



Central Taiwan Science Park Bureau ,
National Science and Technology Council

Central Taiwan
Science Park Bureau
Voluntary Department Reviews

2023



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A Message from the Director-General

This year, the Central Taiwan Science Park (CTSP) Bureau compiled the "Sustainable Development Goals Voluntary Department Reviews" (VDR) for the first time, showing its commitment, efforts and achievements in environmental sustainability, social contribution and sustainable governance. We sincerely thank everyone for their support and affirmation, which have enabled CTSP to make significant progress on the road of sustainable development.

The most important task of CTSP is to actively promote investment and employment in high-tech industries, which has achieved brilliant results. For example, by the end of 2023, there were 241 effectively approved manufacturers, with a total investment of over NT\$ 2.42 trillion, nearly 55,000 employees, and the turnover exceeded trillion dollars in recent years. And continue to expand the high-tech industrial settlements in central Taiwan through the "Taichung Expansion Phase II Plan"; CTSP has also continuously improved the professional talents and promoted the technological upgrading of high-value industries by handling the Talent Cultivation Plan of Science Park, the Plan of Accelerating Industrial Intelligence Upgrade and Digital Optimization, and the Plan of Cross-domain Promotion of Precision Health Industry.

In creating a safe, healthy, and happy workplace environment, CTSP promotes the use of smart technology to improve occupational safety protection and labor health care, creating a safe and healthy workplace environment for workers. "On-site Earthquake Early Warning System" has also been built in five CTSP parks to enhance the earthquake disaster and emergency response capability of the parks. In addition, we will continue to improve the quality of childcare and oversee the construction of expanded departments and additional classes at CTSP Experimental Middle School, building and improving the educational resources in the park. These efforts actively create a secure workplace where employees can find jobs with peace of mind, demonstrating the commitment of CTSP to the well-being of its employees and the greater society.

In promoting the co-prosperity of science and technology and the environment, CTSP continues to move towards a circular economy, with a waste recycling rate reaching 96.1% by the end of 2023. The first resource recycling (utilization) center in Taichung Park will be operational soon, boasting an annual capacity of 140,000 tons of industrial waste and reducing carbon emissions by about 40,000 tons annually. We've also actively promoted

solar green electricity installation, exceeding 59 MW of cumulative capacity and achieving an annual carbon reduction of about 38,000 metric tons by the end of 2023. Additionally, CTSP promotes renewable energy measures like reclaimed water and energy storage systems. The Shuiling Reclaimed Water Project is expected to supply water before the end of 2024, establishing a multi-water supply system within the park. Furthermore, sewage treatment plants in Taichung, Huwei, and Houli Park have all obtained environmental education facility certification from the Ministry of Environment, demonstrating our commitment to environmental protection and education.

We hope this report provides a deeper understanding of our efforts and achievements for those who care about and support Central Taiwan Science Park. We also extend our gratitude to all partners and colleagues within the park for their hard work in realizing a sustainable CTSP. We will follow the scientific and technological vision of the National Science and Technology Council (NSTC) for "2035 to be forward-looking, innovative, democratic, inclusive, resilient, and sustainable," and continue building an innovative and sustainable park that embodies "diversity, excellent life, energy conservation, and sustainability."

Director

許茂新



Summary highlights

The purpose of Central Taiwan Science Park (CTSP) is to create a high-quality investment environment to attract domestic and foreign manufacturers and promote the development of high-tech industries in central Taiwan by building complete software and hardware infrastructure. Central Taiwan Science Park Bureau (CTSP Bureau) is committed to promoting sustainable development alongside the nation. Aligned with the goals of Taiwan's Sustainable Development Goals (T-SDGs), CTSP Bureau has completed a blueprint for CTSP's sustainable development, focusing on "innovation orientation," "sustainable park," and "social integration" as its core objectives.

CTSP conducts self-assessments (Voluntary Department Reviews) on its contribution to the T-SDGs. The environmental safety team leads the overall planning, while a sustainable team handles the ongoing editorial tasks. These efforts ensure a comprehensive review of how each unit's activities correlate with the T-SDGs. Through this process, CTSP Bureau has demonstrably contributed to economic growth (Goals 4 & 8), cross-regional cooperation (Goal 17), environmental management (Goals 6, 7, 12 & 13), social responsibility (Goals 5 & 8), and park construction (Goals 9 & 11) to T-SDGs.

