緯創資通
2022 永續影響力評價報告
SUSTAINABLE IMPACT VALUATION REPORT

wistron

Partner with Corporate Sustainability Impact Center, Tunghai University

Wistron Core Value CUSTOMER FOCUS

Wistron Core Value INTEGRITY

Wistron Core Value INNOVATION

Wistron Core Value SUSTAINABILITY

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Executive Summary

Altruism is the business philosophy of Wistron Corporation (hereafter Wistron), and we firmly believe in creating long-term value for stakeholders[1] is the cornerstone of the sustainability of a company. To better understand the risks and opportunities that environmental, social, and economic issues bring to the company's operations, Wistron started working with Tunghai University's Corporate Sustainability Impact Center in 2021. The collaboration aims to examine, from an outside-in perspective, how Wistron's value chain has affected human welfare. The analysis covers the upstream supply chain, production and operations at Wistron, and downstream product sales, focusing on the intersections of economic, environmental, and social issues. The analysis also is based on Profit and Loss (P&L) management, adding externalities[2], such as costs (negative) and benefits (positive) to the mindset. The aim is to build a sustainability impact management framework using the Triple Bottom Line (TBL) to assess the value chain's actual contribution to society.

Wistron uses the Gross Value added (GVA) method to evaluate the economic value created for stakeholders from production and operations, including employee remuneration, cash dividends, taxes, depreciation, and amortization. The company also follows the Natural Capital Protocol and Social, Human Capital Protocol, ISO 14008:2019, Value Balancing Alliance (VBA) and Impact-Weighted Accounts (IWA) frameworks, use the cause-effect Impact pathway to assess company operations' environmental and social externalities. For supply chain analysis, Wistron uses the Input-output Model to analyze the output value gain created by procurement demand and product sales, which drive the supply and demand of the entire industry chain. The company also uses the same method to examine the supply chain's employment opportunities and workers' income. For environmental issues, Wistron uses the Environmentally Extended Input-Output Analysis (EEIO) to analyze industry hotspots and consider the results while formulating procurement strategies. For product sales analysis, Wistron focuses on the Original Design Manufacturing (ODM) and Original Equipment Manufacturing (OEM) of three major product categories – laptop, desktop, and monitor, and analyzes the output value gain that product sales indirectly created for our customer industries.

In 2022, Wistron created NTD$984.6 billion of business revenue, while expenses, including taxes, dividends, interests, rent, employee remuneration, depreciation, and amortization, totaled NTD$82.2 billion. The financial gain positively impacted stakeholders and facilitated societal and economic growth. Various training resources would generate NTD$1.21 billion of expected gain to the employees' careers. Comprehensive health promotion programs would avoid NTD$10.98 million of medical costs generated by the employees' health problems. Occupational accidents would generate NTD$1.18 million of social cost, while the environmental footprint and resource depletion during the production process would generate NTD$550 million of environmental cost. In the upstream supply chain, Wistron created NTD$502.8 billion in supply chain output value, 46,000 job opportunities, and NTD$17.1 billion in salary income. Meanwhile, the company also generated NTD$7 billion of environmental costs. In downstream product sales, Wistron created a total of NTD$571.1 billion in output value for customer industries, helping customers reach their business goals and grow together.

Heading towards the future, Wistron's vision will be *Sustainability though Innovation*. The company's mission is to *be a Trusted Innovation Partner for Technology, Sustainability and Better Lives*. Through Wistron's six strategies - green products, recycling, people with purpose, labor welfare, sustainable supply base, and decarbonization - the company aspires to create a positive impact on sustainability and generate significant positive values for the society.

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[1] *Stakeholders refer to employees, customers, shareholders/investors, suppliers/vendors, the government, and the communities.*

[2] *Externality refers to the positive and negative impact a company's operations have on the society or environment whose relative value is not reflected in the prices in the free market*

Highlights from 2022

To strengthen management and applications of sustainability impact assessment tools, Wistron is leading sustainability teams to consider potential impacts (direct and indirect, positive and negative, long-term and short-term, and global and regional) of our business activities on stakeholders. To such ends, we organize workshops to explore material ESG issues and ask sustainability teams to consider the question from their functional perspectives. This allows us to paint a comprehensive Sustainability Impact Pathway that can serve as a blueprint for Wistron as we develop our own methodology for assessing sustainability impacts.

Value	Input/Output of Operations		Well-Being Changes (Outcome)	Impacts	Subjects	Impact Indicator	Impact Type				Valuation (NT$1,000)	ESG Issues
Supply Chain	Input	Payments to suppliers	Increases output value by driving supply-demand across industry chain	Socio-economic development	Supply chain	Supply chain output value gained from procurement	(+)	I	S	R	502,828,216	Sustainable Supply Chain
			Generates job opportunities & compensation across supply chain	Job opportunities & Purchasing power	External employees	Supply chain employee salary income generated from procurement	(+)	I	S	R	17,113,618	
			Global warming from rising GHG levels	Social cost of carbon	Environment	Environmental footprint from supply chain	(-)	I	L	G	6,975,704	
			Changes in air pollution levels in the atmosphere	Human health & Ecosystem quality	Environment		(-)	I	S	R		
			Changes in pollution levels in water bodies	Human health & Ecosystem quality	Environment		(-)	I	S	R		
			Air pollution from waste incineration	Human health & Ecosystem quality	Environment		(-)	I	S	R		
			GHG emissions from waste incineration & burial	Social cost of carbon	Environment		(-)	I	L	G		
	Input	Local procurement	Mitigates environmental impact from shipping of procured items	Social cost of carbon	Environment	Environmental footprint from shipping	(+)	I	L	G	Methodology is developing	Green Product
	Input	Green procurement	Mitigates environmental impact throughout life cycle of procured items	Social cost of carbon	Environment	Environmental footprint from life cycle	(+)	I	L	G		
	Output	Digital platform for suppliers	Helps suppliers increase operational efficiency	Work-life balance	Supply chain	Health risks avoided from reduced work hours	(+)	I	S	R		Digital Transformations
Wistron Operations	Input	Compensation & benefits	Increases happiness through compensation higher than living wages	Job opportunities & Purchasing power	Internal employees	Direct economic contribution	(+)	D	S	R	85,978,934	Talent Attraction and Retention
	Input	Tax payments	Supports government infrastructure and social welfare	Socio-economic development	Society							Financial Performance
	Input	Depreciation & amortization	Drives industry technology development	Industry's technical capabilities	Supply chain							
	Input	Interest & leasing	Strengthens drivers for economic growth	Quality of life & Purchasing power	Supply chain							
	Output	Net income	Facilitates product success for customers & generates returns for investors	Quality of life & Purchasing power	Customer/Shareholder/Investor							
	Input	Non-renewable energy usage	Global warming from rising GHG levels	Social cost of carbon	Environment	Social cost generated by GHG emissions	(-)	D	L	G	516,315	Greenhouse Gas Emissions and Energy
	Output	GHG emissions										
	Input	Renewable energy usage	Global warming from rising GHG levels	Social cost of carbon	Environment		(+)	D	L	G	214,804	
	Output	GHG emissions avoided										
	Input	Water withdrawal	Changes in water reserves	Human health & Natural resource stocks	Environment	Social cost generated by water resource depletion	(-)	D	L	R	17,387	Water Resources
	Input	Recycled water usage	Changes in water reserves	Human health & Natural resource stocks	Environment		(+)	D	S	R	1,331	
	Output	Wastewater discharge	Changes in pollutant concentration in water bodies	Human health & Natural resource stocks	Environment	Social cost generated by wastewater disposal	(-)	D	S	R	13,733	
	Output	Air pollution	Changes in air pollutant concentration in the atmosphere	Human health & Natural resource stocks	Environment	Social cost generated by air pollution	(-)	D	S	R	340	Air Pollution and Waste
	Output	Waste	Air pollution from waste incineration	Human health & Natural resource stocks	Environment	Social cost generated by waste disposal	(-)	D	S	R	5,741	
			GHG emissions from waste incineration and burial	Social cost of carbon	Environment		(-)	D	L	G		
	Output	Occupational accidents	Physical and mental impacts on workers & medical expenses	Quality of life & Consumption of social resources	Society	Social cost generated by occupational accidents	(-)	D	S	R	1,178	Occupational Safety and Health
	Input	Expenses for health promotion	Potential health risks from work	Work-life balance	Society	Medical costs avoided from health promotion	(+)	D	S	R	10,981	
	Output	Number of employees with health risks										
	Input	Training hours & funding	Increases professional skills & employability	Professional knowledge & Skills	Society	Future income generated from employee training	(+)	D	L	R	1,207,477	Talent Cultivation and Career Development
Products & Services	Output	Product sales (amount)	Increases output value by driving supply-demand across industry chain	Socio-economic development	Customer/End user	Output value for customers driven by product sales	(+)	I	S	R	571,055,005	Customer Relations
	Output	Product sales (qty.)	Environmental impacts from handling electronic waste	Social cost of carbon	Environment	Environmental footprint from waste products	(-)	I	L	G	Methodology is developing	Green Product
	Input	Renewable raw material usage	Mitigates environmental impacts from raw material extraction	Social cost of carbon	Environment	Environmental footprint from raw materials	(+)	I	L	G		
	Input	Energy-efficient product designs	Reduces GHG emissions with energy-efficient products	Social cost of carbon	Environment	Environmental footprint from product use	(+)	I	L	G		
	Output	Energy consumption from	GHG emissions throughout product use	Social cost of carbon	Environment		(-)	I	L	G		
	Input	R&D expenses	Helps development & application of industry technologies	Quality of life & Industry's technical capabilities	Customer/End user	Increase in proprietary asset value	(+)	I	L	G		Product Development and Innovation
	Output	New patent & technology										

(+): positive impact, (-): negative impact, D: direct, I: indirect, L: long-term. S: short-term, G: global, R: regional

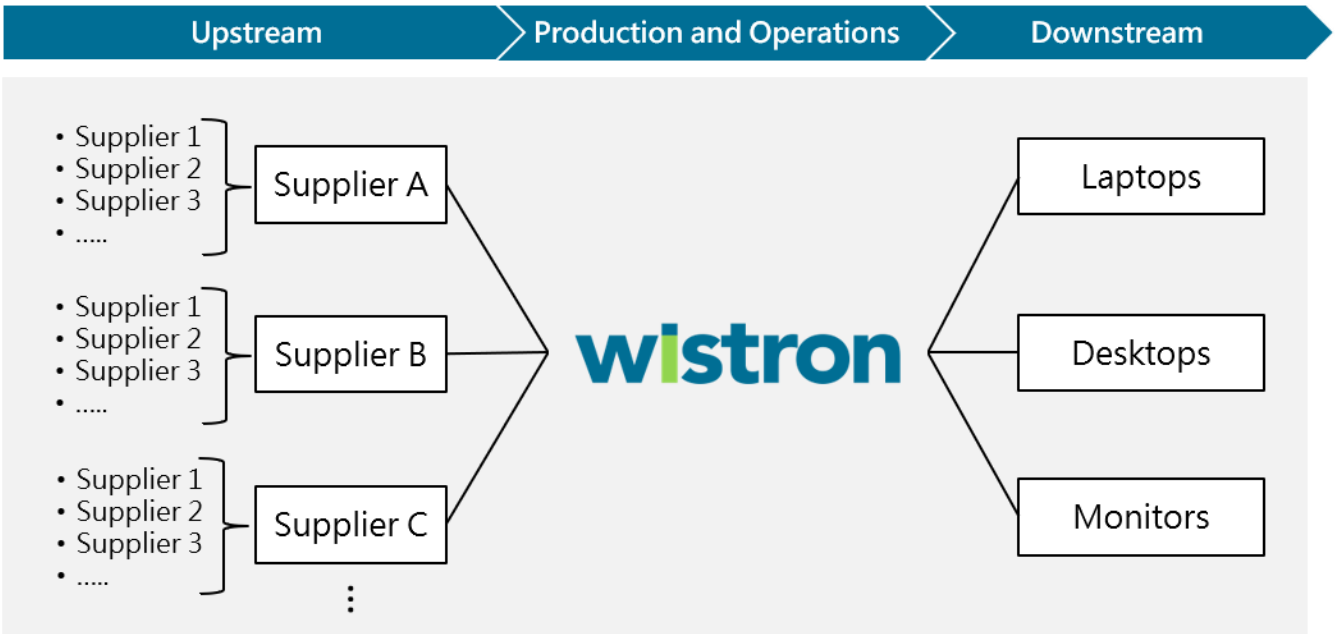
Methodology

There are four steps in assessing Wistron's sustainability impact: defining boundary and scope, mapping impact pathways, confirming data sources and quality, and establishing a valuation method. Each step is interconnected, and decisions made during each step may affect the integrity and accuracy of the final result.

Defining boundary and scope

Wistron's value chain activities cover supply chain (upstream), production and operations, and product sales (downstream), during which Wistron generates both positive and negative impact for stakeholders. Wistron's production and operations generate direct impact, while value chain upstream/downstream partners generate indirect impact.

- **Upstream (supply chain):** The economic activities that raw materials suppliers and service providers conduct to meet Wistron's procurement demand. The activity categories include raw materials for facilities and electronics (including materials supplied by customers and procured by Wistron), equipment, software, engineering, electrical parts, consumables, general affairs, and transportation services.
- **Production and operations:** All activities at all Wistron production sites and operations offices worldwide, including the design, manufacturing, and assembly of electronic products. The boundary of this report is consistent with Wistron's corporate sustainability report, which include all major manufacturing facilities in Taiwan and across the globe. If the assessment boundary differ from the above, they will be specified in the result analysis sections.
  - Wistron Corporation (Neihu Headquarters)
  - Wistron Corporation (Hsichih, Kaohsiung, Tainan Office Complex)
  - Wistron Corporation (Hsinchu Plant, Hukou Plant I, Hukou Plant II))
  - Wistron InfoComm (Kunshan) Co. (Kunshan Plant)
  - Wistron InfoComm (Taizhou) Co. (Taizhou Plant)
  - Wistron InfoComm (Zhongshan) Co. (Zhongshan Plant)
  - Wistron InfoComm (Chongqing) Co. (Chongqing Plant)
  - Wistron InfoComm (Chengdu) Co. (Chengdu Plant)
  - Wistron Mexico S.A. de C.V. (Mexico Plant)
  - Wistron InfoComm (Czech) s.r.o. (Czech Plant)
  - Wistron Optronics (Kunshan) Co., LTD (Kunshan Opt Plant)
  - Wistron Technology (Malaysia) Sdn. Bhd. (Malaysia Plant)
- **Downstream (product sales):** Brand customers for which Wistron provides Original Design Manufacturing (ODM) and Original Equipment Manufacturing (OEM) services. Considering the diversity of product types, this report only analyzes the customer industries of laptops, desktops, and monitors.



Mapping impact pathways

To clarify the direct and indirect, positive and negative, long-term and short-term, and global and regional impacts of value chain activities on stakeholders, Wistron is leveraging an impact pathway to consider inputs and outputs of different activities, changes and impacts on stakeholder well-being, and resulting social value or costs. This allows us to connect ESG issues and systematically and logically identify their complex causal relationships. Please refer to the result analysis description of each section for further details.

Value Chain	Input/Output of Operations		Well-Being Changes (Outcome)	Impacts	Subjects	Impact Indicator	Impact Type				ESG Issues
Supply Chain	Input	Payments to suppliers	Increases output value by driving supply-demand across industry chain	Socio-economic development	Supply chain	Supply chain output value gained from procurement	(+)	I	S	R	Sustainable Supply Chain
			Generates job opportunities & compensation across supply chain	Job opportunities & Purchasing power	External employees	Supply chain employee salary income generated from procurement	(+)	I	S	R	
			Global warming from rising GHG levels	Social cost of carbon	Environment	Environmental footprint from supply chain	(-)	I	L	G	
			Changes in air pollution levels in the atmosphere	Human health & Ecosystem quality	Environment		(-)	I	S	R	
			Changes in pollution levels in water bodies	Human health & Ecosystem quality	Environment		(-)	I	S	R	
			Air pollution from waste incineration	Human health & Ecosystem quality	Environment		(-)	I	S	R	
			GHG emissions from waste incineration & burial	Social cost of carbon	Environment		(-)	I	L	G	
	Input	Local procurement	Mitigates environmental impact from shipping of procured items	Social cost of carbon	Environment	Environmental footprint from shipping	(+)	I	L	G	Green Product
	Input	Green procurement	Mitigates environmental impact throughout life cycle of procured items	Social cost of carbon	Environment	Environmental footprint from life cycle	(+)	I	L	G	
	Output	Digital platform for suppliers	Helps suppliers increase operational efficiency	Work-life balance	Supply chain	Health risks avoided from reduced work hours	(+)	I	S	R	Digital Transformations
Wistron Operations	Input	Compensation & benefits	Increases happiness through compensation higher than living wages	Job opportunities & Purchasing power	Internal employees	Direct economic contribution	(+)	D	S	R	Talent Attraction and Retention
	Input	Tax payments	Supports government infrastructure and social welfare	Socio-economic development	Society						Financial Performance
	Input	Depreciation & amortization	Drives industry technology development	Industry's technical capabilities	Supply chain						
	Input	Interest & leasing	Strengthens drivers for economic growth	Quality of life & Purchasing power	Supply chain						
	Output	Net income	Facilitates product success for customers & generates returns for investors	Quality of life & Purchasing power	Customer/Shareholder/Investor						
	Input	Non-renewable energy usage	Global warming from rising GHG levels	Social cost of carbon	Environment	Social cost generated by GHG emissions	(-)	D	L	G	Greenhouse Gas Emissions and Energy
	Output	GHG emissions									
	Input	Renewable energy usage	Global warming from rising GHG levels	Social cost of carbon	Environment		(+)	D	L	G	
	Output	GHG emissions avoided									
	Input	Water withdrawal	Changes in water reserves	Human health & Natural resource stocks	Environment	Social cost generated by water resource depletion	(-)	D	L	R	Water Resources
	Input	Recycled water usage	Changes in water reserves	Human health & Natural resource stocks	Environment		(+)	D	S	R	
	Output	Wastewater discharge	Changes in pollutant concentration in water bodies	Human health & Natural resource stocks	Environment	Social cost generated by wastewater disposal	(-)	D	S	R	
	Output	Air pollution	Changes in air pollutant concentration in the atmosphere	Human health & Natural resource stocks	Environment	Social cost generated by air pollution	(-)	D	S	R	Air Pollution and Waste
	Output	Waste	Air pollution from waste incineration	Human health & Natural resource stocks	Environment	Social cost generated by waste disposal	(-)	D	S	R	
			GHG emissions from waste incineration and burial	Social cost of carbon	Environment		(-)	D	L	G	
	Output	Occupational accidents	Physical and mental impacts on workers & medical expenses	Quality of life & Consumption of social resources	Society	Social cost generated by occupational accidents	(-)	D	S	R	Occupational Safety and Health
	Input	Expenses for health promotion	Potential health risks from work	Work-life balance	Society	Medical costs avoided from health promotion	(+)	D	S	R	
	Output	Number of employees with health risks									
	Input	Training hours & funding	Increases professional skills & employability	Professional knowledge & Skills	Society	Future income generated from employee training	(+)	D	L	R	Talent Cultivation and Career Development
Products & Services	Output	Product sales (amount)	Increases output value by driving supply-demand across industry chain	Socio-economic development	Customer/End user	Output value for customers driven by product sales	(+)	I	S	R	Customer Relations
	Output	Product sales (qty.)	Environmental impacts from handling electronic waste	Social cost of carbon	Environment	Environmental footprint from waste products	(-)	I	L	G	Green Product
	Input	Renewable raw material usage	Mitigates environmental impacts from raw material extraction	Social cost of carbon	Environment	Environmental footprint from raw materials	(+)	I	L	G	
	Input	Energy-efficient product designs	Reduces GHG emissions with energy-efficient products	Social cost of carbon	Environment	Environmental footprint from product use	(+)	I	L	G	
	Output	Energy consumption from product use	GHG emissions throughout product use	Social cost of carbon	Environment		(-)	I	L	G	
	Input	R&D expenses	Helps development & application of industry technologies	Quality of life & Industry's technical capabilities	Customer/End user	Increase in proprietary asset value	(+)	I	L	G	Product Development and Innovation
	Output	New patent & technology development									

