3 Environmental Protection 💱 🐼 🐼 🐼 🐲

3.1 Management System

Environmental Protection Policies Environmental Investment and Benefits

3.2 Adoption of TCFD

Climate Governance Structure Mitigation and Adaptation Strategies Identification of Climate Risks and Opportunities Climate Goals

3.3 Greenhouse Gas Emissions and Energy Management

Energy Usage Greenhouse Gas Emissions Reduction Actions and Results

3.4 Alleviating Environmental Impact

Water Resource Management Air Pollution Control Waste Management

3.5 Nature and Biodiversity



Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

Management Approach

Topics	Strategies	2022 Targets	2022 Results	Progress Signal	2023 Targets	2025 Targets	2030 Targets
Climate Change and Energy Management	 Improve energy efficiency Improve renewable energy consumption 	Absolute greenhouse gas reduction of 25.2% compared to 2016	-66.7%* Total Greenhouse Gas (GHG) Emissions amounted to 114,137.9 (tons of CO ₂ e) (260 million kWh I-REC was purchased in 2022) *Calculate using the information disclosed in the scope of this report.	•	Absolute greenhouse gas reduction of 4.2% every year compared to the baseline year Note: 2023 is reset as the baseline year due to changes in reporting boundaries. (The original goals: Absolute greenhouse gas reduction of 29.4% compared to 2016	Absolute greenhouse gas reduction of 4.2% every year compared to the baseline year Note: 2023 is reset as the baseline year due to changes in reporting boundaries. (The original goals: Absolute greenhouse gas reduction of 37.8% compared to 2016)	carbon neutral (Scope 1 + Scope 2)
	management	57.5% of renewable electricity used	63.0% 260 million kWh I-REC was purchased in 2022 9.283 million degrees of solar energy was self- produced and used in 2022	•	65% of renewable electricity used	80% of renewable electricity used	100% of renewable electricity used
Water Resource Management	 Implementation of water resource management and day-to-day water conservation Implementation of water recycling and wastewater management 	Water consumption intensity reduced by 10% compared to 2016	-37.6% Total water usage amounted to 3,812.5 (million liters)	•	Water consumption intensity reduced by 11% compared to 2016	Water consumption intensity reduced by 13% compared to 2016	Water consumption intensity reduced by 18% compared to 2016
Hazardous Substance Management	Hazardous Substance Free (HSF)	100% compliance with Hazardous Substance Free standards and customer requirements	100% compliance with Hazardous Substance Free standards and customer requirements	٠	100% compliance with Hazardous Substance Free standards and customer requirements	100% compliance with Hazardous Substance Free standards and customer requirements	100% compliance with Hazardous Substance Free standards and customer requirements
Waste Management	 Continuous implementation of waste classification and waste reduction Enhancement of waste recycling and reuse 	Waste intensity reduction of 4% compared to 2018	-14.0% Waste generation (including landfilling and without energy recovery) 40,303.3 (tons)	•	6% of waste intensity reduction	 Waste intensity in 2025 reduced by 10% compared to 2018 All sites have been certified with UL2799 Zero Waste to Landfill. 	20% of waste intensity reduction compared to 2018
Product Accountability	Improve environmental benefits of products	100% compliance with energy label and safety label requirements of customers and regions 100% compliance with WEEE regulations	100% compliance with energy label and safety label requirements of customers and regions 100% compliance with WEEE regulations	•	 100% compliance with energy label and safety label requirements of customers and regions 100% compliance with WEEE regulations 	 100% compliance with energy label and safety label requirements of customers and regions 100% compliance with WEEE regulations 	 100% compliance with energy label and safety label requirements of customers and regions 100% compliance with WEEE regulations

Note: The progress light is 🔵 green light with more than 95% 😑 yellow light with 90%~95% 😑 red light with 90% or less.

3.1 Management System

3.1.1 Environmental Protection Policies

Wistron is committed to abiding by environmental and energy regulations that are associated with our activities, products and services, as well as customer requirements in order to achieve our set goals and targets, or attain results better than regulated. We actively support government environmental protection policies and continue to mitigate and prevent pollution. (Please refer to the company website for full environmental policy).

Management Approach

Spotlight

Environmental Management Policies

- We regularly implement regulatory compliance inspections to ensure that our current practices comply with new regulations.
- We perform internal audits and third-party verification each year to ensure the effective operations of the management system.
- In addition to paying continuous attention to international issues and trends, Wistron has adopted the ISO 14001 Environmental Management System in all global operations. We seek to satisfy the requirements in environmental protection regulations of local governments. We aim to effectively reduce the impact of business activities on the environment and improve environmental management performance to attain our ultimate goal of sustainable development.

Environmental Complaint Channels

Wistron has set up the Stakeholder Communication Section on its official website for stakeholders such as customers, employees, shareholders, suppliers, government agencies, non-profit organizations, and the media to provide suitable communication channels. When we receive any environmental issue, Wistron will address the issue and respond in accordance with procedures.

Environmental Education and Advocacy

Wistron seeks to enhance the employees' awareness of environmental protection and occupational health and safety. Every plant organizes safety and environmental protection campaigns every year and uses promotions, contests, and activities to encourage employees to participate and learn more about the importance of environmental protection and occupational safety.

Compliance with Environmental Laws and Regulations

In 2022, Wistron had no violations of environmental laws and regulations. During the years 2019 to 2022, Wistron had only one fine related to environmental regulations in 2021, amounting to NT\$1,445,420. The plant has cooperated with the relevant local competent authority to complete the improvement and continues to monitor the progress. We will continue to focus on changes in environment-related laws and regulations in various countries. We will update and implement internal operating procedures and regulations, periodically organize legal compliance training and include the training in the annual internal training plan, in order to ensure the legal and regulatory compliance of every aspect of the company's operations and appropriately respond to the stakeholders' expectations of Wistron.



F Green and low-carbon manufacturing has been implemented, and green factories have been built to lead the industry benchmark. The titles of "Environmental Protection and Integrity Enterprise" and "Green Manufacturing System Demonstration Unit" were awarded.

Responding to the global green transition trend, Wistron's Chongqing plant participated in Chongqing's "Municipal Enterprise Environmental Credit Evaluation" in 2022. The evaluation indicators covered 30 elements, including environmental monitoring, solid waste management, pollutant discharge permit, pollution prevention and control, environmental emergency response, information disclosure and so on. We won the title of "Environmental Protection and Integrity Enterprise" in the Chongging Municipal Enterprise Environmental Credit Evaluation with a score of 101 from the 1,053 enterprises participating in the evaluation. We further promote the green enterprise action plan by strengthening source emission reduction, process control, and practicing the concept of green development to continuously improve the level of clean production. Meanwhile, the green factory certification mechanism has been implemented in both the Chongging Plant and the Zhongshan Plant. These plants have conducted self-assessment and third-party evaluation on 97 factors including energy input, environmental protection, and greenhouse gas emissions. In this way, the green manufacturing management level of the plants has been improved, and it was awarded the title of "Green Manufacturing System Demonstration Unit." The management objectives of the green factory are divided into four aspects: the company's environmental protection, energy management, product quality, and occupational health and safety. The Company's green and low-carbon awareness has been strengthened through management methods. Energy saving, emission reduction, and cleaner production are actively carried out. Green strategies and technologies are adopted to improve ecological benefits. The concept of low-carbon manufacturing has been gradually practiced. Both environmental ecology and energy resource utilization efficiency are considered to demonstrate the enterprise's ambition for sustainable development.

3.1.2 Environmental Investment and Benefits

Environmental Investment

Investment Type	Description	Starting Year of the Investment	Accumulated Investment Amount(NTDK)	Created Benefits
Solar Power Generation Equipment	Wistron has installed solar power generation equipment at the Neihu Headquarters, Zhongshan Plant, Kunshan Plan, Kunshan Opt Plant, and Malaysia Plant. In 2022, the Company expanded the area dedicated to solar power generation by 6,271 square meters at Kunshan Plant, 6,778 square meters at Zhongshan Plant, and 4,652 square meters at Malaysia Plant, increasing solar power capacity.	2017	285,551.9	11,302 KW of installed capacity of solar panels It can generate 11.33 million kWh each year Reduces 7,458 tonnes CO ₂ equivalent
了 () Solar Heating Equipment	Wistron has installed large quantities of solar panels on the rooftops of Zhongshan Plant, Kunshan Plant, Kunshan Opt Plant, and Taizhou Plant to make full use of the space. The panels are used to generate electricity for the plants or used for heating hot water in the dormitories to reduce carbon emissions from the use of electricity or natural gas.	1998	108,541.2	5,023 sets of solar water heater equipment NT\$28,370,469 in the use of natural gas saved Saves 1,834,255 cubic meters of natural gas each year
Smart Energy Conservation	Starting in 2019, Wistron began introducing smart energy saving systems. We used AI and IoT technologies to integrate digital technologies with environmental management. Optimized energy usage is based on supply and equipment performance to achieve energy saving effects.	2020	119,035.7	47.503 million kWh of energy saved Reduces 38,544.9 tonnes CO ₂ equivalent





3.2 Adoption of TCFD

Wistron adopted the framework of the Task Force on Climate-related Financial Disclosures (TCFD) in 2019 to identify climate risks and opportunities and used it to create measurement indicators and targets for management. Starting from 2020, the ESG Committee reports climate change risks, mitigation measures, and the progress of related targets to the board of directors on an annual basis. In 2021, Wistron officially became a TCFD Supporter. From 2022, in coordination with the group, the formal implementation of the Enterprise Risk Management (ERM) mechanism has been introduced, which also integrates climate-related risks. In accordance with the Company's "Risk Management Policies and Procedures", each risk ownership unit must conduct risk assessment for the identified risk scenarios through management process including risk identification, risk analysis, risk evaluation, risk response and monitoring, risk reporting and disclosure, etc. In addition, a risk response improvement plan is proposed based on the assessed residual risk level to effectively adjust the risk.

