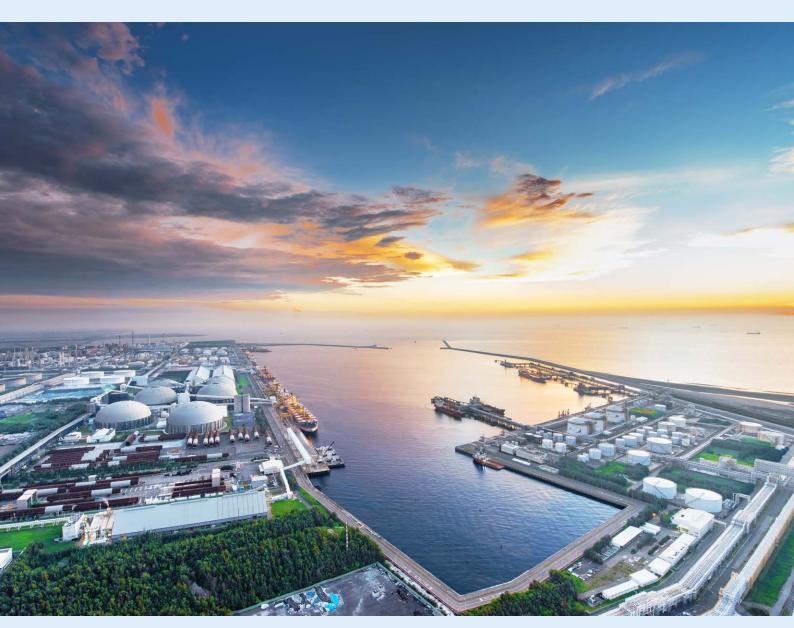


## **FORMOSA PLASTICS GROUP**

2024 Annual Report



Mailiao Harbor- A Green Ecological Port Realizing Corporate and Local Prosperity

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#### Mailiao Harbor- A Green Ecological Port Realizing Corporate and Local Prosperity

Mailiao Harbor occupies an area of 476 hectares and is Taiwan's first privately-funded industrial port. With a maximum waterway depth of 24 meters, the harbor can accommodate 300,000 dwt oil tankers and handle up to 70 million tons of cargo each year, making it the biggest and deepest industrial port in Taiwan. By being committed to ecological and environmental protection since operations began in March 2001, Mailiao Harbor earned the EcoPort certification on October 5, 2018, becoming the first industrial port in Asia to obtain this recognition and a part of green global transportation.

### Formosa Plastics Group | 2024 Financial Highlights

(In Thousands of USD, persons)

Company	Capital	Assets	Equity	Sales	Income Before Income Tax	Number of Employees
Formosa Plastics Corp.	1,941,900	14,043,287	8,815,501	4,455,048	-75,665	6,078
Nan Ya Plastics Corp.	2,419,335	16,500,984	10,572,686	3,756,997	118,719	11,904
Formosa Chemicals & Fibre Corp.	1,787,983	11,914,497	8,314,215	6,637,717	16,964	4,300
Formosa Petrochemical Corp.	2,905,939	11,017,222	9,058,923	20,176,487	205,699	5,160
Nanya Technology Corp.	945,251	6,304,050	5,035,029	1,033,905	-202,339	3,659
Nan Ya PCB Corp.	197,116	1,887,433	1,386,485	666,817	4,918	5,929
Formosa Sumco Technology Corp.	118,315	1,632,074	756,710	378,928	49,448	1,477
Formosa Taffeta Co., Ltd.	513,914	1,503,261	1,125,973	649,852	47,442	4,140
Formosa Advanced Technologies Corp.	134,902	382,042	332,721	272,492	33,746	2,340
Subtotal of Public Companies	10,964,655	65,184,850	45,398,243	38,028,243	198,932	44,987
Other Domestic Companies	2,410,247	18,000,723	14,780,570	6,159,205	926,104	30,451
Subtotal of Domestic Companies	13,374,902	83,185,573	60,178,813	44,187,448	1,125,036	75,438
Companies in U.S.A	1,510,281	17,011,719	13,296,961	6,497,472	117,067	4,388
Companies in China	4,412,818	10,148,418	7,389,193	8,594,374	-33,372	15,903
Other Foreign Companies	6,343,584	12,147,842	5,324,335	4,841,566	-470,864	12,097
Subtotal of Foreign Companies	12,266,683	39,307,979	26,010,489	19,933,412	-387,169	32,388
Total of Formosa Plastics Group	25,641,585	122,493,552	86,189,302	64,120,860	737,867	107,826

\*NOTE:The financial data shown above is extracted from the individual financial statements of each company.



### **Preface**

FPG has consistently pursued transformative breakthroughs to ensure its long-term competitiveness. Facing the current critical juncture marked by volatility and severe challenges, whether through innovative development of existing industries or by forging new paths via transformation, FPG recognizes "transformation" as a necessary and sustainable path for sustained success, even if it cannot be achieved instantly.



The global political and economic situation in 2024 remained unstable, much like the previous year, making it another turbulent period. Intensified geopolitical conflicts dominated the year, intertwined with economic pressures, forcing countries to confront greater uncertainty and challenges.



Chairman **WenYuan Wong** 

According to the International Monetary Fund (IMF), global economic growth in 2024 is expected to be 3.2%, the same as the previous year but still below the pre-pandemic average. Although global inflation and labor market pressures have eased slightly, and despite strong demand for artificial intelligence (AI)-related products, developed countries have benefited from postpandemic improved supply chains and increased demand for services, with particularly significant trade recovery. However, geopolitical risks—such as the ongoing Russia-Ukraine war, escalating tensions in the Middle East, and the escalating China-U.S. trade and technology wars—have ushered in a new stage of all-round and longterm strategic competition. Moreover, China's structural economic problems, combined with a less-than-expected recovery despite economic stimulus policies, have kept Chinese domestic demand sluggish and allowed insufficient demand problems to persist. Consequently, the accumulation of multiple risks and uncertainties has weakened global economic confidence and significantly impacted economic growth.

As for Taiwan's domestic economic situation, according to the Manufacturing Production Index 2024 released by the Ministry of Economic Affairs (MOEA), the output value of Taiwan's overall manufacturing industry had an annual growth rate of 9.75% in 2024, mainly benefiting from the strong global demand for AI, high-performance computing, and cloud data processing, which drove the continued growth momentum of the electronics and information technology industry. However, the traditional manufacturing industry

has been affected by the uneven pace of global demand recovery and China's unresolved domestic economic problems. It has also faced fierce market competition from low-price dumping due to China's excess capacity. Consequently, the growth rate of the chemical industry, basic metal industry, and machinery and equipment industry has been minimal, while the automobile and related parts industry even saw an annual growth rate of -6.33%. The level and degree of impact on Taiwan's traditional manufacturing industry has also been relatively serious.

#### **Business Operation Overview**

The overall revenue of Formosa Plastics Group (FPG) in 2024 was NT\$2.1019 trillion, which is a decrease of 1.1% or NT\$22.5 billion from 2023. FPG's pre-tax profit dropped to NT\$24.2 billion, a drastic decrease of NT\$31.4 billion or 56.5% from 2023.

#### I. Taiwan

In 2024, FPG's various companies in Taiwan created a total revenue of NT\$1.4485 trillion, representing a decrease of 3.9% from 2023. Pre-tax profit amounted to NT\$36.9 billion, a 53.5% decrease from 2023. This was primarily due to the continued lack of improvement in global petrochemical demand, coupled with the continued increase of production capacity in China resulting





FPG Profile
Scan QR code to watch the video

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in low prices spilling over to the international market. The imbalance between supply and demand has reduced the profit margin of most petrochemical products, resulting in a sharp decline in profits compared with the previous year.

Though overall market conditions continued be sluggish in 2024, the companies under FPG have continually striven to explore domestic and foreign sales channels and diversify market risks to reduce dependence on a single market. At the same time, they have developed strategic alliances with upstream and downstream suppliers to research and develop new products or expand the application of existing products, moving towards the transformation of electronics and information technology and medical-grade applications to increase the added value of products. For example: products like Formosa Plastics Corporation (FPC)'s dry-jet wet-spun ultra high strength carbon fiber and medical-grade masterbatch; Nan Ya's wafer dicing and grinding tapes, polyester pellets for medical use, and leuko-reduction filter bags; Formosa Chemicals & Fibre Corporation (FCFC)'s flame-retardant polycarbonate (PC) and nylon from recycled fishing nets; and Nan Ya Printed Circuit Board Corporation (Nan Ya PCB)'s large-size, multi-layer IC substrates have all been completed and put into production, and are expected to drive performance growth.

#### II. United States

In 2024, the U.S. consumer and job markets both developed positively, fueling steady economic growth, and prompting the government to cut interest rates three times consecutively that year to stabilize the financial market and stimulate consumption and corporate investment. In 2024, FPG's various companies in the U.S. generated a total revenue of NT\$213 billion, representing an increase of 9.2% from 2023. The pre-tax profit was NT\$3.8 billion, a significant increase of 34.1% from 2023.

#### III. China

In recent years, the internal economic structure of China has undergone tremendous changes, which have in turn affected its economic development. As the government has successively adopted strong expansionary fiscal and monetary

policies, ultimately, the GDP for the entire year of 2024 reached the preset growth target of 5%.

On the other hand, China has long vigorously supported the construction of large-scale refineries, which have now been completed and entered mass production. Faced with weak demand in both domestic and foreign sales markets, the largescale launch of this new production capacity has triggered a price war. Fortunately, FPG's various companies have cultivated foreign sales markets for many years, with the gradual emergence of results leading to risk diversification. Such companies had a 2024 turnover equivalent to approximately NT\$281.7 billion, a slight increase of 7.5% from 2023, and full-year pre-tax losses equivalent to approximately NT\$1.1 billion, which is also a significant decrease of 81.4% from the previous year.

#### IV. Vietnam

The 2024 turnover of FPG companies in Vietnam was equivalent to NT\$140.3 billion, which was down 0.8% from 2023. Among them, Formosa Industries Corporation continued to be affected by unfavorable factors such as a price war from China's textile fiber product exports and shrinking downstream demand. To effectively improve this situation, a development team was established in Vietnam to drive product transformation, streamline the product portfolio by eliminating weaker items and retaining stronger ones, collaborate with brand customers on differentiated products, vigorously develop new markets and customers, and strive to secure favorable orders. As a result, Formosa Industries Corporation's full-year turnover grew by 16% against the trend, and its pre-tax losses were equivalent to NT\$750 million, a significant decrease of 73.8% from the previous year.

In addition, in 2024, the Asian steel market was affected by the large-scale low-price dumping of Chinese steel plants, and the anti-dumping investigations on hot-rolled products from Vietnam and other countries launched by the European Union and India in August. Steel prices fell sharply, resulting in a 2024 turnover equivalent to NT\$115.7 billion for Formosa Ha Tinh Steel (FHS), a decrease of 4% from the previous year. Despite FHS' high financial expense burden, its continued commitment to various cost-reduction measures has yielded results, with pre-tax losses

in 2024 decreasing by 13.2% compared to the previous year.

#### Corporate Transformation and Sustainable Development

FPG began promoting improvement initiatives such as product upgrades, energy improvements, circular economy practices, and digitalization more than ten years ago. In recent years, AI-related industries have continued to become an important driver of global economic growth. However, due to the rise of the "de-globalization" trend and the serious erosion of related industries around the world by China's red ocean strategy, in order to cope with such unprecedented and severe challenges, the major companies of FPG successively established specialized departments for transformation development and sustainable development in 2023.

Based on their product characteristics and strengths, each company sets goals within five main development axes: "product transformation," "business transformation," "low-carbon transformation," "energy transformation," and "digitalization." In parallel, these companies aim to foster the development of forward-looking technologies and products, adapt and deploy new businesses and products, and proactively develop differentiated, high value-added products through three key directions: enhancing R&D talent, pursuing technology transfer opportunities, and strategically deploying in global markets.

According to statistics, a total of 106 transformation cases were submitted by all FPG companies in 2024, with an estimated investment of approximately NT\$146 billion. By 2030, annual revenue will increase by NT\$194.1 billion and bring in annual profits of NT\$28.1 billion. The high-value products that have been developed and expanded at this stage include:



Locking in high-value markets and enhancing competitive

#### 1. In terms of product transformation: Locking in high-value markets and enhancing competitive advantages

Leveraging "dry-jet wet spinning" technology, FPC has developed high-end carbon fiber for applications in high-pressure gas cylinders, aerospace, and offshore wind turbine blades. This material has also entered the space industry supply chain as a core component for rocket and satellite ion thrusters. Moreover, FPC successfully introduced its superabsorbent polymer (SAP), which holds 113 patents and U.S. FDA certification, into the supply chain of Pampers, the world's leading diaper brand. This has also opened doors to the food-grade liquid absorbent pad market, which is expected to enhance gross profit margins.

FCFC has successfully developed lightweight flame-retardant polycarbonate (PC) composite materials for use in AI server backup battery units (BBU), with the goal of occupying 30% of the global market.

As for Nan Ya, it is actively developing and expanding its portfolio of electronic-grade gases (e.g., hydrogen, nitrogen, carbon dioxide) and wet chemicals (e.g., film stripping, cleaning fluids, etching/developing additives). Nanya Technology has also achieved mass production of its proprietary 10-nm DDR5 and developed through-silicon via (TSV) process technology. This capability allows it to meet the high-capacity DRAM module requirements of markets like servers and AI edge computing, further establishing its presence in the electronic materials industry:

### 2. In terms of business transformation: Optimizing production lines and expanding into the medical device and biotechnology industries

By consolidating its original 111 tape dispensers to 46 units and increasing their utilization rate, Nan Ya has been able to generate an additional NT\$420 million in annual benefits and expanded product applications into high value-added sectors like new energy vehicles, medical care, and semiconductors.

At the same time, FPG companies have actively developed medical-grade materials and promoted a number of innovative medical materials and technologies, including Nan Ya's leuko-reduction filter bags, cell culture bags, vacuum blood collection tubes, anti-sticking films and other medical products. FPC has innovated the world's first painless urinary catheter using dual ionic polymer technology. It has also addressed microbial growth by employing polyvinyl chloride (PVC) and polypropylene (PP) in cooling tower heat dissipation materials and advanced environmental protection and energy efficiency through its development of a solar self-cleaning coating liquid.

In addition, Formosa Biomedical Technology Corporation and PuriBlood have jointly established Formosa Biomedical Material Technology Corporation to jointly develop advanced medical materials and regenerative medicine products. They also acquired Ivy Life Sciences Co., Ltd. and collaborated with 15 hospitals across Taiwan to implement 25 cell therapy clinical trials, and have currently completed a Phase II clinical trial for advanced lung cancer.

#### 3. In terms of low-carbon transformation: Developing low-carbon sustainable products and expanding high-end application markets

Aligned with sustainable development trends, Nan Ya has chosen to develop waste polycarbonate (PC) recycling technology to produce low-carbon BPA. Simultaneously, it has invested in the N-methylpyrrolidone (NMP) recycling business, further strengthening its presence in the high-tech sector. In addition, Formosa Petrochemical Corporation (FPCC) uses recycled waste cooking oil to co-refine and produce sustainable aviation fuel (SAF) to meet the huge global aviation fuel market demand.

#### 4. In terms of energy transformation: Entering the new energy industry and improving Taiwan's supply chain

Formosa Smart Energy Tech Corporation, established with four major goals: "energy saving energy storage, new energy, and recycling," built Taiwan's largest 2.1-GWh lithium iron phosphate battery cell and module factory, which was completed and put into production in the fourth quarter of 2024, completing key links in the domestic battery industry chain. At the same time, Formosa Smart Energy Tech Corporation collaborated with Ming Chi University of



Chairperson Sandy Wang inspected Formosa AdvEnergy' battery cell plant

Technology to develop all solid-state batteries, resulting in 19 granted patents across Taiwan, the United States, China, and Japan, with 10 additional patents pending. Their pilot production line is planned for completion in the fourth quarter of 2025. In addition, Formosa Smart Energy Tech Corporation is promoting energy storage construction projects throughout Taiwan, with a cumulative scale of 619.2 MWh, covering applications such as grid-connected energy storage, photovoltaic storage, peak shaving for large electricity users, and behind-the-meter energy storage. In the future, it will also cooperate with the industry to expand into overseas energy storage markets such as the United States.

