










2024 ESG Performance

TSRC integrated the company's long-term vision and core business goals to develop a specific blueprint framework for ESG strategy in the next decade. The framework is based on the main axis of "Strengthening Governance," "Enhancing Positive Social Impact," and "Promoting Environmental Protection," covering 9 major areas and 24 targets. They will be reviewed based on short-term (2023), medium-term (2025), and long-term (2030) milestones to actively strengthen the ESG performance of TSRC through a positive and practical attitude.

At the same time, considering the importance of ESG goals to company sustainability, TSRC incorporates key ESG objectives or actions into organizational performance goals and executive annual performance targets to motivate executives to achieve individual and organizational goals, thereby strengthening ESG performance. For setting performance targets for senior managers, please refer to the [FAQ for ESG](#) Page 3.

1. The Performance of Governance in 2024

	Corresponding Corporate Indicator for SDGs	★ Achievements in 2024	2024 Goals	2025 Goals	2030 Goals
 Strengthen Corporate Governance	SDG 17 Enhance risk & crisis management	<ul style="list-style-type: none"> Completed assessment and disclosure of climate-related risks and opportunities Integrated climate risk factors into risk management Reported material risk management mechanisms to the Board of Directors and disclosed the implementation status in the sustainability section of the Company's website 	 Refine climate risk management mechanisms, protection measures, and timely disclosure	Strengthen risk monitoring and improve operation management via digital management systems	Continuously improve risk management and crisis response mechanisms
	SDG 9 Build new sustainable business	Continue to evaluate investment opportunities into new business	 Continue to evaluate and develop new business investment opportunities	New businesses contribute $\geq 5\%$ of total revenue	New businesses contribute $\geq 10\%$ of total revenue
 Integrate Sustainability and Business Strategies	SDG 9 Develop innovation momentum	New products accounted for 18% of total revenue in 2024	 Continue developing new products	New products will account for $\geq 15\%$ of revenue	Continue increasing new product revenue share
	SDG 9 SDG 12 SDG 17 Enhance value of customized services [※]	Sales of easy-to-process synthetic rubber increased by 34.7% compared to 2021	 Increased the sales of easy-to-process synthetic rubber by more than 23% compared to 2021, and evaluated other solutions for customized services	Increase the sales of easy-to-process synthetic rubber by 20% compared to 2021, and pilot other new customized products or services	Increase the sales of easy-to-process synthetic rubber by 50% compared to 2021, and begin selling other new customized products or services
 Build Resilient Operations	SDG 17 Accelerate reduction of supplier's greenhouse gas emissions	Out of the top 50 suppliers in terms of annual procurement amount, 34 suppliers have conducted greenhouse gas inventories or have implemented greenhouse gas reduction targets, plans, and actions	 Promoted the reduction of greenhouse gas emissions by the top 50 suppliers in terms of annual procurement amount, and established targets and action plans	Promote the reduction of greenhouse gas emissions (by the top 50 suppliers in terms of annual procurement amount), and establish targets and action plans	Promote the reduction of greenhouse gas emissions from all suppliers, and establish targets and action plans
	SDG 17 Strengthen supply chain integrity	Global local procurement of raw materials reached 74% of total procurement spending, and we continued to seek out suitable suppliers for locally sourced renewable raw materials	 Global local procurement of raw materials will reach 70% of total procurement spending, and we developed suitable suppliers for locally sourced renewable raw materials	Global local procurement of raw materials will reach 75% of total procurement spending, and we will seek out suitable suppliers for locally sourced renewable raw materials	Global local procurement of raw materials will reach 80% of total procurement spending, and we will seek out suitable suppliers for locally sourced renewable raw materials

