

# 2022 Sustainability Report



TTY Biopharm  
Company Limited

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## Letter from the Chairman

We present quality and consistency to our stakeholders in terms of our medical drugs, diverse medical solutions, and excellent collaborations and services, which are all connected to sustainable value.

Since its foundation in year 1960, TTY has strived to R&D, produce, and manufacture international competitive complex generic drugs, and provide high-quality front-end drugs. With our expert sales team, TTY offers a one-stop product and service chain for the international market.

Our employees and suppliers are the reason we are able to grow strong. In return, we adopt the annual sustainable development roadmap to develop value for stakeholders, provide multiple options for patients, and bear social responsibility in three areas: Promotion of Green Transformation, Realization of a Healthy Society, and Steady Development of the Company.

TTY considers the environment from the first stage of operations. The "Promotion of Green Transformation" requires "environmental sustainability is a priority for all operational activities" environmental protection guideline. Including the minimization of energy and material use in the manufacturing process, and good management of water and discharge, our suppliers are incumbent to abide by TTY's supplier management policy to reduce their impact on climate change. This year, the addition of Lean Six Sigma focuses on the systematic method of examining manufacturing procedures to extract efficiency and energy use. ISO 14064-1, a process for quantifying GHG emissions, is also in place to direct our energy conservation methods and emission measures, which expects to improve energy use in all locations.

Regarding social responsibility, we heavily invest in cultivating talents, health education, and caring for the community. We have a 15-year old TTY college internship program, over 360 health education activities of "Regional care for the cancer-affected" at remote campuses spanning 20 years; the recent 2 years for epidemic prevention and public health, TTY donated 1,000 flu vials for CTOC (Chinese Taipei Olympic Committee) in year 2022

to fortify protection and performance.

This year, we returned to basics by initiating a 3-year toxic free rice purchase plan. This health concept, as we always advocate, benefits not only toxic-free farming but also the Andrew Charity Association, and Yu-Cheng and CHENSENMEI Social Welfare Foundation to further benefit society. To extend the opportunities for employees to engage in community service, the paid volunteer leave inspires "labor of love" among our colleagues, encouraging them to do their part for civil responsibility as well as helping us achieve our CSR goals.

Our agenda always features people and public health. In TTY, employees are our most valuable assets. Our welfare plans focus on employees' wellbeing, safety and health are our prime concern in running the corporation. In year 2022, we incorporated the ISO 45001 Occupational Safety and Health Management System, providing holistic protection to all employees. The training system further educates our employees on disease prevention and work safety, ensuring good work conditions, health, wellbeing, and equity, and minimizing occupational injuries and the risk of illness.

In respect of governance, the "Risk Management Center" subordinated to the SDC (Sustainable Development Center) not only monitors environmental changes, identifies significant risks periodically, and reviews the risk management measures adopted by the Company, but also introduced a Task Force on the Climate-related Financial Disclosures (TCFD) risk management system to further align with global trends in year 2022.

Furthermore, TTY has been positioned the top 5% of OTC companies for 6 years consecutively in TWSC's

evaluation; and was TCSA silver winner in year 2019 and year 2020 respectively, and platinum winner in year 2021. Recognition for our efforts did not stop there. In Asia pacific, TTY was the Health 2.0 Conference USA Outstanding Organization Award winner in April 2022. In August the same year, TTY was won for the second time of the HR Asia's Best Company to Work For in HR Asia award, from among 330 competitors.

TTY is developing in the fields of oncology, anti-infection in severe illnesses, medical treatment, and healthcare. We present quality and consistency to our stakeholders in terms of our medical drugs, diverse medical solutions, and excellent collaborations and services, which are all connected to sustainable value. We have on the horizon key drug development, and the introduction of international medicine, while propelling our communities with positive brand value and impact.

We expect to lead Taiwan's biomedical field, not only in terms of the business but also sustainability. We learn from benchmark organizations and partner with businesses internationally, and seek continuous improvement of our sustainability actions to spread the awareness among employees, the local community, and partner vendors. We work to grow the seeds of sustainability in life and in action, to see them bloom in the beautiful future.

**Lin Chuan**  
TTY Biopharm Chairman



# About TTY Sustainability Report

TTY Biopharm Co., Ltd. ("TTY") has issued a sustainability report for 7 consecutive years. Through this report we demonstrate to all stakeholders as part of our sustainable management goals, performance data and related management methods implemented for corporate governance, maintenance of patients' health and safety, responsible products and manufacturing, environmental protection, supply chain management, and employee care and social welfare. We also propose future improvement goals to implement corporate citizenship through concrete actions.

## • Scope of Reporting

This report covers data from 1/1/2022 to 31/12/2022. The financial statement and data include the headquarters in Taiwan and subsidiaries. The scope of the report covering governance and society are individually presented by the headquarters, Chungli Factory, Lioudu Factory, Pharmaceutical Development Center, Neihu Factory, Translation Research Center, excluding the Vietnam office and subsidiaries (see TTY's subsidiaries information). The environment aspect (outsourced electricity, energy use, and air pollution data) is mainly based on data provided by the Chungli and Lioudu Factory. The GHG inventory from 2022 covers the headquarters, Chungli, Lioudu and Neihu Factory, and water, wastes, and toxic substance management are presented by the Chungli, Lioudu and Neihu Factory. The data within the report pertains to 2022 if not otherwise indicated. No change has been made to the information given since the preceding issue.

## • Issuance Frequency

The Company is committed to publishing a sustainability report every year going forward. The last report was published in July 2022 in the Sustainability section of the Company's website for stakeholders to download and review. This report was published in June 2023. The next report will be published in June 2024.

## • Compilation Guidelines

This report is prepared under the guidance of the Sustainability Reporting Standards (GRI Standards) 2021. The GRI index is listed in the Appendix.

## • Report Quality Control

To strengthen the comprehensiveness and credibility of this report, we have established a sustainability report compilation procedure, internal audit, and outside validation procedures based on the Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies.



### Compilation

The report is planned by TTY Biopharm Sustainable Development Promotion Center (SDPC), who then compile and proofread the disclosure, data, and performance index prepared by responsible units.



### Internal Review

Each unit shall confirm the completeness and accuracy of the report, and the highest unit officers make final approvals.



### External Guarantee

- Afnor Asia Ltd., an independent assurance provider, is commissioned to assure after examination against the AA 1000 AS v3, Type 1 and The Moderate Assurance that the report aligns with GRI and AA 1000 AP (2018).
- Financial data is IFRs approved by KPMG Taiwan, in the currency of Taiwan dollars.



### Finalization

Prior to issuance, the report is fact-checked against annual audit items planned by the internal audit team based on applicable regulations and reviewed by the SDPC before being reported to the Sustainable Development Committee.

## • Basic Information

Operating sites

<b>Headquarters</b>	TEL: +886-2-26525999 Address: 3rd Floor, No. 3-1, Park Street, Nangang District, Taipei City	<b>Translation Research Center</b>	TEL : +886-2-26971775 Address: 32F-5, No.99, Sec.1, Xintai 5th Rd., Xizhi Dist., New Taipei City
<b>Chungli Factory</b>	TEL: +886-3-4522160 Address: No.838, Sec.1, Zhonghua Rd., Chungli Dist., Taoyuan City	<b>Pharmaceutical Development Center</b>	TEL : +886-2-27967383 Address: 3F, No.124, Xingshan Rd., Neihu Dist., Taipei City
<b>Lioudu Factory</b>	TEL: +886-2-24512466 Address: No. 5, Gongjian West Road, Qidu District, Keelung City	<b>Neihu Factory</b>	TEL : +886-2-27967383 Address: 5F, No.118, Xingshan Rd., Neihu Dist., Taipei City

## • TTY Subsidiary Information

Company Name	Subsidiary
TTY	Xudong Haiyu Pharmaceutical Industry Limited Company (Cayman) (Xudong Haiyu)
	Worldco Int. Co., Ltd. (HK) (Worldco Int.)
	American Taiwan Biopharma Philippines
	TSH Biopharm Co., Ltd. (TSH)
	EnhanX Biopharm Inc. (EnhanX)
	Chuang Yi Biotech (CYB) Co., Ltd.
	TTY Biopharm Turkey Saglik Urunleri Sanayi ve Ticaret Limited Sirketi

Please contact the Sustainable Development Promotion Center with any question or suggestions regarding the content of the report.

### TTY Biopharm Co., Ltd.

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# Path to Sustainable Development

## Material Topic Sustainable Development Strategies

Corresponding GRI index

Self-established Topic

Policies and Commitment

With a focus on sustainable operations, and inclusive and sustainable economic growth, TTY has established company policies and sustainable development strategies in phases to comply with laws and respond to the expectations of the general public. Accordingly, TTY not only operates from environmental, social, and governance perspectives, but also fulfills supplier management expectations in developing new economic situations, and maintains close alliances with international partners and global investors.

Goals and Targets

### Short-term Goals

To drive a positive cycle in the pharmaceutical industry, TTY strongly cooperates with suppliers and reduces supply chain risks through supplier selection, qualification assessment, risk rating, and grading management. Furthermore, we have introduced a "Supplier CSR Questionnaire and Commitment" to promote sustainable economic, social, and environmental development with suppliers.

### Mid- to Long-term Goals

Establish sustainable consciousness of employees through public welfare activities and daily promotion, allowing employees to carry the TTY business culture in their daily lives and working environment, and assist TTY to achieve sustainable goals based on development strategies aimed at sustainability transformation.

Responsibilities and Resources

The Sustainable Development Committee is subordinated to the Board of Directors, and has 3 functional centers for the promotion and implementation of sustainable strategic goals of the enterprise, the Sustainable Development Promotion Center, the Ethical Management Promotion Center, and the Risk Management Center. There is an executive secretary position served by the corporate governance officer who takes charge of matters such as meetings of the Committee and matters assigned by the Committee.

Assessment Mechanism and Results

- On the progress of supply chain sustainable management, in year 2022, the Supplier CSR Questionnaire and Commitment was disseminated and returned at a rate of 14.89% by the end of year.
- For employee training, all colleagues took 9 remote SDGs training courses, and corporate ethic sessions, and 2 environmental sustainability promotion sessions and 6 health e-newspapers. A lecture in a cancer targeted speech in year 2022 to increase understanding, and 59 engagements on calcium and Vitamin D intake and insufficiency.
- ISO 45001 Occupational Safety and Health Management System certification completed in year 2022.
- A total of 1,000 flu shots were donated to the CTOC in year 2022.
- The 3-year "TTY Rice" project was initiated by the SDPC social participation team, along with 3 health-themed events. Daycare for respiratory services continues and has covered 298 recipients.

## TTY Biopharm SDGs Highlights

Main Aspects/ SDGs Index

TTY Biopharm SDGs Actions



- Established a systematic water resources management program.
- The wastewater discharged by the Liudu Factory, Chungli Factory, Neihu Factory and Pharmaceutical Development Division is satisfactory to national effluent standards.
- The COD contained in the effluent of the Liudu Factory is 22.83 times lower than local standards.
- The SS contained in the effluent of the Liudu Factory is 98.36 times lower than local standards.
- The COD contained in the effluent of the Chungli

- Factory is 19.80 times lower than local standards.
- The SS contained in the effluent of the Chungli Factory is 43.24 times lower than local standards.
- Reaction plans developed according to risk identification results.
- Application of the TCFD to improve disclosure of climate risks and opportunities.
- Took the initiative to reduce emissions by drafting plans.
- ISO 14064-1 GHG inspection.



- The Yu-Cheng Social Welfare Foundation charity purchase.
- Scholarship and financial aids to children of cancer patients.
- Sponsor activities for the Hope Foundation for Cancer Care.
- Donations to several social welfare groups and foundations.
- Sponsored home care and respite services.
- Supported the "Planting a Seed of Hope" project initiated by the Hope Foundation for Cancer Care.
- Supported and covered transportation fees for hospice care families.
- Supplied 1,130,000 vials of public-fund influenza vaccinations and 270,000 vials of self-pay influenza vaccinations.
- Investment in R&D exceeded NTD\$1.5 billion for the recent 5 years.
- Implemented pandemic prevention measures and provided employees with family care leave.
- Started a working-from-home program to reduce the risk of group gatherings.

- Provides all employees and their first-degree kinship, up to 4 people, with influenza vaccinations for free, totaling 632 participants in year 2022.
- The key products fully comply with applicable health and safety regulations.
- Donated 1,000 flu shots to the CTOC.
- Summer internships for 15 years in a row.
- Organized "Regional care for the Cancer-affected" at remote campus.
- Health promotion for cancer patients and their families.
- Speeches to raise awareness of osteoporosis and bone health.
- Paid volunteer leave plan.
- Supported Yu-Cheng Social Welfare Foundation with the purchase of Himalayan salt as gifts for 27,600 shareholders.
- Initiation of the 3-year "TTY Rice" project.
- ISO 45001 Occupational Safety and Health Management System certified.



- The average salary of female entry-level employees is 1.48 times that of the basic salary, and 1.51 times for male employees.
- No supplier with a significant risk of forced or compulsory labor.
- No forced or threat of forced employment or child labor.
- Provided whistleblowing channels and a rewards system for reporting.

- 2 employee complaints were received in year 2022. The first one (5/10/2022) has been investigated and the procedure was completed by 10/11/2022. The second one (15/12/2022) was completed by 5/1/2023. Management team engage in trainings on communication and management to prevent the reoccurrence of similar issues.
- Established an Ethical Management Promotion Center to prepare ethical management rules and relevant operation procedures.



**1** Core

**HUMAN**  
Health  
Union  
Motivation  
Awesomeness  
Navigation

**3** Main Aspects

**7** Material Topics



**Green transformation**

Encourage vendors to adopt green manufacturing and actively support environmental protection and fight against climate change.

Action plans encompassing climate Green operations

**Health of society**

Committed to serve the community with our professional ability, provide medical support for healthier population.

Innovative R&D Healthcare

**Robust corporate development**

Good moral practices and good risk management to create a favourable corporate environment for talent cultivation.

Integrity operations  
Risk Management  
Talent Development



## ESG Performance and Goals



2022 Target	2022 Implementation Results	2022 Achievement	Short-Term Goal 2023	Mid-Term Goal 2024	Long-Term Goal 2025~2028
<ul style="list-style-type: none"> <li>2 environmental sustainability promotions every year</li> </ul>	"Tree Loving" and "Carbon Reduction" on 29/11 and 27/12 to advocate environment sustainability.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>Organize 2 environmental sustainability promotions every year</li> </ol>	<ol style="list-style-type: none"> <li>Organize 2 environmental sustainability promotions every year</li> </ol>	<ol style="list-style-type: none"> <li>Green building plan for the future if applicable</li> </ol>
<ul style="list-style-type: none"> <li>Waste management policy - waste resources recycling to reach 2 tons in total.</li> </ul>	2.729 tons of recycling calculated from January to December.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>Waste management policy- waste resources recycling to reach 3 tons in total</li> </ol>	<ol style="list-style-type: none"> <li>Waste management policy- waste resources recycling to reach 5 tons in total</li> </ol>	<ol style="list-style-type: none"> <li>Establish a green supplier management system to quantify sustainability indexes.</li> </ol>
<ul style="list-style-type: none"> <li>Incorporate and pass ISO 14064-1 certification.</li> </ul>	Carbon emissions in year 2022 were calculated to accommodate the application of ISO 14064-1. Independent verification completed in May.	<p>Failed to deliver</p>	<ol style="list-style-type: none"> <li>Inspection for ISO 14064-1 GHG completed</li> </ol>	<ol style="list-style-type: none"> <li>Assess green energy purchases or increase energy saving facilities</li> </ol>	<ol style="list-style-type: none"> <li>Join climate initiative organization or alliance, declare environmental sustainability, increase ratio of renewable energy</li> </ol>
<ul style="list-style-type: none"> <li>Save 1.2% power compared to 2021</li> </ul>	8 ongoing energy-saving plans in the Lioudu and Chungli Factories are in place.  0.70% (Lioudu) and 1.81% (Chungli), 1.255% average	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>2% more energy conserved than 2021 as a result of improvement in energy saving measures</li> </ol>	<ol style="list-style-type: none"> <li>Carry out water resources recycling</li> </ol>	
<ul style="list-style-type: none"> <li>Complete the planning of aggressive energy saving and carbon reduction before 15/10.</li> </ul>	A carbon reduction plan was proposed by 30/9, and short-mid-long term goals established by 14 /10.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>Assess the adaptation of environmental packing materials, and increase the procurement ratio of equipment and products with environmental labels</li> </ol>	<ol style="list-style-type: none"> <li>Paper-free office</li> </ol>	
<ul style="list-style-type: none"> <li>Establish major climate governance standards of the enterprise before 31/10.</li> </ul>	Completed major climate governance standards by 31/10.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>Enhance toxic substance management by reinforcing toxic substance professional management training.</li> </ol>		

## ESG Performance and Goals



2022 Target	2022 Implementation Results	2022 Achievement	Short-Term Goal 2023	Mid-Term Goal 2024	Long-Term Goal 2025~2028
<ul style="list-style-type: none"> <li>Employee LOHAS events</li> </ul>	Over 100 employees and their families participated in the TTY Healthy Farming Activity on 14/8.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>Encourage employees and families to take part in 2 LOHAS events. Continue hosting the Employee Assistance Program.</li> </ol>	<ol style="list-style-type: none"> <li>Promote health prevention, pharmaceutical knowledge and sustainable concepts incorporated into the campus talent system.</li> </ol>	<ol style="list-style-type: none"> <li>Work with medical institutions or other businesses to establish an online consultation APP, and expand service targets.</li> </ol>
<ul style="list-style-type: none"> <li>Daycare for respiratory service continues.</li> </ul>	By year 2022, 298 people received respirator services at home.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>The "TTY Rice" project will last for 3 years to advocate public welfare through toxic-free farming.</li> </ol>	<ol style="list-style-type: none"> <li>Promote employee health through speeches, a friendly work environment, and protection against human rights infringement.</li> </ol>	<ol style="list-style-type: none"> <li>Design high-demand products and services that respond to climate change and the changing environment.</li> </ol>
<ul style="list-style-type: none"> <li>Flu shots</li> </ul>	Donated 1,000 flu shots to the CTOC.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>Daycare for respiratory service continues.</li> </ol>		
<ul style="list-style-type: none"> <li>Incorporate sustainability into community health events.</li> </ul>	1,869 people attended 59 community health speeches to raise awareness of diet and good living habits, echoing SDG3 Good Health and Well-being and SDG4 Quality Education.	<p>Goal achieved</p>			









## ESG Performance and Goals



2022 Target	2022 Implementation Results	2022 Achievement	Short-Term Goal 2023	Mid-Term Goal 2024	Long-Term Goal 2025~2028
<ul style="list-style-type: none"> <li>Corporate ethics sessions (in person)</li> </ul>	Insider Trading Prevention class on 12/10.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>1. Reinforce information disclosure as stipulated in the TCFD and SASB.</li> </ol>	<ol style="list-style-type: none"> <li>1. Strengthen the connection between sustainability performance and senior management salary. The performance of the senior management team is evaluated against ESG work.</li> </ol>	<ol style="list-style-type: none"> <li>1. Create opportunities for sustainable reformation.</li> </ol>
<ul style="list-style-type: none"> <li>Corporate ethics sessions (online) to continue to raise awareness regarding corporate ethical management, insider trading, information security, and trade secrets.</li> </ul>	All employees took 9 online training sessions.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>2. Reinforce information security promotion, and conduct information security drills and system improvement.</li> </ol>	<ol style="list-style-type: none"> <li>2. More than 60% of suppliers have committed to ESG initiatives.</li> </ol>	<ol style="list-style-type: none"> <li>2. Cultivate the training pool to promote corporate ethics.</li> </ol>
<ul style="list-style-type: none"> <li>Continuously organize employee SDG online courses.</li> </ul>	All employees completed SDG training course online.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>3. Improve the business risk management system and structure, and fortify corporate risk management.</li> </ol>		
<ul style="list-style-type: none"> <li>ISO 45001 Occupational Safety and Health Management System certified by 31/12.</li> </ul>	Independent verification completed on 15/12.	<p>Goal achieved</p>	<ol style="list-style-type: none"> <li>4. More than 30% of suppliers have committed to ESG initiatives.</li> </ol>		
<ul style="list-style-type: none"> <li>Introduce a TCFD risk management system, and report implementation progress to the Sustainable Development Committee and the Board of Directors.</li> </ul>	The TCFD mechanism is in place and was reported to the Sustainable Development Committee and the board on 4/11.	<p>Goal achieved</p>			
<ul style="list-style-type: none"> <li>More than 10% of suppliers have committed ESG initiatives.</li> </ul>	14.89% return rate of the Supplier ESG Questionnaire.	<p>Goal achieved</p>			

## Integrated Reporting, IR

Six Major Sources of Capital	Capital Contribution		Capital Output
	Action Concept	Action Plan	
<b>Financial Capital</b> 	TTY has created solid cash flow based on strong manufacturing and sales abilities. In addition to sharing operational results with shareholders, capital is further contributed to new market development, and to introduce quality products via strategic cooperation with international partners as an international enterprise.	Reinforce manufacturing abilities and optimize sales channels with income received from sales, CDMO, and international market development, and introduce research results to the global market following overseas authorization. Focus on the medical environment of target areas, identify unmet medical needs, apply group resources to achieve short-, mid- and long-term operational goals, and create the profits expected by stakeholders.	<ul style="list-style-type: none"> <li>Market value NTD\$20,737,410</li> <li>Total assets NTD\$9,600,635</li> <li>Consolidated revenue NTD\$5,061,606</li> <li>EPS \$3.4</li> </ul>
<b>Manufacturing Capital</b> 	TTY is an international pharmaceutical enterprise with high standards, high quality management process, and good production management. The manufacturing base is satisfactory to international standards and used to produce pharmaceuticals with highly competitive barriers and high added value on the global market.	<ul style="list-style-type: none"> <li>The Chungli factory passed the GMP/GDP audit of the Taiwan TFDA. During the 2008-2022 period, TTY passed 24 international audits of 16 countries and acquired official GMP verification.</li> <li>The Lioudu factory passed 12 international audits in 2two countries and acquired official GMP verification in year 2013-2022.</li> <li>The Neihu factory has met audit standards for 16 years in a row since year 2007.</li> </ul>	<ul style="list-style-type: none"> <li>Annual capacity of the Chungli factory: 600,000~700,000 vials of liposome injections; 2.5 million vials of cytotoxicity oncology injections; 25 million oncology oral capsules.</li> <li>Annual capacity of the Lioudu factory: 350 million oral tablets; 72 million oral capsules; 1.5 million vials of liquid injections; 200,000 vials of lyophilized liposome injections.</li> </ul>
<b>Human Resource Capital</b> 	TTY publicly appraises employees with long service tenure every year and the salaries of new employees are higher than the base salary standard. TTY does not discriminate salaries based on gender. We also value salary increases and promotion system, allowing employees having opportunity to boost their salary and earn a promotion.	The TTY University employee training project connects training of 6 major colleges, general knowledge courses, and new employee orientation programs for all staff. A talent retention project has also been launched to provide promotion opportunities for outstanding employees. TTY has an annual salary increase plan split into "general salary raises" and "special salary raises" as an incentive to increase productivity and retain outstanding talent. Individual performance bonuses are distributed according to the performance assessment regulations and overall operational conditions to connect remuneration to performance.	<ul style="list-style-type: none"> <li>A total of 521 employees</li> <li>Employee turnover rate of 12.73%</li> <li>Employee training of 6.82 hours per person on average</li> </ul>

Six Major Sources of Capital	Capital Contribution		Capital Output
	Action Concept	Action Plan	
<b>Intellectual Capital</b> 	In respect of technology, TTY has enhanced the stability of product quality through continuous innovation and customized production design of the existing successful platform of long-released specialty dosage to create a win-win between TTY and partners. In respect of intellectual property, TTY firmly follows the Business Secrets Act to protect important core technologies so it can establish a brand within target markets. TTY applies patents to protect all research results and registers trademarks in target product markets.	In respect of technology, more than a hundred patent applications have been proposed to protect the development of formulations, processes, and functional excipients in synthetic technologies. In respect of intellectual property, we follow registrations and launch schedule to apply for trademark registration of product names and marketing feature designs to block forgery or use of similar product names to establish a company brand and increase product visibility. TTY has applied for approximately 380 trademarks to date. In addition, TTY reviews and eliminates patents and trademarks without value or practical use or protection to reduce maintenance fees and avoid wasting resources.	By the end of year 2022, a total of 7 invention patents were approved, including 1 invention patent application under review; 211 trademark registrations were approved and 13 trademark applications are under review.
<b>Social Relationship Capital</b> 	The TTY charity club "Boshiyuan" calls on volunteers to hold various social service activities, and promote social wellbeing and environmental protection. This club has been instrumental in bringing public welfare to the TTY culture and everyone is welcome to contribute to make the world a better place.	TTY holds the "Regional Care for the Cancer-affected" program on remote campuses to promote cancer prevention and healthcare lectures every year. It also organizes the "Step30 · Second-hand Clothes Charity" activity through the "Boshiyuan" charity club. Supports Yu-Cheng Social Welfare Foundation by purchasing Himalayan salt as gifts for shareholders; group purchase of tea flavor popcorn to support the vulnerable groups which underrepresented through action. The social participation team of the SDPC initiated the "TTY Rice" project to promote toxic-free farming.	<ul style="list-style-type: none"> <li>34 remote campus programs</li> <li>Impacted by COVID, 1 physical anti-cancer health seminar was conducted in year 2022, in which a total of 90 people participated.</li> <li>59 healthcare lectures were organized in year 2022 with a total of 1,869 participants.</li> <li>27,600 packs of Himalayan salt were purchased as gifts for shareholder meetings, totalling NTD\$2.2 million in support of social welfare organizations.</li> <li>The "TTY Rice" project "Support TTY, Support Health" organized 3 charity events.</li> </ul>
<b>Nature Capital</b> 	TTY has established energy- and water-saving policies and plans based on government regulations to examination standards of different countries. TTY is also committed to saving water, improving processing and sewage discharge, and traces and audits waste.	The sewage discharged by TTY is complied to the Water Pollution Control Act, self-governance laws of local governments, and incoming water quality standards for sewage treatment factories in industrial zones. In addition, all clearance vehicles of waste contractors have GPS systems for tracing, and on-site and vehicle audits are conducted.	<ul style="list-style-type: none"> <li>In year 2022, the Lioudu and Chungli factories reduced energy consumption by 163,225.93 Joules, and greenhouse emissions (CO<sub>2</sub>e) by 83.08 tons.</li> <li>The total waste of TTY was about 49.73 tons in year 2022.</li> <li>The Chungli and Lioudu factories achieved 100% in weekly and monthly waste clearance contractor follow-up audits.</li> </ul>

# Stakeholder Engagement

## Sustainability topic steps

<p><b>STEP 1</b> Identification of Stakeholders</p> <p><b>8</b> categories of stakeholder</p>	<p>TTY refers the five principles of Stakeholder Engagement Standards to identify eight categories: government, shareholders/investors, customers (including hospitals and medical institutions, patients, manufacturers and general customers), employees, suppliers, local communities, non-profit/non-governmental organizations, and the media, based on the five principles of dependency, responsibility, tension, influence, and diverse perspectives.</p>
<p><b>STEP 2</b> Communication with Stakeholders</p> <p><b>76</b> questionnaires of concerned topics</p>	<p>To truly understand the needs and expectations of stakeholders through a diverse range of communication channels, TTY communicates through everyday business dealings, industrial, government, and academic exchanges, routine surveys, and has issued 76 questionnaires regarding topics of concern collected in year 2022. Moreover, we also accurately report significant company policies, business changes, and the latest news on corporate governance operations, welfare management, and environmental protection in a timely manner to stakeholders for reference.</p>
<p><b>STEP 3</b> Topics of Concern Survey</p> <p><b>17</b> topics of concern</p>	<p>To properly reflect on impacts to the economy, environment, and society of TTY operations, and issues that may affect stakeholders' decision-making, we gather industrial information, pay close attention to external trends, and survey TTY senior leaders. The following 17 topics of concern, considering the level of impact, are incorporated into the questions in the questionnaires on topics of concern:</p> <p>Economic performance, ethical management, marketing ethics, talent attraction and retention, subject safety, occupational safety and health, social participation, drug safety, access to medicine, counterfeit drugs, reasonable pricing, supplier management, response to climate change, information security, sustainable development strategies, water resource management, and waste management.</p>
<p><b>STEP 4</b> Material Topics Identification</p> <p><b>11</b> sustainability topics</p>	<p>11 material topics have been identified according to the results of 32 questionnaires completed by senior management and 76 by external stakeholders. The priority, which is quite far from that of the previous year, follows stakeholders' level of concerns listed in order:</p> <p>Economic performance, talent attraction and retention, access to medicine, sustainable development strategies, counterfeit drugs, ethical management, drug safety, subject safety, reasonable pricing, supplier management, and marketing ethics.</p>
<p><b>STEP 5</b> Review and Discussion</p> <p><b>7</b> sustainability reports</p>	<p>Afnor Asia is commissioned to give external assurance of disclosures in the report in accordance with Type 1 of AA1000AS v3 and the moderate assurance. Financials are IFRs-approved by KPMG Taiwan. This is the 7th issue of the report by TTY. The report is fact-checked by the Company's audit team and carefully reviewed by the SDPC prior to being issued.</p>

<p><b>Collecting Sustainability Topics</b></p> <ul style="list-style-type: none"> <li>Gather sustainability topics closely related to TTY according to national policies, trends, international standards, ratings, and initiatives.</li> </ul>	<p><b>Stakeholders Engagement</b></p> <ul style="list-style-type: none"> <li>8 stakeholders identified</li> <li>17 sustainability topics are focused on through questionnaires.</li> </ul>	<p><b>Assessment of Operational Impact</b></p> <ul style="list-style-type: none"> <li>34 first, second, and higher level managers under the GM assessed the impact of 17 key topics.</li> <li>94.12% questionnaire response rate.</li> </ul>
<p><b>Identification of Material Topics</b></p> <ul style="list-style-type: none"> <li>The results of the survey on level of concern and impact have been gathered, analyzed, and prioritized.</li> <li>11 material topics have been identified in year 2022.</li> </ul>	<p><b>Examination of Material Topics</b></p> <ul style="list-style-type: none"> <li>External consultations were held to examine the suitability of applicable procedure and standards.</li> <li>Ensure the completeness and inclusiveness of material topics.</li> </ul>	<p><b>Establishment of Material Topics</b></p> <ul style="list-style-type: none"> <li>All 11 material topics reported by the SDPC have been approved and established by the board.</li> </ul>

## Identification of Stakeholders

TTY refers the five principles of the Stakeholder Engagement Standard, AA1000 SES 2011, to identify key stakeholders. The five principles are: (1) Dependency, (2) Responsibility, (3) Tension, (4) Influence, and (5) Diverse Perspectives. The stakeholders identified this year include the government, shareholders/investors, customers (including hospitals and medical institutions, patients, manufacturers, and general customers), employees, suppliers, local communities, non-profit/non-governmental organizations, and the media.

## Communications with Stakeholders

To gain insights into stakeholders' concerns and the issues that cause an actual or potential impact on them as well the level of impact, TTY has been communicating with stakeholders regarding daily practices so is very familiar with actual needs and corporate expectation. We gather and respond to these issues, make proper adjustments to operations to echo their viewpoints, and respond to major concerns.

We take into consideration national policies, trends, SASB, TCFD<sup>1</sup>, initiatives (SDGs<sup>2</sup>, UNGC<sup>3</sup>) to categorize 17 highly related sustainability topics that concerned the economy, environment, and society. The 2022 TTY Stakeholder Sustainability Topics of Concern Survey has been constructed to survey, analyze, and report annually to the Sustainable Development Committee to dig further into the Company's development strategy, industry status, value chain practice, and expert opinions. The material topics are then prioritized based on the impact level on the economy, environment, people, and human rights, making up the principal disclosure of the report to provide useful information for users' valuation and decision-making.

Note: 1. Task Force on Climate-related Financial Disclosures  
2. Sustainable Development Goals  
3. The United Nations Global Compact

The TTY Sustainable Development Promotion Center reported communications with all stakeholders in year 2022 to the Sustainable Development Committee on 14/3/2023.

Topics of concern to TTY stakeholders, communication method, frequency, and specific procedures

Stakeholders	Stakeholder Significance to TTY	Topics of Concern	Engagement Method	Communication Frequency	Communication Performance
Governmental Agencies	Governments direct our development. Each location abides by local regulations, and ensures transparent communication to seek government support and partnership.	Ethical management	Visits/Phone/Official letters/Email/	Irregularly	<ul style="list-style-type: none"> <li>5 disseminations organized by TPEX</li> <li>14 industrial, government, and academic seminars</li> <li>More than 540 official letters</li> <li>Occupational safety audit</li> <li>Toxicity response practice</li> <li>Fire safety inspection and report</li> <li>GMP factories routine audit</li> <li>Regulation conferences</li> <li>Business waste operation audit</li> </ul>
		Marketing ethics	Dissemination/Industrial, government, and academic seminar/		
		Information security	Stakeholder Sustainability Topics of Concern Survey		
		Water resources management	Stakeholder Sustainability Topics of Concern Survey		
Investors	Investors are critical supporters of the Company. Our transparent and comprehensive company governance guidelines reassure investors, which consequently facilitate the Company's sustainable development.	Economic performance	Annual general meeting/Annual report	Annually	<ul style="list-style-type: none"> <li>37 material information announcements in Mandarin and English</li> <li>34 email replies</li> <li>4 investor conferences</li> <li>7 conference calls</li> <li>42 domestic analyst visits</li> <li>12 calls from shareholders</li> </ul>
		Counterfeit drugs	Quarterly financial report	Quarterly	
		Drug safety	Operational overview announcements	Monthly	
		Marketing ethics	Investor conferences	Quarterly or more frequently	
		Subject safety	Material information announcements/ Press releases/ Corporate website/ Phone/Email/ Investor relationship mailbox/Stock affairs and investor relationship contact/ Reception of domestic and foreign analysts/ Stakeholder Sustainability Topics of Concern Survey	Irregularly	

Stakeholders	Stakeholder Significance to TTY	Topics of Concern	Engagement Method	Communication Frequency	Communication Performance
Employees	Employees are a key asset to our Company. In addition to protecting workers' rights, various wellbeing initiatives, salary packages, and benefits are in place to attract more talent to join the family. We also encourage employee growth with TTY.	Drug safety	Annual performance interviews and assessment	Twice annually	<ul style="list-style-type: none"> <li>Initial setup, mid-term revision, and year-end assessments are conducted every year. Except for new employees who fail probation (4.03% of all employees), 95.97% of TTY's employees undergo periodical performance assessments. Aimed at new employees, the supervisor of the hiring unit fills in the assessment for new employees according to their performance at the end of the probation period.</li> <li>Organized 4 labor-management meetings on 31/3, 30/6, 26/9, and 26/12.</li> <li>2 employee complaints were received in year 2022. The first one (5/10/2022) has been investigated and the procedure was completed by 10/11/2022. The second one (15/12/2022) was completed by 5/1/2023.</li> <li>The orientation plan started in July 2018, and included a new employee satisfaction survey; there were 48 new employees in year 2022, and satisfaction was 89 (scoring method based on environmental adaptation, interaction, work adaptation, life adjustment, and counselor care, 20 points per item, a total of 100 points). The retention rate of new employees was 94.12% (calculated based on number of resignations within 12 months).</li> <li>Employees' parental leave without pay rights are protected in accordance with the Gender Equality in Employment Act. Employees may apply for parental leave without pay for each child under the age of 3 until said child is aged 3, provided that the period does not exceed 2 years. During parental leave, employees may continue their social insurance. 6 people applied for parental leave without pay in year 2022.</li> <li>34 online and in-person classes were held in year 2022: 4.75/5 satisfaction rate. 6.82 training hours/person; 2 management classes joined by 17 people, with a 4.63/5 satisfaction rate; and 20 internal job transfers within TTY.</li> <li>There were 95 external educational trainings subsidized by the Company, totaling about 1,093 hours at an estimated cost of NT\$476,301. After training, employees mainly use training reports or internal sharing to feed back on the training experience.</li> </ul>
		Talent attraction and retention	Labor management meetings	Quarterly	
		Economic performance	Personnel announcements/	Irregularly	
		Occupational safety and health	Intranet/Sexual harassment complaint channel/		
		Marketing ethics	Infringement reports/Stakeholder complaint mailbox/		
		Counterfeit drugs	Orientation plan and satisfaction survey/		
			Employee welfare committee/Internal education training and e-learning/		
			External education training subsidies/		
			Stakeholder Sustainability Topics of Concern Survey		

Stakeholders	Stakeholder Significance to TTY	Topics of Concern	Engagement Method	Communication Frequency	Communication Performance
Employees	Employees are a key asset to our Company. In addition to protecting workers' rights, various wellbeing initiatives, salary packages, and benefits are in place to attract more talent to join the family. We also encourage employee growth with TTY.	Drug safety Talent attraction and retention	Annual performance interviews and assessment	Twice annually	<ul style="list-style-type: none"> <li>To protect the health and safety of employees, TTY provides all employees and their first-degree kinship, up to 4 people, with influenza vaccinations for free, totaling 632 participants in year 2022.</li> <li>COVID-19 self-test kits are provided by the Company for employees.</li> <li>2 culture events to promote sustainable development: "Tree Loving" ecological education on climate change v.s trees, and "10 TTY carbon reduction statements" with the purpose of decarbonization.</li> <li>Employee benefits are organized by the Employee Welfare Committee based on the Employee Welfare Act. Annual budget and welfare plan covers birthday and holiday gifts, employee travel subsidies, and in the event of marriage, bereavement, sickness, and childbirth.                             <ul style="list-style-type: none"> <li>Announced education subsidies on 2/3. (2021 1<sup>st</sup> semester scholarship/financial aid)</li> <li>Distributed spring e-gift coupons on 1/4.</li> <li>Distributed Labor Day cash gifts on 1/5.</li> <li>Distributed a Dragon Boat Festival bonus on 2/6.</li> <li>Announced the employee travel subsidy and alternative plan on 11/7.</li> <li>Announced Family Day alternative plan on 22/7.</li> <li>Announced employee health check-ups on 29/7.</li> <li>Distributed the Mid-Autumn Festival bonus and e-gift coupons on 8/9.</li> <li>Announced education subsidies on 21/9 (2021 2<sup>nd</sup> semester scholarship/financial aid).</li> <li>Notice of X'mas gifts on 25/12.</li> </ul> </li> </ul>
		Economic performance Occupational safety and health Marketing ethics Counterfeit drugs	Labor management meetings Personnel announcements/ Intranet/Sexual harassment complaint channel/ Infringement reports/Stakeholder complaint mailbox/ Orientation plan and satisfaction survey/ Employee welfare committee/Internal education training and e-learning/ External education training subsidies/ Stakeholder Sustainability Topics of Concern Survey	Quarterly Irregularly	
Customers	Customers constitute key partners in the Company's development. TTY keeps aligned with business trends, provides superior products and service, and maintains constant communication with customers to create a win-win.	Subject safety Marketing ethics Drug safety Talent attraction and retention Information security	Exhibitions/ Academic activities/ Educational seminars/ Academic platforms/ Clinical trials/ Factory visits, inspections/ Visits/ Phone/ Email/ Letter/ Stakeholder Sustainability Topics of Concern Survey	Irregularly	<p>To provide more high-quality products and services that meet market needs, TTY interacts with domestic and foreign customers, including via:</p> <ul style="list-style-type: none"> <li>Domestic/foreign medical exhibitions: 13 sessions</li> <li>Education activities/seminars: 135 sessions</li> <li>Academic platforms: addition of 5 academic platforms, and the Central Taiwan Hematology Academy and Northern Taiwan Hematology Academy continue.</li> <li>Clinical trial research: oncology, intensive care, healthcare totaling 25 projects.</li> </ul>

Stakeholders	Stakeholder Significance to TTY	Topics of Concern	Engagement Method	Communication Frequency	Communication Performance
Suppliers	Suppliers are critical to TTY's development from production to operations. We manage the risk of social responsibility and work with vendors to deliver quality service.	Supplier management Information security Economic performance Counterfeit drugs	Supplier questionnaire survey/Supervision on the validity of supplier quality assurance/Supplier audit Email/Phone calls/ Visits/Stakeholder Sustainability Topics of Concern Survey	Annually Irregularly	<ul style="list-style-type: none"> <li>Suppliers are required to update the survey based on the key properties of raw materials and annual risk level. 23 suppliers have completed updates.</li> <li>Ensure the effectiveness of suppliers' GMP certificates and compliance of raw materials. There are 26 of such suppliers.</li> <li>Annual supplier performance is assessed to identify risk levels and to monitor frequency. No supplier was graded C in year 2022.</li> </ul>
Local Communities	Local communities are our partners. Through communication and interaction we can achieve harmony in our relationship. By benefiting the community, we emphasize positive energy in society.	Counterfeit drugs Water resources management Waste management Drug safety Talent attraction and retention Occupational safety and health Social participation	Email/Visits/Phone/ Meetings/ Educational seminars/ Stakeholder Sustainability Topics of Concern Survey	Annually or Irregularly	<ul style="list-style-type: none"> <li>The Chungli factory has applied for and has been granted groundwater rights.</li> </ul>
NPOs/NGOs	NPOs are partners in developing sustainable impact. Knowing their needs, making lasting connections, and driving ecological and societal themes propels benefits back to society.	Sustainable development strategies Information security Waste management Talent attraction and retention Occupational safety and health Social participation	Activity participation/Email/ Visits/Phone/ Meetings/ Stakeholder Sustainability Topics of Concern Survey	Irregularly	<ul style="list-style-type: none"> <li>Sponsored the Hope Foundation for Cancer Care, and provided NTD\$1 million to support children with cancer family through college.</li> <li>Through the "Boshiyuan" charity we gathered 806 items of clothing and 64 backpacks and sent them to Step30 Second-hand Clothes Charity.</li> <li>Supported Yu-Cheng Social Welfare Foundation by purchasing 27,600 packs of Himalayan salt with NTD\$2.2 million as gifts for shareholder meetings.</li> <li>The 2022 "TTY Rice" project initiated 3 charity events of "Support TTY, Support Health".</li> <li>Cooperated with cancer-related NPOs to organize health education lectures for cancer patients and families with totaling 90 participants.</li> <li>Forward industrial and commercial policies.</li> <li>Attended labor advance studies at the Keelung Labor Association.</li> </ul>

Stakeholders	Stakeholder Significance to TTY	Topics of Concern	Engagement Method	Communication Frequency	Communication Performance
Media	A positive link with the media bridges corporations and the public, facilitates proper Company information and brand image, and allows stakeholders to openly access complete Company information.	Economic performance Reasonable pricing Ethical management Access to medicine Drug safety Talent attraction and retention Social participation	Media visits/ Phone/ Press conference/ Media press conference/ Brand event/ Interview/ Visits/ Stakeholder Sustainability Topics of Concern Survey	Irregularly	To guide media stakeholders to understand the dynamic development of the Company's overall operations and product layout, communication is as follows: <ul style="list-style-type: none"> <li>3 media communication meetings</li> <li>1 health education lecture</li> <li>3 media visits</li> <li>2 brand and product activity sessions, and 4 branding sessions</li> <li>Instructions for irregular visits and telephone contacts</li> </ul>

## Material Topics Identification

The material topics for 2022 followed the GRI standards and SASB-listed sustainability topics, as well the AA1000 AccountAbility Principle, 2018, on the four principles of inclusiveness, materiality, responsiveness, and impact. These are then prioritized on the GRI 2021 to further disclose the impact, management strategy, and practice of each one. The sustainable development goals and strategies are realigned with the above results, strengthening the effectiveness of external communication.

