



LEADING A SUSTAINABLE PATHWAY

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ESG Implementation Framework

Winbond strives to become "a hidden champion in providing sustainable semiconductors to enrich human life." With the ESG vision personally outlined by the Chairman, Winbond has established an ESG committee within the Board of Directors (see Figure 1). The Board of Directors provides the strategic framework for sustainable development (see Figure 2). Winbond upholds values such as integrity, ethical behavior, innovation, and enthusiasm, continuously enhancing corporate value. Simultaneously, the company remains attuned to global trends, addresses social issues, and responds to stakeholder expectations. By aligning its actions with the United Nations Sustainable Development Goals (SDGs) and integrating sustainability principles into its core operations, Winbond contributes to a better future for society.



Figure 1 ESG Committee

Winbond ESG Strategy Framework

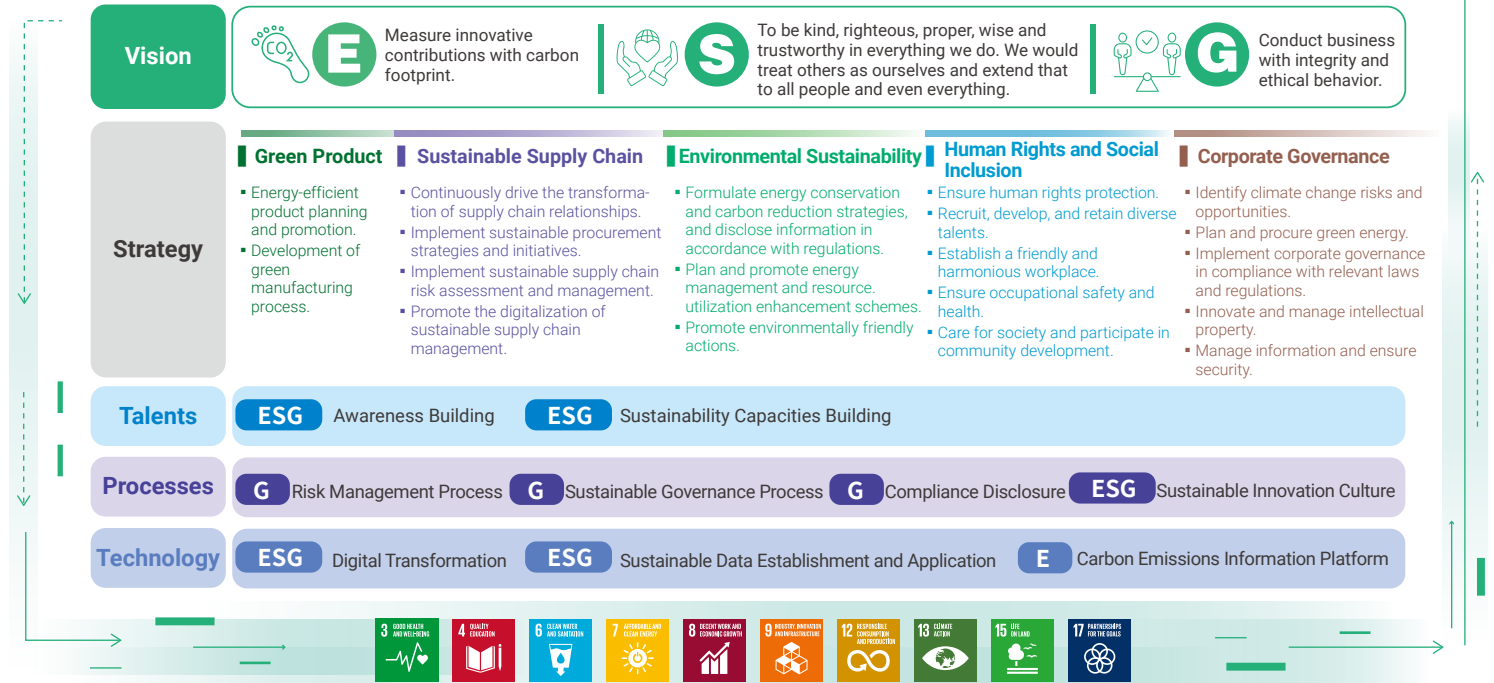


Figure 2 ESG Strategy Framework

Sustainability Statement

Senior executives integrate cross-departmental resources, emphasize the importance of sustainability commitments through a high level of attention to ESG, implement Winbond's sustainability spirit throughout the entire company, and expand its influence to customers and supply chains for mutual benefit and inclusiveness.



Jing-Fong Tsai
Vice President,
Quality & ESH Center

R&D innovation is Winbond's most powerful advantage in adapting to trends. Winbond has incorporated it into our company's development path, aligning it with market demands while maintaining service quality. With confidence, our team continues to strive towards the development of high-end products, aiming to cultivate competitiveness and core technologies to face various risk challenges.



Ilia Stolov
President (Israel),
Security Technology
& Solution Center

At Winbond, we recognize that a lack of data protection poses a significant threat to society, as security plays a crucial role in safeguarding people's privacy. Committed to innovation, we are advancing the field of memory security to create more ethical products, ensuring seamless privacy protection for our customers and society. Our dedication to security is not just a commitment but a corporate responsibility, reflected in our proactive approach to product security certification. By certifying our products, we demonstrate our willingness to adhere to the highest security practices, providing our customers with the most secure and trusted solutions available in the market. Winbond strives to contribute positively to the broader community and uphold values that align with sustainability and responsible business practices.

Sustainability Statement



HSIU-HAN LIAO

Assistant vice president,
Code Storage Technology
Development Center

We are committed to the sustainable development of storage memory technology, creating low-power products through innovative low-carbon processes, smart technology, and component design. Our philosophy is to integrate ESG energy-saving and carbon-reduction concepts into every research and development effort, collectively shaping a cleaner and more environmentally friendly future in technology.



Wen-Pin Chang

Technology Executive,
Taichung Fab. Memory Prod.
Manufacturing Center

Winbond is committed to implementing low-carbon transformation in its factories through innovative thinking and intelligent manufacturing, enhancing production efficiency, continuously optimizing product quality, and achieving green manufacturing. Together with customers, Winbond aims to create sustainable solutions.



Shuo-Che Chan

Technology Executive,
C.M.S Technology Development
Center

Innovation is deeply ingrained in Winbond's corporate culture. The technical team not only drives continuous innovation but also actively participates in carbon reduction and process optimization to enhance the competitiveness of our green semiconductor products, aligning with the company's vision.



Yi-Chih Chang

Technology Executive,
C.M.S Marketing Center

Winbond recognizes that its responsibility extends beyond employees and their families. It strives to benefit society by ensuring healthy lives and a better green environment for future generations. Upholding the highest ethical standards, Winbond avoids using products from unjust, unfair, or inhumane sources. Winbond recognizes that its responsibility extends beyond employees and their families. It strives to benefit society by ensuring healthy lives and a better green environment for future generations. Upholding the highest ethical standards, Winbond avoids using products from unjust, unfair, or inhumane sources.



WEI-MING CHIU

Technology Executive,
KS. Fab Memory Prod. Proc.
Integ. & Testing Center

Winbond emphasizes rapid adoption of various technology products and quality enhancement. The company provides robust chip testing platforms, actively seeks work-life balance for employees, and prioritizes their holistic well-being to achieve sustainable development goals.



