



# 4

## Supply Chain Management



Policies for Sustainable Management of Suppliers



Sustainable Supply Chain Impact



Promotion of Mutual Growth

# Supply Chain Management

## Management approach for material issues

### Supply Chain Management

#### Meaning to the Group

The Group is actively engaged in the implementation of supply chain management practices to develop efficient long-term collaborative relationships with suppliers, as well as environmental, social and governance risk assessments and audit verifications which allow joint fulfillment of corporate social responsibilities by suppliers. This serves to strengthen the resilience of our supply chain, reduce operational risk, and ensure sustainable management.

#### Policies and Commitments

The Group requires suppliers to comply with local laws and regulations and the Group's Supplier Social and Environmental Responsibility Code of Conduct. Furthermore, the Group fully considers social responsibilities and environmental benefits and gives priority to environmentally friendly products and services, seeking to balance both economic and environmental benefits. The Group continuously optimizes and improves green procurement standards and management systems and works with upstream and downstream manufacturers to implement CSR such as environmental protection, energy conservation, and carbon reduction to create a sustainable supply chain.

#### Goals and Targets

##### Short-term goals

- Encourage suppliers to submit compliance information on our RoHS-REACH intelligent management platform to achieve 100% compliance with client requirements.
- Achieve 100% survey response rates regarding the use of conflict minerals from suppliers to ensure that no conflict minerals are used.
- Continuous supervision of suppliers through on-site audits to ensure implementation of the Supplier Social and Environmental Responsibility Code of Conduct.
- Continue to encourage high power-consuming suppliers to complete GHG inventories and carbon reduction plans.
- Promote zero landfill waste management requirements for key suppliers.

##### Mid- to long-term goals

- Encourage suppliers to formulate carbon reduction targets and carbon neutrality plans, implement carbon reduction plans, and review achievement progress to realize the Group's goal net zero greenhouse gas emissions across value chain by 2050.
- Continue to strengthen the resilience of suppliers and initiate mutual growth projects to build a sustainable supply chain.

#### Grievance Mechanism

Please see Section [Stakeholder Communication and Responsibilities](#) for details.

#### Evaluation of the Management Approach

We host management review meetings every year to discuss how to continuously strengthen the management performance of suppliers and track objective achievements to continuously improve performance.

#### Specific Actions

- Audited 76 major suppliers (electronics procurement companies only). Following encouragement and improvement of deficits, all on-site audit results were aligned with our Supplier Social and Environmental Responsibility Code of Conduct.
- Completed conflict minerals surveys for 2,629 suppliers with response rates of 100%. No use of conflict minerals was discovered.
- Assisted and supported 40 suppliers in improving environmental violations and assisted and supported 110 suppliers with high environmental impacts to report and disclose Pollutant Release and Transfer Register (PRTR) data.
- Regularly hosted seminars to interpret environmental protection laws and require suppliers to enhance QC 080000 Hazardous Substance Process Management processes. Required suppliers to build their own RoHS 10 restricted substance detection capabilities while also developing a RoHS-REACH intelligent management platform for material management.

The Group is committed to promoting virtuous cycles in its industry and supply chain and actively collaborates with suppliers to build sustainable development in supply chains. We require suppliers to comply with local regulations and our Supplier Social and Environmental Responsibility Code of Conduct. The Group fully considers social responsibilities and environmental benefits and prioritizes environmentally friendly, energy-saving, low-carbon, and easy-to-reuse supply chain products to create products and services that balance both economic and environmental benefits.

In 2020, the Institute of Public and Environmental Affairs (IPE) issued the Green Supply Chain 2020 CITI Evaluation Annual Report, which targets 20 industries and includes ratings and rankings for 497 enterprises. Due to the support of our many stakeholders and collaborations with our many suppliers, the Group was able to surpass many international brands, ranking at 13<sup>th</sup> place overall and ranking 2<sup>nd</sup> in the IT industry. We have maintained a top-five ranking in the IT industry for three consecutive years. Additionally, the Group's ranking in the Supply Chain Climate Transparency Index (SCTI) in the IT industry rose to 3<sup>rd</sup> places compared with last year, when we were ranked at 9<sup>th</sup> place. The Group adheres to core principles and continues to implement supply chain management, strictly control risks, and seize opportunities to guide suppliers in continuous consideration and improvement of social, environmental, and economic aspects. We strive to expand our influence to achieve sustainable development goals.