To effectively reflect on the economic, environmental, and social effects and impact caused by TTY's operations and matters that are likely to affect the decisions of stakeholders, TTY conducted a "Sustainability Topics of Concern Survey" aimed at executive officers which included 17 topics of concern, and identified 11 material topics based on stakeholders' concerns, including economic performance, talent attraction and retention, access to medicine, sustainable development strategies, counterfeit drugs, ethical management, drug safety, subject safety, reasonable pricing, supplier management, and marketing ethics.

Assessment of Operational Impact	It has been a number of years since we have issued a Sustainability Report. Through observation of global trends and industry dynamic, we gathered key sustainability topics. With the 17 sustainability topics that are surveyed among stakeholders and the "Sustainability Topics of Concern Survey", 34 first, second, and higher level managers tackled the severity (scale and scope), likelihood of occurrence, and human right risks of each topic, and assessed them in a more detailed, standardized manner. (94.12% survey response rate)
Verification of Material Topics	The results of the TTY "Sustainability Topics of Concern Survey" in year 2022 were equally weighted and analyzed before prioritization by quantized values. The threshold of material topics are formed at this stage. 11 material topics were identified in year 2022.
Examination of Material Topics	Consultations were held to ensure the suitability of identified material topics and threshold criteria through examination. The work also covered the completeness, inclusiveness, macro perfection, and the consistency of the Company's sustainable development strategy of report priorities.
Establishment of Material Topics	The 2022 identification concluded 11 material topics, which are established by the board. The SDPC went on to make disclosures in the report regarding the impact of each topic, along with TTY's policy, commitment, management action, indexes, and goals.

## Changes of Material Topics 2022

The assessment of the scope of material topics in year 2022 takes into consideration GRI sustainability topics, and the SASB required disclosures of TTY. To ensure the new sustainability

topics center around key subjects and trends, we employed a new "Sustainability Topics of Concern Survey". The management team and stakeholders are engaged in the evaluation of the potential and severity of the risks of the corporation. Parts of the topics are adjusted and their titles have been changed.

### TTY's Changes to Material Topics in Year 2022

Year 2021 Material Topics	Year 2022 Material Topics	Changes
-	Attracting and retaining talent	Higher materiality in year 2022
Sustainable development strategies	Sustainable development strategies	No change
Operation performance	Economic performance	
Safe products	Drug safety	Change of title
Ethics and Integrity	Ethical management	
Regulatory compliance	Marketing ethics	
Corporate Image	-	
Sewage and waste management	-	Deleted
Information security	-	
Occupational health and safety	-	
-	Access to medicine	
-	Counterfeit drugs	
-	Subject safety	Additions in reference to the SASB and business property
-	Reasonable pricing	
-	Supplier management	

TTY 's Material Topics and Scope in Year 2022

Material Topic	Material Topic Aspect	Significance and Importance to TTY	Value Chain Impact			Chapter
			Up-stream	Mid-stream	Down-stream	
<b>Economic performance</b>	<b>Economic / Governance</b>	TTY is navigating inclusive, sustainable economic growth, and is accelerating the development of generic drugs of specialty dosage forms and new drugs of high barrier and economic value, as well as unmet medical needs, improving the quality of human life with scientific innovation.		✓	Generic drug factories Medical hospitals Original factories	P028~P043 About TTY Biopharm
<b>Attracting and retaining talent</b>	<b>Social</b>	Our talent is our foremost asset. TTY is a friendly workplace, promotes learning, and is an inclusive, innovative incubator where people envision self-positioning and self-value. A comprehensive education system and tailored training plans for employees of high potential and successors, through attract and retain talent so we are well prepared for a changing market and improving our technologies and innovations.		✓		P124~P127 Social Inclusion P130~P135 Talent Cultivation
<b>Access to medicine</b>	<b>Economic / Governance</b>	Health promotions or lectures and partnership with NPOs/social organizations dedicated to disease awareness of illness prevention. We worked with the CTOC to fight the flu with 1,000 flu vaccines in year 2022.			✓	P150~P156 Social Participation
<b>Sustainable development strategies</b>	<b>Economic / Governance</b>	The Sustainable Development Committee (SDC), ethical management implementation of CSR as a core value, and better planned specific responsibility are all in place to drive our sustainable goals. The Committee revises and reviews related policies, execution, performance, and systems.		✓		P006~P017 Path to Sustainable Development
<b>Counterfeit drugs</b>	<b>Human rights</b>	All raw materials are sourced from qualified suppliers, and customers of the drug supply chain can be tracked via shipping records. GPS is installed in transportation of drugs to ensure quality of delivery to the designated destination and user safety. The qualified GDP logistic services shows our commitment to intact packing and content quality, eliminating counterfeits in the supply chain.	✓	✓	✓	P056~P058 Supply Chain Traceability
<b>Ethical management</b>	<b>Economic / Governance</b>	The pharmaceutical business works closely with the national economy and people's health, and drives environmental sustainability. In light of this, the Ethical Management Promotion Center takes responsibility for ethical operations and the holistic development of our corporation, as well as the setup of risk assessment procedures to fortify internal control. The third version of "Procedures for Ethical Management and Guidelines for Conduct" of March 2020 continues to prevent dishonesty, bribery, and illegality by directors, managers, and employees.	✓	✓	✓	P078~P081 Ethical Management

Material Topic	Material Topic Aspect	Significance and Importance to TTY	Value Chain Impact			Chapter
			Up-stream	Mid-stream	Down-stream	
<b>Drug safety</b>	<b>Human rights</b>	The pharmaceutical business is directly related to the life and health of users. The API dictates the effectiveness and safety of preparations. As such, TTY uses discretion in reviewing and managing API suppliers of US/EU generic drug makers, which are required to have Taiwan DMF registration, cGMP and PIC/S GMP. TTY's key products fully comply with applicable health and safety regulations.	✓	✓	✓	P054~P055 Drug Safety
<b>Subject safety</b>	<b>Human rights</b>	Development of drugs in TTY follows the Human Subjects Research Act and the Guidance for Good Clinical Practice. Human research and clinical trials for cancer drugs have been approved by the Ethics Committee and regional health authority. Individual cases are insured to protect test subjects' rights. We also have a standard procedure for clinical trial operations, which is executed by fully trained clinical specialists to ensure drug use safety.		✓	✓	P059~P061 Subject Safety
<b>Reasonable pricing</b>	<b>Social</b>	TTY operations strictly comply with government regulations and controls to provide safe, effective products at the best quality and reasonable price. Our dedicated team is devoted to quality generic drugs, and applies NHI prices that are fairer to the original makers to balance NHI financial impact.			✓	P065 Responsibility of Sales
<b>Supplier management</b>	<b>Economic / Governance</b>	TTY evaluates vendors' financial status, organization management, realization of CSR based on Quality Assurance, Stable Production Capacity, Cycle Time Reduction, and Sustainability as a Goal. The system is referred to the Supplier Management mechanism. Annual assessments and risk ratings are given to existing suppliers to facilitate graded management. Questionnaires are distributed to suppliers to evaluate their sustainability. The insight of suppliers' overall condition serves as a reference for each factory when determining supplier qualification.	✓			P048~P053 Supplier Screening and Management
<b>Marketing ethics</b>	<b>Economic / Governance</b>	TTY regards patient medical wellbeing and care as its foremost concern. We adopt business guidelines and codes of conduct following ethical management and health care ethics to ensure good business operations and a sustainable future.			✓	P062~P064 Responsibility of Sales



Key Performance

- ∴ Consolidated revenue was **NTD\$5,062 million** in the year 2022 (**6.79%** CAGR for 2015-2022).
- ∴ TTY has concentrated on manufacturing. Product Lipo-AB, (a difficult generic drug of Liposome), was successfully entered into US market.
- ∴ Complete product lines of vaccine and anesthesia for intensive care.
- ∴ **3** new oncology drugs to drive the Company's growth.
- ∴ By the end of year 2022, a total of **7 invention patents** have been approved (1 application of invention patent under examination).
- ∴ Won a bid for the public-fund influenza vaccine. TTY supplied a total of **1,130,000 vials** of public-fund vaccines and **230,000 vials** of self-pay vaccines in year 2022.

Chapter ∴∴

# 1

## About TTY Biopharm

About TTY Biopharm  
 TTY Strategy Deployment  
 TTY Development Strategies



# About TTY Biopharm



Material Topic

## Economic Performance

Corresponding GRI index

GRI 201-1 Direct Economic Value Generated and Distributed From the Company

Policies and Commitment

In view of the aging population, the demands for health alertness and treatment should continue to soar in the future, and that is why TTY has deeply developed in the field of target treatment, not to mention its well-recognized and comprehensive customer cooperation relationship and healthcare education programs for patients. In the future, TTY will continue to develop competitive pharmaceuticals in specialty dosage forms to sustain its stable operations and strive to achieve the goal of sustainable operations.

Goals and Targets

### Short-term Goals

TTY will deploy a complete sales network all over Taiwan. Aside from increasing the coverage of sales areas and also improving the effectiveness of utilization of company resources, it will also strengthen strategic cooperation for drugs with a certain market size and value, and introduce new drugs in late clinical stages from targeted treatment areas through authorization. To combine with the efforts of the marketing team, we will optimize revenue for the product.

### Mid- to Long-term Goals

Continue to specialize in the development and manufacturing of oncology, intensive care, and anti-infection treatments, develop generic drugs and new drugs in specialty dosage forms with high barrier and high economic value, and strengthen cooperation with international partners to complete regulatory submission and launch.

Responsibilities and Resources

The management center will plan development strategies and schedules for high barrier drugs, strengthen regulatory negotiation and breakthroughs, and speed up the launch of products in target markets by deepening awareness and knowledge of pharmaceutical regulations of various target markets worldwide and integrating R&D project management capabilities.

Assessment Mechanism and Results

- In year 2022, parent-level sales revenue of TTY was NTD\$4,493 million and profit before tax was NTD\$1,367 million; 109.55% of the annual budget target.
- The consolidated sales revenue in year 2022 reached NTD\$5,062 million.
- In year 2022, the domestic sales of primary products amounted to NTD\$4,568 million and export sales amounted to NTD\$362 million.
- In the recent 5 years, accumulated R&D expenditure has exceeded NTD\$1.5 billion, with an annual R&D expenditure accounting for about 7% of annual revenue.
- In year 2022, R&D expenses reached NTD\$353 million, amounting to 6.98% of revenue.

## Operation Result

TTY Biopharm Co., Ltd. was founded on July 22, 1960, and its headquarters is located on the 3rd floor, No. 3-1, Park Street, Nangang District, Taipei City. The number of regular employees is 521, and the primary categories of businesses include manufacturing, processing, and trading of various pharmaceuticals and chemicals. Primary products include oncology (cancer) drugs, anti-infective drugs, and healthcare drugs for chronic diseases. It was listed on the OTC in September, 2001 (4105:TT), and the paid-in-capital

was NTD\$2.486 billion, with consolidated revenue reaching NTD\$5,062 million in year 2022.

The "Liposome" and "Microsphere" Technology Platforms are the competitive niche of TTY. These platforms not only enjoy a leading position in R&D capabilities in Taiwan, but the commercial mass-produced products are also superior to its peers both in terms of consistency and stability, adding momentum to operational growth. TTY currently has 6 operating locations: (1) Headquarters, (2) Chungli Factory, (3) Lioudu Factory, (4) Translation Research Center, (5) Pharmaceutical Development Center, and (6) Neihu Factory.

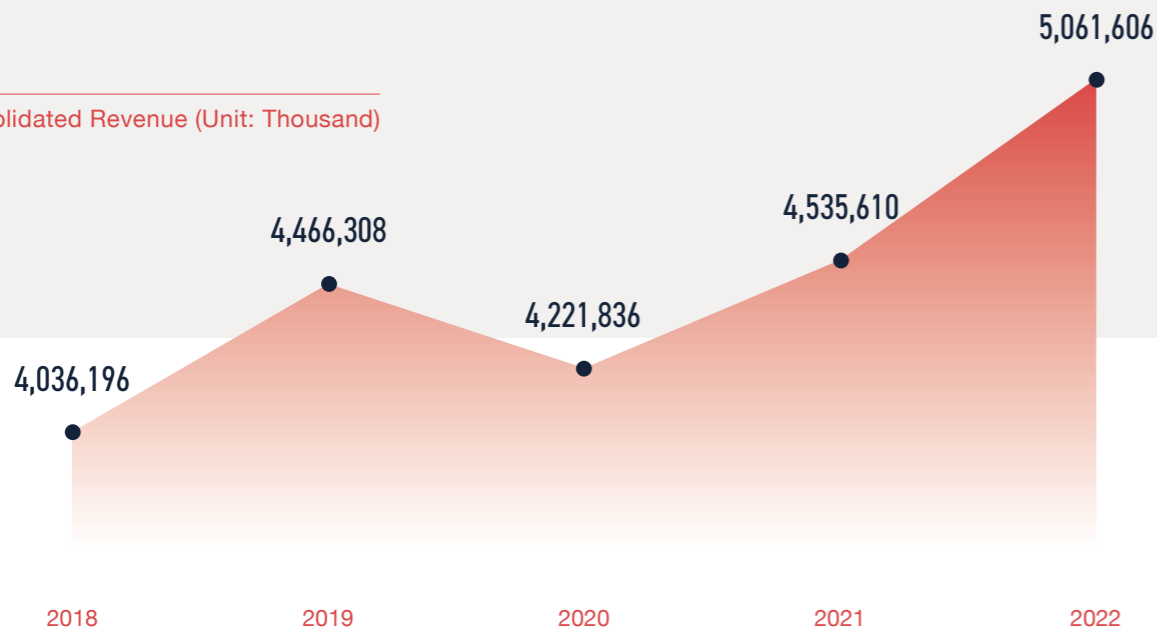
Consolidated Financial Statements of TTY and its Subsidiaries for the Recent 5 Years (Currency: NTD)

Item	Unit	2018	2019	2020	2021	2022
Paid-in Capital	NTD Thousand	2,486,500	2,486,500	2,486,500	2,486,500	2,486,500
Operating Revenue	NTD Thousand	4,036,196	4,466,308	4,221,836	4,535,610	5,061,606
Gross Profit	NTD Thousand	2,663,879	2,907,241	2,607,052	2,766,553	3,021,115
Operating Income	NTD Thousand	1,059,677	1,228,609	957,379	1,140,652	1,227,957
Income Tax	NTD Thousand	205,769	294,949	222,848	264,811	305,249
Net Income	NTD Thousand	1,462,299	907,705	978,677	822,569	1,103,090
Net Income Attributed Majority	NTD Thousand	1,461,381	900,081	924,178	831,894	1,094,391
EPS	NTD/Share	5.88	3.62	3.72	3.35	4.40
R&D Expense	NTD Thousand	361,063	298,552	261,597	287,595	353,436
Labor Salary & Benefit Cost	NTD Thousand	938,506	988,792	1,035,162	1,032,301	1,075,497
Community Investment	NTD Thousand	52,445	52,787	46,230	47,099	86,735
Cash Dividend	NTD/Share	4.5	4.0	4.0	3.0 <sup>Note</sup>	3.4

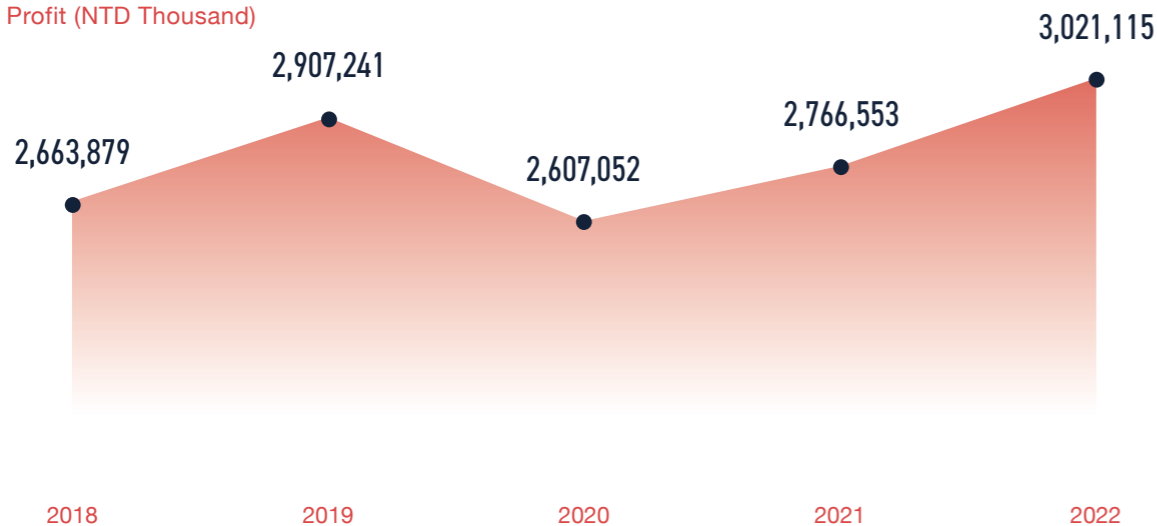
Note: 1. The entities in the consolidated financial statements include TTY and all its subsidiaries. For detailed information of subsidiaries, please refer to P005 of TTY subsidiary.  
 2. 2022 cash dividends will be distributed by the resolution of the Board of Directors meeting on 14/3/2023.

# TO ENHANCE R&D TECHNOLOGY, TO IMPROVE THE QUALITY OF HUMAN LIFE.

Consolidated Revenue (Unit: Thousand)



Gross Profit (NTD Thousand)



## Operation Analysis

The development of new drugs is a long and arduous process, and is not only time-consuming, but also requires tremendous financial support. Therefore, the pharmaceutical R&D industry and the Contract Development and Manufacturing Organization (CDMO) have been complementary to each other for years. The CDMO is responsible for process development and formulation testing, and capable of running from pre-clinical small-scale production to commercial mass production, speed up the process of product launch through its business model of industrial division of labor.

TTY also provides CDMO services through comprehensive solutions related to manufacturing throughout the value chain of the entire pharmaceutical industry, such as preparation development and research, scale-up, and even customized design of equipment and factory and subsequent commercial mass production. As such, our partners can avoid unnecessary

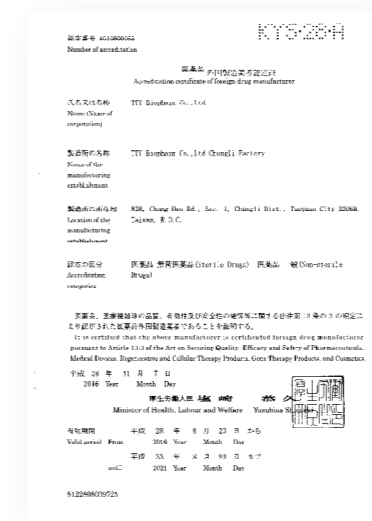
over-investment and make use of appropriate resources to develop products that meet market needs. This is the primary reason that we can work with internationally renowned manufacturers in mutual trust for such a long period of time. In year 2022, the CDMO of TTY accounted for about 9% of its revenue, with its customers in Taiwan, Japan, Europe and US, and we have ensured development and manufacturing quality via regular factory inspections by the competent authorities from countries where customers and host countries are located.

TTY has exceptional talent and core technologies, and has had great advantages in cost control. It has also actively expanded its CDMO business, and sought out manufacturers with contract manufacturing needs both in domestic and foreign markets. It can not only improve the domestic biotechnology industry, but also support R&D and market expansion. Furthermore, such a market can also create stable cash flow and share operating results with investors.

## Revenue Proportion of TTY in the Recent 3 years

Year / Business Unit	2020	2021	2022
Oncology (TOT)	53%	52%	51%
Intensive Care (TIT)	26%	28%	27%
Healthcare (THT)	6%	5%	5%
Contract Development and Manufacturing Organization (CDMO)	9%	10%	9%
Business Development Division (BDD)	5%	4%	6%
Others	1%	1%	2%

## TTY passed inspection certificate of Japan



## TTY passed US FDA inspection certificate



## Market Deployment

TTY excels in the development of specialty dosage forms and new drugs. As a drug developer of bio-technology, TTY has based Taiwan as its primary market for providing services, while the area of export is mainly Southeast Asia, including Thailand, the Philippines, Vietnam, and Malaysia. No products or services

are prohibited from any specific markets. Sales channels are mostly direct to medical centers and regional hospitals, while regional hospitals, clinics, and pharmacies are marketed by distributors. The majority of beneficiaries are cancer patients, hospitalized patients with infectious diseases, or patients with gastroesophageal reflux, osteoporosis, high uric acid, and bacterial infections.

TTY Sales Volume in the Recent 5 Years (Unit: Thousand Tablets/Thousand Pieces)

Main Product	2018		2019		2020		2021		2022	
	Domestic Sales	Export	Domestic Sales	Export	Domestic Sales	Export	Domestic Sales	Export	Domestic Sales	Export
Ointment	2,036	-	2,479	-	2,491	-	2,266	-	2,326	-
Oral Drug	358,317	12,111	393,049	15,551	346,908	15,725	331,583	15,497	369,553	18,190
Injection	4,250	330	4,592	486	5,151	205	5,309	235	6,028	409
Other	727	1,551	789	-	505	-	703	-	662	-

TTY Sales in the Recent 5 Years (Currency: NTD, Unit: Thousand NTD)

Main Product	2018		2019		2020		2021		2022	
	Domestic Sales	Export	Domestic Sales	Export	Domestic Sales	Export	Domestic Sales	Export	Domestic Sales	Export
Ointment	74,630	-	89,429	-	88,869	-	94,491	-	94,836	-
Oral Drug	1,820,313	92,307	2,006,218	130,556	2,035,732	150,747	2,144,779	129,256	2,302,709	181,555
Injection	1,327,902	461,879	1,478,173	555,205	1,683,176	125,056	1,817,541	124,983	2,076,099	180,138
Other	133,938	7,167	112,712	-	109,662	-	113,138	-	94,185	27
<b>Total</b>	<b>3,356,783</b>	<b>561,353</b>	<b>3,686,532</b>	<b>685,761</b>	<b>3,917,439</b>	<b>275,803</b>	<b>4,169,949</b>	<b>254,239</b>	<b>4,567,829</b>	<b>361,720</b>

## External Engagement

Facing the rapid economic, social and environmental changes around the world, TTY has, as an excellent biotech pharmaceutical company focusing on the development of specialty dosage forms and new drugs, actively participated in external initiatives and public associations, and also maintain favorable exchanges with the industry and government, and in academic arenas. In year 2022, TTY participated in 5 major external initiatives and 13 public associations, and held important positions and participated in conferences to communicate industry viewpoints and progress ideas through information exchange and sharing. Such a high degree of participation has helped provide assistance to the sustainable development of the biotechnology and pharmaceutical industry, and facilitate collaboration with peers to establish a far-reaching social influence.

### External initiative

- Sustainable Development Goals, SDGs of the UN
- Sustainability reporting Guidelines (Global Reporting Initiative, GRI)
- The United Nations Global Compact, UNGC
- World Economic Forum, “WEF’s Partnering Against Corruption — Principles for Countering Bribery”
- The Commonwealth Water Conservation Action Initiative "Do One Thing for Tamshui River" centers five commitments: standard discharges of sewage and waste only supervision to ensure no illegal dump by waste contractors; green purchase maximization; encourage public governance of Tamsui River System; and TTY Ecology Action.



Participation in External Associations and Memberships

Name of the organization	Strategic significance	Position held
1. Institute for Biotechnology and Medicine Industry (IBMI)	Work together on pharmaceutical and bio-technology development, improve technology, promote R&D, to maintain national health and national economic growth.	Member
2. Taiwan Bio Industry Organization	Work together on pharmaceutical and bio-technology development, improve technology, promote R&D, to maintain national health and national economic growth.	Member
3. Taiwan Pharmaceutical Manufacture and Development Association	Work together on pharmaceutical and bio-technology development, improve technology, promote R&D, to maintain national health and national economic growth.	Member, Deputy Chairperson of Drug Administration Committee, Deputy Chairperson of Intellectual Property and Legal Committee
4. Taiwan Pharmaceutical Manufacturers Association	Improve connection within the industry to seek shared profit. Find methods to improve and promote pharmaceutical industry for economic development.	Member
5. Taipei Pharmaceutical Agents and Distributors Association	Bridge agents of western drugs across Taiwan to facilitate conversation with government, medical and healthcare policies, and the drafting and promotion of medical and pharmaceutical regulations.	Director
6. Taipei Pharmaceutical Business Association	Bridge agents of western drugs across Taiwan to facilitate conversation with government, medical and healthcare policies, and the drafting and promotion of medical and pharmaceutical regulations.	Member
7. Taiwan Society of Regulatory Affairs for Medical Products	Study medical and pharmaceutical policies and regulation; establish a platform to facilitate coordination of health and medical/pharmaceutical product management regulation; share regulations and knowledge to improve accessibility, international connection, and innovation value.	Member
8. Taiwan Parenteral Drug Association	Improve connection within the industry to seek shared profit. Find methods to improve and promote pharmaceutical industry for economic development.	Executive Director
9. Keelung Federation of Labor	Required by law	Member
10. Medical and Pharmaceutical Industry Technology and Development Center	Improve connection within the industry to seek shared profit. Find methods to improve and promote pharmaceutical industry for economic development.	Member
11. Taiwan Generic Pharmaceutical Association	Seek common consent among industry, government, and, academic and research, to produce value and market for generic drug business.	Director
12. Taipei Medical Instruments Commercial Association	Improve connection within the industry to seek shared profit. Find methods to improve and promote pharmaceutical industry for economic development.	Member
13. Monte Jade Science & Technology Association of Taiwan	The Association seeks Chinese startup participation to gain access to topics such as technology, entrepreneurship and investment to empower knowledge economy and boost small/medium businesses. They are open to the opportunities of increasing funds from investors through innovative technology, business pattern, or transformation of marketing/packaging.	Executive Director

Such a high degree of participation has helped provide assistance to the sustainable development of the biotechnology and pharmaceutical industry, and facilitate collaboration with peers to establish a far-reaching social influence.



## TTY Strategy Deployment

**The introduction and development of antibiotics and oncology drugs continue. Development for difficult generic drugs continues.**

### New Drug Launch to Complete Intensive Care and Oncology Product Line

Our effort in collaboration with Everest Medicines, a new drug development corporation, has helped us gain the sole license of a new type of antibacterial drug in Taiwan. The broad-spectrum drug treats not only Gram-negative bacteria and Gram-positive bacteria, but also with treatment on infections of multiple drug resistant organism. The treatment has been licensed in US/EU areas on adult for complicated intra-abdominal infection, and is applied for examination to Taiwan FDA. It is expected to be approved in Q3/2023.

For flu vaccine, in year 2022 we provided 1.13 millions public-fund vials and partial self-pay shots. In addition to QIV, we purchased new ones with adjuvants from AU original maker to ease the surge of infection in fall/winter season. The vaccine is licensed on 7/3, 2023. We also negotiate for AU agency of flu vaccine usage overseas, and cooperation for CDMO of flu vaccines.

To perfect intensive care, our new addition of anesthesia looks to provide medical professionals clinical solution within Taiwan. With sole license from PAION, German drug designer, a new anesthesia has gained Taiwan FDA approval and will join as an option to the 1.3 millions self-pay market of health check every year. This offers new generation choice for those who seek for quality health check experience. Within 5 years the application will extend onto long/short sedation for operation, anesthesia and pain killer use. The product will contribute to 2023 and future revenue.

On tumor treatment, the ongoing negotiation for lung cancer new drug and 2 new drugs for ovarian cancer also play important role in market expansion. We are planning 3+ new drugs into the market in year 2023 to continue to echo our vision of improving the quality of human life with scientific innovation.

### Extensive Product Profolio and Combinations for Local and Overseas Markets

Of the many unmet medical needs in Taiwan, the 2 territories of oncology, intensive care and anti-infection are the most. Our collaboration for comprehensive of R&D strategy, manufacturing and completed product lines will keep thinking speed and quality. Other than research and marketing for the 2 fields, a series of novel type of drugs will also be introduced to Taiwan, giving medical personnel more remedy solutions. We aim at becoming a leading medical drug corporation with driving force at all directions in Taiwan.

For overseas market, we now see 6% revenue from export market. We are expanding points of sales in Thailand, Vietnam, Singapore, Indonesia and Malaysia with extensive combinations. Increasing overseas networks and locations help generate economic effectiveness, producing economies of scale, which lower manufacturing cost. The success in Taiwan and international markets also facilitates partnership with leading manufacturers, enlarging overseas product selections to aim at double digit percentage portion and more revenue contribution.

### CDMO (Contract Development Manufacturing Organization) to Expand EU/US market

TTY has been applying ourselves to the development and manufacturing of difficult generic drugs of Liposome and microsphere injection for two decades and more. Pegylipo has been entered into 2021 European Common Market Development Agreement with German Company, and has enrolled its first clinical subject on its EU market development timeline in July, 2022. It is scheduled to apply to EMA for license in year 2023.

Lioudu, the site for Lipo-AB, another difficult generic Liposome drug, passed USA FDA factory inspection for US GMP in October, 2022, and obtained FDA approved Amphotericin B (Lipo-AB) license the following month. The first shipping completed in Q1/2023 and is heading into US market in collaboration with partners.

# TTY Development Strategies



**Long-term Development Plans**

**R&D Strategy**

- Seek the evaluation and investment balance of targeted drug development for initial, middle, and final phases; optimize product combinations and competence of the targeted disease treatment domain (specialty drug, biological drug, new drug). Sustain the company's short- and long-term growth momentum as well as value chain integration.
- Foster international partnerships and/or self-accelerated development to meet unmet medical needs, high-barrier drugs, the needs of brand-name drugs and new drugs of specialty dosage form of profitable value, or clinical and medical associated products with a market niche.

**Production Strategy**

- Drug manufacturing sites that follow, renew, and comply with international drug regulations.
- Install a new production line for new drugs to accomplish the commercialization and globalization of drugs of specialty dosage forms and new drugs for production integration.
- Maximize manufacturing energy and supply chain management through critical strategic actions including M&A, strategic alliances, and joint ventures; complete consolidation of production quality and efficiency.

**Marketing Strategy**

- The ongoing optimization of business activities and business life cycle management according to each target market.
- TTY international business development expansion through company-owned and co-developed competitive specialty drugs, sustainable co-development business practice pattern, as well as a cross-border resource consolidated marketing strategies for new and specialty drugs.
- Accelerate the expansion of overseas sales and distribution; strengthen proprietary trading markets and targeted management; extend corporate core market borders to enhance the Company's mid-to-long-term revenue and international development diversity.

**Operation Strategy**

- Commit to the development of new drugs, drugs of specialty dosages, biological drugs, and medical treatment technology to create a more complete product portfolio.
- Continue to strengthen and develop high-barrier dosage drug platforms to extend their application benefit.
- Continue to expand the development and manufacturing territory of drugs for cancer, intensive care, anti-infection drugs, and specialty dosage drugs; continue to increase international market share.
- Become one of the world's most innovative biotech pharmaceutical companies, and the best partner to work with for other international biotech companies.



Key Performance

- ❖ 130 drug licenses were granted in year 2022.
- ❖ More than 36 pharmaceutical items were listed in the NHI Pharmaceutical Benefits and Reimbursement Schedule in year 2022.
- ❖ By the end of year 2022, 7 valid invention patents were awarded and 1 application was under examination.
- ❖ By the end of year 2022, 211 valid trademarks were granted and 13 were under examination.
- ❖ Trial drug in full conformity with PIC/S GMP pharmaceutical standard and GDP (Good Distribution Practice).

Chapter ::

# 2

## Supply Chain Management

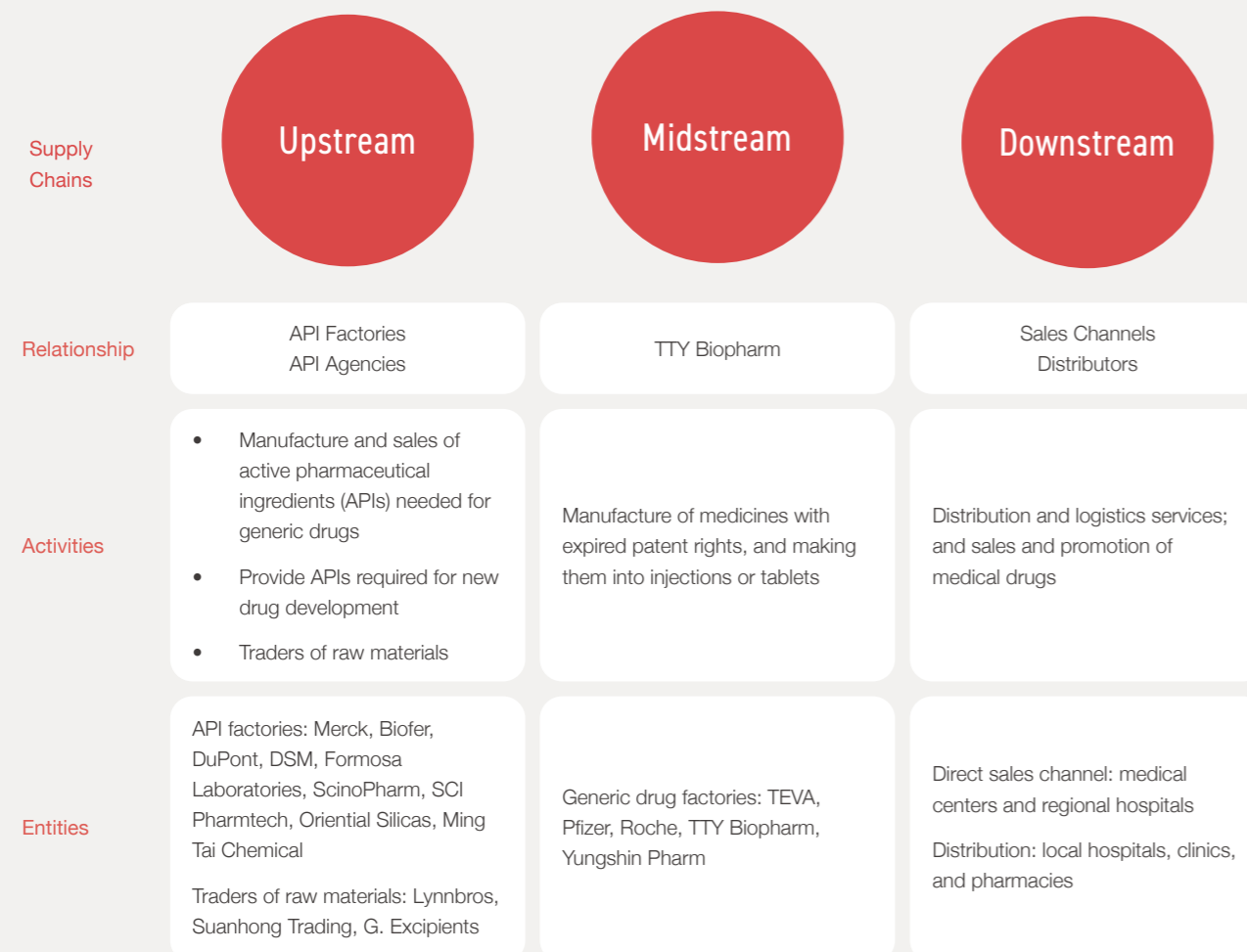
Pharmaceutical Industry Value Chain  
 The Power of Intellectual Property  
 Supplier Screening and Management  
 Drug Safety  
 Responsibility of Sales



## Pharmaceutical Industry Value Chain

In the context of pharmaceutical manufacturing supply chain, the upstream and midstream involve the preparation of raw materials (APIs), and downstream entails the manufacturing of drugs and operations of various sales channels. Drugs can be simply divided into 3 types: original drugs (original), imported or domestic generic drugs with bioequivalence generic drugs (BE generics), and general generic drugs (non-BE generics). At present, the pharmaceutical industry in Taiwan generally comprises downstream suppliers, and most manufacture and sell non-BE generics. As one of the few one-stop services from research to production and sales, TTY is the leading bio-technology pharmaceutical maker exceling in the development of specialty dosage forms and new drugs. No significant change of supply chains occurred during the report period.

### TTY Biopharm Supply Chains



## The Power of Intellectual Property

### Investment in R&D

TTY is deeply embedded in the Taiwan market, taking high-quality manufacturing as its niche, actively researching and developing pharmaceuticals to address the unmet needs of the medical market, and expanding into overseas markets with difficult generic drugs. TTY has utilized liposomes and microspheres within its technology platforms and offers long-acting, sustained-release, and targeted benefits that do not affect liver and kidney function in excessive dosages, creating fewer side-effects for patients.

TTY is considered one of the few pharmaceutical R&D and manufacturing companies in Taiwan that provides a one-stop

service from front-end R&D to manufacturing to sales. The R&D capability of the organization occupies a leading position in Taiwan, with its accumulated R&D expenditure in the recent 5 years exceeding NTD\$1.5 billion. About 7% of annual revenue is invested in R&D every year. In year 2022, R&D expenses reached NTD\$353,436 thousand, accounting for 6.98% of revenue. In the future, TTY will continue to leverage the advantages of these platforms and invest resources as it develops products that can be used on blood-brain barrier, hormone, mental, and other related diseases. It will also continue to expand drug indications to extend product life cycles, and meet its target of allocating 6% of annual revenue for R&D investment.

### TTY R&D Expenses in the Recent 5 years

Item	Unit	2018	2019	2020	2021	2022
Operating Revenue	Thousand	4,036,196	4,466,308	4,221,836	4,535,610	5,061,606
R&D Expense	Thousand	361,063	298,552	261,597	287,595	353,436

### Patent and Brand Deployment

To facilitate successful R&D and product launches, TTY has filed corresponding patent and trademark applications. By the end of

year 2022, the Company had a total of 7 invention patents, and 1 invention patent application currently under review; the total of 211 trademarks with registration approved, and 13 trademark applications under review.

### Regional Distribution Statistics of TTY's Valid Patent and Trademark Applications

Area		Taiwan	Japan	Korea	China	Southeast Asia	Others	Total
Number of Invention Patents	Certificates claimed	7	0	0	0	0	0	7
	Under application	0	0	0	0	1	0	1
Number of Trademark Patents	Certificates claimed	122	0	8	20	38	23	211
	Under application	4	0	0	0	4	5	13

Note: Statistics as of 31/12/2022.

# Supplier Screening and Management



**Corresponding GRI index**

GRI 308-1 New Suppliers That were Screened Using Environmental Criteria  
GRI 414-1 New Suppliers That were Screened Using Social Criteria

**Policies and Commitment**

Enhance management so that the supply chain conforms to laws and regulations, values quality and self-discipline, and improves overall competence and operation flexibility.

**Goals and Targets**

In addition to quality and legal compliance review, new suppliers must align in term of sustainable development. We also emphasize implementation among existing suppliers.

**Responsibilities and Resources**

The procurement team reviews suppliers and manages vendors' sustainable development strategies according to SOP and survey.

**Assessment Mechanism and Results**

- In year 2022, 100% of the new suppliers were screened and chosen according to the selection mechanism.
- The result of the annual assessment concluded that no supplier should be stopped from trading due to significant quality hazards.

## Step 1 Selecting New Suppliers

To ensure environmental sustainability, TTY provides a survey to new and existing material suppliers, as described in the Supplier Assessment Guidelines. The survey includes management of API factories and suppliers of each TTY site and ESG questionnaires, regarding proper recycling of solvents, the cleaning procedure and validation of production equipment, pest and rodent control, proper air conditioning, and a water system to avoid cross-contamination. It also includes a SOP to minimize environmental impact, and evaluation and continued strengthening of, and compliance with, control concerning environmental risks. All fields should be approved by a professional consultant. Moreover, TTY conducts ad-hoc audits on all suppliers based on review plan to ensure consistent quality. Inspections are carried out either by questionnaire or on-site inspection.

"Quality Assurance", "Stable Production Capacity", "Cycle Time Reduction", and "Sustainability" are the four major policies of TTY, and it is important to evaluate a supplier's financial status, organization management, and CSR implementation capability. The Supplier Management mechanism is executed as standard to select and assess new suppliers, re-evaluate and renew contracts with existing ones, conduct a risk assessment and management, and assist with improvements to properly choose and manage suppliers with sustainability and transparency as key factors. In year 2022, 100% of new suppliers were screened and chosen according to the selection mechanism.

1. **Quality Assurance:** Assessment and onsite due diligence to ensure a quality system and quality supply.
2. **Stable Production Capacity:** Multiple suppliers are required to maintain a flexible and stabilized supply and quantity.
3. **Cycle Time Reduction:** Credible suppliers with qualified delivery capabilities are needed to promote cycle time reduction.
4. **Sustainability:** Long-term partnerships are necessary to build stable developments and establish a sustainable supply chain. TTY demands suppliers to observe eco-friendly actions, and consider safety and security, human rights, and CSR, as well as engage in risk management and have a sustainable operation plan.

## Step 2 Eligibility of New Suppliers

Active pharmaceutical ingredients (API) are substances extracted from natural plants and synthesized chemically, which are then processed by the Company's high-quality technology and made into a universally approved and certified safe drug that can be used directly by patients. API can be a determinant of the effectiveness and safety of drugs, thus TTY proceeds with caution to inspect and manage EU and US brand-name drug suppliers. DMF (Drug Master File), cGMP, and PIC/S GMP are the principal criteria to select proper suppliers. We further examine and assess their manufacturing of raw materials, product risks, quality system control competency, and order execution.

## Step 3 Evaluation and Risk Assessment for Existing Suppliers

- **General evaluation:** Scores are deducted for any abnormality of material delivered by suppliers and referred to for annual evaluation.
- Suppliers' assessments are held once a year, and the assessment items include: Cycle Time (on time, credibility); Quality (stable supply quality); Customer Complaints (timely improvement of customer quality complaints); Supportiveness (speedy and immediate return and exchange of goods); and Sustainability (environmental protection and human rights assessment).
- TTY conducts a risk evaluation based on the above 2 items for classification management.
- Suppliers with scores lower than TTY's requirements are terminated from the purchase contract and removed from the supplier list.

### Step 4 Existing Supplier Classification Management

- Assist suppliers with improvement on the basis of grading results.
- Classification according to the supplier risk evaluation, management measures as follows:

Grade	Risk	Scores	Measures
Grade A	Low	90~100	<ol style="list-style-type: none"> <li>1. Supplier to be considered when new items are required to be purchased.</li> <li>2. Paper review based inspection.</li> </ol>
Grade B	Medium	70~89	<ol style="list-style-type: none"> <li>1. Normal purchase contract.</li> <li>2. Paper review-based inspection. Supplier should provide an action plan according to the inspection results. When improvements fail to meet TTY's requirements, an on-site inspection will be conducted.</li> </ol>
Grade C	High	≤69	<ol style="list-style-type: none"> <li>1. Cease purchasing items from supplier.</li> <li>2. Deemed disqualified and the contract is terminated.</li> </ol>

### Paper Review

Other than routine quality surveys, the Taipei headquarters and procurement teams of each sites give out a Sustainable Supplier Review survey as extra bonus for evaluation on top of the assessment score. Each site then selects the suppliers it needs. The Sustainable Supplier Review survey contains the following.

