



SUSTAINABLE IMPACT VALUATION REPORT

2024 SUSTAINABLE IMPACT VALUATION REPORT

Table of Contents

- Executive Summary 2
- Sustainability Impact Across the Value Chain 4
- Upstream Supply Chain 5
 - Salaries for Supply Chain Employees 6
 - Environmental Footprints Derived from the Supply Chain 7
 - Social Costs from Occupational Accidents among Contractors 8
- Production and operations 9
 - Direct Economic Contribution 9
 - Social Costs from Greenhouse Gases..... 10
 - Social Costs from Water Consumption 11
 - Social Costs from Air Pollution 12
 - Social Costs from Wastewater Discharge..... 13
 - Social Costs from Waste Treatment 14
 - Future Income Generated from Employee Training 15
 - Social Costs from Occupational Accidents among Employees 16
 - Medical Costs Avoided from Health Promotion 17
- Downstream Product Sales 18
 - Client Industry Output Enhanced by Product Sales 18
 - Social Costs from the Product Use Stage 19
- Appendix 20
- Methodology 21
 - Defining Boundary and Scope 21
 - Mapping Impact Pathways..... 21
 - Confirming Data Sources..... 22
 - Establishing a Valuation Method 23
- Bibliography 25

Executive Summary

The sustainability of an enterprise is based on the long-term value it creates for its stakeholders¹. Since 2017, Innolux Corporation (Innolux) has been working with the Tunghai University Corporate Sustainability Impact Center to establish a sustainable impact management structure based on the “Triple Bottom Line” (TBL) by analyzing the intersection of economic, environmental, and social issues through causality-oriented impact pathway analysis, and identifying positive and negative, potential and actual, and long-term or short-term impacts from upstream supply chains, production operations, and downstream product sales processes.

2017	2021	2023
Adopts Impact Valuation (IMV) for the first time as a management tool • Three major stages of the value chain (upstream/production and operations/downstream) • Three significant sustainability management aspects (economic/environmental/social) • 14 impact indicators	→ Releases the Sustainable Impact Valuation (IMV) Report	→ Adds new assessment items • Procurement needs create job opportunities along the supply chain • Adoption of renewable energy to reduce GHG emissions • Use of recycled water to mitigate water resource depletion

In 2024, Innolux generated NT\$216.5 billion in operating revenue and NT\$89.8 billion in positive impacts for stakeholders from net profits, tax contributions, employee payroll, R&D expenses, and depreciation and amortization, thereby driving social and economic growth. Unfortunately, occupational disasters incurred NT\$4.55 million in social costs, while environmental footprints and resource consumption from production processes generated NT\$4.6 billion in environmental costs. This impact was partially offset by Innolux’s deployment of renewable energy and water recycling practices, generating NT\$260 million in environmental benefits.

In the upstream supply chain, Innolux stimulated NT\$283.1 billion in output value and indirectly created 18,000 jobs and NT\$6.7 billion in worker wages. Meanwhile, energy and resource consumption generated NT\$9.2 billion in environmental costs, but there were no social costs incurred from work hours lost as a result of occupational disasters among contractors. In the downstream, Innolux products are used in TVs, desktops, laptops, cell phones, and other commercial end-use products, creating NT\$175.9 billion in value for client industries. However, product use resulted in an environmental cost of NT\$85 billion.

From activities across the entire value chain, Innolux created a total of NT\$566.6 billion in positive impacts for stakeholders in 2024, primarily through driving upstream supply chain and downstream industry output with procurement and product sales, respectively. At the same time, corresponding environmental footprints and occupational disasters generated a negative impact of NT\$98.7 billion, with the environmental externality of energy consumption at the product end-use stage being the most significant.

In the future, we will continue to advance and deepen our sustainability impact management framework and identify opportunities to lower our environmental impacts and increase social welfare. We will continue to commit to supply chain transformation and the development of energy-efficient products to drive our sustainability impact and generate more positive impacts for society.

¹ Stakeholders refer to employees, customers, shareholders/investors, suppliers/contractors, the government, and the society

Impact Factors	Sustainable Issue Management	Activity Output	Type of Capital	Impact Item	Impact Object/Stakeholders	Impact Attribute	Level of impact
Supply Chain	Supply chain management	Procurement needs drive supply and demand along the supply chain	Social capital	Social externalities- Elevating supply chain value	Society	Positive (+)	●●●●●●●●
		Procurement needs create job opportunities along the supply chain	Human capital	Social externalities- Employment and salaries for supply chain workers	External employees	Positive (+)	●●●●●○○○
		Supply chain GHG emissions	Natural capital	Environmental externalities- Supply chain GHG emissions	Environment	Negative (-)	●●●●●○○○
		Supply chain air pollutant emissions	Natural capital	Environmental externalities- Supply chain air pollutant emissions	Environment	Negative (-)	●●●●●○○○
		Supply chain wastewater discharge	Natural capital	Environmental externalities- Supply chain wastewater discharge	Environment	Negative (-)	●●●●○○○○
		Supply chain waste production	Natural capital	Environmental externalities- Supply chain waste management	Environment	Negative (-)	●●●○○○○○
	Occupational health and safety	Contractors' occupational accidents	Human capital	Social externalities- Contractors' occupational accidents	External employees, society	Negative (-)	●○○○○○○○
Company Operations	Financial performance	Net revenue	Financial capital	Stakeholder Gross Value Added Income (GVA)	Shareholders/ investors	Positive (+)	●●●●●○○○
		Taxation	Financial capital		Society	Positive (+)	●●●●●○○○
		Depreciation and amortization	Manufactured Capital		Suppliers	Positive (+)	●●●●●○○○
	Talent recruitment and retention	Salary and employee benefits	Financial capital		Employees	Positive (+)	●●●●●○○○
	Innovation and R&D	R&D of new technologies	Intellectual Capital		Customers	Positive (+)	●●●●●○○○
	Climate strategy and energy	Energy consumption causes GHG emissions	Natural capital	Environmental externalities- Operational GHG emissions	Customers	Negative (-)	●●●●●○○○
		Use of renewable energy prevents GHG emissions	Natural capital		Environment	Positive (+)	●●●●●○○○
	Water management	Process water usage depletes water resources	Natural capital	Environmental externalities- Operational water resource consumption	Environment	Negative (-)	●●●●●○○○
		Use of recycled water prevents water resource depletion	Natural capital		Environment	Positive (+)	●●○○○○○○
		Process wastewater discharge causes water pollution	Natural capital	Environmental externalities- Operational wastewater discharge	Environment	Negative (-)	●●○○○○○○
	Air pollution prevention	Process gas emissions cause air pollution	Natural capital	Environmental externalities- Operational air pollutant emissions	Environment	Negative (-)	●●●○○○○○
		Waste treatment process impacts the environment	Natural capital	Environmental externalities- Operational waste management	Environment	Negative (-)	●●●○○○○○
	Occupational health and safety	Employee occupational accidents	Human capital	Social externalities- Employee occupational accidents	Employees, society	Negative (-)	●●○○○○○○
		Number of persons at risk of cardiovascular diseases	Human capital	Social externalities- Employee health management	Employees, society	Positive (+)	●●●○○○○○
	Talent development and training	Skills development and salary increase	Human capital	Social externalities- Future earnings for employees	Employees, society	Positive (+)	●●●●●○○○
Product and Services	Customer relations management	Product sales drive supply and demand in downstream industries	Social capital	Social externalities- Elevating industry chain value	Society	Positive (+)	●●●●●●●●
	Innovation and R&D	Product use causes GHG emissions	Natural capital	Environmental externalities- Product use	Environment	Negative (-)	●●●●●●○○

Note 1: Supply chain output value is calculated based on the Input-Output Model, which captures the economic value generated from procurement-driven demand across the supply chain, as well as the associated environmental impacts, jobs, and wages. Reference sources include the Input-Output Table (DGBAS, 2020), Report on Green National Income Account (DGBAS, 2021), Energy Balance Sheet (BOE, 2021), and the EXIOBASE 2 database.

Note 2: Gross Value Added (GVA) is defined as the difference between intermediate inputs and final products from operations. It also accounts for benefits generated to various stakeholders from economic activities such as primary inputs and public expenditures, including: operating profits (shareholders/investors), employee payroll and benefits (employees), tax contributions (society), R&D expenses (customers), and depreciation and amortization (suppliers).

Note 3: Impact factors for environmental externalities include social costs of carbon, cost of human health loss, and cost of damages to ecosystems derived from GHG emissions, air pollution, wastewater, waste, and water consumption. For the monetary conversion, please refer to the US EPA (2016) and OECD (2012).

Note 4: Employee health management involves regular health screenings aimed at the early detection of high blood pressure, hyperlipidemia, hyperglycemia, and obesity. Intervention programs are implemented to manage and reduce cardiovascular risk. WHO (2008) and Chieh-Hsien Lee (2009) are referenced for relevant coefficients.

Note 5: The social costs of occupational injuries are calculated based on factors such as productivity loss, compensation, and willingness to pay to avoid such incidents. Methodologies reference UK HSE (2017), Jiune-Jye Ho (2005), and the Institute of Labor, Occupational Safety and Health (2013).

Note 6: Innolux' s products and services primarily focus on LCD modules for four major end-use sectors: TVs, desktop monitors, portable computers, cell phones, and commercial products. The indirect economic value created through product sales is assessed based on the relationship between sales revenue and the corresponding output of customer industries, along with the environmental externalities during the product use phase.

Note 7: To account for economic differences across countries, valuation factors are adjusted using Gross National Income (GNI) per capita measured by regional Purchasing Power Parity (PPP). All monetary values are normalized to 2017 as the base year. Methodologies reference OECD (2012) and PwC UK (2015).

Level of impact	
Equivalent monetary value (in NT\$ millions)	Level of impact
>100,000	●●●●●●●●
10,000-100,000	●●●●●●○○
1,000-10,000	●●●●●○○○
100-1,000	●●●●○○○○
10-100	●●●○○○○○
1-10	●●○○○○○○
0-1	●○○○○○○○

Sustainability Impact Across the Value Chain

Upstream Supply Chain

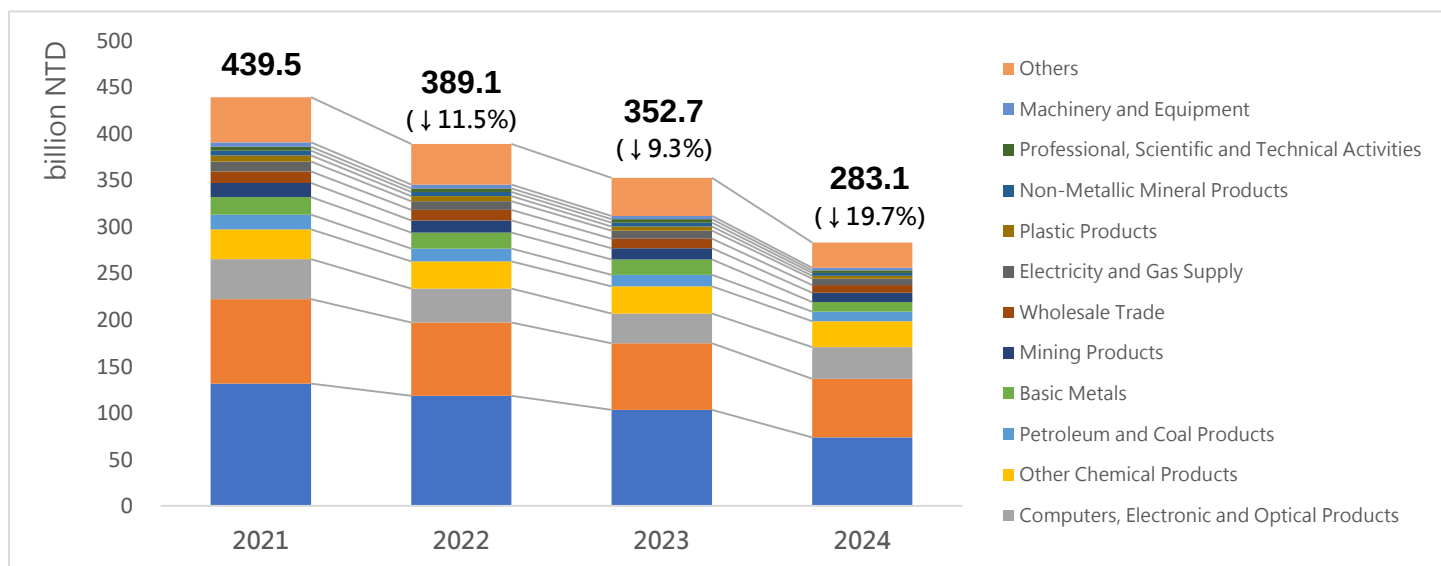
Supply Chain Output Value Driven by Innolux Procurement

The mutual dependency between industries generated by economic activities is complicated. Fortunately, between the 1930s and 1940s, Nobel laureate Wassily Leontief developed an input-output model to understand the impact of purchase spending on the supply and demand structure of industry chains. The model is usually used by governments and scientific research institutions to give a monetary valuation of real financial data. This study refers to the 2016 Input-Output Tables made by the Directorate General of Budget, Accounting and Statistics, Executive Yuan.

