

The cover features a dark grey background on the left and a vibrant lime green area on the right, separated by a diagonal line. A dynamic, multi-colored streak (blue, cyan, purple) flows from the bottom left towards the center. Thin, white, curved lines are scattered across the dark grey background.

LCY

2023 ESG Report

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About this Report

This is the fifth ESG Report of LCY Chemical Corp. The report, which follows the GRI standards, covers the actions taken by LCY Chemical Corp. and its affiliated business units (hereinafter referred to as LCY) from January 1, 2023 to December 31, 2023, highlighting its commitment to ESG principles. LCY will continue to publish the ESG Report every one to two years, with downloadable versions in Chinese and English available on LCY's official website.

Reporting Period

- Date of 1st publication: August 2012 (CSR Report)
- Publication date of the last report: December 2023
- Publication date of the current report: December 2024

Reporting Scope

The financial figures in this report correspond to the financial data boundary in the consolidated financial report of LCY and are presented in New Taiwan Dollar (NT\$). Information disclosed related to the governance, environmental and social aspects of this report cover the Taipei Office, the Nanzih R&D Center, the factories in Taiwan (Dashe, Kaohsiung, Copper Foil, Xiaogang and Linyuan Plants), the Kaohsiung Terminal Station and the three factories in China (Huizhou, Zhenjiang and AR Plants), as well as the Baytown Plant in the US. Any discrepancies in the scope of reporting are explained in detail in the report. Related financial information for LCY Biosciences Inc. in Sarnia, Canada is not yet material and is therefore excluded from the 2023 non-financial disclosures. The Central Taiwan Science Park (CTSP) Branch in Huwei Township, Taiwan, which focuses on electronic-grade materials, is under construction and is not included in the financial and sustainability information collected in the 2023 Report.

Reporting Standard & Third-Party Assurance

This report follows GRI Standards, SASB Standards and TCFD recommendations. The assurance engagement was performed by DNV Business Assurance Co., Ltd. in accordance with the DNV VeriSustain™ Protocol. The independent assurance statement is included in the Appendix.

Guideline/Standard	Organization
GRI Standards -	Global Sustainability Standards Board, GSSB -
Sustainability Accounting Standards - Chemicals	Sustainability Accounting Standards Board (SASB)
Task Force on Climate-Related Financial Disclosures (TCFD) -	Financial Stability Board (FSB) -

● Please see the Appendix for the GRI Index, SASB Index, and TCFD Index

Material Changes

In response to the Chinese government's implementation of the Yangtze River Protection Law, which mandates the strict transformation of factories along the Yangtze River, LCY's Zhenjiang Plant ceased methanol solvent production and related sales activities at the end of 2022. Since then, the Zhenjiang Plant has only maintained activities related to the production and sales of electronic-grade solvent purification. The CTSP Preparatory Office (CTSP Branch/Huwei Township, Taiwan) was established in 2022; the CTSP Branch is under construction from 2023-2024.

Material Changes in ESG Disclosure

Disclosure Standards	Adopted GRI 1: Foundation 2021
Analysis of Material Topics	Inclusion of GRI 3: Material Topics 2021. The report follows the ten material topics that were re-identified in 2022. For more details, please see "Identifying Stakeholders & Material Topics."
Disclosure Scope	The financial data boundary is based on the boundary of LCY's consolidated financial statements, while the information collection boundary for sustainability issues is based on the operating locations listed in the reporting scope.

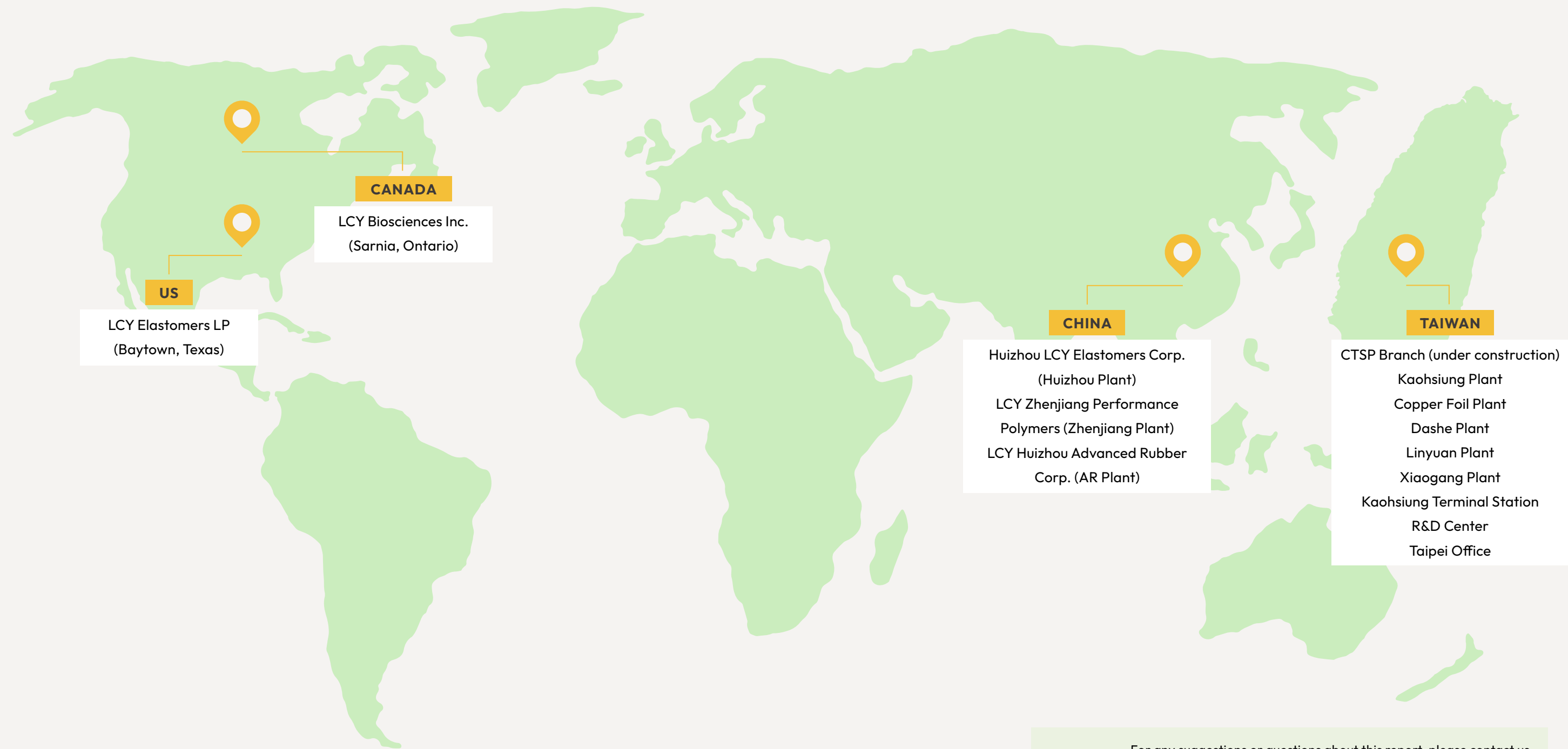


OUR PURPOSE

REIMAGINING SCIENCE FOR A
THRIVING TOMORROW

Locations

LCY Service Locations



For any suggestions or questions about this report, please contact us.



LCY Public Relations and Deputy Spokesperson Anya Ku
Email: anya.ku@lcygroup.com
Phone: 02-2763-1611#110363
Taipei Office: 3F., No. 85, Sec. 4, Bade Rd., Songshan Dist., Taipei
City 105, Taiwan
Website: www.lcycic.com

Message from the Chairman

2023: A Year of Innovation and Prosperity

As a key global industry leader, LCY understands the importance of leading by example. In recent years, we have been actively pursuing sustainable transformation, moving beyond the traditional image of the chemical industry. Our goal is to meet clients' needs through scientific innovation while demonstrating our commitment to sustainability. 2023 is a pivotal year for LCY's transformation and legacy. Under the flagship brand "One LCY", we have reframed our business strategy into three segments and redefined five business units. Our focus is on meeting the needs of our clients by providing comprehensive solutions. In addition, the strengthened collaboration between LCY and our external partners underscores our deep commitment to society and drives further innovation for a thriving tomorrow.

Redefining Three Business Strategy Segments and Five Business Units

As LCY welcomes our corporate transformation, our services will not only focus on providing materials but also a more comprehensive set of solutions. We believe providing diverse and holistic service options can collectively drive a thriving tomorrow. As a part of the transformation, we revisited the internal business unit structure and reframed the business strategy segments as follows: Semiconductor & Interconnect, Performance Polymers & Materials, and Sustainable Technology. The strategy segments extend down to Electronics Materials, Performance Polymers, Elastomers Solutions, Industrial Solutions, and Biosciences & Nutrition Solutions.

Low-Carbon Innovation and International Certifications

In this reorganization, we have strengthened the incorporation of the circular economy. As global demand for recycled materials from end-user companies continues to rise significantly, we believe this demand will become a core competitive advantage for LCY. LCY's Performance Polymers BU has broken traditional boundaries by innovatively developing modified circular polypropylene materials. This advancement ensures that polypropylene is no longer a single-use material but part of a circular economy. By collaborating with third-party recycling companies, we enable a circular economy where products made from our materials can be reused, repaired, and recycled after entering the consumer market, before finally returning to the production process once again.

On the other hand, LCY has achieved low-carbon innovation in high-rebound shoe materials by streamlining the shoe manufacturing process to reduce overall carbon emissions. LCY places great importance on actively reducing the use of petrochemical raw materials, achieving a 10-20% reduction in carbon emissions compared to traditional processes. Additionally, LCY is integrating the ISCC PLUS certification system to offer more environmentally friendly and sustainable options for customers.

Internationally Recognized Commitment to Carbon Neutrality

In terms of governance, LCY updated its carbon reduction goals in 2023. Using 2019 as the baseline year, the company successfully reduced carbon emissions by 24% as of 2023, and plans to achieve a 30% reduction by 2030. In addition, LCY is actively promoting the procurement of

green electricity, with the goal of achieving 15% green electricity usage by 2030. In 2023, LCY joined the ISCC PLUS international certification system, with all products expected to be certified by Q3 2023. ISCC PLUS certifies that LCY's raw materials come from biomass sources, thus contributing to sustainable development.

Meanwhile, LCY received a SER rating of A- in CDP's 2023 Supplier Engagement Rating Report, which is in the Leadership band. LCY performed exceptionally well in the Governance, Scope 3 Emissions (including verification), Overall CDP Climate Change Score, and Supplier Engagement scoring categories, outperforming the average C-level performance of the electrical and electronic equipment industry and the Asia region across all industries.

People-First Philosophy and Embracing the Five Core Values

At LCY, we value the collective growth and progress of our people and our company. Throughout the branding process, we have reaffirmed and emphasized our five core values: safety & health, integrity, accountability, kaizen, and co-creation.

- Safety & health: At LCY, we create a people-first culture by prioritizing safety above all else.
- Integrity: At LCY, we strive to do what's right.
- Accountability: At LCY, everyone incorporates ownership. We value actions, take actions promptly, and go the extra mile.
- Kaizen: At LCY, we continuously strive to be the best in class.
- Co-creation: At LCY, we believe selfless sharing leads to innovation.

Among these, "Safety & Health" is the most important pillar of our company. We believe that while property can be measured in value, life and health are priceless. Life and health are worth

every effort to protect by all LCY employees. Therefore, we maintain strict internal standards and extend our safety and health principles to our partners and contractors. In doing so, we aim to maximize the impact of these principles and fulfill our social responsibility as an industry leader.

Our Commitment to the Environment and Sustainable Development

Looking ahead to 2024, LCY will undergo a corporate-wide scientific transformation, evolving from a traditional chemical company to a science-driven company dedicated to environmental stewardship and sustainable development. We will continue to innovate to offer more sustainable and green solutions that meet market demands. By collaborating with domestic and global partners, we aim to introduce advanced technologies, strengthen our workforce, and enhance skills and competitiveness. LCY is committed to social and global environmental stewardship while pursuing economic returns. At LCY, we reimagine science for a thriving tomorrow, catalyzing innovation for a better future.



Chairman
Tsai-Hsing Hung

A stylized, handwritten signature in black ink, likely reading "Tsai-Hsing Hung".

Identifying Stakeholders & Material Topics

Stakeholders (Stakeholder Communication Channels)

LCY’s ESG Sustainability Strategy Committee (ESG SSC) has conducted internal meetings to evaluate company operations and referenced the AA1000 Stakeholder Engagement Standards 2015 (AA1000 SES2015) to, thereby, identify

nine major stakeholders: employees, customers, government agencies, communities, suppliers, investors, banks, the media, and academic institutes. LCY has collected feedback from all major stakeholders to understand their concerns and respond to their needs.



Risk Categories and Audit Mechanism

Stakeholders	Communication Channel	Frequency	Topics of Concern
Employees	Labor-management meetings	Quarterly	• Information Security & Data Protection • Business Ethics & Transparency • Management of the Legal & Regulatory Environment • Occupational Safety & Health • Employment
	Employee Welfare Committee	Quarterly	
	Occupational Safety and Health Committee	Quarterly	
	Internal announcements: Emails, posters, digital bulletins	When necessary	
Customers	Product consultation	Project-based	• Business Ethics & Transparency • Supply Chain Management • Hazardous Waste Management • Management of the Legal & Regulatory Environment • Occupational Safety & Health

Government Agencies	Official correspondences	When necessary	• Chemical & Environmental Management • Occupational Safety & Health • GHG Emissions • Hazardous Waste Management • Business Ethics & Transparency
Communities	Meetings	When necessary	• Chemical & Environmental Management • Air Quality • Green Products • Hazardous Waste Management • Community Relations
	Factory visits for visitors including local residents and school groups	When necessary	
Suppliers	Audits for existing suppliers	When necessary	• Hazardous Waste Management • Chemical & Environmental Management • Business Ethics & Transparency • Occupational Safety & Health • GHG Emissions
	Reviews for existing suppliers	Annually	
Investors	Annual shareholders’ meeting (1)	Annually	• Supply Chain Management • Business Ethics & Transparency • Management of the Legal & Regulatory Environment • Occupational Safety & Health • Hazardous Waste Management
	Investor conference (1)	Annually	
	Financial performance report	Twice a year	
	Sustainability report	Annually	
Banks	Meetings	Annually	• Chemical & Environmental Management • Energy Management • Green Products • Business Ethics & Transparency • Management of the Legal & Regulatory Environment
Media	Interviews (personal, written, phone)	When necessary	• Hazardous Waste Management • Chemical & Environmental Management • Green Products • Energy Management • Water Management
Academic Institutes	Meetings Factory visits for external visitors including school groups LCY Education Foundation scholarships & events	When necessary	• Green Products • Employee Training, Human Rights, Diversity & Equal Opportunities • Chemical & Environmental Management • Air Quality • Water Management

● (1) The subsidiary LCY Technology Corp. (LCYtech) is a listed company. The annual shareholders’ meeting and investor conference refer to that of LCYtech.

Identification & Disclosure of Material Topics

LCY continues to keep a pulse on global sustainable development trends. To identify the following list of material topics relevant to LCY, we referred to the GRI Standards published by Global Reporting Initiatives (GRI) and the guidelines for the chemical sector set forth by the Sustainability Accounting Standards Board (SASB) for material topics of concern. In addition, we also looked at international sustainability ratings and industry benchmarks. In 2022, we re-evaluated material topics through our identification process, which

was confirmed by our ESG Sustainability Strategy Committee (ESG SSC). For this identification process, a total of 262 stakeholders were invited to fill out a survey, and a total of 224 valid survey responses were recovered. This report elaborates on the policies and relevant actions of these topics in corresponding chapters based on their relevance. LCY will regularly evaluate material topics every two to three years. During this period, LCY will continue to collect and respond to stakeholder feedback and suggestions through diverse communication channels.

Identification Process



Confirm List of Material Topics

- Produced a list of material topics relevant to LCY according to international sustainability ratings; SASB’s governance, environmental, and social requirements for the chemical sector; and sustainability issues important to leading chemical companies recognized by the DJSI.
- Changes to the list of material topics include the addition of four topics: Information Security, Data Protection, Business Ethics and Transparency, and Biodiversity; as well as the merging of three topics with similar impacts on LCY: Human Rights, Training and Education, and Workforce Diversity and Equality. LCY currently has 17 material topics.



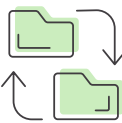
Investigate Level of Stakeholder Concern

- Conducted a survey to understand the level of stakeholder concern, which was issued to 262 stakeholders. We recovered a total of 224 valid survey responses, including 29 from management-level employees in our company.
- Responses from senior executives on the reliance/communication frequency of stakeholder groups and impact level were weighed to produce a score on the level of stakeholder concern, which helped determine the y-axis of the materiality matrix.



Analyze Operational Importance and Value Chain Impact of Material Topics

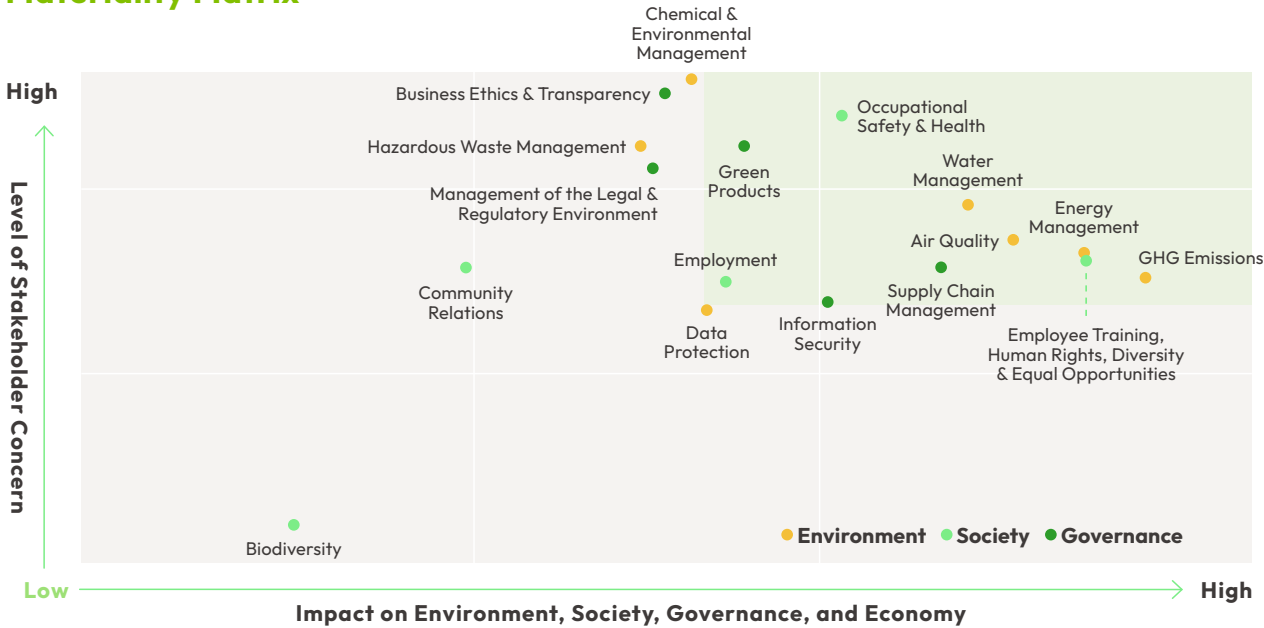
- Analyzed the impact of material topics on LCY’s operations and value chain according to “Likelihood of Impact” and “Significance of Impact on Economy, Environment, and People (incl. Human Rights)” with the help of 41 LCY employees and 29 management employees. Their responses were used to produce a score on the material topic’s impact, which helped determine the x-axis of the materiality matrix.



Confirm Materiality Matrix

- ESG SSC confirmed 10 material ESG topics based on materiality analysis outcomes and presented the list to the chairman and CEO. Then, disclosed internal information, data, and policies according to reporting guidelines.

Materiality Matrix



Explanation of Material Topics and Its Boundary

Material Topics Note	Significance to LCY	Significance of Impact			Potential Impacts from LCY & Value Chain on Economy, Environment, and People (incl. Human Rights)	Related Topic(s)		Major Policies (Related Chapters)
		Suppliers	LCY	Customers		SASB	GRI	
E GHG Emissions	Increasing global emphasis on climate change, stricter control imposed by government regulations, and impacts from the upcoming CBAM in the EU and carbon fees in Taiwan mean that GHG emissions and energy management will now have financial implications beyond existing environmental impacts. GHG emission audits, energy audits, and reducing energy consumption and GHG emissions have become essential tasks on LCY’s journey towards sustainable operations and enhanced resilience.	○	●	○	GHG emissions lead to environmental impacts such as climate change and global warming. In addition, as governments begin to impose carbon fees and taxes on GHG emissions, companies may face additional operating costs, resulting in economic and financial impacts. When companies work with their value chain partners to implement reduction measures, they can effectively mitigate environmental impacts and improve the reputation of the company and its value chain.	GHG Emissions RT CH 110a.1 RT CH 110a.2	305: Emissions	3.3.1 Carbon Management
E Energy Management			●	○	Anomalies in the power or energy supply can disrupt the operation of prevention and control equipment and have environmental implications. Additionally, such disruptions can lead to halts in production, erode customer confidence in placing orders, result in financial losses for the company, and adversely impact the company’s reputation.	Energy Management RT CH 130a.1	302: Energy	3.3.2 Energy Management

● Direct Impact ○ Indirect Impact
● Note: The order of material topics is based on stakeholders’ scores from highest to lowest

Material Topics ^{Note}	Significance to LCY	Significance of Impact			Potential Impacts from LCY & Value Chain on Economy, Environment, and People (incl. Human Rights)	Related Topic(s)		Major Policies (Related Chapters)
		Suppliers	LCY	Customers		SASB	GRI	
S Employee Rights, Diversity & Equal Opportunities	Strengthening corporate competitiveness and building a strong team are critical to achieving development goals and supporting growth on an operational scale. Employees are our most valuable assets. We prioritize safeguarding their interests by preventing injuries and promoting good health. We value human rights and provide comprehensive training and career development opportunities.		●		A robust training mechanism, a human rights-oriented environment, diversity, and equal development opportunities can attract more talented individuals to join the company. This not only improves employee morale and teamwork but also enhances the company’s overall creativity and provides opportunities for operational growth.	-	404: Training and Education 405: Diversity and Equal Opportunity 412: Human Rights Assessment	4.1 Human Rights Policies 4.4.1 Talent Cultivation Policies
S Employment	We are committed to diversity and equal opportunities, ensuring that employees have room for growth in both their professional and personal lives.		●	○	A lack of emphasis on employee welfare and a lack of communication channels for employees can lead to labor disputes, which subsequently affect company operations and lead to financial losses.	-	401: Employment	4.3 Employee Welfare
E Air Quality	Failure to properly manage pollutants generated during manufacturing processes may impact surrounding environments. In 2015, Taiwan launched phase one of the “Kaohsiung-Pingtung Air Quality Total Quantity Control Plan.” Failure to comply with the total quantity control requirements may lead to impacts on company operations.		●		Improper operation or malfunctions in air pollution control facilities that result in the emission of pollutants exceeding regulatory standards may have negative impacts on the environment. This not only subjects the company to potential penalties but also jeopardizes its reputation, leading to financial losses.	Air Quality RT CH 120a.1	305: Emissions	3.4.1 Air Quality Policies
E Water Management	In recent years, climate change has severely impacted our planet, with growing reports of heavy rainfall and droughts around the world. Water risks may have serious impacts on company operations. Effective water management is therefore a critical task for sustainable operations.		●	○	Anomalies in water supply may potentially impact production capacity, leading to a halt in production. This, in turn, can erode customer confidence in placing orders, result in financial losses for the company, and adversely affect the company’s reputation.	Water Management RT CH 140a.1 RT CH 140a.2 RT CH 140a.3	303: Water and Effluents	3.5.1 Water Policies
G Supply Chain Management	To ensure the sustainable operation of our supply chain, we employ Environmental Standards to screen new suppliers and assess the entire supply chain. We require suppliers to collaboratively establish environmental, health, and safety (EHS) management systems, and to adhere to ethical practices such as anti-corruption and anti-bribery measures. This is aimed at minimizing potential impacts on the environment and society.	●	●	○	Disrupted supply chains and inconsistent raw material quality can result in limited production capacity and products that do not meet standards. This can lead to financial losses and loss of customer confidence. Implementing effective supply chain management to maintain sustainable operations can stabilize the company’s long-term performance, ensuring production continuity and boosting customer confidence, thereby yielding positive financial benefits.	-	308: Supplier Environmental Assessment 414: Supplier Social Assessment	1.4.2 Supply Chain Management Procedures

Material Topics ^{Note}	Significance to LCY	Significance of Impact			Potential Impacts from LCY & Value Chain on Economy, Environment, and People (incl. Human Rights)	Related Topic(s)		Major Policies (Related Chapters)
		Suppliers	LCY	Customers		SASB	GRI	
S Occupational Safety & Health	Potential risks to occupational safety and health in production processes or factory environments, if not controlled, can lead to injuries, fatalities, and other hazards. Ensuring workplace safety, creating safe, healthy, and comfortable labor environments, and continuously reducing occupational incident rates are priorities for safe operations.	○	●		Failure to implement safety regulations can result in workplace accidents, illnesses, and subsequent impacts on production and operations, resulting in financial losses.		Workforce Health & Safety RT CH 320a.1 RT CH 320a.2 Operational Safety, Emergency Preparedness & Response RT CH 540a.1 RT CH 540a.2	4.5.1 Occupational Safety Management
G Information Security	To safeguard sensitive data within the company, as well as data exchanged with customers and the supply chain, information security has become a crucial aspect of sustainable development. Failures in information security management may result in operational losses for the company and could even impact long-term competitive research and development capabilities.	○	●	○	Cyberattacks, employees inadvertently clicking on malicious links that download malware, or external uploading of confidential company information can result in the exposure of proprietary company information. This could affect the company’s technological competitive advantage and lead to financial losses.	-	418: Customer Privacy	1.5.1 Information Security Policies
E Green Products	Actively reducing environmental impact throughout all stages of a product’s life cycle and creating economic value for customers are crucial steps for the upstream industry chain in achieving a sustainable chemical future.	○	●	●	Commitment to improving existing processes, developing green products, and fostering collaboration with value chain partners can provide innovative business opportunities in the face of climate change. This approach reduces environmental impacts throughout the value chain, generates positive financial outcomes, and enhances the company’s reputation.		Product Design for Use-phase Efficiency RT CH 410a.1	301: Materials 303: Water and Effluents 2.1.1 Innovative Management 2.2.1 LCY’s Sustainability 6R

● Direct Impact ○ Indirect Impact
 ● Note: The order of material topics is based on stakeholders’ scores from highest to lowest

2023 LCY ESG Material Topic - Metrics and Targets

● The original 3-year mid-term targets have reached their completion. New short/medium/long-term targets have therefore been established.

Category	Metrics ^{Note 1}	Long-term: 2030 Targets	Mid-term: 2027 Targets	Short-term: 2024 Targets
GHG Emissions	Reduction of GHG emissions compared to the baseline	30% “Net Zero 2050” target for the group	25%	8%
Energy Management	Reduction of energy intensity (consumption per unit of product) compared to the baseline	8%	5%	2%
	LCY Taiwan plants will use a certain percentage of renewable energy	15% (RE15)	N/A ^{Note 2}	1.2%
Green Products	Annual sales of solvent recycling services	↑66%	↑48%	↑30%
	Growth rate (%) of total water recovery from the use of MBR products in the market	↑1,160%	↑800%	↑250%

● Note 1: This year marks the first time that environmental indicators for air quality, water management and waste have been examined. The original outcome-based indicators (subject to multiple variables) did not accurately reflect the true underlying context. Therefore, it was decided to reconsider and establish new action-based indicators that will be defined in the coming year.

● Note 2 : Make the necessary evolving adjustments based on the green energy procurement strategies of each plant and business unit.

Category	Metrics	Long-term: 2050 Targets	Mid-term: 2030 Targets	Short-term: 2024 Targets
Talent Cultivation & Diverse Culture	Increase employee satisfaction	90% employee satisfaction	Departments should make 50% progress on items uncovered from the previous survey	Each BU to submit 100% of improvement actions based on the 2024 survey results.
	Increase employee performance in the workplace	>70% EAP coverage	>60% EAP coverage	100% EAP coverage in Taiwan area
	Strengthen the company’s competitiveness	Complete 90% of the talent pipeline for middle and senior management in LCY locations in Taiwan and around the world	Complete 80% of the talent pipeline for middle and senior management in LCY locations in Taiwan and 80% of the talent pipeline for senior management in LCY locations around the world	Complete 70% of the talent pipeline for senior management in LCY locations in Taiwan
	Strengthen equality	Ensure women account for 30% of middle or senior management in LCY locations around the world	Ensure women account for 20% of middle or senior management for LCY locations in Taiwan	Ensure women account for 15% of middle or senior management for LCY locations in Taiwan

2023 ESG Highlights



Governance

46.3 billion

NT\$46.3 billion in consolidated revenue in 2023

Consolidated Revenue

12%

Green Revenue

Revenue from green products reached NT\$5,370,958,000, accounting for 12% of overall revenue.(Several new 6R products were introduced in 2023, such as those made from 100% recycled copper)



Environmental

↓16.7%

Carbon Emissions

Carbon emissions from LCY locations in Taiwan, China, and the US decreased by 25.1% compared to the baseline (2019), and 16.7% compared to the previous year (2022).

↓10.9%

Energy Consumption

Energy consumption from LCY locations in Taiwan, China, and the US decreased by 10.9% compared to the previous year (2022).

↓24%

NOx Emissions

Total NOx emissions from LCY locations in Taiwan, China, and the US decreased by 24% compared to the previous year (2022).

↓11%

SOx Emissions

Total SOx emissions from LCY locations in Taiwan, China, and the US decreased by 11% compared to the previous year (2022).

↓14%

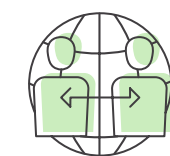
PM Emissions

Total PM emissions from LCY locations in Taiwan, China, and the US decreased by 14% compared to the previous year (2022).

↑5.42%

Recycled Water

Recycled 6.89% (326,010 tons) of water from LCY locations in Taiwan, more than 2022’s 5.42%.



Social

515

Flu Vaccinations

A total of 515 employees voluntarily received flu vaccinations, which were fully subsidized by LCY; the vaccination rate is 21% higher than the previous year.

17%

Master’s Degrees

17% of all employees hold a master’s degree or higher, reflecting a 1% increase from the previous year (2022).

100%

Retention Rate

92% return rate and 100% retention rate after parental leave.

100%

Employee Health Screening

Achieved 100% participation rate in employee health screenings in 2023 and; a 100% participation rate across all LCY operational sites in Taiwan in cancer screenings/government-subsidized four cancer screenings conducted by the Health Promotion Administration.

STRONG SUSTAINABLE GOVERNANCE

- Supply Chain Management
- Information Security



We are dedicated to establishing a robust corporate governance system, adhering to laws and regulations at all locations, and implementing honest and ethical business practices. Our commitment is to foster a corporate culture rooted in integrity and accountability. We will continue to uphold the highest standards of business integrity at the operational level while developing an effective governance mechanism. Our goal is to serve the long-term interests of the company and its shareholders while fulfilling the group's social responsibilities. In 2023, the impact of the post-pandemic environment and the broader economic challenges in the petrochemical industry led to decreased sales volumes and lower prices. As a result, LCY reported a consolidated revenue of NT\$46.3 billion, with a consolidated net income after taxes (NIAT) of NT\$95 million.

46.3

billion in consolidated revenue

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Information Security

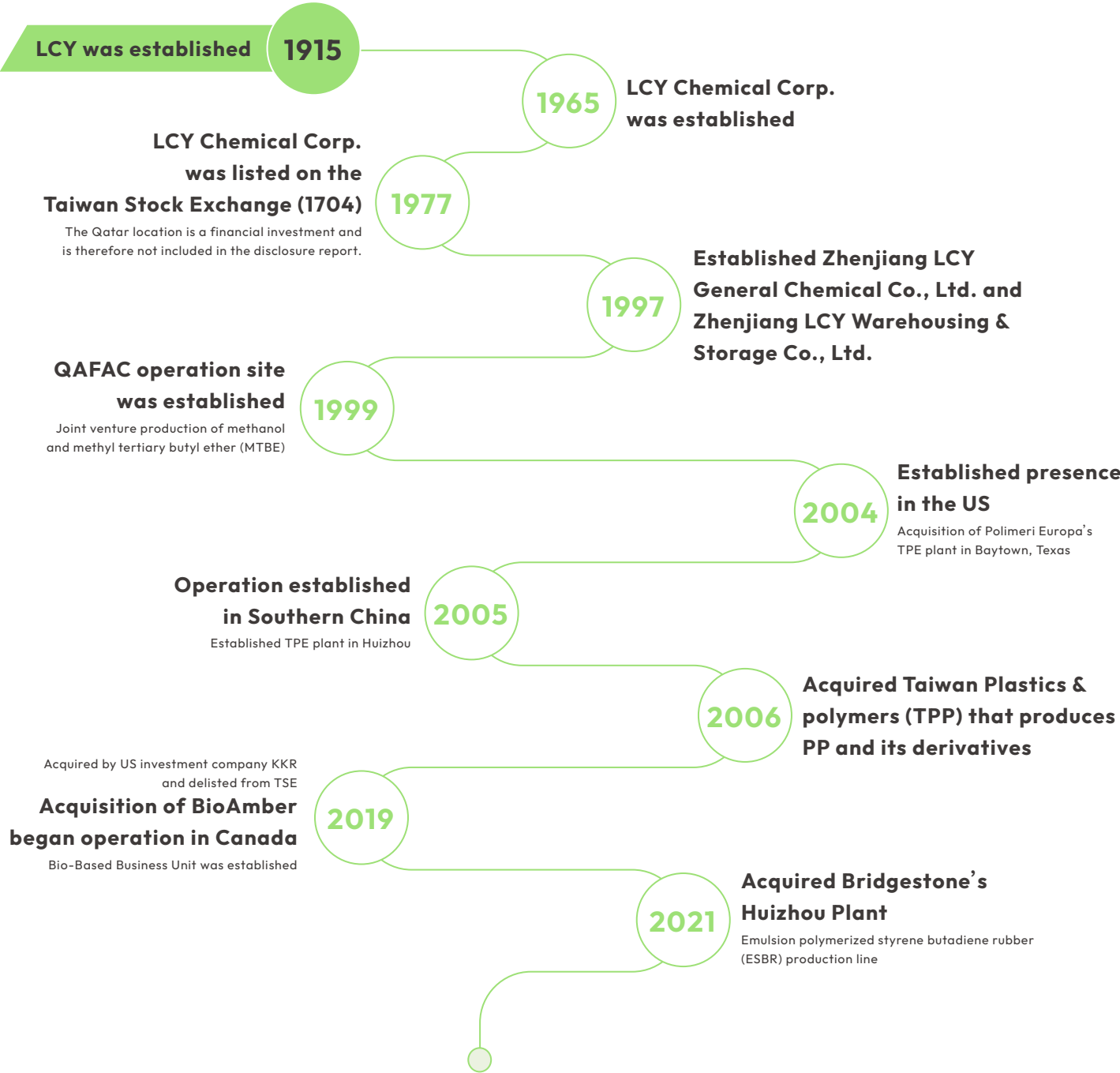
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About LCY

About Us

LCY is committed to value creation through scientific innovations. The Company’s operational strategy is consolidated into the following six business units: Thermoplastic Elastomers, Performance Plastics, Methanol & Solvent & Water, Electronic-Grade Solvent Products, Bio-Based, and LCYtech (Copper Foil Plant). LCY continues to expand in the field of materials science

through corporate values centered on integrity, teamwork, innovation, and accountable leadership. Our operations span Asia, North America, and the Middle East. Looking ahead, LCY will leverage our continued growth momentum to cultivate future materials science talent and lead industry transformation.



● The Qatar location is a financial investment and is therefore not included in the disclosure report.

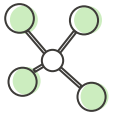
LCY’s Six Business Units



Performance Plastics

LCY is committed to developing unique and differentiated market-driven products. We strive to serve our customers in all aspects, including technical support, application development, new product R&D, market intelligence, and sales services.

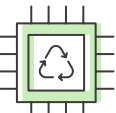
- Polypropylene (PP)
- Performance composite



Elastomers

LCY GLOBALPRENE™ is a styrenic block copolymer, also known as SBC. It is a type of TPE that is produced from styrene-butadiene or styrene-isoprene. SBC products have a wide range of applications:

- Thermoplastic elastomer (TPE)
- Thermoset rubber



Electronic Materials

LCY is the only manufacturing company in Taiwan that offers vertically integrated production of isopropanol (IPA) and acetone (DMK) for electronics manufacturers. LCY offers a high-purity product portfolio (control limit < 0.1 ppb) and recycling service for EIPA and EDMK.

