

Contribution to Sustainability

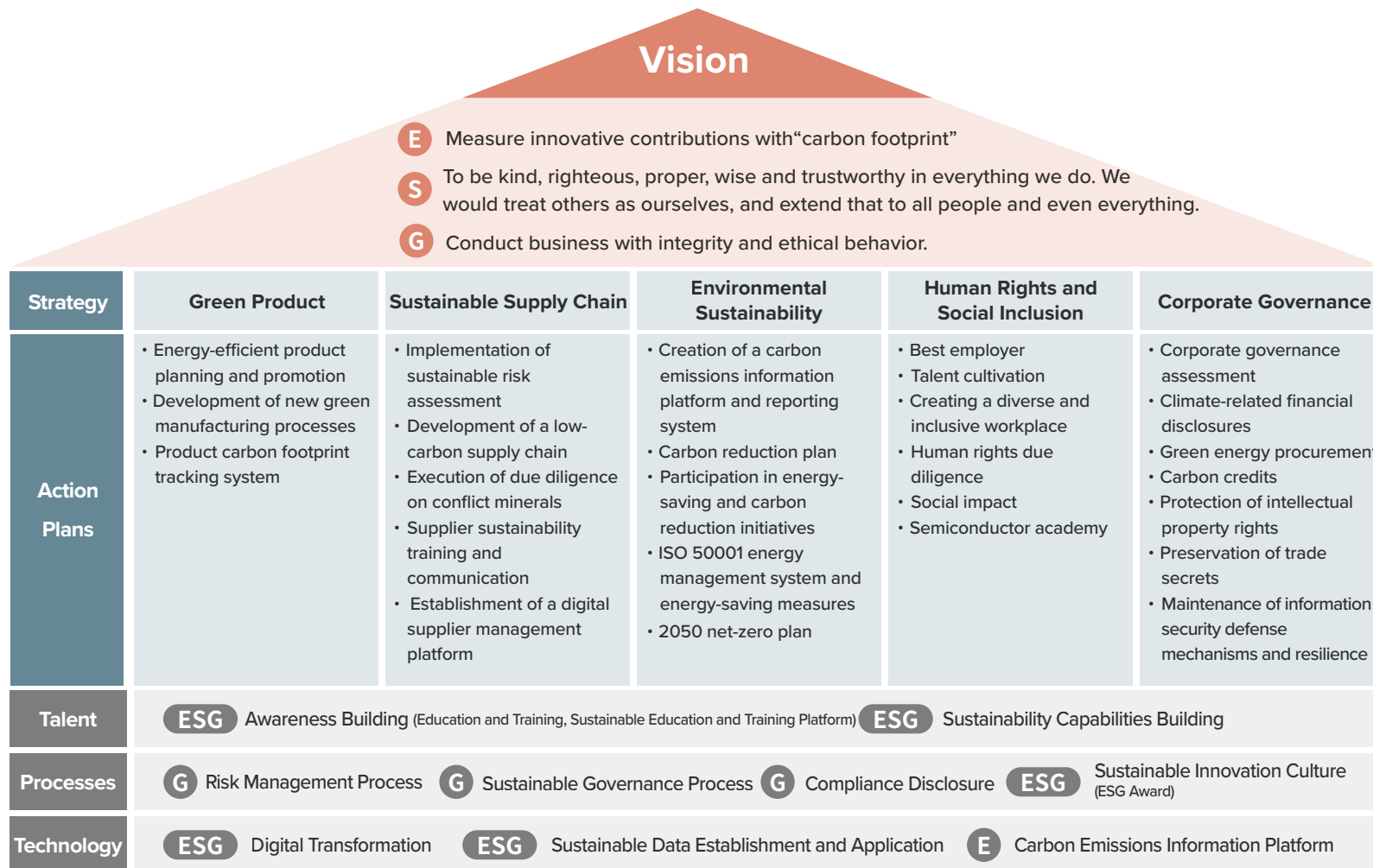
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I. ESG Implementation Framework

Winbond strives to become "a hidden champion in providing sustainable semiconductors to enrich human life". Under the leadership of the Chairman, Winbond upholds integrity, innovation, and passion, and continuously enhances corporate values, while paying attention to global trends, caring about social issues, and responding to the expectations of stakeholders. Winbond has developed a strategic blueprint based on the vision of ESG in three frameworks, aligning with the action plan for the United Nations Sustainable Development Goals (SDGs). By integrating sustainability principles into our core capabilities, Winbond is fostering new possibilities for talent, processes, and technologies, and creating a better future for society.

— Winbond Sustainability Strategy Framework —



II. Sustainable Development Governance

In 2015, Winbond established the "Winbond Corporate Social Responsibility (CSR) Implementation Committee" as the main management for promoting sustainable development within the Winbond. It was restructured into the ESG Committee in 2022. The level of committee is raised to the level of the Board of Directors. The committee convenes at least twice a year, with the Chairman serving as its chairperson. The purpose of the committee is to plan Winbond's sustainable development strategies and goals, formulate corresponding action plans, integrate company resources, and address various sustainability issues to enhance operational competitiveness.

Under the ESG Committee, Winbond established the ESG Office and five task forces, including Environmental Sustainability, Green Products, Human Rights and Social Inclusion, Sustainable Supply Chain, and Corporate Governance. The committee regularly reports its implementation results to the Board of Directors annually to ensure the promotion and implementation of works related to corporate sustainability.





Sustainability Statement



Hsiang-Yun Fan Vice President, DRAM Product Business Group

Winbond is committed to the research and innovation of low-power memory products, aiming to enrich human life through green semiconductor technology and mindset. Winbond strives to make concrete contributions to our customers and society in terms of sustainability.



Wen-Hua Lu Vice President, Memory IC Manufacturing Business Group

Risks are also opportunities, and Winbond actively manages controllable operational risks to minimize their impact. Winbond provides abundant resources to stabilize the supply chain and continuously explore business models that create value for our customers. Through product and process innovation, Winbond hopes to establish long-term and sustainable win-win relationships with our customers.



Jen-Lieh Lin Vice President, Flash Memory IC Business Group

Net-zero carbon emissions have become a global consensus, and through green product design process, Winbond brings significant benefits on carbon emission to end users, by memory product design, chip manufacture, device making and user end devices. Winbond continuously optimizes product design and processes technology, reduces the size of chips and use small form factor packages, which effectively saves materials and reduces carbon emissions per chip. Additionally, Winbond aims to reduce energy consumption during end product usage. Winbond commits on reducing the carbon reduction to enrich human experience and also environment friendly. From product design and manufacturing to end-user usage, Winbond strives to create maximum value and benefits to customers.