Economy	Quality	Environment	Human Rights
<ol style="list-style-type: none"> <li>1. Operation Overview</li> <li>2. Client Management</li> <li>3. Safety Stock, Deliver Time</li> </ol>	<ol style="list-style-type: none"> <li>1. Management of Source Suppliers</li> <li>2. Quality Control</li> <li>3. Drug Master File</li> <li>4. Relevant GMP Compliance</li> <li>5. GDP Compliance</li> </ol>	<ol style="list-style-type: none"> <li>1. GHG Emissions</li> <li>2. Water Resource Management</li> <li>3. Energy Management</li> <li>4. Waste Management</li> <li>5. Overall Environmental Evaluation</li> <li>6. Environment, Safety, and Health</li> <li>7. Compliance with Laws and Regulation</li> </ol>	<ol style="list-style-type: none"> <li>1. Occupational Safety and Health</li> <li>2. Worker Health Improvement</li> <li>3. Welfare Policy</li> <li>4. Feedback Channels</li> <li>5. All Forms of Discrimination</li> <li>6. Compliance with Laws and Regulations</li> </ol>

### Onsite Inspections

Suppliers are to provide the following information for onsite inspections:

- Company Introduction: product supply, capacity, process description, facility, and equipment introduction.
- Environment, Safety and Health Management: information regarding overall environmental safety, health control and management, waste control, cross-contamination prevention.

- Certificates and Licenses: acquired government or global certified QC documents (PIC/S GMP or ISO 9001) and certification of the environmental management system (ISO 14001).
- Quality System Management: a document for the procedure of handling CCs (Customer Complaint), defects, abnormality management, change management, and corrective and preventive action.
- Raw Material Information: SDS and COA, production procedure.



Chungli Factory

Qualified suppliers of the Chungli factory include 555 raw material suppliers (OEM included) and 113 manufacturers, of which 128 are raw materials (API and Excipient) and 427 are materials. There were 15 additions in year 2022, of which 4 comprised raw material and 11 material suppliers.

were assessed based on cycle time, quality, customer complaints, supportiveness, and sustainability. The results indicated 309 classified as Grade A, 10 as Grade B, and 0 as Grade C. The management measures for suppliers of grade A items apply if the Company launches new items; these suppliers would be prioritized for consideration, and the results provided to the quality control department for exemption from testing and evaluation of raw materials.

The 319 items purchased in year 2022 by the Chungli factory

### 2022 TTY Chungli Factory Supplier List

Category	API	Excipient	Packing Material	Total
Number of items	36	92	427	555
Number of manufacturers	27	46	40	113

### 2022 TTY Chungli Factory Items Classified Assessment Results

Category	API	Excipient	Packing Material	Total
Grade A Supplier (lowest risk)	17	60	232	309
Grade B Supplier (moderate risk)	4	4	2	10
Grade C Supplier (highest risk)	0	0	0	0
Total	21	64	234	319



**Lioudu  
Factory**

Qualified suppliers of the Lioudu factory include 454 raw material suppliers and 181 manufacturers, of which 207 are raw materials (API and Excipient) and 247 are material suppliers. There were 22 additions in year 2022, of which 13 were raw material and 9 were material suppliers.

The 320 items purchased in year 2022 by the Lioudu factory were assessed based on quality and customer complaints. The results indicated that 318 classified as Grade A, 2 as Grade B, and 0 as Grade C. Follow-ups and improvement will be required for Grade B suppliers, and these suppliers will be prioritized on the supervision list with increased review frequency in 2023 as necessary.

**2022 TTY Lioudu Factory Supplier List**

Category	API	Excipient	Packing Material	Total
Number of items	81	126	247	454
Number of manufacturers	66	67	48	181

**2022 TTY Lioudu Factory Items Classified Assessment Results**

Category	API	Excipient	Packing Material	Total
Grade A Supplier (lowest risk)	53	96	169	318
Grade B Supplier (moderate risk)	0	2	0	2
Grade C Supplier (highest risk)	0	0	0	0
<b>Total</b>	<b>53</b>	<b>98</b>	<b>169</b>	<b>320</b>



**Neihu  
Factory**

TTY uses onsite inspections and paper reviews as the methods to evaluate suppliers. A supplier that engages closely without major deficiencies and delivers consistently good standards is identified as a qualified supplier. Conversely, a reviewee with poor commitment that shows significant faults or fails to deliver consistently will be regarded as disqualified and the candidate will be removed from the contract. In this case, proper sources of material will be on request.

The qualified suppliers of Neihu factory include 128 as raw material suppliers, 58 manufacturers, and 29 agents, of which 70 are raw material (API and Excipient) and 58 are material suppliers. There were 2 additions in year 2022, of which 0 were raw material and 2 were material suppliers.

The 54 items purchased in year 2022 by the Neihu factory were assessed based on quality and supportiveness. The results indicated that 54 classified as eligible, and no supplier failed the assessment.

**2022 TTY Neihu Factory Supplier List**

Category	API	Excipient	Packing Material	Total
Number of items	8	62	58	128
Number of manufacturers	7	29	22	58
Number of agents	4	16	9	29

**2022 TTY Neihu Factory Items Classified Assessment Results**

Category	API	Excipient	Packing Material	Total
Qualified items	2	19	33	54
Unqualified items	0	0	0	0
<b>Total</b>	<b>2</b>	<b>19</b>	<b>33</b>	<b>54</b>

# Drug Safety

To ensure drug safety from procurement to manufacturing, transportation to subject safety, TTY adheres to compliance with TW FDA regulations, PIC/S GMP, and GDP, safeguarding drugs and subjects from counterfeit drugs.



Corresponding GRI index

GRI 416-1 Assess the Impacts of Product and Service Categories on Health and Safety  
 GRI 416-2 Violation of Health and Safety Regulations Related to Products and Services

Policies and Commitment

To enable patients to use high-quality, safe, effective, and reasonably priced drugs, TTY strictly implements drug safety management, and follows the Taiwan Food and Drug Administration (TFDA) regulations and safety information related to drug products, and abides by international standards to ensure drug safety.

Goals and Targets

Short-term Goals

TTY complies with the International PIC/S GMP Pharmaceutical Standards and Good Distribution Practice for product distribution to ensure pharmaceutical manufacturing and sales processes meet standards, so that the Company provides safe products for clinical treatment.

Mid- to Long-term Goals

To realize the corporate vision of improving the quality of human life with scientific innovation, TTY actively accommodates medical needs through 3 business units: the oncology business unit aims to offer cancer patients high-quality anti-cancer drugs, so that TTY can provide patients and physicians with optimal treatment plans. TTY is actively moving towards the field of emergency and serious diseases for the intensive care business unit, as well as the approach of disease prevention. The healthcare business unit is managed through the improvement of specialty dosage forms, authorization, and cooperation with international innovation companies, and entails the introduction of smart medical equipment, thus improving drug efficacy and utility.

Responsibilities and Resources

Our consistent practice of Adverse Drug Reaction Reporting is realized through procedure and training. Specialists report reactions within the designated time to ensure drug safety. The FDA are notified within 15 days with medical monitors determine a safety signal. Responding action is taken based on risk analysis.

Assessment Mechanism and Results

- TTY works in compliance with the International PIC/S GMP Pharmaceutical Standards and Good Distribution Practice, and 100% of its primary products are subject to health and safety regulatory audits. No product or service has been found to have violated health and safety related regulations.
- Products of TTY's intensive care business unit can be classified into license-in or self-manufactured drugs. We ensure that the production process and quality of license-in drugs produced in the country of origin comply with the drug manufacturing regulations of both Taiwan and the locality. Self-manufactured drugs must comply with local drug manufacturing regulations as well as the requirements of quality and manufacturing specifications of the country of export.
- According to the TFDA's Reporting Regulations of Severe Adverse Drug Reactions, it collects safety information on drug products and completes reporting within a time limit.
- The oncology business unit follows the "Reporting Regulations of Severe Adverse Drug Reactions with a compliance rate of 100%, and has ensured the implementation of drug safety management.
- 100% of employees of the healthcare business unit have also completed internal educational training on Adverse Drug Reaction Reporting and passed the appraisal.

## PIC/S GMP Certifications

Products in the pharmaceutical industry are closely related to the health and safety of users, so safety and effectiveness must be particularly reviewed. TTY follows the most stringent PIC/S GMP standards recognized around the world, and safeguards are in place for raw material supply, plant facilities, and equipment from the source of drug manufacturing. Production and quality

control operations are also ensured via the prevention of cross-contamination, avoidance of confusion, validation, and other methods in the process to guarantee the continuous and stable manufacture of drugs. In year 2022, TTY obtained a total of 130 drug licenses, while more than 36 pharmaceutical items are listed in the Taiwan National Health Insurance (NHI) Pharmaceutical Benefits and Reimbursement Schedule.

## PIC/S GMP Inspection Certificate of TTY



## Statistics of Valid Drug Licenses of TTY in Year 2022

Business Unit	Domestic	Foreign	Subtotal
Oncology Business Unit (TOT)	33	66	99
Intensive Care Business Unit (TTT)	18	2	20
Healthcare Unit (THT)	7	4	11
<b>Total</b>	<b>58</b>	<b>72</b>	<b>130</b>

## Supply Chain Traceability



**Corresponding  
GRI index**

Self-established Topic

**Policies  
and  
Commitment**

Unaware access to products and fake products in the supply chain pose serious problems. We purchase raw materials solely from registered, qualified companies on the raw material supplier list, and transportation is recorded to show customers the drug supply chain. Our methods are GDP/GMP compliant and has traceability to ensure the supply chain is stable and protected without counterfeit.

**Goals  
and  
Targets**

**Short-term Goals**  
TTY and all suppliers remain GDP-compliant.  
Routine supplier assessment to keep quality and packaging integrity during storage and transportation.

**Responsibilities  
and  
Resources**

Specialists monitor API and drug GDP compliance.

**Assessment  
Mechanism and  
Results**

TTY, API suppliers, and logistic services are GDP-certified operators. All procedures are under TTY regular assessment, and executed according to quality contracts signed by both parties to maintain quality and packaging integrity during storage and transportation, ensure delivery within a reasonable time, and ensure no fake products enter the supply chain.

We fortify logistics service management by employing GPS during product transportation. Drugs are driven to the specified destination, medical institution which notifies us if the delivery did not arrive, ensuring drug quality and safety for users.

## Cool Chain Management

As the leading manufacturer in the mass production of Liposomes in Asia, TTY implements strict control over API management, product storage, and cool chain logistics to secure drug quality and stability to international standard and ensure customers' safety.

### API Management

Despite Taiwan's API management not yet being under GDP, the Chungli factory has followed the international management system and is ready to follow potential regulations in Taiwan. API storage and management comply with the GDP of PIC/S GMP. Liposome is a product under cool chain management. Since arrival at the factory, the API and excipient of Liposome are stored in a temperature-controlled warehouse with refrigeration equipment until entering the manufacturing process.



### Product Storage

Upon the completion of product packaging, products are immediately stored in a warehouse of 2 °C ~8 °C . To ensure 24-hour temperature control, all refrigeration warehouses are equipped with 2 air conditioners and fans so either can cover a faulty air-conditioner should the occasion arise. All refrigeration warehouse equipment is linked to backup power to prevent equipment malfunction or power disruption.

General refrigeration warehouse maintenance, in addition to twice inspections every day, is subject to nonstop data logger and alarms inside the manufacturing warehouses. When the temperature exceeds a certain range, flashing lights and a sound alarm will go off and security will notify the relevant authorities accordingly. Every refrigeration warehouse in the Chungli factory is access-controlled, and only authorized warehouse personnel may enter the factory to safeguard products and minimize changes of temperature due to unnecessary entry and exit. A Temperature Mapping Qualification (TMQ) is conducted in every refrigeration warehouse during the coldest and hottest season of the year to ensure the temperature meets storage requirements.



## Cool Chain Product Transportation

2 °C ~8 °C end-to-end temperature control must be followed during the transportation and delivery of Liposome to hospitals and clients. The warehouse and QC departments conducted a number of visits and audits to find a qualified logistics company that could ensure the storage, delivery, and temperature control of LN2, gel packs, and dry ice. TTY then signed agreements with such logistics companies who become qualified cool chain logistics suppliers for TTY.

Our Liposome is packed in the most suitable refrigerated delivery box made from qualified material and created the best size scientifically when being transported from the Chungli factory's refrigerated warehouse. Moreover, the maximum number of times the ice can be used, its efficacy period, and other standard procedures are specified. The package is then sealed by TTY-Logo void tape with a 3M Monitor Mark. Every year TTY invests nearly a million NTD on WHO-certified 3M Monitor Marks. There were no cases of abnormal temperatures reported in year 2022.

Cool chain delivery by ground or by air to the Taiwan mainland, Kinmen, and Penghu should not exceed 24 hours from pickup to proof of delivery. 3 statistic tests and route dynamic tests are each performed for different box sizes, and the shortest delivery time should be selected and recorded as a standard for general transportation management. Validation should be run once every summer and winter to eliminate various factors affecting temperature changes during transportation.



## Continuous Improvement

To continuously improve the stability of the cold chain, TTY optimizes the inner box of coolers and unifies the material and volume to facilitate the simplification of material and storage management. At present, the preliminary comparison and verification was completed in year 2022, confirming that the new inner box is better than the original one as it can provide more stable temperature and longer thermal insulation effect. The new inner box is expected to be fully in place in January 2023 so temperature remains stable during transportation to ensure product quality.

In addition, TTY expects to expand its refrigerated space in year 2022 as a response to increased demand for inventory and in line with the optimization of the production line for the oncology plant. After the construction and optimization of the production line for the oncology plant, semi-finished products can be stored and refrigerated space will convert semi-finished products into finished products in stages. The newly expanded refrigerated space will not only increase the refrigerated space for finished products by about 30 boards, but also enable the tally staff to have more space to conduct cold chain operations.

## Subject Safety

The management and active monitoring of research drugs are carried out in accordance with PIC/S GMP (Part I, Attachment 13 of the Good Manufacturing Practice for Pharmaceuticals in Taiwan), ICH E6 (Good Clinical Trial Practice Guidelines for Pharmaceuticals in Taiwan), and the standard operating procedures of the pharmaceutical research institute, and are recorded in written and electronic format to ensure effective management.

Furthermore, to administer subject safety, human research

and clinical trials of cancer drugs are approved by the ethics committee of the testing institution and the local health authority and implemented in accordance with the standard operating procedures of the medical academic division, in addition to complying with relevant domestic and foreign laws and regulations (such as ICH E6, human research law, etc.), insurance is available on a case-by-case basis. Potential risks, compensation for damage, and insurance are explicit in the Informed Consent so that subjects can opt to participate in a clinical trial. In year 2022, no TTY business unit bore monetary loss due to a legal suit related to a drug clinical trial in developing countries.





Material Topic

**Subject Safety**

Corresponding GRI index

Self-established Topic

Policies and Commitment

We hold the highest standards regarding medical care quality and patient safety. All TTY business units conduct clinical trials under Good Clinical Trial Practice Guidelines for Pharmaceuticals and other applicable national laws.

To ensure subject safety and wellbeing, we conduct clinical trials of the highest standards and under the guidance of the Human Research Law and Good Clinical Trial Practice Guidelines for Pharmaceuticals.

Goals and Targets

Enhance quality control of clinical trials to ensure subject safety, rights, and data credibility.

Responsibilities and Resources

The oncology unit has established a SOP and training to ensure that clinical work is carried out solely by fully trained and authorized personnel.

The intensive care unit follows the Good Clinical Trial Practice Guidelines for Pharmaceuticals when drafting SOPs for clinical trial practice, and assigns well-trained specialists to execute work to ensure drug safety.

Assessment Mechanism and Results

- All our trial drugs fully comply with the International PIC/S GMP Pharmaceutical Standards, and GDP, and the management, return, and destruction of trial drugs fully adhere to the Good Clinical Trial Practice Guidelines for Pharmaceuticals without any violation of health and safety laws.
- All medical academic division staff of oncology unit have completed SOP and regulation training, and passed tests.
- TTY and investigators conduct trials in accordance with the protocols approved by the Ministry of Health and Welfare and Research Ethics Committee (REC). The results of on-site inspections and audits by the competent authority and REC did not locate any significant deficiency or violation, proving the strict quality we hold regarding subject safety and trial execution.
- The intensive care unit's protocols must be TFDA and IRB approved to carry out any clinical trial. During the trial, specialists regularly monitor progress. After completion of a trial, the final clinical trial reports are reviewed by the TFDA and IRB.





# Responsibility of Sales

## Marketing Regulations

Material Topic  
**Marketing Ethics**

Corresponding GRI index

GRI 417-2 Incidents of Non-compliance Concerning Product and Service Information and Labeling  
GRI 417-3 Incidents of Non-compliance Concerning Marketing Communications

Policies and Commitment

To ensure a clear understanding of the Company's ethical operations and regulations by customers and relevant personnel engaging in business with TTY, and realize proper and sustainable business operations, we have adopted guidelines for each unit and a code of conduct.

TTY staff follows the Company's Drug Advertising Management and Standard Operating Procedures to ensure operations adhere to the regulations regarding medical advertisements and to minimize the improper promotion of medicines that causes misinformation of drug effects. When marketing and selling products, patients' medical wellbeing and quality of care are our priority, and must be executed following ethic regulations.

Goals and Targets

When conducting marketing, sales, or delivering products, a pharmaceutical corporation must comply with ethics and adhere to drug and medical regulations.

Our products are sold in conformity with the marketing promotion plan, which commits to the obligation and responsibility of a pharmaceutical corporation to provide objective, authentic, and correct information. All relevant marketing personnel receive annual training regarding products and illness knowledge, so that medical staff are clearly aware of the use of each prescription drug and patients receive appropriate services.

Responsibilities and Resources

TTY adopts procedures to hold events and training, designates employees to check the procedure of marketing events, and has established an internal review system to reinforce the compliance of drug marketing, which includes check points of multiple advertisement to prevent any potential violations.

We have specialists to provide medical personnel with proper instruction and side effects, so that risks are considered based on patient wellbeing to make proper treatment decisions.

Assessment Mechanism and Results

- All drug purchases in year 2022 followed the Government Procurement Act without violation of product information and labeling (such as the Pharmaceutical Affairs Act and Pharmaceutical Affairs Act Enforcement Rules regarding Drug Advertisements), and marketing communication (including advertisement, promotion, and sponsorship) regulations. Online training includes Drug Safety Monitoring and GDP Management Theory to eliminate potential drug violation. We have also reinforced our management mechanism. TTY drug advertisement checklist and Drug Advertising Management and Standard Operating Procedures are in place for marketing staff to obey and ensure operations.
- Marketing information should be clear, easily understandable, accurate, balanced, and complete so that information receivers are capable of deciding the therapeutic effects of drugs. Content should be based on evidence, such as labeling approval of scientific proof, and not contain any false or exaggerated information.
- Medical personnel and administration staff are provided with giveaways or goods to help spread knowledge of our products, which must be of reasonable price and related to medical treatment.
- Free samples of drugs may be offered to medical personnel with the privilege to prescribe such drugs to facilitate patient care. Drugs offered must be explicitly labeled as samples to eliminate resale or repurpose.
- Product information should be informed, or scientific or educational information provided as the main purpose when hosting and/or sponsoring medical conferences, seminars, all types of marketing, and scientific or expert meetings (any "activities").
- Medical personnel may be invited as consultants for paid meetings or activities, such as speeches, hosting or attending meetings, scientific study, clinical trials, training programs, advisory board meetings or for market research purposes.
- Any and all interaction with patient organizations must be based on ethical regulations and respect the independency of the organizations.
- If marketing materials constitute drug advertising, the Ministry of Justice's approval shall be sought and the approval number marked on the materials as regulated. TTY staff have been following the Company rules and regulations in completing procedure and publishing advertisements.
- TTY regulates that a minimum of 3 product trainings per year should be given to salespersons and marketing staff. Package inserts for all products on sale are available on the TTY website.
- The oncology unit had a licensed drug (Aplidin for treating Multiple Myeloma) filed with the TFDA for project application in year 2022 and named patient use. Treatment has been completed.
- The intensive care unit feedbacks annual reports to the audit team regarding compliance matters. In year 2022, advertisement marketing and a NHI drug price and adverse reaction reports were audited to ensure full compliance in operations and by employees.

To implement the safety management of drugs, TTY has invested a lot of resources in the process of drug research and development, production, storage, and use labeling to ensure product safety. Aside from various safety control measures for "license-in and authorized drugs" and "brand generic drugs", TTY has also developed featured products with liposome and microsphere coating, and long-acting sustained-release injection technology to reduce the burden of drugs on the body. In addition, all drugs sold by TTY come with a package insert of instructions for use as required by the law, and the package insert is provided on the official website as reference as well.

Safety Control Measures by TTY

License-in and Authorized Drugs	Brand Generic Drugs
<ul style="list-style-type: none"> <li>• Before introducing license-in and authorized drugs, TTY first evaluates the approval status of drugs in various countries around world, for instance, if the drugs have been approved by the US Food and Drug Administration (FDA), the European Medicines Agency (EMA), or any other top 10 advanced pharmaceutical countries.</li> <li>• If the drug needs to undergo clinical trial in Taiwan before launch, TTY conducts clinical trials in accordance with the law, and evaluates the efficacy and side effects based on the test results to support the efficacy and safety of products. Dedicated staff are assigned to be in charge monitoring drug safety.</li> <li>• After the drug is launched, incidents of adverse drug reactions are evaluated, and a real-time reporting mechanism is established. A reporting mailbox for adverse drug reactions is also set up at: <a href="mailto:drugsafety@tty.com.tw">drugsafety@tty.com.tw</a>.</li> </ul>	<ul style="list-style-type: none"> <li>• Brand generic drugs include oncology and anti-severe infection drugs.</li> <li>• For generic drugs that need to undergo bioequivalence, TTY will conduct bioequivalence tests in accordance with the Bioavailability and Bioequivalence Studies Regulations to apply to the central health authority for marketing authorization of such generic drugs.</li> </ul>

Reasonable Pricing



Corresponding GRI index

Self-established Topic

Policies and Commitment

To fulfill the goal of quality, safe, and effective drugs at reasonable prices, we ensure full compliance with NHIA regulations. Each drug undergoes NHI coverage by category to ensure the price is covered by the NHI. The price adjustment also follows the National Health Insurance Act.

Goals and Targets

We follow applicable regulations within drug and medical fields. Our price is based on cost with a reasonable profit.

To introduce a new drug or authorized drug, we review the price adopted in the top 10 advanced countries and medical technology report before authorization. We then run a financial impact simulation to advise the new addition to NHI coverage. The NHI covered price is determined through conference; to further reduce the NHI financial impact, we also develop quality generic drugs.

Responsibilities and Resources

We have a team dedicated to introducing new drugs and NHI drug applications, while the development laboratory works on high-quality generic drugs that seeks NHI prices to balance out those of original ones.

Application for NHI pricing (including data gathering for the application), drug basic information, recommended NHI price, and same category drug price references are prepared by the product of the marketing unit in charge. The data includes the TFDA drug license, drug prices of the top 10 advanced countries, and clinical trial control price. We ensure reasonable pricing through TTY management team to approve authorization of all application documents.

Assessment Mechanism and Results

- One new product under procedure for NHI coverage in year 2022 (Bongina is undergoing NHI coverage under category A2 for its ingredients, new dosage items, and bioequivalence).
- Operations of year 2022 followed authority regulations and passed review. Prices were adjusted according to the NHI Agency's Drug Price Adjustment Detail.
- 2022 drug prices were declared in accordance with the Guidelines for NHI Drug Price Adjustment. No notice from the NHI Agency was received indicating non-conformity.

Key Performance

- ∴ **Top 5%** of TPEX companies in the TWSE Corporate Government Assessment for 7 consecutive years since year 2017.
- ∴ The 2<sup>nd</sup> year of **11%~20%** among non-electronic and non-finance TWSE and TPEX listed companies with a market value of over NTD\$10 billion.
- ∴ **6** Board meetings convened in year 2022, with an attendance rate of **98.15%** (excluding attendance via proxy).
- ∴ The average advanced training of board members reached **9.94 hours** in year 2022.
- ∴ Board members include **2** female directors and **3** independent directors, showing a diversified and independent governance culture.
- ∴ **2** Remuneration Committee meetings in year 2022, with an attendance rate of **100%** on average (excluding attendance via proxy).
- ∴ **5** Audit Committee meetings in year 2022, with an attendance rate of **100%** (excluding attendance via proxy).

Chapter ∴∴

# 3

## Governance

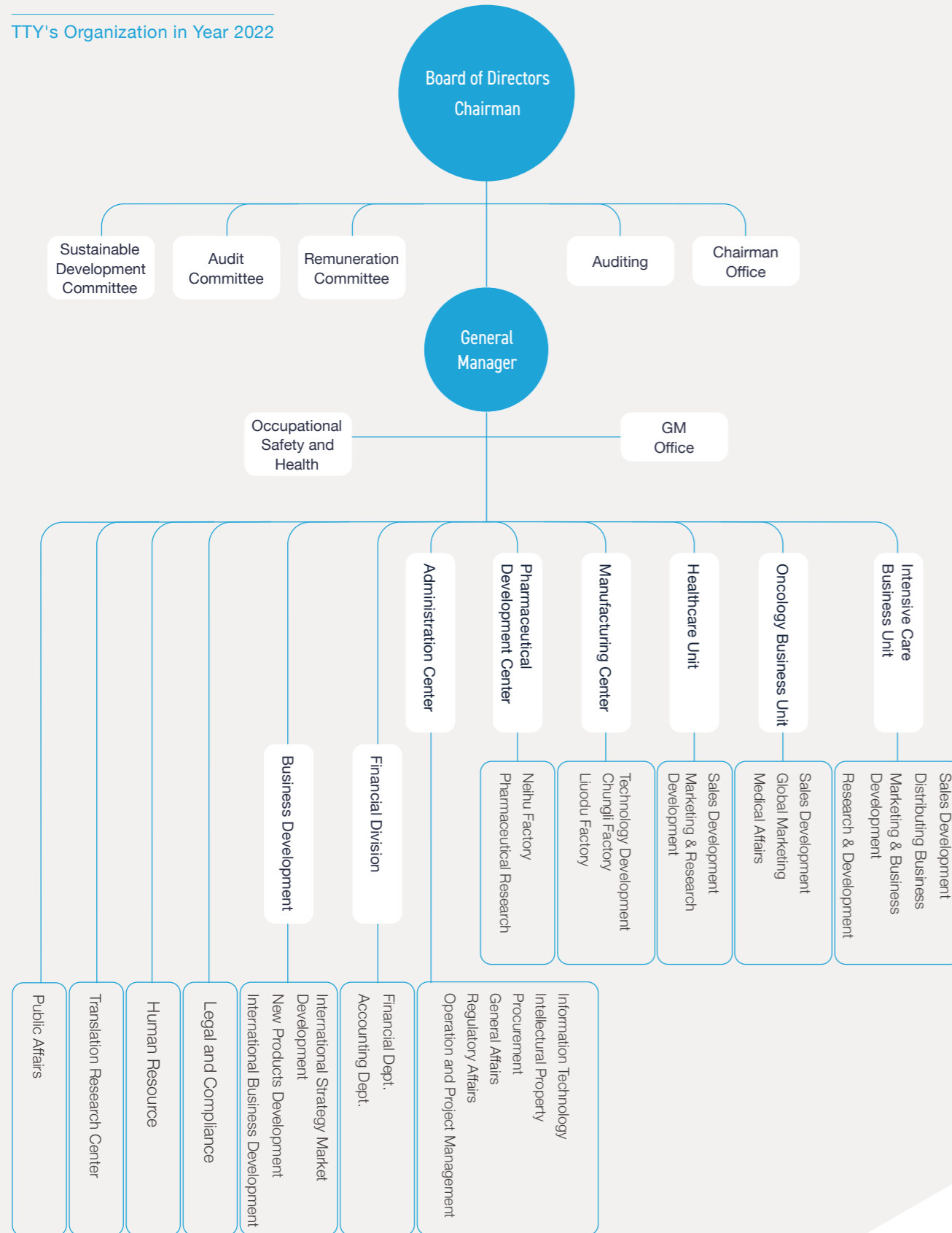
Governance Structure  
 Governance Principles  
 Risk Management

TTY observes investment market trends over the long term to assess whether an investment is beneficial from the perspective of single financial indicators to environment and social and corporate governance factors. In addition, TTY refers to the OECD Principles of Corporate Governance published by the Organization for Economic Cooperation and Development to effectively carry out corporate governance. Value creation for stakeholders and contribution to global sustainable goals are common ground among TTY directors. In year 2022, we received remarkable results in diversified governance, and improvement to the intellectual property management system, ethical management and risk management.

To facilitate corporate sustainable development, TTY has initiated 17 Sustainable Development Goals (SDGs), including the following: the Board of Directors to facilitate SDG 5 “Gender Equality”; introduce the Taiwan Intellectual Property Management System (TIPS) to improve the intellectual property confidentiality management system, echoing SDG 9 “Industry, Innovation, and Infrastructure”; the Sustainable Development Committee and the Ethical Management Promotion Center (EMPC) to implement a corporate sustainable operational development to respond to SDG 11 “Sustainable Cities and Communities”; establish a system to prevent conflicts of interest, implement independent supervision, ethics, and integrity to meet SDG 16 “Peace, Justice, and Strong Institutions”; and follow international trends, implement risk evaluation and management, and foster global sustainable development partnerships in response to SDG 17 “Partnerships for Goals”.

# Governance Structure

TTY's Organization in Year 2022



## Diversity and Professionalism of the Board of Directors

TTY firmly believes in integrity concept and values shareholders' interests. Its transparency and effectiveness of a board that create a solid foundation for a sustainable business. Our Board of Directors are diverse members with different backgrounds and professional competencies, catering to TTY's business and development needs. They are aligned with the Company's core value of integrity concept, and possess expertise and skills covering a range of areas, including the biotechnology, financing, banking, business, law, finance, and accounting, all essential for a functional board to make profits and supervise fraud prevention, to ensure the Company operations sustainably.

Of all 9 directors of the board, aged from range of 31 to 80, 2 are female (22.22%) and 3 are independent directors (33.33%). The term started on 25/8/2021 and ends on 24/8/2024.

Represented by both genders and covering a range of ages and expertise, the directors from Taiwan and the US are competent in business strategy and decision-making concerning the economy, environment, and society, and act as a supervision role for the operating team and risk management. The board met 6 times during the reporting period, and meetings were attended by 98.15% of the directors on average.

The board oversees the Audit Committee, Remuneration Committee, and Sustainable Development Committee. All 3 committees have a dedicated functions so that the board is optimized. Each of the functional committees assists the board to supervise and manage important activities of the Company; decide the overall remuneration policy and directors' and managers' compensation; and facilitates plans and strategies for corporate sustainability. Under the General Manager there is the Occupational Safety and Health Team, and 3 business groups, 3 centers, and other departments. The role of each department is detailed in TTY's annual report.

TTY's Board Members in Year 2022

Title	Name	Gender	Nationality	Age Group	Times to Attendance
Chairman	Lin Chuan	♂		71-80	6
Vice Chairman	Chang Wen-Hua	♀		61-70	6
Directors	Carl Hsiao	♂		31-40	6
	Yang Tze-Kaing	♂		61-70	5
	Chang Hsiu-Chi	♀		61-70	6
	Liao Ying-Ying	♀		61-70	6
	Tsai Duei	♂		71-80	6
Independent Directors	Hsueh Ming-Ling	♂		61-70	6
	Lin Tien-Fu	♂		71-80	6

The board meetings was held 6 times in year 2022; an average of once every 2 months and had a 98.15% attendance rate on average. Business performance, key ESG strategies, and key events were reviewed during the meetings, and the authorities for each matter were appointed and verified. The follow-up, supervision of progress, and updates are reviewed in consequent meetings. In year 2022, the board discussed over 56 matters spanning 10 perspective matters, including the revision of articles, business management, finance and accounting, related party transactions, remuneration, and other key events.

TTY's Board Proposals in Year 2022



Nomination and Selection of Board Members

On 23/4/2021, nominated by the board, Lin Chuan, Chang Wen-Hua, Carl Hsiao, Yang Tze-Kaing, Chang Hsiu-Chi, and Liao Ying-Ying were nominated as board members. Tsai Duei, Hsueh Ming-Ling, and Lin Tien-Fu were nominated as independent directors. The professionalism, independence of, and concurrent serving restrictions for, the nominees for independent directors comply with the Regulations Governing the Appointment of Independent Directors and Compliance Matters for Public Companies. Therefore, according to these regulations and the Company Act, these nominees were shortlisted for positions as 2021 directors and independent directors. On 25/8/2021, these 9 nominees were elected as directors (including 3 independent directors) in a regular shareholders' meeting.

On 15/1/2018, the board resolved that the chairman be Lin Chuan, who was later re-elected the following term in a board election on shareholders' meeting on 25/8/2021. Mr. Lin carried with the background in economy, tax, and financial matters, as well as previous experience as the CEO of a research organization, college instructor, public official, chairman, director, and independent director of many listed companies (VIS, Chartis Taiwan Insurance, Pegatron, Casetek Holdings, and Inotera

Memories, among others) have established him as the most suitable person for the role.

Mr. Lin has been chairman since year 2011, and remains committed to the field of biotechnology in Taiwan. With his past experience and in-depth knowledge, in year 2015, Mr. Lin was elected as director of PharmaEngine, a novel drug developer. Mr. Lin has extensive expertise in pharmaceutical drug development, innovation, manufacturing, and marketing, possesses a global perspective, and is very familiar with corporate governance, which will benefit TTY's market strategy, good manufacturing goals, industry integration, vertical and horizontal merger, and lean management. Under Mr. Lin's guidance, TTY is exploring international opportunities and looks to become a benchmark to pharmaceutical company and leader in the industry in Taiwan. TTY welcomes this new chapter with Mr. Lin's decision-making capabilities, and business, management, navigation, and crisis-processing expertise. As the chairman of the Company, Mr. Lin has provided professional, thorough instruction and advice on business management and investment decisions, assisting TTY to improve its company management. Mr. Lin has been elected again to continue to serve as chairman. See the annual report for diverse indicators that quantify the board and its functional committees' core values.

Conflicts of Interest

TTY's adoption of the Board of Directors' Rules of Procedure for Board Meetings follows the Regulations Governing the Procedure for Board of Directors' Meetings of Public Companies, and specifies the directors' avoidance of conflicts of interest. At the time of the Report, Chairman Lin Chuan does not hold a senior management position in the Company other than as chairman of the board. Potential conflicts of interest include: if a director holds a position in a counter party, to avoid and minimize a conflict of interest, TTY reminds directors in meeting notices to explain the key content of their stake in the meeting when there is stake between any proposal and oneself or the corporation one represents. When it is likely to impair the interests of the Company, that person may not join in the discussion, vote, nor exercise a voting right on behalf of another director. All directors have recused themselves in the discussion of and voting for such proposals. 7 practices of avoidance of conflicts of interest were reported in board meetings in year 2022. All avoidance of conflict of interest practices for proposals during board meetings are disclosed in the annual report.

As of year 2023, directors will be required to submit a statement explaining any conflict of interest related to the proposals of the meeting before board meeting for awareness. Our comprehensive system for avoidance of conflicts of interest requires strong self-discipline, discretion in fulfilling the management's ethical duty, and honest operations of business matters and duty.

Enhancing Directors' Knowledge

Since year 2016, self- and peer-evaluations have been conducted among directors and the board. Annual evaluations are reported to and reviewed by the board in the next Q1. The board rated themselves in the past year (2022) as 4.85/5; individual directors 4.9/5; the Audit Committee 4.94/5; the remaining 2 functional committees 5/5. The above results were delivered to the Remuneration Committee and the Board of Directors. The board and its committees run regularly and perform well.

In addition to self-assessment of the board and functional committees, external professional and independent institutes, experts, and scholars are deployed every 3 years to assess the Company's governance in accordance with the Regulations for the Assessment of the Performance of the Board and Functional Committees. The company commissioned an external institute, the Taiwan Corporate Governance Association, to conduct an evaluation of the board and functional committees for the period from 1/9/2020 to 31/8/2021. The board assessment was divided into the 8 areas of the composition of the Board: instruction, authorization, supervision, communication, discipline, inter-control, and risk management, and was conducted via a questionnaire and field interviews. For the summary and suggestions of the Taiwan Corporate Governance Association and correspondent actions of the company, please refer to [TTY's official website](#).

Summary of the Board Performance Evaluation

1. The Chairman respects the proficiencies of the directors. He especially consults independent directors for their opinions and for a third-party perspective to enhance decision-making. The 3 independent directors also take an active role and form a great Board meeting culture.
2. TTY has established a Sustainable Development Committee subordinated to the board. The committee reports on the implementation of work projects and plans for the coming year by the end of the current year, which effectively improves the communication and implementation of all units, focusing on strategic actions in the areas of corporate sustainability and social responsibility.
3. TTY arranges a board gathering and invites the board to visit factories on an ad-hoc basis. The management team interacts with the board closely, facilitating full functional actions.

To seize the opportunities presented by global risk trends and enhance knowledge in terms of economic, environmental, and social topics, TTY's board members aggressively participate in various advanced training courses to create maximum operational value for all stakeholders. The average advanced training hours of board members amounted to 9.94 hours in year 2022.

2022 Advanced Training Courses of Directors

Title	Name	Study date	Course	Hour(s)	Total Hour(s)
Chairman	Lin Chuan	2022/09/07	Net Zero as a Global Trend and Taiwan's Action	3	12
		2022/09/22	How Board Decisions Avoid Breach of Trust and Irregular Transactions	3	
		2022/10/12	Prevention of Insider Trading	3	
		2022/11/10	Protect Trade Secrets and Prevent Insider Trading	3	
Vice Chairman	Chang Wen-Hua	2022/09/07	Net Zero as a Global Trend and Taiwan's Action	3	6
		2022/10/12	Prevention of Insider Trading	3	
Director	Carl Hsiao	2022/05/04	International Twin-summit Online Forum	2	8
		2022/09/07	Net Zero as a Global Trend and Taiwan's Action	3	
Director	Yang Tze-Kaing	2022/10/12	Prevention of Insider Trading	3	6
		2022/09/22	How Board Decisions Avoid Breach of Trust and Irregular Transactions	3	
Director	Chang Hsiu-Chi	2022/11/10	Protect Trade Secrets and Prevent Insider Trading	3	6
		2022/09/07	Net Zero as a Global Trend and Taiwan's Action	3	
Director	Liao Ying-Ying	2022/10/12	Prevention of Insider Trading	3	12
		2022/08/18	Corporate Governance and Securities Regulations	3	
Director	Liao Ying-Ying	2022/08/18	Global Economy and Financial Insight and Prospect	3	12
		2022/08/18	Global Economy and Financial Insight and Prospect	3	

Title	Name	Study date	Course	Hour(s)	Total Hour(s)
Director	Liao Ying-Ying	2022/08/19	Fraud Risk Management and Ethical Management	3	12
		2022/10/12	Prevention of Insider Trading	3	
Independent Director	Tsai Duei	2022/04/13	External Innovation and Business Sustainability	3	9
		2022/07/21	Corporate Governance and Securities Regulations	3	
		2022/09/07	Net Zero as a Global Trend and Taiwan's Action	3	
Independent Director	Hsueh Ming-Ling	2022/01/24	Sharing the "Reference and Guidance Manual for the Audit Committee"	1	15.5
		2022/02/17	How to Avoid Landmine Stocks — Application of Corporate Governance Risks	3	
		2022/02/25	2022 Taiwan and the Global Economy Outlook	1	
		2022/03/02	Taiwan's Anti-tax Evasion System and Analysis of Global Minimum Tax Impact	1.5	
		2022/04/28	Digital Transformation	3	
		2022/07/14	Latest Trends in Preventing Money Laundering and Combating Terrorism (Insider Trading Propaganda)	3	
		2022/10/12	Prevention of Insider Trading	3	
Independent Director	Lin Tien-Fu	2022/02/17	How to Avoid Landmine Stocks — Application of Corporate Governance Risks	3	15
		2022/07/14	Latest Trends in Prevention Money Laundering and Combating Terrorism (Insider Trading Reminder)	3	
		2022/08/11	Reinforcement of Financial Industry Information Security Resilience and Practice of Financial Industry Risk Management Trends	3	
		2022/09/22	Principle of Treating Clients Fairly and Protecting and Empowering Financial Consumers	3	
		2022/10/12	Prevention of Insider Trading	3	

## Internal Control and Audits

### Internal Audit Organization and Operation

TTY manages internal audit affairs in accordance with the Guidelines for the Establishment of Internal Control Systems by Public Companies. The audit office under the Board of Directors is responsible for internal audits. The audit office has 1 chief auditor and a team of auditors arranged depending on the company scale, business conditions, management requirements, and other relevant laws and regulations. Internal auditors work independently to prepare the annual audit plan, identify items to be audited monthly and quarterly, and verify the internal control system with the audit report enclosed upon approval of the board. If any discrepancy is found, the audited business unit has to propose improvement measures, disclose

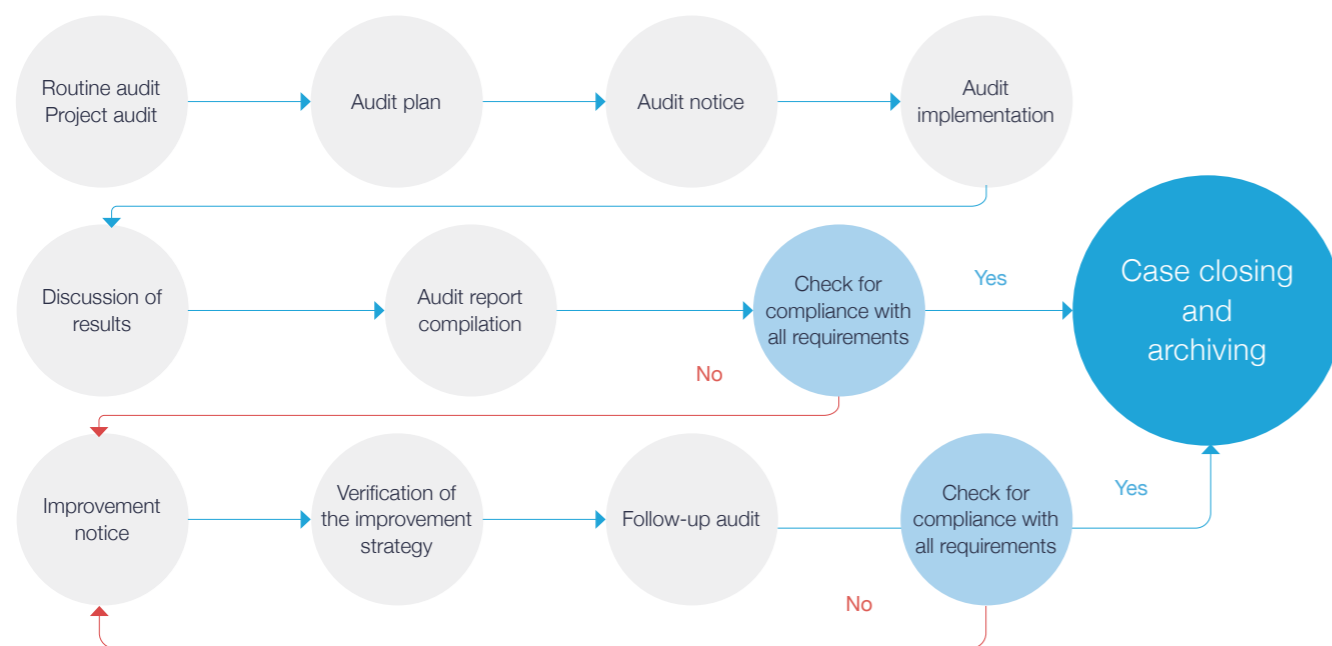
as such in the audit report, and trace the discrepancy and abnormality quarterly. In addition to reporting the implementation status to the Audit Committee periodically, the chief auditor also reports at board meetings.