Furthermore, FCFC has actively invested in small hydropower generation, installing power generators in Wushantou and Shalu, reaching a cumulative installed capacity of 23.3 MWh for its operational hydropower plants. This makes FCFC the private enterprise with the highest hydropower installed capacity in Taiwan and the sole company in the global petrochemical industry to venture into hydropower generation.



FCFC's Shalu hydropower site has officially commenced operation

# 5. In terms of digital transformation: Using data analysis and AI technology to improve operational efficiency

In late 2017, FPG donated NT\$30 million to Academia Sinica to support the establishment of the Taiwan AI Academy and sent staff for training, effectively commencing a new chapter for FPG in the field of AI. By the end of 2024, a total of 592 people had received training. In addition, by combining the resources of Ming Chi University of Technology and Chang Gung University, a series of courses will be offered within FPG to cultivate professional talents.

To address process safety concerns in chemical industry applications of AI, simulation technology has been introduced to ensure AI decisions meet safety standards in practice. For example, FPCC has adopted AI to optimize propylene recovery units, while FCFC has developed a simulation factory for aromatic hydrocarbons to enhance production efficiency. At the same time, with the aim of encouraging active employee involvement in AI applications, an AI case results incentive system has been implemented, and AI project results are reviewed on a regular basis. Excellent cases are shared across all FPG companies to expedite technology promotion and application. Simultaneously, industry-academia collaboration projects accelerate technology research, development, and application.

By the end of 2024, there will be 2,502 AI projects filed by FPG companies, with an estimated investment of NT\$3.71 billion and an estimated annual benefit of NT\$9.33 billion. Currently, 1,660 projects have been completed, with an actual investment of NT\$2.75 billion and an annual benefit of NT\$7.23 billion, which will reduce carbon emissions by 842,000 tons of CO2e. By harnessing AI technology, the goal is to boost annual benefits to NT\$30 billion and further solidify international competitive advantages by optimizing production and sales management, elevating product quality, and minimizing operating costs.

As is widely understood, any transformation brings a mix of challenges and opportunities. This evolution requires adjustments not only in technology and market strategies but also in organizational culture and thinking patterns. Despite its large scale, FPG remains open to even small opportunities. Any product with future development potential can become a key development project. As the Chairman stated, "We must only pursue what holds future promise!" We also encourage our employees to adopt new mindsets and ways of thinking. This shift is crucial for fostering innovation, generating more creative and adaptable ideas, building a more resilient business structure, and overcoming economic downturn challenges.

#### Implementing ESG Sustainable Development

For decades, Formosa Plastics Group has remained committed to its corporate tenets of "get to the heart of matters" and "strive for excellence", from the 1993 5S management principles, the subsequent 1999 no leakage policy (no gas leakage, no water leakage, no oil leakage), and the formation of the company-wide "Energy Conservation and Emission Reduction Task Force" in 2006 to further promote energy conservation and emissions reduction.

In 2016, FPG went even further to promote a circular economy, taking the four aspects of circulation – raw materials, water resources, energy, and waste - into consideration to implement inter-company, inter-factories energy and resource integration. In 2018, FPG applied AI to our energy conservation, emissions reduction, and circular economy efforts and initiated digitalization and further expand the effectiveness. In 2020, FPG expanded the "Energy Conservation and Emission Reduction Task Force" into the "FPG ESG Promotion Organization", ensuring that the entire enterprise is committed to various ESG (environmental, social, governance) tasks so that the enterprise can move towards sustainable development.

The following is an overview of our ESG measures and their results:

#### (1) Environmental protection (E)

1. Water conservation: FPG has actively reduced water consumption by minimizing the amount of water used in production processes, recycling water, and reducing loss due to evaporation. In addition, the water recycling rate of the entire

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Mailiao Industrial Complex has exceeded 92%. Additionally, based on the water use indicators set by the MOEA, the water recycling rate (R1) of the Mailiao Industrial Complex has exceeded 98.9%, which is equivalent to each drop of water being reused up to 12.9 times. At the same time, by increasing the rainwater collection area and rainwater storage facilities, an average of 19,110 tons of rainwater were collected every day in 2024. Furthermore, FPG has invested NT\$6.83 billion to build a seawater desalination plant with a daily output of 100,000 tons, which is scheduled to be completed and put into operation in October 2025.

2. Energy conservation and emission reduction: By implementing a multi-pronged approach to promote energy conservation and emission reduction, the average daily production output of the Mailiao Industrial Complex increased by 4% in the past decade, but the average electricity and steam consumption per unit of product have decreased by 18% and 20% respectively, As for air pollution control, wet electrostatic precipitators have been installed in co-generation power plants to reduce PM2.5 emissions, and heat recovery from boiler chimneys has been promoted to eliminate visible pollution from white smoke from chimneys. The Mailiao Harbor has earned the "EcoPorts Certification" by simultaneously regulating that vessels entering and leaving the harbor must use low-sulfur fuel or energy-saving power, and by requiring them to use shore-side electricity after arrival to minimize sulfide emissions.

3. Overall water and energy conservation investment and results: The Mailiao Industrial Complex had invested approximately NT\$45.08 billion into energy conservation, emissions reduction, and circular economy as of the end of 2024, completing 3,002 water conservation improvement initiatives to conserve 311,500 tons of water per day. At the same time, 12,011 energy-saving improvement initiatives that can reduce CO<sub>2</sub> emissions by 14.25 million tons per year were completed. With combined annual water and energy conservation benefits reaching NT\$40.44 billion, these results are not only impressive, but have also established the Mailiao Industrial Complex as a true eco-industrial park.

The carbon emissions of FPG peaked in 2007 with 61.48 million tons, marking FPG's base year for carbon reduction. The short-term goal is to



Press conference of FPG Flaming Stars Athletic Talent Cultivation Program

lower emissions to 49.18 million tons by 2025, a 20% decrease from the base year. The mid-term goal is to lower emissions to 39.96 million tons by 2030, a 35% decrease from the base year. Moving forward, FPG will continue to stay in line with government policies and international ESG trends, while making plans to move towards achieving the long-term goal of carbon neutrality by 2050.

#### (2) Social responsibility (S)

1. Friendly workplace: FPG has long built a friendly and happy workplace environment to continue attracting and recruiting outstanding talent. FPG provides professional and new technology training to help employees cultivate diversified professional skills. FPG also takes care of the health and welfare of employees, allowing them to reach their full potential in a position suitable for their skills. In addition to providing benefits that are superior to those required by law, FPG also provides welfare measures such as maternity and childcare subsidies to encourage employees to have children. As a result, FPG has consecutively earned the title of "Happy Enterprise" in the voting event organized by the 1111 Job Bank from 2019 to 2024. Meanwhile, in 2024, 58 FPG companies in total received Badge of Accredited Healthy Workplace, which shows how much FPG values and cares for its employees.

2. Social outreach: FPG remains committed to its management philosophy of "taken from the community, given back to society." In addition to the establishment of three universities and the Chang Gung Memorial Hospital, FPG has founded multiple foundations and charitable trusts, giving back over NT\$107.3 billion to the community over the years. FPG's main charitable programs include the Rainbow Program (drug addiction and AIDS)

and the Sunny Program (drug offenders), which provide assistance to inmates; the donation of pneumococcal vaccines and other programs to provide welfare assistance for the elderly; the improvement of early childhood care institutions for children with developmental delays and assistance to families affected by violence, and other programs to provide assistance to women and children; as well as sponsorship of sports and cultural activities, assistance to the homeless in returning to society, and numerous other programs aiding the disadvantaged (detailed information attached).

#### (3) Governance (G)

Sound corporate governance has always been the cornerstone of FPG. This includes strengthening the functions of boards of directors, actively improving the transparency of financial and business information, and respecting the rights and interests of stakeholders. Therefore, the 8th corporate governance accreditation conducted in 2024 showed that Nanya Technology ranked in the top 5%, while FPC, NPC, FCFC, FPCC, Nan Ya PCB, Formosa Sumco Technology (FST), and Formosa Advanced Tech (FATC) ranked in the top 6-20%. Meanwhile, the 4 listed companies in the Group-FPC, FCFC, FPCC, and FST-were all selected in the TWSE Corporate Governance 100 Index, demonstrating that FPG's corporate governance achievement is well recognized.

#### **Future Operating Environment and Prospects**

The global political and economic situation in 2024 continued to be as volatile and unpredictable as the previous year, a trend that extended into the new year. Specifically, the return of U.S. President Trump to the White House on January 20, 2025, has propelled the global political and economic climate into a state of high uncertainty and turbulence.

To fulfill his "Make America Great Again" campaign promise, Trump has adopted a tough tariff policy and unpredictable foreign policy, causing global governments to nervously stand on high alert, fearing tariff penalties. The global political and economic landscape, still volatile from the previous year, has been abruptly thrown into turmoil again. Notably, the April 2nd announcement of "reciprocal tariffs" on many nations swiftly escalated into a wider trade conflict. Consequently, global stock markets experienced a multi-day plunge, severely

impacting the stability of global trade and international relations. This will force the global supply chain to reorganize again, casting a heavy shadow on the global economy, which was originally expected to recover slowly, and triggering a higher risk of stagflation and concerns about an economic recession.

Moreover, China's weak domestic demand, insufficient market confidence, and the impact of Trump's tariff policy and expanded technology controls continue to strain its economic recovery and introduce unfavorable factors into the global economic outlook. Specifically, the tariff war between China and the U.S. could obstruct China's exports to the U.S., potentially leading to dumping in other markets and exacerbating market oversupply. Taiwan is an export-oriented economy with a small domestic market. Faced with multiple severe external political and economic challenges, 2025 will be a year full of uncertainty, risk, and upheaval.

At the same time, coupled with the promotion of global carbon and plastic reduction policies in recent years, as well as the accelerated development of green energy trends and other multiple challenges, the global petrochemical industry is undergoing unprecedented changes. To address these severe challenges and secure future enterprise competitiveness, "transformation" has become a critical and urgent response strategy.

Having operated for 70 years, FPG has consistently pursued transformative breakthroughs to ensure its long-term competitiveness. Facing the current critical juncture marked by volatility and severe challenges, whether through innovative development of existing industries or by forging new paths via transformation, FPG recognizes "transformation" as a necessary and sustainable path for sustained success, even if it cannot be achieved instantly. Therefore, embodying the spirit of enduring hardship with limited resources and a strong will to survive, we proactively explore external opportunities while maintaining a flexible and responsive internal strategy to meet challenges with innovation and resilience. Our firm belief is that only through active innovation and accumulating strength in adversity can we rapidly capitalize on opportunities and secure new growth prospects once the economic downturn subsides.

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## Summary Table of Formosa Plastics Group's Social Welfare Projects in Taiwan (As of the end of 2024)

Unit: NTD million

Donors	Main Social Welfare Projects	2024	As o 2024	
	1 Established Ming Chi University of Technology, Chang Gung University, and Chang Gung			
	University of Science and Technology  2. Established Chang Gung Memorial Hospital			
D N	2 M. J. Janes and J.			
Formosa Plastics Group	Made donations towards earthquake and typhoon reflet and sponsored campus reconstructions     Organic vegetables, food waste recycling, afforestation			
	Donated epidemic relief supplies and the Executive Yuan relief fund.			
	6. Local contributions			
Founder and	Established Ming Chi University of Technology, Chang Gung University, and Chang Gung University of Science and Technology     Established Chang Gung Memorial Hospital		26,84	
Founder and the Wang Family				
the wang ranning	3. Donation of cochlear implants			
	Cover medical expenses for poor or disadvantaged families and unaccompanied or unidentified patients, as well as any emergency relief or care expenses.			
	2. Provide patients or families with care services and hold various outreach activities.		19,36	
Chang Gung	3. Organize community health care and health promotion services.			
Memorial Hospital	4. Provide social services.	700		
(Founded in December 1976)	5. Organize international medical aid.			
	6. Donation of cochlear implants			
	7. Other expenditures			
Ming Chi University of Technology (Founded in December 1963) Chang Gung University of Science and Technology (Founded in June 1988)	Assist indigenous students in their education and employment  1 Disability welfare - Disability welfare such as improving the quality of early intervention		1,6	
(Common de la Common de la Comm	Disability welfare - Disability welfare such as improving the quality of early intervention institutions     Welfare for minors and women- funding Orphan Scholarship Program, provide nutritious			
	breakfast for junior high school students from disadvantaged families, donate to the Foundation for Scholarly Exchange's Hualien and Taitung English Teaching Assistant Program, the Second-Hand Toys and Children's Playground Project, the Positive Education Campus Promotion Project, and the Vocational Empowerment Program for Women Re-entering the Work Force.			
Wang Chang-Gung Charitable Trust Fund	3. Welfare for the elderly - Pneumococcal vaccine donations for the elderly, Donated to the Smart Long-term Care Assistance System and the FHC Volunteer Program, etc.	279	3,92	
(Founded in October 2002)	4. Sports promotion - Athletic trainer assistance program	-		
	5. Health research - "Formosa Plastics Group - Fulbright" Scholarship			
	6. Educational support and other subsidies for indigenous students			
	7. Welfare for the disadvantaged and others - Homeless service plan, sponsored the Chinese Taipei Paralympic Committee in training disabled athletes; Donated funds to numerous organizations, such as a charity concert organized by the Taiwan Alzheimer's Disease Association, road run events and the International Art Fair of People with Disability in Taiwan etc.			
	<ol> <li>Welfare for minors and women - Scholarships for children and teens, nutritional breakfast subsidy, medical and economic assistance for patients with rare diseases, economic assistance for families affected by domestic violence</li> </ol>		1,680	
	2. Inmate assistance - Sunshine Program rehab program (for inmates with drug offenses), purchase lacquerware made by inmates of Taichung Prison, Ministry of Justice Inmate Family Assistance and Care Program, donated funds for correctional school to renovate vocational training equipment, etc.			
Wang Jhan-Yang Charitable Trust Fund	3. Welfare for the Elderly - Pneumococcal vaccine donations for the elderly, Mailiao and Taixi Township meal delivery plan for senior citizens living alone, Wisdom Foundation Dementia Family Support Program, donated Double Ninth Festival cash gift for Yunlin county elderly, etc.	96		
(Founded in March 2006)	4. Health promotion - Technology introduction and AI application in the prevention and health promotion research of common diseases in Taiwan, as well as discussion and health promotion research on indoor health hazards, etc.			
	5. Cultural sponsorship - Development Program for Taiwan's Characteristic Cultures, Mind Theater campus tour, Yunlin local puppet theater campus performances, etc.			
	6. Sports promotion - Flaming Stars Athletic Talent Cultivation Project, Future Stars Athletic Talent Overseas Training Project, etc.			