Yi-Der Wu

Technology Executive,
Flash Product and testing
Engin. Center

Winbond places quality at the heart of product testing. By using innovative technologies to reduce environmental impact, it ensures high-standard testing processes for every product. Upholding integrity and environmental consciousness, Winbond contributes to sustainable storage solutions.



TZU-CHING CHUANG

Technology Executive,
Taichung Fab. Memory
Prod. Proc. Integ. Cen

Balancing innovation and efficiency during the semiconductor process integration, Winbond acknowledges its responsibility toward the environment, society, and governance. Environmentally, it seeks energy-saving and waste-reduction opportunities in processes, adhering to sustainable resource use and circular economy principles. Socially, it prioritizes employee safety and health, maintaining strict workplace safety standards. In governance, it upholds ethical norms and transparency, reporting responsibly. Through these commitments, Winbond aims to create economic value while positively impacting the environment and society.



San-Ha Park

Technology Executive,
Customized Memory
Solution Design Center

At Winbond, sustainability is our guiding principle. Our low-power DRAM solution, integrating CUBE, WoW, and HKMG, champions greener systems and energy efficiency. Leveraging design automation, we expedite the delivery of high-quality, customized DRAM solutions, ensuring rapid development times while prioritizing low power consumption. Through sustainable innovation and operational excellence, Winbond remains dedicated to pioneering low-power, green energy solutions that positively impact both the industry and the environment.



Jackson Huang

Technology Executive,
Flash Product Marketing
Center

As our world becomes increasingly reliant on electronics devices, innovation becomes crucial in mitigating and minimizing their environmental impact. With an annual shipment exceeding 3 billion flash devices that are integral to a diverse array of systems, the onus is on Winbond to introduce solutions that not only consume minimal amount of energy but also cater to optimal user experiences and application requirements. It is imperative for Winbond to help pave the way for a sustainable future, where technology harmonizes with ecological responsibilities.



Johnny Chan

Technology Executive,
Flash Product Design
Center

Reduction of Energy consumption is always Winbond Flash memory design's commitment. With low current usage and low voltage supply combining with short program & erase time, we are the viable partner for the end users to reduce carbon footprint together. Furthermore, Winbond closely engage clients with customized designs for quality improvement and to shorten their manufacturing time. Collectively, Winbond, customers and end-users are working toward ESG goals together.

Materiality Analysis and Stakeholder Engagement

Winbond is committed to communicating with stakeholders in a transparent and open manner in order to identify all sustainability topics of concern and incorporate these topics into our corporate sustainability framework. In 2023, Winbond published its first **Materiality Analysis Report**, disclosing the material topics Winbond had identified and its approach to managing these issues. Based on the GRI Standards published by the Global Sustainability Standards Board on October 2021 (GRI 3: Material Topics 2021), Winbond has conducted a materiality analysis, and defined Winbond’s material topics assessment principles as: “issues of significant impact to major stakeholders that also have a noticeable impact on Winbond operations, while staying consistent with Winbond’s sustainable development goals”. In line with our philosophy for managing material topics, Winbond has identified 9 material topics after consolidation of similar issues, no difference than that of 2022. Winbond conducts a materiality analysis every three years. During this period, Winbond continues to communicate and respond to stakeholders, implementing sustainability strategies and enhancing effectiveness.

Winbond’s Criteria for Assessing Material Topics

- ✔ High stakeholder concern
- ✔ Significant impact on company operation
- ✔ Priority of Winbond’s sustainable management development goals

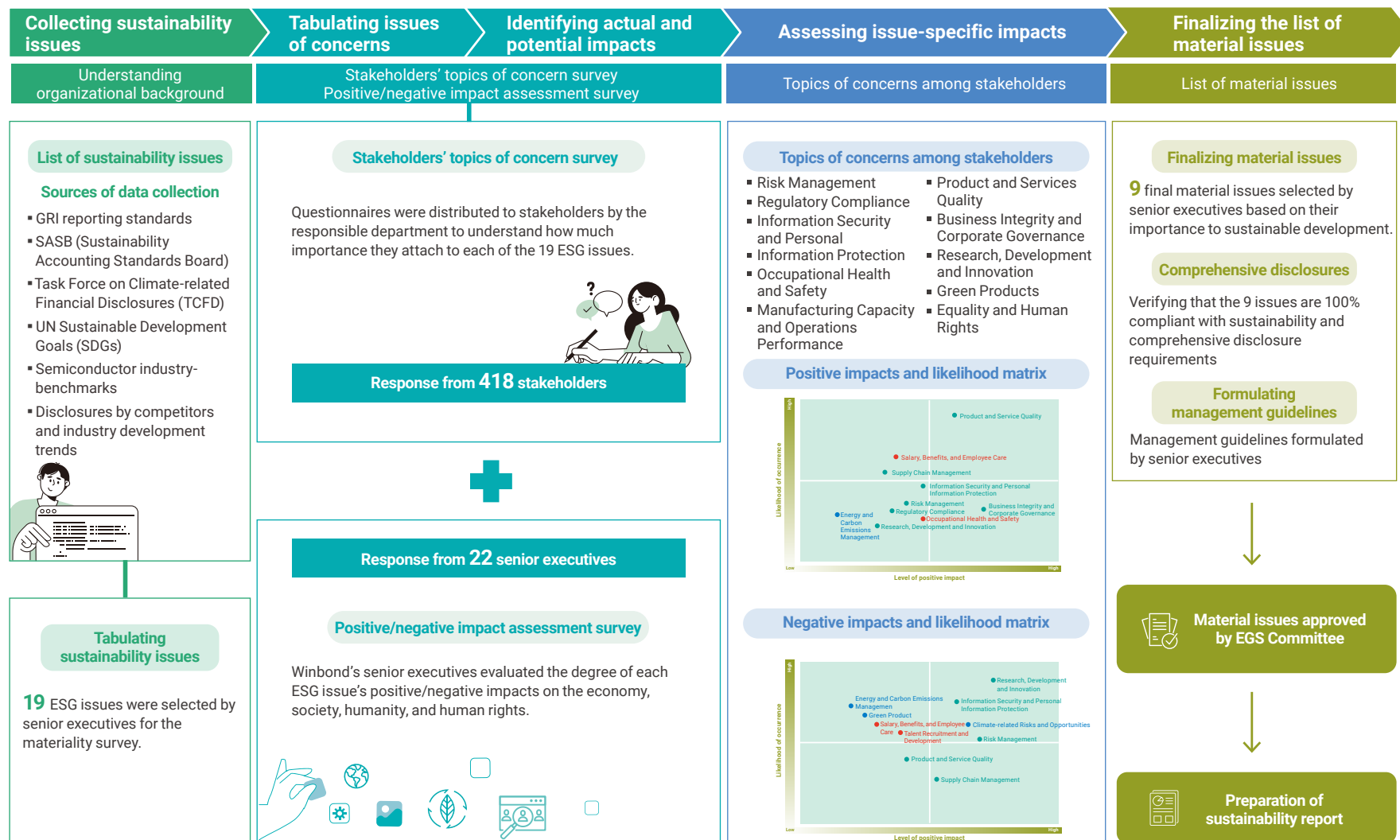


Figure 3 Procedures for Analyzing Material Issues

Matrix of Level of Potential Positive and Negative Impact and Likelihood of Occurrence

In accordance with the GRI Standards (2021) definition of materiality, the senior management team assessed topic impacts through an impact assessment questionnaire, duly considering the principle of double materiality. This evaluation examined both the positive and negative impacts of 19 sustainability topics on the economy, environment, and people (including human rights), rating them based on their likelihood of occurrence and severity of impact (see Figure 4). Subsequently, the material topics identified were organized and submitted to the ESG Committee for review. Based on the priority set by Winbond for its various Sustainable Development Goals, the impact of each topic on Winbond's internal corporate development, the external economic, environmental, and social (including human rights) impact of Winbond's business operations, and in line with Winbond's philosophy for managing material topics, similar material topics are consolidated into a single topic. Through this adjustment process, 9 material sustainability topics were identified. Finally, the Winbond ESG Committee reviewed the identified material topics and confirmed that the information meets the reporting principles of sustainability context and completeness. A management approach was determined for each material topic and submitted to the Board of Directors for approval.