(+): positive impact, (-): negative impact, D: direct, I: indirect, L: long-term. S: short-term, G: global, R: regional

Confirming data sources

The activity data sources include primary data (original data collected from actual inventory) and secondary data (collected from relevant literature, databases, or estimation. When assessing Wistron's sustainability impact, primary data, whose quality is higher, takes precedence over secondary data. However, secondary data will be used when primary data is unavailable. For example, the relationships between supply and demand of each industry within the supply chain, and the volume of pollution generated per unit of output value, could only be obtained from country-level investigation reports and estimated by industry average.

		Upstream supply chain	Production and operations	Downstream product sales
Economic	Activity data	Amount of procurement/ Relationship between industry supply and demand	Internal financial profit and loss indicators	Amount of product sales/ Relationship between industry supply and demand
	Data quality	**Primary and Secondary data**	**Primary data**	**Primary and Secondary data**
	Impact Categories	Supply chain output value generated	Direct economic value generated	Industry chain output value generated
Environmental	Activity data	Industry average databases	Energy resources and pollution generation	Methodology is developing
	Data quality	**Secondary data**	**Primary data**	
	Impact Categories	Social cost of carbon, Human health and Ecosystem loss		
Social	Activity data	Industry average databases	Employee occupational accidents, health examinations, remuneration, etc.	
	Data quality	**Secondary data**	**Primary data**	
	Impact Categories	Creating job opportunities and salary income	Change to personal or social welfare	

Establishing a valuation method

Wistron's sustainability impact management framework covers the three major stages of the value chain (upstream / production and operations / downstream), the three significant sustainability management aspects (economic/environmental/social), and 13 impact indicators. The methodology refers to the practices of benchmark companies in Taiwan and abroad and relevant research.

Boundary	Scope	Impact indicators	Calculation methodology
Upstream	Economic	Supply chain output value gained from procurement	This report uses Input-Output Analysis (IOA) model to assess the economic benefit derived from gains in industry chain supply and demand generated by procurement activities; the report also uses the volume of pollution caused per unit of output value to assess the external environmental costs created caused from greenhouse gasses, wastewater disposal, waste disposal (incineration) and air pollution. The report also assesses the positive impact, namely job opportunities and salary income gained in the supply chain.
	Environmental	Social cost generated by the environmental footprint of the supply chain	
	Social	Supply chain employee salary income generated from procurement	
Production Operations	Economic	Direct economic contribution	The report uses Gross Value added (GVA) method to examine the stakeholder value flows in operations, including business revenue (customers), dividends (shareholders/investors), remuneration and benefits (employee), taxes (government), depreciation and amortization (suppliers).
	Environmental	Social cost generated by greenhouse gas emissions, water consumption, air pollution, wastewater and waste disposal	The report applies the Environmental Profit and Loss (EP&L) mindset to assess the external environmental cost generated by energy and resource depletion, emissions, and pollution during the company's operations and the company's input to mitigate the negative impact on the society.
	Social	Future income generated from employee training	The report refers to VBA (2021) methodology to assess the professional skills and knowledge that employees gained from the company's training programs, which improves their productivity, competitiveness, and salary income further down their careers.
		Social cost generated by occupational accidents	The report refers to the research report by the UK's Health and Safety Executive (HSE, 2017), which considers the loss of productivity due to work injury, compensation for occupational accidents, and willingness to pay to avoid occupational accidents in calculating the social cost.
		Medical costs avoided from health promotion	The aims are early detection of hypertension, hyperlipidemia, high blood sugar, and obesity through regular health examinations and formulating health promotion programs to reduce or avoid cardiovascular diseases and the medical costs derived from such diseases.
Downstream	Economic	Customer industries' output value gained from product sales	The report focuses on the laptop, desktop, and monitor products, taking into account the supply and demand relationship between sales and the output value of customer industry brands to assess the indirect economic value generated by product sales.

Since the currency value conversion factors come from several different studies, Wistron follows the ISO 14008:2019 definitions of environmental impact and relevant currency valuation frameworks. The base year is 2018, and the conversions are adjusted according to geography and time.

1) Geographic adjustment: the report uses the Purchasing Power Parity (PPP) of each region to adjust the weighting (OECD, 2012) of Gross National Income (GNI). The equation is listed below.

$$E\_i = (Y\_i/Y\_ref)\,\hat{}\,\epsilon$$

In particular,

- E_i is the income adjustment weighting
- Y_i is the adjusted GNI of the region of the value conversion using the region's PPP
- Y_{ref} is the adjusted GNI of the region of the original studies using the region's PPP
- ϵ Income elasticity factor refers to the relationship between WTP and income. The value is between 0 and 1.

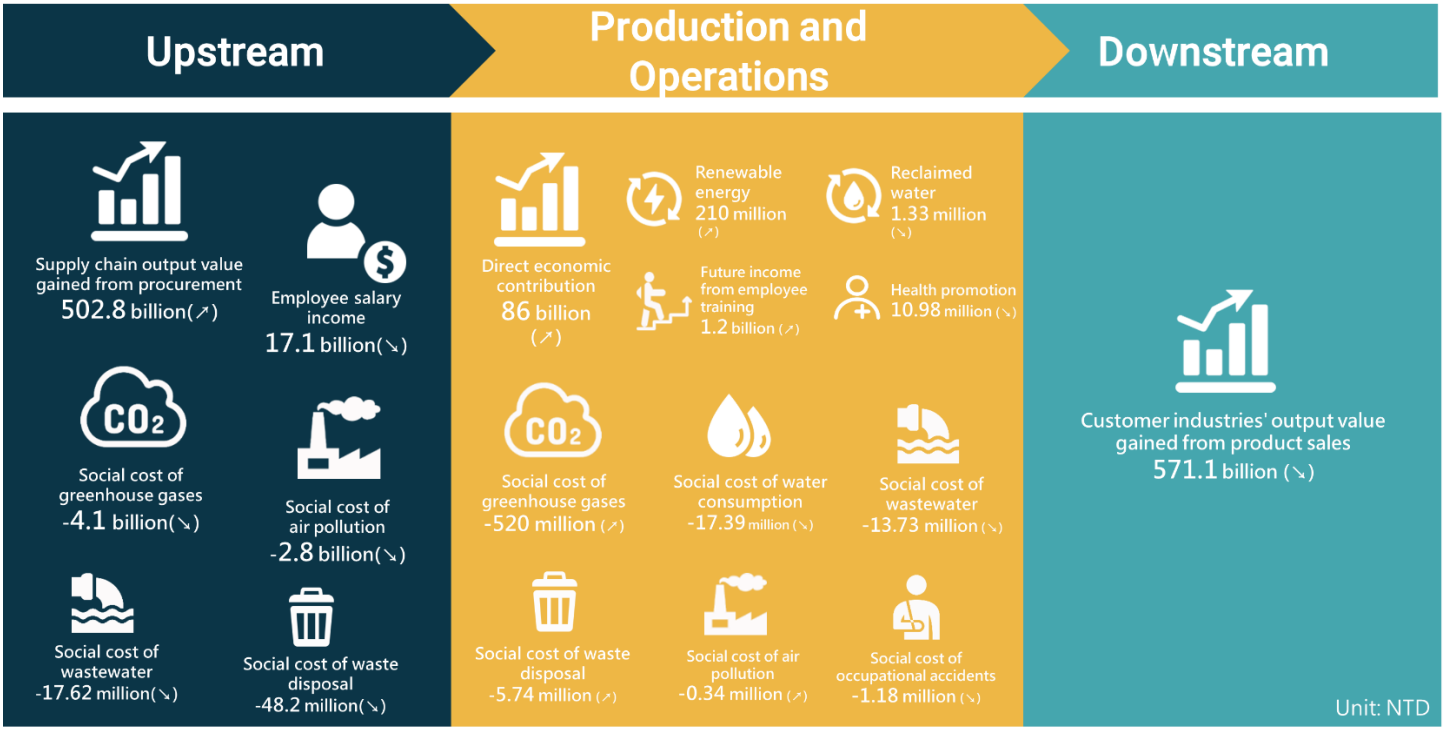
  1 indicates a positive correlation between WTP and income, while 0 shows that the WTP is not correlated with income. The study adopts the recommended value of 0.6 by PwC UK (2015).

2) Temporal adjustment: the report considers inflation and exchange rates when adjusting the currency values of different periods to the currency value of the base year.

Results

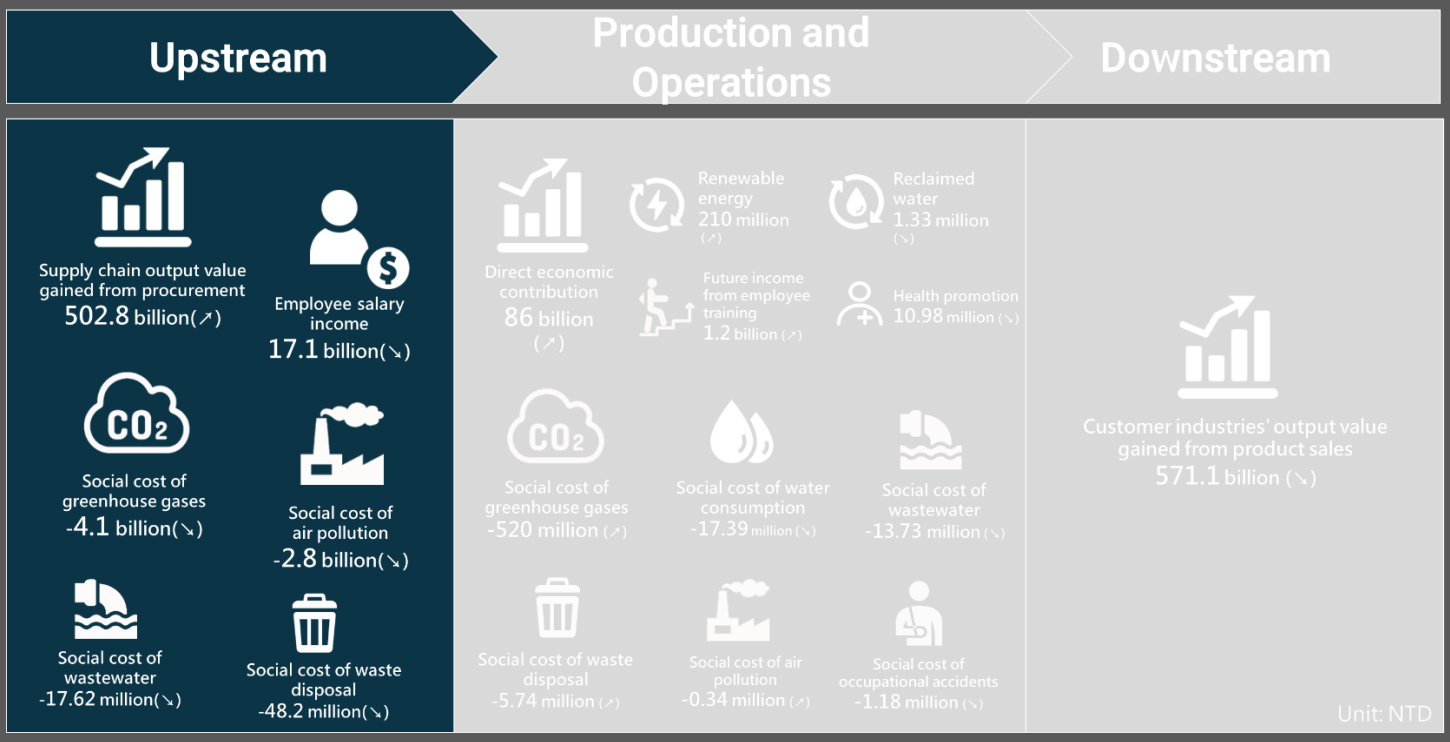
In 2022, Wistron generated NT$86 billion in direct economic value for stakeholders through production and operations, including net profit, tax payment, dividend distribution, interest expenses, leasing, employee compensation, depreciation, and amortization. Additionally, we achieved a future benefit of NT$1.21 billion through employee career development and successfully avoided NT$10.98 million in medical costs from employee health problems, thanks to our robust health promotion system. Unfortunately, in 2022, Wistron incurred NT$1.18 million in social externalities (negative) from occupational accidents and NT$550 million in environmental externalities (negative) stemming from production processes, with 93% attributed to indirect GHG emissions from electricity consumption. However, our initiatives in renewable energy and water recycling made a positive contribution to the environment, with an impact worth NT$220 million. In terms of the upstream supply chain, Wistron's procurement demand indirectly contributed to a 2.7-fold increase in the value of the supply chain, amounting to approximately NT$502.8 billion. However, this growth also came with an environmental footprint, resulting in social costs of NT$7 billion, primarily attributed to air pollution and GHG emissions from the supply chain. In the downstream product sales, Wistron provides customized product development and services to customers, indirectly generating approximately NT$571.1 billion in value for customer industries, representing a 1.4-fold increase.

86 billion NTD Direct economic contribution made from production and operations	**1.2 trillion NTD** Social externality generated by the value chain	**-7.3 billion NTD** Environmental externality generated by the value chain
The economic value directly generated for stakeholders during production and operations, including business revenue (customers), dividends (shareholders/ investors), remuneration and benefits (employee), taxes (government), depreciation and amortization (suppliers)	The results include positive impacts such as supply chain output value and salary income gained from procurement, future income generated from employee training, the benefit gained from good health, and output value that customer industries gained from the product sales, as well as negative impact caused by occupational accidents	The results include negative impacts such as social costs generated by the environmental footprint of the supply chain, and social costs caused by greenhouse gas emissions, water resource depletion, wastewater, air pollution, and waste disposal during production and operations.



Wistron is focused on advancing and deepening our sustainability impact management framework and identifying opportunities to reduce environmental impacts and enhance social welfare. In addition, we are looking to develop various sustainability programs with our ESG 6-Pillar Strategy, including "sustainable supply base," "green products," "recycling," "decarbonization," "people with purpose," and "labor welfare." We hope to make progress toward short-, mid-, and long-term goals to enforce sustainability into our daily operations, thus creating a key competitive advantage for our company. At Wistron, we pride ourselves on being an innovative and world-leading Technology Service Provider (TSP). We are dedicated to creating an impact on our industry and propelling the company, environment, and society toward a sustainable future with innovative thinking. We hope to fulfill an "innovative and sustainable" vision and create a more significant and positive impact on society.

