

02

Sustainable Supply Chain

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SDG 8.4: Improve resource efficiency in consumption and production
SDG 9.1: Strengthen resilient supply chain infrastructure
SDG 13.1: Reduce the impacts of climate-related disasters on supply chains
SDG 13.2: Integrate climate risks into supply chain management
SDG 13.3: Enhance suppliers' climate adaptation capabilities
SDG 17: Partnerships for the Goals

2025 Performance Highlights



• **CDP SEA A Leadership** Achieved the highest **A Leadership level** in the CDP Supplier Engagement Assessment through deepened supplier engagement



• **56,842 Hours** Cumulative supply chain ecosystem co-learning and capacity-building hours



• **11,459 tCO₂e** Annual carbon emissions reduced across the supply chain ecosystem



• **100%** Completion rate of supplier sustainability due diligence management



• **240%** Overachievement of the “Large Leads Small” low carbon and smart transformation project, delivering **19,995 tCO₂e** emissions reduction



• **100%** Tier-1 suppliers covered by sustainability due diligence assessments



• **NT\$430+ Million** Green procurement spending, with more than **2,700 employee participations** supporting the Ministry of Environment’s green procurement initiative



• **100%** On-site audits and improvement programs completed for Tier-1 critical suppliers, including third-party audits



• **700+ Units** “Connecting Silicon Hands for Sustainable Basketball” initiative delivered over 700 sustainable basketballs, benefiting **20 local elementary schools** with 100% community reinvestment



• **13,000+ Records** Scope 3 product carbon data collected annually through the Winbond carbon accounting system



Targets and Progress of Material Topics

	2025 Target	2025 Progress	2026 Target	2030 Target
 Supply Chain Management	• 100% of Tier-1 significant suppliers signed the Conflict-Free Minerals declaration	✔ 100%	100%	100%
	• Increased the localization ratio of critical raw materials procurement $\geq 39.5\%$	✖ 37.3% ^(Note 2)	40%	42%
	• 100% of Tier-1 significant suppliers signed the Winbond Electronics Supplier Code of Conduct	✔ 100%	100%	100%
	• 100% of Tier-1 significant suppliers completed supplier sustainability due diligence	✔ 100%	100%	100%
	• 100% of high-risk suppliers completed sustainability due diligence audits and consultations ^(Note 3)	✔ 100%	100%	100%
	• Disclosure ratio for major suppliers' energy and resource use and savings $\geq 95\%$ ^(Note 4)	✔ 95%	95%	100%
	• $\geq 7\%$ of high-risk suppliers subject to third-party onsite audits and consultations ^{new}	✔ 7%	30%	80%

Note 1: ✔ = Target achieved; ✖ = Target not achieved.
Note 2: Local procurement volume increased significantly; however, due to the price advantages of local materials, the overall procurement spend ratio declined slightly.
Note 3: High-risk suppliers are identified through supplier sustainability due diligence, sustainability desk audits, and other assessments and require on-site audits and consultations to mitigate sustainability risks.
Note 4: Major suppliers are suppliers directly related to Winbond's Scope 3 emissions.
Note 5: The scope of the targets covers Winbond (Taiwan).

Winbond anchored its sustainable supply chain program in "Practicing Responsible Procurement," and a "People-oriented", integrating ecosystem thinking into governance and day-to-day supply chain operations. Through the dual transformation pillars of digitalization and decarbonization, Winbond strengthened controls, data collection, and collaboration mechanisms to support measurable progress.

In a volatile operating environment, maintaining business continuity requires innovation and agile response. Winbond worked with suppliers through audits, training, and digital data systems to strengthen operational resilience and manage ESG risks across the supply base.

Winbond strengthened supplier engagement and expanded value-chain collaboration. In 2025, Winbond received an A rating in the CDP SEA, achieving Leadership level recognition.

Through value-chain climate collaboration, Winbond supported partners' low-carbon transition and co-developed a climate-resilient sustainable supply chain ecosystem.

Winbond has co-built a sustainable and resilient supply chain ecosystem by practicing responsible procurement, continuously strengthening supply chain resilience, and promoting a low-carbon supply chain together with supplier partners.

Convener
Assistant Vice President
Supply Chain Management Center

Shu-Cheng Chang



2.1 Supply Chain Overview . . .

2.1.1 Supplier Composition and Structure

Winbond is a key global memory manufacturer. Within the industry value chain, Winbond supports upstream IC/IP design needs, performs wafer manufacturing, and then—based on customer requirements across product lines—executes outsourced processing, packaging, and testing. Winbond delivers products to customers on time while considering economic and security requirements. In 2025, the Winbond Group operated primarily in Taiwan, with additional presence in Mainland China, Japan, South Korea, Israel, Germany, the United States, and India. Nuvoton’s major operating sites were primarily in Taiwan and Japan, while its business sites were located across Mainland China, Japan, South Korea, Israel, the United States, Germany, India, and Singapore to support customer service needs. To ensure on-time delivery, Winbond collaborates with diversified global suppliers across Taiwan, Japan, the United States, Mainland China, South Korea, Belgium, and Germany. Based on 2025 transaction activities, Winbond (Taiwan) worked with 1,10 suppliers, and Winbond (subsidiaries) worked with 698 suppliers. Please refer to the [Nuvoton 2025 Sustainability Report](#).

Suppliers were categorized by procurement category and application, including raw materials, outsourcing, outsourced semiconductor assembly and testing (OSAT), machinery and equipment, components and spare parts, maintenance and repair, facility engineering, and others (transportation and logistics, waste treatment vendors, waste hauling vendors, IT equipment and software, and general services).

Winbond Supplier Screening Criteria

Country-specific

political and country-specific stability, legal and regulatory rigor, frequency of social events (e.g., strikes and demonstrations), and robustness of national infrastructure.

Sector-specific

energy and resource intensity, uniqueness of natural resources (specific minerals), and specialization of technology and services.

Commodity-specific

supply-demand balance, price volatility, labor availability, and the fixed equipment and capital requirements.

2025	Winbond (Taiwan)	Winbond (Subsidiaries)
Total number of Tier-1 suppliers	1,100	698
Total number of significant suppliers in Tier-1	40	92
% of total spend on significant suppliers in Tier-1	80%	80%
Total number of significant suppliers in non Tier-1	5	5
Total number of significant suppliers (Tier-1 and non Tier-1)	45	97

To manage global suppliers’ delivery capabilities effectively, Winbond established a rigorous screening and assessment mechanism. This mechanism comprehensively evaluates production-base and technical-service stability across three dimensions—country, sector, and commodity. After suppliers enter formal cooperation, Winbond conducts integrated assessments and management across business principles, significant supplier identification, and sustainability (ESG) criteria to build a resilient global supply chain.

Business relevance

market share, industry competitiveness, supply performance and reputation within the industry, product/technology/service quality, and operating

Significant supplier identification criteria

annual procurement spend, diversification of supply sources, and critical spare parts.

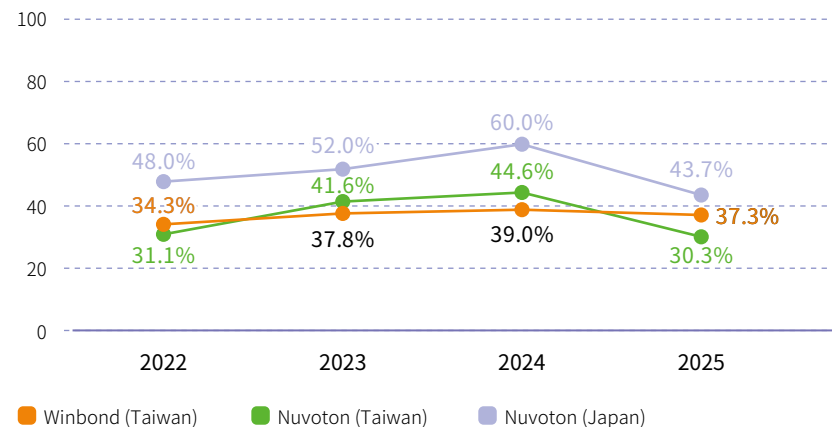
Sustainability (Environmental, Social, Governance) aspect

environmental protection and climate response, protection of human and labor rights, and governance capabilities and transparency.