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.



Wen-Chang Hong Vice President, Sales Center

Business integrity and innovation are embedded in Winbond's DNA. Winbond strives to continuously innovate and develop green products that enrich human lives while contributing to carbon reduction on our planet.



Pei-Lin Pai Vice President, Technology R&D Group

Winbond is committed to develop low carbon footprint process, production, and products for environment protection, starting from the planning phase and throughout the development cycles. We will never stop simplifying and optimizing our process technology to ensure market competitiveness and business sustainability.



Chih-Chung Chou Chief Financial Officer, Finance Center

In addition to financial performance indicators, expectations from diverse stakeholders for sustainable development should be emphasized in corporate values. Winbond will fully implement ESG strategies through integrating financial information and promoting cross-departmental communication and collaboration. Winbond aims to establish long-term positive impact in contribution to sustainability and well-being, fostering mutual wellness and prosperity for both the environment and society.



Chi-Ching Lai Human Resources Executive, Human Resources Division

In addition to fostering better employee work-life balance and providing learning opportunities, Winbond also actively participates in social welfare activities through donations, volunteer services, and many other means of support. Our goal is not only making positive contributions to society but also promoting Winbond's sustainable development and advancing diverse culture and talent development.




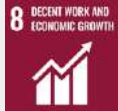


Shu-Cheng Chang Technology Executive, Prod. Control and Sub. Management Center

Supply chain is the relationship between a company and its suppliers, including aspects such as materials, equipment, and services. Winbond, continuously established partnerships and work with suppliers to achieve ESG goals and promote sustainable development. This effort further enhances business ethics, environmental protection, social care, and transparency in governance structure.

Outcomes of SDGs Promotion

Since the release of United Nations' and Taiwan's Sustainable Development Goals (SDGs), Winbond has immediately begun incorporating SDGs related to our core business into our ESG policy and business approach.

Corresponding SDGs	2022 Performance Highlights	Future Directions
 <p>4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship</p> <p>4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations</p>	<ul style="list-style-type: none"> • Data Science Program: Assisting individuals in mastering AI, big data technologies, and commanding AI. Winbond offered physical and online course lectures covering four categories: core, professional, data science, and management. The courses were conducted a total of 2,631 times, with a cumulative participation of 117,526 individuals. • Industry-academia collaboration - Semiconductor Academy: Investing NT\$10 million and collaborating with NCKU to design semiconductor courses, with 17 instructors involved in this initiative. • Education grants for underprivileged students: To supplement education resources for children from impoverished families so they can attend school on a regular basis, Winbond has been working with Taiwan Fund for Children and Families since 2017 by inviting employees to join the effort of raising education grants. From the general manager to grassroots staff, there has been enthusiastic participation in donation drives. From 2017 to 2022, a total of 4,343 beneficiaries have been supported, with a cumulative donation amount of NT\$17.372 million. In 2022, 1,032 students were assisted, with a donation amount of NT\$4.128 million. • Promoting a culture of passionate learning: The LMS platform offers five major programs with a total of 3,241 courses. This allows employees to learn anytime and anywhere at their own pace. In 2022, there were a cumulative 117,526 participants with a total of 142,711 learning hours. 	<ul style="list-style-type: none"> • Use Kirkpatrick's four-level educational training evaluation model to track course effectiveness assessment and continuously optimize the cloud-based learning platform. Increase the interactivity of live courses to enhance employee competitiveness, self-realization, and improve job performance. • Expand the types of subsidized educational resources and provide relevant resources based on the needs of students.
 <p>6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity</p>	<ul style="list-style-type: none"> • Water recycling: Winbond values all resources and is committed to improving the reuse rate of recycled water. In 2022, the overall water recycling rate in the entire plant was approximately 80.5%, and the process water recycling rate was approximately 89%. • In 2022, three new water-saving measures were implemented, resulting in an increase in water savings of approximately 64,000 cubic meters. 	<ul style="list-style-type: none"> • Continue to assess and promote new water-saving measures • Improve the reuse rate of recycled water • Reduce water consumption per unit of product • Fab water recycling rate reaches 80% or more
 <p>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</p>	<ul style="list-style-type: none"> • Invested 550 million in renewable energy projects to increase the development of the renewable energy industry and increase the proportion of renewable energy in the global energy structure. • A 499kW rooftop renewable energy generation equipment has been installed, and the renewable energy it generated was sold to Taiwan Power Company. In 2022, approximately 660,000 kWh of power was generated. • In 2022, the CTSP Fab obtained ISO 50001 certification for energy management systems, effectively integrating energy management into engineering operations. The Kaohsiung Fab is also planning to adopt ISO 50001, aiming to expand the scope and effectiveness of energy management. 	<ul style="list-style-type: none"> • Align with the government's renewable energy policy and assess the feasibility of implementing renewable energy installations • Achieve a year-on-year reduction of over 1% in the electricity consumption per unit of product • Increase the utilization rate of renewable energy
 <p>8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors</p>	<ul style="list-style-type: none"> • Winbond strives to create economic values for various stakeholders. In 2022, the company's consolidated revenue totaled NT\$94.53 billion, a slight decrease of 5% compared to 2021. The consolidated net income after tax was NT\$15 billion, with an earnings per share of NT\$3.25. • The employment rate for individuals with disabilities increased by 147%, with 32 employees with disabilities in position by the end of 2022. Taking into account the weighted number of employees based on the severity of disabilities, the total reached 47. The employment rate exceeded legal requirements. 	<ul style="list-style-type: none"> • Continue to monitor market changes and improve our financial performance • Understand the situation of employees with disabilities and provide a more inclusive work environment

Corresponding SDGs

2022 Performance Highlights

Future Directions



8.5

By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

8.8

Protect labour rights and promote safe and secure working environments for all workers, including migrant workers, in particular women migrants, and those in precarious employment



9.4

By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

9.b

Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities



12.5

By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse

12.8

By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature



13.3

Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

- Winbond continued to actively engage with foreign talent through various channels and provided services to newly hired foreign employees to assist with their relocation and settlement, ensuring a smooth transition for both the employees and their families.
- COVID-19 prevention measures: providing paid leave for vaccination, prevention kits for confirmed cases, epidemic prevention insurance, and rapid antigen test kits were provided.
- Group insurance for employees, their spouses and children: offering self-paid group insurance plans which covered employees, their spouses, children, and parents, allowing them to choose different coverage options based on their own needs.
- Flexible working hours/work-from-home: Employees can apply if they have family needs.