《 Green Supply Chain 2020 CITI Evaluation Annual Report 》

《 Supply Chain Climate Transparency Index 》

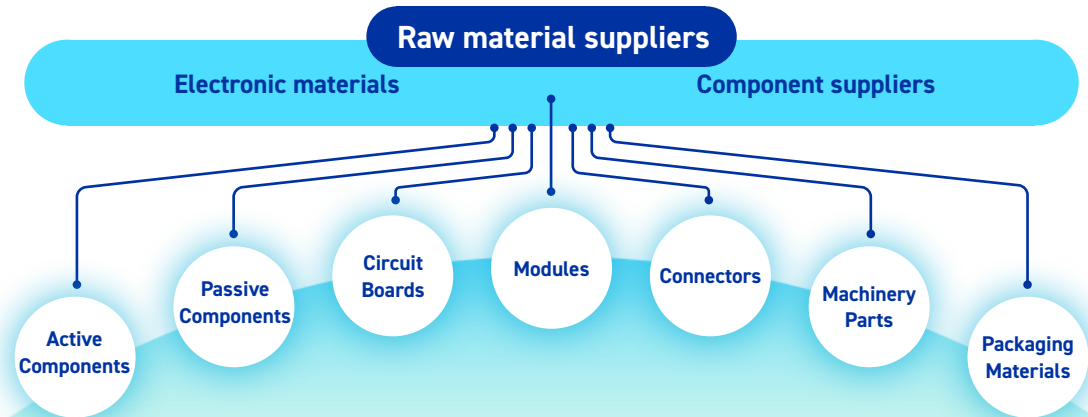


# Policies for Sustainable Management of Suppliers

## Supplier Management System

The Group is the largest electronics manufacturer in the world, with many suppliers and clients from all over the globe. The Group shoulders heavy responsibilities and can influence sustainable developments within supply chains to realize the Group's corporate social responsibilities. As part of Responsible Supply-Chain Management (RSM) procedures, the Group actively participates in the discussion of issues relating to social and environmental responsibilities of its supply chains. We regard fulfillment of corporate social responsibilities as a basic condition for screening suppliers. We conduct annual audits of suppliers to ensure supplier compliance with our Supplier Social and Environmental Responsibility Code of Conduct and may request improvements based on audit results.

Our raw material suppliers are further divided into electronic materials and component suppliers, and materials are respectively classified by-product into active components, passive components, circuit boards, modules, connectors, machinery parts, and packaging materials.

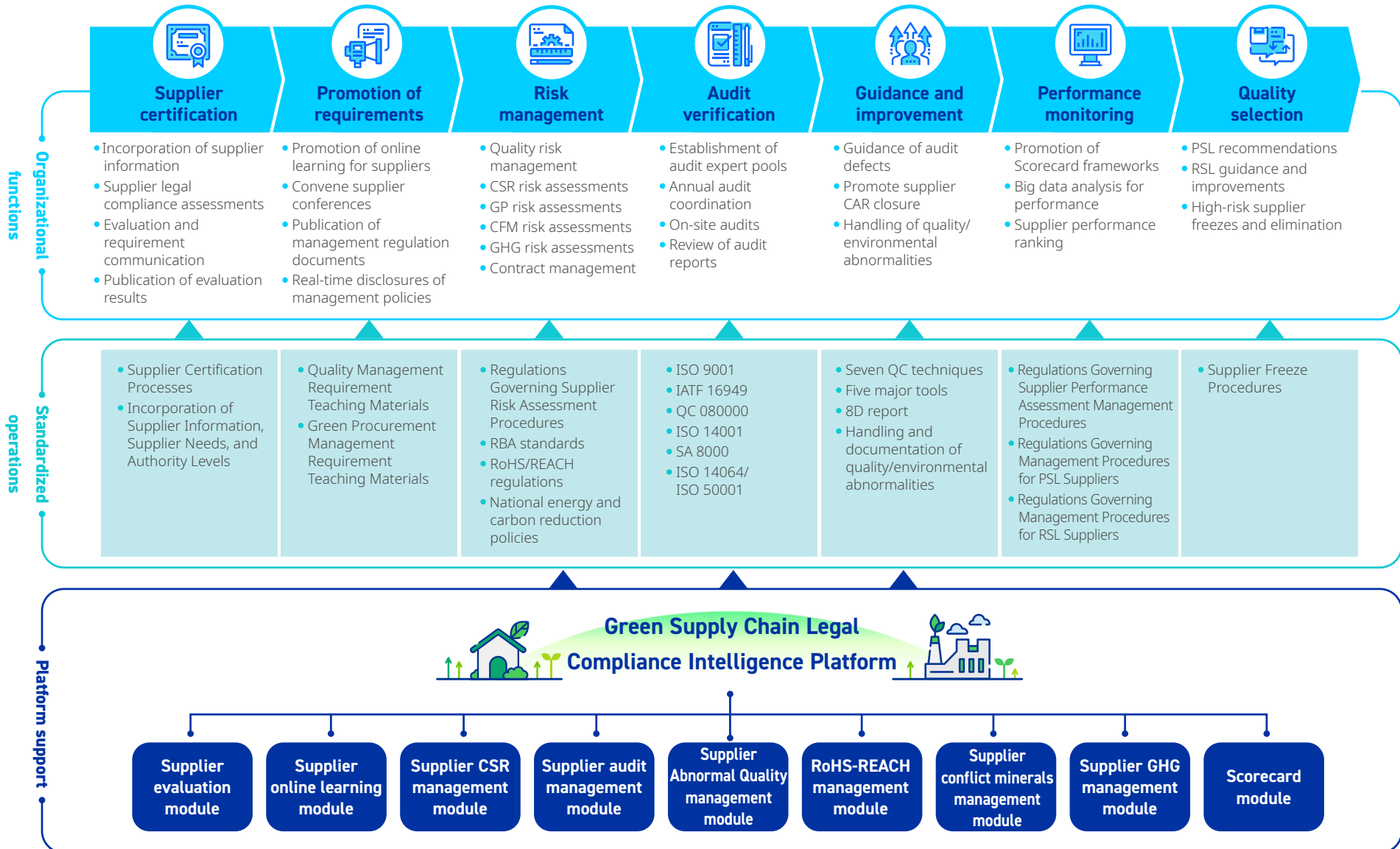


The Group and its suppliers work together to enhance capabilities in sustainability issues, and a comprehensive and systematic supplier management system has been established to achieve digital management and internal data sharing. Each stage of supplier development, qualification assessment, performance evaluation, and elimination of under-performers is managed and controlled to ensure that suppliers meet the requirements of the Group.