3.2.1 Climate Governance Structure



Climate change and global warming are issues the global community must face now together. While floods, droughts, and other physical risks created by extreme weather threaten the continuity of corporate operations, as a proactive solution, the transition to low carbon economy to achieve sustainable goals will also bring massive opportunities for the industry. At this critical turning point in history, in order to strengthen climate governance, Wistron has named the Board of Directors as the highest supervising unit for climate issues. The Board is responsible for coordinating the overall climate strategy and supervising senior managers in the implementation of climate related risk management and key performance indicators. As a functional committee that reports directly tob the Board of Directors, the ESG Committee consists of a risk management team (To comply with the ERM system, it will be transferred to the Audit Committee starting from May 2023) with the CFO acting as the convener. The members consists of supervisors and representatives of each department and business unit. Each year, the risk management team formulates response and adjustment strategies through the comprehensive evaluation and analysis of various risks related to climate. The team produces the corporate risk management and reporter review and management.

Starting from May 2023, the risk management team will be transferred from the original ESG Committee to the Audit Committee, which will regularly reviews the Company's risk assessments and countermeasures in various aspects such as environment, social, and corporate governance, including but are not limited to the implementation status of climate change-related issues and identification and formulation of response strategies for emerging risks. The Committee reports to the Board of Directors at least twice each year. At the level of promoting sustainable strategies, the Sustainability Office under the ESG Committee reports monthly to the President & CEO on the progress of sustainable strategies and projects, including climate actions. It also reports at least once a quarter to the ESG Committee and the Board of Directors on the implementation results and future plans of corporate sustainability, including climate change-related issues.

3.2.2 Mitigation and Adaptation Strategies

Related departments of Wistron plants across the world identify climate-related risks and opportunities and calculate the cost of management and financial impact of each risk and opportunity. The head office in Taipei assigns departments to take charge of responding to material risks and opportunities. They convene meetings to form consensus and determine actions to be taken for risks with material impact on the Company's finance. Wistron currently defines financial impact greater than NT\$100 million to be a material impact. Regarding the physical impact analysis of climate change in the Taiwan area where the operating headquarters is located, high temperature, drought, flooding and other major disaster types that are currently concerned by stakeholders are analyzed through the "Taiwan Climate Change Projection Information and Adaptation Knowledge Platform" (TCCIP) information in order to facilitate the research and development of the Group's future shock adjustment plan. For Wistron, disasters with physical impact are the biggest source of climate risks in operations and directly affect the production capacity. On the other hand, opportunities appear as our customers' demand for green products increases in order to increase cooperation opportunities with our customers and drive R&D and innovation capabilities. As such, Wistron actively assesses investments and R&D for products with increased demand as a result of climate change. They include various medical devices, online video conference systems, analog conference phones, and cloud storage and servers. Climate change risks in the form of potential natural disasters such as floods, typhoons, and damage to agriculture may affect the timeliness of deliveries in the upstream supply chain. Wistron therefore requires our suppliers to deploy flexible delivery capabilities and provide multiple shipment points for selection.

Climate Risk Scenario Analysis

Tuno	Secondria Norma	Timoline	Assumed Devementary		Analysis Results		
туре	Scenario Name	Timeline	Assumed Farameters	Upstream (Supply Chain)	Wistron	Downstream (Customers)	
	SBTi 1.5°C	2021 ~ 2030	Annual carbon reductions reached 4.2% (Scopes 1+2). Wistron will achieve 100% green energy by 2030	The needs of industry transformations will drive low carbon investments, which will in turn increase operating costs. Companies who are unable to adopt low carbon transformations will loss their competitive advantage.	According to international low carbon transformation trends and statutory and policy pressures, Wistron has stipulated the 80% green energy target for 2025 and 100% for 2030. Assuming the annual energy usage growth is 5% due to operational growth, the energy usage of the Group will increase by 1.5 times by 2030 compared to 2021. Therefore, the investments will be increased to accelerate energy transformations and increase green energy usage.	In response to sustainable tranformations, customers will place more importance on green manufacturing for their products. More renewable energy requirements will be placed on upstream suppliers.	
Transition	IEA 2° C	$2021 \sim 2030$	Carbon price:80-100 USD \checkmark ton CO $_2$ e	High carbon emission and high energy usage	In response to the continued expansion of operations and sales	As the international community begins to introduce carbon taxes, the market share of low carbon/green products will gradually increase their market share	
	IEA below 2° C 2021 ~ 2030 Carbon price:90-120 USD / ton CO2e	Carbon price:90-120 USD ∕ ton CO₂e	suppliers will continue to face stricter laws and regulations. Operating expenses are expected to increase and there are the stream of the str	conservation, involvation, and other factors. Assuming the Group's annual carbon emission growth rate is 5%, carbon emissions will increase by 1.5 times by 2030 compared to 2021. Therefore, the	products will gradually increase their market share and become the mainstream in the market. We expect to have more opportunities to work with upstream suppliers to develop green products and requires In terms of product specifications, more		
	IEA Net Zero Emissions by 2050	$2040 \sim 2050$	Carbon price:160-200 USD / ton CO ₂ e	theymay be passed to downstream customers.	company is actively introducing carbon reduction projects and innovative technologies in order to reduce carbon risks.	requirements related to low-carbon and circular economy will also be established.	
	RCP 6.0	2075 ~ 2099	Average annual temperature change is +0.95°C to +3.45°C	High temperature environments will increase work safety risks. The work environments of suppliers will become a key audit item to ensure the human rights of laborers	Days of extreme heat have increased to over 90 days in Taiwan, which may cause production interruptions and revenue loss (around one quarter)	Extreme temperatures will increase energy consumption and lead to increased carbon emissions.	
Physical	RCP 2.6/ RCP 8.5	Middle of the century (2046 to 2065) and end of the century (2081 to 2100)	Longest consecutive rainless days in a year: The base period of Taipei City is (1986 to 2005) 28 days. The base period of Hsinchu County is (1986 -2005) 39.5 days	More frequent seasonal droughts will impact suppliers whose processes are water-consuming and may case supply delays or suspensions.	Operating headquarters in Taiwan and main manufacturing sites: The fluctuation rate of Taipei City is 3.1%. The fluctuation rate of Hsinchu County is 5.6%. The drought problem in Hsinchu County will become more serious	Supply chain disruptions caused by severe droughts will impact the delivery schedule for downstream customers, thereby affecting the product revenue.	
	RCP 8.5	Middle of the century (2039 ~ 2065)	For the 95th percentile of highest accumulated rainfall during extreme rains (region average), the level during the regional base period (1979 to 2008) in the Hsinchu Plant is 385mm. It is expected to rise to 444mm by the middle of the century.	Flooding caused by short-term, extreme rainfall will impact the science park in the Hsinchu area. The Hsinchu Science Park is an important manufacturing site for the electronics industry in Taiwan. Therefore, the flooding may cause delayed deliveries and risk of contract breaches in the supply chain.	The flooding occurrence probability analysis for global warming shows the changes to the probability of flooding above 0.5m. The changes between the base period to the middle of the century show significant increase.	Severe flooding will cause transportation disruptions and problems with logistics. It may cause delayed deliveries by customers, leading to expected revenue from products and services being impacted.	



Water Risk Analysis of Global Major Plants

According to the statistics of the United Nations Environment Program (UNEP), most of the impacts including natural disasters caused by climate change are manifested within the hydrological cycle, and it is estimated that the frequency and scale of these impacts will gradually increase in the future . More than 90% of climate change impacts are related to "water", including droughts, floods and tropical storms, etc., which will have significant impacts on the society and the economy. This year's water risk analysis was conducted specifically for major manufacturing plants around the world in response to extreme climate threats. The water risk analysis tools and database (WWF Water Risk Filter) established by the World Wide Fund for Nature are used to carry out risk assessment of each plant. Taking 2020 as the base year, the assessment level includes physical, regulatory and reputational risks.