Result

In 2024, Innolux generated approximately NT\$283.1 billion in output value across the supply chain through procurement, with electronic components and chemical materials making the largest contribution at 26.1% and 22.2%, respectively. The supply chain output value generated in 2024 decreased by 19.7% from the previous year. This is mainly due to changes in production lines and production strategies, including the sales of the STSP 5.5G plant and the termination of our Nanjing plant. These changes reflect a shift in focus toward high value-added products, resulting in a significant reduction in the procurement of certain raw materials from the previous year, specifically, procurement demand for metal products, plastic products, and electronic components declined by 99.4%, 85.1%, and 42.5%, respectively.

Effective management of the supply chain is an important part of enhancing organizational competitiveness. To enhance supply chain resilience, in 2024, Innolux has been working closely with suppliers to address transitions, not only focusing on product quality, delivery, and price, but also exploring ESG sustainability management to create common good across the value chain. Throughout 2024, 105 suppliers completed GHG inventory and reduced 26,207 tCO₂e in carbon emissions, demonstrating the actual benefits of cooperation across the supply chain. At the same time, qualified suppliers are also encouraged to adopt the ISO 9001:2015 quality management system, ISO 14001:2015 environmental management system, and ISO 45001:2018 occupational safety and health management system, and other related international certification standards to enhance their sustainable competitiveness and become irreplaceable partners to Innolux.

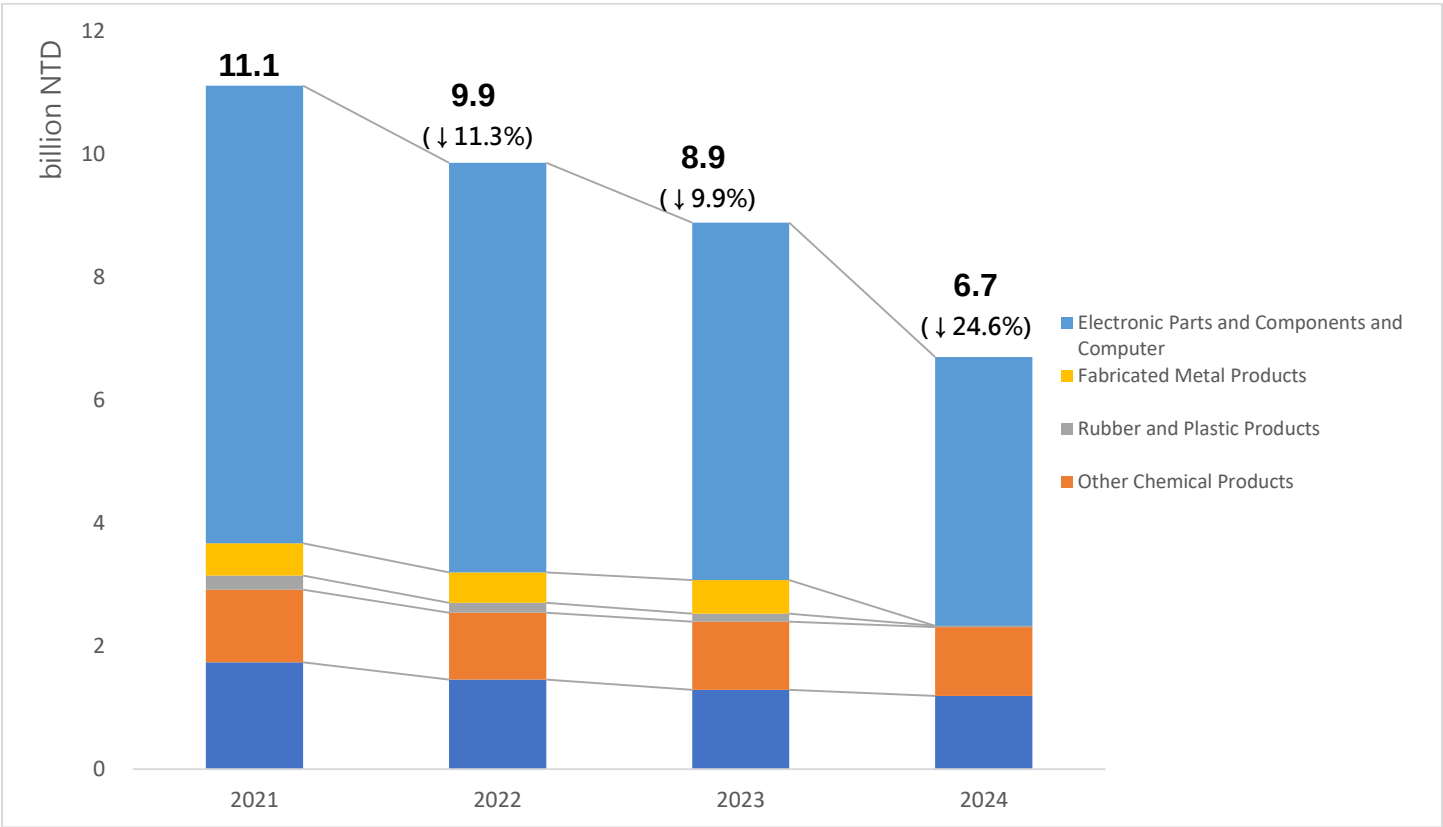


Salaries for Supply Chain Employees

In the input-output analysis model, all input elements of the supplier's production and service process (direct) and its upstream (indirect) are included in the calculation and allocated according to the changes in final demand caused by the company's activities (VBA, 2021), through which the direct and indirect inputs (e.g., employee recruitment and payroll expenses) required by the whole industry chain to satisfy the changes in final demand brought about by procurement demands can be analyzed.

Result

In 2024, Innolux’s procurement demands created approximately 18,000 supply chain jobs, generating NT\$6.7 billion in social external benefits for workers, with the largest contribution coming from the 65.4% share of the electronic components and computer manufacturing industry. Judging from the trend in recent years, the employment earnings of supply chain workers generated by the demand for procurement decreased by 24.6% from the previous year.

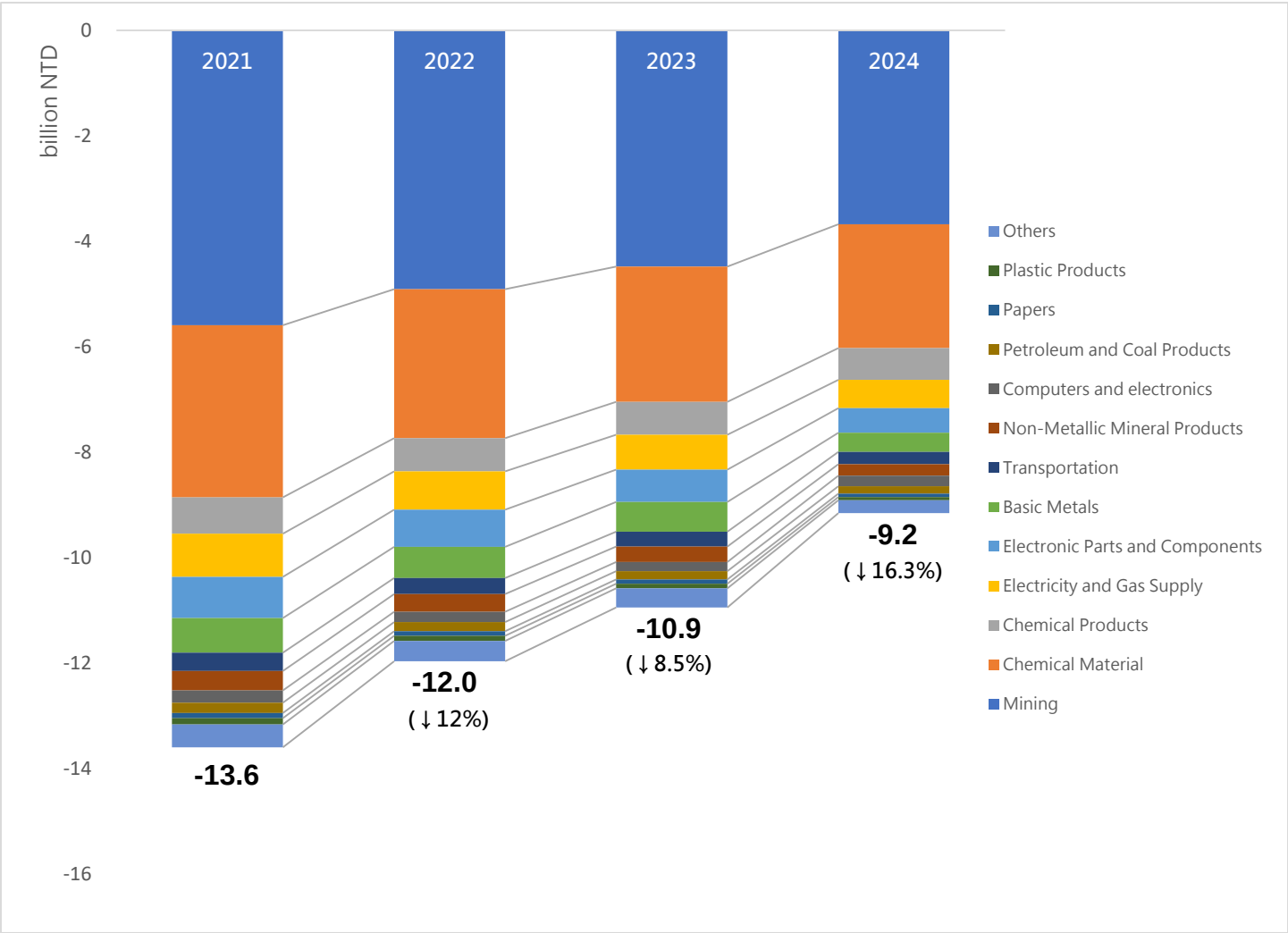


Environmental Footprints Derived from the Supply Chain

Environmentally Extended Input Output Analysis (EEIO) is a simple but comprehensive approach to assess the relationship between economic consumption activities and environmental impacts (Kitzes, 2013). In order to understand the relationship between purchase spending and environmental impacts in various industries, this study adopts the EEIO methodology and analyzes the public data released by the Directorate General of Budget, Accounting and Statistics and the Bureau of Energy to understand the pollutant emissions caused by each unit of output value in various industries. Pollutant emissions include greenhouse gases, water contamination (COD), waste (incineration), and air pollution (PM_{2.5}, NOx, SOx, NMHC, Pb). This study will then plug in the valuation factor to evaluate the resulting social costs.