Upstream supply chain



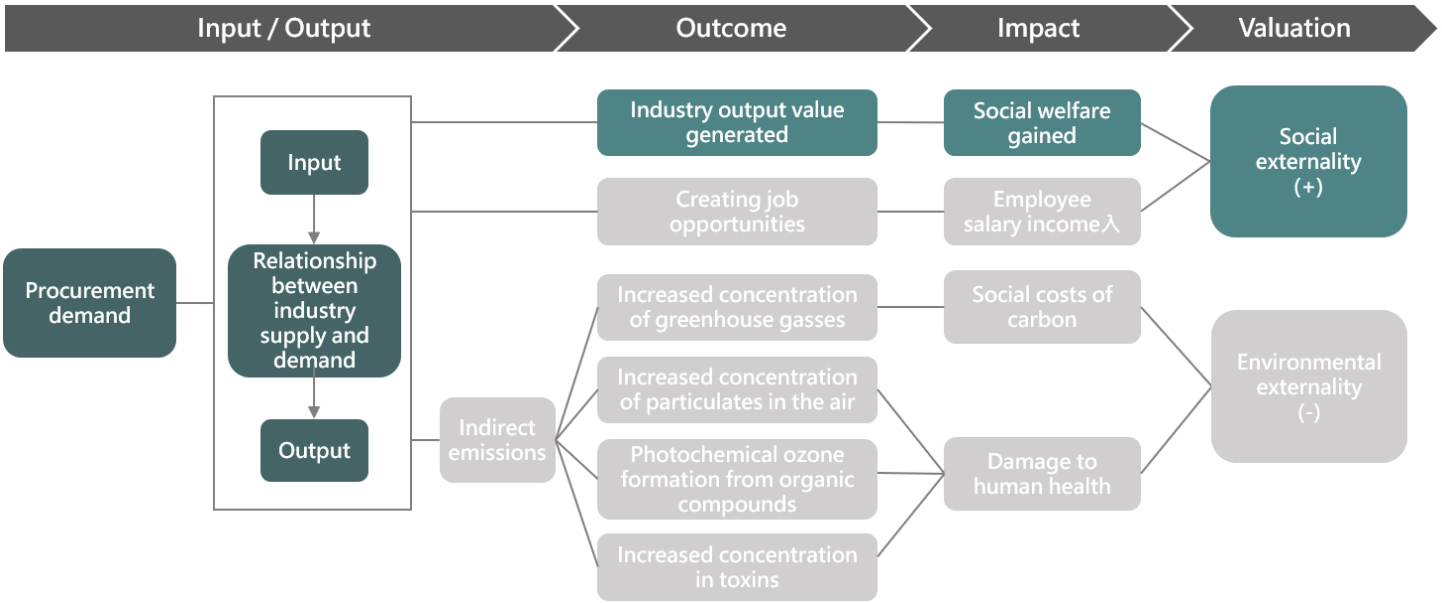
Supply chain output value gained from procurement

Electronic components and parts are the most significant percentage of Wistron's procurement. In 2022, the procurement demand grew by 2.4% compared to the previous year. Since economic activities of various industries cannot be separated from one another, the report adopts the Input-Output model developed by Nobel Prize laureate in Economic Science Wassily Leontief in the 1930s and 1940s, which distributes the production input elements to the final demand of the products. In other words, company activities would ultimately affect the final demand (VBA, 2021). The model is often constructed by governments or research institutions based on actual financial data and presented as an Input-Output table. This report adopts the Input-Output model to examine Wistron procurement's impact on the supply-and-demand structure of the industry chains, including output value, employment, and salary income. The model can also apply to calculate the disposal of pollutants.

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway

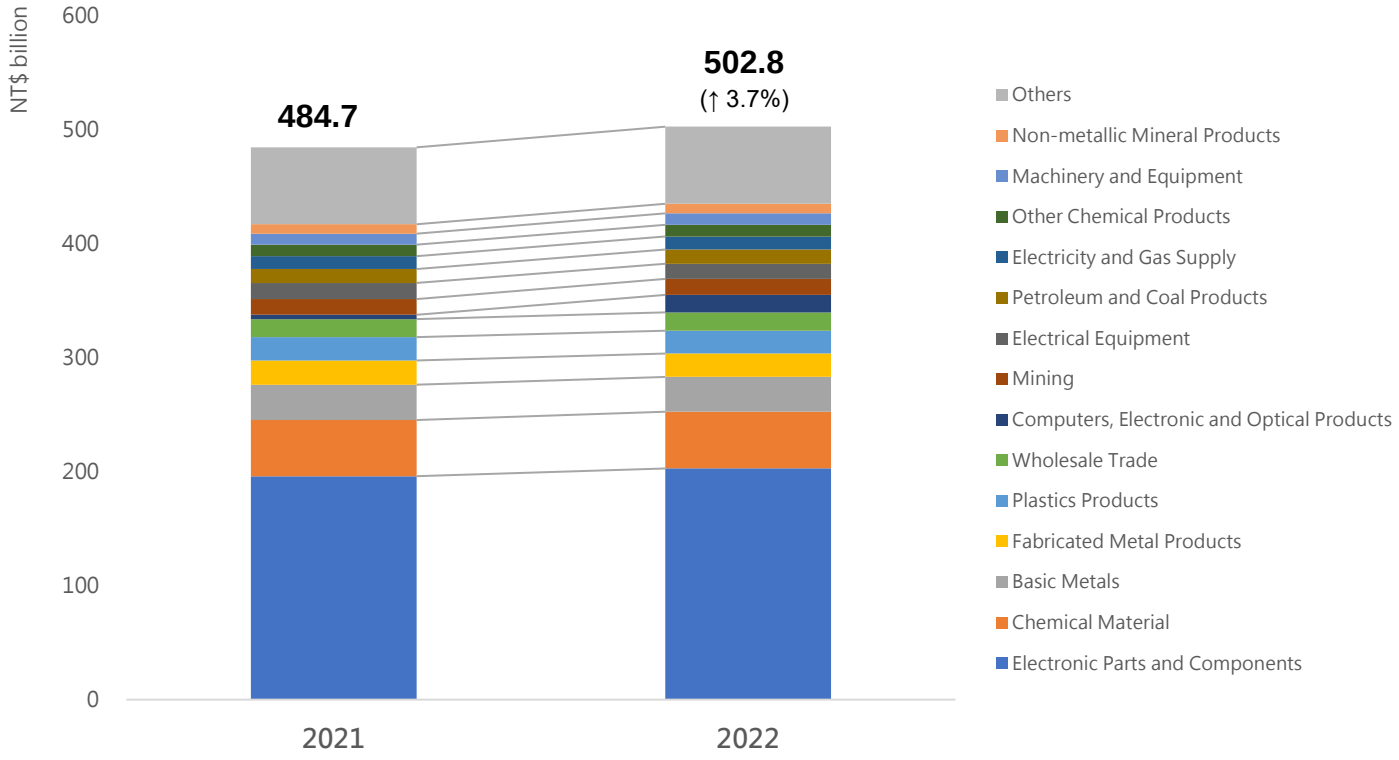


Calculation

- In this study, the supply-and-demand relationships among each industry are based on the DGBAS 2016 Input-Output table (2020).

Result

In 2022, Wistron's procurement demand created NTD$502.8 billion in output value for the supply chain. In particular, electronic components and parts contributed the most significant percentage in Wistron's procurement, 40%. In terms of trends, supply chain output value in 2022 grew by 3.7% compared to the previous year, where procurement demand for computers, electronic and optical products increased.



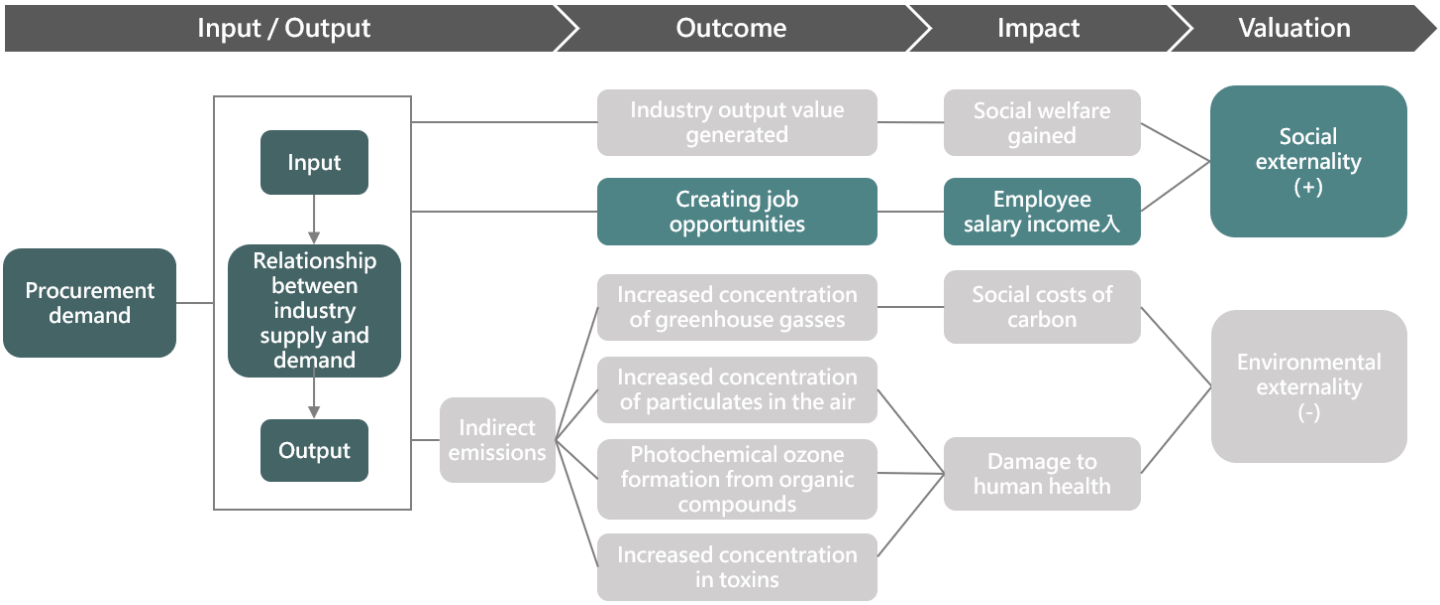
Supply chain employee salary income generated from procurement

The Input-Output model considers all input elements, from the elements during the suppliers' products and services (direct) to upstream (indirect) elements, and distributes these elements to the final demand according to company activities (VBA, 2021). The model offers an analysis of direct and indirect input resources required in the overall industry chain to meet the procurement demand, such as employee recruitment and salary expenses, which affect the final demand.

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway

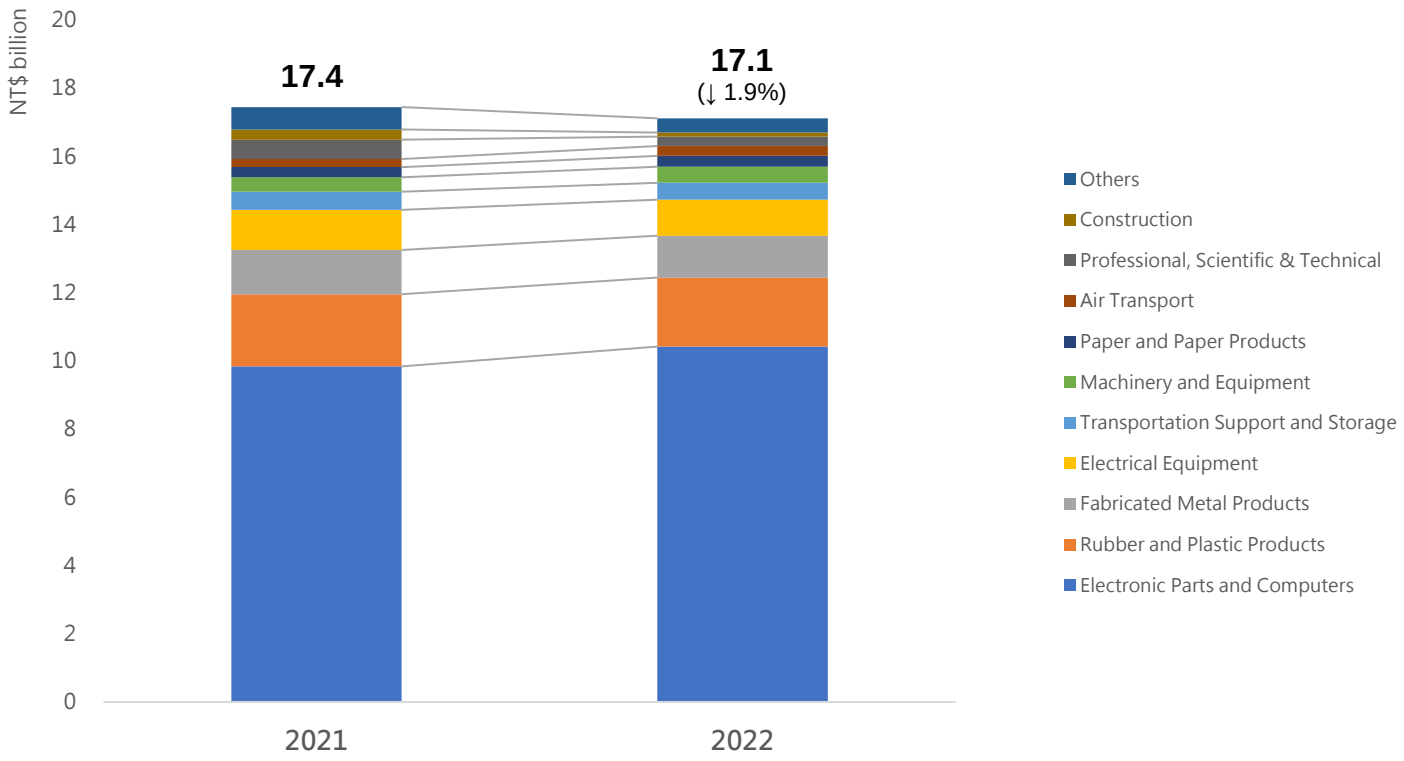


Calculation

- This study refers to the Exiobase 2 Input-Output database[3], and the calculation is based on Taiwan's industry coefficients.

Result

In 2022, Wistron's procurement demand created 46,000 job opportunities for the supply chain, generating a positive social externality of NTD$17.1 billion in salary income. In particular, electronic components and computers contributed the most significant percentage in Wistron's procurement, 61%.



[3] *EXIOBASE is a global, detailed Multi-regional Supply-Use and Input-Output database jointly developed by the Norwegian University of Science and Technology (NTNU), Netherlands Organization for Applied Scientific Research (TNO), Sustainable Europe Research Institute (SERI), Institute of Environmental Sciences (CML), Institute for Ecological Economics (WU), and 2.-0 LCA consultants. EXIOBASE 2 uses 2007 as the base year and covers economic, environmental, and social data for 5 continents, 43 countries/regions, and 163 industries.*

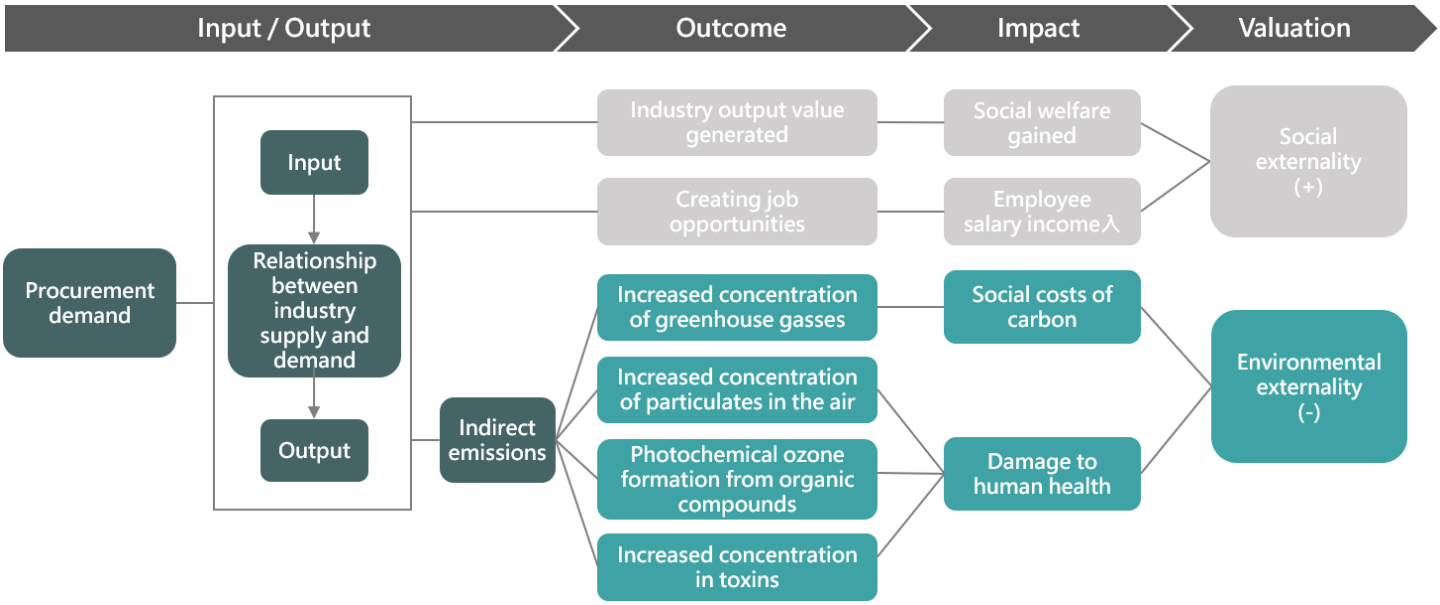
Environmental footprint from supply chain

The Input-Output model is widely applied to economic impact analysis (EIA) and Environmentally Extended Input-Output Analysis (EEIO) (VBA, 2021). Traditional input-output tables offer a clear overview of the interactions among each industry (Miller & Blair, 2009), while the EEIO integrates the information on the environmental impact of each industry, allowing a simple and comprehensive assessment of the connection between economic activities and environmental impact (Kitzes, 2013).

Impact Pathway

All Wistron production sites and operations offices worldwide.

