation by 50% in 2030 compared to 2010. ▪ Non-use of disposable packaging from 2030. ▪ Products contain no hazardous substances and have low impacts on the environment and human health. ▪ Product environmental reports are published promptly for mainstream products.
	Environmental Impact of Products	▪ Enforced GIGABYTE Hazardous Chemical Substances Regulations (HCSR).	▪ Issued product environmental reports to disclose products' impacts on climate change, PM2.5, and land/water acidification through their life cycles.	▪ Continued to incorporate new requirements from international chemical regulations and updated HCSR. ▪ Updated the product environmental report in 2020 to incorporate management activities from each stage of the product life cycle; coefficient version updated in 2021 with data from the latest databases and product carbon footprint provided by suppliers.	▪ Continued to incorporate new requirements from international chemical regulations and updated HCSR to version 4.8. ▪ The product environmental report was updated and expanded in 2022 with environmental impact data for 16 products. Product composition, recycling ratio, and management actions during each stage of LCA were also added. **Hazardous substances excessing standards: 0 sample in 2022** **Published product environmental reports: 77**	
	Thousand Mile Trek – Go Green Taiwan	Founded the GIGABYTE Go Green Club in 2015 and launched the Thousand Mile Trek–Go Green Taiwan project.	Organized 5-6 trips every year and reinforced internal promotion so that the employees could attach importance to environmental protection after taking action personally.	▪ Expanded social influence by partnering with youths from universities on environmental protection initiatives. ▪ Invited retired employees back to the environmental services to enrich their retirement and build cross-generational friendships.	▪ 35 journeys have been completed as of 2022. The project will complete the circumnavigation of the island on 2023 Earth Day. **Trekked distance: 1,106.76 km** **Removed trash: 15,722.38 kg**	
Transition to Low-Carbon Technology	Climate Governance	Participated in the CDP requested by customers and responded to the climate change questionnaire.	Responded to the supply chain module of CDP and was scored B (management level) between 2016 and 2018.	▪ The TCFD disclosure framework and SBTi configuration guide were used to re-design the path for alignment with international carbon reduction as well as refine our climate change response strategy and risk management measures. ▪ Continued to participate in CDP and make improvements to existing carbon management activities based on the scores from each year. The rating of A- (Leadership) was achieved twice between 2019 and 2021.	▪ Climate scenario analysis for the current year was conducted in accordance with the TCFD Guidance on Scenario Analysis for Non-Financial Companies. ▪ Responded to new CDP water security assessment survey and updated the water risk map for operating locations and the top hundred suppliers. **Scored A- (leadership level) in 2022 CDP Climate Change and had been surpassing the management level for 7 consecutive years** **Scored B (management level) in 2022 CDP Water Security**	▪ Reduce carbon emissions by 50% in 2025 compared to 2009. ▪ GIGABYTE's carbon reduction targets meet the standard of Science-Based Targets (SBT). ▪ Strengthening internal innovation to achieve low-carbon technology transition, which then, in turn, contributes to the Company's environmental performance.

		2009~2015 Green Action Plan	Phase 1 2016~2018 2016 Green Action Plan 2.0	Phase 2 2019~2021	Phase 3 2022~	Long-term Target
Transition to Low-Carbon Technology	Greenhouse Gas Inventory and Reduction	Started annual GHG reduction inventory certified by a third-party.	▪ Drew up the 333 Reduction Plan in 2015 to cut carbon emissions, water, and waste by 3% every year. ▪ Reached the emission target ahead of schedule in 2017, so reset a new target of reducing 50% of emissions by 2030 compared to the base year 2009.	▪ Advanced the target year of emission reduction target by 5 years to cutting 50% of emissions by 2025 compared to the base year 2009. ▪ Expanded scope of annual inventory to include 11 Scope 3 indirect GHG emission types.	Advanced the target year of emission reduction target by 5 years to cutting 50% of emissions by 2025 compared to the base year 2009. **Emissions reduction: ↓ 42.99% compared to 2009**	
	Sustainability Fund			A "Sustainability Fund" that will run for 6 years was officially launched in 2019. The new fund will be funded by annual energy savings into 3 categories: plant energy savings and reductions, low-carbon product proposals, and green projects.	Continued running the "Reduction Reward Program", providing incentives to factories and employees who implement reduction and meet the Group's reduction targets for plastic and packaging in order to encourage sustainability R&D and identify reduction hot spots within the Company. **Accumulative proposals: 245** **Estimated reduction performance: please refer to 3.1.2 Sustainability Fund and Reduction Reward Program**	
Sustainability Cycle and Sharing	Circular Economy Business Model	▪ Focused on after-sales service and repair yields to extend product lifetime and fulfill manufacturer responsibility. ▪ Set up recycling sites in each country to provide consumers with a convenient collection of e-waste. ▪ Provided recycling services for electronic products regardless of brand at all customer service centers in Taiwan. ▪ Founded Bestyield International in 2018 to focus on integrated reverse logistics services.		▪ Initiated the "Rent instead of Buy" business model to ensure 100% product recovery. ▪ Introduced resale of refurbished products and developed the out-of-season market to reduce wasted resources. ▪ Launched the Refurbished Product Certification and manufacturer warranty to enhance consumers' trust in the second-hand market and activated transactions. ▪ Bestyield International obtained BS 8001 Circular Economy certification.	▪ Continued to provide product repair services that extend the life cycle of electronic equipment. ▪ Active promotion of corporate leasing services and custom solutions for notebooks, servers and other products in recent years. ▪ Participation in public exhibitions to promote the circular economy philosophy to the general public. **Up to 123,000 products were refurbished in the past 3 years** **Won Outstanding Award at the 3rd Taiwan Circular Economy Awards**	▪ Disclosure of environmental impacts on the life cycle of all products to increase the material recycling rate. ▪ Enhance suppliers' environmental management capabilities and develop circular design and environmental impact assessment systems. ▪ Continue promoting the Alliance and leading supply chain partners to balance development in environmental, social, human rights, and governance areas. ▪ Tiered supplier management integrates ESG evaluations into procurement evaluations to consolidate the Company's sustainable value chain. ▪ Corporate culture and working procedures fully integrate sustainability awareness.
	Reduction. Sharing. Love the Earth Alliance	▪ Created a green cloud platform to lay the foundations for sustainable supply chain management. ▪ Implemented 4 zero-tolerance guidelines for suppliers to enforce labor human rights protection.	▪ Initiated the "Reduction. Sharing. Love the Earth Alliance" to encourage supplier partners to value and practice sustainable development. ▪ Held supplier conferences to share sustainability trends and strengthen links beyond business relations.	▪ Continue to promote the Alliance and track the reduction performance of Alliance partners; host supplier conferences to share international trends and sustainability information. ▪ A new tiered supplier management system was activated in 2021 to incorporate ESG assessment into procurement decisions.	▪ The existing supplier sustainability assessment questionnaire was integrated with the 333 Reduction questionnaire to become the "Integrated Sustainability Questionnaire" in 2022 to investigate the carbon, electricity, water, and waste reduction targets/data of suppliers. ▪ Hosted supplier sustainability education and training to forge a sustainable low-carbon supply chain. **Total alliance members: 130 companies** **Total tree-planting partners: 100 companies**	
	Cultivation of sustainability awareness among employees	▪ Hosted celebrity lectures regularly with professional speakers introducing sustainable development from a variety of perspectives such as food, ecology, health, and enterprise management. ▪ Organized "working holidays" where employees could learn about the importance of ecological conservation through services and environmental education in the local community. ▪ Sent educational articles responding to World Environment Day to make employees understand the world trend and how they could make contributions at an individual level.		▪ Launched the "The Ocean is Our Home" program by adopting Dayuan Beach in Taoyuan and committing to the long-term protection of the ocean. ▪ Hosted annual flea market to mobilize company employees, local community, and charities on circular reuse of materials.	▪ Continue to share articles on sustainability, and increase the diversity of internal activities. ▪ Promotion of sustainability courses at the Group level to strengthen our corporate green culture by cultivating the ESG awareness and sustainability character of employees. **Sustainability and environmental education hours: 101,419**	

		2009~2015 Green Action Plan	Phase 1 2016~2018 2016 Green Action Plan 2.0	Phase 2 2019~2021	Phase 3 2022~	Long-term Target
Realization of Humanistic Values	Happy Workplace	Set up comprehensive software and hardware services, provide benefits and stipends, subsidized employee clubs, and emphasized the balanced development of employees' work, family, and life.	▪ Obtained Sporting Enterprise Certification by the Sport Administration and promoted healthy diets and regular exercise. ▪ Implemented health exams that exceeded statutory requirements and progressively enforced tracking of the employees who did not take health exams.	▪ Set up a tiered management plan for employee health risk and provided employees classified as high-risk level with subsidies for further medical treatment. ▪ Increased welfare points, provided parental subsidies, and distribute epidemic prevention stipends. ▪ Implemented disaster prevention drills, improved the working environment, strengthened EAP functions to spare no effort to protect employees' physical/mental health and safety.	▪ Promotion of health management incentive mechanism to encourage employees take early action on risk factors for chronic illness. ▪ Joined the Family-Friendly Enterprise Alliance and promoted work-family balance for employees through the organizing of parenting seminars and group courses. ▪ Implemented the "Workplace Maternal Health Protection Plan" to create a friendly workplace for female employees and maternal health. **Please refer Chapter 5 Happy Workplace for detailed outcomes**	▪ Listen intently to employee needs to build a truly inclusive and equitable happy workplace. ▪ Use corporate philanthropy as the basis for enlarging digital inclusion and youth empowerment. ▪ Serve as the advocate and practitioner of sustainable eco-roof philosophy to promote urban habitability and ecological inclusion. ▪ Implement climate education to cultivate climate citizenship among the next generation.
	Digital Inclusion and Equitable Society	Continued to promote the Secret to Computers, Bring Technology to Campus, and G-Design Contest to cultivate students' interest in computers and hands-on experience.	▪ The Digital Love was renamed GIGABYTE Senior Academy in 2017 and its target learners expanded from seniors and housewives to foreign spouses and adults with rare illnesses. ▪ Opened smartphone classes to help the disadvantaged connect with the latest technologies.	▪ Launched the "Computer Doctor" course to reveal the secrets of waste electronics reclamation from a circular economy perspective. ▪ Set up Fun Play with IoT Summer Camp that introduces children to the design thinking process and trains their problem-solving skills.	▪ Signed MOU on industrial-university collaboration with schools to build a hall of technology education in New Taipei City. ▪ Hosted training workshops for instructors on TRIZ and invention as well as children's creativity competition to promote creative thinking. **Technology education: 71,792 participants** **G-Design Contest hosted for 20 consecutive years**	
	Tree Planting x Community Ecological Education		Partnered with the Plant-for-the-Planet Foundation from Germany, committed to planting 75,000 trees and holding 5 sessions of Plant-for-the-Planet Academies in Taiwan, and in the meanwhile supported the cultivation of climate justice ambassadors in developing countries.	▪ Adopted afforestation lands in Pinglin and mobilized employees, supplier partners and customers to plant trees in person for cultivating ecological conservation and awareness. ▪ Hosted 5 Plant-for-the-Planet Academies in Taiwan and cultivated climate justice ambassadors and university volunteers. ▪ Developed and implemented sustainability and climate education courses for elementary schools.	▪ Continued to adopt forest land in Pinglin to protect the local ecology of operating locations. ▪ Partnered with the Plant-for-the-Planet Foundation from Germany again to continue supporting voluntary tree planting, eco-conservation, and local empowerment. **Cumulative Trees planted: 92,524**	
	G-HOME GIGABYTE Sustainability Eco-Rooftop		▪ Introduced Social Return on Investment (SROI) tool to quantify benefits of G-HOME. ▪ Obtained Environmental Education Facility and Field Certification by EPA and offered 2 environmental education courses.	Continued to organize and refine environmental education courses while actively reaching out to the industry, government, and academia to expand the influence of roof greening.	▪ No course opened in 2022 in due to COVID-19. ▪ The environmental education facility certification of G-HOME Eco-Rooftop expired in June 2022.	

1.1.2 Stakeholder Communication and Engagement

GIGABYTE knows that sustainability cannot be achieved overnight. In addition to company operations and the market environment, we must also pay attention to stakeholder opinions and feedback. For this reason, we actively respond to topics of stakeholder concern in order to maximize the sustainability value. The AA1000 Stakeholder Engagement Standard was used as a guide for internal team discussions by the Sustainable Development Office to identify 7 key stakeholders: Employees, Investors, Customers, Suppliers, Communities/Non-profit Organizations/Schools, Government, and the Media. Appropriate methods of communication were devised for each stakeholder based on their particular attributes. Relevant information was also provided in a timely manner in accordance with domestic and overseas trends in sustainability topics to ensure a transparent and accurate response to all groups affected by GIGABYTE operations.

Stakeholder	Concerned Material Issues	Communication Channel and Frequency		Corresponding Chapter
Employee	▪ Moral integrity and code of conduct ▪ Corporate governance ▪ Talent cultivation and retention ▪ Occupational health and safety ▪ Human rights, equality, and diversity	Regular	▪ Labor-management meetings/Occupational health and safety committee ▪ Employee satisfaction survey	Chapter 2 Sustainability Governance Chapter 5 Happy Workplace
		Ad hoc	▪ Departmental work meetings ▪ Education and training/Practice drill ▪ Employee Assistance Plan (EAP) ▪ Events and seminars ▪ Internal/external website announcements and e-newsletters	
Investor	▪ Financial performance ▪ Moral integrity and code of conduct ▪ Legal and regulation compliance ▪ Corporate governance ▪ Brand management ▪ Risk management ▪ Information security management	Regular	▪ Annual shareholders' meeting and annual report ▪ Participation in Corporate Governance Evaluation ▪ Publication of sustainability reports ▪ Sustainability-related assessments in response to investor requirements	Overview of GIGABYTE Chapter 2 Sustainability Governance
		Ad hoc	▪ Communication meeting and investor conference ▪ Publication of information on The Market Observation Post System or GIGABYTE official website	
Customer	▪ Risk management ▪ Customer relationship management ▪ Information security management ▪ Climate change and carbon management ▪ Circular economy ▪ Sustainable supply chain management ▪ Conflict minerals	Regular	▪ Annual customer satisfaction survey ▪ Annual response to the CDP questionnaire	Chapter 2 Sustainability Governance Chapter 3 Green Production Chapter 4 Sustainable Value Chain
		Ad hoc	▪ Audit and requirements from customers ▪ Customer technical conferences ▪ Online support system and platform ▪ Response to sustainability-related questionnaires required by customers	
Supplier	▪ Legal and regulation compliance ▪ Moral integrity and code of conduct ▪ Corporate governance ▪ Sustainable supply chain management ▪ Occupational health and safety ▪ Responsible production	Regular	▪ Regular supplier audit/sustainability evaluation ▪ Annual supplier conference ▪ Conflict minerals investigation	Chapter 2 Sustainability Governance Chapter 3 Green Production Chapter 4 Sustainable Value Chain
		Ad hoc	▪ Business review meeting ▪ Explanation of environmental safety and health as well as CSR ▪ Supplier sustainability education and training ▪ Updating and publication of GIGABYTE's "Harmful Chemical Substance Regulations (HCSR)"	

Stakeholder	Concerned Material Issues	Communication Channel and Frequency		Corresponding Chapter
Community /Non-profit Organization / School	▪ Circular economy ▪ Pollution prevention ▪ Green consumption ▪ Ecological conservation ▪ Talent cultivation and retention	Ad hoc	▪ Hosting of technology competition or talent development class ▪ Co-organizing of environmental and technological education activities ▪ Participation in the Corporate Disaster Prevention Association of New Taipei City ▪ Participation in related organizations and forums ▪ Inviting communities and NGOs to participate in activities	Chapter 3 Green Production Chapter 5 Happy Workplace Chapter 6 Social Common Good
Government	▪ Corporate governance ▪ Legal and regulation compliance ▪ Risk management ▪ Climate change and carbon management	Ad hoc	▪ Official correspondence ▪ Participation in meetings ▪ Participation in industry and government activities ▪ Support of policy initiatives with the core corporate capabilities ▪ Participation in the Corporate Governance Evaluation and submit ESG data to the Market Observation Post System	Publish sustainability reports and provide regulators with accurate and complete nonfinancial disclosure.
Media	▪ Company's operating performance ▪ Company's sustainability initiatives	Ad hoc	▪ Press conference ▪ Press release ▪ Interview ▪ Topical reporting	Publish sustainability reports and provide media partners with accurate and complete non-financial disclosure.

1.1.3 Identification of Material Topics

Sustainability topics are periodically updated by GIGABYTE based on international sustainability guidelines and trends, business goals, benchmark enterprises, and material topics in the industry. We identified 27 material topics in 2022 after adjusting the topics "Responsible Production and Consumption"and "Hazardous Substance Management" from the previous year to become "Responsible Production"and "Green Consumption."

Once the stakeholder groups have been ascertained, we use questionnaire surveys to collect their opinions. The respondents' degree of concern on each topic as well as the perceived impact on the economy, environment, society, and human rights were then used to draw the Material Topics Matrix. In 2022, we picked out 6 highly material topics for priority in disclosure. The corresponding management policies and initiatives were also disclosed in the report. Appropriate disclosure is also provided for the remaining 15 moderately material topics based on the degree of stakeholder concern and impact on operations. Changes from last year included the downgrading of "Corporate Governance" and " Risk Management" from highly material to moderately material topics, while "Financial Performance" was upgraded from moderate to highly material.

Identification Process of Material Topic

IDENTIFICATION

The identification process was conducted in accordance with the GRI Standards, SASB Standards, ISO 26000 Guidance on Social Responsibility, Corporate Vision and Code of Conduct, international current affairs, UN Global Compact, stakeholder engagement topics, Sustainable Development Goals, as well as the latest trending domestic/ international topics.

27 Sustainability Issues

ANALYSIS

Through internal seminars, annual supplier sustainability evaluations, external projects, and the CSR website, we investigate the degree of stakeholder concern on material topics. Senior executives above the grade of manager as well as an internal team from the Sustainable Development Office also took part in assessing the impact of material topics on the four operational factors and the economy, environment, society, and human rights.

269 valid responses to questionnaires from stakeholders

24 employees and managers took part in the impact assessment for material topics

CONFIRMATION

The questionnaire responses were compiled, and an annual materiality matrix was drawn up based on the stakeholders' degree of concern for material topics as well as the impact of the material topics on 4 operational factors and the economy, environment, society, and human rights aspects. Finally, the Sustainable Development office discussed the accuracy and completeness of the matrix and analysis.

6 highly material topics

15 moderately material topics

EXAMINE

The Report editorial team regularly examines and evaluates the appropriateness of material topics and, if necessary, immediately amends the identification process of material topics and stakeholders.

2022 GIGABYTE Material Topics Matrix

	Governance Aspect	Economic Aspect
Highly Material Topics	01 Moral integrity and code of conduc 02 Legal and regulation compliance	05 Sustainable supply chain management 06 Financial performance
Moderately Material Topics	03 Corporate governance	07 Risk management 08 Information security management 09 Customer relationship management 10 Brand management
Low Material Topics	04 Stakeholder communication and complaint processing	11 Innovation management

	Environmental Aspect	Social Aspect
Highly Material Topics	12 Climate change and carbon management	21 Occupational health and safety
Moderately Material Topics	13 Environmental policy and management system 14 Energy management 15 Responsible production 16 Green consumption 17 Pollution prevention 18 Circular economy 19 Ecological conservation	22 Talent cultivation and retention 23 Human rights, equality, and diversity 24 Conflict minerals
Low Material Topics	20 Water resource management	25 Labor relations 26 Social engagement and technology care 27 Sustainability and environmental education

1.1.4 Material Topics and Impact Boundaries

To help stakeholders understand the impacts of each material topic on the company, the overall value chains, the environment, and society, we elaborate a matrix table to present the direct impacts and indirect impacts each material topic may cause.

[●] Direct Impact: The topic has a direct impact on the Boundary.

[○] Indirect Impact: The topic has an indirect impact on the Boundary or is related to the Boundary because of commercial activities.

Material Topics	Highly Material Topics							
	Internal Boundary	External Boundary				Corresponding GRI Topic	Corresponding SASB standards	Corresponding Chapter
	GIGABYTE and Subsidiaries	Supply Chain	Customers/ Consumers	Environment	Society			
Moral Integrity and Code of Conduct	●	○	●		○	Self-defined topic		2.1 Integrity Management and Legal and Regulation Compliance
Legal and Regulation Compliance	●	○	○	●	●	GRI 2-27		2.1 Integrity Management and Legal and Regulation Compliance
Sustainable Supply Chain Management	●	●	○	○	○	Procurement practices (204) Supplier social assessment (414)	TC-HW-430a.1 TC-HW-430a.2	Chapter 4 Sustainable Supply Chain anagement
Financial Performance	●					Economic performance (201)		Overview of GIGABYTE
Climate Change and Carbon Management	●	○	○	●	○	Emissions (305)		3.2 Climate Change Mitigation and Adaptation
Occupational Health and Safety	●					Occupational health and safety (403)		5.3.1 Environmental Health and Safety

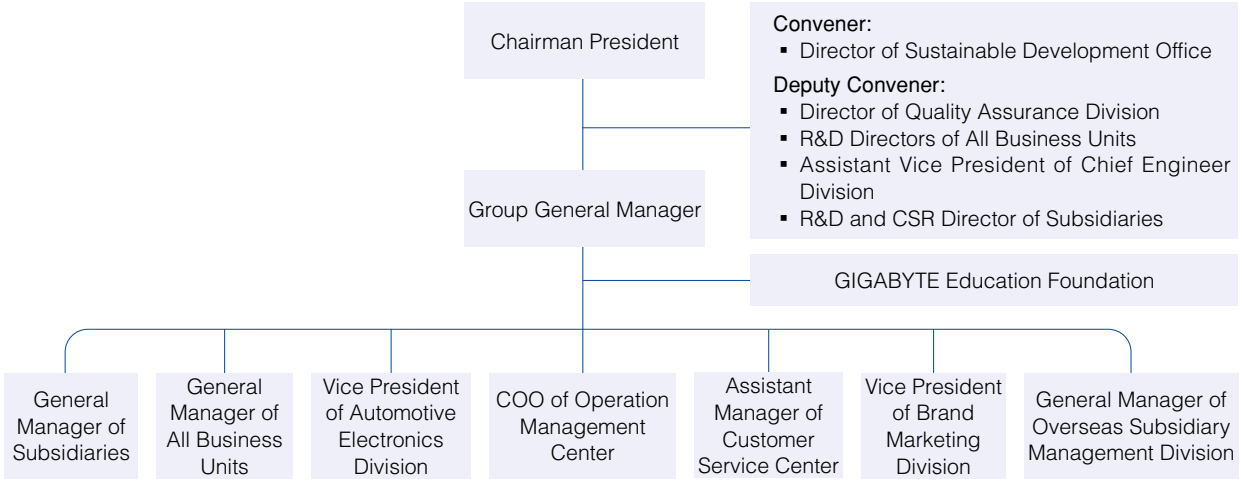
Material Topics	Moderate Material Topics							
	Internal Boundary	External Boundary				Corresponding GRI Topic	Corresponding SASB standards	Corresponding Chapter
	GIGABYTE and Subsidiaries	Supply Chain	Customers/ Consumers	Environment	Society			
Corporate Governance	●	○	○			GRI 2		2.2 Corporate Governance
Risk Management	●	●	●	○	○	Self-defined topic		2.3 Risk Management
Information Security Management	●	●	●			Self-defined topic	TC-HW-230a.1	2.3 Risk Management
Customer Relationship Management	●	○	●			Self-defined topic		4.2 Customer Relations Management
Brand Management	●	○	○			Self-defined topic		Overview of GIGABYTE
Environmental Policy and Management System	●	○		●	○	GRI 2-27		3.1 Environmental Management
Responsible Production	●	●	○	●		Self-defined topic		3.3 Responsible Production
Green Consumption	●	●	●	●		Self-defined topic		3.3 Responsible Production
Energy Management	●	○		●	○	Energy (302)		3.1.1 Environmental Management Performance
Pollution Prevention	●	○	○	●	○	Waste (306)		Chapter 3 Green Production
Circular Economy	●	○	○	●		Self-defined topic	TC-HW-410.4	3.3.2 Circular Economy
Ecological Conservation	●			●	○	Self-defined topic		6.2 Cultivation of Sustainability Thinking and Environmental Care
Talent Cultivation and Retention	●				○	Training and education (404)	TC-HW-330.1	5.1 Human Resource Management and Talent Cultivation
Human Rights, Equality,and Diversity	●	○			○	GRI 3		5.2 Human Rights Commitment and Diversity Communication
Conflict Minerals	●	●			○	Supplier Social Assessment (414)	TC-HW-440a.1	4.1.3 Conflict Minerals Management

1.2 Organization for Promoting Sustainable Development

The "GIGABYTE Green Sustainable Development Committee" is the top decision-making and implementation committee for sustainable development matters at GIGABYTE. The Committee is chaired by Chairman Dandy Yeh, with the person-in-charge of the Sustainable Development Office serving as the convener. Meeting participants comprise the heads and responsible personnel for each business group, subsidiary, and subordinate department. A meeting is convened every 1-2 months, during which each organizational representative reports on sustainability, environmental, product regulations, and trends. Response strategies are also proposed so that GIGABYTE can respond to international developments in a timely manner.

The agenda and conclusions of monthly meetings are periodically reported to the President Office during GIGABYTE central meetings. The yearly outcomes of implemented sustainable development actions and an executive plan for the next year are also reported to the board of directors to effectively integrate the corporate governance policies with sustainable development trends. We hope GIGABYTE can always lead the way in implementing sustainable corporate development.

● GIGABYTE Green Sustainable Development Committee



2022 Committee Focus

The CSR Committee tracks and reviews product regulations on chemicals and hazardous substances every year. Besides, the heads of each BU also report on important policies and reforms related to sustainability as well as the performance and accomplishments of their sustainability projects to ensure that GIGABYTE can respond in advance to changing trends and adjust our strategy and direction when necessary.

Environmental and Harmful Chemical Substance Regulations

- Maintain the product part no. database
- Update harmful substance regulations such as REACH and RoHS directive
- Draft of the 65 California product declaration documents and Group POPs declarations
- Investigate product compliance with Japan's JIS Standard and France's Mineral Oil legislation
- Recommend eliminating all PFAS use in products
- Update GIGABYTE Harmful Chemical Substance Regulations (HCSR) to version 4.8

Reporting of Sustainability Performance and Highlights

- Promote "Reduction. Sharing. Love the Earth" Alliance Coastal Cleanup events
- Promote supplier training courses on greenhouse gas inventory
- Manage high-risk suppliers
- Introduce the Group's ESG courses
- Present the outcomes of annual supplier sustainability evaluation

ch.2 Sustainable Governance

2.1 Integrity Management and Legal and Regulation Compliance 2.2 Corporate Governance
2.3 Risk Management 2.4 Innovation Management

Material Topics of This Chapter	Moral Integrity and Code of Conduct	Legal and Regulation Compliance	Corporate Governance	Risk Management	Information Security Management	Innovation management (Voluntary disclosure)
Management Approach	Construct an effective corporate governance structure and complete education and training system, and be capable of fulfilling responsibility for sustainable governance with the principle of honesty and integrity.			Construct an effective risk management mechanism to reduce operational impacts and maintain operational stability.	Enforce corporate information security governance, and promote the planning, supervision, and execution of information security management.	Connect with technological trends, maintain innovation energy, and retain corporate competitiveness.
Policy and Action	Establish the "Code of Business Conduct", "CSR Best-Practice Principles", "Employee Ethical Code of Conduct", "Procedural Rules of Board of Directors", "Corporate Governance Best-Practice Principles", "Operating Procedures of Internal Material Information Process", and publicly commit to complying with the Responsible Business Alliance (RBA) since 2011.			▪ Risks are identified in accordance with the risk management process. The degree of impact on the Company and the likelihood of each risk are assessed and ordered in a risk matrix. ▪ Comprehensive risk controls are developed by relevant units, such as the Global Operations and Risk Management Center, the Risk Management Section of the Finance Division, and the Quality Risk Department of the Sustainable Development Office.	▪ Establish the Information Security Committee to periodically report on information security management practices and outcomes to the Group President. ▪ Review and revise internal management regulations in accordance with domestic/overseas information security regulations and standards (e.g., NIST Cybersecurity Framework) so that information can be applied to realizing group business goals. ▪ Continue to provide customers with a safe and high-quality product experience by ensuring that the supply chain complies with the information security policy throughout the R&D, development, support, and manufacturing processes. ▪ Conduct regular offensive and defensive information security drills, and strengthen information security awareness in the supply chain through information security training.	Formulate the "Rewarding Regulation for Patent" and "Rewarding Regulation for Awarded Products".
Vision and Goal	▪ The rate of new employees signing the "Employee's Ethical Code of Conduct" reaches 100%. ▪ Provide yearly RBA education and training for native and foreign employees, supervisors, and seed lecturers.	▪ No serious infractions (with monetary penalties in excess of NTD 1 million)	▪ Continue participating in the Corporate Governance Evaluation and improving governing strategies based on the evaluation results.	▪ Early identification of risks and formulation of corresponding management strategies to ensure loss mitigation and realization of business targets	▪ No major information security incidents. ▪ Continue to refine the information security management structure; obtain information security-related certifications. ▪ Strengthen information security education and training among employees and throughout the supply chain.	▪ The number of patents and awards received each year grows steadily.
2022 Major Achievement	[●] The signing rate reached 100%. [●] During 2022, corporate ethical management and anti-corruption training sessions were conducted 189 times and attended by 2,897 people.	[●] There were no major violations at Taiwan bases in 2022 (with monetary penalties exceeding NTD 1 million).	[●] Ranked between the range of 36% and 50% in the 2022 corporate governance evaluation.	[●] 10 areas of risk were identified for continuous monitoring by dedicated units and the development of response strategies. [●] There are no breaches of privacy at GIGABYTE in 2022.	[●] Organized one information security incident reporting and response drill to enforce the division of labor and improve response proficiency. [●] Conducted employee information security training 711 times and two social engineering drills covering 4,795 people.	[●] Acquired 103 patents in 2022, bringing the cumulative total to 2,832 patents. [●] Products won 18 prestigious awards in 2022, including the iF Design Award, Red Dot Design Award, and the Taiwan Excellence Award.