【Patent Results】

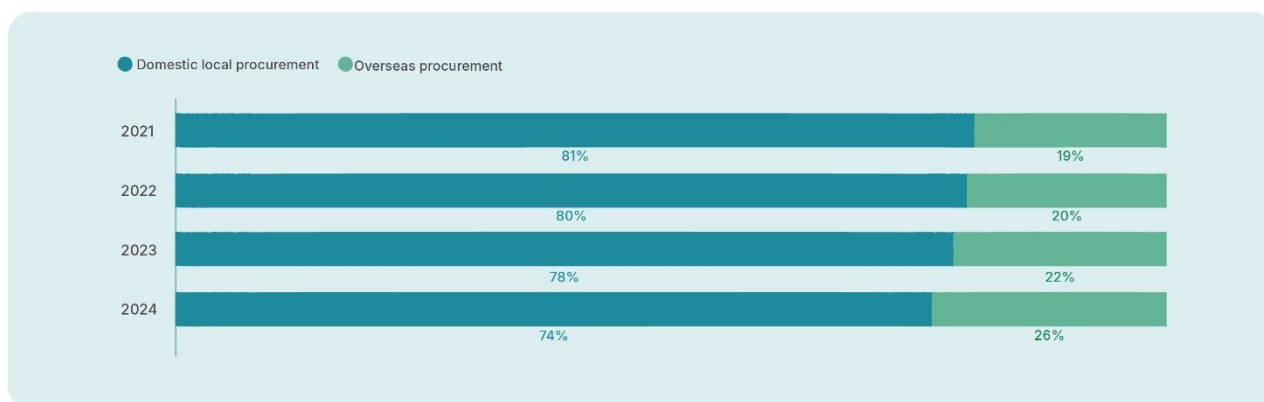
A total of 2 patents in 2024 were granted by a single country, and the TSRC developers has received patent rewards. In 2024, TSRC was granted 15 patents. As of the end of 2024, TSRC has applied for a total of 559 patents worldwide and 464 patents have been granted.

Patents and R&D Expenses over the Years



【Local Procurement Ratio of the TSRC Group】

In 2024, the green procurement of TSRC Corporation amounted to NT\$121,563,273. The Group's domestic local procurement accounted for approximately 74% of the total procurement in 2024.






Note 1: This table is calculated based on the procurement amount.

Note 2: "Local procurement" in this table refers to procurement in the country of the business location.

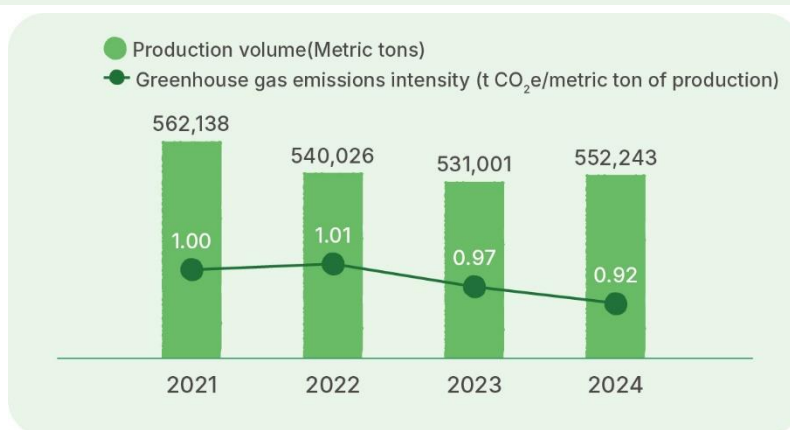
Note 3: This table includes TSRC Corporation and its six operating subsidiaries, excluding the two trading subsidiaries (Polybus Corporation Pte Ltd, TSRC (Lux.) Corporation S.à.r.l.).