Calculation

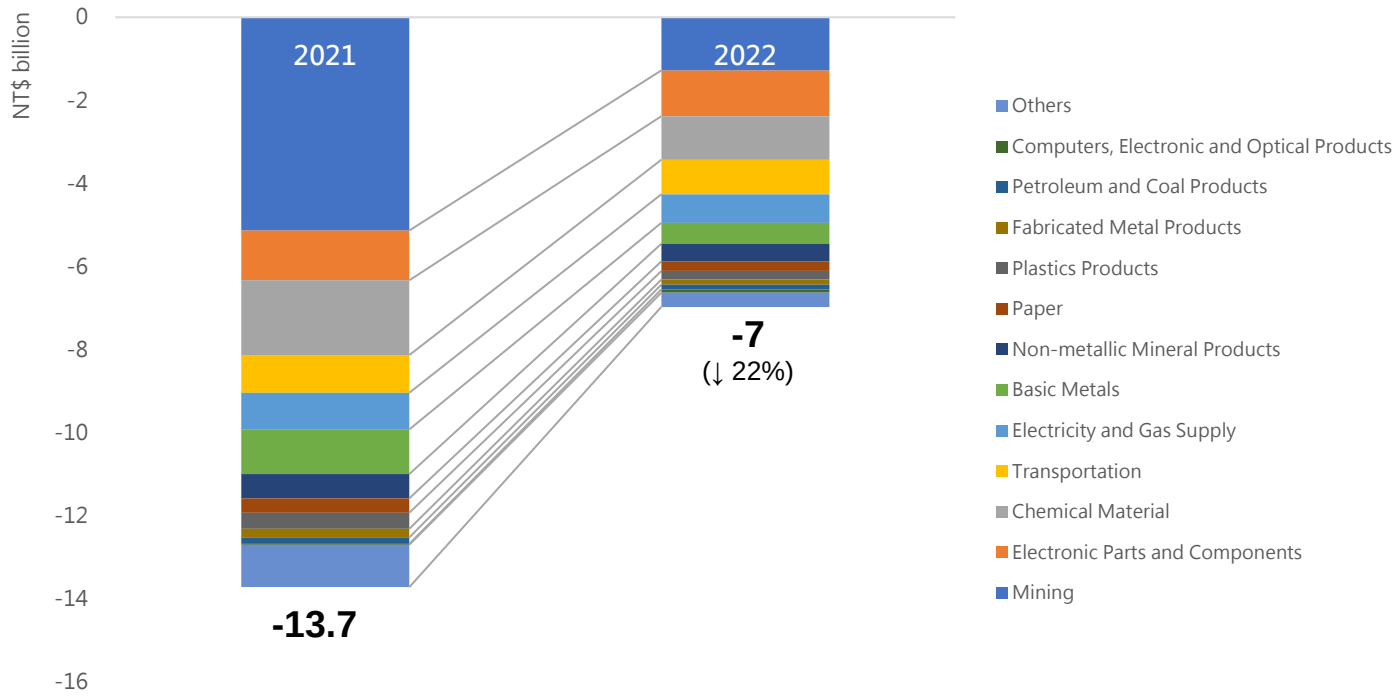


Calculation

- This study follows the EEIO methodology when analyzing statistical data from the DGBAS and Bureau of Energy to examine the relationship between each industry's procurement input and environmental impact. The report calculated the volume of pollution generated per unit of output value, including greenhouse gasses, water pollution (COD), waste (incineration), and air pollution (PM2.5, NOx, SOx, NMHC, Pb). It used the valuation factor to assess the social cost created.

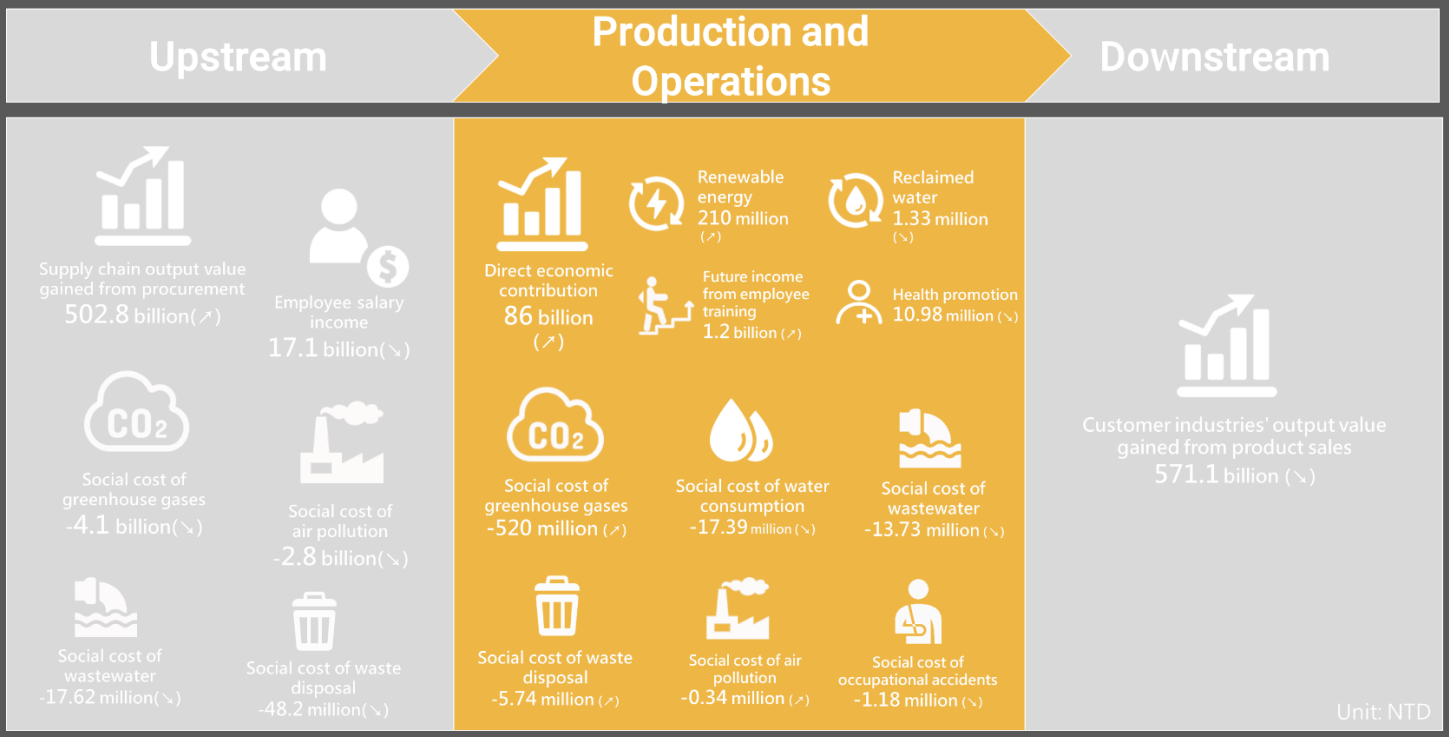
Result

In 2022, Wistron incurred NT$7 billion in environmental externalities (negative) across the supply chain from procurement demands. The environmental externalities were mainly derived from electronic parts and components and upstream mineral extraction, which accounted for 34.2%. The second and third largest contributors were environmental footprints from chemical production and shipping services, which accounted for 15% and 11.9%, respectively. As for trends in recent years, environmental externalities from the supply went down by 49.2% from the previous year. This is largely due to the fact that most industries exhibited a significant decline in pollutants from each unit of output value[4].



[4]Pollutants from each unit of output value from all industries are calculated based on the National Industrial Production and Domestic Deflator (Directorate General of Budget, Accounting and Statistics), Green National Income Account (Directorate General of Budget, Accounting and Statistics), and Energy Balance (Bureau of Energy).

Production and operations



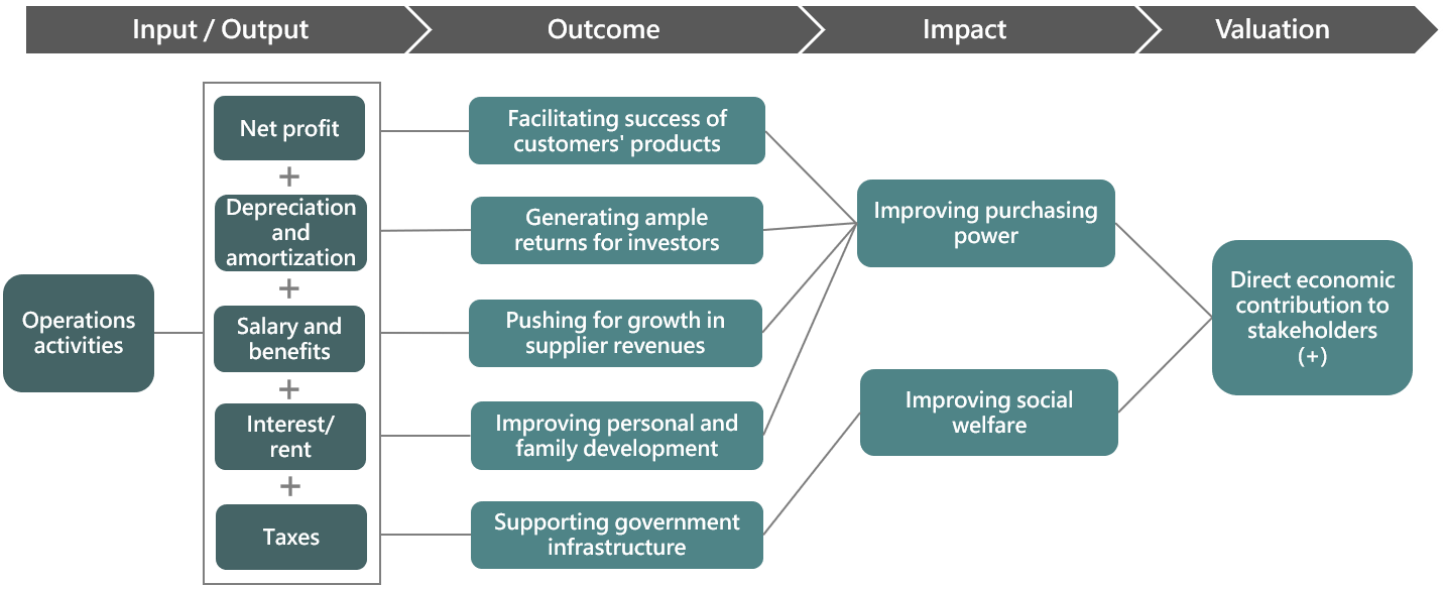
Direct economic contribution

Gross Value added (GVA) assesses the difference between intermediary input and final input in business operations. It also considers the original input, public expenses, and the benefits of economic activities for various stakeholders, such as net business profit, employment cost, and taxes. Therefore, GVA allows the researchers to understand each company's contribution to stakeholder benefits (VBA, 2021). This study uses the GVA method to reexamine the value flows for stakeholders, including net business profit (customers/shareholders/investors), remuneration and benefits (employee), taxes (government), depreciation, and amortization (suppliers).

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway

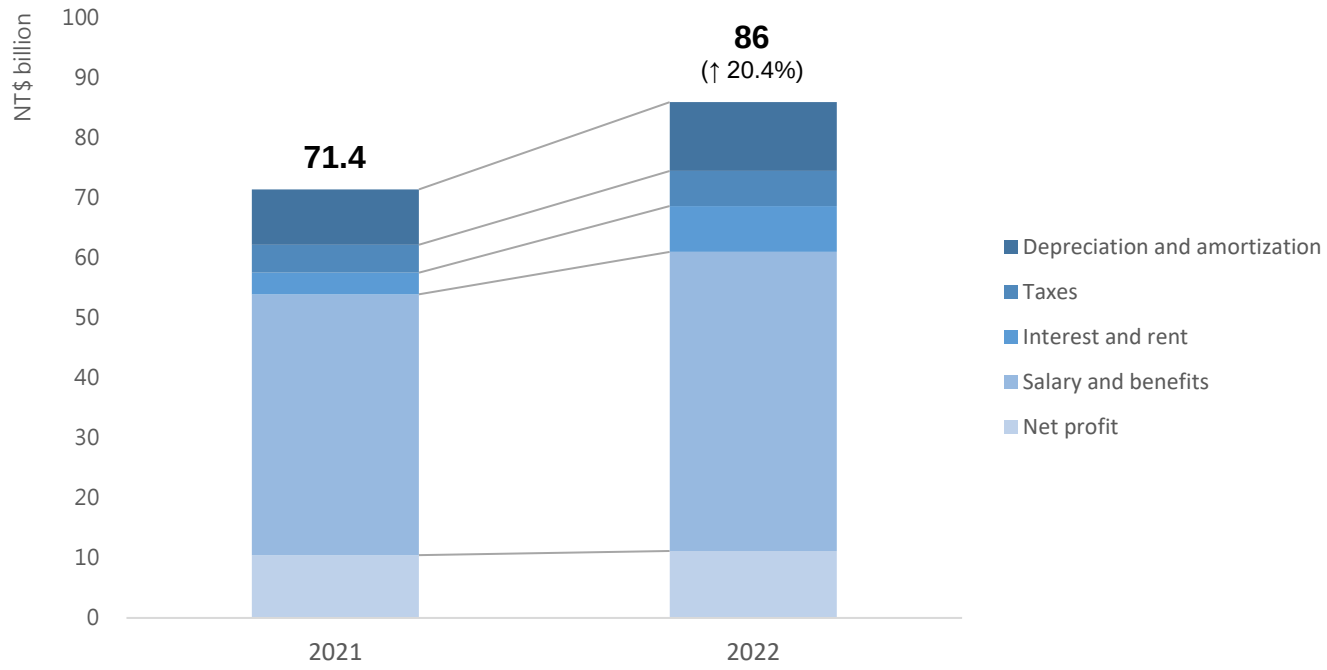


Calculation

- Relevant information comes from the financial profit and loss data in Wistron's annual financial statement.

Result

In 2022, Wistron created NT$86 billion in economic value for stakeholders through production and operations, representing a growth of 20.4% from the previous year. This is mainly attributed to increases in employee compensation and benefits as well as growth in operating income. In response to fierce industry competition and global trends of sustainability transformations, Wistron continues to enhance operational efficiency, optimize products and service models, and leverage advanced technology to strengthen production capacity. We are also actively investing in green product innovations and low-carbon manufacturing to strengthen Wistron's resilience in sustainability.



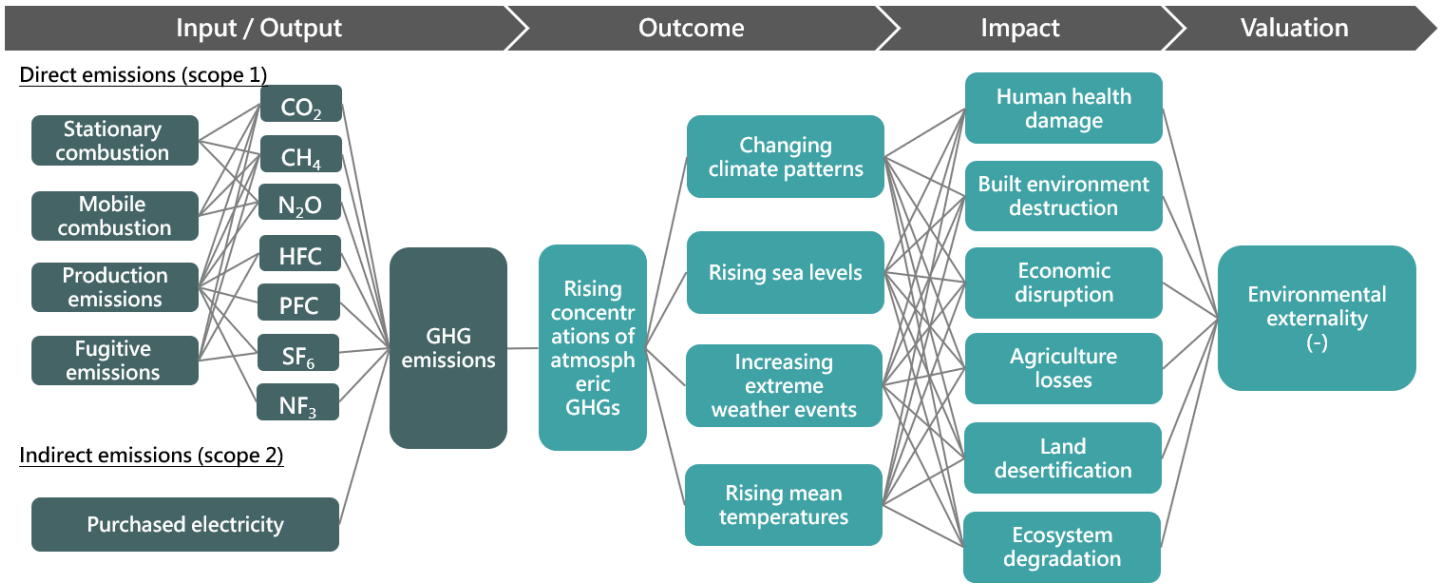
Social cost generated by greenhouse gas emissions

In 2022, Wistron produced 323,181 tCO_2e in GHG emissions from production and operations, 94% of which was derived from indirect emissions through energy consumption (Scope 2)[5] and 6% from direct emissions (Scope 1) from production and operations. Emissions included stationary combustion, mobile combustion, process emissions, and fugitive emissions. Additionally, Wistron procured and self-generated a total of 276,655 MWh in renewable energy. By avoiding the use of mixed electricity grids, we were able to reduce approximately 217,287 tCO_2e in emissions. Greenhouse gas is a gas that absorbs and emits radiant energy, causing heat to be trapped in the Earth's surface and troposphere, thereby resulting in greenhouse effects. The Intergovernmental Panel on Climate Change (IPCC) lists seven principal classes of GHGs, namely, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulphur hexafluoride (SF_6), nitrogen trifluoride (NF_3), various hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). This study calculated the environmental externalities of production and operations based on the carbon social costs generated by greenhouse gas emissions.