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

2.1 Integrity Management and Legal and Regulation Compliance

Morality and integrity have been the core corporate culture of GIGABYTE since its foundation. We believe that operating with integrity and taking the responsibility to society into account is also essential for corporate sustainable development.

GIGABYTE complies with the Responsible Business Alliance (RBA) publicly, self-examines with the highest corporate ethical code of conduct, and establishes the Code of Business Conduct and "Responsible Business Alliance Code of Conduct" to guide equal and safe working environment, legal compliance obligation, external business activities, and corporate asset protection. To urge employees to abide by this Code, GIGABYTE requires every new employee to sign the "Employee's Ethical Code of Conduct", and also provides education training on anti-corruption, intellectual property rights, etc., to shape an emphasis on morality and integrity by the whole Company's members.

(For more details on the Code of Business Conduct, please refer to GIGABYTE CSR Website)

GIGABYTE commits that all business activities fully comply with the laws and regulations of the country and region where GIGABYTE operates and encourages employees to formulate and implement self-standards higher than the basic legal requirements, and also actively promotes social and environmental responsibilities and business ethics in line with internationally recognized standards. The Legal & IP Affairs Division is responsible for regularly supervising and tracking the laws and regulations of domestic and foreign areas where GIGABYTE operates or sells products. All the Company's employment practices, supply chain management, and customer service comply with relevant international trade tariffs, fair trade, hazardous substances prevention, anti-bribery, anti-boycott laws and regulations, human rights standards, and other conventions and regulations.

For employees, GIGABYTE continues to organize and introduce training on ethical management. Course topics encompassing legal affairs and intellectual property, internal audit and controls, accounting systems, and ethical management are offered to managers, general employees, and foreign employees based on their requirements to ensure that every employee understands the GIGABYTE ethical management vision and system. Related courses were held 189 times in 2022. 2,897 people received 4,776.3 hours of training.

Safe and anonymous grievance channels and proactive training and education are provided to employees. The vice president is the highest level to whom employees can send suggestions or complaints. Once receiving a complaint, it will be treated on a case-by-case basis, and disciplinary actions will be taken if necessary. The range of complainants also expands to distributors to ensure that employees always adhere to the ethical boundaries for business dealings. The Company promises that employees will not suffer demotion, penalty, or other adverse consequences even if their compliance with the ethical rules results in business losses. We hope this will support building an anti-corruption environment. There were no violations of ethics and integrity or serious violations of the law at GIGABYTE's Taiwan bases in 2022.

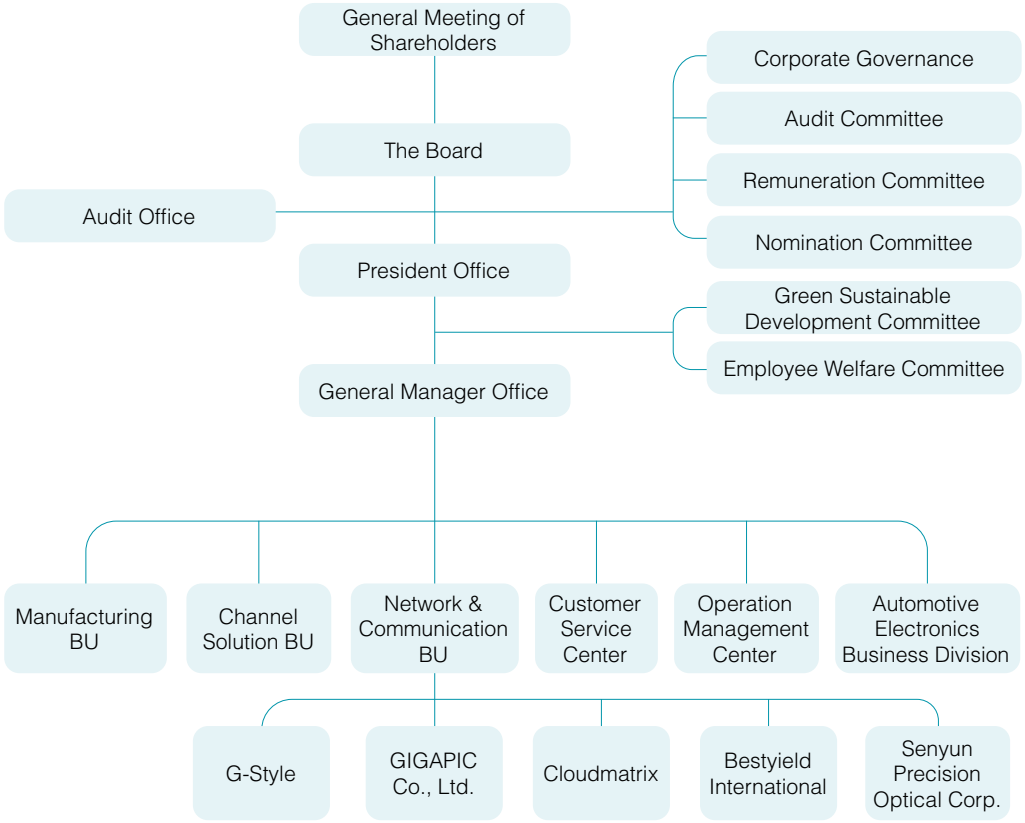
(For more stakeholder communication channels, please refer to GIGABYTE Investor Website)

2.2 Corporate Governance

Robust corporate governance is the backbone of business operations. By setting a governance organization and a transparent and prudent decision-making process, GIGABYTE ensures that every step of operational strategy can take full account of all stakeholders.

Internal audits and self-inspections are periodically conducted in accordance with corporate governance regulations and principles and to respect shareholders' interests. Clearly defined rules such as "Rules of Procedure for Board of Directors Meetings" and "Procedures for Handling Material Inside Information" ensure operational transparency and prevent conflicts of interest so that the management team can focus on managing the business and fulfilling social responsibility.

● Organization of Corporate Governance



[Note] This graphic was based on the internal organization chart issued in 2022 and does not include the GIGABYTE subsidiary Selita Precision.

2.2.1 Board of Directors and Management Team Board of Directors

Board of Directors

The Board of Directors is the top decision-making body for business management activities. The GIGABYTE Board of Directors was made up of 9 directors in 2022, including 6 directors and 3 independent directors. The Chairman of the Board was Mr. Pei-Chen Yeh. All members of the Board were male, aged between 51 and 70, and did not include any directors from a legal background. The material issues most relevant to the professional experience of current board members include corporate governance, financial performance, and innovation management. The Board was convened 9 times during 2022, and average attendance was 98.77%. To boost Board diversity, a goal of increasing the number of female directors and directors with a legal background by at least one has been set.

GIGABYTE directors regularly attend development courses on governance, industry trends, and regulatory changes to maintain their professional edge and ability. The Remuneration Committee and Audit Committee were also set up per the law to strengthen the board's competency and ensure fairness in the appointment of directors and their resolutions.

(For more information on the Board diversity, independence, and professional experiences, please refer to pp.16-20 of the GIGABYTE 2022 Annual Report)

(For more information on each director's continuing education and performance evaluation, please refer to p.37 and pp.45-46 of the GIGABYTE 2022 Annual Report)

Remuneration Committee

In order to assess the achievement of performance goals for the Company's directors, supervisors, and managers and to maintain the appropriateness of individual remuneration, GIGABYTE established the Remuneration Committee in 2011 in accordance with the Securities and Exchange Act. In 2022 the GIGABYTE Remuneration Committee was made up of 2 independent directors (Mr. Hwei-Min Wang, Mr. Zheng-Li Yang) and 1 industry expert (Mr. Peng-Huang Peng). The committee was convened 4 times, and average attendance was 100%.

(For the details of composition, responsibilities, and operation conditions for the Remuneration Committee, please refer to pp.47-50 of the GIGABYTE 2022 Annual Report)

● Comparison of the Annual Remuneration[1] and Increase Percentage between the Highest-paid Individual and General Employees[2]

	Taiwan Bases		China Bases	
	The Highest Annual Remuneration[1]	Median Annual Remuneration of General	The Highest Annual Remuneration[1]	Median Annual Remuneration of General
Ratio to Median Multiple	33.3	1	7.1	1
Ratio to Median Increase Percentage	-0.03	1	0.22	-1

[Note 1] The Annual Remuneration: The sum of fixed salary and floating salary.
[Note 2] General Employees: The statistical benchmark is based on the employees in service at the end of December 2022.

Audit Committee

The Audit Committee is to supervise the proper expression of the Company's financial statements and the independence and performance of the certified accountants, as well as to ensure the Company's compliance with laws and the effectiveness of the internal control system. The Committee meetings are convened at least once every quarter and convened at any time whenever necessary. A valid resolution must be approved by more than one-half of all members, and meeting minutes must be made according to laws and regulations and retained indefinitely. In 2022, the Audit Committee comprised 3 independent directors (Mr. Hwei-Min Wang, Mr. Yi-Hong Chan, and Mr. Zheng-Li Yang). It was convened 7 times, and average attendance was 100%.

(For more information on the operation of the Audit Committee, please refer to pp.38-40 of the GIGABYTE 2022 Annual Report)

Nomination Committee

The GIGABYTE Nomination Committee was established on August 3, 2021, to strengthen the functionality of the Board and management mechanism. The Committee members elect one of their members as the convener and chairperson. Members of the current Nomination Committee will serve until the end of their directorship. In 2022, the GIGABYTE Nomination Committee was made up of one director (Mr. Pei-Chen Yeh) and two independent directors (Mr. Hwei-Min Wang and Mr. Zheng-Li Yang). According to GIGABYTE's "Rules for Director Election," a candidate nomination system is used for the election of directors, and shareholders elect directors from the nominated candidates.

(For more information on the operation of the Nomination Committee, please refer to pp.50-51 of the GIGABYTE 2022 Annual Report)

2.2.2 Internal Audit

GIGABYTE's internal audit unit is an independent unit that reports directly to the Board of Directors. In addition to regular reports at routine Board of Directors meetings, the internal audit unit also reports to the Chairman monthly or anytime when necessary. The internal audit plan is an important part of corporate risk management and can weigh and discover the performance of all departments and operational processes. For example, if there is a deficiency during the audit process, the auditor will immediately notify each audited unit or subsidiary to take appropriate improvement measures. GIGABYTE's internal audit is divided into 10 major audit directions, including salary cycle, product production and equipment cycle, as well as cash-flow-related cycles like receiving/payment and financing, to examine the Company's daily operation comprehensively.

In addition to the internal audit, GIGABYTE regularly discloses company-related information on the Company's website and TSE Market Observation Post System and actively incorporates external evaluation mechanisms, such as participating in the Corporate Governance Evaluation System by the Financial Supervisory Commission (FSC) every year. GIGABYTE ranked 36-50% among all listed companies in the 9th Corporate Governance Evaluation. We will keep taking the lesson from the evaluative results, list the insufficient part as the priority for future improvement, and expect to improve our corporate governance gradually.

2.3 Risk Management

2.3.1 Risk Identification and Management

Sound risk management is fundamental to the sustainability of an enterprise. GIGABYTE used the risk management process to identify 10 areas of risk in 2022. Senior executives above the manager level then participated in evaluating the degree of impact on the Company from each risk and their likelihood. A risk matrix was then drawn up based on the results. The appropriate departments were then commissioned to develop a sound risk management method using their professional knowledge and practical experience in related fields.

● GIGABYTE Risk Management Process and Management Actions

01 Risk Identification

[External Environment]
Identify external developing trends related to politics, economics, environment and society to confirm any potential influence on our operation.

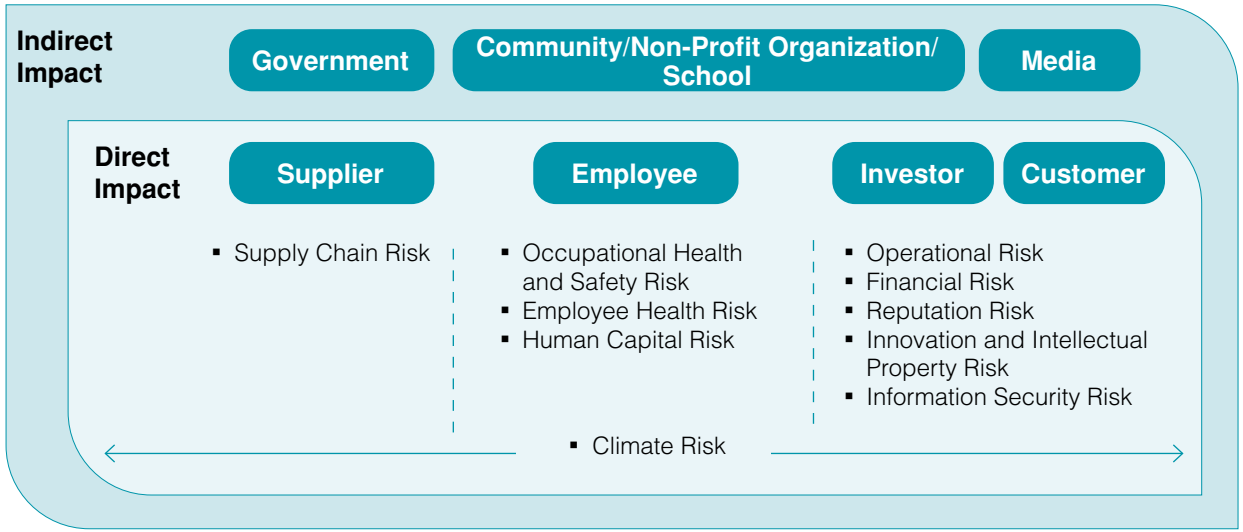
[Internal Operation]
Identify potential risk events based on operational processes.

02 Risk Scope Definition

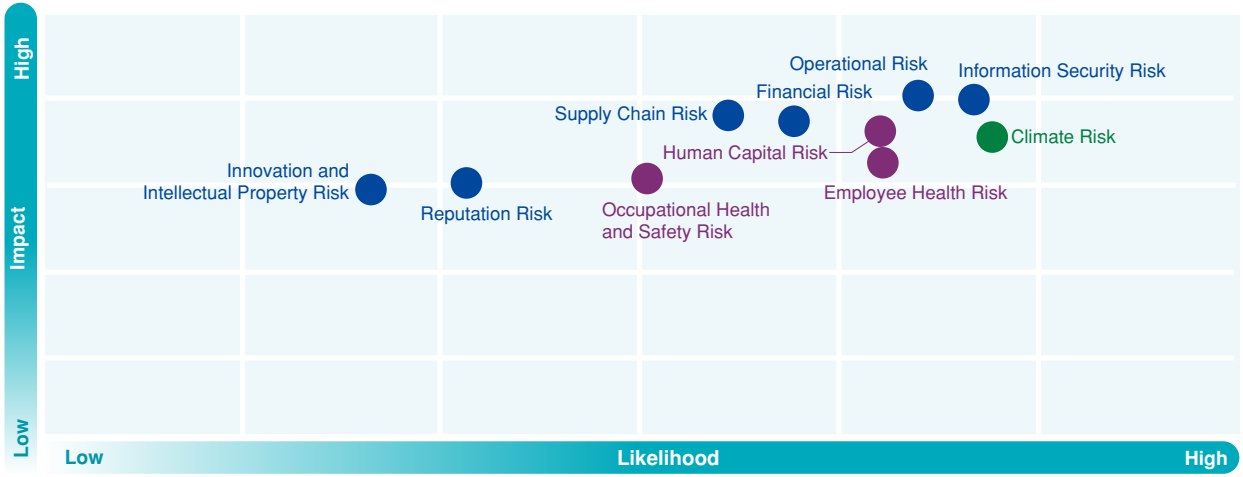
With consideration of daily operational activity, define the direct and indirect impacts of various risks on stakeholders.

03 Risk Analysis and Assessment

Assess the severity of the impact on the company and the likelihood of each identified risk factor, and further draw a risk matrix to distinguish the level of urgency.



● Risk Matrix



04 Risk Management

Establish responding measures for those issues with higher risk and instruct related units to review and follow-up on the performance of risk management.

Risk	Description of Risk	Risk Control Measures	Corresponding Chapter
Operational Risk	The risk includes business disruption risk, market demand decline risk, compliance risk, and geopolitical risk.	Information on products, materials and parts, logistics, customs, and taxes are collated by the Group's Operational Risk Management Center. Product compliance, operations, and other related matters are managed through the global operational risk management platform. Employee education and training are also conducted at various times to prevent disruptions to business continuity.	Overview of GIGABYTE
Financial Risk	The risk includes interest rate risk, exchange rate risk, taxation risk, inflation risk, credit risk, liquidity risk, and financial derivative tool risk.	The Board sets overall financial risk management principles and issues written policies for specific ranges and items such as interest rates, exchange rates, use of derivative and non-derivative financial instruments, and investment of surplus liquidity. These are all implemented by the financial department.	Overview of GIGABYTE
Information Security Risk	This includes the risks due to the impact of hacker attacks, network failure, software/hardware malfunction on customer privacy and company operations.	▪ Establish Information Security Committee as the highest governance unit for information security risk management. ▪ Revise management regulations in accordance with domestic and overseas information security regulations and standards as necessary to ensure confidentiality, integrity, and availability of information.	2.3.2 Enhancing Information Security
Supply Chain Risk	Risk of supply chain disruptions and material shortages due to deficiencies in supplier quality, pricing, service, and delivery time; risk to company image from supplier violations of human rights and CSR events.	▪ The RBA Code of Conduct issued by the Responsible Business Alliance was used as the guiding principle for defining the 4 management aspects (15 sub-targets) and 4 zero-tolerance rules. A new tiered supplier management system was introduced in 2022 to better reflect suppliers' overall sustainability performance.	4.1 Sustainable Supply Chain
Innovation and Intellectual Property Risk	The risk includes innovative R&D risk, product patent risk, and patent litigation risk.	▪ Cautiously develop patent and trademark strategies for key technologies of the Company. Also, participate in product and technology development plans every year to actively seek out potential patents. ▪ Hold education and training to cultivate employees' sensitivity to intellectual property and establish rewarding and managing mechanisms to protect the innovations of employees.	2.4 Innovation Managemnet
Reputation Risk	The risk includes risk from PR events that impact brand image and market reputation.	For special incidents that may affect the Company's brand image, market reputation, and so on, material information and clarifications are issued through the Group corporate communications office through channels such as the corporate website, media, and the Market Observation Post System of the Taiwan Stock Exchange	Please find more information at the MOPS
Climate Risk	The risk to operations due to the increasing frequency of extreme weather events caused by climate change, and risks from customers requiring disclosure of product carbon footprint or reduction of carbon emissions.	▪ Introduce the TCFD framework and participate in CDP to build a comprehensive climate risk identification process and matrix. Scenario analysis is also conducted to link financial performance and climate impact. ▪ Expand to monitor the climate-related transition and physical risks along the supply chain since 2019.	3.2 Climate Change Mitigation and Adaptation

Risk	Description of Risk	Risk Control Measures	Corresponding Chapter
Occupational Health and Safety Risk	The risk includes operating environment risk, dangerous and hazardous substance management risk, disaster prevention and response risk, occupational injury disaster, and contractor management risk.	GIGABYTE defines Risk Assessment Procedures for the working environment. Each year, the EHS department compiles the Hazard Identification Form based on the irregular examination of the on-site environment, the impact of hazards, and current controls. EHS-related hazards and risks are classified into 4 levels, and each is then inspected in turn to determine the adequacy of the existing management process.	5.3.1 Environmental Safety and Health
Employee Health Risk	Risk of impact on company operations from labor shortages and employee physical/mental well-being caused by pandemics of general illnesses.	▪ Promote a tiered health management system and conduct special tracking and management based on the results of health exams each year. Medical subsidies and health management incentives are also provided for high-risk groups. Everyday health activities and promotions, overwork and occupational injury prevention, and EAPs help to maintain the physical and mental well-being of employees as well as reduce the risk of occupational disease. ▪ Epidemic prevention measures are announced and implemented in a timely manner in response to COVID-19 developments.	5.3.2 Healthy and LOHAS Workplace
Human Capital Risk	Risks from shortages of critical technology talent and high employee turnover.	Talent is a critical asset for corporate sustainability. To prevent risks such as a shortage of critical technical talent and high turnover, rigorous talent selection and cultivation are employed to construct a diverse and balanced human resources structure. Talented people from diverse backgrounds are also encouraged to unleash their expertise, creativity, and potential in their work.	5.1 Human Resource Management and Talent Cultivation

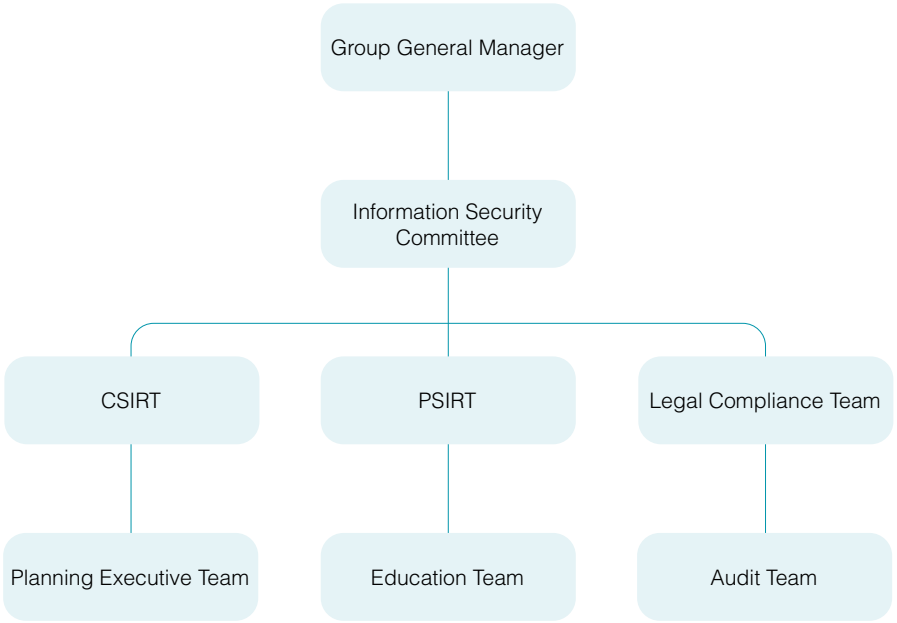
2.3.2 Enhancing Information Security

An Information Security Committee was established by GIGABYTE in 2021. An information security policy and management structure were formulated in accordance with international standards, regulatory requirements, privacy protection, risk management, and crisis management. The Committee is responsible for promoting information security management, planning, supervision, and implementation across the organization. It also regularly reports to the Group General Manager on the effectiveness of information security management activities and systems by the information security management organization.

Information Security Policy

1. Information security management rules are reviewed and updated every year in accordance with international information security standards (NIST CSF framework) and domestic/overseas information security regulations.
2. Ensure the confidentiality, integrity, and availability of information so that they can be securely, correctly, appropriately and reliability used for the planning, management, and realization of Group targets.
3. Ensure that information security management during R&D, product development, cloud services, and manufacturing supply chain are all in compliance with the information security policy in order to effectively reduce management risks, increase the overall maturity of information security, and ensure a safe, quality product experience for customers.
4. Enforce information security by conducting regular offensive and defensive information security drills and strengthening internal information security awareness through employee training.

Structure of Management Organization



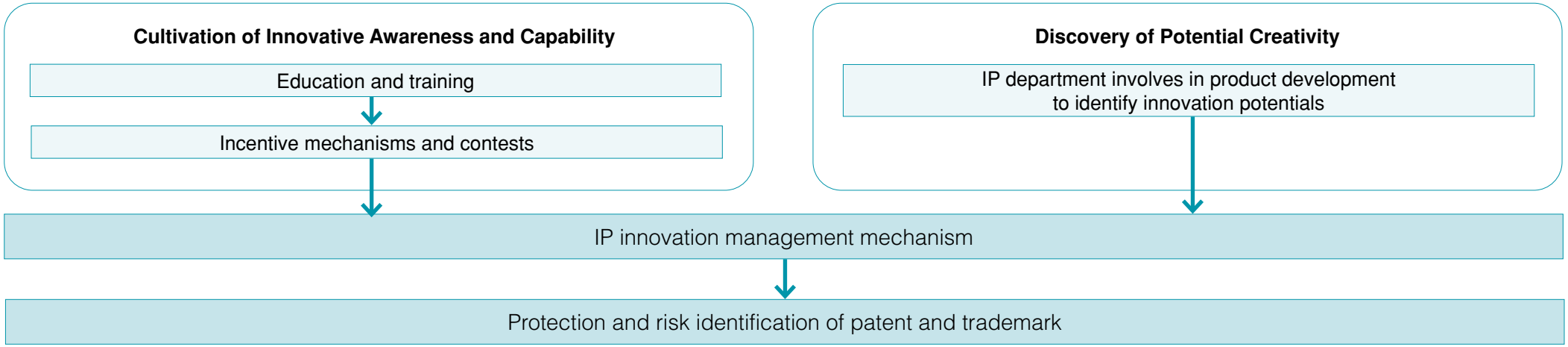
● Management Goals and 2022 Accomplishments

Management Target	Achievement in 2022
Enhance Information Security Maturity	▪ Conducted vulnerability scans and penetration tests to validate overall system security and defenses. ▪ Organized 1 information security incident reporting and response drill to enforce the division of labor and improve response proficiency.
0 Major Information Security Events	▪ In response to employees working from home due to COVID-19, deployed high-security protective mechanisms and multi-factor authentication (MFA) to ensure the security and integrity of information operations. ▪ One of the software suppliers discovered an information security vulnerability in December 2022. Following the announcement of the Information Security Bulletin, GIGABYTE immediately assisted our customers in updating their systems to improve their information security defenses. There were no significant losses for customers afterward.
Strengthen Information Security Education Training for Employees and the Supply Chain	▪ Deployed anti-phishing protection in response to the continued rise in BEC e-mail fraud. Employee information security training was conducted 711 times as well as two social engineering drills covering 4,795 people. ▪ Established a joint information security platform for the supply chain.

2.4 Innovation Management

GIGABYTE continuously focuses on innovative R&D in order to master critical cutting-edge software and hardware technologies so that they can be harnessed to create a better life for all of humanity. A sound management mechanism has been developed by GIGABYTE to help employees turn their creative inspirations into competitive products and services. We also continue implementing the "GIGABYTE Patent Reward" and organizing education/training and proposal challenges in order to cultivate an atmosphere and corporate culture that embraces creativity and reform.

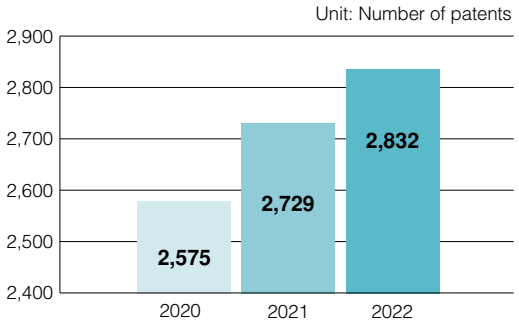
● Innovation Management Process



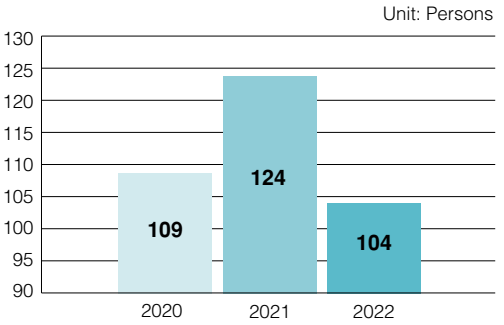
Achievements of Innovation

The Legal Affairs and Intellectual Property Division oversees all patent applications and maintenance activities within the Group. GIGABYTE has obtained more than 100 patents in the last 3 years and the accumulative number of obtained patents up to 2022 is 2,832. Besides, the internal patent rewarding mechanism encourages employees to engage more in innovation development and turn their creativity into reality.

● Cumulative Number of Obtained Patents



● Number of recipients for internal patent incentives



2022 Innovation Highlights

Data Center

● Data Center Cooling Solution

Advances in technology meant that processors in next-generation data centers often consume more electricity and produce more heat. GIGABYTE offers a full range of advanced cooling solutions that provide customers with everything from air and liquid to the latest immersion cooling solutions. Our technology can help build low power-consumption, high-performance, and environmentally friendly data centers that reduce energy consumption by up to 90% and power utilization efficiency (PUE) down to 1.08. GIGABYTE solutions are now already used in a variety of fields, including the aerospace, semiconductor, and telecommunications industries. (For more information, please refer Section 3.3.1 Friendly Product)

Smart Manufacturing

● Warehouse Logistics Automation Solution

Unmanned vehicles play an important role in the trend toward smart manufacturing. They not only improve efficiency and safety during production but can also make up for labor shortages caused by COVID-19. GIGABYTE can supply dependable cutting-edge computing power and a highly flexible I/O interface for Autonomous Ground Vehicles (AGV) or Autonomous Mobile Robots (AMR) that have entered widespread service in recent years. GIGABYTE can also design embedded systems with industrial-grade shock resistance and fan-less cooling for AGV/AMR applications. A compact footprint help meet the AGV/AMR requirement for high performance with space constraints.

Digital Innovation and E-Sports Entertainment

● AERO Series Creator Notebook

The AERO series focuses on ultimate performance and color rendering performance. It has received several international third-party certifications to satisfy the demand for perfect color accuracy by pro creators. In addition to TÜV Eyesafe® certified OLED display to reduce harmful blue light effectively, it is also unique in obtaining both X-Rite™ 2.0 Factory Display Calibration and Pantone® Validated certification from the world's most rigorous authorities on color calibration.