Donors	Main Social Welfare Projects	2024	As of 2024
Wang Jhan-Yang Charitable Trust Fund (Founded in March 2006)	Charitable Trust Fund (Founded in March 2006)  8. Wetlate for the disadvantaged and other - Talwan New Economy Foundation's industry Environment Excellence Program, lighting improvement program for social welfare institutions (children's institutions, study programs, elder-care institutions), donated funds to		
	purchase computer equipment for the Taichung School for the Visually Impaired, etc.  1. Disability welfare - Employment assistance program for mildly autistic people		
Ching Pao Charitable Trust Fund (Founded in June 2010)	<ol> <li>Welfare for minors and women - Scholarships and talent training programs for remote areas, Donated to the Foundation for Scholarly Exchange's English Teaching Assistant Program, etc.</li> <li>Welfare for the elderly - Housing improvement and home appliance subsidy program, The Foundation for the Welfare of the Elderly's Make a Wish Program, Rural Elders Assistance Program, etc.</li> </ol>		907
(Founded in Julie 2010)	4. Donated vehicles to social welfare organizations, provide holiday bonuses to low-income households in Mailiao, donated daily necessities and rice to social welfare organizations, emergency aid, assistance program for Yunlin veterans and their families, donated daily necessities to the Chinese Christian Relief Association (1919) food bank, donated funds for the renovation of Yinghua Drainage Ecological Park in Taishan District, etc.		
	Disability welfare - Improving the quality of early intervention institutions		
	2. Welfare for minors and women - Funds for school lunches for elementary and junior high school students in Yunlin County, funds for the construction of welfare institutions for minors and women, donations to provide funds for 7th grade girls in Yunlin County to receive the HPV vaccine, and childcare subsidies provided to grandparents caring for children ages 0-2 in Yunlin County.		
Wang Jhan-Yang Social Welfare Foundation	3. Inmate assistance - Rainbow Program (inmates with drug addiction and AIDS), donation to the Taipei Prison Environment Improvement Project, etc.	21	1,993
(Founded in August 1995)	<ol> <li>Welfare for the elderly - Pneumococcal vaccine donations for the elderly, donation of funds and equipment to the Yunlin County Evergreen Canteen</li> </ol>		
	5. Culture - Sponsored the Vienna Philharmonic New Year Concert		
	Educational support and other subsidies for indigenous students		
	7. Welfare for the disadvantaged and others - Sponsored the renovation of Mailiao Kongfan Temple, Donations to the Mailiao Township Library and volunteer firefighting group		
	<ol> <li>Disability welfare - Improving the quality of early intervention institutions, donation to the Yunlin Physical Therapy Youth Association for building repairs</li> </ol>		3,027
	2. Welfare for minors and women - Ching Pao P.D. Scholarship, part-time student workers at social welfare organizations, donation to the Taipei Orphan Welfare Foundation, donation towards breakfasts for junior high school students from disadvantaged families, talent training programs in remote areas, support for minors that have left welfare institutions, and after-school care for elementary school children in remote areas.		
Ching Pao Charitable Trust	3. Welfare for the elderly - Housing improvement and home appliance subsidy programs for the elderly, Active Aging Center Program, donation towards establishing healthcare plans for remote areas, etc.	161	
Fund (Founded in November 1995)	4. Health promotion - donations to environmental protection research projects at Chang Gung University and Ming Chi University of Technology		
1770)	5. Educational support and other subsidies for indigenous students		
	6. Support for the disadvantaged and others - Donate daily necessities, rice and vehicles to social welfare organizations for emergency aid. make donations to the Chang Gung Memorial Hospital Social Welfare Foundation, United Way, the Dharma Drum Mountain Humanities, Social Improvement Foundation, and to various social welfare organizations and county/city government social welfare programs, donated to the Lan An Cultural and Educational Foundation in Lanyu to fund day care centers, donation for families impacted by typhoons, and renovations of social welfare institutions		
	Disability welfare - Early Intervention Efficacy Enhancement Program     Welfare for minors and women - Donations to CGU Choir and the Nantou County After-School Program for Indigenous Students     Educational support and other subsidies for indigenous students		89.4
Ming-De Foundation			
(Founded in July 1974)			
	4. Welfare for the disadvantaged and others - Educational support and other subsidies for indigenous students		
Jin-che Indigenous	Welfare for minors and women - Work-study programs and emergency relief for indigenous students     Educational support and other subsidies for indigenous students		18.1
Foundation (Founded in April			
1997)	3. Welfare for the disadvantaged and others - Donation to the Yilan Leshui Community Development Association	0.4	
	Formosa Plastics Group	1,482	47,727
	Founder and the Wang Family	-	26,842
Total	Chang Gung Memorial Hospital	700	19,368
Total	Chang Gung University, Chang Gung University of Science and Technology and Ming Chi University of Technology	2	1,679
	Foundations and Charitable Trusts	597	11,640
	Total	2,781	107,256

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## **Formosa Plastics Corporation**

FPC will continue to develop the R&D for forward-looking and high value-added products and production process. In the meantime, FPC moves towards the trend in refinization of products to strengthen long-term competitiveness.



The Company (Formosa Plastics Corporation) reported consolidated sales of NTD 200.04bn, achieving 85% of the targeted NTD235.67bn, and marking a 0.5% growth compared to NTD199.14bn in 2023. Consolidated pre-tax loss came in at NTD2.41bn in 2024, a decline by 135% from the consolidated pre-tax profit of NTD6.99bn in 2023.



Chairman **WenBee Kuo** 

The revenue in 2024 was attributed to factors such as interest rate cuts by central bank in the US, continued economic growth in emerging countries like India, and the completion and commissioning of our Ningbo PDH plant, ensuring a stable propylene supply. Additionally, the debottlenecking of our PVC plant in Taiwan led to increased production and sales volumes. However, challenges such as a sluggish real estate market and weak domestic demand in mainland China, increased production capacities and export competition among petrochemical peers, and rising raw material costs for ethylene and propylene resulted in narrower product margins. Consequently, the consolidated operating loss was NTD4.16bn in 2024, a decrease of NTD43.75mn compared to 2023.

Despite recognizing investments income of NTD 1.83bn in 2024 (-NTD6.12bn vs. 2023) from companies like Formosa Petrochemical Corporation and FPCUSA, a decrease in cash dividend income by NTD2.61bn to NTD1.06bn led to the first operational loss since the Company's establishment.

In recent years, the petrochemical industry has seen substantial new capacity additions in mainland China, and the termination of ECFA tariff, coupled with geopolitical risks such as the Russia-Ukraine war and Middle East

conflicts, have led to soaring raw material and energy costs. The global trend towards carbon reduction and coal phase-out has also resulted in an oversupplied market and challenges in passing on costs within the Asian petrochemical industry.

To overcome these challenges, the Company has focused on optimizing and developing high-value and differentiated products based on our core petrochemical business to enhance product profitability. We have also continued to reduce our sales proportion to mainland China, diversifying into Southeast and South Asian markets. In 2024, the export share of our main products to mainland China decreased by 6.2% to 27.7% compared to 33.9% in 2023. Conversely, sales proportions in Southeast Asia increased from 17.8% in 2023 to 21.6% in 2024, and in South Asia from 18.3% to 22.1%.

Simultaneously, with the completion and commissioning of our Kaohsiung Intercontinental Terminal propylene storage tank in the first quarter of 2024, we increased spot propylene imports due to lower spot prices compared to contract prices. The ethylene cryogenic tank and underground pipelines are expected to be completed in the second half of 2025, allowing for more flexible spot procurement to reduce raw material and transportation costs. Additionally, we are regularly reviewing

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Night view of Ningbo Complex

and curbing various operating expenses and, under the premise of safe production, canceling or postponing non-essential and non-urgent capital expenditures and project costs. Considering the short-term operational difficulties of the epichlorohydrin (ECH) product, the Mailiao ECH plant will be mothballed and cease production starting from January 2025.

Furthermore, in January 2024, we established a Transformation Development Project Team, focusing on three major transformation directions: new product/new business development, energy, and digitalization. In new product/new business development, we are targeting industries such as electronics/semiconductors, green energy, environmental protection, and healthcare. We have initiated evaluations and expansions for nearly 20 forward-looking product technology transfers or cooperative developments. With the completion and commissioning of some projects in 2025, these initiatives are expected to improve our operational performance.

In terms of energy transformation, in response to global carbon reduction trends and the domestic imposition of carbon fees starting in 2025, as well as to meet stakeholders' expectations and requirements for the Company's

sustainable transformation, we have begun promoting autonomous carbon reduction in each plant. Measures include gradually replacing coal-fired boilers with gas-fired ones in utility plants, increasing the proportion of wind and solar green energy generation, enhancing the use of renewable energy, and implementing other water and energy-saving measures. These efforts aim to comply with the Environmental Protection Administration's 2030 carbon fee technical benchmark reduction rate regulations, moving towards the goal of carbon neutrality by 2050.

In digital transformation, we continue to apply AI in optimizing production and sales, improving output and quality, reducing raw material and energy consumption, and enhancing industrial safety and environmental protection. With the goal of smart factories and digitalized operation management, we are further promoting cross-unit integration of process AI, combining GPT for innovative R&D applications, developing smart robot technologies, and digitizing industrial safety management to improve operational management performance. As of the end of 2024, we have proposed 450 development projects, completed 258, yielding annual benefits of NTD830mn.

By implementing the above measures to improve operational performance and transformation strategies, we aim to strengthen the Company's structure and mitigate the impact of various challenges.

The Company and its subsidiaries in Ningbo, China, and the US primarily produce plastics, chemicals, and fiber raw materials. In 2024, the PVC segment faced challenges due to the ongoing Russia-Ukraine conflict, escalating Middle East tensions and the persistent Red Sea crisis, leading to elevated shipping costs. Additionally, the high interest rates in Europe and the US weakened end-user demand, while

a sluggish real estate market in Mainland China further dampened consumption. These factors, along with global oversupply resulted in declining market prices. However, the Company's established presence in markets such as India and Australia, as well as our early expansion in Vietnam and Thailand helped mitigate some challenges. Our continued efforts in promoting differentiated products helped achieve PVC sales volume of 1.71 million tons in 2024, a 2% increase over 2023.

In the caustic soda segment, East Asia experienced an oversupplied market. Starting in the second quarter, plant closures and force majeure events in Australia, plus the export disruptions in Guinea, increased alumina prices. Additionally, new alumina refining capacities in China increased demand, leading to higher caustic soda prices in 2H24. Overall, sales volume reached 1.44million dry tons, a 1% increase from 2023.

HDPE sales declined by 25% from 2023 to 278,000 tons, affected by China's economic slowdown, weak market demand and ongoing capacity expansions that pressure prices. Linear Low-Density Polyethylene (LLDPE) faced

similar changes, with the increased competition from US exports to Asia. FIC's sales volume decreased by 11% to 448,000 tons due to lackluster market conditions in North and South America.

Ethylene Vinyl Acetate (EVA) sales volume contracted 3% to 316,000 tons. Reduced demand for shoe foam materials and the US sanctions on Chinese solar industry entities lead to decreased production rates among solar module manufacturers, impacting EVA encapsulation film demand.

AE experienced a sales volume of 547,000 tons in 2024, the same level as of 2023. This was achieved despite a sluggish real estate market demand in Mainland China, which led to reduced demand for paints and coating. In response, local competitors shifted focus toward export promotions, intensifying competition in Europe and Southeast Asia market. While the significant infrastructure developments in India increased demand for paints and adhesive, the implementation of Bureau of Indian Standards (BIS) certifications also alleviated Chinese products, supporting the sales figures.



Participating in the TaipeiPLAS

Formosa Plastics Corporation



Carbon fiber badminton racket

Carbon fiber sales reached 5,000 tons, a 15% increase over 2023. This growth was driven by the completion of inventory clearance in sports equipment and a gradual recovery in demand for large-tow carbon fiber used in wind energy applications.

Normal Butanol primarily supplied internal needs at Taiwan and Ningbo AE plants, with additional exports to Northeast and South Asia. Nonetheless, the sluggish real estate market in Mainland China dampened paint demand, and the new capacities intensified market competition, resulting in a 3% decline in sales to 236,000 tons compared to 2023.

Super Absorbent Polymer (SAP) remained steady at 203,000 tons, on par with 2023, as the Company strategically reduced sales in the Turkish market and increased presence in Southeast and Africa markets.

Polypropylene (PP) sales grew by 18% to 851,000 tons, attributed the completion of Ningbo PDH plant, which enhanced propylene self-sufficiency.

Acrylonitrile (AN) sales increased 8% to 283,000 tons, benefitting from successful market expansion in India. Methacrylate (MMA) sales rose by 6% to 92,000 tons, as production

anomalies among European and US competitors alleviated supply glut in the Asia spot market. Epichlorohydrin (ECH) sales, however declined by 25% to 57,000 tons due to severe overcapacity, intense market competition, and a shift by downstream epoxy resin producers towards glycerin-based ECH, leading to a reduced demand.

To enhance international competitiveness and increase product value, the Company has actively expanded production capacities and addressed bottlenecks across its domestic and international facilities. In Taiwan's Renwu complex, a medical materials center producing medical-grade PVC, PE, and PP compounds was completed in the second half of 2024. Ongoing projects include converting the dryjet wet spinning line to increase capacity by 2,800 tons, is anticipated to complete in the second half of 2025, and expanding carbon fiber production by 1,600 tons, are expected to finish in the first half of 2026. Additionally, a debottlenecking project at Taiwan PVC plant to increase annual capacity by 60,000 tons is scheduled to be completed in the second half of 2026.

At our Ningbo complex in mainland China, the construction of an ethylene refrigeration tank at the PP plant is expected to be completed in the second half of 2025. As for our Texas complex in the US, the construction of a 100,000 ton/year 1-hexene plant is estimated to be completed by the end of 2025.

Furthermore, in alignment with the urban development in Kaohsiung City, the Company relocated the Front Caisson area to the Phase II Petrochemical Park. Apart from the ethylene storage tank, which is scheduled for completion in the second half of 2025, the remaining 11 storage tanks and a salt warehouse were completed and put into operation by the end of 2023.

These expansion and debottlenecking projects aim to achieve economies of scale, reduce production costs, and enhance product value, thereby strengthening the Company's operational resilience.

In terms of equity investments, FPC-USA's (22.66% owned by the Company) pretax income amounted to USD147mn, a decline from 2023's level. The decrease is primarily due to a contraction in the US manufacturing sector, with orders and production indices hitting new lows, coupled with overcapacity in China's petrochemical industry leading to significant supply-demand imbalances and lower average product prices.

In 2024, the Company's research and development expenses amounted to TWD 2.5bn, representing 1.2% of our total revenue. These funds were primarily allocated to various areas, including formula development, process improvement, quality enhancement, energy conservation, talent development, aiming to increase its product's value and reduce costs. The Company successfully completed 42 research and development projects, generating an annual benefit of TWD 100mn. Some notable projects include the development of Special powder for the suspension method in CPVC production, high-efficiency flow-blocking pipes for polymerization tanks, new processes to increase the production capacity of processing aids, composite emulsifiers for MBS, silicone tubing for peritoneal dialysis with anti-adhesive properties, high-flow HDPE fiber material, C6 rotational molding grade LLDPE, high elasticity foamed EVA materials, PP containers for health supplement, VE carbon fibers, high-wear-resistant carbon fibers, SAP for internationally renowned adult diaper brands, and calcium carbonate pellets for automobile bumpers. These proactive initiatives have yielded positive results in enhancing the added value of downstream products.

In response to the severe challenges of oversupply in the petrochemical industry, the Company is undergoing transformation and industrial upgrading to enhance competitiveness and diversify products. The Company actively invest in critical technology research and development while applying for patents domestically and internationally. In 2024, the Company obtained a total of 46 granted patents, bringing the cumulative number of valid patents to 365 by the end of 2024. In order to deepen our research and development foundation and strengthen R&D capabilities, the Company continually expand collaborations with academia and industry. The Company send talent in R&D team to universities domestically and internationally for further education, aiming to reinforce their expertise and broaden their perspectives. Additionally, the Company leverages the research potential of top academic institutions and sufficient quantum high-speed computing resources to accelerate its pace and scope of R&D. This approach helps the Company effectively reduce the time required for product development.

In addition, by integrating resources from the valuable instrument center and virtual laboratory, the Company has been actively invested in the research and development in advanced composite materials. This initiative spans various sectors, including medical materials,



Participating in the firefighting volunteer elite commendation conference

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energy, and green materials. In view of ESG and carbon neutrality policies, the Company is committed to development of carbon reduction technologies. Moreover, the Company is actively developing recyclable materials. These efforts include the development of new technologies, such as reusable systems for saltwater electrolysis and carbon dioxide, all-material PP cold-resistant clothing, new applications for recycled plastics (PCR), and recyclable resin in carbon fiber composites.

The Company always puts emphasis on industry development and environmental protection equally. As of 2024, the cumulative investment in improvements of occupational safety, environmental protection, and fire prevention has reached a substantial NTD 33.4bn. These improvements have resulted in the treatment and emission of various pollutants surpassing national regulatory standards. Several business units of the Company were praised by local government on the good performance in these efforts by 2024. Notable mentions include Mailiao EVA, C4 and MMA Plant for receiving the Yunlin County Occupational Health and Safety Excellence Unit award. Additionally, the Mailiao AN Plant represented the Company in the Yunlin County Industrial Excellence Awards, receiving the Environmental Sustainability Award and the Golden Carbon Excellence Award. Furthermore, due to ouroutstanding performance in net-zero carbon



Awarded the highest rating "A" by CDP

reduction, we were awarded the Net-Zero Industry Competitiveness Excellence Award by the 21st Century Foundation and were listed among the Top 100 Carbon Competitiveness Companies of 2024 by Business Weekly.