The Number of Plants of Each Risk Level Under Each Risk Type:



Correspondence Between Risk Level and Risk Score:

Very low	Low	Medium	High	Very high
1.0 - 1.8	1.8 - 2.6	2.6 - 3.4	3.4 - 4.2	4.2 - 5.0



Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

Type of Risk

Physical Risk	Water Scarcity Flooding Water Quality Ecosystem Services Status	
Regulatory Risk	Enabling Environment Institutions & Governance Management Instruments	
	Infrastructure & Finance	
Reputational Risk	Biodiversity Importance Media Scrutiny	
	Conflict	

As far as the current situation is concerned, most plants around the world have a relatively high degree of exposure in the field of physical risks and reputational risks caused by water risks, as can be seen from the assessment results of the base year. We also further assess the degree of water risk impact caused by future climate change to grasp the medium- and long-term risk change trend. The formulation of enterprise risk management strategy and the basis of risk response plan can become the consideration of future global operation layout and business strategy in addition to the current routine operation management mechanism. In this scenario analysis, the time scale covers the mid-term (2030) and long-term (2050). Scenarios include three types of scenarios: optimistic, current situation trend, and pessimistic. Scoring is carried out for Wistron's 11 major global manufacturing plants according to 6 risk levels:

		Physical Risk			Regulatory Risk			Reputational Risk	
	2030 Optimistic Scenario	2030 Current Trend Scenario	2030 Pessimistic Scenario	2030 Optimistic Scenario	2030 Current Trend Scenario	2030 Pessimistic Scenario	2030 Optimistic Scenario	2030 Current Trend Scenario	2030 Pessimistic Scenario
Chengdu Plant(WCD)	3.53	3.57	3.73	1.78	2.29	2.59	3.95	3.95	3.95
Chongqing Plant(WCQ)	3			1.78	2.29	2.59	3.93	3.95	3.95
Czechia Plant(WCZ)	3.46	3.46	3.53	1.3	1.52	1.57			
Xinan Plant(WIH)	2.63			1.98	2.06	1.85	4.5	4.5	4.5
Hukou Plant(WIHK)	2.63			1.98	2.06	1.85	4.5	4.5	4.5
Kunshan Plant(WKS)	3.91	4.08	4.28	1.89	2.4		4.25	4.27	4.27
Mexico Plant(WMX)	4.25	4.44	4.59	2.07	2.32	2.16	3.84	3.82	3.82
Malaysia Plant(WMY)	2.83		2.98	2.34	2.92		3.69	3.67	3.67
Kunshan Opt(WOK)	3.91	4.08	4.28	1.89	2.4	2.7	4.25	4.27	4.27
Taizhou Plant(WTZ)	4.25	4.34	4.59	1.78	2.29	2.59	4.23	4.27	4.27
Zhongshan Plant(WZS)	3.42	3.56	3.76	1.85	2.37	2.67	4.55	4.55	4.55

Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

		Physical Risk			Regulatory Risk			Reputational Risk	
	2050 Optimistic Scenario	2050 Current Trend Scenario	2050 Pessimistic Scenario	2050 Optimistic Scenario	2050 Current Trend Scenario	2050 Pessimistic Scenario	2050 Optimistic Scenario	2050 Current Trend Scenario	2050 Pessimistic Scenario
Chengdu Plant(WCD)	3.51	3.79	3.98	1.52	2.79	3.59	4.01	4.01	4.01
Chongqing Plant(WCQ)			3.47	1.76	2.79	3.59	3.93	3.93	3.93
Czechia Plant(WCZ)	3.52	3.54	3.61	1.3	1.82	2.02	2.73		
Xinan Plant(WIH)				1.78	1.98	3.7	4.5	4.5	4.5
Hukou Plant(WIHK)				1.78	1.98	3.7	4.5	4.5	4.5
Kunshan Plant(WKS)	3.81	4.03	4.42	1.54	1.98	3.7	4.25	4.27	4.27
Mexico Plant(WMX)	4.14	4.42	4.54	1.65	2.32	1.88	3.88	3.9	3.9
Malaysia Plant(WMY)		3.42		1.92	3.42	4.22	3.69	3.69	3.69
Wei Shih Ching Opt Plant(WOK)	3.81	4.03	4.42	1.54	1.98	3.7	4.25	4.27	4.27
Taizhou Plant(WTZ)	4.13	4.59	4.86	1.52	1.87	3.59	4.25	4.27	4.33
Zhongshan Plant(WZS)	3.34	3.68	4.05	1.52	1.95	3.67	4.55	4.55	4.55

Very low risk	Low risk	Medium risk	High risk	Very high risk	Extreme risk
$1.0 \leq X \geq 1.8$	$1.8 < X \ge 2.6$	$2.6 < X \ge 3.4$	$3.4 < X \ge 4.2$	$4.2 < X \ge 5.0$	$5.0 < X \ge 6.6$

Types of Scenario Analysis

	Optimistic	Current Trends	Pessimistic
Climate Aspects	Moderate Emissions	Intermediate Emissions	High Emissions
	RCP2.6/ RCP4.5	RCP4.5/ RCP6.0	RCP6.0/ RCP8.5
Socio-Economic Aspects,	Sustainability	Middle of the Road	Regional Rivalry
Extended Towards Water Availability and Use	SSP1	SSP2	SSP3

Wistron implements risk assessment and public disclosure so that stakeholders can evaluate the relevant exposure status of Wistron's business activities. In addition to the implementation of information transparency to improve the quality of corporate governance, Wistron's internal risk authorities and responsible units regularly monitor and report key risk indicators (KRI) according to the risk assessment results under the enterprise risk management mechanism (ERM) in compliance with norms such as "Risk Management Policies and Procedures" and program documents such as risk management manuals, etc. Also, the board of directors serves as the ultimate supervisory unit.

Plants around the world face risks of varying sizes in terms of three major aspects such as physics, regulation and reputation, which can be learned from the results of this water risk assessment. In particular, physical and reputational risks need to be properly addressed due to the high degree of exposure. In the future, each relevant risk authority and responsible unit will develop a risk response plan tailored to local conditions, depending on the type and degree of exposure of each plant. Relevant risk adjustment measures will be gradually implemented to meet the challenges brought about by climate change.

Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

Adaptation Plan to Physical Risks

Physical Natural Disasters	Current Situation		Changes to the	e Return Period		Overall Adaptation Plan for the Group
High Temperatures	The average temperature of the Hsinchu Plant in Taiwan was 22.39°C in 2018.	Changes to the 10 year The temperature increa The temperature increa	return period: sed to 23.3°C (RCP8.5) sed to 23.62°C (RCP2.6)			With the expected annual average temperature increase, in extreme high-temperature situations, outdoor operations will be temporarily suspended if necessary or in compliance with regulations. Indoor temperatures will be regulated through the use of air conditioning systems, and proactive efforts will be made to adopt green building designs to maximize efficiency. The newly built Vietnam plant was awarded the LEED v4 Building Design and Construction: New Construction and Major Renovation Silver certification by the US Green Building Council (USGBC) in 2022.
		Average change at the r	niddle of the century (%)	Average change at the r	middle of the century (%)	
		95%	14.7	95%	18.1	
		75%	6.1	75%	13.5	
		50%	2.2	50%	5.6	
		25%	-0.3	25%	0.6	The impacts of seasonal droughts are expected to become more severe with the continued effects of climate
	Longest consecutive rainless	5%	-5.9	5%	-8	change. While Wistron's main production processes are not heavily rely on water resources, the company is
Drought	days in a year during the base period is 39.5 for the Hsinchu					committed to fulfilling its corporate citizenship responsibilities. It will continue to enhance water efficiency, setting short, medium, and long-term goals integrated into routine performance evaluations. Additionally
	Plant in Taiwan.	Average change at the end of the century (%)		Average change at the end of the century (%)		in the planning of new factory sites, Wistron will establish rainwater harvesting systems and employ various
		RCP	2.6	RCF	P 8.5	management measures to effectively reduce water consumption per unit of revenue.
		95%	14.8	95%	29.6	
		75%	7.9	/5%	22.6	
		50%	2.4	50%	14.8	
		25% 	- .2	Z3%	7.4	
			-0.7	570	-7.4	
		Rainstorm changes in th	e next 5 days under	Rainstorm changes in th	ne next 5 days under	Flood prevention facilities and designs have been reinforced in every operating location. Alarm and reporting
		RCP 4.5		RCP 8.5		mechanisms have been established to protect employee safety and reduce asset loss.
		5 ve	ars	5 ve	ears	Adaptation plans for specific assets or sites:
	According to the base	95%	51	95%	57	100 year return period is used for analysis. Appropriate drainage and flood prevention facilities are reviewed
	period (1979 to 2003) data, Hsinan Plant in Hsinchu	75%	45	75%	47	and emergency response plans (including typhoon flooding protection plant) are formulated for the various
	Science Park,the major	50%	29	50%	29	disasters (including typhoons and flooding), in order to reduce the negative impact of potential flooding in
	manufacturing sites in Taiwan,	25%	9	25%	11	the next hundred years. In terms of design, 1. Install plant trenches, water permeable surfaces, and other low
Floods	is situated in a level 4 (level	5%	1	5%	-11	and drainage gradients are installed according to the calculations of the 24 hour rain water flooding potential
	5 is the highest level of risk)					during the 100 year return period, in order to prevent ground flooding at the foundation. 3. Increase the height
	(combined evaluation of	25 y	ears	25 y	rears	of the foundation and the first floor of buildings to prevent flood water filling the foundation.
	danger,vulnerability, and	95%	85	95%	84	Regarding the emergency response measures: (1) Planned to install rainwater collection systems and rainwater recycling: pools, in order to manage and reuse
e>	exposure).	75%	51	75%	49	rainwater.
		50%	41	50%	38	(2) Installed flood gates (panels) to prevent flood water entering the underground spaces.
		25%	12	25%	19	(3) Stipulated the water pumping plan. The water pumping equipment is sufficient to drain flood water during

-5

5%

5%

-5

(3) Stipulated the water pumping plan. The water pumping equipment is sufficient to drain flood water during continuous rain storms.