《 Supplier Social and Environmental Responsibility Code of Conduct 》

## Supplier Management System Structure



## Supplier Management Processes

The Group adopts a circular mechanism for supplier management processes which includes the four major stages of regulatory compliance, risk assessment, audit verification, and continued improvement. We implement social and environmentally responsible management structures in our supplier management processes and conduct data analysis regarding supplier compliance with social and environmental responsibilities to assist suppliers in improving vulnerabilities, thereby enhancing their social and environmental performance. We adhere to our four management principles and communicate with our suppliers through a variety of channels as we continue to exchange information with and guide our suppliers in implementing improvement actions to drive virtuous cycles in responsible supply chains for the electronics industry.

### Circulation mechanism for supplier management policy and process



STEP

1

### Regulatory Compliance

The Group has compiled its “Green Procurement Management Manual” and “Supplier Management Manual” to serve as basic guidelines for supplier management at Group units. New suppliers must pass risk assessments for social and environmental responsibilities and sign “Procurement Contracts” and “Environmental and Social Responsibility Commitments” to ensure that they comply with our Supplier Social and Environmental Responsibility Code of Conduct and other supplier regulations, and that understand the Group’s specific requirements toward responsible supply chains. In 2020, the RBA Code of Conduct was updated to version 7.0. The Group’s Supplier Social and Environmental Responsibility Code of Conduct was also updated in accordance with the latest version of the RBA Code of Conduct.

Additionally, all suppliers are required to sign “Vendor Commitments” and “Proactive Supplier Declarations” and pledge not to request, offer, or conduct any bribery actions or provide improper benefits to Group affiliates, related persons, and/or designated personnel. Additionally, suppliers also pledge not to directly or indirectly benefit Group employees, related persons, and/or designated personnel.

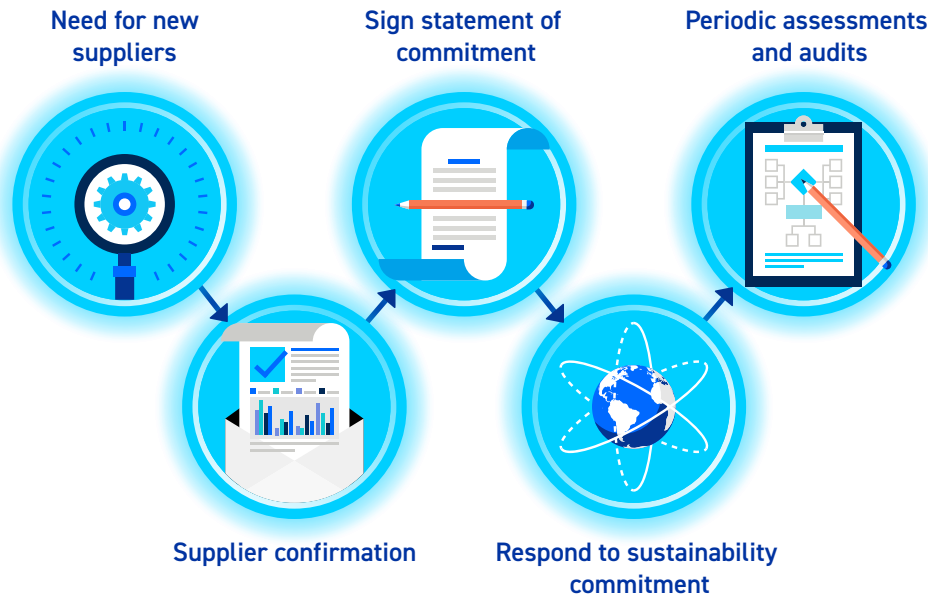
STEP

## 2 Risk Assessment

New supplier evaluations are an important part of our management system. Through ESG (Environmental, Social, and Governance) oriented risk assessment, sample recognition, and supplier audits, the production capacities of new suppliers and their enthusiasm for transactions with the Group can be identified to develop a solid basis for effective long-term collaborative relationships and sustainable management for the Group.

The Group collects the following information from new suppliers through our “Supplier Evaluation System”: basic information cards, component recognition certificates, environmental protection, and social responsibility commitments, and due diligence for conflict minerals. We also conduct risk assessments for individual items such as supplier quality, green products, social and environmental responsibility, and product environmental impact. In 2020, all 31 of our new suppliers in the electronics procurement category passed environmental and social selection standards.

### Group Supplier Risk Assessment Processes



STEP

## 3 Audit Verification

The Group conducts quality assessments, process assessments, social and environmental responsibilities, green products, and greenhouse gas (GHG) audits for medium- and high-risk suppliers; audit or post-audit improvement results must meet the requirements of the Group before suppliers can be included in our list of qualified suppliers. The Group also increases management oversight for suppliers that account for 85% of procurement values for supplied materials or those that provide key components. Regular online surveys and on-site audits of suppliers are conducted through our supplier management platform. If zero-tolerance deficits are found during audits, suppliers will lose the right to be selected for new cases; for non-zero-tolerance deficits, suppliers will be allowed to provide improvement plans and measures within a stipulated deadline based on the severity of the deficit. Reviews are carried out for serious issues. Suppliers who do not complete improvements within allotted times will be included in our list of suppliers restricted for poor performance. In 2020, we conducted audits on a total of 76 major suppliers. Audit results for these suppliers only contained non-zero-tolerance deficits, and improvement plans and measures were required within a time limit. The Group will continue to track and improve upon these supplier deficits.