Intelligent Transportation

● PILOT Automated Driving Control Unit

The GIGABYTE PILOT Automated Driving Control Unit (ADCU) helped the WinBus crewless bus implement SAE Level 4 high driving automation technology at the Automotive Research & Testing Center. Its three key features include a high-performance processor package for enhanced AI algorithm performance, support for high-speed interfaces and ultra-high connectivity with automotive devices, and a ruggedized design capable of withstanding different weather and road conditions. Potential applications include autonomous driving of vehicles, agricultural machinery, and robots.

Smart Healthcare

● Edge Servers Edge Computing Server

GIGABYTE's Edge Servers offer high-density, scalable edge computing servers for use in Internet-of-Things (IoT) devices such as wearable devices and sensors in the smart healthcare field. Its ability to rapidly collect and analyze big data with low latency can help predict future patient health trends. Therefore, medical services can evolve beyond treating diseases to human care and predictive detection of serious illnesses.

● AORUS Project Stealth Barebones PC DIY Kit

GIGABYTE and its partners developed the Project Stealth Barebones PC DIY Kit incorporating revolutionary patents and design. A perfect package of cleverly designed, customized components, including ATX-compatible motherboards, graphics cards, and computer casings, can be quickly, efficiently, and safely combined through innovative hidden connectors. The product was recognized with the 2023 CES Innovation Award.

(For more innovative technologies from GIGABYTE, please refer to GIGABYTE INDUSTRY)

ch.3 Green Production

3.1 Environmental Management 3.2 Climate Change Mitigation and Adaptation 3.3 Responsible Production

Material Topics of This Chapter	Environmental Policy and Management System Pollution Prevention	Climate Change and Carbon Management Energy Management	Hazardous Substance Management	Responsible Production Green Consumption Circular Economy
Management Approach	Shape a business model that enables harmonious coexistence with nature and internalization of environmental impacts.	Mitigate the impacts on corporate operations from the worsening climate change, and promote effective climate-related management and adaptation measures.	Take full responsibility as a manufacturer to reduce environmental impacts from manufacturing processes and strive to achieve resource circulation.	
Policy and Action	▪ Introduce ISO14001 Environmental Management System. ▪ Promote the "333 Reduction Plan" and se t annual and long-term reduction goals. ▪ Promote the "Sustainability Fund" and "Reduction Reward Program" to encourage internal energy conservation proposals. ▪ Introduce fully automated intelligent production processes.	▪ Introduce ISO14064 and PAS 2050. ▪ Participate in the CDP. ▪ Introduce Science-based Targets (SBT) analytical tools to review the connection between current carbon reduction plans and the international climate target. ▪ Introduce TCFD framework for climate-related risk identification and scenario analysis.	▪ Introduce IECQ QC 080000 hazardous substance process management certification. ▪ Refer to international laws and regulations and publish GIGABYTE "Harmful Chemical Substances Requirements (HCSR)". ▪ The treatment of all wastes, exhaust gases, and sewage generated by GIGABYTE complies with local laws and regulations.	▪ Introduce ISO14051 material flow cost accounting. ▪ Release the "Product Environmental Reports" to disclose the potential environmental impacts of a product during its life cycle. ▪ The local service sites of Bestyield International recover waste electronic products of all brands. The products are repaired, refurbished, and resold to realize the reversed logistics business model of the circular economy. This business model has received BS 8001 certificate. ▪ Define a Group product packaging and incoming packaging reduction plan.
Vision and Goal	▪ Reduce carbon emissions by 3% every year, and reduce 50% in 2025 compared to the 2009 base year. ▪ Reduce water and waste by 3% every year, reduce water by 20%, and waste by 50% in 2030 compared to the base year 2010.	▪ Continue participating in the CDP to keep improving and urging climate management performance and aim to be scored above the Management Level.	▪ Revise the GIGABYTE HSCR every year according to the latest chemical substances laws and regulations. ▪ No major environmental violations (with monetary penalties in excess of NTD 1 million)	▪ Publish Product Environmental Reports of all product lines. ▪ Continue to promote the ICT Refurbished Product Certification worldwide, improve service integration capability and make process improvements to boost the cost-effectiveness of the circular economy. ▪ Stop using disposable packaging from 2030.
2022 Major Achievement	[●] From 2022 onwards, the scope of greenhouse gas inventory expanded to include the subsidiaries GIGAPIC and Selita Precision at Taipei Silicon Valley Park Offices. Carbon emissions were 6.77% lower than in 2021 and 42.99% lower than the base year. [●] Received 245 proposals through the reduction reward program to date. These translated into annual savings of 6,210 MWh in electricity, 28,622 tonnes of water, and 440 tonnes of waste. [●] Water consumption data included 4F of Headquarters Building B in 2022. Total water consumption was 2.42% lower than in 2021 and 35.17% lower than the base year. [●] Waste production in 2022 was 10.62% lower than in 2021 and 11.99% lower than the base year.	[●] Received A- (Leadership) for the 2022 CDP Climate assessment, A (Leadership) for the 2022 CDP Supplier Engagement Rating (SER), and B (Management) for the 2022 CDP Water Security assessment. [●] Climate scenario analysis was conducted using the transition scenarios IEA B2DS and APS, as well as physical scenarios RCP2.6, RCP4.5, and RCP8.5.	[●] Updated HSCR to version 4.8. [●] No major environmental violations in 2022.	[●] Published environmental reports for 4 main product lines and the accumulative number of published reports to date were 77. [●] Recovered, repaired, and refurbished 687,000 electronic products; the rate of repaired products taken back by consumers was 98.66%. [●] In 2022, the total weight of packaging materials was 5,780.3 metric tons and 60.43% lower than in 2011. 95.1% of the packaging was recyclable.

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

3.1 Environmental Management

GIGABYTE's environmental management commits to reducing the environmental impact of operations and manufacturing processes as well as protecting the health and safety of our employees. Environmental and hazardous substances management systems such as ISO14001, ISO14064-1, and IECQ QC 080000 are introduced to ensure that all our routine operations and products comply with environmental standards and regulations.

3.1.1 Environmental Management Performance

In terms of environmental management, GIGABYTE sets a clear long-term goal drawn with an aggressive reduction timetable. The "333 Reduction Plan" was set as a short-term goal aiming at reducing carbon emissions, water use, and waste by 3% every year. At the same time, initiatives such as the reduction reward program and green challenges help employees cultivate the habit of energy and water conservation. It also provided motivation to get involved in the development of green and energy-saving products.

(For more information on GIGABYTE environmental and quality management systems, please visit the GIGABYTE CSR Website)

● 2022 Environmental Resources Input and Output

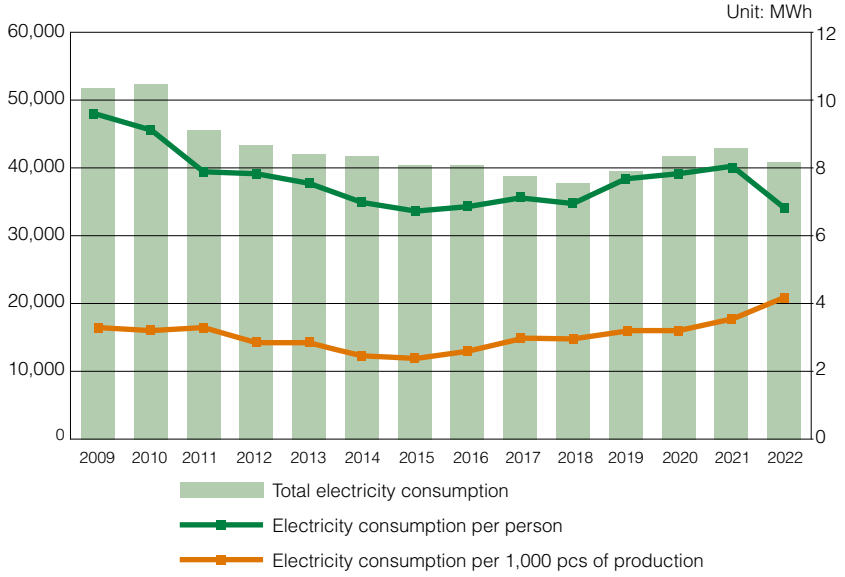
Input		Output		Reduction Outcomes over the Past 2 Years
Energy[1] [GJ]	Purchased electricity: 147,820.19 Purchased steam: 5,409.32 Gasoline: 232.27 Diesel: 852.75 LPG: 31.65	**Greenhous Gas [t-CO_2e]**	Direct emissions (Scope 1): 627.8059 Indirect emissions associated with purchase energy (Scope 2): 27,283.6386	▪ **Increased 1,166.02 t-CO_2e (+4.05%)** in 2021 compared to the previous year Reduced 38.85% compared to the base year 2009 ▪ **Decreased 2,026.50 t-CO2e (-6.77%)** in 2022 compared to the previous year Reduced 42.99% compared to the base year 2009
Water Resource [MT]	Tap water：252,964	**Effluent [MT]**	Domestic sewage: 202,371	▪ **Decreased 31,948 MT (-10.97%)** in 2021 compared to the previous year Reduced 33.56% compared to the base year 2010 ▪ **Decreased 6,270 MT (-2.42%)** in 2022 compared to the previous year Reduced 35.17% compared to the base year 2010
Resource[2] [MT]	Plastic: 2,824.34 Glass: 778.14 Metal: 9,728.19 Paper: 5,494.71 Other: 1,073.00	**Waste [MT]**	General industrial waste: 2,073.25 Hazardous industrial waste: 141.57	▪ **Increased 406.92 MT (+19.65%)** in 2021 compared to the previous year Reduced 1.54% compared to the base year 2010 ▪ **Decreased 263.19 (-10.62%)** in 2022 compared to the previous year Reduced 11.99% compared to the base year 2010

[Note 1] The energy conversion factors are based on the location of factories where the energy types were used. The factors of steam, LPG, and gasoline take reference from the data in China, while the factors of diesel and gasoline used in Taiwan bases refer to the Heat Content of Energy Commodities table published by the Bureau of Energy, MOEA.
[Note 2] Input resources include all product packaging as well as the materials used to produce ATX, Micro ATX, and Mini ITX motherboards.
[Note 3] General industrial waste includes domestic waste.
[Note 4] The scope of energy in this table encompassed Headquarters, Taoyuan Nanping Factory, China Dongguan and Ningbo Factorys, as well as the Taipei Silicon Valley Park Offices where the subsidiaries Bestyield International, G-Style, GIGAPIC, and Selita Precision are located; the scope of water resources and resources were Headquarters, Taoyuan Nanping Factory, and China Dongguan and Ningbo Factorys.

Energy Conservation

Electricity is the main type of energy used by GIGABYTE in our routine operations and production processes. The subsidiaries GIGAPIC and Selita Precision, located at the Taipei Silicon Valley Park Offices, were included in the scope of the GIGABYTE energy inventory for 2022. Total electricity consumption for the year amounted to 41,061.16 MWh, 4.97% lower than in 2021 and 21.01% lower than in 2009. Analysis of electricity consumption attributed to the reduction in electricity consumption in production. A number of energy conservation and carbon reduction projects were implemented by factories during 2022, including optimization of production line configuration and processes, equipment upgrades and development, and introduction of auxiliary tools, all of which helped reduce electricity consumption. Considering both electricity and other energy sources, the intensity of total energy consumption per 1,000 pieces of production in 2022 was 15.8 GJ, and per capita was 25.8 GJ.

● Electricity Consumption and Intensity Over the Years



● 2022 Energy Conservation and Emission Reduction Projects

Operation Base	Energy Conservation Project	Electricity Saving (Unit: kWh)	Energy Reduction (Unit: GJ)	Emission Reduction (Unit: t-CO_2e)
Headquarters	Chiller replacement	20,174	72.63	10.27
	Switched to energy-efficient lighting	1,872	6.74	0.95
Nanping Factory	Introduction of unpowered roller platforms on the production line	4,125	14.85	2.10
	Introduction of automatic screw locking machine for notebook KB and C components	5,928	21.34	3.02
	SMT Reflow fan monitoring system	4,602	16.57	2.34
	Development, introduction, and application of feed alerts	443	1.59	0.23
	Introduction of 1-to-many disc duplicator for downloading of notebook test images	977	3.52	0.50
	Waste reduction for SMT and DIP carrier materials	15,926	57.33	8.11
	Material reduction for SMT common carriers	5,888	21.20	3.00
	Quick-locking jig for cooling modules	870	3.13	0.44
	Reduced wasted electricity from printers and OA equipment on standby	7,474	26.91	3.80
Dongguan Factory	Introduction of heat pumps with level 1 energy efficiency rating for employee dormitories	9,360	33.70	7.53
	Introduction of new energy-efficient nitrogen machines	216,000	777.60	173.71
Ningbo Factory	Upgrades to SMT network communications cooling	6,584	23.70	5.22
	Introduction of a drying room	68,104	245.17	53.94
	Optimization of manually soldered components for notebooks to improve energy efficiency	3,488	12.56	2.76
Total		**374,575**	**1,348.47**	**279.32**

[Note 1] The energy types of all energy conservation measures were electricity. The figures are estimated.
[Note 2] The measures are different year by year. The estimated electricity savings were compared to the energy consumption of the equipment before improvement.
[Note 3] The reduced emissions in Taiwan bases were calculated based on the 2021 electricity emission factor, 0.509 kg-CO_2e/kWh, announced by the Bureau of Energy, MOEA.
[Note 4] Emission reduction at China Dongguan Factory was calculated based on the emission factor of 0.8042 (kg-CO_2e/kWh) in southern China; as for the China Ningbo Factory, the emission factor of 0.7921 (kg-CO_2e) for southern China was used.

Water Resource Conservation

The manufacturing process of GIGABYTE's products is mainly assembly, which does not consume too much water, and the water sources for basic factory facilities and domestic water are tap water. The water resources management policies are promoted and implemented through water-saving policies, education promotion, and annual performance reporting. Besides, we build rainwater recycling systems on the G-HOME Sustainable Eco-Roof that can supply about half of the water for irrigation every year. In the future, we will continue to look for raw materials with lower water footprints to achieve the water-saving target of the overall product lifecycle.

Regarding wastewater discharge, all GIGABYTE's wastewater is domestic sewage and is legally discharged into underground sewers per local laws and regulations. Thus, it has not caused impacts on the environment and ecology around the business locations.

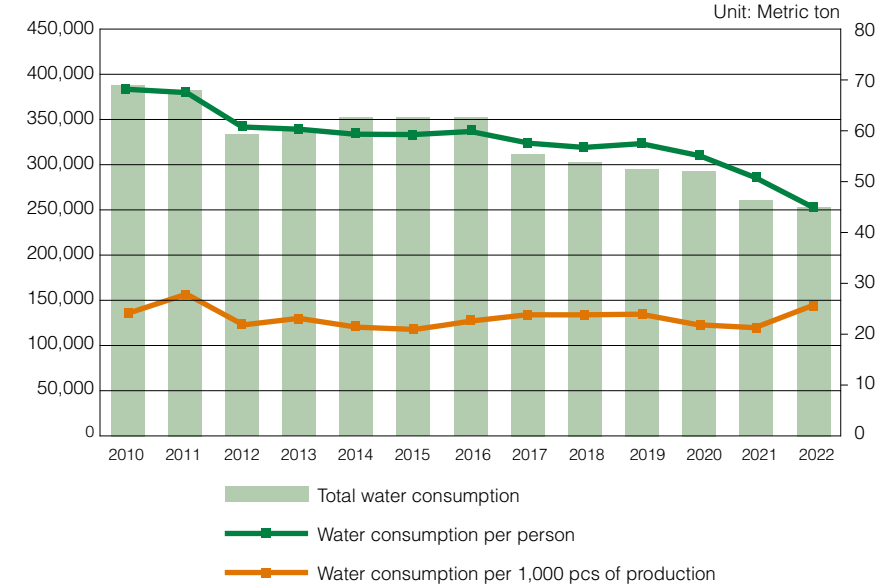
● Water Use in 2022

Unit: megaliters

Water Resources	Total Water Withdrawal	Total Water Discharge	Total Water Consumption
Distinguish by Source of Water Withdrawal and Discharge			
Surface Water	-	-	50.59
Groundwater	-	-	
Seawater	-	-	
Produced Water	-	-	
Third-Party Water	252.96	202.37	
Distinguish by Water Category			
Fresh Water [1]	252.96	202.37	50.59
Other Water [2]	-	-	

[Note 1] Freshwater: total dissolved solids ≦ 1,000 mg/L
[Note 2] Other Water: total dissolved solids >1,000 mg/L

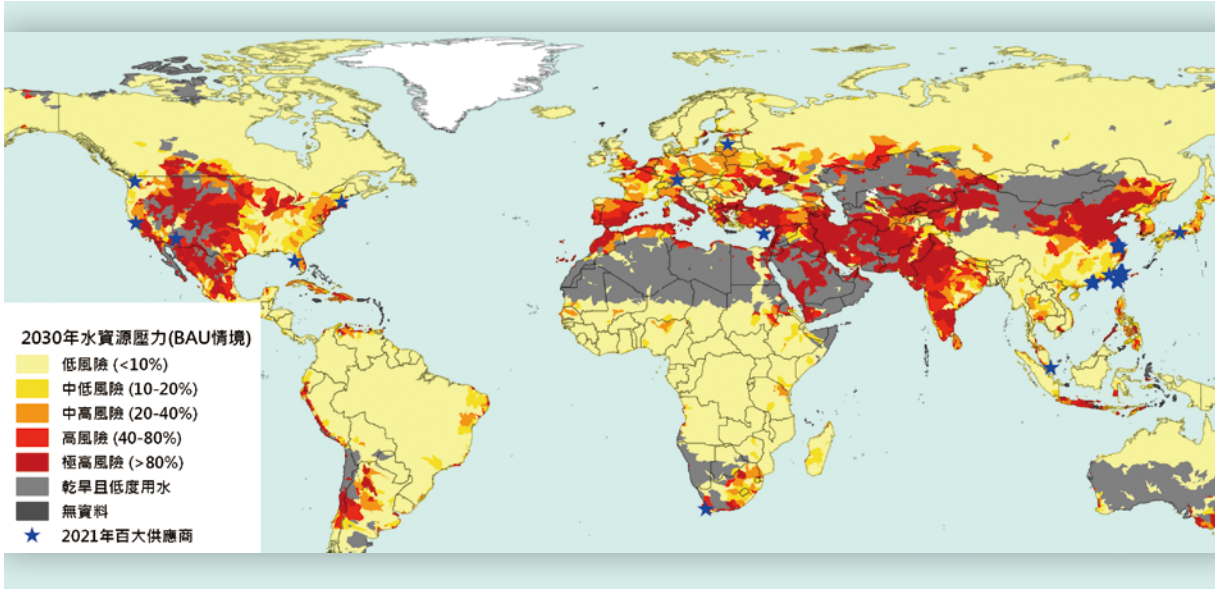
● Water Consumption and Intensity Over the Years



[Note] The scope of water resource inventory included Operation Headquarters, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory. Also, 4F of Headquarters Building B was added to the inventory boundary in 2022. Taipei Silicon Valley Park Offices are in a leased office building, so no separate water meter data is available.

Water Resource Risk Assessment

In response to the increased severity of drought and flood risks due to climate change, GIGABYTE employed GIS tools and the water risk assessment tool developed by the World Resource Institute (WRI) for the first time in 2019 to analyze the water stress and risk exposure at our global operating locations and key suppliers. The latest analysis in 2022 found that, under the BAU scenario, most of our top 100 suppliers will face moderate to high water stress by 2030 in the regions they base. Water shortages will also become a problem in the supply chain. GIGABYTE has responded by including water in our climate-related risks for management. We are also communicating the potential risk in water resources to suppliers through our supplier conference.



Waste Reduction and Pollution Control

The domestic waste, recyclable waste, and hazardous industrial waste generated by each GIGABYTE's operating base are entrusted to local qualified manufacturers for disposal. In accordance with local waste disposal regulations, the manufacturer clears and transports waste off-site for disposal, and provides a proper disposal receipt for the company's declaration and management of disposal. Audits are also conducted regularly at waste disposal manufacturers to ensure proper waste disposal. The "333 Reduction Plan" sets a target to reduce waste by 3% every year, and we strive to reduce waste by improving the process and introducing circular resource modes. Our ultimate goal is to achieve "Zero Waste and Zero Pollution". Total waste production in 2022 amounted to 2,214.82 metric tons.

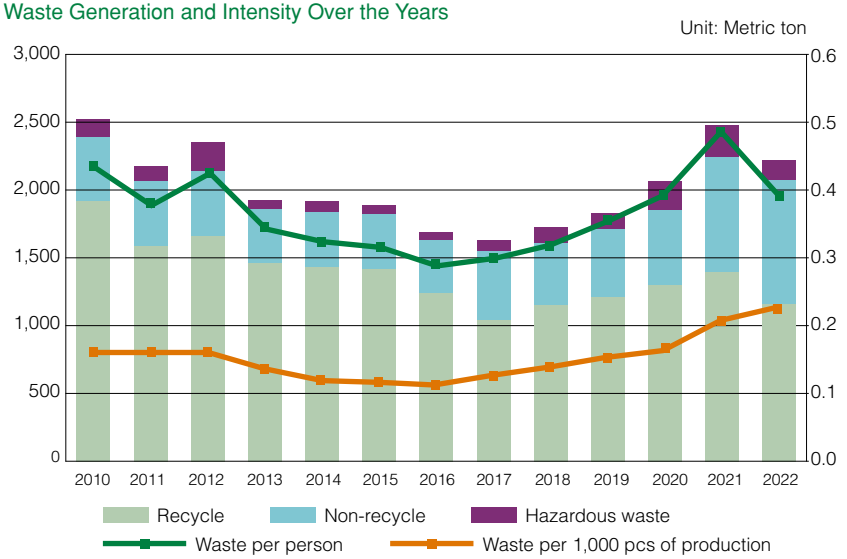
● Total Waste Generation in 2022

Unit: Metric ton

	General Industrial Waste				Hazardous Industrial Waste			
	Recycle	Landfill	Incineration	Other (including compost)	Recycle	Landfill	Incineration	Other
Taiwan	462.85	0.00	315.88	174.15	13.67	0.00	0.00	32.35
China	689.17	431.21	0.00	0.00	63.13	0.00	32.42	0.00
Total	1,152.01	431.21	315.88	174.15	76.80	0.00	32.42	32.35

In terms of pollution control, since the GIGABYTE process is relatively simple, both industrial waste and hazardous waste of the assembly-based factories are managed by legal contractors. Besides, the Ningbo Factory has installed the related equipment for the disposal of paint exhaust gas and electronic exhaust gas in response to its special manufacturing process to treat and dispose of xylene and non-methane hydrocarbon emissions properly.

● Waste Generation and Intensity Over the Years



[Note] The scope of waste calculations included Headquarters, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory. Taipei Silison Valley Park Offices are in a leased office building with centralized waste disposal, so separate waste data is unavailable.

Explanation of 2022 Violations

The competent authorities fined GIGABYTE twice in 2022 due to violations of the Waste Disposal Act. The main reason for this was an increase in the disposal of food boxes at plant cafeterias due to internal epidemic prevention measures that led to anomalies in online reporting. The industrial waste disposal plans were subsequently updated by the competent internal unit based on the needs of plant personnel management and epidemic prevention policy. The changes had been approved by the competent authorities.

● Cumulative Reduction Performance of Proposals

Round	Electricity Savings (MWh per year)	Water Savings (tonnes per year)	Waste Reduction (tonnes per year)	Waste Liquid Reduction (KL per year)	Carbon Reduction (t-CO_2e per year)
6th Round (Mar 2022)	1,326.15	0	67.65	0	854.08
7th Round (Sep 2022)	893.35	0	0.80	4.42	474.36
Cumulative Total	6,210.36	28,622.20	381.73	58.50	5,801.96

3.1.2 Sustainability Fund and Reduction Reward Program

In 2019, GIGABYTE officially launched the 6-year "Sustainability Fund". The Fund is based on the savings of energy fees every year and invests in 3 aspects: energy conservation at factories, development of resource reduction and low-carbon products, and green projects related to climate change and sustainable development. The program aims to stimulate comprehensively innovative thinking for manufacturing, operation, product strategies, and sustainable development plans to provide incentives and motivations for reduction and strengthen the internal competence of green designing that helps achieve the reduction purpose.

Factory Reduction Reward

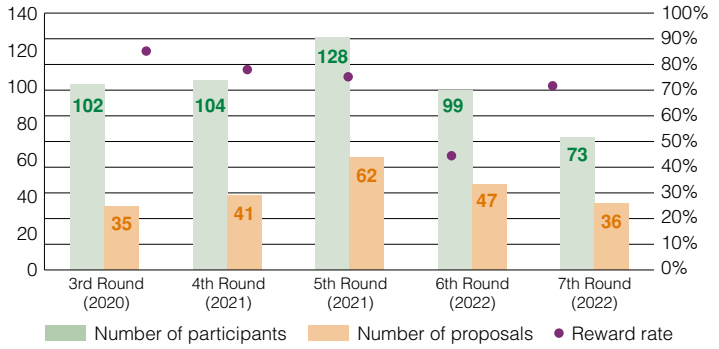
After comparing emissions reduction performance and production output changes in 2021 at each factory, Taoyuan Nanping Factory was qualified to receive the "Factory Reduction Incentives" of the Sustainability Fund in 2022.

Results of Reduction and Low-carbon Product Proposals

Applications for reduction and low-carbon product proposal rewards are accepted twice a year. 7 rounds have been held as of the end of 2022. The review of incentive applications employs the "shadow pricing" concept for internal carbon pricing to quantity actual reduction performance. Carbon was priced at USD 50 per metric ton (currently equivalent to TWD 1,535). Proposals submitted by employees this year included optimization of the production process to boost energy efficiency, improve yields, and reduce the scrapping of high-value parts. Also, some responded to the Group's targets for reducing plastic packaging or recycling waste plastics.

The average approval rate for proposal rewards this year was 71.8%, and we will continue refining the reward scheme in the future. The transparent reward scheme and judging process were also used to provide advice and guidance on the optimization of proposals. We hope this will motivate employees to put environmental awareness into practice in their work and submit proposals as a team. They will not only be rewarded with prize money but will also receive additional learning opportunities.

● Participation Outcomes of Reduction and Low-Carbon Product Proposals



3.2 Climate Change Mitigation and Adaptation

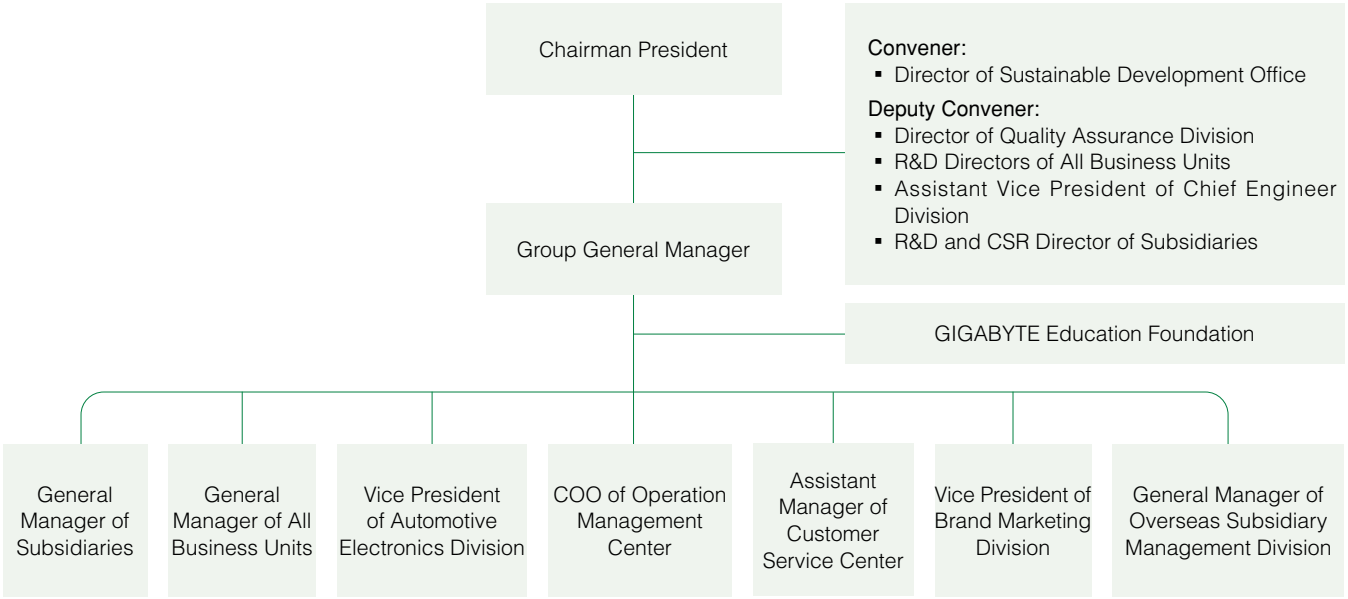
GIGABYTE is committed to mitigating climate change caused by business operations. Visionary management policies and effective response plans were adopted to promote climate-related management and adaptation measures effectively. These not only improve our cost efficiency, boost the green competitiveness of our products, but also fulfill our environmental responsibility on climate change mitigation and adaptation.

3.2.1 Climate Governance Organization

The GIGABYTE Green Sustainable Development Committee was formally established in 2009, serving as the highest management level for sustainable development issues such as climate change. The Company's chairman chairs the Committee. The GIGABYTE "Corporate Social Responsibility Best Practice Principles" also explicitly state that the Board of Directors authorizes the senior management to handle all economic, environmental, and social topics generated by the Company's business activities, and the management should periodically report its handling of such topics to the Board of Directors.

All business groups, factories, and subsidiaries attend a meeting every one to two months, and resolutions are submitted to the chairperson every two weeks. Annual outcomes are reported to the Board of Directors so they can evaluate the company's overall performance at the year's end.

● GIGABYTE Green Sustainable Development Committee



Committee Responsibility and Strategies

The meetings look at topics such as the company's overall sustainability strategy with a particular focus on climate-related topics. Everything from climate action on the company level to actual methods of implementation and strategy for expanding to include the supply chain is planned in detail by the Committee. Performance indicators are also defined for monitoring management performance.