Result

In 2024, Innolux’s procurement demands along the supply chain caused environmental externalities that incurred a social cost of approximately NT\$9.2 billion, which was mainly attributable to the upstream mining of raw materials for electronic components and computer-related products, accounting for 45.3% of the total, followed by the environmental footprint from the production process of chemical-related products, which accounted for 25.6% of the total. Environmental externalities derived from the supply chain decreased by 16.3% compared to the previous year.

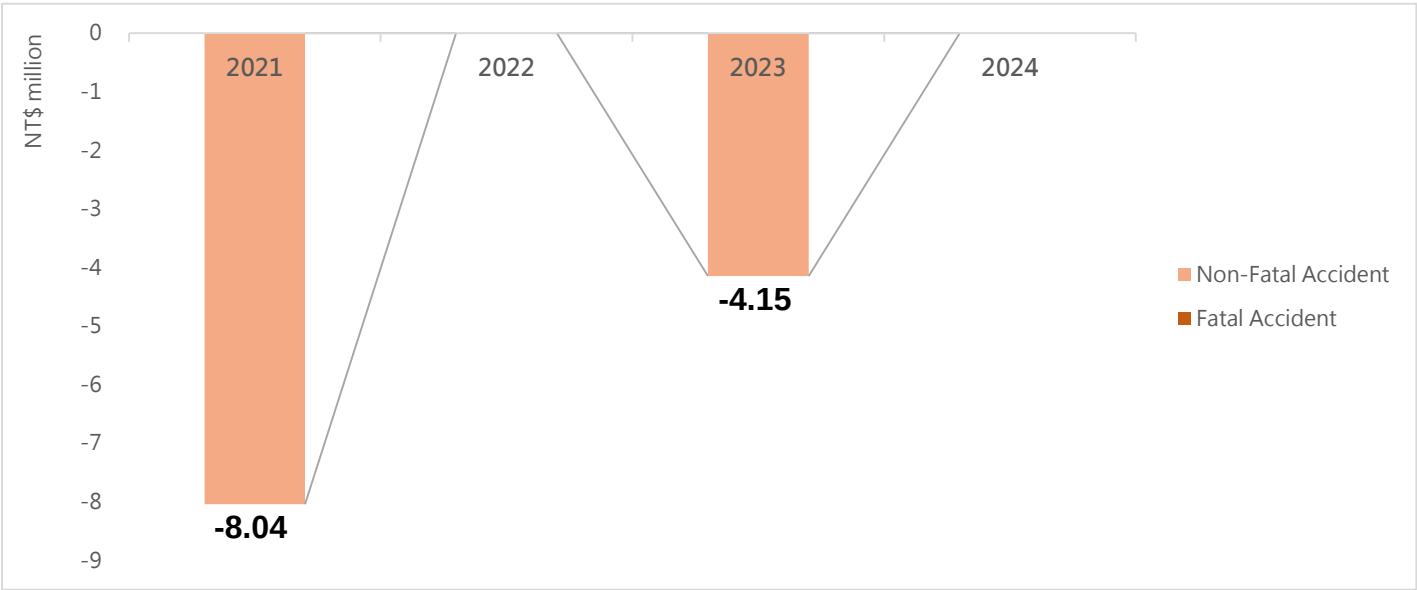


Social Costs from Occupational Accidents among Contractors

A contractor is any person with an Innolux contract that also works in an area managed by Innolux; this includes those under labor outsourcing contracts. Social costs from injuries and fatalities in the workplace are included in this study. For further explanation, please refer to "[Social Costs from Employee Accidents](#)".

Result

In 2024, there were no occupational injuries among contractors leading to loss of work days, and there was a frequency rate (FR) of disabling injuries of 0 throughout the year, generating no social costs from occupational accidents. Innolux continues to strengthen OSH management for contractors, requiring all contractors to comply with the Guidelines for Contractor Management and Operation. Before work, all contractor personnel are required to complete health and safety training provided by contractors and be fully informed of workplace hazards for a better grasp of the workplace environment, risks, and precautionary measures. For high-risk operations, Innolux cooperates with contractors to complete risk identification and emergency response plans to minimize the likelihood of incidents. In 2024, Innolux also managed work applications and personnel verification through our contractor website to strengthen access control and ensure safety.



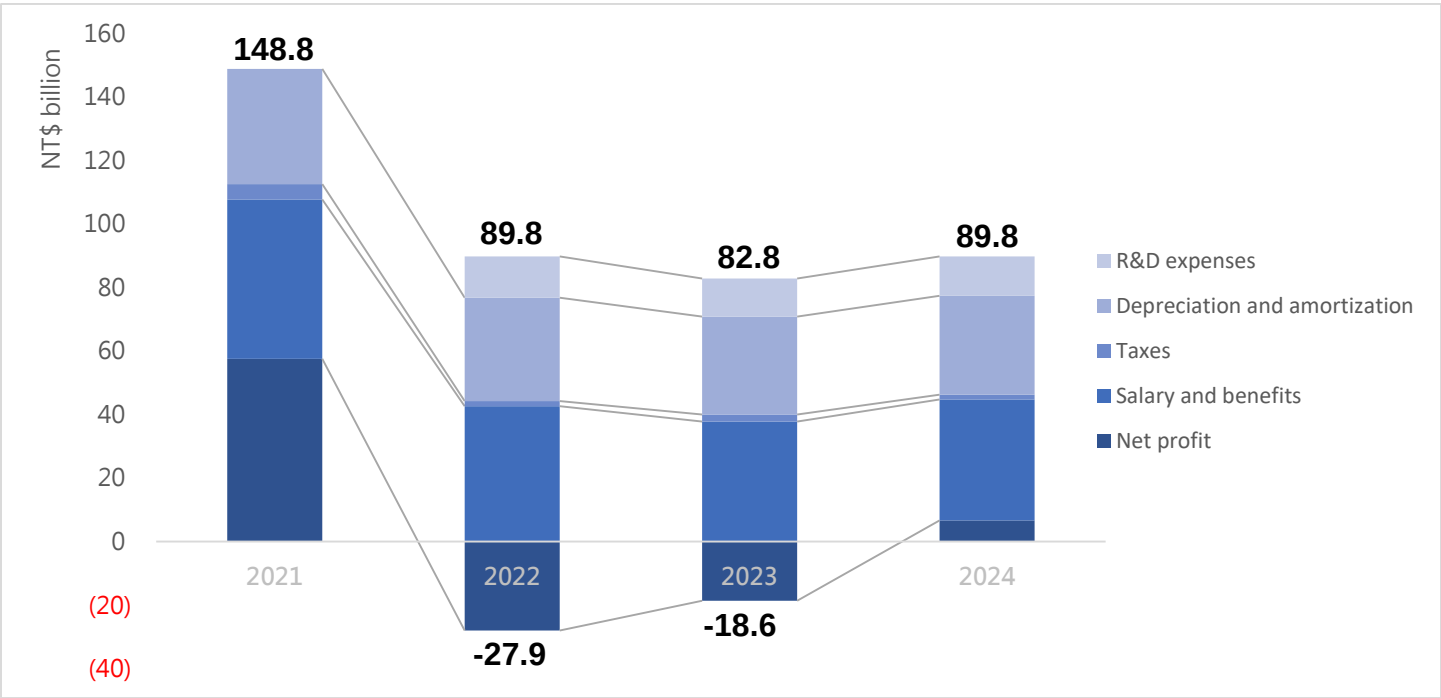
Production and operations

Direct Economic Contribution

The Gross Value Added (GVA) method evaluates the difference between inputs and outputs of the business operation process and takes into account original inputs and public expenditures. These economic activities bring benefits to various stakeholders, including net operating profits, employment costs, and tax payments. Thus, GVA can be used to understand the contribution of an enterprise to the well-being of stakeholders (VBA, 2021). This study applies the financial profit and loss data in Innolux’s annual reports to evaluate profits created in the operating process for stakeholders, including net operating profit (customers/shareholders/investors), remuneration and benefits (employees), tax (government), and depreciation and amortization (suppliers).

Result

In 2024, Innolux generated a total of NT\$216.5 billion in operating revenue, with a gross value-added (GVA) income of NT\$89.8 billion generated for stakeholders from income taxes, employee payroll, R&D expenses, and depreciation and amortization. Looking forward to 2025, Innolux will continue to strengthen the development of high value-added technologies such as automotive displays, smart retail, and glasses-free 3D displays, while accelerating expansion into non-display sectors such as semiconductor packaging, smart healthcare, and satellite communications to strengthen market competitiveness and enhance resilience in business transformation. In addition, Innolux will continue to maintain a high level of R&D investment to bolster innovation capabilities and drive the expansion of future applications.



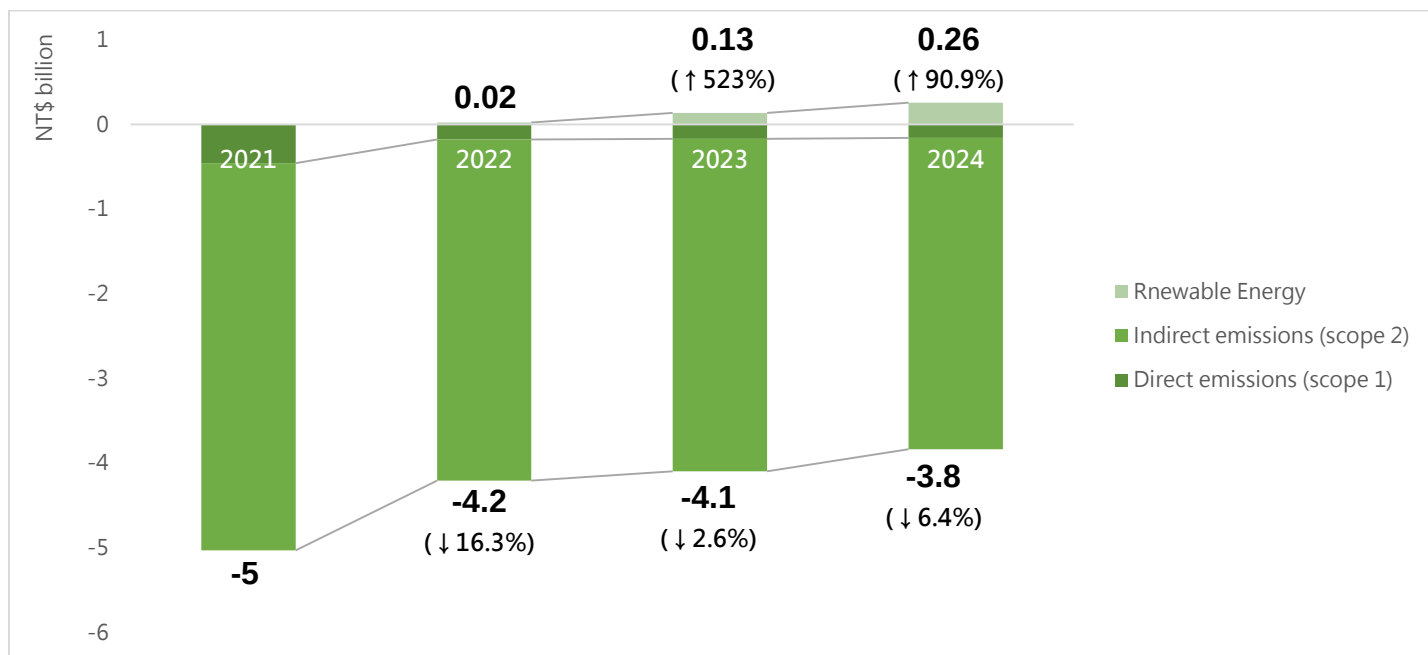
Social Costs from Greenhouse Gases

Greenhouse gas (GHG) 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 (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), nitrogen trifluoride (NF₃), various hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). This study uses the Social Cost of Carbon (SCC) as developed by the US Environmental Protection Agency (US EPA, 2016) as the valuation factor per unit of greenhouse gas emissions. SCC refers to the social costs of long-term damage to the global economic system caused by climate change, including property damage, adverse health impacts from climate-related disasters, and transition costs for mitigating climate change, etc., The study converts the future damage costs into a present value at a discount rate (2.5%, 3%, 5%)². The median of 3% was used in this study.