2.1.2 Local Procurement

Winbond worked with suppliers as “+1” sustainability partners and leveraged procurement to drive sustainability impact, transforming economic benefits into long-term momentum for shared prosperity with existing and potential suppliers. In 2025, Winbond fully implemented three sustainable procurement strategies: local procurement to reduce greenhouse gas emissions from international transportation; circular procurement to promote material circularity and reuse; and green procurement to encourage suppliers to develop environmentally friendly products and services. To strengthen operational resilience, Winbond prioritized local procurement of critical raw materials required for wafer manufacturing (chemicals, gases, targets, and wafers). In 2025, external challenges—including new international climate agreements, carbon fees, layered tariffs, inflation controls, and supply chain regionalization and shortening—continued to affect supply chain resilience and operational stability. Winbond therefore focused on two key initiatives: enhancing green and low-carbon processes at manufacturing sites and optimizing the local procurement mix for critical raw materials to strengthen resilience and mitigate operating risks. In 2025, the local procurement spend ratio was 37.3% for Winbond (Taiwan), 30.3% for Nuvoton (Taiwan), and 43.7% for Nuvoton (Japan), all remaining above 30%. Looking ahead, Winbond will continue multi-track traceability to strengthen resilience for critical raw materials, strategically expand local procurement to production equipment, critical spares, and components, and assess localization feasibility across supply resources to build a more flexible and reliable supply chain.

| Local raw materials procurement ratio |



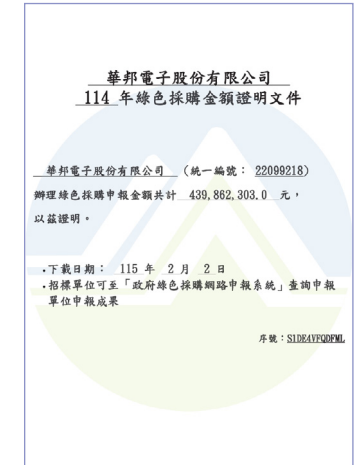
Note: Local procurement refers to the sourcing of raw materials from suppliers whose production sites are located in the same country as the Winbond Group's primary mass-production facilities

2.1.3 Green Procurement

Winbond (Taiwan) embedded the “sustainable living” concept and used procurement to drive transformation across the supply chain and employee lifestyles. On the manufacturing side, Winbond prioritized high-efficiency, low-pollution, and recyclable equipment and building materials. Reported green procurement under the Ministry of Environment “Green Procurement Declaration Platform” exceeded NT\$430 million. On the employee side, Winbond promoted sustainable living each quarter, engaging 2,735 participants by the end of 2025. Going forward, Winbond will expand the scope of green procurement and develop diversified green products and services, extending initiatives across administrative and manufacturing systems at the group level.



▲ Winbond green procurement promotion

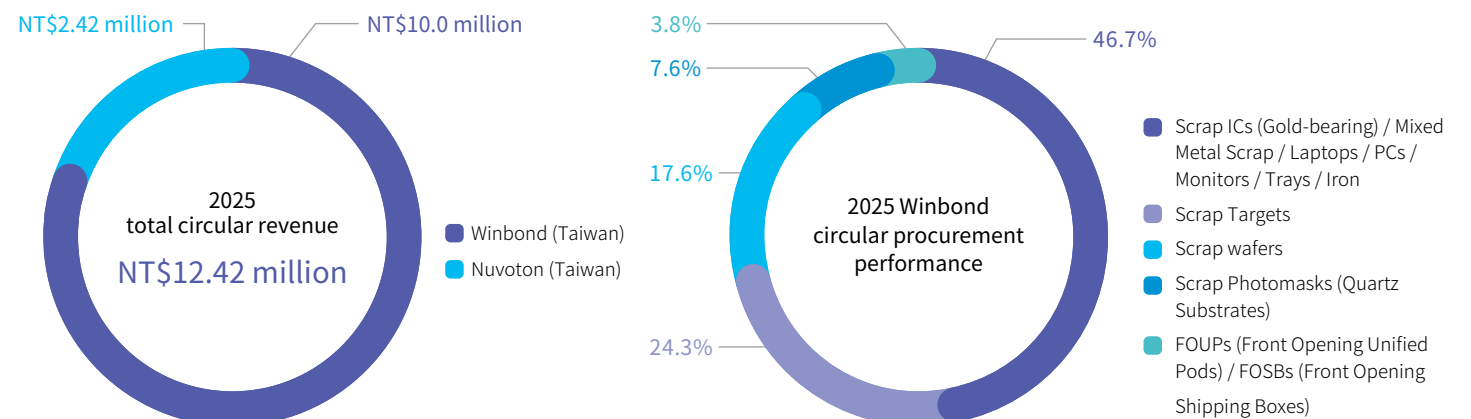


▲ Winbond 2025 green procurement certificate (illustrations omitted).

2.1.4 Circular Procurement

Winbond advanced circular procurement by focusing on operational processes at its Central Taiwan Science Park (CTSP) Fab and Kaohsiung Fab. Winbond identified products and services with circular benefits and worked closely with suppliers through procurement strategies to maximize resource efficiency. In 2025, circular value was generated through recycling and remanufacturing of scrap targets, scrap wafers, and various hardware, creating more than NT\$12.42 million in circular revenue (NT\$10.0 million for Winbond (Taiwan) and NT\$2.42 million for Nuvoton (Taiwan)). Looking ahead, Winbond will prioritize procurement of products with reparability, reusability, and high recycling potential to accelerate progress toward sustainability goals.

| 2025 Winbond circular procurement performance |



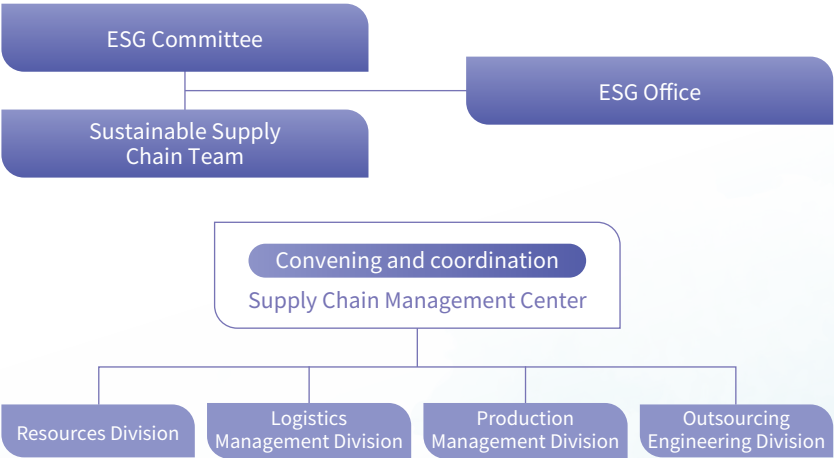
2.2 Sustainable Supply Chain Management . . .

2.2.1 Strategy and Policy

The Sustainable Supply Chain Team operated under the ESG Committee and was led by the Assistant Vice President of the Supply Chain Management Center to implement sustainable supply chain projects. To strengthen governance quality, the team adopted a regular reporting mechanism: semiannual reports to the committee on strategy and phased outcomes, and quarterly progress updates to the ESG office. These mechanisms ensured steady achievement of Winbond’s sustainable supply chain targets.

Building on responsible procurement, Winbond integrated requirements from the Responsible Business Alliance (RBA) Code of Conduct, Hazardous Substance Free (HSF) policy, traditional supplier management (quality, price, lead time, process technology capability), and Authorized Economic Operator (AEO) practices. Winbond further incorporated “environmental co-benefits” and “shared prosperity with partners” to drive sustainability across the supply chain. In 2025, Winbond adopted a net-positive mindset and positioned suppliers as partners that create positive impact. Through in-depth audits and coaching by third-party verification bodies, Winbond achieved 100% completion of supplier sustainability on-site audits in 2025 and strengthened execution capabilities across the supply base. Winbond also advanced dual digital and low-carbon transformation measures, with notable progress in ESG data collection for suppliers and OSAT suppliers, green production management, and internal green logistics systems.

| Supply chain management framework-Organization structure |



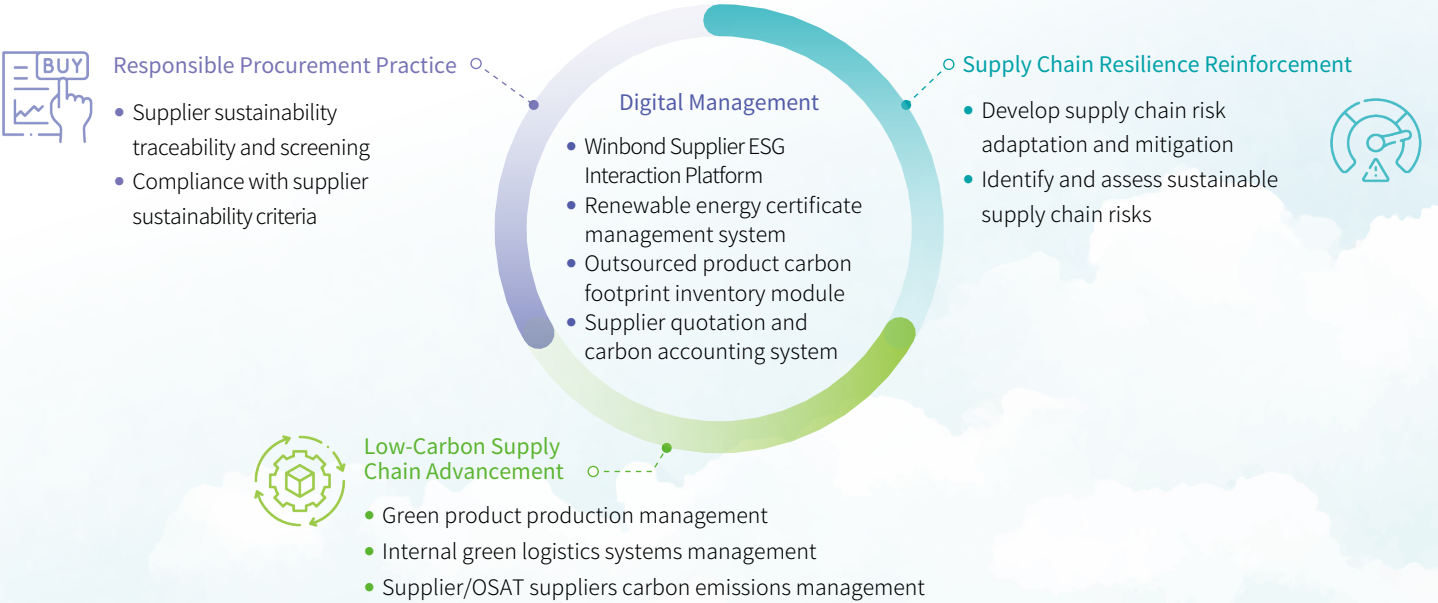
| Supply chain management framework-Management strategy |