Definition of positive impact

Refers to positive or noticeable results generated by Winbond implementing measures in response to the topic, leading to a positive economic, environmental, or social (including human rights) impact on sustainable development.

Definition of negative impact

Refers to the negative economic, environmental, or social (including human rights) impact caused by Winbond's overall business operations due to Winbond failing to implement or poorly implementing measures in response to the topic.

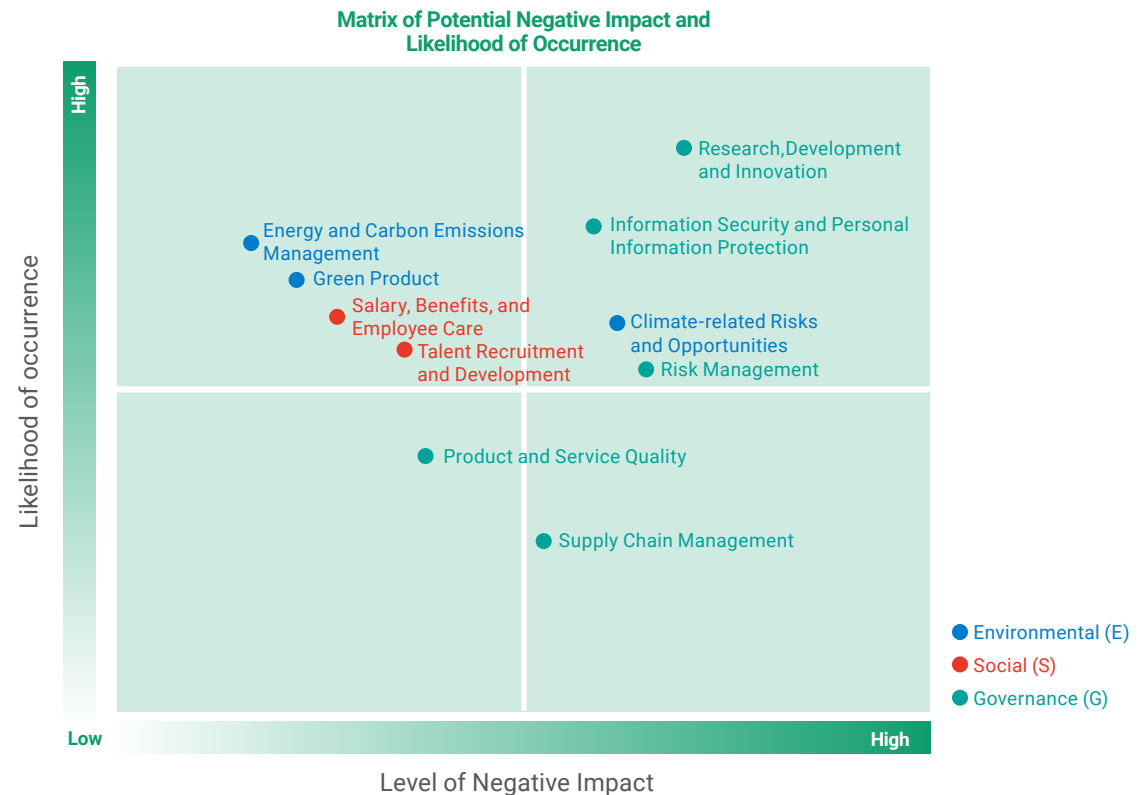
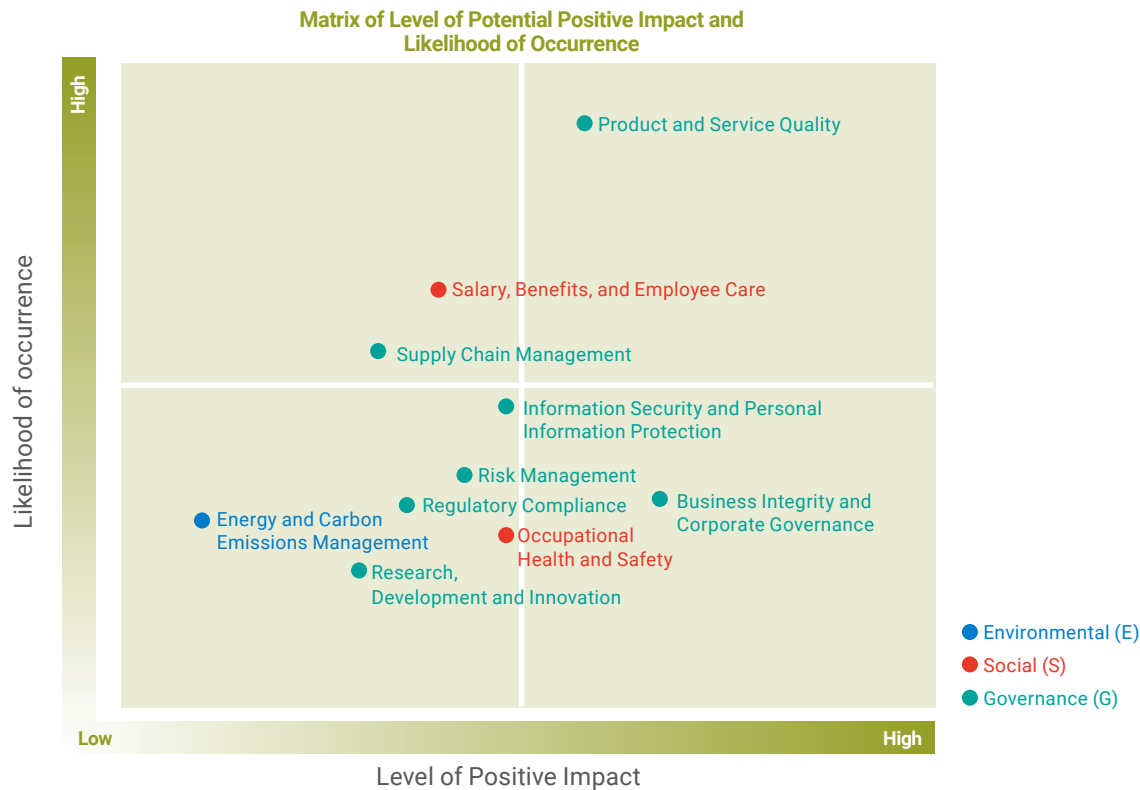


Figure 4 Top 10 sustainable issues ranked by the severity of positive and negative impacts and the likelihood of occurrence

Material Topics and Their Relationship with Winbond Value Chain





















Winbond places high importance on material topics, describing both positive and negative impacts associated with the 9 identified material topics. It links these material topics to Winbond's value chain, determining the impact boundaries on the value chain, including Winbond itself, customers, and the supply chain. Winbond tracks specific outcomes regularly each year.