Result

In 2024, Innolux's direct (Scope 1) and indirect (Scope 2) GHG emissions from production and operation totaled 2.37 million tCO₂e, generating a carbon cost of approximately NT\$3.8 billion. The main impact comes from indirect S2 GHG emissions from energy use, which accounted for 95.8%. The social cost of carbon derived from production and operations decreased by 6.4% from the previous year, with Scope 1 and Scope 2 emissions decreasing by 6.2% and 6.4%, respectively. These decarbonization outcomes are mainly due to the introduction of renewable energies, process optimization, and measures to increase energy efficiency, such as company-wide use of local scrubbers and expanded adoption of renewable energies.

In order to achieve net-zero emissions, Innolux continues to adopt various decarbonization initiatives to optimize processes, increase energy efficiency, expand renewable energy use, and promote recycling, thereby reducing our operational impact on the environment. In 2024, Innolux used 240 million kWh in renewable energy, generating positive environmental externalities valued at NT\$260 million, a 90.9% increase from the previous year.



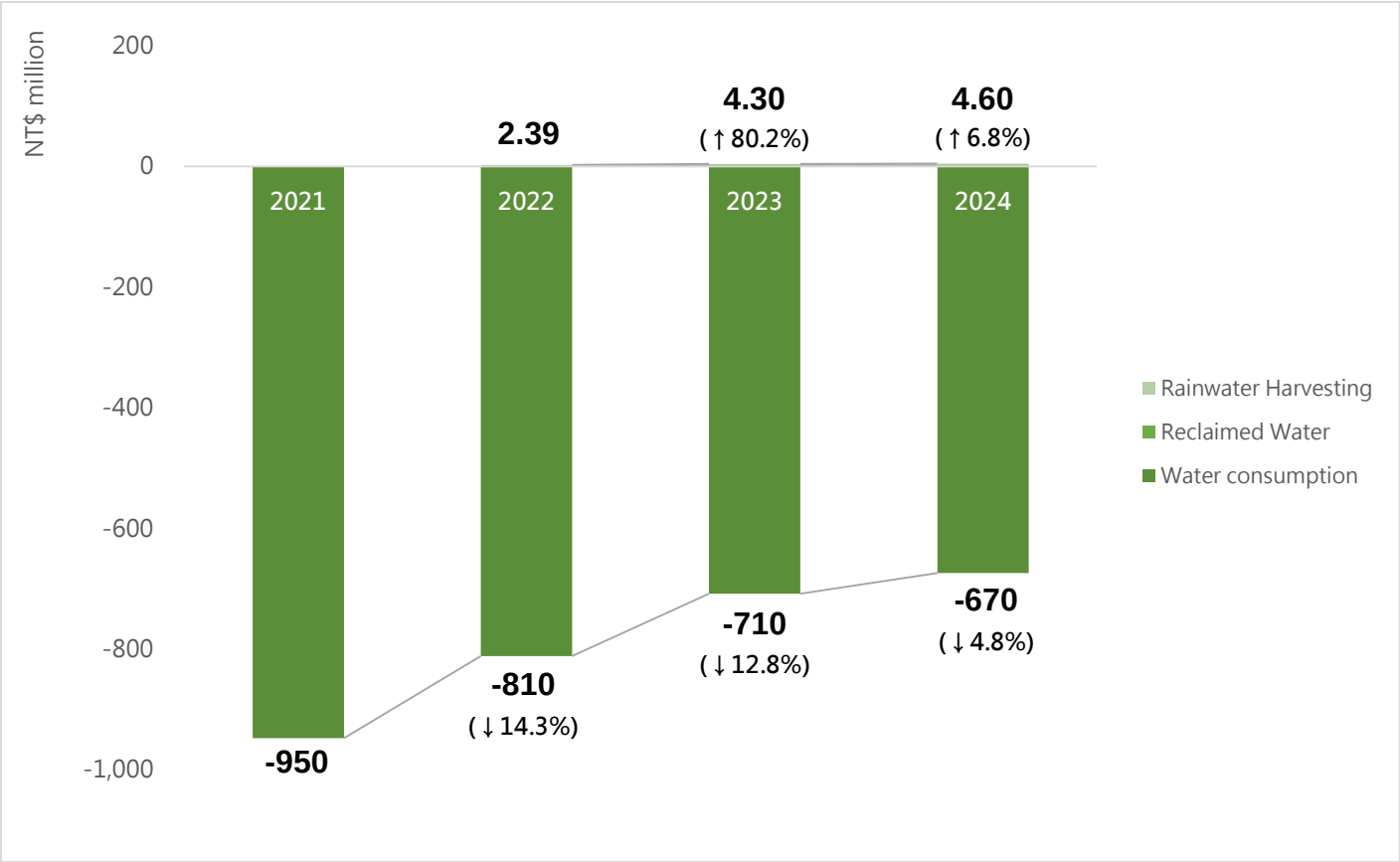
² A high discount rate means that people are willing to pay more attention to short-term rather than long-term benefits (Yan, 2014).

Social Costs from Water Consumption

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)³ according to UNEP/SETAC (2017), which determine the impact of water scarcity on human health, and the value of a statistical life (VSL).

Result

In 2024, Innolux's production and operational processes consumed a total of 15.16 million tonnes of water resources, resulting in approximately NT\$670 million in social costs, a 4.8% decrease from the previous year. This reduction is primarily due to the implementation of 15 water conservation projects, with an investment of approximately NT\$100 million, which contributed to water savings of 602,000 tonnes. In 2024, Innolux used 560,000 tonnes of recycled water and recycled 680,000 tonnes of rainwater, generating NT\$4.6 million in environmental externalities, a 6.8% increase from the previous year.



³ 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.

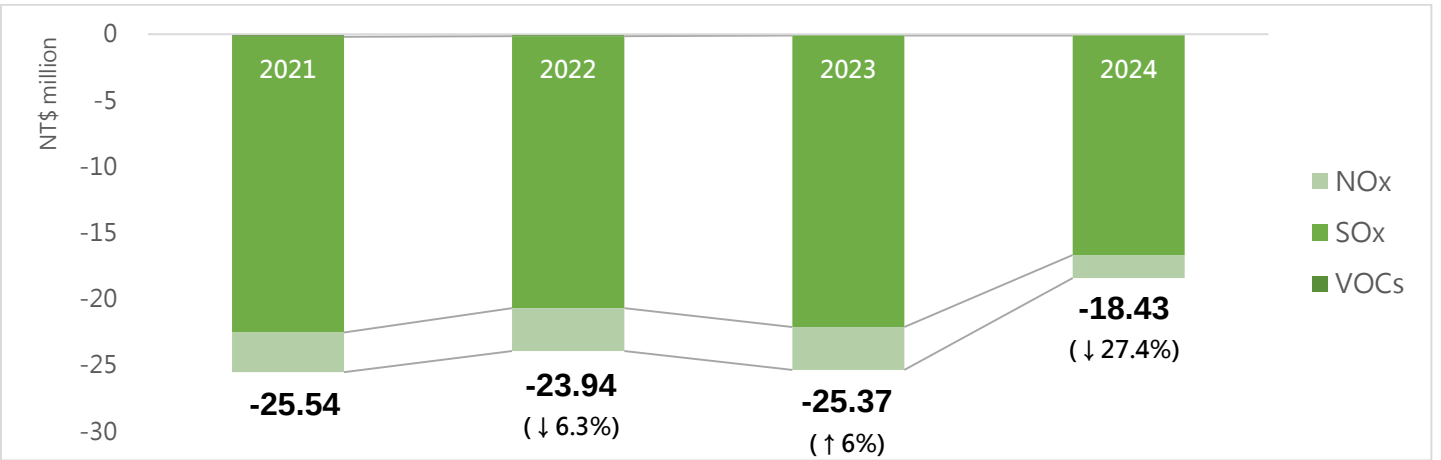
Social Costs from Air Pollution

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). The majority (94%) of the social cost of air pollution comes from illnesses and mortalities. The rest is from visibility, agricultural losses, and recreational value (Muller & Mendelsohn, 2007). This study examines the volatile organic compounds (VOCs), nitrogen oxides (NOx), and sulfur oxides (SOx) produced during production and operations. Innolux refers to guidelines provided in RIVM (2017) and UNEP/SETAC (2017) regarding the characteristic factors of the impact of fine particulate matters (PM_{2.5}), photochemical ozone formation, and toxic substances generated from air pollutants after second-order reaction on human health. The associated health-related social costs from air pollution were calculated using the Value of Statistical Life (VSL) approach.

Result

In 2024, Innolux emitted 77 tonnes of VOCs, 36 tonnes of SOx, and 18 tonnes of NOx from production and operations, resulting in a social cost of approximately NT\$18.43 million due to air pollutant emissions, 90% of which was attributable to SOx emissions. The social cost of air pollution has decreased by 27.4% from the previous year. The significant decrease in VOC, NOx, and SOx emissions is mainly due to Innolux’s continued efforts in optimizing air pollution prevention and control equipment, strengthening operations control, and strengthening regulatory compliance in pollution source management. Specifically, Innolux replaced rotary zeolite concentrators in Tainan’s FAB3 and FAB4, which has increased the efficiency of VOC removal to 92%. The Foshan Plant has installed additional VOC treatment facilities in accordance with Guangdong emission standards. By enhancing the enclosed collection, sorting, and treatment of exhaust gases, the plant has effectively reduced both the concentration and total volume of pollutants, thereby contributing to a reduction in the social costs associated with air pollution.

To ensure VOC emissions comply with local standards, Innolux continued strengthening air pollution control measures in 2024. These efforts included installing control facilities based on the characteristics of specific pollutants, such as VOCs, acids and alkalis, and particulates, and implementing enclosed collection, sorting, treatment, and regular inspections in line with local regulations. Also in 2024, we conducted pollution source investigations and reinforced exhaust ducts at plants in China (Foshan and Ningbo) to enhance pollutant collection efficiency. At the Tainan plant, VOC equipment performance testing and upgrades were completed to ensure emissions met regulatory standards. Across all sites, Innolux also maintained strict compliance with environmental regulations by managing operational records, maintenance, raw material reporting, and emissions standards to improve the overall effectiveness of pollutant control.



