4. Sustainable Supply

4.1 Industry Supply Chain

4.1.1 Industry Overview

(GRI 2-6)

The Group is positioned upstream in consumer products, industrial control products, medical products and automotive industries, providing signal cables, electronic wire harnesses, PCBs, electronic components and EMS products and services, belonging to technology and labor-intensive product types. Compared with 2022, there have been no significant changes in the industry, upstream suppliers, downstream customers, and other business relationships of the Group.

The Group's corporate headquarters is located in New Taipei City, Taiwan, with main production areas in China and Southeast Asia. The products and services provided by the Group span markets in China, the United States, Southeast Asia, and Europe, with China and Southeast Asia as the main sales markets, accounting for over 80% of revenue.

The cables and connectors produced by the Group are primarily used in computers, their peripheral equipment, and network communication systems, so product growth aligns with the demand for personal computers and peripherals, mobile communications, and other products. We leverage existing cable manufacturing technology to deeply cultivate niche industries, such as components and modules required for automotive/medical/industrial/cloud server markets, thereby raising the technological standards for our products. PCBs are mainly for consumer products such as game consoles, computer monitors, TVs, smart speakers, and notebooks, providing hard boards and HDI boards needed by customers. Electronic Manufacturing Services (EMS) are primarily for extended needs of electronic component customers and diversified, niche product customers, offering comprehensive one-stop services.

4.1.2 Supply Chain Structure

(GRI 2-6, 204-1)

The Group's value chain encompasses upstream suppliers, including raw material suppliers, original manufacturers, trading agents, and outsourcing service providers. These suppliers provide the Group with raw materials and semi-finished outsourcing services, such as copper wire, copper clad laminates, plasticized raw materials, packaging materials, PCBA, and injection molding. After undergoing various product processes such as inspection, wire cutting, cleaning, assembly, drilling, electroplating, and molding, the Group supplies signal cables, wire harnesses, PCBs, and other electronic components products, as well as EMS finished products, to downstream assembly customers or brand sellers.

▼ Pan-International Value Chain

Value Chain	Business Category	Industry Type
Upstream: Suppliers	Original manufacturers	Technology-intensive
	Agents	Service, capital-intensive
	Outsourcers (outsourced processing)	Labor-intensive
For the Group:	Electronic component manufacturers, EMS service	Technology and labor-intensive
Downstream: Customers	Product assemblers, EMS service providers	Labor-intensive
	Brand manufacturers	Sales service

- **Upstream Suppliers in the Value Chain (GRI 2- 6, 204-1)**

The Group's suppliers provide raw materials such as copper wire, copper clad laminates, plasticized raw materials, active and passive components and packaging materials, as well as outsourced processing services required for signal cables, electronic wire harnesses, PCBs and electronic components. In 2024, there were more than 737 accumulated suppliers, with local suppliers accounting for over 80% of procurement budgets in important operating locations such as China and Southeast Asia.

The Group categorized suppliers into four grades of A, B, C and D according to the formulated supplier management operation process, supplier performance evaluation methods, and risk level evaluation regulations. Only those meeting Grade A are qualified suppliers and can be procured from. In 2024, original manufacturers account for approximately 40%, distributors account for about 50%, and outsourced processing vendors account for approximately 3%.

- **Downstream Customers in the Value Chain (GRI 2-6)**

The downstream segment of the Group's value chain includes electronic product, automotive assemblers, and brand sellers. The Group supplies downstream customers with consumer products, automotive, industrial control, medical, and communication products, including signal cables, electronic wire harnesses, PCBs, PCBAs, electronic components and EMS services. In 2024, electronic product assemblers and brand sellers in Southeast Asia maintained growth trends in revenue to the company compared to last year due to supply chain flexibility adjustments.

4.2 Supply Chain Management

4.2.1 Supply Chain Management Policy

Sustainable supply chain management practice is a series of actions that incorporate environmental sustainability and social feedback while maintaining organizational economics in traditional supply chains, including both internal and external company practices, which can achieve true sustainability in supply chains from environmental, social, and economic aspects. The implementation scope of sustainable supply chain management practices ranges from green procurement to product lifecycle management, flowing through suppliers, manufacturers, and customers. This approach enhances partner relationships by improving the flow of goods and information, as well as promoting sustainable practical actions.