● Direct impact ▲ Indirect impact through business relationship

Material Topic	Type of Impact (↑ as positive impact ↓ as negative impact)	Description (How to impact economic, environment, and people (including human rights))	Scope of Impact			2023 Result (Please refer to the following sections)
			Winbond	Customer	Supply Chain	
Business Integrity and Corporate Governance	↑ Improve positive brand image. ↓ Corruption and anti-competitive behavior reduce the trust that stakeholders have in Winbond, negatively affecting our operating revenue.	<ul style="list-style-type: none"> Well-established corporate governance and regulatory compliance lead to increased investment. Avoiding illegal activities prevents financial and rights losses for Winbond and certain groups. 	●	▲	▲	1.1 Corporate governance 1.2 Business integrity
Regulatory Compliance	↑ Elevating reputation for sustainable operations. ↓ Receiving legal or regulatory penalties may damage Winbond's reputation, and negatively impact our financial situation and employees.	<ul style="list-style-type: none"> Compliance with regulatory requirements enhances reputation, leading to increased investment and revenue. Avoiding the impact on society and Winbond resulting from non-compliance with social or environmental regulations. 	●	▲	▲	1.2 Business integrity 3 Environmental sustainability 5.1 Human rights governance 5.4 Occupational safety and health
Risk Management	↑ Improve corporate resilience, reducing the impact of risk on the Winbond. ↓ Without a risk management system, potential risks that occur may damage Winbond's reputation and lead to financial losses. Information security leaks may lead to security or financial losses.	<ul style="list-style-type: none"> Through effective corporate governance, human rights, and supply chain risk management systems, the impact and likelihood of risks from climate change and human factors can be reduced. Encourage greater investment from Winbond's stakeholders. 	●	▲	▲	1.4 Risk management
Research, Development and Innovation	↑ Research and development into improving energy conservation and carbon reduction performance are able to provide both Winbond and our customers with benefits. ↓ If research, development, and innovation are unable to provide results that customers are satisfied with, Winbond's competitiveness would decline.	<ul style="list-style-type: none"> The energy conservation and carbon reduction benefits provided through research and development are able to reduce environmental impact. Innovative technologies can satisfy customer requirements, leading to more competitive products and higher revenues for Winbond. 	●	●	▲	2.1 Research, development and innovation
Productivity and Business Performance	↑ Increased productivity, positively impacting revenues. ↓ Insufficient productivity, reducing business performance.	<ul style="list-style-type: none"> Increased productivity can reduce costs and waste, improving business performance and capabilities. Insufficient productivity can lead to higher costs and waste, leading to revenue losses and increased environmental burden, costs and waste, leading to revenue losses and increased environmental burden. 	●	▲	▲	1.3 Productivity and business performance
Supply Chain Management	↑ Refine the supply chain management system, making the goods supply process more stable and smoother. ↓ Supply channels obstructed, leading to production and sales delays.	<ul style="list-style-type: none"> Build a comprehensive supply chain management system, ensuring that supply is stable, leading to increased business production efficiency and higher revenues. Poor management of the social and environmental aspects of the supply chain, leading to lower customer trust and sales orders, and increased environmental burden. 	●	▲	●	4 Sustainable supply chain
Green Product	↑ Improving product functions and reducing product energy consumption can create positive benefits for the environment. ↓ Product market competitiveness.	<ul style="list-style-type: none"> Consistent with sustainability trends, meet customer expectations, improve product positioning and revenues, while also benefiting the environment. Failure to meet customer demands would diminish product value and reduce revenue. 	●	●	▲	2.2 Quality management for products and services 2.3 customer relationship management
Energy and Greenhouse Gas Management	↑ Carbon emissions management, calculating and managing carbon costs. ↓ If energy consumptions and emissions go unmanaged, this may lead to severe environmental impacts and accelerate the negative impact of climate change.	<ul style="list-style-type: none"> Managing Winbond's energy consumption and greenhouse gas emissions to effectively reduce costs. Mitigati the potential operational impacts caused by extreme climate conditions. 	●	▲	▲	3.1 Energy and greenhouse gas management
Talent Management	↑ Bilateral communications between employers and employees help promote smooth business operations. ↓ The safety, diversity, equality, and compliance of the workplace environment significantly impact talent retention or turnover.	<ul style="list-style-type: none"> By enhancing talent acquisition and retention, as well as fostering employee skills and self-worth, we promote the sustainable operation of a happy enterprise and enhance our R&D innovation capabilities. Implementing occupational safety and health management, prevent serious workplace injuries, and promote the physical and mental well-being of employees. 	●	▲	▲	5.1 Human rights 5.2 Talent attraction and development 5.3 Employee communication and relations 5.4 Occupational safety and health

Alignment of Major Topics with GRI, SASB, UN Global Compact, SDGs, and Winbond Commitments

Winbond aligns nine major issues with international standards, including the Global Reporting Initiative, (GRI), the Sustainability Accounting Standards Board, (SASB), the United Nations Global Compact, (UNGC) and the United Nations Sustainable Development Goals, (SDGs).

Material Topic	Significance to Winbond	Commitment of Winbond	GRI	SASB	UNGC	SDGs
Business Integrity and Corporate Governance	In the knowledge economy, business integrity and corporate governance are vital for high-tech firms such as Winbond.	Adherence to legal regulations is the fundamental baseline; "business integrity" represents Winbond's highest ethical standard. Based on this principle, we strive for the mutual prosperity of both the company and society.	GRI 205 Anti-Corruption GRI 206 Anti-competitive Behavior	TC-SC-520a.1 Intellectual Property Protection & Competitive Behaviour	Businesses should work against corruption in all its forms, including extortion and bribery.	
Regulatory Compliance	Winbond is committed to a corporate philosophy of sustainable development, and to doing our part as a responsible corporation. Winbond has complied with all laws and regulations throughout our overall business operations.	Winbond shall fully complies with all laws and regulations on corporate governance, financial operations, trade, environmental protection, occupational safety and health, information security, intellectual property, worker rights, internal controls, and risk management relevant to our business operations.	Regulatory compliance (self-defined topic)			
Risk Management	A sound and well-implemented risk management system is the foundation of Winbond's sustainable business operations.	Adhering to the goal of sustainable business operations, establishing a risk management mechanism, integrating and managing various potential risks that may affect operations and profitability, including but not limited to financial, environmental, cybersecurity, operational, and climate risks.	Risk management (Self-defined topic)			 
Research, Development and Innovation	Research, development and innovation into our products, technologies, and business model are the sources of our competitiveness and value. They are also one of the most effective ways to conserve energy and reduce carbon emissions.	Winbond promises to deliver most competitive, energy-efficient, power-saving, and low-carbon-emission products through our innovative technologies developed in R&D.	Research & Development and Innovation (Self-defined topics)			
Productivity and Business Performance	Productivity and business performance are critical to Winbond's continued development. Improving productivity can lead to lower costs and less waste while increasing income at the same time, further increasing corporate profits and improving business performance.	Winbond is committed to improving productivity and business performance, with sustainable development and the enhancement of corporate value as our guiding goals. We are actively promoting digital transformation, introducing advanced technology, and popularizing the application of data and AI. We continuously optimize our business strategy and management models to improve corporate competitiveness and market share, while also strengthening employee training and motivation.	GRI 201 Economic Performance			
Supply Chain Management	Building a sustainable and resilient supply chain system, coordinating and integrating logistics, production, procurement, and other sales-related activities, achieving high production and service efficiency and maximizing value.	Winbond is committed to ensuring the stability of our supply chains, improving supply chain transparency, and establishing and implementing policies on environmental protection and corporate social responsibility through close collaborations with our suppliers. These efforts aim to promote the overall legal compliance and continued development of the overall supply chain	GRI 308 Supplier Environmental Assessment GRI 414 Supplier Social Assessment	TC-SC-440a.1 Material sourcing	Make sure that they are not complicit in human rights abuses.	    
Green Product	Creating value, reducing risks, and developing sustainable technologies and products in order to create secure, energy-saving, and smart lifestyles.	Winbond's vision is to become a "hidden champion in providing sustainable semiconductors to enrich human life", and Winbond has devoted ourselves to developing a high-efficiency, small-size, low energy-consumption, and high-quality green memory products and green manufacturing processes.	GRI 417 Marketing and Labeling	TC-SC-410a.1 TC-SC-410a.2 Product lifecycle management	Encourage the development and diffusion of environmentally friendly technologies.	 
Energy and Greenhouse Gas Management	Extreme climate conditions threaten to upset ecosystem balance. Winbond needs to do our part to save energy and reduce carbon emissions.	Combine data science and professional knowledge, and together with our Fab facility systems suppliers, continue to improve energy usage efficiency, gradually increase the proportion of renewable energy used, and reduce greenhouse gas emissions.	GRI 302 Energy GRI 305 Emission	TC-SC-110a.1 TC-SC-110a.2 Greenhouse Gas Emissions TC-SC-130a.1 Energy emission	Businesses should support a precautionary approach to environmental challenges. Undertake initiatives to promote greater environmental responsibility	    
Talent Management	Talent is the key to Winbond's success. Recruiting talent, using talent, cultivating talent, and retaining talent are all long-term operational tasks.	Winbond is committed to providing a high-quality working environment, competitive compensation and benefits to attract, develop, and retain our talents, aiming to enhance employee engagement and dedication.	GRI 401 Employment GRI 403 Occupational Health and Safety GRI 404 Training and Education GRI 405 Diversity and Equal Opportunity GRI 406 Non-discrimination GRI 408 Child Labor	TC-SC 320a.1 TC-SC-320a.2 Workforce Health & Safety TC-SC-330a.1 Recruiting & Managing a Global & Skilled Workforce	Businesses should support and respect the protection of internationally proclaimed human rights. Make sure that they are not complicit in human rights abuses. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining. The elimination of all forms of forced and compulsory labour. The effective abolition of child labour. The elimination of discrimination in respect of employment and occupation.	   