Climate Governance Strategy

- Define and supervise GIGABYTE's core sustainability policy – Green Action Plan.
- Monitor climate-related national/international trends and propose response strategies.
- Collate energy consumption and greenhouse data from each operating location for analysis of annual performance.
- Disclose GIGABYTE's climate risks and response strategies.

Value Chain Cooperation

- Conduct sustainable supplier evaluations every year to collect data on energy and resource conservation as well as identify supplier climate-related risks.
- Host supplier conferences to provide climate-related knowledge, education, and training on sustainability trends and actions.

Substantive Mitigation and Adaptation Plans

- Set carbon reduction targets. (Please refer to Section 3.2.4 Greenhouse Gas Management Targets and Performance)
- Conduct GHG inventories and third-party verification in accordance with the Greenhouse Gas Protocol and ISO 14064-1 standard every year.
- Develop an internal product carbon footprint calculation platform to analyze each product line's environmental impacts in its lifecycle.
- Cooperate with the government and non-government organizations to continue planting trees worldwide to mitigate global warming.
- Established the GIGABYTE G-HOME Eco-Rooftop to demonstrate greening engineering techniques for old buildings that balance climate adjustment and eco-inclusivity.

3.2.2 Climate Risk Assessment and Management Strategy

GIGABYTE adopted the framework recommended by the Task Force on Climate-related Financial Disclosures (TCFD) to fully understand how climate risks may affect company operations or the opportunities they may create. Climate-related risks and opportunities were then identified. The topics that will significantly affect finances, change business strategies or models or impact the value chain are prioritized for planning response strategies and management measures. Annual reviews and re-assessments are then conducted through climate scenario analysis.

Stage 1

Risk Information Collection and Identification and Classification of Issue

Comprehensively collect potential global and local climate-related issues that are generally faced by electronics industry, including:

- Substantial consequences caused by global warming or extreme weather events.
- Current or emerging laws and regulations related to climate mitigation and adaptation.
- Changes in policies, business activities, or markets due to any other climate-related factors.

The issues identified at this stage are further divided into 3 categories: response to policies and regulation; response to international trends; substantial consequences caused by climate factors.

Stage 2

Financial Impact Assessment

Evaluating the direct or indirect effects on GIGABYTE operations and finances in the short, medium, and long-term from risk topics identified from stage one:

▪ Definition of Risk Timeframe

Short-term	The risk is likely to have a significant impact on the Company's operation or business strategies within	1-3 years	immediate action must be taken
Medium-term		3-5 years	planning of preventive measures are required
Long-term		5-10 years	variables such as regulation and climate change must continue to be monitored

and thus

▪ Financial Impact Aspects to Consider

Revenue
- Changes in demand for products and services
- Changes in market competitiveness

Cost
- Increase in direct costs
- Increase in indirect costs
- R&D investment in low-carbon transformation technologies

Capital Expenditure
- Replacement and upgrade of energy-saving equipment
- Investment in low-carbon production processes

Stage 3

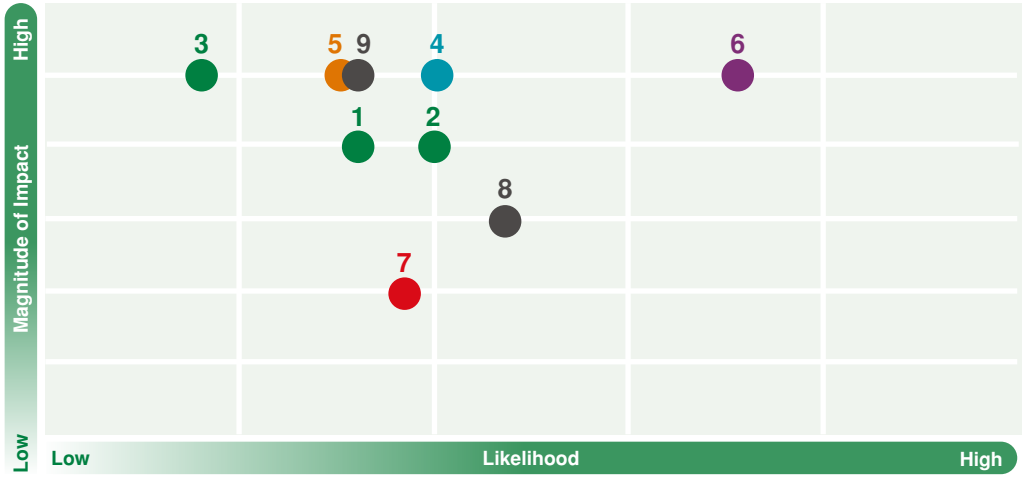
Risk Matrix Analysis

Conduct a risk matrix analysis to assess the materiality of the climate-related issues that are identified in the second stage and have impacts on GIGABYTE. The analysis contains 3 indicators, which will then help identify the priority of each issue according to its urgency for responses.

Impacted Time × **Likelihood** × **Extent of Impact**

9 material climate-related risks were identified in 2022

2022 GIGABYTE Climate Risk Matrix



1	Tightening of GHG management policy in Taiwan and the upcoming implementation of carbon fees	Policy and Legal
2	Energy transformation policy and adjustment of electricity structure leading to fluctuations in electricity prices and new requirements on the use of renewable energy.	Policy and Legal
3	Impact on trade costs from activation of carbon pricing mechanisms in the international market.	Policy and Legal
4	Product carbon footprint is becoming a key component of market competitiveness and must be reduced from products' life cycle.	Technology
5	Rising consumer awareness means product sustainability will become increasingly connected to brand value and consumer loyalty.	Reputation
6	Customer requirements on carbon management in the supply chain are becoming increasingly rigorous and have expanded to include product carbon footprint disclosure and carbon reduction targets.	Market
7	Increasing severity of extreme climate events, such as typhoons.	Acute
8	A drastic increase in the cost of cooling as temperatures continue to rise.	Chronic
9	Changing rainfall and climate patterns expose supply chains and operating locations to water risk.	Chronic

Climate Scenario Analysis

Proactive response with higher costs from transition risks ⟷ Reactive response with greater losses from physical risks

	Proactive Mitigation Scenario	Transitional Adaptation Scenario		Business as Usual (BAU)
Transition Scenario	IEA B2DC	IEA APS		None
Physical Scenario	RCP 2.6	RCP 4.5		RCP 8.5
Scenario Description	Accelerate the realization of carbon reduction targets through effective energy management and the use of renewable energy together with the investment of returns in carbon neutrality projects.	Adopt less cost-effective energy conservation and carbon reduction measures to realize carbon reduction targets within a short period of time.	Emissions continue to increase due to the inadequate performance of energy conservation and carbon reduction projects, with the consequences reflected in compliance costs.	Emissions continue to increase due to stagnation in energy management methods with no carbon reduction or carbon neutrality actions taken.
Analytical Method	1. Assumption: If the magnitude of annual changes in operating status and energy usage are identical. 2. Analytical factors: Extent of climate warming, transformation of energy structure, level of carbon pricing, cost of emission reduction measures.			
Summary of Analytical Outcomes				
2030	▪ 20% reduction in GHG emissions compared to 2021. ▪ Invest approximately NTD68.3 million towards emission reduction measures to realize the emission reduction target.	Invest approximately NTD110 million towards emission reduction measures to lower the cost of compliance and accelerate emission reduction.	Poor carbon reduction performance may result in up to NTD38.5 million in costs associated with carbon fees in Taiwan and international carbon tariffs.	▪ 60% increase in electricity consumption compared to 2021. ▪ Economic losses due to the failure of global climate action will amount to approximately 0.13% of annual revenue.
2050	▪ 88% reduction in GHG emissions compared to 2021. ▪ Invest approximately NTD270 million towards emission reduction measures to realize the emission reduction target.	Invest approximately NTD360 million towards carbon reduction measures to lower the cost of compliance and accelerate emission reduction.	Poor carbon reduction performance may result in up to NTD380 million in costs associated with carbon fees in Taiwan and international carbon tariffs	▪ 176% increase in electricity consumption compared to 2021. ▪ Economic losses due to the failure of global climate action will affect approximately 2.15% of GIGABYTE's annual revenue.

3.2.3 Identification of Climate-related Risks and Opportunities

Transition Risk	Policy and Legal		
	GHG management policy in Taiwan	**Energy structure transition policy**	**Carbon pricing mechanism in international markets**
Risk Description	Taiwan's "Greenhouse Gas Reduction and Management Act" was officially amended in January 2023 to become the "Climate Change Response Act." The target of net zero by 2050 was also made into law, and a carbon levy mechanism will be activated.	The Ministry of Economic Affairs in Taiwan has set a renewable energy target of up to 20% by 2025. The energy transition policy will lead to fluctuations in electricity prices and businesses will be required to adopt more renewable energy.	The EU will implement the Carbon Border Adjustment Mechanism (CBAM) in October 2023 with the ultimate goal of amalgamating CBAM with its carbon trading market mechanism. This will spur the implementation of carbon tariff mechanisms by other international markets.
Likelihood	Likely	Very likely	Likely
Scope of Impact	Business operations	Business operations	Upstream supply chain, business operations, downstream demand chain
Potential Financial Impact	Future inclusion in the control scope will lead to increased operating costs from legal compliance.	▪ Production costs will increase by fluctuations in energy prices. ▪ Investment in equipment related to energy transition equipment due to regulatory requirements will increase capital expenditure.	▪ International carbon pricing may lead to higher material costs and reduce product gross profits. ▪ Operation costs increase to reduce carbon emissions during production in order to comply with the trading regulations.
Management Strategy	▪ The GIGABYTE Green Sustainable Development Committee continues to enhance the environmental management system by developing and supervising the implementation of sustainability strategy. ▪ The units responsible for sustainability continue monitoring international regulations and trends, implementing energy conservation projects, replacing outdated equipment, and improving production efficiency at each operating location. ▪ Active tracking of domestic and overseas climate legislation to facilitate timely adjustment of climate policy direction to ensure compliance. ▪ Introduction of ISO 14064 management system and third-party verification. ▪ The "Sustainability Fund" was set up in 2019 to reward units for reduction performance based on savings from energy and resource conservation in order to promote continued internal innovation and improvements to resource utilization. ▪ Set up a life cycle assessment system for all products to analyze 16 environmental impact indicators, including carbon footprint for all product series.		
Derived Opportunities	▪ Introduce an internal carbon pricing mechanism to assess the true cost of products and target sources of energy consumption to improve product competitiveness. ▪ Continue to optimize the energy efficiency of processes so that production output increases while operating costs are reduced. ▪ Develop and apply renewable energy to realize carbon reduction targets, fulfill corporate responsibility for environmental protection, and enhance brand preference.		

Transition Risk	Technology	Reputation	Market
	Low-carbon products become the mainstay of the market	**Change in consumer preferences**	**Raising of carbon management requirements by customers**
Risk Description	The product carbon footprint has become a key part of market competitiveness due to global consensus in order to achieve global climate targets. Nearly 95% of GIGABYTE products are exported, so a low-carbon transition will be essential.	Growing global environmental awareness and international advocacy and regulations continue to push for greater disclosure by businesses. Greater access to environmental information by consumers is in turn having an influence on consumer behavior.	The global climate crisis as well as advocacy on circular economy are boosting awareness of value chain symbiosis. Customers are now setting stricter requirements on carbon management for their upstream supply chain, and those that fail to meet those standards may miss out on orders and opportunities for cooperation.
Likelihood	Very certain	Likely	Very certain
Scope of Impact	Upstream supply chain, business operations	Business operations	Upstream supply chain, business operations
Potential Financial Impact	▪ A decrease in demand for products and services leads to decreased revenue. ▪ Production and operating costs An increase in order to respond to each nation's environmental regulations on products.	Revenue may be impacted by a decrease in demand for products and services due to the inability to satisfy consumer preferences.	Revenue may be impacted by a decrease in demand for products and services due to higher standards being set by customers.

Transition Risk	Technology	Reputation	Market
	Low-carbon products become the mainstay of the market	**Change in consumer preferences**	**Raising of carbon management requirements by customers**
Management Strategy	▪ Allocate part of annual revenue to research and development to develop environmentally friendly products with high performance and low carbon footprint. ▪ Promote energy conservation policy at all operating locations and investment in the R&D of energy-efficient and low-carbon products. ▪ Set up a "Sustainability Fund" to reward the development of low-carbon products and cultivate the capability to develop products with low environmental impact. ▪ Voluntarily inventory Scope 3 greenhouse gas emissions, analyze carbon footprint information for all products, and publicly disclose climate-related information. ▪ Strengthen supplier management to lower the environmental impact of the value chain as a whole.		▪ Strive to achieve the "333 Reduction" target of a 3% annual reduction in carbon emissions, water consumption, and waste, and recruit supply chain partners to do the same. ▪ Introduce ISO 14064 management system with third-party verification and analyze GHG emissions every year to pinpoint carbon reduction hot spots. ▪ Establish a life cycle assessment system for all products to strengthen the ability to analyze and manage environmental data for products and the upstream supply chain. ▪ Set up a "Sustainability Fund" to use last year's budget savings from energy conservation to reward each plant for reduction and low-carbon projects they propose and implement.
Derived Opportunities	▪ Crossover into the low-carbon product or service markets to increase brand visibility and boost brand value. ▪ Transition to green product services to satisfy customer requirements and consumer preferences.		

Physical Risk	Acute	Chronic	
	Increased frequency of extreme weather events	**Increased water risk from changing precipitation pattern**	**Increasing severity of the warming**
Risk Description	Extreme weather events may increase in frequency and severity. Most of GIGABYTE's operating bases are located in the northwest Pacific, where typhoons often occur. Global warming may enforce the intensity and duration of typhoons, increasing our exposure to flooding and power outages.	Analysis based on international databases found that GIGABYTE's Headquarters, factories, and some key suppliers were located in regions with moderately high to high water stress. Relatively high exposure to flood and drought risks may impact on continuity of operations and supply.	Excessive GHG emissions will make the global warming problem worse. The urban heat island effect is becoming more obvious in urbanized regions as well. Increased electricity demand for cooling of offices and workshops increases the risk of power outages due to overload on summer days.
Likelihood	Likely	Likely	Very certain
Scope of Impact	Upstream supply chain, business operations, downstream demand chain	Upstream supply chain, business operations	Business Operations
Potential Financial Impact	▪ Increased labor and equipment maintenance from interrupted operations. ▪ Increased operating costs in upstream supply or downstream shipping may impact profits.	Reduction in production output due to supply disruptions and unreliable delivery of materials that in turn have impacts on revenue.	Higher energy costs from fluctuations in electricity prices and increased electricity consumption.
Management Strategy	▪ Establishment of "Risk and Emergency Management Guidelines" in accordance with ISO14001 as well as the devising of management and response measures for typhoons and flooding. ▪ Water shortage drill conducted by factories in response to potential water restrictions during the dry season. ▪ Establish water reclamation system at the Dongguan and Ningbo factories in China. ▪ Diversify suppliers to distribute supply chain risk and ensure the continuity of key raw materials		▪ Replace old and worn AC and cooling equipment and improve the energy efficiency of AC equipment. ▪ Optimize the power factor of electrical equipment to reduce power loss as well as stabilize and lower the load of the electrical system. ▪ Set up and maintain the GIGABYTE G-HOME Eco-Rooftop to effectively reduce the indoor temperature of the top floor by 2.5°C and the surface temperature on the rooftop by 25° C.
Derived Opportunities	▪ Diversify and distribute product sources in the supply chain to improve the stability of material supply and strengthen the risk resilience of the supply chain. ▪ Improve the energy efficiency of offices, processes, and equipment to conserve operating costs as well as reduce the carbon footprint of products and services.		

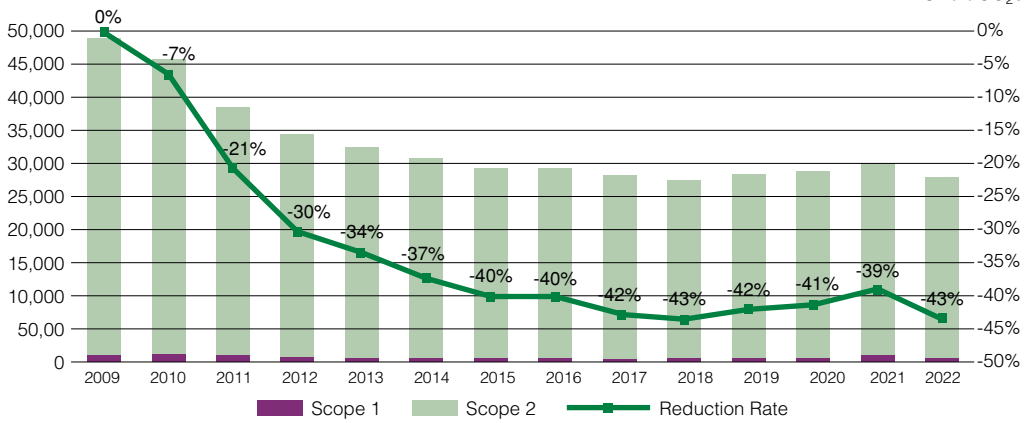
3.2.4 Greenhouse Gas Management Targets and Performance

Greenhouse Gas Targets and Performance

GIGABYTE has set a greenhouse gas reduction target of a 50% reduction in carbon emission by 2025 with 2009 as the base year. A separate short-term target was set in 2016 under the "333 Reduction Plan" with GIGABYTE promising to reduce carbon emissions, water consumption and waste production by 3% each compared to the previous year. The concise targets help us track our carbon reduction progress and performance.

GIGABYTE began conducting annual organizational GHG inventories in accordance with ISO 14064 in 2010. The inventory originally encompassed scope 1 and scope 2 greenhouse gas emissions at the Business Headquarters, Taoyuan Nanping Factory, and Dongguan and Ningbo Factorys in China. As of 2021, the reporting boundary was expanded in response to the latest standards and regulations to encompass the Taipei Silicon Valley Park Offices, where the subsidiaries Bestyield International, G-style, GIGAPIC, and Selita Precision are located, as well as scope 3 greenhouse gas emissions. GIGABYTE's processes and products do not use substances that harm the ozone layer, nor do they emit nitrogen oxides (NO_X), sulfur oxides (SO_X), or other major gaseous emissions.

● Greenhouse Gas Emissions Reduction Target Progress

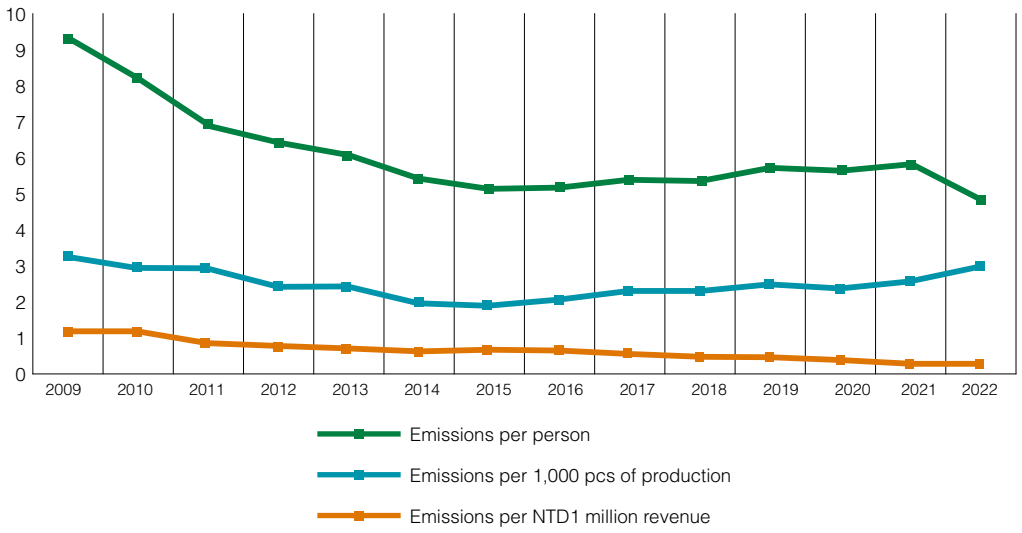


(Unit: t-CO_2e)	2020	2021	2022
Scope 1	648.09	1,063.52	627.81
Scope 2	28,123.84	28,874.43	27,283.64
Sum of Scope 1 and Scope 2	28,771.93	29,937.95	27,911.44
2025 Carbon Reduction Target Progress	82.5%	77.7%	86.0%
333 Reduction Target Progress	+1.1% (Target not met)	+4.1% (Target not met)	-6.8% (Target met)

[Note] The GHG inventory applied IPCC 2021 AR6 GWP values. Types of GHG covered CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, and NF_3.

GIGABYTE has transformed our organizational strategy and diversified product portfolio in recent years in response to the popularization of cloud computing, digitization of industries, and automation of factories and supply chains in the post-pandemic era. We are focusing on working with our global partners to craft innovative solutions in manufacturing, healthcare, transportation, and communications, which has also led to drastic changes in our annual production output. Our absolute greenhouse gas emissions in 2022 were 42.99% lower than the base year and 6.77% lower than the previous year. In terms of emission intensity, emissions per unit of revenue were 77.34% lower than the base year, while emissions per unit of production were 9.32% lower than the base year.

● Changes in Greenhouse Gas Emission Intensity (Scope 1 and Scope 2)



● Scope 3 GHG Inventory for the Past 2 Years [1]

Unit: t-CO_2e

Scope 3 GHG Emission Items [2]		2021	2022
Transport-related	Upstream Transportation and Distribution	234.74	58.32
	Downstream Transportation and Distribution	40,088.61	28,051.45
	Business Travel*	24.13	128.35
	Employee Commuting*	1,201.65	1,867.53
GIGABYTE's use of products	Purchased Goods*	1,515,136.60	892,256.60
	Capital Goods	739.74	776.94
	Fuel and Energy-related Activities	1,860.45	1,217.49
	Waste Generated from Operation*	1,464.50	1,238.66
Use of GIGABYTE's products	Processing of Sold Product	1,722.91	2,312.99
	Use of Sold Products*	4,239,140.03	5,689,602.28
	End-of-Life Treatment of Sold Products*	10,931.82	8,089.73
Total Scope 3		**5,812,545.17**	**6,625,600.33**

[Note 1] GIGABYTE adjusted the inventory methodology for scope 3 due to the reversion of ISO14064-1:2018 standard. The results before 2020 were not shown in this table because of the differences in methodology.
[Note 2] Figures marked with * have been verified by an external party.

CDP Performance

Since 2010, GIGABYTE has responded to the CDP Climate Change Questionnaire because of customer requests. Besides responding to customers' requirements and international expectations, participating in CDP helps further self-examine the implementing processes of carbon management, adjusting the carbon management approaches according to the evaluative results and feedback to improve the overall management system.

In 2022, GIGABYTE's CDP rating was A- (Leadership). Our rating was better than the industry and regional average for Asia. Our supplier engagement rating (SER) was A. The Water Security Questionnaire was added in 2022 and rated B. With the growing domestic and overseas importance of carbon management, we will continue to strengthen our carbon reduction initiatives and review the weaknesses in our performance in order to realize the goal of low-carbon technology.

● GIGABYTE CDP Score in the Past 5 Years

Leadership Management	2018	2019	2020	2021	2022
Climate Change	B	A-	B	A-	A-
Supplier Engagement Rating	A-	A-	A	A-	A
Water Security	/	/	/	/	B

3.3 Responsible Production

GIGABYTE incorporates lifecycle thinking into product research, development, and assembly and considers material recycling and environmental friendliness from the design stage. The selection of raw materials strictly follows the hazardous substances control rules. After the products are sold, we provide a longer warranty period and repair services. Furthermore, the customer service center provides electronic equipment recycling services regardless of brand. It develops a circular business model based on returned logistic services that strive to achieve resource recycling and reduce the overall environmental impacts of products. Transparency on the environmental impact data of products is the manufacturer's duty to consumers. Therefore, we established a product carbon footprint calculation system in 2016. As of 2022, the system is now able to issue product reports covering 16 aspects of environmental impacts.

(For more information on our product environmental reports and their actual implementation, please visit GIGABYTE CSR Website)

3.3.1 Friendly Product

Harmful Substance Management

To GIGABYTE, ensuring our products are safe for consumers and friendly to the environment is the basic principle as a manufacturer. The trends and changes in international hazardous substances management standards are reported quarterly at the Green Sustainability Committee meetings. A cross-department response plan will be started when it is necessary. The plan will set a response time target to ensure that GIGABYTE's products comply with the latest laws and regulations in time.

We issue the "GIGABYTE Harmful Chemical Substances Requirements (HCSR)" that classifies the substances into three levels: Level A prohibited substances, Level B prohibited substances with time limits, and Level C potentially prohibited substances in the future. By systematically managing the list of high-risk substances and forming respective response plans according to the hazardous levels, we could quickly eliminate prohibited substances.

● Harmful Substance Management Process

Harmful Substance Management Process	Harmful substances are divided into 3 levels (A, B, and C) for management in accordance with the relevant laws or directives.
Dedicated personnel assigned to tracking harmful substance regulations and standards	Track and collate harmful substance legislation in each state and country to ensure product compliance and safety.
Make regular reports to the GIGABYTE Green Sustainable Development Committee and develop strategies	Reporting the latest legislation to the Committee with each BU drafting or amending their strategies and practices accordingly.

Product Design with High Efficiency and Low Energy Consumption

GIGABYTE has introduced various innovative materials, technologies, and meticulous management mechanisms at various stages of the product life cycle in order to facilitate the product's outstanding performance with high efficiency and stable durability. Moreover, the design stage takes circular economy as its core so that we will move towards the zero-waste goal. After launching the Ultra Durable Motherboard in 2007, GIGABYTE progressively introduced innovative technologies such as energy-saving switches, 2X copper PCBs, and high current capable components that boosted motherboard stability and extended product service life.

(For more information on friendly product designs from previous years, please refer to the GIGABYTE CSR Website)

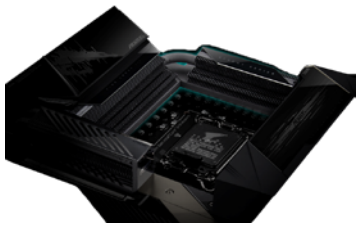
In response to the growing demand for data centers from all sectors, GIGABYTE began assisting customers with deploying different types of immersion cooling data centers in 2021. Our solutions have since won praise from academic, scientific research, government, and industry customers. Investment and support for immersion cooling computing solutions were further expanded in 2022 with the introduction of off-the-shelf, turn-key single-phase immersion cooling computing solutions that offer advantages such as breakthrough cooling performance, high-performance computing, mobile deployment, and high scalability. Our solution effectively reduces energy consumption and helps users realize the net zero carbon emissions goal.

(For more information on system cooling solutions, please refer to the GIGABYTE website)

Product with Friendly Design

Diverse low-energy-consumption products

All integrated water cooling and multi-platform tower fans are equipped with the Socket AM5 clip to provide enthusiasts with the optimal CPU cooling performance and easy system upgrades without having to replace the heatsink.



The all-new 3rd generation Fins-Array design delivers extreme cooling performance. Irregular secondary fins provide 9 times the cooling surface of conventional heatsink fins.

80 PLUS PLATINUM

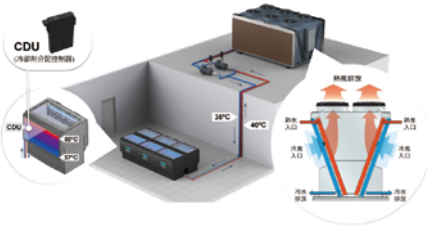
All products in the PSU line have obtained 80 PLUS certification indicating exceptional power conversion efficiency, reduced waste heat generation, and lower fan noise.

Single-phase Immersion Cooling Solution

A range of single-phase immersion cooling servers was launched in 2022 along with an immersion cooling tank that complies with Electronic Industry Alliance (EIA) and Open Computing Project (COP) specifications.

Single-phase Immersion Cooling Process

The server and other IT equipment are immersed in a tank filled with heat-conducting dielectric liquid. The liquid is a carbon-fluorine compound with a high boiling point and low viscosity that stays in liquid form, whether boiling or frozen.



Smart Temperature-Regulated Cooling Tank

The inside of the cooling tank is fitted with a host of intelligent sensors that detect the temperature of the surrounding liquid to keep the tank below 35°C at all times. A backup pump is also provided to prevent any interruption of server operations.

Friendly Packaging Materials

GIGABYTE continues to streamline packaging, increase the ratio of recycled materials used, and replacement of polystyrene padding materials in order to reduce consumption of packaging materials and the waste they produce. We began analyzing our packaging recovery rate and composition in 2011, and reduction progress is reviewed every year. In 2021, GIGABYTE launched the Product Packaging and Incoming Packaging Reduction Plan. Non-use of disposable packaging materials from 2030 onwards was set as the ultimate goal.

GIGABYTE eliminated printed user manuals for all motherboards and retained just essential quick installation guides in 2022. Detailed instructions and configurations are now presented via a QR Code. The change reduced not only paper consumption and waste but also the need for non-environmentally friendly processes, such as color printing, gluing, and lamination of manual cover pages.