In terms of greenhouse gas reduction, the Company sets short-term (20% reduction in 2025), medium-term (40% reduction in 2030) and long-term (carbon neutrality by 2050) reduction targets based on the benchmark of greenhouse gas (Scope 1 and 2) emissions in 2020 with 8.635 million tons. After a thorough test conducted by a third-party institution, the total greenhouse gas (Scope 1 and 2) emissions in 2023 was 8.005 million tons, a reduction of 630,000 tons compared with 2020, a decrease of 73%

In terms of water and energy conservation and greenhouse emissions reduction, the Company accomplished 991 improvement projects in 2024. Total water saved amounted to 2,403 tons/day, while greenhouse gas emissions reduction reached 187K tons/year. Other ongoing 1,169 improvement projects were expected to further conserve water by 6,367 tons/day and reduce greenhouse gas emissions by 366K tons/ year. According to the results announced by the Carbon Disclosure Project (CDP) in 2024, the Company was once again rated as "A" in both climate change and water security assessments. This marks the second consecutive year, following 2023, that the Company has ranked among the top international chemical companies. These achievements demonstrate that the Company's efforts in energy saving, emission reduction, and circular economy in response to climate change have achieved considerable results.

Besides, in order to enhance operational safety, prevent occupational disasters, and ensure the safety and health of labors, the Company continued to conduct overall equipment



Aerial panoramic photo of FPCUSA Texas Complex

inspection, implement Mechanical Integrity (MI), Standard Operating Procedures (SOP), Management of Change (MOC) and Process Hazard Analysis (PHA) operations, and strengthen inspections of machinery and equipment for improvement. Measures such as personnel control, the use of safety helmets, the deployment of image recognition technology for monitoring elevated pipelines and high-risk areas, and the integration of abnormal incident reporting mechanisms are employed to enhance occupational safety management. For instance, the Company developed a "Personnel Positioning System" to monitor the real-time dynamics of personnel and construction activities. This system, combined with the existing "Image Recognition System for Construction Site Safety" that establishes electronic fences, has been implemented at the expansion construction site to facilitates effective occupational safety management, prevents occupational accidents, and contributes to the establishment of a safe and friendly work environment.

In response to increasingly stringent environmental regulations, all plants are required to implement measures such as reducing VOC sources, streamlining equipment components, and gradually eliminating low-leakage equipment components. The Company also strengthen autonomous inspections by the application of infrared detector (Gas Finder). Meanwhile, the Company enhance the management of various environmental indicators to continue promoting carbon neutrality and zero discharge of wasted water for a friendly environment.

Looking ahead to 2025, it is anticipated that the United States, Europe, and Mainland China will continue to cut interest rates, shifting monetary policies from tightening to easing. This is expected to stimulate a rebound in enduser demand and investment momentum.

However, the global economy faces numerous uncertainties, including the future direction of US President Trump's reciprocal tariff policies, the growth momentum of China's economy, geopolitical risks, global trade fragmentation, supply chain restructuring, and climate change. These factors are significant variables influencing international economic and trade dynamics, as well as trends in oil prices and inflation, warranting close attention.

Formosa Plastics Corporation

In the global petrochemical raw materials market, according to Chemical Market Analytics (CMA), the net increase in global ethylene capacity in 2025 is expected to be 8.5 million tons, bringing total capacity to 240 million tons. Assuming demand grows at 1.1 times the GDP growth rate, it is projected to increase by 6.6 million tons. Similarly, propylene capacity is expected to see a net increase of 10.4 million tons, reaching a total of 182 million tons, with demand projected to grow by 4.5 million tons under the same assumptions. Both are expected to be in a state of oversupply.

Notably, mainland China is anticipated to add 8.6 million tons of ethylene and 9.3 million tons of propylene capacity, making it the region with the most significant expansions globally. Total capacities are expected to reach 63 million tons and 76 million tons, respectively. In the coming years, ethylene and propylene are projected to remain in an expansionary phase, with combined new capacities exceeding 20 million tons. This substantial expansion in downstream plastics

and chemical fiber products is likely to lead to severe market imbalances.

As the world's largest consumer of petrochemical products, China's economic growth slowed in 2024. The weakening end user demand, coupled with rapid domestic capacity expansion driven by large-scale investments and subsidies, has led to vicious competition across various petrochemical products. Leveraging low-cost raw materials like crude oil and coal and energy cost advantages to export at lower prices, alleviating domestic demand pressures. This has impacted the global petrochemical market, leading to an unprecedented downturn, with a significant divergence from the moderate economic recovery seen internationally. In the face of intense competition and energy transition challenges, peers in Europe and Asia have been unable to reflect cost increases in their prices, causing continued deterioration in profitability, forcing them to shut down or scale back, and in some cases, exit the market.



Flue Gas CO<sub>2</sub> Capturing and Utilization Pilot Plant in FPC Renwu Complex

However, China has implemented several economic stimulus measures, including interest rate cuts and initiatives aimed at revitalizing the real estate sector such as issuing over RMB 10tn in bonds over next few years. These measures are designed to assist local government in addressing fiscal challenges and stimulate the housing market. If successful, these efforts could help stabilize the domestic economy, reduce inefficient production capacity and boost domestic and ultimately alleviating pressures from oversupply and price competition in the market. This could potentially lead to growth in petrochemical products market.

The Company expects 2024 to mark the bottom of the industry's economic cycle, a potential recovery in the petrochemical market is expected to improve in 2025 compared to 2024. The economic stimulus measures in mainland China, including interest rate cuts and support for the real estate sector, could boost domestic demand and alleviate overproduction pressures. Additionally, anticipated interest rate reductions in Europe and the US, along with favorable energy policies under President Trump's administration, may create new opportunities for the petrochemical industry. The potential conclusion of the Russia-Ukraine conflict could also lead to reconstruction demands, further supporting market recovery.

Looking ahead to the new year, in the face of unprecedented and severe challenges, the Company will maintain a crisis-awareness mindset, carefully review and pursue rationalization step by step. In response to the growing trend of "deglobalization", the Company will strengthen supply chain resilience through close cooperation among production bases in Taiwan, Mainland China and US. The Company will implement market diversification based on regional market changes, supply and demand competition dynamics, and trade barriers. Notably, with the reduction of ECFA tariff for products, and the majority of the key products

having passed the India BIS certification, the Company will increase its sales share in markets with growth potential such as India, Africa, Southeast Asia, and South Asia to seize the opportunities arising from global supply chain reshuffling.

Simultaneously, the Company will continue to rigorously control project expenditures, streamline operating costs, and eliminate non-essential investment that lack urgency and efficacy. Efforts will also focus on organizational rationalization, with a thorough review to discontinue long-term loss-making products that no longer offer strategic value, aiming to reverse the current downturn.

Moreover, the Company will aggressively drive the development of new products and business ventures, alongside implementing energy transition and digital transformation strategies. The focus will be on industries such as electronics, semiconductors, green energy, environmental sustainability, and healthcare. Ongoing initiatives will also include enhancing product value and quality, advancing circular economy practices such as water and energy conservation, reducing maintenance costs, and minimizing carbon emissions. These operational enhancements are designed to elevate management performance and strengthen the Company's competitive edge.

By executing these strategic transformations and business improvements, we aim to reduce production costs, optimize management efficiency, and contribute positively to environmental sustainability. This approach will enable us to move beyond the competitive challenges in the petrochemical sector, positioning ourselves as a key driver for future growth and transforming the current challenges into opportunities. These efforts will play a critical role in lifting the Company out of its current financial setbacks and securing long-term success.

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## **Nan Ya Plastics Corporation**

The Company will integrate the circular economy into process optimization, and constantly improve and upgrade the efficiency of existing equipment/production lines by introducing AI.



In 2024, Nan Ya Plastics Corp. (NPC) recorded a consolidated revenue of NT\$259.61 billion, marking a 0.1% decrease from NT\$259.75 billion in 2023; and consolidated pre-tax income of NT\$4.52 billion, declining by 50.5% compared to NT\$9.13 billion in 2023.



Chairman ChiaChau Wu

In 2024, inflation and high interest rates have slightly eased, coupled with the continued growth in supply chain demand driven by the development of AI. Except for a slight decrease in printed circuit board sales, the Company experienced slight growth in both revenue and profitability from its core business in other product categories. However, adverse factors such as the U.S.-China tech war, geopolitical conflicts, and the real estate issues in Mainland China have hindered the recovery momentum. Additionally, the reduction in recognized investment income has further impacted overall profitability, resulting in unsatisfactory financial performance.



Blood bag and leukocyte reduction filter system from Nan Ya

Since its establishment, Nan Ya Plastics Corp. has continuously undergone industrial transformation in response to the development of socio-economic conditions and technological advancements. The Company currently operates in key industries, including plastics processing, chemicals, polyester, and electronic materials.

In terms of plastic processing, advancements in processing technology in recent years have led to the development of new applications, new materials, and eco-friendly products for the medical industry, such as wafer cutting and polishing tapes, automotive interior films, and blood bag and leukocyte reduction filter system. These products have been widely applied across various industries. Simultaneously, the production lines have integrated automated monitoring equipment to enhance machine production efficiency. The Company has also promoted e-commerce and online marketing strategies to expand into high-end and emerging markets with strong potential, achieving stable and sustainable business growth.

Moreover, we took advantage of our decentralized production sites at home and abroad in Taiwan, mainland China, the U.S., and Vietnam. By coordinating production and marketing operations among our plants promptly, we provided satisfactory service and experience to

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**2024 TITAS** 

our customers. As a result of our ongoing efforts, we consistently maintain stable profitability in plastic processing products.

In terms of chemical products, in line with vertical integration and division of labor in the Sixth Naphtha Cracking Plant in Mailiao, NPC's products, including ethylene glycol (EG), Bisphenol-A (BPA), 1,4-butylene glycol (1,4BG), plasticizers, phthalic anhydride (PA), 2-ethylhexanol (2EH), and epoxy resin (EPOXY), have been vertically integrated into upstream and downstream industries to form a complete supply chain that supports the development of downstream industries such as polyester, electronics, and plastic processing, respectively.

In 2024, new production capacity in Mainland China was gradually brought online, with output spilling over to overseas regions, leading to increased market competition. In response, the Company flexibly adjusted its production and sales regions, as well as the capacity utilization rates for different products, based on market conditions. Specifically, for ethylene glycol (EG), process optimization was implemented. Additionally, with the market recovering, the Company leveraged the relatively lower raw material costs at its Texas plant in the United States to increase production and sales volume, driving improvements in overall chemical product revenue and profitability.

In the field of polyester products, adhering to an environmentally sustainable business philosophy, we are committed to recycling and regenerating polyester products used by consumers. We have independently developed AI-driven sorting technology, proactively advancing the recycling of fabrics, and launched our polyester recycling brand, "SAYA." Through the optimization of product structures, we are strategically positioning ourselves in the high-value-added product market. In 2024, our revenue saw a slight growth.

To facilitate recycling, we have launched single-material products, such as modified polyester pellets used to produce zippers, buttons, and other garment accessories, making the entire garment out of PET material. We also manufacture curtains made entirely of polyester material, which have received an excellent market response. Additionally, we have developed polyester pellets for medical applications, expanding the high-end PET application market. The modified recycled polyester pellets are also used in 3C electronic products, continuously expanding the application of fiber products and increasing the value of recycling and reuse, leading to further growth in our performance.

In the field of electronic materials, demand for consumer electronics remained weak in 2024. However, the rise of AI applications drove an increase in the demand for copper foil substrates and copper foil. Additionally, the market for high-frequency and high-speed materials, including automotive, telecommunications, and server sectors, remained stable, resulting in a strengthening of our operations.

In the future, fields such as generative artificial intelligence (AI), high-performance computing, edge computing, servers, and highspeed switches will continue to grow. Additionally, artificial intelligence will transition from the cloud to the edge, advancing towards the application development of end products (such as AI PCs, AI smartphones, AI robots, etc.), further driving the demand for upstream raw materials.

Electronic materials will focus on the development of high-end materials with highfrequency, high-speed, low dielectric constant, and low coefficient of thermal expansion. NPC leverages its complete upstream and downstream vertical integration advantages, combining both internal and external resources to drive transformation. In addition to enhancing the value and differentiation of existing products, the Company is also advancing the development of materials for high-end telecommunications, AI servers, low earth orbit satellites, wind power, and maritime industries. With stable raw material sources, NPC is well-positioned to meet customers' one-stop purchasing needs, with promising growth prospects.

In the field of circuit boards, Nan Ya Printed Circuit Board Corp. (Nan Ya PCB) has long been deeply involved in the IC carrier board market and has collaborated with customers to launch next-generation high-end server and switch, telecommunications, AI, and high-performance computing chip application boards.

With the rapid development of generative AI, the demand for customized chips and high-speed transmission has increased. Nan Ya PCB has developed large-size, multi-layer IC carrier boards for cloud AI server processors, high-speed switches, and other applications. Nan Ya PCB will also begin mass production of IC carrier boards for high-end PC central processing units (CPUs) and graphics chips, positioning itself to capitalize on the emerging market opportunities for edge AI products.

The reinvested subsidiary, Nan Ya Technology Corp., is dedicated to developing, manufacturing, and selling DRAM products. It is currently advancing its proprietary technology for 10nm process nodes, with the development and mass production of related products (such as DDR5 and beyond) underway.

With the rapid development of AI, the demand for HBM (High Bandwidth Memory)



NAN YA participated in the 2024 TPCA Show TAIPEI

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DRAM products will continue to grow. We are actively developing high-density advanced products, including Through-Silicon Via (TSV) processes and multi-chip packaging, along with designs for high-bandwidth products. At the same time, we will strategically invest in and collaborate on the integration of logic-based ICs and HBM DRAM, as well as the development of customized memory solutions. Leveraging our deep process technology development capabilities, we aim to establish long-term competitive advantages.



Nan Ya was honored with the "Excellence Award in Net-Zero Industrial Competitiveness" in 2024

Looking ahead to the year 2025, the intensifying technological competition between the U.S. and China, coupled with tariff barriers, supply chain restructuring, and geopolitical tensions, presents significant uncertainties for economic development. Additionally, the continuous expansion of petrochemical production capacity in Mainland China, increased competition within the industry, and the imposition of carbon taxes, among other factors, will continue to make operations challenging.

In response to changes in the political, economic, and technological landscape, the Company announced four major transformation strategies in June 2024: ①product transformation, ②business transformation, ③low-carbon transformation, and ④digital transformation. Additionally, the Company established the "Sustainable Operations and Development

Department" to coordinate resources across the organization and drive business transformation and sustainable development. The key directions for these initiatives include:

- 1. Product Transformation: Increase the proportion of high-value and differentiated products, develop new application areas, and expand into new markets.
- 2. Business Transformation: Develop new businesses, products, and technologies, seek business transformation, and deepen the Company's industry layout.
- 3. Low-Carbon Transformation: Expand green products, focus on energy-saving and carbon reduction, and implement the circular economy.
- 4. Digital Transformation: Apply digital technologies, enhance AI applications, and achieve digital transformation to enable intelligent operations.

The four major transformations align with three key industry development trends: high-speed communication and AI innovative application materials, low-carbon and green products, and biotechnology and medical health application materials. The first three fall under industry transformation, while digital transformation focuses on establishing and optimizing a solid and efficient operational foundation for the Company. Overall, the strategy incorporates the concept of sustainable development, allowing for the creation of marketable products that can adapt to industry and technological changes.

In the short term, the Company is undergoing product transformation, focusing on producing differentiated and high-value products, while continuously leveraging the characteristics of existing products to explore new uses and markets.

Additionally, in line with industry development trends, the Company is pursuing new business development, new product research and development, and the introduction of new technologies to seek business transformation, such as in medical materials and semiconductor materials.

In addition to product and business transformation, the Company is continuously integrating artificial intelligence into equipment and processes, consolidating various digital data, and developing a digital management platform. This initiative aims to optimize the control of production process conditions, enhance product quality, and reduce raw material and energy consumption. By implementing intelligent management and leveraging big data analysis and automation, the Company seeks to strengthen its competitiveness and improve operational efficiency.