The strategy covered Winbond’s supply chain management approach and included:



| Supply chain management framework-Work framework |

The work framework centered on digital management and expanded across three pillars:



Sustainable supply chain initiatives

Responsible Procurement		Low-Carbon Supply Chain		Supply Chain Resilience	
- Implement Sustainable Sourcing and Selection for New Suppliers - Signing of Integrity Commitment and Regular Awareness Advocacy - Compliance with Winbond Supplier Code of Conduct	No use of prohibited substances	- Internal Compliance Program (ICP) - Authorized Economic Operator (AEO) - Supplier Sustainability Due Diligence - Supplier on-site audits, coaching, improvement, and enhancement	- Supplier ESG ecosystem engagement and advocacy - Develop supply chain risk management plans (including climate change, environmental impacts, human rights, and governance) - Sustainable education and training by Supply Chain Management Center	- Sustainable procurement (local, circular, and green procurement) - Conduct energy and resource usage surveys for major suppliers - Supply chain carbon reduction: 10%, OSAT product carbon reduction: 60%	- Facilitate and guide sustainable resources in the supply chain - Internal green logistics systems management - Green product production management
	No use of conflict minerals				
	Regular Supplier Sustainability Assessments				

2.2.2 Supplier Management Processes and Mechanisms



Sourcing and Assessment of New Suppliers

Winbond’s new supplier selection mechanism included quality system assessments (covering quality, lead time, service, technology, and supplier’s quality system), the Responsible Business Alliance Code of Conduct, and corporate sustainability requirements. As a member of the Internal Compliance Program (ICP) of the International Trade Administration, Ministry of Economic Affairs, Winbond also screened UN Security Council and Taiwan Ministry of Justice sanctions lists at the traceability stage to safeguard supply chain security.

Suppliers that met compliance requirements were required to provide third-party quality system certificates, Process/Product Change Notice (PCN) management principles, and completed hazardous substances management questionnaires. For outsourced manufacturing suppliers for security products, additional third-party certificates and the “Security Product Outsourced Processing Safety Control Measures Checklist Questionnaire” were required. In 2025, the Winbond Group added 13 new suppliers (5 for Winbond (Taiwan), 7 for Nuvoton (Taiwan), and 1 for Nuvoton (Japan), and 100% passed selection against economic, environmental, and social (including human rights) standards.

Percentage/Number of New Suppliers Selected Based on Economic, Environmental, and Social (including human rights)		
Year	Number of new suppliers	Pass rate
2022	5	100%
2023	9	100%
2024	9	100%
2025	13	100%
Total	36	100%

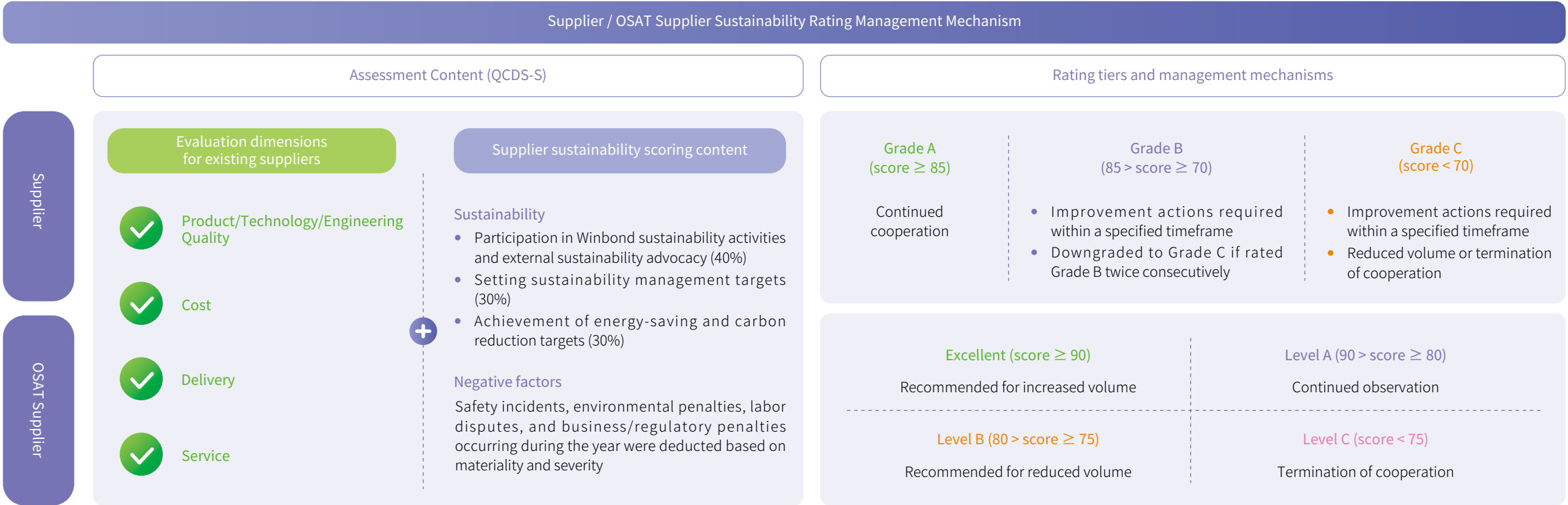
Regular Evaluation of Qualified Suppliers

Winbond conducted an annual evaluation for qualified suppliers. Reflecting Winbond’s production specialization, suppliers were grouped into (1) suppliers and (2) OSAT suppliers. The assessment scope covered core indicators such as quality, cost, delivery, and service. Results were managed through a tiered system: suppliers were categorized as A (excellent), B (good), or C (under review), while OSAT suppliers were graded as Excellent, A, B, or C. To advance sustainable supply chain transformation, Winbond incorporated sustainability performance into regular assessments starting in 2024 and increased the weighting from 5% to 15% in 2025, covering participation in sustainability activities, target-setting, and energy-saving and carbon reduction outcomes. An ESG penalty mechanism was introduced to ensure fairness. Suppliers that failed to meet standards were required to submit improvement plans within one month; persistent underperformance triggered a supplier offboarding process to maintain compliance and resilience.

In 2025, no suppliers in Winbond (Taiwan) were terminated due to major sustainability deficiencies. One supplier received a C grade and implemented improvement measures within one month; all other suppliers and OSAT suppliers achieved B grade or higher and A grade or higher, respectively. Winbond will continue proactive communication, monitoring of government enforcement disclosures, and tracking of supplier operating dynamics to ensure stable supply on a compliance basis, while providing positive incentives for suppliers with strong sustainability performance.

Incentive mechanisms for suppliers with sustainability performance

1. Awards and public recognition at supplier forums / OSAT supplier conferences
2. Support from the Sustainable Supply Chain Team for supplier/OSAT sustainability assessments and sustainability audits and coaching; results were used to guide positive procurement measures (e.g., preferred selection and increased allocations).



Qualified supplier sustainability audits and improvements - Winbond (Taiwan)

To manage qualified suppliers’ operations effectively, Winbond’ s supplier audit team conducted annual key-sample audits for all qualified suppliers. Desk audits verified valid certificates such as quality management and green review certifications. On-site audits, centered on the RBA 8.0 audit manual, conducted systematic sustainability assessments. In 2025, Winbond conducted 72 audit sessions (24 raw material suppliers, 16 OSAT suppliers, and 32 waste disposal suppliers), identifying 287 improvement recommendations. Compared with 2024, improvement items increased due to expanded sustainability coaching and supplier management needs. Suppliers submitted corrective action plans within agreed timelines, and none were removed from the qualified supplier list due to non-compliance in environment, safety, and health; labor and ethics; product and technical quality; or sustainability management systems. Winbond will expand high-frequency sustainability coaching and training to embed sustainability awareness into supply chain culture and strengthen practical capabilities.

Results of regular desk audits on qualified suppliers across economic, environmental, and social (including human rights) aspects



Economic

- ISO 9001 Quality Management System : 100 %
- IATF 16949 : 100 %



Environmental

- ISO 14001 Environmental Management System : 100 %
- REACH : 100 %
- RoHS : 100 %
- HSPM Hazardous Substances Process Management : 100 %



Social
(including human rights)

- RBA Social Responsibility : 100 %

Supplier ESG improvement actions

Aspect	Improvement Items	Response and Recommendations
 Environmental, Health, and Safety	Inadequate maintenance of safety facilities: multiple emergency safety facilities (e.g., eye-wash station covers, insufficient water column height, expired medicines) were not maintained as required or were mislabeled, creating immediate risks.	Required suppliers to implement regular inspections and immediately rectify deficiencies related to occupational safety and health; ensured consistent labeling management across all equipment.
	Potential hazards in the workplace: piping in filling areas occupied walkways, creating route risks; personnel in receiving/ testing areas did not wear PPE as required.	Required on-site management and safe route planning; mandated strict PPE compliance and incorporated PPE adherence into performance evaluation.
	Insufficient planning for energy and water resources: in 2025, suppliers lacked clear plans to adopt renewable/clean energy or to manage water resources.	Required suppliers to set sustainability targets for energy and water and integrate them into long-term operating strategies and annual objectives.
 Fire Protection System	Lack of recycled content information for products: suppliers lacked clear planning or tracking of recycled content composition in supplied products.	Required suppliers to disclose product composition clearly and establish material sustainability plans or disclosure policies to improve transparency.
	Emergency exits in receiving areas were obstructed by stored items.	Required regular inspections and review of inspection records.
	Fire extinguishers in the packing room lacked control tags and periodic inspection data.	Required fire extinguishers to be tracked and regularly inspected, with inspection records maintained.