### Suppliers are strictly prohibited from conducting any of the following zero-tolerance actions:

- Use of child labor
- Use of forced labor/prison labor
- Discharge of untreated toxic and hazardous substances or materials
- Actions and working environments that can cause immediate physical harm to employees
- Providing false information to the Group
- Retaliation against employees who provide factual information

### CSR-Related Basic Requirements for New Suppliers

#### Management System

Passed ISO 14001, ISO 45001, ISO 14064, and QC 080000 system certification

#### CSR Risk Assessment

Working hours, salary and benefits, environmental assessment approval, environmental violations, dangerous procedures, and management systems

#### CSR Audit

We use the RBA VAP Audit Checklist when conducting audits

**Results of supplier ESG (Environmental, Social, and Governance) audit assessments in 2020**



**GPD Supplier Audit Items**

Aspects and Standards	Audited suppliers	Pass Rate
QPA & QSA & SCM (Involving ISO 9000, IATF 16949)	50	92%
GP (Involving QC 080000, RoHS, REACH)	31	93%
GHG (Involving ISO 14064)	6	84%
CSR (Involving RBA, ISO 14001, ISO 45001)	53	86%

**Notes:**

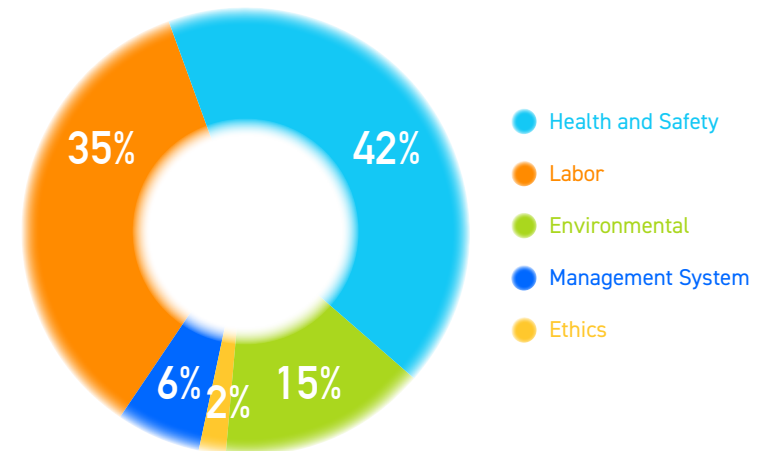
- GPD: Global Procurement Division
- QPA: Commodity Quality Process Assessment
- QSA: Quality System Assessment
- SCM: Supplier Chain Management Assessment
- GP: Green Product Assessment
- GHG: Greenhouse Gases
- CSR: Corporate Social Responsibility

The Group's supplier CSR audits are conducted using RBA VAP 6.0 (Validated Assessment Program) tools. Dedicated supply chain management personnel in the Group's procurement department formed audit teams with experts in the Human Resources, Fire/Industrial Safety, Environmental Protection and Energy Saving and Carbon Reduction units. Audits encompass five aspects: Labor, Health and Safety, Environmental, Ethics and Management System. RBA updated the RBA Code of Conduct to version 7.0 in 2020. Therefore, in 2021, we adapted RBA VAP 7.0 for the implementation of supplier CSR audits.

In 2020, the RBA Code of Conduct was updated to version 7.0. The Group's Supplier Social and Environmental Responsibility Code of Conduct was also updated in accordance with the latest version of the RBA Code of Conduct.

In order to prevent infection risks from on-site audits during the pandemic while ensuring that the Group continued to conduct audits and verifications for suppliers, we began implementing audits of relevant documentation and records for some suppliers, supplemented by interviews with supplier managers and employees conducted using video conferencing tools.

**Distribution of CSR audit deficits in 2020**



Note: Audits conducted in 2020 found no incidents relating to child labor, forced labor, or prohibitions of employee freedom of association.

STEP

# 4 Continuous Improvement

Supplier performance evaluations are a particularly important component of the supplier management system. We score supplier performance from five major aspects: quality, cost, service, delivery, and corporate social, environmental responsibility (total score is 100 points). Up to 30 points can be deducted from suppliers due to poor implementation of social and environmental responsibilities, causing them to be placed on the Restricted Supplier List (RSL). We use the Scorecard system to conduct effective monitoring of supplier performance and encourage suppliers to engage in continuous improvement.

For RSL suppliers, the Group will continue to encourage implementation of improvements through a series of measures, such as repeated deductions from performance scores, review meetings with senior executives of said supplier, and official letters to the supplier's CEO. This encourages suppliers to meet the Group and client requirements. If suppliers do not complete the improvements within stipulated time limits following guidance provided by the Group, the Group will consider reducing and restricting the use of the supplier for new cases and may even cancel the collaborative relationship.