The Company has also stipulated that "the employment, assessment, and remuneration of internal auditors shall be based on employment, the performance development plan, and performance bonus assessment and salary management regulations" in accordance with the Internal Audit System. Except for the employment of the chief internal auditor, which is approved by the Audit Committee before submission to the Board of Directors for approval, all remaining items shall be reported by the chief auditor to the Chairman for approval. Internal auditors shall be qualified, competent for the role, and engage in advanced training hours as required sustainably.

### TTY's Internal Audit Reporting Status

Submission Deadline	Report Content	Counterparty
End of January annually	Basic information of internal auditors	Website appointed by the competent securities authority
End of February annually	The implementation status of the audit plan in the previous year	
End of May annually	Discrepancies in the internal control system and improvement for abnormal affairs from the previous year	
End of December annually	Audit plan for the coming year	

### TTY's Internal Audit Flowchart



## Functional Committees

To assist the board with supervision, TTY has established a Remuneration Committee, Audit Committee, and Sustainable Development Committee. It has also established a Sustainable Development Promotion Center, Ethical Management Promotion Center, and Risk Management Center subordinated to the Sustainable Development Committee.

### The Remuneration Committee

To consolidate the remuneration system for board members and managers, ensure the fairness of performance and individual compensation of directors and managers in respect of economic, environmental, and social factors, the Remuneration Committee has been established under the Board of Directors. Since year 2016, the Remuneration Committee has comprised 3 independent directors and 2 external experts. All members of the Remuneration Committee exercise their duties as good administrators and propose suggestions to the board to reinforce the independence of the committee. 2 meetings were convened in year 2022, with an average attendance rate of 100%.

The Company implements self-assessments of the board, functional committees, and individual directors once annually, and designates external professional and independent institutes, experts, and scholars to conduct an assessment every 3 years. Self-assessments are mainly conducted via questionnaires. Please refer TTY's website for the results of board and committee performance evaluations. The Remuneration Committee suggests the criteria for compensation and specific amount based on the self-assessment evaluation results and external institutes, as well as referring to overall operation performance.

The Remuneration Committee assists the board with the implementation and evaluation of overall compensation and welfare policies, as well as compensation for directors and managers through a review of the compensation system. It also refers to payment standards in the industry and the achievement of individual directors and managers in respect to corporate governance, economic performance, and positions. The committee also proposes revisions aimed at the compensation structure periodically to ensure TTY's compensation meets the requirements of relevant laws and the principle of fairness. In the future, the Remuneration Committee will connect the remuneration of board members with sustainable performance (environmental protection, employee care, and social and public welfare issues), so that TTY fulfills the spirit of sustainable operations from the top down, led by directors.

### The Audit Committee

To strengthen supervision and reinforce management mechanisms, the board has established an Audit Committee in accordance with the Securities Exchange Act. The Audit Committee consists of 3 independent directors with duties covering financial statements, internal audits, the internal control system, acquisition or disposal of assets, financial derivative transactions, fund lending to other parties, endorsements and guarantees, issuing securities, compliance with relevant laws, potential conflicts of interest among managers and directors, fraud investigations, risk management, employment, discharge, and compensation of the CPA, and employment and discharge of financing, accounting, and internal chief auditor staff. The attendance rate of all members of the Audit Committee in year 2022 was 100%.

### The Sustainable Development Committee

Following the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies, TTY established a Sustainable Development Committee in accordance with the Principles of Corporate Social Responsibility Practice on 7/10/2019 (renamed to the Principles of Sustainable Development Practice on 24/12/2021). The Sustainable Development Committee is subordinated to the Board of Directors, and its duties include setting policies, goals, strategies, and execution plans relating to sustainable development from an environmental, social, and governance perspective, as well as reviewing and revising the implementation system and results annually for submission to the Board of Directors.

3 functional centers– the Sustainable Development Promotion Center, Ethical Management Promotion Center and Risk Management Center– are subordinated to the Sustainable Development Committee to promote and implement the sustainable development strategic goals of the Company. The committee has 1 executive secretary served by the chief corporate governance officer who oversees meetings of the committee and matters assigned by the Board of Directors.

# Governance Principles

## Promote Corporate Sustainability Development

The board of TTY has established a Sustainable Development Promotion Center under the Sustainable Development Committee that is responsible for the proposal and implementation of sustainable development policies, systems, relevant guidelines, and promotion plans, and submits such plans to the Sustainable Development Committee which subsequently reports to the Board of Directors periodically. The General Manager is the convener of the Sustainable Development Promotion Center, and the financial department is responsible for the promotion of relevant policies.

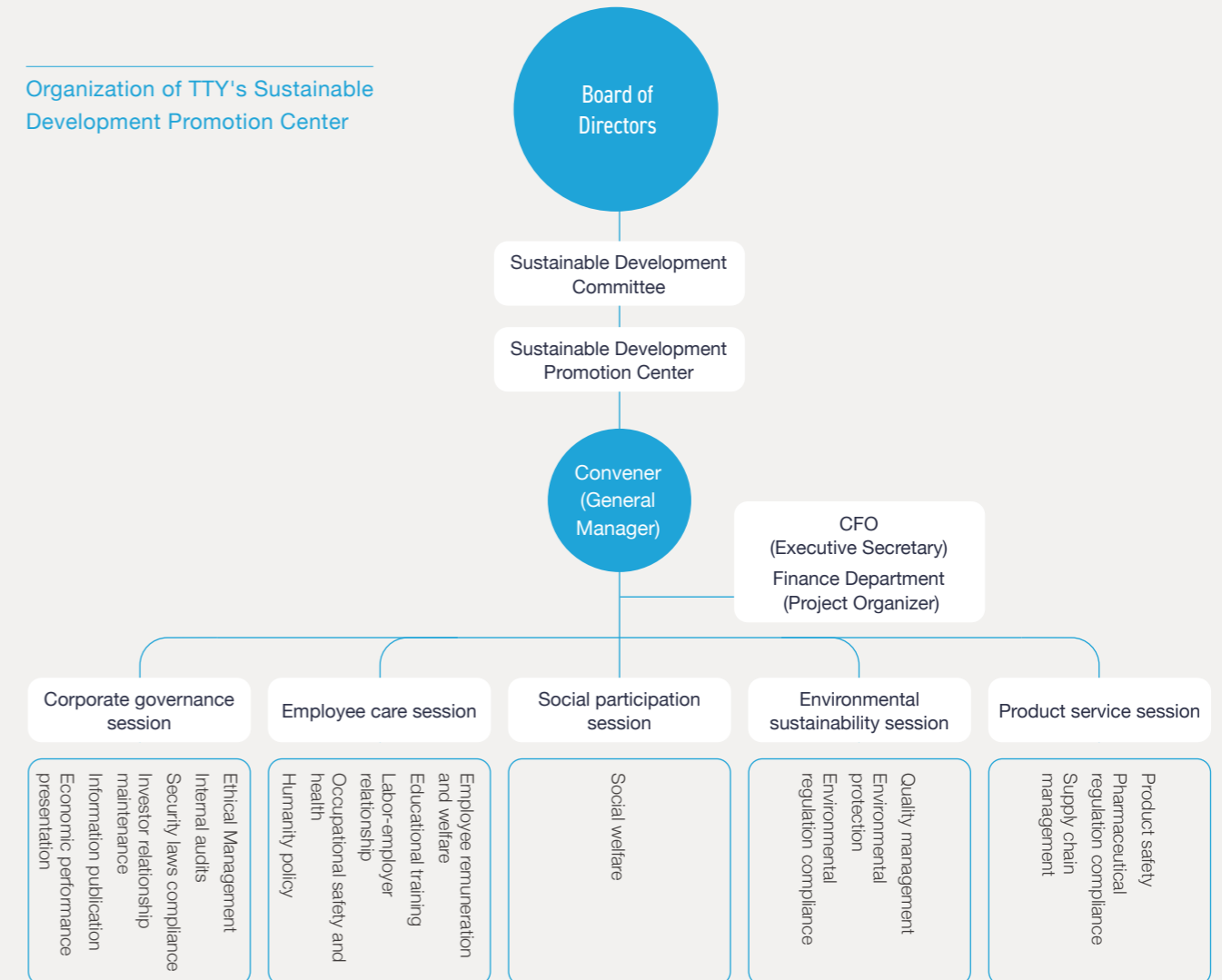
The Sustainable Development Promotion Center is divided into corporate governance sessions, employee care sessions, social participation sessions, environmental sustainability sessions, and product service sessions based on ESG. In addition, a stakeholder section has been established in the "Sustainability" zone on the Company's website as a smooth and effective communication channel. The center also has internal meetings to confirm the requirements and expectations of stakeholders of the Company. Meanwhile, all sessions propose methods to improve ESG operations and advance future goals to promote the concept of business operations and social responsibility.

The Sustainable Development Promotion Center makes the implementation plan for the coming year by the end of the current year, and submits the plan to the Sustainable Development Committee and the Board of Directors. The work plan for year 2023 was submitted to the Sustainable Development Committee for implementation upon approval on 4/11/2022.

The Sustainable Development Promotion Center makes the implementation plan for the coming year by the end of the current year, and submits the plan to the Sustainable Development Committee and the Board of Directors. The work plan for year 2023 was submitted to the Sustainable Development Committee for implementation upon approval on 4/11/2022.



### Organization of TTY's Sustainable Development Promotion Center



Task force	Corporate governance session	Employee care session	Social participation session	Environmental sustainability session	Product service session
<b>Task</b>	To ensure legal compliance of corporate governance and board performance is linked to ESG	To ensure a safe, fair workplace that is inspired to progress, with protected employee salary and benefits	To organize community and public engagement for better teamwork within the Company and giving back to society	To promote green operations and sustainability, and integrate environmental friendliness in company strategies and operations	To provide better products and services that benefit both hospital and patients
<b>Major topics</b>	Economic performance Access to medicine Sustainable development strategies Ethical management	Talent attraction and retention	Sustainable development strategies	Supplier management	Counterfeit drugs Drug safety Subject safety Reasonable pricing Supplier management Marketing ethics



## Ethical Management

It is basic obligation to follow laws and regulations in daily operations, and key for operational sustainability. To ensure local compliance, we have a dedicated legal team that pays close attention to updates and changes to regulations and gives

proper compliance advice, ensuring legitimate operations across all departments. Each department reviews how such guidance has been carried out on annual basis. Apart from suggestions for improvement by authorities, no major violations or illegalities led to penalties in year 2022.



Corresponding GRI index

GRI 205-2 Communication and Training of Anti-corruption Policies and Procedures

Policies and Commitment

Engage in business activities on the principle of fairness, honesty, good faith, and transparency, and effectively implement ethical management policy, aggressively preventing dishonest behavior, and allowing the Company to be responsible to stakeholders.

Goals and Targets

**Short-term Goals**  
organize corporate ethics related online and in-person courses.  
**Mid- to Long-term Goals**  
commit to creating a business culture of ethical management.

Responsibilities and Resources

Establish the Ethical Management Promotion Center to develop an ethical management system.

Assessment Mechanism and Results

- The Sustainable Development Committee convened 7 meetings in year 2022. The Ethical Management Promotion Center reported the ethical management status and proposed to the Sustainable Development Committee a 2023 work plan; organize 2 corporate ethical management promotions and 2 insider trading prevention programs.
- Regulations: establish Principles of Procedures for Ethical Management, Procedures for Ethical Management and Guidelines for Conduct, Internal Material Information Management and Procedures for the Prevention of Insider Trading for a holistic anti-corruption system.
- Training: in year 2022, 1 Insider Trading Prevention training was given to 7 directors and 54 senior management staff members, in-person and online; 2 corporate ethical management and 2 insider trading prevention courses were attended by all employees, with 100% completion of online learning and tests.
- Reporting mailbox: dedicated personnel report non-advertising or spam mail to the Sustainable Development Committee immediately after receipt, which shall then report a summary of mail received quarterly.
- No corruption-related issue in TTY in year 2022.

### Principles of Procedures for Ethical Management

To prevent dishonest behavior, TTY has established an Ethical Management Promotion Center subordinated to the Sustainable Development Committee, in which the General Manager is the convener. Under the center are a Report and Process Team, and an Administration Team. All senior management staff members declare ethical management compliance; both the General Manager and vice president sign an ethical conduct statement. The Ethical Management Promotion Center establishes ethical management as a business culture, drafts the Principles of Procedures for Ethical Management, the Procedures for Ethical Management and Guidelines for Conduct, and Operating Procedures for Handling Internal Material Information and Insider Trading Prevention as the key regulations of ethical management and systems to process case reports and ensure employees do not engage in improper interests or corruptive practices.

### Ethical Management Education and Training

To ensure all employees are aware of ethical management regulations, TTY disseminates dishonest behavior related regulations to all new employees, provides an integrity policy program for each newly recruited employee, and makes announcements the Procedures for Ethical Management and Guidelines for Conduct on the intranet and in email to all employees. To ensure new employees implement and follow

company regulations from day one, TTY arranges a series of online and in-person orientation courses, including an Introduction to Intellectual Property Rights and Environmental, Safety and Health, etc. 122 participants attended in-person courses totaling 183 training hours in year 2022.

Focusing on anti-corruption policies and procedure communication with members of the governance unit, TTY manages insider trading prevention related legal training for directors, managers and employees at least once annually, and reports on operation results to the Sustainable Development Committee and the Board of Directors every year. On 12/10/2022, an insider trading speech was given to 7 directors and 54 mid-senior management staff members in-person and online, totaling 183 training hours. Ethical management training and unethical behavior cases from year 2022 were reported to the Sustainable Development Committee and the board on 14/3/2023.

TTY organizes various training courses on an ad-hoc basis for employees' advanced development. The 2022 online courses included Drug Safety Supervision, Introduction to Good Drug Practice (GDP) Management, Information Security, Introduction to Trade Secrets, Corporate Ethical Management, Insider Trading Prevention, and Material Business Event Handling Principles, all of which were compulsory. All employees completed 100% of online courses.

TTY Anti-corruption Training Status for the First-half of Year 2022

Employee Category	Total Employee	Actual Participants	Percentage
Administration	79	79	100%
Marketing & Sales	130	130	100%
Research	91	91	100%
Factory	240	240	100%
<b>Total</b>	<b>540</b>	<b>540</b>	<b>100%</b>

TTY Anti-corruption Training Status for the Second-half of Year 2022

Employee Category	Total Employee	Actual Participants	Percentage
Administration	76	76	100%
Marketing & Sales	128	128	100%
Research	83	83	100%
Factory	234	234	100%
<b>Total</b>	<b>521</b>	<b>521</b>	<b>100%</b>

### Complaints and Suggestions Channel

Corporate sustainable operations are based on honesty and responsible business actions. In view of this, we adopt various approaches for reporting cases and suggestions, and encourage stakeholders to report, complain, or make suggestions regarding any unethical behavior or dishonest operations that impact the environment, economy, society, and human rights.

To minimize dishonest behavior is made via the complaint and report system and related process. There is a mailbox for reporting such behavior on TTY's website and employees' intranet: [ethical@tty.com.tw](mailto:ethical@tty.com.tw). The stakeholders' feedback is processed by the Ethical Management Promotion Center. All cases received are gathered, listed, and submitted to the Sustainable Development Committee every quarter. Upon receiving a case, an investigation is initiated. Management of different departments will form an investigation team according to the accused personnel's position. All violations will be punished, the persons culpable suspended, or employment terminated. The reporter's identity and report content remains

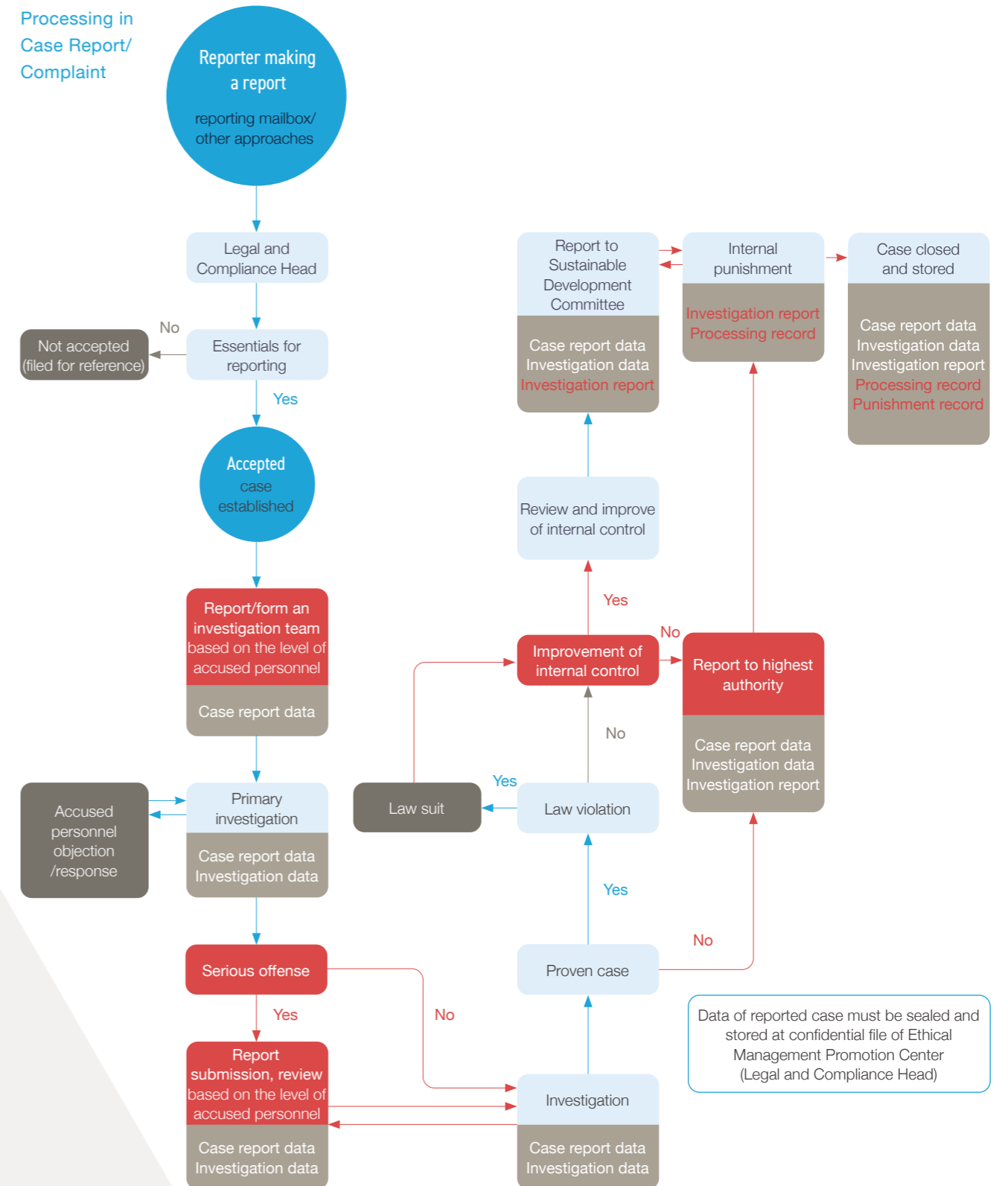
confidential to protect personal safety. A report may be made anonymously, and anyone who reveals the reporter's identity or report content will be severely punished. The audit office examines the mailbox each year to ensure no reports have been hidden.

Anyone can report illegal activity to [ethical@tty.com.tw](mailto:ethical@tty.com.tw). The information required for a case report is available on the Company website. In year 2022, 1 case was reported regarding factory task procedure. An investigation was initiated and no illegality was found, and was reported to the Sustainable Development Committee afterward. To minimize misunderstanding, TTY adopted correction methods, including taking photos, additional personnel for reassurance, installing cameras to monitor and reinforce procedure, and conducted an audit to follow up. Other than that, 2 complaints of employees were finished investigation. The investigation into the complaint has been concluded. TTY will focus on management's ability to communicate and manage situations such as this to avoid a similar occurrence. See "Protecting Employment Rights" for further details.

TTY Number of Complaints and Cases in Year 2022

Case Type	Number of Cases	Closure Rate
Human Rights	2	100%
Production	1	100%
<b>Total</b>	<b>3</b>	<b>100%</b>

### Procedure for Processing in Case Report/ Complaint



# Risk Management

Aimed at the management of risk and uncertain factors that could potentially threaten business operations, TTY has added a Risk Management Center subordinated to the Sustainable Development Committee in year 2020 to effectively evaluate common risk and countermeasures. TTY also arranges educational training for employees, and has established basic knowledge regarding various operational safety procedures and protection to reduce the impact of operational risk and reinforce sustainable operations.

The Risk Management Center, convened by the General Manager, supervises the execution of risk management and coordinate operations. The Risk Management Team runs as 1 down unit of General Manager and takes charge of all types

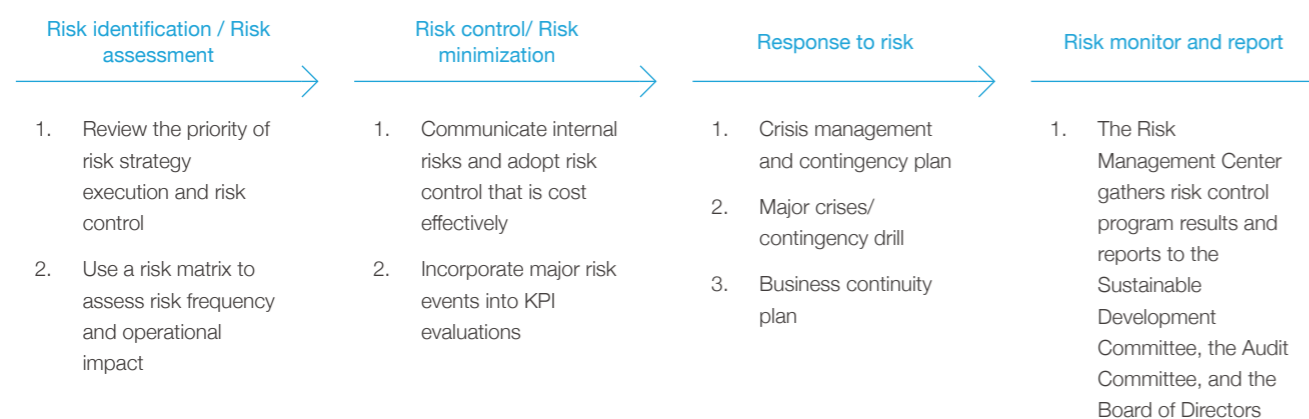
of risk management work. The Finance Department provides assistance services and supports the General Manager, with coordinating risk management across all departments, ensuring all risks involved are affordable. The Sustainable Development Committee is supervising of operations of the Risk Management Center. The Audit Committee ensures effective implementation of internal control, and advises on the Company's risk management. Board of Directors, the top decision-making unit makes the decisions on the Company risk management and bears responsible for their decisions. The Risk Management Center makes an annual report to the Sustainable Development Committee, the Audit Committee, and the board regarding its operations.

## Risk Management Organization



To manage uncertainties that may pose a threat to the Company operation, and ensure stable business and sustainable goals, TTY has regulated risk management procedure as follows according to the Risk Management Practice Code of TWSE/TPEX Listed Companies, and the Regulations Governing the Establishment of Internal Control Systems by Public Companies.





## TTY's Risk Management Procedure








TTY's [Risk Management Policy and Procedure v.2](#)

## Major Risk Items and Countermeasures

### 2022 TTY Major Risk Items and Countermeasures

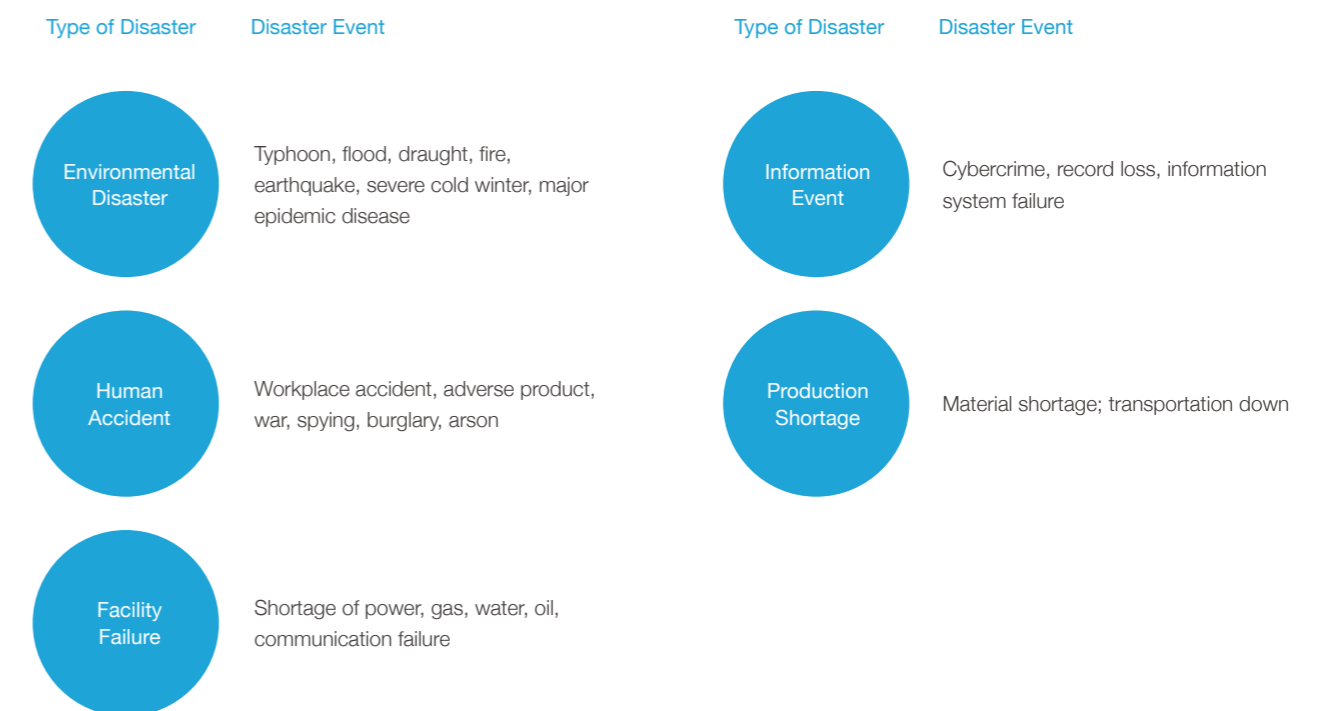
Risk Item	Risks Explanation	Risk Management Strategies	The Authorities
 Regulations Compliance	Revision and implementation of relevant financial authority and pharmaceutical industry laws and regulations affects product promotion.	<ol style="list-style-type: none"> <li>Annual checks to report legal compliance to the government.</li> <li>Verify regulations and current implement procedure, and establish SOPs.</li> </ol>	Legal and compliance Department; 3 business units; Regulatory Affairs Department
 Industrial and Market Change	The adjustment of NHI drug price affects some drug price and sales, which also affects overseas product prices resulting in a reduction of revenue and profit.	<ol style="list-style-type: none"> <li>Arrange a complete sales network nationwide to increase sales coverage.</li> <li>Reinforce strategic cooperation aimed at drugs with market scale and value.</li> <li>Enhance the confidence of hospitals and physicians in drugs through cooperation with clinical experts to increase the opportunity of reasonable use.</li> <li>Introduce new drugs in late clinical phases for target treatment through licensing, cooperate with the schedule of certificate acquisition in advanced countries to shorten the time for domestic certificate acquisition.</li> <li>Create optimal revenue in cooperation with the marketing team and resources to avoid drug price adjustment that reduces profits.</li> </ol>	3 business units; Business Development Division; Regulatory Affairs Department
 Ethical Management	Insider trading may cause a loss of information security due to major information leaks, affecting investors' confidence and goodwill.	<ol style="list-style-type: none"> <li>To prevent insider trading, in December, 2021 a report was made to the board regarding measures to prevent insider trading. An update to the Operating Procedures for Handling Internal Material Information and Insider Trading Prevention, also regulates the buy and sale of the Company stock during the closed period of 30 days before the publication of annual financial statements and 15 days before the announcement of quarterly financial statements by TTY directors, managers, and holders of more than 10% of the Company stock.</li> <li>Starting from 9/3/2022, the date of the submission of the 2021 annual financial statements, a reminder is sent via email regarding the regulation of insider trading of the Company stock 30 days before the announcement of the annual financial statement and 15 days before announcement of quarterly financial statements.</li> <li>On 12/10/2022, an insider trading speech was given to 7 directors and 54 mid-senior management online and in-person.</li> <li>Education to insider trading prevention is given twice a year.</li> </ol>	Risk Management Center, Finance Department
 Product Safety	The effects of adverse drugs reactions to the Company operations and reputation.	<ol style="list-style-type: none"> <li>Implement Drug Master File (DMF) management.</li> <li>All products are complied with PIC/S GMP regulations.</li> <li>Conduct Drug Safety Supervision training for employees annually, and Good Drug Practice (GDP) Management training every 2 years.</li> <li>TFDA aligned PV report system.</li> </ol>	3 business units; Factories; Pharmaceutical Affairs Department

Risk Item	Risks Explanation	Risk Management Strategies	The Authorities
 <p>Supply Chain</p>	Risks of unstable raw material quality and supply sources, supplier environment and labor human rights.	<ol style="list-style-type: none"> <li>Maintain a cooperative relationship with existing suppliers and aggressively develop new suppliers to ensure second or third sources of materials.</li> <li>Establish a supplier sustainable selection mechanism, evaluate suppliers periodically and irregularly annually and establish a list of qualified suppliers and classification management.</li> </ol>	Factories; Procurement Department
 <p>Occupational Safety</p>	Occupational accidents causing personal injury and property loss.	<ol style="list-style-type: none"> <li>Working places of all operational sites are insured with public liability insurance.</li> <li>Proper compliance with occupational safety and health rules.</li> <li>ISO 45001 incorporated and certified.</li> </ol>	Factory's environmental safety and health; all TTY locations
 <p>Intellectual Property, Business Secrets, and Confidentiality</p>	Loss due to stolen, forged or embezzled patents, trademarks or trade secrets.	<ol style="list-style-type: none"> <li>Patent and trademark management: establish an intellectual property management system, manage patent and trademark cases, and control flow; inventory of the quantity and status of patents and trademarks periodically every year and review the consistency of the name of the product and trademark on the market to ensure trademark protection of corresponding products.</li> <li>Trade secret management: establish confidentiality measures, review the implementation status via internal audits annually, and provide trade secrets and confidential management training to employees every year to enhance their awareness. Include non-disclosure clauses in employee contracts whereby employees are obligated to keep trade secrets acquired during service and after resignation confidential.</li> <li>Trade secret drills: at least once a year to discover and reinforce weak links. Use of the professional document management system and plug gaps in security to fortify confidentiality management.</li> </ol>	Intellectual Property Department
 <p>Climate Change</p>	Extreme climate results in losses directly from climate incidents, and indirectly from global supply chain disruption and resource shortages.	<ol style="list-style-type: none"> <li>Improve disaster response capabilities.</li> <li>Actively develop new suppliers to ensure second or third source of raw materials and ensure the implementation of supplier sustainability management.</li> <li>Establish a sustainable environment mechanism. Inclusion of ISO 14064-1 GHG inventory standards.</li> </ol> <p>Note: For detailed measures of TTY's climate change response, please refer to the <a href="#">Task Force on Climate-related Financial Disclosure</a>.</p>	All TTY locations; Factory Engineering; Risk Management Center; Procurement Department; Sustainable Development Promotion Center
 <p>Major Epidemics</p>	Operational impact caused by large-scale epidemics.	<ol style="list-style-type: none"> <li>Establish a Business Continuity Plan for an epidemic, including employee health monitoring and care management, supply chain risk management, and client management and crisis communication; and reinforce infrastructure and human resources management to backup operations in different locations, such as emergency offices, video conferencing, and remote and home working.</li> </ol>	Occupational safety and health; ODHR; Risk Management Center; Public Affairs Department; Information Technology; General Affairs Department

Note: For detailed risk management information, please refer to the official website.

### Business Continuity Plan (BCP)

The purpose of the Business Continuity Plan (BCP) is to protect employees when the company faces the risk of discontinued operations so it can recover key activities as soon as possible. The Risk Management Center has therefore developed and published preventive measures, disaster mitigation measures, and related drill procedures for 6 common operational continuity risks and scenarios, and conducts a review and drill annually to ensure no operational continuity crisis occurs to the Company.



TTY BCP Practice in Year 2022

Corresponding Risk to Operational	Practice Item	Common Goals
Supply Chain Disruptions	<ol style="list-style-type: none"> <li>1. Regulation compliance: API requires DMF certification and GMP regulations, and an inventory of certificates annually.</li> <li>2. Assessment system: factory quality control conducts a supplier assessment annually.</li> <li>3. Inventory management: continuously improve the inventory monitoring system and demand forecast precision to ensure a safe inventory level of API and finished products.</li> <li>4. Multiple sources strategy: actively develop second and third sources to increase coverage.</li> </ol>	
Shutdown due to a Violation of Pharmaceutical Industry Regulations	<ol style="list-style-type: none"> <li>1. Regulation compliance: all parts of the business satisfy the GMP, GDP, and Pharmaceutical Affairs Act, and undergo periodical and irregular official inspections by the TFDA and different countries.</li> <li>2. Marketing activity: establish a drug advertising checklist for compliance of the marketing unit.</li> <li>3. Drug review: all changes to products are reviewed by quality control and the legal unit.</li> <li>4. Changes to laws: receive official news and messages from various associations periodically, and gather relevant units to discuss response to changes.</li> </ol>	
Company Image Affected by Adverse Drug Quality or Drug Reaction of Patients	<ol style="list-style-type: none"> <li>1. Regulation compliance:                     <ol style="list-style-type: none"> <li>(1) Manufacturing factories follow GMP and GDP regulations in business activities and undergo periodical and irregular official inspections by the TFDA and different countries.</li> <li>(2) Construct an adverse product reporting system incorporated with the TFDA and an adverse drug reporting mailbox, and hold quality management meetings periodically.</li> </ol> </li> <li>2. Educational training: organize Drug Safety Supervision training annually and an Introduction to GDP Management training every 2 years.</li> </ol>	<ul style="list-style-type: none"> <li>• Test the effectiveness of disaster response and reporting procedures</li> <li>• Activate restoration rapidly through planning for disaster in advance</li> </ul>
Information Security	<ol style="list-style-type: none"> <li>1. Management policies: information security management system and authorization system management.</li> <li>2. Prevention system: firewall, anti-blackmail virus tools and anti-virus software.                     <ol style="list-style-type: none"> <li>(1) Conduct internal or outsourced penetration tests on an ad-hoc basis. Introduced a priority management/file access monitoring system in year 2020.</li> <li>(2) The inclusion of HCI (Hyper Converge Infrastructure) and an expert file server solution ensures even timely, flexible, comprehensive backup of the system and prevention drills.</li> </ol> </li> <li>3. Educational training: open information security training courses.</li> <li>4. Establish private equipment (computers, mobile phones, tablets) to access the intranet management system and expand periodical inventory against authorization.</li> </ol>	
Work Suspension due to COVID-19	<ol style="list-style-type: none"> <li>1. Emergency response team: continuously follow pandemic developments in accordance with the Principles of Disaster Emergency Response Handling.</li> <li>2. Work separation practice and a WFH plan.</li> <li>3. Safe inventory establishment: complete the safe inventory level for finished products and raw materials.</li> </ol>	
Occupational Safety and Health	<ol style="list-style-type: none"> <li>1. ISO 45001 with independent inspection completed.</li> <li>2. The Chungli factory conducts regional united drills online, 2 fire safety drills and 1 chemical leakage drill annually.</li> <li>3. The Lioudu factory conducts alert-free drills, and fire safety and chemical leakage drills.</li> </ol>	

## Task Force on Climate-related Financial Disclosure

To correspond with global warming, extreme climate, environmental protection, and energy-saving initiatives, and to increase awareness of safety and health and conservation, TTY has identified risks and opportunities brought by climate change and planned physical response strategies, including water resource management and development, disaster response and adaptation, and city and value chain cooperation reinforcement.

The potential major impacts TTY will face in the future include energy, environment, safety and health issues, and external restrictions due to regulations, while low carbon energy, power, and carbon footprint issues constitute important items requiring

close attention. To respond to these important impacts, in addition to organizational adjustment and group response strategies, TTY will also reinforce strategic cooperation with domestic and foreign peers in the same industry, the green energy industry, suppliers, and academic and research circles to reduce operational risk and create more favorable operational conditions.

In addition to cooperating with national policies and the GHG reduction plan, TTY will further establish an energy-saving and carbon reduction team, promote energy savings and carbon reduction, evaluate low-carbon, high-efficacy actions, and replace low-efficiency equipment to reduce the pollution generated by operational processes.



# TCFD

Core Elements



## Governance

The Risk Management Center is the responsible unit for climate change management, and the general manager is the convener of the Risk Management Center responsible for decisions, evaluation and monitoring climate change related matters.

The center reports progress of the climate change response plan to the Sustainable Development Committee and the Board of Directors in accordance with the climate governance material principles established by the Risk Management Center annually.

In addition, it manages climate change related training to enhance climate change awareness at governance level.

## Strategy

TTY is committed to fulfill low carbon, green processes and promote the green supply chain, and is expected to lead the environmental transformation in the biotechnological pharmaceutical industry and achieve GHG gas reduction goals.

## Risk Management

The Risk Management Center convenes sessions to identify risks and opportunities related to climate change, and establishes management plans for major risks and opportunities to trace progress and results, and achieve environmental goals.

## Indicators and Targets

### Short-term Goals

- 2% power conserved as a result of the implementation of an energy-saving plan. The plan was made in year 2022 regarding the improvement of energy-consuming equipment.
- Introduced the ISO 14064-1 GHG inventory standards and complete certification in year 2023.
- Assessment to adopt green energy outsourcing or increase energy-saving facilities by year 2023.
- Establish climate governance material principles in year 2023.

### Mid-term Goals

Increase the target of reducing carbon emission gradually.

### Long-term Goals

10% or more carbon reduction in year 2025 compared to the base year 2022.

### Verification of Climate-related Risks and Opportunities

#### TTY's 2022 Climate Change Related Risks Identification and Countermeasures

Risk Category	Risk Impact	Countermeasure and Potential Financial Effects
<b>Policies and Laws</b>	The Greenhouse Management Act is about to be stricter. If GHG emission control is launched in the future, carbon prices will increase the operational costs of the Company.	To improve energy efficiency, TTY will continuously implement its energy-saving and carbon-reduction plan and install energy-saving facilities. TTY will also continually improve processes to reduce the environmental impact via source controls and terminal prevention equipment reinforcement.  According to data from PTC, if nuclear power is replaced by renewable energy and fuel coal is replaced by gas in the future, power generation costs per degree will increase by 45.45% in year 2025. Taking the average power price of NTD\$2.6 per degree in year 2018, power generation costs per degree will increase by NTD\$1.182 in year 2025.  Based on the 14 million kWh power outsource of the last 2 years, an annual increase of NTD\$16.55 million in power cost is expected.
<b>Technological Risks</b>	The economic system has gradually turned to supporting low-carbon, highly efficient technology improvement and innovation, which may affect the competitiveness of the Company and likely increase procurement, production and distribution costs to meet demand and depth as required by customers.	Evaluate the comprehensive impact of climate change related policies to make short- to mid-term operational plans. To continue energy-saving measures, including changing fans and motors of cooling towers for the A/C, installing a cooling tower water quality monitor, improving A/C system performance to reducing power use, gradually moving toward the green transformation.  1. A total of NTD\$32.19 million budget is expected on replacement of assets and equipment for year 2023.  2. To conserve power in factories include changing fans and motors of cooling towers for the A/C, implementing a cooling water quality monitor and improving A/C system, and installing LED lighting from traditional T8 lighting with a total cost of NTD\$1.03 million.
<b>Transformation Risk</b>		
<b>Market Risks</b>	To correspond with climate change risk and carbon emission control requirements, new business models have gradually been created and enterprises are required to create carbon assets management capabilities to adapt to this trend. The inventory costs of TTY increased to avoid the risk of supply chain disruption due to unstable supply of raw materials.	To enhance the ability to assume climate change risk, TTY has created new revenue opportunities and market expansion through the establishment of environmental protection related mechanisms and carbon emission control measures. Meanwhile, inventory costs will increase along with the increase of safe inventory levels. With inventory of about NTD\$1.026 billion in year 2022, NTD\$10.26 million in inventory costs are expected, an additional 1% each.
<b>Reputation Risks</b>	Climate change may affect the image that customers and social groups have in terms of how committed the Company is to the low-carbon transformation. If the Company produces high carbon emissions or high levels of pollution, it may not win tenders, may lose orders, experience a decrease in revenue or even suffer a reputational damage.	To develop more environmentally friendly products and services, TTY is not only continuously improving sewage and waste recycling rates, but managing environmental sustainability activities to build a green enterprise culture from the inside out, and evaluating its investment in green energy and low carbon logistic development to reduce the carbon footprint of the Company products, and enhance industrial competitiveness in line with market demand.

Risk Category	Risk Impact	Countermeasure and Potential Financial Effects
<b>Physical Risk</b>	Climate change may cause a typhoon, flood, draught, or other extreme climate event, resulting in damage to assets, supply chain disruption, and other events with an immediate financial impact.	Reinforce water resource management and ensure the safety of plant equipment to maintain uninterrupted operations. In response to draught in Taiwan, TTY has completed a list of water suppliers but costs have increased. With 99,652 degrees of water consumption in year 2022, the cost of water outsourcing is calculated at NTD\$80,000/day (25t water tanks for 4 rounds) to cover water shortages.  Revenue will also be affected if materials and finished products cannot be delivered on time due to a typhoon and floods. To mitigate the risk, warehouse leases in different locations will be evaluated and rent will be increased by about NTD\$20 million.
<b>Immediate Risks</b>		
<b>Long-term Risks</b>	Rising temperatures around the world and the gradual shortage of water, electricity, and fuel resources may cause discontinued factory operations, resulting in rising operational costs or penalties due to delivery delays.	Evaluate the use of regional energy and resources consumption and arrange off-peak production as needed. Prepare a BCP to actively find new suppliers and create a list of emergency power generators and water suppliers to ensure stable materials and energy resources supplies, and enhance the ability of TTY to respond and adapt to disasters accordingly.