2. The Performance of Environment in 2024

	Corresponding Corporate Indicator for SDGs	★ Achievements in 2024	2024 Goals	2025 Goals	2030 Goals
 Towards Carbon Neutrality	SDG 13 Reduce total carbon emissions (Scopes 1+2; Base year: 2021)	Total emissions reduced by 9.44% compared to base year	✓ Total carbon emissions reduced by 7.5% compared to base year	Total carbon emissions reduced by 10% compared to base year	Total carbon emissions reduced by 22.5% compared to base year
	SDG 7 Increase the use of renewable energy	Renewable energy accounted for 7.55% of total electricity consumption	✓ Renewable energy accounted for 7.5% of total electricity consumption	Renewable energy accounted for 10% of total electricity consumption	Renewable energy accounted for 30% of total electricity consumption
 Water Resource Optimization	SDG 6 Increase wastewater recycling	Increased wastewater recycling to 27% of total volume of wastewater	✓ Increase wastewater recycling to 26% of total volume of wastewater	Increase wastewater recycling to 36% of total volume of wastewater	Increase wastewater recycling to 40% of total volume of wastewater
	SDG 6 Increase reclaimed water utilization	Increased reclaimed water utilization to 23% of total water consumption	✓ Increase reclaimed water utilization to 23% of total water consumption	Increase reclaimed water utilization to 34% of total water consumption	Increase reclaimed water utilization to 40% of total water consumption
 Reduce the Carbon Footprint of Products	SDG 9 SDG 12 Develop eco-friendly products	Develop new-generation synthetic rubber for green tires/shoe materials to reduce carbon emissions by around 420,000 mt (calculation based on sales volume) Completed assessment of feasible plans for green foaming products. Developed various product applications, including using the material for production of slippers, shoe midsoles, and bra inserts, and provided these products to customers for evaluation and testing	✓ Develop new-generation synthetic rubber for green tires/shoe materials to reduce carbon emissions by around 350,000 mt ✓ Develop eco-friendly foaming products	Develop new-generation synthetic rubber for green tires/shoe materials to reduce carbon emissions by around 300,000 mt Develop eco-friendly foaming products that can be recycled	Develop new-generation synthetic rubber for green tires/shoe materials to reduce carbon emissions by around 1,500,000 mt Develop eco-friendly foaming products that use renewable materials and offer greater recyclability
	SDG 7 SDG 13 Product process optimization	Optimized the manufacturing process of TPE products and reduced the use of vapor, achieving carbon emissions reduction by 3,230 mt CO₂e in 2024 compared to 2022	✓ Optimize the manufacturing process of TPE products and reduce use of steam (total cumulative reduction of 2,130 mt CO₂e compared to 2022)	Optimize manufacturing process of TPE products to reduce electricity and energy consumption (total cumulative reduction of 3,230 mt CO ₂ e compared to 2022)	Reduce the electricity and energy consumption of TPE products (total cumulative reduction of 9,000 mt CO ₂ e compared to 2022)
	SDG 12 Use renewable materials ¹	Engaged in small-scale procurement from renewable materials suppliers	✓ Continue looking for suitable renewable raw material suppliers and expand customer demand	Renewable raw materials account for 5% of total raw materials procurement	Renewable raw materials account for 15% of total raw materials procurement
	SDG 9 SDG 12 Increase sustainable products ²	• Sustainable product portfolio accounted for 15.2% of total sales • Develop rTPE products that use post-consumer recycled (PCR) plastics as raw materials and obtain Global Recycled Standard (GRS) certification	Have the sustainable product portfolio account for 16.2% of total sales	Have the sustainable product portfolio account for 20% of total sales	Have the sustainable product portfolio account for 40% of total sales