According to the latest global CEO survey by PwC, supply chain disruption is one of the top 10 threats to enterprises. Over 50% of CEOs have begun to adjust supply chain management and procurement strategies. Sustainable supply chain has become an important part of enterprise practice for continuous operations. Procurement management is a key mechanism for enterprises to fulfill social responsibility and drive the supply chain to achieve sustainable goals. The U.S. National Institute of Standards and Technology (NIST 800-161) includes sustainability as a key issue in supply chain risk management practices.

The Group has established a sustainable supply chain management mechanism focusing on three major aspects: product quality, legal compliance, and social responsibility. We have formulated requirements and evaluation standards for operating conditions, manufacturing and supply capabilities, technology development capabilities, quality assurance capabilities, management system performance, environmental management capabilities and trade security. New suppliers must pass an evaluation to be registered on the "Qualified Supplier List." Additionally, suppliers are randomly inspected each year to ensure they continue to meet our evaluation standards. Only those confirmed to pass the evaluation eligible for continued cooperation. We aim to improve supply chain management through pre-assessment, supplier commitments, and regular audits. In addition, considering ESG trends, besides corporate governance and environmental sustainability, employee rights are also a crucial aspect. We will reference international standards such as the "United Nations Guiding Principles on Business and Human Rights," the International Labour Organization's "Declaration on Fundamental Principles and Rights at Work," and the "Universal Declaration of Human Rights," as well as local labor laws in various regions. We will gradually require all suppliers to ensure their business practices in areas such as labor rights, health and safety, and employee benefits comply with the Group's guidelines and commitment letters, and fully comply with the legal regulations in their operating regions.

The Group is committed to practicing corporate social responsibility and aims to expand partnerships with suppliers that closely cooperate in our business. We are gradually integrating corporate social responsibility terms into our supplier contracts, with the long-term goal of requiring 100% of suppliers to fulfill ESG clauses. If suppliers violate the terms of agreement, we will require them to make improvements within a specified timeframe. Those with serious violations may have their cooperation terminated and dissolved. We actively communicate and share information related to social responsibility with our suppliers, encouraging them to develop materials that reduce environmental impact, or to implement energy saving and carbon reduction measures in their processes or equipment, thereby creating a win-win partnership.

When selecting suppliers, our plants set scoring indicators based on quality, price, environmental accreditation, pollution incidents, labor dispute incidents, non-use of child labor, corruption/bribery incidents, and ethical management. We conduct a strict review process, allowing only qualified suppliers to provide samples for testing.

Additionally, before signing contracts and formally supplying, suppliers must sign commitment letters on related topics such as integrity and ethics, environmental issues, and material composition declarations, demonstrating their commitment to honest business operations and environmental sustainability.

- Supplier Evaluation: We conduct strict evaluations of all suppliers, including assessing their environmental management systems to ensure they comply with relevant environmental regulations and standards. We establish long-term cooperative relationships with suppliers and work together towards the development of green supply chains.
- Environmental education and training: We provide environmental education and training for suppliers to enhance their understanding and awareness of environmental sustainability. We conduct environmental seminars and training courses, share best practice cases, and provide technical support to help suppliers implement environmental management measures.
- Environmental Requirements: We require suppliers to comply with strict environmental requirements, including energy saving and emission reduction, resource conservation, and waste management. We work with suppliers to promote the use of environmentally friendly materials and processes, and encourage them to develop environmentally friendly products.
- Monitoring and Auditing: We regularly monitor and audit suppliers to ensure they meet our environmental requirements and policies. We have established an internal team responsible for monitoring the green sustainable development of the supply chain.

▼ Strategic Approaches

Supplier Evaluation Management - Manufacturing Plants

In addition to monthly assessment of supplier grades based on various indicators such as QCDS (Quality, Cost, Delivery, & Service), AEO (Authorized Economic Operator) certification audits will be conducted at the end of the year. Suppliers that do not meet standards must submit review and improvement plans and receive guidance from the Company. Those who fail to improve after this guidance will be eliminated and replaced with new suppliers.