Data Sources:National Science and Technology Center for Disaster Reduction

Risk Graph for Flooding Due to Climate Change in the Hsinchu Plant (East District of Hsinchu City)



Data Sources:National Science and Technology Center for Disaster Reduction



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Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

3.2.3 Identification of Climate **Risks and Opportunities**

Climate-related risks and opportunities have been integrated into Wistro enterprise risk management (Enterprise Risk Management, ERM) plans. Company identifies material risks for management based on ERM survey results. Management measures include verifying whether risks can be ave (where applicable) or using mitigation measures to control risks. The Company has adopted the TCFD framework and referenced the risk

in the CDP climate change and water security questionnaires. Each year the world Wistron identifies plant-specific transition risks and physical risk based on the location of plant business operations. All results of identified are compiled by the head office for an assessment of the scale and scope the impact across the world. The head office then establishes related stra and takes response actions.

The Company has adopted the ERM risk management procedures and u risk map to evaluate the possibility of the occurrence of various potential and emerging risks and the extent of damage after they occur. In the tim from 2021 to the end of this century, various short, medium and long-ter risks (short-term: 1-3 years, medium-term: 3-5 years, long-term: 5-10 year and opportunities are used to assess the degree of potential threats may caused towards the Company's future operations (including the upstream downstream value chain as well as its own operational scope) based on such as asset lifespan, potential climate risk, industry sectors and regions operation. Risk and opportunity ratings are evaluated and risk and opport priorities are defined, as well as a risk and opportunity matrix map is pres Analyzing the probability of occurrence and the level of impact is used to judgements regarding risks and opportunities. The results are classified low-, medium-, and high-risk ratings. Five levels of impact are determine the amount of monetary losses (extremely minor, minor, moderate, sever extremely severe). Risks classified as high or moderate are listed as main for which preventive measures and improvement plans must be establish

t t	High						1	1		Transition Risks	Physical
of Impac	Medium High					3	2			Development of renewable energy regulations	Typhoons (a
Level	Medium						2			2 Demand for low-carbon products and services	2 Floods (acut
	Medium Low						4		3	3 Mandatory filing	3 Uncertaintie
	Low				4					4 Investment in new technology	4 Rise in avera
	.	Impossible	Very Unlikely	Unlikely	Possible	Small Possibility	Likely	Very Likely	Certain		(chronic)
F	Risk M	atrix						Prob	ability	-	
	Risk M _{High}	atrix						Prob	ability	Climate Change Op	oportunities
of Impact	Risk M High Medium High	atrix						Prob	ability	Climate Change Op	oportunities
Level of Impact	Risk M High Medium High Medium	atrix						Prob	ability	Climate Change Op 1 Seek new business opport 2 Energy-saving buildings	portunities tunities
Level of Impact	Risk M High Medium High Medium Low	atrix				4	3	Prob	ability	Climate Change Op 1 Seek new business opport 2 Energy-saving buildings 3 Low-carbon energy	oportunities
Level of Impact	Risk M High Medium High Medium Low	atrix				4	3	Prob	ability	Climate Change Op 1 Seek new business opport 2 Energy-saving buildings 3 Low-carbon energy 4 Energy efficiency improver	portunities

Types of climate-related risk included in risk assessment • Current Regulation • Market Risk • Emerging Regulation Reputational Risk • Acute Physical Risk

• Chronic Physical Risk

- Technology Risk
- Legal Risk
- 64

Climate Change Financial Impact Analysis (Risks)

Climate Change Risks	Financial Impacts	Response Measures
Regulatory developments in renewable energy demand and climate risk	Increase in operating costs (e.g., higher compliance cost or increase in renewable energy related cost expenditure and management expenses) The 100% renewable energy target is expected to be achieved by 2030. The fee for the green electricity certificate will increase the annual cost by NT\$300-600 million. The annual carbon fee cost due to regulation is: 1. About USD 40-50 million in 2030 (IEA 2° C scenario) 2. About USD 50-60 million in 2030 (IEA below 2° C scenario) 3. About USD 240-310 million in 2050 (IEA NZE scenario)	Assessed in the global market, renewable energy is obtained in multiple ways to achieve the vision of energy transformation and green manufacturing. In 2022, more than 260 million kilowatt-hours of renewable energy certificates were purchased, and the long-term goal of increasing the utilization rate of renewable energy up to 100% was set.
Increase in demand for low-carbon products and services	Decrease in product R&D expenses in operating costs, and increase in procurement expenses	 Help customers obtain various environmental protection labels such as Energy Star, EPEAT, TCO, Taiwan Green Mark, and China Environmental Labelling. In 2022, the company's products that assist brand customers to obtain various environmental protection labels account for 85.07% of hardware revenue. All product lines are 100% in compliance with customer requirements, environmental protection laws and regulations, energy consumption labels and safety regulations in various regions. The sustainable supply chain management mechanism is established to ensure the transparency of the carbon footprint of products or services, and the reduction measures are carried out.
Mandatory reporting of carbon emissions	Increase operating costs	The Company established a comprehensive greenhouse gas list and inventory system as well as methodology for all manufacturing sites across the world. We implement greenhouse gas inventory every year and pass third-party verification from an impartial third party.
Demand for new low-carbon technologies	Increase in operating costs (e.g., higher R&D cost or increase in patent licensing expenses)	1.The innovation culture in the organization is stimulated, and the patent and technology layout is continuously optimized to enhance the competitiveness. The ratio of R&D personnel to employees has continued to increase, reaching 13.4% in 2022; 414 patents and 34 green product patents were obtained in 2022. 2.Since 2022, Wistron has been recognized by Top 100 Global Innovators™ by Clarivate for two consecutive years.
Drought	Impact on production and loss of operating revenue The loss in operating revenue due to the severe drought caused by the suspension of production is about NT\$1.8 billion to 3 billion (RCP 8.5) on the premise that the transfer of manufacturing capacity is not taken.	The new sites of plants are enhanced with planned rainwater recovery systems and water monitoring system. Also, existing plants cooperate with local water suppliers. A special water supply mechanism was activated to maintain the operation of the plant during the drought. The water recovery rate is continuously improved and short, medium and long-term goals are set. These are included in the annual performance appraisal to comprehensively improve operational resilience.
Typhoons	Impact on production and loss of operating revenue	In the event of a typhoon, the Company monitors alerts and related information on whether employees should work or suspend work. If work is not suspended, the Company provides vehicles, transportation subsidies, or other necessary assistance will be provided to ensure the safety of employees.
Floods	Impact on production and loss of operating revenue	The foundations of existing plants were elevated and drainage facilities were built before construction to prevent losses caused by floods. "Natural disaster evaluation" was included in siting procedures for new sites. Relevant flood control facilities are also planned to enhance the disaster resilience of operation bases.
Uncertainty of physical risks in climate change	Increase operating costs and impact operating revenue	 Wistron responds to the Paris Agreement to address the challenge of global warming. Over the years, the Company complies with the SBT 1.5°C carbon emissions reduction methodology by setting annual targets for absolute greenhouse gas reduction starting from 2020, in order to achieve the long-term goal of carbon neutrality The total emission of greenhouse gases (Scope 1+2) was reduced by 22% compared with the previous year (market benchmark).
Rise in average temperature	Increase operating costs (e.g., increase in water and electricity charges)	Wistron's energy conservation efforts encompass six major categories including the air conditioning system, air compressor system, green lighting, management, production, and others. In 2022, the total electricity saving was about 14,428,530 kWh. A total of approximately 10,635.76metric tons of carbon emissions could be reduced. Operating costs are reduced, while resources are actively invested in reducing the carbon footprint of operations.