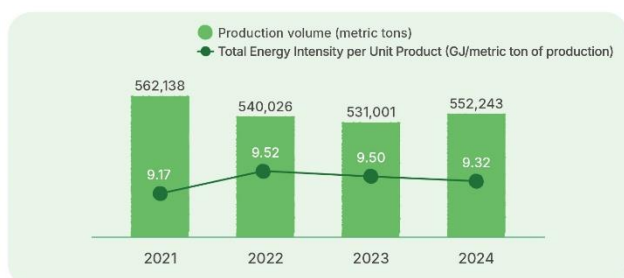
【GHG Emissions】

In 2024, TSRC's total Scope 1 and 2 GHG emissions were 507,782.71 tons CO₂e, a decrease of 9.44% from the 2021 baseline. TSRC did not use any carbon offset measures in 2024. The main reduction is due to the reduction of the power coefficient of non-renewable energy sources purchased in Scope 2, the use of installed solar power generation equipment, and increases to equipment energy efficiency. The Kaohsiung Factory, Shen Hua Chemical. and Nantong Industries achieved the most significant results. In 2024, TSRC's Scope 1+2 carbon emission intensity per unit product decreased slightly to 0.92 t CO₂e per metric ton of product compared to the base year of 2021.



【Energy Management】

TSRC Group's total energy consumption in 2024 was 5,145,114.47 gigajoules (GJ). While TSRC's production output in 2024 increased by 4.00% compared to 2023, energy consumption only increased by 2.04% compared to 2023. Energy intensity per metric ton of production was 9.32 GJ/metric ton, a decrease of 1.89% compared to the previous year, and showing an effective improvement to energy efficiency.



Note 1: Direct energy consumption includes: Bituminous coal, fuel oil, plant diesel, natural gas, liquefied petroleum gas (LPG), gasoline, and recycled butadiene. Bituminous coal and fuel oil were not used for the 2021-2024 period.

Note 2: Indirect energy consumption includes: Purchased electricity (including renewable and non-renewable), purchased steam, and self-generated electricity (including renewable).

Note 3: Total energy consumption = internal energy consumption = direct energy consumption + indirect energy consumption. Includes both renewable and non-renewable energy sources.

Note 4: Total energy intensity per unit product = total energy consumption (GJ) / production output (metric tons).

Note 5: The graph is rounded to the second decimal place.

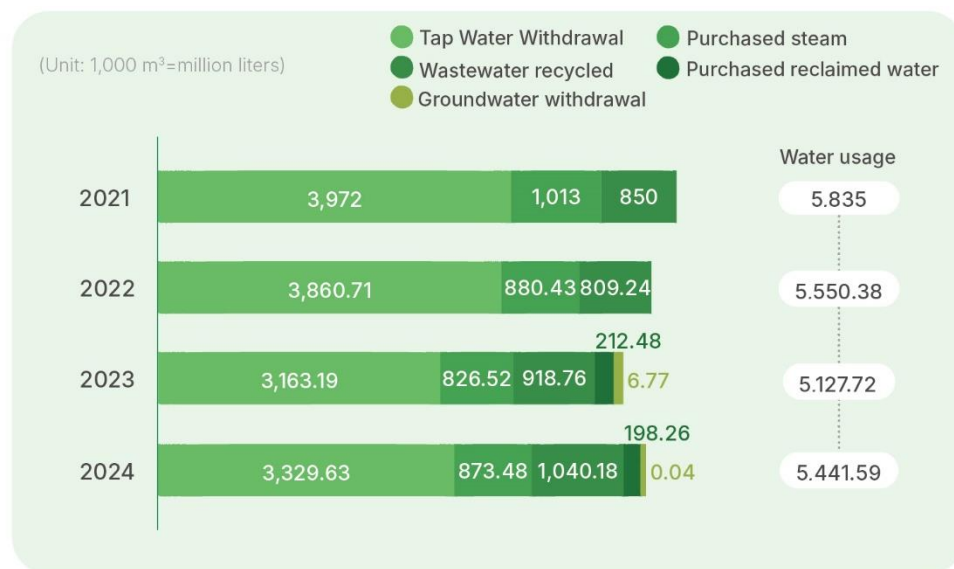
Note 6: The table uses the following conversion units:

• 1 kWh = 1 kWh; 1W = 1 Joule/second (J/S); 1,000 kWh = 1,000kW*3,600 seconds/hour = 3,600,000 KJ = 3,600 MJ

• For the 2023-2024 data, except for Nantong Industries and TSRC-UBE, which were calculated based on 2.96626 GJ of heat required to vaporize one metric ton of water, the other factories were calculated based on 2.26 GJ of heat required to vaporize one metric ton of water.