- EIPA
- EDMK



Industrial Solutions

LCY has achieved a global presence in the production of pentaerythritol, para-formaldehyde, and isopropanol (IPA), solidifying its position as a key player in the international chemical industry. In 2016, LCY initiated research and development on MBR, facilitating 100% recycling of wastewater from the manufacturing process. Advancing water recycling technology remains a focal point of LCY’s ongoing efforts.

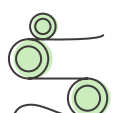
- Solvent
- Methanol
- EPPA-MBR



Bioscience

LCY replaces fossil fuels with renewable feedstocks rich in sugars and fatty acids. Using proprietary yeast and advanced biotechnology, we sustainably produce the desired products.

- Carotenoid
- Succinic acid



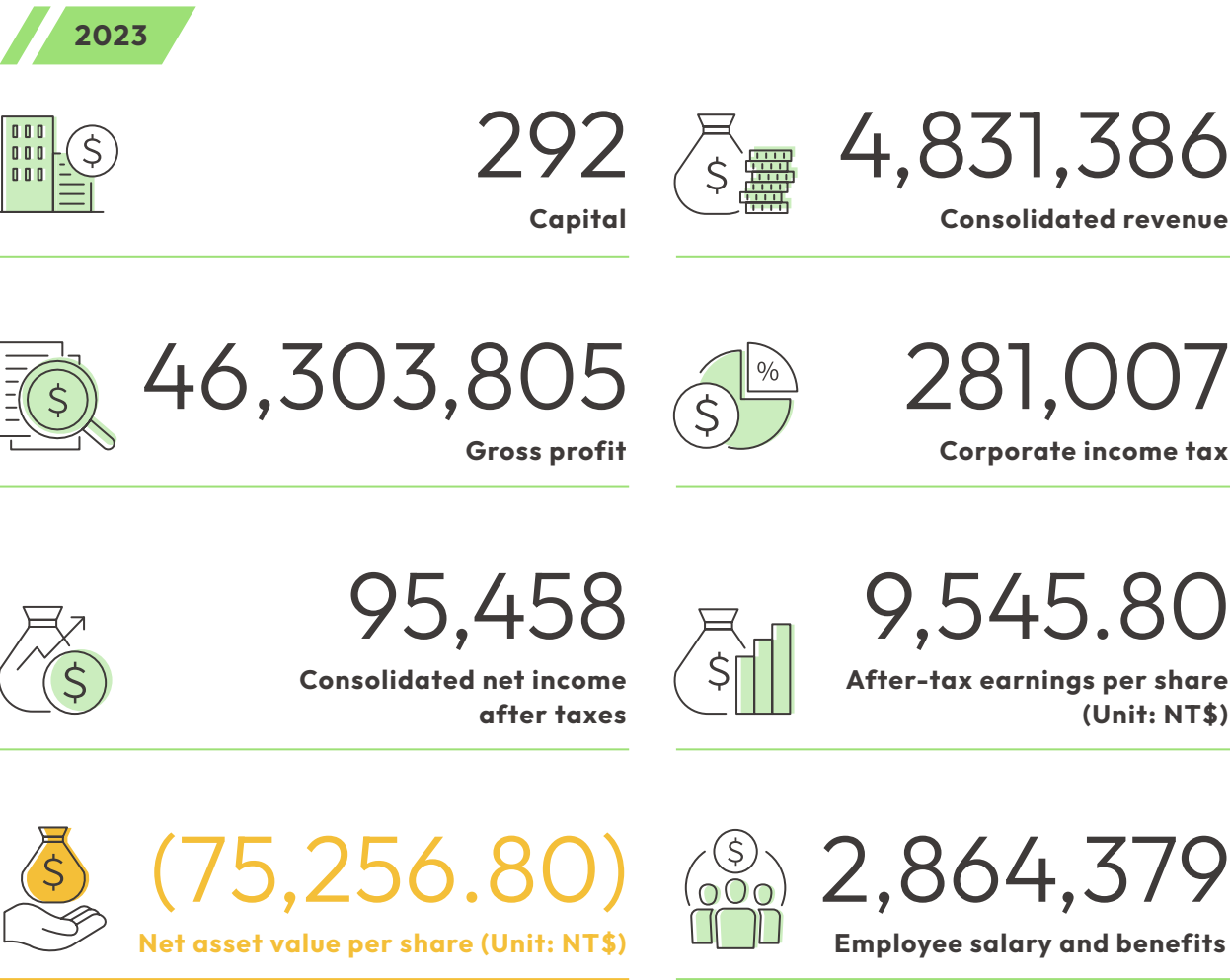
Copper Foil

We are the upstream material supplier for the printed circuit board (PCB) industry. LCY uses 100% reclaimed wire and cable as manufacturing raw materials. We have mastered key processes and technologies to develop next-generation copper foil with high density, thinness, and high heat resistance.

- Premium thin foil technology

Company Performance

In 2023, the impact of the post-pandemic environment and the broader economic challenges in the petrochemical industry led to decreased sales volumes and lower prices. As a result, LCY reported a consolidated revenue of NT\$46.3 billion, with a consolidated net income after taxes (NIAT) of NT\$95 million.

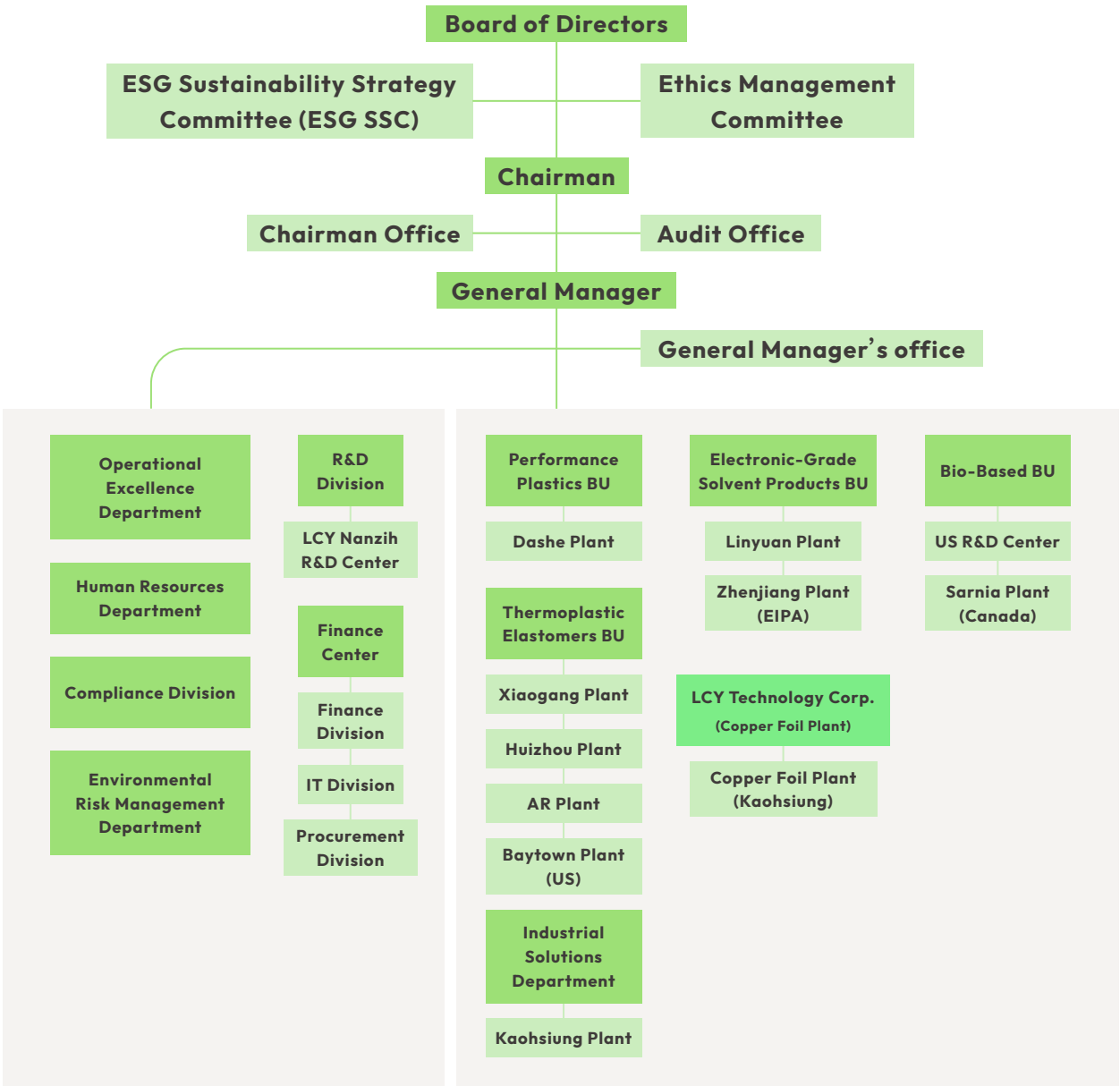


Sustainable Governance

Corporate Governance

LCY is committed to establishing a robust corporate governance system, adhering to laws and regulations at all locations, and implementing honest and ethical business practices. Our commitment is to foster a corporate culture rooted in integrity and accountability. We will continue to uphold the highest standards of business integrity at the operational level while developing an effective governance mechanism.

Our goal is to serve the long-term interests of the company and its shareholders while fulfilling the group’s social responsibilities. By establishing an appropriate internal control system, we can ensure that the company’s internal rules are consistent with external regulations and are thoroughly implemented. This approach will reduce operational risks and achieve sustainable corporate governance.



● LCY Technology Corp. (LCYtech) is an independently listed company.
● The Sarnia Plant in Canada is a recent acquisition and is not yet financially material. As a result, its environmental and social data is not included in this ESG report.
● In 2024, the Environmental Risk Management Department was renamed the Department of Environmental Risk Management and Sustainability Development, incorporating the Sustainability Development Department, which previously reported to the Office of the CEO

Board of Directors

The functional duties and powers of the shareholders’ meeting of LCY Chemical Corp. are exercised by its board of directors. The board is the highest governing body that is responsible for overseeing the overall operational responsibilities and evaluating the results of management’s policy implementation. To ensure a robust and effective board, the board meets at least once a quarter to review business strategies and operational reports. The board consists of three directors, each serving a three-year term. The directors are appointed by the company’s juristic person shareholders and bring diverse expertise in business, law, finance, and accounting. In addition to their deep industry knowledge, the board includes individuals of different nationalities, strategically selected to capitalize on their different perspectives on global market trends. This diversity aims to cultivate a breadth of decision-making and perspectives. The chair is unanimously appointed by all directors and represents the company externally. The directors must adhere to LCY’s Codes of Ethical Conduct and Anti-Bribery Policy. As of 2023, they have collectively signed the Anti-Bribery Management Compliance Statement and are prohibited from participating

in situations that could pose a conflict of interest with the company. The directors undergo comprehensive corporate governance training, including “Anti-Corruption and Anti-Bribery Advocacy,” as well as “Prevention of Insider Training, Changes in Insider Shareholding, and Short-Term Trading.” The board convened 12 times in 2023, with an average attendance rate of 100%.

● Note: The current term of the board of directors is three years (January 2022 – January 2025), with a full re-election scheduled for January 2025.



T. H. Hong
Chairman

Education MBA, Preston University, US
Gender Male
Age > 51



Zhen Ji
Director

Education An M.S from New York University, B.S from Indiana University of Pennsylvania, and an M.B.A from northwestern University’s Kellogg School of Management
Gender Male
Age > 51



Charles Wei
Director

Education Bachelor of Business Administration, Fu Jen Catholic University
Gender Male
Age > 51

Sustainable Operations

LCY has established the ESG Sustainability Strategy Committee (ESG SSC) and the Ethics Management Committee, both of which report directly to the board. The committees provide regular updates to the board and operate under its oversight. In addition, in order to enhance resource allocation and ensure efficient use of resources, the board has the authority to establish additional functional committees as needed and deemed appropriate. By establishing the ESG SSC, LCY oversees and manages environmental, health, and safety issues, corporate social responsibility, governance, sustainable development, and other relevant public policy matters. The committee is chaired by the chairman and vice-chaired by the chief executive officer, who provide regular updates to the board and receive oversight and input from the board. The ESG SSC aligns LCY’s sustainable development plan with the core capabilities of the business. The directors further enhance their insight, skills, and experience in sustainable development issues through regular updates provided by the ESG SSC. In 2023, the committee provided three reports to the board

detailed the annual ESG plan formulation and its outcomes, which encompassed aspects such as carbon management and green transformation strategies related to carbon reduction. The ESG SSC oversees four key cross-functional working groups: Green Transformation, Social Inclusivity, Employee Care, and Corporate Governance. The working groups bring together teams from sales, R&D, and manufacturing sites to collaborate on carbon reduction targets to mitigate climate risks. The ESG SSC has set mid-term targets to reduce carbon emissions by 30% by 2030 and long-term targets to achieve net-zero emissions by 2050. These targets have been approved by the board of directors. In 2023, the ESG SSC initiated the development of a carbon management platform, anticipated to be finalized by 2024. This platform will comprehensively monitor short-, mid-, and long-term objectives, emissions management, and carbon reduction projects. The ESG SSC remains committed to advancing green transformation and will consistently refine and evaluate ESG issues and strategies as part of its ongoing progress. In January 2022, the board voted to establish the Ethics Management Committee, in line with

international standards and the United Nations’ advocacy for ethical corporate governance. This initiative is central to supporting LCY’s sustainable development. The committee, which reports to the board, is tasked with developing integrity management policies, and anti-corruption/anti-bribery strategies, and overseeing the implementation of the provisions set forth in Article 17 of the Ethical Corporate Management Best Practice Principles. The committee is required to report annually to the board and to meet as needed. In 2023, the committee reported to the board once. The Ethics Management Committee is composed of heads from the Finance Division, the Human Resources Department, and the Compliance Division. The committee chair is elected by mutual recommendation of its members and is tasked with appointing a secretary to support its work. In 2023, the committee was chaired by the head of the Finance Division. The committee held two meetings in 2023, with an average attendance rate of 100%. Ethical management is a core aspect of LCY’s identity, ingrained in our corporate DNA. We uphold a firm zero-tolerance stance against bribery and corruption. LCY has made its “Ethical Corporate Management Best Practice Principles” publicly available on our official website, and internally, we have implemented measures such as the “Donation and Sponsorship Management Policy.” In 2022, we further advanced our efforts by publishing the “LCY

Employee Guidelines” and “LCY Regulations of Whistleblowing System” on our website. This disclosure informs and guides employees, subsidiaries, and external stakeholders in aligning their actions with our guidelines. Additionally, LCY conducts ethics training for directors, employees, and external consultants, totaling approximately 3,766 person-hours in 2023, with a 100% pass rate in assessments. The company provides a reporting channel for individuals to disclose violations of ethical conduct, inappropriate behavior, and bribery. Whistleblowers are encouraged to provide specific evidence and may choose to report anonymously or disclose their identity. The company encourages reports based on good faith or reasonable belief and ensures the confidentiality of the whistleblower’s identity and the content of the report. LCY also guarantees that whistleblowers will not face undue consequences for their disclosures. Upon receipt of a report of unethical behavior, the CEO will direct the formation of a cross-departmental investigation team, including, at a minimum, the head of Internal Audit. The results of the investigation are then presented to the Ethics Management Committee for review.



By letter:
Ethics Management Committee, 3F, No. 85, Section 4, Bade Road, Songshan District, Taipei City
E-mail : gm@lcygroup.com

LCY Ethical Corporate Management Best Practice Principles

LCY Trade Sanctions Policy

LCY Employee Guidelines

LCY Regulations of Whistleblowing System

LCY Human Rights Policies

LCY Anti-Bribery Policy

ESG Sustainability Strategy Committee (ESG SSC)

Board of Directors

Committee Chair

Vice Chair

Chief Sustainability Officer

ESG Strategy Committee Executive Secretary

Green Transformation

● Process Optimization

● Energy and Low Carbon Tech

● Green Products

● Circular Economy

Social Inclusivity

● Community Engagement

● Communication with Stakeholders

● Open house

● Social Engagement Activities

Employee Care

● Employee Benefits

● Talent Cultivation

● Occupational Safety

● Human Rights

Corporate Governance

● Compliance and Risk Management

● Contingency Response

● Supply Chain Management

● Information Security

	Education and Training	1 Integrity and regulatory compliance 2 Professional ethics and conduct
	Continued Guidance	1 Ad-hoc basis 2 Annual sessions for all employees
	Anti-Bribery Management Compliance Statement	1 Board members 2 Manages
	Internal and external reporting channels	1 Internal: Employee grievance hotline 2 External: Dedicated email and mailbox
	Administrative Punishments/Legal Actions	1 Disciplinary action 2 Referred to judicial authorities for resolution
	Propose Improvement Suggestions	1 Optimize corporate management processes 2 Internal control procedures
	Implement Improvement Plans	1 Incorporate into training materials 2 Reinforce the company's commitment to integrity

STRONG SUSTAINABLE GOVERNANCE

26

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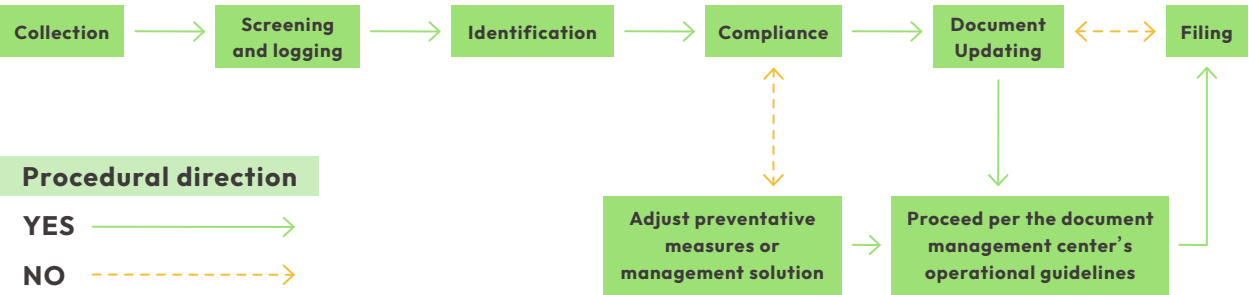
2023 SUSTAINABILITY REPORT / LCY

Regulatory Compliance

Compliance Culture

LCY will closely monitor domestic and international policies and regulations at all operational locations, integrating compliance into the core of our corporate culture. Each unit is responsible for identifying relevant regulations within the scope of its responsibility, coordinating the establishment of operational management methods, and optimizing internal procedures and management measures for compliance risk areas within their jurisdictions. We stay informed of the latest regulatory trends and relevant activities through government e-newsletters and external seminars, sharing the latest regulatory trends and relevant event information with relevant units and providing education and training to employees. With respect to environmental, health, and safety (EHS), each responsible unit collects, registers, identifies, audits, and records laws and regulations in

accordance with the facility’s EHS management system, and implements appropriate responses to material regulatory changes. To address the global trend toward net-zero emissions and increasingly stringent regulations in Taiwan, such as the Climate Change Response Act and the Renewable Energy Development Act, we will enhance the EHS regulatory management system at our domestic plants. This includes the implementation of regular internal audits, the evaluation of support for international sustainability initiatives, and the establishment of a global EHS regulatory management system. By regularly sharing information on regulatory changes, providing education and training, and promoting awareness and announcements, we encourage employees to understand and comply with relevant regulations to achieve our zero-violation management goal.



In terms of education, training and awareness promotion, our Compliance Department monitors the responsible units in each compliance risk area to submit their annual plans for 2023 and ensures their implementation. In the area of anti-corruption and anti-bribery, 1,833 people received training, with a 100% completion rate. Similarly, 1,718 people participated in cyber and information security training, also achieving a 100% completion rate. For the EHS-related areas, 1,694 people received training. In the

area of anti-trust (fair trade), LCY’s Taiwan operations actively engaged with the Fair Trade Commission’s “Fair Trade G2B Program” and collaborated with the relevant authorities. We invited experts from the Fair Trade Commission to explain the regulations on anti-competitive behavior under the “Fair Trade Act” to our colleagues. For our operations in China, we enlisted external lawyers to provide training on the “Anti-Monopoly Law” and the “Anti-Unfair Competition Law.” The training completion rate

for employees required to attend the trainings in both Taiwan and China reached 100%. LCY’s responsible units actively identify regulatory applicability and optimize internal management measures within their areas of compliance risk. To address geopolitical and export control risks in terms of trade imports and exports, we have referenced the Internal Compliance Program of the Bureau of Foreign Trade of the Ministry of Economic Affairs to establish the “Import and Export Trade Security Management Guidelines.” In terms of personal data protection and privacy, LCY’s operations in Taiwan comply with the ISO 27701 standard. The Personal Data Management Committee is responsible for managing the personal data privacy information system. The committee is responsible for supervising departments in conducting personal data inventories, outsourcing internal audits and risk assessments, organizing emergency drills, providing education and training, and reporting the status of implementation to management during annual management review meetings. In addition, anti-money laundering/trade sanctions efforts adhere to the “Trade Sanctions Policy Management Guidelines” and utilize the trade sanctions query system (AML system). This system was established in Taiwan in 2021 and expanded to China, the US, and Canada in 2022. Additionally, to enhance the efficiency of regulatory compliance operations and achieve electronic intelligent management, LCY’s Compliance Division and project team began implementing the “Intelligent Regulatory Compliance Operations Management System” (referred to as the “Compliance Platform”) in applicable domestic regulations and risk areas starting from the fourth quarter of 2023. We aim to achieve the following goals through the Compliance Platform:

1. Create a database covering domestic regu-

- lations applicable to LCY to reduce the time spent searching for regulations on various regulatory websites;
2. Achieve automated notifications of changes in external regulations;
3. Use an electronic reporting system to effectively track and organize related operational progress.

Regulatory Compliance

In line with our core value of compliance and commitment to delivering high-quality products and services, LCY ensures that our operations adapt to regulatory changes to meet the latest policy trends. In recent years, regulatory authorities have strengthened their oversight of harmful air pollutants by implementing new emission limits for stationary pollution sources. They have also raised standards for water discharge and established more rigorous targets for energy conservation and carbon reduction. In response, our facilities have adopted a range of measures. These include transitioning to cleaner fuels, such as replacing heavy oil with natural gas, installing enclosed hoods to collect emissions in production lines, optimizing processes, and upgrading to more energy-efficient equipment. In addition, all of our facilities comply with the Regulations of the Labor Health Protection, which require plants with more than 50 employees to appoint dedicated medical personnel to provide on-site clinical services. In 2023, there were two EHS regulatory violations, both of which have been fully addressed. Both violations were related to environmental issues. For more details on these environmental violations and the corrective actions taken, please refer to 3.1.2 Environmental Regulatory Compliance. For detailed information on occupational safety-related issues in the socio-economic aspect, please refer to section 4.5.1 Occupational Safety Management.

Risk Management

LCY is committed to meeting the needs of our stakeholders and ensuring the quality of our services. Our commitment extends to identifying and responding promptly to internal and external risks. We have implemented a comprehensive risk management system to support the company’s growth and maintain sustainable operations. We prioritize risk assessment, with the Environmental Risk Management Department serving as the dedicated unit under the supervision of the board. This ensures that all risk-related issues receive the highest level of governance and management. In 2023, the global chemical industry faced numerous challenges, including inflation, geopolitical conflicts, and the intensification of climate change. These challenges have prompted companies to adopt more proactive risk management measures. In addition to strengthening supply chain resilience by diversifying supply sources and enhancing cooperation to mitigate risks, there has been a significant increase in the emphasis on independent risk engineering and self-insurance to better respond to potential future operational impacts. To address these challenges, we have implemented the following measures:

First, in terms of green operations, we are

actively promoting environmentally friendly measures and carbon reduction initiatives, and are striving to reduce carbon emissions during production. We are implementing a series of energy-saving projects, including process parameter optimization, equipment upgrades, and process improvements, as well as actively participating in domestic and international carbon reduction technology seminars to meet future carbon fee pressures. We have strengthened supply chain management by working closely with suppliers to ensure the greening and sustainability of the supply chain. At the same time, we are investing significant resources in process and energy transformation to improve resource efficiency through innovative technologies and best practices. We actively participate in international energy cooperation projects to promote energy savings and carbon reduction throughout the company. These initiatives not only help reduce operating costs, but also enhance the company’s competitiveness in the marketplace.

Second, LCY’s digital transformation is specifically focused on smart manufacturing and data-driven risk management systems. By leveraging artificial intelligence of things (AIoT) and big data analytics tools, the company is

able to monitor and predict various risks during production in real time. This not only increases production efficiency but also enables quick responses to emergencies, thereby reducing potential operational risks.

In 2023, the challenges facing the global chemical industry prompted LCY to further strengthen

its risk management strategies to adapt resiliently to market changes and continuously create value for stakeholders. The company will continue to promote green operations and digital transformation to achieve sustainable business operations.

Risk Categories and Audit Mechanism

Risk Category	Management Procedure	Evaluation/Audit Frequency	Highest Level of Risk Management
 Assets	Finance Division’s recurring meetings	Perform audits in accordance with the annual audit plan and daily audit activities. Track remediation of anomalies. Before issuing the report, communicate with the audited unit to verify audit-related matters. If found to be a material issue, it may be reported directly to the Chairman	Finance Division’s highest level of leadership, Board of Directors
 FX transaction			
 Investment			
 Regulatory Compliance	Report to the board at least annually		Board of Directors
 Information Security	1. The IT Division meets twice a year 2. The Information Security Committee meets once a year	In accordance with the annual information security plan, the Information Security team works with external consultants to conduct audits. Based on the audit results, communication takes place and the audited department develops improvement plans. Follow-up is conducted based on the responses. Audit and remediation results are regularly reported to the Information Security Committee and the board (annually).	Information Security Committee Board of Directors
 Environmental and occupational safety	The Environmental Risk Management Department meets on a monthly and quarterly basis	ISO 45001 & ISO14001 management review meeting The Environmental Risk Management Department carries out ad hoc inspections of the plants and conducts on-site sampling review	Environmental Risk Management Department’s highest level of leadership, Human Resources’ highest level of leadership
 Emerging infectious disease	Hold review meetings	Conduct ad-hoc project meetings in the form of project meetings/working groups.	Environmental Risk Management Department & Human Resources’ highest level of leadership
 Climate change	Conduct consistent target reviews and risk assessments in conjunction with the ESG SSC	Consolidate the daily management activities of each plant related to climate change and energy issues, ensuring the quality and effectiveness of plan implementation. Provide a report to the chairman every six months.	Board of Directors
 Ethical management	Report to the board at least annually	The Ethics Management Committee reviews and supervises the reported incidents	Board of Directors



Risk Management Mechanism



Internal Audits

LCY refers to the “Regulations Governing Establishment of Internal Control Systems by Public Companies” to establish its internal control system. This is to reasonably ensure the effectiveness and efficiency of our operations, as well as the reliability, timeliness, transparency, and compliance with relevant laws and regulations. In response to mid-to-high-risk internal controls, departments are required to perform internal control self-assessments. The purpose

of this process is to confirm the effectiveness of internal control systems and the reliability of corporate governance. Each year, the Audit Office determines the risk levels based on the actual audit results and the self-assessment results for the year. It then formulates the audit plan for the following year. On a quarterly basis, the Audit Office reports to the board on the execution of the audit plan and the handling of significant anomalies.



Supply Chain Management

Supply Chain Overview

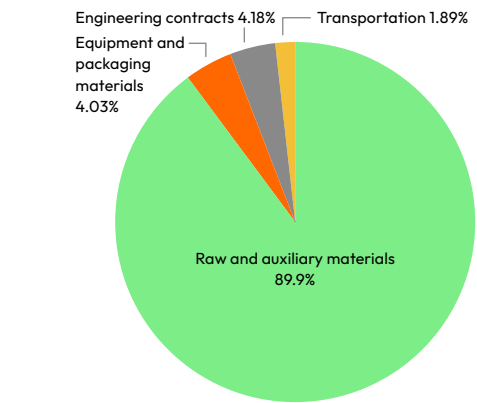
At LCY’s operational sites in Asia (including Taiwan and China) and the US, there are 835 and 359 suppliers, respectively. These suppliers can be categorized into four main groups: raw and auxiliary materials, equipment and packaging materials, engineering contracts, and transportation services. In 2023, the total procurement amounts for the two major operational sites were NT\$19,307,222,000

for Asia and NT\$22,123,818,000 for the US. In the Asian operational site, “raw materials and auxiliary materials” accounted for nearly 90% of total procurement. In the US operational site, “raw materials and auxiliary materials” and “equipment and packaging materials” represented close to 90% of total procurement. The local procurement ratio for both operational sites is nearly 99%, with a primary distribution in Taiwan, Asia, and the Americas.

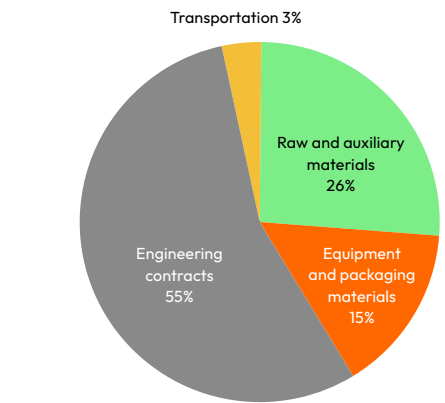
Suppliers for Asia Operations	Number of Suppliers	Proportion
Taiwan	551	66.0%
Asia	272	32.6%
Americas	7	0.8%
Europe	3	0.4%
Others	2	0.2%
Total	835	100%

Suppliers for U.S. Operations	Number of Suppliers	Proportion
Taiwan	1	0%
Asia	0	0%
Americas	355	99%
Europe	3	1%
Others	0	0%
Total	359	100%

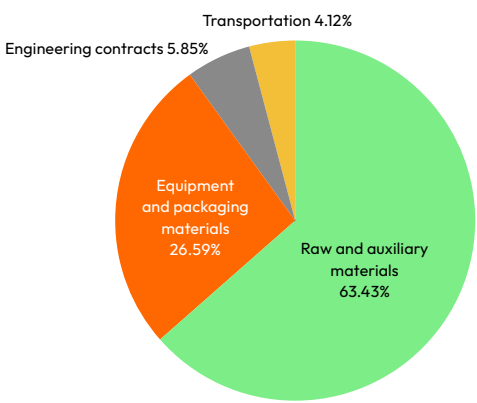
Suppliers for Asia Operations/Procurement by Category (%)



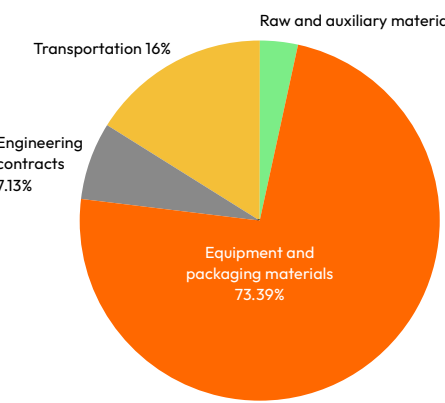
Asia Operations/Supplier Distribution by Category (%)



Suppliers for US Operations/Procurement by Category (%)



US Operations/Supplier Distribution by Category (%)



● Note 1: The transportation operations of the AR Plant and the Zhenjiang Plant in China do not fall under the the Taiwan supply chain, leading to incomplete transportation data. As a result, this year's supply chain overview temporarily excludes information from these two plants. The relevant supply chain data is expected to be disclosed next year after integrating the supply chains of our Asian operational sites.

Evaluation of New Suppliers

LCY actively seeks new suppliers each year in response to user, policy, and product demand, as well as the departure of former suppliers. LCY serves more than 400 companies worldwide, many of which are world-class global manufacturers. As our customers strive to improve product and supply chain security, we are also committed to providing guaranteed services to our customers. LCY has established an internal “Authorized Economic Operator (AEO) Supply Chain Business Partner Evaluation and Control Protocol” in accordance with the “Regulations Governing the Certification and Management of Authorized Economic Operators” by the Customs Administration of the Ministry of Finance, which initiated the AEO mechanism in 2013. While integrating our internal principles to properly implement the AEO policy, we also conduct risk assessment and planning for new suppliers and apply the same standards to existing suppliers to fully implement our supply chain security management system. Preference will be given to suppliers with international standard certifications (including ISO 9001, ISO 14001, IATF 16949, ISO 45001, etc.) to improve the service standards of our supply chain. Additionally, considering the impacts of climate change on

energy, greenhouse gases, and resources, we will continue to focus on suppliers with relevant international standards certifications (including ISO 50001, ISO 14064, ISO 14067, etc.) as means of evaluating the prioritization of partnership. For major raw material suppliers in the copper foil plant, apart from completing the Supplier Social Responsibility Self-Assessment Questionnaire, suppliers should also provide a Declaration on Environment and Social Responsibility and an Agreement of Non-Use of Conflict Minerals.

Management of Carriers

Much of LCY’s supply chain involves the transportation of chemical feedstocks and products. As a result, we emphasize the safety management of our partner carriers to ensure they are compliant. In accordance with our Management Guidelines for Transportation Operations, inspection procedures are in place to ensure the safety of product loading and unloading operations; the procedures cover transportation safety from the arrival of the carrier vehicle at the designated plant or location for pick-up/unloading to departure, as well as the notification process for transportation outside of our facilities.



Important Transportation Regulations

- 01

Designated Routes for Tank Cars Transporting Hazardous Goods
- 02

Regulations on the Professional Training for Personnel Road Transporting Hazardous Goods
- 03

Regulations on the Management of Emergency Responders of the Toxic and Concerned Chemical Substances
- 04

Regulations on Highway and Expressway Traffic Control
- 05

Regulations for the Labeling and Hazard Communication of Hazardous Chemicals
- 06

Regulations for Labor Safety of High-pressure Gas



Unit	Responsibility
 Carrier	1. Ensure that industrial safety personnel and qualified drivers (certified with Hazardous Goods Delivery Personnel Training Certificate) are in place 2. Conduct regular safety meetings between management and drivers 3. Conduct blood pressure and alcohol tests before each driver’s assignment 4. Use GPS and CCTV to check the drivers’ on-the-job performance 5. Conduct regular vehicle inspection and maintenance 6. Orientation and on-the-job training 7. Conduct an emergency drill every six months

Unit	Responsibility
 LCY Factory - Facility Department	1. Inspect driver qualifications and vehicle equipment upon entry to the plant 2. Responsible for inspection before, during, after loading, and before leaving the factory
 LCY Factory - Occupational Safety Team	1. Convene advisory organization meetings 2. Conduct driver training 3. Security guard observes if the carrier driver is drinking and driving 4. Audit incoming vehicles
 LCY Procurement Division	Conduct annual audits and evaluations on carriers

Management of Engineering Contracts

In 2022, LCY’s Engineering Contracting Department started to develop an Engineering Information Management (EIM) platform that integrates electronic procurement approaches with the Engineering Project Management Information System (EPMIS) to improve operational efficiency. This initiative aims to establish transparent competition, foster trust among stakeholders (contractors), and subsequently strengthen safety and health management on projects. To ensure optimization and stellar user experience, the platform is scheduled to go live by Q3 of 2024. We leverage OpenAI technology to automate and optimize various operational processes in contractor management, including AML due diligence, contractor transaction investigations,

data collection, and the optimization and automated generation of invitation to bid (ITBD), for greater efficiency, accuracy, and reliability. Significantly improving productivity, these technologies also reduce the risk of human error, and further enhance our competitive advantage, ensuring partner satisfaction. LCY is committed to environmental sustainability and collaborates with suppliers to create a green and sustainable chemical product supply chain. We adhere to the ISO 20400 Sustainable Procurement guidelines, carefully selecting environmentally friendly raw materials to reduce environmental risks. In 2023, at our Formulation Pilot Plant and cleanroom engineering project in the Central Taiwan Science Park (CTSP) Branch, we successfully utilized green building materials, which reduced the environmental impact and enhanced our green competitiveness.

Looking ahead, we will continue to drive the digital transformation of engineering management. By working closely with our partners, we aim to achieve efficient, transparent, and green engineering management, creating greater social and environmental value.

Supply Chain Audit

The Procurement Division is tasked with coordinating the annual supply chain audit for LCY’s major suppliers. The determination of major suppliers is a collaborative effort involving the factory, quality control section, and procurement, considering the feedstock used throughout the year. All feedstock suppliers for medical-grade products fall under the category of major suppliers. The audit, assessing the five aspects of supply chain management, is conducted by the factory, quality control section, and Procurement Division. In the event of significant deficiencies, immediate improvements are mandated from the supplier, closely monitored and tracked by LCY. No further procurement is

allowed until the necessary improvements are implemented. Supplier evaluation for the US Baytown plant focuses on the top 10% of suppliers by procurement amount. In 2023, there were 48 key suppliers, with 44 undergoing audits, resulting in a 92% audit rate. This represents a 20% increase compared to the previous year, primarily due to the resumption of on-site audits following the end of the pandemic. In the future, there will be a continued emphasis on the supervision and management of suppliers to enhance the audit rate. We also aim to encourage suppliers to obtain ISO 9001 and ISO 14001 certifications to improve the quality of overall supply chain management.