Aspect	Improvement Items	Response and Recommendations
 Labor and Ethics	Lack of diverse and anonymous employee communication channels: no anonymous suggestion/complaint box and insufficient confidentiality and protection measures.	Required suppliers to establish diverse communication channels and confidentiality and protection mechanisms; recommended engaging an independent third party to manage anonymous cases to ensure impartiality and professionalism.
	Insufficient awareness and planning for human rights due diligence: limited understanding and no advanced planning or policies.	Required suppliers to develop a human rights policy, conduct human rights risk assessments, periodically map and assess potential negative impacts on human rights (including supply chains), identify high-risk groups and issues, and implement management plans with follow-up.
	Insufficient protection mechanisms for vulnerable groups: failure to establish a pregnancy notification mechanism, compromising the protection of employee rights.	Required suppliers to develop a maternal health protection plan aligned with Ministry of Labor OSH Guidelines and establish a pregnancy-friendly reporting mechanism and process.
 Product and Technical Quality	Inadequate equipment and instrument management: mismatched equipment status labels, missing pressure gauge control stickers, and test equipment not included in maintenance plans.	Required standardized status labeling for process equipment (e.g., running, down, abnormal), immediate repair and maintenance for abnormal readings, and ensured accurate monitoring.
	Disorganized material and product storage: conforming and non-conforming items mixed; different materials stored in the same location without clear labeling.	Required improved storage management with zoning and 5S practices; recommended training for site managers, warehouse staff, and production staff to reduce quality risks.
	Incomplete process data and records: HF process testing was used to guide acid addition but values after acid replacement were not recorded, affecting traceability and analysis.	Required standardized data recording; operators must immediately and completely record latest test values after each acid addition or replacement, and periodically analyze results.

Aspect	Improvement Items	Response and Recommendations
 Management System	Incomplete personnel and contractor management: differences in re-certification cycle definitions and execution; unclear contractor risk standards.	Required standardized re-certification cycle definitions and execution standards and inclusion in annual training and audit items; required clear definitions for quality and supply risk evaluation standards and periodic audits and tracking.
	Mismatch between physical storage and management labeling: inventory records inconsistent with physical stock, risking misuse and traceability difficulties.	Required standardized labeling and 5S implementation with fixed-point visual management to ensure neat placement and clear labels.
	Incomplete environmental regulatory compliance data: waste reporting and pollution control equipment maintenance records required supplementary information after audits.	Required suppliers to develop and strictly implement periodic maintenance and calibration plans for air and wastewater pollution control equipment; recommended digital management to input and archive environmental records in real time.
 Corporate Sustainability	Insufficient environmental sustainability and emergency response management: lack of a regular verification mechanism for conflict mineral sourcing, and the emergency response plan is not periodically reviewed to ensure its effectiveness.	Required periodic verification of source stability and compliance, as well as establishment and periodic review and drills (e.g., annually or semiannually) for emergency plans with continuous improvement.
	Unclear science-based carbon-reduction targets and strategies: limited understanding of Science Based Target initiative (SBTi) and no further planning or action.	Encouraged targeted training on SBTi for key department personnel to strengthen understanding of climate change and carbon reduction targets.
	Gaps in supply chain information security training: no information security training with regular value-chain partners, creating cybersecurity risks.	Planned to make information security training a required condition for regular collaboration with value-chain partners and to conduct periodic online/offline training to build baseline security awareness.

2.2.3 Sustainable Supply Chain Risk Management

2025 Key Sustainable Supplier Management Highlight

✓ 100% Signing rate of the Integrity and Ethics Policy among all suppliers

✓ 100% of Tier-1 suppliers covered by sustainability due diligence

✓ 100% completion rate of sustainability guidance for high-risk Tier-1 suppliers



| Suppliers Risk Management Process |



Establish risk management logic



Categorize and identify risk types



Design of management systems and methods



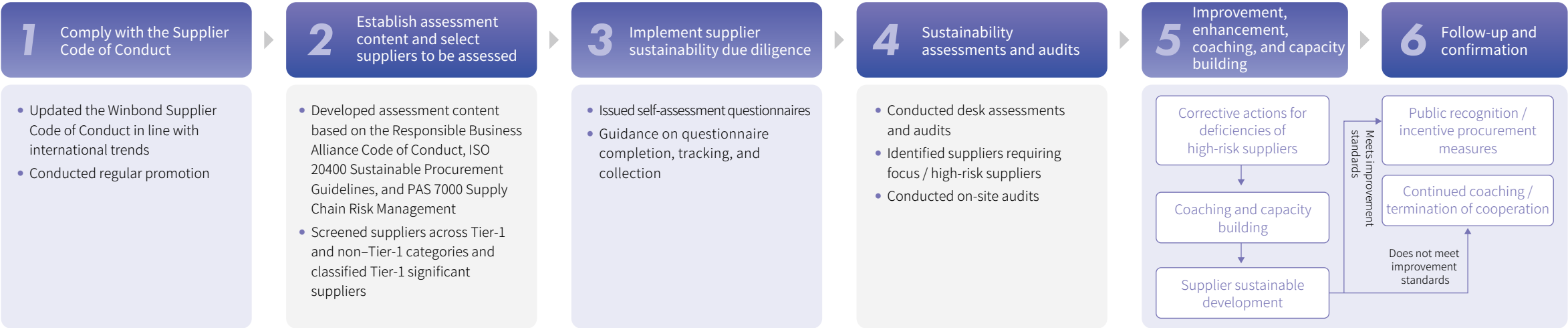
Incidents review, improve, and prevent

Through its procurement activities, Winbond (Taiwan) builds collaborative relationships with various types of suppliers. Distributed across production sites in different regions, these suppliers provide products and services and together constitute Winbond's supply chain. First, Winbond used ISO 31000-based systematic thinking for monitoring and impact assessment. Second, Winbond categorized risk sources into Material risks, intra-partnership risks, and external risks. Third, Winbond established corresponding management methods based on differences in risk sources and types. Fourth, Winbond reviewed each management incident, corrected deficiencies, and implemented improvements to reduce future impacts on supply chain management.

Supply chain risk management mechanism

Risk type	Definition	Management systems / measures
 Material risk	Risk that directly related to the production and manufacturing	- Managed based on the Responsible Business Alliance (RBA) requirements for conflict-free minerals; conducted annual due diligence for significant suppliers using the RMI Conflict Minerals Reporting Template (CMRT) and issued a conflict minerals due diligence report. - Ensured product quality by establishing Process/Product Change Notice (PCN) principles; triggered controls when raw materials, processes, or packaging materials changed.
 Intra-partnership risk	Supply chain partnership risks arising from integrity risks driven by comparative advantage among members.	- Regularly updated the Winbond Supplier Code of Conduct and required signing for all new qualified suppliers. - Conduct biannual communication on ethics and integrity policies for all suppliers. - Require suppliers to comply with Winbond's Information Security Management Policy and define response measures and liability for compensation in the event of information security risks or incidents.  Winbond Supplier Code of Conduct
 External risk	Risks from climate change and natural disasters, and non-natural risks (political, economic, and social).	- Natural disasters: used the Emergency Response System to reflect global earthquakes in real time and supported procurement in assessing supplier impacts. - Climate change: analyzed disaster exposure for global supplier sites under warming scenarios. - Political, economic, and social risks: for events such as war, major safety incidents, and strikes that could disrupt supply, Winbond established an emergency response taskforce to collect, consolidate, report, analyze, and assess impacts. - Strictly complied with Authorized Economic Operator (AEO) regulations and required OSAT suppliers to comply with trade security management.

Supplier sustainability due diligence process



In 2025, Winbond (Taiwan) established Supplier Sustainability Due Diligence content based on RBA 8.0, ISO 20400:2017 Sustainable Procurement, and the OECD Due Diligence Guidance for Responsible Business Conduct. For the first time, Winbond implemented due diligence across all Tier-1 suppliers. To strengthen implementation among Tier-1 significant suppliers—including raw materials, OSAT services, and critical spares (e.g., quartz, photomasks, PAD) with significant procurement spend and direct manufacturing relevance—the Sustainable Supply Chain Team conducted rigorous desk reviews for 133 suppliers. On average, OSAT suppliers, machinery and equipment suppliers, and raw material suppliers performed better. Results also showed strong performance in occupational safety and health and in human rights and labor protection. However, to strengthen overall supply chain resilience, suppliers required further improvements in corporate sustainability and environmental and climate response management. Following the 2025 assessment results, 11 high-risk suppliers were identified; 100% were required to submit improvement plans and were included in coaching and follow-up management.