【Water Resource Management】

TSRC's total water usage in 2024 was 5,441.59 thousand cubic meters, an increase of 6.12% compared to 2023. Water consumption per unit product was 9.85 metric tons per metric ton of production, an increase of 2.04% compared to 2023. In 2024, the Kaohsiung Factory, Nantong Industries, and TSRC-UBE each optimized their factory facilities to reduce reliance on fresh water. In particular, the Kaohsiung Factory recycled and reused process wastewater, while Nantong Industries and TSRC-UBE reduced reliance on fresh water by increasing their wastewater recycling rate.



Note 1: Tap water withdrawal refers to freshwater supplied by the local water company ($\leq 1,000$ mg/L TDS). TSRC Kaohsiung Factory also draws groundwater.

Note 2: Water usage = Tap water withdrawal + Groundwater withdrawal + Purchased steam + Wastewater recycled + Purchased reclaimed water.

【Waste Management】

In 2024, TSRC generated total general industrial waste (including non-recyclable, reusable, and recyclable) weighing 3,854.79 metric tons, a 7.00% increase compared to 2023. Total hazardous industrial waste (including non-recyclable, reusable, and recyclable) weighing 2,086.47 metric tons was generated, a 5.99% decrease compared to 2023. The total weight of all generated waste was 5,941.26 metric tons, an increase of 2.05% compared to 2023. Overall, TSRC's waste per unit product in 2024 was 10.76 metric tons/thousand metric tons of product, a decrease of 1.88% compared to 2023.



【Environmental Investment & Capex】

In 2024, TSRC's capital expenditures on environmental projects for energy conservation, air pollution prevention, waste management, and water resource management reached NT\$228,433,066. Since some project expenditures in 2024 were for projects continuing on from 2023, expenditures for 2024 were overall slightly less than those for 2023. However, investments into energy conservation, carbon reduction, and air pollution reduction projects have continued to grow since 2021. Expenditures into energy conservation and carbon reduction projects for 2024 have increased by 94% compared to 2021, with expenditures on reducing air pollution increasing by 161%.

(Unit: NTD)

	2021	2022	2023	2024
Energy conservation and carbon reduction	61,124,785	65,585,801	82,634,999	118,818,631
Reduction of air pollution	38,273,072	57,672,813	87,427,700	99,756,543
Waste reduction	3,315,279	9,096,124	23,762,820	537,067
Improve water resources management	4,722,282	7,154,179	45,277,097	9,320,825
Total	107,435,418	139,508,917	239,102,616	228,433,066

TSRC's environmental performance in environmental management is as follows:

- **Energy Conservation and Carbon Reduction :**

1. TSRC is committed to promoting energy conservation and carbon reduction. All of our factories optimize their process operations and utility systems and invest in high-efficiency equipment as the main direction of carbon reduction, reducing electricity and steam consumption by replacing energy-consuming equipment, installing energy-saving devices, and installing steam extraction and heat recovery technologies. In 2024, we conserved a total of 2,250,308 kWh (8,101 GJ) of electricity, 1,999 metric tons (5,682 GJ) of steam, and reduced annual carbon emissions by 1,758 metric tons of carbon dioxide equivalent.
2. Using Renewable Energy: subsidiary Nantong Industries signed a contract with power suppliers to purchase green power and green power certificates, used 17,664,960 kWh of renewable energy and purchased 939,000 kWh of green power certificates in 2024. TSRC completed the installation of solar power generation facilities at its Kaohsiung Factory site at the end of 2023 and began using 1,589,505 kWh of solar power in 2024. TSRC achieved the target of 7.55% of total electricity consumption in 2024.