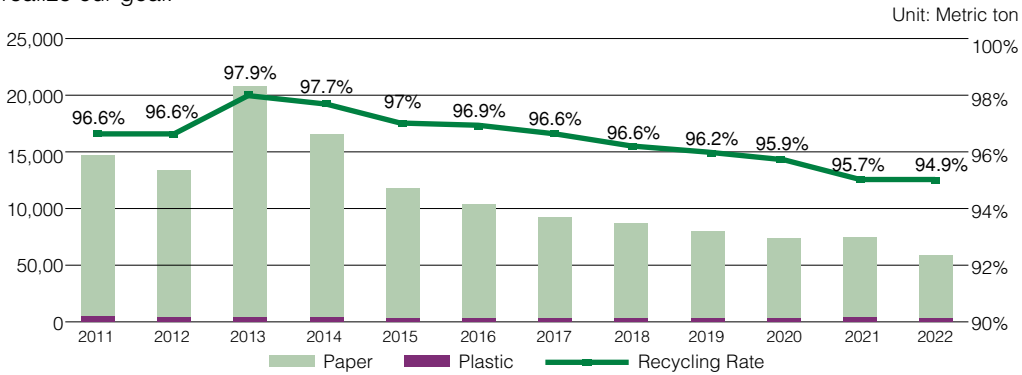
● Example: Optimization of notebook packaging volume to improve transportation efficiency and reduce transportation carbon emissions

The R&D and design departments for notebooks used the stacking volume of sea freight pallets as the starting point to optimize the volume of notebook packaging. The optimization reduced the volume of product lines by 19-52%, increasing the average capacity of each container by 51.6%. As a result, carbon emissions from the sea freight phase were reduced by 9-10% per notebook.

● Recycling Rate of Packaging Materials

GIGABYTE makes every effort to avoid excessive packaging while maintaining a certain level of protection. The total weight of packaging used by products in recent years has been declining. In 2022, GIGABYTE used 5,494.7 metric tons of paper and 285.6 metric tons of plastic in packaging materials, a reduction of 60.43% compared to 2011. The recycling ratio for packaging was 95.1%, and we will continue with further reductions in the future in order to realize our goal.

Unit: Metric ton



[Note] The recycling ratio for packaging materials was calculated using the percentage of paper in all packaging materials (plastic plus paper).

3.3.2 Circular Economy

In 2018, GIGABYTE drew on more than 20 years of professional PCB repairs and customer service expertise to set up the subsidiary Bestyield International ("Bestyield"). A sustainable circular economy business model was established based on a core philosophy of Mottainai[1]. In 2020, Bestyield obtained the highest level of "Optimizing" certification under the BS 8001 circular economy standard for business model maturity. Then, in 2022, it won the Outstanding Award of Innovative Service Award at the 3rd Taiwan Circular Economy Awards as well as the SGS Excellent Quality Practice Award.

[Note 1] Mottainai is a Japanese phrase used to sigh for something that is no longer what it should be. It was later used to convey regret over wasting materials, efforts, or actions.

Popularize the Value of Responsible Consumption

Bestyield converted 6 existing repair centers in Taiwan into G+ 3C Outlet retail outlets. In 2021, some of the rapid service centers were also converted into hybrid sales + service centers. The stores' bright and minimalist design provides consumers with the same pleasant shopping experience as shopping for brand-new merchandise. The repair area was designed to educate consumers on the Mottainai spirit, and sculptures made from the powder of ground-up waste motherboards were displayed inside the store to highlight the innovative reuse of substances.

The G+ 3C Outlet sells refurbished and off-season GIGABYTE products as well as products sold on consignment by other maintenance clients. It also continues providing customer support services. Bestyield has also been focusing on corporate leasing services for notebooks, services, and office smart solutions in recent years.

At the same time, Bestyield actively reached out to government agencies, businesses, and school organizations through social networks in order to promote the concept and benefits of circular economy to the general public through a variety of channels. It participated in 4 public exhibitions and received 4 visiting tours during 2022.

Strengthen Credibility of Second-hand Market

Bestyield introduced the "Refurbished Product Certification" (RPC) to diminish consumers' doubts and distrust of second-hand products. The product that has been repaired, tested, and meets the quality standards would receive an RPC certificate and a resume showing the complete traceability of the product. The certification aims to solve the "lemon's market", which is full of cheap and defective products due to the information disparity between buyers and sellers. Also, to increase consumer trust and willingness to purchase, Bestyield International introduces "Manufacturer Approved" and "100% Tested" certificates and offers a 0-6 months warranty depending on the product type.

Refurbished Product Certification

Manufacturer Approved

Warranty Support

100% Tested

▪ Sustainability Special Exhibition of Taipei City

▪ MOE Lifelong Learning Alliance Midterm Workshop

▪ G+ 3C Outle

▪ Repair Display

▪ Sculpture of Waste Motherboards

Recycle and Reuse Electronic Waste

Bestyield refers to the 9R circular economy values defined by the PBL Netherlands Environmental Assessment Agency and develops an action strategy in response to "SDG 12.5: by 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse" to seek tangible environmental benefits for the electronic waste topic.

Value Proposition		Action Direction
Innovative design in the use and manufacture of products	R0 Refuse	Product maintenance quality analyses provide feedback to the manufacturing and design sides, and hopefully, the need for manufacturing can be reduced by improving serviceability at the process or design levels.
	R1 Rethink	
	R2 Reduce	
Extend the life cycle of products and parts	R3 Re-use	Use techniques such as repair, refurbishment, and leasing services as well as extension into the preowned market to ensure the resources are effectively recovered and repaired. The goal of maximizing utility and extending product life cycle can then be achieved.
	R4 Repair	
	R5 Refurbish	
	R6 Remanufacture	
	R7 Repurpose	
Material applications	R8 Recycle	The recovery and re-manufacturing of resources make materials usable by factories or repair centers again.
	R9 Recover	

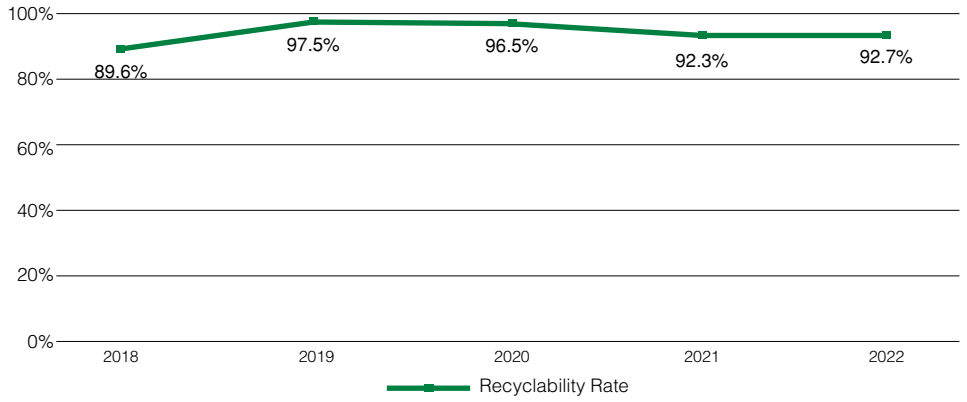
In 2022, Bestyield extended the life of 660,710 products through repair and refurbishment, equivalent to removing 774.2 metric tons of electronic waste. The EPA product carbon footprint database estimated emissions from solidification and disposal of hazardous industrial waste to be 130 kg-CO_2e per metric ton, so that means we reduced carbon emissions by 100,646 kg.

Action Plan	Outcome
Repair	619,474 pieces were sent for repairs and 611,162 pieces were picked up after being repaired. The repair rate was 98.7%, and reduced electronic waste by 726.7 metric tons.
Refurbishment	A total of 41,236 pieces of products were refurbished and 16,192 pieces were sold after refurbishment. Unsold products were returned to the distributor's refurbished goods warehouse after refurbishment and testing for continued use. Electronic waste was reduced by a total of 47.6 metric tons.
Recycling and Reuse	Consumers turned in 10,174 pieces of products for scrapping while Bestyield purchased 16,220 pieces of waste products and recovered 267 pieces of B2B leased devices. These were refurbished, remanufactured, or recycled in some other manner for reuse.

Product Recycling Rate and Environmental Impact

In addition to promoting the circular economy business model and reinforcing terminal recovery, GIGABYTE is working on increasing the proportion of reusable materials in our products to reduce the environmental burden at their disposal stage. Motherboards manufactured by GIGABYTE are mostly made of metal and plastics. In 2022, 9,728.19 tonnes of metal, 2,538.7 tonnes of plastic, 778.14 tonnes of glass, and 1,024.07 tonnes of other raw materials were used to produce motherboards. The average recyclability rate of raw materials was above 92.7%.

● Recyclability Rate of Raw Materials Used by Motherboards



[Note] The motherboard form factors and model analyzed in 2022 included ATX (Z790 AORUS ELITE AX), Micro ATX (Z790M AORUS ELITE), and Mini ITX (Z690I AORUS ULTRA).

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

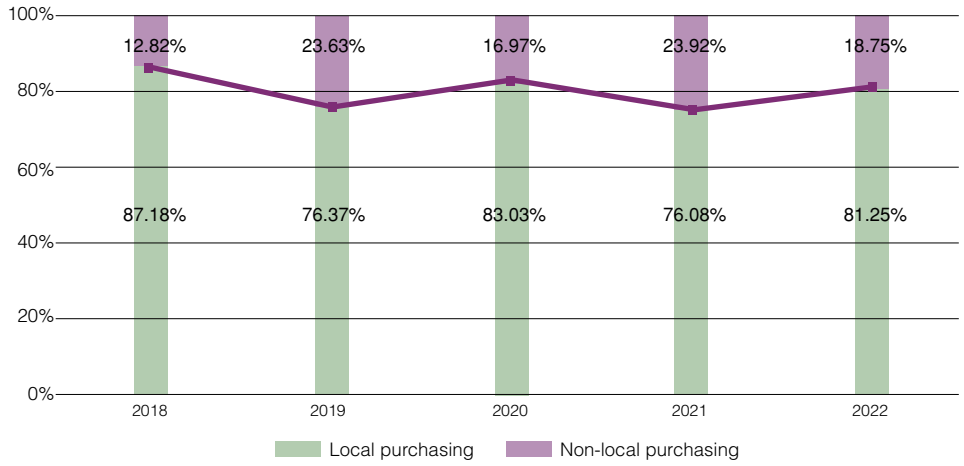
4.1 Sustainable Supply Chain

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



[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

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

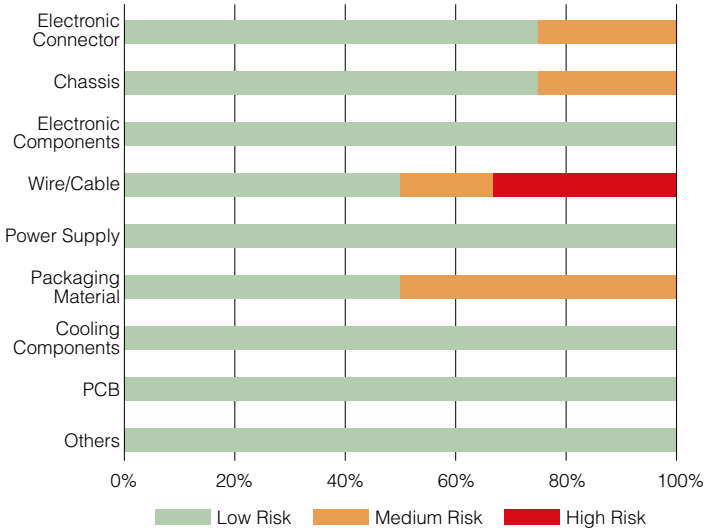
The supplier with excellent performance will be awarded annually. GIGABYTE provides four Awards to well-performed suppliers:

- 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



Audit Result of Supplier CSR Performance

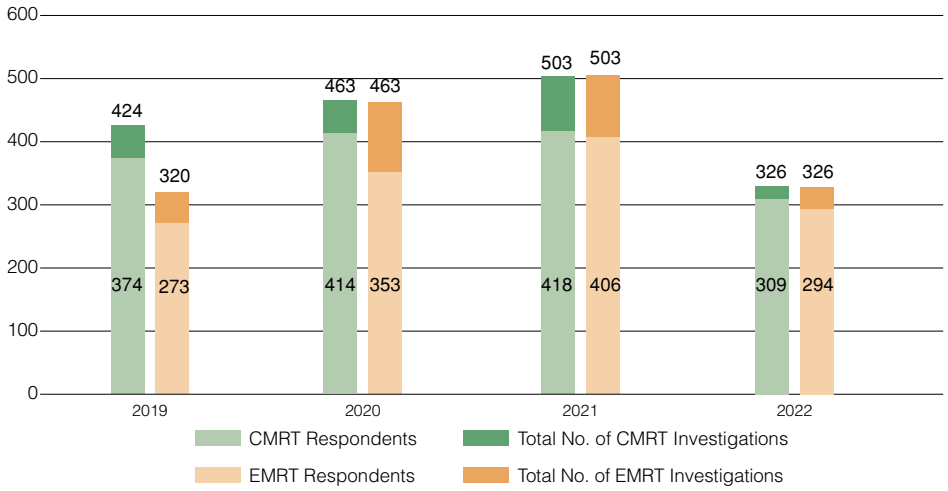
4.1.3 Conflict Minerals Management

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



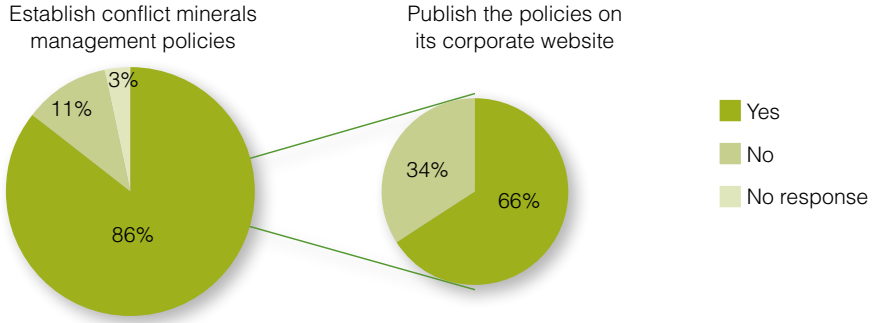
[Note 1] CMRT refers to the conflict minerals reporting template for 3TG (Tantalum, Tin, Tungsten, Gold) metals; the CRT cobalt metal investigation template has been replaced with the EMRT template for the investigation of cobalt and mica since 2022.
[Note 2] There was a decrease in the number of suppliers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

3TG Minerals

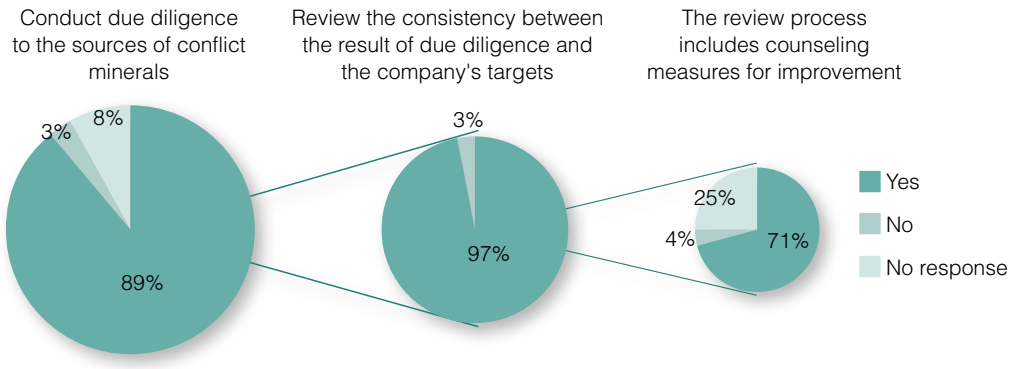
We further conducted statistical analysis on the CMRT responses to understand the actual management of conflict minerals by each supplier, and through their regulations and requirements for upstream to outline the use and management of conflict minerals by second-tier suppliers. GIGABYTE started by examining 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

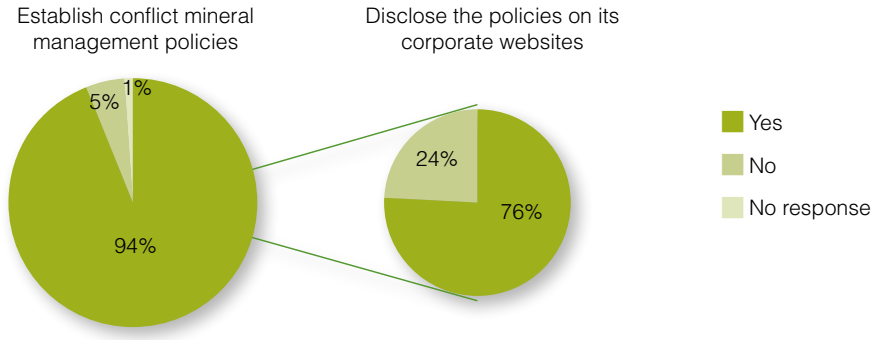


Conflict Minerals Management among Tier 2 suppliers

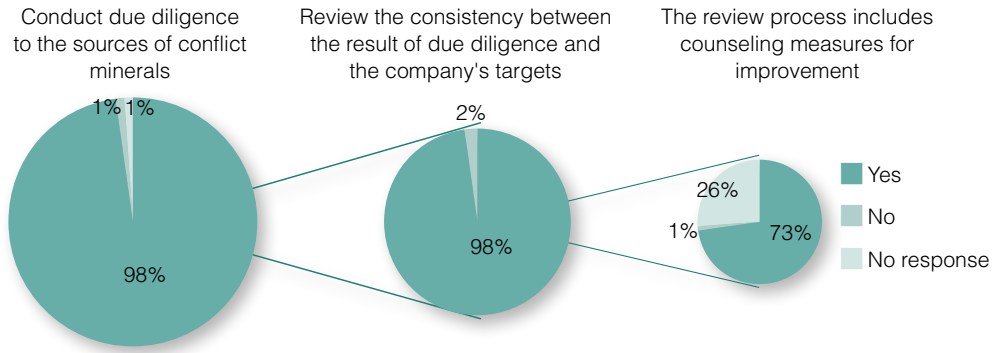


3TG Minerals from Covered Countries[1]

Completeness of Conflict Minerals Management Policy among Tier 1 Suppliers



Conflict Minerals Management among Tier 2 Suppliers



[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	Host for 5 consecutive years	Assess for 5 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%	"Reduction. Sharing. Love the Earth" Supplier Conference Number of participated suppliers: 78 Participation rate of the top 100 suppliers by purchasing amount: 26%	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

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

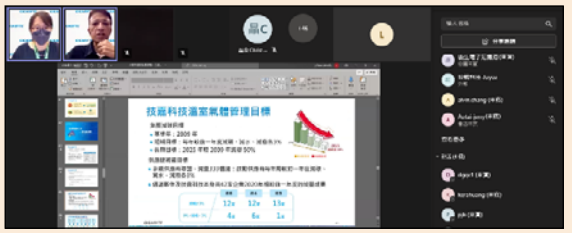
Carbon strategy and ESG management are now key business disciplines. GIGABYTE shared our sustainability strategy and promotion of a zero-carbon value chain in response to international trends and customer requirements at the 2022 supplier conference. External experts were also invited to explain the 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.

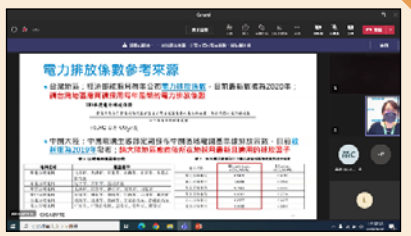
Agenda of the Supplier Conference on September 15 in 2022

- 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.





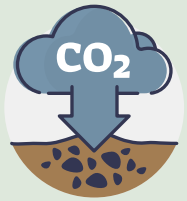
- 47 suppliers participated in greenhouse gas inventory training on June 23 and July 21 in 2022.

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

"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

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

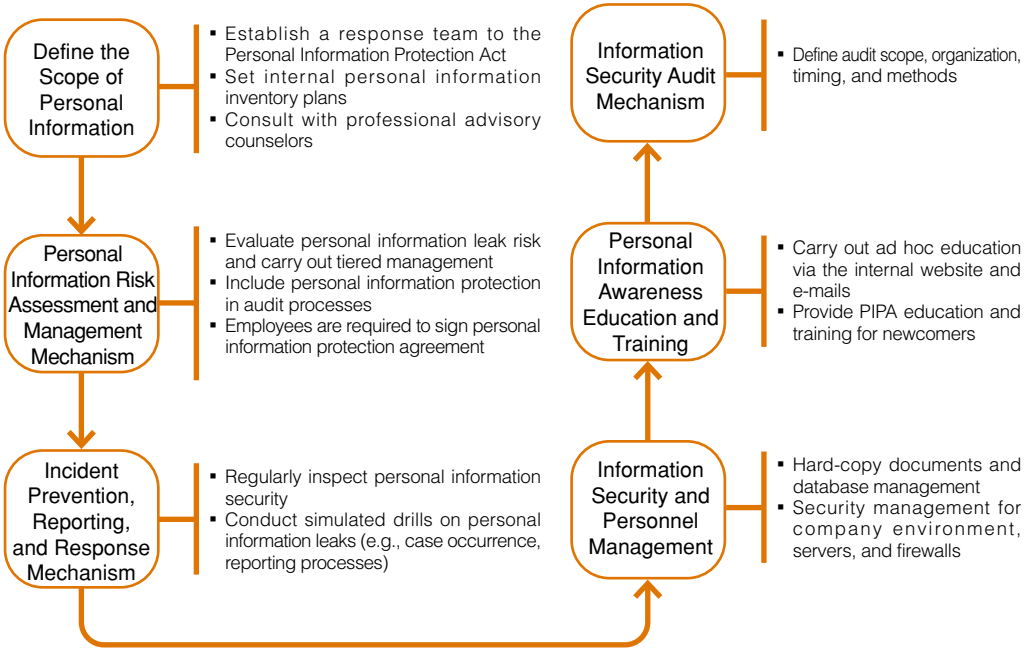
If a fault is with GIGABYTE
- Convene complaints meeting
- Devise response and approach
- Review by the head of responsible units and obtain confirmation

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



ch.5 Happy Workplace

5.1 Human Resource Management and Talent Cultivation　5.2 Human Rights Commitment and Diversity Communication
5.3 Occupational Health and Safety

Material Topics of This Chapter	Talents Cultivation and Retention	Human rights, equality, and diversity / Labor relations (voluntary response)	Occupational Health and Safety
Management Approach	Enable every employee to work in a suitable position, build a diverse and balanced manpower structure, enhance workplace happiness and cohesion, and cultivate competence and power.	Strive for organizational justice, respect diversity and equality, strictly adhere to zero discrimination, anti-violence, and no harassment, and establish a workplace culture that values human rights.	Establish comprehensive environmental safety and health management measures to build a friendly and healthy working environment.
Policy and Action	▪ Plan education and training on the basis of competency development, professional training, and self-growth. ▪ Set up a performance examination process to ensure fair remuneration. The remuneration is adjusted between 0% and 4% every year according to job position and job grade. Basic-level employees are given a higher adjustment rate. ▪ Establish a sound benefits system and a Joint Welfare Committee to enhance employee benefits and organize promotional events at appropriate times.	▪ Issue the "Code of Business Conduct" based on the RBA Code of Conduct to protect human rights in the workplace. ▪ Define the "Plan for Prevention of Illegal Infringements in the Performance of Duties" and "Statement on Prohibition of Workplace Violence" to eliminate bullying or violence in the workplace. ▪ Issue "Operating Instructions for Prevention of Sexual Harassment in the Workplace" and "Workplace Maternal Health Protection Plan" to promote gender-friendly workplaces. ▪ Establish multiple labor-management communication channels and hold labor-management meetings quarterly in accordance with the laws and regulations.	▪ Each business base establishes occupational safety and health management policies, including the "Occupational Safety and Health Management Plan", "Health Management Plan", and maternal protection measures. ▪ Introduced a tiered employee health management system and the "GIGA-Health" health management incentives to provide encouragement as well as early prevention and treatment of disease. ▪ Promote Employee Assistance Programs (EAP) to provide complete physical and mental care for employees. ▪ Obtain the Sports Workplace Certification, launch family-friendly programs, and encourage exercising habits to build a happy corporate.
Vision and Goal	▪ Review the Company's development strategy and employee needs every year and provide corresponding education and training resources. ▪ Maintain the appropriate turnover rate of indirect employees and stabilize the Company's human resource base. ▪ Continue enhancing benefits policy and promotional events.	▪ Plan and implement measures to protect women's reproductive health and physical/mental well-being in the workplace.	▪ Launch monthly 5S environmental safety examination, and average assessment score is above 70. ▪ No cases of occupational injuries. ▪ No cases of occupational diseases. ▪ No cases of fire accidents, and lower the probability of occurrence of all types of safety incidents. ▪ The number of employees classified as level 4 in the tiered employee health management system decreased by 30% each year. ▪ Enhancement of EAP services and support to foster a diverse, inclusive, and positive corporate culture that increases organizational competitiveness. ▪ Health-promoting seminars and events are held at least 2 times each year.
2022 Major Achievement	[●] Continued to conduct a wide range of in-person and online education and training activities. In 2022, 517 seminars and classes were conducted with 14,855 participants [●] Average turnover among indirect labor at Taiwanese operating locations over the last three years in 2022 was 0.96%, a decrease of 0.03%	[●] 22 employees receive work hazard assessment, maternal health protection interviews, and tiered management during pregnancy/after giving birth in 2022. [●] Breast-feeding room was used 2,679 times in 2022, and 34 employees applied for parental leave. [●] 4 labor-management meetings were convened in 2022 as the law requires.	[●] Conducted 5S audits 12 times during 2022, and the target average monthly score was achieved. Audit outcomes were published internally as a reminder for each unit to make improvements. [●] There was 0 incident of occupational injury at Headquarters and 6 incidents of occupational injuries at the Ningbo Factory in 2022. [●] There were no employees with occupational disease in 2022. [●] There were no incidents of fire in 2022, and emergency evacuation and disaster prevention training was conducted 24 times. [●] In 2022, 23 out of the 79 employees classified as level 4 for health risk due to health anomalies achieved an improvement in their health. [●] EAP consultation services were used 355 person-times in 2022 with an average satisfaction rating of 4.4 (out of 5). [●] More than 2 health-promoting events were held in Taiwan during 2022.

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

5.1 Human Resource Management and Talent Cultivation

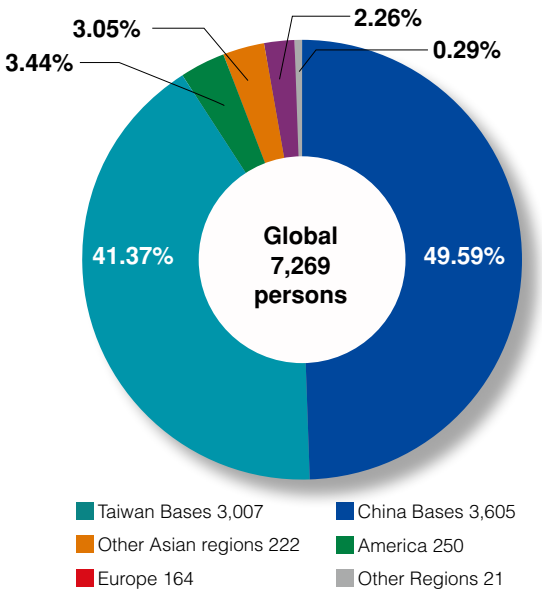
5.1.1 Sound Human Resource Structure

GIGABYTE knows how important people with the right talents are to the company's sustainable development. Rigorous talent selection and cultivation are therefore employed to construct a diverse and balanced human resources structure. Talented people from diverse backgrounds are also encouraged to unleash their expertise, creativity, and potential in their work. GIGABYTE had a total workforce of 7,269 people in 2022. Most of the employees were concentrated in Taiwan and China, with the remainder located in other parts of Asia, the Americas, and Europe. 58.9% were male employees, 41.1% were female employees, and the average age was 33. 35 disabled employees and 12 employees from ethnic minorities were employed in Taiwan at the end of 2022.

		Taiwan Bases		China Bases		Overseas Bases		G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
No. of Employees		1,352	1,392	1,875	930	815	537	0	3	47	19	130	66	6	14	57	25	0	1
Gender Ratio (%)		49.27	50.73	66.84	33.16	60.28	39.72	0	100	71.21	28.79	66.33	33.67	30	70	69.51	30.49	0	100
Age Ratio (%)	Under 30	6.89	9.91	32.3	17.08	25.89	18.79	0	0	19.7	10.61	8.67	0.51	10	65	13.41	6.10	0	0
	30~50	35.93	33.49	33.8	15.61	32.99	20.41	0	100	40.91	18.18	51.53	29.59	10	5	51.22	24.39	0	100
	Over 50	6.45	7.33	0.75	0.46	1.41	0.52	0	0	10.61	0	6.12	3.57	10	0	4.88	0	0	0
Position Type Ratio (%)	Management	18.04	6.30	8.20	3.71	15.31	5.77	0	0	27.27	7.58	21.43	7.14	5	5	29.27	7.32	0	0
	Specialist	31.23	44.42	58.65	29.45	44.97	33.95	0	100	43.94	21.21	44.90	26.53	25	65	40.24	23.17	0	100

[Note] Due to changes to the Group organization in 2023, the workforce demographics data for 2022 is as of 2022/12/24.

● Global Employee Distribution



● Total Number of Employees by Contract type and Role

Unit: Persons

		Taiwan Bases		China Bases		Overseas Bases		Subsidiary											
								G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Employment Type	Full-time	1,335	1,383	1,295	652	805	514	0	3	46	19	127	66	5	13	57	25	0	1
	Part-time	17	9	580	278	10	23	0	0	1	0	3	0	1	1	0	0	0	0
Employment Contract	Full-time	1,335	1,383	1,295	652	805	514	0	3	46	19	127	66	5	13	57	25	0	1
	Temporary	17	9	580	278	10	23	0	0	1	0	3	0	1	1	0	0	0	0

The definitions of employment type and contract are as follows:

Employment Typ	Full-time	Expatriate personnel/Permanent employee/R&D alternative service/Consultant
	Part-time	Contractor/Part-time worker/Intern
Employment contract	Full-time	Expatriate personnel/Permanent employee/R&D alternative service/Consultant
	Temporary	Contractor/Part-time worker/Intern

● Statistics of New Employees

	Taiwan Bases		China Bases		Overseas Bases		Subsidiary											
							G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under 30 Years Old	101	157	3,041	1,190	21	130	0	0	11	6	18	2	3	3	5	1	0	0
31-50 Years Old	70	73	213	308	19	23	0	0	5	4	90	50	0	0	13	2	0	0
Over 50 Years Old	5	1	1	0	2	0	0	0	1	0	11	7	0	1	2	0	0	0
New Employee Rate	11.81%	14.13%	65.70%	56.06%	4.55%	24.52%	0.00%	0.00%	30.36%	40.00%	89.47%	85.51%	N/A	N/A	N/A	N/A	N/A	N/A

[Note 1] The total number of new employees includes direct and indirect employees.
[Note 2] The calculation of the New Hire Ratio = total number of new hires for the year / (head count at the end of the previous year + total new hires in the current year)
[Note 3] The subsidiaries Cloudmatrix, Senyun Precision Optical, and Selita Precision were added to the disclosure scope in 2022. No head count data from the previous years were available, so these were treated as N/A.