#### TTY 2022 Climate Change Related Opportunities and Countermeasures

Type of Opportunity	Opportunity Explanation	Countermeasure and Potential Financial Effects
<b>Resources Use Efficiency</b>	Increase energy use efficiency to reduce mid- to long-term operational costs and achieve carbon reduction goals.	The use and upgrade of equipment with less energy consumption, water, and power reduction goals, and better efficiency in year 2022 continued at an expense of NTD\$1.04 million. Such measures expect to save NTD\$400,000/year. The renewal of outdated machines in year 2023 is given a budget of NTD\$32.19 million, contributing to a cost reduction of NTD\$2.7 million/year.
<b>Duration</b>	Improve the ability to adapt to climate change by managing climate change related risks and seizing opportunities.	The Risk Management Center convenes all sessions to identify climate change related risks and opportunities, and plans management strategies. The Finance Division establishes climate governance material principles to trace progress and effects, and to reinforce the risk response ability of the Company.

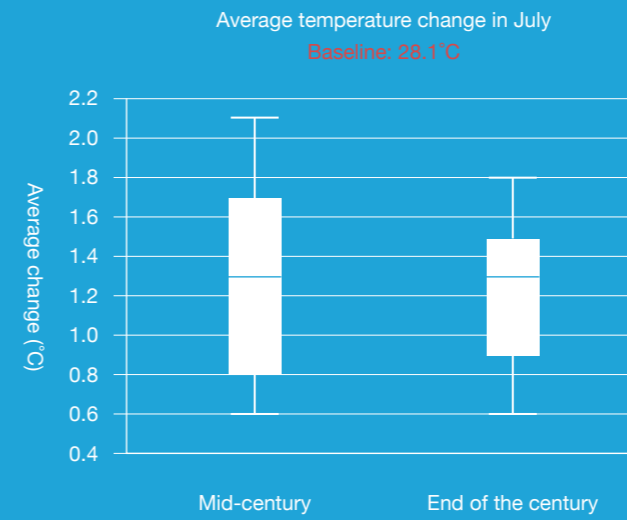
TG-mon (Julys)

Analysis of Scenarios

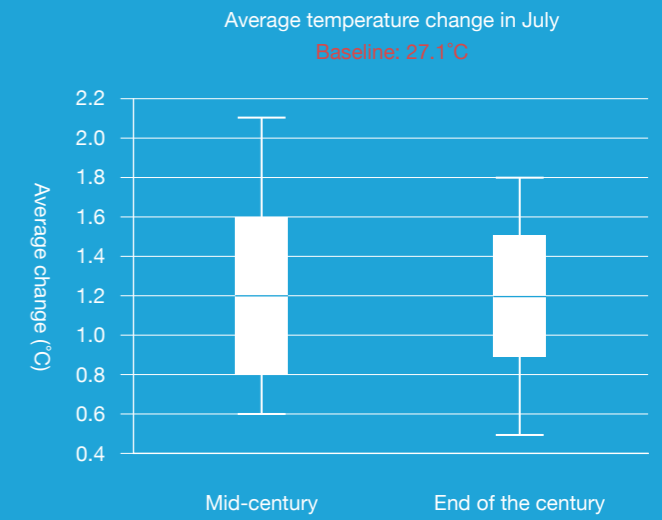
1. To respond to the FSC's TCFD framework requirement, the scenario is based on IPCC 5th RCP (Representative Concentration Pathways) and RCP2.6 scenario, which resulted an increase of 2°C .
2. The weather scenario takes into account locations in Taiwan, namely Headquarters, Chungli Factory, Liudu Factory, Neihu Factory, Translation Research Center, and Pharmaceutical Development Center.
3. The base period of the weather scenario is set between year 1976–2005; estimation is set in the mid-21st century.

4. The simulation of the scenario adopts following indexes:
  - a. Temperature: maximum monthly average temperature (TG-mon), number of days where the daily maximum temperature exceeds the 90th percentile of the maximum temperature (TX90p).
  - b. Heavy Rain Days (R200) Highest one day precipitation amount (rx1day), number of days with rainfall over 200mm per year (R200).
  - c. Rise of sea level: when temperature rises 2°C , the sea level of Taiwan rises 0.5 meter.
5. Source: TCCIP, NCDR, Coastal Risk Screening Tool: Ice Sheet Contributions to Sea Level Rise.

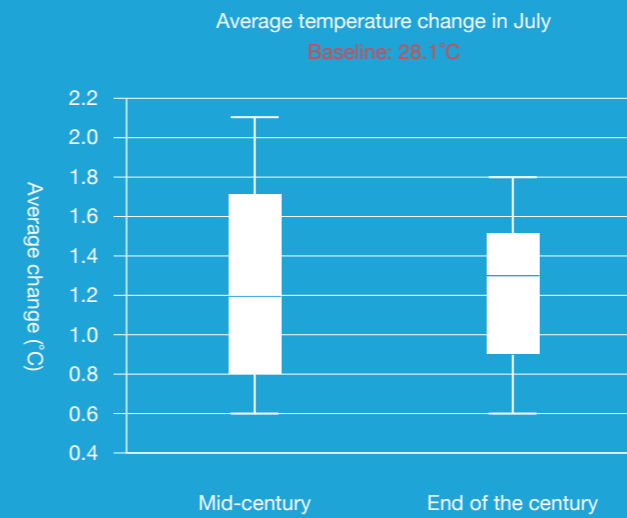
Taipei



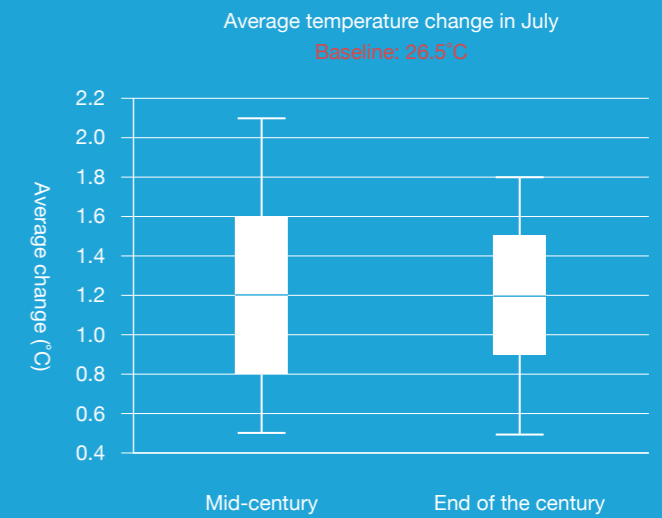
New Taipei City



Keelung



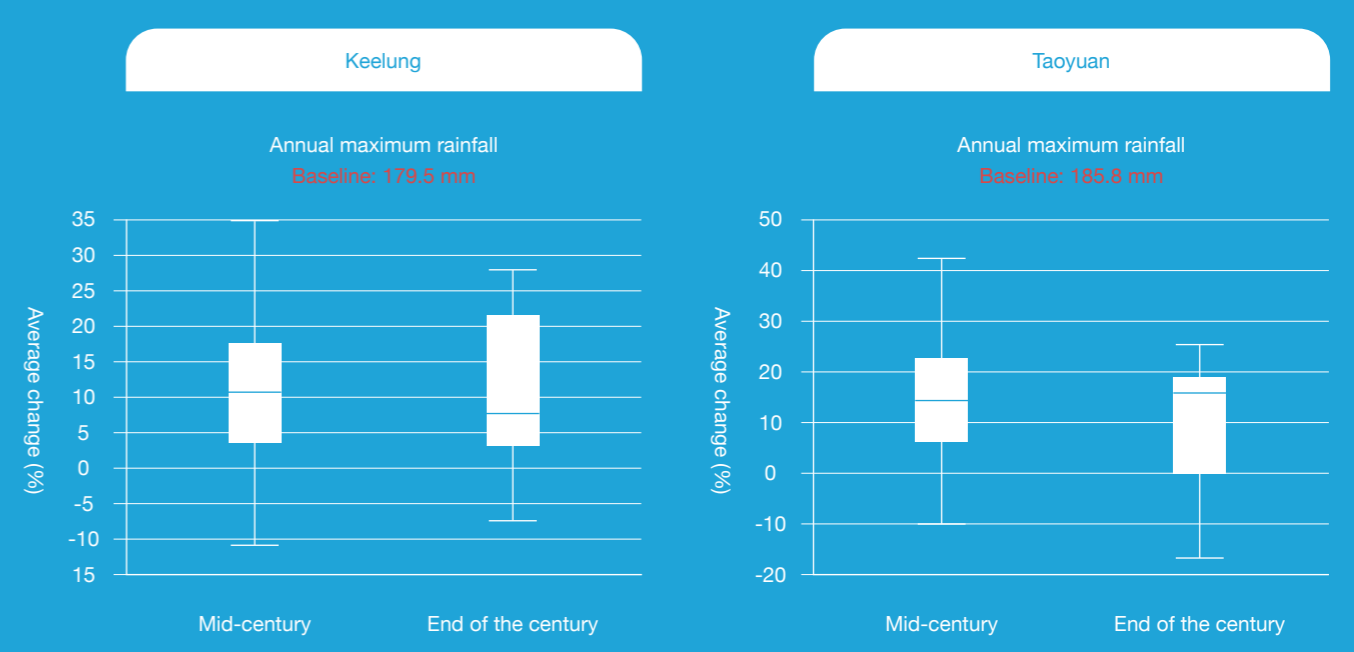
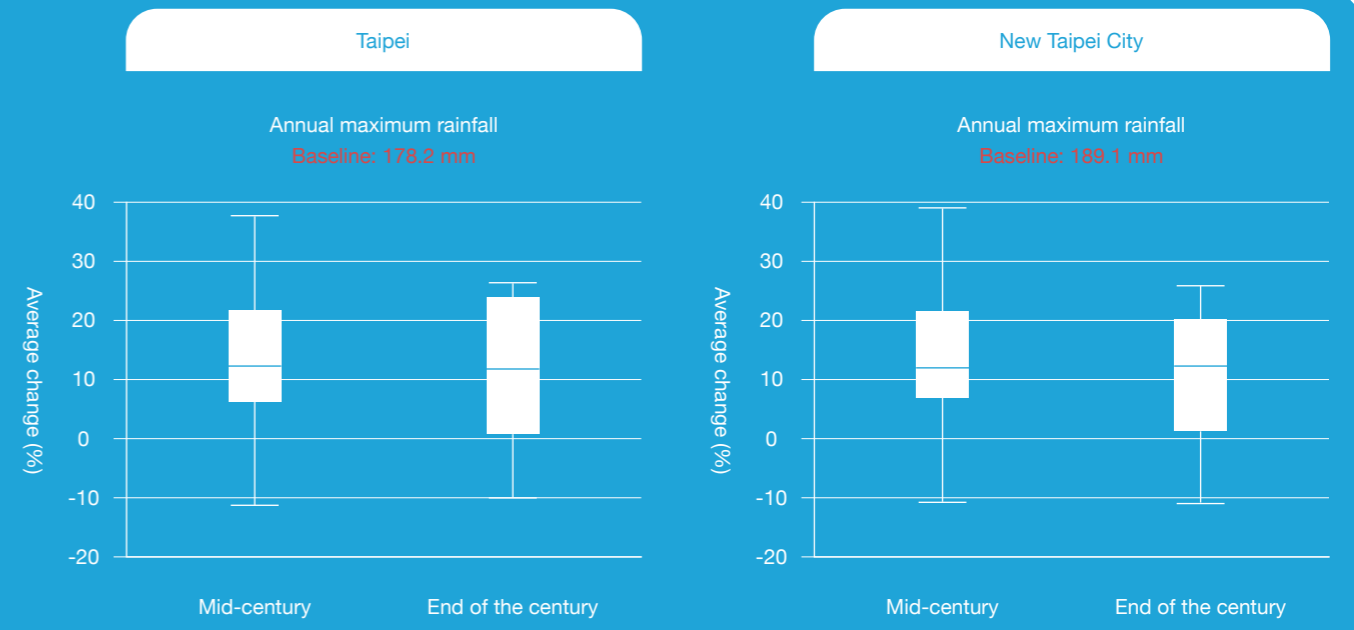
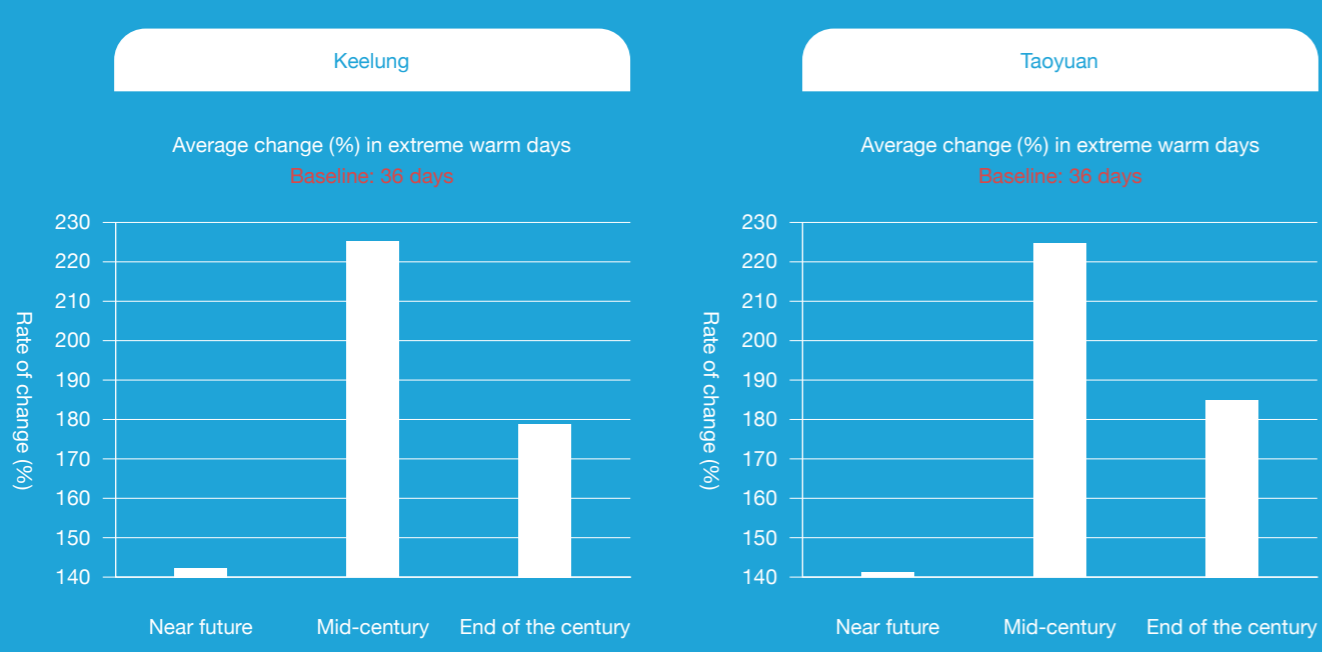
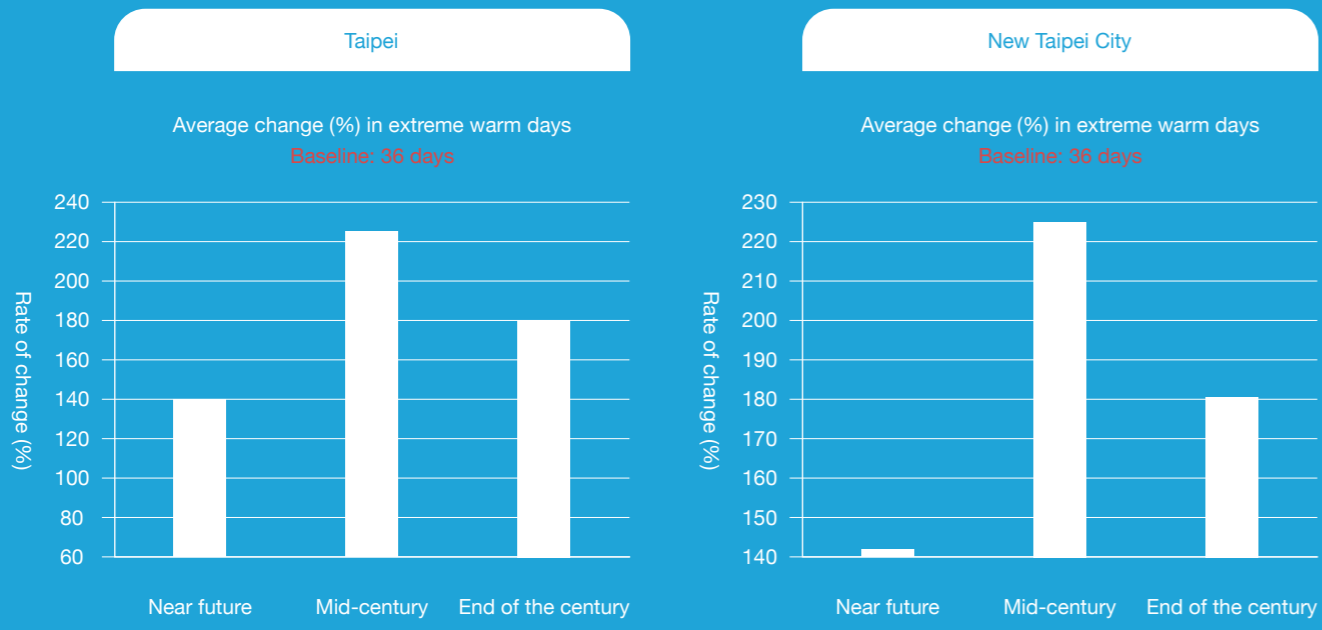
Taoyuan



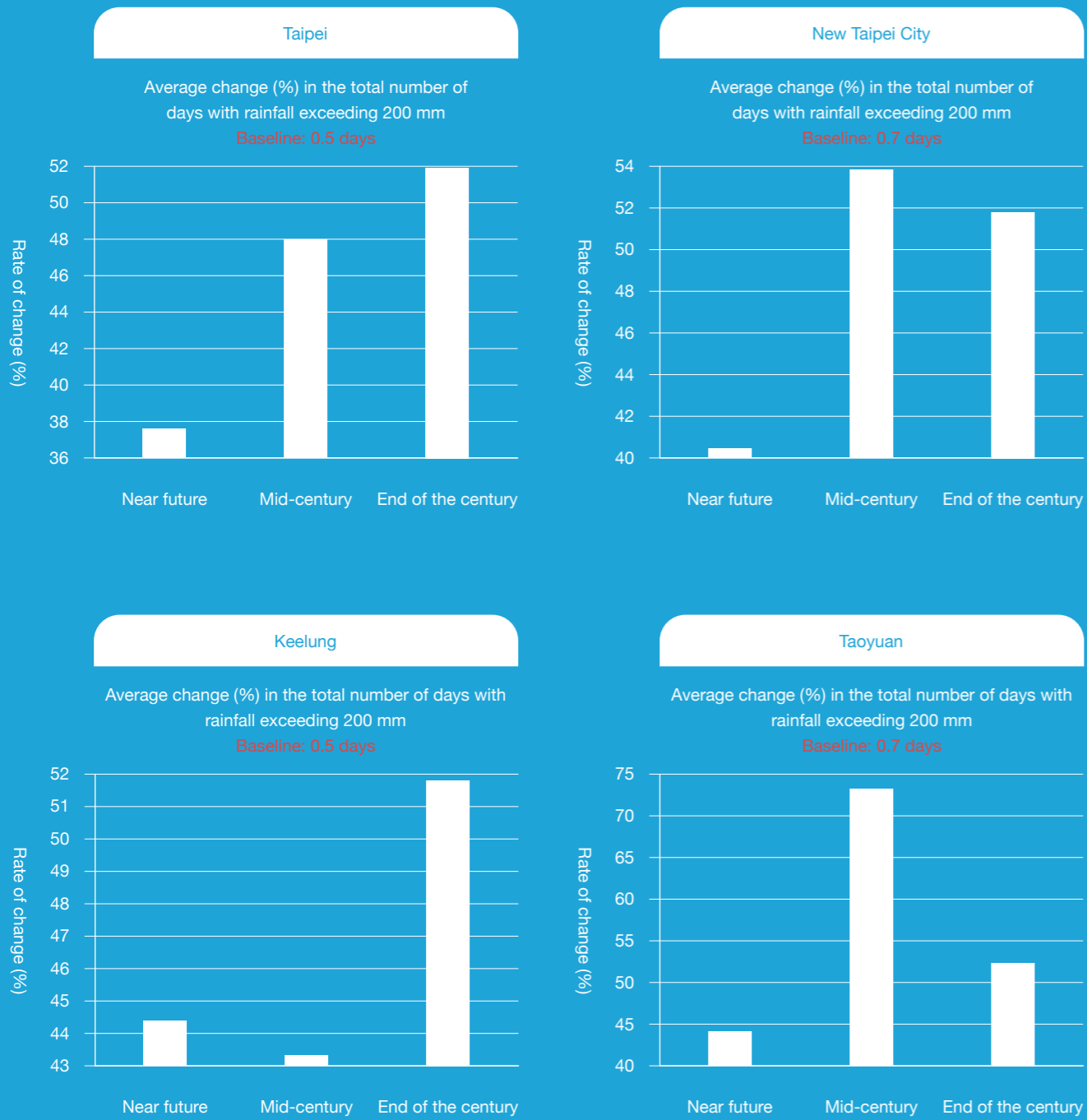


TX90p

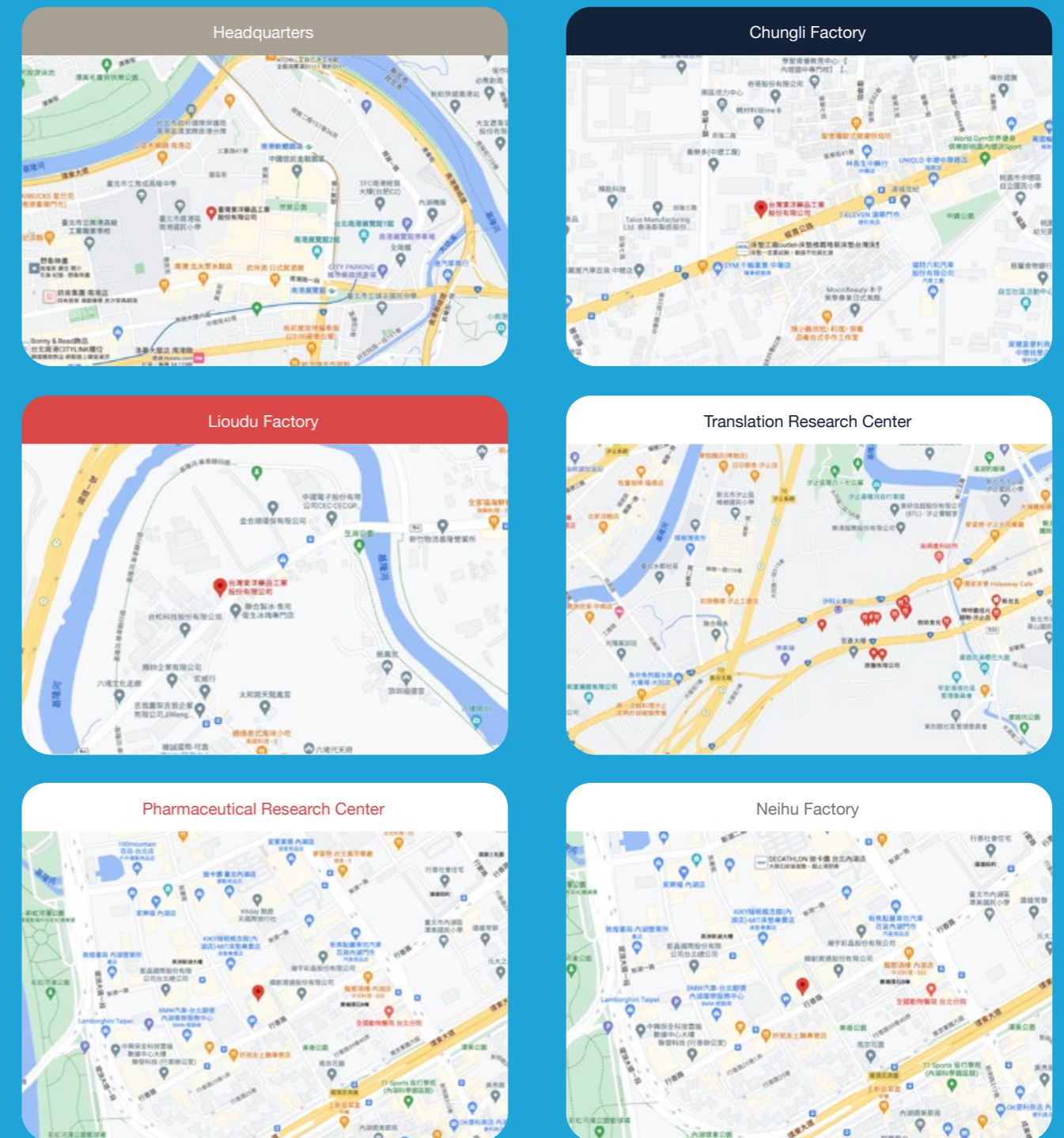
RX1DAY



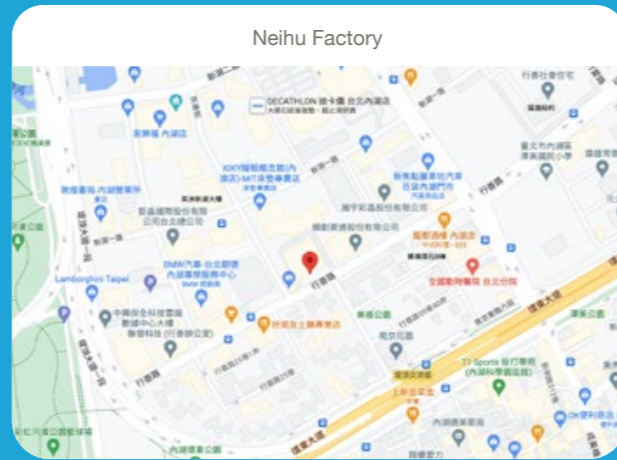
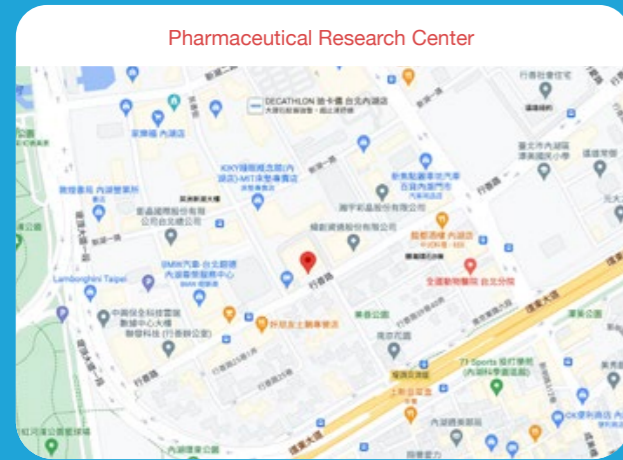
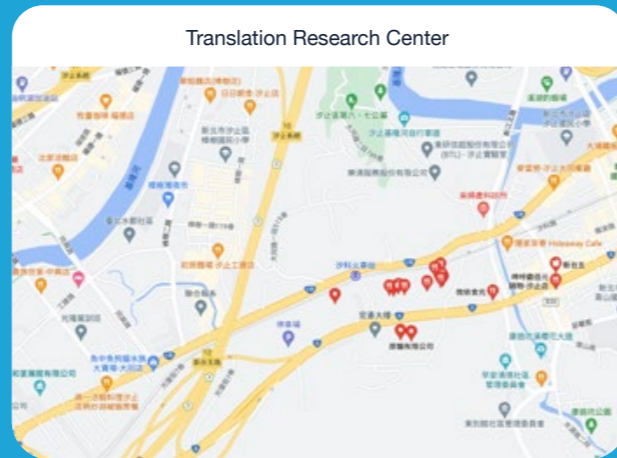
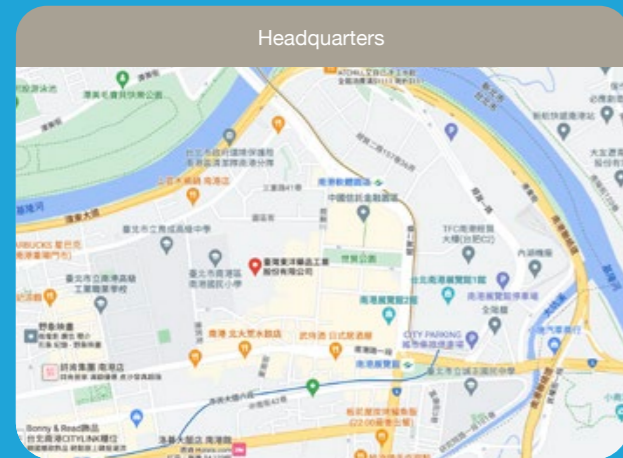
Number of Days with Rainfall Over 200mm per Year (R200)



Flood Potential when Rainfall is Over 200mm In 24hrs

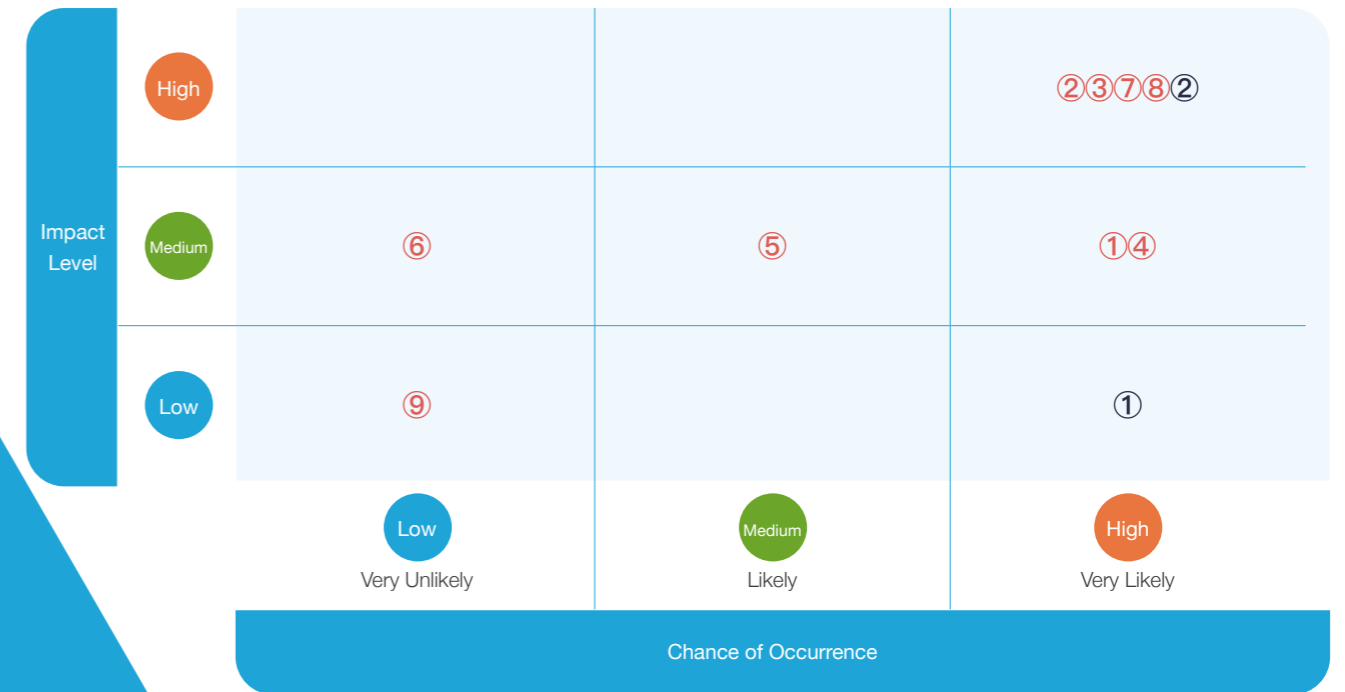


Flood from Rise of Sea Level and Land Loss Potential



Climate Risk Matrix

Matrix of Climate-related Risk and Opportunities



List of Climate-related Risk and Opportunities

- Climate Risks**
- ① Renewable energy and carbon reduction regulations and requirements
  - ② Cost of the low-carbon transformation
  - ③ Rise of operating cost
  - ④ Climate abnormalities (typhoon)
  - ⑤ Climate abnormalities (flood)
  - ⑥ Climate abnormalities (rise of sea level)
  - ⑦ Climate abnormalities (rise of average yearly temperature)
  - ⑧ Cost to build corporate resilience
  - ⑨ Cost to develop low-carbon technology and services

- Climate Opportunities**
- ① Better energy efficiency
  - ② Better resource efficiency

TTY's Climate-related Risks' Financial Impact

Climate Hazard	Chance of Occurrence	Impact Level	Hazard Description	Financial Impact	Department in Charge
② Cost of low-carbon transformation	High	High	Corporate energy-saving actions	<p>A total of NTD\$12,699,070 investment in energy-saving plans for the Lioudu and Chungli factories in the past 5 years.</p> <p><b>Cost for power efficient lighting in Headquarters: NTD\$1,142,340</b></p> <ol style="list-style-type: none"> <li>LED flat light: = 438 sets *\$1,630=NTD\$713,940</li> <li>Projecting light: 52 sets *\$1,180=NTD\$61,360</li> <li>Tube light: 108 sets *\$1,380=NTD\$149,040</li> <li>LED indirect lights: 182 sets *\$1,000=NTD\$182,000</li> <li>Gemini light: 8 sets *\$4,500=NTD\$36,000</li> </ol> <p><b>Light change work and maintenance: NTD\$158,800</b></p> <ol style="list-style-type: none"> <li>Light removal and installation: 18 works *\$3,600=NTD\$64,800</li> <li>Work protection and materials: 4 works *\$4,500 =NTD\$18,000</li> <li>Garbage transportation: 3 runs *\$12,000=NTD\$36,000</li> <li>Supervision fee: 1 time *\$40,000=NTD\$40,000</li> </ol>	General Affairs Department, Lioudu Factory Engineering, and Chungli Factory Engineering
			Use of renewable energy	Cost of installation of a solar energy system at the Chungli factory is estimated to be NTD\$8.9 million (146KW capacity, NTD\$60,700 cost per 1KW, totaling NTD\$8,862,200); for the Lioudu factory solar energy system: NTD\$19.05 million (313.92KW capacity, NTD\$60,700 cost per 1KW, totaling NTD\$19,054,944).	GM Office, Lioudu Factory Engineering, and Chungli Factory Engineering
③ Rise of operating cost	High	High	Natural gas instead of heavy oil	Natural gas to replace heavy oil and change of fuel boilers at the Lioudu and Chungli factories. At Chungli, the cost to change boiler was NTD\$5,225,187 (which will save up to 78,840 KW yearly, or NTD\$236,520 power bill), and at Lioudu, the cost to change boiler was NTD\$6,980,000. (which will save up to 65,185 KW yearly, or NTD\$195,555 power bill).	Lioudu Factory Engineering, and Chungli Factory Engineering
			Rise of key materials cost	Rising cost of natural gas led to a restricted use of industrial electricity, which affects the production of materials, and delayed schedule and delivery. In the long-run forecast to ensure a constant supply of API, there has been an increase of NTD\$1.36 million in annual purchases (increase of 1.82%).	Procurement Department

Climate Hazard	Chance of Occurrence	Impact Level	Hazard Description	Financial Impact	Department in Charge
④ Typhoon	High	Medium	Loss of labor due to inability to work, loss of daily revenue, loss of machines and equipment	<p>Day cost from loss of material and labor due to typhoon-caused power and water outage, and a one-day production suspension:</p> <ol style="list-style-type: none"> <li>Material loss: NTD\$5 million/Chungli factory and NTD\$3.27 million/Lioudu factory, loss of injection and oral medicine, and OEM materials.</li> <li>Labor loss: NTD\$1.17 million in daily labor costs (monthly salary of 521 employees of NTD\$35,220,209 ÷ 30 days = NTD\$1,174,007/day.</li> <li>Cost of water outage: production during water outage requires NTD\$30,000 for water storage equipment; NTD\$80,000/day in purchase water costs.</li> </ol>	HR, Lioudu Factory Affairs, and Chungli Factory Affairs
			Rise of yearly average temperature	1.5% rise/unit *17t yearly average usage= NTD\$2.1 million extra in purchase costs.	Procurement Department
⑤ Cost to build corporate resilience	High	Low	Additional insurance expense to keep business continuity	<p>Due to the rising cost of Business Interruption Insurance and other climate hazard insurance, insurance expenses total NTD\$525,000 for all 3 factories.</p> <p>2022 Insurance coverage for Chungli, Lioudu, and Neihu factories is NTD\$1,203,004,106, NTD\$344,434,508, and NTD\$81,223,808 respectively, and insurance fees for each is NTD\$406,615, NTD\$108,841, and NTD\$10,478.</p>	General Affairs Department
			Generators and UPS are installed to ensure business continuity	<ol style="list-style-type: none"> <li>Annual maintenance fees for Chungli and Lioudu factory generators are NTD\$77,000 and NTD\$60,000 respectively.</li> <li>Diesel fuel expenses for Chungli and Lioudu factory generators are NTD\$58,500 and NTD\$13,500 (calculated with NTD\$30/L) respectively.</li> </ol>	Lioudu Factory Engineering, and Chungli Factory Engineering

TTY's Climate-related Opportunities' Financial Impact

Climate Hazard	Chance of Occurrence	Impact Level	Hazard Description	Financial Impact	Department in Charge
① Increase of energy efficiency	High	Low	Energy efficiency plans	In the past 5 years, the plans have invested for NTD\$12,699,070 at the Lioudu and Chungli factories and conserved 800,625 KW by saving NTD\$2,401,875 in power bills.	Lioudu Factory Engineering, and Chungli Factory Engineering
	High	High	Water usage reduction	At the Chungli factory, RO sewage is treated daily and a cooling tower is used. When the RO recycles 2t/hr, and 1 cubic meter of water is charged at NTD\$12, each year we save NTD\$210,240 by daily recycle of 48t of sewage capacity. At the Lioudu factory, RO sewage is treated as equipment cooling water, and used in a water seal vacuum pump. When the recycle rate is 0.75t/hr, and each cubic meter of water is charged NTD\$12, each year we save up to NTD\$78,840 by daily recycle of 18t of sewage.	Lioudu Factory Engineering, and Chungli Factory Engineering
	High	High	Paper, waste recycle and reuse	Income from recycling generates NTD\$2,500/month, or NTD\$30,000 year.	Lioudu Factory Engineering, and Chungli Factory Engineering
	High	High	Use of ERP	The use of ERP saves up to 159,144 pieces of paper each year, or NTD\$35,649. 1. Digital ERP verification instead of printed vouchers to save costs. 2. We plan to bring in BarCode and portable devices with ERP, which will digitalize requisition and transfer forms in production and inventory management. Digital verification can save paper usage.	Information Technology Department

For production expense refer to: [Manufacturing expenses – mbalib.com](https://mbalib.com)

Information Security Risks

• Information Security Risk Management Framework

To maintain overall information security and reinforce security management for all information assets, TTY has 1 information officer and other professional information personnel responsible for the establishment of internal information security policies, planning, and execution of information security policies, and reporting information governance to the Board of Directors periodically. The audit office is the unit responsible for information security supervision, and the audit officer and other professional audit personnel are responsible for the implementation of internal information security. In case of any discrepancies, the audit office will ask audited units to propose an improvement plan and actions, and trace implementation periodically to reduce the risk of internal information security breaches. In year 2022, no complaints were submitted due to an infringement of customer privacy or loss of customer information.

• Information Security Risks Assessment and Management

TTY identifies various risks and implements control measures as appropriate through due diligence, risk assessment methods, and steps to reduce potential threats to information security. The Risk Assessment and Handling Procedures were established to keep information assets and network security within the scope of the information security management system. TTY executes system risk evaluations at least once every year to detect potential issues early, implement corresponding actions, and submits an annual information security report to the Board of Directors.

• Internal and External Information Security Audit

To reinforce secret data management, TTY implements internal and external information security audits periodically:

1. Internal audit

- In addition to a daily information security control audit, the audit office also executes an annual audit covering information security items based on the Regulations Governing the Establishment of Internal Control Systems by Public Companies.
- TIPS Management assigns a principal auditor and teams up members who pass audit training on a yearly basis. A TIPS-aligned audit is run across all units regarding the management of document confidentiality. Management representatives then meet to discuss shortcomings and improvement actions.

1. External audit:

- The Institute for the Information Industry is designated to conduct an audit of TTY's intellectual property management regulations every 2 years to ensure TTY's operational procedure is satisfactory to the TIPS.
- An external consulting company is designated to conduct inventory of trade secrets and optimize the internal management system to ensure TTY's information security management is satisfactory to industrial standards and there are no security concerns.

• Information Security Protection Measures

In the post-COVID-19 era, where cyberattacks remain a threat globally, TTY is enhancing our information security and protection strategy. In response to the development trend, the following adjustments are planned:

1. Computer room equipment security:

To reinforce access security, we have applied HCI and industrial file server solutions to data center and file servers to cope with increasing business demand in a more timely and flexible manner, with an all-encompassing backup system.

2. External connection access:

To eliminate potential attacks on login information when accessing servers on a VPN, a multi-factor authentication is activated to strengthen connection safety.

3. Internal network control:

According to a security report of domestic information security institutions, 80% of invasions and threats derive from improper use of the intranet. TTY introduced its renowned intranet security monitoring product that effectively screens the terminal connected to the intranet in October, 2021 to avoid mail viruses and ensure the Company network security.

4. Professional information security checks:

In addition to system updates to cover system loophole attacks, we run scans on critical servers to spot and fix weak points, minimizing potential attacks.

5. Protection drills:

TTY runs drills to familiarize ourselves with local and remote backup processes every year. The auto-backup and restoration system ensures the system resumes smooth operations post-threat.

6. Information security awareness:

Speeches and case sharing from outside experts as well online training courses and tests that ensure latest information security related information and awareness among colleagues.

In addition to the above-mentioned management to ensure information security, we assess the possibility plan to apply ISO 27001. Through this strict system, the operations and procedures can be perfected and the certification allows our compliance with international regulations. A social engineering class will be implement in year 2023 to emphasize information security awareness.

IP management

TIPS Grade A certified

To protect the Company IP from infringing others, and further expand the Company's intangible assets, TTY implements the TIPS (Taiwan Intellectual Property Management System) to improve the IP management system and confidentiality, and minimize risks. We also target continuous improvement, risk control, and response ability by conducting annual internal audits and trade secret incident drills. To prevent patent infringement, we work to ensure no such incidents in target markets impact key products. For development management, we run prior patent searches before developing product and novel technology to ensure minimal infringement and maximal efficiency.

We included TIPS 2007 and passed basic certification in year 2016. As the updated version of 2016 prevails, in year 2017 we reviewed the internal system to align our processes. In year 2018, we earned an independent TIPS audit Grade A certification; 2 years later in year 2020, TTY received another certification to extend the validity of our Grade A TIPS 2016.

In year 2020, TTY activated a trade secret management system and established written procedures to effectively maintain confidentiality, integrity, and availability of trade secrets. By August, 2022, an industrial DMS (document management system) was put in place to minimize the manual effort required to manage trade secrets, reducing human error and disclosure risks and improving the safety and security of trade secrets. The 2022 independent TIPS audit reviewed our trade secret management approach and approved our procedure, demonstrating our conformity to regulations. The certificate is valid until 31/12/2024.

Training to Reinforce Internal Audits

To complete our IP management certification system, ensure proper knowledge about IP management principles, and the importance of the Company confidentiality and innovation among employees, our new members undertake courses in TIPS and IP basics. TIPS is constant topic throughout training at the headquarters and all other sites. Trainings are carried out in-person and online, where important courses (for example, Trade Secret Concepts) are mandatory for all. In accordance to the annual internal audit, internal auditors are given class trainings, and each department must take part to ensure all units are familiar with the TIPS system and its purpose. There have been 70 TTY audits dedicated to the TIPS to date.