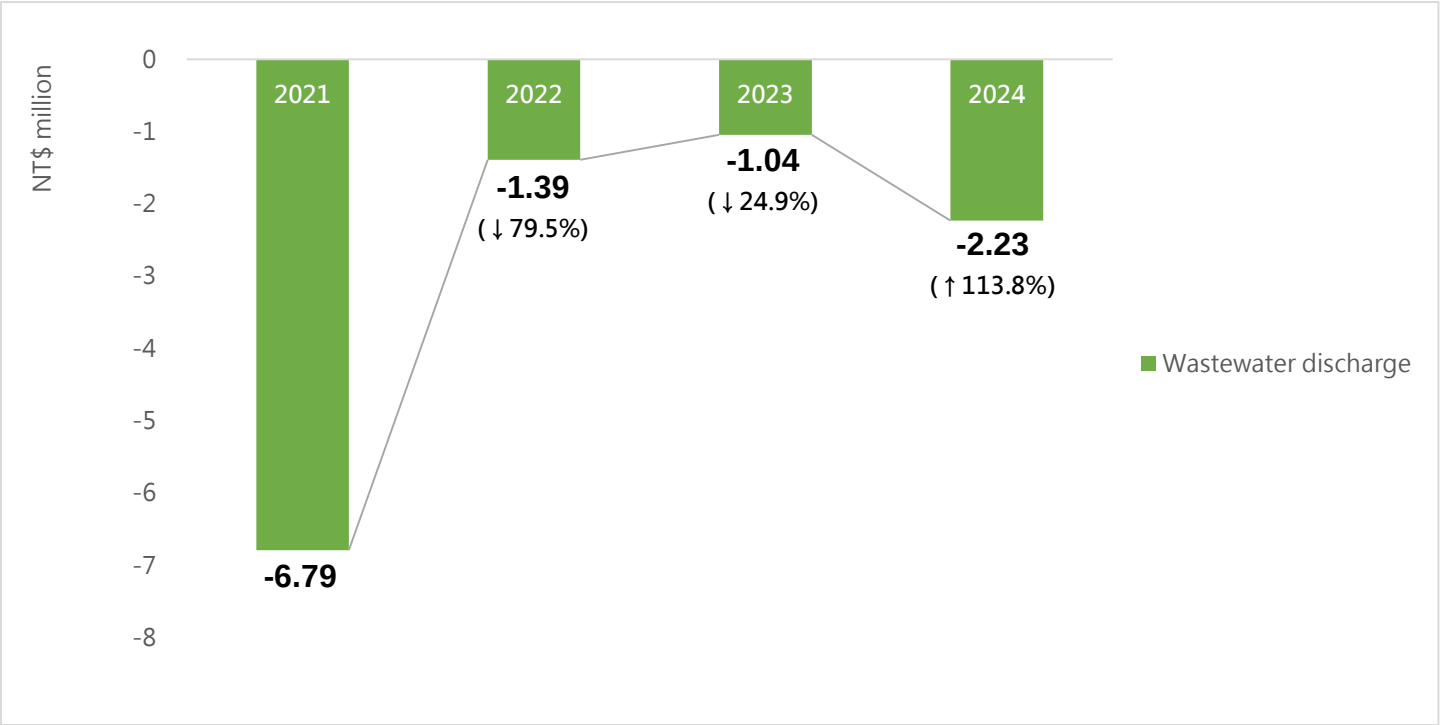
Social Costs from Wastewater Discharge

The anaerobic digestion process in industrial wastewater treatment generates methane (CH₄), the amount of which is determined by degradable organic matter, temperature, and treatment system. This study adopts the evaluation method defined by the 2006 IPCC Guidelines and takes the chemical oxygen demand (COD) in wastewater as an indicator to calculate the amount of greenhouse gas emissions generated from wastewater treatment and further calculate the social costs derived therefrom. CO₂ emissions from the wastewater treatment process are considered a biological factor, hence excluded from the evaluation.

Result

In 2024, a total of 8.01 million tonnes of wastewater was generated from Innolux’s production and operations, generating a social cost of NT\$2.23 million, an increase of 113.8% from the previous year. This is mainly caused by optimizations to water recycling systems in our China plants, which convert some high-concentration process wastewater into water sources for recycling, leading to an increase in Chemical Oxygen Demand (COD) in our effluent systems and a higher overall COD from the previous year.

We recycled a total of 2.675 million tonnes of process wastewater, achieving a 97.6% recycling rate – a new high for Innolux. For wastewater management, we focused on reducing overall pollutants, improving the wastewater discharge classification system, and establishing a wastewater discharge characteristic monitoring system that evaluates water recycling and reuse. With these efforts, Innolux turns waste into reusable resources and enhances the efficiency and performance of wastewater treatment facilities.



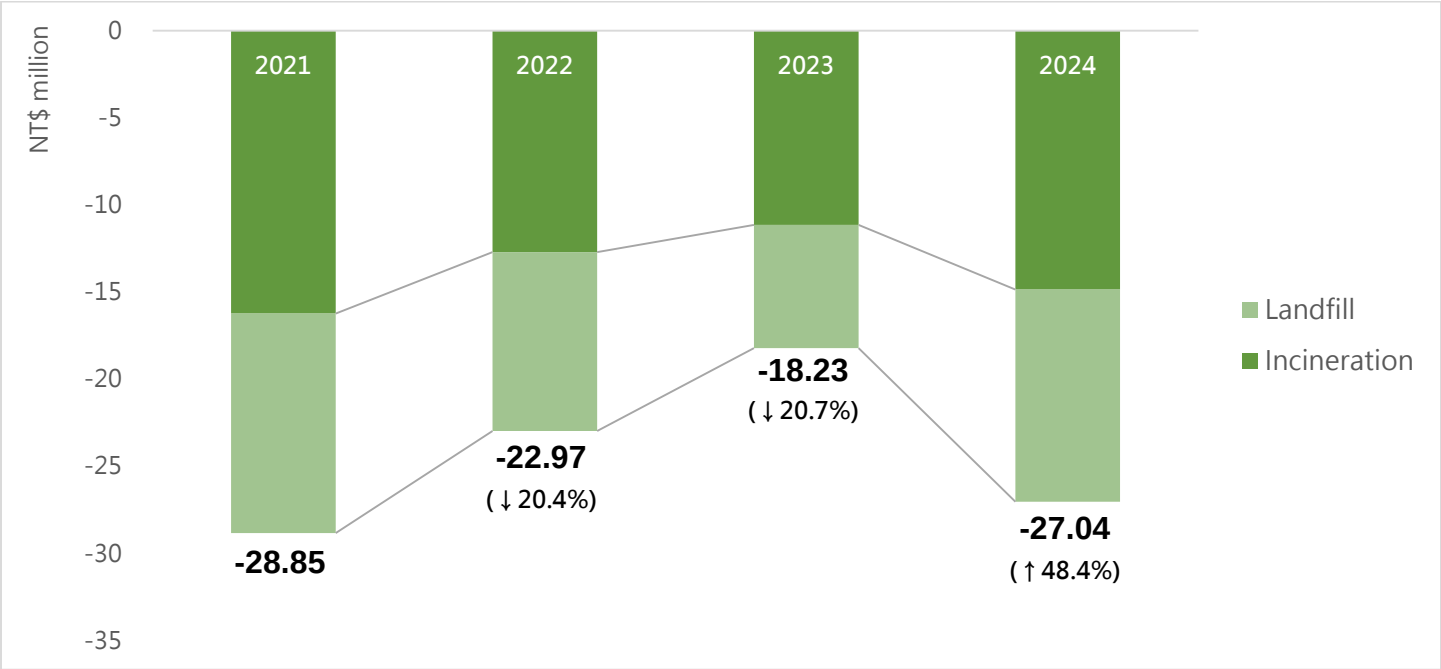
Social Costs from Waste Treatment

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., resulting in cancer or impaired cognitive development) (EXIOPOL, 2009; PwC UK, 2015). This study refers to data from actual inspections of 24 waste incinerators in Taiwan and the USEtox database to calculate the emission coefficient of various air pollutants and their impacts on human health. The social costs of related health damage were calculated based on VSL. Both incineration and decomposition in landfills generate greenhouse gases. Based on the management table for greenhouse gas emission coefficients and the national greenhouse gas emission inventory report issued by the Environmental Protection Bureau, this study calculates the greenhouse gas emissions generated from the waste treatment and the social costs derived therefrom. Considering the complexity of recycling technologies and the difficulty in obtaining related data, waste recycling is excluded from the evaluation.

Result

In 2024, the amount of waste generated from Innolux’s production and operation processes that was disposed of via incineration and landfill was 8,149 tonnes and 750 tonnes, respectively. The resulting social cost was approximately NT\$27.04 million, an increase of 48.4% from the previous year. The increase is mainly due to equipment upgrades, production line changes, and construction work in certain plants, leading to a rising number of building and demolition waste. In addition, changes to raw material use led to certain materials being discarded as waste, which then required incineration or landfill, driving overall social costs up.

In 2024, Innolux continued to promote process optimization and pollution control from the source, working with external partners from the upstream and downstream to deepen the circular economy and leverage recycling, resource regeneration, extended use, and re-design to maximize resource efficiency. Throughout the year, Innolux recycled 18,982 tonnes of general industrial waste, achieving a recycling rate of 99.9%, and 2,920 tonnes of hazardous industrial waste, with a recycling rate of 99.5%. During the same time, Innolux also rolled out resource classification and reuse initiatives at Taiwan sites to regenerate organic solvents, recycle edge trims, and convert used filter materials into accelerants, promoting both waste reduction and recycling.



Future Income Generated from Employee Training

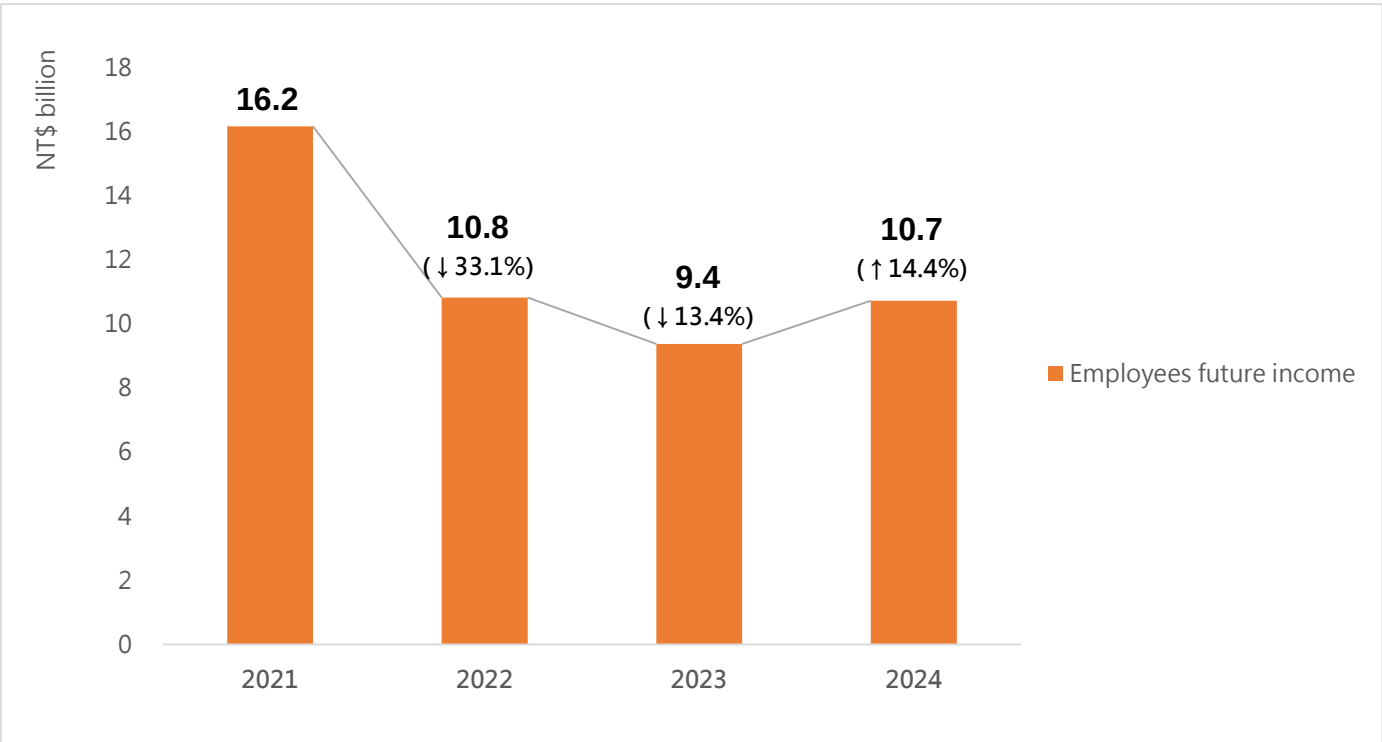
Employee experience and skills are of utmost importance to the Company’s long-term development. Enhanced employability also leads to better compensations for employees, further increasing their quality of life and purchasing power. This study refers to the methodology of Ecomatters (2016) and considers the average compensation, average raise percentage, retirement age, inflation conversion factors, and job-related remuneration development percentage to estimate the average annual growth of future returns created by employees’ growing experiences and skills throughout their careers.