Content of Supplier Sustainability Due-Diligence Self-Assessment Questionnaire

Management dimension	 Environment	 Social	 Governance
Purpose	From a life-cycle and traceability perspective, encouraged and supported suppliers to operate on an environmentally friendly and economically sound basis.	Required suppliers to sign a code of ethical conduct and provide safe and healthy workplaces while protecting rights and interests.	Required suppliers to treat business integrity as the highest ethical standard for stakeholders and implement it across all operations.
Assessment items	- Environmental management system - Air pollution control - Water resource management - Waste management - Greenhouse gas management - Sustainable materials - Biodiversity management - Hazardous and prohibited substances management	- Human rights protection - Working and labor rights protection - Human rights risk identification and adaptation - Occupational health and safety - Health management system - Chemical safety - Fire safety - Equipment safety	- Corporate sustainability formalization - Sustainability response and disclosure - Climate change and adaptation - Business continuity and management - Supply chain management - Service quality management - Business ethics and public welfare - Corporate governance - Information security
High-risk supplier identification criteria	- Penalty records within the last three years or still under penalty mitigation - GHG emissions > 25,000 tCO₂e and no management measures - Carbon management maturity < 3 points	- Penalty records within the last three years or still under penalty mitigation - No clear management rules prohibiting child labor or protecting pregnant workers' rights - Inadequate management of living environments for migrant workers	- Penalty records within the last three years or still under penalty mitigation - Cybersecurity concerns and IP litigation within the last three years - No business continuity and supply chain management plan

Note: Tier-1 significant suppliers referred to suppliers directly related to manufacturing, single-source supply, and critical spares that affected production (photomasks, PAD, quartz, and export packaging), representing 80% of total procurement spend.

Supplier sustainability due diligence results and action items

Measure type	Key action items
Sustainability audits	Based on desk audit results from annual Supplier Sustainability Due Diligence, prioritized suppliers with identified significant negative sustainability impact risks for follow-up management. In addition to existing second-party on-site audits aligned with industry standards, we expanded the number of third-party audits conducted annually. This initiative strengthens objectivity and improvement effectiveness for high-risk suppliers while supporting continuous follow-up tracking and management.
Introduce industry-government-academia coaching resources	Connected industry-government-academia resources, matched suppliers with government coaching and capacity building programs, and supported suppliers with limited resources to improve sustainability management capabilities.
Supplier sustainability empowerment	Provided digital sustainability training and coaching resources through the Supplier ESG Interaction Platform and thematic forums. Topics included human rights due diligence, biodiversity, and climate and environmental management, supporting suppliers in understanding international sustainability requirements and domestic policy trends and improving independent improvement and long-term governance capabilities.

Supply chain human rights risks and management

Internal capability building:

In 2025, Winbond invited a benchmark supplier—Hewlett Packard Enterprise (HPE)—to share practical experience in supply chain human rights management, helping employees deepen understanding of human rights risks, management mechanisms, and international trends as a foundation for advancing supplier human rights management.

Survey distribution and assessment:

In Supplier Sustainability Due Diligence, Winbond assessed the human rights and labor protection module and conducted preliminary human rights risk identification based on suppliers' industry characteristics, operating models, and responses, serving as the basis for follow-up management and coaching.

Communication of supplier management principles:

Through regular promotion, Winbond communicated that suppliers should respect labor human rights and ensure dignified work conditions, including prohibiting forced labor, child labor, and discrimination; safeguarding reasonable working hours and wages and benefits; and respecting freedom of association and an inclusive workplace culture as fundamental principles for supplier management and cooperation.

Survey results and subsequent response plans:

For suppliers identified with higher human rights risks, Winbond required the submission of corrective action plans (CAP) and verifies tracking progress through our subsequent follow-up and consultation mechanisms. When necessary, Winbond arranged for third-party professional organizations to conduct on-site audits or employee interviews, thereby reinforcing our understanding and management of the implementation of these corrective measures.

Status of suppliers covered by sustainability due diligence management - Winbond (Taiwan)

Indicator	2022	2023	2024	2025
Number of supplier audits	0	69	120	133
Percentage of unique significant suppliers assessed via desk assessments/on-site assessments	0	100%	100%	100%
Number of significant non-Tier-1 suppliers	0	6	5	5
Number of suppliers with identified substantial negative impacts	0	0	13	11
Number of suppliers terminated due to substantial negative impacts	0	0	0	0
Number of suppliers supported in corrective action plan implementation	0	0	13	11
Percentage of audited suppliers implementing corrective action plans	0	0	100%	100%

KPI for supplier assessment and development			2025
Total number of unique suppliers			1,105
Number of unique significant suppliers			45
Number of unique significant suppliers supported with development measures			45
Percentage of suppliers supported in development measures			100%
Number of unique significant suppliers assessed via desk assessments/on-site assessments			45
Percentage of unique significant suppliers assessed via desk assessments/on-site assessments			100%
Number of unique significant suppliers assessed with substantial actual/potential negative impacts			2
Number of unique significant suppliers with substantial actual/potential negative impacts with agreed corrective action/improvement plan			2
Percentage of unique significant suppliers with substantial actual/potential negative impacts with agreed corrective action/improvement plan			100%
Number of unique significant suppliers with substantial actual/potential negative impacts that were terminated			0

Sustainability due diligence audit forms - Winbond (Taiwan)

Completion of desk audit (supplier sustainability due diligence)	Completion of second-party on-site audit (including RBA VAP)	Completion of third-party on-site audit
133 suppliers	11 suppliers	1 supplier

Note: In 2025, on-site audits for significant and high-risk suppliers were planned based on the prior year's assessment results; therefore, the number of audits executed followed the previous year's planning baseline.

2.3 Supply Chain Engagement and Impact • • •

2.3.1 Green and Low-carbon Supply Chain

To advance toward the 2050 net zero target, Winbond in 2025 continued supplier ESG engagement activities related to energy conservation and carbon reduction and expanded the scope of supply chain decarbonization. Winbond led by example by starting with Scope 3 reductions, including upstream transportation, backend packaging and testing services, and waste treatment. Annual carbon reductions reached 11,459 tCO₂e, and Winbond continued to encourage suppliers to set Science Based Targets initiative (SBTi) targets.

In supply chain collaboration, Winbond (Taiwan) and 13 suppliers applied in 2023 to the Industrial Development Administration, Ministry of Economic Affairs, for the “Low-Carbon and Smart Manufacturing Upgrade and Transformation Subsidy Project (Large Leads Small).” Over two years, the project completed over 30 carbon reduction initiatives, reducing 19,995 tCO₂e and exceeding the target by 240%. Winbond demonstrated low-carbon supply chain governance performance through two pillars: “Lead by Example—Internal Scope 3 Emission Reduction” and “Expansion and Impact—Low-carbon Supply Chain Governance.”

2025 Highlights

- ✓ **>95%** disclosure rate of energy and resource usage surveys among Tier-1 significant suppliers in the sustainable supply chain
- ✓ **19,995 tCO₂e** total emissions reduced through Winbond’s “Large Leads Small low carbon and smart transformation project
- ✓ Annual increase of **11,459 tCO₂e** in Scope 3 emission reductions.



| Supplier low-carbon management process |

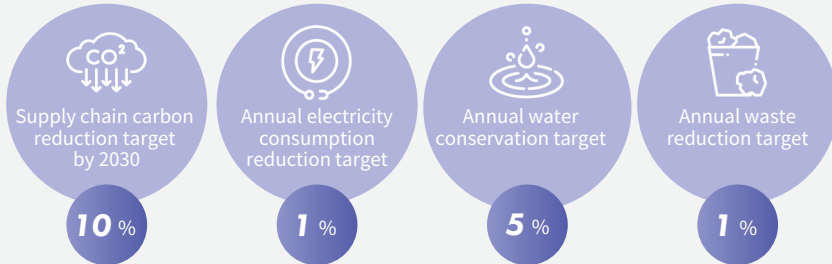


Lead by example — Internal scope 3 emission reduction in 2025

Category	Key Initiatives and Carbon Reduction Performance
Raw materials decarbonization	In 2025, coached significant suppliers to complete product carbon inventories; annual reductions in upstream value chain (Scope 3, Category 1) reached 4,625.8 tCO ₂ e.
Upstream transportation	1. Completed multi-source traceability for 9 significant materials; six were shifted to Local Procurement, reducing emissions by 725.0 tCO₂e. 2. Introduced a shared logistics mechanism and engaged two suppliers in shared-transport models, reducing 0.3 tCO₂e annually. 3. Implemented Packaging Optimization 2.0 and paperless low-carbon import/export operations; for sample shipments, adopted safe minimal packaging to avoid over-packaging, reducing packaging and transportation emissions by 251.6 tCO₂e annually. Packaging optimization 2.0 Tube Carton Empty Box AS-IS Tube Tray Empty Box To-Be
Backend packaging and testing services	1. Conducted regular product carbon footprint inventories; the third inventory will be conducted in 2026 to track changes across seven major OSAT suppliers and set hotspot reduction targets. 2. Continued packaging material decarbonization projects (anti-static boxes replacing paper cartons, Reel material reduction, Carrier Tape recycling and reuse, Tube material recycling and reuse, removal of duplicate labels), reducing 285.9 tCO₂e. 3. Introduced energy-efficient test production equipment, reducing 3,702.0 tCO₂e.
Waste disposal	1. Reduced the incineration treatment ratio for IPA waste liquid (CTSP Fab: 30% → 15%; Kaohsiung Fab: 20% → 10%), reducing 391.2 tCO₂e in 2025. 2. Shifted spent waste expanded polystyrene (EPS), corrugated plastic board, and ultrapure water (UPW) filter cores from incineration to recycling treatment, reducing 3.9 tCO₂e in 2025.