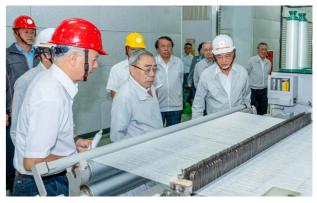
The Company develops environmentally friendly, high-value green products and implements water and energy-saving processes. We are also engaged in cross-factory resource and energy integration for multiple cycles of recycling, reducing resource consumption. Through strategic alliances, we have established a recycling system to achieve waste reduction. By promoting green processes, we aim to lower carbon footprints and minimize environmental impact. Several products have already obtained ISCC Plus (International Sustainability & Carbon Certification) certification, demonstrating our commitment to sustainable operations.

We are also actively implementing strategies to achieve "Carbon Neutrality by 2050". These strategies include "low-carbon energy transition", "energy conservation and circular economy", "increasing renewable energy usage", "application of carbon capture technology", etc. We are also

proactively addressing the opportunities and challenges presented by climate change.

In terms of new expansions and investments, several projects have been completed this year, including the release film and blood bag and leukocyte reduction filter system for medical use at the Shulin Plant in Taiwan, PET-modified pellets at the Linkou Plant, and flexible PVC sheeting at the Texas plant in the United States.

In the coming years, the Company will continue to carry out expansion projects, including the Phase II ABF substrate at the Shulin Plant in Taiwan, the solar system installation at the Xingang Plant, and copper foil plant in Huizhou, mainland China. In the future, in addition to production line upgrades, the Company will also respond to industry development trends, international trade dynamics, and supply chain changes by timely and strategically investing in new businesses and high-value products to drive continuous growth in performance.



Chairman of FPG, along with corporate executives, held an engineering meeting at the Chiayi Plant

Nan Ya Plastics Corporation 2



## Formosa Chemicals & Fibre Corporation

In pursuit of the worldwide environmental trend, FCFC practice the circular economy by recycling and reusing emissions and wastes.



Although the global economy remained stable in 2024, industries exhibited a polarized development trend. Traditional manufacturing industries generally experienced a downturn, while domestic demand in Mainland China remained weak, with the economic recovery falling short of expectations. Additionally, the continued expansion of petrochemical and plastics production capacity in China led to intensified price competition, which spilled over to global markets, causing a severe imbalance in supply and demand. The operating environment of the petrochemical industry faced significant difficulties and challenges. Moreover, unresolved geopolitical risks and surging shipping costs hindered production and sales expansion, impacting the Company's operations.



Chairman FuYuan Hong

For 2024, the Company's consolidated revenue reached NT\$348.6 billion, an increase of NT\$16 billion or 4.8% compared to NT\$332.6 billion in 2023. In terms of pricing, despite weak petrochemical demand, prices for SM, phenol, acetone, PS, and ABS were supported by rising raw material costs. Through supply control, price stabilization, and adjustments in production and sales strategies, the average product price increased compared to the previous year, resulting in an overall sales price increase of NT\$8.9 billion. Due to unfavorable market conditions, the company proactively reduced its utilization and temporarily suspended some of the production, impacting the sales volume of PX, PTA, PP, PS, and ABS in Taiwan. However, thanks to the efforts of the team, the Ningbo PTA-6 plant commenced production, the PIA production line operated at full capacity with full sales, self-consumption of SM was reduced in favor of increased external sales, downstream customer demand for OX increased, and the acetic acid plant maintained stable production and sales without

scheduled maintenance. These factors contributed to an increase in sales by NT\$7.0 billion.

In terms of profit, the Company's consolidated pre-tax profit in 2024 amounted to NT\$0.9 billion, a sharp decline of NT\$6.4 billion or 87.3% compared to NT\$7.3 billion in 2023. The profit margin was squeezed by the massive capacity expansion of mainland competitors. However, through continuous adjustments in production and sales strategies, eliminating weaker segments while retaining stronger ones, and developing high-value-added products, the Company expanded its market beyond Mainland China, leading to an increase of NT\$1.5 billion in operating profit. Despite this, declining profits from reinvested companies and reduced cash dividends resulted in a decrease of NT\$7.9 billion in non-operating income.

Looking back at 2024, global inflation gradually eased, and the economy stabilized. Consumer confidence worldwide was generally conservative, except in the U.S., where robust consumer demand slowed the pace of interest

rate cuts. In contrast, Mainland China faced weak consumer confidence and a significant excess supply issue. International crude oil prices remained relatively stable, with West Texas Intermediate crude fluctuating between US\$70-85 per barrel. In Q4, price fluctuations narrowed to around US\$70  $\pm$  3 per barrel, with an annual average price of US\$75.76 per barrel, reflecting a slight US\$2 decrease from 2023. The Company maintained profitability in the first half of the year. However, in the second half, the price of naphtha feedstock increased compared to the first half, while demand in the petrochemical and plastics markets remained weak. The continued expansion of excess production capacity, along with speculation by Mainland China's PTA downstream manufacturers, led to a decline in the prices of our PX, OX, and PTA products, despite expectations for an increase. As a result, product prices significantly deviated from expectations, and processing margins were severely compressed. SM production was also reduced due to oversupply and weak downstream demand to ensure business survival, further eroding first-half profits. Thanks to the efforts of the team, the phenolacetone product line demonstrated strong process efficiency and low costs, while the differentiation strategy and market diversification for plastic products yielded positive results. Notably, PC plastics remained profitable in 2024, despite facing a 9% anti-dumping duty in Mainland China and the termination of ECFA benefits, which led to an overall tax burden increase of more than 16% on exports to China. As a result, the Company maintained a positive overall profit for the year.

As part of the consolidated revenue in 2024, the parent company's net revenue was NT\$175.0 billion, accounting for 50.2% of the consolidated revenue. Net revenue of subsidiaries such as Formosa Chemicals Industries (Ningbo) Co., Ltd., Formosa Industries Corporation in Vietnam, and Formosa Taffeta Co., Ltd., totaled NT\$173.5 billion, accounting for 49.8% of the consolidated

revenue. Main contributors to the parent company's revenue were petrochemical and plastic products. Both combined had a net worth of NT\$163.6 billion, accounting for 93.4% of the parent company's revenue. Among them, petrochemical products totaled NT\$124.4 billion or 71% and plastic products NT\$39.2 billion or 22.4%.

While ensuring safe production, the Company has focused on key business strategies for its major products, aligning production and sales with market expansion. Efforts have been directed toward enhancing product differentiation by strengthening high-value-added offerings, maintaining stable quality, obtaining product certifications, ensuring timely delivery, and providing comprehensive after-sales services. Additionally, the Company has continued to promote circular economy improvements, including water and energy conservation, consumption reduction, and emission control. It also has actively advanced AI-driven smart production and developed new business ventures, reinforcing operational resilience to build sustainable competitive advantages.

In terms of petrochemical products, the Company has been working to enhance energy integration efficiency at the Mailiao plant. The third aromatic hydrocarbon plant plans to upgrade low-pressure steam to high-pressure steam, which will not only supply heat for internal processes but also be externally supplied to neighboring plants. Meanwhile, the first and second aromatic hydrocarbon plants are planning to recover lowtemperature residual heat from distillation tower tops to generate low-pressure steam, which will be used in turbines for electricity generation, thereby reducing power costs. Additionally, hydrogen compressor downsizing and modification are being planned to improve efficiency and reduce steam consumption. At the Mailiao styrene plant, AN and PTA plant-recovered steam are being extensively utilized. The Haifeng styrene plant has completed an alkylation heat recovery enhancement in its ethylbenzene zone, while the synthetic phenol plant is now capable of recovering steam for supply to neighboring facilities. These initiatives help lower processing costs, improve energy efficiency, and enhance competitiveness. For PTA, the market continues to face pressure from new production capacity in Mainland China, leading to increased supply and narrowing product margins. In August 2024, after improvements, the Ningbo PTA-6 production line demonstrated advantages in low energy consumption and high product quality, along with stable delivery, earning customer trust. By 2025, the high-efficiency Ningbo PTA-6 plant is expected to operate at full capacity year-round, while PTA-5 production will be adjusted based on market conditions, effectively minimizing losses. Regarding Taiwanese production lines, production and sales adjustments have been made in response to shrinking domestic demand. The Mailiao PTA plant has been prioritized to maximize energy recovery and support the plant-wide energy transition. In terms of PIA,

the two production lines in Taiwan and Ningbo together contributed to an annual production capacity of 400,000 tons. Efforts continued to explore potential domestic and international customers for bottle chips, low-melt fibers, and coatings. In November 2024, total monthly sales across the Taiwan Strait further increased to 45,000 tons, aiming to increase the presence of the Company's PIA on the global market and secure its position as a market-leading manufacturer.

In terms of plastic products, excess production capacity in Mainland China and a decline in real estate prices led to a weak domestic demand in 2024. Additionally, export orders remained weak, causing plastic product prices to remain low throughout the year and significantly increasing sales difficulties. The Company continued to adjust inventory levels and production-sales volumes, leading to an overall decline in production and sales compared to 2023. Despite these challenges, PC remained profitable, while ABS and PP losses were reduced. However, PS continued to suffer losses, as a



FCFC awarded the National Occupational Safety and Health Awards

higher proportion of long-haul shipments was impacted by high freight costs, and Mainland China's decreased home appliance exports further weighed on performance. Faced with increased production capacity in Mainland China, the Company will continue its efforts in 2025 to implement lean production and sales practices, reduce the production and sales of general products in highly competitive markets, and focus on increasing the proportion of differentiated products in sales while diversifying the market. The differentiation targets for each product are 57% for PS, 50.5% for ABS, 50.5% for PP, and 45% for PC. Additionally, the Company will expand sales in new application fields in the European and American markets and increase orders from the relocated Southeast Asian industrial chain, thereby reducing its reliance on the Mainland China market. Furthermore, the Ningbo ABS plant will leverage the cost advantages of its new production processes to continue to consolidate its market share in Mainland China while actively zexpanding sales to RCEP tariff-free countries.

Regarding textile and fiber products, Mainland China's dumping of low-cost goods and continued shrinking downstream demand have had a significant impact. Consequently, the rayon and Taiwan yarn plants, which the Company established 60 years ago, have ceased production. In 2025, Taiwan's textile business will transition to a trade-based model, selling imported yarn from Vietnam's Nhon Trach plant and expanding sales of differentiated products. The focus of textile production and operations will shift to Formosa Industries Corporation in Vietnam, where a development team at the Nhon Trach plant will drive product transformation, eliminate weaker segments of the product mix while retaining stronger ones, and collaborate with brand customers to develop differentiated products. Strengthened efforts in new market and customer expansion, as well as securing high-value orders, are expected to help return the business to profitability. For

nylon fiber products, the Company has streamlined operations and reduced production capacity. Among them, clothing yarn, supported by marine waste recycling initiatives, is experiencing business growth. Meanwhile, for industrial yarn, the Company will phase out coarse denier tire cord fabric and transition to fine denier products incorporating recycled marine waste in collaboration with downstream partners, with profitability expected this year. The nylon pellet business will shift toward high-viscosity differentiated products, with prospects for improved operations in the future.

Sustainable development is the focus of business administration while ESG (environmental protection, social responsibility, and corporate governance) is the unchanged priority in the business operation of the Company.

To boost industrial safety, the Company formed the Safety & Sustainability Task Force in 2019, promoting the principles of "people-centric management," "essential safety management," and "enhanced autonomous management." This initiative has helped explore blind spots in safety management, eliminate underlying risks, raise employee safety awareness, and improve workplace safety performance. In 2024, the Company received several awards, including the National Occupational Health and Safety Benchmark Award, the Outstanding Healthy Workplace of the Year, the Excellence Award for Adult Health Management, the 2024 Corporate Sports Certification from the Ministry of Education's Sports Administration, and the Outstanding Occupational Health and Safety Unit in Yunlin County. For 2025, the goal is to continue pursuing a "people-centric approach, further enhancing essential safety, and prioritizing the strengthening and promotion of autonomous management." Through internal and external exchanges, the Company aims to share experiences, implement contractor and staff training programs, and transform employees' safety culture mindset to achieve the goal of zero workplace accidents.

Over the past few years, the petrochemical industry has faced challenges from the industrial environment, digital technology advancements, and carbon neutrality initiatives. Only by strengthening and advancing digital transformation, energy transition, circular economy practices, and industrial innovation can sustainable development be ensured. To this end, the Company established the Transformation Development Task Force in October 2023, consisting of four divisions focused on "digital transformation," "energy transition," "circular economy," and "new venture development." These divisions are responsible for strengthening the promotion of related initiatives accordingly. Digital transformation initiatives include digital optimization and AI applications for smart plants and operational dynamics management. Energy transition initiatives encompass continued water and energy conservation improvements, the formulation of coal reduction and energy transition strategies, and the development of clean energy projects

such as solar power and small-scale hydropower plants to align with global carbon reduction trends. Throughout 2024, an investment of NT\$1.31 billion was made to promote energy conservation and emission reduction, with 235 improvement projects completed, saving a total of 2,943 tons of water per day, 69.2 tons of steam per hour, and 11.0 kWh of electricity per hour. Circular economy initiatives include waste reduction, raw material reduction, process emission reduction, and green product development.

The Company continues to carry out various sustainable development initiatives, achieving significant progress and external recognition. Notable achievements include receiving the 2023 National Sustainable Development Award for Enterprises from the Executive Yuan's National Council for Sustainable Development, the 2024 National Enterprise Environmental Protection Silver Award from the Ministry of Environment, and the Gold Award for Outstanding Enterprises in



FCFC awarded the National Enterprise Environmental Protection Award

Resource Circulation in the Resource Circulation Group from the Ministry of Environment's Resource Circulation Administration for two consecutive years (2023 and 2024). These accolades highlight the Company's success in circular economy practices, waste recycling and regeneration, environmental sustainability, renewable energy development, and energy transition.

Regarding continued investment and organizational transformation, in 2024, the Ningbo PTA plant successfully expanded its annual production capacity by 1.5 million tons. This expansion utilizes the most advanced production technology, positioning the plant as an industry leader. Additionally, the Company discontinued its rayon and textile businesses in Taiwan and downsized operations at the Longde plant. In 2025, the PIA and utilities operations will be merged into a single plant to reduce indirect personnel and maintenance workforce. Meanwhile, idle industrial land will be gradually revitalized and repurposed.

Looking ahead to 2025, the International Monetary Fund has revised down its previous forecast of global economic growth rate to 2.8%. However, with the inauguration of the U.S. president, Donald John Trump, the U.S.-China trade war is expected to escalate, potentially extending to other regions with significant U.S. trade deficits, such as the European Union, Mexico, and Vietnam. Additionally, the effectiveness of Mainland China's monetary and fiscal measures introduced in Q4 2024, along with geopolitical risks, potential inflation resurgence, and the slower pace of U.S. interest rate cuts, will influence global economic conditions and raw material price fluctuations. Under the global trend toward carbon neutrality, international oil prices are expected to steadily and gradually decline in the future. Meanwhile, Mainland China's rise has led to excess production capacity across multiple industries, including refining, petrochemicals, plastics, steel, and even

new energy and semiconductors—an issue that is unlikely to be resolved in the short term. As a result, highly competitive market and price-cutting to secure orders have become the new normal. The Company cannot avoid these challenges but must actively respond and adapt. However, it is estimated that with the Mainland Chinese government's strengthened implementation of policies in three key areas—fiscal stimulus, significant export growth, and housing market correction—GDP growth will be maintained at around 5%, providing momentum to stimulate the global economy. As a result, corporate investment and consumer spending are expected to gradually increase, leading to an improvement in market conditions compared to 2024, which will be beneficial to the Company's operations.

Thus, finding a way out of a daunting operating environment remains a priority for the Company. Since 2016, the Company has recognized the need to adapt to an oversupplied market and initiated a strategy of "differentiation." This was followed by the "escape from China" initiative, the 2023 "stand high and go far" strategy, and the 2024 "be more refined and more extensive" business approach, culminating in a "total solution" customer service strategy. Over the years, these strategic shifts have driven the Company's transformation, reducing its reliance on the Mainland Chinese market, which faces severe overcapacity, and expanding into global markets. Currently, the Company trades with over 80 countries, conducting regular monthly transactions with approximately 50. Going forward, regardless of market changes, differentiation will remain the core business strategy. The Company will no longer pursue full-capacity and full-sales expansion but will instead exit highly competitive markets and industries where differentiation has proven ineffective. In 2025, differentiation efforts will continue to focus on high-value-added products, stable quality, certification compliance, timely delivery, and comprehensive after-sales services.