- Winbond seeks to consolidate our competitive advantage through continuous innovation in products and technologies. Winbond expands its production capacity and upgrades production processes to provide customers with energy-efficient and environmentally-friendly green products. Winbond granted nearly 380 patents in 2022, and the accumulated granted patents have exceeded 4,500.
- In 2022, Winbond incorporated trade secrets into the IP strategies and set about planning the mechanism of registering trade secrets. A total of 23 trade secret workshops were conducted.

- Winbond has incorporated environmental considerations into design practices to actualize the concept of corporate sustainability, achieving a total reuse of 5,200 tons/year of recycled materials in 2022.
- Winbond places importance on corporate sustainability performance and regularly holds supplier conferences to utilize sustainability review standards, actively working with partners to improve. In 2022, Wah Bang's suppliers/outourcing partners achieved a 100% pass rate in audits and assessments in economic, environmental, and social dimensions.
- Waste recycling rate: 90.1%.
- Promoting sustainability awareness: Establishing the Sustainable Education and Training Platform
- Conflict minerals: 100% of primary suppliers have signed the Winbond Supplier Code of Conduct Commitment Letter, and Winbond formally declared to suppliers Winbond's policy of not using conflict minerals through website and advocacy letters.

- Established a Climate Change Task Force Team: Members were assigned from various departments under the ESG Committee to form a cross-departmental TCFD Task Force Team consisting of over 40 individuals to identify climate risks and opportunities and discuss financial impacts and mitigation measures. The first TCFD report was published in 2023
- Blue carbon procurement: Winbond invested in the world's largest blue carbon project, contributed efforts to climate change mitigation, biodiversity conservation, and job creation efforts.

- Continue to recruit diverse talents to enhance talent diversity, and promote cultural integration to unleash innovative vitality

- Winbond aims to accumulate over 5,700 global patents by 2025.
- Winbond continuously providing guidance to each department to identify and inventory confidential information and trade secrets related to their business responsibilities, in order to further enhance the protection of Winbond's intellectual property.

- Continuously implement green design and processes to reduce the size and enhance efficiency, resulting in energy saving and reduced material usage.
- Collaborate with outsourcing partners to promote sustainability development, including conducting carbon footprint assessments/verification, setting carbon reduction targets, and implementing carbon reduction plans.
- Achieve a waste recycling rate of over 90%
- Promote sustainability awareness and culture
- Practice responsible procurement

- Continue improving the TCFD management mechanism and regularly track management goals.
- Develop a TCFD information platform to enhance efficiency through digital tools.

Green Products

Environmental Sustainability

Sustainable Supply Chain

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Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology and financial resources, to support the achievement of the Sustainable Development Goals in all countries, in particular developing countries

- Winbond promoted supply chain decarbonization and implemented the Co-Sustainability project, with the first phase targeting raw material and outsourcing suppliers.
- In 2022, the Key Supplier ESG Learning Forum was established for comprehensive ESG knowledge exchange and deep learning.
- Winbond communicated and engaged with suppliers to convey and discuss the 10% carbon reduction target for the Winbond supply chain, and conducted carbon footprint assessments/certifications with outsourcing partners.

- In 2023, focus on supplier ESG Learning and Exchange Workshop and Co-Sustainability projects, and targeting key suppliers will be expanded to other types of suppliers.
- Sustainability risk assessments will be implemented for the first-tier key suppliers in 2023 and based on the assessment results, plan corresponding sustainability audit activities.
- Establish a digital supplier management platform to digitize various sustainability surveys, receive information feedback, and share sustainability-related information with suppliers for mutual learning and growth.



III. 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 in 2022, after consolidating similar topics into a single topic category: Business integrity and corporate governance, regulatory compliance, risk management (information security and personal information protection, climate-related risks and opportunities), research and development innovation, productivity and business performance, supply chain management, green product (product and service quality), energy and carbon emissions management, human resources management (recruitment, compensation and benefits, employee care, education, and training). New topics compared to 2021 are: human resources management (recruitment, compensation and benefits, employee care, education, and training), green products, supply chain management, and carbon emissions management. The following is a description of each 2022 material topic:





List of 2021 Material Topics	List of 2022 Material Topics	Description of Changes
Business Integrity and Corporate Governance Regulatory Compliance Risk Management Research, Development and Innovation Business Performance Information Security and Personal Information Protection Product and Service Quality Occupational Health and Safety	Business Integrity and Corporate Governance	-
	Regulatory Compliance	-
	Risk Management (Information Security and Personal Information Protection, Climate-related Risks and Opportunities)	-
	Research, Development and Innovation	-
	Productivity and Business Performance	-
	Supply Chain Management	Supply chain management is a topic that Winbond’s senior management has assessed as having a noticeable impact on Winbond operations.
	Green Product (product and service quality)	Green products have become an important issue as Winbond continues to progress towards achieving net zero carbon emissions. It is newly-added to Winbond’s list of sustainability topics this year, and also an issue highly concerned by stakeholders and senior management of Winbond.
	Energy and Carbon Emissions Management	Energy and Carbon Emissions management is a topic that Winbond’s senior management has assessed as a noticeable impact on operations.
	Human Resources Management (recruitment, compensation and benefits, employee care, education, and training)	Human Resources Management is a new material topic after consolidating multiple issues with similar perspective, and is a topic in line with our material topic management. This topic displays Winbond’s focus on human rights topics, and our commitment on diverse talents development and care.






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

In 2022, 22 of Winbond senior management were involved in conducting the stakeholder identification survey, and identified the following major stakeholders after confirming the extent of each stakeholder's relationship with Winbond: government agencies, customers, employees, investors/shareholders, media, suppliers/contractors, and community groups. A stakeholder section has been established on [Winbond website](#), providing stakeholders with ways to communicate with Winbond. Should a stakeholder have any question or suggestion related to a sustainability topic, he/she is able to communicate with Winbond through these methods, with different contacts responsible for responding to different types of stakeholders. This ensures that Winbond is able to communicate effectively with stakeholders.