Expansion and impact — Low-carbon supply chain governance

Decarbonization and reduction commitment



Energy and resource disclosure

In 2025, Winbond (Taiwan) surveyed 250 suppliers directly related to Winbond Scope 3 emissions to review annual electricity savings, water usage, waste generation, and GHG reduction performance. For details, please refer to the [ESG website](#).

Training and open discussion

Winbond (Taiwan) conducted a total of 5 supplier ESG co-learning workshops, one Sustainable Supply Chain Management Forum, and one Environmental Forum. Through thematic co-learning sessions and engagement with suppliers, the scope of learning covered the promotion of sustainability across second-tier semiconductor supply chains, corporate low-carbon transition, product carbon footprint and supply chain traceability, practical sharing of international sustainability ratings, and the transition from responsibility to implementation.

Integrate resources from industry, government, and academia to collaboratively drive carbon reduction

Winbond held 1 briefing session on the low carbon and smart transformation project, with a special invitation extended to suppliers with smaller procurement volumes and limited transformation resources. A total of 220 participants attended.

Winbond's low-carbon transformation collaboration project within the sustainable supply chain was successfully concluded, completing over 30 carbon reduction initiatives and achieving total reductions of 19,995 tCO₂e—exceeding the target by 240%. The project was selected as an annual low-carbon achievement demonstration case by the Industrial Development Administration, Ministry of Economic Affairs.

- Final review meeting for the Large Leads Small project, with all 13 partner suppliers in attendance.



- Selected as a 2025 Low-Carbon Achievement Demonstration Enterprise by the Industrial Development Administration, Ministry of Economic Affairs.



In 2025, Winbond facilitated collaboration with the Chung-Hua Institution for Economic Research and partnered with ChipMOS Technologies Inc. and Walton Advanced Engineering, Inc. to conduct expert interviews on carbon fee policies. This initiative enhanced Taiwanese enterprises' engagement with carbon pricing policies and supported government think tanks in formulating industry-aligned policies, achieving public-private collaboration and sustainable win-win outcomes.

- Carbon fee and voluntary reduction consensus interview – OSAT supplier (ChipMOS Technologies Inc.)



- Carbon fee and voluntary reduction consensus interview – OSAT supplier (Walton Advanced Engineering, Inc.)



2.3.2 Sustainable Raw Materials Management

Sustainable raw materials policy

Winbond is a professional memory integrated circuit company, providing comprehensive memory solutions to global customers. Its operations span product design, technology research and development, wafer fabrication, and global marketing under its own brand. In terms of corporate sustainability, Winbond continued to pay attention to global trends, social issues, and the resilience of self-governance, practiced responsible material procurement, expanded positive environmental and social impacts through sustainable approaches, and aimed to be a hidden champion in providing sustainable semiconductors to enrich human life.

Biodiversity protection in the supply chain

Supplier standards communication:

Winbond added ecological resource protection clauses to the environmental chapter of the Winbond Electronics Supplier Code of Conduct and clearly required suppliers to:

- 1
- Monitor and mitigate impacts on surrounding ecosystems
- 2
- Comply with biodiversity conservation regulations; avoid operational impacts on key habitats and participate in conservation actions
- 3
- Commit to no operations in or near key biodiversity areas
- 4
- Propose mitigation measures including avoidance, mitigation, restoration, and compensation
- 5
- Commit to compensation measures for forest restoration and cease any future development activities

Biodiversity impact analysis and supplier support

In 2025, Winbond evaluated biodiversity impacts across global supplier sites and will continue to provide necessary support to suppliers located in hotspots.

Sustainable raw materials programs

In 2025, Winbond launched comprehensive traceability management for raw materials to minimize procurement impacts on primary environments. For key materials such as wafers, process chemicals, gases, and targets, Winbond established a sustainable raw materials evaluation system integrating five dimensions: quality, technology, commercial feasibility, environmental friendliness, and humanitarian considerations. Winbond continued to prioritize “wafer regeneration and circular utilization” as the primary initiative before 2027. Looking ahead, Winbond will introduce third-party verified sustainable raw materials while ensuring process quality, increase procurement ratios year by year, and strengthen professional training to empower front-line procurement personnel to embed sustainability capabilities into daily supply chain operations.

Sustainable raw materials training

To effectively enhance front-line procurement personnel’s understanding of sustainable raw materials and expand upstream traceability, Winbond introduced diversified sustainable raw materials training programs in 2025, totaling 470 person-hours. Course topics included:

- Environmental education lecture series – Introduction to SBTi science-based carbon reduction targets
- Zero-waste challenges: From individuals to collectives
- Green energy: The role of new and renewable energy in advancing net zero
- Daily plastic reduction practices starting from households
- Net zero takeoff: Actions and innovations toward net zero emissions
- Net zero power grids: Power systems on the path to net zero
- The history of plastics and their environmental impacts
- Energy saving and carbon reduction: Innovative pathways to improve energy efficiency
- Core concepts of achieving a zero-waste lifestyle



| 2025 Short-term sustainable raw materials plan |

Raw materials category	Procurement item	Sustainable raw materials			
		Percentage of use		Percentage of recycling	
		Target (%)	Actual (%)	Target (%)	Actual (%)
Silicon wafers	• Regenerated silicon wafers for control/stop layers	68%	64%	100%	100%

Note: 2025 was a triennial major overhaul year for Winbond. To maintain stable restart quality, new control wafers were required; therefore, the recycled-use share declined compared with the previous year.

| 2027 Medium-term sustainable raw materials plan |

Raw materials category	Procurement item	Sustainable raw materials	
		Target usage percentage (%)	Target recycling percentage (%)
Silicon wafers	• Regenerated silicon wafers for control/stop layers	71%	100%
Targets	• Copper targets	10%	100%

| 2030 Long-term sustainable raw materials plan |

Raw materials category	Procurement item	Sustainable raw materials	
		Target usage percentage (%)	Target recycling percentage (%)
Silicon wafers	• Regenerated silicon wafers for control/stop layers	72%	100%
	• Copper targets	10%	100%
Targets	• Copper/Manganese targets • Titanium targets	Evaluated according to quality, technology, commercial feasibility, environmental friendliness, and humanitarian criteria; management plans will be disclosed progressively.	100%
Chemicals	• Isopropanol		

In 2025, metal raw materials usage and recycled material usage ratios were as follows. Winbond will continue exploring circularity for metal raw materials and, in 2026, will further strengthen traceability for circular regeneration of metal raw materials and require raw materials suppliers, OSAT suppliers, and outsourced manufacturers to advance circular remanufacturing and product R&D, minimizing primary extraction and maximizing environmental friendliness.

| Metal raw material usage and recycled content share (Winbond (Taiwan), 2025) |

Metal materials	Usage (metric tons)	Percentage of material from recycled sources
Gold	0.67	0
Aluminum	0.70	0
Cobalt	0.03	0
Copper	153.39	18.6%
Iron / Steel	2.27	0
Nickel	20.43	8.0%
Lithium	0	0
Titanium	0.68	0



2.3.3 Sustainability Engagement and Capacity Building

■ Supplier/ Contractors training (Winbond Group)

To safeguard workplace equality, occupational safety and health, and fire safety and to strengthen supplier awareness, Winbond provided annual training for suppliers’ employees who worked on-site or provided resident services. In 2025, training hours for workplace equality, occupational safety and health, and fire safety reached 5,391 person-hours across the Group.

| Regular workplace equality and ESH training - Winbond (Taiwan) |

Topic	Content	Trainees	Total training hours (person-hours)
Workplace equality	Training on workplace bullying, abuse, harassment, and related matters	68	128
Occupational safety and health & fire safety	Hazard communication and special operations training; evacuation drills	5,809	4,576

| Regular workplace equality and ESH training (Subsidiaries) |

Topic	Content	Trainees	Total training hours (person-hours)
Occupational safety and health & fire safety	Hazard communication and special operations training; evacuation drills	379	687

■ Sustainable education and training by supply chain management center - Winbond (Taiwan)

To advance supply chain management on the sustainability journey, Winbond (Taiwan) combined technical and quality fundamentals with innovative thinking and management models. In addition to regular ESH training for suppliers/contractors and the OSAT supplier conference, Winbond expanded internal sustainability education through the ESG Academy within the Supply Chain Management Center to ensure front-line colleagues maintained up-to-date thinking, knowledge, and capabilities.

In 2025, training hours for colleagues in the Supply Chain Management Center reached 5,358 person-hours, averaging 34 hours per employee. Training included quality courses, supplier manufacturing management courses, and digital management courses required for routine work. Winbond also encouraged participation in iPAS Net zero Carbon Emission Planning Administrator training and industry AI talent development programs led by the Ministry of Economic Affairs. In 2025, seven colleagues achieved iPAS Net zero Carbon Emission Planning Administrator certification.

| Supply chain ESG academy: courses & training hours |



Case study: Deep engagement and knowledge exchange with sustainability benchmark suppliers – Supplier ESG co-learning workshop

Since advancing its sustainable supply chain, Winbond has deepened industry exchange through its Co-learning Workshops, covering environmental carbon reduction, climate change adaptation, greenhouse gas and carbon management, human and labor rights protection, and corporate governance. As of 2025, a total of 38 partner companies had participated, with 2,626 cumulative participants and 5,265 co-learning hours.