Additionally, differentiating and enhancing the capabilities of sales personnel will ensure timely and comprehensive service and delivery, better adapt product specifications to diverse customer needs, and uphold the principle of putting customers first. The Company will further refine its business model and strengthen the promotion of its "total solution" strategy to drive operational success.

Facing the business challenges and pressures of 2025, the Company will continue to streamline its production-sales structure by eliminating weaker segments while retaining stronger ones, effectively separating the wheat from the chaff. Efforts will focus on circular economy initiatives, energy conservation, emission reduction, and smart upgrades in plant and operational management. The digital twin plant project will be completed, and AI applications will be expanded to process equipment and pipeline monitoring, enhancing quality, industrial safety, and management efficiency. Regarding carbon neutrality, the Company has set a phased target of reducing carbon emissions by 25% by 2030 (compared to 2020 levels) and has committed to achieving full carbon neutrality by 2050. Between 2021 and 2030, the Company plans to invest NT\$17.5 billion, including in a self-directed carbon reduction plan, to ensure the practical execution of its decarbonization plans.

The Company will continue advancing improvement projects in energy transition, resource recycling innovation, water resource reuse, and AIdriven process optimization. In the green product and circular economy sector, the Company has achieved a monthly recycling volume of 1,250 tons for marine waste materials, including nylon oyster ropes and recycled fishing nets. It is also strengthening plastic recycling efforts to produce low-carbon circular materials, consolidating high-value-added green material production, and expanding into customized, high-margin differentiated products that require certification and are difficult to replace. Building on its existing foundation, the Company will steadily expand into application fields such as differentiated products, semiconductor electronic materials, energy

storage, and hydrogen, continuously capturing new business opportunities and investing in promising emerging ventures. These efforts aim to mitigate risk, ensure profitability, protect shareholder interests, and deepen transformation strategies, ultimately strengthening operational resilience and aligning with global sustainability trends to achieve corporate sustainable management goals.



## **Formosa Petrochemical Corporation**

Through digital technology, enhancing efficiency in production and management, alongside dynamically adjusting production and sales plans, will be beneficial for responding in real-time to changes in the market and developments in new energy.



In 2024, the global economy faced a mix of challenges and opportunities. The petrochemical industry underwent structural changes due to continuous capacity expansion in both the U.S. and China. Additionally, an oversupply in China led to the dumping of low-priced petrochemical products, while economic recovery did not meet expectations, resulting in lower profitability for our company compared to previous years. In response to these external changes, we leveraged our resilience and adaptability by adjusting raw material procurement strategies and optimizing production processes to reduce costs. We recognize that future growth depends not only on market competitiveness but also on actively seeking transformation opportunities, developing new business models, and expanding product applications. We anticipate that our strategic efforts will gradually yield positive results, turning challenges into opportunities for sustainable growth.



Chairman **Mihn Tsao** 

EDCC Jubricant

### **2024** Financial and Operational Performance Review

(In Thousands of NT Dollars)

	2024	2023	% Change
Consolidated Revenue	663,823,047	712,576,194	-6.8
Consolidated Operating Income	-651,435	15,404,555	-104.2
Consolidated Earnings Before Tax	6,567,110	24,693,679	-73.4
EPS After Tax	0.63	2.30	-72.7

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FPCC providing aviation fueling services at Songshan Airport

#### **Refining and Oil Products Business**

In 2024, slowing economic growth in the U.S. and Europe, coupled with weaker-than-expected recovery in China, impacted global oil demand. The ongoing Red Sea crisis also led to an oversupply in Asia, affecting the export price margins of oil products. Furthermore, domestic oil prices were regulated in line with government policies to absorb price fluctuations, resulting in losses for our refining and oil products business.

In terms of production, the average refining throughput in 2024 was 408,000 barrels per day, a 7.7% decrease from 2023, mainly due to flexible production adjustments and product yield optimization.

For the domestic market, oil sales volumes slightly declined due to an increasing market share of hybrid and electric vehicles. Price stabilization policies also led to losses in oil and liquefied petroleum gas sales. However, our company maintained a focus on stabilizing domestic prices and increasing sales, achieving an average market share of 22.5% in 2024, a 0.1% increase from 2023. Various marketing strategies, such as "Formosa Saturday Member Day" promotions and sponsorships of renowned events and sports

competitions, helped strengthen brand recognition and customer loyalty.

For exports, gasoline sales increased by 7.3% to 3.091 million kiloliters, while diesel sales decreased by 8.4% to 7.735 million kiloliters, leading to an overall 2.5% decline in total export sales.

#### **Basic Petrochemical Business**

The global petrochemical market in 2024 was constrained by China's sluggish economic growth and weaker-than-expected demand recovery in downstream markets. However, rising naphtha prices and low run rates at Asian cracking plants improved product margins. Our company also implemented flexible raw material procurement and process optimization strategies, reducing losses compared to 2023.

#### **Utilities Business**

he primary goal of our utilities business is to provide stable electricity and steam supply to our plants. As the impact of the Russia-Ukraine war diminished and international coal prices declined, electricity and steam sales prices were adjusted in line with lower raw material costs. Consequently, utility business profits in 2024 decreased by 2.1% compared to 2023.

#### Corporate Sustainability Initiatives in 2024

Our company upholds sustainable development as a core value, continuously focusing on various aspects of ESG issues. We aspire to balance the interests of employees, investors, and other stakeholders while sharing the fruits of our efforts with the environment and society, striving to achieve harmony between

corporate growth, environmental sustainability, and social prosperity.

To achieve this, we have leveraged artificial intelligence technology to establish smart factories, optimizing production to enhance efficiency and product value. In 2024, we completed 59 projects, generating an annual benefit of approximately NT\$161 million. Regarding emissions reduction, energy conservation, and water-saving efforts, we completed 213 improvement projects in 2024, including reducing emissions by 188,000 tons per year, saving 71 million kWh of electricity annually, and conserving 228,000 tons of water per year.

In terms of social responsibility, our company adheres to a people-oriented approach, considering industrial safety and employee well-being as core values. We remain attuned to societal trends and actively engage in public welfare initiatives. We are particularly committed to supporting local education and developing children and youth. In addition to our long-term collaboration with the

Taiwan Fund for Children and Families through programs such as With Love, We Care and Endless Generations, which help improve the lives of abused children and disadvantaged families, our company also participated for the first time in the National Theater & Concert Hall's Family Inclusion Program in 2024. Through a series of family-friendly arts and cultural activities, we hope to enrich lives with knowledge and nourish souls with art, creating a better environment for future generations to grow. This initiative also serves as an opportunity to inspire more businesses and individuals to take concrete actions in supporting the development of arts and culture, advancing social welfare, and bringing about a greater positive impact on society.

#### 2025 Sales Targets

For petroleum products, our estimated sales volume for gasoline and gasoil are 5.072 million KL and 9.836 million KL, respectively. Our sales strategy for the domestic market will



Solid recovered fuel (SRF) waste to energy

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focus on enhancing refueling convenience through digital transformation, including the launch of the Formosa Petrochemical APP. This initiative aims to strengthen our existing customer base, enable precise marketing, and reduce overall promotional costs. Additionally, we will leverage diverse marketing channels such as television, radio, online platforms, and sports events to further expand our customer reach. In overseas markets, we plan to strengthen collaborations with oil companies and traders to increase international petroleum sales.

For petrochemical products, our target sales volumes are 2.222 million MT of ethylene, 1.844 million MT of propylene, and 310 thousand MT of butadiene. On the production side, we will prioritize stable plant operations, ensuring a steady supply of raw materials aligned with the production plans of downstream manufacturers. For exports, we will closely monitor market

conditions and arrange overseas shipments when favorable. As for the Utility division, our primary objective is to ensure a stable supply of electricity and steam to support plant operations and meet process demands.

#### Future Outlook

In 2024, the petrochemical industry faced significant challenges, including a slowdown in global economic growth, excess production capacity, weakened demand, and increasing trade barriers, placing many industry players in difficult positions. For Formosa Petrochemical Corporation, striking a balance between environmental commitments and economic realities has been particularly challenging. Looking ahead to 2025, with former U.S. President Donald Trump returning to the White House, further policy shifts are expected. A potential re-escalation of U.S.- China trade tensions could introduce new



Participate in the National Theater & Concert Hall's Family Inclusion Program.



Moving forward with product upgrade and transformation projects, based on three main pillars: green factories, green energy, and green innovation.

challenges to the global supply chain. Additionally, his administration's stronger support for traditional energy exploration and consumption may create uncertainties in global oil prices and market demand. However, with the Federal Reserve expected to enter an interest rate-cutting cycle and the Chinese government implementing proactive fiscal and monetary policies to stimulate domestic demand, further to enhance consumer confidence in real estate and stock market confidence. Global liquidity is likely to improve accordingly. These factors are expected to drive a recovery in demand for petroleum and petrochemical products. Moving forward, our company will closely monitor international trade developments, seize emerging market opportunities, and flexibly adjust production and sales strategies to ensure steady business growth and expand market share.

On the other hand, with Taiwan's carbon fee officially coming into effect, businesses are facing increased operating costs, necessitating adjustments in the development direction of the petrochemical industry. In response to future business environments and industrial transformations, our company is committed to three core pillars: Green Factories, Green Energy, and Green Innovation. By integrating AI applications and digital transformation, we are implementing multiple carbon reduction initiatives to mitigate cost impacts.

In addition to continuously optimizing processes to enhance energy efficiency, we collaborate with value chain partners to develop low-carbon products, integrating upstream, midstream, and downstream operations to establish a domestic Sustainable Aviation Fuel (SAF) supply chain in Taiwan to seize business opportunities in the global low-carbon market. Through forward-looking strategies and ongoing innovation, we aim to ensure sustainable corporate growth, enhance long-term competitiveness, and create lasting value for our shareholders and society.

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## Formosa Plastics Group-US. Operations

FPG U.S. is implementing artificial intelligence (AI) and other related technologies to improve product quality and production/sales management performance.



The total revenue of Formosa Plastics Corporation USA (FPCUSA), Nan Ya Plastics USA, and Nan Ya Plastics America in 2024 was \$4.4 billion, compared to \$4.7 billion in 2023, representing a decline of 6.38%. Despite disruptions caused by the Russia-Ukraine conflict in energy and food markets, unprecedented tightening of monetary policies due to 40-year high inflation, while the tensions in the Middle East have yet to fully subside, the US GDP still exceeded expectations growing by 2.8% and the unemployment rate was slightly above 4% in 2024. However, behind the economic figures, there is increasing divergence in different sectors. Compared to the booming technology and service sectors, the average Purchasing Managers' Index (PMI) for manufacturing in the US was below the standard 50, indicating a significant slowdown in the manufacturing sector. Additionally, with new capacities in the North American petrochemical industry (including Olefin PE, PP, and PVC) coming online over the past three years, plus the suppressed demand due to tight monetary policies and unresolved inflation issues, the prices for petrochemical products across North America and globally have been slumped further compared to 2023. Despite facing challenges such as global geopolitical tensions, economic slowdown, and declining product prices in 2024, FPCUSA was able to adjust its production and sales strategies timely to ensure profitability.

In terms of production, following the principle of sustainable operation, FPCUSA continuously improves its operations. Despite numerous challenges, the company closely monitors market dynamics and adjusts production strategies flexibly to maximize overall benefits. Additionally, the company consistently conducts to tirelessly review and to improve the product quality, process and production efficiency, along with competitor benchmarking to strengthen its competitiveness in reducing production costs.

In terms of olefin and its derivative products, FPCUSA purchases natural gas liquid (NGL) and processes it through the liquid fractionation plant to separate ethane, propane & other feedstocks. These are then used in three cracking plants to produce 2.74 million metric tons of ethylene and 350,000 metric tons of propylene annually, and then through the polyolefin plants to produce 1.97 million metric tons of polyethylene and 850,000 metric tons of polypropylene.

In terms of Chlor-Alkali product chain, Formosa Plastics Corporation USA generates power from its own power plant. The electricity is used for the electrolysis of brine to produce 970,000 metric tons of caustic soda annually. The chlorine byproduct then undergoes the EDC, VCM, and PVC processes, resulting in an annual production of 1.46 million metric tons of PVC resin. Furthermore, the production of 60,000 metric tons of rigid PVC film is entrusted to Nan Ya Plastics Corporation USA, while 48,000 metric tons of flexible PVC film is produced by Nan Ya Plastics Corporation America. For the polyester fiber product line, ethylene produced by Formosa Plastics Corporation USA is supplied to Nan Ya Plastics Corporation America, which yields an annual production of 1.19 million metric tons of ethylene glycol (EG) and 860,000 metric tons of polyester fiber products. Nan Ya Plastics Corporation USA also produces 11,000 metric tons of PET rigid film annually.

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In terms of new plant expansions, FPCUSA successfully completed the bottleneck expansion of its VCM plant in Texas in October 2023, increasing its annual capacity by 150,000 metric tons and ensuring a more abundant supply of PVC raw materials. In the third quarter of 2024, the PVC plant in Louisiana completed its bottleneck expansion, increasing its annual capacity by 110,000 metric tons. Additionally, a new polypropylene production line in Texas is expected to be completed and put into operation in the second quarter of 2025, adding 250,000 metric tons of polypropylene annually. These expansions will enhance the competitiveness of FPCUSA by enriching its portfolio with higher value-added differentiated products.

Regarding sales strategy, the company aims for a balance between production and sales, focusing on the North American market while recognizing the importance of export sales to complement its overall sales objectives. Regarding customer management, the company has established a base of foundational customers, targeting strategic market segments, and is developing strategic partnerships and alliances to deepen customer relationships and facilitate new product development. In the North American market, the company has targeted high-growth and high-value-added segments, maintaining a balanced portfolio across large, medium, and small customers, and gradually reducing sales of disposable plastics year by year as a strategy. In terms of exports, with the expanded production capacity, the company has set up bonded warehouses and shipping hubs in various regions of Europe and utilizes contracted distributors and agents for sales, focusing its export market efforts on Europe. Additionally, the company places importance on maintaining its market shares in Mexico and Central/South America to leverage advantages in freight costs.

Ensuring sustainable business operations has always been the core value of our management. The company will not only continue to strengthen environmental protection, occupational safety management and employee's career development,

but also invest in improving product quality, sales strategies, and enhance maintenance performance. Additionally, we will begin evaluating various carbon reduction strategies and planning related initiatives, focus on continuous development of high-value-added or eco-friendly products, and also enhance customer services and operational management. This allow us to build long-term relationship with the customers with high demands for quality and service, albeit at relatively higher product prices, to increase profitability and market share.

Looking into 2025, economic experts anticipate several challenges for the global and U.S. economies, including ongoing geopolitical tensions such as the Russia-Ukraine war, the Israel-Hamas/Iran conflict, and the political tensions in the Asia-Pacific region. Additional concerns include trade deglobalization, potential tariff increases under a new Trump administration, and weak market demand in mainland China. Meanwhile, the International Monetary Fund (IMF) has raised its 2025 global GDP growth forecast to 3.3%. In the North American petrochemical industry, low natural gas prices continue to keep feedstock costs (ethane, propane, butane, and naphtha) low for olefin plants. However, the industry faces pressure from increased supply due to the completion of several new olefin and downstream plants (PE, PP, PVC) over the past three years. With global demand still recovering, competition-driven price reductions are expected to persist. FPCUSA forecasts improved profitability in 2025 compared to 2024 but will need to adopt a cautious strategic approach.



EG-1 Plant. Texas



### **Other Investments**

In addition to these four major corporations, the Formosa Plastics Group has many other affiliates.