## Supplier performance (Scorecard) review



### Social and environmental responsibilities

- CSR management system
- Audit results and improvement of non-compliance items
- Survey of conflict minerals
- Energy and carbon reduction and management of hazardous materials



### PSL (Preferred Supplier List)

- Allocate higher proportion of orders
- Recommendation for new ODM projects
- The Group strategic partner

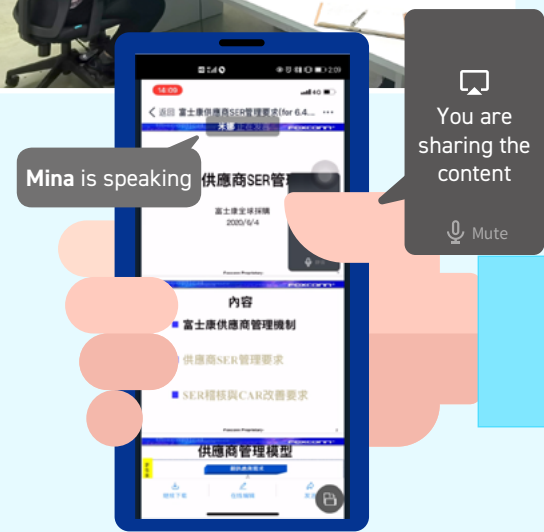


### RSL (Restricted Supplier List)

- Reduction of orders
- Prohibition of usage in new ODM projects
- Freeze

# CSR CAR Improvement Seminars

To assist our suppliers in correcting deficits discovered during Group audits within specified time limits, the Group convened a "Supplier CSR CAR improvement online seminar" on June 4, 2020. We invited 51 managers from 14 suppliers to participate in this event. The Group communicated management measures and requirements to supplier partners through this online seminar and provided practical solutions for common problems faced by suppliers.



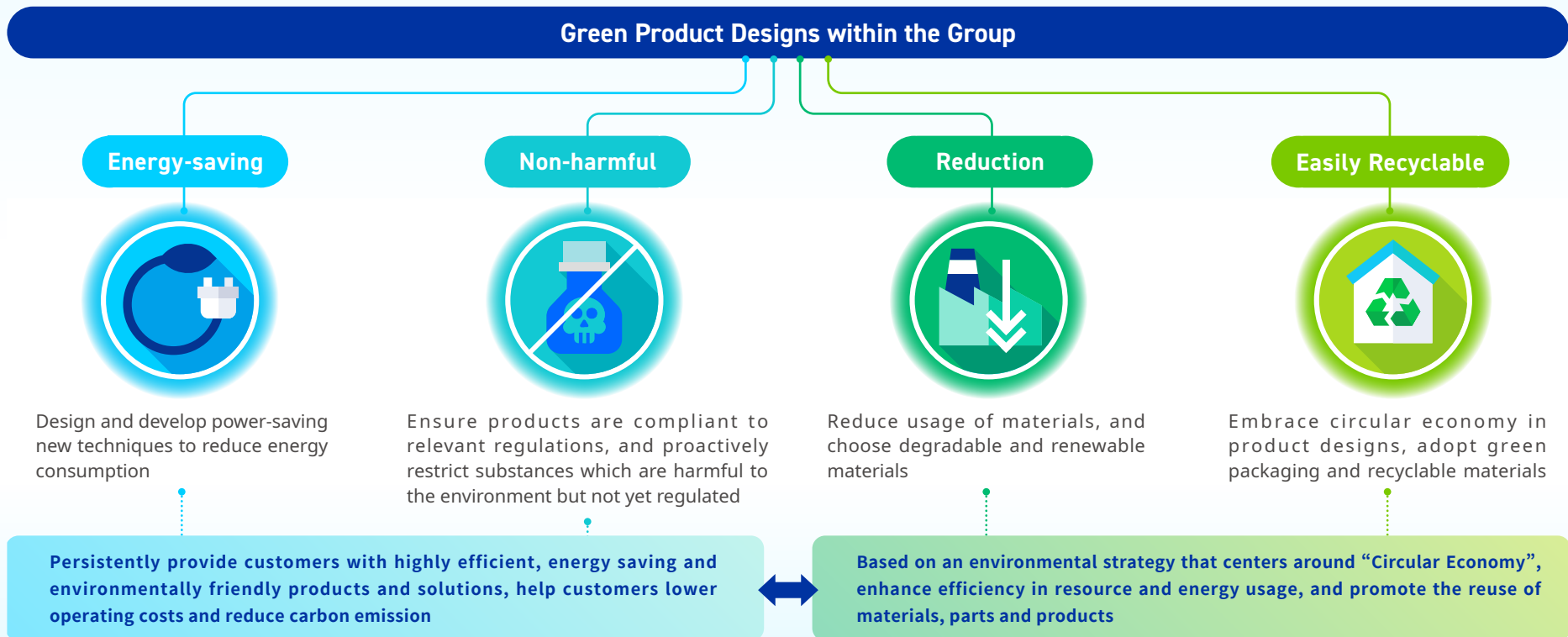


# Sustainable Supply Chain Impact

## Design of Environmentally Friendly Products

The Group not only strictly requires supplier raw materials to comply with environmental protection laws but is also attentive to environmental protection concepts at the initial stages of product design. We adhere to green design concepts and incorporate environmental factors and pollution prevention measures during the design and development stages. We regard environmental performance as a design target and starting point for our products and strive to minimize product environmental impacts. To meet the above requirements, the Group integrated green design concepts into product designs

while complying with environmentally friendly product cycles and relevant environmental protection directives and requirements. Our main mission is to research and formulate environmentally friendly product design guidelines encompassing electronic products that adhered to four axes: “energy-saving, non-harmful, reduction, and easily recyclable.” We coordinate with all Group business units to improve design processes for environmentally friendly products and establish environmentally friendly design mechanisms.