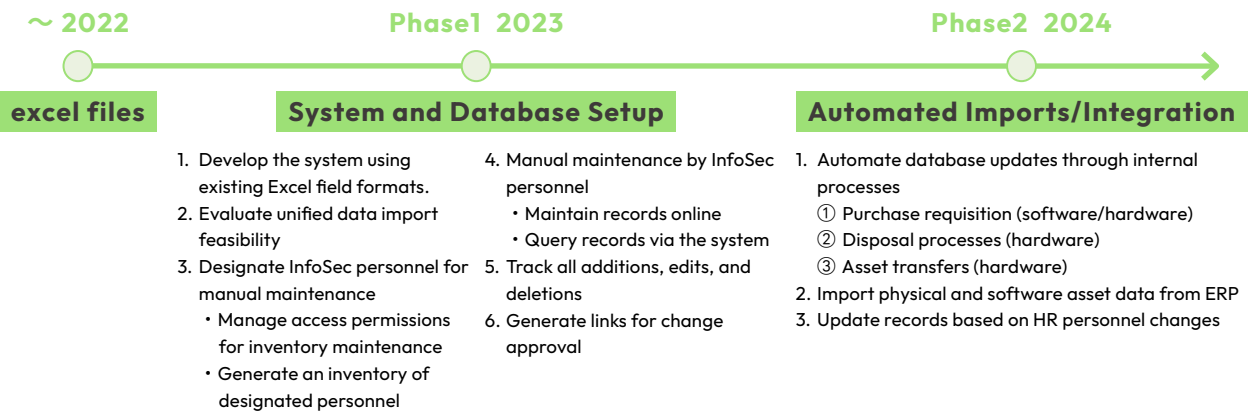
	No. of Suppliers	No. of Audited Suppliers	Audit Rate
2023	48	44	92%
● Note: The audit data currently reflects only suppliers in Taiwan's supply chain. Plans are in place to include global information in the future (covering the China region and North America).			

Information Security

Information Security Policies

Information security and the protection of sensitive data have always been a priority for LCY, one that is continually emphasized and strengthened. This commitment is a testament to our dedication to our clients and partners.

LCY establishes and enhances systems and deploys information security tools based on differential analysis and risk assessment. LCY establishes and enhances systems and deploys information security tools based on differential analysis and risk assessment.



Category	2023 Targets
Information Security Management System (ISMS)	Continue to enhance and implement management procedures at plants where ISMS is already in place; prepare for the transition to ISO 27001:2022 certification. Establish an information security management framework among our affiliated companies to ensure the comprehensive implementation of LCY’s information security policies, ensuring smooth information exchange and maintaining the requisite flexibility required for the organization.
Cybersecurity	Strengthen capabilities in detection, response, and recovery based on the NIST Cybersecurity Maturity assessment and the ISMS risk evaluation results. Enhance the security design of cloud services and establish robust procedures and standards. Improve endpoint security and response capabilities.
Data Protection	Maintain the existing sensitive data protection system by implementing data classification, categorization, labeling, and protection. Optimize the current data loss prevention (DLP) measures. Conducting evaluations of automated tools for sensitive data protection to prepare for future optimization of information protection measures.

Information Security Management Procedures

Our goal is to align information security governance with the organization’s vision and goals. We integrate information security management across four key dimensions, starting with project implementation and establishing a security organization and framework. This enables us to meet our management commitments and provide adequate resources. By incorporating risk management and integrating resource processes, we can assess the most cost-effective approach to achieving organizational goals and enhancing customer confidence. To enhance personnel awareness of information security, LCY conducts annual cybersecurity awareness training for all employees. This training aims to promote company policies, increase understanding of current trends and techniques in cyber attacks, and enhance employees’ ability to recognize social engineering attacks and phishing websites. The goal is to reduce the harm caused by errors in clicking, using, or entering information, ultimately boosting our defense against cyber threats. The company also elevates its ability to respond to cybersecurity risks through personnel and equipment upgrades. Regular

social engineering drills, incident response exercises, and backup drills are conducted to enhance corporate resilience, shorten response times, and improve the company’s ability to handle unexpected cybersecurity incidents. In an ongoing effort to continuously improve and adapt to evolving information technologies and the overall business environment, LCY plans to undertake the ISO 27001:2022 revision process in 2023, with a target completion date of 2024. This initiative is designed to meet current corporate information security requirements and objectives, ensuring the ongoing protection of both corporate and customer information. Since 2021, LCY has been proactively identifying and managing business-sensitive data/ documents from a data life cycle perspective. Continuous efforts have been made to improve data identification, labeling, and protection. In addition, LCY has implemented DLP measures to achieve effective protection, detection, and response. This approach aims to protect both corporate and customer-sensitive data, ensure competitive advantage, and foster customer trust. Notably, the company reported zero incidents or complaints related to data breaches or loss of customer data in 2023.

Four Areas of Information Security Management



01

Establish InfoSec Organizational Structure

- Establish an Information Security Committee, with the Chairman/CEO serving as chair and deputy director, respectively. Convene regular committee meetings
- Establish an Information Security Response Team and conduct annual drills
- Establish a communication and management framework for information security among affiliated companies



02

InfoSec Risk Management

- Conduct regular audits and improvement tracking for the ISMS
- Perform risk assessment
- Regularly convene the information security supervisory committee



03

Enhance InfoSec Communication

- Appoint an information security liaison in each department; strengthen cybersecurity promotion and project execution

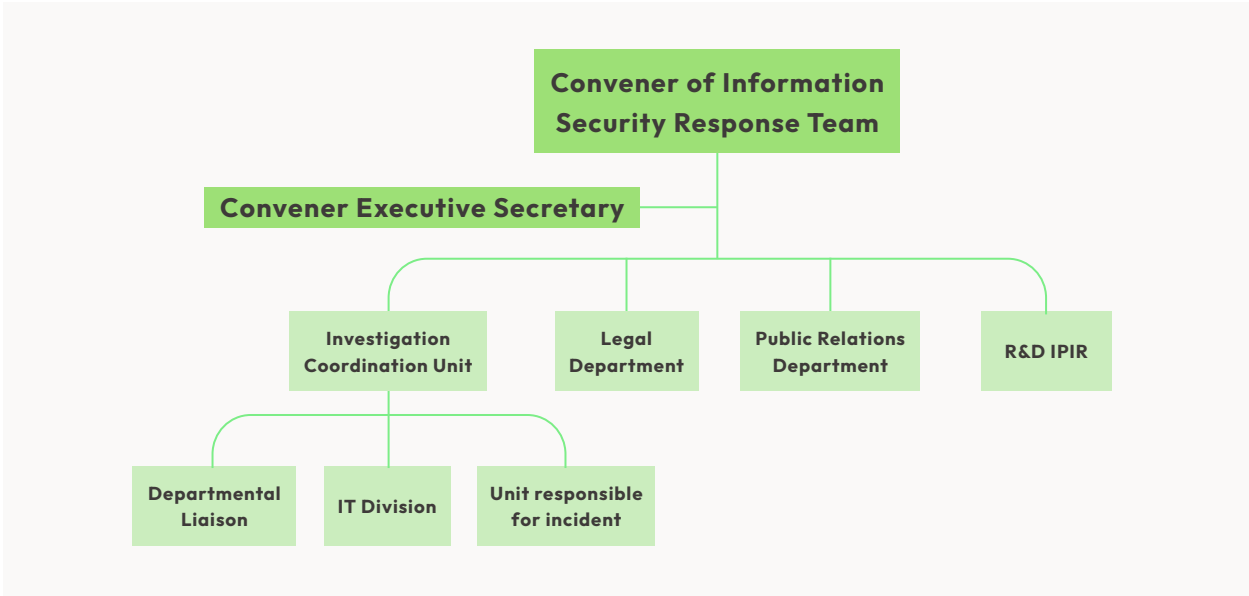


04

Personnel InfoSec Training

- Conduct annual cybersecurity awareness training for all employees
- Evaluate and improve results through social engineering drills

Information Security Response Team Organizational Structure



Information Security Implementation Results

>180 times/year

InfoSec newsletters and policy promotion

>100 people

Information security liaison

100%

participation rate in information security incident response drills

2 times/year

Access permission audits

>1500 attendances

3 times/year

Education and Training

>2100 accounts

Accounts involved in social engineering drills

>3 times

Information security reports to senior management

10 times

Social engineering drills

LEADING CIRCULAR INNOVATION

● Green Products



LCY set up the first innovation hub in Asia for recycled materials in Nanzih, Kaohsiung as a platform for innovation, inspiration, and creativity. Devoting great effort to R&D innovation and increasing investments in equipment and facilities, we establish LCY Nanzih R&D Center as an international-grade innovation hub. At the same time, LCY also fosters R&D talent and employs almost 150 R&D professionals from fields such as chemistry, materials, chemical engineering, analysis, and even market development. Roughly 40% of the R&D Center staff hold doctorate degrees. Our employees aim for sustainability and circularity within the economy and the environment, and they are devoted as a whole to creating an industry value chain within the circular economy to ensure our vision for a greener future.

12%

Revenue from green products reached NT\$5,370,958,000, accounting for 12% of overall revenue. (Several new 6R products were introduced in 2023, such as those made from 100% recycled copper)

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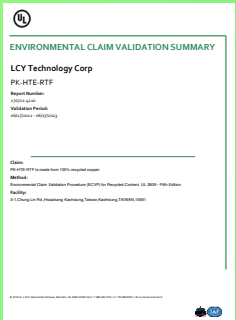
Linyuan EIPA Dual Cycle Circular Economy + Membrane Bioreactor (MBR)

After electronic-grade isopropyl alcohol (EIPA) is used for wafer cleaning, the resulting waste liquid consists of approximately 10 wt% IPA and 90 wt% water. LCY’s Linyuan Plant has independently developed a recycling process that purifies the used isopropyl alcohol (UIPA) into EIPA. Meanwhile, the water is treated using LCY’s proprietary membrane bioreactor (MBR) and wastewater treatment system, developed by the Methanol & Solvent & Water BU, established in 2010. This system filters and separates wastewater, converting it into industrial-grade water for reuse within the plant.

We have revolutionized traditional wastewater recycling technology by helping downstream customers recover UIPA waste liquid and purify it into EIPA with over 99.9% purity. The water produced in this process supplies the cooling towers at the Linyuan Plant to maximize resource efficiency. Membrane Bioreactor (MBR) is a key technology developed by LCY Chemical Corp. in collaboration with Taiwan’s leading university membrane research centers. Utilizing innovative technology, the polyvinylidene fluoride (PVDF) hollow fiber membranes are fabricated on liners and encapsulated within membrane tubes to create a small volume with a large filtration area. This technology is integrated with biological reactors to treat wastewater, filter suspended solids, and recycle water for reuse. The LCY-MBR system, during product changeouts, seamlessly integrates with existing MBR systems through control logic integration and optimized pipeline configuration. The MBR system was introduced at the Kaohsiung Plant in 2016 and received the Excellence in Water Conservation Award from the Water Resources Agency, Ministry of Economic Affairs, in 2019. The AI technology has been implemented since 2018. In 2024, the MBR technology received the Excellence in Water Purification Sustainability Award - Intelligent Management Category from the Ministry of Environment, as well as TSMC’s carbon reduction subsidy.

By providing local production services, LCY Group can quickly respond to and meet customer needs, stabilize the supply chain, reduce wastewater treatment risks, and reduce carbon emissions from transportation. The smart control system and intelligent biological acclimation system reduce the use of chemicals and power consumption and increase the amount of recycled water to further reduce carbon emissions. LCY Chemical Corp. has a strong deep-rooted presence in Taiwan. The company consistently delivers innovative and timely services. By collaborating with top universities, LCY continuously improves its systems and creates more value for the industry through integrated exchanges.

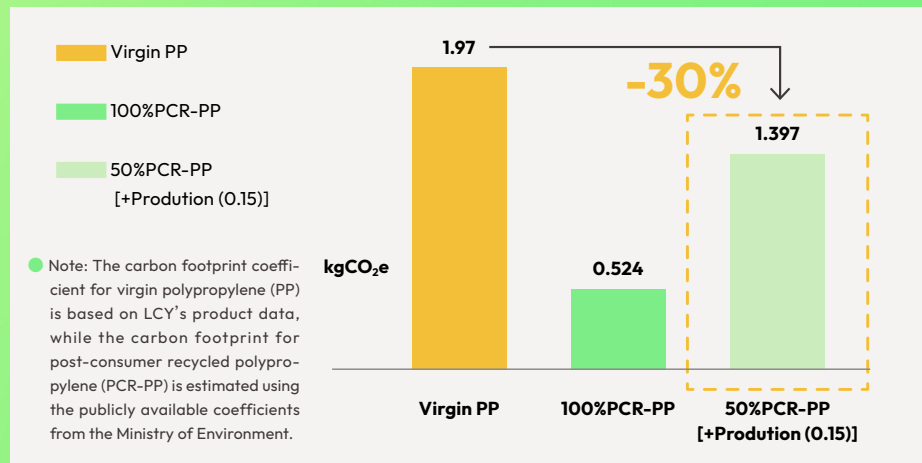
Achievements	Short-term: 2023 Targets	2023 Achievements	- Note 1: The baseline year is 2019 for solvent recycling services and 2020 for MBR products. - Note 2: Due to the lack of market competitiveness of the innovative materials (TCAA/TCA, CPI and EPP), EPP has been phased out, CPI remains in the sample testing phase, and TCAA has been reclassified under green product initiatives. As a result, data on the growth rate of innovative material products is no longer being reported.
Annual sales of solvent recycling services	↑27%	↑27%	
The growth rate of total water recovery using MBR products in the market	↑240%	↑167%	
As the previous short-term goals have expired, a new set of short-, mid-, and long-term goals have been redefined in this report:			
Goals & Targets	Long-term: 2030 Targets	Mid-term: 2027 Targets	Short-term: 2024 Targets
Annual sales of solvent recycling services	↑66%	↑48%	↑30%
The growth rate of total water recovery using MBR products in the market	↑1160%	↑800%	↑250%
Note: The baseline year is 2019 for solvent recycling services and 2020 for MBR products.			



Recycled Copper Wire UL2809 Certification

Traditional linear production and consumption models are no longer adequate for sustainability and carbon neutrality goals.

Using recycled raw materials in manufacturing is also a part of sustainable design. In 2022, the Copper Foil Plant initiated UL2809 certification for recycled material content. Under the guidance of certification bodies, the plant compiled relevant data on recycled copper wire. The procurement unit explained the differences between pre-consumer and post-consumer recycled materials to suppliers and collected the necessary information. This led to the successful completion of recycled material supplier declarations. The facilities unit compiled delivery and weighing records from suppliers. The on-site unit gathered records of recycled copper wire input. The production management unit detailed the production processes and product composition. The quality assurance unit compiled inspection records of recycled copper wire and provided product SDS and elemental analysis data to prove product composition. Through the collaboration of all relevant departments, the UL2809 audit and on-site verification were completed, ultimately achieving certification. This certification meets environmental declarations and addresses market and societal expectations for sustainable development.



Dashe Plant PP Obtains GRS Certification

Polypropylene (PP) is an integral part of our lives. Post-consumer recycled polypropylene (PCR PP), created from properly recycled PP plastic, reduces reliance on virgin materials and conserves petrochemical resources. In 2022, the Dashe Plant established the Green PP team, consisting of members from advanced composite materials R&D, production, safety and environmental protection, facility department, storage terminal, and sales. The Dashe Plant obtained PCR PP product certification in 2022 and has continued to expand the variety of certified PCR PP products in 2023. Amid the ESG movement, we are committed to reducing the energy consumption of product manufacturing. Our current PCR PP products, which contain 50% recycled content, achieve a 30% reduction in carbon emissions (CO₂). We will continue to advance our R&D efforts and adhere to GRS certification standards to ensure product quality, transparency, and traceability to minimize the carbon footprint of our products.



LCY GRIT CORP.'s SEBS GP-7720 & GP-9654D

LCY GRIT CORP., a subsidiary of LCY Chemical Corp., focuses on enhancing value chain sustainability. Molecular design is used to develop high-fluidity and easy-to-process next-generation products that are highly compatible with substrates. This helps reduce energy consumption in customer processes, supporting the industry's move towards sustainable co-prosperity. Medium-low molecular weight SEBS is highly compatible with plastics with good dispersion. This property enhances the flexibility, toughness, and impact resistance of traditional plastics such as PP (polypropylene) and PE (polyethylene), significantly expanding the applications and lifespan of these products. Adding just 5% of SEBS to recycled plastics can greatly improve their performance and processability, giving new life to recycled plastics. LCY GRIT CORP.'s SEBS GP-9645D has a transparent appearance and low impurities. Due to its special structural design, it can be compounded without the need for additional oil, making it suitable for films. LCY's independently developed production technology effectively reduces impurities and contaminants, significantly enhancing the stability and safety of the final product. SEBS GP-9645D is highly fluid and easy to process, saving 20% of energy consumption while maintaining excellent performance. Compared to common polyolefin (PO) plastics, only half the amount of SEBS GP-9645D is needed to achieve the same performance. SEBS GP-7720, developed by LCY for the sports industry, is a lightweight, high-elasticity material with excellent fluidity. It has high compatibility and dispersion with EVA, and can be processed using existing compounding equipment, which reduces processing temperatures by at least 10° C and decreases energy consumption by more than 20% compared to traditional SEBS. Due to its unique molecular design, SEBS GP-7720 can be used in chemical foaming, reducing crosslinking agents, additives, and foaming agents by at least 30% during the manufacturing process, and also supports physical foaming. It significantly reduces the dispersion of powder particles and volatile gases during footwear manufacturing, ensuring the health and safety of workers. SEBS GP-7720 is a new generation of footwear material balancing functionality, workplace health, and environmental sustainability.

Cornerstone of Innovation

Innovative Management

Products R&D is primarily overseen by the LCY R&D Center. In addition to product development, the R&D Center also includes business units developing other branches of the product series. Innovative products aim to enhance resource efficiency for clients through product, process, and business model innovation. Our R&D management, spanning six stages, integrates considerations like environmental health and safety, technological development, market assessment, patent risks, and compliance. This approach fulfills the fundamental requirements for managing the schedule, budget, and com-

pliance of product development. Additionally, LCY implements a six-stage R&D management process and has an intellectual property management system in place. When product development reaches a certain level, employees can register patentable and commercially valuable R&D results as patents or trade secrets through IP management. This not only protects the company's R&D achievements but also provides bonuses to inventors. As of 2023, a total of 150 patent applications have been filed, and over 100 employees have received IP bonuses from 2014 to 2023.

The Six Stages of LCY's R&D Management

- | | | |
|----|---|--|
| 00 | Concept & Analysis | <ul style="list-style-type: none"> Conduct preliminary market research, competitive analysis, and capability alignment to understand customer needs and market opportunities. Perform Real-Win-Worth assessment analysis. |
| 01 | Market & Technology Concept Validation | <ul style="list-style-type: none"> Conduct detailed market research and competitive analysis to understand customer needs and preferences, and identify the target market and positioning of the product. Perform initial technical assessment and feasibility analysis. Conduct preliminary business assessment and financial analysis, forecasting indicators such as product cost, price, sales volume, and revenue. |
| 02 | Product Development & Optimization | <ul style="list-style-type: none"> Conduct prototype production, testing, modification, etc., to meet the customer's requirements for product specifications and performance. Optimize the product, including improving quality, safety, production costs, etc. Assess the feasibility of scaling-up production. Conduct business model, value chain, and other analyses. |
| 03 | Trial Production Verification | <ul style="list-style-type: none"> Initiate trial production and obtain customer verification. Determine product specifications and confirm the design and feasibility of scaling up the production process. Develop a plan for commercialized production. Formulate market entry and launch plans. |
| 04 | Commercialized Mass Production Validation | <ul style="list-style-type: none"> Initiate commercialized mass production of the product and validate through customer verification. Establish production facilities adhering to commercialized specifications (depending on the project). Validate the market launch plan and establish a robust value chain. |
| 05 | Product Market Realization | <ul style="list-style-type: none"> Commercialize the product and submit the product project to the business unit. The sales team devises a revenue acceleration plan. Monitor whether sales revenue meets projected targets and conduct corresponding reviews. |



Asia's First R&D Center for Recycled Materials

LCY has always been a proponent of innovation and the entrepreneurial spirit, and we prioritize value creation as our operational strategy to revolutionize resource use. LCY R&D innovation is also driven by significant momentum, with a team of nearly 150 experts spanning chemistry, materials, chemical engineering, analysis, and market development. From 2019 to 2023, accumulated R&D expenditure surpassed NT\$2 billion, including the inauguration of the LCY Nanzih R&D Center in 2019.

The design philosophy of the LCY Nanzih R&D Center incorporates safety, friendliness, creativity, and interactivity, serving as LCY's hub for circular material innovation. Over half of the research and development personnel are stationed here, with approximately 40% holding domestic and international doctoral degrees.

With a focus on sustainable economic and environmental cycles, they contribute to creating value in the circular economy industrial chain, embodying the vision of a green future.

Platform for Innovation, Inspiration, and Creativity

In addition to R&D management, LCY initiated a Platform for Innovation, Inspiration, and Creativity to encourage creative contributions from R&D personnel. This platform serves as a space for sharing innovative ideas, and concepts that pass the platform can enter the six-stage R&D management process. The continuous process of experimentation and implementation in product development is challenging but equally filled with innovation and enjoyment. Furthermore, incentives are provided to individuals who submit creative ideas to the platform.

Sustainable Products and Services

LCY's Sustainability 6R

LCY incorporates life cycle assessment into our product design process, guided by both domestic and international standards such as the Sustainability Accounting Standards Board (SASB), the Restriction of Hazardous Substances Directive (RoHS), and the Registration, Evaluation, and Authorization of Chemicals (REACH). Additionally, we consider the specific business units' product characteristics and developmental direction. We have established the LCY Sustainable 6R prin-

ciples: Renewable, Recycling, Replace, Reduce, Repurpose, and Recover. These principles aim to maximize resource utilization during manufacturing, reduce environmental impact, and extend our influence on the consumer cycle. Leveraging our extensive R&D capabilities, we strive to redesign sustainable products that meet end-user needs, thereby redefining LCY's role and position in the industry. In 2023, green products generated NT\$5,370,958,000 in revenue, accounting for 12% of total revenue.



Bio-based materials

- Derived from natural and renewable sources such as plant starch, carbohydrates, and fibers.
- Polymeric materials synthesized via direct microbial fermentation.
- Can be biodegraded into carbon dioxide and organic matter under appropriate conditions after disposal.
- Compostable.



Converting waste into resources

- Materials or technologies for recycling and reuse.
- Designing recyclable processes.



Replace/avoid/reduce the use of risky materials

- Use of raw materials abides by international directives on banned or restricted substances, e.g.: RoHS, REACH, etc.
- R&D, replacing/avoiding the use of toxic substances.



- Use energy recaptured from the manufacturing process.
- Convert energy waste (e.g., steam) into a product.

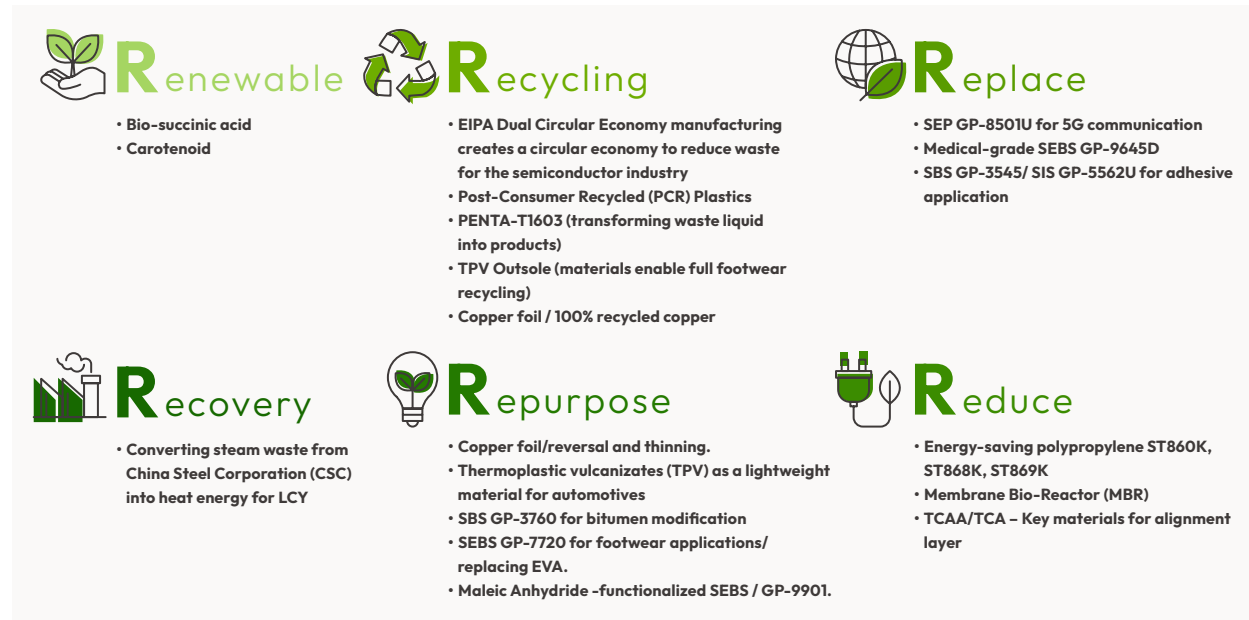


- Enables customers to add new functionality or applications to their products by providing superior properties such as improved adhesion, flexibility, lightweight, smoothness, excellent electrical properties, weather resistance and durability.



Reducing the environmental impact of processes

- Reduce emissions of air pollutants such as sulfur oxides (SOx), nitrogen oxides (NOx), and hazardous air pollutants (HAPs).
- Reduce water consumption or improve water utilization.
- Reduce waste.
- Reduce energy consumption.



Innovation in Green Materials



Bio-succinic acid - Plant-Based Plastic Made Without Fossil Fuels

LCY's bio-succinic acid can replace traditional plastics as it is fully degradable under ambient temperature and normal pressure conditions. This material can be used in coffee cup coatings or packaging materials, helping to reduce carbon emissions when disposable coffee cups are incinerated. The world's largest coffee chain, major global brands, and international coffee chains have all begun using bio-succinic acid in

the coffee cup coatings. Unlike traditional chemical manufacturing processes, bio-succinic acid is produced through bio-fermentation using corn syrup as the raw material. Specially engineered yeast converts the corn syrup into succinic acid, which is then crystallized and purified from the fermentation solution. In addition, LCY's bio-based carotenoids are used to produce all-natural, plant-based astaxanthin, a natural vitamin and antioxidant produced through natural fermentation processes. Astaxanthin can also be used as a colorant in cosmetics and is widely used in animal feed, food, and dietary supplements.

Manufacturing Process of Bio-Based Products

Fermentation

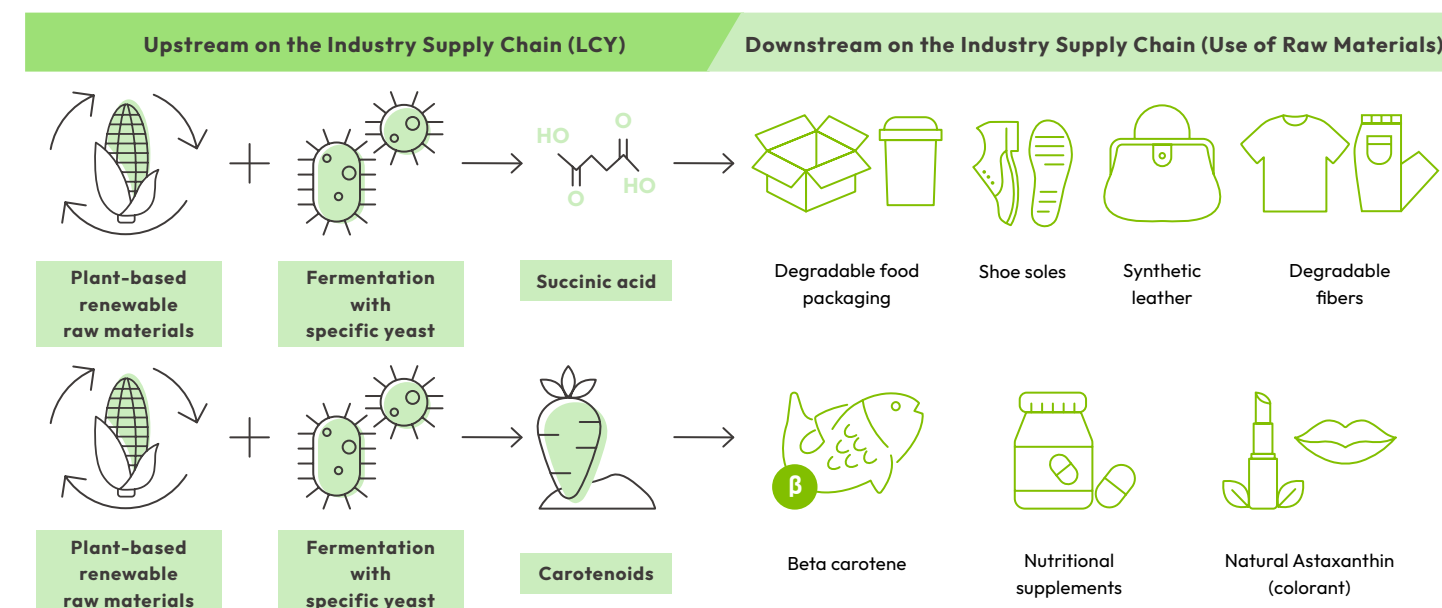
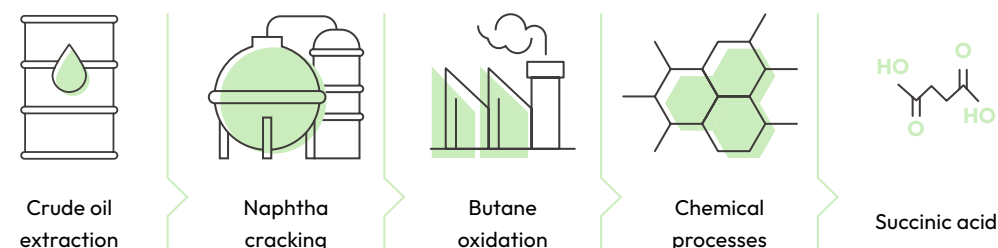
Bio-based process

Produces various products using different yeast strains



Synthesis

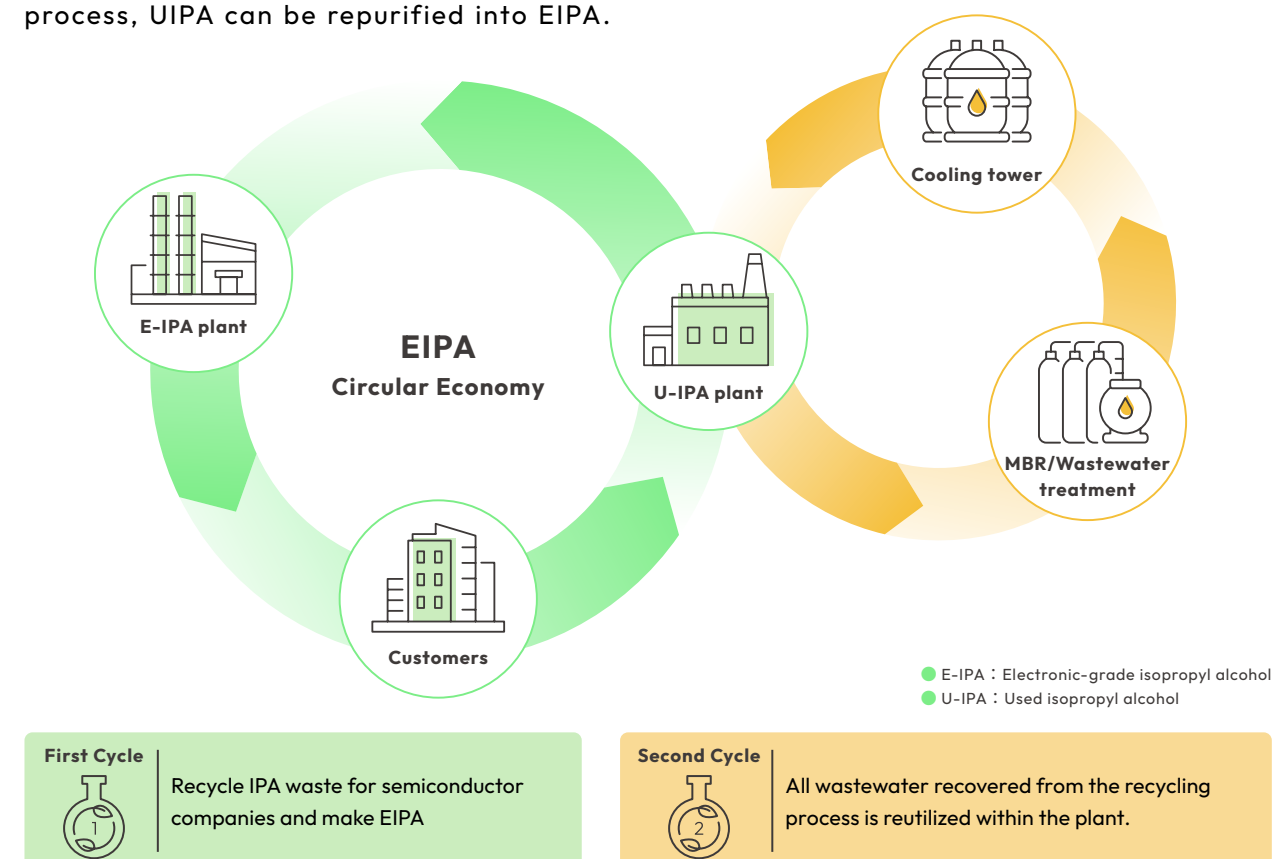
Traditional petrochemical Manufacturing processes



EIPA Dual Cycle Circular Economy Model - creating a circular economy to reduce waste for the semiconductor industry

LCY is the largest producer of EIPA (electronic grade isopropyl alcohol) in Taiwan. LCY pioneered the Dual Cycle Circular Economy model to recycle IPA waste liquid used in wafer rinsing. Used isopropyl alcohol (UIPA) consists of 10 wt% IPA and 90 wt% water. Using LCY's proprietary process, UIPA can be repurified into EIPA.

Additionally, LCY has developed a specialized membrane bioreactor (MBR) and wastewater treatment system to filter and separate the water, making it suitable for industrial use. LCY's innovative waste recycling technology helps downstream clients recycle and reuse UIPA. UIPA is purified and reclaimed from waste liquids to become an industrial-grade product with 99.9% purity. The water produced from the purification process supplies the cooling towers at LCY's Linyuan Plant to maximize resource utilization.