#### Our domestic affiliates include:

NanYa Technology Corp., Nan Ya Printed Circuit Board Corporation, Formosa Sumco Technology Corp., Formosa Taffeta Co., Formosa Advanced Technologies Co., Formosa Heavy Industries Corp., Mailiao Power Corp., Formosa Daikin Advanced Chemicals Co., Ltd., Formosa Asahi Spandex Co., Hwa Ya Power Corp., PFG Fiber Glass Corp., Formosa Environmental Technology Corp., Formosa Idemitsu Petrochemical Corp., Formosa BP Chemicals Corp., Formosa FCFC Carpet Corp., Formosa Oil (Asia Pacific) Corp., Formosa Plastics Transport Corp., Formosa Plastics Marine Corp., Nan Ya Photonics Inc., Formosa Biomedical Technology Corp., Formosa Technology Corp., Formosa Lithium Iron Oxide Corp. and Formosa Smart Energy Tech Corp.

#### Our overseas affiliates include:

Formosa Plastics Corporation, U.S.A., Nan Ya Plastics Corporation, USA, Nan Ya Plastics Corporation, America, Formosa Ha Tinh Steel Corporation and P. T. Indonesia Nan Ya Indah Plastics Corporation. FPG's investments in Mainland China include Formosa Plastics Corporation, Nan Ya Plastics and Formosa Chemicals & Fibre Corporation.



Formosa Sumco Technology Corp



The largest lithium iron phosphate battery cell plant in Taiwan - Formosa AdvEnergy cell plant



## Non-Profit Organization—Medical Care Chang Gung Memorial Hospital

By integrating teaching, research, services and sound management, Chang Gung Memorial Hospital (CGMH) have created an institution that serves the public as we strive toward upgrading the level of medical care and enhancing the well-being of the society.



In order to achieve the goal of "service quality improvement and appropriate medical cost control", Chang Gung Memorial Hospital has continuously evaluated Taiwan's environment and needs with the exploration of each core problem for more than 40 years. Patient orientation is our central belief to develop environmental innovation and high-quality medical care. Taking good use of limited resources maximizes the effectiveness and the contribution with unstoppable progress of Taiwan's medical standards.

Established in 1976, Chang Gung Memorial Hospital (CGMH) is now in its 49<sup>rd</sup> year of operation. Adhering to the belief of "What is Taken from the society is to be used in advancing the interests of the Society", we have overcome numerous obstacles during that timeframe. By integrating teaching, research, services and sound management, we have created an institution that serves the public as we strive toward upgrading the level of medical care and enhancing the well-being of the society. In 2024, we were honored with the highest international recognition from the International Hospital Federation (IHF) - the "Grand Hospital Award Gold Winner." Additionally, we received the prestigious titles of "Hospital of the Year-Taiwan" and "Smart Hospital Initiative of the Year-Taiwan" at the Healthcare Asia Awards.

#### 1. Teaching

As a teaching hospital, we have launched cooperative programs with Major medical schools in the country to provide their interns with clinical Training. We have also developed a highly respected resident training system designed to nurture highly competent attending physicians in different specialties. In 2024, 190 residents finished their training program at CGMH for promotion to Attending Physician. Over the years CGMH has graduated over 4,957 students to achieve excellent performance in their respective careers in the medical profession.

Since 2015, CGMH has been accepting

healthcare professionals from various countries for clinical internships and training. In 2024, there were 434 international trainees, bringing the cumulative total to 2,494 trainees. Training participants come from over 92 countries, with the top ten being Malaysia, India, the Philippines, Thailand, the United States, Singapore, Spain, South Korea, Hong Kong, and Japan. The number of international trainees is higher compared to other domestic medical institutions. Additionally, CGMH actively promotes international training collaboration and participates in the national "Medical and Health Cooperation and Industrial Development Plan" under the New Southbound Policy.

#### Research

To encourage R&D, we provide funding for clinical research, basic medical research and international studies for our medical, nursing, technical and administrative staffs. In 2024, we supported international studies for 42 research staff personnel, and conducted more then 3,032 medical research projects under the National Science and Technology Council and Ministry of Health and Welfare. In addition, we provided Funding of US\$ 112.87 million, and published 3,049 SCI qualified papers. 36 patents, 8 technology transfer cases, 43 Research Innovation Award winning projects, including 29 National Innovation Award winning projects. The academic research results and published manuscripts contribute greatly in the academic fields.

Non-Profit Organization—Medical Care



2024 Chang Gung Medical Week

In addition, CGMH integrates research findings into clinical applications to enhance healthcare quality. We utilize AI applications to assist in clinical diagnosis. Currently, three medical equipment software have obtained TFDA medical device licenses. CGMH is also the first healthcare institution in Taiwan to acquire the Ministry of Health and Welfare's medical equipment license. Currently, 26 items of AI software have been reviewed and recommended for clinical use, and the Chang Gung AI Inference Cloud Platform for use in July 2024, there are currently 13 items of AI software has been uploaded to the CG AI Inference Cloud platform, the cumulative total of 7,203 people use, an average of 554 users per AI software.

#### 3. Services

As one of the biggest general hospitals in Taiwan, both our facilities and our level of health care are on par with first-rate hospitals around the world. By the end of 2024, we offered 11,268 beds with health care services provided by over 26,029 employees. In 2024, we served over 10.27 million outpatients and admitted almost 335,000 patients for inpatient services.

#### 4. Management

To achieve the goal of enhancing service quality and controlling medical costs within reasonable limits, for over 48 years we have constantly evaluated local conditions and needs, inquiring into the root of every problem. With patients at the center of our mission, we have embraced innovations allowing us to provide the best possible medical care, to make the most of limited resources and to enhance the quality health service in the country.

Following the principles of founder Wang Yung-Ching, Chang Gung Medical Foundation is dedicated to utilizing information technology to integrate operations, manpower, and equipment, assisting in the functioning of healthcare services and elevating their quality. With a focus on enhancing hospital information security, it serves as the foundation for implementing electronic medical records and smart hospitals.

The foundation consistently undergoes certification by the Healthcare Information and Management Systems Society (HIMSS). In 2019, it became the first hospital in Taiwan to achieve Level 7 certification, the highest level, in the HIMSS Electronic Medical Record Adoption Model (EMRAM). In 2022, it participated in the Digital Health Indicator (DHI) evaluation, ranking as the world's second and Taiwan's top smart hospital. In 2024, Chang Gung Memorial Hospital achieved certifications for INFRAM (Infrastructure Adoption Model) stage 7, DIAM (Digital Imaging Adoption Model) stage 6, and AMAM (Analytics Maturity Assessment Model) stage 6. CGMH becoming the first hospital in Taiwan to achieve DIAM stage 6 certification. Moving forward, the foundation will continue to prioritize "Informatization" as an overall strategic tool, positioning itself at Chang Gung as an intersection of "technology" and "information."

Valuing the necessity of artificial intelligence as part of the future development, Chang Gung Medical Foundation set up the Artificial Intelligence Core Laboratory to apply AI technology on clinical use, assisting diagnosis and avoiding human resource waste at the same time. The laboratory also focuses on combining communication technology and existing resources to make the process of medical service more convenient. For example, clinic visits, hospitalization, prescription pick-ups etc.

#### 5. Social welfare and Sustainable development

In the promotion of organ donation, CGMH continues to actively advocate the concept and medical procedures of organ transplantation. In 2024, there were a total of 138 organ donors, with 135 receiving corneas, 9 receiving hearts, 18 receiving lungs, 86 receiving kidneys (including 40 living kidney transplants), 198 receiving livers (including 145 living liver transplants). Additionally, 7 cases of whole-body donation. Among these, the numbers of lung and liver transplants all ranked first in Taiwan.

CGMH has also been active in providing advanced social services. In 2024, CGMH provided relief to over2.99 million patients, CGMH have taken an active part in Social welfare such as Charity project of sport medicine, The protection of children and youths program, Children's health care, Health care system of communities in Yunlin County, Telemedicine service, Medical volunteer programs by employees, etc. An outlay over US\$ 21.97 million from our social service fund.

Chang Gung Medical Foundation (CGMF), as a healthcare foundation, is deeply rooted in its core medical mission while actively championing environmental protection (E), social responsibility (S), and hospital governance (G). In 2023, the hospital

published its third sustainability report, providing comprehensive information. Furthermore, it achieved verification against BSI Taiwan's AA1000 V3 assurance standard, earning the esteemed "Platinum Award" for the third consecutive time.

In terms of energy conservation and carbon reduction, the CGMH has achieved remarkable results. In recent years, it has participated in the national-level Energy Saving Benchmark Award competition four times, winning an impressive total of three gold and one silver medals. In October 2024, President Lai Ching-te personally visited Linkou Chang Gung Memorial Hospital to explore its deep energy-saving and sustainable innovation achievements, recognizing the Chang Gung system's efforts and contributions to energy conservation.

In addition to its outstanding core healthcare services, Chang Gung Medical Foundation (CGMF) for Medical Research and Education has expanded its horizons through various innovative initiatives. These encompass research and development, talent training, health education, medical relief, and community healthcare services. Acknowledging its comprehensive excellence, CGMF has been honored with the "Overall Outstanding Award" for three consecutive years (2022 `2023 `2024) from the Ministry of Health and Welfare.



Healthy Ageing Tech Show 2024

Non-Profit Organization—Medical Care

## Non-Profit Organization—Education Chang Gung University

Chang Gung University will continue to strengthen teaching, research, industrial innovation, and international exchanges across all fields in order to respond to the pulse of the times and meet societal needs.

Chang Gung University exclusive academic gown -Debuting at the 2024 Graduation Ceremony Following the motto of "Diligence, Perseverance, Frugality, and Trustworthiness", we adhere to the teaching philosophy of "integrating theory with practice", striving for excellence with a pragmatic approach. Since its inception, our university has meticulously planned medium to long-term development strategies for teaching, research, counseling, and administrative services. We are dedicated to the pursuit of excellence in teaching, research, and industrial innovation, while emphasizing the promotion and implementation of holistic education.

Chang Gung University was founded in April 1987, originally named Chang Gung Medical College. Later, to meet the needs of national economic development, engineering and management departments were added to provide comprehensive teaching resources for the cultivation of outstanding medical, engineering, and management talents. In August 1997, the Ministry of Education formally approved the name change to Chang Gung University. Currently, the university comprises four colleges: Medicine, Engineering, Management, and Intelligent Computing, offering a total of 22 departments, 25 graduate institutes, 1 bachelor's degree program, 7 master's degree programs, and 1 doctoral degree program.



Center for Clinical Skills and Simulation

The university currently has 611 full-time faculty members (including clinical faculty), 638 adjunct faculty members (including clinical faculty), and a total of 7,241 students, comprising 5,328 undergraduate students and 1,913 graduate students. In addition to completing general and professional coursework, students are also required to participate in internship programs at teaching hospitals and Formosa Plastics Group enterprises, aligning with their fields of study. In recent years, the university has promoted the Formosa Plastics Group Scholarship Program and Memory Industry Program to facilitate direct employment upon graduation. Furthermore, the university actively encourages students to engage in faculty research projects and industry-academia collaborations. This allows our students to gain hands-on experience and seamlessly integrate academic learning with practical applications.

In response to industry demands and the rise of AI technology, Chang Gung University has adopted an AI-integrated teaching approach. The university has introduced a mandatory AI fundamentals course for all first-year students and has developed AI application courses across various fields.

Additionally, it offers multiple credit programs and micro-programs. We encourage students to

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Chairman's banquet for outstanding teachers from three universities

pursue double majors, minors, and interdisciplinary studies to cultivate diverse expertise. To broaden students' academic perspectives, the university actively promotes inter-university collaborations and international dual-degree programs. Whether graduates enter the workforce or pursue further studies, they are well-equipped to apply their knowledge and skills effectively. Our graduates have earned widespread recognition and trust from various sectors. This aligns with the university's mission of nurturing professionals with both knowledge and integrity, contributing to society through education.

Chang Gung University fosters research excellence through a comprehensive research ecosystem and ample resource support. The university enables faculty and researchers to pursue high-quality research while ensuring the cultivation of scientific talent and sustainable development. In 2024, the university achieved stellar research performance: an average of 3.8 published papers per faculty, ranking 2nd

nationwide; an average of 0.6 approved research projects per faculty by the National Science and Technology Council (NSTC), ranking 1st among private comprehensive universities in Taiwan. These achievements surpass those of many public universities. In terms of academic rankings, the university has received significant recognition. According to the 2024 Stanford University list of the world's top 2% scientists, Chang Gung University ranks 6th nationwide and 1st among private comprehensive universities. In the 2024 CWUR World University Rankings, the university ranks 603rd globally and 1st among private comprehensive universities in Taiwan. In the 2024 CWTS Leiden Ranking by Leiden University, Netherlands, the university is ranked 237th worldwide and 3rd in Taiwan. Notably, in the field of Biomedical and Health Sciences, it ranks 79th globally and 1st in Taiwan. These achievements solidified the university's position as a leading research-intensive university with significant scientific impact.

Regarding industry-academia collaboration, over the past three years, the university has secured an average of NTD\$144.57 million in annual project funding. Among these, NTD\$48.24 million (approximately 33.4%) comes from collaborations with Formosa Plastics Group. Looking forward, the university will continue to actively expand partnerships with industries.

Our university upholds the philosophy of holistic education, aiming to cultivate students with both academic and moral excellence. balanced development across the five domains, and a lifelong commitment to learning. We actively encourage students to practice selfdiscipline in their academic pursuits, participate in club activities, engage in public affairs, participate in service learning, and cultivate moral character through various activities. Through six indicators of holistic soft power — "caring and giving, teamwork, humanities and arts, selfreflection, discipline and self-regulation, innovation and initiative" — we regularly assess students' learning outcomes to ensure the spirit of holistic education emphasizing balanced development and excellence in learning is realized.

To encourage students to participate in extracurricular activities, develop leadership and management skills, and foster teamwork, Chang Gung University has actively promoted the "Club PLUS Program." In 2024, students achieved remarkable success in various competitions. The String Ensemble Club received the Top Honor Award (Category B) in the National Student Music Competition. The Light and Fire Arts Club won the "Best Club Specialty Activity Award" in the National College Club Awards for consecutive years. The Student Association once again earned the "Outstanding Student Autonomy Award" at the National University Student Association

Exhibition. These achievements highlight the university's commitment to holistic education and reflect its success in nurturing well-rounded students with strong character and leadership skills.

Looking ahead, Chang Gung University will continue to drive teaching and industrial innovation through research, striving to achieve excellence in academia, industry collaboration, and innovation. The university is committed to internationalization, digital transformation, interdisciplinary learning and collaboration, in order to foster a student-centered learning environment. The goal is to equip students with holistic education and core professional competencies, interdisciplinary knowledge and technological proficiency, global mobility and industry-driven innovation and entrepreneurship skills. By cultivating highly skilled professionals with strong ethical values, the university aims to promote sustainable development and fulfill its social responsibility. Moving forward, Chang Gung University is dedicated to becoming the First Choice University with a strong medical and interdisciplinary focus, and advancing toward the vision of being a Top University in the world.



Chang Gung Electrical Engineering 5G Base Station Teaching System

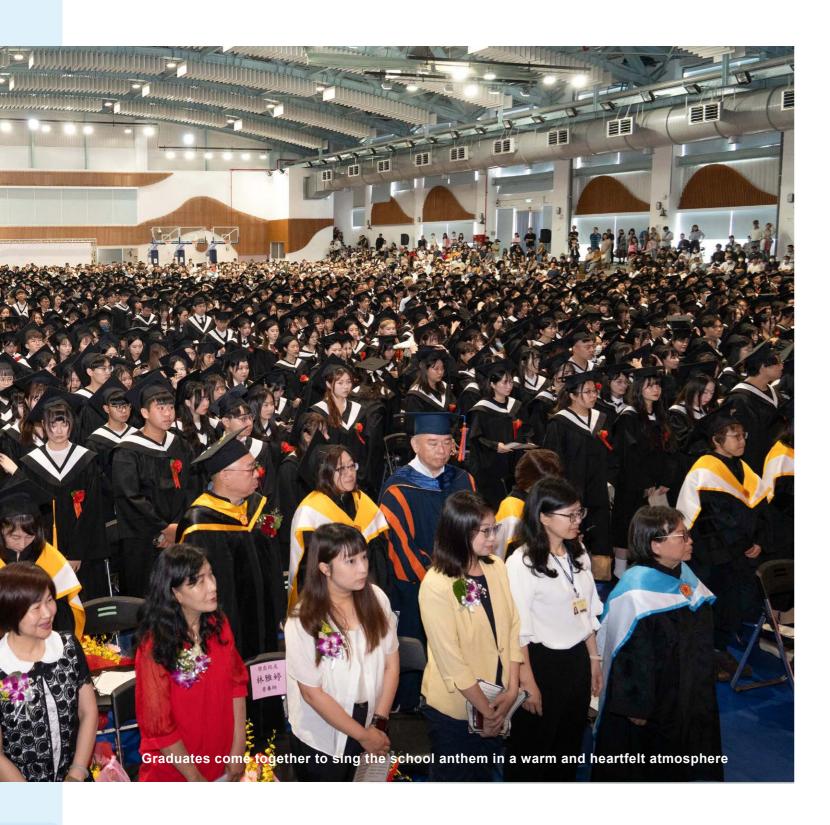
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## Non-Profit Organization—Education Chang Gung University of Science and Technology

Founded to support commitment to humanity and integrity, its vision is to be, in every aspect of health care, the highest-quality school and the source of the highest-quality nurses entering the field.