● Statistics of Resigned Employees

In 2022, 92% of employee turnover was from voluntary separation. The main reasons were continuing education and enrollment.

Unit: Persons

	Taiwan Bases		China Bases		Overseas Bases		Subsidiary											
							G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under 30 Years Old	65	131	2,843	1,414	24	124	0	0	5	5	1	2	10	5	8	6	0	0
31-50 Years Old	61	92	219	289	9	30	0	1	4	1	2	1	3	4	26	12	0	1
Over 50 Years Old	15	22	4	2	2	1	0	0	0	0	0	0	0	1	4	1	0	1
Resignation Rate	9.46%	14.98%	61.89%	63.81%	3.79%	24.84%	0.00%	25%	16.07%	24.00%	2.26%	4.35%	N/A	N/A	N/A	N/A	N/A	N/A

[Note 1] The high personnel turnover rate in China bases was mainly due to the expiration of contracts with winter vacation workers and interns. Many employees left the jobs to return to their hometowns before Spring Festival, and thus the recruitment increased to balance the need for manpower.
[Note 2] The Turnover Ratio was calculated as the total number of separations during the year ÷ (head count at the end of the previous year + total new hires in the current year)
[Note 3] The subsidiaries Cloudmatrix, Senyun Precision Optical, and Selita Precision were added to the disclosure scope in 2022. No head count data from the previous years were available, so these were treated as N/A.

5.1.2 Talent Recruitment and Retention

GIGABYTE defines a clear set of criteria for recruitment. We look for multi-national and multi-disciplinary talents based on the development focus of each business unit and department. The cultivation of the younger generation is important to us as well. We establish industry-academia cooperation programs with colleges and universities and organize long-running product design competitions that provide students with a stage to showcase their knowledge and creativity, expand their horizons on career possibilities, and enrich their practical experiences. GIGABYTE provided internship opportunities to 2 students from the National Taiwan University of Technology in 2022.

● 2022 "Team Up, Fight On" Recruiting Campaign

GIGABYTE has been focusing on aligning technological progress and talent in recent years to keep up with our rapid business growth. Therefore, the "Team Up, Fight On" campaign was launched in 2022 to expand our recruiting efforts and fill job openings in R&D, product management, integrated marketing, sales, and design. Very competitive salaries and benefits were offered to attract potential talent. International opportunities were also offered to top talent from each field who could put their skills to good use and chase their dreams. 3 campus recruitment sessions were held in 2022. These attracted more than 330 participants, and over 900 resumes were received.

Industry-Academic Collaboration on Youth Development

NVIDIA Studio x GIGABYTE Collaboration Space

GIGABYTE partnered with NVIDIA and the design faculties of I-Shou University and National Taiwan Normal University to set up the "NVIDIA Studio x GIGABYTE Collaboration Space" fitted out with NVIDIA-Studio-certified AERO high-performance notebooks for creators. Advanced NVIDIA technology was applied to create an immersive creative environment for content creators to cultivate the next generation of digital content creation talent together.

ARM Processors Accelerate Development of "High Precision Traffic Flow Model" at NTU by 200%

A team led by a professor at National Taiwan University used the GIGABYTE G242-P32 server and ARM HPC Developer Kit to develop the "High Precision Traffic Flow Model" for an accurate simulation of traffic conditions. The model can be used to test autonomous vehicles that will soon reach the market and observe accident-prone road sections to identify their root cause. (For more information, please refer to GIGABYTE Website)

GIGABYTE Workstations Supports NTHU Racing's International Championship Bid

NTHU Racing is an international student formula racing team at National Tsing Hua University. In 2022, the "TH06" racing car designed with the help of GIGABYTE W771-Z00 and W331-Z00 workstations took part in the Formula Student Germany race in a bid to win the championship. (For more information, please refer to GIGABYTE Website)

Solid Remuneration Structure

The compensation system at GIGABYTE is based on grade, education, background, seniority, and fair performance evaluations to ensure that they accurately reflect each employee's contribution. For detailed information on the distribution of employee and directors' compensation, please refer to p.32 and p.130 of the GIGABYTE 2022 Annual Report; for details on the number, average salary, and media salary of full-time employees in non-management positions in the Taiwan region, please refer to the Market Observation Post System website. GIGABYTE introduced the performance evaluation system at the G-Style, GIGAPIC, and Bestyield International in 2022. The system will be progressively rolled out to all subsidiaries. In addition to the basic salary, GIGABYTE offers a variety of incentives and welfares such as seniority awards, patent awards, quarterly bonuses, as well as performance bonuses in order to encourage outstanding employees. These can also stimulate inner enthusiasm and share the success of GIGABYTE with all of our employees.

Appreciation for Employees' Contributions

- The average service years of retired employees were 16 years
- 340 employees received awards for more than 5 years of service

Innovation Reward

- 104 employees received patent awards

Employee Participation in Annual Performance Evaluations

Unit: %

Currency	Taiwan Bases																China Basesw			
Operation Bases	Headquarters		Nanping Factory		G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita		Dongguan Factory		Ningbo Factory	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Management	91.02	94.29	80.85	100	N/A	N/A	0	0	19.05	21.43	Performance audit system not introduced						36.43	71.43	18.81	27.54
Specialist	94.73	96.33	84.43	18.11	N/A	0	0	0	6.82	11.54							3.04	1.22	1.26	0.72

[Note 1] The following personnel do not take part in end-of-term evaluations and thus were not included in the above statistics:
1. Senior managers above grade 8.
2. Grade 1 personnel, including part-time workers, production line workers, and operators.
3. The employees who have served for less than 3 months.

[Note 2] There were no employees in management positions at the G-Style subsidiary, so the above table's corresponding ratios are N/A.

The Ratio of the Average Salary of Basic-level Employees to the Local Minimum Wage

Currency	Taiwan Bases																China Bases			
	NTD																RMB			
Operation Bases	Headquarters		Nanping Factory		G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita		Dongguan Factory		Ningbo Factory	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Ratio of Basic Salary and Local Minimum Wage	1.22	1.16	1.18	1.07	N/A	1.90	2.14	1.60	1.72	1.54	1.71	1.46	1.09	1.03	N/A	1.58	1.47	1.44	1.43	1.43
Local Minimum Wage in 2022	NTD 25,250																RMB 2,120		RMB 2,280	

[Note 1] The salary above is the full-time salary of basic-level personnel, excluding bonuses, overtime, and stipends.
[Note 2] The G-Style and Selita Precision subsidiaries had no male employees. The ratio between male employee salaries and local minimum wage is therefore shown as N/A in the table.

Male and Female Remuneration Ratio [1] and Range of Salary Adjustment by Business Locations

GIGABYTE adjusts salaries with reference to the price index and the salary adjustment rate of its peers as well as public servants. Individual performance appraisals are also taken into account. Achievement bonuses would be awarded to employees if their KPIs are achieved..

Job Grade[2]		Taiwan Bases																China Bases			
		Headquarters		Nanping Factory		G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita		Dongguan Factory		Ningbo Factory	
		Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Management Position	Senior Level Manager	1.31	1	No female employees at present		No male employees at present		No female employees at present		No female employee at present		No female employees at present		No female employees at present		No employees at present		1.03	1	1.02	1
	General Level Manager	1.02	1	1.22	1	No male employees at present		0.99	1	1.11	1	No male employees at present		1.27		No employees at present		1.03	1	1.06	1
Professional Position	Senior Engineer/ Specialist	1.24	1	No employees at present		No male employees at present		No female employees at present		No employees at present		No employees at present		1.08		No employees at present		0.92	1	No female employees at present	
	Engineer/ Specialist	1.02	1	1.28	1	No male employees at present		1.45	1	1.27	1	1.05		1.20		No male employees at present		1.12	1	0.97	1
Average Adjustment of Salary[3] in the Past 3 Years		4.2%		3.8%		0~4%		0~4%		0~4%		0~4%		0%		0~4%		23%		11%	

[Note 1] Remuneration: The total pay to full-time personnel, including bonuses, overtime, and stipends.
[Note 2] Grade: Senior management (Grades M06 and above); Management (Grades M01-M05); Senior Engineer/Specialist (Grades P06 and above); Engineer/Specialist (Grades P01-P05)
[Note 3] Average Salary: The salary includes basic salary, living allowance, food allowance, etc., excluding annual bonuses.

Sound Employee Welfare and Retirement Plans

A sound benefits system has been put into place by GIGABYTE. In addition to providing statutory insurance, leave, pensions, and health exams, we also provide a number of better-than-statutory benefits to construct the most comprehensive support network for employees. A Joint Employee Welfare Committee has now been established to increase happiness in the workplace by enhancing the benefits policy and promotional events for employees at appropriate times. Some of the employee welfare items vary slightly at different operation sites.

Project	Description
Perfect Insurance Plan	Labor insurance, national health insurance, and group comprehensive insurance, including life insurance, accident insurance, medical insurance, catastrophic illness insurance, etc. Group insurance is also applicable to employees and their families.
Pensions	▪ Allocate employees' retirement reserves in accordance with the Labor Standards Act and the Labor Pension Act, and an account in the name of "Employee Pension Reserve Supervision Committee" is established as an exclusive account for employee retirement funds. ▪ Provide retirement bonuses and hold honorable retirement ceremonies.
Comprehensive Healthcare	▪ For current employees with at least 2 years of service, those over 40 years old are eligible for a health exam each year, and those under 40 years old are eligible for a health exam every two years. Senior executives and highrisk employees are provided further health exam subsidies. ▪ Provide "GIGA-Health" health incentives to help take early action on risk factors for chronic illness. ▪ Implementation of Employee Assistance Plans (EAP) providing psychological, financial, and legal advice to help employees with their life and mental well-being
Leave System	No make-up leave was required for statutory make-up leave days in 2022; in 2023, this was adjusted to providing 3 days of paid vacation leave, exceeding statutory requirements.
Living Allowance	▪ Provide childbirth, hospitalization, funeral, marriage, education allowances, as well as emergency assistance. ▪ Additional childcare subsidies were introduced in 2021. Employees with children under the age of 2 received NTD3,000 per child each month and 2 hours of flex-time.
Living Benefits	In addition to the basic 3 Festival bonuses, the Company also provides birthday gifts and travel allowances. Also, a certain number of benefit points are offered to employees each year, allowing them to purchase charity products and friendly agricultural products freely. The benefit points were NTD8,000 per person in 2022.
Employee Discounts	▪ Sign contracts with restaurants and childcare institutions to provide preferential prices to GIGABYTE employees. ▪ Provide discounts on the company's products, concerts, exhibitions, performances, or related ticketed events and free arts and culture seminars.
Club and Leisure Activities	GIGABYTE establishes a wide variety of clubs on sports, dancing, environmental services, and handicrafts. Besides, we organize leisure activities such as e-sports competitions, sports carnivals and family days to foster employee interests and networking.

Explanation of 2022 Violations

In 2022, GIGABYTE was fined by the competent authorities for 2 violations of the Labor Standards Act. The main reason was labor shortages during COVID-19 while the order kept increasing. The competent internal units have taken proactive action to prevent any further recurrence of these violations, such as introducing alerts for excessive work hours and continuing to recruit through multiple channels.

5.1.3 Talent Cultivation and Development

A sound talent cultivation and development system plays a key role in attracting talent and maintaining core competitiveness. GIGABYTE provides diverse education and training sources, dual-track talent cultivation, and a performance evaluation system targeted towards employee needs and career development plans to ensure that every GIGABYTE employee can realize their potential, find self-fulfillment, and grow with the Company.

GIGABYTE developed competency-based training courses for new hires, specialist personnel, and section/division-level managers. A variety of learning channels are provided, and self-study/external training are encouraged for employees so they can engage in self-development, broaden their professional knowledge, as well as understand the company's vision for the future and current accomplishments. Sharing events are also held at suitable times to let employees learn from each other. In addition to on-the-job employee training, GIGABYTE develops exclusive training courses for newcomers based on the needs of each operation base or each position. The courses help newcomers adapt more quickly to their work and environment.

Education and Training

GIGABYTE provides themed courses for new employees. They are also assigned mentors to help them settle into their new roles.

- Company introduction
- Brand and corporate identity
- Sustainability and environmental policy
- Code of business conduct
- Authorized Economic Operator (AEO)
- Intellectual Property and Personal Information Act guidelines
- Labor health and safety education
- Human resources, administrative services, invoicing process, etc.

E-Learning Platform

Digitize the internal training and lectures of all units and support online course selection to allow the employees to learn at any time.

Feedback and Review

Knowledge Cycle and Feedback

- Train internal lecturers and hold sharing sessions from time to time.
- Encourage the colleagues of all units to share their external training experience to benefit both teaching and learning.

Review of Training Performance

- Truthfully implement opinion surveys to check the benefits of the curriculum for career development and personal competence.
- Encourage employees to plan new task objectives or processes based on training content.

Professional Training

Competency is critical to a successful work. GIGABYTE defines 6 core competencies all employees shall have, as well as additional 5 management competencies that personnel at management positions shall have. Related courses are provided in order to train talent and cultivate organizational culture.

6 Core Competencies

- Innovation and improvement
- Problem solving and analysis
- Self-learning and development
- Cost and quality awareness
- Communication and coordination
- Teamwork

Continuous Advance Learning

- Internal training of BU
- Trend lectures and technology forums
- Professional education of legal affairs and financial accounting
- Foreign language learning resources and allowances
- External education training allowances
- Encourage employees in self-learning

5 Management Competencies

- Target setting
- Empowerment and delegation
- Communication and leadership
- Clear reward and punishment
- Leading reformation

Management Education

- Annual senior-level consensus meeting
- Lecture for senior level manager
- Training for division level manager and new manager
- Talent recruitment and interview skills, etc.

The HR Department draws up internal training courses every year following industry trends and the Company's future direction and also cultivates the soft power for career development and work management. It handpicks articles that assist employees in career planning, self-management, and the development of concrete goals and visions, which then help strengthen the cohesion between units and individual employees. 9 seminars and events were held in 2022. We also hand-picked 14 articles related to management, HR guide, successful career, and workplace trends to provide employees with the resources they need to build themselves and their teams.

Group Sustainable Development Training

GIGABYTE began offering a series of sustainability courses between 2022 and 2023 to cultivate our employees' ESG and sustainability awareness. The courses were also made mandatory for certain positions. We hoped to strengthen our corporate sustainability culture by providing employees with a progressive introduction to core concepts in ESG and corporate sustainability practices. 1 session was held in 2022.

Diverse Courses and Seminars

Handpicked Articles

- "How Far ESG IS- Solutions for Businesses" on 2022/12/8 was attended by 92 people.

● Average Training Hours of Employees

Unit: Hours

Average Training Hours	Taiwan Bases																China Bases			
	Headquarters		Nanping Factory		G-Style		GIGAPIC		Bestyield International		Cloudmatrix		Senyun		Selita		Dongguan Factory		Ninbo Factory	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
By Gender	10.30	10.98	18.01	9.34	N/A	8.00	4.55	4.90	18.72	17.94	6.67	1.67	0.47	0.18	N/A	0	1.32	1.24	5.06	4.40
By Base	10.57		11.63		8.00		4.66		18.45		4.17		0.38		N/A	0	1.31		4.86	
By Job Position - Management Position	10.14	13.37	20.46	27.53	N/A	N/A	5.22	10.30	35.06	41.87	N/A	N/A	0	0	N/A	N/A	2.99	3.33	9.49	7.68
By Job Position - Professional Position	10.41	10.29	17.14	8.59	N/A	8.00	4.02	3.10	10.56	11.41	6.67	1.67	0.77	0.24	N/A	0	1.09	1.01	4.77	4.09

[Note 1] The G-Style, Cloudmatrix, and Selita Precision subsidiaries had no employees in certain categories, so these were shown as N/A in the table.
[Note 2] The calculation of average training hours = Total training hours ÷ total number of employees trained.

5.2 Human Rights Commitment and Diversity Communication

Commitments and Actions of Humans Right at Workplace

GIGABYTE supports international human rights conventions and complies with the local regulations of our operating locations. We have defined a number of human rights rules. For example, " strive for organizational justice, respect for diversity" and "anti-discrimination, violence and harassment" are included in our Code of Business Conduct. All board directors, managers, and employees are expected to protect human rights in the workplace by adhering to human rights and equality.

(For GIGABYTE's code of workplace human rights, please refer to Chapter 2 of GIGABYTE Code of Business Conduct)

Human Rights Commitment	Actions
Talent Inclusion and Non-discrimination	▪ Stipulate clearly in the Code of Business Conduct: The recruitment and promotion of employees do not distinguish between race, gender, age, skin color, sexual orientation, language, religion, party, place of origin, nationality, physical and mental disabilities, and marital status. ▪ Hire physically or mentally handicapped, which accounts for at least 1% of the number of employees in GIGABYTE's bases in Taiwan and G-Style, complying with the "People with Disabilities Rights Protection Act" issued by the Ministry of Health and Welfare.
Prohibition against Forced Labor and Employment of Child Labor	▪ Suppliers are required to comply with regulations relating to the human rights of workers in accordance with the RBA Code of Conduct and to undergo investigation on conflict mineral usage. ▪ Stipulate clearly in the Employment Management Regulations that do not employ people under 15 years old as well as child labor above 15 years old but under 16 years old.
Prevention of Illegal Infringement in the Workplace	▪ Define the "Plan for Prevention of Illegal Infringements in the Performance of Duties" and procedures and issue the "Written Statement on Prohibition of Workplace Violence" to protect employees against bullying or violence in the workplace.
Gender Friendly Workplace	▪ The "Guide on Prevention of Sexual Harassment in the Workplace" specifies that employees who believe they have been sexually harassed may file a complaint with their supervisor, HR department, or the dedicated mailbox. Their complaint will be handled in strict confidence. If the complaint is investigated and upheld, disciplinary actions will be taken against the offender and may result in termination of employment in serious cases. There were no sexual harassment or discrimination cases in 2022. ▪ Plan the maternal health protection plan of the workplace, and set up friendly facilities such as nursery rooms. (For details of implementation status, please refer to 5.3.2 Healthy and LOHAS Workplace)
Fair Salary	▪ Determine the standard of salary payment through open and transparent performance evaluations. The wage levels of all operation bases are higher than the local legal minimum wage.

Smooth Communication Channels between Management and Labor

Good communication between management and labor is on the basis of mutual trust and mutual assistance. Although GIGABYTE does not have a labor union, we enhance labor-management interaction and communication through regular labor-management meetings, division-level management discussions, online article promotion, and annual questionnaire surveys every year.

● Labor-management Communication Channels

Communication Channels	2022 Communication Outcomes	2022 Communication Focuses (extract)
Labor and Management Meeting	Labor-management meetings were convened quarterly as law requires. In 2022, a total of 4 sessions were held.	1. COVID-19 epidemic prevention education and explanation of vaccination leave. 2. Notification to employees who were affected by the change in minimum wage and labor insurance premiums. 3. Education on anti-workplace bullying and complaints channels. 4. Explanation of changes to parent-friendly workplace regulations and benefits, as well as provision of additional childcare benefits and promotion of a parent-friendly workplace.
Internal Web	Ad hoc	▪ Announce important information by the Company. ▪ Promotion of relevant events.
Internal Newsletter "GIGA HI"	87 articles	▪ Report on the outcomes of the company's events. ▪ Highlights of past seminars.
HR Website	▪ 14 articles regarding career development ▪ 26,887 view times to the Webpages	▪ Guiding employees about the company's development direction. ▪ Providing employees with information on career development.
Employee Satisfaction Survey	▪ Conduct once a year at Headquarters. ▪ Conduct monthly at Nanping Factory ▪ Conduct at various times at China Factories.	Focus on health care, security, cleaning, and other common services in order to continue improving the equipment and services offered by the company.

5.3 Occupational Health and Safety

5.3.1 Environmental Safety and Health

GIGABYTE Headquarters, Taoyuan Nanping Factory, as well as the Dongguan and Ningbo Factories in China have all obtained ISO45001:2018 Occupational Health and Safety System certification. The management scope includes employees, on-site contractors, visitors, and any personnel near the workplace that may affect organizational activities.

(For more information on GIGABYTE quality and environment-related certifications, please visit the GIGABYTE CSR Website)

A permanent OHS contact point was established in each business group to ensure effective OHS management. The Occupational Health and Safety Committee was also set up, composed of Group Operation Management Center, business units, subsidiaries, and labor representatives, of which the number account for more than one-third of the committee members. The OHS Committee is convened quarterly to examine OHS management policy and matters and to continue optimizing and managing the OHS risks at the company to ensure a safe and hygienic working environment for employees.

GIGABYTE's Occupational Safety and Health Management Plan can be subdivided into 16 items, including workplace hardware testing, operating standards setting, education and training, health promotion, disaster response, etc. Each item is reviewed and audited every year.

● Composition of Occupational Health and Safety Committees

	Headquarters	Nanping Factory	Dongguan Factory	Ningbo Factory
No. of Labor Representatives	9	11	12	9
No. of Registered Members	21	32	33	22
Labor Ratio	42.86%	34.38%	36.36%	40.91%
			Not subject to the regulations in Taiwan	

● Occupational Safety and Health Management Plan

Reduce Occupational Injury and Promote Labor Safety and Health

Eliminate Workplace Risk Factors and Achieve Zero Accident Case

- **Operational Environment Monitoring**
  - Identification, evaluation, and control of work environment or harmful processes.
  - Planning and monitoring of the sampling strategy of harmful operating environments.
  - Process or construction safety assessment items in dangerous workplaces.
  - Management and implementation of personal protective equipment.
- **Automatic Inspection and Equipment Maintenance**
  - Regular inspections, key inspections, operation inspections, and site patrol inspections.
  - Management of machinery, equipment, or hardware.
- **General Knowledge of Dangerous Items and Hazardous Substances**
  - Classification, labeling, general knowledge, and management of hazardous chemicals.
- **Safety and Health Education and Training**
  - Hosting of safety and health education and training.
  - Collection, sharing, and use of safety and health information.
- **Contractor Management**
  - Procurement management, contract management, and updates of management matters.
- **Health Management**
  - Health examination, management, and promotion.
- **Other Management Matters**
  - Emergency response measures.
  - Processing and analysis of occupational accidents, false alarms, and the events affecting physical and mental health.
  - Safety and health management records and performance evaluation measures.
  - Safety and health standards.
  - Identification and verification in accordance with Environmental Safety Act.

Occupational Safety and Health Risk Management

Comprehensive identification of occupational safety and health risks helps to detect potential hazard factors early, and annual management plans assist in controlling and eliminating the factors. GIGABYTE defines risk assessment processes, which are then periodically assessed by the OHS contact point in each business group. The assessments cover operational frequency, workflow, equipment and materials used, and operating environment. Risks are divided into 4 levels according to the assessing results. Further assessment of whether the Company's current operating control procedures are sufficient to respond to the listed risks is then conducted. When necessary, a management process will be adjusted according to the identification results to prevent the occurrence of occupational accidents.

● 2022 Rating and Evaluation of Potential Risks in Taiwan

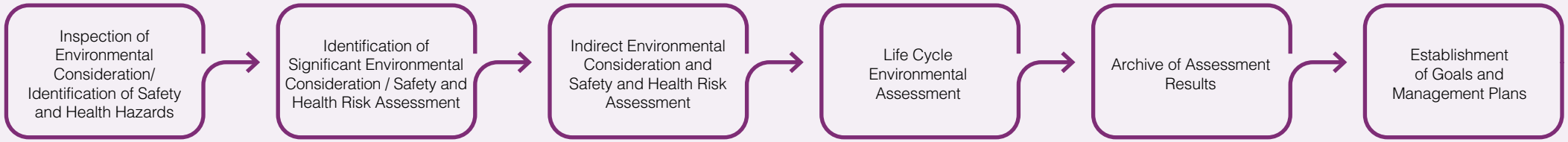
Unit: Case

High ---------- > Low

Risk Classification	Level 1	Level 2	Level 3	Level 4
Number of Cases	5	61	2	9

After risk identification, GIGABYTE reviews the existing operation management process to confirm the integrity of the Company's existing regulations and starts improving the discovered management gaps. We will continue to manage occupational safety and health risks through PDCA processes in order to provide employees with a safe and healthy working environment.

● Process of Occupational Safety and Health Risk Assessment



Implementation Methods and Outcomes

※Operational Environment Monitoring

In accordance with statutory requirements and the work type in each unit, GIGABYTE monitors CO_2 concentrations and brightness in the workplace environment along with isopropanol, tin, and noise generated due to operational requirements. We also conduct voluntary monitoring of ambient radiation and equipment temperature. Monthly 5S audits are also conducted to examine environmental problems and deficiencies in a timely manner. Every effort is made to ensure the safety of the operational environment for all workers.

※Automatic Inspection and Equipment Maintenance

GIGABYTE implements automatic inspection and maintenance every year for 5 major equipment, such as high-pressure gas containers, local exhaust facilities, as well as constant temperature and humidity equipment, to ensure stable operation of equipment and operators' safety.

※General Education on Dangerous and Hazardous Substances

The EHS Division audits the storage location, labeling condition, and document management of the Company's chemicals and hazardous substances every year. It also builds up a risk map according to the results, which can help improve the defects. In Addition, it provides high-risk employees with hazardous substances operation management, organic solvents, and chemicals general knowledge courses. Enhanced training is also provided to operations managers to strengthen the employees' sensitivity to avoiding potential chemical injuries. In 2022, 184 employees from the Headquarters and Bestyield International attended safety and health education and training on handling hazardous substances.

GIGABYTE voluntarily tightens the maximum allowable CO_2 concentration by reducing the threshold for working environments from the statutory limit of 5,000 ppm to under 1,000 ppm on each floor.

Due to an increase in operational demand, the maximum detected noise level at some product testing laboratories in 2022 had reached 97.5 dB, exceeding statutory limits. GIGABYTE had made improvements actively, including the distribution of noise protection equipment, additional inspections, and rigorously enforcing the wearing of protective facilities. Employees working in high-noise areas for extended periods also received hearing tests and health education.

In 2022, all old extension cords at the Headquarters were replaced to prevent fire hazards during electricity use.

※Safety and Health Education and Training

Prize quizzes, EDM, education, and training are used by GIGABYTE to raise employees' hazard awareness and disaster response skills. In addition to mandatory OHS training for newcomers, current employees are also given training to obtain certifications (first-aid, fire safety, organic solvent operations supervisor) required by law. The cultivation and training of cadre personnel along with OHS management system evaluations and audits are conducted as part of ISO management system activities.

Training Courses and Attendance		
	Taiwan Bases	China Bases
Basic Safety and Health Training (including basic training and newcomer training)	238 sessions 1,147 trainees	9 sessions 414 trainees
Evacuation and Disaster Prevention Training	115 sessions 2,298 trainees	9 sessions 2,009 trainees

※Contractor Management

GIGABYTE requires all contractors (including caterers, security, cleaning, and personnel stationed on-site for extended periods) to sign the "Guidelines of Contractor Management" and reminds them of basic precautions. The work instructions specifically for working in constrained spaces or special operations are also provided when contractors enter the workplace. Contractor occupational disaster surveys are conducted monthly. In 2022, contractor training was conducted 523 times. 1 case of occupational injury related to contractors was reported.

※Health Management

Please refer to 5.3.2 Healthy and LOHAS Workplace.

※Emergency Response Measures

"Familiarity with every action is essential for rapid response and prevention of casualties in an emergency." There have been several serious fire incidents in Taiwan in recent years. In addition to hosting static seminars on disaster prevention knowledge, GIGABYTE focused on fire safety drills for all employees and developing a series of disaster prevention measures. Training for personnel in the self-defense fire organization was also enhanced to ensure their operational effectiveness, proper division of labor, and proficiency in carrying out their missions. GIGABYTE is also a member of the New Taipei City Government's corporate disaster prevention program. In 2022, we donated emergency generators and 500 home fire extinguishers to do our part in national disaster prevention.

December is designated as "Fire Safety Month" with EDM and posters issued to promote disaster prevention concepts. Prize quizzes were hosted to ensure a proper employee mindset on disaster prevention.

- Emergency no-notice fire and evacuation drills were held for all employees. The drill involved a scenario that escape routes were blocked in order to improve training realism.
- Conduct hose training to enhance real-world response skills.

Emergency supplies caught, including water, emergency rations, and emergency tools, were stored in specific areas on each floor and refreshed annually in case of an emergency.

※Occupational Injury and Disaster Statistics

In 2022, 6 reportable occupational injuries case occurred in GIGABYTE's Headquarters and three factories. The cases in this year were minor work-related injuries. Educational articles and personnel training were immediately instituted. The design unit was also notified to engage in corrective action for the reason and electives.

	Headquarters		Nanping Factory		Dongguan Factory		Ningbo Factory	
Occupational Injury Category	No. of the injured	Ratio [1]	No. of the injured	Ratio	No. of the injured	Ratio	No. of the injured	Ratio
Fatal Occupational Injury	0	0	0	0	0	0	0	0
Severe Occupational Injury	0	0	0	0	0	0	0	0
Recordable Occupational Injury	0	0	0	0	0	0	6	2.21

[Note 1] The ratio is calculated based on per million work hours.

5.3.2 Healthy and LOHAS Workplace

GIGABYTE builds a safe and friendly working environment for employees. We actively help employees to identify their own physical and mental health risks through a comprehensive health management plan and provide tracking and improvement resources to enable employees to ascertain personal health management while contributing to the Company wholeheartedly at the same time. GIGABYTE hopes that every employee is healthy and happy.