Winbond has continued to deepen its sustainability co-learning mechanism, expanding from perspective exchanges and thematic discussions to ecosystem dialogues. This has enabled timely understanding of semiconductor ESG trends and, through generous sharing from benchmark suppliers, helped capture practical experience in international sustainability ratings and human rights due diligence. Internally, the platform provides colleagues with the latest industry insights to optimize supply chain planning; externally, it serves as a stage for suppliers to demonstrate sustainability performance. Looking ahead, Winbond will continue using this model to encourage suppliers to invest in low-carbon processes and green product R&D, strengthening the global competitiveness of Taiwan's semiconductor supply chain and the "Silicon Shield" capability from upstream.



Supplier feedback

- “We sincerely thank Winbond for hosting this forum, which deepened understanding of the circular economy. In a context of limited resources, advancing circular regeneration is a shared responsibility across the supply chain.”
- “The forum featured speakers from diverse fields and delivered rich and in-depth content, including practical applications of the circular economy at the manufacturing level. Overall, the learning outcomes were highly valuable.”

Sustainable supply chain management forum

Winbond hosted the “Sustainable Supply Chain Management” forum to strengthen suppliers’ sustainability awareness and execution motivation through professional coursework and open discussion. The forum encouraged cross-functional participation among partner companies to amplify learning leverage and information diffusion, embedding sustainability DNA into daily operations. As of 2025, Winbond had held six sustainability forums and one environmental-themed forum, totaling 11,143 person-hours. In anticipation of the government’s “2050 Circular Economy Roadmap” to be issued in 2026, the 2025 forum specifically focused on the circular economy, partnering with the Green Economy Research Center of the Chung-Hua Institution for Economic Research and the Chinese National Association of Corporate Sustainability Development to provide a systematic introductory guide. Winbond also invited ChipMOS Technologies Inc.—recognized for strong sustainability performance—to share how circular economy practices strengthened operational resilience. Recognizing that energy saving is central to net zero, Winbond will continue adopting diversified strategies to enhance supply chain sustainability capabilities and inject momentum into industry transformation. This year, Winbond also presented the “Low-carbon Outstanding Supplier” award to 13 partners participating in the Industrial Development Administration’s “Large Leads Small” low carbon and smart transformation project. Winbond thanked suppliers for completing more than 30 decarbonization initiatives—covering process gas emissions reduction, water-saving measures for ammonia-nitrogen systems, and net zero supply chain acceleration—delivering total carbon reductions of 19,995 tCO₂e, equivalent to the annual carbon sequestration of 52 Da’an Forest Parks and far exceeding the original target by 240%. Through awards and recognition, Winbond promoted experience sharing and learning across the supply chain, encouraging more suppliers to continue investing in decarbonization and sustainability transformation and jointly advancing a low-carbon supply chain.



2025 Sustainable Outstanding Supplier – Sharing by ChipMOS Technologies
2025 Sustainable Supply Chain Management Forum

Advanced packaging technology forum

Innovation is a core driver of supply chain sustainability. Winbond believes that strengthening OSAT partners’ R&D capabilities also enhances the competitiveness of Winbond’s own products. To this end, Winbond held the “Advanced Packaging Technology Forum,” establishing a direct dialogue mechanism between internal units and backend packaging and testing partners to co-develop solutions that deliver future life benefits. In 2025, the forum held six sessions, focusing on the critical impact of 3D IC packaging architectures (such as 3D TSV advanced packaging and interposer technologies) in the AI era, while examining challenges and innovation pathways across packaging and testing processes. Total learning hours exceeded 3,918 person-hours, with participation spanning engineering teams from Winbond and OSAT partners. Through technical co-creation, this initiative strengthened industry competitiveness.



SHINKO and Powertech Technology Inc.



MJC, one of the world’s top three semiconductor probe card suppliers (Probe Card)



2025 Sustainable Supply Chain Management Forum



2025 Low-Carbon Outstanding Supplier Awards Ceremony

2025 OSAT supplier conference – Further strengthening supply chain resilience: From co-learning and innovation to ecosystem alliances

Behind Winbond’s highly competitive memory products are colleagues’ unwavering commitment to quality and OSAT partners’ pursuit of technical excellence. At the 2025 OSAT supplier conference, the general manager’s in-depth industry insights further reinforced commitments to green manufacturing and strengthened supply chain cohesion. Practical experience sharing by site and division leaders also accelerated sustainability upgrades across the supply chain. To recognize partners’ contributions, Winbond selected “Sustainable Outstanding OSAT Suppliers” based on five key indicators, including quality and sustainability, honoring outstanding companies that advanced alongside Winbond.

2025 Winbond supplier awards

Award	Number of awarded suppliers
Low-carbon Outstanding Supplier	13
Best Packaging Supplier	1
Best Testing Supplier	1
Best Quality Supplier	1
Best ESG Contribution Supplier	1



2025 OSAT Supplier Conference



2025 OSAT Supplier Awards Ceremony

Number of suppliers empowered in sustainability initiatives (Winbond (Taiwan), 2025)

Since establishing the Sustainable Supply Chain Team in 2022, Winbond actively engaged suppliers as “+1” sustainability partners. In 2025, four supplier empowerment projects were implemented: Co-Sustainability (ESG exchanges, analysis, and learning); sustainable logistics and low-carbon transportation; resource circularity projects (e.g., styrofoam/hollow boards/UPW filter cores reuse and IPA incineration reduction); and sustainable supply chain management forums. Cumulatively, 502 suppliers have participated in Winbond’s engagement and capacity building. Winbond will continue to match suppliers aligned with sustainability values and expand industry demonstration impacts.



Supplier empowerment projects and number of suppliers empowered

Project type	Project name	2023	2024	2025	Total accumulated number of suppliers
Winbond supplier empowerment projects	• Co-Sustainability Project — ESG exchanges, analysis, and learning				38
	• Sustainable logistics and low-carbon transportation				3
	• Recreate value from waste — circularity project				8
	• Sustainable supply chain management forum				429
Winbond supplier empowerment projects	• Large Leads Small Supply Chain Decarbonization Project				13
	• Supplier energy-saving and carbon reduction diagnostics and coaching				2
	• Carbon data electronic data interchange — PACT pilot verification				9

Note: The implementation period of the Winbond Large Leads Small Supply Chain Decarbonization Project was from September 1, 2023, to August 31, 2025.

Proportion of suppliers covered by capacity building programs

	2023	2024	2025
Number of suppliers included in capacity building programs	37	62	502
Share of significant suppliers within capacity building programs	74%	95%	100%

As of 2025, **100** % of key suppliers had implemented sustainability capacity-building programs.

Note: Calculated as the number of key suppliers implementing capacity-building programs divided by the total number of key suppliers.

1

Case study

The Silicon Circular Chain: From sustainable wafers to sustainable campuses

As semiconductor manufacturing processes continue to advance in precision, wafer fabrication has faced increasingly stringent challenges, including high energy consumption, intensive water use, and complex chemical management. Winbond firmly believes that addressing these challenges proactively enables the identification of long-term development opportunities.

Internally, in 2025, Winbond centered its efforts on “maximizing resource efficiency” and “minimizing waste,” comprehensively advancing the sustainability of wafer manufacturing. This approach not only optimized operating costs but also strengthened alignment with international regulations and customer expectations. Externally, Winbond leveraged its influence across the supply chain by integrating the needs of diverse stakeholders and embedding the principles of the circular economy and shared social value. In line with Chairman’s vision that “sustainability is a multidimensional concept,” the Group progressively engaged suppliers in public welfare initiatives and low-carbon management. Looking ahead, Winbond will continue to build on this model as a demonstrative foundation, mobilizing the broader supply chain to deepen cross-domain collaboration and jointly advance sustainable development goals.

Internal actions

► Establishing clear targets to strengthen circular impact

In 2025, Winbond established a clear internal target of achieving a 30% waste resource utilization rate at its CTSP Fab and Kaohsiung Fab. To advance this target, Winbond conducted a comprehensive inventory of on-site waste streams and systematically reviewed waste collection, transportation, and treatment processes, with the aim of improving recycling efficiency while reducing environmental burdens. To accelerate implementation, Winbond actively engaged treatment partners with proven circular processing capabilities to support the resource recovery of manufacturing materials at Winbond (Taiwan), including:

Transitioning spent waste expanded polystyrene (EPS), waste foam boards, and waste UPW filter cores from incineration to recycling treatment:

After treatment, these materials were remanufactured into products such as pens, plastic goods, bicycle pedals, traffic cone linkages, cleanroom garments, and commemorative trophies. The initiative is estimated to reduce 8.3 tCO₂e annually.

Reducing the incineration ratio of IPA waste liquids:

After the adjustment, the incineration ratio of IPA waste liquids was reduced from 30% to 15% at the CTSP Fab and from 20% to 10% at the Kaohsiung Fab.



Winbond temporary storage area



Resource utilization process at the treatment facility

External engagement

► Cross-sector collaboration to expand social impact

In parallel with internal circular initiatives, Winbond extended circular value creation beyond its manufacturing boundaries. In 2025, Winbond partnered with ChipMOS Technologies to launch the “The Silicon Circular Chain:

From Sustainable Wafers to Sustainable Campuses” public welfare initiative, translating cradle-to-cradle circular economy principles into tangible social outcomes. The project collaborated with Semisils possessing advanced material regeneration capabilities to extract recycled materials from recovered silicon sludge and remanufacture them into high-quality sustainable basketballs. Through coordination with the National Kaohsiung Normal University Teacher Education Center and the Corporate Sustainability Development Research Center, the basketballs were delivered to 20 rural and underserved elementary schools across Tainan and Kaohsiung. Beyond material reuse, the initiative enabled students to better understand the circular lifecycle of semiconductor manufacturing, while leveraging supply chain scale effects to advance SDG 4 (Quality Education), SDG 10 (Reduced Inequalities), SDG 12 (Responsible Consumption and Production), and SDG 17 (Partnerships for the Goals), thereby amplifying social impact through cross-sector collaboration.