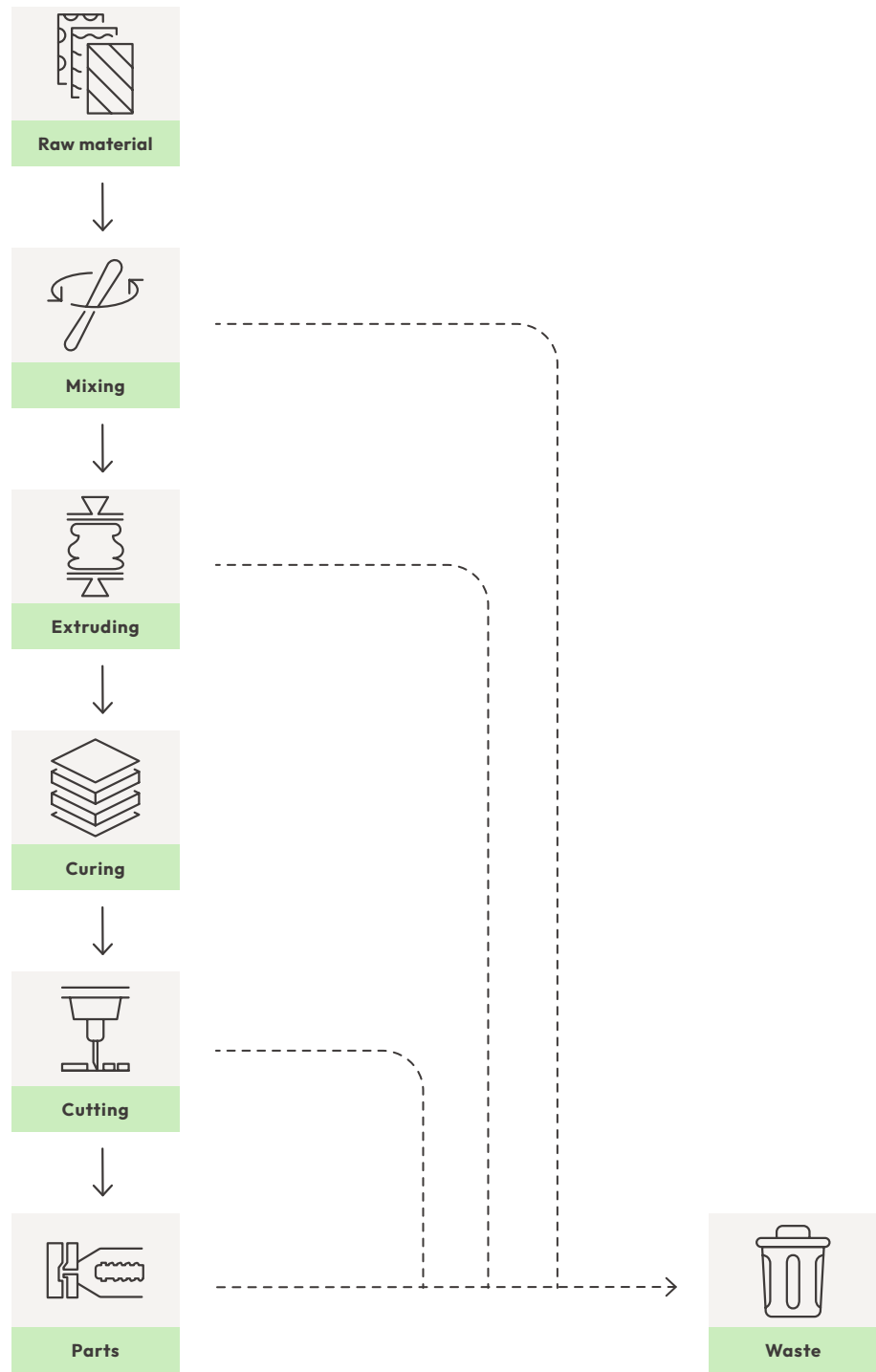
TPV Outsole - Recyclable, Next-Generation Outsole Material

LCY has developed an eco-friendly rubber, thermoplastic vulcanizate (TPV), whose process waste can be recycled and reprocessed, reducing process waste by 1-5%¹. At the end of the footwear’s life cycle, TPV components can be recycled, resulting in an estimated 30% reduction in waste and approximately 50% reduction in

energy consumption². Unlike traditional thermo-set rubber materials, TPV can be molded using continuous injection molding to create products with complex shapes and a variety of colors, significantly reducing equipment and labor costs and saving energy.

¹ National Taxation Bureau of the Central Area, Ministry of Finance (April 18, 2019). Material consumption levels in the footwear industry for the 2018 fiscal year.
² Soochow Securities Research Institute (April 7, 2017). In-Depth Report on Thermoplastic Elastomer.

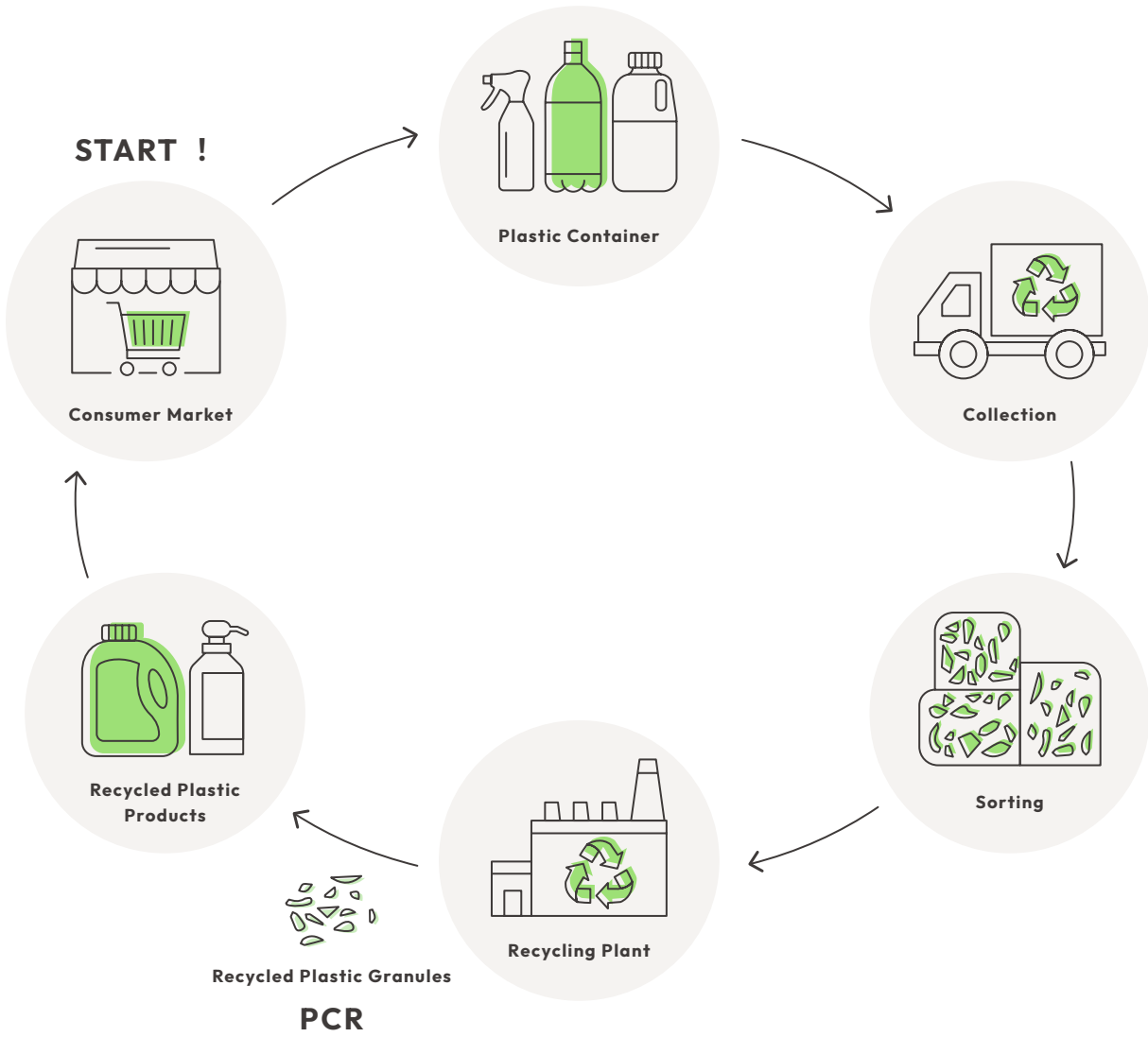
Traditional Thermoset Rubbers - Linear Value Chain



GRS Certified - Dashe Plant Polypropylene (PP) PCR Products

Polypropylene (PP) is an integral part of our lives. Post-consumer recycled polypropylene (PCR PP), created from properly recycled PP plastic, reduces reliance on virgin materials and conserves petrochemical resources. In 2022, the Dashe Plant established the Green PP team, consisting of members from advanced composite materials R&D, production, safety and environmental protection, facility department, storage terminal, and sales. The Dashe Plant

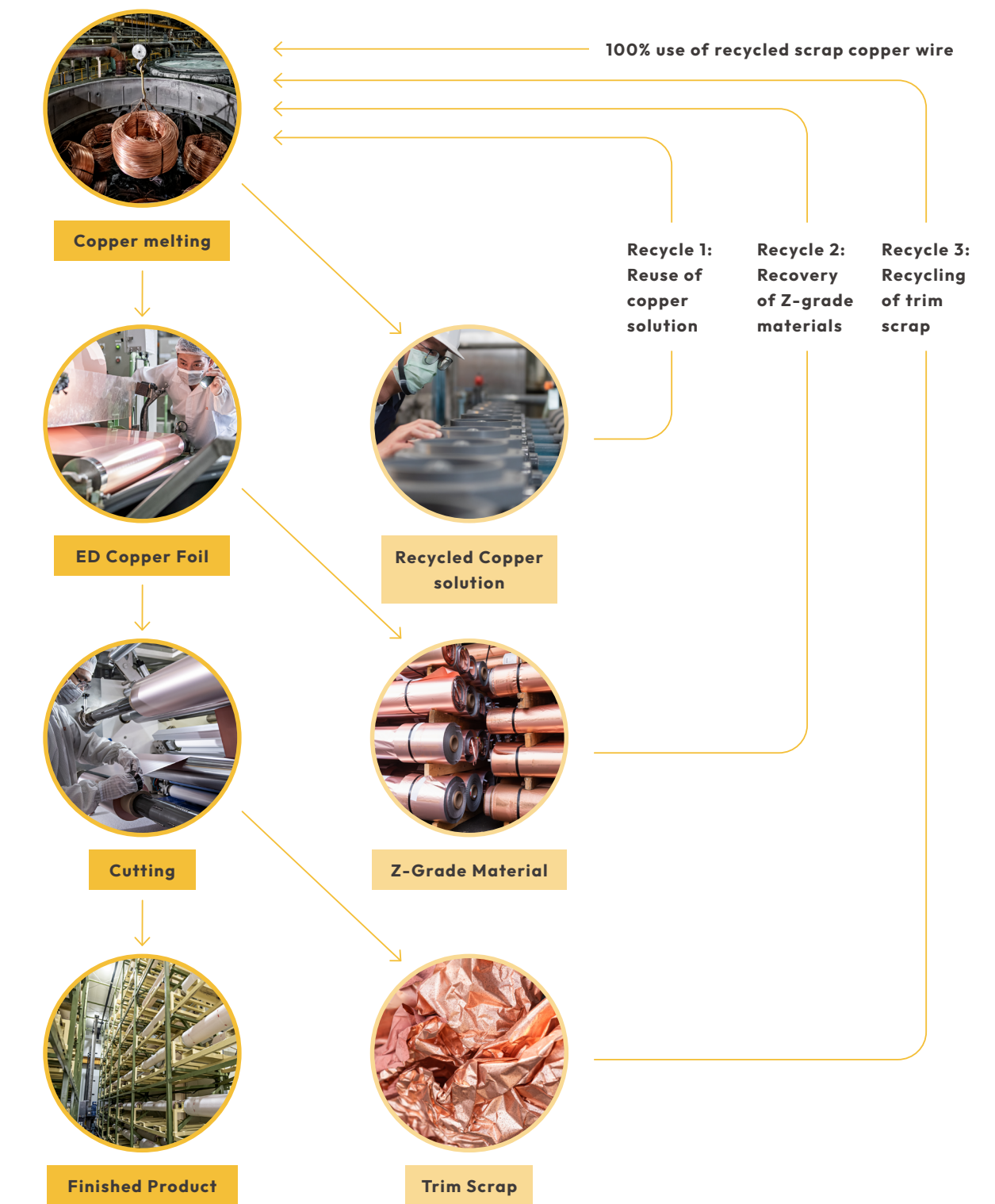
obtained PCR PP product certification in 2022 and has continued to expand the variety of certified PCR PP products in 2023. Amid the ESG movement, we are committed to reducing the energy consumption of product manufacturing. Our current PCR PP products, which contain 50% recycled content, achieve a 30% reduction in carbon emissions (CO2). We will continue to advance our R&D efforts and adhere to GRS certification standards to ensure product quality, transparency, and traceability to minimize the carbon footprint of our products.



100% Recycled Copper Foil Production - 100% Recycled Content Validation - UL 2809

LCY's Copper Foil Plant uses 100% recycled copper wire as raw material to produce high quality, high strength green copper foil that has received UL 2809 (2022-2023) 100% recycled content validation. We maintain communication with our customers to ensure product quality and adopt more environmentally friendly manufacturing processes. When recycled copper wire enters

the production process, key procedures such as smart manufacturing controls and self-developed water resource recycling are applied. Besides using 100% recycled copper wire, the plant also recycles copper from wastewater. The reclaimed copper from wastewater is processed by external facilities and then returned to the production line for copper foil manufacturing. This ensures the maximum utilization of resources and achieves a recycling rate of over 99%.



SEP GP-8501U for 5G Communications - A Safe Alternative for Chloroprene Rubber

SEP GP-8501U is used in 5G infrastructure, specifically in optical fiber and cable fill gels, and due to its specialized polymer thixotropy. It serves as an advanced thickener and rheology modifier in grease and oil applications, effectively replacing animal-based thickeners that often fall short in performance. SEP GP-8501U is designed to maintain functionality under harsh

environmental conditions and offers exceptional heat resistance. This provides end products with desirable properties such as longer life cycles, reduced energy consumption, and less waste. In addition, SEP GP-8501U improves the low-temperature impact strength of general-purpose plastics, making it an excellent replacement for chloroprene rubber (CR) and polyolefin elastomers (POE). Since chloroprene rubber contains halogens that pose health risks, SEP GP-8501U provides a safer alternative. See the table below for more examples of successful substitutions.

Development of PFAS-free CPI Material for flexible displays	LCY's CPI (Colorless Polyimide) is synthesized using alicyclic monomers instead of traditional fluorine-containing monomers to create a transparent substrate for transparent polyimide. It boasts excellent optical performance, high heat resistance, and outstanding mechanical strength without generating PFAS, making it eco-friendly. It can be used to replace traditional glass substrates in displays, particularly in applications like foldable and flexible displays.
TMAH-free, low toxicity electronic-grade cleaners	TMAH (Tetramethylammonium hydroxide) can be absorbed through the skin and cause respiratory suppression in exposed individuals. This chemical is highly lethal and has no antidote. There have been several fatal incidents in Taiwan due to improper handling of TMAH. To reduce the risk of harm, LCY has developed the Non-TMAH Poly-siloxane Remover, a TMAH-free cleaning agent that offers superior cleaning performance.
Substitute for Talc to reduce health risks	Talc is used as a raw material for dusting agents in the TPE-SIS product series. However, safety concerns in recent have raised questions about its potential risks to human health and the environment. To address these concerns, LCY has developed a method to completely replace talc in our products. We have not only avoided using similar raw materials but have also improved product functionality, fully replacing talc in all products within the SIS series.
Alternative for traditional PVC medical materials	Rubber products made with SEBS GP-9645D possess high transparency and excellent elasticity, making them suitable for medical tubing and films, such as IV bags. As it is halogen-free and does not require plasticizers, SEBS GP-9645D can replace traditional PVC medical materials. This material is not easily degradable and exhibits excellent resistance to UV and ozone, as well as outstanding chemical stability.
Replacement of Toxic Potassium Dichromate and Potassium Chromate to Reduce Health Risks	High concentrations of hexavalent chromium compounds, which are characterized as carcinogens, are commonly used in analytical formulations. The Linyuan Plant adjusted the analytical methods to avoid the use of listed toxic substances, effectively replacing their usage.
Development of Online Analytical Technology	LCY has incorporated Process Analytical Technology (PAT) in its processes to replace manual sampling and offline analysis, enhancing operational security and reducing material waste



New Catalyst - Reducing Activation Energy in Reactions

To increase the efficiency of chemical conversions, LCY is developing a new generation of catalysts aimed at reducing the required amount to just one-tenth of the original. Besides lowering the catalyst quantity required to be added, this innovation also enhances conversion efficiency, which simplifies the purification steps and leads to significant savings in materials and energy usage.

Analysis of C2-C6 Impurities in IPA Products - Increasing Efficiency and Reducing Energy Consumption

Developing efficient analytical methods. LCY has incorporated two analytical methods that allow rapid detection of various C2-C6 impurities in IPA. The analytical methods offer the advantage of completing the analysis of nearly 20 impurities within 30 minutes, effectively reducing analysis time and energy consumption. The detection limit can reach the ppb (parts per billion) level by using low-cost equipment.



Process Simulation – Reducing Trial and Error Effort

By establishing mathematical models and performing simulations, we can predict the results of different variables and parameters in the manufacturing process. This optimization of the production process aims to reduce energy and material consumption while improving product quality.



Repurpose

LCD Display Alignment Films (TCA/TCAA) – Innovative Low-Carbon Technology

LCY is actively developing electronic materials and relevant products with high technological thresholds. The R&D team has successfully achieved mass production of TCA and TCAA, which are crucial raw materials for alignment films in LCD displays. Our innovative process uses lower-value petrochemicals as starting materials, resulting in a 21% reduction in hazardous waste during manufacturing compared to other methods, according to LCY studies. Additionally, our unique monomer design and patented formulation produce transparent polyimide products that do not require low-temperature storage. This innovation also lowers the operating temperature for customers and significantly reduces energy consumption.

High-Rebound SEBS elastomer for Functional Footwear – Advanced High Resilience/Light-weight Technology

LCY's high rebound thermoplastic elastomer (SEBS), GP-7720, offers a unique combination of softness, low hardness, and high resilience to significantly improve the comfort and performance of EVA footwear. This innovative SEBS material is specifically designed to meet the required characteristics of athletic footwear, such as running and basketball shoes while supporting the principles of the circular economy through its recyclability. The high-rebound SEBS GP-7720 exhibits high fluidity and low energy consumption, ensuring compatibility with existing EVA injection molding equipment. This allows for the reduction in compounding temperatures and energy usage while improving processing efficiency. The manufacturing process can achieve a 20% reduction in energy consumption. Additionally, the material is suitable for physical and chemical foaming processes, minimizing the need for cross-linking agents and additives by nearly 30%. It also lowers the amount of volatile compounds and fines during processing, making it a next-generation high-performance material that prioritizes environmental sustainability and worker health.

Enhancing Road Durability with High-Additive Asphalt Modifiers – High-Performance Asphalt Modification Technology

SBS-modified asphalt technology has been in use for over 50 years, typically incorporating 4% to 6% SBS to enhance asphalt's high-temperature mechanical properties and low-temperature flexibility. LCY's specially formulated SBS GP3760 allows for an additive content exceeding 8%, significantly outperforming traditional modified asphalts. Research and field data indicate that roads constructed with high-additive GP3760 modified asphalt not only exhibit superior load-bearing capacity but also require 40% less pavement thickness, thereby extending road lifespan and reducing maintenance frequency. Reducing the thickness of the pavement reduces the use of carbon-intensive asphalt, concrete and energy, and less maintenance further reduces carbon emissions, making it a more sustainable next-generation building material.

Customized Reverse Treatment Foil (RTF) & Very Low Profile (VLP) Thin Copper Foil – High-Performance Materials for 5G and Automotive Substrates

LCY's Copper Foil Plant focuses on the copper-clad laminate and printed circuit board markets, actively developing very low profile (VLP) reverse treatment foil (RTF) and ultra-thin

8 µm copper foil for high-frequency applications. These innovations are tailored to the needs of automotive electronics and 5G end products for high-frequency interference reduction and high-speed transmission. Successfully validated by customers, these products are suitable for high-speed multilayer PCBs and high-frequency signal transmission boards. VLP reverse treatment foil is also used in advanced flexible circuits for high-frequency transmissions, such as automotive collision systems, GPS security systems, and servers. These high-value products have three advantages: they meet customer needs, generate profits, and elevate the general quality of life for the overall society. The Copper Foil Plant is committed to reducing process waste and chemical consumption, saving over 100 tons of chemicals per month and reducing copper-containing wastewater sludge by 30%. LCYtech prioritizes environmental sustainability and continuously optimizes processes to embody the principles of waste reduction and circular economy, thereby enhancing sustainable competitiveness.

Responsible Chemical Management

Chemical Management Protocols

Chemical management at LCY is controlled through two phases: Product R&D and Plant Management. For product R&D, LCY will evaluate alternatives and reduce high-risk/hazardous substances through management mechanisms before mass production. LCY also meets with industrial safety and environmental protection units at plants to conduct environmental and health hazard and safety assessments for the production process. The HQ Environmental Risk Management Department and industrial safety and environmental protection offices at each plant are the primary plant management units. The Environmental Risk Management Department formulates quality control guidelines for each of the five stages of the chemical life cycle,

including needs-based application, incoming inspection, procurement labeling, storage and use, and disposal. We monitor changes in chemical regulations by the relevant authorities, clarify the impact on our plants, and discuss response measures to ensure that the use and management of chemicals at all plants comply with local laws and regulations. The aim is to safeguard the safety and health and employees using chemicals. In 2023, the revenue from products containing GHS Category 1 and Category 2 health and environmental hazard chemicals was NT\$5,969,903,000, accounting for 12.9% of the company's consolidated revenue. All such products undergo a 100% hazard and risk assessment as required by the company.

R&D	Substance Use Evaluation	High-risk/hazardous substances are evaluated for substitution and reduction in use.
	Experiment Process Design	The R&D unit plans experiments, selects chemicals, and compiles safety data sheets.
	Needs-based Application	The usage unit/operations department confirms the type and quantity of chemicals.
Plant Management	Incoming Inspection	The safety and environmental protection unit reviews and evaluates the characteristics of the chemical, and conducts hazard analysis using the national standard classification of the operational site and with the Management of Change (MOC) method.
	Procurement Labelling	Chemicals are procured according to the operational site's procurement standards, with suppliers required to provide safety data sheets and GHS labeling.
	Storage and Use	Complete records of chemical storage and labeling are maintained, and hazard information is communicated and usage records are kept.
	Disposal	Waste is properly disposed of and treated according to the regulations of the operational site.

Chemical Hazards and Risk Assessment



- Categorize and manage chemicals according to chemical control banding (CCB) and risk levels.
- Compliance assessment of international banned/restricted substances directives such as RoHS, REACH, etc., safety data sheet update check, and chemical incompatibility check.



- ISO 45001 Risk Assessment and ISO 14001 Environmental Consideration: We regularly assess the risk level of possible sources of risks in our daily operations every year and prepare corresponding management measures.



- Process Hazards Analysis (PHA): We use the HazOp (hazard and operability analysis) method to identify, assess, and control process hazards associated with the manufacturing, use, and storage of hazardous substances within plants.

Responsible Chemical Research

The use of chemical substances has long been closely related to human daily life. In response to current concerns about the safety of various chemical substances, LCY aims to leverage its excellent R&D capabilities through two main strategies: the development of substitutes and process innovation. These strategies aim to gradually reduce the use of high-risk and high-concern substances in our products and facilities. Additionally, we collaborate with our customers to help them develop substitutes, thereby reducing the potential impact of various substances on human health and the environment

Smart Chemical Management

The R&D Center adopted an online chemical management system in 2019 and has been steadily expanding system functions every year. The system utilizes AI technology and currently holds information on the properties of over 20,000 chemicals, allowing users to quickly look up the latest status and management of all chemicals held within the R&D center. The system's PDA and APP functions allow for quick and easy access to records, queries, and reviews of chemical operations, and a QR code function allows users access to information on the type, quantity, distribution, and hazards of all laboratory chemicals, anywhere at any time. By integrating this system with chemical control banding (CCB), we can effectively manage chemicals and exposure risks. We are streamlining the management hierarchy to have a more direct and real-time understanding of chemical operations within the factory, aiming to enhance productivity and allow the company to adapt swiftly to dynamic market environments. The early warning system allows us to monitor chemical manufacturing parameters in real time.

Digital Innovation

Digital Transformation Strategy

LCY has been actively making the digital transformation since 2014, focusing on cultivating top-down change in the digital mindset of our employees to integrate technological tools and conduct digital analysis. During the transition, we adopted the LCY Insights project and LCY AI School.

The LCY Insights project is tasked with implementing company-wide digital transformation and is dedicated to building a brand-new smart factory strategy platform. The platform shall gradually decrease dependency on manual information gathering, building a digital operational cycle: Data → Insight → Decision. This strengthens information visualization, automates reporting, and enhances real-time monitoring, promoting the company's goals of process safety, energy efficiency, carbon reduction, process optimization, and stable quality. It also aims to reduce operational risks, enhance resilience, and propel the company towards sustainable development.

In 2023, a year considered to be the rise of generative AI, we delved deeply into the power of generative artificial intelligence (AI). Against this backdrop, we invited renowned AI experts, Chien Lee-feng and Yin Xiang-Zhi, to give keynote speeches and share their profound insights on AI development trends. To further internalize generative AI technology, our internal AI team organized multiple specialized seminars and developed several innovative generative AI application projects. These projects not only demonstrated the diverse applications of AI technology but also highlighted our forward-thinking and innovative approach to driving digital transformation.

Through a series of LCY AI School courses and Insights User Conferences, we have delved deep into key areas of intelligent manufacturing in the chemical industry. These courses showcase the construction and application of smart machinery, with a particular focus on the strategic

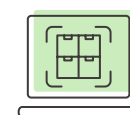
methods for AI implementation. In 2023, to further support and implement digital transformation, we independently developed a No-code AI platform aimed at lowering the threshold for AI technology, enabling employees without technical backgrounds to easily participate in AI project implementation and promotion. This innovative platform provides an intuitive user interface and drag-and-drop features, allowing users to design, modify, and deploy AI models without any programming knowledge. Additionally, by incorporating practical internal cases into the use of this No-code AI platform, we promote a deeper understanding of AI applications among employees.

Whether it's the LCY AI projects or generative AI technology, our strategy not only increases efficiency but also reduces resource waste, further meeting the ESG requirements for environmental protection and demonstrating our commitment to environmental responsibility. Environmentally, we have lowered resource consumption and environmental pollution by reducing the use and storage of paper documents. Socially, we have improved employee work efficiency and job satisfaction, enhancing LCY's social image and reputation. Governance-wise, we have increased LCY's internal management transparency and efficiency by optimizing document information processing procedures, contributing to better corporate governance.

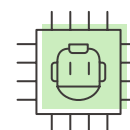
We regard these achievements as a firm commitment to our future development direction, continuing to drive digital transformation and laying a solid foundation for sustainable corporate development. Through these efforts, we have not only improved our company's operational efficiency and product quality but also strengthened our social and environmental responsibilities, actively contributing to sustainable development in the economy, society, and environment.



24/7 industrial safety and environmental monitoring



Process quality prediction and production status monitoring to reduce defective products



Generative AI to boost teamwork efficiency



Smart process optimization improving production line quality yield by 23%



Industrial process digitalization to identify wastewater leaks, saving approximately 1,825 tons of water annually

Digital Innovation & Application

24/7 industrial safety and environmental monitoring

We are committed to enhancing safety monitoring and warning systems in industrial areas to ensure the safety of the production environment and the well-being of employees while maintaining environmental quality. Initially, for the propylene unloading area, we utilize image recognition technology to safeguard the safety of unloading operators. Automatic detection of individuals not wearing protective clothing triggers immediate alarms and records, significantly improving overall safety in the plant. Similarly, we have initiated a fire image recognition project at the Linyuan plant. Utilizing surveillance cameras 24/7, we monitor fire situations continuously and promptly issue alarms when a fire is detected, ensuring timely response during critical moments and preventing significant losses. Beyond safety concerns, we also place a strong emphasis on environmental quality monitoring. We have established an air quality monitoring and warning system by obtaining real-time air quality information from external sources such as the Environmental Protection Agency and municipal governments, integrating it into our database. If the air quality exceeds regulatory standards, the system immediately issues alerts, ensuring the production environment is compliant and well-maintained.

Process quality prediction and production status monitoring to reduce defective products

Smart solutions have been implemented for continuous processes in the titanium/nickel hydrogenation process at the Xiaogang Plant and the titanium hydrogenation process at the Huizhou Plant. Additionally, at the Xiaogang Plant, an intelligent monitoring system has been specifically introduced for batch processes to help users understand the current state of production. For batch processes, monitoring technology for the addition of raw materials was introduced to help users verify the correct proportions and methods of adding materials. If there are abnormalities in the addition of raw materials or deviations from standard procedures, alerts are sent to notify relevant personnel, enabling early detection and timely resolution of issues. For continuous processes, a quality prediction model is developed based on the current flow rate of raw materials and key factors such as temperature, pressure, and liquid level in the reaction tank. This model helps operators monitor the current production status, enabling real-time predictions and issuing alerts in case of quality anomalies. Additionally, for each alert event, the system calculates the top three contributing factors for the operators' reference, helping them quickly identify the root cause. Our process quality prediction system helps improve process stability and reduces defective products.

Generative AI to boost teamwork efficiency

The year 2023 is regarded as the inaugural year of generative AI. Within LCY, innovative applications of large language models (LLMs) have been introduced to enhance operational efficiency with new dynamism. We have developed diverse LLM application solutions for various scenarios, including document information extraction, knowledge management, and report writing analysis, to support efficient work. For instance, tools for long document summarization and mind mapping help staff quickly read documents and visualize key points. The RD knowledge base document search engine enables quick retrieval of technical documents and understanding of critical knowledge. We have also established an ISO document search platform for each department, enhancing departmental collaboration efficiency. By applying AI and LLMs, we infuse innovative vitality into LCY, improving teamwork efficiency and corporate competitiveness.

Smart process optimization improving production line quality yield by 23%

Through the use of sensor data from production lines and AI model analysis methods, we have successfully established optimal process parameter guidelines, effectively enhancing product quality and operational efficiency in our factories. In the copper foil plant's optimization project for foil physical properties, we used AI models to identify the amount of activated carbon added as a key factor affecting the process's physical properties. The AI model regularly predicts and recommends the optimal amount of activated carbon to be added, providing clear operational guidelines for on-site personnel. This project has been in execution for over a year, and in 2023, the physical

property yield of the copper foil has significantly improved by about 23% compared to 2022. This has not only greatly enhanced quality stability but also noticeably reduced physical property fluctuations. We have also applied this AI model analysis method to identify key process variables in the SBS product process at the Xiaogang Plant, effectively solving long-standing product packaging issues at the factory. In the future, we plan to continue using this AI model analysis method in the processes of other products within the company, enhancing product consistency and quality, and thereby improving overall company operational performance.

Industrial process digitalization to identify wastewater leaks, saving approximately 1,825 tons of industrial water annually

The Huizhou Plant has improved industrial water management through digital technology, effectively identifying and addressing leaks in the wastewater system. Previously, the deoxygenation tank would occasionally overflow during boiling, causing unnecessary water wastage. By precisely simulating liquid level and flow rate data, we implemented an optimal water replenishment strategy to prevent wastewater overflow, successfully reducing unnecessary water wastage. Additionally, we established an anomaly detection model that automatically issues alerts when there are abnormal fluctuations in drainage, allowing for timely intervention and adjustment. These improvements have not only saved the plant up to approximately 1,825 tons of water annually but have also significantly reduced production costs and environmental impact, demonstrating the crucial role of digitalization in promoting sustainable development.

Impact of Digital Innovation

In this era of rapid technological development, LCY actively bridges AI and academia, integrating practical AI experience with academic research.



At the Digital Sustainability Summit, the Chief Information Officer presented LCY's commitment to digital sustainability with "Green Transformation: Data and AI-Driven Sustainable Operations," showcasing the company's dedication to sustainable development in the industry.



Since 2020, the LCY information team has been continuously sharing and exchanging insights with major universities on the practical applications of AI digital technology in the industry. This initiative also helps students experience innovation and transformation within traditional industries.

GREEN OPERATIONS

● GHG Emissions ● Energy Management
● Air Quality ● Water Management



↓24%

Total NO_x emissions from LCY locations in Taiwan, China, and the US decreased by 24% compared to the previous year (2022).

↓10.9%

Energy consumption from LCY locations in Taiwan, China, and the US decreased by 10.9% compared to the previous year (2022).

↓14%

Total PM emissions from LCY locations in Taiwan, China, and the US decreased by 14% compared to the previous year (2022).

↓16.7%

Carbon emissions from LCY locations in Taiwan, China, and the US decreased by 25.1% compared to the baseline (2019), and 16.7% compared to the previous year (2022).

↓11%

Total SO_x emissions from LCY locations in Taiwan, China, and the US decreased by 11% compared to the previous year (2022).

↑5.42%

Recycled 6.89% (326,010 tons) of water from LCY locations in Taiwan, more than 2022's 5.42%.

We promote carbon inventory initiatives to evaluate the use of energy, materials, and carbon emissions throughout all stages of production. This systematic and strategic approach enables us to set short-, medium-, and long-term carbon reduction targets, which serve as the foundation for our business decisions and propel LCY toward net zero by 2050. The company continues to promote sustainable manufacturing to increase efficient energy use. All LCY factories are required to increase renewable energy and integrate ISO 50001 energy management systems.

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Achievements

Category	Metrics	Short-term: 2023 Targets	2023 Achievements
GHG Emissions	Reduction of GHG emissions compared to the baseline	↓4.2%	LCY is committed to implementing energy-saving and carbon-reduction measures. In 2023, the company emitted 768,000 tCO ₂ e of GHGs. Compared to the baseline year, emissions have decreased by approximately 25.1%; compared to the previous year (2022), emissions have been reduced by 16.7%.
	Reduction of energy intensity (consumption per unit of product) compared to the previous year	↓1%	In 2023, the total energy consumption at LCY operating locations decreased by 10.9% compared to 2022. However, the energy intensity per unit of product increased to 7.08 GJ/t, up by about 35% from 2022. The main factor was a 34% reduction in total production capacity in 2023 compared to 2022. Despite maintaining the energy intensity required for continuous operation, the significant decrease in production capacity led to an increase in the energy consumption per unit of product.
	All LCY Plants in Taiwan will use a certain percentage of renewable energy	0.5%	In 2023, LCY's in-plant solar power installations generated 122 MWh of electricity. Additionally, the three plants of Taiwan's operational sites (the Kaohsiung Plant, Copper Foil Plant, and Dashe Plant) collectively purchased and used 3,859,000 kWh of green electricity. In 2023, a total of 3,981 MWh of green electricity was used, accounting for 1.1% of the total electricity consumption at LCY plants in Taiwan.
Air Quality Management	Reduction of VOCs from the baseline	↓5%	Overall total emissions decreased by 23% compared to the previous year (2022).
	Reduction in NOx emission from the baseline year (boiler emissions)	↓30%	Overall total emissions decreased by 24% compared to the previous year (2022).
Water Management	Ratio of Reclaimed Water	10%	Recycled 6.89% (326,010 tons) of water, more than 2022's 5.42%.
Hazardous Waste Management	Optimize resource efficiency	Inventory information on hazardous waste (total quantity, types, disposal methods, etc.) and transition from traditional incineration or burial to recycling and reclamation In 2023, the hazardous waste recycling rate was 28.54%, significantly higher than the 12.75% in 2022.	

- The baseline year for greenhouse gas emissions and energy management is 2019; The baseline years for air quality management, water resource management, and waste management are set as the average values from 2016 to 2018. (Removal of 2016-2018 baseline data is considered and update of baseline year for air, water and waste management).
- After several years of data tracking, NOx emissions have consistently met the Ministry of the Environment's regulatory standards. As a result, the indicator for NOx reduction (boiler emission) compared to the baseline year has been phased out from this year's report.

Goals & Targets

As the previous short-term goals have expired, a new set of GHG emission and energy management targets have been set in this report as we continue to strive for net zero by 2050.

Category	Metrics ^{Note 1}	Long-term:2030 Targets	Mid-term: 2027 Targets	Short-term: 2024 Targets
GHG Emissions	Reduction of GHG emissions compared to the baseline	30%	25%	8%
Energy Management	Reduction of energy intensity (consumption per unit of product) compared to the baseline	8%	5%	2%
	All LCY Plants in Taiwan will use a certain percentage of renewable energy	15%	N/A ^{Note 2}	1.2%

- Note 1: 2019 is the baseline year.
- Note 2: The mid-term targets for renewable energy are subject to evolving adjustments based on the individual green electricity procurement strategies of the plants and business units.
- Note 3: This year marks the first time that environmental indicators for air quality, water management and waste have been examined. The original outcome-based indicators (subject to multiple variables) did not accurately reflect the true underlying context. Therefore, it was decided to reconsider and establish new action-based indicators that will be defined in the coming year.

Environmental Policies

Environmental Protection Policies

We have established the Environmental Risk Management & Sustainability Department (ERM & Sustainability Department) as a primary management body that reports directly to the employer. This department comprises the Sustainability Development Department and the Environmental Risk Management Department, each responsible for different operations. The Sustainability Development Division focuses on the organization's sustainability development strategy and the promotion of social responsibility. Meanwhile, the Environmental Risk Management Division manages environmental risks to ensure compliance and supervises the occupational safety and environmental protection offices at all plants. All occupational safety and environmental protection offices are responsible for the formulation, planning, supervision, and promotion of health and safety management. Environmental protection is the top priority for the environmental management system. We are dedicated to implementing all relevant environmental protection measures to respect and safeguard the lives of people, the ecosystem, and facilities. LCY is committed

Environmental Regulatory Compliance

LCY experienced two environmental violations in 2023, with fines amounting to NT\$825,000. Primary violations were of the Air Pollution Control Act (Taiwan). All violations have been thoroughly reviewed with enhanced employee training and improved protocol. No material environmental violations were found. LCY will continue to strive for zero violations.

to promoting a responsible care system for continuous improvement in line with all standard requirements. Additionally, all activities within LCY plants must fully comply with and adhere to relevant regulations to ensure the sustainable operation of all plant activities. We have incorporated an effective system for environmental management. All plants in Taiwan and China have adopted ISO 14001 environmental management systems (EMS) and successfully obtained third-party verification. All plants conduct daily environmental management operations according to ISO 14001 to ensure environmental compliance. The chemical industry has a significant impact on the environment. LCY shoulders the responsibility of managing its environmental impact by setting corresponding management metrics and targets for carbon, energy, air quality, water resources, responsible chemicals, and waste.