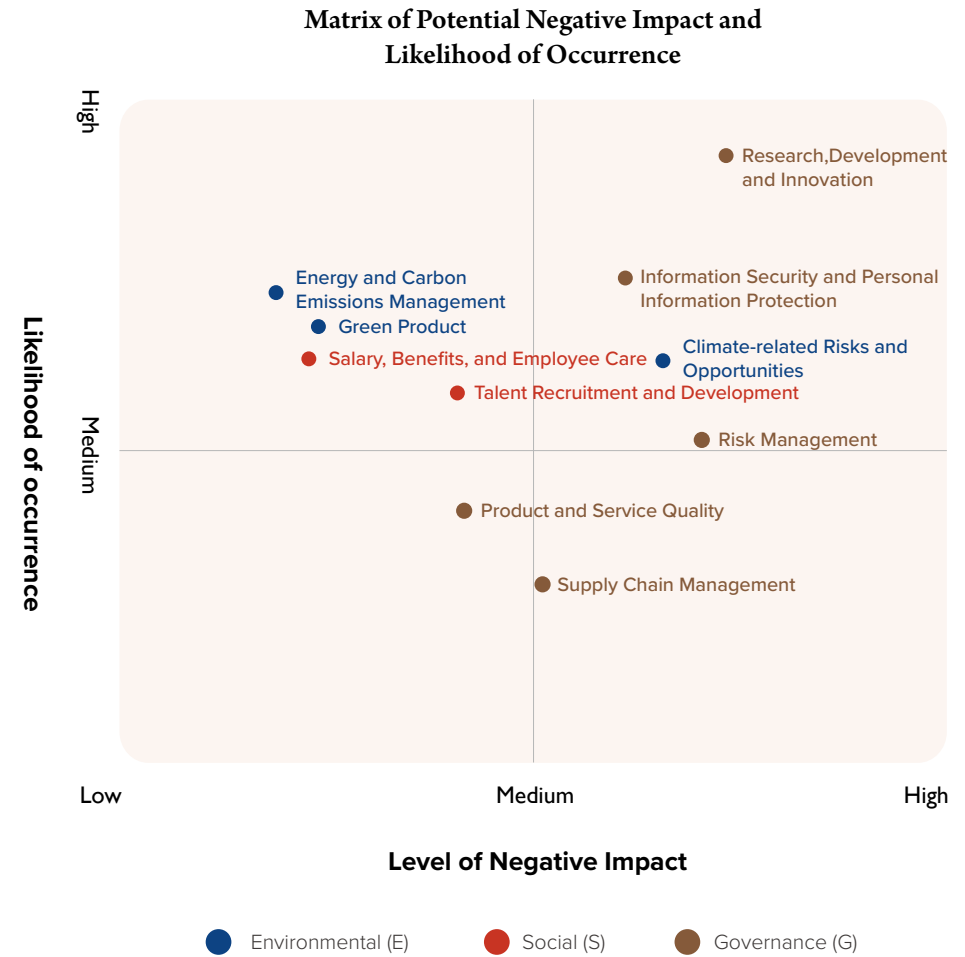
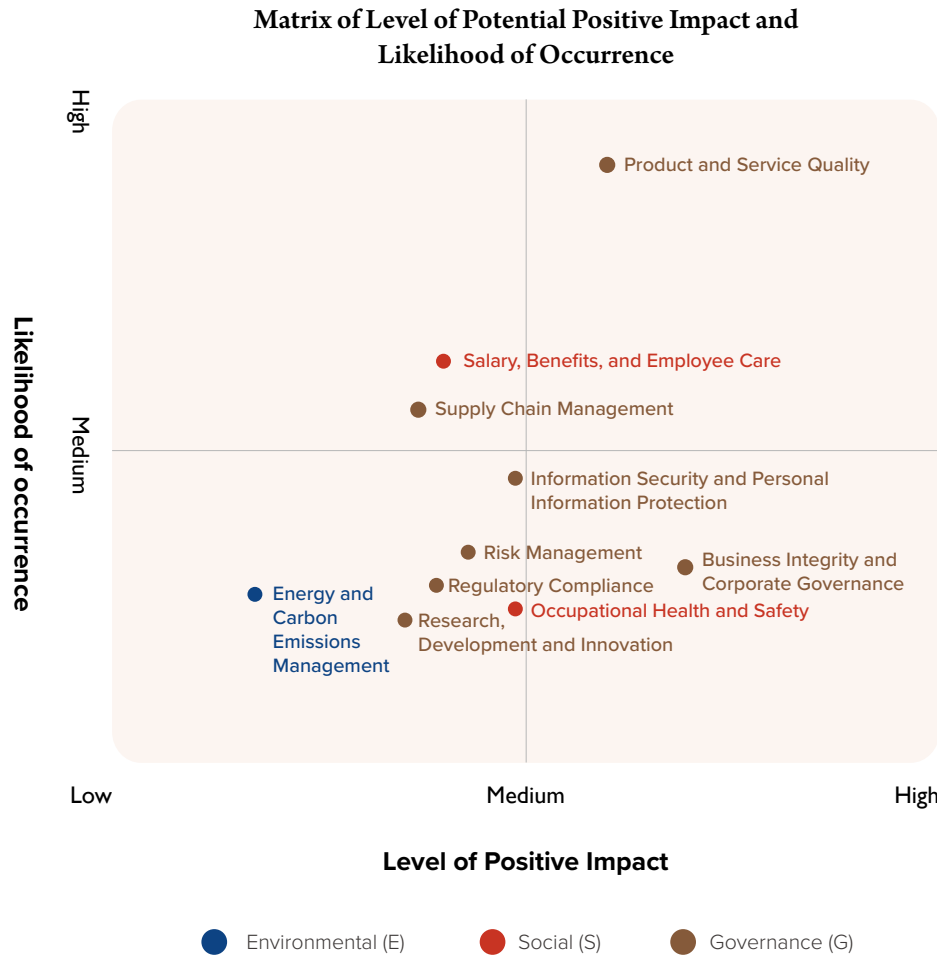
— Stakeholder Communications and Outcomes —