## Three Management Stages for Supplier Products



### Management of all processes is the foundation

Compliance management of all green products from suppliers is based on the management of all processes and adherence to the “principle of five noes”: no design, no procurement, no inflow, no manufacturing, and no outflow. We exercise rigorous control of all green product processes from design, production, and manufacturing.



### Source management is the key

We implement management mechanisms including assessments, verifications, audits, performance evaluations, and elimination of under-performers starting from new suppliers, and require thorough execution of GP management in all supplier management processes to build a green product management chain that links all processes from suppliers to clients.



### Digital transformation is the key

We developed a RoHS-REACH intelligent management platform aligned with the Group's digital transformation targets to provide core modules for supplier management structures and compliance management of raw materials. The platform is also able to effectively manage data collection, review, management, and automatic monitoring of supplier green products; create green databases, and assist all green product management units within the Group.

**The RoHS-REACH intelligent management platform was launched in November 2020. Platform services encompass 11 business groups, 28 business divisions and are used for the management of 495 suppliers.**



## Compliance Management for Green Products

As the largest electronics manufacturer in the industry, the Group promotes internal green procurement management policies. We have established a dedicated unit and dedicated personnel to collect and research various environmental requirements (RoHS, REACH, and HF) from existing legislation, clients, the industry, and society, with a mandate to convert these into action initiatives and measures that can be executed internally and simultaneously communicated to the entire supply chain so that we can track green compliance of raw materials starting from our upstream suppliers. We require our suppliers to disclose the number of hazardous substances contained within their products, and this information is communicated all the way to our end customers.

#### Notes:

RoHS : Restriction of Hazardous Substances Directive

REACH : Registration, Evaluation, Authorization, and Restriction of Chemicals

HF : Halogen Free

## Goals

The Group plans to add green product compliance consulting and improved empowerment modules to the RoHS-REACH intelligent management platform to enhance management of supplier green products through the provision of counseling and solutions. The platform is also connected to third-party databases, making it possible to automatically obtain third-party testing reports for supplier materials.

## Green product management requirements for Group suppliers

The Group's management of supplier green products stems from the two dimensions of supplier management structures and product compliance, and we continually encourage our suppliers to enhance their GP management standards.



## Online green product management seminar for suppliers

To ensure that green product management of all Group business units and suppliers can instantly and effectively respond to changes in environmental protection laws, the Group hosted three online green product management seminars for suppliers in collaboration with Intertek, a well-known third-party industrial institute. The themes for the three seminars were "Supplier green product management and digital transformation," "International standards for VOC management," and "EU RoHS 2.0 exemptions and SCIP responses." We invited 10 of our business groups, 39 green product management departments within these business groups (including procurement, quality assurance, EHS, and engineering departments), 594 participants, and 246 managers from 131 suppliers to participate in these events.



## Responsible Mineral Procurement Management

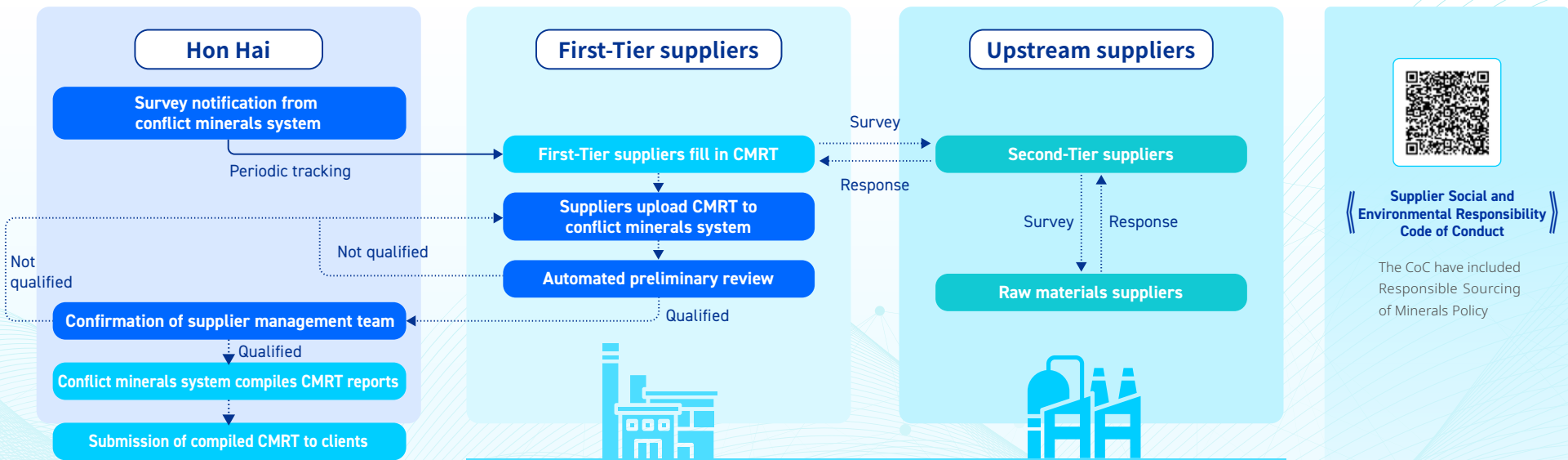
The Group does not directly purchase raw materials from smelters or refineries but purchases components that possibly contain conflict minerals. To fulfill our CSR, avoid minerals sourced from high-risk conflict areas in the Democratic Republic of Congo and its surrounding countries, which causes human rights disasters, and reduce supplier management risks, the Group has established management processes for supplier procurement of responsible minerals and issued the “Statement on Responsible Mineral Procurement.”