Key Performance

- ∴ The Liudu and Chungli factories **saved 163,225.93 kWh** of electricity and **83.08 tonCO<sub>2</sub>e** via 8 electricity-saving measures.
- ∴ The chemical oxygen demand (COD) emissions in the water of the Liudu factory was **22.83 times** lower than sewer connection standards.
- ∴ The quantity of suspended solids (SS) discharged in the water of the Liudu factory was **98.36 times** lower than sewer connection standards.
- ∴ The chemical oxygen demand (COD) emissions in the water of the Chungli factory was **19.80 times** lower than sewer connection standards.
- ∴ The quantity of suspended solids (SS) discharged in the water of the Chungli factory was **43.24 times** lower than sewer connection standards.
- ∴ The Chungli and Liudu factories achieved **100%** in weekly and monthly waste clearance contractor follow-up audits.

Chapter ∴∴

# 4

## Environmental

- Environmental Symbiosis
- Energy Management
- Air Pollutant Control
- Water Management
- Waste Management
- Toxic Substance Management

### ∴∴ Environmental Symbiosis

#### Management Guidelines

As a pharmaceutical company enhancing the quality of human lives, TTY is aware that human being's health greatly relies on good environment, including clean air, water, and proper handling of waste. Therefore, TTY holds "environmental sustainability is the first priority of all operations" as the guideline for environmental protection management. All suppliers are requested to follow TTY's supplier management policies and continuously optimize processes to save energy and reduce the impact of operations on climate change.

Greenhouse gases are the main driver of global warming and climate change. TTY introduced ISO 14064-1 GHG Inventory Standards in year 2022 and aims to pass the certification at the end of May, which will form the basis of our management guidelines and regulations for all energy-saving and carbon reduction measures to improve the energy efficiency of all operation locations.

## Environmental Goals

In compliance with the relevant environmental law and international guidelines, TTY takes initiative when it comes to environmental conservation and has worked every possibility to minimize the ecological impact of its manufacturing processes. In year 2022, there was no significant fine for a violation of related laws\*. All activities, business operations, internal management of all TTY locations and sites are conducted with sustainable environmental goals in mind.

A dedicated environmental management unit and personnel designate, facilitate, and maintain environmental management systems and action plans, such as proper water consumption, recycling, and related measures, to enhance water usage efficiency. Meanwhile, the climate change impact of operational activities, policies, and strategies are monitored and promoted to decrease carbon footprint and GHG emissions. For all employees, periodical environmental education focuses on being a sustainable consumer and aiming to achieve the five goals of building a good corporation that is friendly to the environment.



Note: A material penalty refers to a fine per single violation of over NTDS\$1 million, or a fine of less than NTDS\$1 million but at least 3 times the minimum statutory limit.

## Energy Management

TTY is the leading company of the domestic biotechnology industry. To achieve its commitments to sustainable development and responsibility for resources used, the ISO 14064-1 GHG inventory standards was introduced in year 2022, and the certification was passed in May, 2023. Meanwhile, the aggressive electricity saving and carbon reduction plan was drafted by 30/9, with short-, mid- to long-term goals specified the next month. The plan included improving power-consuming equipment, and also with a 2% power conservation goal in year 2023 compared to the year before. In the future, TTY will continuously evaluates the approach of purchasing and installing green energy, adopting a green supply chain, taking part in climate initiatives, discovering energy alternatives and better energy efficiency, and ensuring energy and environmental management policies are followed.

In year 2022, 2 major manufacturing sites Lioudu factory and Chungli factory had reduced 163,225.93 kWh of electricity saving and 83.08 tonCO<sub>2</sub>e via 8 electricity saving measures. It is expected to implement 6 electricity saving measures in year 2023, which may decrease 913,505.92 kWh of power and reduced 465.03 tonCO<sub>2</sub>e.

## Energy Consumption Statistics

Energy and GHG intensity dropped through the implementation of our 8 effective electricity saving plans at the Lioudu and Chungli factories. We counted an additional 473,549MJ of consumption and 206 tonCO<sub>2</sub>e emissions in year 2022 as a result of the lyophilized products production at the Lioudu B1 factory, and the non-stop operation of a temperature-humidity fixed clean room for powder and injection production at the B3 factory.

In year 2022, we calculated a total of 8,973,000 kWh of outsourced and 390,900m<sup>3</sup> of natural gas consumption at the Lioudu factory; and 5,441,800 kWh and 178,594m<sup>3</sup> at the Chungli factory, which combined 70,964,495 MJ of consumption and a 4.76% reduction of energy use. TTY has used an emission coefficient since year 2018, and completed inventory and disclosure of GHG quantification. By year 2022, we employed an independent GHG inventory standards and verification. In the future, TTY shall continue to work to reduce energy consumption and GHG emissions through improved electricity saving measures and higher energy efficacy practice.

**4.76% energy intensity drop compares to year 2021**





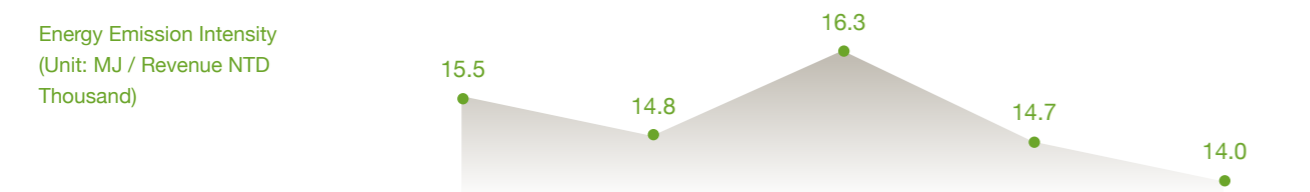
TTY Energy Consumption for the Recent 5 Years (Unit: MJ)

	Energy Type	2018	2019	2020	2021	2022
Lioudu Factory	Natural Gas	9,587,246	10,323,547	11,411,672	10,920,001	13,090,459
	Purchased Electricity	28,142,064	28,156,536	31,368,240	29,877,120	32,302,800
Chungli Factory	Natural Gas	5,611,316	7,094,433	5,574,111	5,548,225	5,980,756
	Purchased Electricity	19,088,640	20,711,880	20,604,600	20,145,600	19,590,480
	Natural Gas	15,198,562	17,417,980	16,985,783	16,468,226	19,071,215
	Purchased Electricity	47,230,704	48,868,416	51,972,840	50,022,720	51,893,280
	<b>Total</b>	<b>62,429,266</b>	<b>66,286,396</b>	<b>68,958,623</b>	<b>66,490,946</b>	<b>70,964,495</b>

Note: 1. In January 2018, natural gas boilers were swapped for low sulfur fuel oil (LSFO) to reduce CO<sub>2</sub> emissions.  
 2. Energy produced by natural gas boilers: 1 m<sup>3</sup> natural gas = 8000 kcal = 33,488,000 Joule  
 3. Purchased Electricity calculated as 1 kWh purchased = 3,600,000 Joule

TTY Energy Emission Intensity for the Recent 5 Years

Year	2018	2019	2020	2021	2022
Energy Consumption (Unit: MJ)	62,429,266	66,286,396	68,958,623	66,490,946	70,964,495
Revenue (Unit: NTD Thousand)	4,036,196	4,466,308	4,221,836	4,535,610	5,061,606



Note: 1. The scope of energy consumption statistics is the Lioudu and Chungli factories.  
 2. Revenue is consolidated sales revenue of the Group.

Electricity Reduction Results

In year 2022, 2 major manufacturing sites, the Lioudu and Chungli factories, saved 163,225.93 kWh of electricity and 83.08 tonCO<sub>2</sub>e via 8 electricity saving measures. It is expected to implement 6 electricity saving measures in year 2023, which could potentially decrease power use by 913,505.92 kWh and emissions by 465.03 tonCO<sub>2</sub>e.

2022 TTY Electricity Saving Actions and Results at the Lioudu & Chungli Factories

	Lioudu Factory	Chungli Factory
<b>Electricity Saving Plans</b>	<p>The motors at Lioudu Plant C for cooling tower reached 20% better efficiency through improvement and use of energy saving fans.</p> <p>→ A total of 63,023.43 kWh of power and 32.08 tonCO<sub>2</sub>e GHG emissions were saved in year 2022.</p>	<p>The 350T cooling tower at Chungli Plant B was replaced, and lighting at Plant C1 changed to energy efficient ones.</p> <p>→ A total of 100,202.5 kWh of power and 51 tonCO<sub>2</sub>e GHG emissions were saved in year 2022.</p>
<b>Electricity saving actions</b>	<ol style="list-style-type: none"> <li>Changed Office Bld. A to LED lighting.                             <ul style="list-style-type: none"> <li>4,145 kWh/year saved</li> <li>14,922 MJ of energy saved</li> <li>2.11 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> <li>Plant C 900RT cooling tower was installed with auto-dosing to improve radiation effect.                             <ul style="list-style-type: none"> <li>33,897.92 kWh/year saved</li> <li>122,032.5 MJ of energy saved</li> <li>17.25 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> <li>Removal of 13 150W lights from Building C dock and replaced with 6 80W LED lights.                             <ul style="list-style-type: none"> <li>306.17 kWh/year saved</li> <li>1,102.2 MJ of energy saved</li> <li>0.16 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> <li>Monitor and control of water quality of the cooling tower for the warehouse and office at Building A.                             <ul style="list-style-type: none"> <li>13,361.67 kWh/year saved</li> <li>4,802 MJ of energy saved</li> <li>6.80 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> <li>Replacement of Plant C cooling tower fans and motors to improve efficiency.                             <ul style="list-style-type: none"> <li>7,446 kWh/year saved</li> <li>26,805.6 MJ of energy saved</li> <li>3.79 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> <li>LED lighting in place of T8 at the warehouse.                             <ul style="list-style-type: none"> <li>3,866.67 kWh/year saved</li> <li>13,920 MJ of energy saved</li> <li>1.97 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> </ol>	<ol style="list-style-type: none"> <li>LED lighting in place of T8 at Plant C1.                             <ul style="list-style-type: none"> <li>12,812.8 kWh/year saved</li> <li>46,126 MJ of energy saved</li> <li>6.52 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> <li>Monitor and control of water quality of the 350T cooling tower of Plant B.                             <ul style="list-style-type: none"> <li>87,389.7 kWh/year saved</li> <li>314,602 MJ of energy saved</li> <li>44.48 tonCO<sub>2</sub>e emissions reduced</li> </ul> </li> </ol>

Note: 1. Calculation: purchased electricity 1 kWh = 3,600,000 Joule  
 2. The 2022 discharge coefficient was yet to be published, hence, the 2022 discharge coefficient published by the Bureau of Energy in year 2021 of 0.509 kgCO<sub>2</sub>e/kWh was adopted in this report.

2023 TTY Electricity Saving Plans at the Lioudu and Chungli Factories

Electricity Saving Plans

Electricity saving actions

Lioudu Factory	Chungli Factory
<p>Scheduled upgrade of cooling tower fans and motors at the Lioudu factory; LED lighting installed in place of T8 at the warehouse.</p> <p>→ Expected to save 341,267.92 kWh of power and 173.71 tonCO<sub>2</sub>e of GHG emissions in year 2023.</p>	<p>Scheduled upgrade of the screw type water cooler to magnetic bearing chiller; monitor and control of the 250T cooling tower water quality of Plant B; and lighting upgrade for efficiency at 2<sup>nd</sup> &amp; 3<sup>rd</sup> F of Building B.</p> <p>→ Expected to save 572,238 kWh of power and 291.32 tonCO<sub>2</sub>e of GHG emissions in year 2023.</p>
<p>1. Change of cooling tower fans and motors.</p> <ul style="list-style-type: none"> <li>3,723 kWh/year to be saved</li> <li>13,402.8 MJ of energy to be saved</li> <li>1.90 tonCO<sub>2</sub>e emissions to be reduced</li> </ul> <p>2. Lighting in place of T8 to LED at the warehouse.</p> <ul style="list-style-type: none"> <li>6066.67 kWh/year to be saved</li> <li>21,840 MJ of energy to be saved</li> <li>3.09 tonCO<sub>2</sub>e emissions to be reduced</li> </ul> <p>3. Upgrade of two 240RT screw type water coolers to 300RT magnetic bearing chillers.</p> <ul style="list-style-type: none"> <li>331,478.25 kWh/year to be saved</li> <li>1,193,321.7 MJ of energy to be saved</li> <li>168.72 tonCO<sub>2</sub>e emissions to be reduced</li> </ul>	<p>1. Water cooler replaced with new one in the Plant B air conditioning system.</p> <ul style="list-style-type: none"> <li>541,000 kWh/year to be saved</li> <li>1,947,600 MJ of energy to be saved</li> <li>275.4 tonCO<sub>2</sub>e emissions to be reduced</li> </ul> <p>2. Monitor and control of the 250T cooling tower water quality of Plant C.</p> <ul style="list-style-type: none"> <li>26,067 kWh/year to be saved</li> <li>93,841.2 MJ of energy to be saved</li> <li>13.29 tonCO<sub>2</sub>e emissions to be reduced</li> </ul> <p>3. LED lights replacement for the 2<sup>nd</sup> &amp; 3<sup>rd</sup> F of Building B.</p> <ul style="list-style-type: none"> <li>5,171 kWh/year to be saved</li> <li>18,615.6 MJ of energy to be saved</li> <li>2.63 tonCO<sub>2</sub>e emissions to be reduced</li> </ul>

Note: 1. Calculation: purchased electricity 1 kWh = 3,600,000 Joule  
 2. The 2022 discharge coefficient was yet to be published, hence, the 2022 discharge coefficient published by the Bureau of Energy in year 2021 of 0.509 kgCO<sub>2</sub>e/kWh was adopted in this report.

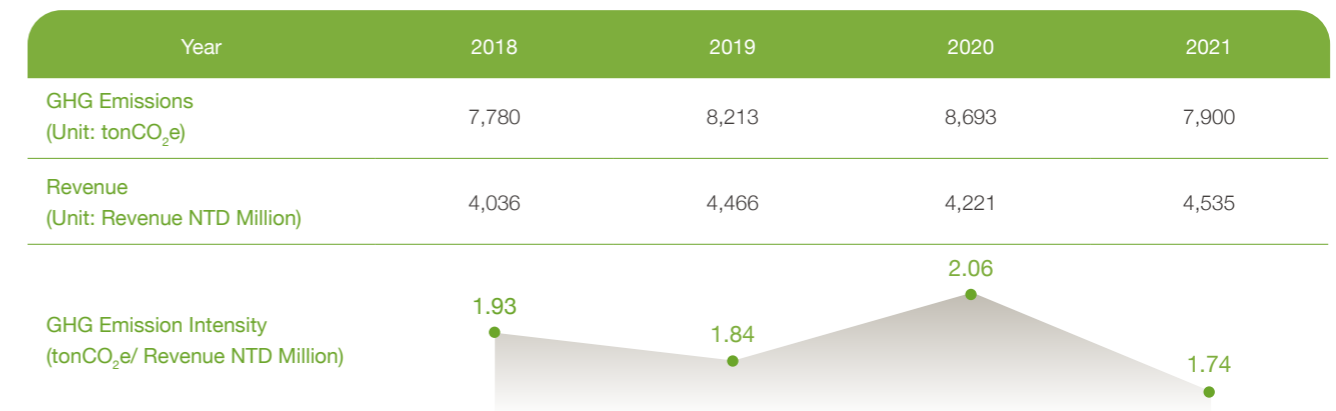
GHG Emission Statistics

TTY Autonomous GHG Inventory in Year 2018-2021 (unit: tonCO<sub>2</sub>e)

Energy Type	2018	2019	2020	2021	
Lioudu Factory	Category I	538	579	640	613
	Category II	4,128	4,169	4,827	4,166
Chungli Factory	Category I	315	398	313	312
	Category II	2,800	3,067	2,913	2,809
Category I	853	977	953	925	
Category II	6,928	7,236	7,740	6,975	
Total	7,781	8,213	8,693	7,900	

Note: 1. Emissions from the Lioudu and Chungli factories fall under Category I & II. Category III is not included.  
 2. In January 2018, natural gas boilers replaced the low sulfur fuel oil (LSFO). Natural gas boilers dominate the emissions source of Category I. The types of GHG generated from burning natural gas, including CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, are all included in the calculations.  
 3. Category II calculates the emissions from purchased electricity, 0.554 kgCO<sub>2</sub>e/kWh in year 2017; 0.533 kgCO<sub>2</sub>e/kWh in year 2018; 0.509 kgCO<sub>2</sub>e/kWh in year 2019; 0.502 kgCO<sub>2</sub>e/kWh in year 2020; and 0.509 kgCO<sub>2</sub>e/kWh in year 2021 were used for the calculations.

TTY Autonomous GHG Emission Intensity in Year 2018-2021 (tonCO<sub>2</sub>e/Revenue NTD Million)



Note: 1. The scope of GHG emission statistics is Category 1 and Category 2 within the Lioudu and Chungli factories.  
 2. Revenue is consolidated sales revenue of the Group.

Prior year 2018, the calculations have been based on the coefficients declared each year. This year (2022) we worked with an independent party, DNV for the ISO 14064-1 GHG Emission inspection, and passed the ISO 14064-1 certification in May, 2023.

TTY GHG Emission and Intensity in Year 2022

Site	Energy Type	Total Emission (tonCO <sub>2</sub> e)	Intensity (tonCO <sub>2</sub> e / Revenue NTD Million) Sales revenue for year 2022: NTD\$5,061.606 million
Lioudu Factory	Category I	1119.5441	0.22
	Category II	4567.2570	0.90
Chungli Factory	Category I	386.8177	0.08
	Category II	2762.6993	0.55
	Category I	1506.3618	0.30
	Category II	7329.9563	1.45
Total		8836.3181	1.75

2022 TTY Stationary Pollution Source Measurements

Lioudu Factory	PM(mg/Nm <sup>3</sup> )	SO <sub>2</sub> (ppm)	NO <sub>x</sub> (ppm)
Stationary Pollution Source Air Pollutant Emissions Standards	30 mg/Nm <sup>3</sup>	50 ppm	100 ppm
Gas boiler (P001)	2 mg/Nm <sup>3</sup>	1 ppm	54 ppm
Gas boiler (P002)	1 mg/Nm <sup>3</sup>	1 ppm	57 ppm
Gas boiler (P003)	2 mg/Nm <sup>3</sup>	1 ppm	55 ppm

Chungli Factory	PM(mg/Nm <sup>3</sup> )	SO <sub>2</sub> (ppm)	NO <sub>x</sub> (ppm)
Stationary Pollution Source Air Pollutant Emissions Standards	30 mg/Nm <sup>3</sup>	50 ppm	100 ppm
Gas boiler (P001)	2 mg/Nm <sup>3</sup>	1 ppm	25 ppm
Gas boiler (P002)	1 mg/Nm <sup>3</sup>	2 ppm	22 ppm

Notes: No Persistent Organic Pollutant (POP), Volatile Organic Pollutant (VOP) and Hazardous Air Pollutant (HAP) is discharged from the Lioudu or Chungli factories.

# Air Pollution Control

TTY strived every effort to reduce air pollution. In year 2022, two main manufacturing sites adopted source classification to minimize air pollutants during manufacturing processes. Treatment technology at multiple sections has helped elevate the processing performance of the terminal preventive facility. Annual air pollutant discharge inspections and implementation

have resulted in maintenance and training put in place to ensure that pollutants fall within or are superior to the criteria of the Stationary Pollution Source Air Pollutant Emissions Standards. In year 2022, the 2 manufacturing sites of Lioudu and Chungli factories discharged particle pollutants of PM 6.17kg, SO<sub>2</sub> 12.97kg, and NO<sub>x</sub> 310.24kg in total.

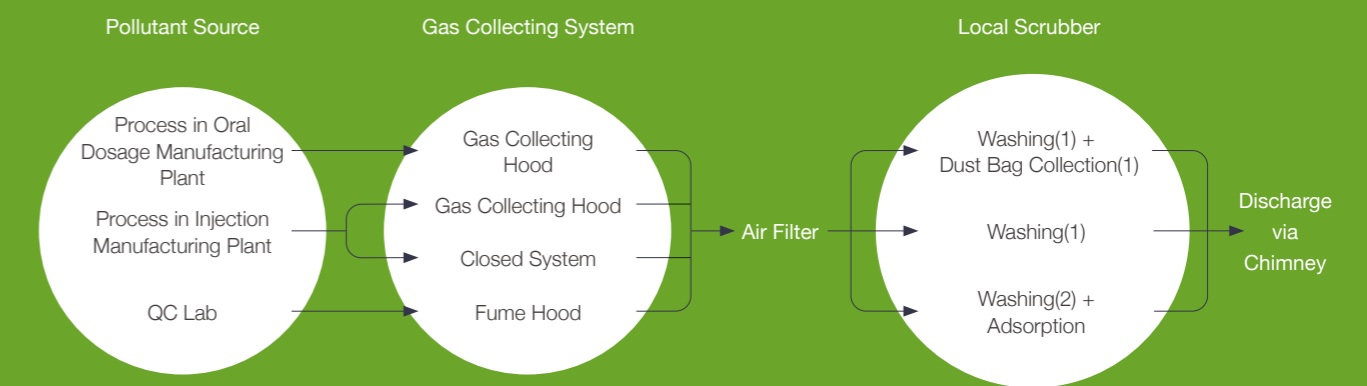
Material Gas Emission of Lioudu and Chungli Factories in Year 2022	PM(mg/Nm <sup>3</sup> )	SO <sub>2</sub> (ppm)	NO <sub>x</sub> (ppm)
Total Emission From the Lioudu Factory (unit: kg)	3.70	6.12	240.24
Total Emissions From the Chungli Factory (unit: kg)	2.47	6.85	70.00

Note: The data from the verification report designated by the factories is adopted to calculate emissions (emissions per hour x operation hours of boilers per day x working days per year).

Taking control from the beginning is the most effective way to minimize pollutants. In TTY, the "effective minimization on emission sources and enhanced treatment at the terminal preventive facility" is our current practice. Starting at the source in phase I, pollutants are classified based on their nature, such as dust, organic, solvents, and odors. The local scrubber is

then treated through washing, following which activated carbon absorbers or bag-type dust collectors process the remaining emissions before they are released into the air. The pollutant concentration now complies with the relevant regulations. The sectional treatment is a perfect, all-direction solution to making air emission treatment more effective.

Air Pollutant Control Process



# Water Management

## Reinforced Water Consumption Strategies

According to the Aqueduct Water Risk Atlas of the World Resources Institute, water resource risks in Taiwan are all low-medium level (1-2), which is not a water resource pressure area. All water sources of major operation sites at the Lioudu and Chungli factories, and the

Neihu Pharmaceutical Development Center of TTY are 100% obtained from local water plants without using underground water and affecting the water source. The quality of water discharged is free of high density chemicals and low concentration wastewater is discharged to a sewage treatment plant in a local industrial zone for final processing after preliminary treatment in the factories. Water is not discharged to bearing water unless it is in compliance to national effluent standards.

In year 2022, the water intake of TTY's Lioudu and Chungli factories and the Neihu Pharmaceutical Development Center was about 126.7 million liters and sewage discharge was about 101.395 million liters; sewage discharge slightly decreased by about 11.812 million liters compared to the previous year. No sewage was discharged by TTY as a result of an unscheduled leakage or overflow. Furthermore, all sewage discharged complies with the Water Pollution Prevention Act, local governance laws, and sewage treatment plant's Incoming Water Quality Standards in the industrial zone. The COD and

SS in sewage discharged by the Lioudu and Chungli factories are far lower than local sewer connection standards without impacting nature and biological diversity. In the future, the overall water saving policy will be further expanded to systematic water management, inclusive of the circulation system, recycle and reuse of chilling tower water, chilling procedure upgrades, better heat recovery rate, and lower water demand. The importance of saving water is disseminated across all employee levels up to managerial for fundamental actions.

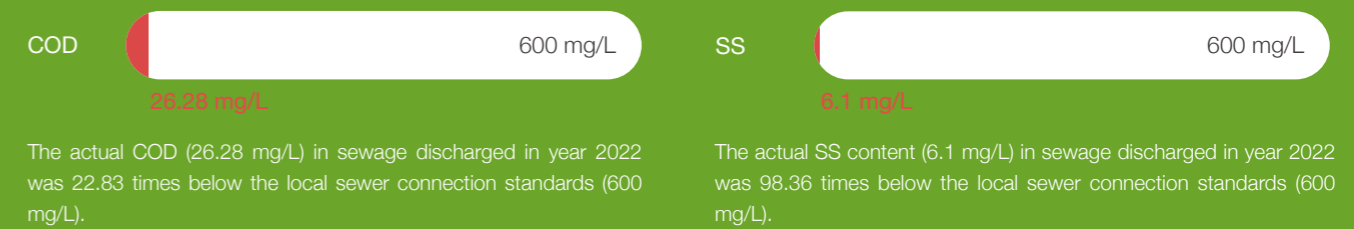
## Water Consumption Statistics

TTY Water Discharge and Water Quality Monitoring Results From the Recent 5 Years (Unit: Million Liter/Revenue NTD Thousand)

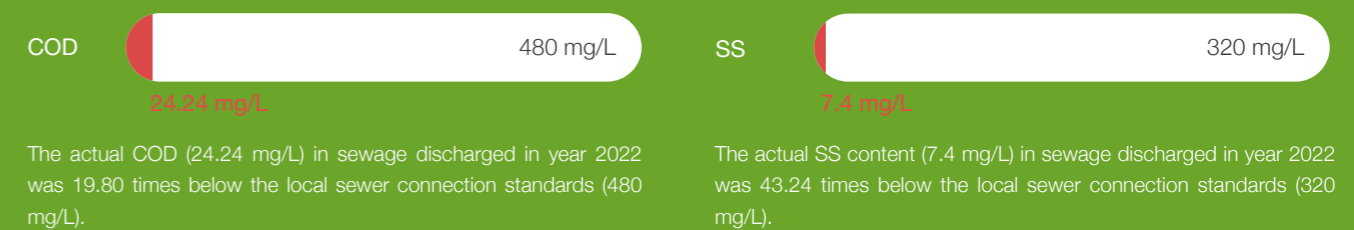
	Water Quality	Unit	Local Sewer Connection Standards	2018	2019	2020	2021	2022
Lioudu Factory	Water Discharge	Million Liter		79.518	68.292	76.961	91.323	79.936
	COD	mg/L	600	68.34	73.42	22.68	72.94	26.28
	SS	mg/L	600	12.69	16.80	6.31	3.15	6.10
Chungli Factory	Water Discharge	Million Liter		24.165	37.739	23.811	20.086	19.626
	COD	mg/L	480	87.94	77.36	66.58	13.5	24.24
	SS	mg/L	320	5.65	3.53	4.53	3.55	7.40
PDC	Water Discharge	Million Liter	N/A	1.696	1.905	1.943	1.798	1.833
Total Water Discharge		Million Liter		105.379	107.936	102.715	113.207	101.395
Revenue		NTD Thousand		4,036,196	4,466,308	4,221,836	4,535,610	5,061,606
Sewage Discharge Intensity		Million Liter / Revenue NTD Thousand		0.0000261	0.0000242	0.0000243	0.0000250	0.0000200

## Comparison of the COD and SS Contained in Effluent with Local Sewer Connection Standards

### Lioudu Factory



### Chungli Factory



# Waste Management

To fully understand waste flow of factories and reinforce supplier audits, in addition to checking orders every week and tracking disposal vehicle GPS abnormalities, TTY also follows supplier handling conditions every month and conducts on-site audits every year to confirm the output and flow after processing. Moreover, TTY implements irregular vehicle audits to confirm that waste disposal and handling contractors do business pursuant to laws. In year 2022, the total waste of TTY in the Lioudu, Chungli, and Neihu factories was about 49.73 tons, from among which hazardous waste was 28.55 tons and non-hazardous waste was 21.18 tons. All such waste was delivered to qualified disposal contractors for off-site treatment. The Chungli and Lioudu factories achieved 100% in weekly and monthly audits

without a violation of the Waste Clearance Act or other relevant laws, or causing impact to the local environment. Meanwhile, the Neihu factory expects and arranges to complete at one on-site audit in year 2023.

As per the Energy Bureau, 97.7% of energy in year 2021 was imported. To reduce reliance on imported energy, and maximizing the energy efficiency as promoted by the EPA, in year 2022, TTY Lioudu factory took the initiative to gather all flammable waste with the help of the waste treatment plant to fully combust, used a steam boiler to collect the steam from the combustion process, then turned the heat into power through a steam turbine. This approach has reduced the waste volume

of the Lioudu factory as we extract energy from waste. We not only saw a good amount of recyclable energy this year, but hazardous waste volume dropped significantly from year 2021.

To fulfill the sustainable government goals of being friendly to the environment, in addition to arranging professional technology personnel in accordance with Article 28-2 of the Waste Clearance Act, TTY also aggressively trains dedicated personnel. In year 2022, TTY had a total of 5 dedicated waste professional personnel (2 in the Lioudu factory, 2 in the Chungli factory, and 1 in the Neihu factory) and submitted a waste clearance plan pursuant to the law for operation with the approval of the agency designated by the municipality, county

(city) competent authority, or central competent authority. TTY also signs contracts with qualified clearance and processing institutions to clear and process business and daily waste pursuant to the law. In addition, the Management of Waste Clearance and Tracing Regulations are based on Article 14-2 of the Permit Management Regulations for Public and Private Waste Clearance and Disposal Organizations. All clearance machines and devices of waste contractors need to be declared and approval. Meanwhile, all vehicles delivering TTY's business waste must be equipped with GPS, and the vehicle trace return rate must reach 90% to facilitate real-time monitoring of the competent authority and TTY.

2022 Disposal Contractors Audit Results

	Weekly Articulation	Monthly Articulation	No. of Physical Audit	No. of Unscheduled Follow-ups
Chungli Factory	100%	100%	2	2
Lioudu Factory	100%	100%	2	3
Neihu Factory	100%	100%	0	0

TTY Wastes Categories by Groups in the Recent 5 Years (unit: tones)

	2018	2019	2020	2021	2022
Hazardous industrial waste	19.08	15.83	25.18	25.59	28.55
Non-hazardous industrial waste	13.04	10.13	13.95	19.43	21.18
Total wastes	32.12	25.96	39.13	45.02	49.73

Waste Directly Disposed of by TTY According to Disposition Operations in the Recent 5 Years (unit: tons)

Disposal Operations \ Year	2018	2019	2020	2021	2022
<b>Hazardous Waste</b> Incineration (including energy recycling)	-	-	-	-	14.82
Incineration (excluding energy recycling)	17.05	13.75	22.09	22.23	13.73
Landfill	-	-	-	-	-
Other Disposal Operations (physical treatment)	2.03	2.08	3.09	3.36	-
<b>Total</b>	19.08	15.83	25.18	25.59	28.55

<b>Non-hazardous Waste</b> Incineration (including energy recycling)	-	-	-	-	-
Incineration (excluding energy recycling)	0.79	1.01	No clearance	4.27	5.53
Landfill	-	-	-	-	-
Other Disposal Operations (physical treatment)	12.25	9.12	13.95	15.16	15.65
<b>Total</b>	13.04	10.13	13.95	19.43	21.18

# ☼☼☼ Toxic Substances Management

## Management Policy

According to the Regulations of Toxicity and Concerned Chemical Substances Management, toxicity chemicals are classified into 4 categories; categories 1-3 are not prone to decompose, chronic toxicity, or acute toxicity respectively, and category 4 comprises chemicals with endocrine disruptor properties, environmental pollutants, or chemicals which endanger human health. There are currently 344 substances under categories 1 to 4, and an additional 3 are listed as a "Concerned Chemical Substance".

Those that manufacture, import, export, sell, transport, use, or store categories 1, 2, or 3 toxic chemical substances must apply for a permit, registration, or approval documents; the disposal of such substances should have a report, an attached disposal declaration with detail by batch sent to the special municipality, county or city competent authority for registration according to regulations, and may only begin handling after doing so. The handling of category 4 toxic chemical substances shall be performed with permission of the competent authorities in compliance with authorized items.

## Control Measures

To create a safer working environment, TTY proceeds further than the regulations in management by educating relevant managerial personnel and assisting them to acquire toxicity professional management personnel certifications, and though toxicity and concerned chemical substance operation volumes in all factories are lower than statutory standards. A total of 8 colleagues in the Lioudu and Chungli factories have acquired a toxicity professional management personnel certificate (6 in Lioudu and 2 in Chungli). The Neihu factory and Translation Research Center also have a person in charge of toxicity control for chemicals in accordance with the toxicity management flow of the Company.

All chemicals must be determined by internal toxicity management personnel if they constitute toxicities controlled by the government before purchase. An application for a toxicity permit, registration documents, or approval documents shall be filed with local environmental bureau in this case. Furthermore, a

usage record must be maintained after each use and managerial personnel must report the use volume online monthly.

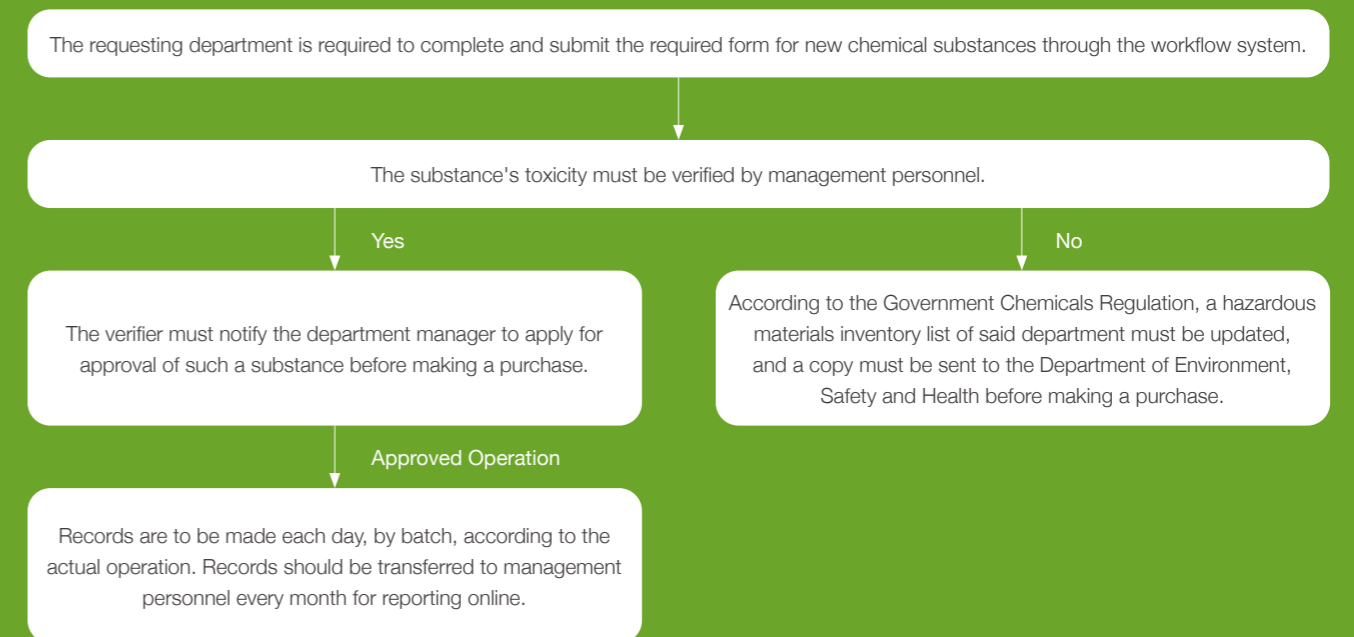
Before using toxic chemical substances, TTY applies for the required documentation and prepares an SDS and Basic Disaster Prevention Data Sheet. The containers for such substances are labeled with cautionary and warning signs. In addition, TTY has joined the National Disasters Prevention and Protection Commission, an organization that reacts to disasters with agreed-upon protocols for incidents that occur during the use or storage of toxic chemical substances. Any incidents should be reported within 30 minutes, and contingency teams must reach the location within 2 hours.

In addition, all factories have registered in accordance with the Regulations for the Management of Emergency Responders and Toxic and Concerned Chemical Substances. This ensures professionalism when handling emergencies, the full practice of safety and efficiency for professional response work, and the adoption of regulations and certifications.

Toxic and Concerned Chemical Substances Used by TTY

Toxicity Classification	Chungli Factory	Lioudu Factory	Neihu Factory	Translation Research Center
Categories 1~3	16	19	14	1
Category 4	13	16	26	1
Concerned Chemical Substance	2	2	0	0

TTY Toxicity Management Flow





Key Performance

- ❖ **64 new employees** joined in year 2022, providing the total to **521 work opportunities.**
- ❖ **42.19%** of managerial positions are filled by females, demonstrating our commitment to gender equality in the workplace.
- ❖ In year 2022, the average salary of entry-level positions was more than **1.5 times** higher than the local minimum salary.
- ❖ In year 2022, the average training time of each employee was **6.82 hours.**
- ❖ Free flu vaccines were offered to **632** employees and their relatives in year 2022.
- ❖ For a consecutive 15 years since year 2008, a total of **391 interns** have benefited from the Summer Internship Program (SIP).

Chapter ❖❖

# 5

## Social

- Social Inclusion
- Labor-employer Relationship Management
- Talent Cultivation
- Occupational Safety and Health
- Social Participation

# Social Inclusion

## Human Resource Structure

  
**Material Topic**  
**Talent Attraction and Retention**

**Corresponding GRI index**

GRI 401-1 New Employee and Departed Employee  
 GRI 401-2 Benefits Provided to Full-time Employees That are not For Temporary or Part-time Employees

**Policies and Commitment**

Employees are the core asset of an organization. For TTY, through comprehensive organizational performance and the development, cultivation, and management of the workforce, each employee can able to fully understand the organization's strategic direction, the purposes and content of short-, mid- to long-term goals, and the connections between departmental and personal goals with organizational goals, therefore fully reaching their potential and adding value. By working and developing with the organization, our employees are able to further explore professional opportunities and enrich their lives.

**Goals and Targets**

- All sorts of business management classes, online courses, in-person group learnings, role-plays and discussions on scenario of management topics are in place to provide continuous learning and growing.
- To fulfill everyone's short-, mid- to long-term development goals, job rotations, ability-based promotions, as well as selection for interdepartmental rotation and promotion are available for employees of high potential and future leaders of departments, tailored as individual plans.

**Responsibilities and Resources**

- In September, managers on the Talent Retention and Development course discussed methods of retaining talent at the Company (communication and inspiration, feedback and assistance, employee retention plans, talent development practice, and so forth). Managers' execution and results will be followed.
- Physical courses, and online management learning platform, themed role-playing concept learning, and group discussions are available to improve the management team and future successors' leadership awareness and effectiveness.
- The Future Leaders Program, the seminar of a new breed of leaders for the great resignation are two foreign-language-based courses that we sourced to improve entrepreneurship and global skills of the mid-senior management team.

**Assessment Mechanism and Results**

- Winner of HR Asia Best Companies To Work For In Asia Awards 2022 and Health 2.0 Best Company 2022.
- We value the impression candidates have of TTY and were rated 4.79/5 by job applicants in year 2022.
- Orientation plan: to assist newly recruited settle in. We scored 89/100 in year 2022 among new employees, of which 94.12% continued to work with us.
- Management themed group learning included: performance management in January 2022, talent cultivation in March, and coaching leadership in June.
- 87.74% of employees with great potential and future successors continued working with us, 17 received a promotion, and 6 went on to work and develop in another positions (including 3 promotions).

### More Job Opportunities

We believe that employees are one of our most valuable assets. We are committed to provide a friendly working environment that allows everyone to reach his/her full potentials. We have been recognized as one of the "2020 & 2022 Best Companies to Work for in Asia" by HR Asia in the Taiwan area with excellent scores in company culture and organizational leadership, employee recognition and satisfaction, and organizational atmosphere. We have also been recognized for our outstanding performance across many categories, outlining that the Company "encourages constant self-enhancement and learning", and "encourages cross-departmental collaboration and position rotation".

TTY's had its first win in the Health 2.0 Conference as one of the "Best Companies in the Healthcare Industry" in 2022, excelling in prestige and competence – a key accomplishment on the road to internationalization.

By the end of year 2022, the 521 full-time employees in TTY were categorized by age as follows: 10.94% of employees

are under 30 years old, 70.06% are aged 31-50, and 19% are aged 51 years old and above. Furthermore, 64 new employees accounted for 12.28% of the entire staff. It is important to note that the 100% local employment rate demonstrates our priority to support local talent. Moreover, 25 people were hired on regular contracts in positions such as consultants and research nurses, and 37 people were hired as temporary workers in response to production needs. Full-time employees exclude contractors and temporary workers. Overall, the total number of employees has no significant change compared to the previous reporting period.

In addition, an employee satisfaction survey was conducted for new employees who have reached 3 months' tenure. The scoring method included five major items: environmental adaptation, interaction, work adaptation, life adjustment, and counselor care (20 points per item). The system sent the questionnaire with a notice to fill it in within 6 months. By the end of year 2022, a total of 48 new recruits had been surveyed, with a satisfaction rate of 89%.

TTY 2022 Number and Percentage of New and Departed Employees

	Male		Female		Total		
	Number	%	Number	%	Number	%	
New Employees	≤The 30s	8	38.10%	11	30.56%	19	33.33%
	31s-50s	18	10.91%	23	11.50%	41	11.23%
	≥51s	2	4.35%	2	3.77%	4	4.04%
	Subtotal	28	12.07%	36	12.46%	64	12.28%
Departed Employees	≤The 30s	8	38.10%	7	19.44%	15	26.32%
	31s-50s	32	19.39%	31	15.50%	63	17.26%
	≥51s	4	8.70%	4	7.55%	8	8.08%
	Subtotal	44	18.97%	42	14.53%	86	16.51%

Note 1. New employee percentage = no. of the same gender in each age category/no. of employees in the category by the end of year 2022.  
 Note 2. Departed employee percentage = no. of the same gender in each age category/ no. of employees in the category by the end of year 2022.



### Diversity and Equality in the Workplace

Diverse and inclusive talent recruitment is the engine of TTY's continuous innovation. TTY occupies a superior position knowing that our employees represent a range of diversity, be it in relation to value, belief, race, age, gender, experience, or background. Everyone is given the opportunity to express his/her talent in the Company. Consequently, we grow together, explore career opportunities, and live an enriched life. TTY strives to create an inclusive and non-discriminatory workplace that accommodates all employees, regardless of gender. Inclusive mindsets are incorporated into our Human Resource Department to enable employees to fulfill their duties and

showcase their experiences and perspectives. As we operate in the high-tech industry, pharmaceutical work relies heavily on expertise and specific knowledge. We strive to hire an equal number of female and male employees all year round. In year 2022, 232 male employees accounted for 44.53% of the entire workforce, while 289 female employees represented the remaining 55.47%. Our female employees have accounted for more than 50% of the workforce in recent 5 years. In addition, to promote equality in the employment environment, 6 indigenous people and 4 people with handicaps were employed in year 2022. The proportion of vulnerable groups of all employees is 1.72%.