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway



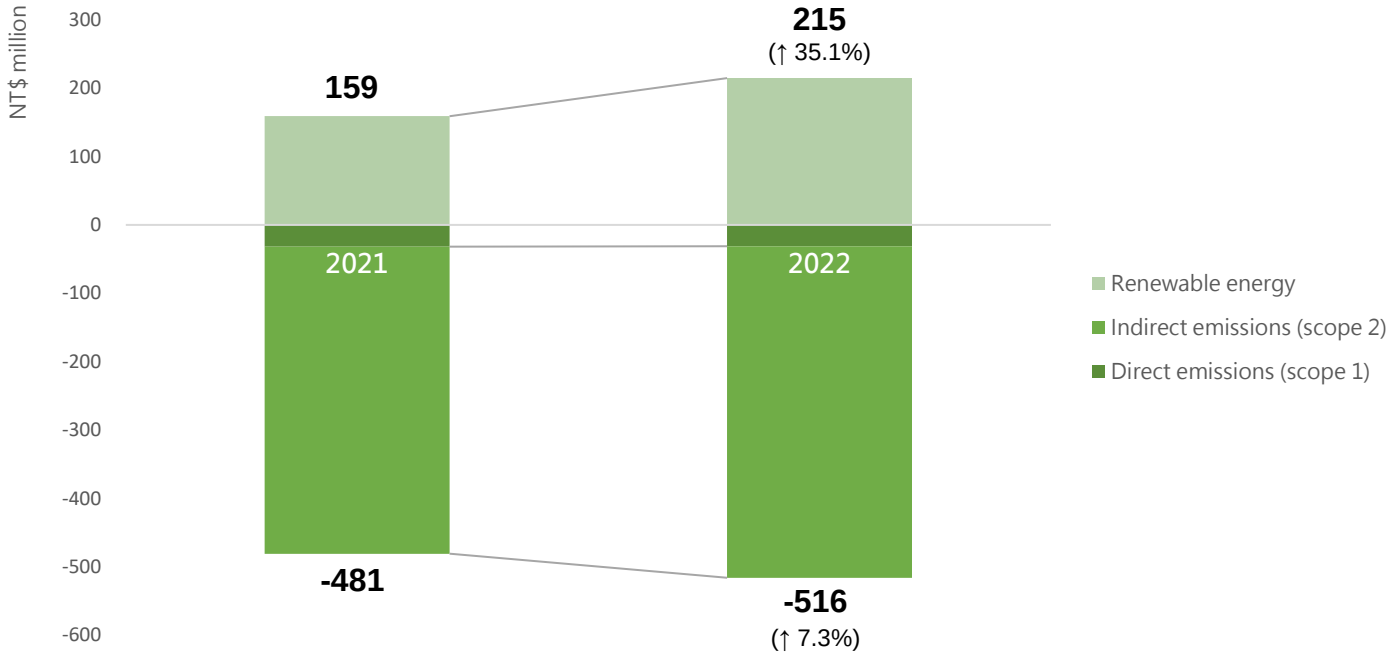
[5] *Scope 2 emissions are calculated based on location-based method.*

Calculation

- The Social Cost of Carbon (SCC) developed by the US Environmental Protection Agency (US EPA, 2016) as the valuation factor of external costs per unit of greenhouse gas emissions. The external costs refer to the social costs of long-term physical and economic damage worldwide resulting from climate change, including loss of money, property, or bodily health from natural disasters, and the economic tradeoff for energy transformation to avoid further warming. The US EPA converts the costs of future damages at discount rates of 2.5%, 3%, and 5% to current values[6]. This study opted for the median value of 3%.
- Social cost for carbon adopts a comprehensive assessment model that evaluates the global impact of carbon emissions, increasing the concentration of greenhouse gasses. There is no bias in geography. However, there are still various factors of uncertainty, such as the catastrophic and non-catastrophic impact, mitigation of climate change and changes in technology, estimation of damages from rising temperatures, and the assumptions of risk aversion.
- Since Scope 3 emissions (other indirect greenhouse gas emissions) cover too wide a range for this report and there are limited cases of application, Scope 3 emissions are excluded from this report.

Result

In 2022, Wistron incurred approximately NT$516 million in environmental externalities (negative) resulting from direct (Scope 1) and indirect (Scope 2) GHG emissions in production and operations, representing a 7.3% increase from the previous year. The increase can be attributed to the inclusion of emissions from Hukou Plant 1, Hukou Plant 2, and Malaysia Plant, which led to an overall increase in GHG emissions, which was primarily driven by indirect GHG emissions from energy consumption. In recent years, we have been actively increasing our use of renewable energies across all Wistron locations around the world. In addition to procuring over 260 million kWh of renewable energy certificates and expanding partnerships with local renewable energy businesses, we have also increased our self-generated solar capacity to 9.28 million kWh. Through two pathways, increasing energy efficiency and pursuing energy transformation, Wistron has been able to mitigate our social cost of carbon produced from production and operations, generating NT$215 million in positive social impacts.



[6] *A high discount rate means that people are willing to pay more attention to short-term rather than long-term benefits (Yan, 2014).*

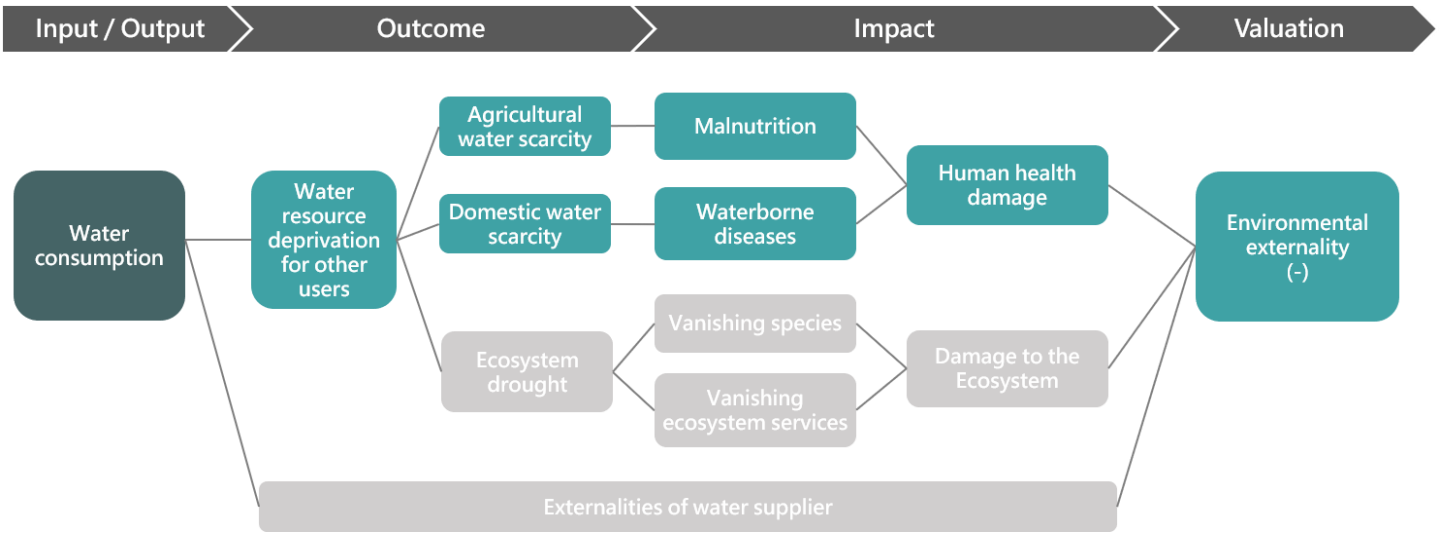
Social cost generated by water resource depletion

Processes for Wistron products revolve mainly around the assembly, which requires lower water demand. In 2022, the company's water consumption during production and operations totaled 3,811 thousand tons, where most was used for service water and general affairs facilities such as kitchens and cooling water towers. Generally, three main types of water use exist for human needs, namely, domestic, agricultural, and industrial (UNEP, 2016). According to Bayart et al. (2010) and Kounina et al. (2013), excessive freshwater consumption will lead to irrigation water scarcity and will subsequently result in health degradation from malnutrition. Malnutrition may result from waterborne diseases that reduce nutrient absorption (WWAP, 2009; Boulay et al., 2011). This study assumes that the water consumed by business operations would directly impact the water available for domestic and agricultural uses. Thus, we estimate the environmental externality derived from damage to human health using the characterization factors (CFs)[7], which determine the impact of water scarcity on human health, and convert into monetary value based on statistical life (VSL).

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway



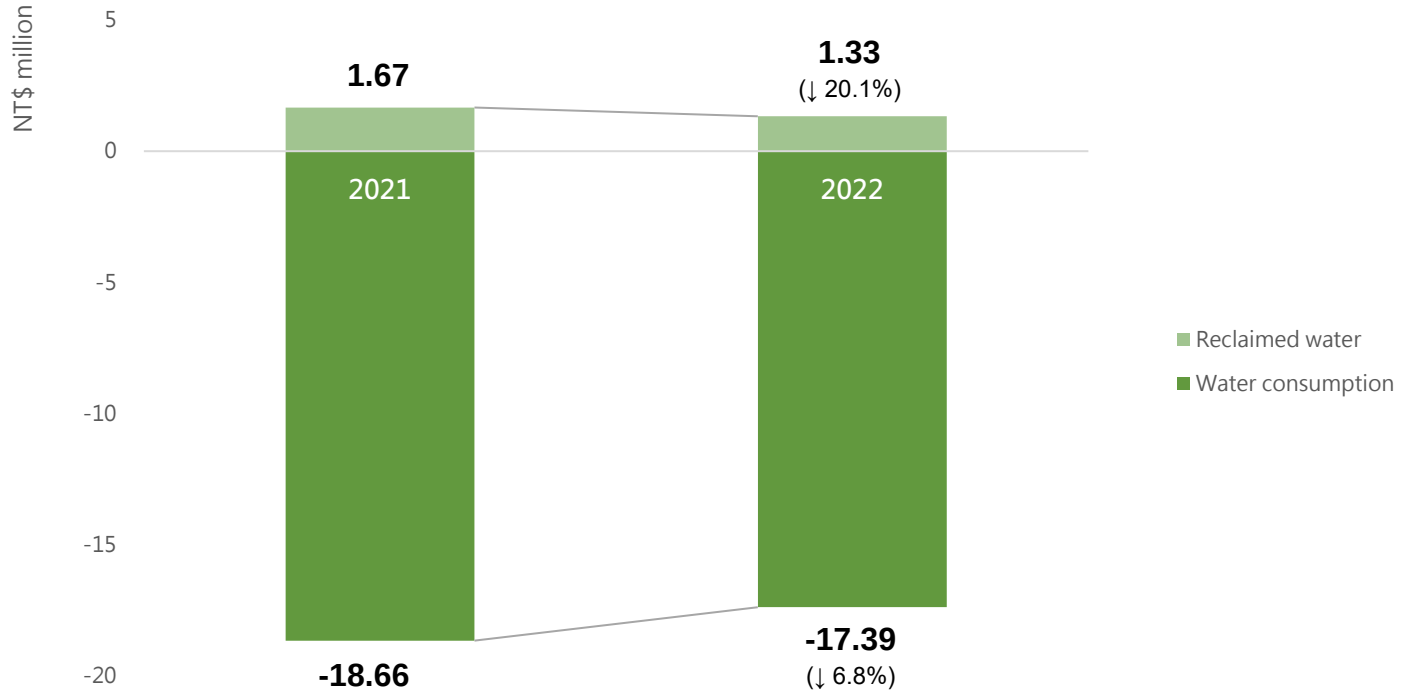
[7] *Refers to changes caused by resource depletion and pollution, such as increased concentration of particulates in the air, that affect human health or the ecosystem.*

Calculation

- Agricultural water shortage: Refers to characteristic factors of malnutrition caused by agricultural water shortage LC-Impact(2016). The regional differences factors are the agricultural water percentage, Water Stress Index (WSI), and human development index (HDI).
- Domestic water shortage: Refers to characteristic factors of waterborne diseases caused by domestic water shortage Motoshita et al. (2011). The diseases include roundworm, whipworm, hookworm, and diarrhea.
- The valuation methodology of damage to the ecosystem from water depletion is still under development; therefore, this item is excluded from the assessment.
- The environmental impact of water supply facilities is excluded due to low data availability.

Result

In 2022, Wistron incurred NT$17.39 million in environmental externalities (negative) from water consumed in production and operations, representing a 6.8% decrease from the previous year. The decrease can be attributed to capacity adjustments in plants requiring water for production processes (Taizhou Plant and Kunshan Opt Plant), leading to an overall reduction in water consumption. Wistron continuously implements two major strategies, namely "Water Resource Management and Daily Water Conservation" and "Water Recycling and Wastewater Management," to improve water efficiency and reduce environmental impact in its operations. In 2022, a total of 290,000 tons of water was recycled, resulting in a positive social impact of approximately NT$1.33 million. Wistron also strictly follows national regulations governing water resources to reasonably consume water. The company prioritizes water-saving equipment and monitors water consumption with energy-saving bulletin boards. Wistron aims to improve water utilization efficiency to ensure that the environmental impact of production and operations on water resources and the water ecosystem of the watershed areas is limited.



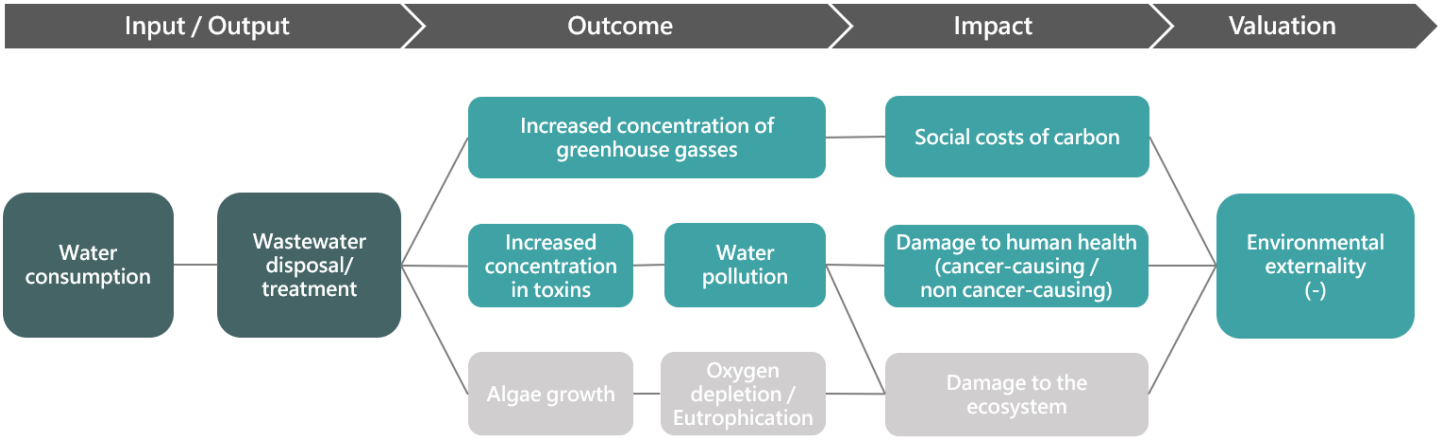
Social cost generated by wastewater disposal

Wastewater disposed of by Wistron during production and operations mainly came from employee domestic water, and the disposal volume in 2022 was 3.02 million tons. Water pollutants can enter humans via a number of pathways, including direct ingestion (e.g., drinking), indirect ingestion (e.g., bioaccumulation), and direct inhalation (e.g., evaporated pollutants). These pollutants are discharged in low concentrations in effluents. Long-term exposure to low levels of chemical pollutants can lead to chronic health problems, such as cancer, increased risks of adverse pregnancy outcomes, and reduced mental and central nervous functions. The most important of these pollutants are heavy metals and chemicals, which are measured by human toxicity potential (HTP) (PwC UK, 2015; CE Delft, 2018). One of the wastewater treatment processes, the anaerobic treatment, generates CH4, and the volume generated depends on the amount of degradable organic compounds in the water, temperatures, and the types of treatment systems (IPCC, 2006). This study estimates the environmental externality derived from damage to human health using the characterization factors (CFs), which determine the impact of wastewater treatment on greenhouse gas emissions and human health, and convert into monetary value based on statistical life (VSL).

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway

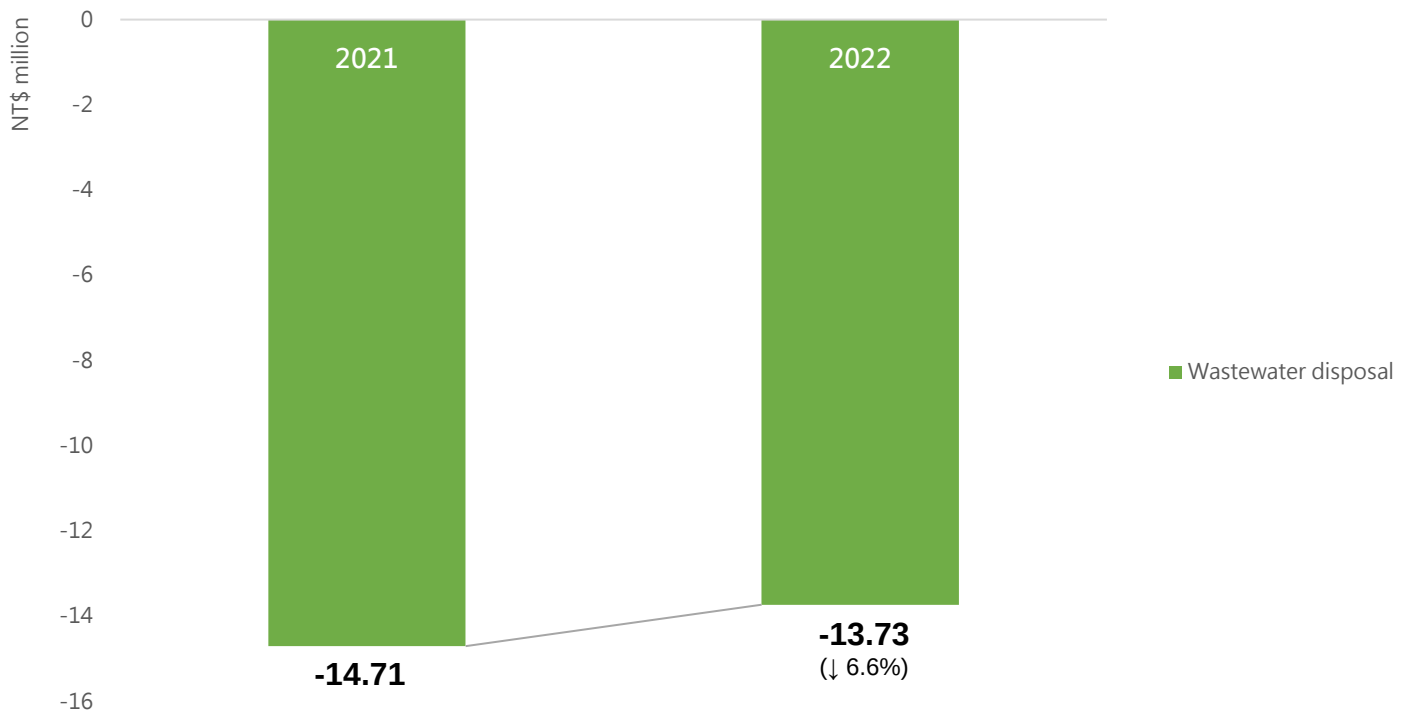


Calculation

- The impact of wastewater treatment on greenhouse gas emissions and human health is calculated by referring to the characteristic factors in the ReCiPe 2016 database.
- The valuation methodology of damage to the ecosystem from wastewater disposal is still under development; therefore, this item is excluded from the assessment.