As a member of the RMI (Responsible Mineral Initiative), the Group is attentive to updates on responsible mineral sourcing released by the RMI and has adopted the CMRT (Conflict Minerals Reporting Template) and CRT (Cobalt Reporting Template) responsible reporting templates developed by the RMI. We conduct due diligence on our suppliers and require new suppliers to use smelters/refineries that adhere to the RMI RMAP (Responsible Minerals Assurance Process) and also have to sign the “Environmental Protection and Social Responsibility Commitment” form, pledge to comply with the Group’s responsible mineral procurement policies and submit verified CMRT reports before they can become a qualified Group supplier.

The Group has developed a management platform for conflict minerals. All our business units use this platform to collect, review, and compile supplier conflict minerals due to diligence reports, and the data is stored and tracked over the long term. The platform was upgraded in 2020 to integrate the latest RMI conflict minerals reporting template (CMRT 6.01), and we plan to integrate the latest cobalt reporting template (CRT 2.2) in 2021.

In 2020, the Group completed conflict minerals investigations for 2,629 suppliers through our conflict minerals management platform. Supplier response rates were 100%. If we discover non-RMAP smelters and refineries during the course of these investigations, we will require our suppliers to encourage these smelters/refineries to complete RMAP compliance within a specified time limit or face elimination from the supply chain. The Group has not yet discovered supplier products containing minerals from conflict areas in the Democratic Republic of Congo and surrounding countries.

### Flowchart of Management Operations for Conflict Minerals



## Environmental Management

The Group has always emphasized environmental management for suppliers and requires suppliers to strictly abide by local environmental protection laws and regulations, establish and maintain an effective environmental management system, and obtain ISO14001 certification. When engaging a new supplier, the Group will assess the environmental risk of its manufacturing plants and review relevant legal certification documents for supplier manufacturing environments (including environmental assessments and approvals, verified environmental protection documentation, and pollution discharge permits) and also require the said supplier to ensure environmental compliance. If the supplier is found to have incurred zero-tolerance violations relating to “discharge of untreated toxic and hazardous substances or materials,” or if environmental violations are not improved upon, the supplier will lose its status as a qualified supplier. The Group conducted environmental risk assessments on 31 new suppliers in 2020. All suppliers were found to comply with Group requirements.

The Group fully understands the importance of public monitoring for environmental compliance relating to supply chains. Therefore, we actively collaborate with external parties such as the Institute of Public Environmental Affairs (IPE). We use the IPE Blue Map application to monitor supplier environmental compliance performance and provide improvement counseling for suppliers that incur environmental violations. Violation records are removed from the Blue Map website for suppliers following environmental reviews and verification of rectification effectiveness. In 2020, we assisted 40 suppliers with environmental violations to remove their records.

## Online seminar for supplier PRTR reporting

The Group continues to encourage suppliers with high environmental risks to report and disclose Pollutant Release and Transfer Register (PRTR) data on the IPE PRTR platform. To help suppliers better understand the Group's requirements for environmental management of green supply chains, the Group hosted an online PRTR reporting seminar for suppliers to guide suppliers in reporting PRTR data. Under our guidance, 110 suppliers completed reporting of PRTR data.

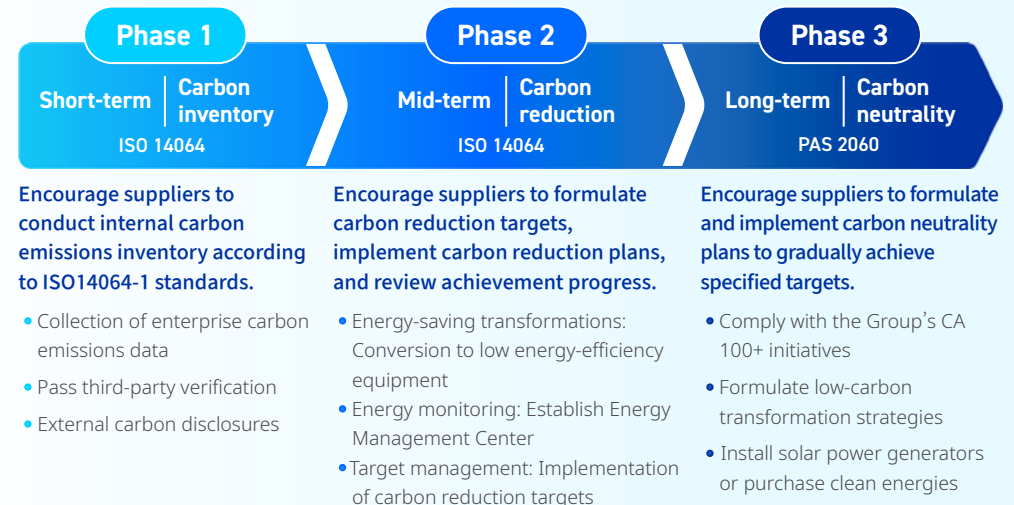


## Supplier Energy and Carbon Reduction Management

Over time, we have gradually strengthened our energy and carbon reduction management measures, which have brought us ever closer to our goal (Control the maintain average global temperature increases within 1.5°C and mitigate climate change impacts). Governments around the world have announced national goal, net zero emissions. There are also increasing energy and carbon reduction requirements for our brand enterprises and NGOs in the supply chain.