Climate Change Financial Impact Analysis (Opportunities)

Climate Change Opportunities	Financial Impacts	Response Measures
New business opportunities for the low-carbon economy are being sought.	Increase revenue from energy-saving green products	 Green design thinking is introduced into product development, and harmful substances are avoided to reduce the energy consumption during product manufacturing. By 2022, all product lines have attained 100% compliance with Waste Electrical and Electronic Equipment Directive (WEEE) regulations. In 2022, the company's products that assist brand customers to obtain various environmental protection labels account for 85.07% of hardware revenue. In 2022, Wistron's products that meet the Energy Star standard saved 580,048,154 (kwh) and reduced 295,244,510 (kgCO₂e) annually. Product age is considered, and the energy saving benefit of the product is 3,590,806,033 (kwh) with a reduction of 1,827,720,271 (KgCO₂e). Green resource business is developed. Electronic product recycling and recycled plastics are focused on refining. In this way, a viable circular economy model is actively established. In 2022, the products shipped by Wistron use post-consumer recycled plastics (PCR), accounting for 80.3% of hardware product revenue with an increase of 1.2% from the previous year.
Energy-saving and carbon-reducing solutions	Reduce operating costs	 All plants around the world formulate corresponding appropriate measures according to the actual situation of different locations. Various types of energy saving and carbon reduction projects have been launched to reduce operating expenses. For example, Wistron's Zhongshan plant adopts a central nitrogen supply system to improve efficiency. The annual power saving is estimated to reach 2.47 million kWh to save about RMB1.62 million in electricity bills.
Low carbon	Increase continuously the use of low-carbon renewable energy to avoid carbon taxes and meet customer needs.	In 2022, 260 million kWh of renewable energy certificates were purchased. Solar power is actively expanded to match the plants. The proportion of renewable energy has reached 57% of our total energy consumption, and renewable electricity accounted for 63.02% of our total renewable energy, and the goal is to increase the use of renewable energy to 100% year by year.
manufacturing	Increase in operating revenue	We continue to increase the proportion of renewable energy production lines to 100% in our global operating sites by purchasing green energy certificates, directly purchasing green energy, and other measures to meet the market's demand for low-carbon manufacturing.
Energy efficiency improvement	Reduce energy costs	The Company has established an energy project team which regularly inspects energy management conditions in plants and the results of energy conservation projects and shares the experience. Wistron's energy conservation efforts encompass six major categories including the air conditioning system, air compressor system, green lighting, management, production, and others. As of the end of 2022, the Company saved a total of 14,428,530 kWh of electricity, which reduced carbon emissions by 10,635.76 tons. In 2022, the unit revenue electricity consumption was 481.64 (degrees/billion NT dollars). Energy performance indicators increased by about 4.7% compared with the previous year.





Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity



3.2.4 Climate Goals

In response to the IPCC Special Report on Global Warming of 1.5° C, Wistron has decided to take more proactive actions since 2020. Based on the Science-based Targets initiative (SBTi), using 2016 as the base year, the company aims to achieve an annual absolute reduction of 4.2% in greenhouse gas emissions.. The short-term goal was achieving an absolute greenhouse gas reduction of 25.2% by 2022. The medium-term goal is to reduce absolute greenhouse gas emissions by 37.8% by 2025 and the long-term goal is to achieve carbon neutrality by 2030, demonstrating our commitment to mitigating and adapting to climate change. Furthermore, in response to the international energy transition and the trend of low-carbon manufacturing, Wistron actively assists its supply chain partners in setting science-based targets to promote the entire value chain towards net-zero. Additionally, taking recommendations from science-based targets, Wistron has set short, medium, and long-term goals for renewable energy usage. The targets for renewable energy usage in 2022, 2025, and 2030 are set at 57.5%, 80%, and 100% respectively.. Our progress towards these goals has been on track and steadily developing.



Wistron Climate Change Statement

In active pursuit of decarbonization, Wistron responds to Paris Agreement and commits to limiting the temperature increase to 1.5° C above pre-industrial levels. In December 2021, Wistron announced its goal to achieve carbon neutrality by 2030. Additionally, Wistron commits to adopting the Science-based Targets initiative (SBTi) and will gradually implement net-zero actions.

3.3 Greenhouse Gas Emissions and Energy Management

3.3.1 Energy Usage

Electricity is the main form of energy consumption for Wistron. The remaining energy consumption consists of low amounts of fossil fuel usage. Therefore, Wistron has increased energy efficiency and renewable energy ratio as its energy management strategy. Wistron introduced the ISO 50001 Energy Management System to implement systematic management of energy. Through the effective operation of the management system and the real-time energy dashboard, the Company identifies areas with high energy consumption for analysis. We use analysis results to set up energy projects. The Company regularly convenes energy project meetings and follows up on the implementation progress and results. We continue to improve energy efficiency through the exchange of information between the plants.

Energy Usage

	Energy	Unit	2019	2020	2021	2022
	Self-generation and	kWh	2,383,895.00	2,393,900.79	6,889,549.45	9,283,177.44
	selt-consumption of renewable energy	GJ	8,582.02	8,618.04	24,802.38	33,419.44
Electricity	Purchased renewable	kWh	-	188,690,000.00	202,817,000.00	267,372,000.00
Electricity	energy	GJ	-	679,284.00	730,141.20	962,539.20
	Purchased non-	kWh	505,325,225.95	284,263,177.75	187,514,768.52	162,311,497.10
	renewable energy	GJ	1,819,170.81	1,023,347.44	675,053.17	584,321.39
	Unation	kWh	583,225.00	920,347.22	1,299,377.78	1,065,600.00
	Heating	GJ	2,099.61	3,313.25	4,677.76	3,836.16
	Discol	kWh	3,222,292.85	155,102.78	1,174,909.65	3,531,294.35
	Diesei	GJ	11,600.25	558.37	4,229.67	12,712.66
			4,133,091.84	3,826,211.35 3,315,532.56		2,863,679.51
	Gasoline	GJ	14,879.13	13,774.36	11,935.92	10,309.25
	Netwol	kWh	34,996,888.15	34,838,471.71	29,994,111.16	33,869,128.25
	Natural gas	GJ	125,988.80	125,418.50	107,978.80	121,928.86
1.1	te de la companya de	kWh	358,545.03	502,668.73	529,856.82	1,309.15
Liquet	ied petroleum gas	GJ	1,290.76	1,809.61	1,907.48	4.71
	Castian	kWh	-	-	-	3,436,463.37
	Cooling	GJ	-	-	-	12,371.27
Total nor	n-renewable energy onsumption	MWh	548,619.27	324,505.98	223,828.56	207,078.97
Total r	enewable energy onsumption	MWh	2,383.90	191,083.90	209,706.55	276,655.18
Percen energ c	Percentage of renewable energy in total energy		0.43	37.06	48.37	57.19

Energy Performance Indicators

Performance Indicators	Unit	2019	2020	2021	2022
Unit revenue electricity consumption	MWh/NT\$ billion	609.09	595.05	505.42	481.64
Percentage of renewable energy in electricity consumption	%	0.47	40.20	52.79	63.02

Note:

1. Calculated based on the electricity consumption of Wistron's major manufacturing plants worldwide / the revenue of the plants 2. Percentage of renewable energy in electricity consumption : (Self-generation and self-consumption of renewable energy + Purchased renewable energy) / total electricity consumptio

3. Energy consumption outside of the organization is 301,608.31 GJ



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Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

Spotlight

R Wistron promotes digitalization and AI intelligent application management to help corporate sustainability operations, moving 77 towards the goal of carbon neutral in 2030.

In order to achieve the goals formulated by the corporate sustainability report, Wistron has established an energy management system called ECO-SSOT. This platform integrates the real-time energy information from Wistron's global factories, including water, electricity, carbon emissions, renewable energy use and waste, and other multi-dimensional environmental indicators. Also, it is presented using a visual panel, allowing managers to quickly grasp the energy usage status of each plant. With the assistance of digital management, each plant effectively arranges energy-saving measures and quantifies the actual benefits brought by the measures to achieve closed-loop management.

In addition, the platform found AI smart applications that can be implemented with the goal of carbon reduction:

In addition, the platform found AI smart applications that can be implemented with the goal of carbon reduction:

• Project 1: The power consumption benchmark of the plants was established by using the impact factor to quantify the power saving benefits of each plant;

• Project 2: Evaluation on quantification of air compressor replacement ROI benefits;

• Project 3: The recommendation of the best maintenance cycle for air compressors allows plants to be managed with AI recommended data. In addition, replacement and maintenance of air compressors in a timely manner can achieve the results of carbon reduction.

In the future, Wistron will be committed to more decarbonization-targeted issues. With the assistance of digital management and AI, we strongly hope to achieve the goal of carbon neutrality by 2030.