Environmental Protection Policies

- Respect For Human Life
- Observe Regulations
- Prevention of Pollution
- Continuous Improvement
- Sustainable Operations

Environmental Violations in 2023

Type	No. of Violations	Fine (NT\$)
 Waste pollution	0	0
 Air pollution	2	NT\$825,000
 Water pollution	0	0
 Toxic chemicals pollution	0	0
Total	2	NT\$825,000

Climate Strategy

Governance & Policies

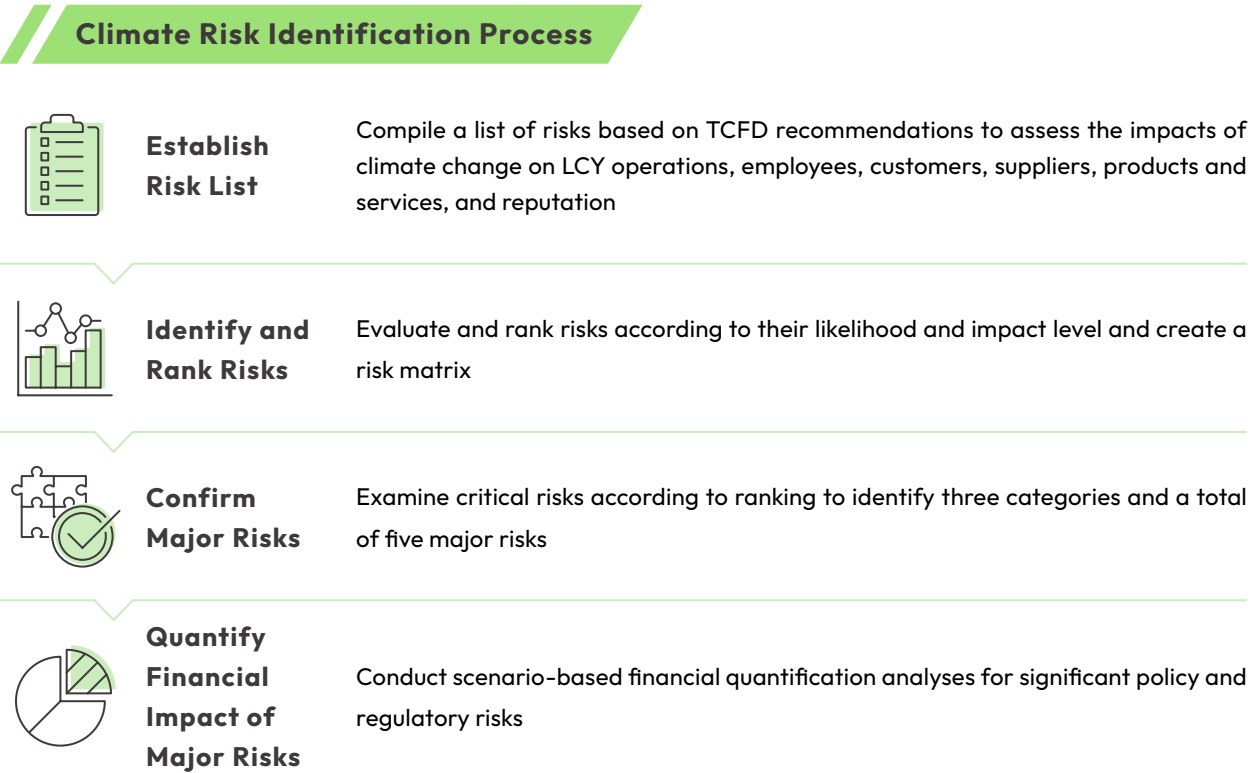
LCY established the Green Transformation Team under the ESG Sustainability Strategy Committee (ESG SSC), under which the Green Operation Team is responsible for climate change risk management and opportunity assessment. They integrate the daily management activities related to climate change and energy issues across all production plants. Following the company’s risk management procedures, climate risk-related issues are regularly reported to the Green Transformation Team. The team evaluates and

approves relevant mitigation and adaptation plans, which are then periodically reported to the Board of Directors for oversight and recommendations. In terms of climate change strategy, LCY comprehensively assesses the risks and opportunities that climate change presents to its operations, employees, customers, suppliers, products and services, and reputation. We establish different regulatory policy scenarios, including total GHG emission control and carbon fees, for risk assessments.

Climate Risk and Response

In response to the increasing risks posed by climate change, LCY references relevant climate change information and the TCFD framework to identify short-term, medium-term, and long-term climate change risks and opportunities. We prioritize these risks and opportunities based on their Impact Level and Likelihood of Impact, creating a risk matrix. Corresponding measures are then developed and implemented. Through executive meetings, the rankings are adjusted according to the relevance of these risks and issues to LCY’s business and operations, ensuring appropriate responses are in place. In 2020, LCY identified the top three risks in the risk matrix as follows: Policy and regulatory risks, which include general environmental regulations and the

increase in GHG emissions costs; and Transition risks, which involve the costs related to the replacement of products and services by low-carbon technologies. Appropriate management and response measures have been developed to address these risks. Looking ahead, we will continue to strengthen our multi-faceted approach to evaluating and reviewing the potential impacts of climate risks on our company. In addition to adopting adaptive strategies to mitigate the effects of climate risks, we are actively leveraging opportunities to enhance production efficiency and innovate product development. We have established relevant carbon reduction metrics and targets in response to climate risks. For more details, please refer to Section 3.3 Carbon & Energy Management.



Using the TCFD-recommended risk list and the Risk Pathways method, we preliminarily identify potential impact pathways. Through internal department interviews and evaluation forms, we confirm the substantive impacts, scenarios,

	Low	High
● Litigation Acquire insured new assets and locations Substitution and diversity of resources International industry standards Uncertainty derived from new regulations Low-emissions energy usage Increase in the cost of raw material Develop or expand low-carbon products and services Recycle Use more efficient transportation	Shift to distributed generation Rise in sea levels Failed investment in new technology Cost of low-carbon economy transformation Rise in average temperature An increase in GHG emissions cost Products and services replaced by low-carbon technology Drastic severe weather patterns Air pollution emissions regulations Renewable energy regulations Respond to changes in consumer preferences Changes in consumer/client preferences Use new technology Uncertainty in market signal Use of more efficient production and distribution processes Fuel/energy tax and relevant laws Strengthen emissions reporting Develop adaptation measures and insurance solutions, participate in renewable energy planning and increase efficiency	Diversify operations Reduce water usage R&D and innovation of new products and services General environmental regulations Lack of regulations Stigmatization on the industry Participation in carbon emission trading Obtain government incentives

Type	Risk	Operational Impact	Financial Impact	Mitigation & Adaptation
Transition Risk	Stringent Environmental Policies and Regulations	Water conservation charges and carbon fees leveraged on plants in Taiwan.	Increase in operational cost	- LCY's plants in Taiwan are participating in the Kaohsiung City Government's water recycling facility project. We contribute by procuring reclaimed water from domestic wastewater, reducing overall water consumption. - Install process water recycling and rainwater harvesting units within the plant, maximizing the reuse of recycled water. Promote water-saving initiatives and actively enhance water efficiency to reduce overall water resource consumption. - Implement energy-saving and carbon-reduction initiatives across all facilities. Green Transformation Team (GTT) consolidates efforts, manages carbon emissions modeling (including cost predictions), and redefines LCY's short- to mid-term goals. Integrate resources and establish ongoing tracking for carbon reduction progress.
	Increasing cost of GHG emissions	Investment costs for controlling GHG emissions (e.g., renewable energy certificate purchases, carbon credit acquisitions, carbon reduction technology investments, and the procurement of energy-efficient equipment)	Increase in operational cost	- Incorporate ISO 50001 energy management system together with a digital energy monitoring system for energy use insights. - Conduct annual inventories to capture GHG emission data and identify hotspots. Drive energy-saving and carbon reduction initiatives to decrease energy consumption. - Collaborate with the value chain to procure waste steam from external entities, promoting efficient energy recycling.
	Products and services replaced by low-carbon technologies	Higher costs for low-carbon, bio-based, or eco-friendly raw materials, and limited availability in the supply chain Unable to meet client product requirements, leading to a decline in sales	Increase in operational cost and decrease in revenue	R&D is actively developing low-carbon products, incorporating carbon emissions or footprint calculations at the development stage to enhance product competitiveness
Physical Risk	Extreme weather events	- Flood, disruption of factory operation, damages to plants - Blackout or energy rationing at plants	Increase in operational cost	- All plants have implemented raised foundations and drainage facilities during construction to prevent flood-related damages. When selecting future sites, LCY will conduct natural disaster assessments and plan flood control facilities to enhance disaster resilience. - All business units have business continuity plans (BCP) in place. In addition to inventory planning for a continuous supply chain, LCY has global production sites and logistics facilities to address potential power outages or energy rationing events.
	Shifting Weather Patterns	Water shortage, increase in production cost	Increase in operational cost	- Develop water shortage contingency plans to prevent operational disruptions caused by water shortages. - Promote water conservation projects and enhance efficient use of water to reduce consumption of water resources.

Carbon & Energy Management

Carbon Management

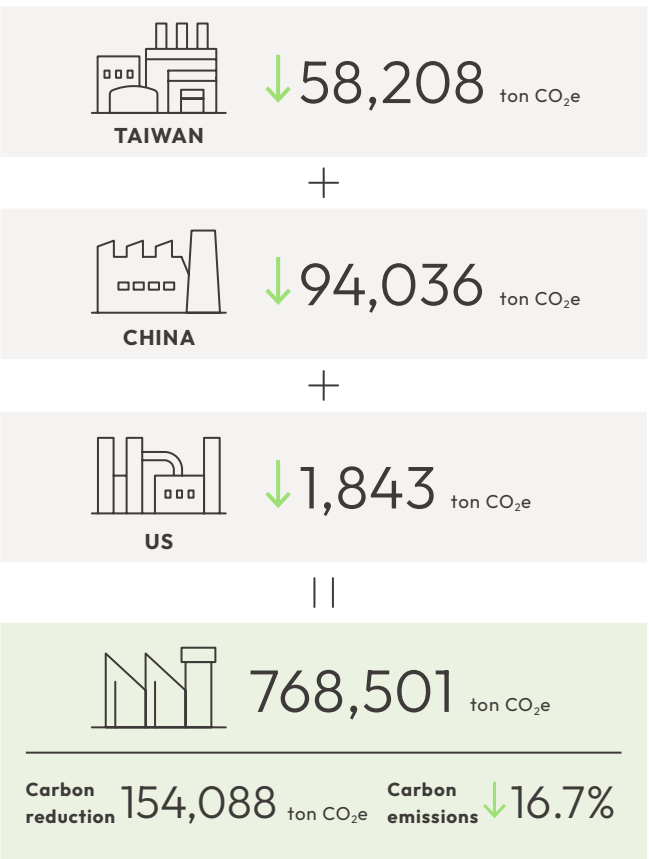
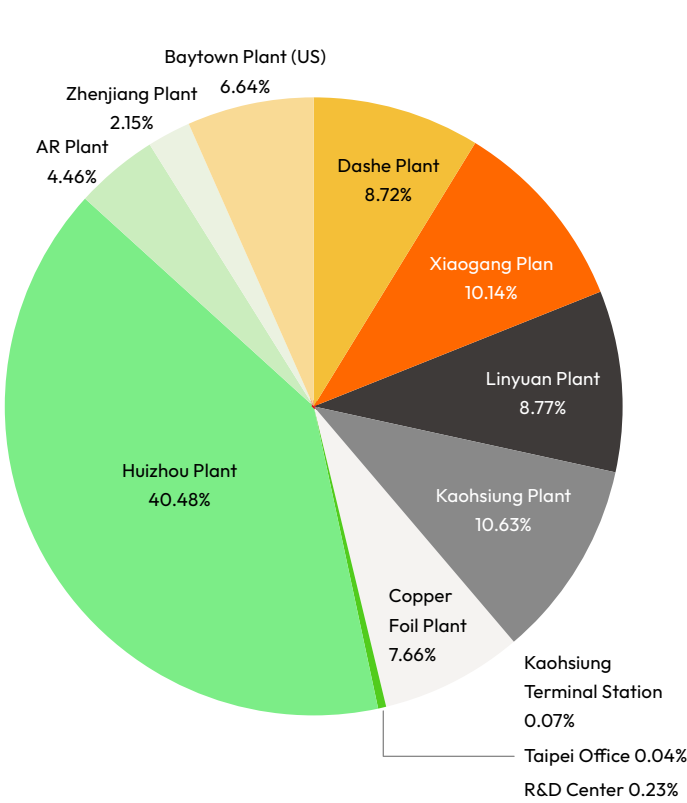
Since 2004, LCY has systematically carried out GHG inventory and obtained third-party ISO 14064 verification at Taiwan facilities. This allows us to track the emissions from each location and consistently pursue carbon reduction and low-carbon initiatives. Facilities in both Taiwan and China adhere to the ISO 14064-1 greenhouse gas inventory method, conducting annual inspections and obtaining third-party certification. The Taipei office, R&D center, and Kaohsiung Terminal Station follow the ISO 14064-1:2018 standard for independent

inspections, while operations in the US conduct voluntary inventory in compliance with the requirements of the local authorities. There are plans to gradually transition to ISO 14064-1 certification as well in the future. In 2023, total GHG emissions from locations in Taiwan, China, and the US amounted to 768,501.0 tCO₂e. Carbon emission intensity was 0.763 tCO₂e per ton of production. Compared to the previous year (2022), this represents a reduction of 154,088 tCO₂e, indicating a 16.7% decrease in carbon intensity.

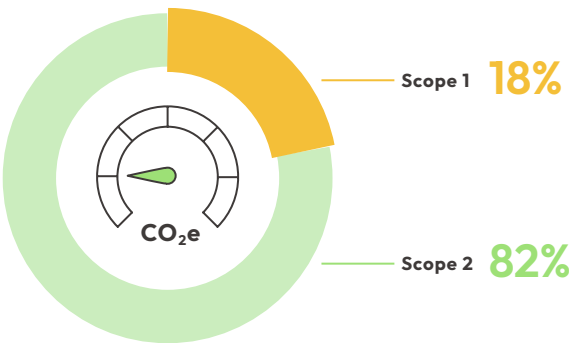
Due to the type and characteristics of LCY products, our GHG emissions are primarily indirect emissions (Scope 2), which account for 82% of our total emissions, rather than direct emissions (Scope 1), which are more common in traditional petrochemical industries. Carbon reduction measures primarily target energy conservation and steam usage reduction. In 2023, carbon emissions from LCY Taiwan locations totaled 355,511 tons, a 14.1% reduction (58,208 tons) compared to the previous year (2022). Carbon reduction efforts are divided into two main parts: internal improvements and optimization within the plant and engagements with suppliers. Internal improvements involve enhancing process operations, heat integration, and replacing

energy-saving equipment, resulting in a total carbon reduction of approximately 16,112 tons. Supplier engagements focus on adjusting the energy source materials provided, leading to a further carbon reduction of approximately 1,335 tons in 2023. In 2023, adjustments to production capacity, operational schedules, and emission source carbon coefficients, driven by sales strategy, resulted in a reduction of approximately 40,760 tons in total carbon emissions from LCY Taiwan operations. In the future, our Scope 1 reduction plan focuses on process adjustments to decrease exhaust emissions and lower direct fuel usage. This expansion of carbon reduction efforts within the plant aligns with our vision for a gradual transition to a low-carbon model.

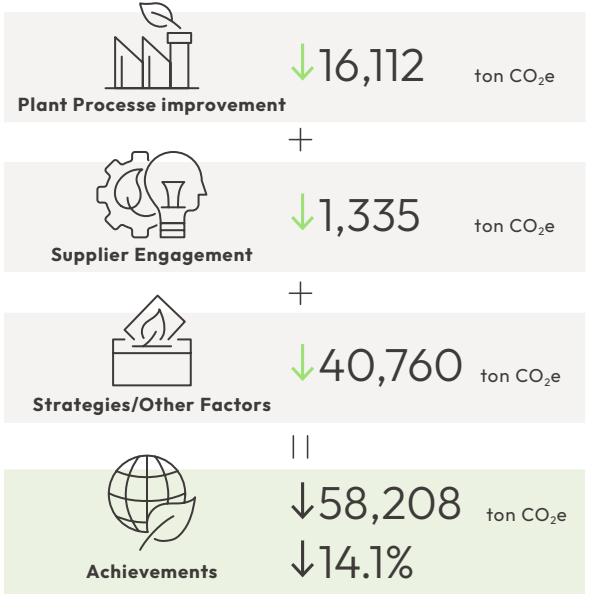
GHG Emissions Analysis by Location in 2023



GHG Emissions Breakdown



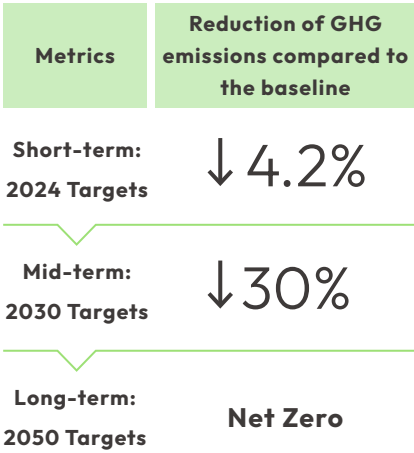
Taiwan



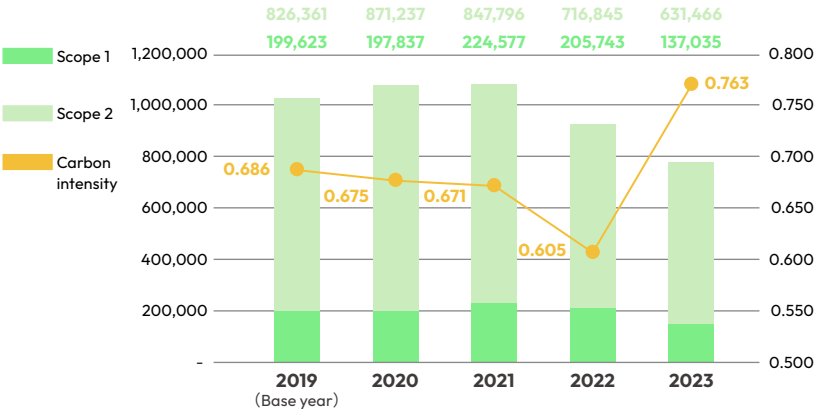
Following the establishment of the GHG emissions inventory system, each plant will further verify product carbon footprints (CFV), integrating the concept of GHG emissions into corporate operations for effective management. In addition to standard verification, LCY introduced renewable energy strategies and internal energy-saving initiatives in 2019, formally incorporating them into company management.

We then formulated energy and GHG management targets for all plants in Taiwan and in 2023, reexamined the progress made toward the 2023 short-term goals. We subsequently expanded these goals to include China and US operations, redefining short-term (2024), mid-term (2030), and long-term (2050) targets that align with those of the country, industry peers, and the customers.

GHG Emissions



Note: The baseline year is set as 2019, representing the most recent year before the impact of the pandemic and a period of stable production.



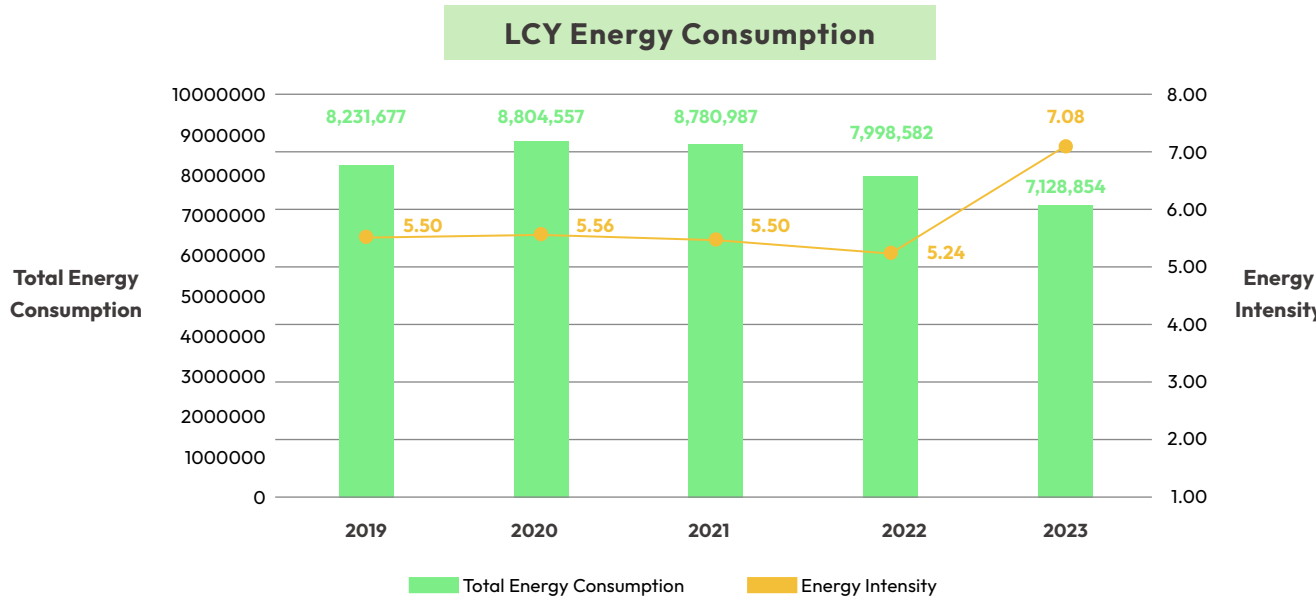
Scope 1 (tCO ₂ e)	199,623	197,837	224,577	205,743	137,035
Scope 2 (tCO ₂ e)	826,361	871,237	847,796	716,845	631,466
Total (tCO ₂ e)	1,025,985	1,069,074	1,072,373	922,588	768,501
Carbon intensity (tCO ₂ e per ton of production)	0.686	0.675	0.671	0.605	0.763

- Note:
- Total carbon emissions include Scope 1 and 2 GHG emissions from Taiwan, China, and US operations. The types of greenhouse gas emissions include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).
 - Emission factor data sources for Taiwan: The Ministry of Environment's Greenhouse Gas Emission Factor Table (6.0.4) and the electricity emission factor released by the Energy Administration of the Ministry of Economic Affairs in 2023. The emission factors for the Zhenjiang Plant are based on the "2019 Annual Emission Reduction Project: Baseline Emission Factors for China Regional Power Grids." For the Huizhou Plant and the AR Plant, the emission factors are calculated according to "No. 43 [2023], Ministry of Ecology and Environment" and "No. 111 [2022], Ministry of Ecology and Environment" respectively. The emission calculations for the US (Baytown) plant follow the latest data provided in the EPA's announcements.
 - The emissions from each location are aggregated using the operational control approach. Taiwan's operational sites (Kaohsiung Plant, Xiaogang Plant, Copper Foil Plant, Linyuan Plant, and Dashe Plant) and locations in China (Zhenjiang Plant, Huizhou Plant, and AR Plant) adhere to ISO 14064-1:2018, referencing the Global Warming Potential (GWP) values from the IPCC 2021 Sixth Assessment Report. The emissions data are certified by third-party verification. The R&D center, Kaohsiung Terminal Station, and the Taipei office follow the ISO 14064-1:2018 standard for GHG inventory. Operations in the US conduct voluntary inventory in compliance with the requirements of the local authorities, and conduct voluntary self-assessments using Global Warming Potential (GWP) values from the IPCC 2021 Sixth Assessment Report.
- Carbon intensity = total carbon emissions (Scope 1+Scope 2) / total production (tons).

Energy Management

In 2012, the Dashe Plant in Taiwan was the first to adopt the ISO 50001 Energy Management System. As of the end of 2023, all Taiwan and China plants have fully adopted the system with regular maintenance to ensure ongoing effectiveness. A smart platform management system is used to monitor the equipment's energy usage. LCY continues to review and optimize the production process to improve energy efficiency based on data analysis provided by the system. In 2023, the total energy consumption at LCY operating locations in Taiwan, China, and the US was 7,128,854 GJ, a decrease of 10.9% compared to 2022. Energy intensity increased by 35%, primarily due to the fact that though production in LCY Taiwan, China, and US plants decreased

by 34% since 2022, the energy intensity required for continuous operations remained unchanged, leading to an increase in the energy consumption per unit of product. The top two categories of energy usage were steam at 54.7% and electricity at 26.4%. To reduce the potential cost and environmental impact of self-generated steam, LCY became the first company to purchase and reuse exhaust steam from China Steel Corporation in 1994. This innovative approach allows the reuse of discarded resources. Through continuous efforts in process improvement, thermal integration, and the adoption of energy-efficient equipment, LCY enhances energy efficiency, steadfastly advancing toward the goal of achieving net-zero emissions.



LCY's Energy Consumption from 2019 to 2023

Type	2019	2020	2021	2022	2023
Natural Gas (NG)	1,538,142	1,623,278	1,613,843	1,475,611	1,262,650
Liquefied Petroleum Gas (LPG)	13,963	13,002	49,373	102,893	65,427
Steam (procured)	4,588,031	4,960,390	4,879,136	4,318,759	3,896,828
Diesel	11,328	8,281	6,782	5,260	3,802
Gasoline	2,389	1,556	1,387	1,266	1,221
Electricity procurement	2,077,609	2,197,743	2,230,182	2,094,504	1,884,615
Generated renewable energy (T-REC)	214	307	284	289	14,311
Total Energy Consumption	8,231,677	8,804,557	8,780,987	7,998,582	7,236,639

unit: GJ

Promoting Renewable Energy

In light of the global shift towards renewable energy and the policies of the Taiwan government, LCY is actively expanding renewable energy facilities and equipment. LCY implemented solar power generation equipment at both the Dashe Plant and the LCY Nanzih R&D Center, generating 334GJ and 104GJ of electricity respectively. Taiwan Renewable Energy Certificates (T-RECs) have also been obtained. Furthermore, in response to the Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a

Certain Contract Capacity and the Renewable Energy Development Act in Taiwan, the GTT will work with relevant units at each plant to prepare for the use of renewable energies in 2023. We integrated the company's short-, mid-, and long-term measures for carbon reduction and determined targets for renewable energy use to reduce dependency on fossil fuels and mitigate the impact of energy consumption on climate change. LCY's renewable energy use in 2023 increased 49-fold to 0.2% from 0.004% in the previous year.

Air Quality Management

Air Quality Policies

LCY continuously improves air quality management across all production plants and facilities. Each business unit regularly reports the current status and improvement measures to the management team during monthly KPI meetings. These reports include a review of air pollution emission trends and the improvement efforts at each plant. The Environmental Risk Management Department collaborates with the occupational safety and environmental protection office personnel from each plant, as well

as external scholars and experts, to strengthen the routine promotion of pollution prevention activities through cross-plant personnel integration and audits. Primary management strategies include regular monitoring, equipment optimization, and information transparency. Continuous monitoring with dual dimension (time and space) management. For the spatial dimension, LCY uses the Fourier Transform Infrared Spectroscopy (FTIR) around the entire plant perimeter and establishes an odor fingerprint map for the factory perimeter. Additionally, with



the aid of OP-FTIR, we continuously develop emission fingerprint identification for tracking and improvement. In the event of an abnormal warning, we can immediately trace the source and perform data-driven and scientific assessments. For the temporal dimension, LCY conducts daily self-monitoring supplemented with weekly inspections by the EYE-C-GAS team using infrared cameras. Quarterly, we engage external parties for inspections, and at least

once a year, we conduct stack testing to ensure all air pollutants comply with regulations. We also combine AI tech with our air quality monitoring and warning system, obtaining real-time air quality data from external sources such as the Ministry of Environment and municipal governments, and integrating it into our database. If the air quality exceeds regulatory standards, the system immediately issues alerts, ensuring the quality of the production sites.



Regular monitoring and testing

We implement dual-dimensional management of time and space to monitor and establish potential odor fingerprint maps around the plant perimeter. If an abnormal warning occurs, we can immediately determine and track the source.

- Integration with AI Factory
- Regular Monitoring: Daily self-monitoring, weekly inspections using infrared imaging by the EYE-C-GAS team, and quarterly external inspections
- Utilizing FTIR for autonomous monitoring



Active reduction efforts

In response to various global regulations, LCY plants in Taiwan, China, and the US conduct strict self-management.

- Phased replacement of equipment and components
- Optimization/installation of advanced prevention and control equipment
- Management by Walking Around (MBWA)
- Regular review of reduction performance



Information transparency

We disclose emissions data honestly and transparently, strengthening internal improvements through external supervision. We also monitor regulatory updates and conduct compliance evaluations to ensure adherence to legal standards.

Each operational site’s occupational safety and environmental protection teams are responsible for collecting relevant regulations, conducting compliance evaluations, and providing training and advocacy to ensure pollutant emissions remain within standards. Pollutant emission regulations:

Taiwan
All plants have adopted regulatory identification procedures set forth by the air pollution emission control regulations for Kaohsiung-Pingtung area.

China
Emissions standards are established under the Atmospheric Pollution Prevention and Control Law, mandating industrial sectors in each region to establish total emission control targets. Standards encompass particulate matter, sulfur dioxide, nitrogen oxides, and volatile organic compounds.

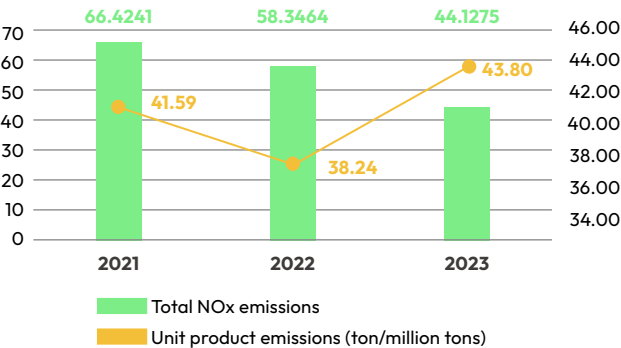
US
The Environmental Protection Agency (EPA) primarily establishes emission standards for industries under the Clean Air Act. These standards are designed to regulate the release of harmful substances into the atmosphere, including sulfur dioxide, nitrogen oxides, volatile organic compounds (VOCs), and particulate matter such as PM2.5 and PM10.

Air Pollution Reduction Measures

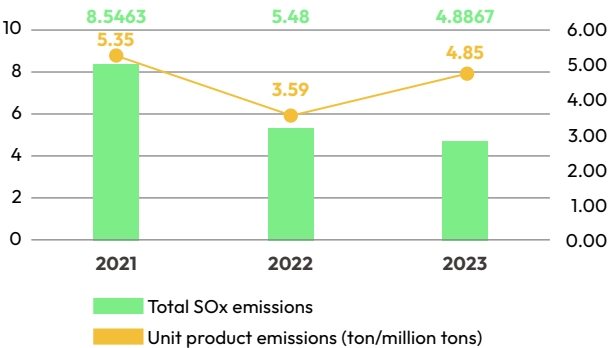
LCY continuously undertakes phased replacement of equipment parts, installation of Selective Catalytic Reduction (SCR) facilities, process equipment adjustments, and the setup of exhaust gas collection and treatment facilities to reduce VOC emissions and decrease NOx levels. Internally, we hold regular meetings to review emission data and the improvement sta-

tus of each plant. We also enhance equipment inspection management and provide education and training to minimize the environmental risks and hazards posed by specific air pollutants. In 2023, NOx emissions decreased by 24% from the previous year; SOx emissions decreased by 11%; VOCs decreased by 23%; and PM emissions decreased by 14%.

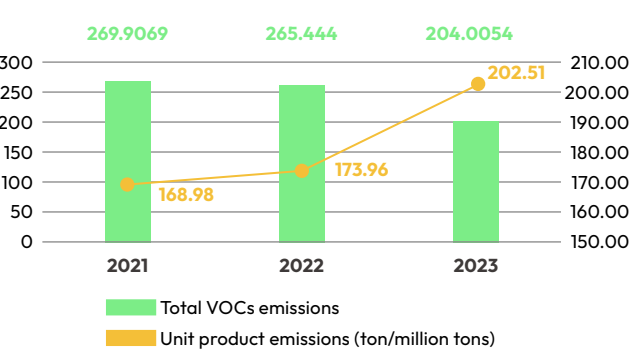
NOx Emissions & Unit Product Emissions



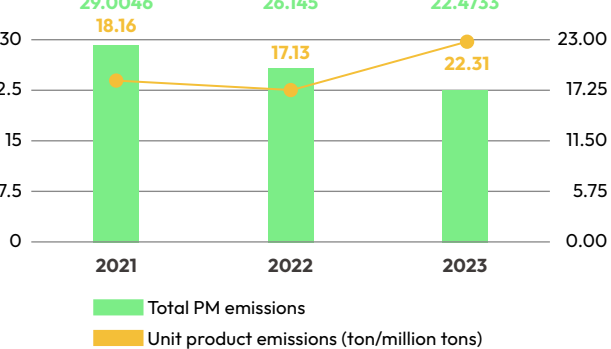
SOx Emissions & Unit Product Emissions



VOCs Emissions & Unit Product Emissions



PM Emissions & Unit Product Emissions



2023 LCY Air Pollutant Emissions Data

Region	Unit: Ton	NOx	SOx	VOCs	PM	Hazardous Air Pollutants (HAPs)
Taiwan	Kaohsiung Plant	5.9433	0.7998	39.9	1.0052	0.1842
	Copper Foil Plant	0	0	4.352	3.7228	0.0051
	Dashe Plant	12.456	0.4625	9.7619	3.5212	0.7554
	Linyuan Plant	3.084	0.304	29.1742	0.078	0.4902
	Xiaogang Plant	1.8674	1.23	59.4578	0.5575	34.665
	Kaohsiung Terminal Station	0	0	9.7949	0	0
	R&D Center	-	-	-	-	-
China	Huizhou Plant	9.564	1.106	35.884	4.704	-
	AR Plant	0.8828	0.7844	5.566	0.4646	-
	Zhenjiang Plant	0	0	0.4446	0	-
US	US (Baytown) Plant	10.33	0.2	9.67	8.42	-
Total		44.1275	4.8867	204.0054	22.4733	36.0999

Note 1: Emission quantities of air pollutants at each location are calculated based on testing data, considering only production processes and not accounting for mobile sources.
Note 2: Disclosure for HAPs data from all plants in China and the US (Baytown) is not required and therefore, the data is not currently disclosed.

Unit: ton/year



Water Management

Water Policies

We have identified water resource risks in our main production locations with WRI’s water assessment tool, Aqueduct Water Risk Atlas. Plants in Taiwan, Huizhou (China), AR (China), and Zhenjiang (China) are in regions of low baseline water stress; and Baytown (US) has low-to-medium baseline water stress. In spite of this, each LCY plant continues to actively manage water resources internally and through external collaboration to mitigate the impact of potential water shortages.

The UN World Water Development Report 2020 highlighted the cross-sectoral influence of water resources. In response, we signed a reclaimed water usage contract with the MOEA Industrial Development Bureau for the Kaohsiung Linhai Water Resource Centre. In alignment with government policies, we agreed to use 2,000 tons of reclaimed water per day from the Linhai Reclaimed Water Plant for plant operations starting in 2022. This project integrates the capabilities of sewage treatment and reclaimed water plants, pooling resources from the private sector, government, and corporations to

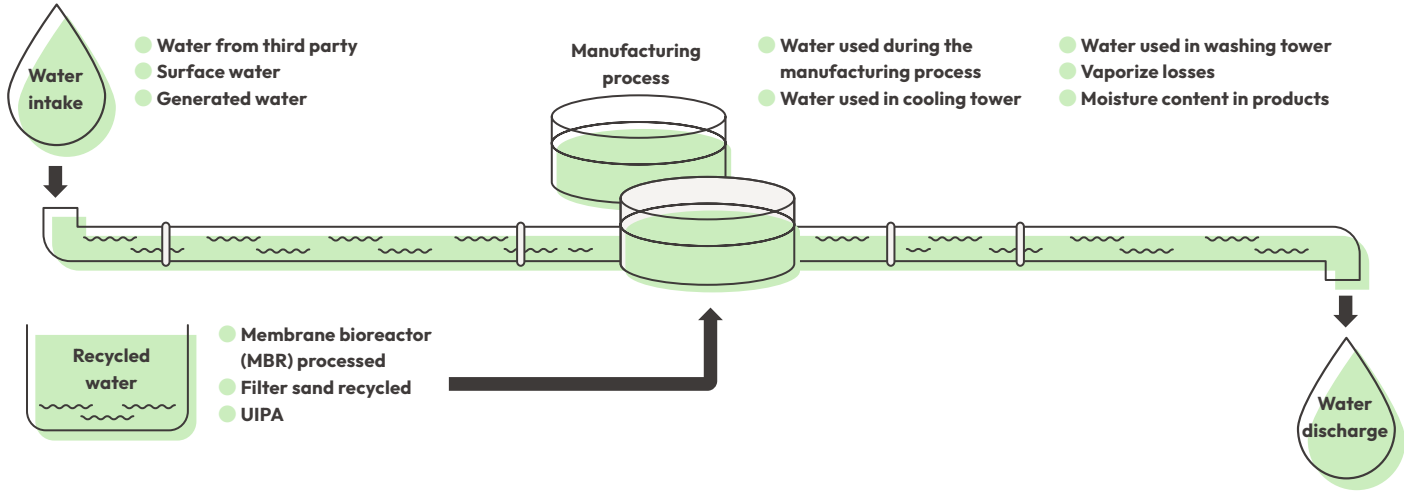
transform municipal wastewater into reclaimed water. Five companies, including LCY, have joined this initiative, combining resources, manpower, and technology to optimize water resource efficiency. Additionally, Taiwan’s unique geographical factors result in significant differences in reservoir water supply between dry and wet seasons. To address water shortages during dry periods, we plan to enter long-term agreements with external water truck suppliers to maintain a water supply.