- **Air Pollution Prevention:**

TSRC will strengthen the management of volatile organic compounds (VOCs) by equipment upgrade, purchase of new equipment, process improvement and regular inspection to reduce VOCs emissions.

- **Waste Management:**
 1. Waste Reduction at Source: By optimizing the process control, the conversion rate will be improved. By increasing the sampling analysis, the process conditions will be more accurate and the waste and by-products will be reduced.
 2. Waste Recycling (Off Site): TSRC actively cooperates with waste disposal companies to convert the waste into resources. A total of 67.087 tons waste rubber were recycled in 2023.
- **Water Resource Management:**

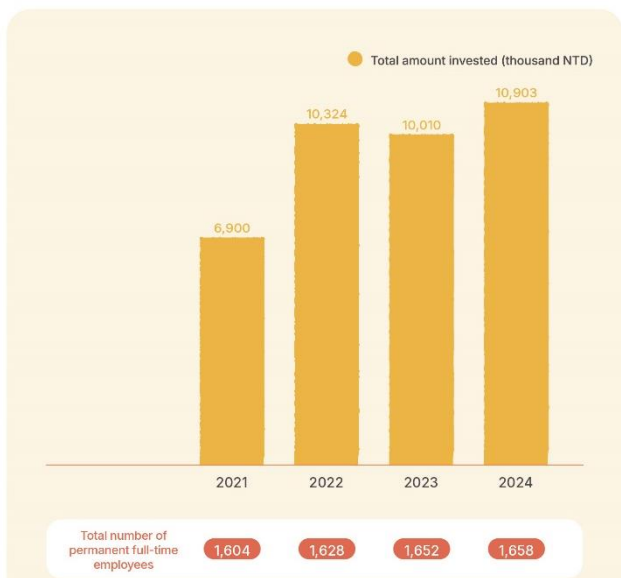
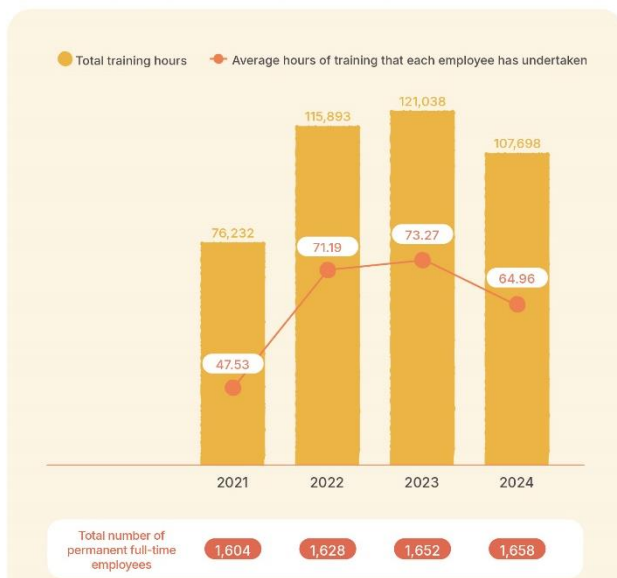
TSRC has strengthened water recycling measures and increased the circulation of water resources in factories in recent years. In 2024, the overall wastewater recycling rate was 27%, and the reclaimed water usage rate of 23%.