各數值 Overview 累計區間 ~: 2022 ~ 01 - 11 ~ | 創出年度: 2021 ~ 資料缺漏 Plant 發展的 用電量 破拂量 用水量 廢棄物 (-1-09(-5-03)) (千郎) 215.980 (2)10 3.401 (≆₩) 34.292 (公司) 7 0% 283,788 的比赛课程 基準年 2021 出出基準年 2016 \$115.3678/0F 3678/0F 2016 前往後台設定 直看資料詳述 396,444 可再生能源占出 用電密集成 記録目 at 36.98 (F) • 不可再生能透 3538.00 日間:創計調測出-25.2% - END: 1011-3538:01 - 296 • 實際: -19.4% • 自建太陽能 • 前間:-6.7% 2.29 屋位:公職 自建大器体日標 單位:千度/十億台幣 用水密集度 約常單台用電 **应至**幼家集度 • 25/84 基準年 目標:對比基準年-5% 目標:對比基準年-4% • 御際:-37.0% • 寶熙: 23.79 • 實際:-16.9% 單位:千噸/十億台灣 單位:皮/台 單位:公職/十億台幣

Al intelligent application - the best maintenance cycle of air compressors as an example



Digital management - various energy indicators of Wistron's global plants

3.3.2 Greenhouse Gas Emissions

With the challenges caused by global climate change, enterprises must reduce greenhouse gas emissions during operations to mitigate the negative impact on the climate. Wistron implements greenhouse gas inventory in accordance with ISO 14064-1 every year. We also appoint a third-party impartial inspection institution to conduct verification in order to rigorously monitor greenhouse gas emission sources and volume in all plants. In response to the requirements of the Science Based Targets initiative (SBTi), the evaluation plan for Scope 3 Greenhouse Gas Emissions was implemented. The aim was to include broader upstream and downstream indirect emissions into our own greenhouse gas reduction scope. We hope to utilize Wistron's influence and work towards the target of 1.5°C of the Paris Agreement together with the world.

Scope 1 and Scope 2 Greenhouse Gas Emissions

Greenhouse Gas Emissions (tCO₂e)

Scope Category		2019	2020	2021	2022
	Stationary combustion	7,622.77	6,993.68	5,777.74	7,752.60
Scope 1	Mobile combustion	1,095.90	1,075.48	861.94	878.46
	Processes emissions	0.25	4.75	57.80	21.00
	Fugitive emissions	19,351.94	15,375.89	13,375.41	10,876.22
Subtotal		28,070.86	23,449.79	20,072.89	19,528.28
Score 2	Local base	400,583.72	357,010.93	287,909.87	303,653.21
Scope 2	Market base	400,583.72	206,972.43	125,696.18	94,609.58
Total of Scope 1 + 2	Local base	428,654.57	380,460.73	307,982.76	323,181.49
	Market base	428,654.57	230,422.23	145,769.07	114,137.87

Note1 :The emissions from the biogenic combustion is 0.09 tCO₂e.

Note2 :The indirect emissions from imported electricity are adjusted to the indirect emissions from imported energy of category 2, so the emissions of the 2020 and 2021 are revised simultaneously in the calculation of the market base.

Note3 :Wistron has no direct emissions and removal-related emissions from Land Use, Land Use Change and Forestry, LULUCF.

Note4 :The electricity emission coefficients cited include the electricity emission coefficient of 0.509 kg CO₂e /kWh for Taiwan in 2021. The emission coefficients of Mainland China's regional power grid in 2019 were 0.7921 kg CO₂e /kWh in Eastern China, 0.8587 kg CO₂e /kWh in Central China, and 0.8042 kg CO₂e /kWh in Southern China; The electricity emission coefficient of 0.39 kg CO₂e /kWh for Czech in 2021; The electricity emission coefficient of 0.423 kg CO2e /kWh for Mexico in 2021; The electricity emission coefficient of 0.78 kg CO₂e /kWh for Malaysia in 2019.

Scope 1 + 2 Greer	house Gas Emissi	on Types (tCO₂e)		
Туре	2019	2020	2021	2022
CO ₂	409,252.50	365,036.32	294,470.89	312,226.86
CH_4	12,979.98	13,088.97	9,023.87	7,766.86
N ₂ O	38.54	36.76	50.43	38.53
NF ₃	-	-	-	-
HFC	6,383.55	2,298.68	4,437.57	3,149.24
PFC	-	-	-	-
SF_6	-	-	-	-
Total	428,654.57	380,460.73	307,982.76	323,181.49

Greenhouse Gas Emissions Performance Indicators (kilotons of CO₂e / NT\$ billion)

Performance Indicators		2019	2020	2021	2022
Emissions per	Local base	0.51	0.48	0.39	0.35
unit-revenue	Market base	0.51	0.29	0.19	0.13

Note1 :Greenhouse gas emission intensity and target: Calculated based on the greenhouse gas emissions/plant revenue of Wistron's global manufacturing plants.

Note2 :Only Category 1 and Category 2 greenhouse gas emissions were calculated.



Scope 3 Greenhouse Gas Emissions

Wistron has started a comprehensive inventory and assessment of greenhouse gas emissions of scope 3 in order to grasp the emission contributions of its own operations and various activities between upstream and downstream. These also provide many potential opportunities for Wistron to negotiate with suppliers and customers. From the results of the inventory, it can be easily seen that the upstream is focused on purchasing products and services, while the downstream is focused on investment behavior.

Wistron has used the Scope 3 inventory to strengthen supply chain management for new opportunities to develop lower carbon electronic parts with our suppliers. Regarding the energy use of downstream customers' products, we will also strengthen the energy efficiency of products with customers. Therefore, Wistron can work with upstream and downstream together to reduce greenhouse gas emissions and expand the influence of climate strategies. In the end, we will be able to achieve the vision of building an overall low-carbon supply chain.

Scope 3 Greenhouse Gas Emissions (tCO₂e)

Scope 3 Emission Sources	2019	2020	2021	2022
Purchased Goods and Services	0	0	14,049,499.30	8,481,121.25
Capital Goods	0	0	142,632.13	188,089.07
Fuel- and energy related activities	0	0	76,107.22	110,060.82
Upstream transportation and distribution	17,245.75	8,544.14	21,134.68	4,483.60
Waste generated in operations	0	0	4,215.71	4,960.22
Business travel	5,745.52	1,000.76	1,027.22	3,696.16
Employee commuting	0	0	18,156.21	24,917.29
Upstream leased assets	0	0	5,666.65	11,695.49
Downstream transportation and distribution	51,940.01	111,455.11	278,700.73	97,348.43
Processing of sold products	0	0	-	-
Use of sold products	0	0	-	-
End-of-life treatment of sold products	0	0	-	-
Downstream leased assets	0	1.47	20,206.67	25,664.55
Franchises	0	0	-	-
Investment	0	0	1,523,696.41	2,147,023.02
Total	74,931.28	121,001.48	16,141,042.93	11,099,059.90



Note1 :Since Wistron has no relevant control rights, the categories of product processing, use and final disposal were not included in the scope of the investigation and disclosure; Note2 :Because Wistron is a B2B company and has no franchise-related activities, no investigation and disclosure was conducted.

3.3.3 Reduction Actions and Results

Wistron uses "energy efficiency improvements" and "energy transformations" to implement reduction actions. To ensure the implementation of energy management and energy conservation projects, Wistron has set up the Energy Project Teams in all plants composed of units responsible for plant engineering affairs or related matters. They convene regular energy management meetings and review the current state of energy and project implementation progress in the plants. The plants also share information on the effectiveness and experience in each project with each other.

Improvement of Energy Efficiency

Wistron's energy conservation efforts encompass six major categories including the air conditioning system, air compressor system, green lighting, management, production, and others. As of the end of 2022, the Company saved a total of 14,428,530 kWh of electricity, which reduced carbon emissions by 10,635.76 tons. If we use the carbon dioxide absorption volume of the Daan Forest Park in Taipei of 389 tons per year (calculation based on data from the Bureau of Energy, Ministry of Economic Affairs), the carbon reduction was equivalent to the annual CO₂ absorption volume of 27 Daan Forest Parks.