#### TTY 2022 Employee Structure

	Male		Female		Total		
	Number	%	Number	%	Number	%	
Age	≤The 30s	21	4.03%	36	6.91%	57	10.94%
	31s-50s	165	31.67%	200	38.39%	365	70.06%
	≥51s	46	8.83%	53	10.17%	99	19.00%
	Subtotal	232	44.53%	289	55.47%	521	100.00%
Job Category	Management and Administration	26	11.21%	50	17.30%	76	14.59%
	Sales and Marketing	56	24.14%	72	24.91%	128	24.57%
	R&D	39	16.81%	44	15.22%	83	15.93%
	Factory	111	47.84%	123	42.56%	234	44.91%
	Subtotal	232	44.53%	289	55.47%	521	100.00%
Type of Labor and Employment	Full-time	232	44.53%	289	55.47%	521	89.36%
	Contracted	11	44.00%	14	56.00%	25	4.29%
	Dispatched	10	27.03%	27	72.97%	37	6.35%
	≥51s	253	43.40%	330	56.60%	583	100.00%

Note: Temporary workers, whose salaries are paid by the work dispatch agency, are categorized as non-employee workers.

### Employment Protection Rights

#### Protecting Employment Rights

To provide a fair and safe workplace, our operations comply with internationally recognized human rights standards, including the ILO Declaration of Fundamental Principles and Rights at Work, the Universal Declaration of Human Rights, UNGC 10 Principles, and UN Guiding Principles on Business and Human Rights. The stipulation of TTY's human rights policy follows local labor regulations to treat and respect every stakeholder equally. 2 complaints were made respectively on 5/10/2022 and 15/12/2022. Investigations followed by 10/11/2022 and 5/1/2023. To prevent similar cases in the future, training will be given to emphasize communication skills and management skills among the management team.

- In compliance with international human rights standards and local laws and regulations, the Company strives to protect the basic human rights of employees and to recognize and comply with international human rights conventions. The Company must not violate human rights and must protect the legitimate rights and interests of its employees.
- We ensure equal job opportunities by eliminating discrimination, implementing workplace diversity, and ensuring that employees are not subjected to any discrimination or unfair treatment based on gender, race, age, marital status, religion, or political position, etc.
- Forced labor or child labor that does not meet the minimum legal age is prohibited. No forced, compulsory labor or child labor is permitted at the Company in year 2022.
- The Supplier Sustainability Management Assessment, which reviews suppliers' performance in relation to deliver time, quality, customer complaints, supportiveness, and sustainability, verified that in year 2022 no forced or compulsory labor or other material risks were committed by suppliers.
- We ensure a safe and healthy working environment by following relevant laws and regulations, implementing strong occupational safety mechanisms, and providing health education and training to ensure workplace and

personal safety protection. We have also established an occupational safety and health team, hold labor meetings, and implemented complaint handling channels to continue improving the safety and health conditions of the working environment, and reduce the risk of occupational injuries, and ensure the physical and mental health of employees and that mutual rights are observed.

- We follow risk management and assessment regulations and approaches to safety and health activities and management; we accommodated ISO 45001 in place and completed independent verification.
- Health examinations and diverse activities are arranged for employees to help prevent potential health risks and to assist colleagues with their physical and mental health and work-life balance. There was extensive interaction among co-workers through participation in clubs, as well as child-care services within the Company to assist parents with childcare needs.

#### Harmonizing Labor-employer Relations

The representatives of TTY labor meetings are composed of senior executives and colleagues from respective departments. Regular meetings are held every 3 months to discuss issues such as the revision of labor conditions. TTY complies with the Taiwan government's labor laws and regulations. No significant operational alterations that severely affected employee rights or resulted in large numbers of contract terminations occurred during the reporting period.

In compliance with Article 16 of the Labor Standards Act and the Act for Worker Protection in Mass Redundancies, notice is required prior to redundancies when upcoming major operational alterations or changes in labor conditions may cause damage to the rights and interests of workers. At least 10 days' notice is required if a person has been employed between 3 months and 1 year; 20 days' notice if employed between 1 and 3 years; and 30 days' notice if employed for 3 years or more. After receiving notice, a worker may ask for a leave of absence during the hours of work for the purpose of finding a new job. Such leave of absence may not exceed 2 working days per week and wages shall be paid during such leave. For each terminated employee, TTY shall submit a report with arrangements for career guidance or vocational training needs. Severance pay will be issued in compliance with Article 11 of the Labor Standards Act.

# Labor-employer Relationship Management

## Employee Benefits

Apart from labor insurance, health insurance, special leave, maternity leave, and parental leave as prescribed in the Labor Act, we also offer group accident insurance, travel leave, paid sick leave, a year-end bonus, and regular health examinations. The Welfare Committee also organizes cash gifts of employees' birthdays, weddings, maternity, festivals (Dragon Boat Festival/Mid-autumn Festival), condolences, bereavement, disaster aid, education subsidies (learning aids and scholarships for employees' children), and travel subsidies. The TTY Retirement Management Guidelines and Regulations specifies retirement eligibility and pension for full-time employees, fully in compliance with local labor regulations. Details on pension and retirement eligibility is described on the Company Annual Report.

The Welfare Committee adopts the TTY Welfare Subsidy Guidelines and allocated NT\$20,000 to each full time employee in year 2022. A total of 468 employees received the full subsidy, while 52 others who have either worked in TTY for less than 12 months or left TTY after receiving a subsidy, received a pro-rated subsidy based on their tenure.

As winter approaching, flu viruses thrive alongside COVID-19. In year 2022, we again arranged vaccinations for all employees and up to 3 of their first-degree kinship from 12/10 onwards. Therefore, a total of 632 participants were given to employees, their families, and directors. As a corporation that takes its corporate social responsibility seriously, TTY does not waiver in its efforts to maintain public health and support epidemic prevention, helping to build a safe and secure social protection network for employees and their families, and create a

prosperous society.

To further cover employee health, in year 2021, we initiated an emergency aid program and included notifiable diseases insurance and comprehensive vaccination protection insurance in the employee care package, ensuring extensive protection for all employees. In addition, to ensure the health of colleagues, the Company distributed an antigen nasal Covid-19 self-test kit to all employees, so if anyone suspected they might have Covid-19, they could conduct rapid screening to confirm before risking returning to the office to help maintain a safe and healthy working environment for colleagues and their families. During the epidemic, we provided high-quality care for employees and contributed to society through our rigorous approach to the health and safety.

## Remuneration Structure

Employees' contributions are closely related to company growth. Therefore, TTY strives to create a competitive salary based on the local basic wage, and sets a minimum internal monthly approved salary of NTD\$25,250 to meet current basic wage requirements. After considering the standard salary of TTY's entry-level personnel depending on job category, education, experience, and other conditions, the ratio of the average salary of entry-level personnel to the basic salary is 1.48 times for women and 1.51 times for men. In addition, to eliminate gender discrimination and promote gender equality in the workplace, there is no any gender gap in TTY employees' salaries. The average male to female salary ratio is 1:1.074.

### Ratio of the Average Salary of Entry-level Personnel of TTY for the Recent 3 Years to the Local Minimum Salary (unit: NTD)

Year	Average Standard Salary of Entry-level Personnel/Month		Average Standard Salary of Entry-level Personnel/Minimum Local Salary	
	Male	Female	Male	Female
2019	37,179	35,644	1.61	1.54
2020	36,913	35,645	1.55	1.50
2021	37,807	36,262	1.58	1.51
2022	38,018	37,284	1.51	1.48

Note: 1. The local minimum salary in year 2019 was NTD\$23,100/month. The local minimum salary in year 2020 was NTD\$23,800/month. The local minimum salary in year 2021 was NTD\$24,000/month. The local minimum salary in year 2022 was NTD\$25,250/month.  
2. The difference in the average salary between male and female entry-level personnel is mainly due to the difference in work content and work attributes.

### Salary Plus Compensation Ratio of Male and Female Across Job Categories

Job Category	Management and Administration	Sales and Marketing	R&D	Factory
Salary + Compensation Ratio of Male and Female	Male: Female 1.37 : 1	Male: Female 1.14 : 1	Male: Female 1.30 : 1	Male: Female 1.13 : 1

### Average and Median Annual Salaries of Full-time Employees not Holding Supervisory Positions in TTY for the Recent 3 Years

Full-time Employees not Holding Supervisory Positions		
Year	Average Annual Salary	Median Annual Salary
2019	1,116	976
2020	1,126	936
2021	1,169	992
2022	1,206	1,021

Note: Supervisory positions include directors, employees in managerial positions, consultants, and some other roles.

## Maternity Health Protection

The Act of Gender Equality in Employment clearly states the right to apply for unpaid parental leave (UPL). Employees may apply for unpaid parental leave before any of their children reach the age of 3, but the period of leave may not exceed 2 years. During the period of unpaid parental leave, employees may continue to participate in their original social insurance program.

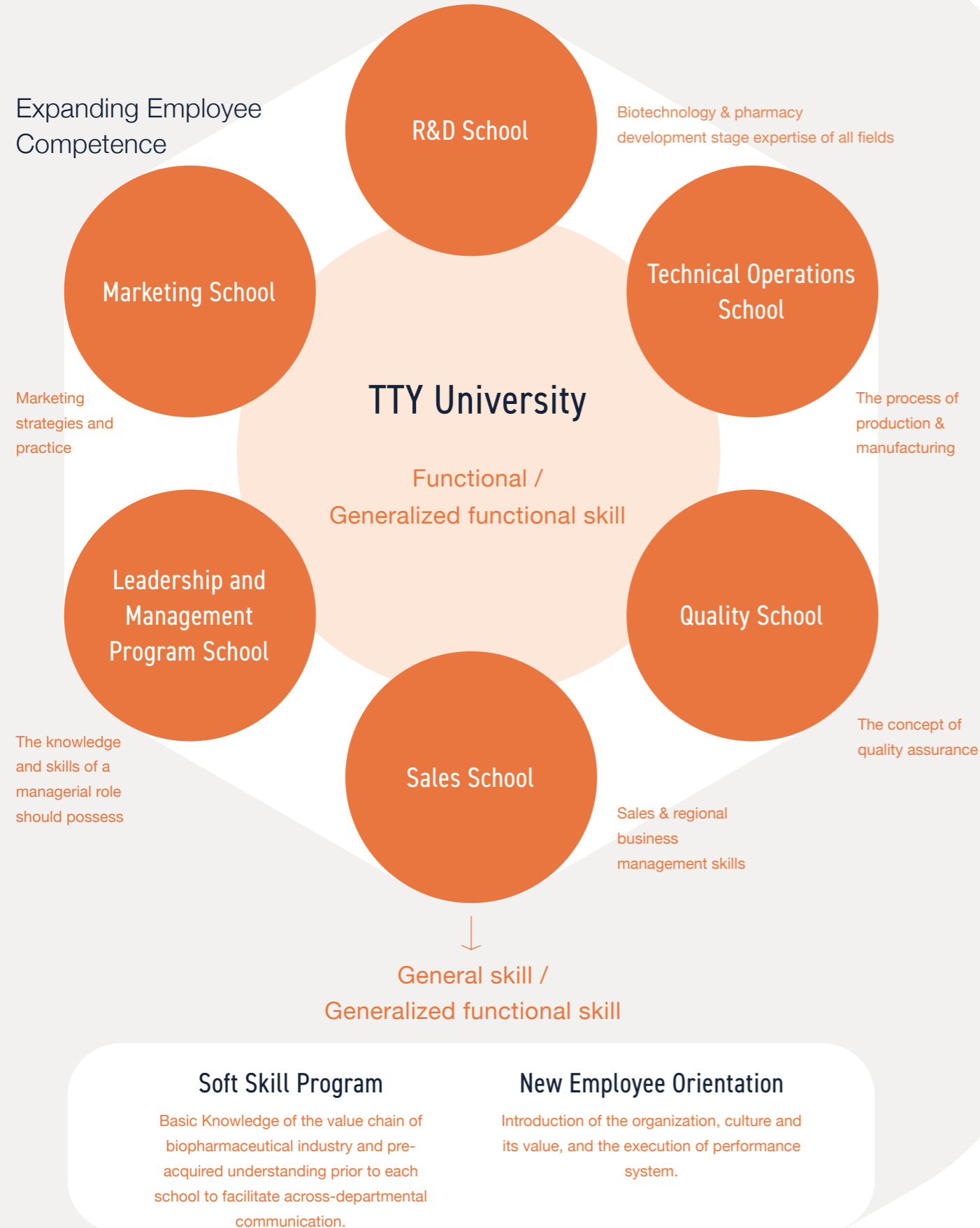
Note:

- Based on employees who applied for maternity or paternity leave in the past three 3 years (2020-2022).
- Expected and actual reinstatement date in year 2022.

### TTY 2022 Number of Employees who Applied for UPL

	Male	Female	Subtotal
(a) The no. of employees who qualified in year 2022	16	33	49
(b) The no. of employees who applied in year 2022	2	4	6
(b/a) UPL Application rate	12.50%	12.12%	12.24%
(c) The no. of reinstatement estimates in year 2022	1	4	5
(d) The no. of employees reinstated in year 2022	1	3	4
(d/c) Reinstatement rate	100.00%	75.00%	80.00%
(e) The no. of reinstatements in year 2021	0	5	5
(f) The no. of employees remaining for at least 1 year after reinstatement in year 2021	0	4	4
(f/e) UPL retention rate	0	80.00%	80.00%

# Talent Cultivation



"Acquiring knowledge quickly, transferring knowledge effectively, and transforming knowledge into consensus and organizational ability as soon as possible" is a critical path for a corporation to build core competitiveness. Therefore, TTY has continued to innovate and cultivate a great education, and training and development system. TTY University has been providing educational training for all employees since year 2012. Depending on the depth of content, courses are divided into initial courses, advanced courses, and high-level courses to meet the needs of all colleagues in the Company, regardless of expertise.

TTY University combines the six programs of R&D, Technical Operations, Quality, Marketing, Sales, Leadership and Management, and Soft Skill programs. In year 2022, there were 34 in-person and online courses, not only helping colleagues engage in continuous professional development in their own professional field, but also aiding understanding of roles in other functions in the industrial chain to provide them with holistic

industrial and organizational operations knowledge to create the best organizational performance.

In addition to integrating internal and external resources, senior employees are also trained as lecturers. Colleagues from all departments can volunteer to attain lecturer qualifications. After being reviewed by the Human Resources Department, they can become candidate lecturers and participate in the lecturer training process. After passing a strict evaluation, they are qualified to serve as internal lecturers. We expect our lecturers to engage in their own development, self-position so they attain the best results and expand their talent through learning. In year 2022, a total of 17 colleagues from TTY University participated in the internal lecturer training and 4 colleagues had official classes and became qualified lecturers. Another 4 are expected to reach this goal in year 2023 to continuously transform their knowledge into the organizational capacity of TTY to implement sustainable operations.

### 2022 Employee Training Program Results

Course Satisfaction	Average Annual Training Hours per Person	Qualified Trainers	Professional Courses with Diverse Contents
4.75/5	6.82	35	34

### New Employee Training

Orientation is carried out over several days, both in-person and online, to familiarize new employees with the Company regulations quickly and effectively to mitigate business risk. This includes the following training sessions: Introduction to Confidentiality Management Regulations, Introduction to GMP Management, Introduction to Regulations Governing

Pharmaceutical Patents, Introduction to the TIPS (Taiwan Intellectual Property Management System), Basics of Intellectual Property, Drug Safety Supervision, Information Security Education, Introduction to GDP Management, Introduction to Trade Secrets, and Environmental, Safety and Health. 58 attendees participated in orientation training sessions in year 2022.

### Employee Training

To raise awareness of business risks and Ethical managements, we give various online and in-person courses. The former one focuses on Drug Safety Supervision, SDGs Good Life Goals, Information Security, Trade Secrets, Insider Trading Prevention and Material Business Incident Guidelines, promotion on Corporate Ethical Management, Building a Friendly Workplace, and Introduction to GDP Management. All employees have attended and completed training. Internal and offsite trainings

of the year calculated an average of 6.82 hours of classes per employee, of which female marketing representatives received the most training, topped by 10.39 hours per person; followed by 10.14 hours of female R&D attended. We encourage learning and growing through internal and external courses, empower employees to improve their skills to attain more challenging positions, and reach their career goals through self-development.

Average Training Hours of Each Employee Based on Gender and Job Category in year 2022

		Male	Female	Total
Management and Administration	(a1) The actual number of people during the reporting period	26	50	76
	(b1) Training hours during the reporting period	161	253.5	414.5
	(b1/a1) The average number of training hours during the reporting period	6.19	5.07	5.45
Sales and Marketing	(a2) The actual number of people during the reporting period	56	72	128
	(b2) Training hours during the reporting period	582	726	1,308
	(b2/a2) The average number of training hours during the reporting period	10.39	10.08	10.22
R&D	(a3) The actual number of people during the reporting period	39	44	83
	(b3) Training hours during the reporting period	202.8	446	648.8
	(b3/a3) The average number of training hours during the reporting period	5.20	10.14	7.82
Factory	(a4) The actual number of people during the reporting period	111	123	234
	(b4) Training hours during the reporting period	732	450	1,182
	(b4/a4) The average number of training hours during the reporting period	6.59	3.66	5.05
Total	(Q) Hours	1,677.8	1,875.5	3,553.3
Total number of employees at the end of the reporting period	(R) Number	232	289	521
The average number of training hours per employee	(Q/R) Hours	7.23	6.49	6.82

### Successor Projects

#### Talent Development and Assessment

In TTY we promote an environment of continuous learning and this is what motivates our workforce. In real terms, employees seek to advance their careers through management programs,

and internal and cross-subsiidiary/affiliate job rotations. In year 2022, 95.97% of our employees underwent regular performance reviews, of which 222 employees were male (44.40%), and 278 female (55.60%). The remaining 4.03% were new employees in their probation period. Prior to the end of the new hiring period, supervisors provide performance evaluations by filling in the New Employee Probation Performance form.

TTY 2022 Regular Performance Review Rates

		Male	Female	Total
Management and Administration	(a1) Total number of employees at the end of the reporting period	26	50	76
	(b1) Number of employees undertaking regular performance and career development reviews	25	47	72
	(b1/a1) Percentage	96.15%	94.00%	94.74%
Sales and Marketing	(a2) Total number of employees at the end of the reporting period	56	72	128
	(b2) Number of employees undertaking regular performance and career development reviews	52	68	120
	(b2/a2) Percentage	92.86%	94.44%	93.75%
R&D	(a3) Total number of employees at the end of the reporting period	39	44	83
	(b3) Number of employees undertaking regular performance and career development reviews	38	42	80
	(b3/a3) Percentage	97.44%	95.45%	96.39%
Factory	(a4) Total number of employees at the end of the reporting period	111	123	234
	(b4) Number of employees undertaking regular performance and career development reviews	107	121	228
	(b4/a4) Percentage	96.40%	98.37%	97.44%
Total	(Q) Total number of employees at the end of the reporting period	232	289	521
Total	(R) Number of each employee undertaking regular performance and career development reviews	222	278	500
Total	(Q/R) Percentage	95.69%	96.19%	95.97%

### Talent Evaluation and Development

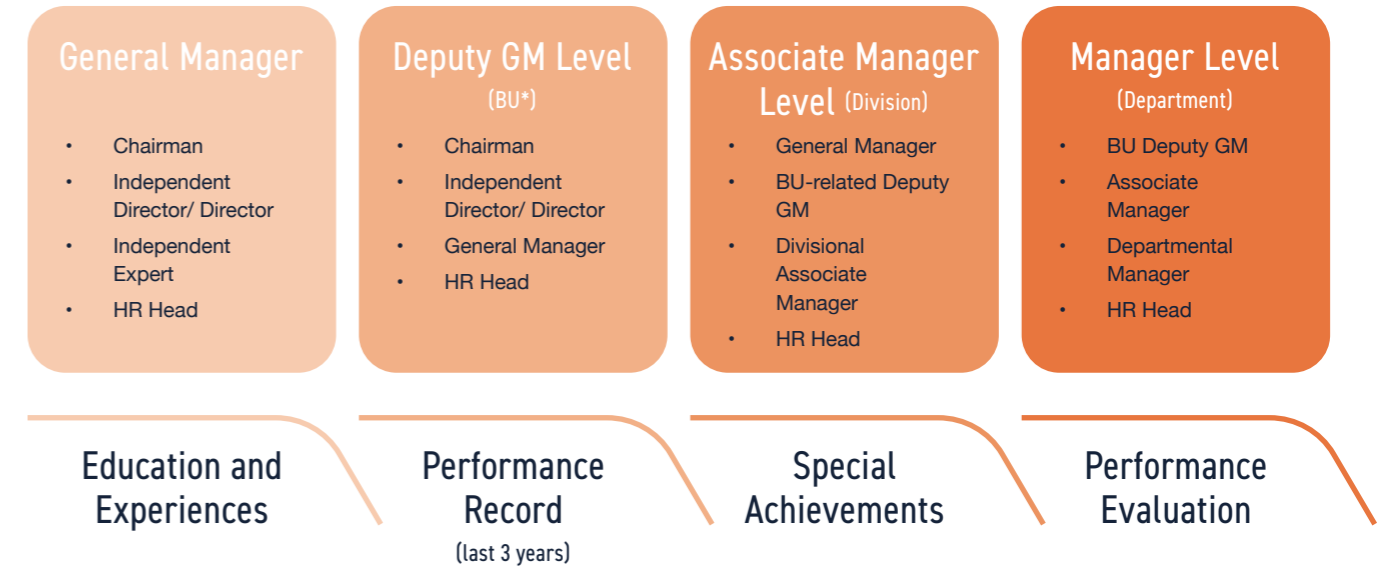
Apart from various software and hardware training programs and other such resources, further learning and development plans suitable for each level and role were developed under the Successor Project in year 2019. The results of the 2022 plan were as follows:



- The Future Leaders Program is a series of classes in a foreign language that cultivate entrepreneurship and a global perspective. Well planned with targeted learning results, the topics enhance basic leadership theory, self-awareness and self-motivation, performance management, decision-making, influencing/persuasiveness, stakeholders, and personal branding. Each topic strengthens our medium to senior management team to meet organizational development and growth objectives.
- Tailored short-, mid- to long-term development plans cultivate the candidates with good potential as the future leaders and successors of each unit. Job rotation and promotions that amplify professional experiences are arranged by managers within and across departments based on personal abilities. In year 2022, there're 17 promotions and 6 changes of positions (including 3 promotions) occurred.
- To cater to developing needs of all levels, themed group learning guided by contracted professional mentors prompt discussions of management topics (January - Performance management; March - Talent cultivation; June - Coaching leadership) and role playing. Internal trainers reinforce management abilities through classes (August - Internal lecturer training; September - Talent retention and development), boosting leadership awareness and performance of the management team and future leaders.

### Succession Planning and Operation

#### Personnel evaluation committee members of management positions at all levels



Note: BU refers to business unit or center

As part of TTY's succession planning, the core values of successors must be consistent with the Company's, and they must demonstrate integrity, commitment, and innovation, and have earned customers' trust.

In accordance with the Provisions of Corporate Governance formulated by TTY, the directors selected by TTY fully consider diversity and formulated appropriate policies based on the Company's operations, operation type, and development needs, including the following 2 criteria:

- Basic conditions and values: gender (at least 2 female directors), age, nationality, culture, etc.
- Professional knowledge and skills: professional background (such as law, accounting and taxation, biotechnology and medical industry, finance, marketing, or technology), professional skills and industrial experience, etc. In year 2021, TTY re-elected all directors considering their overall skills and characters, and all candidates met the qualification review and relevant specifications.

Since 29/12/2016, TTY has implemented Performance Evaluation Measures for the Board of Directors and Functional Committees to evaluate the performance of directors and ensure the effectiveness of the operations of the Board of Directors through performance evaluations. Items under assessment include control of the Company's objectives and tasks, responsibility cognition, operation participation, internal relationships operation, and communication, professional functions, further advanced training, internal control, and specific opinions, as a reference for the selection of directors in the future.

Moreover, employees with leadership qualities and outstanding performance are offered the opportunity to transfer to other positions within the Company. We continue to expand the future workforce from external sources as well. To ensure sustainable growth, 2 business management programs were held in year 2022 and an average of 17 employees were trained each session with a 4.63/5 satisfaction rate. 20 employees were transferred within the Company.

# Occupational Safety and Health

## 2018 Occupational Safety and Health Management System

The ISO 45001: 2018 Occupational Safety & Health Management System is a strong and effective procedure management tool for global supply chain safety. Over 70 countries are directly involved in setting this important standard. This international standard aims to help organizations of various scales and industries minimize occupational injuries and illness around the world. The ISO 45001: 2018 Occupational Safety & Health Management System adopts a simple PDCA management pattern, and provides organizations with a highly compatible framework for planning measures that require execution by organizations, thereby minimizing the risk of damage.

In December, 2022, we became an ISO 45001: 2018 certified

company, and aim to provide a safe and healthy workplace, allowing us to identify and prevent risks, and protect and provide a safe and reliable work space, minimizing the possibility of incidents and illnesses among employees, and improve legal compliance.

- Hazard identification. Locate any potential hazards to employees in factory operations and control risk levels based on management.
- Safety labels. Traffic route of personnel, vehicle and shipping goods must be clearly labeled to warn people.
- Control factory entrance access (supplier, customers, visitors).
- Employee health examinations, equipment, device and production process inspections to ensure workplace safety.

## Occupational Safety and Health Management

To ensure the safety of employees, we provide labor and health insurance, group insurance, accident insurance, occupational injury insurance, cancer insurance, travel insurance for business trips, and public accident liability insurance for each operation site. Qualified and certified fire protection management personnel are stationed in each factory, and a fire protection plan is formulated according to local laws and regulations. Public safety equipment inspections of buildings and fire protection facilities are regularly reported to the competent authority. All checks are conducted to ensure the safety of all employees.

An Occupational Safety and Health Management Committee has

been set up in the Chungli and Liudu factories in accordance with local laws and regulations. PDC Neihu is excluded from the regulatory standards but formed a Safety and Health Management Promotion Team to take charge of relevant affairs. Members call regular meetings and review occupational safety issues, ensuring occupational health and safety supervision, as well as planning suggestions accordingly. At least a third of members are accounted for by labor representatives. An Occupational Safety and Health Work Code and Occupational Safety and Health Management Plan have been drafted pursuant to the Occupational Safety and Health Act and relevant laws. Additionally, each factory shall establish an occupational safety and Health unit comprising management staff and first-aid personnel.

ISO 45001: 2018 certified in year 2022



2022 The Composition of the Occupational Safety and Health Committee

Members of the OSH Committee	Number
OSH specialists	1
Managers, supervisors, and instructors of each unit	3
Engineers	1
Medical staffs	1
Labor representatives	3
<b>Total</b>	<b>9</b>

Health Promotion

Our employees are provided orientation training, health services, medical assistance, and occupational illness prevention talks. To ensure easy access to professional medical help, onsite nurses (3 times a month) and professional doctors (3 times a year) provide consultations regarding workload assessment and management, human-factored hazards prevention, maternal health, and workplace violence prevention.

In addition, 6 e-articles share and raise awareness of healthy diets and weight loss, how to improve short-term memory, slow jogging, spinal issues that can cause acute back pain, seafood consumption to lower blood vessel and organ fat, and 9 foods to help you fall asleep faster, to further provide guidance on overall mental and physical wellbeing.

TTY Health Information Promotion in year 2022

**最新節拍超慢跑！**  
**甩肉24kg、減脂降三高**

節拍器設定：下載節拍器相關APP，並設定步頻為180步/分鐘

step 1 前腳掌先落地 再後腳跟

step 2 膝蓋彎曲、保持彈性 (呈<<字形可以有避震效果)

step 3 節能減碳，輕量落地

step 4 小步伐、高步頻 (180步/分鐘)

早安健康 百萬影片觀看

進行節拍超慢跑時，可以謹記「不酸、不痛、不硬、不喘」4個口訣，如果身體不適，千萬不要勉強。體力較差的長輩可以先在家中平坦的地板執行

**最新節拍超慢跑！甩肉24kg、減脂降三高**

你聽過「超慢跑」嗎？在早安健康網站上吸引了百萬觀看的「節拍超慢跑」影片，不費力卻有效率，顛覆了傳統跑步印象。「超慢跑」跑步方式更緩和、更不傷膝蓋，特別適合熟齡族，除了可以幫助逆轉前期糖尿病、消滅脂肪肝，對於三高也很有幫助，此外，更有燃脂的優勢，達到減重、減脂的功效。

徐標英教練建議飯後不要立刻坐下、躺下，可以在3餐飯後，休息5分鐘後，原地執行超慢跑10到20分鐘，讓血液循環，維持血糖持續在穩定狀態。曾經有位患者也靠著「超慢跑」，3個月成功逆轉前期糖尿病、消滅脂肪肝，持之以恆下，1年更成功甩掉24公斤。

H2U 永悅健康

Hazard Identification and Risk Assessment

According to the Occupational Safety and Health Act, a corporation that has reached a certain scale or comprises a specific workplace must establish an occupational safety and health management system. TTY started building ISO 45001 in August, 2021, and aim to complete it and pass in December, 2022. The ISO 45001 Occupational Safety and Health Management System is promoted by TTY senior executives and heads of departments and units to carry out hazard identification and risk assessment in accordance with the provisions of the standard, so hazards and risks caused by changes in the Company, the occupational safety and health management system, or other activities can be mitigated, and to propose management plans and track risk opportunities and control measures.

Occupational Injury Statistics

Occupational Injury Statistics of TTY Employees for the Recent 5 Years

Year	Working Hours	Number of Recordable Occupational Injuries	Frequency Rate of Recordable Occupational Injuries	Number of Severe Occupational Injuries	Frequency Rate of Severe Occupational Injuries
2018	1,121,623	2	0.36	1	0.18
2019	1,155,097	0	0.00	0	0.00
2020	1,183,759	2	0.34	0	0.00
2021	1,147,336	2	0.35	0	0.00
2022	966,168	0	0.00	0	0.00

- Note:
- The statistical range includes the Chungli Factory, Lioudu Factory, Neihu Factory, PDC, and Translation Research Center.
  - The statistical standard of occupational injury does not include commuting accidents.
  - Recordable occupational injuries: workers who cannot continue their normal work due to an occupational injury and must leave the workplace for more than 1 day, including deaths caused by occupational injury.
  - Total recordable injury frequency rate (TRIFR) = number of recordable occupational injuries × 200,000/total working hours (calculated to two decimal places, and not rounded).
  - Severe occupational injury: an occupational injury that results in death or from which the worker is unable to recover within 6 months.
  - Severe occupational injury frequency rate = number of severe occupational injuries × 200,000/total working hours (calculated to two decimal places, and not rounded).
  - The number of occupational injuries in year 2022 was 0.
  - No occupational disease has occurred to a TTY contractor in the recent 5 years.
  - To adapt to the revision of the GRI specific topic standard "GRI 403 Occupational Safety and Health" and changes in measurement, the statistical information on occupational injuries in the previous report has been restated.

Disability Frequency and Severity Rate Statistics of TTY Employees over the Recent 5 Years

Year	Number of Working Days Lost Due to Disability	Disabling Frequency Rate (FR)	Disabling Severity Rate (SR)	Frequency Severity Indicator (FSI)	Injury Type
2018	220	1.78	196.14	0.59	Being clamped and rolled, and fall
2019	0	0.00	0.00	0.00	-
2020	24	1.69	20.27	0.19	Object collapse, crumble, fall
2021	6	1.74	5.23	0.10	Being cut, slashed, abraded
2022	0	0	0	0	-

- Note:
1. Number of lost working days: number of days unable to work (rest days). The calculation basis includes occupational accident injury leave, excluding sick leave and menstrual leave.
  2. Disabling frequency rate (FR) = times of disabling injury × 1,000,000/total working hours (calculated to two decimal places, and not rounded).
  3. Disabling severity rate (SR) = (days of disability damage loss × 1,000,000)/total experienced working hours (calculated to two decimal places, and not rounded).
  4. Frequency severity indicator,  $FSI = \sqrt{[(FR \times SR) \div 1,000]}$



Occupational Safety Risk Control

Employee Safety Measures

Disease Prevention

Covid-19 has posed many challenges to corporation. Whether in daily operations or for employee wellbeing, corporates must respond effectively to reduce the impact of the epidemic, assist employees in managing difficulties, and show organizational resilience. To effectively manage epidemic prevention, TTY rigorously implements daily health monitoring and management policies for employees, from working from home to managing shifts, to minimize the risk of infection of all staff. TTY also actively appeals to employees to pay attention to personal hygiene and ensure they wash their hands frequently. We have also placed sanitizers in many offices and provided free masks for employees.

TTY has established an emergency response team to regulate visitors and personnel in the headquarters, elevators, meeting rooms, factory offices, restaurants, and other confined spaces prone to cross-infection. Video conference and online meetings are preferred to face-to-face meetings with business visitors. Face masks must be worn throughout the office space. All employees' travel plans should be suspended, and lunch should be prepared by the employee themselves or ordered in groups to avoid unnecessary entering and leaving of crowded places. Employee travel was also canceled in year 2022 due to the pandemic. Therefore, the Employee Welfare Committee decided to offer electronic gifts instead of employee travel subsidies equal to the amount of travel subsidies so employees could still receive their benefits.

Working from Home

Taiwan faced numerous outbreaks of COVID-19 from overseas arrivals this year. Group infection of Omicron variants (BA.1



& BA.2) was seen at quarantine hotels, hospitals, Taoyuan Airport, and Kaohsiung Port, on a large scale. In view of this, TTY activated 12 weeks of remote working and work from home between 4/11 and 7/1 to minimize infection risks during commutes, ensuring employee health and safety.

At the height of the pandemic, we reviewed the working from home system and required daily self-check management forms to be filled in by employees and avoided crowded, public areas to support national defense against the virus. Work resumed to normal by July when the pandemic was alleviated. The preventive measures continued in the Company as prescribed by central policies and advocated active prevention, such as self-monitoring of body temperatures, self-health monitoring, and social distancing, throughout the period.

COVID-19 Self-test Kit to Protect Health

It has been 2 years since the 2020 year-end outburst of COVID-19. During these months we sought comprehensive protection for employees. Quarantine transportation, emergency aid, quarantine insurance, vaccine insurance, and options to work remotely, along with quick testing kits provided to all employees at different timelines to screen out affected workers enable to curb the spread and implemented work from home.

As one of the key pharmaceutical corporations in Taiwan, TTY pays close attention to national health and the health of our employees. Each step of the way we advance towards sustainability we move closer to a stable society. We strongly believe that sustainability actions should respond to ESG actions, and global trends, and contribute to a better Taiwan. Behind corporate governance, environmental protection, and all preventive measures against the pandemic, TTY makes our best efforts to assume social responsibility and make decisions in daily operations that align with CSR and take care of our people and wider society.





### Initiative Improvement Plan

#### Personal Protective Equipment

We value and protect the safety of each product we make. Personal protective equipment (PPE) is used to keep our operators safe from certain occupational hazards.

In accordance with relevant occupational safety and health laws and regulations, TTY carries out environmental harmful component inspections for different processes and production lines to assess the necessity and effectiveness of protective equipment and determine the working environment.

For example, glove boxes effectively allow factory workers to avoid contact with chemicals, and spill kits are provided for an immediate response to chemical spillages or leakages. This ensures that injuries can be contained and the disaster mitigated.

In addition, PPE is updated depending on the process requirements and use conditions so that production line employees receive maximum protection. For example, masks and protective clothing are all disposable, and respiratory protective equipment is replaced according to the degree of dust adsorption.

#### Different Occupational Safety and Health Protection Equipment for Different Processes

Unit	Process	Hazard Identification	Corresponding Protective Equipment
Oral Section	Weighing process	Organic solvent and dust	PAPR
	Crushing process	Noisy workplace	Earmuffs
	Ingot shaping process	Noisy workplace	Earmuffs
	Coating process	Organic solvent	Respiratory protective equipment
Injection Section	Weighing process	Organic solvent	Glove boxes, chemical-resistant gloves
Physical and Chemical Section	Chemical experiment	Organic solvent	Respiratory protective equipment, chemical-resistant gloves, chemical fume hood
Microbiology Section	Microbiological experiment	Microbial contamination	Biosafety cabinet

#### Employee Health Examinations

TTY conducts regular health examinations for all employees every year, including general health examinations and special examinations for colleagues with a higher risk of occupational health problems. In year 2022, a total of 100 employees underwent special physical examinations, and their health management classification was implemented according to

the regulations. If the health examination results are about personnel above level 2 management, nurses and professional medical specialists will perform health education and health follow-up examinations, and, if necessary, on-site assessments of suspected work-related injuries may be conducted. No personnel above level 3 management and no abnormalities in physical examinations caused by special operations were detected this year.

#### Classification Results of Special Health Examinations for Each Factory in TTY in year 2022

Level	Health Examination Item	TTY
1 <sup>st</sup> Level	Specific chemical substance	86
	Dust	14
	Physical	0
2 <sup>nd</sup> Level	Specific chemical substance	29
	Dust	3
	Physical	0

#### Contractor Occupational Safety Management

To ensure the safety and health of employees and contractors, TTY complies with Article 26 of the Occupational Safety and Health Act which states that when all or part of the business is delivered to a contractor, the contractor must be informed in advance about the working environment, and all known hazardous factors. Safety and health regulation measures are to be adhered to per TTY's Contractor Safety, Health, and Environmental Management Standards. Before outsourcing certain work, the two parties must sign a joint contract. During the contract period, in addition to observing the provisions of the contract, both parties should also abide by relevant laws and regulations, such as the government's occupational safety and health regulations, environmental protection, and fire hazard-related regulations.

In addition to providing complete occupational safety and health education and training for TTY employees, the Company also carries out occupational safety and health education and training

for dispatched employees and contractors. In year 2022, TTY held 4 training sessions for dispatched personnel, totaling 19 participants, and 24 sessions for contractors, totaling 173 participants. In addition, the Company also provides health consultation services for dispatched personnel. If dispatched or contracted personnel encounter an emergency, the Company will provide basic emergency medical assistance and assist in sending them to the nearest hospital for a consultation.

For major engineering contracts or construction work, TTY also requires contractors to designate a person in-charge of the contracted project during the design stage and prior to the start of each project phase as the commander, supervisor, and coordinator of large-scale construction. Reports covering hazard identification, risk assessment, and measures to control such risk according to the assessment results should be presented based on the design, construction, and execution methods. The contractor should receive confirmation and approval from TTY before any formal construction work begins. In year 2022, TTY did not record any occupational hazards with contractors.

## Social Participation

In year 2022, these actions centered around the SDG themes of no poverty, good health and well-being and quality education. TTY initiated a charity group purchase, second-hand donations, financial aids to children of cancer patients, eco-friendly farming, hospice care, flu vaccines for athletes to conquer the virus, and many more actions with welfare organizations to seek more inclusive ways of taking care of our communities.

### The Starting Point of TTY's Core Value and Culture of Public Welfare: Boshiyuan

In response to our corporate culture of "being a civilized person", advocated by Chairman Lin Chuan, and in combination with the 17 SDGs of the United Nations, TTY colleagues established a charity club, Boshiyuan, to promote social services and environmental protection, and to bring the DNA of public welfare to daily life, imperceptibly mirroring TTY's culture so we can all work together for the world.

Boshi's idea is to give generously; while Shiyuan is the homophonic sound of "si yuan", which means being grateful for the origins of things. It represents the heart of thinking of nature, helping those that are disadvantaged, and repaying to society what we take from it.



### No Poverty

#### The Yu-Cheng Social Welfare Foundation – Charity Purchase

Since year 2019, TTY has cooperated with the Yu-Cheng Social Welfare Foundation, a legal entity to provide assistance to children with mental disabilities through practical actions. TTY gathered volunteers to spend the Mid-Aautumn Festival with children who are part of this foundation to create an atmosphere of "home" for many children who lack care.

As the pandemic situation remains critical, gathering for meals has been postponed to eliminate the unnecessary risk and to protect the safety of our community. The foundation has faced challenges with the workforce and operating expenses due to the global pandemic. We initiated group-purchase in year 2021 to motivate and assist vulnerable groups to learn and practice their work skills, gain a sense of independent living, and enable them to navigate society more seamlessly and seek ways to inspire and present multiple possibilities in their lives.

Colleagues initiated group-purchase initiatives of moon cakes in year 2021, and Yu Cheng's new 4 tea-flavored popcorns in year 2022. We are always seeking ways to better support vulnerable groups and engage in comprehensive public welfare.

#### Yu Cheng Souvenirs to Shareholders

TTY worked with the Yu Cheng Foundation to organize shareholder souvenirs for year 2022. Selected during The shareholder's meeting selected the Himalayan rose rock salt packing by the Yu Cheng vulnerable groups as souvenirs, and presented our long-time supportiveness, and boosted NPO product exposure. This purchase reached 27,600 sets, totaling NTD\$2.2 million this year.

### Step30 · Gathering Second-hand Clothes

As a regular participant in social activities, TTY lives up to its company values and returns to local communities. TTY's charity spirit grows in our everyday work and promotes within the Group. This year we teamed up with subsidiary TSH on gathering used clothes to donate and to provide basic needs in underdeveloped countries. The second-hand clothes are in good condition and helps with the Company's goal of reducing waste.

Within 1.5 months, we managed to collect 806 tops and bottoms and 64 backpacks, which amounted to a GHG reduction of 3,385.2 kg. Echoing SDG1 of no poverty and SDG13 of Climate Action, our workers helped achieve this Company goal as a team.

### Planting the Seeds of Hope: Providing Scholarships and Financial Aids to Children of Cancer Patients

According to statistics of the Ministry of Health and Welfare, patients suffering from certain cancers tend to be younger. The younger cancer population in Taiwan also means that most cancer patients are the economic pillar of their families, so treatment expenses are a particularly heavy burden on families and have an impact on children's lives and studies. To reduce

the economic burden on families impacted by cancer, TTY has sponsored the Hope Foundation for Cancer Care since year 2010 and offers a scholarship of NTD\$20,000 for each student. Since year 2011, learning subsidies have been given each year to totaling 510 children affected by cancer to help alleviate the financial burden so children can give their undivided attention to their learning. Every year we funded NTD\$1 million to support events that help cancer-affected college students learn under an equal, quality education system.

"Seeing the smiling faces of children is a great encouragement to us." In addition to providing scholarships to enable the children of patients with cancer to get some support in their studies and to reduce the economic burden of patients, TTY also supported the Hope Foundation for Cancer Care in launching the Planting a Seed of Hope project through practical action. Since year 2016, we have hosted 21 sessions of Planting a Seed of Hope projects during 7 years – 525 people have joined to raise awareness – and provided care and companionship to children of cancer patients to help them through difficult times. Students exploring who they are can still find their own position in life and develop their skills. Through listening and sharing, we can assist students who participate in the project to express their emotions, learn how to adjust, and provide substantive support to children of cancer patients.



### TTY Rice Project- 3 Episodes

As an international pharmaceutical brand, we emphasize the importance of health. Other than being committed to global medical development, TTY focuses our efforts on patients' wellbeing and enrich people's lives. As general manager Sara Hou always encourages the team, we must first be passionate about life, and then we can see the needs of others, and further discuss solutions with the medical team. Based on CSR, we work to support the environment, employees, and society. TTY has developed a 3-episodes of "Support TTY, Support Health", The TTY Rice project is a toxic-free farming support initiative targeting groups in need and donating rice to develop a deep connection with public welfare, it also deepens the corporate DNA of public welfare culture.