● GIGABYTE Health Management Plan

Tiered Management of Employee Health	▪ Provide health exams, physician consultations, and occupational disease prevention and treatment ▪ Establish a tiered health risk system and devise management actions for each level ▪ Track health status and promote health improvement for employees with high health risks
Comprehensive Health Exams	▪ Provide a variety of bonus packages for special health exams ▪ Encourage particular groups to take early health exams and improve health by offering health exam subsidies ▪ Effectively track employees who do not take health exams
Health Promotion	▪ Provide health education and medical information regularly and host health seminars and activities ▪ Flu vaccination ▪ Hold health-promoting activities for specific groups, e.g., LOHAS exercise courses for executive managers and core strength courses
Healthcare	▪ Provide emergency first-aid, follow-up, and support ▪ Replenish clinic and first-aid kits ▪ Emergency response to the pandemic ▪ Maternal health protection plan in the workplace
Employee Assistance Programs(EAP)	▪ Continue distributing articles and EDM on diverse topics ▪ Host seminars, workshops, and family excursions ▪ Increase the level of EAP support and happiness of employees

Disease Prevention and Tiered Management

"Precision Prevention" is the core philosophy of GIGABYTE for employee health management. We help employees identify their health risks and symptoms early by providing health knowledge over e-mail, regular and fine health exams, and medical consultation resources at each location. Professional nursing personnel then track and reach out to high-risk groups to enhance the physical health of all employees.

GIGABYTE provides health examination resources beyond the legal requirements and encourages employees to attend health exams through sustained education and monitoring. We also contract with partner clinics to provide additional high-end health exam services such as Heart Rate Variability (HRV), Fecal Occult Blood Test (FOBT), endoscopy, ultrasounds, and CAT at discounted rates. These give employees a more complete picture and protection for their health.

Health Bonus
Friendly Health Exam Welfare

Better than Statutory Requirement

- For employees with 2 or more years of service: provide a free health exam every 2 years for those aged 21–40; provide a free health exam every year and extra subsidies every 2 years for those aged over 41.

High-Risk Group

- Provide additional NTD5,000 per year for health exams or medical treatment.
- Actively contact employees with high health risks who have not taken health exams for more than 3 years or are living alone.

Families of Employees

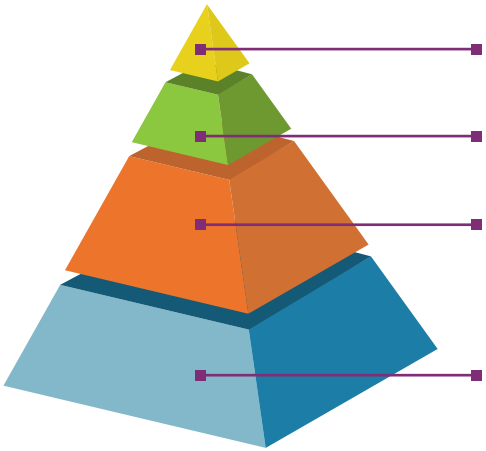
- Enjoy the same health exam discounts and flu vaccination assistance as employees.

● Number of Employees Participating in Health Exams and Examination Rate

	Headquarters	Nanping Factory	Dongguan Factory	Ningbo Factory
No. of Employees Participating in Health Exam	713	668	484	486
Examination rate	85.8%	99.8%	100%	89.7%

After the annual health exam, the occupational nurses classify employees' health into 1-4 levels. For any employee or high-level manager whose key health index like blood pressure, total cholesterol, and triglyceride are classified into level 4 high-risk group, a special follow-up and management such as consultations and health tracking will be launched. In 2022, at the Headquarters, 23 out of the 79 employees classified as level 4 high-risk group due to health anomalies had improved in their health.

● GIGABYTE Tiered Health Management



Level 4 High Risk
- Subsidies for high-end testing of abnormal items.
- Information on medical treatment and tracking of drug subsidies.
- Free participation in health promotion activities.

Level 3 Moderate Risk
Level 2 Low Risk
- Interview and health education by the company physician.
- Re-testing of abnormal blood test items.
- Priority access to health promotion activities, muscle power classes, fitness classes, flu vaccinations, etc.

Level 1 Normal
- Health education EDM published on internal information platform on an ad hoc basis.
- Exclusive health guidance through face-to-face session/telephone/e-mail.

GIGA-Health - Health Management Incentive Mechanism

"GIGA-Health" health incentives were introduced in 2022 to encourage GIGABYTE employees to look after their health, develop healthy habits, actively seek medical assistance, as well as achieve the indicators for disease control and improvement. Employees who are classified as level 4 for any of these health indicators and have sought treatment, established healthy habits, and effectively brought the disease under control, and also can provide supporting proof within 3 years may apply and collect health recovery reward points once approved.

Overwork and Ergonomic Hazard Prevention

Most of the employees at GIGABYTE headquarters are "stationary office workers." Poor posture can easily result in musculoskeletal and eyesight damage. Workers in factories may experience pulled muscles and soreness from repetitive motion or heavy lifting. In view of that, GIGABYTE establishes the "Ergonomic Hazard Prevention Plan" and "Disease Prevention Plan for People with Abnormal Workloads" to ensure desks, chairs, lighting, and ventilation are regularly checked for suitability and also track excessive work hours. Furthermore, through health exam reports, we identify the employees at risk of cardiovascular diseases and change their working patterns or adjust their work hours according to the suggestions from doctors. At the Headquarters, no cases of work-related musculoskeletal symptoms were surveyed, tracked, and managed during 2022, while 77 employees were tracked for high health risks due to workload and cardiovascular disease.

Occupational Disease Statistics

In 2022, no case of occupational disease was reported at GIGABYTE locations in Taiwan and factories in China. We will continue to maintain our high health management standard and realize the goal of "early prevention and sound treatment."

Occupational Disease Category	Number of Cases	Number of Affected Persons
Fatal Occupational Disease	0	0
Recordable Occupational Disease	0	0

Health Promoting Activities

Healthy exercise habits and health awareness is not just employees' own responsibility, companies shall also foster a healthy workplace culture. That is why exercising is promoted by GIGABYTE on top of basic disease prevention. We provide employees with fully equipped fitness centers and aerobics classrooms and organize diverse health-promoting activities to encourage employees to manage health management as well as exercise more for physical/mental well-being.

▪ Influenza vaccination: 150 people

GIGABYTE's Headquarters partnered with nearby clinics to let employees get quadrivalent influenza vaccinations directly in the company without paying a registration fee at a clinic.

▪ GIGA-Move for Health – 91 people

The event was held in September and October at the Headquarters to promote a sporting culture within the Company. A complementary app was used to count the number of steps and track improvements in cardiovascular fitness. All those that satisfied the criteria went into a lucky draw.

Total step count: 49,410,568 steps
Equal to going around the Taiwan island 27.6 times

▪ Physical fitness testing: 99 people

GIGABYTE's Headquarters partnered with the Sports Administration to conduct the "Technology Physical Fitness Test". The test covered physical composition, cardiovascular endurance, and grip strength and flexibility. Professional one-to-one coaching was provided after the test.

- LOHAS and Relaxation Camps were held at the Headquarters in 2022 for senior executives and employees with high health risks. We also hosted 4 health seminars with 218 participants and cancer screening for 101 female employees.

Special Disease Management - COVID-19

The GIGABYTE Epidemic Command Center, established in January 2020, tracked the latest local and international COVID-19 developments as well as make rolling adjustments to epidemic prevention management measures:

1. Issue an employee epidemic prevention handbook and guidelines for business trips; send EDM about epidemic prevention and health education along with the latest epidemic prevention policies as well as the track of confirmed cases nearby the offices.
2. Purchase and supply employees with home RAT kits, surgical face masks, and epidemic prevention packs for business travel.
3. Provide employees that have been infected, under home quarantine, or in close contact with individual health management and support.
4. Report, investigate, evaluate, statistical analysis, track, protect privacy, and keep records of infections.
5. All employees receiving the COVID-19 vaccine are entitled to paid vaccination leave (2 days for the first and second doses and 1 day for the third, fourth, and fifth doses). This exceeded statutory leave does not count toward their full attendance or performance evaluation.
6. Employees with children receiving COVID-19 vaccination may apply for epidemic prevention care leave.

Gender Friendly Workplace

Women account for nearly half of the GIGABYTE workforce. The "Workplace Maternal Health Protection Plan" was therefore formulated by GIGABYTE to promote facilities and systems more friendly to female employees and maternal health in the workplace. In 2022, GIGABYTE received the Excellent Enterprise Award for Gender Equality in Taoyuan City for promoting the fulfillment of CSR and gender equality policy.

Diverse and Complete Maternal Friendly Measures

Pregnancy Care

- Establish maternal protection measures. Dedicated nursing personnel regularly contact and care for pregnant employees.
- Provide a "GIGA-baby Gift Pack" to employees who give birth to a baby. It included 6 practical baby products.

Nursey Room

- Both the Headquarters and Nanping Factory set up nursery rooms, which locations are clearly marked and on main passageways. The Access is via swipe card for the safety of pregnant women and mothers. The rooms are equipped with refrigerators, basins, sofas, and heaters to provide female employees with a convenient and comfortable space.

The use times of nursey rooms in 2022: 2,679

Childcare Subsidy

- Additional childcare subsidies were introduced in 2021. Employees with children under 2 years old and with Taiwanese citizenship can receive NTD3,000 per child every month. The employee may also apply for 2 hours of flex time.
- GIGABYTE signs contracts with qualified kindergartens nearby and provides subsidies in order to make employees convenient to drop off and pick up children.

Gender-friendly Parking

- Considering that the parking space around the Headquarters is limited, GIGABYTE sets up priority motorcycle parking exclusively for pregnant employees to avoid their risk exposures from looking for parking outside. This also loosens their stresses of getting to the office on time.

Return Rate of Parental Leave in 2022

	Taiwan Bases		China Bases	
	Male	Female	Male	Female
Number of employees eligible for parental leave in 2022	133	70	0	21
Number of employees applying for parental leave in 2022	7	9	0	18
Number of employees who shall return to the Job with job retained for baby care leave in 2022 (A)	4	10	0	7
Number of employees who actually returned to the job with job retained for baby care leave in 2022 (B)	3	7	0	6
Number of employees who actually returned to job with job retained for baby care leave in 2021 and work for more than 1 year (C)	1	3	0	4
Number of employees who actually returned to the job with job retained for baby care leave in 2021 (D)	1	4	0	5
Rate of return to job (B/A)	75%	70%	N/A	86%
Rate of job retained (C/D)	100%	75%	N/A	80%

[Note 1] The data encompasses GIGABYTE's operating locations in Taiwan (Headquarters, Nanping Factory), China Dongguan Factory, China Ningbo Factory, and subsidiaries in Taiwan such as G-STYLE, GIGAIPC, Bestyield International, Cloudmatrix, Senyun Precision Optical Corp., and Selita Precision that it controls.

[Note 2] The number of people eligible for baby care leave is calculated by the number of employees with children under 3 years old based on the national health insurance data.

GIGABYTE Happiness Station / Family-Friendly Enterprise Alliance

To help GIGABYTE employees achieve work-family balance and strengthen their family's support functions, GIGABYTE began organizing family-friendly education activities with local government family education centers and corporate partners in 2021. 12 seminars and family organization classes were held in 2022, attracting more than 500 participants.

(For more information, please refer to the report section of GIGABYTE Education Foundation)

Employee Assistance Programs (EAP)

Besides building a safe, healthy, and LOHAS workplace, GIGABYTE pays attention to the daily problems our employees would face and their needs for psychological counseling. We partner with external organizations to provide advanced counseling services about mental, legal, and financial issues. Employees can take part in confidential consultations through the dedicated website, information hotline, and e-mails. In 2022, EAP conducted 355 consultation sessions with an average satisfaction rating of 4.4 (out of 5).

GIGABYTE regularly provides topical columns and related seminars in response to situations that employees may encounter in life or at work. A total of 16 topical support e-newsletters and EDMs were distributed in 2022, along with 11 sessions of stress management workshops, outdoor recreation, concerts and other activities. We hope make EAP a part of employees' work and life and would enhance their happiness and positive energy to embrace the future.

● 2022 EAP Activity Summary

How Stress Changes the Sense of Taste

Invited external lecturer to talk about how the relationship between stress and energy lines in the body from a traditional Chinese medicine perspective and share ways of coping with stress.

Robot DIY Workshop for Families

Invited employees as parents and their children to use waste electronic components stripped from motherboards to build robots together. The workshop not only communicated the message of waste reuse but also helped to strengthen family bonds.

Full Moon Music Festival

An online concert was held during lunch breaks. Employees enjoyed performances of songs related to the Mid-Autumn Festival and the moon by romantic singers over their lunch.

Shimen Disaster Reduction Hike

Employees and their families took part in an invigorating hike at Shimen Reservoir that incorporated both ecological conservation and health promotion.

The Secret of Eternal Flowers

The fun of handicrafts and the resultant sense of achievement helped employees get away from the stresses of work and life.

Tea Farmer for a Day in Pinglin

Employees and their families visited a water catchment. DIY workshops on tea-making and tea cuisine also introduced them to the beauty of living in harmony with the environment and respecting nature.

ch.6 Social Common Good

6.1 Social Caring and Technology Education 6.2 Cultivation of Sustainability Thinking and Environmental Care

Material Topics of This Chapter	Social Engagement and Technology Care (voluntary Disclosure)	Sustainability and Environmental Education Ecological Conservation (voluntary response)
Management Approach	Combine the core competency of GIGABYTE to expand social participation and corporate influences on reducing the digital gap, innovating and cultivating talents, and caring for the disadvantaged.	Shape the awareness of sustainable development and environmental protection and strengthen citizens' environmental literacy to achieve the vision of overall sustainability.
Policy and Action	▪ The GIGABYTE Education Foundation is founded to be responsible for coordinating social participation and technology education projects. ▪ Launch the "3unlight" volunteer platform to encourage selfless contribution by employees on social topics. ▪ Serve as the general convener of the Lifelong Learning Promotion Alliance, and cooperate with NPO partners to carry out courses and workshops to strengthen capability. ▪ Jointly launch courses with various departments in the Company to design new courses that promote the idea of circular resources.	▪ Partner with the Plant-for-the-Planet Foundation from Germany again to continue supporting voluntary tree planting, eco-conservation, and local empowerment. ▪ Adopt forest land and recruit value chain partners to engage in reforestation and ecological rehabilitation. ▪ Promote internal seminars, educational articles, and plastic reduction activities. ▪ Found a corporate volunteering club, GIGABYTE Go Green Club, and executed the "Thousand Mile Trek – Go Green Taiwan", a round-island clean-up plan. ▪ Establish G-HOME GIGABYTE Sustainable Eco-roof as an urban green island. Most of the plants grown on the roof are endemic and native species. The Roof was certified as an Environmental Education Facility and Field, and 2 courses were opened to the public.
Vision and Goal	▪ Continue hosting a variety of digital inclusion courses to disseminate technology knowledge. ▪ Embed technology education in rural areas and provide hardware where necessary to bridge the gap of digital resources. ▪ Promote circular economy based on the spirit "Mottainai", and technology courses such as 5G and face recognition. ▪ Provide the elementary schools around the Headquarters with technical support to build an intelligent campus. ▪ Continue to organize volunteer activities and increase the number of users for the volunteer platform.	▪ Partner with Plant-for-the-Planet Foundation from Germany and commit to planting 62,500 trees for the planet from 2023 to 2027. ▪ Introduce the surrounding ecology to the employees, and practice environmental conservation through tree-planting and waste clean-up activities ▪ Continue to promote the G-HOME environmental education courses and enlarge its influence. ▪ Retain the climate literacy educational programs to cultivate climate talents for Taiwan.
2022 Major Achievement	[●] The G-Design Competition was held for 20 consecutive years. More than a thousand students from the design field came together to develop ideas that consider both caring and practicality. [●] Donated computer equipment to groups in need. A total of 13 computers were donated in 2022, and 447 computers have been donated to date. [●] 71 people registered and used the volunteer platform in 2022.	[●] 92,524 trees have been planted, with 3,125 trees planted in 2022. More forestation efforts will be planned in the future. [●] The "Thousand Mile Trek - Go Green Taiwan" program picked up 3,396.33 kg of waste in 2022. [●] "The Ocean is Our Home" coast clean-up has been conducted 3 times as of 2022, with 3,122.3 kg of coastal trash removed. [●] The G-HOME venue and courses were not open to the public in 2022 due to COVID-19. The climate education project was not held on campus either.

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

6.1 Social Caring and Technology Education

"Upgrade Your Life" is the corporate purpose of GIGABYTE and also the core vision of our commitment to social welfare- promoting science education with core capabilities while paying attention to humanistic development and sponsoring cultural or educational activities that benefit society.

In terms of science and technology education, in addition to the long-term product design contest and digital competence workshops, GIGABYTE also co-organizes a cross-disciplinary Transaction Award with the government and industry to actively cultivate slashies for the industry. Hardware resources are also provided to rural regions and disadvantaged groups where appropriate. At the same time, GIGABYTE fully sponsors art and cultural activities and brings art into the community and the Company to cultivate humanistic literacy for the whole generation.

Annual Performance and Initiatives in Social Philanthropy

Charity Donations and Scholarships Annual Donation NTD2,916,000	The GIGABYTE Education Foundation launches the year-end donation campaign at the end of each year to raise donations from GIGABYTE's employees and their families, children, and partners of GIGABYTE. The targets of donation are as follows: (1) Providing scholarships to students who experience unexpected events in their families. (2) Donating to the Children's Hearing Foundation to give early treatment for hearing-impaired children from disadvantaged families. (3) Donating to long-term care households and single-parent families. The accumulated donation over the years was NTD27,820,000.
Double Caring Blood Donation 861 Participants during the Year	GIGABYTE has been recruiting blood donors in Taiwan since 2003, and we have been recognized as an "Outstanding Blood Donation Organization" for many consecutive years. We offer food, beverage, rice, and other supplies to replenish the energy of donating employees so that blood donations not only warm the heart but also warms the stomachs. The accumulative number of participants was 10,427, who have donated 3,975,000 c.c. of blood over the years.
Direct Purchase of Agricultural Products Annual Group Purchase NTD5,300,000	GIGABYTE has been promoting the group purchase of direct-selling agricultural products since 2002. GIGABYTE supports domestic agricultural products by purchasing directly from farmers, quick harvest during typhoon season, and when oversupply may make prices plunge occurs. In this way, not only can our employees buy cheaper, safer, and fresher fruits and vegetables, we have also seen farmers' lives improved and the value of agricultural products increased. The cumulative group purchase over the years was NTD 34,590,000.
Spring Festival Red Envelops for Ragpickers Sent out 400 Spring Festival Red Envelops	Since 2015, the GIGABYTE Education Foundation has passed on care and blessings to the people cleaning and collecting scraps, including the elderly living alone and physically handicapped people with limited mobility, etc. We believe society will be warmer and more beautiful if everyone contributes a little love and action. The accumulative number of red envelopes sent out over the years was 3,074.
Donation of Hardware Donation of 7 Touch Screens and 6 Notebook Computers for the Year	GIGABYTE allied with other companies in 2015 to help rural areas, disadvantaged groups, or organizations with related requirements obtain hardware and resources. GIGABYTE donated the following hardware in 2022: ▪ We donated 5 55" touch screens, 2 65" touch screens, and 6 notebook computers to the Department of Medical Engineering at National Taiwan University. The accumulative number of computer products donated over the years was 447.

Group Buy of Social Enterprise Products

In addition to the above corporate philanthropy activities, GIGABYTE launched 3 group buys of social enterprise products to support solving social issues innovative business models. The group buys from DIYI MD Masks, Charity Rice, and GoodWill Foods were supported by 608 people and had a total value of TWD 79,000 in 2022.

Contributing to Epidemic Prevention

- Received a certificate of appreciation from the Taipei City Government for contributions to epidemic prevention.
- Donated a "Contactless Smart Epidemic Prevention Kiosk" to Taipei City Hospital.

Promotion of Arts and Culture

GIGABYTE has long supported the arts and cultural activities in a variety of ways. The Upgrade Your Life Gallery, art and culture appreciation, Upgrade Your Life seminars, and art and cultural recreational activities encourage employees to purchase and participate in different art and cultural activities. In this way, these support performing arts groups through the box office and as the audience. GIGABYTE was recognized with a Bronze Award for permanent exhibitions at the 15th Arts & Business Award hosted by the Ministry of Culture in 2022.

The Upgrade Your Life Art Gallery hosted 5 exhibitions in 2022. GIGABYTE partnered with the Children Hearing Foundation, a long-time recipient of our donations, to host the "Hear the Pictures Talk" exhibition of paintings by children with impaired hearing between July and August. Employees were able to admire the artworks of hearing-impaired children and learn more about the topic of hearing impairment. (For more information, please refer to report section at GIGABYTE Education Foundation)

Cultivate Technological Talents and Implement Digital Inclusion

As a technology hardware manufacturer at the forefront of technology and innovation, GIGABYTE firmly believes that everyone should have the opportunity and ability to experience the convenience and progress brought by technology. Therefore, the GIGABYTE Education Foundation has continuously promoted science and technology education in multiple forms since 2010, just like building a wonderful science and technology city in which people of different genders, age groups, education levels, and other backgrounds can experience the surprise and happiness created by the science and technology.

● 2022 Technology Education Formula City

G-Design Contest

The Great Design Contest has been held for 19 consecutive years. It has an outstanding team of industry experts, and the contest themes are always closely related to the trend. The contest is student-oriented, providing handsome bonuses, and actively assists participants in patent applications. Therefore, it has become a well-known domestic science and technology creativity contest.

The theme of "Post-Covid Lifestyle" was chosen for the Innovative Technology category in 2022. Participants were invited to design a product that improved both quality of life and work to help people overcome problems they encountered during the pandemic. The theme of "Young Hearts and Learning Power" was chosen for the Upgrade Your Life category. Participants were invited to design a product that can be used as a teaching tool for interacting with others using technology as the lexicon. The products will inspire students during the technology learning process and be rewarded with understanding and attention when sharing with others.

Results in 2022: 537 entries received

Digital Charity

With the popularization of the digital age, GIGABYTE has also actively invested in the educational fields of digitally disadvantaged communities and ethnic groups, such as elders, foreign spouses, and children with rare diseases.

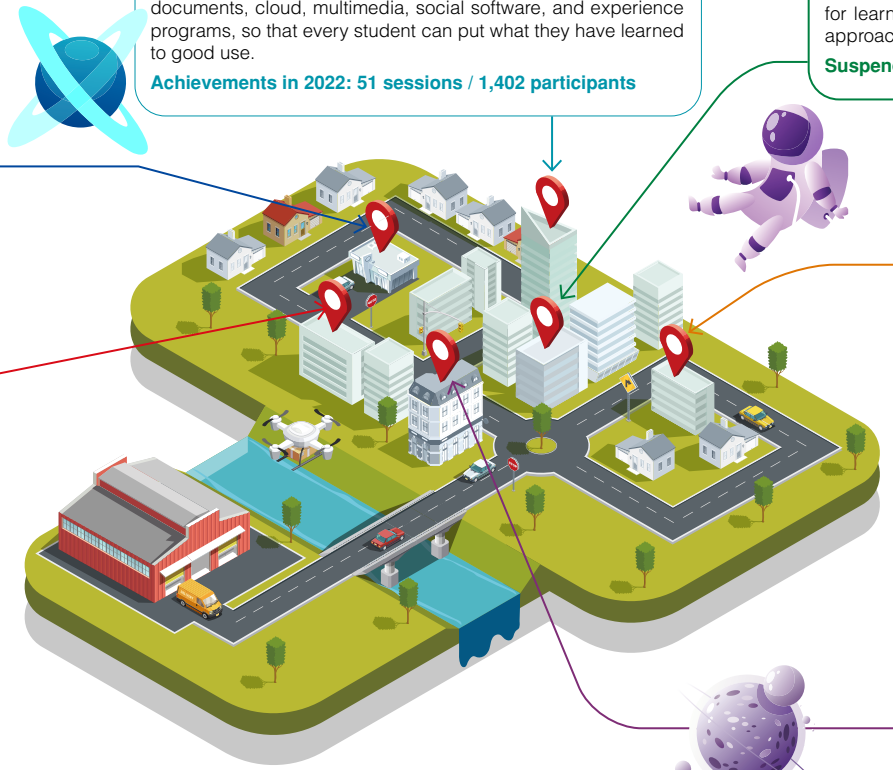
We provide computer and mobile phone teaching classes and focus on topics based on the participants' interests, such as documents, cloud, multimedia, social software, and experience programs, so that every student can put what they have learned to good use.

Achievements in 2022: 51 sessions / 1,402 participants

The Secret to Computers

GIGABYTE has opened the Nanping Factory in Taoyuan for schools to visit since 2002. It is still the only motherboard manufacturing factory in Taiwan that opened the production lines to the public for visiting. The types of visitors include elementary school summer camps, high schools, vocational schools, universities and colleges, and also expands to foreign visitors for learning. The Secret of Computers has become one of the most solid approaches for industry-university exchanges and unofficial diplomacy!

Suspended in 2022 due to COVID-19



Bring Technology to Campus & PC DIY

GIGABYTE not only opens the factory to students, but also actively enters the campus to provide with opportunities to learn about functions, composition, and operation of computer components, and through the DIY process to stimulate children's interest and impression of computer structure. We keep optimizing the teaching content, adding courses of Virtual Reality (VR) and Augmented Reality (AR) operations, and solar DIY to take root in campus technology quality.

Achievements in 2022: 77 sessions / 1,819 participants

TRIZ Innovative Thinking

TRIZ is a systematic approach to innovation based on 40 types of invention principles, ideality rules, use of resources, and system evolution trends. Proficiency with TRIZ invention principles and examples enables the rapid identification of effective solutions to problems.

GIGABYTE has collaborated with the Taiwan TRIZ Association since 2021 on hosting activities such as TRIZ "innovation and invention" instructor training and the TRIZ Cup Children's Creativity Challenge. We hope to cultivate innovative thinking at an early age and enhance the innovation ability of young students.

Achievement in 2022: Hosted 3 instructor training workshops

Computer Doctor

The resources on the earth are gradually used up. every citizen of the world must understand the concept of the circular economy. In 2019, Bestyield International opened the "Computer Doctor" course aiming at turning over the students' impression of "recycling" and understanding its value and importance.

Achievements in 2022: 1 session / 50 participants

(For more information regarding the G-Design Contest and its prizewinner, please refer to Great Design Official Website; for more exciting content of science and technology education, please refer to GIGABYTE Education Foundation Official Website)

6.2 Cultivation of Sustainability Thinking and Environmental Care

GIGABYTE partnered with the Plant-for-the-Planet Foundation from Germany between 2017 and 2020 to launch the "Make Earth Green Again" project. The project planted 75,000 trees on the forest rehabilitation site in Mexico and trained 1,367 climate justice ambassadors. The two parties cooperated again and launched a new 5-year collaborative project for "planting trees x carbon offset" at the end of 2022. At the same time, GIGABYTE continued to hold adoption of local forests, ocean conservation, and sustainability education within the company and in the community. We hope we can help boost the whole population's sustainability character and draw attention to environmental topics such as ecological conservation and climate change.

6.2.1 Deep Cultivation of Sustainability Thinking in Workplace

Communication and Cultivation of Sustainability Concepts

GIGABYTE publishes a "Sustainability e-Newsletter" every month. It features a hand-picked selection of the most popular sustainability affairs at the time and offers prize quizzes. Employees were encouraged to support global environment theme days or introduce GIGABYTE's sustainability policy and local/overseas sustainability trends in an entertaining manner. These encourage employees to think about sustainability topics and become willing to practice them in everyday work. News updates are also published on the GIGABYTE CSR Website at different times to provide stakeholders interested in GIGABYTE with our latest sustainability information.

SDGs Carnival - New Life for Old Things

To promote the ideals of "zero waste" and "circular economy", GIGABYTE has been hosting an employee flea market at our Headquarters at the end of each year since 2019. In 2022, we drew on our core expertise and invited Bestyield International to provide the "Recycling Waste Electronics for Charity" service in order to promote electronic waste reduction. A "Disaster Prevention and Traffic Safety Awareness" lecter was also added to the program to promote the philosophy of disaster reduction. By expanding the "Disaster Prevention Month" event that GIGABYTE hosts in December every year to include local residents, we hope to realize the inclusive vision of a zero-disaster community.

● Accomplishments in 2022

Number of donated items	Number of Donors	Avoided Waste	Reduced/Avoided Carbon Emissions
719+	145	509.2 kg	183.31 kg-CO_2e

[Note] Carbon reduction was calculated based on the EPA Product Carbon Footprint database, which indicated that waste disposal services in 2020 generated 360 kg-CO2e per metric ton of waste.

"3unlight" Volunteer Platform

The "3unlight" volunteer platform was formally launched by GIGABYTE in 2022. Current/former/retired employees and their families were invited to use the platform based on the themes of "initiative", "inspiration", and "influence." The platform integrates all Group's volunteering activities, such as coastal clean-ups, flea markets, and environmental education. It also automatically logs their hours of volunteering service to provide not only a more detailed record of each employee's participation but also includes a mechanism to redeem hours for gifts.