2022 Energy Conservation Results

Reduction Type	Main Implemented Project	Annual Energy Savings (MWh)	Annual Energy Savings (GJ)	Greenhouse Gas Emissions (tCO_2e)
Air conditioning system	Improvement of equipment efficiency (ice machines and water pumps were replaced with energy-efficient equipment) Introduction of intelligent frequency conversion (upgrade of intelligent control system)	3,470.66	12,494.36	2,559.89
Air compression system	Replacement of old equipment (air compression equipment was replaced by centralized nitrogen supply) Introduction of intelligent group control (Introduction of intelligent group control system)	3,011.41 11,131.87		2,437.88
Green lighting	Intelligent lighting system (introduction of more energy- saving LED lamps)	2,110.19	7,596.68	983.75
Management	Optimal integration of temperature control and idle space	1,658.25	5,969.72	1,307.51
Manufacturing	Optimized production, improved production equipment efficiency, and introduced smart monitoring and management Introduction of smart reflow exhaust control system	800.05	2,880.18	655.69
Others	Reduction of useless power consumption and expansion of solar power generation equipment	3,377.97	12,160.68	2,691.04
	Subtotal	14,428.53	52,233.49	10,635.76
F	Purchase of renewable energy certificates	-		209,860.11
	Total	-		220,495.87





Energy Transition

Extreme weather has become the new normal. Major international companies have joined the 100% renewable energy,RE100, initiative to support the use of renewable energy to reduce carbon emissions and slow down global warming. Wistron responded to international renewable energy trends by purchasing 267 million kWh of Renewable Energy Certificates in 2022 to actively increase the use of renewable energy in plants around the world, and offset market-based greenhouse gas emissions. Apart from purchasing renewable energy certificates, Wistron is actively expanding solar power generation in operating locations around the world to utilize idle space. We continue to strengthen our partnerships with local renewable energy providers, in order to implement the ideas of energy transformation and green manufacturing in our corporate operations.



Spotlight

F The transformation of energy sources has been accelerated, with the goal of fully replacing conventional vehicles with electric official vehicles.

22

In response to local incentive policies such as charging subsidies, road taxes and parking subsidies, the Czech plant has purchased a Skoda electric vehicle for official use in 2022. This initiative aims to reduce air pollution and gasoline consumption. This measure not only reduced 0.80707 tons-CO₂ equivalent (CO₂e) emissions, but also saved about NT\$36,000 in expenses for the plant. The Czech factory will gradually replace official vehicles in the future to achieve the dual benefits of carbon reduction and cost savings.



Energy saving measures for nitrogen supply machines

Zhongshan plant adopts a central nitrogen supply system to improve the efficiency of nitrogen production to replace multiple nitrogen supply machines at the side of the reflow soldering lines. This reduces the requirements of air compression and the reduction in energy consumption. In addition, the equipment units were installed outside the production area to avoid noise directly disturbing the workers, and it could also greatly improve the quality of the working environment and free up the floor space around the reflow soldering lines. After reducing multiple heat-generating facilities in the production area, the air-conditioning load was also relieved. It is estimated that the annual energy saving introduced will reach 2.47 million kWh, which can save RMB1.62 million in electricity costs. It will be extended to other plants for evaluation and implementation. The Mexican plant evaluated that the nitrogen produced in the plant can be used for different reflow soldering ovens. Therefore, the entire plant was able to shut down 8 nitrogen generators and indirectly shut down 2 air compressors through pipeline optimization and control. This saved up to 14,000 kWh of electricity per day, and it reduced energy consumption by







Sustainability Innovation Value Environmental Protection Social Inclusion Corporate Governance Appendix

Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

3.4 Alleviating Environmental Impact

3.4.1 Water Resource Management

Wistron's production processes mainly consist of product assembly which does not involve the use of a great amount of water. Most of the water demand is for domestic use and plant equipment such as kitchens and cooling towers. After Wistron's evaluation, the source of water for each plant and each office is tap water. It does not cause obvious environmental impact on water resources and the ecological environment of water sources. Nevertheless, Wistron still actively collects water consumption data and regularly monitors water quality and consumption conditions. We organize water conservation campaigns from time to time for the purpose of protecting water resources.

Wistron's management of water resources can be divided into "implementation of water resource management and day-today water conservation" and "implementation of water recycling and wastewater management. "We conduct an inventory of high-risk areas for water resources based on an evaluation of the water stress indicators of our global operations. We then implement preventive measures based on the water resource management strategy. Dedicated units in different plants are responsible for water resource management, plan formulation and implementation, regular monitoring, resolution of irregularities, data analysis, and continuous improvements. Wistron is committed to rigorous compliance with the national regulations on water resources, reasonable use of water resources, prioritized selection of water conservation equipment, and use of energy conservation panels to monitor the consumption of water resources and improve water use efficiency. Wistron's water use target in 2022: Reduce water consumption intensity by 10% compared to 2016 and implement more ambitious goals for 2023, 2025, and 2030, and continuous tracking to disclose the water saving performance of each year.

Water Usage (million liters)





Notes 1 : Water consumption intensity: Calculated based on the water consumption / plant revenue of Wistron's global manufacturing plants. Notes 2 : Water intensity in 2016 was 6.7 kilotons / NT\$ billion



Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity

Water Stress Index

Wistron uses WRI Aqueduct tools to analyze water stress index of global operations. We evaluate the risk ratings of water resources to set up management and recycling equipment in advance. In addition, we also disclose the water sources, water bodies receiving the effluent, wastewater treatment unit, and water quality data to ensure compliance with effluent quality standards in local regulations.

Water Stress Index

lt	em	Neihu Headquarters Xizhi Office	Hsinchu Plant	Kunshan Plant	Kunshan Opt Plant	Taizhou Plant	Zhongshan Plant	Chengdu Plant	Chongqing Plant	Mexico Plant	Czechia Plant	Malaysia Plant
Wate	r stress dex	Medium low	Medium low	High	High	Medium high	Medium high	Medium low	Medium low	Medium high	Medium low	Medium low
Water	source	Feitsui Reservoir Xinshan Reservoir	Baoshan Reservoir	Water drawn from the Yangtze River	Water drawn from the Yangtze River	Water drawn from the Yangtze River	Xijiang River	Min River	Jialing River	Hueco Bolson Aquifer Mesilla / Conejos-Medanos Basin	Vir Reservoir	Sg. Selangor / Sg. Langat river basins
Wate receiving	r body g effluent	Keelung River Tamsui River	Keya Creek	Wusong River	Wusong River	Yinjiang River	Shiqi River Hengmen Waterway	Fuhe River	Houhe River	Use in agricultural irrigation	SVRATKA River	Klang River
Wast treatm	ewater ent unit	Neihu Sewage Treatment Plant Dihua Sewage Treatment Plant	Hsinchu Science Park Sewage Treatment Plant	Kunshan Development Zone Kuncheng Precision Water Purification Co., Ltd.	Precision Machinery Industrial Park Sewage Treatment Plant	Taizhou Chengnan Wastewater Treatment Plant No.2	Zhenjiashan Sewage Treatment Plant Linhai Industrial Park Wastewater Treatment Plant	Huayang Wastewater Treatment Plant No. 2	Yubei District Chengbei Wastewater Treatment Plant	Valle de Juarez water treatment plant	Brno water and sewerage plant	Indah Water Konsortium Sewage Treatment Plant
	PH	6~9	$5\sim 9$	6.5 ~ 9.5	6.5 ~ 9.5	6~9	6~9	6~9	6~9	6~9	6~9	$5.5 \sim 9$
Effluent Quality	SS (mg / l)	$30 \sim 50$	300	400	400	400	400	400	400	180	550	100
Quanty _	COD (mg / l)	$100 \sim 150$	500	500	500	500	500	500	500	220	1,200	200

Note1: The water stress indicator is calculated based on Aqueduct tools:https://www.wri.org/aqueduct

Note 2: Effluent quality is taken from the local regulations of each plant.

Multiple stages of Wistron's manufacturing process is product assembly. Most processes do not require water and do not produce waste water. Only Taizhou Plant and Kunshan Opt Plant require the use of water and they have set up wastewater treatment plants. They implement real-time online monitoring to immediately respond to any anomalies. The industrial sewage generated by the Zhongshan Opt Park is directly handed over to a third-party sewage treatment company for treatment. The sewage and wastewater in other plants mainly consist of domestic sewage of employees. The domestic sewage is collected through the pipelines of the park and delivered through the sewage system to the wastewater treatment plant for processing and discharge. It is not directly discharged to natural bodies of water. To monitor the effluent quality, Wistron regularly inspects the water quality to ensure that the effluent meets regulatory requirements and does not affect the ecological environment of natural water bodies and habitats. Wistron implements the ISO 14001 Environmental Management System to ensure that the wastewater and sewage management meets effluent specifications in regulations. The Company systematically manages related environmental issues. By 2022, Wistron has attained zero effluent leaks and zero environmental complaints.



Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity



3.4.2 Air Pollution Control

The gas emissions in Wistron's production process consist mostly of hot air and tin fumes. They also contain volatile organic compounds (VOCs) from the isopropyl alcohol used for cleaning. According to internal standard procedures, the gas is concentrated and collected in the ducts for the waste gas treatment equipment to absorb before emissions. The Company passes regular waste gas sampling inspections to ensure compliance with regulatory requirements. The used isopropanol waste liquid is uniformly stored in a specific area, and then handed over to an external qualified processor for cleaning and transportation. Wistron implements inventory and management of substances that contain VOCs to ensure that operators of all positions are equipped with personal protection equipment (PPE) and related ventilation devices in the usage and storage process. These measures ensure health and safety for personnel while reducing the potential negative impact of VOCs on the environment. Nitrogen oxides (NOx) and sulfur oxides (SOx) are only emitted in Wistron Plants when generators are used and fuel is incinerated in the process. The generators are only activated in the event of emergencies (e.g., power outages) and are not regular sources of emissions. Therefore, they are not listed as the main sources of emissions.