Goals and Performance for Material Topics

Material Topic	2023 Goal	2023 Performance (✓ Achieved)	2024 Short-Term Goal	2030 Mid- & Long-Term Goal
Business Integrity and Corporate Governance	<ul style="list-style-type: none"> Attain top 20% ranking in TWSE Corporate Governance Evaluation. 	<ul style="list-style-type: none"> ✓ listed in top 6 -20% 	listed in top 20%	Listed in top 20%
	<ul style="list-style-type: none"> Continuously increasing the participation of female board members. 	<ul style="list-style-type: none"> ✓ 3 female directors, accounting for 27% 		Continuously increasing the participation of female board members
Regulatory Compliance	<ul style="list-style-type: none"> Implement and conduct 12 regulatory compliance –related courses/year. 	<ul style="list-style-type: none"> ✓ 21 courses 	>12 course/year	>15 course/year
	<ul style="list-style-type: none"> Ensure strict compliance with relevant domestic and foreign laws and regulations, with no major violations. 	<ul style="list-style-type: none"> ✓ 0 	0	0
Risk Management	<ul style="list-style-type: none"> Strengthen climate resilience and formulate measures climate change adaptation and prevention to minimize the impact of climate risks and production disruptions caused by climate disasters. 	<ul style="list-style-type: none"> ✓ 0 days 	0 days	0 days
Research, Development and Innovation	<ul style="list-style-type: none"> Achieve over 80% customer satisfaction. 	<ul style="list-style-type: none"> ✓ 85.2% 	>80%	>80%
	<ul style="list-style-type: none"> Obtain approval for 350 patents worldwide 	<ul style="list-style-type: none"> ✓ 390 patents 	>350 patents	>350 patents
Productivity and Business Performance	<ul style="list-style-type: none"> Complete at least 24 digital transformation activities and training sessions in 2023 	<ul style="list-style-type: none"> ✓ 35 sessions 	72 sessions	72 sessions
	<ul style="list-style-type: none"> Conduct an annual survey of major suppliers to assess their sustainable supply chain resource usage, with a focus on improving the survey response rate each year 	<ul style="list-style-type: none"> ✓ ≥90% 	≥91%	≥93%
Supply Chain Management	<ul style="list-style-type: none"> Achieve a high implementation rate of sustainability risk assessment of key suppliers 	<ul style="list-style-type: none"> ✓ 100% 	100%	100%
	<ul style="list-style-type: none"> Achieve a high installation and utilization rate of the outsourced product GHG emission data exchange standard module for suppliers 	Installation rate 60%	Installation rate 100%	Utilization rate 100%
	<ul style="list-style-type: none"> Plan the implementation and utilization of internal logistics operational systems and green electricity product production systems. 	Installation rate 60%	Installation rate 100%	Utilization rate 100%
	<ul style="list-style-type: none"> Achieve a 37% localization rate in key raw material procurement. 	<ul style="list-style-type: none"> ✓ 37% 	38%	41%
	<ul style="list-style-type: none"> Complete 8 projects focus on developing multi-sources for key raw materials. 	<ul style="list-style-type: none"> ✓ 8 projects 	14 projects	26 projects
	<ul style="list-style-type: none"> Enhance the construction and utilization rates of the suppliers ESG Interactive Network. 	<ul style="list-style-type: none"> ✓ Installation Rate>90% 	Utilization rate 100%	Utilization rate 100%
	<ul style="list-style-type: none"> Host annual Suppliers ESG Co-Learning Workshops (cumulative sessions) 	<ul style="list-style-type: none"> ✓ 24 sessions 	32 sessions	80 sessions
	<ul style="list-style-type: none"> Organize annual Sustainable Supply Chain Forums (cumulative sessions) 	<ul style="list-style-type: none"> ✓ 3 sessions 	5 sessions	20 sessions
	<ul style="list-style-type: none"> Provide 28 hours ESG education and training for internal supply chain colleagues (per person) 	<ul style="list-style-type: none"> ✓ 28 hours per person 	30 hours per person	40 hours per person



