



University : National Chin-Yi University of Technology
Country : Taiwan
Web Address : www.ncut.edu.tw

[SDGs 17] Partnership for the Goals 全球夥伴

[17.2.5] Does your university as a body collaborate with NGOs to tackle the SDGs through:

National Chin-Yi University of Technology (NCUT) actively partners with **non-governmental organizations (NGOs)** to implement and promote solutions aligned with the **United Nations Sustainable Development Goals (SDGs)**. These partnerships focus on leveraging academic knowledge, community engagement, and NGO expertise to address pressing challenges in environmental sustainability, social responsibility, and economic growth.

Environmental Conservation and Carbon Reduction

- **NGO Partnership:** NCUT works closely with the **ESG Sustainable Development Association** and **Bell International Inspection and Certification Group** to guide companies through carbon reduction processes.
- **Activities:** Through the **Carbon Neutral Center**, NCUT provides **carbon inventory services** to companies and coordinates with NGOs to facilitate **carbon audits, environmental training, and awareness campaigns**.
- **Impact:** The collaboration ensures industries receive **third-party validation and verification** to align with carbon reduction standards, contributing to Taiwan's **2050 net-zero goals**.

Lecture Sharing Air Compression Utility System Planning and Energy Saving Design

Chiu Chunmao, an industrial master's degree graduate from the NCUT Department of Engineering, currently serves as the general manager of Neoair Company and holds a supervisory role at the An Yashen Industrial Association. He shed light on Neoair Company's trajectory, which began in 1991, primarily focusing on the distribution of renowned American brand INGERSOLL-RAND (IR) air compressors. The company also offers cutting-edge Double-stage screw air compressors (with a maximum horsepower of 700HP) and centrifuges (exceeding 400HP), boasting energy-saving and carbon-reducing benefits. With a solid reputation built over 33 years, Neoair's high-performance products and significant market share resemble the "Double Bs" in the automotive industry. Recognized and valued by customers in Shenzhen, Neoair embarked on a net-zero transformation last year, earning the prestigious title of a 2023 Onward 80 forward-looking member. This accolade positions Neoair as a model company with considerable potential in domestic air compressor agency sales.



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Chiu Chunmao recently had the honor of delivering a lecture at the "Naruto Hall" of the TanYashen Workers' Association on March 1st. The lecture, titled "Planning and Energy-saving Design of Air Compressed Utility Systems," aimed to impart new knowledge to participants. Particularly, it addressed the significant electricity consumption in industries, primarily attributed to air conditioners and air compressors. The lecture focused on strategies to mitigate electricity usage, promote energy efficiency, and reduce carbon emissions, which are pressing concerns for enterprises today.

Chiu Chunmao highlighted the esteemed history and global recognition of the renowned American brand, INGERSOLL-RAND (IR) air compressors, established in 1871 as a listed company with a remarkable 150-year legacy. Currently, Neoair proudly serves as the nationwide agent for IR air compressors in Taiwan, a testament to their widespread popularity and presence worldwide. The ubiquity of the IR brand is undeniable, resonating with consumers across various countries.

In recent years, Neoair's dedication to excellence has been duly recognized through prestigious accolades such as the Taiwan Excellent Trademark Award, Taiwan Excellent Products and Consumer Satisfaction Gold Award, and the Golden Hand Award. These achievements underscore Neoair's commitment to establishing a distinguished brand identity, exemplified by the Xuanxin Air Compressor (NEO-AIR).

With extensive experience in the installation and maintenance of air compressors, dryers, filtration systems, and piping systems, Neoair has earned the trust of Taiwan's leading manufacturers and listed companies. Notable clients include industry giants such as TSMC, HIWIN, NVIDIA, SPIL, Metro Taipei, Formosa Plastics Group, FATC, Chang Chun Group, CHIMEI, CATCHER TECHNOLOGY, CHENG LOONG, Cannon Taichung, and Powerchip Semiconductor Manufacturing Corporation. These partnerships span high-tech semiconductor, electronics, and petrochemical industries, reflecting Neoair's commitment to delivering exceptional sales and service standards, certified by ISO 9001.