3 The Performance of Society in 2024

	Corresponding Corporate Indicator for SDGs	★ Achievements in 2024	2024 Goals	2025 Goals	2030 Goals
 Strengthen the Organization's Sustainability Capabilities	 SDG 8 SDG 17 Enhance organization-wide ESG development and employee competency	<p>Since 2022, 907 employees have been trained under training projects</p> <ul style="list-style-type: none"> Adopted a carbon management system Completed implementation of the LMS - TSRC Group Online Learning Management System Continued building relationships with suppliers of ESG information systems and maintained discussions with suppliers on detailed system requirements 	 Provide multifaceted competency training to 850 cumulative employees since 2022	Improve the organization's ESG development and provide multifaceted competency training to 950 employees ^{***}	Improve the organization's ESG development and provide multifaceted competency training to 1,500 employees
	 SDG 17 Sustainable collaboration programs with business partners or outside institutions	<ul style="list-style-type: none"> Participated in the annual Chem Career job fair for the chemicals industry organized by National Taiwan University, and engaged in exchanges with university students and newcomers on chemical product applications and the industry Collaborated with the Youth Bureau, Kaohsiung City Government to invite young students to visit the TSRC Kaohsiung Factory Participated in the 2024 KPMG Leadership Forum, where the CEO attended as a speaker, and exchanged and shared our industry sustainability experience with senior executives, directors, supervisors, and accountants from other TWSE/TPEX-listed companies in various sectors 1,907 participants in total attended the activities above 	 Achieve ≥800 participants (cumulative) for academic or technology exchange with business partners or outside institutions	Achieve ≥1,000 participants (cumulative) for academic or technology exchange with business partners or outside institutions	Achieve ≥5,000 participants (cumulative) for academic or technology exchange with business partners or outside institutions
 Improve Health, Safety & Wellbeing of Employees	 SDG 8 Enhance global workplace safety in the global operating environment	Achieved Total Recordable Incident Rate (TRIR) of 0.11	 Achieve TRIR ≤0.3	Achieve TRIR <0.3	Achieve TRIR <0.3, and achieve at least one year with zero recordable injuries
	 SDG 8 Strengthen employee engagement	<ul style="list-style-type: none"> The 2024 Employee Engagement Survey found an employee approval rate of 80.8% Achieved an Employee Net Promoter Score (eNPS) of 16.2% in 2024 (increase of 12.6% compared to 2023) 	 Achieve approval rate of 72% in the Employee Engagement Survey	Achieve approval rate of 72% in the Employee Engagement Survey	Achieve approval rate of 75% in the Employee Engagement Survey
	 SDG 3 SDG 8 Enhance employee physical and mental care	Organized physical and mental health activities or lectures, with a total of 4,541 participants (cumulative) since 2022	 Have ≥800 employees (cumulative) participate in physical and mental health activities or lectures	More than half of all global operating sites provide physical and mental consulting services	Have all global operating sites provide physical and mental consulting services
 Enhance Social Engagement	 SDG 17 Support environmental protection and social care programs	≥1,471 volunteers (cumulative) have participated in social care or environmental protection activities among global employees since 2022	 ≥450 volunteers (cumulative) for social care or environmental protection activities among global employees	≥600 volunteers (cumulative) for social care or environmental protection activities among global employees	≥1,000 volunteers (cumulative) for social care or environmental protection activities among global employees
	 SDG 9 SDG 17 Promote science sustainability education programs	Organized scientific events which attracted a total of 779 participants (cumulative)	 Organize scientific events which attract ≥150 total participants (cumulative)	Organize scientific events which attract ≥300 total participants (cumulative)	Organize scientific events which attract ≥1,000 total participants (cumulative)

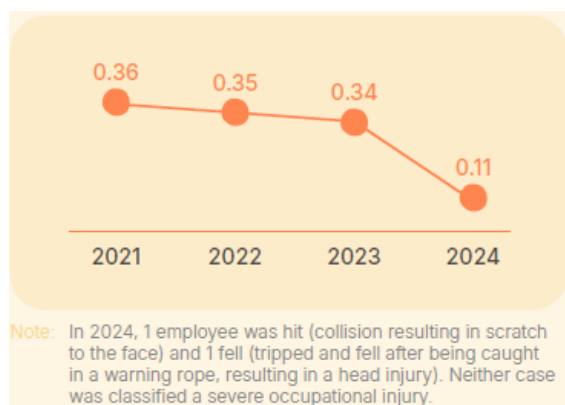
【Employee Training Hours】

In response to rapid market and environmental changes, TSRC has actively invested in employee education and training resources, and implemented training projects. In 2024, the total amount invested into employee training increased by 8.92% compared to the previous year.