Sustainable basketballs—filled with the care of Winbond and ChipMOS colleagues—delivered to students

**Minquan Elementary School,
Namaxia District, Kaohsiung City**

“Thank you to Winbond, ChipMOS, and partner companies for working together to integrate sustainability principles and actively support physical education in rural communities. Through basketball, the initiative supported children’s diverse learning and healthy development, allowing care and sustainability to move forward together.”



2

Case study

Sustainability and digital empowerment: Building supplier carbon data competitiveness through the Winbond carbon accounting system

Since 2023, Taiwan's Climate Change Administration (Ministry of Environment) has convened experts from industry, government, academia, and research to explore fiscal measures that strengthen corporate carbon reduction actions. Starting January 1, 2025, the government also officially announced that the first group subject to carbon fees would include power and gas supply as well as manufacturing entities with emissions of 25,000 tCO₂e or more. While these policies are designed with sound intent that integrates economic and environmental considerations, many domestic businesses still face challenges in understanding "carbon accounting." Moreover, incorporating carbon topics into business decision-making to secure first-mover advantages and transformation benefits in an era of carbon pricing has become a hidden operational pain point for many enterprises.

Aligning with global decarbonization trends:

► Building sustainable competitive advantage through net zero transformation

Taiwan's semiconductor industry has long been regarded as the "Silicon Shield." Developing an effective strategic roadmap to accelerate sustainable supply chain transformation—one that guides suppliers through the evolving carbon management landscape and leverages organizational scale to amplify impact—represents a core responsibility of contemporary corporate citizens committed to sustainability.

In 2025, Winbond (Taiwan) formally implemented a comprehensive carbon accounting management system across all emission scopes. Beyond leading by example through the integration of Scope 1 and Scope 2 cost and emissions management, Winbond further extended the system to Scope 3 by linking it with existing procurement quotation mechanisms, encouraging suppliers to disclose product-level carbon data at the quotation stage.

To strengthen supplier engagement, the Sustainable Supply Chain Team has promoted the system's value proposition to stakeholders through a series of outreach initiatives since 2024. In 2025, Winbond further introduced a structured refresher and support mechanism designed to serve as a long-term enabler of supplier transformation. As of the end of 2025, over 13,000 product and service carbon data records had been reported through the system. These outcomes demonstrate that integrated carbon and cost management can effectively drive supply chain carbon inventories and establish a benchmark with transformational significance for advancing carbon management practices across the domestic industry.



- Sustainable Supply Chain Summit Forum, Industrial Development Administration, Ministry of Economic Affairs



- Winbond Sustainable Supply Chain Upgrade Forum: Opportunities for Supply Chain Transformation in the Era of Carbon Pricing



- Large Enterprises Leading SMEs in Low-Carbon Supply Chain Collaboration Program – Interview by UDN News

2024
Early-Stage Awareness Campaign

2025
Official Launch

Commencement of
Refresher Training



- Carbon Accounting System and Quotation Briefing Session



- Winbond ESG Interactive Platform: Supplier Carbon Information and Quotation Portal

2.4 Conflict Minerals . . .

Winbond continued to implement the requirements of Responsible Business Alliance requirements in the supply chain and considers them to be a mandatory element of supply chain management. In accordance with the management recommendations of the OECD due diligence, Winbond first issued a conflict-free minerals statement and then analyzed the material composition of its products to identify key suppliers requiring further assessment, thereby facilitating due diligence implementation. Suppliers are strictly required to select qualified smelters and update the information within the validity period. Finally, based on the annual survey results, Winbond published the due diligence report on conflict minerals for public disclosure. In 2025, suppliers directly related to Winbond products involving 3TG metals, cobalt, mica and other minerals included 18 suppliers for Winbond (Taiwan), 19 suppliers for Nuvoton (Taiwan), and 49 suppliers for Nuvoton (Japan). Winbond (Taiwan) also conducted on-site audits for 9 suppliers, achieving a 100% qualified rate.

2025 Conflict minerals management highlights

- ✓ 100% coverage rate of suppliers for conflictfree minerals policy advocacy
- ✓ 100% of new Winbond suppliers committed to conflictfree minerals
- ✓ 100% qualification rate for suppliers surveyed and audited in 2025



| Conflict minerals management process |



2.4.1 Conflict-free Minerals Statement

Winbond follows the RMI to conduct due diligence on the sources and regulation of gold (Au), tantalum (Ta), tungsten (W), tin (Sn), cobalt, mica, copper, and nickel in its products, to ensure that its sourcing practices are in alignment with the OECD Guidelines for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas or an equivalent and recognized due diligence framework. Winbond also requires all suppliers to comply with and sign the sustainability-related codes of conduct and ethical standards, employee ethics standards, the International Declaration of Human Rights and the International Labor Organization's Tripartite Declaration of Principles, the adoption of green products, environmental protection and hazardous substance free (HSF) policies, or comply with the requirements set by the Responsible Business Alliance (RBA). In 2025, all qualified suppliers signed the Winbond Code of Ethics and Integrity and the Winbond Supplier Code of Conduct Commitment (including the terms of the RBA and Conflict Minerals Statement) to avoid the use of minerals originated from non-compliant smelters. Suppliers shall ensure that such minerals do not directly or indirectly finance or benefit armed groups in the Democratic Republic of the Congo (DRC), its adjoining countries, or other conflict-affected and high-risk areas, and comply with all applicable regional and international laws and regulations on responsible mineral sourcing..

2.4.2 Identification and Results of 3TG Metals Sources

Winbond first reviewed the Safety Data Sheets provided by the supplier to determine product composition and identify whether specific metals were included. Winbond then adopted the Conflict Minerals Reporting Template (CMRT) and Extended Minerals Reporting Template (EMRT) to survey suppliers whose product composition involves gold (Au), tantalum (Ta), tungsten (W), tin (Sn), cobalt (Co), mica, copper, nickel, and other responsible mineral sources as reported in the Responsible Minerals Initiative (RMI). In 2025, surveyed suppliers included 18 suppliers for Winbond (Taiwan), 19 suppliers for Nuvoton (Taiwan), and 49 suppliers for Nuvoton (Japan), with smelter sources spanning North America, South America, Europe, Asia, and Central Asia. Qualified smelters included 67 for Winbond (Taiwan), 191 for Nuvoton (Taiwan), and 226 for Nuvoton (Japan). In addition, Winbond has also formally implemented on-site conflict minerals audits to reinforce its conflict-free commitment and ensure suppliers’ management commitments. In 2025, all suppliers comply with the requirements and have not been prohibited from selling related products to Winbond.

| Number of conformant smelters by mineral |

Mineral	Winbond (Taiwan)	Nuvoton (Taiwan)	Nuvoton (Japan)
Gold	17	90	90
Tin	13	47	49
Tantalum	19	25	30
Tungsten	9	14	30
Cobalt	4	15	27
Mica	0	0	0
Copper	4	0	0
Nickel	1	0	0
Total	67	191	226

2.4.3 Supplier Management and Labeling of Conflict Minerals

Due to the ever-changing nature of global political relationships, intergovernmental conflicts or even wars between countries in recent years can arise with little warning. To ensure that Winbond abides by its commitment to not using conflict minerals, Winbond has implemented three measures to manage and control risks related to the use of 3TG metals. First, Winbond continued to issue regular due diligence surveys and annual due diligence reports on conflict minerals, and simultaneously expanded to suppliers who use 3TG metals, conducting on-site audits to ensure their practices are consistent with their stated policies. Second, we continued to trace the compliant 3TG sources domestically and internationally, and the suppliers implementing conflict minerals management policies to diversify supply risks to implement diversified supply risk control and conflict prevention of mineral sources. Third, for suppliers with potential conflict minerals risks, Winbond supported traceability toward other compliant minerals; if improvements were not achieved, Winbond would cease business with the supplier. Winbond’s supply chain team is responsible for supplier management related to conflict minerals and actively monitors stakeholders’ requirements regarding conflict minerals management. Based on a proactive and preventive approach, the team continuously reviews and adjusts its internal supplier management measures to identify and prevent the use of conflict minerals, with the aim of upholding the rigorous standards for responsible mineral sourcing and respect for human rights.

In 2025, in accordance with the regulations of the RBA and U.S. Securities and Exchange Commission, Winbond (Taiwan) also actively responded to the U.S. Dodd-Frank Act (DFA) and strengthened the implementation of corporate social responsibility. Winbond (Taiwan) will label all product outer packaging with a “Conflict-free” mark to clearly declare that the company’s products were manufactured without the use of conflict minerals.

| Suppliers conflictfree minerals prevention mechanism |

- ✓

Periodic surveys and on-site audits
- ✓

Traceability for compliant mineral sources and suppliers
- ✓

Provide assistance to suppliers with risks; if no improvement is made, business relationships will be terminated

| Winbond’s products are 100% conflict-free minerals |