Result

In 2024, Innolux’s growth in future returns from professional development for employees was NT\$10.7 billion, an increase of 14.4% from the previous year, which is mainly due to the growth in average employee payroll.

To strengthen employee potential and career development, Innolux designed three academies and one center under the Innolux University program. The program offers a total of 24 courses and, in 2024, delivered 144,768 trainings. This translates into 124.5 hours of training per employee on average, demonstrating Innolux’s commitment to promoting digital transformation and cultivating cross-domain talents.

At the same time, Innolux has developed a systematic performance management system that incorporates six major competencies into the assessment framework. This is coupled with a dual-track system that offers employees pathways to grow both their management and professional competencies. In 2024, the internal hiring rate reached 41.84% at Innolux, reflecting the company’s continued efforts to strengthen labor capital through cultivation and career advancement systems as well as hopes to increase our employees' expected long-term economic benefits throughout their careers.



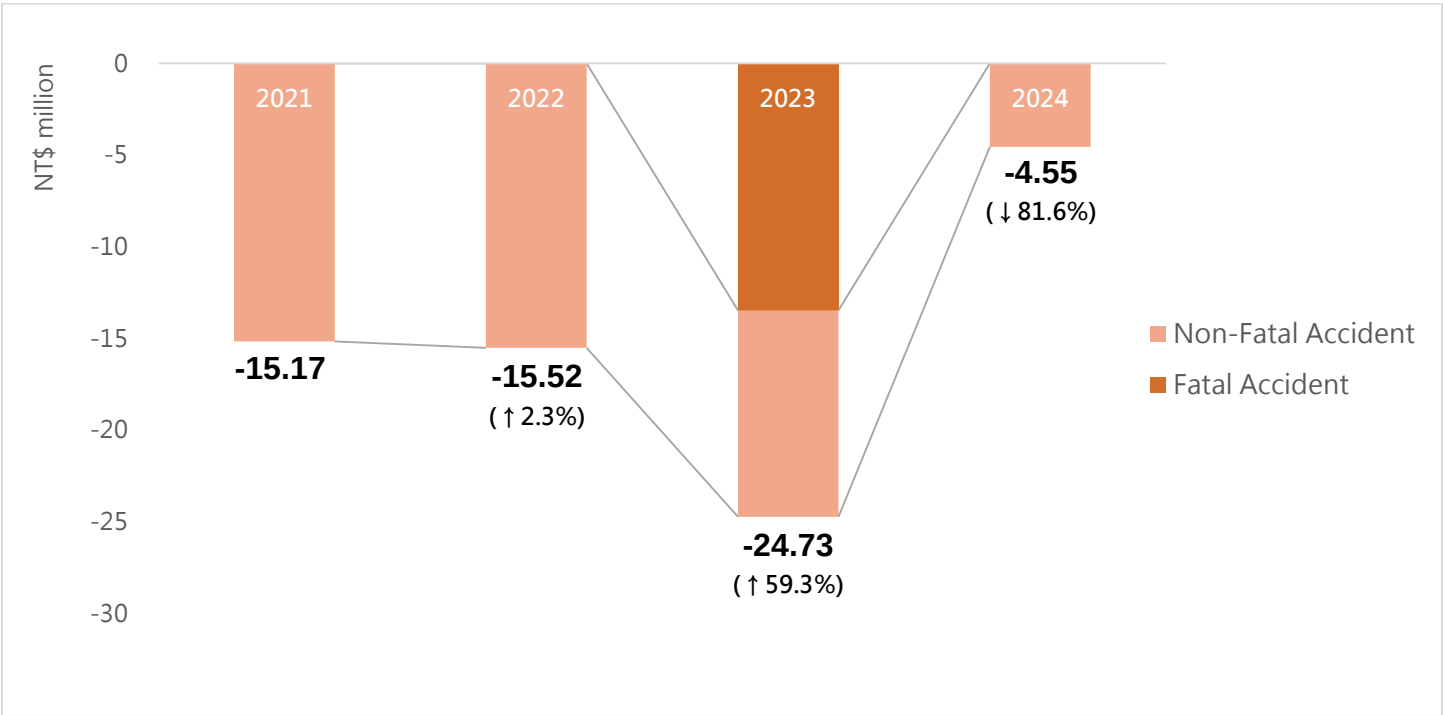
Social Costs from Occupational Accidents among Employees

While performing their duties, employees may experience occupational accidents that cause illnesses, injuries, disabilities, or deaths from the architecture, machines, equipment, raw materials, substances, chemicals, gases, steams, dust, and other operational or occupational hazards. The 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. This study includes disabling injuries and deaths in the evaluation. The financial costs include production losses and compensations for occupational accidents. Innolux refers to the labor costs defined by Ho Chun Chieh (2005) and Tsao Chang Cheng (2013) to calculate the financial losses resulting from willingness to pay (WTP) to prevent occupational accidents and death by occupational injury deaths. Noting the complexity involved in the methodology required for the consideration of occupational diseases, they are excluded from the evaluation.

Result

In 2024, Innolux recorded a total of 201 lost workdays due to disabling injuries from occupational accidents, resulting in an estimated social cost of approximately NT\$4.55 million. These incidents were primarily caused by individual workers failing to follow proper safety procedures while handling materials or operating equipment, leading to falls, pinch injuries, crush injuries, and other disabling accidents.

To address this, Innolux implemented a digital reporting and investigation system to manage occupational incidents, strengthening real-time reporting, data analysis, and root cause investigation. Corrective measures are rolled out across all sites through a “horizontal roll-out system” to prevent recurrence. We also continue to advance tier-based risk controls and hazard management at the source to strengthen intrinsic safety and enhance worker safety awareness and discipline.

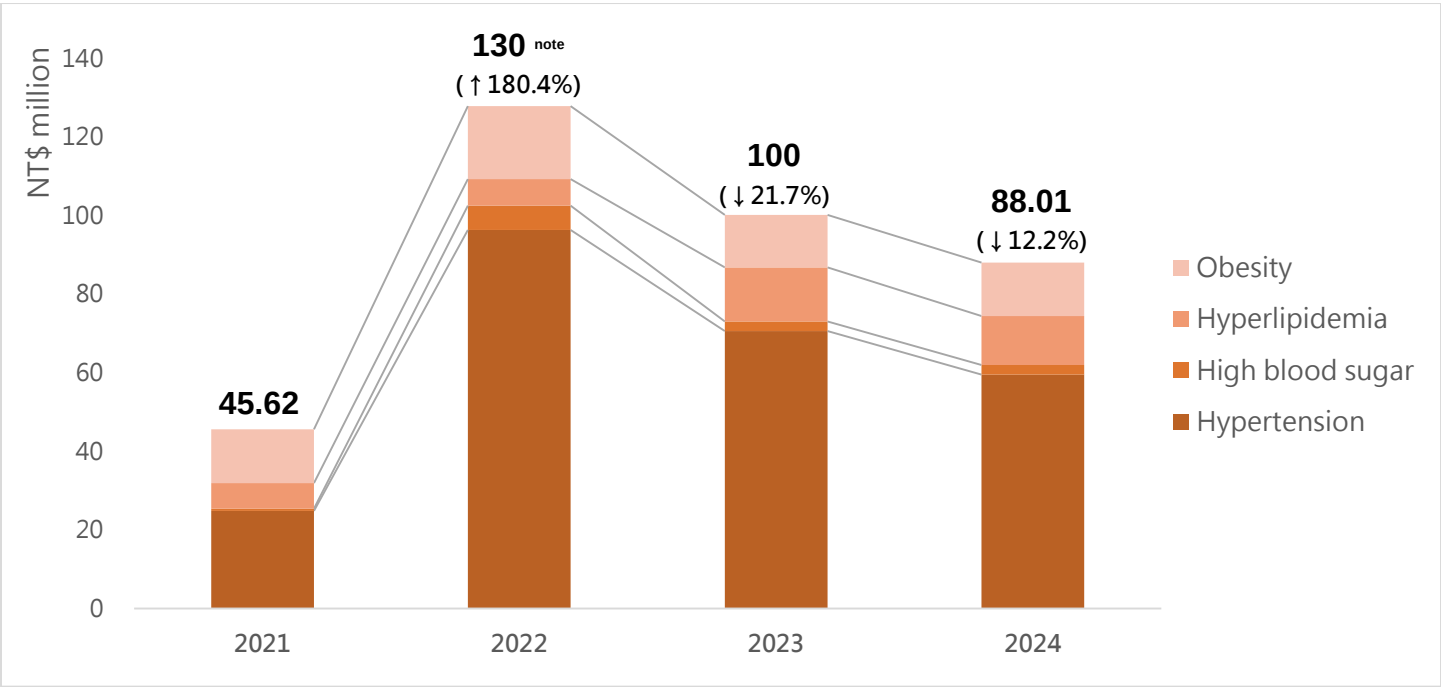


Medical Costs Avoided from Health Promotion

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). 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. Based on the aforementioned methodologies, this study calculates the derivative medical cost from reducing or avoiding risks of cardiovascular diseases in employees by offering regular health checkups, personalized health management, and various activities to promote employee health.

Result

In 2024, the social benefits generated by reducing cardiovascular diseases in Innolux employees through regular health checkups and health management measures were approximately NT\$88.01 million. Employee health and mental wellbeing are valued at Innolux. We organize health promotion activities such as health lectures, sports events, health classes, and free clinic sessions. We also encourage all employees to find their own balance between work and life. In addition, individual health information is integrated across a digital health management system and mobile app management tools, which is supported by personalized health-management advice and advocacy for health awareness to create a happy and healthy workplace.



Note: The data in this report has been corrected as the number of people affected with high blood pressure, high blood sugar, and high cholesterol in the 2022 health check was misreported.