Stakeholders	Importance of Stakeholder to Winbond	Topics of Concern	Channel and Frequency of Communication		2022 Communication Performance
 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.	<ul style="list-style-type: none"> Business Integrity and Corporate Governance Human Resources Management Energy and Carbon Emissions Management Regulatory Compliance Risk Management 	<ul style="list-style-type: none"> Official documents and correspondence (ad hoc) Public hearings (ad hoc) Policy information sessions (ad hoc) Regulatory conferences (ad hoc) 	<ul style="list-style-type: none"> Inspections by competent authority (ad hoc) ESG questionnaire (annual) 	<ul style="list-style-type: none"> Participated in 18 meetings with environmental, safety and health authorities. 28 on-site audits and inspections were conducted by environmental, safety, and health authorities.
 Customers	Customers are the main source of the economic value created by Winbond. They are primarily concerned with the ESG performance of Winbond operations.	<ul style="list-style-type: none"> Business Integrity and Corporate Governance Energy and Carbon Emissions Management Green Product Regulatory Compliance Productivity and Business Performance Research, Development and Innovation Risk Management Supply Chain Management 	<ul style="list-style-type: none"> Winbond official website, telephone, and e-mail (immediate) Sales meetings (regular) ESG questionnaire (annual) Technical seminars (annual) 	<ul style="list-style-type: none"> Internal Audit (annual) Customer audits (ad hoc) 	<ul style="list-style-type: none"> Winbond invited our customers to take part in the WinTech 2022 conference, and also opened up the conference to online participation. Our customers responded favorably to all conference topics, including those on market dynamics and future trends. Winbond attended and showed off our products at the Electronica electronic components trade fair in Munich, taking this opportunity to seek out more opportunities to collaborate with potential customers. Regular customer communications were carried out through telephone, email, or regular in-person visits. Winbond also adopted the D365 system to keep track of data on past visits. Apart from using the system to track sales, Winbond was also able to look up past interactions between Account Sales and each customer before visiting these customers.
 Employees	Employees are one of Winbond's most important assets, being key stakeholders in our continued breakthroughs and innovations. Employees are one of Winbond's most important assets, being key stakeholders in our continued breakthroughs and innovations.	<ul style="list-style-type: none"> Business Integrity and Corporate Governance Human Resources Management Regulatory Compliance Productivity and Business Performance 	<ul style="list-style-type: none"> Internal Hotline 75234 Employee Complaints Hotline (always available) Care" Employee Suggestions Box (always available) Illegal Employment Infringement Appeals and Arbitration Committee (always available) Health Consultation (always available) Health Promotion Activities (ad hoc) 	<ul style="list-style-type: none"> Surveys on Health, Stress, and Physical Aches (annual) Employee Welfare Committee (ad hoc) Employer-Employee Meetings and Supervisor Communication Meetings (quarterly) Functional Communications Meetings (regular) Internal Bulletin Board (ad hoc) Articles on Winbond Philosophy Published on the Employee Homepage 	<ul style="list-style-type: none"> 7 cases of internal complaints in total 9 reports of everyday issues received through suggestion box (both physical and email messages). 1,634 persons attended the President's Talk event, held online because of the pandemic, with 55 pieces of feedback received through the event. 0 cases of sexual harassment. 2 cases of illegal workplace infringements. 12 labor management meetings held. (Zhubei, Central Taiwan Science Park, Kaohsiung) Elections were held for new labor and management representatives for the Central Taiwan Science Park and Zhubei locations, due to the terms of the previous representatives expiring. 4 quarterly executive management and issue discussion conferences were held. These sessions were attended by 1,973 people, achieving an attendance rate of 87%. EP articles. Public announcements to all.
 Shareholders/Investors	Shareholders/Investors are Winbond's main source of capital. They are mainly concerned with Winbond's operating performance and sustainable development.	<ul style="list-style-type: none"> Business Integrity and Corporate Governance Green Product Regulatory Compliance Productivity and Business Performance Research, Development and Innovation Risk Management 	<ul style="list-style-type: none"> Telephone and e-mail (immediate) Winbond official website (ad hoc) The Taiwan Stock Exchange Market Observation Post System (ad hoc) Investor conference (biannual, or whenever necessary due to special circumstances) 	<ul style="list-style-type: none"> One-on-one meetings with institutional investors (10-20 times/quarter) Shareholders' Meeting (annual) ESG questionnaire (annual) 	<ul style="list-style-type: none"> 12 disclosures of revenues 1 annual shareholders' meeting 2 institutional investor conferences 4 disclosures of financial reports

Stakeholders	Importance of Stakeholder to Winbond	Topics of Concern	Channel and Frequency of Communication	2022 Communication Performance
 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.	<ul style="list-style-type: none"> • Business Integrity and Corporate Governance • Human Resources Management • Green Product • Productivity and Business Performance • Research, Development and Innovation 	<ul style="list-style-type: none"> • Telephone and e-mail (immediate) • Press release (regular) • Media interviews (annual) • ESG questionnaire (annual) 	<ul style="list-style-type: none"> • 20 telephone and e-mail communications • 29 press releases • Winbond operating report provided 2 times • 3 press conferences held
 Suppliers/ Contractors	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.	<ul style="list-style-type: none"> • Business Integrity and Corporate Governance • Green Product • Regulatory Compliance • Research, Development and Innovation • Supply Chain Management 	<ul style="list-style-type: none"> • Winbond Ethics and Integrity Policy and complaint channel (Six months) • External complaints channels (immediate) • Supplier audits (annual) • Evaluations of major suppliers (once every six months) • ESG questionnaire (annual) 	<ul style="list-style-type: none"> • All 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.
 Community	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.	<ul style="list-style-type: none"> • Business Integrity and Corporate Governance • Human Resources Management • Regulatory Compliance 	<ul style="list-style-type: none"> • Volunteer activities (ad hoc) • Collaborative projects and visits (ad hoc) 	<ul style="list-style-type: none"> • In 2022, the orphanage and after-school tutoring volunteer activities were suspended due to the COVID-19 pandemic. • In 2022, 1,052 employees contributed a total of NT\$4.128 million to student grants. • In 2022, 5 blood donation events were held, attracting a total of 219 participants.



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



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.