Our university upholds the motto "diligence, perseverance, frugality, and trustworthiness" and adheres to the philosophy of "putting people first and seeking truth from facts." With "health care" as our core focus, we position ourselves as a "university that values teaching and research equally while pursuing sustainable development in health care." Our mission is realized through "talent cultivation," "industry-academia R&D," "sustainable development," and "service and guidance." We aim to nurture practical health care professionals, establish distinctive features in health care education and research, and actively fulfill our social responsibilities.

Founded in 1988 as the Chang Gung Institute of Nursing (CGIN), our university has continually pursued self-improvement and excellence. It was restructured as the Chang Gung Institute of Technology (CGIT) in 2002, received approval to establish the Chiayi Campus in 2004, and was elevated to university status in 2010. In August 2011, it was renamed Chang Gung University of Science and Technology (CGUST).

The university is committed to cultivating professionals with practical skills, expertise in health care, industry knowledge, and humanistic literacy. To achieve this, we continuously enhance teaching quality and learning outcomes. We have three college-level units: the College of Nursing, College of Human Ecology, and Center for General Education. These units encompass four graduate institutes and six departments: the Graduate Institute of Nursing, Graduate Institute of Gerontology and Health Care Management, Graduate Institute of Health Industry Technology, Graduate Institute of Child Care and Education, Department of Nursing, Department of Respiratory Care, Department of Gerontology and Health Care Management, Department of Child Care and Education,

Department of Cosmetic Science, and Department of Nutrition and Health Sciences.

Our university employs outstanding senior full-time faculty, achieving a student-faculty ratio which is significantly lower than the Ministry of Education's standard. Departments offer practical internship courses combining theory and practice, preparing students for employment without long adjustment periods. CGUST offers 13 interdisciplinary (micro) credit programs, such as Traditional Chinese Medicine Aesthetic Nursing, Communication and Entrepreneurship, and Infant Care Innovation. These programs foster secondary specializations and entrepreneurial skills.

- \* The university's outstanding performance has been recognized by students, parents, and numerous institutions both nationally and across the world.
- \* The university's freshman enrollment rate has exceeded 98% for several consecutive years.
- \* It ranks first among private technical and vocational universities in student retention stability.

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- \* With full support for consistent and effective learning, students achieve graduation rates exceeding 95%.
- \* In 2023, the university passed the Ministry of Education's "Institutional Affairs" evaluation for technical and vocational colleges, with its sound management and academic performance receiving recognition.
- \* In 2024, all departments and programs received the highest five-year accreditation from the Taiwan Assessment and Evaluation Association (TWAEA) under the "Higher Education Quality Assurance Program," earning high praise for teaching quality.
- \* The university also passed the TWAEA's "Internship Curriculum Performance Evaluation" for technical and vocational colleges, with a national pass rate of only 30% that year.
- \* It secures over NT\$200 million annually in grants and subsidies from various government programs.
- \* Global Views Monthly
- Best Progress Award for Private Universities and Model University in the Medicine category in 2024 Taiwan Best University Rankings, ranking 2nd among private universities of technology and 5th among medical universities in Taiwan.
- Ranked 2nd in 2024 Survey of University Graduates Most Favored by Employers and Most Favored by Medical Institutions.
- First Prize in 2024 5th University Social Responsibility Awards for Sharing the Joy of Aging, Starting with Oral Health, and Model

- Award for Diverse New Perspectives: Supporting Migrants in Chiayi.
- Ranked 6th among medical universities in Taiwan and 9th among technical and vocational universities in 2022 Taiwan Best University Rankings. Additionally, ranked 1st among private technical and vocational universities in the Teaching Performance category and 3rd in the Financial Soundness category.
- Ranked 9th among private technical universities and 1st among medical and health care universities in 2021 Survey of University Graduates Most Favored by Employers.
- \* Times Higher Education (THE) 2024
- World University Rankings: Ranked 29th in Taiwan and 2nd among private technical universities.
- Rankings by Subject: Listed in the Clinical and Health and Life Sciences categories for two consecutive years as the only technical university in Taiwan to be included.
- Impact Rankings: Ranked 16th in Taiwan and 2nd among private technical universities in the SDG 3 (Good Health and Well-Being) category.
- Asia University Rankings: Ranked 34th in Taiwan and 3rd among private technical universities.



The inauguration of the Holistic Education Building heralds a new vision for the future



The Physical Activity for Young Children in the Affiliated Laboratory Preschool of Chang Gung University of Science and Technology

- Young University Rankings: Ranked 15th in Taiwan and 2nd among private technical universities.
- \* Five professors from our university were named among the top 2% of the world's leading scientists, based on the global database Scopus as published by Stanford University.

CGUST continuously establishes sister school agreements with prestigious academic institutions worldwide, promotes international collaborative research, and invites international scholars to engage in academic and cultural exchanges. These efforts enhance faculty and students' understanding and appreciation of multiculturalism, strengthen cross-cultural communication skills, and nurture a commitment to global issues and societal service as core competencies.

The university offers various scholarships and financial aid to encourage students to participate in international conferences,

competitions, and study abroad programs at sister schools for dual-degree or credit courses. Special financial aid mechanisms are available for economically or culturally disadvantaged students to reduce financial barriers, enabling broader participation in overseas learning. These initiatives significantly improve students' international competitiveness and humanistic literacy. CGUST consistently ranks among the top universities in Taiwan for the number of students sent abroad annually.

In response to the rapid changes in society, the University is dedicated to improving its administration, with personnel as its central consideration. Its mission focuses on cultivating professional talent, promoting industryacademia R&D, and advancing sustainability. The University actively strives to achieve its vision of becoming a reputable and leading institution in Asia.

# Non-Profit Organization—Education Ming Chi University of Technology

In the pursuit of adhering to the spirit of perfection, we strive for excellence in everything, keep making self-improvement, and are tailored to the requirements of the development of the whole industrial economy in order to continue cultivating professional talents with good character.



In the 1960's while both the industrial and economic developments were taking off in Taiwan, there was a lack of mid-level professionals in the industries. In response to the developmental needs, Mr. Y. C. Wang and Mr. Y. Z. Wang, the founders of Formosa Plastics Group, donated the funds for the establishment of the University in December 1963 in order to strengthen the cultivation of talents.

The University is located on the hillside of Kueizi Village in Taishan District, New Taipei City and was originally named "Ming Chi Institute of Technology." The campus occupies an area of 62 hectares with vast green areas and beautiful yet tranquil sceneries. More than 200 years ago, during the reign of Emperor Chienlong in the Ching Dynasty, the "Ming Chi Academy," founded by a Tributary Scholar, Mr. Hu Cho-yu in Southern Fukien, was located in the vicinity of the University. At that time the Academy was a center of intellectual and cultural hub and was also the cultural origin of northern Taiwan. This university was named "Ming Chi" with an aim to encourage the faculty and the students to learn from the virtuous elders and to embrace heritage and vision as their own mission.

With the exceptional operational performances and in response to the need for talents due to the economic development and the industrial advancement in Taiwan, the School was approved in 1999 for its transformation into "Ming Chi Institute of Technology." After being awarded Excellence by the annual evaluation conducted by the Ministry of Education (MOE) for six consecutive years, the Institute was approved again in 2004 for its further transformation into "Ming Chi University of Technology." The University currently hosts 4,383 students (4,292 students in the day division and 91 students in the continuing education division), 206 faculty members, and 140 staff members. The University consists of the College of Engineering, College of Environment and Resources, and College of Management and Design, offering three Ph.D. programs, 12 M.A. programs and 13 departments (including three bachelor programs). All the departments and graduate institutes have passed the certifications of IEET (Institute of Engineering Education Taiwan) or ACCSB (Accreditation of Chinese Collegiate School of Business), showing that the University's educational system is on the international track.

Due to Ming Chi's units receiving top rankings and the school being ranked number one nationwide in the 2011 MOE Evaluation of Technological Universities, Ming Chi was granted permission to conduct selfevaluation instead of being evaluated by the MOE. Since then, Ming Chi has passed the MOE evaluation held every five years, starting from 2016, on technological university affairs and self-evaluation on colleges. According to the data collected from Web of Science, Ming Chi was ranked number one among all the technological universities and colleges in the year of 2024 in producing SCI/ SSCI papers per author, including assistant professors and above. In 2018, the Institutional Research Center was established to develop a data-based decision-making model to implement efficient and effective school management systems and pursue sustainable school administration. The average amount of subsidies per student at Ming Chi received from the MOE (including MOE grants, Teaching Excellence Program funds, and Higher Education Sprout Project grants) has led other funded technological universities for years. Ming Chi, which has been awarded certificates of information security management system (ISMS) ISO-27001, and environmental management system (EMS) ISO-14001, is a technological university with excellent traditions and achievements.

The motto of the University is "Diligence, Perseverance, Frugality and Trustworthiness." In terms of "Diligence and Perseverance," we expect the students not only to work hard but also to do the right and useful things. Students are encouraged to build their wisdom and enhance self-confidence through the accumulation of such useful experiences. When students live simple and honest lives, they can concentrate on the pursuit of their life goals. Based on this foundation and equipped with the professional

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knowledge and skills, all our students are expected to become useful members of the society. Ming Chi has been a boarding school since its establishment. Through this shared on-campus living, students are encouraged to maintain a regular life, strong body and mind. The Mindfulness Center has been established, offering a General elective course on Mindfulness. This initiative aims to enhance students' focus and observational skills, while fostering grounded characteristics and good moral character. In 2018, the general education course "Design Thinking" was offered to guide students to develop interdisciplinary skills, to inspire their creative thinking, and to lay the foundation for them to explore practical problems and solve problems in the future. Moreover, since teachers also live on campus, they can better guide students and live up to the standards of propagating the doctrines of the ancient sages, who would not only teach but also clarify any doubts.

In order to combine theory with practice and to instill in students the spirit of self-reliance, diligence, and endurance, Ming Chi has, since its founding, implemented co-op programs by alternating regular classes with internships throughout the four-year curriculum. Students are arranged to participate in full time practical internship program for one year in the Formosa Plastics. This allows students to receive salaries from the work so that they could reduce the financial burden of their families and complete their studies. Through the internship, students are able to learn the techniques relevant to their professions as well as the practical management skills. Students are also able to experience the meaning of diligence, perseverance, frugality and trustworthiness and develop the attitude of being downto-earth and always getting to the bottom of everything. The overseas internship system is unprecedented. Presently the practical training program has expanded to various industries and companies in the U.S., Switzerland, Mainland China, Indonesia and Vietnam. The amount of students working overseas has accumulated to 608 till now. Moreover, Ming Chi has been selected by the MOE to establish a project office on campus to facilitate vocational schools nationwide in offering co-op programs for 15 years,

expanding practical training across various industries with over 172 companies participating. This initiative has significantly enhanced students' practical skills, earning high acclaim in the industry. Ming Chi has also received lots of recognition of "Excellent Performances in Industry-Academia Cooperation" evaluated and selected by the Chinese Institute of Engineers. The gap between school education and the employment among industries is effectively shortened, realizing the educational goals in connecting industries and education. Commonwealth Magazine announced in the "2024 USR University Citizens" survey that Ming Chi ranked number one among private technological universities nationwide. According to the 2024 Global Views Monthly university ranking, Ming Chi ranked third among technology universities nationwide and first among private technology universities in the technology category of comprehensive universities. The Ming Chi alumni of the past years have received positive affirmation from the academic, industries, and business fields. In addition, to continue the founder's spirit of caring the financially/ physically challenged, Ming Chi has facilitated the contribution of scholarships by alumni, accumulating donations totaling NTD 150 million to date.

Beginning from the academic year 2004, Ming Chi started to recruit aboriginal students in the four-year college in order to extend our concerns for the aboriginal students. Ming Chi has funded the aboriginal students up to NTD 408 million. This program has gained much appreciation from the aborigines and acclamation from the public in the society. Moreover, in coordination with the needs in lifetime learning and returning education for



2024 Commencement Ceremony of Ming Chi University of Technology

technical training, Ming Chi provides employee training for enterprises as well as career guidance for young adults. Meanwhile, in order to satisfy the needs of the alumni and members of the society in continuing education, the Division of Continuing Education was established. This Division has offered in-service master program. In 2016, Dual Award Master's Degree Program was offered between Ming Chi and University of Cincinnati. Further in 2017, Ming Chi together with National Taiwan University of Science and Technology set up dual award Ph.D.'s degree program. In 2019, Dual Award Master's Degree Program was offered between Ming Chi and Northern Illinois University. Ming Chi has signed 152 sister school partnership agreements with overseas schools striving toward a goal of globalization.

After the institute was upgraded to the university level, in addition to the usual devotion in the maintenance of the existing educational beliefs and practice, Ming Chi also focuses on "Industry-Academia Cooperation." Since 2007, Ming Chi has frequently been awarded the title of Outstanding Unit for Industry-Academia Cooperation" by the Chinese Institute of Engineers in their biennial selection of units for industry-academia cooperation. Nine professors from Ming Chi are on the list of the "World' s Top 2% Scientists 2023," released by Stanford University in 2024. According to the 2024 statistics released by the National Science and Technology Council (NSTC), Ming Chi has ranked number four nationwide, and number one among private technology universities in the category of the average amount of funding per project director. MOE also announced in 2024 that Ming Chi ranked number one in both technological universities nationwide and private technological universities and colleges in the average amount of conducting public and private industry-academia cooperation projects per project holder. These honors demonstrate the fruitful results of developing collaborative relationships with industry partners. In recent years, by means of continuously integrating the resources of various colleges, ten research centers have been established: the Biochemical Engineering R&D Center, the Center for Plasma and Thin Film Technologies, the Chinese Herbal Medicine Center, the Battery Research Center of Green Energy, Organic Electronics Research Center, Center for Reliability Engineering, Research Center for Intelligent Medical Devices, Artificial Intelligence and Data

Science Research Center, Center for Environmental Sustainability and Human Health, and Intelligent Vehicle R&D Center. By partnering with industry, the university has established two pilot production factories and two collaborative research centers, evolving into a technology university driven by industryacademia R&D.The faculty and students are always encouraged to participate in practical researches and to provide industry-academia services for enterprises. With the development of internship opportunities, the industry-academia cooperation relations are actively being built. Utilizing the resources of intern students, guidance teachers, specific research centers, the Industry-Academia Cooperation Center, and the Innovation and Incubation Center, we are able to achieve close cooperation with the industries and improve the research quality and quantity, and further contribute the research findings to the industries. While the education purposes as well as the advancement of technological force in the industries are achieved, a win-win situation is also created.

Education is the foundation of a nation and its importance is hardly surmountable. Ming Chi looks for "perfection" in every aspect including school administration, research, industry cooperation, and cultivation of students' integrity. We seek the best for everything we do, and pursue self-improvement at all the times. We hope to continue nurturing professionals with sound personality to work with the need of industrial economic development, and fulfill the university social responsibility. We aim to set a new model for the vocational education in Taiwan.



Students conducting battery diagnostics in the EV Lab.

Non-Profit Organization—Education

Ming Chi University of Technology

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