We announced at the end of 2020 that GHG emissions policies across the value chain are consistent with the goals of the Paris Agreement and we aim to achieve the goal of net zero greenhouse gas emissions by 2050. Therefore, we are planning to advance the carbon emissions management measures for our supply chains and commence carbon neutrality measures. In 2020, the Group encouraged 165 suppliers to conduct annual energy and carbon reduction actions and assisted 88 suppliers in implementing greenhouse gas inventories; 58 suppliers also completed ISO 14064-1 verification.

### The Group's energy and carbon reduction strategy for suppliers



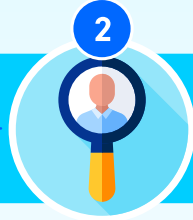
## Supplier GHG Promotion Process

- Establish core carbon management team for the Group supply chains



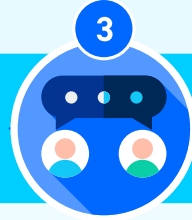
**Establish teams**

- Formulate selection standards
- Select suppliers



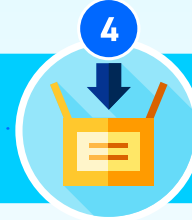
**Supplier selection**

- Convene supplier GHG forums to explain carbon management policies, goals, and requirements to suppliers
- Implementation of supplier management platform



**Supplier education**

- GHG inventory
- Efficiency enhancement and identification of carbon reduction opportunities



**Collection of carbon information**

- Formulate goals and indicators
- Train suppliers
- Energy reduction audits



**Establishment of capabilities**



**Incentives and recognition**

- Provide incentives to high-quality suppliers



**Corresponding CDP questionnaires**

- Corresponding CDP questionnaires for business units



**Compilation of results**

- Compilation of supplier carbon management results reports



**Performance verification**

- ISO 14064-1 inventory verification
- Performance verification of carbon reductions and increased productivity
- Verification of lowered costs



**Supplier performance monitoring**

- Supplier on-site audits and improvements
- Scorecard performance reviews
- Adjustment and implementation of procurement policies

At present, more and more countries have announced carbon neutrality targets and policies, thereby increasing the ratio of clean energies for each country and indicating a gradual decrease in the installed capacity of traditional coal generators. We predict that clean energies will become a major trend in the future. Therefore, the Group will actively work with

collaborating suppliers to promote clean energy usage within the supply chain, set an example for our suppliers, implement advancements in clean energy items, and work with our end clients to build a zero-emissions supply chain and contribute to the mitigation of global climate change impacts.

# Promotion of Mutual Growth

## Guidance for Establishment of Supplier RBA Management Systems

The Group requires suppliers to comply with labor, health and safety, environmental, ethics and management system, as well as establish and maintain an effective CSR management system with regular assessments and continued improvements. We encourage our suppliers to complete third-party RBA VAP audits. Suppliers who have obtained RBA gold or platinum verifications are exempted from the Group's annual CSR audits.

In practice, we found that many suppliers had a strong willingness to implement RBA management systems despite having relatively weak management capabilities. Therefore, in 2020, the Group worked in tandem with professional consulting agencies to provide comprehensive diagnosis, management personnel training, counseling and verification, and technical audit processes. Under our pilot counseling scheme, a total of 3 key suppliers successfully implemented RBA management systems. The Group plans to assist more suppliers in implementing RBA management systems in 2021 and help to enhance supplier CSR management capabilities.



## Counseling process for supplier implementation of RBA management systems



## Participation in Setting of National Standards for Green Supply Chains

Following the government's active promotion of green manufacturing, we utilized our abundant green supply chain management experiences to obtain an opportunity to participate in the setting of national green manufacturing standards, provide technical support, and lead the electronics industry in developing green supply chain management systems.



The following standards were released in November 2020 and went into effect in March 2021.

- “Green manufacturing - Green supply chain management in manufacturing enterprises - Control of purchase” (GB/T 39258-2020)
- “Green manufacturing - Green supply chain management in manufacturing enterprises - Specifications of informatization management platform” (GB/T 39256-2020)



## Online Energy and Carbon Reduction Seminar

To enhance supplier energy and carbon reduction capabilities, the Group hosted an online energy and carbon reduction seminar for 30 pilot suppliers attended by a total of 52 supplier representatives. We also conducted online training for supplier GHG inventories to ensure that suppliers possess GHG inventory capabilities, which can prepare for the goal of zero GHG emissions in the value chain by 2050. Additionally, the Group also provided online GHG inventory tools during the seminar in response to the COVID-19 pandemic to reduce pandemic exposure risks for all personnel.