Note Ranking of top 10 sustainability issues with positive or negative impact and likelihood of occurring

— Material topics and their relationship with Winbond value chain —

● Direct impact
▲ Indirect impact through commercial relationship

Material Topic	Topics defined in GRI Standards/ Self-defined Topics	Implications of Material Topic to Winbond	Type of Impact (positive/negative)	Description of Impact (description of economy, environment, and people (including human rights) impact)	Scope of Impact to Value Chain			Corresponding Section
					Winbond	Customers	Supply Chain	
Business Integrity and Corporate Governance	GRI 205 Anti-corruption GRI 206 Anti-competitive behavior	The foundation of how high-tech companies are able to survive during the information economy age.	<ul style="list-style-type: none"> 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"> Good corporate governance and legal compliance leads to increased investment Avoids Winbond and other Winbond entities from losing assets or rights due to illegal behavior 	●	▲	▲	Corporate Governance
Regulatory Compliance	Regulatory Compliance (Self-defined Topics)	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.	<ul style="list-style-type: none"> Receiving legal or regulatory penalties may damage Winbond's reputation, and negatively impact our financial situation and employees. 	<ul style="list-style-type: none"> Complying with laws and regulations improves our reputation, leading to increased investment and revenues. Avoiding negative impacts to society and Winbond from violating social and environmental laws and regulations 	●	▲	▲	Environmental Sustainability and Social Inclusion Corporate Governance
Risk Management	Risk Management (Self-defined Topics)	A sound and well-implemented risk management system is the foundation of Winbond's sustainable business operations.	<ul style="list-style-type: none"> 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 	●	▲	▲	Corporate Governance
Research, Development and Innovation	Research, Development and Innovation (Self-defined Topics)	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.	<ul style="list-style-type: none"> 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. 	●	●	▲	Green Product
Productivity and Business Performance	GRI 201 Economic 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.	<ul style="list-style-type: none"> 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. 	●	▲	▲	Corporate Governance
Supply Chain Management	GRI 308 Supplier Environmental GRI 414 Supplier Social Assessment	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.	<ul style="list-style-type: none"> Refine the supply chain management system, making the goods supply process more stable and smooth. 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. 	●	▲	●	Sustainable Supply Chain

Green Products

Environmental Sustainability

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Material Topic	Topics Defined in GRI Standards/ Self-defined Topics	Implications of Material Topic to Winbond	Type of Impact (positive/negative)	Description of Impact (description of economy, environment, and people (including human rights) impact)	Scope of Impact to Value Chain			Corresponding Section
					Winbond	Customers	Supply Chain	
Green Product	GRI 417 Marketing and Labeling	Creating value, reducing risks, and developing sustainable technologies and products in order to create secure, energy-saving, and smart lifestyles.	<ul style="list-style-type: none"> 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. Product value and revenues would fall if Winbond is unable to meet customer requirements. 	●	●	▲	Green Product
Energy and Carbon Emissions Management	GRI 302 Energy GRI 305 Emissions	Extreme climate conditions threaten to upset ecosystem balance. Winbond needs to do our part to save energy and reduce carbon emissions.	<ul style="list-style-type: none"> If energy consumptions and emissions go unmanaged, this may lead to severe environmental impacts and accelerate the negative impact of climate change. Carbon emissions management, calculating and managing carbon costs. 	<ul style="list-style-type: none"> Reduce the likelihood of extreme climate conditions impacting business operations. Manage Winbond's energy consumption and Carbon emissions, effectively reducing costs. 	●	▲	▲	Environmental Sustainability
Human Resources Management	GRI 401 Employment GRI 403 Occupational Health and Safety GRI 404 Training and Education GRI 405 Diversity and Equal GRI 406 Non-discrimination GRI 408 Child Labor	Talent is the key to Winbond's success. Recruiting talent, using talent, cultivating talent, and retaining talent are all long-term operational tasks.	<ul style="list-style-type: none"> Two-way communications between employers and employees help promote smooth business operations. Workplace safety, and rules on diversity and equality can all affect whether talent is retained, or leaves the Winbond. 	<ul style="list-style-type: none"> Through recruiting and retaining talent, as well as improving employee abilities and self-worth through cultivating employee growth, companies with high employee satisfaction can better achieve sustainable management and improve research, development, and innovation capabilities. Implement measures for occupational health and safety management, preventing serious injuries, and improving employee physical and mental health. 	●	▲	▲	Human Rights and Social Inclusion

— Strategies and Goals for Material Topics —

	Medium and Long-term Goals (refers to goals planned to be achieved in 2030 or later)	Short-term Goals (refers to goals planned to be achieved before 2030)	Outcome of Management Approach Assessment
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Business Integrity and Corporate Governance

Legal compliance is the minimum threshold to be achieved. The Winbond considers “ethical business management” to be the highest standard for business ethics, and by following these standards, the Company strives for mutual prosperity for both the Company and society.

- The corporate culture of ethical business management is deeply rooted in our sales operations, where Winbond aim to win the trust of long-term customers.

- Fulfill our responsibilities as Winbond management, protecting the legitimate rights and interests of shareholders, and the rights of other stakeholders.

- Winbond was ranked in the top 6-20% by the 2022 Corporate Governance Evaluation.
- No violations of laws and regulations on corporate governance and business integrity.



Regulatory Compliance

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.

- Held 15 courses each year on legal compliance.
- Assessed the adoption of the ISO 37301 Compliance Management Systems standard
- Completed 2 legal compliance review meetings for each year.
- Complied with international and domestic laws, no major legal violations reported

- Improved legal compliance management systems
- Held 12 courses each year on legal compliance
- Complied with international and domestic laws, no major legal violations reported

- Held courses each year on legal compliance (including courses on: corporate law, securities and exchange laws, insider trading, business secrets, labor standards laws, labor laws, information security, occupational safety and environmental protection, and environmental safety and protection for new hires), 10 courses held in total.
- No legal violations occurred in 2022.



Risk Management

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.

- Establish long-term identification, analysis, evaluation, response, monitoring, and review systems.

- Regularly convene risk management committee meetings, continuing to track and implement risk management measures.

- Any lapses discovered shall be reviewed by the responsible employees or department, and an action plan shall be proposed to address the issue.



Research, Development and Innovation

Winbond promises to provide the most competitive products and services in our targeted markets. Winbond promises to deliver most energy efficient and power saving, as well as low carbon emission, products through our innovative technologies from R&D.

- Winbond strives to exceed our customers’ expectations for product energy efficiency and performance through our technologies, designs, and manufacturing.
- Together with our strategic partners, Winbond is developing new technologies and products capable to sustain long term business operations and enrich human beings’ lifestyles.

- Winbond will reduce the carbon emissions from each new generation by 20% per bit(memory unit).
- Winbond will target at over 80% satisfaction ratings for both internal and external customers.
- To achieve technical leadership, Winbond will have over 350 patent approvals globally by 2023.