Emissions of Volatile Organic Gases (tons)

Categories	2019	2020	2021	2022
Isopropyl alcohol	94.92	90.83	72.32	147.95
Ethanol	62.5	22.8	63.43	59.37
Ethylene glycol monobutyl ether	7.1	5.9	7.81	14.80
Ethanolamine	3.9	3.3	1.48	3.38
Others (those that account for < 1% of total)	13.3	7.5	7.54	9.64
Total	182	130	152.59	235.15

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3.4.3 Waste Management

Wistron is committed not to use banned substances or materials and actively promotes waste reduction, recycling, and reuse. The Company rigorously and carefully selects materials and suppliers and continues to implement technical improvement or seek environmentally friendly materials. We abide by environmental and customer regulations related to our activities, products, and services to attain, or even exceed set goals.

Wistron's waste management methods includes "Continuous implementation of waste classification and waste reduction" and "Enhancement of waste recycling and reuse". We comprehensively evaluate and check the generation and flow of waste and toxic substances through good waste and hazardous substance management. The output of waste is minimized as much as possible, and waste is reduced by recycling. Positive management of waste and hazardous substances can help reduce the impact and burden of the environment. We can also create niches in business operations with improved material usage rate and lowered operating costs, which help the Company attain sustainability.

Waste Management Performance Indicators

Performance Indicators	Unit	2019	2020	2021	2022
Waste output per unit-revenue	kilotons of waste output/ NT\$ billion	0.05	0.05	0.05	0.04
Non-hazardous waste output per unit-revenue	kilotons of waste output/ NT\$ billion	0.0508	0.0515	0.0487	0.0429
Hazardous waste output per unit-revenue	kilotons of waste output/ NT\$ billion	0.0015	0.0013	0.0013	0.0013

Note: The waste intensity in 2018 was 0.051 kilotons / NT\$ billion

Amount of Waste Generated (tons)

	Categories	2019	2020	2021	2022
	a.Reuse	-	215.67	238.07	232.67
Non-	b.Recycle	38,180.84	37,613.77	35,533.31	35,626.81
	c.Replaced with alternative raw materials	-	-	-	-
hazardous	d.Landfill	370.70	373.00	562.67	937.72
	e.Incinerate (with energy recovery)	-	272.76	1,670.37	2,300.53
	f.Incinerate (without energy recovery)	3,760.48	2,666.89	255.31	-
	Subtotal	42,312.01	41,142.08	38,259.73	39,097.73

g.Tem	porary storage	-	-	-	-
h.Tran	sported to external treatment facilities	1,208.83	1,001.90	1,043.50	1,205.56
	Subtotal	1,208.83	1,001.90	1,043.50	1,205.56

Total -	Total waste disposed(d.+e.+f.+g.+h.)	5,340.01	4,314.55	3,531.85	4,443.81
	Total waste recycled/ reused (a.+b.+c.)	38,180.84	37,829.43	35,771.38	35,859.48

Recycle / Reuse

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35,859.48 tons

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Waste Reduction

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Wistron implements reduction at the source with resource classification and recycling plans, with recycling areas established in the plants and offices to reduce waste. We define recyclable waste generated in plant areas in accordance with regulations, including waste metal, packaging materials, plastic, paper, and batteries. We set up recycling areas in all plants and offices to collect these materials and appoint external recycling companies for clean-up and disposal. Through waste classification and recycling, we have reduced operating costs by reducing waste disposal fees while meeting international waste reduction trends. Apart from recyclable waste, other special waste generated in the manufacturing process such as chemical solvents (isopropyl alcohol, fluxes, thinners, etc.), lubricating oil, solder paste, and dross are temporarily stored in special storage areas after classification and labeling and delivered to qualified waste disposal companies authorized by government institutions for processing. To monitor the final destination of the waste, Wistron also creates audit plans for waste disposal companies and performs regular audits.

To reduce waste more effectively, Wistron has changed the waste treatment target to "waste intensity reduction" starting from 2021. We use 2018 as the baseline year and set a target for reducing waste generation intensity (unit revenue waste generation) by 2% each year, which means a 6% reduction in 2023, a 10% reduction in 2025, and a 20% reduction in 2030. In addition, the UL2799 waste zero landfill certification mechanism will be introduced in all major manufacturing plants from 2022. It aims to find out the waste reduction plan and the best resource utilization plan to realize a virtuous resource cycle.

Waste Recycling Rate (%)

Waste Recycling Rate

ltem		2019	2020	2021	2022
Non- hazardous	Reuse	0.0%	0.5%	0.6%	0.6%
	Recycle	87.7%	89.3%	90.4%	88.4%
	Replaced with alternative raw materials	0.0%	0.0%	0.0%	0.0%
	Incinerate (with energy recovery)	0.0%	0.6%	4.3%	5.7%
Total		87.7%	90.4%	95.3%	94.7%

94.7%



Recycling has been strengthened, and the UL 2799 zero waste to landfill certification mechanism has been introduced. Chongqing Plant and Zhongshan Plant awarded Gold-Level certification.

Starting from 2022, Wistron has implemented the UL 2799 zero waste to landfill certification mechanism in Hsinchu plant, Chongqing plant, Chengdu plant, and Zhongshan plant. Moreover, it is required that the flow of waste in the plant be managed, inspected and audited for compliance. It is necessary to confirm that all wastes have undergone transformation processes such as recycling, reuse, and energy usage, so as to avoid waste of heat energy after landfill treatment and incineration. Once the waste diversion rate reaches at least 90%, the certification can be successfully obtained.

Through the introduction of the UL 2799 zero waste to landfill certification mechanism, the waste conversion rate of Wistron's factories has reached over 99%. In this way, not only the output and conversion rate of waste in the plant can be grasped, but also the management of waste processors can be strengthened. In addition, waste reduction plans and resource utilization optimal solutions were found through this certification diagnosis and evaluation, resulting in a reduction of the energy recovery rate after incineration to 9%, in order to improve Wistron waste management through certification. In the future, we will move towards the goals, including clean production, the continuous promotion and horizontal expansion of waste reduction measures to all plants around the world, the realization of a virtuous resource cycle, and the achievement of comprehensive waste recycling.





Management Approach Management System Adoption of TCFD Greenhouse Gas Emissions and Energy Management Alleviating Environmental Impact Nature and Biodiversity







Wistron Global Site Biodiversity Risk Assessment

3.5 Nature and Biodiversity

In recent years, most stakeholders have focused on issues associated with climate-related risks, while "Biodiversity Loss" has gradually become one of the most impactful and influential topics of interest. None of Wistron's global manufacturing sites and office areas are located in environmentally protected, biologically rich and diverse areas, or restored habitats. There is no natural forest land such as rare plants, or trees within the boundaries of the company's sites. There are also no endangered species listed in the Red List of Threatened Species of the International Union for Conservation of Nature (IUCN) and National Conservation List. Meanwhile, we conduct environmental impact assessments in accordance with local environmental protection regulations to avoid damaging biodiversity conservation from our operating activities. The eco-friendly technologies are adopted to actively reduce pollution as we strictly abide by environmental protection regulations, and the inspection measures are taken on a yearly basis to ensure that wastewater, waste gas, waste disposal, and noise emissions comply with regulatory requirements. In Taiwan, we continue to carry out projects related to the protection of the natural ecosystem through Wistron Foundation.

Wistron promises to undertake the responsibility of mitigating the impact on the overall ecological environment. Therefore, we promote nature and biodiversity conservation and no-deforestation plans through continuous improvement of our activities, products and services. For this reason, starting from inside the company, we strongly advocate the elimination of deforestation in the value chain and all manufacturing sites. Additionally, we map out the steps starting with avoidance, minimalization, restoration and Biodiversity offsets, and then introduce Nature-based Solutions (NbS) to eventually reach the common goals of No Net Loss and Net Positive Impact.

We hope to respond more actively to the Global Goal for Nature, and keep abreast of the subsequent development of the biodiversity-related issues. Therefore, through a series of engagements and information exchange with domestic industries, official academics, and research units, we continue to pay attention to the ecological environment, respect the ecological balance, and protect endangered species. At the ESG Committee meeting in December 2022, Wistron proposed to participate in the "Taiwan Nature Positive Initiative" launched by BCSD-Taiwan (Business Council for Sustainable Development). It is expected to introduce the international organizations' tools and resources provided by WBCSD (World Business Council for Sustainable Development) to examine the status quo of the Company's ability to respond to issues regarding nature. We plan to construct a set of evaluation methods and indicators measuring the degree of dependency and impact on nature as well as biodiversity conservation in 2023. In this regard, it will facilitate the formulation of our work goals in the field of biodiversity and thus eventually contribute to Nature Positive in 2050.