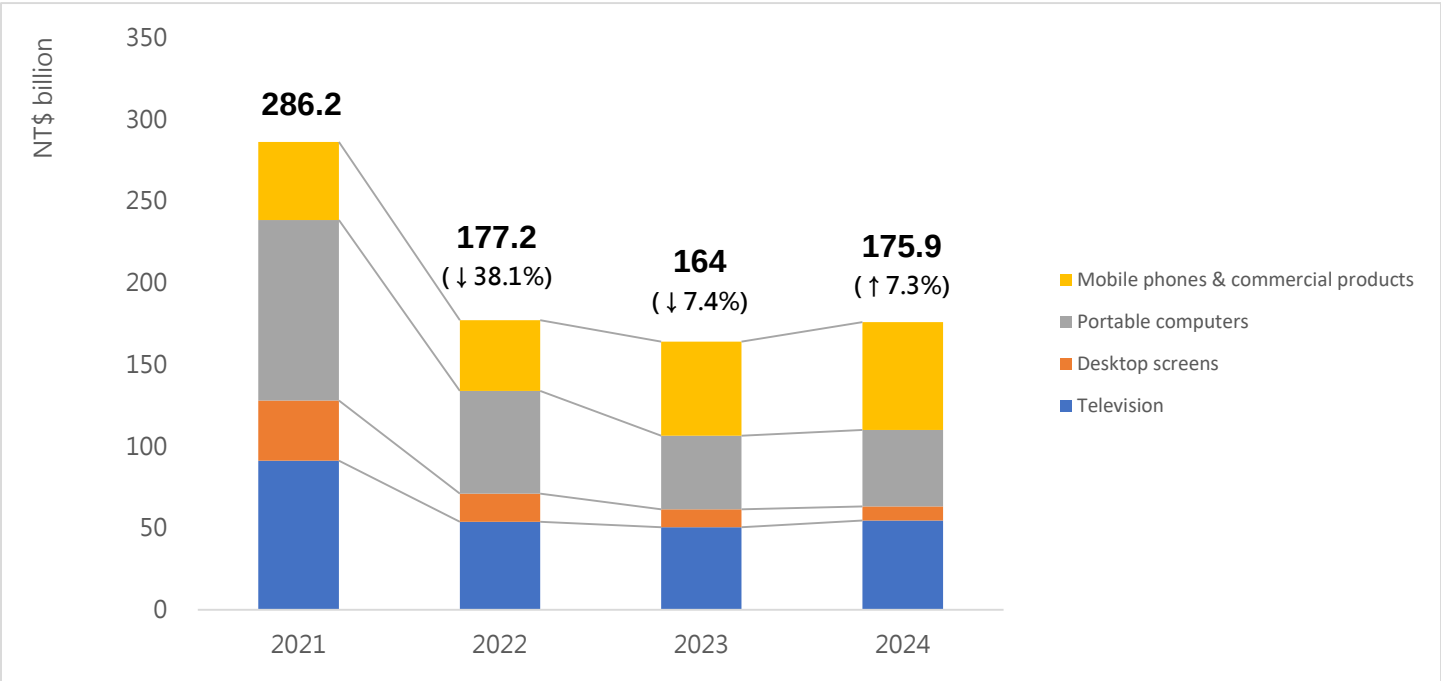
Downstream Product Sales

Client Industry Output Enhanced by Product Sales

Innolux’s main product is TFT-LCD monitors in all sizes primarily used in LCD TVs, billboards, desktop security monitors, laptops, tablets, cellphones, portable audio/video players, wearable devices, automotive monitors, medical devices, X-Ray applications, display panels, and touch modules for industrial, aviation, and educational use. The Company’s product sales translate into business growth for customers. Since Innolux is not the only supplier to customers, this study focuses on sales in four main industries of terminal TFT-LCD applications (including television, desktop screens, portable computers, mobile phones, and commercial products). Sales prices and the relationship between supply and demand of the client industry’s output value are considered to assess the indirect economic values created from the product sales process.

Result

In 2024, Innolux’s TFT-LCD product sales indirectly generated NT\$175.9 billion in output value for its client industries, an increase of 7.3% from last year. We continue to advance our transition strategy of "More than Panel" – maintaining our existing business while also actively expanding into new emerging industries such as automotive, medical, smart retail, semiconductor packaging, and low-earth orbit satellites. By integrating display technologies with cross-disciplinary innovations in AI, sensing, biomedical, and communications, we are looking to expand product functions and extend applications. This strengthens our capability to provide comprehensive solutions to customers and increases the overall value of our downstream industry chain.



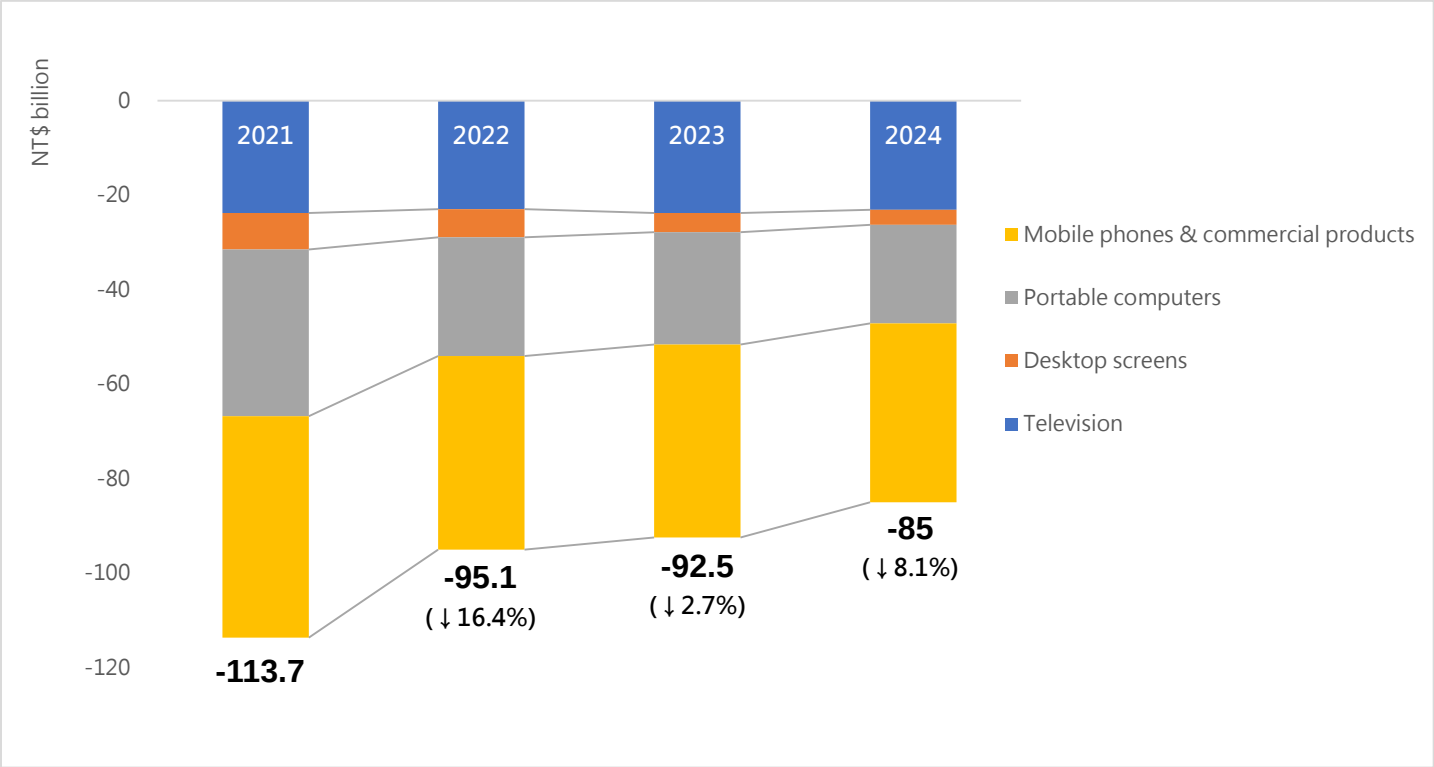
Social Costs from the Product Use Stage

In the varying terminal applications of TFT-LCD products, the energy consumption during product use phases leads to environmental externalities including greenhouse gas emissions, air pollution, wastewater, waste, and resource consumption. Based on the average energy consumption of each terminal application and the product category rules (PCR), this study calculates the energy consumption of TFT-LCD products during the product life cycle according to end product use scenarios and service life, and the social costs are determined accordingly.

Result

In 2024, the end-use products of Innolux’s TFT-LCD line resulted in a social cost of NT\$85 billion in the product use stage, a decrease of 8.1% from the previous year. We continue to promote green design by incorporating low-power materials and energy-efficient circuits, effectively reducing carbon emissions during the product use phase.

Innolux factors in environmental considerations in every part of the product life cycle – from raw materials, manufacturing, packaging, product use, to recycling. In 2024, Innolux obtained a total of 169 green product certifications, including the China Environmental Label, TCO, and Korea Eco-Label, demonstrating our ongoing commitment to low-carbon products and sustainable design.



Appendix

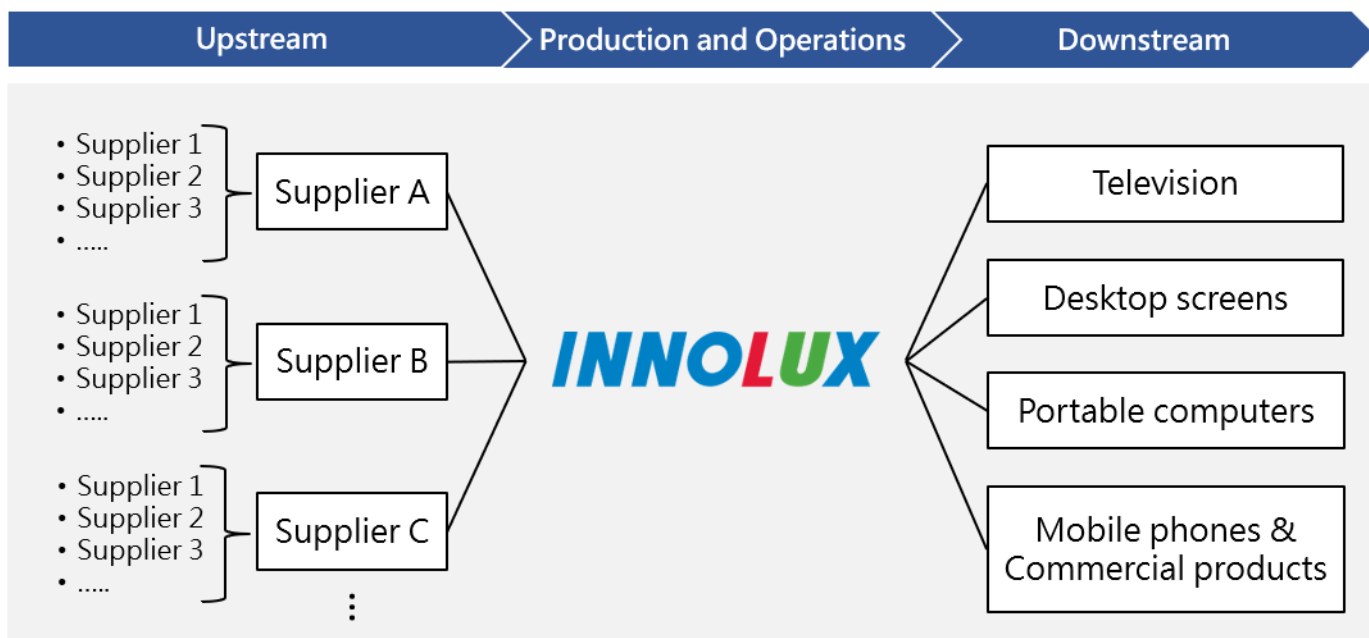
Methodology

There are four steps in assessing Innolux'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