- Granted nearly 380 patents, and the accumulated granted patents have exceeded 4,500 as of 2022.
- Completed ISO 14067 carbon footprint inventory for our IC products.
- Our pioneering 1.2V NOR Flash uses 45% less power than the current 1.8V NOR Flash in mainstream today.
- Winbond completed JEDEC reliability test procedures for low temperature soldering, reducing carbon dioxide in the manufacturing process by approximately 57 tons a year.



Productivity and 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.

- Through world-class technology and innovation, optimization of internal management optimization, promotion of digital transformation and cultivation of a forward-thinking culture, we are committed to continuously improving Winbond’s productivity and business performance.

- Between 2023 and 2025, we aim to complete more than 72 promotion activities and training courses related to digital transformation across the entire company.
- We plan to deploy a productivity tracking system by 2025.

- We have achieved a consolidated total revenue of NTD 94.53 billion.

Green Products

Environmental Sustainability

Sustainable Supply Chain

Human Rights and Social Inclusion





Corporate Governance

Preface

Winbond’s Story

Contribution to Sustainability
— Taking the Lead

Appendix

	Medium and Long-term Goals (refers to goals planned to be achieved in 2030 or later)	Short-term Goals (refers to goals planned to be achieved before 2030)	Outcome of Management Approach Assessment	Green Products	Preface
 Supply Chain Management Winbond is committed to ensuring the stability of our supply chains, improving supply chain transparency, and establishing and implementing polices 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.	<ul style="list-style-type: none"> Establish a global supply chain by 2030 able to effectively diversify operating risks, providing the overall supply chain with more potential for continued development. Further promote our values to indirect suppliers, continuously expanding the scope of our influence in promoting environmental protection and corporate social responsibility. Reduce carbon emissions from our supply chain by 10% by 2030. 	<ul style="list-style-type: none"> Improve the reliability of our supply chain, optimize inventory management, and improve supply chain risk management by 2024. Establish a high-quality supply chain management team by 2026, and gradually begin building up a sustainable green supply chain, improving the environmental-friendliness and corporate social responsibility of our products. 	<ul style="list-style-type: none"> 100% of suppliers have signed Winbond's sustainable supply chain declarations and documents. 100% of audited suppliers have no major environmental, social responsibility, and corporate governance issues, and no audited suppliers have consequently been disqualified. 	Environmental Sustainability	Winbond's Story
 Green Product 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.	<ul style="list-style-type: none"> Reduce carbon emissions from flash memory by 110,000 tons by 2030 (using the total number of products shipped in 2021 as the baseline). By using the 16nm advanced technology process by 2030, the new developing DRAM memory is able to reduce carbon emissions by 20% across its product life cycle. 	<ul style="list-style-type: none"> Reduce carbon emissions from flash memory by 35,000 tons by 2024 (using the total number of products shipped in 2021 as the baseline). Develop new flash memory products apply to new energy and healthcare applications to reduce carbon emissions by 34% and electricity consumption by 27% per chip. responsibility of our products. 	<ul style="list-style-type: none"> According to the total sales volume of 1.2V NOR Flash in 2022, compared with the power consumption of 1.8V NOR flash, it will save up-to 493,727 kWh of power consumption, which is equivalent to a reduction of 251.3 tons of carbon dioxide equivalent. 	Sustainable Supply Chain	Contribution to Sustainability — Taking the Lead
 Energy and Greenhouse Gas Management Combine data science and professional knowledge, and together with our plant facility systems suppliers, continue to improve energy usage efficiency, gradually increase the proportion of renewable energy used, and reduce greenhouse gas emissions.	<ul style="list-style-type: none"> Have our Central Taiwan Science Park (CTSP) Fab use 90% renewable energy by 2030. Reduce carbon emissions from our CTSP Fab by 60% by 2030. Achieve net-zero emissions across the whole Company by 2050. 	<ul style="list-style-type: none"> Reduce greenhouse gas emissions intensity by at least 5% per unit year-on-year from 2023 to 2030. Reduce product energy consumption by at least 1% per product unit year-on-year from 2023 to 2030. Recycle at least 80% of all water used by our plant facilities each year from 2023 to 2030. Recycle at least 90% of all total waste produced each year from 2023 to 2030. 	<ul style="list-style-type: none"> Conducted ISO 14067 carbon footprint inventory of a portion of our IC products in 2022. Fully adopted ISO 14064-1 greenhouse gas emissions inventory standards and audits across the entire Company. Our Central Taiwan Science Park (CTSP) Facility achieved ISO 50001 Energy Management Systems certification. 	Human Rights and Social Inclusion	
 Human Resources Management 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.	<ul style="list-style-type: none"> Implement human rights management by promoting human rights concepts and due diligence checks, to manage and continuously improve human rights risks. Provide competitive compensation, salary, and benefits, as well as diverse training resources to enhance employee engagement, creating a stable and attractive workplace. To increase our impact in social welfare activities, we actively participate in various social welfare initiatives. 	<ul style="list-style-type: none"> Conduct human rights training continuously, with the goal of achieving a 100% global training rate. Maintain overall compensation within the top 25% level in the industry. Aim to have more than 95% of employees willing to contribute their expertise in Winbond for the next five years. Continue donating to promote social inclusion each year. Achieve an average of 48 hours of learning per employee per year. 	<ul style="list-style-type: none"> Completed human rights due diligence investigation in 2022. Performance evaluations were conducted for both direct and indirect employees, with a 100% participation rate. Winbond achieved the highest Platinum level certification in the Responsible Business Alliance (RBA) Validated Assessment Program (VAP) . Average annual learning hours per employee were 42 hours. No significant deficiencies were found in audits or labor inspections. 	Corporate Governance	Appendix