Result

In 2022, environmental externalities (negative) from wastewater discharge in Wistron's production and operations amounted to approximately NT$13.73 million, representing a decrease of 6.6% from the previous year. The decrease can be attributed to capacity adjustments in plants requiring water for production processes (Taizhou Plant and Kunshan Opt Plant), leading to an overall reduction in wastewater volume. Additionally, continuous efforts in water resource management, water recycling, and wastewater management have been implemented to mitigate the environmental impact generated during operational processes. Wistron's manufacturing processes primarily involve product assembly. In facilities such as the Taizhou Plant and Kunshan Opt Plant, where water is required for production processes, we've installed wastewater treatment facilities that are equipped with online real-time monitoring systems, allowing us to take immediate action against any abnormal situations. At the Zhongshan Optoelectronics Park, all industrial wastewater is transported to a third-party industrial wastewater treatment company through a processing center.



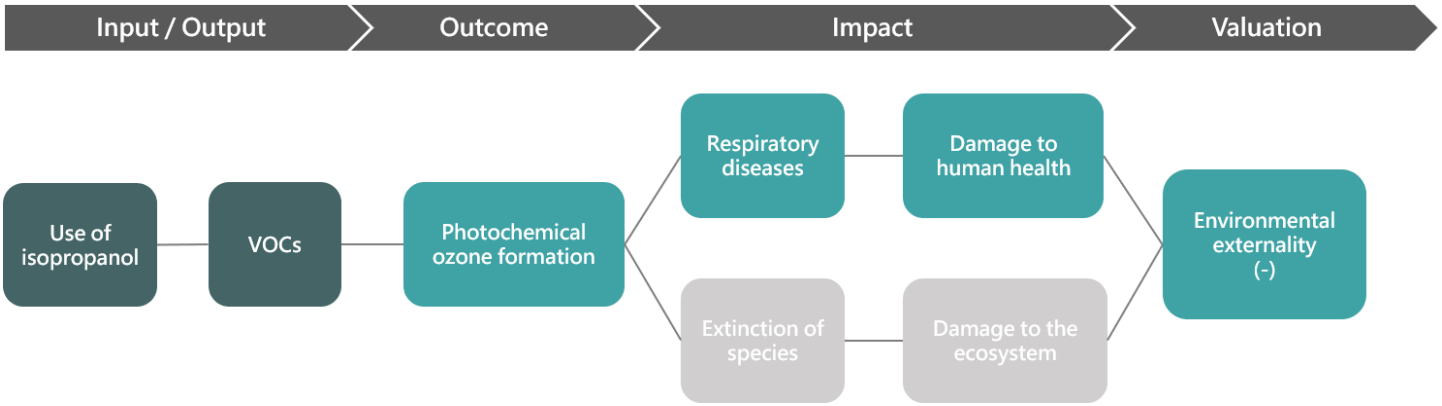
Social cost generated by air pollution

Wistron production generates Volatile Organic Compounds (VOCs); in 2022, the VOC generated totaled 235 tons. The primary source was fugitive emissions during the isopropanol wash process. Air pollution that produces primary and secondary aerosols in the atmosphere can have a substantial negative impact on human health (WHO, 2006; HEIMTSA, 2011; Burnett et al., 2014; Lelieveld et al., 2015). In particular, the fugitive nitrogen oxides (NOx) and VOCs in the atmosphere would cause photochemical reactions and form ozone in the air, which, once absorbed by human bodies or plants, would cause damage to the respiratory system and the terrestrial ecosystems. This study estimates the environmental externality derived from damage to human health using the characterization factors (CFs), which determine the impact of photochemical ozone and toxins on human health and convert into monetary value based on statistical life (VSL).

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway

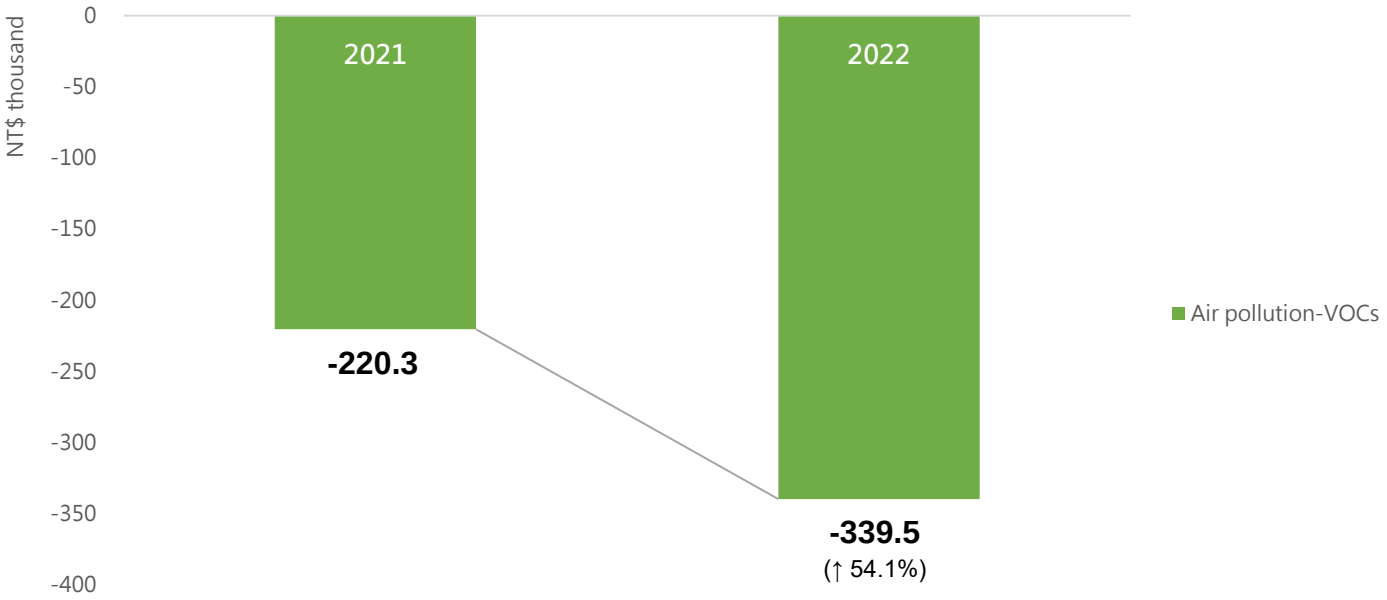


Calculation

- Ozone is a highly reactive oxidant. Long-term ozone inhalation would cause respiratory stress and damage the lung, leading to asthma and chronic obstructive pulmonary disease (COPD). This report refers to characteristic factors of damage to health caused by air pollution LC-Impact (2016).
- The valuation methodology of damage to the ecosystem from air pollution is still under development; therefore, this item is excluded from the assessment.

Result

In 2022, environmental externalities (negative) from air pollution emissions in Wistron's production and operations amounted to approximately NT$339,545, representing a 54.1% increase from the previous year. This increase was primarily due to the inclusion of emissions from Hukou Plant 1, Hukou Plant 2, and the Malaysia plant, which led to an increase in volatile organic compounds (VOCs) emissions. Wistron's air pollution prevention and management measures: gasses generated are collected via ventilation pipelines that run through waste gas treatment equipment before the release. The company regularly tests the released gasses to ensure they meet regulatory requirements. The waste isopropanol liquid after use is stored in a specific area before being handed over to qualified external service providers for disposal. Wistron conducts inventory checks and monitoring for materials containing VOCs to ensure that all personnel at relevant posts are equipped with personal protective equipment (PPE), and that appropriate ventilation devices are in place during use and storage. The aims are to safeguard the health and safety of on-site personnel and reduce VOCs' potential negative impact on the environment.



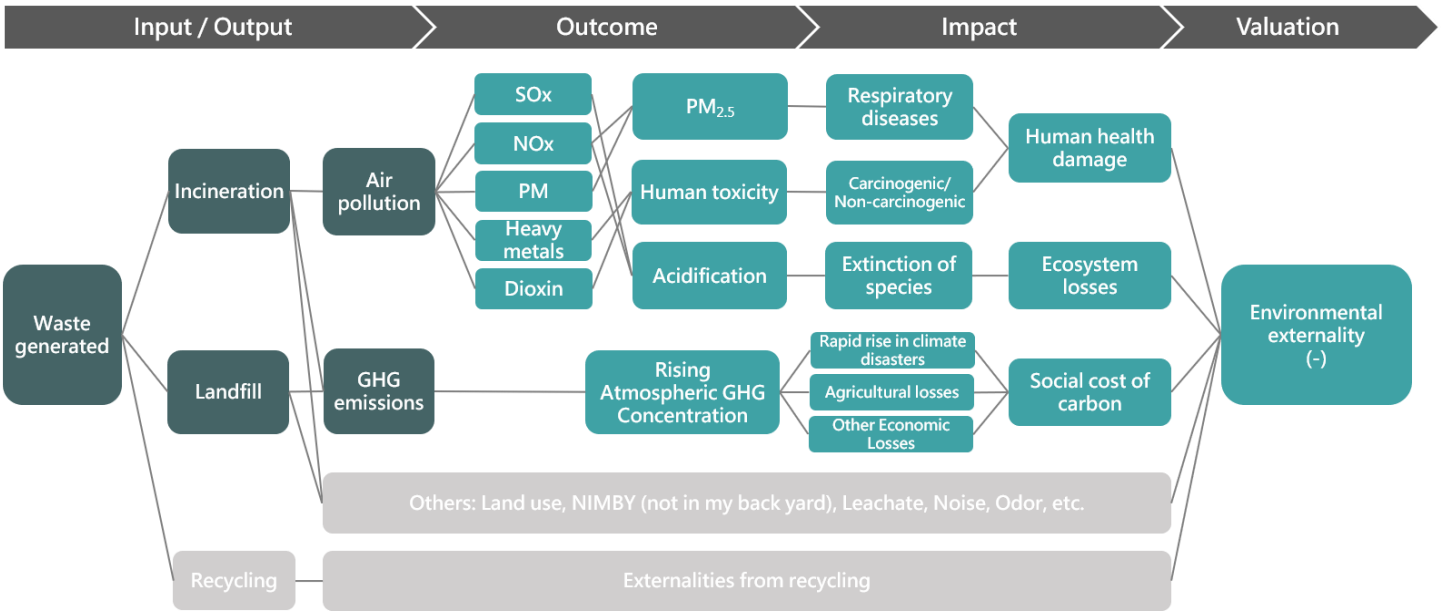
Social cost generated by waste disposal

In 2022, Wistron generated 39,098 tons of general business waste during production and operations, and the reuse and recycle rate was 91.7% (energy recycling excluded). Incineration rate and landfill disposal rates were 5.9% and 2.4%, respectively. The company generated 1,206 tons of hazardous waste, disposed of by qualified vendors conducting regular audits and inspections. Waste incineration produces a wide variety of air pollutants. PM, NOx, SOx, dioxins, and heavy metals are particularly important, as they can have considerable societal consequences (e.g., causing cancer or loss of intelligence via developmental harm) (EXIOPOL, 2009; PwC UK, 2015). The atmospheric sedimentation of inorganic materials (such as sulfates, nitrates, and phosphates) would cause soil acidification, affecting terrestrial ecosystems (Goedkoop et al., 1999; Hayashi et al., 2004). This study estimates the environmental externality derived from damage to human health using the characterization factors (CFs), which determine the impact of air pollutants generated during waste incineration on human health and the ecosystems, and convert into monetary value based on statistical life (VSL) and willingness to pay (WTP). The study also considers the environmental externality derived from greenhouse gas emissions caused by waste incineration or landfill degradation.

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway

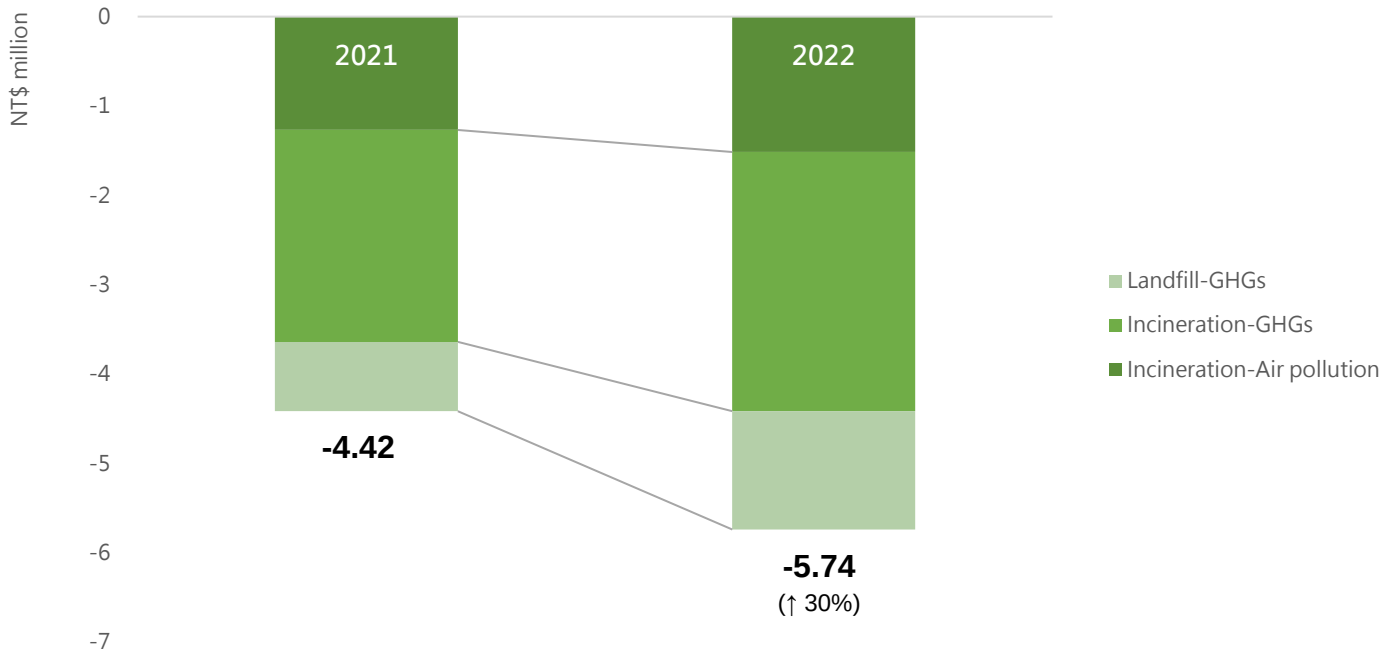


Calculation

- The volumes of waste air pollutants generated during waste incineration, based on the air pollution factor, are calculated using the actual monitoring data of 24 incineration plants in Taiwan. The study also refers to relevant characteristic factors in the USEtox and Eco-indicator 99 databases to estimate the impact of air pollutants on human health and biodiversity.
- The greenhouse gas emissions from waste incineration and landfill disposal are calculated using the IPCC (2006) methodology and EPA statistic data. The study also refers to US EPA's (2016) research to estimate the social cost of carbon.
- Other sources of externality are irrelevant to the main impact issues and thus are excluded.
- The waste recycling technologies are complex and thus are excluded due to low data availability.

Result

In 2022, Wistron incurred NT$5.74 million in environmental externalities (negative) from waste incineration and burial in production and operations. The environmental externalities were mainly derived from GHG emissions and air pollution caused by waste incineration. Based on recent trends, the social cost derived from waste disposal has increased by 30% compared to the previous year. This increase can be attributed to the inclusion of Hukou Plant 1, Hukou Plant 2, and the Malaysia plant in the assessment. The waste category with the largest increase in cost is landfill, which has grown by 66.7% compared to the previous year. The main source of this increase is the Malaysia Plant, where waste predominantly ends up in landfills. Wistron continues to implement measures such as "Waste Classification and Reduction" and "Waste Recycling and Reuse" to reduce waste generation at the source and promote circularity. These efforts aim to mitigate the volume of waste generated from production processes. Wistron not only continues to optimize its process technologies and adopt environmentally friendly materials but also conducts comprehensive assessments and audits on the generation and flow of waste and toxic substances. The aim is to minimize environmental externalities associated with waste generation as much as possible. Starting in 2022, Wistron adopted UL 2799 Landfill Waste Diversion Claim Validations across our Hsinchu, Chongqing, Chengdu, and Zhongshan plants to identify waste reduction plans and optimal resource utilization strategies, enabling a circular economy approach to waste management.