Water is a critical component in chemical production, used for cooling, steam generation, and raw material processing. Consequently, LCY prioritizes water resources as a key risk factor and implements proactive management measures to enhance the importance of water resource issues from governance, strategic, and technical perspectives. The governance aspect includes elevating the importance of water management and setting water conservation goals; The strategic aspect includes 1) increasing the amount of water recycled at the plants by recycling steam condensate, using MBR technology to treat wastewater at plants, and 2) installing water conservation facilities to reduce water withdrawals and working with external

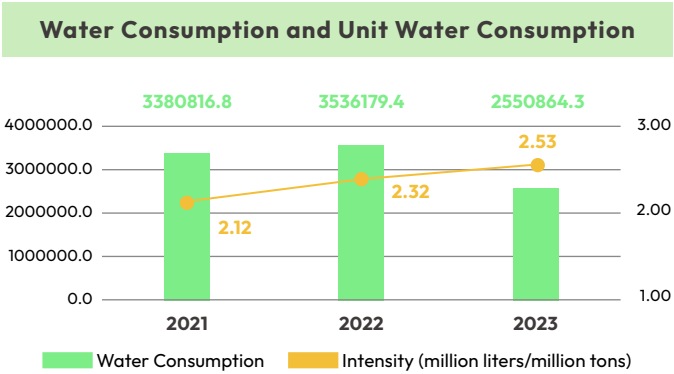
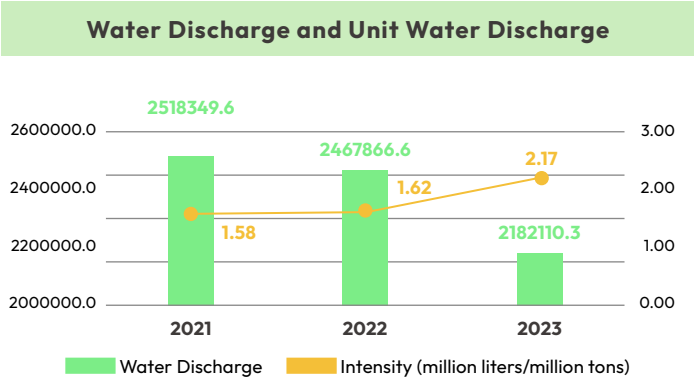
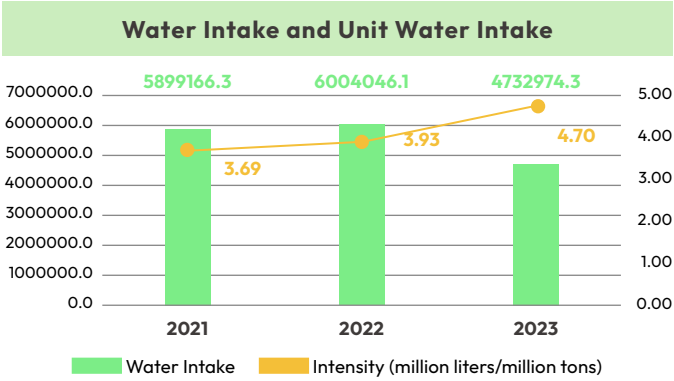
parties to implement a water reclamation program; and the technical aspect includes research, development, and optimization of MBR technology and other technologies that improve water use efficiency. In 2023, LCY’s unit product water intake and unit product wastewater increased by 19.41% and 33.94%, respectively, compared to 2022. Additionally, water recycling in 2023 amounted to 326,010 tons, constituting 6.89% of the total water usage. Occupational safety and environmental protection teams at each plant are responsible for collecting wastewater discharge regulations, conducting compliance evaluations, and promoting adherence to these standards. Water quality is continuously monitored at discharge points. By developing water treatment equipment, optimizing equipment performance, and installing filter sand systems, we effectively reduce harmful substances in the effluent, there-

by improving the quality of the receiving water bodies and ensuring that wastewater discharge meets or exceeds regulatory standards.

- For LCY Taiwan facilities, the national Effluent Standards are the primary regulation. We also strictly control the quality of factory discharge water according to the regional effluent standards specific to the industrial zones where our operations are located.
- For our China facilities, we comply with the Water Law of the People’s Republic of China as the primary regulation and adhere to the Class III discharge standards, rigorously following these to minimize the impact of pollutants on the environment.
- LCY US facilities comply with the relevant regulations of the Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ).



Governance	Strategy	Technical
Elevate Water Resource Governance and Set Water Conservation Targets ● Aim for recycled water usage to account for 20% of total water usage by 2030 ● Establish an Energy & Water Conservation Committee to conduct cross-departmental meetings with plant managers and business units ● Develop an emergency response plan for water shortages.	Enhance water recycling and reduce water withdrawal ● Increase water recycling: Implement internal management strategies (process water recycling, including steam, condensate, and wastewater) and collaborate externally for reclaimed water, integrating municipal wastewater recycling ● Reduce water withdrawal: Install water-saving hardware, such as stormwater interception systems, summer sprinkler water collection systems, larger pump systems for increased circulating water, and reuse water from scrubbing towers ● Optimize water treatment equipment by integrating MBR technology	Develop climate adaptation technologies to reduce pollution/ manage diversions ● Independently develop LCY Nano-level MBR 3.0 ● Enhance industrial water use efficiency ● Improve the efficiency of centralized water treatment systems



Total Water Intake (Categorized by Source)

Source	Water Intake in 2023 (Unit: tons)
Surface water	378,982.76
Water from third party – tap water	2,230,180.91
Water from third party – purchased reclaimed water	697,227
Generated water	1,426,583.64
Total water intake	4,732,974.31

Note 1: LCY’s water intake does not include seawater; all water intake falls under the category of freshwater with total dissolved solids ≤ 1,000 mg/L.
Note 2: Generated water output includes condensed water from externally purchased steam and condensed water after purification of UIPA.

Water Discharge in 2023

Categorized by Destination	Surface water	216,155
	Water to third party	1,965,955
	Groundwater	0
	Sea water	0
Freshwater or others	Freshwater (total dissolved solids ≤ 1,000 mg/L)	2,182,110
	Others	0
Total water discharge		2,182,110
Total water consumption		2,550,864

Note 1: Total water consumption = total intake – total discharge (including water sales of 7,409 tons (Linyuan Plant))

Unit: tons

Water Conservation Measures



Since 2018, LCY’s Kaohsiung Plant has supported the Kaohsiung City Government Linhai Reclaimed Water Project, utilizing municipal wastewater converted for industrial use as reclaimed water. This project integrates the capabilities of sewage treatment and reclaimed water plants, pooling resources from the private sector, government, and corporations to optimize water resource efficiency. For example, at the Kaohsiung Plant, reclaimed water is used to supplement cooling towers as circulating water. As the water is cleaner, it saves 50-100 tons of water daily from the cooling towers’ discharge, amounting to approximately 18,000-36,000 tons of water saved annually.



To reduce water resource consumption during operations, we actively implement water conservation measures and use recycled water within the plant. Through the recovery of process steam and condensate, the introduction of MBR technology in certain plants, and the installation of wastewater reuse equipment, we continuously monitor water usage and develop equipment to improve water use efficiency. For instance, since 2021, the Kaohsiung Plant has optimized wastewater treatment facilities, using SBR-treated wastewater, which, after obtaining water reuse permits, is used as scrubber water for incinerators, saving 50-100 tons of water daily, or 18,000-36,000 tons annually.



LCY developed its own “EPPA-Membrane Bioreactor (MBR)” water recycling technology. Since 2016, the Kaohsiung Plant has implemented MBR equipment to fully recycle process wastewater. Combined with big data intelligent biological treatment systems, over 90% of the plant’s wastewater is successfully recycled and reused. The system can handle up to 1,000 tons of process wastewater daily, significantly reducing potential pollution from process wastewater. The recycled water quality surpasses that of purchased industrial water and can be directly used for cooling tower replenishment and cleaning incinerator scrubbers. The MBR equipment thus expands “recycled water” resources and enhances water supply flexibility.

Water Pollution Prevention Measures

Occupational safety and environmental protection teams at each plant are responsible for collecting wastewater discharge regulations, conducting compliance evaluations, and promoting adherence to these standards. Measures to prevent water pollution include continuously monitoring water quality at discharge points; developing water treatment equipment; opti-

mizing equipment performance; and installing filter sand systems. These measures help us to effectively reduce harmful substances in the effluent, thereby improving the quality of the receiving water bodies and ensuring that wastewater discharge meets or exceeds regulatory standards. In 2023, LCY had no incidents of non-compliance with water quality discharge regulations.

Effluent Discharge Standards

Taiwan	The primary regulation is the national Effluent Standards, along with regional effluent standards specific to the industrial zones where our operations are located
China	The primary regulation is the Water Pollution Prevention and Control Law of the People’s Republic of China, and LCY adheres to Class III discharge standards
US	Compliance with relevant regulations of the US’s Environmental Protection Agency (EPA) and the Texas Commission on Environmental Quality (TCEQ)

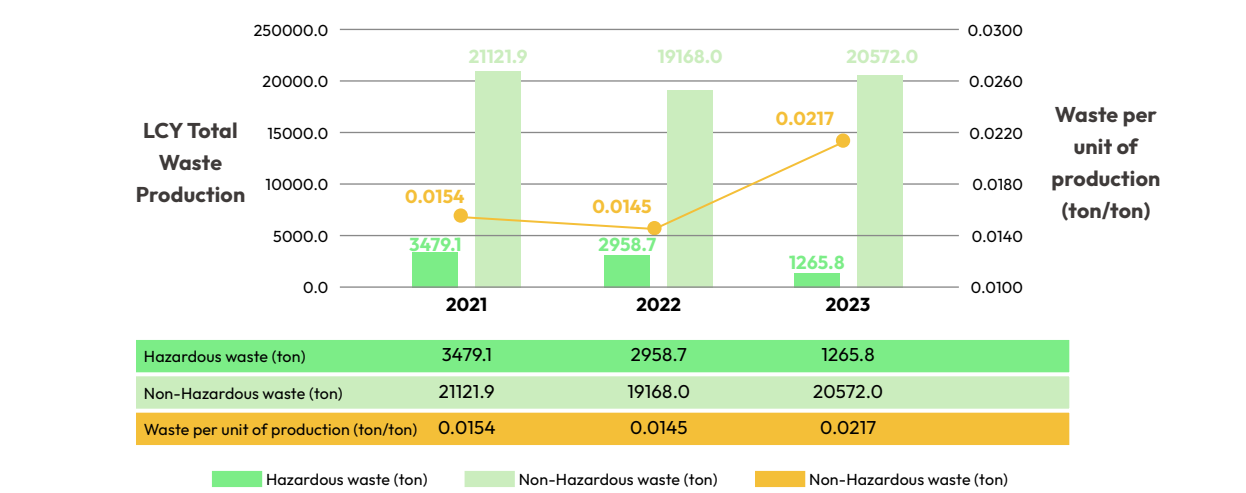
Waste Management

Waste Management

The quality of upstream raw materials significantly impacts product quality. If the upstream supply quality is poor, it can lead to lower production yields and negatively affect the company’s operations. This situation necessitates the use of more resources and results in increased internal waste production and higher corresponding costs. Industrial waste is handled by qualified downstream contractors. If these contractors fail to comply with environmental laws and do not properly dispose of the waste, it can lead to additional environmental issues, impacting the company’s reputation. Therefore, all waste disposal activities comply with legal regulations. We plan and manage non-hazardous and hazardous waste storage areas, apply for discharge or treatment permits, and report honestly to regulatory authorities. Each plant has departments relevant units, including the facility department and EHS department, which are responsible for the storage, reporting, cleaning, and inspection of waste. Currently, waste is mainly entrusted to qualified disposal and recycling companies for legal disposal. We rigorously review the qualifications of these companies, conduct on-site inspections of their permits and facilities, and confirm the com-

pletion of operational processes. After waste removal, we conduct random inspections and audits of the waste handling process to ensure it is properly and legally managed. Before waste cleaning personnel commence work, we provide EHS training to ensure proper waste disposal and worker safety. Additionally, each plant has an internal waste inspection and audit system, as well as an external audit system for waste contractors. We regularly review total waste output and propose improvement plans when anomalies are detected in waste handling to minimize environmental impact. As each plant produces different waste, LCY has adopted three main strategies: “source reduction,” “process efficiency enhancement,” and “recycling and reuse.” Regular meetings are held to review and continuously improve equipment efficiency, aiming to reduce waste generation across the company. In 2023, the total waste generated by the company was 21,837.9 tons, including 20,572.0 tons of general industrial waste and 1,265.8 tons of hazardous waste. Hazardous waste saw a decrease of 57.22% compared to the figures from 2022, with a recycling rate (handled by trusted recycling organizations) of 28.54%

LCY Total Waste Production



Note 1: In the Kaohsiung Plant, where waste can be processed internally, the data is calculated based on the declared figures on the completion date of waste processing. All other plants outsource waste management, and therefore, calculations are based on the declared data with the waste removal date.

Note 2: Only industrial waste that is required to be reported by law is used to calculate hazardous and non-hazardous waste.

PROMOTING SOCIAL PROSPERITY

● Occupational Safety & Health ● Employment
● Employee Training, Human Rights, Diversity & Equal Opportunities



100%

Achieved 100% participation rate in employee health screenings in 2023 and; a 100% participation rate across all LCY operational sites in Taiwan in cancer screenings/government-subsidized four cancer screenings conducted by the Health Promotion Administration.

515

A total of 515 employees voluntarily received flu vaccinations, which were fully subsidized by LCY; the vaccination rate is 21% higher than the previous year.

17%

17% of all employees hold a master's degree or higher, reflecting a 1% increase from the previous year (2022).

100%

92% return rate and 100% retention rate after parental leave.

We believe that “talent” and “safety” are crucial to the sustainable development and operation of society and businesses. Therefore, we strive to provide robust and competitive incomes and benefits, including annual leave policies that exceed the regulatory requirements of the Labor Standards Act, group insurance, employee trust funds, health checks, diverse club activities, etc. We are also staunchly opposed to any acts of discrimination, believing firmly in a workplace that fosters mutual respect and trust. We are happy to share the fruits of our shared labor with employees, providing a performance-based pay system that incentivizes employees and ensures that all employees can unleash their full potential to build a happy and friendly workplace.

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Category	Metrics	2023 Achievements
Employee Health & Safety	Reduce risks to employee health and safety	1. Encouraged and subsidized flu vaccinations for employees; 515 employees voluntarily received flu vaccinations. The vaccination rate is 21% higher than last year. 2. In 2023, all Taiwan-based plants voluntarily participated in the Health Promotion Administration's cancer screening program/government-subsidized four cancer screenings. During the annual health check, screenings for liver cancer (AFP), colorectal cancer (CEA), breast cancer (CA-153), and prostate cancer (PSA) were conducted, achieving a 100% participation rate.
	Implement employee health management	1. In 2023, 100% of employees in Taiwan and China underwent health checks, with factory nurses and OSH personnel monitoring and tracking those found to be high-risk individuals. 2. All employees across all global operational sites are enrolled in the group health insurance provided by the company. Additionally, employees and their families can opt for additional coverage at discounted rates, ensuring comprehensive protection that extends to individuals, families, and overseas needs.
Employment	Increase employee satisfaction	1. Summarize the improvement items based on the 2022 Employee Engagement Global Survey results submitted by each business unit. [Note: AR Plant excluded] 2. Plan for the 2024 employee engagement survey, with project operations scheduled to commence in March of 2024. (Note: The NPS survey is conducted biennially by LCY.)
Talent Cultivation & Diverse Culture	Enhance employee performance in the workplace	LCY's headquarter has pioneered the introduction of an Employee Assistance Program (EAP), with coverage in Taiwan reaching 18.6%.
	Strengthen the company's competitiveness	1. 17.3% of all employees hold a master's degree or higher, reflecting a 1% increase from the previous year (2022). 2. Optimized talent pipeline assessment processes with clearer explanations and guidelines, alongside enhanced communication efforts, provided organizational resources to support business units in completing talent reviews.
	Strengthen equality	1. LCY does not define or differentiate based on gender or race in our compensation and benefits policies and practices, including promotions, benefits, and bonus distributions. We regard all talents as critical to our sustainable growth and operations. 2. Focused on offering opportunities for female employees in training and career development, strengthened female leadership development and promoted fair, equitable career pathways.
Community Relations Management	Caring for local communities	Actively engaged in community care by understanding local needs and promoting the company's sustainability vision through 23 open house events.
	Strengthen communication with stakeholders	Enhanced public understanding of sustainability in the materials industry by participating in exchanges through the Taiwan Chemical Industry Association (TCIA), industry associations, and net-zero-related seminars and consultation meetings.
	Build a circular economy & innovative ecosystem	Connect with global industry talent by sponsoring the Bowei Research Conference (BRC)

Category	Metrics	Long-term: 2050 Targets	Mid-term: 2030 Targets	Short-term: 2024 Targets
Employment	Increase employee satisfaction	90% employee satisfaction	All business units should make 50% progress on items uncovered from the previous survey	All business units submit the improvement items from the 2024 survey results
	Enhance employee performance in the workplace	>70% EAP coverage	>60% EAP coverage	100% EAP coverage in Taiwan area
Talent Cultivation & Diverse Culture	Strengthen the company's competitiveness	Complete 90% of the middle and senior management talent pipeline in LCY locations in Taiwan and around the world	Complete 80% of the middle and senior management talent pipeline for LCY locations in Taiwan and 80% of the senior management talent pipeline for LCY locations worldwide	Complete 70% of the senior management talent pipeline in LCY locations in Taiwan
	Strengthen equality	Ensure women account for 30% of middle or senior management in LCY locations around the world	Ensure women account for 20% of middle or senior management for LCY locations in Taiwan	Ensure women account for 15% of middle or senior management for LCY locations in Taiwan

Human Rights Policies

LCY is dedicated to creating a happy workplace environment and complies with local labor laws for all LCY locations around the world. We recognize and support the spirit and fundamental principles of human rights protection set forth in international human rights conventions such as the Universal Declaration of Human Rights, the United Nations Global Compact, and the

International Labour Organization Convention. We hope to ensure that all LCY employees are treated fairly and with dignity and seek to provide quality workplace environments to guarantee safety in the workplace and physical/emotional health. Our Human Rights Policies are applicable to all LCY locations as well as our suppliers and partners.

Management & Implementation of Human Rights Issues



Respecting Human Rights in the Workplace

- Provide equal employment opportunities and promote an inclusive and diverse workplace environment. Hiring, education and training, pay and benefits, retirement, layoffs, resignations, and firings at LCY will not discriminate against any race, class, language, religion, political affiliation, ancestry, gender, sexual orientation, age, or marital status.
- Uphold diversity in the workplace by ensuring equal treatment to those of different races, classes, languages, religions, political affiliations, ancestry, gender, sexual orientation, age, marital status, physical or mental disabilities, or blood type as well as prohibiting any human rights violations such as forced labor, child labor, or human trafficking.
- LCY policies clearly state that the company is prohibited from hiring any individuals below the age of 15. The company and plants are compliant with the policies and do not have any employees below the age of 16.



Designing Impartial Salary & Welfare Policies

- Comply with regulations concerning pay and work hours and optimize salary structures based on principles of impartiality. Define the positions and value of each role within the organization while ensuring that difference in salary derives from their different functions and responsibilities.



Fostering A Safe, Healthy & Happy Workplace

- Foster a safe and healthy workplace environment, work together to reduce health and safety risks in the workplace, promote our employee's physical and mental health, and facilitate work-life balance.
- Publicly declare our staunch opposition to any forms of discrimination, harassment, bullying, or any acts of workplace violence in our LCY Employee Guidelines and Guidelines to Prevent and Handle Sexual Harassment.
- Spotlight protection of maternal health by providing benefits better than those required in the Labor Standards Act, such as paid maternity leave, paid parental leave, and dedicated parking spots for pregnant employees.



Respecting Freedom of Association

- Encourage employees to establish and participate in club activities, offer diverse, open communication channels, and regularly convene labor-management meetings/union representative assemblies to foster harmonious labor relations.

Training & Promotion on Human Rights Issues

In early 2022, we announced our human rights policies to LCY employees around the world. Simultaneously, a Trust and Respect workshop was conducted to provide education on human rights

principles. Additionally, a mailbox (gm@lcygroup.com) was established to encourage colleagues to express their opinions or suggestions. In 2023, there were no cases of discrimination, violations of rights to freedom of association or collective bargaining, child labor, or forced labor.

Employee Demographics & Management

Employees are the drivers for continuous corporate growth and the cornerstone of sustainable development. LCY treats all employees solely based on their functions, and our hiring policies honor equality and diversity. In 2023, we had 1,872 employees; 98.8% of which were permanent employees and 1.2% were temporary employees. Due to the nature of our industry, we have more male employees than female, with male employees accounting for 82% and female

employees accounting for 18%. LCY employees include those employed in Taiwan (69%), China (27%), and the US (4%). In 2023, we welcomed 113 new employees and had a turnover of 288 employees, which is a turnover rate of 15%. Contract employees include temp workers, outsourced workers (security/cleaning services/factory drivers), interns, part-time workers, long-term contractors, etc.

Employee Demographic: By Region & Labor Contracts					
	Region	Others (Not Management)		Management	Total
		Direct Labor	Indirect Labor		
Permanent Employees	Taiwan	644	447	181	1,272
	China	335	128	35	498
	US	50	15	14	79
Temporary Employees	Taiwan	0	11	0	11
	China	1	11	0	12
	US	0	0	0	0
Note 1: Direct Labor includes technical engineers and duty supervisors. Note 2: Indirect Labor includes other employees who are not direct labor or in management. Note 3: Management includes all employees with division head, group leader, or higher titles. Note 4: Temporary employees are defined as fix-term contractors and consultants.					

	Region	Full-time Employees	Part-time Employees	Zero-hours Workers Employees	Total
Permanent Employees	Taiwan	1,272	0	0	1,272
	China	498	0	0	498
	US	79	0	0	79
Temporary Employees	Taiwan	0	11	0	11
	China	12	0	0	12
	US	0	0	0	0
Note 1: Full-time employees are those working the statutory work hours or more each week. Note 2: Part-time Employees are those working less than the statutory work hours each week.					

By gender & labor contracts

	Male (ppl)	Female (ppl)	Total (ppl)
Permanent Employees	1,515	334	1,849
Temporary Employees	18	5	23
Total	1,533	339	1,872
Percentage	82%	18%	100%

	≤30 years old (ppl)	31-50 years old (ppl)	≥51 years old (ppl)	Total (ppl)
Permanent Employees	234	1,318	297	1,849
Temporary Employees	7	0	16	23
Total	241	1,318	313	1,872
Percentage	13%	70%	17%	100%

Composition of New Employees in 2023

Age	Region	Male (ppl)	Female (ppl)	Total (ppl)
≤30 years old	Taiwan	11	6	17
	China	43	0	43
	US	5	0	5
31-50 years old	Taiwan	14	5	19
	China	12	0	12
	US	4	1	5
≥51 years old	Taiwan	4	3	7
	China	0	0	0
	US	5	0	5
Total		98	15	113
New Employees (%)		5.2%	0.8%	6%
Note 1: New Employees (%) = Number of New Employees / Total Number of Employees				

Composition of Turnovers in 2023

Age	Region	Male (ppl)	Female (ppl)	Total (ppl)
≤30 years old	Taiwan	18	4	22
	China	47	2	49
	US	4	0	4
31-50 years old	Taiwan	68	18	86
	China	58	8	66
	US	8	3	11
≥51 years old	Taiwan	34	2	36
	China	5	1	6
	US	7	1	8
Total		249	39	288
Turnover rate (%)		13.3%	2%	15.3%
Note 1: Turnover Rate (%) = Number of Employee Turnovers / Total Number of Employees. Note 2: The number of former employees does not include those whose contracts have expired, those who have been transferred internally, or those who are on leave without pay.				

Employee Welfare

We believe that “talent” and “safety” are crucial to the sustainable development and operation of society and businesses. Therefore, we strive to provide robust and competitive incomes and benefits, including annual leave policies that exceed the regulatory requirements of the Labor Standards Act, group insurance, employee trust funds, health checks, diverse club activities, etc. We are also staunchly opposed to any acts of discrimination, believing firmly in a workplace that fosters mutual respect and trust. In addition, we are happy to share the fruits of our shared labor with employees, providing a performance-based pay system that incentivizes employees and ensures that all employees can unleash their full potential to build a happy and friendly workplace. In 2023, LCY invested NT\$2,758,205,000 into payroll and benefits for LCY employees.

Pay & Welfare

Competitive Salary

We regularly review employee pay and how competitive their pays are, participating in peer income surveys both globally and locally to learn more about the status of different regions, leading companies, regulatory standards, and consumer price indices to quickly adjust pay policies in all LCY locations upon approval from senior executives. Our goal is to maintain

competitive salaries while ensuring sustainable company operations. In addition, the incentive program for management at the LCYtech (Copper Foil Plant) has been promulgated upon deliberation from the LCYtech’s Remuneration Committee and subsequent approval from the Board of Directors.

Average annual compensation	2023	2022
Average	1,108,738	1,139,047
Median	980,485	1,004,435

Unit: NT\$
● Note: The scope of calculation includes all full-time employees in Taiwan, excluding those at or above the director level. The statistics cover employees who were employed for the entire year.

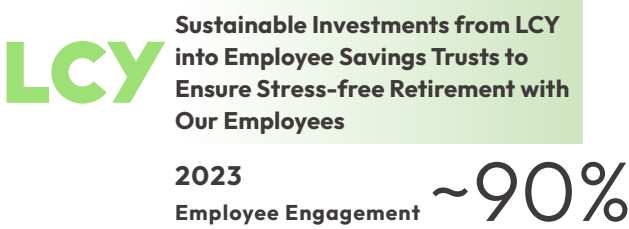
Incentives & Career Development Pathways

LCY has a comprehensive incentive system in place to reward and recognize our employees’ efforts and performances. Our incentives, which include variable compensation, such as quarterly and annual bonuses, are based on company operations, developed by referring to our local industry’s standards and norms, and differentiated rewards by performance. At LCY, incentives also serve to reinforce five core values – “Safety & Health,” “Integrity,” “Accountability,” “Kaizen,” and “Co-creation.” We regularly convene HR evaluation meetings to encourage management to help plan and formulate career development paths and targets for employees based on their function, competency, seniority, etc.

Supporting Employees with Robust Financial Plans & Practices

To ensure our employees’ lifelong financial security, LCY established the Employee Benefit and Savings Committee, where employees can opt in and contribute a portion of their monthly income into their personal trust account, which will be partially matched by LCY as well. This initiative encourages long-term savings and

wealth accumulation, aiming to ensure a secure and stress-free retirement. In 2023, up to 90% of employees have opted into the program.



Since 2006	
STAFF	Voluntary Employee Contributions To ensure our employee’s lifelong financial security, we provide employees with a savings trust that employees can opt in and contribute a portion of their monthly income into their personal trust account and adjust when necessary.
LCY	LCY Contributions LCY will partially match employee contributions each month for employees participating in the benefits savings program to encourage long-term savings, investing, and financial management.
BANK	Management by Third-party Financial Institution Contributions from employee incomes and LCY will be deposited into a trust account at a third-party financial institution each month to strengthen asset protection and ensure employee welfare.

Employee Health & Safety

Employee Welfare Committee & Diverse Activities and Subsidies

To care for our employees, the Employee Welfare Committee gifts holiday vouchers during the three major festivals (Lunar New Year, Dragon Boat Festival, and Mid-autumn Festival); birthday vouchers for employee birthdays; and subsidies for gatherings, childbirth, marriage, travel, language learning, retirement, injuries and diseases, bereavement, and children education. In addition, the Employee Welfare Committee sponsors club activities and provides welfare packages.

Flexible Work Hours & Better-than-Regulation Leave System

We are committed to upholding and protecting our employees’ vacation rights. We care about our employees’ physical and mental well-being, and offer paid leave that surpasses the requirements of the Labor Standards Act, including maternity leave, sick leave, flexible make-up leave, and family leave. Additionally, we institute partial flexible working hours to help employees avoid peak traffic times, reducing stress and the likelihood of accidents.

Taiwan

Maternity Leave	• According to the Labor Standards Act, female employees working in a company for less than 6 months are not eligible for paid maternity leave. At LCY, we want to do better; all female employees, even if they have worked for us for less than 6 months, are eligible for paid maternity leave. • In the event of miscarriage between the second and third month of pregnancy, the female worker shall be permitted to discontinue her work and shall be granted a one-week paid maternity leave. • In the event of miscarriage before the second month, the female worker shall be permitted to discontinue her work and shall be granted a five-day paid maternity leave to give our female colleagues time to rest.
Sick Leave	We provide 80 hours of paid sick leave each year to hospitalized colleagues who have received surgery as treatment so that they can have enough time to rest.
Flexible Makeup Days	Employees are exempt from working makeup days for paid typhoon days and flexible holidays, effectively giving employees additional holidays.
Family Leave	Employees who travel abroad for business for a single trip lasting 30 days or more are eligible for paid family leave, allowing them to spend time with their families.

Encourage Childbirth and Child-rearing, Protecting Related Benefits, and Helping Employees Return to the Workplace

From 2022 to 2023, the return-to-work rate for employees eligible for parental leave in 2023 is 92%, with a 100% retention rate for those who returned to work in 2022.

	Total		
	Female	Male	Total
Employees eligible for parental leave in 2023 (a)	63	275	338
Employees on parental leave in 2023 (b)	26	44	70
Employees expected to return to work (in 2023) after parental leave (c)	13	25	38
Employees that returned to work in 2023 (d)	11	24	35
Return Rate (d/c)	85%	96%	92%
Employees that returned to work in the last reporting period (2022) (e)	11	49	60
Employees that returned to work from parental leave (in 2022) and have been in service for one full year (f)	11	49	60
Retention Rate (f/e)	100%	100%	100%

● Note: For the US (Baytown) plant, we comply with US laws, providing paid maternity leave to female employees and 12-week family care leaves (to care for their family, newborns, and medical conditions) to all employees who have been employed at LCY for a full year. As the definition for parental leave in the US is different from that of Taiwan and China, US data is not included in this table.

Diverse Employee Assistance Programs

The health and well-being of our employees are among LCY’s top priorities. In addition to continuously providing access to professional psychologists and vision-impaired massage therapists, we actively collaborate with external professional teams. In 2023, we launched the “Hello! Hotline” at our location in Taiwan, commissioning an outside team of experts to offer telephone consultation services and allowing employees to contact professional counselors via phone or email for advice on health, life, and work-related concerns. All matters discussed in these consultations are protected and strictly confidential. In 2023, we provided eight telephone consultations and 73 face-to-face counseling sessions to assist employees in resolving concerns regarding their mental and physical health. Additionally, we held five mental health seminars with a total of 342 participants. We remain committed to fostering a supportive and friendly work environment where every

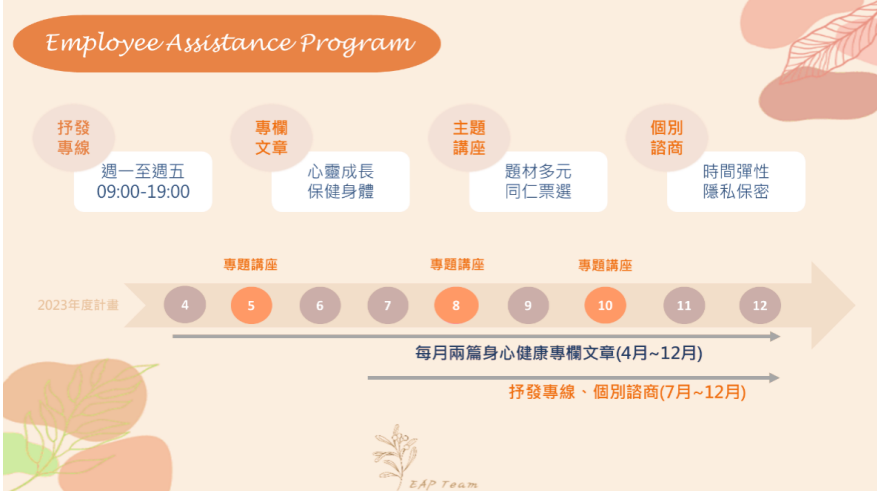
employee feels valued and cared for. We care about our employees’ health, working with designated medical centers to provide better-than-regulation health checks to employees based on their work and control banding to give employees insight into their physical conditions. Furthermore, we re-evaluate employee work based on previous accidents and medical histories to reduce diseases from occurring. In 2023, 100% of employees at LCY locations in Taiwan and China underwent health checks, with factory nurses and OSH personnel monitoring and tracking those tested as high-risk individuals. In addition, for employees wishing to receive out-of-pocket flu vaccines (GSK-Quadrivalent), we provide full funding and work with medical centers to send medical workers to the company to administer flu vaccines for employees. In 2023, a total of 515 employees at LCY locations in Taiwan received flu vaccines as we attempted to safeguard employee health through preventative medical care.

Comprehensive Group & Business Travel Insurance, Extending Coverage to Family and Overseas

LCY provides a wide range of insurance coverages for all employees, including term life insurance, critical illness insurance, accident insurance, occupational injury insurance, accident and health insurance, and hospitalization insurance. This coverage extends to hospitalization insurance for employees’ spouses and children, with the addition of fully company-funded cancer insurance for employees. Additionally, we offer business travel insurance to enhance the protection for employees on business trips and international assignments. We also provide optional insurance plans for employees and their families at a discounted rate, extending the coverage beyond the individual to include family members and overseas protection, ensuring comprehensive coverage.

Incentives to Increase Commute Safety

Employees working at LCY plants in Taiwan and China have access to free shuttle buses to and from metro stations. We also subsidize employees who commute using public transportation (buses, trains, metros) and carpooling to reduce the risks of riding motorcycles or driving and decrease carbon emissions to promote a friendlier environment.



Talent Cultivation

Talent Cultivation Policies

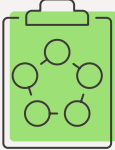
LCY is dedicated to pursuing outstanding talents and expanding the scale of our organization. We institute robust HR policies to provide diverse job opportunities, establish comprehensive pay and benefit systems, and uphold gender equality and non-discriminatory ideals during hiring processes. At LCY, we spotlight talent cultivation

and care about employee career development. More importantly, we care about instilling core values of “safety & health, accountability, co-creation, kaizen, and integrity” into the DNA of our employees through education and training, empowering our employees to become our strategic partners, and building a culture of sustainable operations to achieve sustainability.



Commitment

- Talent development will be founded on a “fair and rigorous internal and external recruitment process” to achieve corporate sustainability goals.
- Value and enforce gender equality laws, ensuring equal employment and promotion opportunities. Emphasize employee career development by offering diverse educational and training programs.



Policy

- Adopt core values such as Safety & Health, Integrity, Accountability, Co-creation, and Kaizen as the criteria for talent selection, using a fair and rigorous internal and external recruitment process.
- Provide comprehensive employee education and training. This helps familiarize new recruits with LCY’s company culture, strengthens employees’ sense of identity and cohesion with the company, and aids in professional development.



Communication Channels

- In compliance with labor laws, we regularly convene labor-management meetings to facilitate communication. All LCY Taiwan locations convene quarterly labor-management meetings. At LCY’s operational sites in China, quarterly employee and union exchange meetings are regularly conducted, allowing all employees the opportunity to participate and engage in discussions.. The goal is to facilitate collaboration, promote stronger labor relations, improve labor conditions, and negotiate employee benefits.
- We’ve also set up a mailbox (gm@lcygroup.com) for employee suggestions or feedback.