Supplier conferences

Through online communication, we continuously promote various issues and strengthen on-site audits and regular evaluation items to ensure the supply chain achieves goals such as regulatory compliance, pollution reduction, and zero accidents.

Responsible Mineral Purchase - Manufacturing Plants

Pan-International Group is committed to promoting responsible supply chain management, particularly in metal mineral procurement, by clearly following the "Responsible Smelter Program" jointly promoted by the Responsible Business Alliance (RBA) and the Responsible Minerals Initiative (RMI). This program requires member companies and their suppliers to investigate and disclose the sources of minerals in their supply chains, avoiding the use of minerals from areas of armed conflict or mass violence, to prevent indirectly funding armed groups or regimes that violate human rights. The initiative was subsequently expanded to cover "Conflict-Affected Areas" and "High-Risk Areas," where widespread human rights violations and breaches of international and local regulations commonly exist.

The Group ensures that all products supplied to customers do not use metal materials from conflict-affected or high-risk areas and comply with the "DRC Conflict-Free" standards. To ensure supply chain transparency and responsibility, the Group requires all suppliers to sign and submit a "Declaration of Minerals Conflict-Free," committing not to procure or use conflict minerals (gold, tin, tantalum, tungsten, etc.) mined from the aforementioned regions, and continues to promote this international initiative together with upstream supply chain partners.

Meanwhile, the Group also regularly conducts material source reviews and audits of suppliers to confirm that their provided materials and components comply with sustainable procurement standards, do not involve forced labor, human rights violations, or illegal mining activities, thereby implementing the core values of corporate social responsibility.

Green Products and Chemical Management

In response to increasingly stringent global environmental regulations and customer expectations for green products, Pan-International Group has comprehensively strengthened its control mechanisms for hazardous substances. Regarding the extended RoHS Directive (Directive (EU) 2015/863) that officially took effect in July 2019, which added four new restricted phthalate plasticizers (BBP, DBP, DEHP, DIBP), the Group's major subsidiaries (those with manufacturing facilities) have fully implemented corresponding RoHS 2.0 management guidelines for phthalates and other internationally regulated hazardous substances (REACH, Ozone Depleting Substances (substances regulated by the Montreal Protocol) (ODS)...).

The guidelines cover the following areas:

- All items that may come into contact with or contain regulated substances, including raw materials, packaging materials, auxiliary materials, equipment, jigs, and related consumables
- Enhanced employee education and training: Regular training on hazardous substance regulations and identification to improve internal monitoring and response capabilities
- Supplier management: Requiring all suppliers to comply with RoHS 2.0 and related international environmental regulations, cooperate in providing material composition descriptions and compliance documentation, and conduct random inspections or audits when necessary

Pan-International Group recognizes that chemicals may pose potential risks to employee health and the environment during production and operation processes. Although the Group's current manufacturing processes involve very minimal chemical use, we still adhere to the precautionary principle and implement basic management measures for necessary chemical use, including substance registration, proper storage, labeling management, and personnel operation training, while complying with local environmental protection and occupational safety regulations.

Among them, the subsidiary Dongguan Pan-International has obtained IECQ QC080000 Hazardous Substance Management System certification to strengthen systematic control of hazardous substances and ensure products comply with global electronics industry regulations on hazardous substances and customer requirements.

The Group will continue to evaluate the need to strengthen chemical management mechanisms based on operational and regulatory changes, gradually improve relevant internal standards, and ensure both operational safety and environmental protection are maintained. Through internal and external collaborative management mechanisms, the Group not only complies with regulatory requirements but also strives to exceed standards, implementing green procurement and source reduction management to reduce potential risks of products to the environment and human health, while continuously strengthening customer trust and brand responsibility.