### 1. Eco-friendly Farming Supports Toxic-free Rice

General manager Sara Hou believes that, as a pharmaceutical company, it is best for TTY to take on CSR from the point of health. In view of this, we contacted eco-friendly farmers based in Daxi rice farms around the Chungli factory to work with them and support toxic-free rice.

The rice suppliers, Mr. Wang Lien-Pao, comes from a farming family. For over 3 decades, Mr. Wang has practiced toxic-free farming and insists on quality rice for our citizens. This level of friendliness toward the environment and longevity echo TTY's long-pursued brand spirit. With this backdrop, our TTY Rice Project was launched. As an initial purchase of two terms, 13,000 kg of clean rice was sponsored to meet Mr. Wang's persistence on sustainability. An environmentally-friendly, toxic-free lifestyle is a good example of ecological sustainability that has long been advocated by TTY.

### 3. Increasing Impact Trough Connecting Public Welfare Groups

Clean rice is a motivation to show our support for the environment and employees, as well as our deep care for society. By encouraging acts of altruism, we are able to cover more groups under our health-oriented umbrella.

In year 2022, our extensive collaboration with the Yu Cheng Foundation that assists handicaps and Andrew Charity Association, a dedicated organization that supports children affected by poverty, gave out 1,000 kg respectively of clean rice through professional leverage and supporting the families in need.

General manager Sara Hou is a firm believer in helping others. "Even the slightest action can warm someone's heart. We all benefit ourselves through small acts of kindness." Our employees initiated volunteer work of packing food at the Andrew Charity in Wugu, and clean rice packing with children with mental disabilities of the Yu Cheng Foundation at Daxi Farmhouse.



### 2. One-day Farmer - Encouraging a LOHAS Lifestyle

TTY has stood by ESG efforts and worked to connect daily life with sustainable awareness. Our team started a nature experience project of "toxic-free rice farm to table" and has engaged in a contract with a clean farming movement.

"We are what we eat. This is a familiar concept. We expect this concept to be embedded in our employees' work and family, and further expanded into society." General manager Sara Hou believes that by experiencing farming together, environmental sustainability, a LOHAS lifestyle, can be facilitated, and families can stay connected. In August 2022, during the second term of plantation, the general manager gathered nearly a hundred employees and their families to experience rice farming. From planting know-how to riding on a cultivator and stepping in the mud, a day on the farm was enjoyed with lots of laughter and satisfaction. We hope everyone who participated felt a strong sense of fulfillment by getting involved in this initiative.



Proceeding as a team, it does not matter whether the action is big or small as long as everyone keeps moving forward on the charity path. Though the TTY Rice Project advocating environmental sustainability at the outset, teamwork among employees and welfare groups maximized the impact. We were able to deliver rice to families in need, and deepen the ESG culture in TTY.





## Good Health and Well-being



Corresponding GRI index

Self-established Topic

Policies and Commitment

We dedicated on unmet medical needs, and our solutions target patients and doctors around the world. The pricing method for drugs adheres to regulations; and our products, licensed-in or self-developed, best meet local needs. Extensive collaboration with NPOs and social groups facilitates public benefit and awareness of human being's health.

Goals and Targets

### Short-term Goals

- Introducing drugs with active treating ingredients with a shorter authorization process to benefit more people sooner.
- Improve knowledge of illnesses through health education.
- Introduce vaccines for greater protection against infectious diseases.
- Reduce the number of deaths from non-infectious illnesses.

### Mid- to Long-term Goals

- Collaboration with supply chain partners.
- Promoting access to medicine.
- All-encompassing product combination for access to treatment options.

Responsibilities and Resources

Our experts assist as a team with license applications and follow up on each step of the process to ensure all is ready before a new drug and its authorization are introduced to the market.

Prior to licensed-in or authorized drugs, we review the top 10 advanced countries' prices and medical technology reports to simulate the financial impact when bringing the new drug under NHI coverage, locating a reasonable and affordable NHI price.

Continuously on brand activities and management optimal localization throughout each of the targeted market.

Assessment Mechanism and Results

- 130 licenses owned at the end of year 2022.
- Over 36 products listed as NHI-covered drugs in year 2022.
- The first clinical patient enrollment in Europe for the development of the difficult generic drug Pegylipo, for which an EMA application for a license is scheduled for year 2023.
- The Lioudu factory passed the FDA inspection in October 2022 for the difficult generic drug Lipo-AB, with a permit for Amphotericin B (Lipo-AB) received by November 2022. Shipping was completed in Q1/2023.
- One permitted product (Aplidin for treating multiple myeloma) application to the TFDA for use in projects and named patient use; treatment has been completed.
- 1,000 flu vials donated to the CTOC.

### Donating Flu Vials to the CTOC, Better Protected Athletes

The Hangzhou Asian Games were rescheduled to 2023 due to the pandemic. To reassure our players, we worked with the CTOC (Chinese Taipei Olympic Committee) to supply 1,000 cellular influenza vaccines to protect our athletes.

When viruses mutate, the threats are not critical so the world's gradually released. Meanwhile, some experts are concerned about immunity debt as many western countries face the outbreak of the flu. TTY works with the Chinese Taipei Olympic Committee and donated 1,000 cellular influenza vaccines to our national athletes to receive their shots at the National Sports Training Center, boosting protection of public health and the health of athletes, helping them prepare for the Hangzhou Asian Games in year 2023.

The IDSA validated the cellular influenza vaccine's ability against influenza-like illnesses. It gives 36.2% higher protection than the embryo flu vaccine. Both the CDC of the USA and the JCVI of the UK recommend the former. To better fulfill our responsibility as a member of society, these shots allow our athletes to benefit from better protection, and advocate the importance of flu prevention.

The quality of the cellular influenza vaccines that TTY licensed-in received numerous recognitions by the government. We

processed increasing orders from 550,000 vials in year 2020 to 890,000 in year 2021, and then 1,130,000 vials this year (2022). The vaccines are further approved to expand indication to infants and children over 6 months old. Furthermore, TTY assumes responsibility for epidemic prevention, education, and research, where we combine our expertise and efforts towards extensive business sustainability.

### With You Until the End: TTY and Hospice Care

To promote hospice care within Taiwan, TTY initiated the hospice care with China Medical University Hospital. At CMUH, hospice daycare is a service targeting palliative care and medical treatment from home. Carried out by hospice home nursing staff, the palliative and medical treatment provides information for family members and alleviates the pressure in caregivers.

For the 2 years of the pandemic, our love and care for the community continued. In year 2022, we reached 298 patients under hospice care at home and covered their expenses. With emotional support, symptom relief, and financial assistance, we try to alleviate some of the burden patients and their families through good corporate effort.





## Quality Education

### Industry-University Cooperation: Committed to Training Domestic Medical Talent

TTY has spared no effort in cultivating domestic biotech talent. Since year 2008, TTY has provided a Summer Internship Program (SIP) for 15 consecutive years, and hosted many seminars, group interviews, course content planning, and project management workshops for undergraduate and graduate students from universities related to pharmacy and bioscience across Taiwan. From the perspective of a professional and forward-looking international pharmaceutical company, TTY brings industry experience and offers insights into aspects of the industry that cannot be learned in class. Over the past 15 years,

391 students have benefited from our program.

In year 2022, even when faced with the outbreak of the epidemic, students were still expected to have the opportunity to put their skills into practice and engage in a remote internship. TTY planned a new “group entrepreneurship competition” to motivate and encourage students in their learning. Students simulated establishing a new biotech company, and learned about the effort that goes into compiling the vision, mission, and strategy of a company, understood market operation modes and the demand of the biotech industry, and started developing their skills as high-quality talent of the future.

A total of 28 students from National Taiwan University, Taipei Medical University, National Yang Ming Chiao Tung University, National Tsing Hua University, China Medical University, National Cheng Kung University, Chia Nan University of Pharmacy and Science, Kao Hsiung Medical University, Tajen University, and students from the United Kingdom, the United States, and other countries, participated in the summer internship program. In year 2022, high-performing students were selected as campus ambassadors to encourage more students to participate in the Summer Internship Program in the future.

TTY has held the SIP for **15** consecutive years

Over the past 15 years, **391** students have benefited from the program

### Overview of TTY's SIP in the Recent 3 Years

Year	Participant	Internship Unit	Internship Content	Results
2022	28	Sales Marketing	Course learning Unit internship	<ul style="list-style-type: none"> <li>3 served as the 2<sup>nd</sup> session campus ambassadors</li> <li>1 SIP learner of year 2022 working in TTY</li> <li>1 SIP learner of year 2017 working in TTY</li> </ul>
2021	24	R&D Manufacturing	Team entrepreneurship competition	<ul style="list-style-type: none"> <li>3 served as the 2<sup>nd</sup> session campus ambassadors</li> <li>1 served as a short-term intern after the SIP</li> </ul>
2020	26	Clinical Regulatory Affairs	Demonstration of learning result	<ul style="list-style-type: none"> <li>1 served as the 1<sup>st</sup> session campus ambassador</li> </ul>
2019	27	Intellectual Property		<ul style="list-style-type: none"> <li>1 worked in TTY after graduation</li> <li>1 worked in an affiliated corporation of TTY</li> </ul>



#### Feedback from interns:

I learned so much from this program, about working in a pharmaceutical firm, directions, and targets. From interview to participation, the program is so well organized that you know behind the speeches and learnings there are human resources, speakers from different units, and a professional workforce, who all value our participation. Others in the program from other schools really stood out as well. I am so lucky to be part of this. What an opportunity and every minute was worth it.

### TTY Campus Ambassador

With the increase in online communities and digital media, TTY held the 2<sup>nd</sup> Campus Ambassador program in year 2022. Through campus activities, students' creativity and unlimited potential were stimulated, and students were given the opportunity to take practical action. They served as "TTY's little helpers" on campus, and implemented their ideas online so more students could get to know TTY and have the opportunity

to work in TTY in the future.

This year (2022) the SIP found 3 fantastic students taking up the position as campus ambassadors. They study at NYCU, CMU, and CNU. We broadcast on TTY's digital platform and successfully gathered almost a hundred students with 1,261 hits, allowing more students to further their understanding of TTY, close the gap between the company and domestic students, and enhance TTY's brand recognition.

#### Experience of TTY's 1<sup>st</sup> session of campus ambassadors:

As a campus ambassador I am exposed to many opportunities, such as interviewing the online professionals as a journalist, learning how each unit works, and gaining insights. I then share what I learned as an intern. My skills are definitely developing! I really enjoyed the program. With TTY I can see and plan for my future much more easily now with all this valuable experience in different positions.



### Three Cancer Prevention Education Courses

As a major cancer pharmaceuticals manufacturer in Taiwan, TTY has been engaged in cancer prevention education for years, hoping to help the people of Taiwan understand more about cancer and related illnesses. Cancer education at TTY is carried out across three key areas: "Regional care for the cancer-affected", "Education support expanded to remote areas", and "Health education". Beneficiaries of our sessions are all over Taiwan, so the general public, cancer friends, and their families are no longer afraid of cancer and can show more tolerance and understanding of patients.

TTY continues to promote cancer prevention education on campus. In year 2022, a total of 34 "Regional care for the cancer-affected" campaigns were held on campus in remote places.

#### 1. Regional Care for the Cancer-affected

Since year 2005, TTY's TOT has cooperated with cancer-related non-profit organizations to hold a series of cancer prevention health education and publicity activities in rural areas, and has invited medical staff from major medical centers as lecturers to promote cancer prevention and publicity on campus, and contribute to cancer prevention initiatives. Cancer awareness continues in towns and villages. This year (2022), we worked with 34 junior high schools in Yunlin-Chiayi-Tainan, Miaoli, Hualien-Taitung and off-shore islands, and empowered young students with preventive thinking, so that family members can learn more about cancer, and how to lead as a healthy life as possible.



#### 2. Education Support Expanded to Remote Areas

To improve the capacity of domestic cancer prevention education and help cancer prevention activities take root, as independently initiated by TOT colleagues, TTY has held health promotion lectures every year since year 2012 at Lyudao and Goungguan Elementary School in Taitung, and combined cancer prevention knowledge with a health competition as suggested by colleagues. Through more diversified and relaxed teaching methods, children in Taiwan can also understand health information and cancer prevention knowledge. Health promotion activities conducted by TOT colleagues were not only welcomed by students, but also strongly supported by the principals and teachers. Although activities were suspended in year 2022 due to Covid-19, TTY shall continue to hold lectures in elementary schools around the country to create a high-quality and equal learning environment.



TTY holds health promotion activities on campus in remote areas every year to help children learn about cancer through interesting competitions.

#### 3. Health Education

Together with NPOs, TTY spreads information regarding treatment trends as well as nutrition and health guidelines for cancer among patients and their families, helping patients deal with discomfort from treatment and disease while gaining the proper knowledge to fight cancer. This year (2022) we had just 1 session due to the pandemic and government policy on hospital outspread prevention. With 90 in attendance, so far there have been 6,711 individuals affected by cancer who have benefited from disease information since year 2009. Moreover, we also arrange talks on osteoporosis, bone health, and environmental factors that lead to a lack of calcium and vitamin D. 26 professional doctors shared with 1,869 people in 59 sessions how to ensure calcium sufficiency through diet and everyday habits.



TTY regularly organizes health education for the patients' association to help patients and their families actively fight cancer.

### TTT Sustainability Report Received the TCSA Platinum Award



### 2022 TTY sustainability report received the TCSA Platinum Award

Since year 2018, TTY's corporate social responsibility report has led the way in responding to sustainability report trends of Europe and the United States. It has been prepared with the three main ESG axis of environmental protection, social care, and corporate governance, and aligns with current international norms. TTY has continuously adjusted and improved the report so that stakeholders can further understand the organization's sustainable business strategy and effective communication channels, resulting in the 2021 sustainability report winning the 15<sup>th</sup> TCSA Platinum Award in the healthcare category in year 2022.

The core ESG values of TTY are not just a slogan, but a standard of conduct that is implemented in daily operations and internalized in TTY members. It is hoped that all colleagues of TTY be civilized people and work with the Company to realize the vision of improving the quality of human life through scientific innovation.

# Appendix

- Statement of Independent Assurance Opinion
- Index Table of GRI Sustainability Report Standards
- SASB Chart
- UNGC Chart

## Statement of Independent Assurance Opinion

### The 2022 Sustainability Report is Verified by Afnor Asia

TTY's 2022 sustainability report passed the third-party independent verification conducted by institution Afnor Asia according to AA1000AS V3 first application type (type 1) and moderate assurance verification standards. External assurance is provided for the information disclosed in the report, and the independent assurance opinion statement issued by Afnor Asia confirms that this report correctly presents and conveys TTY's 2022 economic, social, and environmental performance information.

In year 2023, TTY conducted the 2022 ISO 14064-1 GHG emissions, and passed the third-party independent assurance opinion issued by DNV Business Assurance.

This block contains two main documents: an Afnor Assurance Statement and a DNV Independent Assurance Opinion. The Afnor document is an 'Independent Assurance Statement' for TTY Biopharm Company Limited's 2022 Sustainability Report, issued on June 7, 2023. It states that the report provides a fair and balanced representation of TTY's 2022 performance. The DNV document is an 'Independent Assurance Opinion' for TTY Biopharm Company Limited's 2022 Greenhouse Gas Inventory Management Report, also issued on June 7, 2023. It provides a 'reasonable' assurance opinion on the GHG emissions data. A table on the right side of the DNV document lists various categories and their corresponding values.

Category	Value
Scope 1	135,3169
Scope 2	232,4903
Scope 3	187,8872
Other	115,7528
Total	144,7213
Other	81,4213
Other	341,8354
Other	809,7426



# Index Table of the GRI Sustainability Report Standards

## General Disclosure

Use Statement	The content of the report period of 1/1/2022 to 31/12/2022 followed the GRI Standards		
GRI 1 Application	GRI 1: Foundation 2021		
GRI Standard/ Other Source	Disclosure Item	Chapter & Page	Omission
GRI 2 : 2021 General Disclosure			
GRI 2-1	Organizational details*	P.005 About TTY Sustainability Report>Basic Information P.031 About TTY Biopharm	
GRI 2-2	Entities included in the organization's sustainability reporting*	P.004 About TTY Sustainability Report P.031 About TTY Biopharm>Operation Result	
GRI 2-3	Reporting period, frequency, and contact*	P.004 About TTY Sustainability Report	
GRI 2-4	Restatements of information*	P.004 About TTY Sustainability Report	
GRI 2-5	External guarantee / Confirmation*	P.004 About TTY Sustainability Report	
GRI 2-6	Activities, value chain and other business relationships	P.046 Pharmaceutical Industry Value Chain	
GRI 2-7	Employee	P.124 Social Inclusion>Human Resource Structure	
GRI 2-8	Non-employees workers	P.126 Social Inclusion>Diversity and Equality in the Workplace	
GRI 2-9	Governance structure and composition	P.068 Governance Structure	
GRI 2-10	Nomination and selection of the highest governance unit	P.068 Governance Structure	
GRI 2-11	Chair of the highest governance body	P.071 Governance Structure>Conflicts of Interest	
GRI 2-12	Role of the highest governance unit in supervising operation management	P.075 Governance Structure>Functional Committees P.082 Risk Management	
GRI 2-13	Delegation of responsibility for managing impact	P.075 Governance Structure>Functional Committees P.082 Risk Management	
GRI 2-14	Role of the highest governance unit in sustainability reporting	P.004 About TTY Sustainability Report	
GRI 2-15	Conflicts of interest	P.071 Governance Structure>Conflicts of Interest	
GRI 2-16	Communication of material concerns	P.069 Governance Structure>Diversity and Professionalism of the Board of Directors	

GRI 2-17	Collective knowledge of the highest governance unit	P.071 Governance Structure>Enhancing Directors' Knowledge	
GRI 2-18	Evaluation of the performance of the highest governance unit	P.071 Governance Structure>Enhancing Directors' Knowledge	
GRI 2-19	Remuneration policies	P.075 Governance Structure>Remuneration Committee	
GRI 2-20	Process to determine remuneration	P.075 Governance Structure>Remuneration Committee	
GRI 2-21	Annual total compensation ratio	No	No disclosure due to non-disclosure agreement
GRI 2-22	Statement on the sustainable development strategy	P.002 Letter from the Chairman P.006 Path to Sustainable Development P.076 Governance Structure>Promote Corporate Sustainability Development	
GRI 2-23	Policy commitments	P.006 Path to Sustainable Development P.069 Governance Structure>Promote Corporate Sustainability Development	
GRI 2-24	Embedding policy commitments	P.069 Governance Structure>Promote Corporate Sustainability Development	
GRI 2-25	Processes to remediate negative impacts	P.080 Governance Principles>Complaints and Suggestions Channel	
GRI 2-26	Mechanisms for seeking advice and raising concerns	P.080 Governance Principles>Complaints and Suggestions Channel	
GRI 2-27	Regulatory compliance	P.078 Governance Principles>Ethical Management	
GRI 2-28	Membership to associations	P.035 External Engagement	
GRI 2-29	Guidelines to stakeholder engagement	P.018 Stakeholder Engagement	
GRI 2-30	Group agreements	P.128 Labor-employer Relationship Management > Employee Benefits	

Note: Nothing may be omitted.

## Material Topic Disclosure

GRI No	Disclosure Item	Chapter & Page
<b>GRI 3 : 2021 Material Topic</b>		
GRI 3-1	Procedure to determine material topics*	P.018 Stakeholder Engagement P.024 Material Topics Identification
GRI 3-2	Material topic list*	P.024 Material Topics Identification
<b>1. Economic Performance</b>		
GRI 3-3	Material topic management	P.030 About TTY Biopharm
GRI 201-1	Direct economic value generated and distributed by the organization	P.031 Operation Result
GRI 201-2	Financial implications and other risks and opportunities due to climate change	P.087 Risk Management>Task Force on Climate-related Financial Disclosure
GRI 201-3	Defined benefit plan obligations and other retirement plans	P.128 Labor-employer Relationship Management > Employee Benefits (Please refer to Annual Report)
<b>2. Talent Attraction and Retention</b>		
GRI 3-3	Material topic management	P.124 Social Inclusion>Human Resource Structure
GRI 401-1	New and departed employees	P.125 Social Inclusion>More Job Opportunities
GRI 401-2	Benefits provided to full-time employees (excluding temporary or part-time employees)	P.128 Labor-employer Relationship Management>Employee Benefits
<b>3. Access to Medicine</b>		
GRI 3-3	Material topic management	P.150 Social Participation>SDGs 3 Good Health and Well-being
<b>4. Sustainable Development Strategy</b>		
GRI 3-3	Material topic management	P.006 Path to Sustainable Development
<b>5. Counterfeit Drugs</b>		
GRI 3-3	Material topic management	P.056 Drug Safety>Supply Chain Traceability
<b>6. Ethical Management</b>		
GRI 3-3	Material topic management	P.078 Governance Principles>Ethical Management
GRI 205-2	Communication and training on anti-corruption policies and procedures	P.078 Governance Principles>Ethical Management

GRI No	Disclosure Item	Chapter & Page
<b>7. Drug Safety</b>		
GRI 3-3	Material topic management	P.054 Drug Safety
GRI 416-1	Assessing the health and safety of product and service categories	P.054 Drug Safety
GRI 416-2	Violation of health and safety regulations related to products and services	P.054 Drug Safety
<b>8. Subject Safety</b>		
GRI 3-3	Material topic management	P.059 Drug Safety>Subject Safety
<b>9. Reasonable Pricing</b>		
GRI 3-3	Material topic management	P.065 Responsibility of Sales>Reasonable Pricing
<b>10. Supplier Management</b>		
GRI 3-3	Material topic management	P.048 Supplier Screening and Management
GRI 308-1	New suppliers that were screened using environmental criteria	P.048 Supplier Screening and Management
GRI 414-1	New suppliers that were screened using environmental criteria	P.048 Supplier Screening and Management
<b>11. Marketing Ethics</b>		
GRI 3-3	Material topic management	P.062 Responsibility of Sales>Marketing Regulations
GRI 417-2	Failure to comply with laws and regulations regarding information and labeling of products and services	P.062 Responsibility of Sales>Marketing Regulations
GRI 417-3	Failure to comply with marketing communications regulations	P.062 Responsibility of Sales>Marketing Regulations

# SASB Chart

(Sustainability Accounting Standards Board)

SASB Biotechnology and Pharmaceutical Industry Disclosure Guidelines				
No.	Accounting Standards	Category	Disclosure Item	Relevant Chapters
<b>Topic: Safety of participants in clinical trials</b>				
HC-BP-210a.1	To study the management process to ensure the quality of care and patient safety according to different regions of the world	Discussion and Analysis	<p>TTY adopts the highest standards of management for ensuring medical quality and patient safety, and each business unit conducts clinical trials in accordance with domestic regulations such as the Good Clinical Trial Practice Guidelines for Pharmaceuticals.</p> <p>In human research and clinical trials of cancer drugs, in addition to complying with relevant domestic and foreign laws and regulations (such as ICH E6, human research law, etc.), they must be approved by the ethics committee of the testing institution and the local health authority, and implemented in accordance with the standard operating procedures of the medical academic division.</p>	Chapter 2 Supply Chain Management > Subject Safety
HC-BP-210a.2	For clinical trial management and drug active surveillance-related FDA audit items and quantities, the following approaches can be taken: (1) Voluntary Active Initiative (VAI) (2) Official Active Initiative (OAI)	Quantitative	The management and active monitoring of research drugs are carried out in accordance with PIC/S GMP (Part I, Attachment 13 of the Good Manufacturing Practice for Pharmaceuticals in Taiwan), ICH E6 (Good Clinical Trial Practice Guidelines for Pharmaceuticals in Taiwan) and the standard operating procedures of the pharmaceutical research institute, and are recorded as written documents and data records to ensure effective management.	Chapter 2 Supply Chain Management > Subject Safety
HC-BP-210a.3	Total financial losses from legal proceedings related to clinical trials of drugs in developing countries	Quantitative	<p>There were no relevant losses to report in TTY in year 2022.</p> <p>In human research and clinical trials, TTY provides insurance to the subjects depending on the case. In addition, potential risks, damage compensation, and insurance information in studies are clearly stated in the subjects' consent form so subjects may carefully consider whether to participate in the clinical trial.</p>	Chapter 2 Supply Chain Management > Subject Safety
<b>Topic: Access to medicine</b>				
HC-BP-240a.1	The measures and initiatives to promote the use of healthcare products for diseases requiring priority prevention and treatment and countries with relatively underdeveloped medical and health conditions (as defined in the drug licensing index) is described in detail	Discussion and Analysis	<p>TTY introduced and obtained the trivalent and tetravalent influenza vaccine certificate issued by the competent authority.</p> <p>Note: the drug license was obtained on 6/4/2017 and 20/3/2020.</p>	Chapter 5 Social
HC-BP-240a.2	As a product on the PQP list of pre-qualified medicines	Discussion and Analysis	Taiwan is not a member of the World Health Organization (WHO), and TTY does not hold products related to the WHO PQP.	Chapter 5 Social

SASB Biotechnology and Pharmaceutical Industry Disclosure Guidelines				
No.	Accounting Standards	Category	Disclosure Item	Relevant Chapters
<b>Topic: Reasonable pricing for the masses</b>				
HC-BP-240b.1	The number of lawsuits related to ANDA procedures related to disbursements or the specified period of delay in the listing of generic drugs	Quantitative	No related lawsuits.	Chapter 2 Supply Chain Management > Reasonable Pricing
HC-BP-240b.2	Percentage change in (1) average pricing and (2) average net price of the US drug portfolio compared to the same period last year	Quantitative	TTY drugs are mostly regulated by Taiwan's health insurance laws and regulations, and only 1 cancer drug and 1 anti-infection drug are at the patients' own expense. For drugs covered by national health insurance, most prices were reduced compared to the same period last year, and only a few drugs maintained the same prices. In addition, the price of self-pay drugs is the same as the same period last year.	Chapter 2 Supply Chain Management > Reasonable Pricing
HC-BP-240b.3	Percentage change: (1) pricing and (2) net price of products with the largest increase compared with the same period of the previous year	Quantitative	The current pricing of drugs sold by TTY 's BUs is the same as that in the same period of the previous year.	Chapter 2 Supply Chain Management > Reasonable Pricing
<b>Topic: Drug safety</b>				
HC-BP-250a.1	List of products listed in the U.S. Food and Drug Administration's (FDA) MedWatch Notification System's Human Medical Product Safety Alert Database	Discussion and Analysis	<p>Adverse drug reactions of TTY are reported in the drug safety window of each BU. In year 2022, the cases reported to the adverse drug reaction notification system of the Taiwan Food and Drug Administration (TFDA) included Tynen, Lipo-Dox, UFUR, TS-1, Pemazyre, Leavdo, Thado, Gemmis, Ivic and Yondelis of the Oncology Business Unit (TOT); Brosym, Cubicin, Colimycin and Flucelvax of the Intensive Care Team (TIT), and are included in active drug safety monitoring.</p> <p>All the cases reported above do not involve any change in product safety information, and were reported in accordance with TFDA regulations.</p>	Chapter 2 Supply Chain Management > Drug Safety
HC-BP-250a.2	Number of deaths related to products in the FDA adverse drug reaction notification system	Quantitative	In Taiwan's TFDA adverse drug reaction notification system, the 4 deceased are within TIT product range (3 Brosym cases and 1 Flucelvax case). No specific consequential relations were found between the cases and the drugs.	Chapter 2 Supply Chain Management > Drug Safety
HC-BP-250a.3	The number of recalls issued in accordance with FDA regulations and the total number of units recalled	Quantitative	No related matters.	-
HC-BP-250a.4	The total amount of products accepted for recycling, reuse, or disposal	Quantitative	No related matters.	-

SASB Biotechnology and Pharmaceutical Industry Disclosure Guidelines				
No.	Accounting Standards	Category	Disclosure Item	Relevant Chapters
HC-BP-250a.5	The number of cases by type to which FDA-enforced measures apply for violations of current Good Manufacturing Practices (cGMP)	Quantitative	No related matters.	-
<b>Topic: Counterfeit drugs</b>				
HC-BP-260a.1	Detail of the methods and techniques to maintain product traceability and prevent counterfeiting throughout the supply chain	Discussion and Analysis	<p>TTY purchases raw materials from qualified suppliers on the list of raw material suppliers and has transportation and sales records so customers in the drug supply chain can be consulted and traced.</p> <p>To maintain product traceability and prevent counterfeiting, the logistics providers of the Company are all qualified manufacturers with GDP, which are regularly evaluated by TTY and implemented in accordance with the contents of the quality contract signed by both parties to ensure that after the drugs leave the factory, product quality and packaging integrity is maintained during storage and transportation, and drugs are correctly delivered to customers within a reasonable time to prevent counterfeit drugs from entering the drug supply chain.</p> <p>In addition, to strengthen internal control management of logistics companies, the vehicles of logistics companies are also equipped with GPS, and logistics companies follow the instructions of the company to deliver the drugs to designated medical institutions. The medical institutions report to the Company if they do not receive the stock.</p>	Chapter 2 Supply Chain Management > Supply Chain Traceability
HC-BP-260a.2	Explore procedures to remind customers and business partners of potential or known risks associated with counterfeit generic drugs	Discussion and Analysis	The manufacturer avoids direct contact with customers, so there is no relevant matters.	Chapter 2 Supply Chain Management > Supply Chain Traceability
HC-BP-260a.3	The number of searches, seizures, arrests, or criminal proceedings related to counterfeit drugs	Quantitative	No related matters.	Chapter 2 Supply Chain Management > Supply Chain Traceability
<b>Topic: Marketing ethics</b>				
HC-BP-270a.1	Total financial loss due to legal proceedings related to forged sales statements	Quantitative	No related matters.	Chapter 2 Supply Chain Management > Responsibility of Sales

SASB Biotechnology and Pharmaceutical Industry Disclosure Guidelines																
No.	Accounting Standards	Category	Disclosure Item	Relevant Chapters												
HC-BP-270a.2	Ethical guidelines for off-label use of pharmaceutical products	Discussion and Analysis	The products sold by each BU of TTY follow the indications approved by the Taiwan Food and Drug Administration, and use advertising content approved by the health authorities for public communication. When so requested, TTY provides further clinical literature for doctors to decide whether to use the product.	Supply Chain Management > Responsibility of Sales												
<b>Topic: Employee recruitment, development and retention</b>																
HC-BP-330a.1	Explore the recruitment and retention of scientists and R&D personnel	Discussion and Analysis	<p>In talent recruitment through the SIP program or industry university cooperation R&amp;D projects, TTY enables students in chemistry-related departments to further understand and experience specialties and the future development of pharmaceutical R&amp;D to attract talent. In addition, TTY contacts and interacts with R&amp;D personnel of overseas pharmaceutical companies through LinkedIn and other related platforms, and provides job vacancy information to motivate exceptional talent to return to Taiwan to work in the industry.</p> <p>TTY provides a friendly and flexible working environment to meet the needs of R&amp;D projects so R&amp;D personnel can focus on their work and help retain talent. In addition, TTY gives colleagues with integration and leadership abilities the opportunity to serve as project leaders in R&amp;D projects so they can engage in continuous professional development.</p>	Chapter 5 Social > Human Resource Structure												
HC-BP-330a.2	(1) Voluntary departure rate (2) involuntary departure rate: (a) senior managers, (b) middle-level managers, (c) professionals (d) others	Quantitative	<p>By the end of year 2022, the total number of employees was 521, including 64 new employees, accounting for 12.28% of all employees; 86 employees resigned, accounting for 16.51% of all employees.</p> <table border="1"> <thead> <tr> <th>2022</th> <th>Voluntary resignation</th> <th>Involuntary resignation</th> </tr> </thead> <tbody> <tr> <td>Senior managers</td> <td>5</td> <td>0</td> </tr> <tr> <td>Middle-level managers</td> <td>12</td> <td>2</td> </tr> <tr> <td>Professionals</td> <td>63</td> <td>4</td> </tr> </tbody> </table>	2022	Voluntary resignation	Involuntary resignation	Senior managers	5	0	Middle-level managers	12	2	Professionals	63	4	Chapter 5 Social > Human Resource Structure
2022	Voluntary resignation	Involuntary resignation														
Senior managers	5	0														
Middle-level managers	12	2														
Professionals	63	4														
<b>Topic: Supplier management</b>																
HC-BP-430a.1	Confirm the (1) physical facilities and (2) percentage of primary supplier facilities for those participating in the Rx-360 international pharmaceutical supply chain alliance review plan or equivalent third-party review plan to ensure supply chain quality and drug ingredient integrity	Quantitative	<p>TTY does not participate in the Rx-360 but will conduct a written or on-site supplier review plan every year or every 3 years according to the in-plant SOP.</p> <ol style="list-style-type: none"> <li>Physical facilities: no relevant event to report.</li> <li>The factory has established an appropriate continuous monitoring and assessment system for qualified raw material suppliers to ensure the integrity of supply chain quality and pharmaceutical ingredients.</li> </ol>	Chapter 2 Supply Chain Management > Supplier Screening and Management												

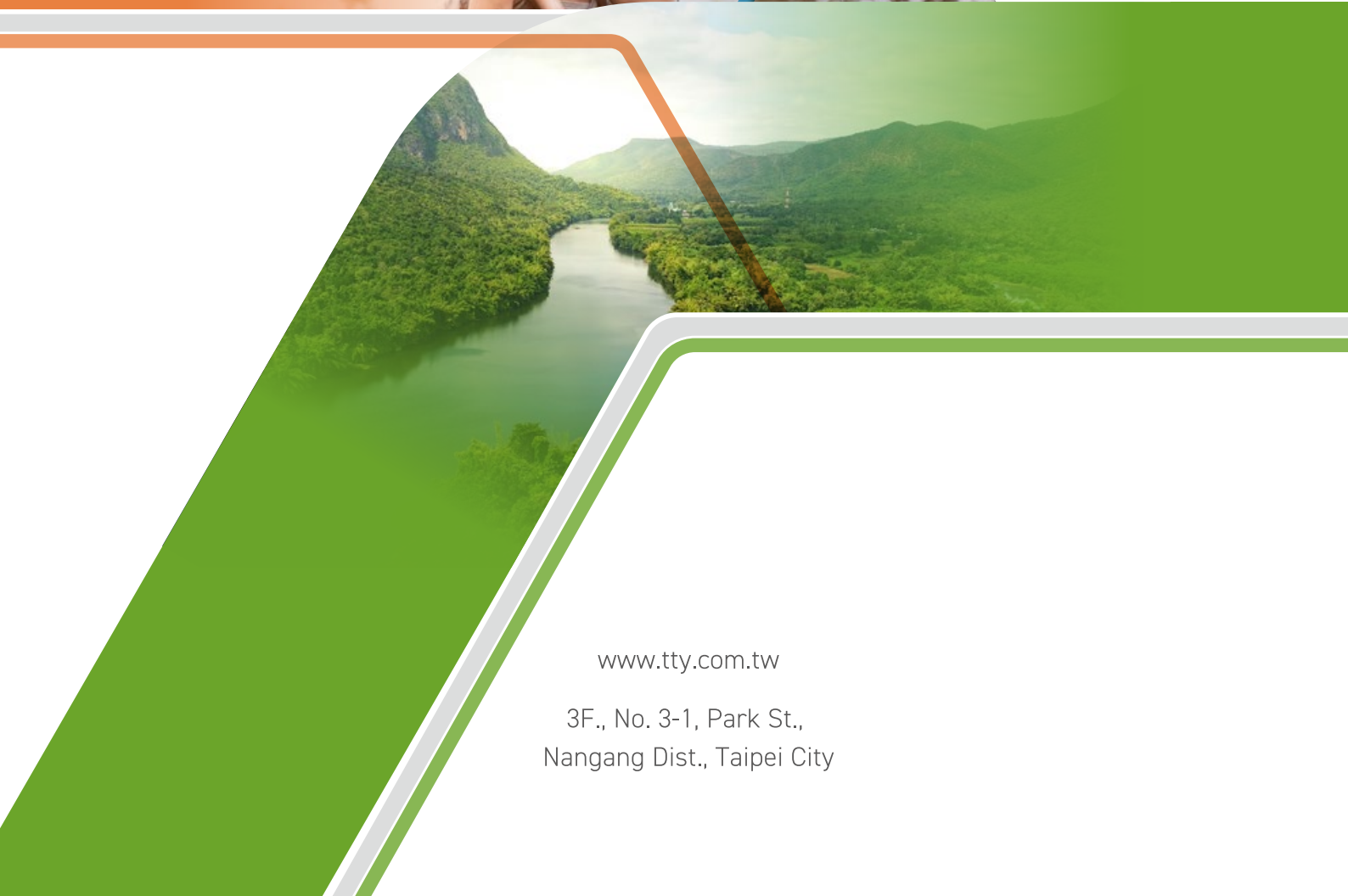
## UNGC Chart

SASB Biotechnology and Pharmaceutical Industry Disclosure Guidelines				
No.	Accounting Standards	Category	Disclosure Item	Relevant Chapters
<b>Topic: Business ethics</b>				
HC-BP-510a.1	Total financial losses caused by legal proceedings related to corruption and bribery	Quantitative	No related matters.	Chapter 3 Governance > Ethical Management
HC-BP-510a.2	Detail ethics when interacting with healthcare professionals	Discussion and Analysis	<p>All marketing activities and product promotion of TTY focus on "prolonging patients' life and improving their quality of life" as the core value. Instead of directly contacting patients, TTY leverages its academic and professional advantage to sell products at disease treatment and clinical sites, and conveys product information to customers through academic seminars, medical associations, and one-on-one visits, etc. All product messages communicated to medical professionals have clinical evidence such as guidelines and related literature.</p> <p>To promote the development of academic research and disease treatment, TTY provides sponsorship, such as medical associations and clinical research funds, assists doctors in holding professional academic seminars, and provides doctors' speech fees and conference host fees. No BUs accept bribes to further product sales, and all follow the code of business integrity to enforce ethical principles of interaction between colleagues and professionals.</p>	Chapter 3 Governance > Ethical Management
<b>Topic: Activity indicators</b>				
HC-BP-000.A	The number of patients treated	Quantitative	The Oncology BU provides relevant drugs for about 500,000 patients. About 300,000 patients are in the Intensive Care BU's GNB empirical treatment market, about 50,000 patients in the MRSA and VRE (BSI, IE, BJ) treatment market, and about 100,000 patients in the MDR-GNB treatment market. About 80,000 patients use stomach medicine products, about 30,000 patients take calcium tablets, and about 5,000 patients take gout drugs in the healthcare BU.	Chapter 1 About TTY Biopharm
HC-BP-000.B	(1) The number of drugs in the product portfolio (2) the number of drugs in research and development (stages 1-3)	Quantitative	<p>The Oncology BU currently has 27 drugs in its product portfolio, including 20 solid tumors and 7 blood tumor products. We have 1 product under process for a permit.</p> <p>There are 8 kinds of drugs in the product portfolio of the Intensive Care BU, including 5 antibiotic products, 2 antimycotic products, 1 influenza vaccine, and 1 anesthesia product. Additionally, there are 2 products under process for permits: 1 imported, and the other Company-developed drug.</p> <p>The Healthcare BU has 4 products in its product portfolio, including 2 gastrointestinal health products, 2 osteoporosis prevention products, and 1 product under API improvement.</p>	Chapter 1 About TTY Biopharm

Principles	TTY Practice	Relevant Chapters	
Human rights	Principle 1: Enterprises should support and respect internationally recognized human rights	TTY adheres to internationally recognized human rights standards, such as the International Labor Organization's Declaration of Fundamental Principles and Rights at Work, the Universal Declaration of Human Rights, the 10 Principles of the United Nations Global Compact, and the United Nations Guiding Principles on Business and Human Rights, and also complies with local government labor laws and regulations to establish corporate human rights policies to protect the rights of employees.	Protecting Employment Rights
	Principle 2: Enterprises should ensure that they are not involved in human rights violations	The 2 complaints received were made respectively on 5/10/2022 and 15/12/2022, and investigations followed and were completed on 10/11/2022 and 5/1/2023. To prevent similar cases, training will be given to emphasize communication and management skills among the management team.	Protecting Employment Rights
Labor	Principle 3: Enterprises should support the freedom of labor association and recognize the right to collective bargaining	The representatives of the TTY Labor and Employer Conference are composed of senior executives and colleagues from various departments. Meetings are held every 3 months to discuss issues such as the revision of labor conditions.	Harmonizing Labor-employer Relations
	Principle 4: Elimination of all forms of compulsory labor	TTY prohibits all forced labor practices, and there are no cases of forced labor at the Company.	Protecting Employment Rights
	Principle 5: The definitive abolition of child labor	TTY prohibits child labor that does not meet the legal minimum age and does not use child labor within the Company.	Protecting Employment Rights
Environment	Principle 6: elimination of discrimination in employment and occupation	TTY actively strives for workplace diversity. In the recent 5 years, the proportion of female employees has remained stable at more than 50%, and 42.19% of women hold key leadership positions above manager level, ensuring that employees are not discriminated against or treated unfairly due to gender, race, age, marital status, religion, political position, etc.	Diversity and Equality in the Workplace
	Principle 7: Enterprises should support the adoption of preventive measures to cope with environmental challenges	To mitigate the impact of climate change and cope with increasingly stringent temperature management regulations, TTY currently participates in the TCFD specification, preliminarily completing the identification of climate change related risks and opportunities, is planning specific response strategies according to the risk identification results, and strengthening information disclosure of climate-related risks and opportunities. To improve disaster response capabilities, TTY has actively developed new suppliers to ensure a second or even third source of raw materials, and has implemented a supplier sustainability management mechanism.	Risk Management
	Principle 8: Take initiative to promote and strengthen corporate environmental responsibility	TTY is committed to improving the utilization efficiency of water resources, creating a water resources circulation system, recycling water resources of the cooling tower, improving the cooling process, and increasing the heat recovery rate to reduce demand for water resources and subsequent impact on the environment.	Water Management
Anti-corruption	Principle 9: Encourage the development and promotion of environmentally friendly technologies	TTY adopts source classification and multi-sections effective treatment technology in the 2 manufacturing sites of Lioudu and Chungli factories to reduce air pollution caused by operating processes. The pollutant content discharged by the Company into the atmosphere is far lower than local regulation requirements.	Air Pollution Control
	Principle 10: Enterprises should strive against all forms of corruption, including extortion and bribery	<p>To establish a corporate culture of ethical management, TTY applies the "Principles of Procedures for Ethical Management" and "Procedures for Ethical Management and Guidelines for Conduct", specifically regulates matters that employees should pay attention to when performing their roles, and clearly prescribes preventive measures to various dishonest behavior. It is strictly prohibited for directors, managers, and employees to engage in any bribery or illegal behavior, and TTY is committed to minimizing the risk of violating honest practices.</p> <p>The Ethical Management Promotion Center under the Board of Directors publicizes the ethical management policy through internal announcements, regularly provides relevant education and training for all colleagues, and at least once a year publicizes relevant laws and regulations on preventing insider trading for directors, managers, and employees.</p> <p>To eliminate insider trading, the Internal Material Information Process Procedure was reviewed and renamed on 24/12/2021 by the board to the Internal Material Information Process and Insider Trading Management Procedure to strictly and explicitly regulate insider trading. A speech given by a legal professional in year 2022 further raised the awareness of directors, and online participation of the junior to senior management team. Another 2 online lectures shared cases to emphasize the importance of the topic among employees.</p>	Ethical Management



# 2022 Sustainability Report



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