Talent Cultivation Measures

Operational expansion means that LCY is facing rapidly growing human resource needs. Therefore, LCY has established a comprehensive education and training framework to meet our development goals. This framework includes proper orientation training, professional training, management training at all levels, environmental safety training, and courses on corporate philosophy. Training is delivered through both in-person sessions and e-learning

platforms, providing employees with well-rounded development opportunities. This ensures that every employee can continually enhance their professional skills, find a platform to showcase their abilities and work with the company to build medium- and long-term competency and career development plans. In 2023, LCY offered a total of 40,000 training hours, with an average of 21.8 hours of training per employee. Additionally, 100% of all permanent employees underwent performance reviews.

Annual Training (Hours) for 2023					
Category	Others (Not Management)		Management	Total	Average Hours
	Direct Labor	Indirect Labor			
Taiwan & China - Female	1,541.5	5,790.2	1,563.2	8,894.9	28.1
Taiwan & China - Male	10,659.5	12,600.2	4,846.4	28,106.1	19.3
US	3,031.0	24.0	168.0	3,223.0	40.8
Total Hours	15,232.0	18,414.4	6,577.6	40,224.0	21.8
Average Hours per Employee	14.8	31.2	28.6	21.8	
Note: 1. Direct Labor includes technical engineers and duty supervisors. 2. Indirect Labor includes other employees who are not direct labor or in management. 3. Management includes all employees with division head, group leader, or higher titles. 4. Category: In the 2023 statistics for Taiwan and China, the data is broken down by gender, while in the US, the statistics are presented without gender distinction.					

Permanent Employees	Employees Receiving Regular Performance Reviews			
	Others (Not Management)		Management	Total
	Direct Labor	Indirect Labor		
Taiwan	644	447	181	1,272
China	335	128	35	498
US	50	15	14	79
Total	1029	590	230	1849
Percentage	55.7%	31.9%	12.4%	100%
Note: 1. LCY only conducts performance reviews for permanent employees, not temporary employees. 2. Direct Labor includes technical engineers and duty supervisors. 3. Indirect Labor includes other employees who are not direct labor or in management. 4. Management includes all employees with division head, group leader, or higher titles.				

New Employee Orientation

To foster a sense of cohesion with the company and help new employees integrate into corporate culture, LCY has designed a comprehensive orientation program. Beyond the essential training required on the first day of onboarding, LCY has introduced a group-wide orientation training. Forty new employees, all of whom

joined within the past year, from LCY locations all across Taiwan are gathered for a one-day training. Representatives from different business units provide an overview of their operations, giving new employees a broader understanding of the LCY’s scope. Additionally, team-building exercises communicate LCY’s core values whilst fostering collegial connections.



Career Development Plan

We've organized workshops to promote the LCY Career Development Plan, which aims to help employees map out career goals, develop different expertise, and encourage continued self-directed growth and development for enhanced individual and company competitiveness. In the workshops, employees learn how to uncover their innate talents, potential, and passion; identify the requisite skills and available resources to reach their next career goals; as well as establish career goals and specific action plans. Continuous feedback, career development plan updates, and regular progress reviews allow us to foster continued learning and growth among employees and guide them toward their career goals. In 2023, LCY offered six Career Development Plan workshops.

Leadership Campus

Through a structured, year-long leadership development program, we cultivate managerial talent by focusing on both mindset formation and practical skills, fostering leadership and management capabilities from within. This program includes leadership courses and peer learning opportunities, fostering a growth mindset and building team cohesion. Using management training and professional assessment tools (MAP), employees identify their skill gaps and develop an Individual Development Plan (IDP). In addition to comprehensive training, we conduct regular post-training evaluations ("Report Back" sessions), providing managers the opportunity to share key insights with peers and supervisors. These sessions facilitate collaborative discussions on challenges that may arise when applying learned skills in the workplace, ensuring that leadership skills are effectively utilized in the workplace to create a real impact.



Management Learning Camp

Continuous learning and growth are essential for a new generation of management talent. Through the Management Learning Camp, we inspire a thirst for knowledge and collaborative learning, driving the development of a learning organization. In 2023, we launched our first on-line book club focused on performance appraisal interviews. By regularly sharing articles from the Harvard Business Review, we aim to help managers better understand how to conduct employee interviews and address potential challenges in performance appraisals. The discussions, guided by Harvard Business Review facilitators, enhance managers' knowledge and promote the exchange of diverse perspectives, fostering collective growth and exemplifying the core value of co-creation.

Campus Engagement & Youth Programs

In addition to cultivating talents internally, LCY also works with universities and colleges in Taiwan. We seek to encourage, inspire, and cultivate talents for the next generation through diverse approaches such as on-campus recruitment, open sessions introducing LCY, internships, and career coaching programs. We hope to introduce LCY to our younger generations to contribute and exert more influence on society.

We also actively engage in applied research, leveraging the R&D capabilities of universities, colleges, and academic research institutes to foster potential R&D talents, increase the added value of products, and enhance product management.

- NCKU Career Coaching Program: Mid-level and senior management are brought on to serve as career coaches to NCKU students, guiding students to learn more about the industry landscape and helping them prepare for job search and employment. Coaches also share their own experiences to inspire students to think about interests, career plans, and future career development. In 2023, we organized one corporate visit and four lectures, which saw 71 attendances. Students shared that the series of sessions gave them further insight into LCY and thanked our instructors for sharing their rich, diverse experiences in workplaces and life, which were highly beneficial.

- Corporate internships: 4 interns in 2023. By providing internships to college students in related departments, LCY facilitates industry-academic cooperation and exchanges, and also helps students bridge the industry transition beforehand through hands-on learning.



2023 LCY Townhall Meeting & EDM Communications

LCY has been deeply rooted in the material science industry for nearly 60 years and is about to embark on its fourth transformation. To enhance employee engagement and sense of belonging, LCY organized the LCY Live Show on October 31, 2023. The event was attended by all employees from the Taipei headquarters and live-streamed online for employees in the Kaohsiung, Huizhou, and Zhenjiang production plants, enabling a virtual gathering and collective celebration.

LCY invited three key leaders in particular - Chairman Bowei Lee, Chairman Tsai-Hsing Hung, and CEO Vincent Liu - to clearly articulate the future vision of the new ONE LCY brand structure. The presentation included significant adjustments in company policies and management, such as the reorganization into three scientific directions and six business units (BUs), the update of the brand logo and identity, and the introduction of the company's new five core values: Safety & Health, Integrity, Accountability, Kaizen (Continuous Improvement), and Co-creation. These values are expected to be deeply ingrained in every employee, guiding their future work and behavior.

In addition to the aforementioned presentations, five colleagues from different business units were invited to share their stories on embodying the

core values: Director Chou Hai-Ming from the Environmental Risk Management Department, Kuan-Wei Wu from the Electronics Materials Department, Chiong-Yao Huang from the R&D Center, Senior Manager Feng-Yung Tsung from the Accounting Department, and Deputy Plant Manager La-Jun Fu from the Huizhou Plant. Each shared their experiences of practicing the five core values in their work and daily life, offering new insights and methods to enhance the work environment and efficiency.

To conclude the event, Chairman Bowei Lee, Chairman T. H. Hong, CEO Vincent Liu, and department leaders joined on stage to leave their handprints, officially marking the commencement of LCY's fourth transformation, ushering in a new era of striving for "science." Given the significance of this transformation, LCY gathered questions and thoughts from employees. These were addressed in a series of four EDMs following the event, where Chairman Bowei Lee, Chairman T. H. Hong, CEO Vincent Liu, and Deputy Spokesperson Anya Ku responded. They delved into the five core values, the direction of the brand structure transformation, and the symbolic meaning of the new logo and brand colors, providing an opportunity for further engagement between employees and management.



LCY 催化 創新未來

LCY Live Show 中同事們提出了各種問題，我們將透過四期 EDM，為各位排除疑難雜症！本期 EDM 我們請到洪再興董事長為大家一一解答，快來看看他都回答了哪些問題！

研發中心 品牌轉型實質上可以帶給 LCY 怎樣的改變？希望達到怎樣的目標？

製造廠區 品牌轉型對於員工未來工作最主要影響？

總經理 公司在轉型過程中，對於員工應有的新形象要求，同仁該如何配合，融入才能跟公司價值保持一致？

這些問題都好好！此次轉型期望讓客戶更真誠的感受到，LCY 力求與客戶站在一起，持續深究、思考並解決客戶所面臨或潛在將面臨的挑戰。

透過我們的科學解決方案，或是攜手產業鏈共同研究 / 開發的方案，有效解決客戶的問題、創造雙贏甚至產業鏈的多贏，是我們的目標。

所以在工作上，我希望同仁能夠去思考，如何「持續改善」與「價值共創」，為客戶與 LCY 創造最大的利益，藉由與不同利益關係人溝通、互動，包括供應商、供應商等，也就大幅大了解 LCY 正朝什麼方向前進，而這些改變會如何讓世界邁向生生不息的未來。

環球總經 GRIT 品牌不再對內外溝通，但不取消 legal entity，請問與總會怎麼執行呢？會如何溝通呢？

這次 One LCY，最大的改變就是我們不再溝通環球總經 GRIT，而是環球總經獨立是為了切分 TPE 事業與 Kraton 合併，但此時此刻環球總經的這個戰略意義不復存在。

我們決定後續不須對外溝通環球公司，節省資源並減少品牌困惑，因此將此公司 brand entity，所以在組織、財務與投資人層次，譬如天下要收購的財務數據披露，ESG 報告披露，MSCI 認證等，都將繼續停止溝通 GRIT。

在這層層，legal entity 還是存在的，但是他的權限與 AR/Baytown 一致化，成為公司的工廠，存在於客戶 / 供應商合約、銀行收付款、ISO 認證等。

你的問題是否不在本期 EDM 當中？別失望，下期有更多！

快來找 LCY Corp. 中的經理和部門吧！

Occupational Safety

Occupational Safety Management

Safety is the foundation of our operations and a crucial cornerstone for sustainable development in the chemical industry. Health Safety Environment (HSE) and Process Safety Management (PSM) are the two vital pillars that uphold our safety framework. We prioritize employee health and safety by establishing a safe, healthy, and comfortable working environment while continuously reducing occupational hazard rates. LCY Taiwan and China operations adopted the ISO 45001 Occupational Health and Safety (OH&S) Management System. The Baytown plant in the US adheres to local regulations, establishing management methods and procedures, and implementing regular internal and external audits to prevent accidents effectively. If a potential risk in the work environment or an accident occurs, operations may be suspended as necessary, and the situation will be reported according to the SOP. During accident investigations, we focus on identifying root causes to prevent recurrence, rather than prioritizing worker accountability. We are committed to achieving the goal of “zero accidents,” thereby fostering a culture of occupational safety and health.

Beyond ensuring the safety of the working environment inside our plants, we also emphasize the importance of traffic safety during employee commutes. Our plants advocate and continuously encourage employees to use public transportation. We have consistently organized safe driving courses, applying defensive driving techniques to predict and prevent potential road incidents, thereby promoting safe driving practices.

In 2023, LCY reported no social violations. Our plants continue to enhance occupational safety education and training, and improve inherent safety processes to maintain a record of no significant violations, aiming for zero violations each year.

The Occupational Safety and Health Committee

Each operational site in Taiwan has established an Occupational Safety and Health Committee (OSH Committee), which is jointly composed of representatives from both labor and management in accordance with regulations. Labor representatives account for more than one-third of the committee seats, and meetings are held quarterly. Similarly, our operations in China and the US regularly convene safety management meetings, involving both management and labor representatives. These meetings set management policies for safety and health, review safety education and training plans, conduct environmental audits, and discuss various safety proposals. Local regulations are regularly reviewed and incorporated. Plant managers, the Environmental Risk Management Department, and top executives including the Chairman, CEO, and heads of each business unit regularly review safety and health affairs at each plant. This ensures risk control, effective health management, and the promotion of employee wellness. This reflects the company’s commitment to and implementation of employee health and safety.

Occupational Safety Management Measures

Hazard Identification	Each plant determines potential occupational diseases based on process characteristics and daily operations, including physical and chemical hazards.
Risk Assessment	Identify high-risk operating environments within the plants, such as areas with ionizing radiation, noise, and hazardous chemicals. The risk is evaluated based on factors like operational frequency, probability of occurrence, and severity. Risks are categorized into five levels: low, moderate, slightly high, high, and very high. This assessment helps evaluate the potential risks and hazards in daily operations.
Accident Investigation	Each plant follows LCY’s Incident Investigation & Reporting Guideline. If any occupational hazards or dangerous situations are detected, the personnel or department supervisors can suspend operations as necessary. They must then report the issue using the Inspection & Corrective Action Report, and conduct post-accident reviews to prevent recurrence.
Training and Advocacy	We provide occupational safety training for employees and contractors. Depending on the type of work, specific hazard and safety education training is arranged, including general safety and health education, special equipment operation training, and chemical usage training. In 2023, employees received a total of 44,923 training hours, and contractors received 7,174 training hours.
Emergency Response	We have established comprehensive emergency response plans and drills, simulating various emergency scenarios to continuously improve disaster response measures. These include fire drills and safety evacuation drills to enhance employees’ emergency response capabilities. Drills include underground pipeline leak tests, chemical and toxic substance leak evacuation drills, tabletop exercises for response equipment support, high-temperature heatstroke emergency response drills, hazard awareness training, PPE usage training, earthquake evacuation drills, CO ₂ evacuation drills, and fire drills.

Work-related Injuries

There were 11 work-related injuries (including contractors), 0 fatalities, and 0 cases of work-related ill health in 2023. Work accidents in plants were primarily from falls, collisions, or

improper use of machinery. The work accidents have now been included in management references to serve as a basis for optimization and strengthening education and training.

Severity of Work-related Injuries		Employees	Contract Employees
Work-related Injuries	No. of People	8	3
	Percentage	0.439	0.628
Work-related Ill Health	No. of People	0	0
	Percentage	0	0
Fatalities	No. of People	0	0
	Percentage	0	0
Total No. of Hours Worked (Hours)		3,640,560	955,216

- Note :
1. Data mainly derived from monthly reports of work-related injuries
 2. Rate of fatalities as a result of work-related injury = Number of fatalities as a result of work-related injury × [200,000 working hours] / Number of hours worked
 3. Rate of recordable work-related injuries = Number of recordable work-related injuries × [200,000 working hours] / Number of hours worked
 4. Rate of work-related ill health = Number of work-related ill health × [200,000 working hours] / Number of hours worked; [Work-related ill health are those that arise from exposure to hazards at work and requires a medical diagnosis]
 5. Contract employees include temp workers, part-time workers, security, cleaning services, equipment maintenance, long-term contractors, etc.

Process Safety

To optimize and implement Process Safety Management (PSM), the Environmental Risk Management Department has organized a PSM Promotion Committee, based on Line Management principles, which supports the establishment of execution committees within our BU plants. By adopting a felt leadership approach and utilizing a human resources matrix, PSM activities are managed through sub-committees. Each plant has established seven sub-committees to execute the following PSM elements: Process Hazards Analysis (PHA), Process Safety Information (PSI), Management of Change (MOC), Standard Operating Procedures (SOP), Pre-Startup Safety Review (PSSR), Mechanical Integrity (MI), and Incident Investigation (II). These sub-committees are responsible for carrying out the corresponding PSM activities. The effectiveness of each plant’s sub-committees is assessed through quarterly reports and reviews by the PSM Promotion Committee. This ensures that PSM activities, operational discipline, and full employee participation are effectively integrated into the plants’ daily risk management practices. When BU plants experience a near miss, especially ones that can used as case studies of high potential risks for educational purposes, they are required to conduct investigations and compile investigation reports so that other colleagues may learn from the near miss and prevent material events or losses in the future. Each month, we select two cases of “near misses concerning high potential risks and educational value or

near misses relating to process safety” to discuss during monthly management meetings. Simultaneously, we roll out corrective measures at all plants. These practices enable us to learn from near misses at other plants, specifically the basic cause and remedial measures, to strengthen our BU plants’ understanding of near misses and continue to optimize process safety. Meanwhile, we’ve referred to the definition of process safety events (PSE) from the International Council of Chemical Associations (ICCA), adding process safety events that meet the criteria for Tier 2 events or higher into the metrics of safety indicators. In the event of any accidents, we are not only concerned with potential indirect causes of unsafe situations or unsafe behaviors in workplace environments but also care about any potential management failures due to flaws in our management systems. This can help us further identify the basic causes of accidents. In 2023, there was one process safety event, all relating to chemical leaks. No one was harmed in the events. All events have been investigated and corrective measures have been issued. In handling these events, we conducted investigations into the incident to identify the basic cause but also emphasized the importance of uncovering and identifying the basic causes of “subsequent corrective actions.” In addition, for events that may result in losses, we also factor in the consequences, focusing on reviewing flaws or failures in our protective measures to ensure better prevention of similar incidents in the future.

Process Safety Metrics	
Tier 1 Process Safety Incident Count (PSIC)	0
Tier 1 Process Safety Total Incident Rate (PSTIR)	0
Tier 2 Process Safety Incident Count (PSIC)	1
Tier 2 Process Safety Total Incident Rate (PSTIR)	0.067
Note : 1. Process Safety Management primarily targets production plants and excludes other non-factory locations such as our Taipei Office, R&D Center, and Kaohsiung Terminal Station. 2. Process Safety Events are Tier 1 events as defined in ANSI/ API RP 754. 3. Process Safety Incidents Count (PSIC) tallies events that meet the four following conditions: (1) process-related; (2) chemical leaks exceeding the minimum requirement for reporting and that result in fatalities or injuries in employees, contractors, or hospitalization of third parties (non-employees or contractors); formal announcements of community evacuation or shelter-in-place; fire disasters or explosions that result in direct losses of US\$25,000 for the company; any of the above scenarios shall be immediately reported; (3) site of the incident is a production, logistic, storage, public, or testing facility; (4) any serious leakages that result in leakages exceeding the threshold limit value (TLV) within 1 hour. 4. Process Safety Total Incident Rate (PSTIR) = Total Process Safety Incident Count (PSIC) x [200,000 working hours] / Number of hours worked. Work hours from the Taipei Office, R&D Center, and Kaohsiung Terminal Station account for a small percentage of total work hours and are therefore not excluded from the data above.	

Transportation Safety

We place a high priority on transportation safety. Externally, the unit for transportation procurement manages and audits transportation contractors. Internally, each plant’s safety and facility management teams conduct inspections and arrange emergency response drills. In 2023, there were no major transportation incidents. For details on the management of transportation providers, please refer to Section 1.4.2 Supply Chain Management Procedures.

Promoting Occupational Health

LCY prioritizes comprehensive health management for employees through full health check-ups, robust plant safety protection facilities, and strict chemical management systems. During the pandemic, the Taipei office and Nanzih R&D Center implemented flexible working hours for

non-site units to avoid peak traffic congestion, reducing psychological stress and the likelihood of accidents from lateness. This measure proved effective and has been extended post-pandemic. Additionally, to prevent severe complications from influenza, LCY fully subsidizes the cost of flu vaccinations for employees and arranges for medical professionals to administer the vaccines on-site. For contractor partners, entry into the plants requires adherence to internal regulations, including hazard awareness training. This training fully informs contractors of identified risks within the plant, particularly the health hazards associated with the chemicals used and the corresponding emergency protective measures. These steps aim to eliminate potential hazards and reduce risks to the lowest possible level.

01

Comprehensive Health Check-ups

- Provide regular and comprehensive health and cancer screenings for employees at all levels based on their work environment.
- Provide health screening and control banding for special tasks to ensure that employees do not come into contact with harmful and hazardous substances that could subsequently affect their health.
- Screen all plant employees for musculoskeletal symptoms and reevaluate existing work arrangements based on past incidence rates and employee medical history to reduce incidence rates.
- We have introduced psychological counselors to address employees’ mental well-being through preventative measures and comprehensive health check-up systems.
- As part of the Health Promotion Administration’s efforts to promote cancer screening, we include colorectal and oral cancer screenings in the annual health check-ups for our employees.

02

Safety & Protection Measures in Plants

- Plants are equipped with toxic chemical substance detectors and we are preparing to connect machines with the PI system’s toxic chemical substance detectors to monitor stored toxic substances and potential leaks to prevent harm to human health and safety.
- Develop AI photo recognition technology to give alerts such as real-time feedback in the case of fires, electronic fences, and PPE integrity.
- Use automated machinery to reduce handling operations and therefore reduce potential incidents.
- Plants also conduct spontaneous audits to ensure operational safety for employees.

03

Strict Chemical Control System

Each plant has established chemical management procedures aimed at reducing employees’ exposure to chemical hazards through three main approaches:

- Investigate toxicity and regulatory restrictions before purchasing chemicals; Compile and regularly review data to ensure the quality of chemicals.
- Perform chemical incompatibility analyses to ensure the safety of plant production.
- Enhance employees’ understanding of the chemicals used at our facilities and their proper handling procedures through education and training. For example, the Linyuan Plant conducted a session focusing on the hazardous characteristics of on-site dangerous goods and the application of neutralizing agents such as diphoterin.

LCY prioritizes the physical and mental health of employees. In addition to routine safety awareness events and workplace health seminars, each plant actively participates in govern-

ment-organized occupational safety and health promotion activities, earning certifications and honors.

- Kaohsiung Plant and LCYtech certified by local health bureaus as AED safety zones
- The Kaohsiung plant has been proactively promoting workplace tobacco hazard prevention and health promotion, earning the MOHW's Badge of Accredited Health Workplace - Smokefree & Health Promotion
- The Linyuan Plant received a certificate of appreciation from the Kaohsiung City Mediator's Association (commissioned by the Ministry of Transportation) for its labor defensive driving program
- LCY's Kaohsiung Plant, Linyuan Plant, and LCYtech actively participated in the 2023 National OSH Week, organized by the MOHW Occupational Safety and Health Administration (OSHA)
- LCYtech participated in the 2023 Outstanding Healthy Workplace Selection and was awarded a certificate by @SouthHealthyWork
- The Linyuan Plant passed the Ministry of Labor's Work-Life Balance Atmosphere Assessment
- The Linyuan Plant was listed as an outstanding workplace during the Kaohsiung City Department of Health's 2023 Employee Health Services Promotional Program
- The Nanzih Plant was listed as an outstanding workplace in the Ministry of Labor (MOL)'s 2023 Promotion of Occupational Safety and Health Units and Personnel Program
- The Nanzih Plant was awarded five stars for excellence in its Occupational Health and Safety Management System during the MOL's 2023 evaluation and performance recognition meeting.
- The AR Plant improved the safety design of the butadiene pipeline to prevent blockages and ensure safe production. The ESBR team and project received the third prize in the 2023 Comprehensive Evaluation for Positive Incentives in Safe Production.
- The Huizhou Plant actively improved the safety of loading and unloading operations and transportation processes. By enhancing the safety awareness and operational skills of relevant personnel, they effectively controlled safety risks across the entire value chain, promoted refined operations, and raised safety levels. The plant was awarded the 2023 Safety Excellence Award by CNOOC and Shell Petrochemicals Company Limited.

Community Relations

Community Relations Management Policies

LCY has established a robust framework for community relations, focusing on three pillars: Community Engagement, Process Safety, and Environmental Protection. While developing our business operations, we also remain committed to community development. We support local communities and extend that support to the greater society and industry to meet their demands and drive economic development, demonstrating our commitment to social responsibility. To achieve shared prosperity, our actions spotlight three key points: local development, strengthening stakeholder engagement, and developing a circular economy ecosystem.

operational activities, we place great emphasis on assessing and mitigating industrial safety and environmental risks for surrounding communities. Plant operations may impact process safety, air pollution, employment, and transport safety for surrounding communities. To address these concerns, we've established a direct communication channel with local village chiefs to ensure immediate communication and feedback. Plant employees also conduct community visits from time to time to survey local residents and report any assistance or improvements required by the communities back to the plant and LCY to give us more insight and ensure that changes are being implemented.



Community Risk Assessment

LCY's operational sites are primarily located within industrial districts, approximately three to four kilometers from neighboring communities. However, due to reliance on underground pipelines or supplier transportation for raw materials required at our factories and the potential for broader environmental impacts from

Community Initiatives

LCY's plant operations may have impacts on surrounding communities. As such, we are proactive in rolling out community initiatives to ensure safety, good relations, and environmental protection in neighboring areas. To gain support from community residents, we've established effective and direct communication channels

to also maintain strong relationships with local communities. For example, we organize open house visits to our factories from time to time so that employees, employee families, local residents, schools, government agencies, and other important stakeholders have a better understanding of our plant's operations and the environment, aiming to build mutual trust

Community Care Actions

In 2023, LCY invested NT\$ 8.59 million into community relations.

Community Safety	Community Relations	Environmental Protection
● Conduct daily routine inspections and schedule annual maintenance checks for pipelines. ● Perform flow simulations for underground pipeline leaks and assess risks along tank car routes. ● Establish internal and external crisis response plans, ensuring prompt reporting and adherence to procedures during emergencies. ● Regularly conduct occupational safety and fire drills to ensure plant safety and that personnel are familiar with emergency rescue and evacuation procedures. ● Actively participate in the Manufactures United General Association Of Industrial Park Of R.O.C., coordinating joint emergency response drills with nearby plants.	● Maintain close relationships with local police and fire departments. ● Continuously engage with local residents and support community activities through sponsorship ● Host open houses at various plants to increase transparency. ● Provide assistance and emergency aid to underprivileged residents in local communities. ● Hire talented individuals from local communities to increase local job opportunities.	● Actively participate in initiatives by the Kaohsiung City Government, including adopting and maintaining air quality purification zones and related equipment in local schools. ● Increase the use of renewable energy, establish relevant infrastructure, and obtain Taiwan Renewable Energy Certificates (T-REC). ● Automatic information management platform systems to ensure chemical safety and environmental management. ● Introduce the ISO 50001 energy management system with a digital energy monitoring system for energy use insights. ● Adopt the ISO 14064-1 GHG Inventory and conduct regular annual GHG inventory.

We value our relationship with the surrounding community, and we strive to improve the quality of life through our quality products while also exerting our influence to better the local environment and strengthen relations with local communities. LCY seeks to become a good friend and neighbor to our surrounding communities.

● 2023.01.05
Linyuan Plant's Coastal Patrol Volunteer Team receives commendation from the Environmental Protection Bureau, Kaohsiung City Government

● 2023.03.07
Nanzih Plant donates 100 residential fire alarms and receives a certification of appreciation from the Youchang Fire Brigade of the Kaohsiung City Government Fire Bureau

● 2023.03.09
Methanol & Solvent & Water BU attends IDB's "Drought Awareness and Water Conservation Seminar" to share our AI control and smart technologies for water conservation and receives a certificate of appreciation

● 2023.03.18
Linyuan Plant supports the Kaohsiung City Government Environmental Protection Bureau's beach cleanup campaign - "Beach Cleanup In Progress."

● 2023.04
AR Plant organizes spring trip for employees' families to clean up mountains, galvanize employee loyalty, and raise awareness for environmental protection

● 2023.05.15
Zhenjiang Plant receives commendation from the Zhenjiang City Public Security Bureau for outstanding governance and security within the plant in 2022

● 2023.05.23
LCY Chemical Corp.'s Kaohsiung Plant formally adopts the Hualien Ming Yih Primary School air purification zone and receives a certificate of appreciation

● 2023.06
LCY participates in Daya Bay's "Production Safety Law Video Competition" with a self-produced video - Small Sparks, Big Disasters - and wins the award of excellence

● 2023.08.07
Dashe Plant participates in Renda Industrial Park's blood drive and receives a certificate of appreciation from the service center

● 2023.08.09
Participates in the Ministry of Education's Sports Administration's "2023 Sports Enterprise Certification Implementation Plan," passing the preliminary review.

- 2023.09.08
Linyuan Plant's Environmental Volunteer Team receives commendation from the Environmental Protection Bureau
- 2023.11.03
Dashe Plant receives a certificate of appreciation for assisting public health centers with "Flu Vaccine Station" in plants
- 2023.11.23
LCY GRIT CORP.'s Xiaogang plant formally adopts the Fengming Elementary School air purification zone and receives a certificate of appreciation and trophy from the Environmental Protection Bureau
LCY Chemical Corp.'s Linyuan Plant and Kaohsiung Plant adopt air purification zones and are commended by the Kaohsiung City Government Environmental Protection Bureau in 2023 as an Outstanding Environmental Protection Enterprise for air pollution control

- 2023.11.23
LCYtech formally adopts air purification zones and receives a certificate of appreciation and trophy from the Environmental Protection Bureau
- 2023.12
AR Plant is rated by the Huizhou Bureau of Statistics as a Trustworthy Business
Huizhou Plant donates resources and organizes events to support children patients from underprivileged families and low-income single-parent families as well as senior citizens in Daya Bay's Xiqu Subdistric

Active Participation in Joint Defense Drills to Ensure Regional Safety

Kaohsiung City has numerous underground pipelines, including those for chemical transport, which require ongoing management and inspection. We participate in joint defense organizations with industry peers, conducting regular meetings, educational training, emergency response simulations, and drills to ensure smooth communication channels, appropriate procedures, and efficient use of equipment. Continuous improvement through real-life exercises and post-drill reviews aims to enhance our disaster response capabilities. In 2023, the Dashe Plant served as the lead plant for the Sixth Branch of the Joint Defense Organization of the Underground Industrial Pipeline Alliance. We continuously advanced the organization's operations and emergency response capabilities, leading six joint defense meetings, six training sessions, one tabletop

exercise, one live drill, and other activities to advance joint defense. These efforts earned the Sixth Branch recognition as an outstanding joint defense organization in 2023. The Kaohsiung Plant participated in cross-regional joint defense training organized by the Taiwan Responsible Care Association (TRCA), focusing on simulations of formaldehyde and benzene leaks caused by tank car accidents. The training included exercises on command and coordination, zoning, personal protective equipment, hot zone operations, and decontamination procedures. Our excellent performance during these exercises was recognized at the 2023 TRCA Transportation Safety Seminar. Additionally, the Xiaogang Plant was honored with the "National Joint Defense Organization Award for Operational Excellence" by the Ministry of Environment for participating in the Joint Defense Against Butadiene Toxic Disaster.

Joint Defense in Linyuan Plant

Our Linyuan Plant places great emphasis on emergency response drills. In addition to conducting more than 12 in-house fire drills annually, we actively participate in community initiatives and OHS promotion activities in industrial parks. We provide regular training to the Linyuan Fire Brigade, sharing knowledge on the hazardous properties of public hazardous materials and the application of neutralizing agents (e.g., diphoterine), to enhance their understanding of our factory's risks and strengthen their ability to offer emergency rescue. In the first half of 2023, we led the Linyuan Industrial Park Chemical Disaster Emergency Response and Joint Defense Drill Observation Activity, coordinating joint drills (with CPC Corporation, Formosan Union Chemical Corp., Linyuan Advanced Materials Technology, and the Linyuan Fire Brigade). Attendees included representatives from the

Linyuan Industrial Park Service Center, Kaohsiung City Labor Bureau, Kaohsiung City Labor Inspection Office, Linyuan Fire Brigade, and 23 businesses in the Linyuan Industrial Park. By conducting joint emergency response drills with neighboring plants, we strengthen emergency reporting and mutual support mechanisms, significantly contributing to the safety of the area. Regular training sessions are held with the Linyuan Fire Brigade to share knowledge on the hazardous properties of public hazardous materials and the application of neutralizing agents (e.g., diphoterine). We maintain cooperative relationships with neighboring institutions to jointly enhance emergency rescue capabilities. LCY and the plants will continue to promote and strengthen emergency response mechanisms, improve safety capabilities, and uphold the spirit of corporate education.



- Left: April 25, 2023: Supports the joint defense fire drill and receives a certificate of appreciation from the Linyuan Fire Brigade.
- Middle: May 30, 2023: Receives a certificate of appreciation from the Linyuan Fire Brigade for assisting them with training on public hazardous materials in our plants and industrial safety and health.
- Right: June 16, 2023: Receives a certificate of appreciation for supporting joint defense in the Linyuan Industrial Park.

Open House Events

LCY plants organized 23 open house events in 2023 to increase the transparency of our plants and promote a relationship of trust with society. Local residents, schools, local government agencies, and business partners are invited to these open house events to learn about our ideologies and measures for in-plant safety management and environmental management but also engage in dialogue on corporate social responsibility, the circular economy, water rec-
lamation technologies, and PI systems (real-time information systems).



Village Chief Tseng Jung-Chang and seven representatives from Wuchang Village visited our Dashe Plant to gain insight into the plant's underground pipes, exchange ideas, and facilitate an interactive relationship with communities.



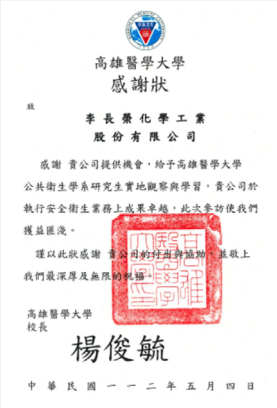
Government agencies and the Association of Occupational Safety and Health's Safety & Environmental Technologies Division visited our plant. Their visit was guided by the plant manager, deputy plant manager, facilities director, process technology office, and occupational safety team, who shared existing PSM (MOC, PSSR) and PI systems and exchanged views on smart factory topics.



Students of the Bachelor Degree Program in Fire Safety Sciences at Chang Jung Christian University visited our Xiaogang Plant to learn about safety management and related practices.



A total of 46 students from the Department of Information Technology and Management at Shih Chien University, led by their professors, visited our Nanzih Plant. Guided by the IT Division, Facility Department, and work safety supervisors, the visit included an introduction to the Information Technology Department and a tour of the plant from the first to the third floor, showcasing the application of information technology in the chemical industry. Students expressed that the visit was incredibly fruitful.



Graduate students of the Kaohsiung Medical University Department of Public Health visited the Kaohsiung Plant to learn and explore safety and health practices in plants. The visiting students and teachers expressed that the visit was incredibly fruitful.



42 teachers and students from Kaohsiung Municipal Jhongyun Junior High School visited our Linyuan Plant. The plant manager, deputy plant manager, facilities director, and EHS employees guided the visit, sharing our products, process properties, public hazardous materials, PSM, real-time PI systems, and ESG activities to give teachers and students insights into Linyuan Plant's management and efforts in occupational safety, environmental protection, fire safety, and sustainable development.



A group of six individuals from Chang Jung Christian University, including the Dean of Research & Development Dr. Lai, Dean of Academic Affairs Dr. Ting, Director Chuang of the Center for Corporate ESG and Sustainability Research, and Chairman Dr. Dai of the Bachelor Degree Program in Fire Safety Science visited the Nanzih Plant. Operations management, EHS, and the analytical science team guided their visit. They shared insights on the LCY and the R&D center's product development, talent cultivation/recruitment, lab fire safety, ESG storage shelves, and carbon emissions. The visit also included a tour of the analytical science lab to understand the capabilities of the center's precious instruments. Discussions were held afterward on GHG management and student internships.

Sustainable Community Empowerment

The Bowei Research Conference (BRC): A World-Class Science Event

The influence of Taiwan's material chemistry sector is waning, with limited high-value but room for improvement in basic chemical research among Taiwanese enterprises. Additionally, the semiconductor industry attracts most of the high-level talents in Taiwan, leading to a talent drain in the material chemistry field. To address these challenges and elevate the quality of Taiwan's material chemistry industry, LCY established the Bowei Research Conference (BRC) in 2018, named after Mr. Bowei Lee.

The BRC invites Nobel laureates and world-leading scholars in the fields of chemistry and science to Taiwan and provides a platform for young students and scientists to engage and interact with these leading experts. We hope that this can enhance their knowledge of fundamental chemistry and inspire new academic pursuits. The conference aims to motivate more students to pursue doctoral studies and contribute to the

chemical industry in the future, thereby increasing the influence of Taiwan's material chemistry sector on the global market. The success of the BRC relies heavily on the support of the Scientific Advisory Board (SAB), which comprises members from both domestic and international communities. The SAB is responsible for recommending speakers and planning the conference agenda.

The SAB is a committee of 14 renowned scientists from five different countries. The first chairman was Dr. Chi-Huey Wong, a fellow and former president of Academia Sinica. The second and current chairman is Dr. Ehud Keinan, President of the International Union of Pure and Applied Chemistry (IUPAC) and President of the Israel Chemical Society (ICS).

Academia Sinica President Dr. James C. Liao has also attended the conference for two consecutive years, listening to presentations and interacting with participants, adding to the prestige of the BRC.

BRC is dedicated to fostering inspirational interactions between young Taiwanese students and leading global scientists to create breakthroughs that improve human life. Unlike typical conferences, BRC follows the model of Gordon Research Conferences. In other words, the BRC is held in remote, quiet locations to provide participants with a relaxing and contemplative environment. During the conference, participants engage in in-depth discussions and leisure activities such as hiking and cycling, which promote natural interactions and friendships. At BRC, we strive for equal communication, ensuring that every participant has the opportunity for face-to-face exchanges. For instance, the third annual BRC, which was held in Kenting, offered leisure activities such as hiking, cycling, and exploring local old streets after the conference.