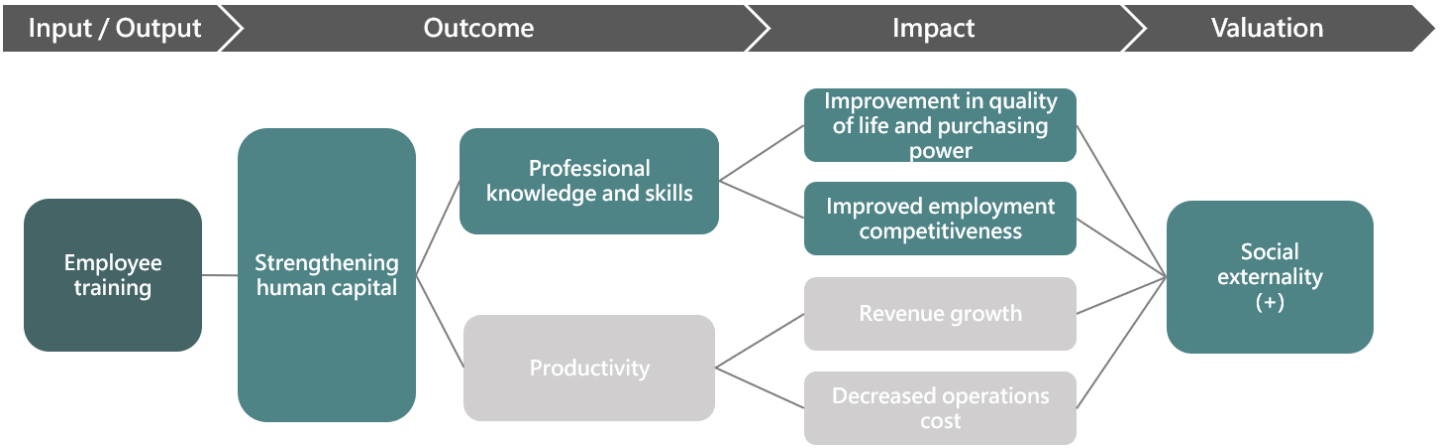
Future income generated from employee training

In 2022, the training of Wistron employees worldwide totaled 3,104,305 hours, and each employee received 65.5 hours of training on average. Employee experience and skills are crucial to a company's long-term development. Training increases productivity, increasing business revenue and employment competitiveness for individual employees. This benefits the employees' future career development, boosting salary income and improving their quality of life and purchasing power. This study refers to the VBA (2021) methodology and targets indirect employees. The aim is to estimate the positive social externality, i.e., the expected increase in salary income in the future career development of the employees, generated by training resources a company provides that improve employee professional know-how and skills. The study considers impact factors such as employee salary, hours of training, salary adjustment rate, employee turnover, retirement age, and conversion rates to the current value.

Assessment Boundary

All Wistron production sites and operations offices worldwide.

Impact Pathway

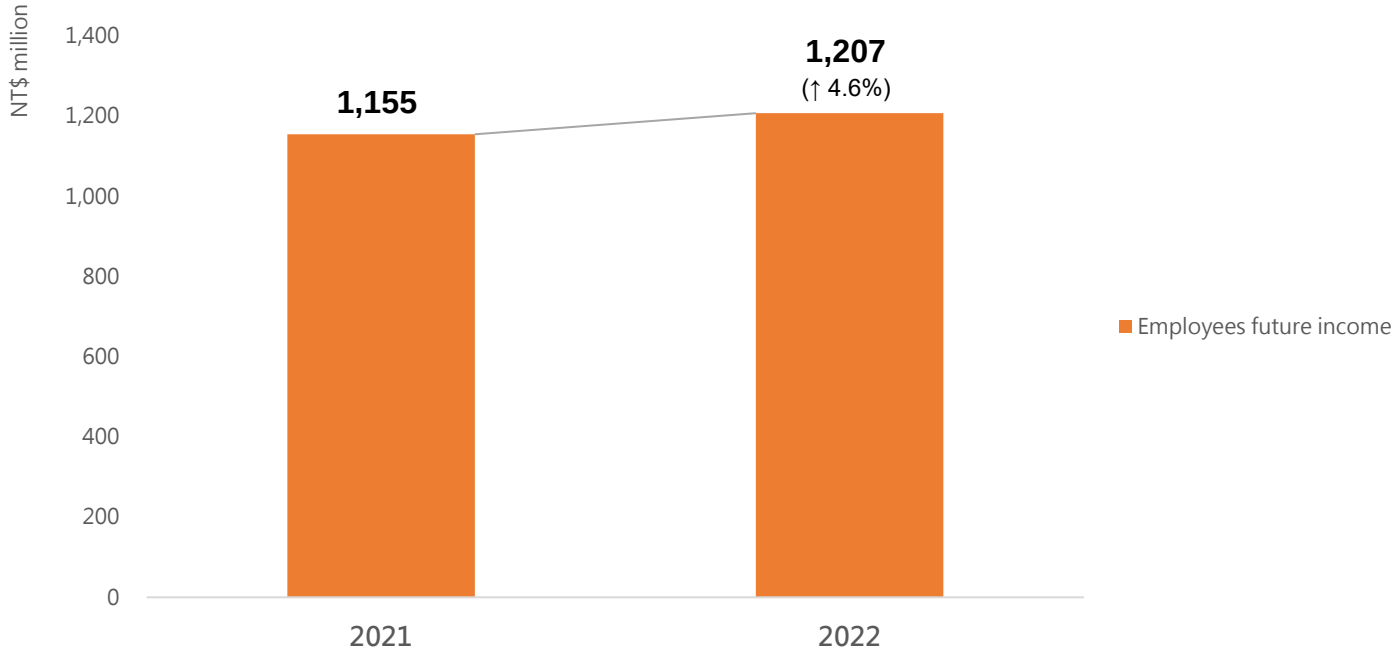


Calculation

- Employee salary used to calculate the social externality from employee training is based on the average salary income of full-time non-supervising positions. Other impact factors came from Wistron's internal statistic data. The retirement age used was 65, and the discount rate was 3%.
- Since the increase in revenue and decrease in operational costs resulting from improved productivity due to training is already reflected in the company's financial statement, such a positive impact was excluded.

Result

In 2022, Wistron generated NT$1,207 million in social externalities (positive), a 4.6% increase from the previous year, by organizing employee training programs and mapping out career paths for our employees. Wistron had adopted four core strategies, "Digital Capabilities," "Management Capabilities," "Global Capabilities," and "Sustainable Capabilities" for talent development. The core strategies align with our efforts toward global expansion, digital transformation, and sustainable development. In 2022, we consistently conducted training programs for key talents in "Digital Capabilities" and "Management Capabilities," as well as accelerated the promotion of "Global Capabilities" and "Sustainable Capabilities" to overcome barriers. Through a unified global talent development direction, we are committed to enabling our employees worldwide to grow with the organization and create sustainable career competitiveness. Wistron launched a systematic, sustainable talent training plan to support the Company's sustainable policy. The sustainability vision starting from the headquarters enables global employees to understand the promotion determination of the senior management team based on the globally consistent visual, auditory, and sensory experience. Meanwhile, internal and external partners are guided through the learning levels of knowing → knowledge → practice → leadership. While the organization promotes the sustainable vision, we also enhance employees' individual sustainable competitive capability through the planning of the learning blueprint to drive our diverse businesses and global development.



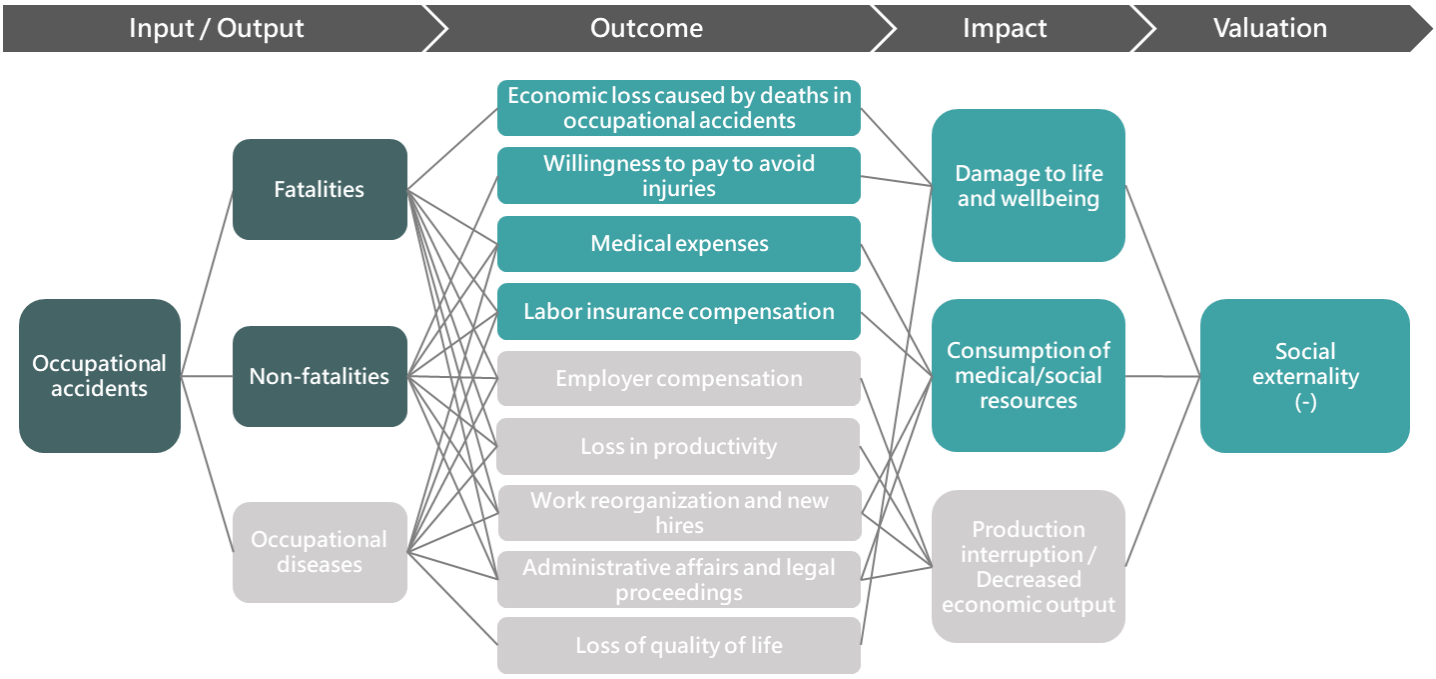
Social cost generated by occupational accidents

In 2022, there were zero cases of deaths from occupational accidents across Wistron locations around the world, but employees lost 537 workdays from occupational accidents, mainly from incidents involving transportation and machinery. A UK Health and Safety Executive (HSE, 2020) study states that the social costs derived from employee occupational accidents include financial and human costs. Financial costs included a loss in productivity, medical and recovery expenses, administrative and legal fees, salary, and insurance claims. Human cost refers to the individual's willingness to pay to reduce the risks of occupational injuries or death. While calculating the social externality derived from occupational accidents, this report includes disability and deaths in the assessment. The financial cost covered in this report contains loss in productivity and compensation for occupational accidents. In contrast, human cost consists of the willingness to pay to avoid occupational accidents and the economic loss caused by death in occupational accidents.

Assessment Boundary

Wistron production sites and operations offices in Taiwan.

Impact Pathway

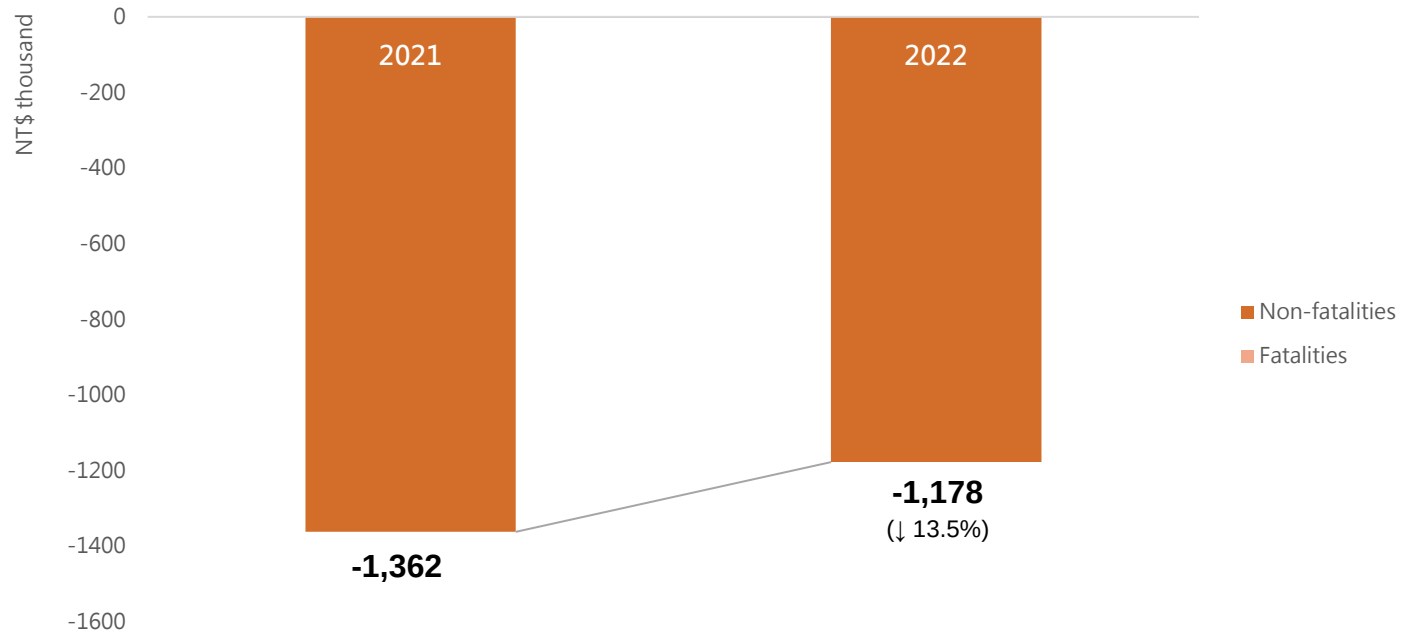


Calculation

- The financial cost caused by occupational accidents came from Wistron's internal statistic data. In contrast, the human cost came from the studies by Jiune-Jye Ho (2005) and Charng-cheng Tsaur et al. (2013) on the willingness to pay to avoid occupational accidents and the economic loss caused by deaths in occupational accidents.
- Loss in productivity and employer compensation for occupational accidents are reflected in a company's financial statement and thus are excluded.
- Since the methodology involving occupational diseases is more complex, it is excluded from the assessment.

Result

In 2022, Wistron incurred NT$1.18 million in social externalities (negative), a 13.5% decrease from the previous year. Wistron is dedicated to providing employees with a safe and healthy workplace by integrating digital technologies. At Wistron, we use an intelligent safety management system to predict risks, reduce work-related injuries among employees, and drastically enhance our management of occupational safety. For example, Wistron's Zhongshan Plant uses IoT equipment to collect parameters from on-site machines and materials. The parameters are then uploaded onto cloud platforms and used by an AI algorithm to build a prevention and control model. Combined with equipment anomaly detection and a dedicated database, we are able to predict any risks of anomalies. Management units will develop control measures and alerts for high-risk equipment and work areas based on outcomes from analyses. For example, setting up an anomaly detection and reporting station, safety guidelines for high-risk tasks, and high-risk zones to further reduce risks of occupational injuries. In 2022, the rate of occupational injuries per 1,000 workers decreased by 70% from 2021. All Wistron plants will continue to comply with ISO 45001 Occupational Safety and Health Management Systems, striving to achieve our company-wide goal of zero major occupational safety incidents (fatalities). With robust management systems for education and training in occupational safety, hazard identification and risk assessment, voluntary reporting on false alarms, and incident investigation, Wistron continues to raise our employees' safety awareness and ensure a safe workplace to, thereby, minimize any potential incidents.



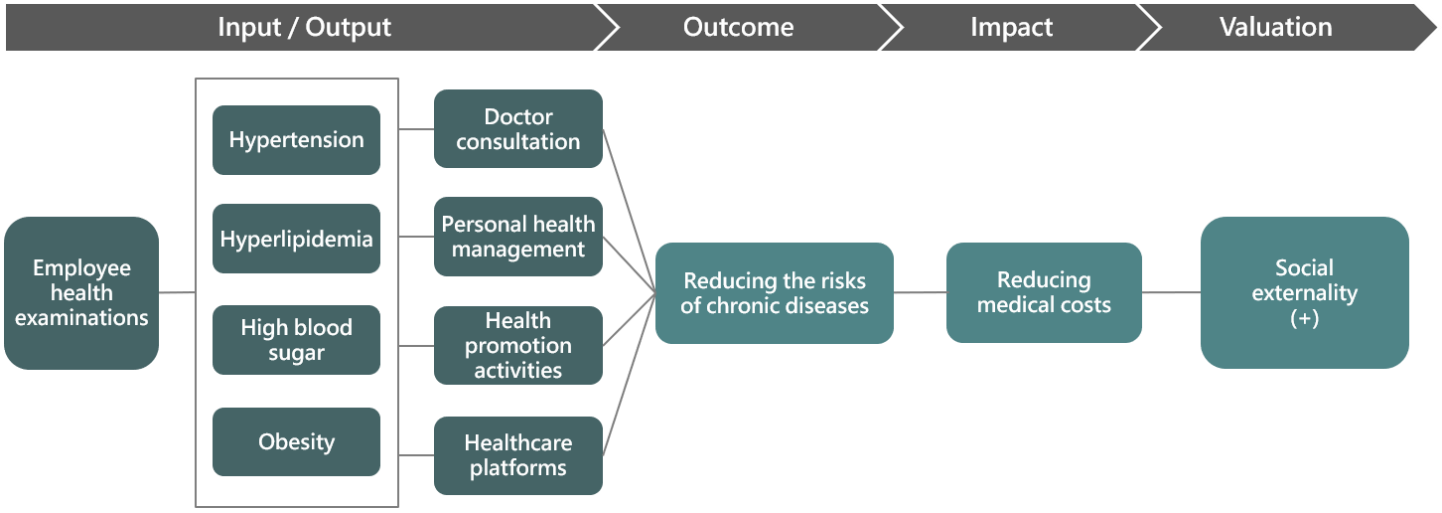
Medical costs avoided from health promotion

Comprehensive health checks can aid in the early detection of major illnesses. Wistron provides annual health checks for all employees at Wistron locations in Taiwan, while overseas plants organize and provide their own health check programs. Our comprehensive health check gives employees insight into their health so that they can take better care of themselves and seek medical attention when necessary. In 2022, 9,859 employees underwent health checks in Taiwan, accounting for 95.47% of all employees. According to statistics from the Ministry of Health and Welfare, cardiovascular diseases have always been the top three on the list of top 10 causes of death in Taiwan. Epidemiologists view hypertension, high cholesterol, diabetes, and obesity as potential causes of cardiovascular diseases (Anderson et al., 1991). This study assesses the medical costs reduced by Wistron's measures to eliminate or reduce the risks of employees getting cardiovascular diseases from a risk attribution perspective. The measures include regular examinations, personalized health management, and health promotion activities.