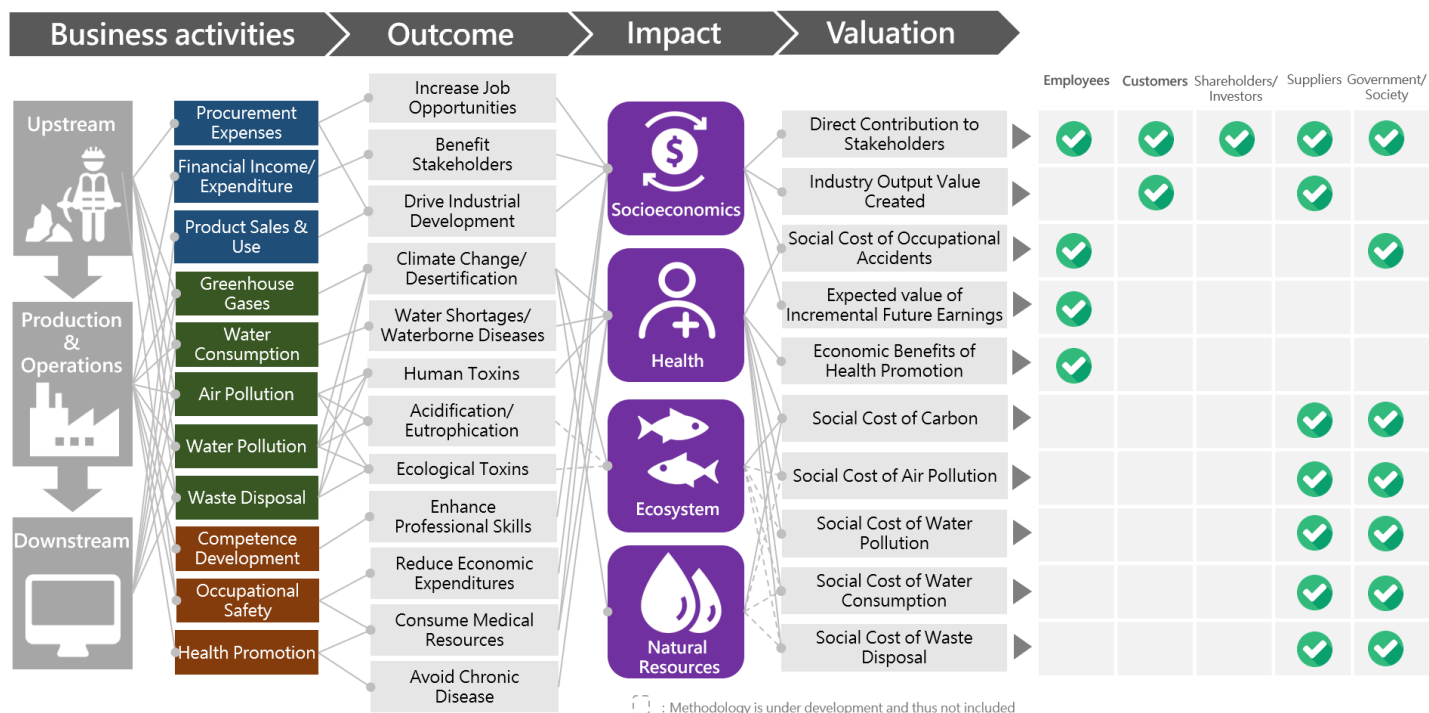
Innolux's value chain activities cover supply chain (upstream), production and operations, and product sales (downstream), during which Innolux generates both positive and negative impact for stakeholders. Innolux's production and operations generate direct impact, while value chain upstream/downstream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

- **Upstream (supply chain):** All economic activities, such as backlight component production, logistics, transportation, etc., undertaken by the raw material suppliers or service providers to fulfill Innolux orders.
- **Production & Operation:** All activities at Innolux's production and operating locations across the world.
- **Downstream (product sales):** Considering the diversity of product applications, priority is given to end-use industries such as television, desktop screens, portable computers, mobile phones, and commercial products. The product usage during its life cycle is considered as well.



Mapping Impact Pathways

To clarify the direct/indirect, positive/negative, and potential/actual impact that each type of activity in the value chain has on stakeholders, Innolux uses the impact pathway method in this report, considering the input and output of each activity, changes and impacts on people's lives, and the social value/cost generated in the process. The aim is to examine the complex cause-and-effect relationships systematically and logically.



Confirming Data Sources

The activity data sources include primary data (original data obtained through direct inventory) and secondary data (derived from literature, databases, or estimates). When assessing Innolux's sustainability impact, priority is given to primary data due to its higher reliability. Secondary data is used when primary data is unavailable. For instance, the supply-demand relationships within the supply chain or pollutant emissions per unit of output value are typically sourced from national investigation reports and industry-wide averages.

		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	Databases of industry average environmental factors.	Energy resources and pollution generation	Product energy consumption/use scenario
	Data quality	Secondary data	Primary data	Primary and Secondary data
	Impact Categories	Social cost of carbon, Human health and Ecosystem loss		
Social	Activity data	Contractor occupational accidents	Employee occupational accidents, health examinations, remuneration, etc.	Methodology currently under development for assessing downstream social impacts.
	Data quality	Primary data		
	Impact Categories	Change to personal or social welfare		

Establishing a Valuation Method

Innolux'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 14 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.
	Environmental	Social costs generated by the environmental footprint of the supply chain	
	Social	Social costs generated by occupational accidents (contractor)	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.
Production and 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 costs generated by greenhouse gas emissions, water consumption, air pollution, wastewater and waste treatment	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 Ecomatters (2016) 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 costs generated by occupational accidents (employee)	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 the 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	Client industry output enhanced by product sales	Focus on four main end uses of Liquid-Crystal Module, including TV, desktop screens, portable computers, and mobile phones; consider the supply-demand relationship between sales value and the output value of client industries; evaluate the indirect economic value created by product sales and environmental externalities from product use.
	Environmental	Social costs derived from product use stage	

Since the currency value conversion factors are derived from various studies, Innolux adopts the definitions of environmental impact and monetary valuation frameworks outlined in ISO 14008:2019. The base year for all calculations is set to 2017, with adjustments made for both geographic and temporal factors.

- 1) Geographic adjustment: The report applies Purchasing Power Parity (PPP) for each region to adjust the weighting of Gross National Income (GNI), following the methodology proposed by the OECD (2012). The equation used is shown below:

$$E_i = (Y_i/Y_{ref})^{\epsilon}$$

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

€ 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.

Bibliography

1. Anderson, K. M., P. M. Odell, P. W. F. Wilson and W. B. Kannel (1991). "Cardiovascular Disease Risk Profiles," American Heart Journal, 121, 293-298.
2. Bayart, J.B., Bulle, C., Deschênes, L., Margni, M., Pfister, S., Vince, F., Koehler, A. (2010). A framework for assessing off-stream freshwater use in LCA. International Journal of Life Cycle Assessment, 15(5), 439-453.
3. Boulay, A.M., Bulle, C., Bayart, J.B., Deshenes, L., Manuele, M. (2011). Regional characterization of freshwater use in LCA: modeling direct impacts on human health. Environmental Science & Technology, 45(20), 8948-8957.
4. Burnett, R.T., Pope, C.A., III, Ezzati, M., Olives, C., Lim, S.S., Mehta, S., Shin, H.H., Singh, G., Hubbell, B., Brauer, M., Anderson, H.R., Smith, K.R., Balmes, J.R., Bruce, N.G., Kan, H., Laden, F., Pruess-Ustuen, A., Turner, M.C., Gapstur, S.M., Diver, W.R., Cohen, A. (2014). An Integrated Risk Function for Estimating the Global Burden of Disease Attributable to Ambient Fine Particulate Matter Exposure. Environmental Health Perspectives, 122(4), 397-403.
5. Chang-cheng Tsaor, Yu-ning Tuanmu, Jin-chuan Lee, (2013), Analysis of the Years of Potential Life Lost due to Occupational Fatality Injury by Manufacture Industry, Journal of Occupational Safety and Health, volume 21 number 3, 373-386.
6. Chieh-Hsien Lee, (2010), Evaluating the Benefits of Ameliorating Cardiovascular Disease-An Application of the Travel Cost Method, Taipei Economic Inquiry, 46:1, 103-140.
7. Directorate General of Budget, Accounting and Statistics, (2020), 2016 Input-Output table.
8. Ecomatters, (2016). Expected value of incremental future earnings - assessment method.
9. Environmental Protection Bureau, (2019), Greenhouse gas emissions factors management table version 6.0.4.
10. Environmental Protection Bureau, (2020), Greenhouse gas inventory report.
11. Environmental Protection Bureau, (2021), Carbon footprint product categories rules - LCD monitor.
12. Exiopol. (2009). Report of the Exiopol project, Dose response function paper, National Environmental Research Institute.
13. Health and Safety Executive (HSE), (2017). Costs to Britain of workplace fatalities and self-reported injuries and ill health, 2015/16.
14. HEIMTSA. (2011). D 5.3.1/2 Methods and results of the HEIMTSA/INTARESE Common Case Study. The Institute of Occupational Medicine.
15. International Organization for Standardization (ISO). (2019). ISO 14008:2019 Monetary valuation of environmental impacts and related environmental aspects.
16. IPCC. (2006). 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
17. Institute of Labor, Occupational Safety And Health, MOL
18. Jiune-Jye Ho, (2005), impact Resulting from Serious Occupational Injuries: Estimation of Years of Potential Life Lost and Monetary Value of Physical Pain, doctoral dissertation, Institute of Occupational Medicine and Industrial Hygiene, National Taiwan University.
19. Kitzes, J. (2013). An Introduction to Environmentally-Extended Input-Output Analysis. Resources 2013, 2(4), 489-503.
20. Kivimäki, M. et al. (2006). Work stress in the aetiology of coronary heart disease – a meta-analysis. Scandinavian Journal of Work and Environmental Health, 32:431-442.
21. Kounina, A., Margni, M., Bayart, J.B., Boulay, A.M., Berger, M., Bulle, C., Frischknecht, R., Koehler, A., Milà i Canals, L., Motoshita, M., Núñez, M., Peters, G., Pfister, S., Ridoutt, B., Zelm, R., Verones, F., Humbert, S. (2013). Review of methods addressing freshwater use in life cycle inventory and impact assessment. International Journal of Life Cycle Assessment, 18(3), 707-721.
22. Lelieveld, J., Evans, J.S., Fnais, M., Giannadaki, D., Pozzer, A. (2015). The contribution of outdoor air pollution sources to premature mortality on a global scale. Nature, 525, 361-371.
23. Marmot, M. (2004). The status syndrome: how your social standing affects your health and life expectancy. London, Bloomsbury.
24. Muller, N.Z. and Mendelssohn, R. (2007). Measuring the Damages of Air Pollution in the United States. Journal of Environmental Economics and Management, 54 (1), 1-14.
25. Natural Capital Coalition. (2016). Natural Capital Protocol Principles and Framework.
26. Organisation for Economic Cooperation and Development (OECD). (2012). Mortality Risk Valuation in Environment, Health and Transport Policies.
27. PwC UK. (2015). Valuing corporate environmental impacts. PwC methodology document.
28. RIVM. (2017). ReCiPe2016: a harmonized life cycle impact assessment method at midpoint and endpoint level, version 1.1.
29. Social & Human Capital Coalition (SHCC), (2019). Social and Human Capital Protocol.
30. Stansfeld, S. & Candy, B. (2006). Psychosocial work environment and mental health – a meta-analytic review. Scandinavian Journal of Work and Environmental Health, 32:443-462.
31. UNEP and SETAC. (2016). Global Guidance for Life Cycle Impact Assessment Indicators, Volume 1.
32. UNEP and SETAC. (2017). USEtox 2.0 documentation, version 1.
33. US EPA. (2016). Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis.
34. Value Balancing Alliance (VBA). (2021). Methodology Impact Statement. Focus: Socio-economy.
35. Value Balancing Alliance (VBA). (2021). Methodology Impact Statement. Focus: Environment.

36. Value Balancing Alliance (VBA). (2021). Methodology Impact Statement. Extended Input-Output Modelling.
37. World Health Organization (WHO), (2008). Closing the gap in a generation: Health equity through action on the social determinants of health.
38. World Health Organization (WHO). (2006). Health risks of particulate matter from long-range transboundary air pollution. World Health Organization, Copenhagen, Denmark.
39. World Water Assessment Programme (WWAP). (2009). The United Nations World Water Development report 3: Water in a Changing World. The United Nations Educational Scientific and Cultural Organization. Paris, France and London, United Kingdom
40. Yan, Ru-yu. (2014). An Investigation into the Social Discount Rate from a Cost-benefits Analysis of Public Works. Public Finance Review, 43 (1), 149-162.