Neoair serves as the agent for the esteemed global brand, INGERSOLL-RAND, specializing in Ingersoll Rand air compressors. Through this partnership, Neoair offers manufacturers comprehensive solutions, including the design and planning of air compressor systems and assistance in implementing "energy-saving and carbon reduction plans." These initiatives aim to effectively reduce energy consumption and greenhouse gas emissions. Moreover, Neoair provides valuable aerodynamic system information free of charge to industries for reference.

In addition to its product offerings, Neoair frequently organizes project seminars aimed at addressing industry challenges and enhancing productivity. Notably, Neoair conducted a briefing session at Lihpao Land in Taichung City in 2019, bringing together stakeholders from the Industrial Research Institute, petrochemical industry, pharmaceutical factories, electronics factories, chemical factories,



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and engineering communities. These gatherings foster collaboration and facilitate problem-solving initiatives among manufacturers.

Chiu, Chunmao emphasized Neoair's commitment to digital transformation, positioning the company as a trailblazer in Taiwan. Neoair introduced innovative solutions such as the air compressor services mobile management system app and Line notifications and push messages. These tools not only boost efficiency but also promote energy conservation, reduce environmental pollution, and lower labor costs. By embracing digital transformation, Neoair aims to instill a new perspective on energy conservation and carbon reduction while enhancing company management and service efficiency.

In light of the global demand for energy and the imperative to develop green energy technologies, Neoair emerges as the ideal partner for companies striving to achieve net-zero carbon emissions. Through its comprehensive solutions and commitment to innovation, Neoair stands poised to lead the way in promoting energy efficiency and sustainability.





Research and development of smart toilet devices won gold medal at iENA International Exhibition

Shiao, Yuchen, a 23-year-old student from Yilan County, is currently pursuing his master's degree in the Department of Electrical Engineering at NCUT. Alongside his peers, Shiao, Yuchen formed a laboratory team dedicated to developing a smart detection device designed to be installed in home toilets for rapid urine status detection. What sets their invention apart is its ability to provide results within a day, unlike traditional hospital tests which typically take longer.

Their innovative project gained recognition on an international scale when they represented their country at the esteemed "iENA International Invention Exhibition" in Nuremberg, Germany. This exhibition, renowned for its long-standing history and reputation for fair evaluation, provided the perfect platform for showcasing their work. Under the guidance of Wu Jianxing, an associate professor in the NCUT Department of Electrical Engineering, graduate students Shiao, Yuchen, Liu, Youci, and Shiao Hanxuan developed the "smart toilet detection device" with the aim of swiftly detecting and providing crucial disease distribution information globally. Their efforts culminated in winning the gold medal at the competition in October 2023.

Shiao, Yuchen's journey in innovation extends beyond his recent success at the iENA competition. In 2022, he participated and secured a bronze medal with his team's creation, the "intelligent electric vehicle system," tailored for patients with neurodegenerative diseases. However, Xiao's achievements reached new heights in the latest competition, earning him accolades at a local level.

Today, on the 18th, Shiao, Yuchen returned to his hometown to receive praise from Lin Zimiao, the county magistrate. Reflecting on his motivation, Xiao shared insights gained from hospital settings where urine testing posed challenges due to cumbersome procedures and time delays. Drawing from these observations, his team embarked on developing a portable detection device designed to simplify and expedite urine analysis. The device can be easily attached to home toilets, enabling testing to commence when the patient urinates. Currently, results are obtainable within 3 to 4 hours, with plans to further shorten this to 1 to 2 hours in the future.

Xiao elaborated on the device's functioning, explaining its utilization of an optical fiber detection rod to project optical fibers and spectra of specific wavelengths. This process aids in discerning vital urine information, including the presence of hematuria, hydration levels, and indications of diabetes.

Throughout the development journey, the team encountered challenges, particularly in ensuring the device's compatibility with existing toilet operations. However, their perseverance paid off, culminating in both technical success and recognition. Xiao expressed his hope that the device's

ability to accelerate urine testing will not only enhance long-term care but also propel advancements in preventive medicine.



NCUT's partnerships with NGOs enable the university to **accelerate the achievement of the SDGs** by combining **academic expertise, community engagement, and non-governmental resources**. Whether focusing on **carbon reduction, waste management, water conservation, or community development**, these collaborations provide a **comprehensive approach to sustainability**. NCUT's work with NGOs also ensures that **students, industries, and local communities** benefit from **practical knowledge and global best practices**, positioning the university as a key contributor to **sustainable development in Taiwan and beyond**.