Goals and Performance for Material Topics

Material Topic	2023 Goal	2023 Performance (✓ Achieved)	2024 Short-Term Goal	2030 Mid- & Long-Term Goal
Green Product	<ul style="list-style-type: none"> 1.2V HyperRAM mass production 	<ul style="list-style-type: none"> ✓ The 1.2V HyperRAM products were mass-produced utilizing advanced, compact packaging such as 49BGA and WLCSP. ^(Note 1) 	Energy savings and GHG emission reductions at the customer application end >33% ^(Note 2)	20% Reduction in GHG emissions throughout the product's life cycle. ^(Note 3)
	<ul style="list-style-type: none"> 3V Spi NOR RV series mass production 	<ul style="list-style-type: none"> ✓ The RV series produced 34% less GHG emissions than the 90nm DV series 	GHG reduction of 35,000 tCO ₂ e ^(Note 4)	GHG reduction of 110,000 tCO ₂ e ^(Note 4)
Energy and Greenhouse Gas Management	<ul style="list-style-type: none"> Total power saving: 2~3% 	<ul style="list-style-type: none"> ✓ 4.2% 	2~3%	>2~3%
	<ul style="list-style-type: none"> YoY reduction in electricity consumption per unit product: ≥ 1% 	<ul style="list-style-type: none"> Increased 22.8% ^(Note 5) 	≥1%	≥1%
	<ul style="list-style-type: none"> YoY reduction in GHG emission intensity: ≥5% 	<ul style="list-style-type: none"> Increased 17.4% ^(Note 5) 	≥5%	≥5%
	<ul style="list-style-type: none"> Fab-wide water recovery rate ≥ 80% 	<ul style="list-style-type: none"> ✓ 82.2% 	≥80%	≥80%
	<ul style="list-style-type: none"> Overall waste recycling rate: ≥ 90% 	<ul style="list-style-type: none"> ✓ 90.9% 	≥90%	≥90%
Talent Management	<ul style="list-style-type: none"> Reduction rate of volatile organic compounds (VOCs): ≥ 93% 	<ul style="list-style-type: none"> ✓ 98% 	≥93%	≥93%
	<ul style="list-style-type: none"> Global human rights and labor ethics training course – achieve a 100% attendance rate 	<ul style="list-style-type: none"> ✓ 100% 	100%	100%
	<ul style="list-style-type: none"> Ensure social inclusion donations > NT\$10 million 	<ul style="list-style-type: none"> ✓ NT\$18.11 million 	>NT\$10 million	>NT\$10 million
	<ul style="list-style-type: none"> Maintain total compensation within the top 25% of the industry 	<ul style="list-style-type: none"> ✓ Top 25% ^(Note 6) 	Top 25%	Top 25%
	<ul style="list-style-type: none"> Attain ≥95% employee retention and willingness to contribute at Winbond for the next 5 years, based on the 2023 Employee Core Values and Engagement Survey results 	<ul style="list-style-type: none"> ✓ 97% 	≥ 95%	≥ 95%
	<ul style="list-style-type: none"> (Important operating sites-WEC) Ensure the average number of learning hours per employee reaches 48 hours 	<ul style="list-style-type: none"> ✓ 50 hours per person 	50 hours per person	65 hours per person



- The 128Mb~512Mb products were mass-produced in 49BGA package, and the 1.2V/128Mb products were mass-produced in WLCSP (Wafer-Level Chip-Scale Package).
- This calculation was based on 25nm 1.2V/128Mb HyperRAM product.
- Calculations were based on the entire range of dynamic random-access memory (DRAM) products including the process evolution.



- Calculations were based on the entire range of flash memory products including the process evolution.
- The challenge in meeting targets was linked to the global economic recession in 2023, resulting in decreased production capacity. Furthermore, the Kaohsiung Fab not yet attained economies of scale, contributing to elevated average electricity consumption and emissions per unit product.
- Data was sourced from the figures published annually in July by the Taiwan Stock Exchange Market Observation Post System for the preceding year.

Stakeholder Engagement

Winbond identified the relevance and precedence of stakeholders using the five principles of the AA1000 Stakeholder Engagement Standard (SES) 2015: Dependency, Responsibility, Influence, Tension, and Diverse Perspectives.

In 2022, 22 senior management members at Winbond participated in a stakeholder identification survey (please refer to the [Materiality Analysis Report](#)). They identified the following major stakeholders based on the extent of each stakeholder's relationship with Winbond: government agencies, customers, employees, investors/shareholders, media, suppliers/contractors, and community groups.

A dedicated stakeholder section has been established on the Winbond website, providing various communication channels for stakeholders. Stakeholders can raise questions or suggestions related to sustainability topics, with specific contacts designated to respond to different types of stakeholders. This structure ensures effective communication between Winbond and its stakeholders. The 2023 report utilized the stakeholder identification results mentioned above.

Employees

- Employees are one of the most important assets.
- Serving as key stakeholders in our continued breakthroughs and innovations.

100 %
Human rights due diligence

88 % Attendance rate
4 supervisor management discussion sessions

62
Total number of internal communication cases handled

Material Topics

- Business Integrity and Corporate Governance
- Talent Management
- Regulatory Compliance
- Productivity and Business Performance

Channel and Frequency of Communication

immediate

- Internal Hotline 75234 Employee Complaints Hotline
- "Care" Employee Suggestions Box
- Illegal Employment Infringement Appeals and Arbitration Committee
- Health Consultation

ad hoc

- Health Promotion Activities
- Employee Welfare Committee
- Internal Bulletin Board

regular

- Surveys on Health, Stress, and Physical Aches (annual)
- Employer-Employee Meetings and Supervisor Communication Meetings (quarterly)
- Functional Communications Meetings (regular)
- Articles on Winbond Philosophy Published on the Employee Homepage (weekly)
- Monthly Labor Safety Meetings (monthly)
- Environmental Safety and Health Committee (quarterly)
- ESG questionnaire (annual)

2023 Communication Effectiveness

- 12 cases of internal complaints in total (excluding the sexual harassment)
- 2 cases of sexual harassment
- 48 reports of everyday issues received through the suggestion box
- 4 quarterly supervisor management discussion sessions were held. These sessions were attended by 2,099 people, achieving an attendance rate of 88%.
- 12 labor-management meetings were held (Zhubei Building, CTSP Fab, Kaohsiung Fab).

Employee Testimonial

"Thanks to Winbond's various policies that support employees to achieve a balance between work and family. LOHAS leave and flexible working hours provide more time to spend with their children. The maternity subsidy provided quarterly for four years is just like regular small sure payments every quarter. Fortunately, we can actually feel that the company pays attention to employees' families and life attitude."

Kai Jen

▲ Winbond has pioneered the childcare allowance system and takes care of the family life of employees

▲ 2023 Winbond Zero-Carbon Family Day offset the event's carbon footprint through carbon credits.



Customers

- Customers are the primary source of economic value creation for Winbond.
- They are key stakeholders concerned with Winbond's ESG performance.

85.2 %
Customer satisfaction

7,470
Customer interaction



Material Topics

- Business Integrity and Corporate Governance
- Energy and Greenhouse Gas Management
- Green Product
- Regulatory Compliance
- Productivity and Business Performance
- Research, Development and Innovation
- Risk Management
- Supply Chain Management



Channel and Frequency of Communication

immediate

- Winbond official website, telephone, and e-mail

regular

- Sales meetings (regular)
- ESG questionnaire (annual)
- Technical seminars (annual)
- Internal Audit (annual)

ad hoc

- Customer audits



2023 Communication Effectiveness

- WinTech 2023: Exploring product performance, market dynamics, future trends, and technical solutions.
- International exhibitions: Participating in the Germany Embedded World 2023, Shanghai electronica 2023, USA Flash Memory Summit, Japan EdgeTech+ and other international exhibitions.
- Technical seminars:
 - Conducting product technology forums in Shenzhen and Shanghai with our partner NXP, focusing on the Chinese market.
 - Organizing Distributor Sales Conference events, featuring market outlook presentations by senior executives, product planning and advantages presentations by business group managers, and market observation and analysis by sales center.
- Daily visit and communication

Customer Testimonials



▲ Provide a detailed explanation of future strategies and Supply Chain Management to customer (Inventec)

Miss Gloria Shih
Procurement Manager, Pegatron

"In multiple discussions, PEGATRON has acknowledged Winbond's expertise and dedication in this field."

Miss Rachel Huang Manager,
Inventec

"From numerous discussions about future strategies and supply chain management with suppliers, Winbond stands out as the most enthusiastic and well-prepared supply partner."