6.2.2 Environmental Care Practice

Thousand-Mile Trek – Go Green Taiwan

"Follow our dream, protect our land, care about all life" has always been the mission of GIGABYTE Go Green Club. In 2015, a group of nature lovers at GIGABYTE decided to venture beyond the office and launch the "Thousand Mile Trek - Go Green Taiwan" round-island trek. Participants include families of employees as well as retired employees. Since 2019, GIGABYTE has also invited university/college teachers and students to join in the trek to draw more public attention to the environment. The project had successfully completed 35 journeys and clocked up 1,106.76 km as of the end of 2022. The last journey will be taken out on 2023 Earth Day. (For more activity information and benefits, please refer to GIGABYTE CSR Website)

Cumulative hours of environmental service: 31,991 hours
Cumulative waste picked and removed: 15,722.38 kg

Second-time Partnership with Plant-for-the-Planet Foundation from Germany

GIGABYTE partnered with the Plant-for-the-Planet Foundation from Germany for a second time to launch a new 5-year "Plant Trees x Carbon Offset" partnership model at the end of 2022. The project promises to achieve 2,500 metric tons of carbon reduction a year by planting 12,500 trees. For each metric ton of carbon reduction, we will donate EUR2.5 toward the training of climate justice ambassadors and additionally purchase and offset 2,500 metric tons of carbon certificates. In 2022, 3,125 trees were planted for the 1st quarter of the 1st contract year. The project expects to plant 62,500 trees by 2027 and sponsor the training of up to a thousand children as climate justice ambassadors. The actions will help offset more than half of the emissions the Headquarters emits in a year.

The Ocean is Our Home

Picking up every piece of marine trash by hand symbolizes the pure commitment that GIGABYTE has made to the shoreline. GIGABYTE formally launched the "The Ocean is Our Home" project in 2021 based on years of experience in beach clean-ups. It represents our long-term commitment to protecting the ocean. We applied to the competent authority to adopt the Dayuan-Shalun coastline on a yearly basis. In 2022, we conducted 2 beach clean-ups and removed 2,226.5 kg of trash (including 1 session for suppliers). In the future, GIGABYTE will continue to reach out to other units to engage in real actions that make a difference in boosting awareness of ocean protection topics among businesses and individuals.

Cumulative participants: 256 person-times
Total Trash Removed: 3,122.3 kg

GIGABYTE G-HOME Sustainability Eco-roof

"Sustainability" is rooted in humanity's peaceful coexistence, embrace and symbiosis with nature." The G-HOME Sustainability Eco-roof was founded in 2013, of which the core concept includes three values: environment, employee, and life. That is, we sought to create an ecological oasis within the urban island where employees can connect with nature as well as promote ecological and lifestyle balance.

GIGABYTE gradually opened the rooftop for visit to employees' families, industry peers, government, education and other groups after its establishment. The roof was certified as an environmental education facility between 2017 and 2022 and offered two courses related to circular economy and rooftop greening. The courses introduced visitors with corporate sustainability ideals and views. They can also take the knowledge back to their home or workplace and expand the influence.

People influenced: 3,317
Group visits: 425 organizations

Appendix I. Sustainability Performance Summary in the Past 5 Years

Aspect	Main Index		2018	2019	2020	2021	2022
Economic Aspect	Consolidated Revenue (NTD 100 million)		609.24	617.81	846.03	1,219.05	1,072.64
	Operating Cost (NTD 100 million)		500.80	521.90	701.38	923.15	906.47
	Operating Expense (NTD 100 million)		78.48	81.35	102.47	151.04	107.71
	Employee Salary and Benefits (NTD 100 million)		55.99	53.44	69.14	107.23	48.74
	Earnings per Share (NTD)		4.04	3.05	6.88	21.01	10.29
Environmental Aspect	Greenhouse Gas Emission ($t\text{-}CO_2e$)[1]	Scope 1	661.29	657.63	648.09	1,063.52	627.81
		Headquarters	162.85	162.21	170.19	275.23	293.27
		Taipei Silicon Valley Park Office	The Taipei Silicon Valley Park Office where our subsidiaries are located was added to the scope of inventory in 2021.			24.69	41.17
		Taoyuan Nanping Factory	82.87	82.43	82.21	80.43	70.48
		China Dongguan Factory	309.36	179.25	167.85	360.02	24.62
		China Ningbo Factory	106.21	233.74	227.84	323.15	198.27
		Scope 2	27,002.64	27,800.91	28,123.84	28,874.43	27,283.64
		Headquarters	3,542.00	3,303.19	3,461.81	3,605.31	3,830.76
		Taipei Silicon Valley Park Office	The Taipei Silicon Valley Park Office where our subsidiaries are located was added to the scope of inventory in 2021.			311.78	476.46
		Taoyuan Nanping Factory	6,747.28	6,570.18	6,206.85	6,461.34	6,107.90
		China Dongguan Factory	9,975.37	10,709.94	11,255.87	10,909.10	9,875.28
		China Ningbo Factory	6,737.99	7,217.59	7,199.31	7,586.89	6,993.24
	Greenhouse Gas Emissions Intensity ($t\text{-}CO_2e$ / 1,000 motherboard equivalent pieces)		2.21	2.36	2.22	2.49	2.86
	Electricity Consumption (MWh)[1]	Headquarters, Taoyuan Nanping Factory; subsidiaries Bestyield International, G-Style, GIGAPIC, and Selita Precision (Taipei Silicon Valley Park Office)	18,572.70	18,524.16	18,995.40	20,674.18	20,556.94
		China Dongguan Factory, China Ningbo Factory	19,429.23	21,124.7	22,794.11	22,534.26	20,504.23
	Energy Consumption (GJ - including steam, gasoline, diesel fuel, LPG, and electricity)		147,514.21	150,922.69	154,879.76	163,903.31	154,346.18
	Water Use (tonnes)[2]	Headquarters, Taoyuan Nanping Factory	80,063	84,528	90,120	89,087	89,909
		China Dongguan Factory, China Ningbo Factory	222,522	209,884	201,063	170,148	163,055
	Waste Production (tonnes)		1,723.70	1,819.21	2,071.08	2,478.00	2,214.82
	General Industrial Waste- Non-recyclable (tonnes)	Headquarters	42.27	41.85	41.83	42.62	52.83
		Production Bases[3]	428.70	463.88	513.47	800.96	868.41
	Hazardous Industry Waste (tonnes)	Headquarters	0	0	0.6	1.22	0.88
		Production Bases[3]	114.2	106.51	216.93	232.19	140.69
	Volume of Waste per Unit Production (tonnes /1,000 motherboard equivalent pieces) of Production Bases		0.13	0.15	0.15	0.20	0.22
	Average Waste Production per Person (tonnes /person) of Headquarters		0.06	0.06	0.06	0.06	0.07
	Environmental Education Hours		12,945	10,570	8,132	13,318	13,692
Social Aspect	Total Number of Employee		6,716	7,471	7,303	7,026	7,269
	Average Age		34	33	34	34	33
	Average Service Year		6.81	5.87	6.23	8	8
	Employee Education Training Hours	Headquarters, Taoyuan Nanping Factory; subsidiaries Bestyield International, G-Style, GIGAPIC, Cloudmatrix, Senyun, Selita[4]	16,796	24,878	19,904	15,359	30,088
		China Dongguan Factory, China Ningbo Factory	9,141	59,010	18,998	15,169	13,136
	Fatal Occupational Injuries Ratio	Headquarters	No historical data due to the revision of GRI Standards	0	0	0	0
		Taoyuan Nanping Factory		0	0	0	0
		China Dongguan Factory		0.22	0	0	0
		China Ningbo Factory		0	0	0	0
	Severe Occupational Injuries (SOI) Ratio	Headquarters		0	0	0	0
		Taoyuan Nanping Factory		0	0	0	0
		China Dongguan Factory		0	0	0	0
		China Ningbo Factory		0	0	0	0
	Recordable Occupational Injuries	Headquarters		0	0.39	0.39	0
		Taoyuan Nanping Factory		2.28	0.69	0	0
		China Dongguan Factory		0.22	0	0	0
		China Ningbo Factory		0.83	0.41	1.27	2.21

[Note 1] As of 2021, the Taipei Silicon Valley Park Offices, where GIGABYTE subsidiaries Bestyield International and G-Style are located, have been included in the scope of GHG emissions and electricity consumption. In 2022, the subsidiaries GIGAPIC and Selita Precision located in the same park were also included.

[Note 2] The scope of water resource calculations included Business Headquarters, Taoyuan Nanping Factory, China Dongguan and Ningbo Factorys. 4F of Building B from Business Headquarters was also added in 2022.

[Note 3] All production locations: Includes GIGABYTE's 3 main bases, namely Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory

[Note 4] The subsidiaries Cloudmatrix, Senyun Precision Optical and Selita Precision were included in total employee training hours in 2022.

Appendix II. GRI Content Index

Terms of Use：The 2022 Sustainability Report was published by GIGABYTE with reference the GRI Standards. The disclosed data is for the period running from January 1 and December 31, 2022.
GRI 1 Version：GRI 1: Foundation 2021
GRI Sector Standards Used：None

GRI Standards / Disclosure Items	Page	Description and Omitted
GRI 2: General Disclosures 2021		
The organization and its reporting practices		
2-1 Organizational details	2	
2-2 Entities included in the organization's sustainability reporting	2	
2-3 Reporting period, frequency and contact point	2	
2-4 Restatements of information	2	
2-5 External assurance	2	Verification of the 2022 Sustainability Report is planned for August 2023
Activities and workers		
2-6 Activities, value chain and other business relationships	7	
2-7 Employees	53	
2-8 Workers who are not employees	63	
Governance		
2-9 Governance structure and composition	21	For more information, please refer to GIGABYTE 2022 Annual Report III. Corporate Governance Report
2-10 Nomination and selection of the highest governance body	-	For more information, please refer to GIGABYTE 2022 Annual Report page 41
2-11 Chair of the highest governance body	-	Chairman is also a member of the management team
2-12 Role of the highest governance body in overseeing the management of impacts	19	
2-13 Delegation of responsibility for managing impacts	19	
2-14 Role of the highest governance body in sustainability reporting	3	
2-15 Conflicts of interest	-	For more information, please refer to GIGABYTE 2022 Annual Report page 79
2-16 Communication of critical concerns	19	
2-17 Collective knowledge of highest governance body	-	For more information, please refer to GIGABYTE 2022 Annual Report page 45-46
2-18 Evaluating the highest governance body's performance	-	For more information, please refer to GIGABYTE 2022 Annual Report page 37
2-19 Remuneration policies	-	For more information, please refer to GIGABYTE 2022 Annual Report page 33, 100
2-20 Process to determine remuneration	-	
2-21 Annual total compensation ratio	22	
Strategy, policies and practices		
2-22 Statement on sustainable development strategy	3	
2-23 Policy commitments	9	
2-24 Embedding policy commitments	19	
2-25 Processes to remediate negative impacts	21	
2-26 Mechanisms for seeking advice and raising concerns	21	
2-27 Compliance with laws and regulations	33,56	
2-28 Membership associations	7	
Stakeholder engagement		
2-29 Approach to stakeholder engagement	14	
2-30 Collective bargaining agreements	60	
GRI 3: Material Topics of 2021		
3-1 Process to determine material topics	15	
3-2 List of material topics	16	
3-3 Management of material topics	6,20, 28,44, 52,69	
Material Topics GRI 200 Economy 2016; GRI 300 Environment; GRI 400 Society		
Financial Performance		
GRI 3: Material Topics	3-3 Management of material topics	6	-
GRI 201: Economic Performance	201-1 Direct economic value generated and distributed	8	-
Moral Integrity and Code of Conduct; Corporate Governance; Legal and Regulation Compliance; Customer Relationship Management; Brand Management			
GRI 3: Material Topics	3-3 Management of material topics	6,20,44	
GRI 405: Diversity and Equal Opportunity	405-1-a Diversity of governance bodies	22	-
	Overview of GIGABYTE	6	-
Risk Management / Information Security Management / Innovation Management (voluntary disclosure)			
GRI 3: Material Topics	3-3 Management of material topics	20	-
	Risk management and information security management strategies and measures	23-25	-
	Innovation management measures	26-27	-
Environmental Policy and Management System / Climate Change and Carbon Management / Energy management / Responsible Production / Green Consumption / Circular Economy /Pollution Prevention			
GRI 3: Material Topics	3-3 Management of material topics	28	

GRI Standards / Disclosure Items			Page	Description and Omitted
GRI 302: Energy	302-1	Energy consumption within the organization	29	-
	302-3	Energy intensity	30	-
	302-4	Reduction of energy consumption	30	-
GRI 303: Water and effluents (2018)	303-1	Interactions with water as a shared resource	31	-
	303-2	Management of water discharge-related impacts	-	GIGABYTE's main water source is domestic water, and discharges water in accordance with laws and regulations, without significant impact to the ecology.
	303-3	Water withdrawal	31	-
	303-4	Water discharge		-
	303-5	Water consumption		Leave out 303-5-b.c.d
GRI 305: Emissions	305-1	Direct (Scope 1) GHG emissions	39-40	-
	305-2	Energy indirect (Scope 2) GHG emissions		-
	305-3	Other indirect (Scope 3) GHG emissions		-
	305-4	GHG emissions intensity		-
	305-5	Reduction of GHG emissions		-
GRI 306: Effluents and Waste (2020)	306-2	Management of significant waste-related impacts	-	GIGABYTE not only manages the waste we generate but also track the reduction performance of 333 Reduction Alliance supplier partners (including carbon, water, and waste) by questionnaire surveys every year.
	306-3	Waste generated	32	-
	306-4	Waste diverted from disposal	-	GIGABYTE generated 2,214.82 tonnes of waste in 2022. All were disposed through qualified contractors.
	306-5	Waste directed to disposal		
Sustainable Supply Chain Management / Conflict Minerals				
GRI 3: Material Topics	3-3	Management of material topics	44	
GRI 204: Procurement Practices	204-1	Proportion of spending on local suppliers	45	
GRI 414: Supplier Social Assessment	414-2	Negative social impacts in the supply chain and actions taken	47-48	Focus on conflict minerals.
Occupational Health and Safety / Labor Relations / Talent Cultivation and Retention / Human Rights, Equality, and Diversity				
GRI 3: Material Topics	3-3	Management of material topics	52	
GRI 202: Market Presence	202-1-a	Ratios of standard entry level wage by gender compared to local minimum wage	56	-
	401-1	New employee hires and employee turnover	54	-
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	57	-
	401-3	Parental Leave	67	-
GRI 402: Labor/ Management Relations	Minimum notice periods regarding operational changes		-	Notice 10 days before for service for more than 3 months and less than 1 year. Notice 20 days before for service for more than 1 year and less than 3 years. Notice 30 days before for service for more han 3 years.
GRI 403: Occupational Health and Safety (2018)	403-1	Occupational health and safety management system	61	-
	403-2	Hazard identification, risk assessment, and incident investigation	62	
	403-3	Occupational health services	64	
	403-4	Worker participation, consultation, and communication on occupational health and safety	61	-
	403-5	Worker training on occupational health and safety	63	-
	403-6	Promotion of worker health	64	-
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	62	-
	403-8	Workers covered by an occupational health and safety management system	61	-
	403-9	Work-related injuries	63	-
	403-10	Work-related ill health	65	-
GRI 404: Training and Education	404-1	Average hours of training per year per employee	59	-
	404-2.a	Programs for upgrading employee skills	58	
	404-3	Percentage of employees receiving regular performance and career development reviews	55	-
GRI 405：Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	22,53	-
	405-2	Ratio of basic salary and remuneration of women to men	56	-

Appendix III. Cross-Reference Table with the Ten Principles of UN Global Compact

Category	The Ten Principles	Report Content or Description
Human Rights	Businesses should support and respect the protection of internationally proclaimed human rights	5.2 Human Rights Commitment and Diversity Communication
	Make sure that they are not complicit in human rights abuses	4.1.2 Supply Chain Risk Management
Labor Standards	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	5.2 Human Rights Commitment and Diversity Communication
	The elimination of all forms of forced and compulsory labor	5.2 Human Rights Commitment and Diversity Communication
	The effective abolition of child labor	5.2 Human Rights Commitment and Diversity Communication
	The elimination of discrimination in respect of employment and occupation	5.2 Human Rights Commitment and Diversity Communication
Environment	Businesses should support a precautionary approach to environmental challenges	Chapter 3 Green Production
	Undertake initiatives to promote greater environmental responsibility; an	3.3 Responsible Production 6.2.2 Practicing Environmental Care
	Encourage the development and diffusion of environmentally friendly technologies	3.3.1 Friendly Product
Anti-corruption	Businesses should work against corruption in all its forms, including extortion and bribery	2.1 Integrity Management and Legal and Regulation Compliance

Appendix IV. TCFD Index

Core Element	Description	Recommended Disclosures		
Governance	Disclose the organization's governance around climate-related risks and opportunities.	a) Describe the board's oversight of climate-related risks and opportunities	b) Describe management's role in assessing and managing climate-related risks and opportunities	
		3.2.1 Climate Governance Organization	**3.2.1 Climate Governance Organization**	
Strategy	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2° C or lower scenario
		3.2.2 Climate Risk Assessment and Management Strategy	**3.2.3 Identification of Climate-related Risks and Opportunities**	**3.2.2 Climate Risk Assessment and Management Strategy**
Risk Management	Disclose how the organization identifies, assesses, and manages climate-related risks.	a) Describe the organization's processes for identifying and assessing climate-related risks	b) Describe the organization's processes for managing climate-related risks	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management
		3.2.2 Climate Risk Assessment and Management Strategy	**3.2.2 Climate Risk Assessment and Management Strategy**	**2.3.1 Risk Identification and Management** **3.2.2 Climate Risk Assessment and Management Strategy**
Metrics and Targets	Disclose the metrics and targets used to assess and management relevant climate-related risks and opportunities where such information is material.	a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	b) Disclose Scope 1, Scope 2, and, if appropriate,Scope 3 greenhouse gas (GHG) emissions, and the related risks	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets
		3.2.2 Climate Risk Assessment and Management Strategy	**3.2.4 Greenhouse Gas Management Targets and Performance**	**3.2.4 Greenhouse Gas Management Targets and Performance**

Appendix V. Cross-Reference Table with the Climate-related Disclosures for TWSE/TPEx Listed Companies

Item	Implementation Status/Corresponding Chapter
1. Describe the board of directors' and management's oversight and governance of climate-related risks and opportunities.	3.2.1 Climate Governance Organization
2. Describe how the identified climate risks and opportunities affect the business, strategy, and finances of the business (short, medium, and long term).	3.2.2 Climate Risk Assessment and Management Strategy 3.2.3 Identification of Climate-related Risks and Opportunities
3. Describe the financial impact of extreme weather events and transformative actions.	
4. Describe how climate risk identification, assessment, and management processes are integrated into the overall risk management system.	
5. If scenario analysis is used to assess resilience to climate change risks, the scenarios, parameters, assumptions, analysis factors and major financial impacts used should be described.	
6. If there is a transition plan for managing climate-related risks, describe the content of the plan, and the indicators and targets used to identify and manage physical risks and transition risks.	3.2.2 Climate Risk Assessment and Management Strategy GIGABYTE has not yet formulated a climate transition plan that complies with the "Paris Climate Agreement" and the 1.5 °C temperature increase scenario. We are, however, using SBTi tools to analyze the pathway for science-based reduction targets. The corresponding physical risks and transition risks have been incorporated into our climate scenario analysis as well.
7. If internal carbon pricing is used as a planning tool, the basis for setting the price should be stated.	3.1.2 Sustainability Fund and Reduction Reward Program
8. If climate-related targets have been set, the activities covered, the scope of greenhouse gas emissions, the planning horizon, and the progress achieved each year should be specified. If carbon credits or renewable energy certificates (RECs) are used to achieve relevant targets, the source and quantity of carbon credits or RECs to be offset should be specified.	3.2.4 Greenhouse Gas Management Targets and Performance More information on GHG inventory and assurance can be found on P.77-78 of the GIGABYTE 2022 Annual Report
9. Greenhouse gas inventory and assurance status.	

Appendix VI. SASB Index

Topic and Code	Accounting Metric	Chapter or Explanation
Product Security		
TC-HW-230a.1	Description of approach to identifying and addressing data security risks in products	2.3.2 Enhancing Information Security
Employee Diversity and Inclusion		
TC-HW-330a.1	Percentage of gender representation for (1) management, (2) technical staff and (3) all other employees	SASB Statistics
Product Life Cycle Management		
TC-HW-410a.1	Percentage of products by revenue that contain IEC 62474 declarable substances	GIGABYTE's products are 100% compliant with IEC 62474 declarable substances list.
TC-HW-410a.2	Percentage of eligible products, by revenue, meeting the requirements for EPEAT registration or equivalent	GIGABYTE's main products are components of system hardware (e.g. motherboards, graphics cards), so cannot obtain EPEAT and Energy Star certification which primarily aim at terminal electrical and electronic products.
TC-HW-410a.3	Percentage of eligible products, by revenue, meeting ENERGY STAR® criteria	
TC-HW-410a.4	Weight of end-of-life products and e-waste recovered, percentage recycled	SASB Statistics
Supply Chain Management		
TC-HW-430a.1	Percentage of Tier 1 supplier facilities audited in the RBA Validated Audit Process (VAP), or equivalent, by (a) all facilities and (b) high-risk facilities	SASB Statistics
TC-HW-430a.2	Tier 1 suppliers' (1) non-conformance rate with the RBA Validated Audit Process (VAP), or equivalent, and (2) associated corrective action rate for (a) priority non-conformances and (b) other non-conformances	100% of tier 1 suppliers passed the RBA VAP or equivalent audit process in 2022.
Materials Sourcing		
TC-HW-440a.1	Description of the management of risks associated with the use of critical materials	4.1.3 Conflict Minerals Management

SASB Statistics

TC-HW-330a.1

Percentage of gender representation for (1) management, (2) technical staff and (3) all other employees

	Male	Female
Management	14%	5%
Technical staff	29%	19%
All other employees	16%	17%
Total	59%	41%

TC-HW-410a.4

Weight of end-of-life products and e-waste recovered, percentage recycled

Total weight of recycled (tonnes) / Total weight of products sold (tonnes) =792.19/14,327.94=5.53%

* All other wasted products were disposed of through qualified contractors in accordance with legal procedures.

TC-HW-430a.1.

Percentage of Tier 1 supplier facilities audited in the RBA Validated Audit Process (VAP), or equivalent audit (customer managed audit, CMA), by (a) all facilities and (b) high-risk facilities

(a) Number of suppliers audited under CMA process by a third party/ Number of suppliers with ongoing trading records = 44/257=17.12%

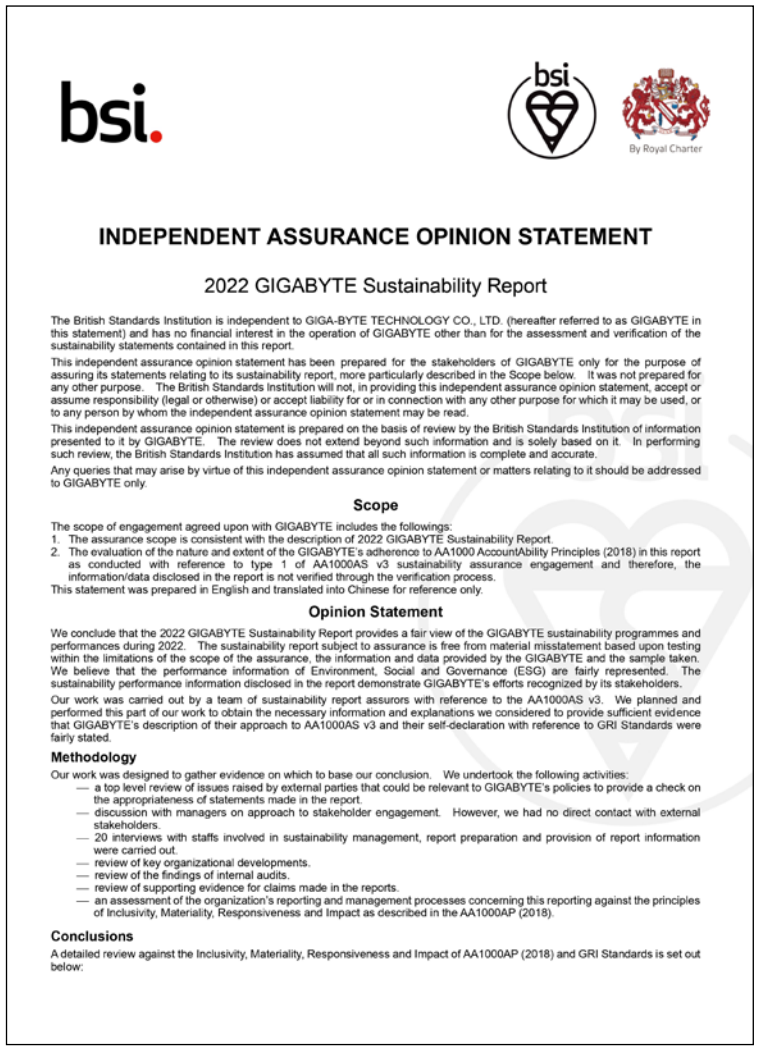
(b) Number of suppliers audited under CMA process by a third party / Number of high-risk suppliers = 44/44=100%

Appendix VII. Sustainability Disclosure Indicators - Computer and Peripheral Equipment Industry

Indicator	Indicator Category	Annual Disclosure	Unit
1. Total energy consumption, percentage of externally purchased electricity, and renewable energy usage	Quantification	For total energy consumption in 2022 please refer to 3.1.1 Environmental Management Performance. All electricity consumed by GIGABYTE are currently purchased externally with no use of renewable energy.	Gigajoule (GJ), Percentage (%)
2. Total water withdrawal	Quantification	Please refer to 3.1.1 Environmental Management Performance	1,000 m^3
3. Total mass of hazardous waste produced and percentage recycled	Quantification	141.57 metric tons of hazardous waste were produced in 2022; 76.8 metric tons were recycled Percentage recycled was 54.25%	Tons (t), Percentage (%)
4. Occupational disaster types, frequency, and ratios	Quantification	Please refer to 5.3.1 Environmental Safety and Health	Ratio (%), Frequency
5. Disclosure of product life cycle management: Include mass of scrapped products and waste electronics, as well as percentage recycled (Note 1)	Quantification	792.19 metric tons of electronic products were repaired, recycled, and refurbished in 2022; 764.44 metric tons were collected after repairs, refurbished after recycling for re-manufacturing or resale. Recycling ratio was 96.50%	Tons (t), Percentage (%)
6. Description of risk management related to use of critical materials	Qualitative Description	Please refer to 4.1.3 Conflicts Minerals Management	N/A
7. Total monetary losses caused by litigation relating to laws and regulations on anti-competitive behavior	Quantification	There was no litigation relating to laws and regulations on anti-competitive behavior in 2022	Reporting Currency
8. Product output of key products by category	Quantification	Please refer to Overview of GIGABYTE	Varied depending on product type

[Note 1] An explanation should be provided for the sale of scraps or their disposal in some other means

Appendix VIII. Independent Assurance Opinion Statement



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By Royal Charter

INDEPENDENT ASSURANCE OPINION STATEMENT

2022 GIGABYTE Sustainability Report

The British Standards Institution is independent to GIGA-BYTE TECHNOLOGY CO., LTD. (hereafter referred to as GIGABYTE in this statement) and has no financial interest in the operation of GIGABYTE other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of GIGABYTE only for the purpose of assuring its statements relating to its sustainability report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by GIGABYTE. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to GIGABYTE only.

Scope

The scope of engagement agreed upon with GIGABYTE includes the followings:

1. The assurance scope is consistent with the description of 2022 GIGABYTE Sustainability Report.
2. The evaluation of the nature and extent of the GIGABYTE's adherence to AA1000 AccountAbility Principles (2018) in this report as conducted with reference to type 1 of AA1000AS v3 sustainability assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

This statement was prepared in English and translated into Chinese for reference only.

Opinion Statement

We conclude that the 2022 GIGABYTE Sustainability Report provides a fair view of the GIGABYTE sustainability programmes and performances during 2022. The sustainability report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the GIGABYTE and the sample taken. We believe that the performance information of Environment, Social and Governance (ESG) are fairly represented. The sustainability performance information disclosed in the report demonstrate GIGABYTE's efforts recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurors with reference to the AA1000AS v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that GIGABYTE's description of their approach to AA1000AS v3 and their self-declaration with reference to GRI Standards were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top level review of issues raised by external parties that could be relevant to GIGABYTE's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 20 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000AP (2018).

Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness and Impact of AA1000AP (2018) and GRI Standards is set out below:

Inclusivity

This report has reflected a fact that GIGABYTE has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the GIGABYTE's inclusivity issues.

Materiality

GIGABYTE publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of GIGABYTE and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the GIGABYTE's management and performance. In our professional opinion the report covers the GIGABYTE's material issues.

Responsiveness

GIGABYTE has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for GIGABYTE is developed and continually provides the opportunity to further enhance GIGABYTE's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the GIGABYTE's responsiveness issues.

Impact

GIGABYTE has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. GIGABYTE has established processes to monitor, measure, evaluate and manage impacts that lead to more effective decision-making and results-based management within the organization. In our professional opinion the report covers the GIGABYTE's impact issues.

GRI Sustainability Reporting Standards (GRI Standards)

GIGABYTE provided us with their self-declaration of with reference to GRI Standards 2021 (For each material topic covered in the applicable GRI Sector Standard and relevant GRI Topic Standard, comply with all reporting requirements for disclosures). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported or omitted. In our professional opinion the self-declaration covers the GIGABYTE's sustainability topics.

Assurance level

The moderate level assurance provided is with reference to AA1000AS v3 in our review, as defined by the scope and methodology described in this statement.

Responsibility

The sustainability report is the responsibility of the GIGABYTE's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of Lead auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064 and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

Peter Pu, Managing Director BSI Taiwan

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...making excellence a habit.™

Statement No: SRA-TW-791784
2023-09-08

Taiwan Headquarters: 2nd Floor, No. 37, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.

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2021 Sustainability Report - Errata

2021 Report - Overview of GIGABYTE > p.11 > 2020 Generation and distribution of direct economic value

- Employee salary and benefits should be revised to read TWD 6,860,068 thousand; retained economic value should be revised to read TWD 5,086,283 thousand.

2021 Report - 2.4 Innovation Management > p.27 > Cumulative Number of Obtained Patents

- 2020 should be revised to 2,575 cases; 2021 should be revised to 2,769 cases

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Thank you for reading GIGABYTE 2022 Sustainability Report
If you have any suggestion, welcome to e-mail CSR@gigabyte.com