【Employee Total Recordable Incident Rate】

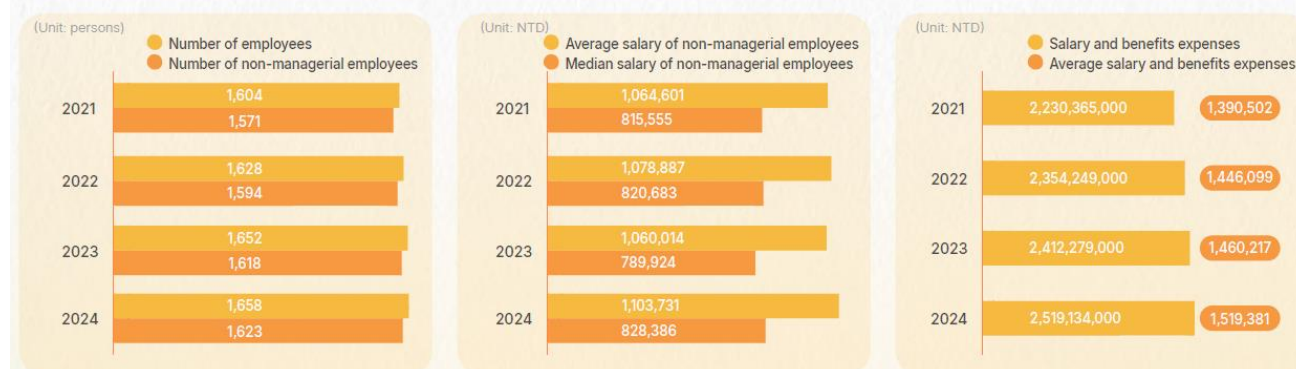
TSRC adopts the Total Recordable Incident Rate (TRIR) as a management indicator to monitor global operational safety. In 2024, 2 occupational injuries occurred among TSRC employees. The TRIR of all TSRC employees was 0.11, which had been decreasing for four consecutive years and reached the management target for 2024. (≤ 0.3).



【Employee Remuneration】

Employee compensation and benefits of the TSRC Group reached NT\$2,519,134,000 in 2024, up 4.4% compared to 2023. Average compensation and benefits expenses significantly increased to NT\$1,519,381, slightly higher than 2023. TSRC continues to provide competitive compensation and benefits associated with the annual earning to attract and retain outstanding talent for innovation.

Salary and Benefits



【Employee Surveys】

Organization Thermometer Survey	Employee Engagement Survey ^{Note}
<p>We derive an employee net promoter (eNPS) based on the survey results in order to gauge how our employees currently feel towards the Company. This score is used as a reference indicator for observing how the organization's atmosphere changes.</p> <p>Survey frequency Once a year</p> <p>Scope of survey All TSRC employees worldwide</p> <p>Implementation results The response rate in 2024 increased by 1.8% compared to 2023, while the employee net promoter score was 16.2% (up 12.6% compared to 2023).</p>	<p>Through surveys, are able to understand the current work situations faced by our employees, discovering potential challenges and issues with work. For areas with lower scores, the HR team has collaborated with functional units to promote continuous improvements and formulate plans to enhance employee engagement, closely tracking progress and results to strengthen organizational team cohesion.</p> <p>Survey frequency Once every two years</p> <p>Scope of survey All TSRC employees worldwide</p> <p>Implementation results A total of 1,479 people participated in the survey in 2024, with the survey participation rate reaching 89.7%, and the survey agreement rate reaching 80.8% (up 7.0% compared to 2022).</p> <p><small>Note:</small> Starting from 2024, the name of the survey was changed to the Employee Engagement Survey, and survey frequency was adjusted from once every three years to once every two years, allowing us to better care for and understand our employees.</p>