Mr. Lee SCM Strategic
Procurement Manager, SigmaStar

"SigmaStar recognizes Winbond as a long-term strategic partner, believing in Winbond's professional product development and planning, as well as its deep commitment to enhancing the customer experience."

Suppliers

- Suppliers/Contractors provide supplies and services required for Winbond's production operations. They help maintain Winbond's continuous and sustainable operations, making them also important stakeholders and partners of Winbond's sustainable development.

100 % Signing rate
Of Code of ethics and integrity and RBA statement

340 Hours
ESG co-learning workshop training hours

9 Workshops
ESG co-learning workshops

Material Topics

- Business Integrity and Corporate Governance
- Regulatory Compliance
- Supply Chain Management
- Green Product
- Research, Development and Innovation

Channel and Frequency of Communication

immediate

- External complaints channels

regular

- Winbond Ethics and Integrity Policy and complaint channel (Six months)
- Evaluations of major suppliers (Six months)
- Supplier audits (annual)

- ESG evaluations of suppliers (annual)

2023 Communication Effectiveness

- 100% suppliers have signed the Commitment to Ethical Conduct and the Responsible Business Alliance (RBA) Code of Conduct
- 100% of key suppliers have signed the Declaration of Non-Use of Conflict Minerals
- 100% of key suppliers have signed the Hazardous Substance Free Declaration (HSF).
- 0 cases of supplier complaints
- 100% of suppliers have passed economic, environmental, and social impact audits, and have adopted sustainability review standards.

Supplier Testimonial

▲ Supply chain low-carbon transformation ceremonies

“Thank you, for inviting us to participate in the ‘Large Leads Small’ project and for the government funding support. Let’s continue building a win-win partnership with Winbond as we work towards our net-zero goal by 2050!”

Choc Choc Lin, Vice Chair of the Sustainable Development Committee, Walton Advanced Engineering

Government Agencies

- Government agencies are concerned with Winbond's regulatory compliance on environmental, social and governance (ESG) matters. Its influence on industry development and policy implementation makes it a material stakeholder.

24
Public associations

65 Meetings
Occupational safety and health meeting with authorities

Material Topics

- Business Integrity and Corporate Governance
- Regulatory Compliance
- Talent Management
- Risk Management
- Energy and Greenhouse Gas Management

Channel and Frequency of Communication

regular

- ESG questionnaire (annual)

ad hoc

- Official documents and correspondence
- Public hearings
- Policy information sessions
- Regulatory conferences
- Inspections by competent authority

2023 Communication Effectiveness

- Participated in 65 meetings with Occupational safety and health management entities.
- Conducted 38 on-site audits and inspections with Occupational safety and health management entities
- Engaged in 24 public association

◀ Recognized as an outstanding business entity for using electronic uniform invoices by the Ministry of Finance in 2023

Shareholders/ Investors

- Shareholders/Investors are Winbond's main source of capital.
- They are mainly concerned with Winbond's operating performance and sustainable development.

51 Meetings
Shareholders/investors communication meetings

Material Topics

- Green Product
- Risk Management
- Regulatory Compliance
- Productivity and Business Performance
- Business Integrity and Corporate Governance
- Research, Development and Innovation

Channel and Frequency of Communication

immediate	regular	ad hoc
<ul style="list-style-type: none"> Telephone and e-mail 	<ul style="list-style-type: none"> Investor conference (biannual, or whenever necessary due to special circumstances) One-on-one meetings with institutional investors (10-20 times/quarter) Shareholders' Meeting (annual) ESG questionnaire (annual) 	<ul style="list-style-type: none"> Winbond official website The Taiwan Stock Exchange Market Observation Post System

2023 Communication Effectiveness

- 12 disclosures of revenue
- 1 annual shareholders' meeting
- 2 institutional investor conferences
- 48 Corporate communication meetings
- 4 disclosures of financial reports

Dialogue and Engagement with Investors



▲ Winbond 2022 annual shareholders' meeting

“In the past two years, Winbond has engaged in exchanged and negotiated with Winbond on ESG materiality issues, ESG development, and MSCI ESG Rating, and Winbond has further shared its ESG actions, carbon inventory and verification timetable of domestic and foreign subsidiaries. The company's open and transparent attitude is the key to building investor trust, and it also reflects the company's recognition and commitment to ESG values. Cathay Life also sincerely hopes that the company can take the ESG field to the next level, so as to bring positive and long-term impact to both parties and society!”

Responsible Investment Team, Cathay Life Insurance

Community/ Society

- Their proximity to Winbond's operating locations means they bear the brunt of the impact from our operations. Their welfare is therefore of high importance to Winbond.

NT\$18.11 million
Total amount of charitable donations

1,089 People
Total number of donors

358 People
Serve as a volunteer and lecturer

Material Topics

- Business Integrity and Corporate Governance
- Talent Management
- Regulatory Compliance

Channel and Frequency of Communication

ad hoc

- Volunteer activities
- Collaborative projects and visits



▲ Conserving and nurturing 27 species of Theaceae to protect Taiwan's native plants and preserve Theaceae germplasm

2023 Communication Effectiveness

- We have cultivated 27 Theaceae species, including 1 species that is classified as critically endangered, 1 as endangered, 5 as vulnerable, and 3 as near threatened, as listed in the IUCN Red List of Threatened Species.
- Happy Breakfast Program for School Children in Rural Areas which benefits 101 students
- Fundraising for Impoverished Students Education Financial Aid which benefits 1,023 students
- Donate NT\$115,000 in Southern Taiwan Science park charity picnic
- Collected 70 kg of trash in the activity - Guard Fazi River activities
- Total amount of charitable donations NT\$18.11 million

Media

- The media serves as a bridge between Winbond and stakeholders. With immediate access to information released by Winbond, they can assist Winbond with the disclosure of positive sustainability information

2 Press conferences

30 Press releases

Material Topics

- Business Integrity and Corporate Governance
- Talent Management
- Green Product
- Productivity and Business Performance
- Research, Development and Innovation

Channel and Frequency of Communication

immediate	regular
<ul style="list-style-type: none"> Telephone and e-mail 	<ul style="list-style-type: none"> Press release Media interviews (annual) ESG questionnaire (annual)

2023 Communication Effectiveness

- 25 telephone and e-mail communications
- 30 press releases
- Winbond operating report provided 2 times
- 2 press conferences held

Attaining the UN Sustainable Development Goals



Winbond references the Sustainable Development Goals (SDGs) released by the United Nations and the Taiwan Sustainable Development Goals announced by the Taiwanese government, integrating SDGs relevant to its business into its corporate social responsibility policies and operational directions. Following the Practical Guide for Business Reporting on SDGs jointly issued by the Global Reporting Initiative (GRI) and the United Nations, Winbond identifies SDGs relevant to its operations through three steps and nine actions, establishing sustainable development goals and initiating sustainable actions.

Winbond first identifies priority areas of SDGs, sets sustainable goals after measuring and evaluating performance, and integrates and reports on sustainable action plans. We will continue

to track our progress in the future. Winbond released its first action report, defining SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), SDG 15 (Life on Land), and SDG 17 (Partnerships for the Goals) as priority areas, setting 24 specific goals. By 2023, Winbond had initiated and undertaken over 15 sustainable actions, fulfilling its corporate citizenship responsibilities and expanding its positive impact on society by aligning with its commitment to SDGs and demonstrating a clear dedication to their implementation.