4.2.2 Supply Chain Management Process

(GRI 308-1, 414-1)

1. Document Signing	2. New Supplier Risk Assessment	3. Audit and Guidance	4. Result Determination	5. Time-limited Improvement and Re-audit
All suppliers must sign a procurement contract and new supplier registration commitment letter. The documents include various sustainability requirements outlined in the "Supplier Code of Conduct," including: integrity management commitment, environmental protection responsibility, conflict minerals management, anti-trust and fair trade clauses, to ensure that business partners implement corporate social responsibility in their business practices and jointly maintain a fair and transparent supply chain system.	The Group conducts comprehensive ESG (Environmental, Social, Governance) risk assessments for new suppliers. The assessment aspects cover indicators such as product quality, green product development capability, social and environmental responsibility performance, and financial soundness. This helps identify potential operational or sustainability risks and serves as an important basis for supplier screening and cooperation decisions.	The Group also initiates enhanced audit and guidance mechanisms for "high-risk suppliers" and partners with poor ESG ratings. Through on-site inspections and technical assistance, we conduct in-depth evaluations and provide guidance on aspects such as product quality, process management, social and environmental responsibility fulfillment, green product certification acquisition, and greenhouse gas inventory, helping suppliers enhance their sustainability management capabilities.	The Group regularly conducts online questionnaire surveys and on-site audits of suppliers. If major deficiencies belonging to "zero tolerance" items (such as forced labor, use of illegal child labor, severe environmental pollution, major integrity violations, etc.) are discovered during the audit process, their qualified supplier status will be immediately revoked and the business relationship will be terminated.	For suppliers with general deficiencies, they are required to submit written improvement reports and relevant supporting documents within the specified timeframe, and implement corrective measures according to the improvement plan. The Group will conduct a re-audit after the improvement deadline expires. If the review shows that standards are still not met, measures such as downgrading, order suspension, or partnership termination will be taken depending on the circumstances to maintain supply chain quality and sustainability standards.

▼Three Stages of Supplier Management

Supplier Registration Management	For new suppliers, on-site audits or document reviews must be conducted to verify their qualifications. Development channels include internet, exhibitions, peer recommendations, etc. The decision to include suppliers in the qualified supplier list is based on document review and on-site audit results. (Slightly different for different sites)
Supplier Evaluation Items	Based on monthly performance evaluations or annual audit results, daily management of suppliers is conducted, covering multiple assessment aspects including price, delivery time, production environment, production process, environment, human rights, and credit. (Slightly different for different sites)
Supplier Improvement Measures	Submit improvement reports and re-audit operations. Suppliers with monthly performance ratings of C, D, or non-conforming grades are required to provide improvement reports; when issues are identified during annual audits, suppliers must provide improvement measures and related supporting evidence within the specified timeframe.

▼Supplier Improvement Measures

For	Company policy adoption	Tracking unit: The company regularly monitors their improvement progress	Tracking method
Suppliers with issues in delivery time, quality, environment, human rights, information security, social responsibility, or other aspects.	Required to respond with improvements within deadline	The audit departments (Quality Control, Procurement Unit, or other audit units) are responsible for regularly tracking improvement progress.	Conduct secondary audits to verify supplier improvement effectiveness and require relevant supporting evidence to ensure deficiencies have been fully corrected.

4.2.3 Supply Chain Audit Effectiveness

(GRI 308-2, 414-1, 414-2)

- **Audit Status and Results**

The Group had a total of 737 suppliers in 2024, of which 35 were new suppliers added this year. In the 2024 procurement annual audit, environmental impact assessments were conducted on a total of 68 suppliers, while social impact assessments were conducted on a total of 46 suppliers. Ultimately, no suppliers had their partnerships or business relationships terminated. 3 suppliers were found non-compliant, all of them completed improvements in 2024 and became qualified suppliers after secondary audits. After final evaluation, no suppliers among those audited were identified as having significant actual or potential negative impacts.