Our longstanding dedication to the material chemistry field has endowed each senior executive at LCY with extensive international connections. Additionally, the contributions of LCY Chairman Bowei Lee and SAB Chairman Ehud Keinan have been instrumental in connecting the

BRC with international award winners, including Nobel laureates and recipients of the prestigious Priestley Medal, Welch Award in Chemistry, and Wolf Prize, highlighting the BRC's academic status as an international conference. In 2023, BRC had the honor of inviting Nobel Laureate in Chemistry Dr. Ben Feringa to Taiwan to share his research.

The BRC aims to foster an environment where young Taiwanese students can interact and exchange ideas with the world's leading scientists and inspire new ideas that can further improve human lives. To achieve this, BRC encourages each participating professor to bring at least



one student to compete in a poster competition. The winners are chosen by the scholars through a vote, so that our students experience a sense of honor and stronger levels of engagement. At BRC, we strive to break down hierarchical barriers, ensuring that every participant can engage and communicate on an equal footing. Beyond the actual conference, we also organize leisure activities at the BRC to promote exchange-



es. Scholars and students are invited to participate in hikes or bike rides to encourage natural interactions and discussions in a relaxed setting. These arrangements provide young students with incredible opportunities for face-to-face interactions with world-class scientists and are the best approaches to building friendships and potentially extending the relationship further into the future.

After each BRC, a satisfaction survey is distributed to all participants. In 2023, we recovered 69% (valid responses) of issued surveys, with an overall satisfaction score of 4.74 out of 5. To provide a more comfortable and satisfactory experience to participants, the project team conducts a thorough review and discussion after the conference, to identify areas that can be improved to drive growth.

BRC aims to nurture more talents. As such, in addition to the conference and poster competition, we also organize additional opportunities

for interaction between world-leading scholars, Taiwanese experts and young students. Starting in 2023, the project team collaborated with the Chemical Society Located in Taipei (CSLT) and TwICHE to host post-BRC seminars to share new insights with a wider student audience, contributing significantly to talent cultivation. The kick-off of these post-BRC seminars marks the conclusion of a fruitful and successful BRC. In addition to nurturing young Taiwanese scholars, we also encourage our R&D center employees to attend the BRC. We hope they can internalize invaluable insights from world-leading scientists and apply them to their daily work, providing their team with more diverse and innovative ideas as well as driving business development at LCY. We also hope that academically accomplished young scientists have the opportunity to return to LCY and bring their new ideas and practices for future businesses, driving further possibilities for LCY's business

performance.

Our BRCs have also garnered media attention. In 2023, The News Lens interviews Group Chairman Bowei Lee and BRC SAB's Chairman Ehud Keinan. During the interview, they expressed their hopes for Taiwan's young scientists and talents and stated their intentions to support these new talents and propel them onto the global stage.

BRC will continue to introduce innovative topics through world-class scientists, aligning Taiwan's materials sector with international trends as we continue to strive to cultivate talents for our industry. The project team revealed plans to potentially collaborate with Peking University for an inaugural overseas BRC on materials science, AI, neuroscience, and other scientific topics. By expanding the BRC through affiliated conferences, we hope to engage more young scientists in this exploratory venture.



APPENDIX



Participation in Industry Associations

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GRI Standards Reference Table

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Independent Assurance Statement

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Participation in Industry Associations

Industry Association	Role
Association of Occupational Safety and Health	Member
Sino-Indonesia Cultural and Economic Association	Member
ROC-USA Business Council	Member
Chemical Society Located in Taipei (CSLT)	Member
Chinese Petroleum Institute	Member
Chinese Human Resource Management Association	Member
The Third Wednesday Club	Member
Taiwan Responsible Care Association (TRCA)	Vice President Joey Lin serves as an executive director
Sino-Arabian Cultural & Economic Association	Member
Young Presidents' Organization (Taipei Chapter)	Member
Taiwan Institute of Chemical Engineers (TwIChE)	Member
Taiwan Chemical Industry Association (TCIA)	Chairman Tsai-Hsing Hung as the Vice Chairman of the Seventh Board of Directors
Monte Jade Science & Technology Association of Taiwan	Member
Association of Taiwan Bio-based and Sustainable Material Industry	Member
Taiwan Mergers & Acquisitions and Private Equity Council (MAPECT)	Member
AmCham Taiwan	Member
Petrochemical Industry Association of Taiwan	Chairman Tsai-Hsing Hung as the supervisor
Taiwan Synthetic Resins Manufacturers Association	Member
Taiwan Institute of Directors	Member

Industry Association	Role
Women on Boards Taiwan	Member
Taiwan Society of Mass Spectrometry	Member
Taiwan Contact Lenses Industry Development Association	Member
Taiwan Display Materials & Devices Association	Member
Cross-Strait CEO Summit	Member
Industrial Safety and Health Association (ISHA) of the R.O.C.	Member
WBCSD Global Network Partner	Member
The Corrosion Engineering Association of ROC	Member
Chinese International Economic Cooperation Association (CIECA), Taiwan	Vice Chairman Christine Young sits on the Board of Directors
Chinese Industrial Machinery Association	Member
Taiwan Alliance for Sustainable Supply (TASS)	Member
Taiwan Safety Council	Member
Kaohsiung Chamber of Industry	Member
Kaohsiung Industrial Association	Member
Kaohsiung Lin Hai Industrial Park Association	Member
International Association of Arson Investigators Taiwan Chapter	Member
Taiwan Patent Attorneys Association	Member
European Petrochemical Association (EPCA)	Member
Taiwan Union of Nurses Association (TUNA)	Member

GRI Standards Reference Table

GRI Standards	Disclosures	Related Chapters	Page
GRI 1: Foundation 2021	GRI 1 Provide a Statement of Use	LCY Chemical Corp. has reported in accordance with the GRI Standards for the period 2023/01/01 to 2023/12/31. GRI 1 used: GRI 1: Foundation 2021.	3
	Applicable GRI Sector Standard(s)	None	3
GRI 2: General Disclosures 2021	2-1 Organizational details	About this Report 1.2.1 Corporate Governance	3, 24
	2-2 Entities included in the organization’s sustainability reporting	About this Report	3
	2-3 Reporting period, frequency and contact point	About this Report	3
	2-4 Restatements of information	About this Report The historical air quality and carbon emissions data for Chapter 3 has been revised. During our ongoing efforts to enhance data management and accuracy, we identified discrepancies in the carbon inventory calculations for the logistics center in Qianzhen, Kaohsiung, and the R&D Center. These discrepancies were due to the use of GWP (Global Warming Potential) values from the EPA’s earlier AR4 version, while other facilities adopted the GWP AR6 version for historical data starting in 2022. As a result, minor deviations in calculations impacted the presentation of historical data. To ensure data consistency and report integrity, we have reviewed the relevant data following best practices (applying the most recent GWP version for the inventory year) and implemented the necessary adjustments.	3
	2-5 External assurance	About this Report	3
	2-6 Activities, value chain and other business relationships	About this Report 1. About Us 1.4 Supply Chain Management	3, 21, 33
	2-7 Employees	4.2 Employee Demographics & Management	90
	2-8 Workers who are not employees	4.2 Employee Demographics & Management. The number of workers who are not employees is incomplete and therefore, has not been disclosed at this time. The data is expected to be disclosed in the 2024 ESG report.	90
	2-9 Governance structure and composition	1.2.1 Corporate Governance Please refer to the company’s official website: About LCY Chemical Corp. (lcycc.com)	24
	2-10 Nomination and selection of the highest governance body	1.2.1 Corporate Governance	24
	2-11 Chair of the highest governance body	1.2.1 Corporate Governance	24
	2-12 Role of the highest governance body in overseeing the management of impacts	Identify stakeholders and material topics 1.2.1 Corporate Governance 1.2.2 Sustainable Operations	10, 24, 26

GRI Standards	Disclosures	Related Chapters	Page
GRI 2: General Disclosures 2021	2-13 Delegation of responsibility for managing impacts	1.2.2 Sustainable Operations	26
	2-14 Role of the highest gov-ernance body in sustainability reporting	Identify stakeholders and material topics 1.2.2 Sustainable Operations	10, 26
	2-15 Conflicts of interest	This information is not disclosed due to strict confi-dentiality regulations and as LCY is not a publicly listed company.	-
	2-16 Communication of critical concerns	There are no significant issues that require reporting to the Board of Directors.	-
	2-17 Collective knowledge of the highest governance body	1.2.1 Corporate Governance 1.2.2 Sustainable Operations	24, 26
	2-18 Evaluation of the performance of the highest governance body	LCY Chemical Corp. does not conduct this evaluation. The evaluation approach for LCY Technology Corp. (Copper Foil Plant) involves reporting the performance assessment results of the Board of Directors (internal assessments, director self-assessments, and external assessments) to the board. Subsequently, the results are disclosed to TWSE by filing a report on the results of “Self-Evaluation of Performance of the Board” and documented in the annual report.	-
	2-19 Remuneration policies	This information is not disclosed due to company confidentiality regulations. Please refer to the annual report and organizational charter for the remuneration committee for data on LCY Technology Corp. (Copper Foil Plant), as well as the articles of incorporation § 27, 30-1, 31. Link: Annual Report, the organizational charter for the remuneration committee, and articles of incorporation	-
	2-20 Process to determine remuneration	4.3.1 Pay & Welfare	91
	2-21 Annual total compensation ratio	4.3.1 Pay & Welfare	91
	2-22 Statement on sustainable development strategy	Message from the Chairman 1.2.2 Sustainable Operations	8, 26
	2-23 Policy commitments	Message from the Chairman 1.2.2 Sustainable Operations 1.3.1 Compliance Culture 3.1.1 Environmental Protection Policies 4.1 Human Rights Policies 4.4.1 Talent Cultivation Policies	8, 26, 28, 67, 89, 96
	2-24 Embedding policy commit-ments	1.2.2 Sustainable Operations 1.3.1 Compliance Culture 4.1 Human Rights Policies 4.4.2 Talent Cultivation Measures	26, 28, 89, 96

GRI Standards	Disclosures	Related Chapters	Page
GRI 2: General Disclosures 2021	2-25 Processes to remediate negative impacts	1.3.1 Compliance Culture	28,
		1.4.2 Supply Chain Management Procedures	34,
		4.1 Human Rights Policies	89,
		4.4.1 Talent Cultivation Policies	96
	2-26 Mechanisms for seeking advice and raising concerns	1.3.1 Compliance Culture	28,
		1.4.2 Supply Chain Management Procedures	34
	2-27 Compliance with laws and regulations	Identify stakeholders and material topics	10,
		3.1.2 Environmental Regulatory Compliance	67,
		4.5.1 Occupational Safety Management	102
	2-28 Membership associations	Appendix Participation in Industry Associations	117
2-29 Approach to stakeholder engagement	Identify stakeholders and material topics	10	
2-30 Collective bargaining agreements	4.4.1 Talent Cultivation Policies (While there are no collective bargaining agreements in place, employee rights and interests are addressed through regular labor-management meetings.)	96	
	GRI 3: Material Topics 2021	3-1 Process to determine material topics	Identify stakeholders and material topics
3-2 List of material topics		Identify stakeholders and material topics	10
Material Topics			
GHG Emissions			
GRI 3: Material Topics 2021	3-3 Management of material topics	3 Green Operations 3.3.1 Carbon Management	65, 72
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	3.3.1 Carbon Management	72
	305-2 Energy indirect (Scope 2) GHG emissions	3.3.1 Carbon Management	72
	305-4 GHG emissions intensity	3.3.1 Carbon Management	72
	305-5 Reduction of GHG emissions	3.3.1 Carbon Management	72
Energy Management			
GRI 3: Material Topics 2021	3-3 Management of material topics	3 Green Operations 3.3.2 Energy Management	65, 75
GRI 302: Energy 2016	302-1 Energy consumption within the organization	3.3.2 Energy Management	75
	302-2 Energy consumption outside of the organization	3.3.2 Energy Management	75

GRI Standards	Disclosures	Related Chapters	Page
Material Topics			
Employee Training, Human Rights, Diversity & Equal Opportunities			
GRI 3: Material Topics 2021	3-3 Management of material topics	4 Promoting Social Prosperity 4.1 Human Rights Policies 4.4.1 Talent Cultivation Policies	87, 89, 96
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	4.4.2 Talent Cultivation Measures	96
	404-3 Percentage of employees receiving regular performance and career development reviews	4.4.2 Talent Cultivation Measures	96
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	4.2 Employee Demographics & Management	90
Employment			
GRI 3: Material Topics 2021	3-3 Management of material topics	4.2 Employee Demographics & Management 4.3 Employee Welfare	90, 91
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	4.2 Employee Demographics & Management	90
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	4.3.1 Pay & Welfare 4.3.2 Employee Health & Safety	91, 92
	401-3 Parental leave	4.3.2 Employee Health & Safety (retention rate)	92
Air Quality			
GRI 3: Material Topics 2021	3-3 Management of material topics	3 Green Operations 3.4.1 Air Quality Policies	65, 76
GRI 305: Emissions 2016	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	3.4.2 Air Pollution Reduction Measures	78
Water Management			
GRI 3: Material Topics 2021	3-3 Management of material topics	3 Green Operations 3.5.1 Water Policies	65, 80
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	3.5.1 Water Policies 2.2.2 Innovation in Green Materials (sale of reclaimed water from UIPA processes)	80, 50
	303-2 Management of water discharge-related impacts	3.5.1 Water Policies	80
	303-3 Water withdrawal	3.5.1 Water Policies	80
	303-4 Water discharge	3.5.1 Water Policies	80
	303-5 Water consumption	3.5.1 Water Policies	80
	303-1 Interactions with water as a shared resource	2.2.2 Innovation in Green Materials	50

GRI Standards	Disclosures	Related Chapters	Page
Material Topics			
Supply Chain Management			
GRI 3: Material Topics 2021	3-3 Management of material topics	1.4 Supply Chain Management	33
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	1.4.2 Supply Chain Management Procedures	34
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	1.4.2 Supply Chain Management Procedures	34
Occupational Safety & Health			
GRI 3: Material Topics 2021	3-3 Management of material topics	4.5.1 Occupational Safety Management	102
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	4.5.1 Occupational Safety Management	102
	403-2 Hazard identification, risk assessment, and incident investigation	4.5.1 Occupational Safety Management	102
	403-3 Occupational health services	4.5.2 Occupational Health Services	105
	403-4 Worker participation, consultation, and communication on occupational health and safety	4.5.1 Occupational Safety Management	102
	403-5 Worker training on occupational health and safety	4.5.1 Occupational Safety Management	102
	403-6 Promotion of worker health	4.5.2 Occupational Health Services	105
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4.5.1 Occupational Safety Management	102
	403-8 Workers covered by an occupational health and safety management system	4.5.1 Occupational Safety Management	102
	403-9 Work-related injuries	4.5.1 Occupational Safety Management	102
	403-10 Work-related ill health	4.5.1 Occupational Safety Management	102
Information Security			
GRI 3: Material Topics 2021	3-3 Management of material topics	1.5 Information Security	39
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	1.5.2 Information Security Management Procedures	40
Green Products			
GRI 3: Material Topics 2021	3-3 Management of material topics	2.1.1 Innovative Management 2.2.1 LCY's Sustainability 6R	47, 49
GRI 301: Materials 2016	301-2 Recycled input materials used	2.2.2 Innovation in Green Materials (100% recycled copper and PCR-PP)	50

SASB Index - Chemical Sector (2023 version)

Topic	Code	Accounting Metric	2023 Amount	Related Chapters	Page
GHG Emissions	RT CH 110a.1	Gross global Scope 1 emissions (tCO ₂ e)	137,035 tCO ₂ e, accounting for 18x% of total emissions (Scope 1+ Scope 2)	3.3.1 Carbon Management	72
		Percentage of Scope 1 emissions covered under emissions-limiting regulations (%)	Carbon fees and trading systems are still in the legislative process in Taiwan. No Scope 1 emissions are limited by regulations in Taiwan, China, and the US, but we will continue to keep a pulse on domestic carbon regulations.		
	RT CH 110a.2	Discussion of strategy to manage Scope 1 emissions, emission reduction targets, and an analysis of performance against those targets.	Due to the type and characteristics of the products we offer at LCY, our GHG emissions are primarily indirect emissions (Scope 2), which account for nearly 82% of our total emissions, rather than direct emissions (Scope 1), which are more common in traditional petrochemical industries. As such, carbon reduction measures focused on two areas: energy and steam conservation. We also utilized smart management systems at the plant to identify optimal operating parameters and potential hotspots for energy conservation. New practices implemented included replacing variable-frequency drives, recycling waste heat, and reducing steam usage. With respect to Scope 1, efforts are focused on exhaust gas treatment and reducing the use of externally sourced fuels. Alternatively, there is a focus on transitioning to low-carbon fuels such as natural gas. In 2023, Scope 1 emissions decreased by 33.4% compared to 2022.	3.3.1 Carbon Management	72
Air Quality	RT CH 120a.1	Air emissions of the following pollutants: ① Nitrogen oxides (NOx)	44.1275 tons	3.4.2 Air Pollution Reduction Measures	78
		② Sulfur oxides (SOx)	4.8867 tons	3.4.2 Air Pollution Reduction Measures	78
		③ Volatile organic compounds (VOC)	204.0054 tons	3.4.2 Air Pollution Reduction Measures	78
		④ Hazardous Air Pollutants (HAPs)	36.0999 tons	3.4.2 Air Pollution Reduction Measures	78

Topic	Code	Accounting Metric	2023 Amount	Related Chapters	Page
Energy Management	RT CH 130a.1	① Total energy consumed (GJ)	7,128,854GJ	3.3.2 Energy Management 3.3.3 Promoting Renewable Energy	75, 76
		② Percentage grid electricity (%)	26.4%		-
		③ Percentage renewable (%)	0.2%		-
		④ Total self-generated energy (GJ) (+T-REC)	14,311GJ	3.3.2 Energy Management 3.3.3 Promoting Renewable Energy	75, 76
Water Management	RT CH 140a.1	① Total water intake	4,732,974.31 tons	3.5.1 Water Policies	80
		② Percentage of total water withdrawn in regions of High or Extremely High Baseline Water Stress	0% We have identified water resource risks in our main production locations with WRI's water assessment tool, Aqueduct Water Risk Atlas. Plants in Kaohsiung (Taiwan), Huizhou (China), AR (China), and Zhenjiang (China) are in regions of low baseline water stress; and Baytown (US) has low-to-medium baseline water stress, hence 0%.	3.5.1 Water Policies	80
	RT CH 140a.1	③ Total water consumption	2,550,864 tons	3.5.1 Water Policies	80
		④ Percentage of the total water consumed in regions of High or Extremely High Baseline Water Stress	0% We have identified water resource risks in our main production locations with WRI's water assessment tool, Aqueduct Water Risk Atlas. Plants in Kaohsiung (Taiwan), Huizhou (China), AR (China), and Zhenjiang (China) are in regions of low baseline water stress; and Baytown (US) has low-to-medium baseline water stress, hence 0%.	3.5.1 Water Policies	80
	RT CH 140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	0	3.5.3 Water Pollution Prevention Measures	84

Topic	Code	Accounting Metric	2023 Amount	Related Chapters	Page
Water Management	RT CH 140a.3	Description of water management risks and strategies to mitigate those risks		At LCY, we manage water resources from three aspects: governance, strategic and technical. • The governance aspect includes elevating the importance of water management, establishing the Energy & Water Conservation Committee, and setting water conservation goals; • The strategic aspect includes 1) increasing the amount of water recycled at the plants by recycling steam condensate, using MBR technology to treat wastewater at plants, and 2) installing water conservation facilities to reduce water withdrawals and working with external parties to implement a water reclamation program; • The technical aspect includes research, development, and optimization of MBR technology and other technologies that improve water use efficiency.	3.5.1 Water Policies 80
Hazardous Waste Management	RT CH 150a.1	Amount of hazardous waste generated	1,265.8 tons	3.6.1 Waste Management	85
		Percentage of hazardous waste recycled	28.54% (handled by trusted recycling organizations)	3.6.1 Waste Management	85
Community Relations	RT CH 210a.1	Discussion of engagement processes to manage risks and opportunities associated with community interests		LCY upholds three principles for community relations: community engagement, process safety, and environmental protection. • Plant operations may impact process safety, air pollution, employment, and transport safety for surrounding communities. • We've established a direct communication channel with local village chiefs to ensure immediate communication and feedback. • Plant employees conduct community visits and report any assistance or improvements required by the communities back to the plant and LCY to give us more insight and ensure that changes are being implemented.	4.6.1 Community Relations Management Policies 106

Topic	Code	Accounting Metric	2023 Amount		Related Chapters	Page
Workforce Health & Safety	RT CH 320a.1	Employee Type	Total recordable incident rate (TRIR)	Fatality Rate (FR)	4.5.1 Occupational Safety Management	102
		Employees	0.439	0		
			0.628	0		
		Contract Employees Contract Employees include temp workers, outsourced workers (security/cleaning services/factory drivers), interns, part-time workers, long-term contractors, etc.	There were 11 work-related injuries, 0 fatalities, and 0 cases of work-related ill health in 2023. Work accidents in plants were primarily from falls, collisions, or improper use of machinery. The work accidents have now been included in management references to serve as a basis for optimization and strengthening education and training.			
	RT CH 320a.2	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks.	• Provide regular and comprehensive health and cancer screenings for employees at all levels based on their work environment. • Provide health screening and control banding for special tasks to ensure that employees do not come into contact with harmful and hazardous substances that could subsequently affect their health. • Screen all plant employees for musculoskeletal symptoms and reevaluate existing work arrangements based on past incidence rates and employee medical history to reduce incidence rates.		4.5.2 Occupational Health Services	105
Product Design for Use-Phase Efficiency	RT CH 410a.1	Revenue from products designed for use-phase resource efficiency	In 2023, green products generated NT\$5,370,958,000 in revenue, accounting for 12% of total revenue.		2.2.1 LCY's Sustainability 6R	49

Topic	Code	Accounting Metric	2023 Amount		Related Chapters	Page
Safety & Environmental Stewardship of Chemicals	RT CH 410b.1	Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances	12.9%		2.3.1 Chemical Management Protocols	58
		Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, that have passed a hazard assessment	100%		2.3.1 Chemical Management Protocols	58
	RT CH 410b.2	Discussion of strategy to manage chemicals of concern and develop alternatives with reduced human and/or environmental impact.	Chemical management at LCY is controlled through two phases: Product R&D and Plant Management • Product R&D phase: Evaluate alternatives and reduce high-risk/hazardous substances. Meet with industrial safety and environmental protection units at plants to conduct environmental and health hazard and safety assessments for the production process. In the TPE-SIS product line, a successful substitution was made for talc, a raw material for the dedusting agent, which was suspected of causing health and environmental problems. In addition, at the Linyuan plant, analytical methods were adjusted to avoid the use of carcinogenic listed toxic substances, specifically potassium dichromate and potassium chromate, to improve employee safety.		2.3.1 Chemical Management Protocols 2.3.2 Responsible Chemical Research	58, 59

Topic	Code	Accounting Metric	2023 Amount	Related Chapters	Page
Safety & Environmental Stewardship of Chemicals	RT CH 410b.2	Discussion of strategy to manage chemicals of concern and develop alternatives with reduced human and/or environmental impact.	Plant management phase: The Environmental Risk Management Department at headquarters and the industrial safety and environmental protection office at the plants formulate quality control guidelines for each of the five stages of the chemical life cycle, including needs-based application, incoming inspection, procurement labeling, storage and use, and disposal. We monitor changes in chemical regulations by the relevant authorities, clarify the impact on our plants, and discuss response measures to ensure that the use and management of chemicals at all plants comply with local laws and regulations.	2.3.1 Chemical Management Protocols	58,
				2.3.2 Responsible Chemical Research	59
Genetically Modified Organisms	RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	LCY does not use any GMOs.		
Management of the Legal & Regulatory Environment	RT CH 530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	To track, assess, and manage changes in related regulations, responsible local units and industrial safety and environmental protection offices in plants are instructed to pay close attention to regulatory changes, coordinate support and rollout, and ensure employee understanding and compliance through regular information sharing, education, training, advocacy, and announcements. Our goal is zero noncompliance.	1.3.1 Compliance Culture	28

Topic	Code	Accounting Metric	2023 Amount	Related Chapters	Page
Emergency Preparedness & Response for Occupational Safety	RT CH 540a.1	Process Safety Incidents Count (PSIC)	1	In 2023, there were three process safety incidents (zero Tier 1, one Tier 2). The incidents primarily involved chemical leaks, but fortunately, no injuries were reported. All incidents were thoroughly tracked and managed, and recommendations for improvement were made.	4.5.1 Occupational Safety Management
		Process Safety Total Incident Rate (PSTIR)	0,067		
		Process Safety Incident Severity Rate (PSISR)	0,067		
	RT CH 540a.2	Number of transport incidents	0 件		
Production	RT CH 000.A	Annual production by reportable segment (tons) / percentage (%)	Due to LCY's commercial considerations, only the production ratio by business unit is provided. The data includes Sarnia Plant in Canada Thermoplastic Elastomers 450,728 ton / 45% Performance Plastics 254,866 tons / 25% Methanol & Solvent & Water 155,848 tons / 15% Electronic-Grade Solvent Products 136,150 tons / 14% LCYtech (Copper Foil) 9,771 tons / 1% Bio-Based 0 tons / 0% Others 0 tons / 0% Total 1,007,364 tons / 100%	1. About Us	21

TCFD Index

TCFD Disclosure Standards		Related Chapters	Page
Governance	A. Describe the board’s oversight of climate-related risks and opportunities.	3.2.1 Governance & Policies	68
	B. Describe management’s role in assessing and managing climate-related risks and opportunities.		
Strategy	A. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	3.2.2 Climate Risk and Response	69
	B. Describe the impact of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning.	3.2.1 Governance & Policies	68
	C. Describe the resilience of the organization’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	3.2.2 Climate Risk and Response	69
Risk Management	A. Describe the organization’s processes for identifying and assessing climate-related risks.	3.2.2 Climate Risk and Response	69
	B. Describe the organization’s processes for managing climate-related risks.		
	C. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization’s overall risk management.		
Metrics and Targets	A. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	3.3 Carbon & Energy Management	72
	B. Disclose Scope 1, Scope 2 and, if applicable, Scope 3 greenhouse gas (GHG) emissions and the related risks.		
	C. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.		

Independent Assurance Statement



WHEN TRUST MATTERS

Page 1 of 3
Statement No.: DNV-2024-ASR-737840

Independent Limited Assurance Statement

DNV Business Assurance Co., Ltd. (“DNV”, “we” or “us”) were engaged by LCY CHEMICAL CORP. (“LCY” or “the Company”) to conduct a limited assurance engagement over Selected Information presented in LCY 's 2023 ESG Report and 2023 GRI Index (together, “the Report”), covering the reporting year ended 31 December 2023. The stakeholders of LCY are the intended users of this statement.



Our Conclusion: Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Selected Information is not fairly stated and has not been prepared, in all material respects, in accordance with the Criteria. This conclusion relates only to the Selected Information, and is to be read in the context of this Independent Limited Assurance Statement, in particular the inherent limitations explained overleaf.

Selected information

The scope and boundary of our work are restricted to the key performance indicators included within the Report (the “Selected Information”) prepared with reference to “Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies.” Greenhouse gas (GHG) emission assurance is excluded from the scope of work since relevant verification had been done under the jurisdiction of an official mechanism governed by the competent authority. In this assurance, DNV did not perform substantial verification activities again but only referred to the existing verification opinions, issued by verification bodies endorsed by the official mechanism.

We understand that the reported financial data and information are based on the data from the Company’s Annual Report and Accounts, which are subject to a separate independent audit process. The review of financial data taken from the Annual Report and Accounts is not within the scope of our work.

The selected performance indicators can be found on the GRI Index:

- GRI 302-1 Energy consumption within the organization; GRI 302-3 Energy intensity
- GRI 303-1 Interactions with water as a shared resource; GRI 303-2 Management of water discharge-related impacts; GRI 303-3 Water withdrawal; GRI 303-4 Water discharge; GRI 303-5 Water consumption
- GRI 305-1 Direct (Scope 1) GHG emissions; GRI 305-2 Energy indirect (Scope 2) GHG emissions; GRI 305-4 GHG emissions intensity; GRI 305-5 Reduction of GHG emissions; GRI 305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions
- GRI 401-1 New employee hires and employee turnover; GRI 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees; GRI 401-3 Parental leave
- GRI 403-1 Occupational health and safety management system; GRI 403-2 Hazard identification, risk assessment, and incident investigation; GRI 403-3 Occupational health services; GRI 403-4 Worker participation, consultation, and communication on occupational health and safety; GRI 403-5 Worker training on occupational health and safety; GRI 403-6 Promotion of worker health; GRI 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships; GRI 403-8 Workers covered by an occupational health and safety management system; GRI 403-9 Work-related injuries; GRI 403-10 Work-related ill health
- GRI 404-1 Average hours of training per year per employee; GRI 404-2 Programs for upgrading employee skills and transition assistance programs; GRI 404-3 Percentage of employees receiving regular performance and career development reviews
- GRI 405-1 Diversity of governance bodies and employees
- GRI 418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data

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Our observations and areas for improvement will be raised in a separate report to LCY's management. Selected observations are provided below. These observations do not affect our conclusion set out below:

- LCY has established a variety of processes for collecting and consolidating the various data it reports. We have confidence in the process in place to ensure reasonable accuracy for the information presented in the Report and management systems.
- The Company has established an information management system to oversee operational and sustainability performance information. This provides greater assurance for the reliability and quality of the data at the group level across different business units. In response to the ongoing efforts to refine longer-term metrics and goals, it is recommended that data collection protocols be continuously improved and integrated to enhance information management and effectiveness.

Standard and level of assurance

We performed a limited data-only assurance engagement using the international assurance best practice including the International Standard on Assurance Engagements (ISAE) 3000 – "Assurance Engagements other than Audits and Reviews of Historical Financial Information" (revised) issued by the International Auditing and Assurance Standards Board.

To ensure consistency in our assurance process, we conducted our work in accordance with DNV's assurance methodology, VeriSustain, applying only the pertinent sections of the protocol relevant to the specific purpose of the activity.

This methodology ensures compliance with ethical requirements and mandates planning and execution of the assurance engagement to obtain the desired level of assurance.

DNV applies its own management standards and compliance policies for quality control, which are based on the principles enclosed within ISO IEC 17029:2019 - Conformity Assessment - General principles and requirements for validation and verification bodies, and accordingly maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement; and the level of assurance obtained is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. We planned and performed our work to obtain the evidence we considered sufficient to provide a basis for our opinion, so that the risk of this conclusion being in error is reduced but not reduced to very low.

Our competence, independence and quality control

DNV's established policies and procedures are designed to ensure that DNV, its personnel and, where applicable, others are subject to independence requirements (including personnel of other entities of DNV) and maintain independence where required by relevant ethical requirements. This engagement work was carried out by an independent team of sustainability assurance professionals. Our multi-disciplinary team consisted of professionals with a combination of environmental and sustainability assurance experience.

Inherent limitations

All assurance engagements are subject to inherent limitations, as selective testing (sampling) may not detect errors, fraud or other irregularities. Non-financial data may be subject to greater inherent uncertainty than financial data, given the nature and methods used for calculating, estimating and determining such data. The selection of different but acceptable measurement techniques may result in different quantifications between different entities. Our assurance relies on the premise that the data and information provided to us by LCY have been provided in good faith. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Independent Limited Assurance Statement.

Basis of our conclusion

We are required to plan and perform our work in order to consider the risk of material misstatement of the Selected Information; our work included, but was not restricted to:

- Conducting interviews with LCY's management to obtain an understanding of the key processes, systems and controls in place to generate, aggregate and report the Selected Information;
- On-site and virtual visits to LCY to review processes and systems for preparing site-level data;
- Performing limited substantive testing on a selective basis of the Selected Information to check that data had been appropriately measured, recorded, collated and reported;
- Reviewing the specified data collected at the company level and statements made in the Report;
- Reviewing that the evidence, measurements and their scope provided to us by LCY is prepared in line with the Criteria;
- Assessing the appropriateness of the Criteria for the Selected Information; and
- Reading the Report and narrative accompanying the Selected Information within it.

DNV Business Assurance Co., Ltd.


C. K. Wong
Management Representative & Quality Reviewer

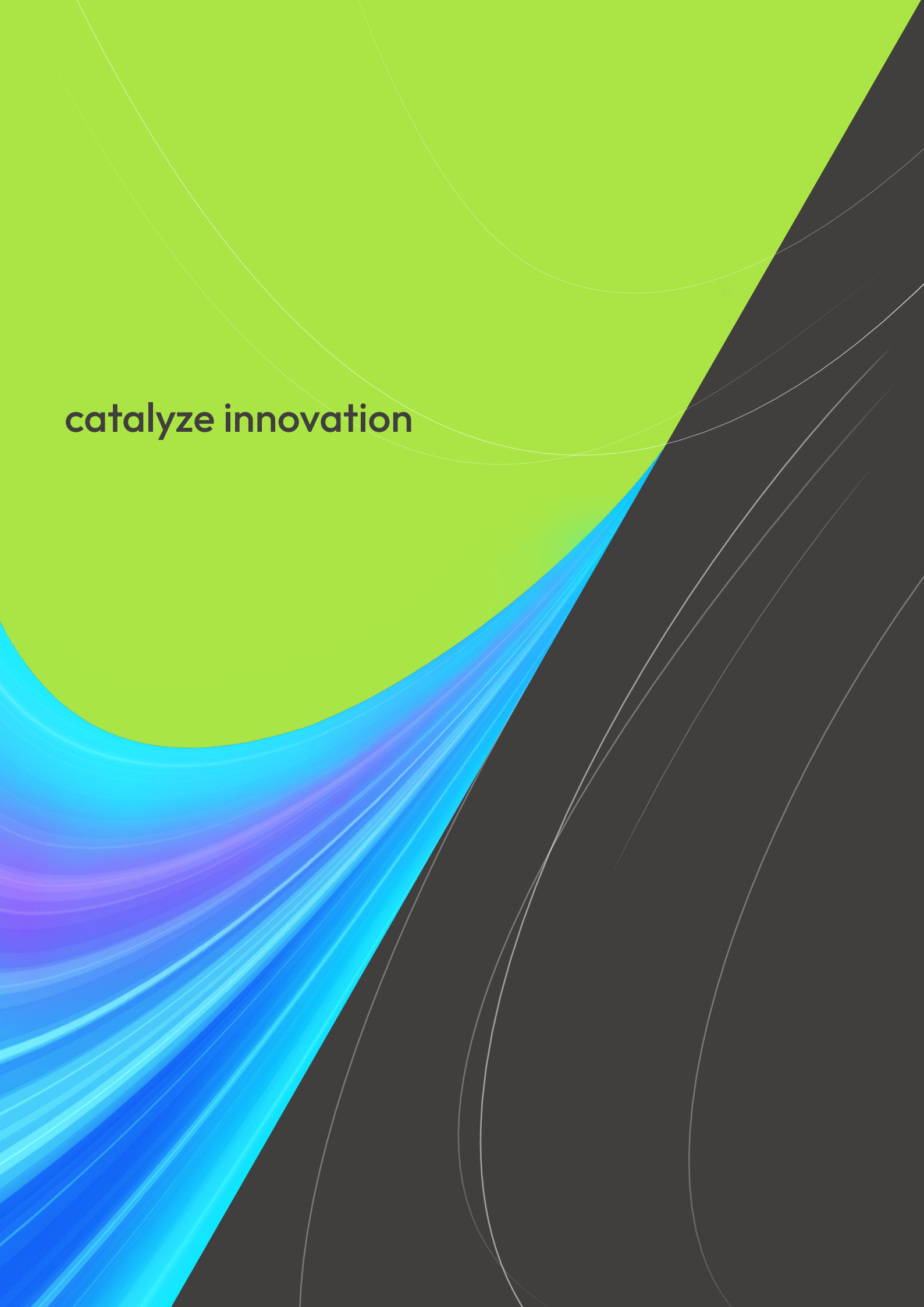
Taipei
20 November, 2024

Responsibilities of the management of LCY and DNV

The management of LCY has sole responsibility for:

- Preparing and presenting the Selected information in accordance with the Criteria;
- Designing, implementing and maintaining effective internal controls over the information and data, resulting in the preparation of the Selected Information that is free from material misstatements;
- Measuring and reporting the Selected Information based on their established Criteria; and
- Contents and statements contained within the Criteria.

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Selected Information has been prepared in accordance with the Criteria and to report to LCY in the form of an independent limited assurance conclusion, based on the work performed and the evidence obtained. We have not been responsible for the preparation of the Report.



catalyze innovation