Winbond's Sustainable Development Strategy

Develop five strategies from the three-dimensional vision of ESG

Green Product

Developing safe, efficient, and low-energy green products continuously

Sustainable Supply Chain

Strengthening supply chain cooperation and enhancing sustainable competitiveness

Environmental Sustainability

Improving energy efficiency and achieving net-zero goal

Human Rights and Social Inclusion

Cultivating talent, encourage innovation, and creating a friendly and harmonious workplace

Corporate Governance

Enhancing corporate governance functions and realizing sustainable value

SDGs Item Identification

Through 3 steps and 9 actions, we identify the SDGs related to Winbond and establish sustainable development goals

Winbond Stakeholders

- employees
- customers
- suppliers/contractors
- government agencies
- shareholders/investors
- community/society
- media

Step1

Identify priorities for the SDGs

10 priorities

- Learn about the SDGs and their sub-goals
- Sort the SDGs sub-goals
- Decide on the content of SDG-related coverage

Step2

Measurement & Performance Evaluation

24 goals

- Setting goals
- Select the Disclosure Project
- Collect and analyze data

Step3

Report, integrate, and react

15 Action plans

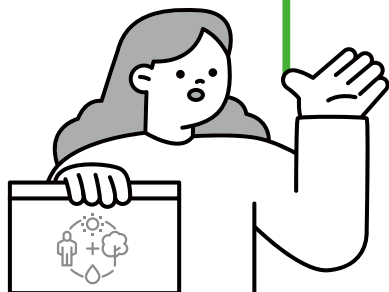
- Benchmarking examples when reporting on the SDGs
- Consider the needs of information users
- Reporting and action

Practice of Sustainable Action Plan

Actions, disclosures and reports

Winbond has launched a sustainable action plan for 10 priority SDGs, as detailed in [2023 Winbond UN SDGs Action Report](#).





SDG 3 Good health and well-being

1 Employee health management

- 1 > 1,000 employees benefit from health promotion programs
- 2 > 1,000 employees receive free vaccines

2 Encourage childbearing

- 1 NT\$6,000 monthly employee childcare stipend (until the kid reaches the age of 4)
- 2 Pregnant Employee Care Program coverage: 100%

Achievements in 2023

- Employee health examination follow-up completion rate: 100%
- 30,476 employees participated in sports promotion campaigns (10,362,995 Kcal burned)
- 1,773 employees received free flu shots
- NT\$6,000 monthly employee childcare stipend (NT\$330 million paid between 2011 and 2023)
- 45 pregnant employees received counseling services and information on subsidies



SDG 4 Quality Education

1 Youth education

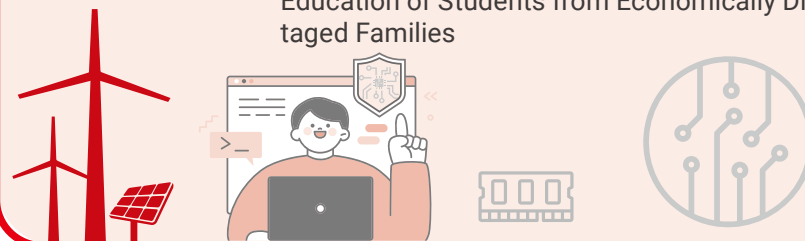
- 1 Investing NT\$10 million in cultivating semiconductor talent

2 Educational resources for the disadvantaged

- 1 Annual scholarships for disadvantaged students (benefiting > 1,000 students)

Achievements in 2023

- Invested NT\$10 million in and appointed 20 lecturers to the NCKU Semiconductor Program, benefiting 360 students
- 1,023 students benefiting from Financial Aid for the Education of Students from Economically Disadvantaged Families



10
Priority
SDGs

15
Action Plans

24
Sustainability
Goals



SDG 6
Clean water and sanitation

1 Minimizing water risk

- 1 The water recovery rate of the whole plant \geq 80%



Achievements in 2023

- Fab-wide water recovery rate: 82.2%
- 4 billion liters of water conserved during 2019–2023
- Introduction of the ISO 46001 water efficiency management systems



SDG 7
Affordable and clean energy

1 Energy conservation

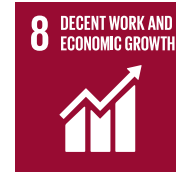
- 1 Reduction in electric power consumption of 2–3% year over year between 2023 and 2030
- 2 Reduction in product energy intensity of 1% year over year between 2023 and 2030

2 Use of renewable energy

- 1 Green energy accounted for 90% by 2030 at the CTSB Fab

Achievements in 2023

- 456,000 MWh conserved between 2019 and 2023
- Renewable energy accounted for 0.4% of all energy used at the CTSP Fab



SDG 8
Decent work and economic growth

1 Competitive employee remuneration

- 1 Salary level ranks in the top 25% among our competitors

2 Local procurement

- 1 >35% of key materials sourced locally

Achievements in 2023

- Remuneration for full-time non-management employees ranked in the top 25% in the industry in 2022
- 37% of key materials sourced locally
- Winbond became the first company in the semiconductor industry to receive a full subsidy from Industrial Development Administration (IDA) for the “Large Leads Small: Working with suppliers to reduce carbon footprint” program



SDG 9
Industry, innovation and infrastructure

1 Encouraging innovation

- 1 350 new patents globally per year between 2023 and 2030
- 2 R&D expenses account for > 8.5% of operating income between 2023 and 2030

Achievements in 2023

- 390 new patents granted in 2023; total patents reached 4,900
- R&D expenses accounted for 23% of operating income
- Named Top 100 Global Innovator by Clarivate





SDG 12
Responsible consumption and production

1 Responsible Procurement

- 1 Declaration of Non-Use of Conflict Minerals signing rate: 100%
- 2 Winbond Supplier Code of Conduct Commitment Letter signing rate: 100%

2 Promotion of Sustainability Awareness

- 1 80 supplier ESG workshops by 2030

Achievements in 2023

- Zero conflict minerals used
- The signing rate of the Winbond Supplier Code of Conduct Commitment Letter reached 100% among our key suppliers
- 24 supplier ESG workshops



SDG 13
Climate action

1 Minimize weather risks

- 1 Zero days of production interruptions due to weather-related hazards
- 2 Greenhouse gas emission intensity YoY reduction $\geq 5\%$

2 Promote climate change education

- 1 Promoting sustainable education
- 2 Promoting suppliers co-learning initiative
- 3 Establish cross-functional TCFD project team

Achievements in 2023

- Zero days of production interruptions due to weather-related hazards in 2023
- 2.28 million metric tons in CO₂e reduction since joining the Perfluorocarbon Greenhouse Gas Emissions Reduction Project initiated by the World Semiconductor Council in 2006
- Establish sustainable training platform to promote sustainable education
- Total learning hours for the supply chain ecosystem: 16,965 hours



SDG 15
Life on land

1 Nature-based solutions

- 1 30-year afforestation project
- 2 > Preservation of 25 species of Theaceae (The tea plant family)



Achievements in 2023

- 1,300 trees planted at the Kaohsiung Fab
- 7,700 trees planted in Chiayi
- 27 out of 42 native Taiwanese Theaceae species conserved
- Conservation of *Spiranthes sinensis* (the Lady's Tresses orchid), an endangered wild plant species



SDG 17
Partnerships for the goals

Winbond starts with its own operations, engages employees, customers, suppliers, government agencies, stakeholders/investors, and the community/society, and collaborates with stakeholders to respond to the SDGs and create sustainable value.