▼ 2024 Supplier Audit Results

Audit Results	2024
Total Number of Suppliers	737
Percentage of procurement that complies with internationally recognized product responsibility standards as a proportion of total procurement (%)	100
Number of suppliers audited	68
Percentage of suppliers audited (%)	9.22
Audit items for supplier audits	Quality system & environmental system audit
Number of Suppliers Evaluated for Environmental Impact	68
Number of Suppliers Identified as Having Significant Actual or Potential Negative Environmental Impacts	0
Number of Suppliers Evaluated for Social Impact	46
Number of Suppliers Identified as Having Significant Actual or Potential Negative Social Impacts	0
Percentage of Suppliers Agreeing to Improve After Evaluation	0
Percentage of Relationships Terminated After Evaluation	0
Audit results from supplier audits	PDG annual audit plan covered 68 suppliers, and improvement results for all 68 suppliers were Grade A (qualified suppliers)

Note: The above table (supplier audit table) shows the updated results after the Group completed the data integration of subsidiaries in mainland China in July 2025.

▼ New Supplier Audits (2024)

Location	Whether New Supplier Audits Were Conducted	Number of New Suppliers Audited
Pan-International, Taipei (Office)	No	0
Dongguan Pan-International	Yes	20
New Ocean, Jiangxi	Yes	1
Honghuasheng, Yantai	No	0
CJ Electric Systems, Wuhu	Yes	14
PIU (USA) (Office)	No	0

Note: The above table (supplier audit table) shows the updated results after the Group completed the data integration of subsidiaries in mainland China in July 2025.

▼2024 Supplier Improvement List

Location	Supplier	Negative impact aspects	Deficiency category	Items	Deficiency and risk content	Improvement measures and response strategies
Dongguan Pan-International	Quan X	Environmental	Environmental Systems	Environmental management substance plan	No comprehensive waste disposal and reduction plan for environmental management substances has been established, which may affect the achievement of environmental management goals in the plant area.	Require suppliers to establish complete environmental management substance reduction plans and standard requirements, and organize relevant personnel for training to ensure system implementation.
Dongguan Pan-International	Xing X	Environmental	Incoming material inspection	Instrument calibration	In the 2024 instrument measurement calibration plan, 19 measuring instruments (steel rulers and measuring tapes) are defined as internally calibrated, but there are no relevant internal calibration reports, which may affect measurement accuracy.	Require immediate calibration of uncalibrated instruments, and establish a system for regular updates and verification of instrument calibration lists to ensure the validity of subsequent measurements.
Honghuasheng, Yantai	Guangzhou Lian X	Others	Chemical Management	Document revision	In "W-GMA-2010 Chemical Safety Operation Specifications", the emergency preparation and response section lacks specific flow charts and personnel responsibility assignments. W-CES-0027 Emergency Response Management Procedures" contains Section 3.0 Responsibilities and Section 5.1 Operation Process, but there is no correlation between the two.	Request suppliers to provide improvement reports, revise the "Chemical Safety Operation Specifications", and establish correlations with the responsibilities and operation processes in the "Emergency Response Management Procedures" to ensure the completeness and consistency of the emergency management mechanism.

For supplier deficiencies identified in 2024, the Group has initiated improvement mechanisms according to the existing supplier management system and required relevant suppliers to submit improvement reports and supporting documentation within the specified deadline. The improvement content covers the establishment and implementation of environmental management systems, calibration and maintenance of testing instruments, and document revision and process integration of chemical management systems and emergency response mechanisms.

By the end of the reporting period, the improvement completion rate for monitored deficiency cases reached 100%, with all cases having received responses and completed initial improvements. Relevant units will also continue to track through secondary audits and annual audits to ensure the effective implementation of improvement measures and continuously reduce potential impacts on environmental, quality, and operational safety.

This improvement action aligns with the core spirit of the United Nations Sustainable Development Goals (SDGs), particularly responding to:

SDG 8: Decent Work and Economic Growth - Enhancing labor safety and operational quality through supply chain management.

SDG 12: Responsible Consumption and Production - Promoting efficient resource utilization and hazardous substance management.

SDG 13: Climate Action - Strengthening environmental management to reduce potential impacts on climate and ecology.

★ Supplier Highlight: Honghuasheng, Yantai and legal entities jointly obtained SEDEX-SMETA Suppliers Ethical Data Exchange accreditation