Assessment Boundary

Wistron production sites and operations offices in Taiwan.

Impact Pathway

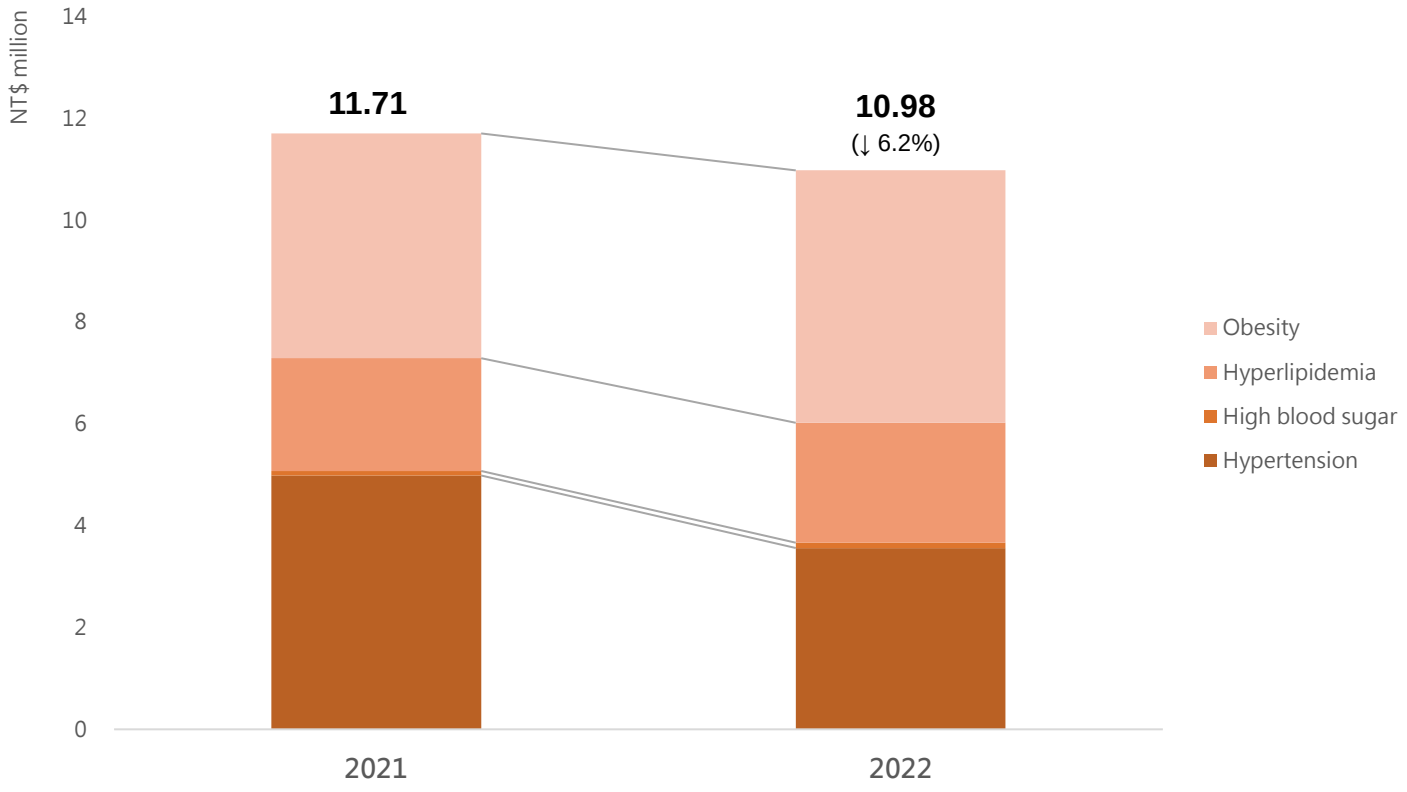


Calculation

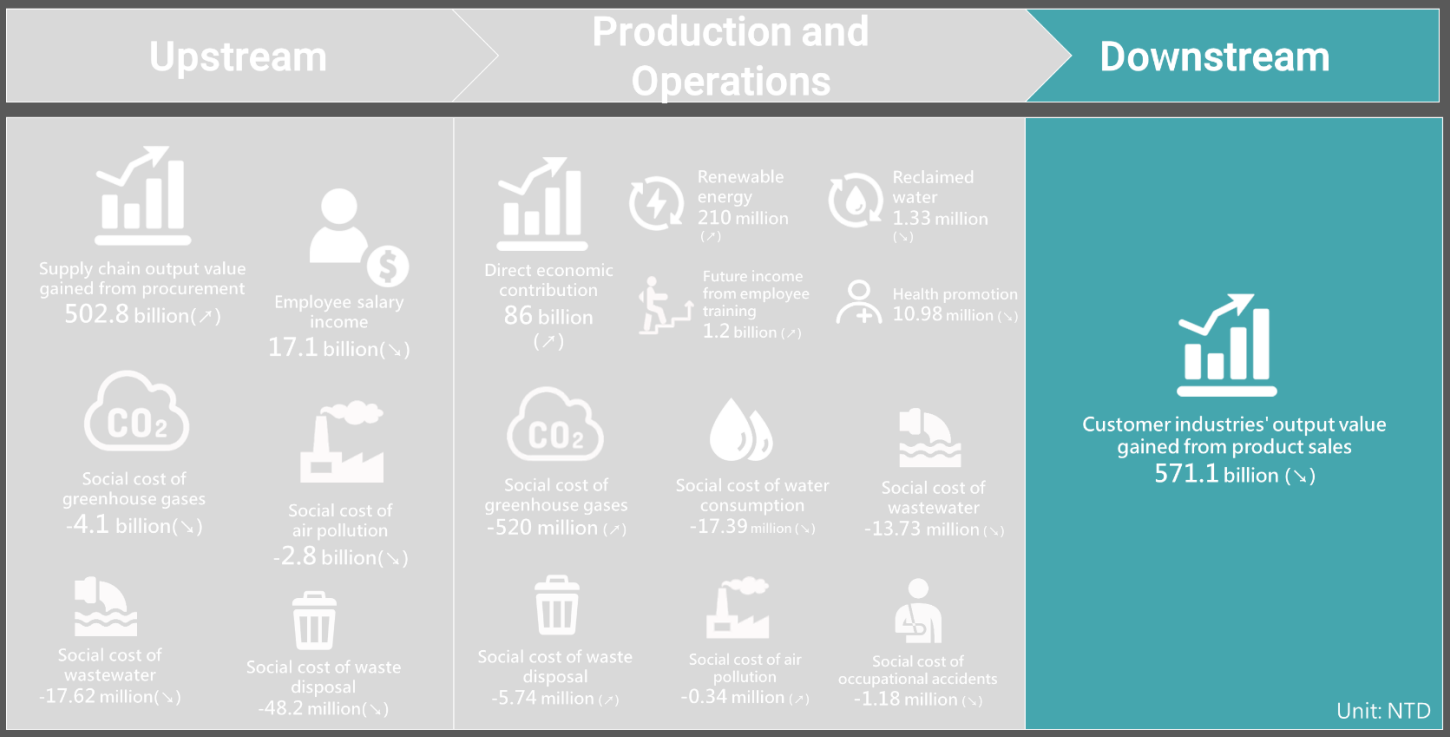
- The World Health Organization (WHO, 2008) stated that harmful work conditions would lead to a series of harm to the employees' health. In particular, 50% of the increased risk of cardiovascular diseases is related to stress at work (Marmot, 2004; Kivimäki et al., 2006).
- Chieh-Hsien Lee (2010) illustrated the attributing risk factors of hypertension, high cholesterol, diabetes, and obesity that may lead to cardiovascular diseases and applied the Travel Cost Method to discuss the economic benefit of eliminating cardiovascular diseases.

Result

In 2022, Wistron generated NT$10.98 million in social externalities (positive) by implementing health promotion programs to reduce risks of cardiovascular diseases among employees. Wistron also organized specialized health checks for employees performing special tasks (e.g., loud noises, dust, X-rays, etc.). Wistron provides annual health checks for all employees at Wistron locations in Taiwan, while overseas plants organize and provide their own health check programs. Our comprehensive health check gives employees insight into their health. In 2022, Wistron conducted company-wide health checks with affiliated businesses and was able to increase health check rates from 91.63% to 95.47% through internal promotions and dedicated reminders. After the check-ups, dedicated medical staff in Wistron offices and plants will assist employees who have significant anomalies in their health check results by providing support in seeking medical assistance and reminders for regular health check-ups. This is part of our ongoing efforts to care for our employees' well-being. Wistron provides professional counseling services to address health anomalies. Regular physician consultations are held to offer our employees a professional avenue for seeking medical advice. We also actively manage and formulate plans for education/training, counseling, prevention/risk monitoring, and medical assistance related to individual health anomalies.



Downstream product sales



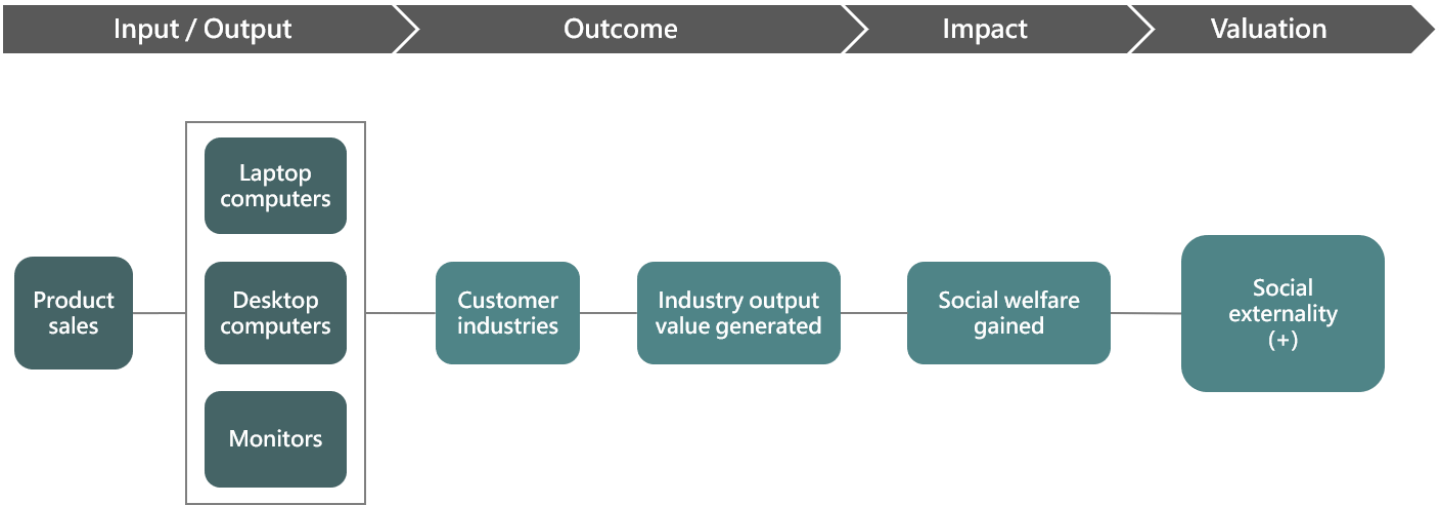
Output value for customers driven by product sales

Wistron Corporation is one of the most significant information and telecommunication product suppliers worldwide. Business revenue primarily comes from Original Design Manufacturing (ODM) and Original Equipment Manufacturing (OEM) services of electronic devices, including laptops, desktops, multi-in-one computers, monitors, servers, internet storage devices, handheld mobile devices, video call, and internet telephone products. Wistron's product sales also facilitate revenue growth for customer industries. Since there is a wide range of product types, this study focuses on three major categories - laptop, desktop, and monitor - to assess the social externality benefit generated during product sales. The report considers product sales volume, the relationship between industry supply and demand, customer industry categories, and output value.

Assessment Boundary

Laptop, desktop, and monitor products that received the Energy Star label.

Impact Pathway

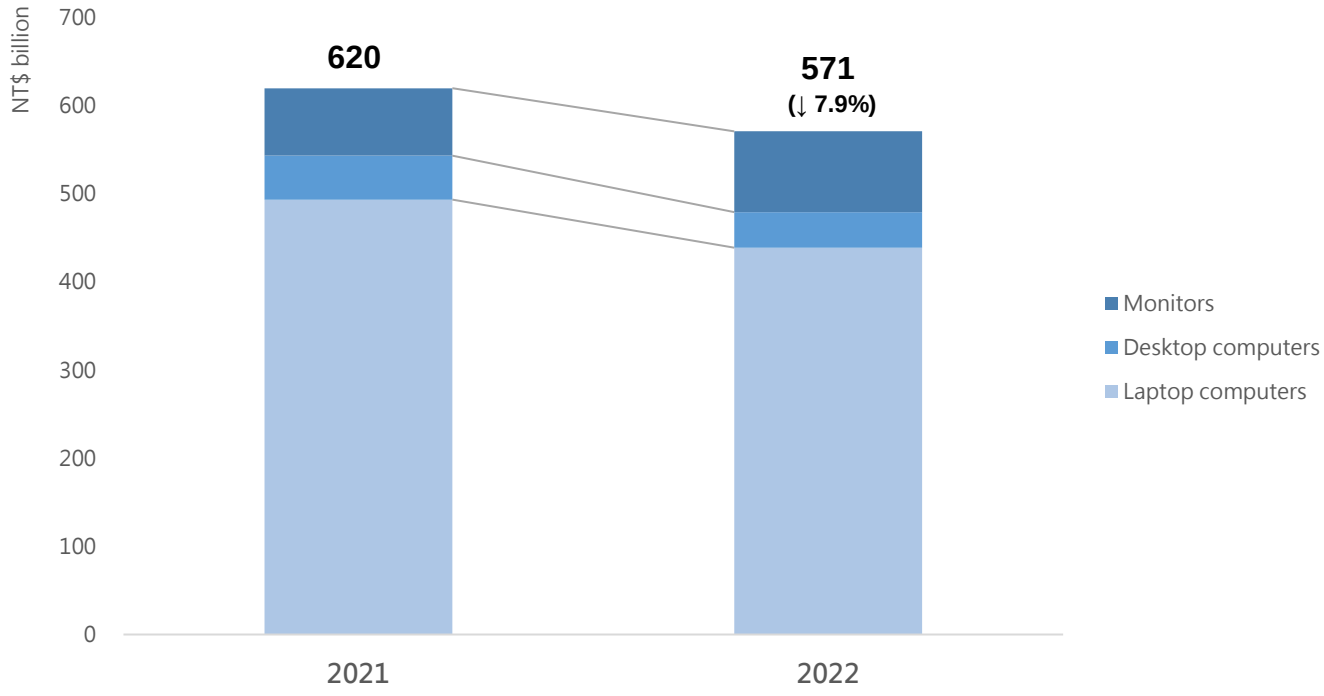


Calculation

- Since Wistron was not the only supplier for the customer industries, this study refers to the BASF (2017) assessment methodology when calculating the indirect economic value created for the customer industries during product sales. During this process, the report factors in the supply-and-demand relationships between the product sales and the output value of customer industries, and allocates appropriate weighting to each individual variable.

Result

In 2022, Wistron generated NT$571.1 billion in social externalities in output value for our customers through product sales, a 7.9% decrease from the previous year. The decrease can mainly be attributed to weak demands across the global PC market in 2022, the first year with declining demands since 2020. The decline is caused by high inflation, which causes the public to spend more on essential goods and, therefore, impacts their willingness to purchase computers. Central banks around the world are also actively adjusting interest rates to contain inflation, which contracts budgets for commercial, public, and private sectors, further reducing demands for computers. Despite weak demands for end products, Wistron continues to outperform industry averages in the personal computer sector as products such as servers, industrial computers, and AI computing continue to experience growth, driving overall growth for Wistron. As we enter our third decade, Wistron envisions "Sustainability through Innovation" and seeks to leverage strong R&D and innovative technological capabilities. Powered by the growth and development of a diverse ICT product portfolio, we highlight the importance of value chain integration and the development of high-value-added products to help create competitive advantages for customer products, align with market demands, and mitigate social and environmental impacts. At Wistron, we strive to become a comprehensive Technology Service Provider (TSP) and work with our business partners to pursue a sustainable business model of shared prosperity.



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