— Systems for Managing Material Topics —

Material Topic	Tracking Systems	Reporting/Communication Mechanism
Business Integrity and Corporate Governance	<ul style="list-style-type: none"> Through systematic audits and internal controls implemented by functional committees. Established whistleblowing systems, acting together with the monitoring system implemented by the audit committee under the Board of Directors. Externally, Winbond is subject to regular accountant audits, who also communicate appropriately with the Audit Committee. 	Established whistleblowing system (note 1): <ul style="list-style-type: none"> Whistleblowing channels for stakeholders on Winbond's website. (Anonymous/Non-anonymous) reporting hotline and mailbox.
Regulatory Compliance	<ul style="list-style-type: none"> Notification system: Disciplinary actions and penalties are managed and regular progress reports made until the case is resolved. Review system: Annual legal compliance review meetings are convened, where each responsible department reports on any issues that have occurred, and the preventive measures taken. Reporting system: Winbond's Chief Corporate Governance Officer shall report on the year's legal compliance operations to the President in the annual Management Audit Meeting, and report on the summarized results Possesses ability to learn about new global laws and regulations. 	<ul style="list-style-type: none"> Legal Department assist with the legal questions or provide legal advice.
Risk Management	<ul style="list-style-type: none"> Risk identification shall be carried out using the risk identification results of other companies in the industry as a benchmark for comparison. Risk analysis indicators and calculations shall be based on methods accepted by the industry or academic community, and adjusted when appropriate, in order to maintain objective and correct results. The approved risk appetite and the results of regular assessments shall be combined with information systems in order to produce management reports, ensuring that risk assessments have been conducted. Risk management operations and other related documents will be included in Winbond's internal controls, and disclosed when necessary pursuant to law. 	Established whistleblowing system (note 1): <ul style="list-style-type: none"> Whistleblowing channels for stakeholders on Winbond's website. (Anonymous/Non-anonymous) reporting hotline and mailbox.
Research, Development and Innovation	<ul style="list-style-type: none"> Conduct internal and external satisfaction surveys each year. Conduct product competitiveness analyses each year, ensuring that our products possess competitive advantages. Conduct product competitiveness analyses each year, ensuring that our products meet energy consumption and carbon footprint reduction goals. Upper management personally communicate with customers each quarter, directly learning what expectations customers have towards our service and products. Review business performance of each business group year, as an indicator of each group's competitiveness. 	<ul style="list-style-type: none"> Innovation R&D teams regularly meet for discussions and brainstorming sessions, incorporating various internal opinions and suggestions. Intellectual Property Department provides R&D departments with training related to intellectual property protection and invention proposals, as well as consultation on patent strategies.
Productivity and Business Performance	<ul style="list-style-type: none"> Digital Transformation Committee: Responsible for promoting an overall digital transition, further improving productivity and business performance. Also reviews digital transformation plans and results, while also monitoring employee abilities and training. Benchmark comparisons: Understand the role of Winbond in the industry, and our strengths and weaknesses. Discover problems and opportunities, and establish refined plans in response. Stakeholder feedback: Collect suggestions on Winbond's productivity and business performance to improve Winbond's fulfillment of corporate social responsibilities and brand image. 	Established whistleblowing system (note 1): <ul style="list-style-type: none"> Whistleblowing channels for stakeholders on Winbond's website. (Anonymous/Non-anonymous) reporting hotline and mailbox.
Supply Chain Management	<ul style="list-style-type: none"> Winbond has continued to conduct internal and external audits, alongside other measures for verifying product quality. At the same time, Winbond has also conducted regular evaluations of our suppliers, detecting, preventing, and resolving issues, and helping our suppliers propose methods for improvement. From 2022 onwards, due to climate change and sustainable development trends, Winbond has engaged in ESG exchanges and conducted ESG investigations into our suppliers, creating a low carbon emissions supply chain management investigation report, and continuing to track how our suppliers are progressing in reducing carbon emissions. Held a supplier conference and ESG workshop for material (key) suppliers, engaging in two-way communication. 	<ul style="list-style-type: none"> Held a supplier conference and the Sustainable Supply Chain Upgrading forum, engaging in two-way communication at the venue.

Material Topic	Tracking Systems	Reporting/Communication Mechanism
Green Product	<ul style="list-style-type: none"> Established goals to reduce energy consumption during production and product energy consumption in our new product development plans, tracking how effectively Winbond can conserve energy and reduce carbon emissions during the actual production process. 	<ul style="list-style-type: none"> Innovation R&D teams regularly meet for discussions and brainstorming sessions, while carrying out product development innovative new ideas are implemented with the goal of reducing carbon emissions and energy consumption throughout the product development processes of raw materials, innovative design, testing, packaging and production.
Energy and Carbon Emissions Management	<ul style="list-style-type: none"> ISO 14067 Verifying carbon footprint of products ISO 14064-1 Greenhouse gas emissions verification ISO 50001 Energy management systems verification Regular reports made by ESG Committee 	<ul style="list-style-type: none"> ESG Committee regularly reports on how Winbond is managing and reducing its energy consumption and greenhouse gas emissions, and continues to review, analyze, and plan improvement measures. ESG Committee is also responsible for monitoring domestic and international trends, laws, and regulations.
Human Resources Management	<ul style="list-style-type: none"> Regularly review human rights due diligence investigation. Regularly review the Employee Core Values and Engagement Survey. Conduct salary surveys on the labor market. Regularly review Responsible Business Alliance certification audits. ISO 45001 Occupational safety and health management systems verification Safety performance indicators 	<p>Diverse, open, and transparent channels for effective communication:</p> <ul style="list-style-type: none"> Physical suggestion boxes 75234 Employee Complaints Hotline Care Complaints Mailbox Sexual Harassment Complaints Committee, etc. <p>Functional regular communications meetings:</p> <ul style="list-style-type: none"> Employer-employee Meetings Management Discussion Meetings Employees Welfare Committee etc.

Note 1 Whistleblowing channels for stakeholders on the Winbond website include: (1) Whistleblowing Hotline: +886-4-2521-3579; (2) Whistleblowing Email: internal_audit@winbond.com; (3) The whistleblowing channels available on the [Winbond official website](#) provides our employees and persons not affiliated with the Winbond with methods to make anonymous or non-anonymous reports if they discover that the Winbond's employees have engaged in illegal activities, such as unfair business practices, bribery, earning illegal profits, fraud, or coercion. Whistleblowing reports shall be handled by dedicated responsible units, and an investigation team may be established if necessary. Measures have been implemented to ensure confidentiality and protection during the investigation process, allowing for reports to be handled fairly. Winbond shall not dismiss, re-assign, or otherwise change how an employee is treated at work due to the employee making a whistleblowing report. Employees at all levels within the Winbond may not discriminate against, threaten, or otherwise negatively treat the whistleblowing employee, in order to encourage all stakeholders, including Winbond employees, to have the courage to expose illegal behavior.

Note 2 Winbond conducts regular (quarterly) and ad hoc strategic meetings, where the management team reports on any material topics to the Board of Directors, and listens to suggestions from the Board.