This report follows the Guidelines for the Writing of Voluntary Inspection Reports of the Ministry, and takes CTSP Bureau's Blueprint for Sustainable Development, Organizational Structure and Promotion Mechanism, Major Core Goals and Promotion Results and Future Outlook as the writing framework, and explains the contents and achievements of business implementation in combination with the sustainable vision, governance axis and 16 promotion measures, and systematically presents CTSP's response to the sustainable development goals (T-SDGs) in Taiwan.

Vision	Major core targets of T-SDGs	Core goals related to promotion measures
<p>Innovation orientation</p>	<ul style="list-style-type: none">  Ensure comprehensive, fair and high-quality education and advocate lifelong learning.  Promote inclusive and sustainable economic growth, enhance labor productivity, and ensure that all people enjoy quality employment opportunities. 	<ul style="list-style-type: none"> Promote high-tech investment and local employment Continuously improve the quantity and ability of professional talents Promote technological upgrading of high-value industries.

Vision	Major core targets of T-SDGs	Core goals related to promotion measures
<p>Inno- vation orien- tation</p>	<p> Establish multiple partnerships and work together to promote a sustainable vision.</p>	<ul style="list-style-type: none"> ● Encourage R&D and innovation and cultivate new teams ● Connect production, government, academic and research resources in series ● Industrial exchange and international connection
<p>Sustain- able Park</p>	<p> Ensure environmental quality and sustainable management of environmental resources.</p> <p> Ensure that everyone can enjoy affordable, stable, sustainable and modern energy.</p> <p> Promote green economy and ensure sustainable consumption and production mode.</p> <p> Complete mitigation and adaptation actions to cope with climate change and its impact.</p>	<ul style="list-style-type: none"> ● Environmental pollution risk management ● Intensive utilization of water resources ● Resource circulation and perfect waste treatment ● Stabilize park power supply ● Applying intelligent system to improve the adaptability of the park ● Greenhouse gas management
<p>Social integra- tion</p>	<p> Achieve gender equality and the empowerment of all women.</p> <p> Promote inclusive and sustainable economic growth, enhance labor productivity, and ensure that all people enjoy quality employment opportunities.</p> <p> Construct affordable, safe, environmentally friendly, resilient and sustainable transportation.</p> <p> Construct cities and villages with inclusive, safe, resilient and sustainable characteristics.</p>	<ul style="list-style-type: none"> ● Create a safe, healthy and happy workplace environment ● Convenient and intelligent service ● Create a healthy Lohas CTSP ● Environmental and ecological sustainability

Performance of sustainable management in 2022 -2023



100% compliance	Environmental protection businesses were 100% in compliance with total volume caps and stricter environmental impact assessment commitments from 2022 to 2023.
2,539 sessions	Provided environmental protection business consulting services 2,539 sessions, implement Single-window service from 2022 to 2023.
11,985,640M³	As of 2023, we provided water conservation guidance to 48 manufacturers, with a total water-saving potential of 11,985,640 M ³ , which can reduce 1,869.76 metric tons of CO ₂ e for the year.
96.1%	In line with the government's circular economy policy in 2023, we continued to promote the recycling rate of industrial waste in the Science Park to reach 96.1%, which is better than the national recycling rate of industrial waste 86.48%.
5,507 projects	Carry out 5,507 environmental monitoring projects from 2022 to 2023, and continuously supervise and understand the environmental conditions of the park.
27 sessions	A total of 27 sessions held for EIA tracking and supervision meetings or on-site inspections from 2022 to 2023. The participation of citizens accounted for 60% and the environmental information was open and transparent.
112 metric tons	The total number of passengers on the CTSP Park Tour Bus and the Huwei Park feeder bus reached 184,796, which was equivalent to a reduction of 112 metric tons of CO ₂ e from 2022 to 2023.
3,249 participants	A Number of 112 environmental education activities held in Taichung, Huwei and Houli Park Wastewater Treatment Plants with a total of 3,249 people participation from 2022 to 2023. The implementation of environmental education has taken root.
59MW	As of 2023, the cumulative solar power generation capacity of the Park has exceeded 59 MW.
91.9%	The recovery rate of process water for semiconductor and photoelectric industries in the park has reached 91.4% in 2022. The recovery rate of process water for semiconductor and photoelectric industries in the park has reached 91.9% in 2023.



Social Performance

<p>88.14 score</p>	<p>CTSP Bureau pays attention to the needs of manufacturers, actively solves the problems reflected, and continuously improves the service quality of manufacturers. In 2022 and 2023 , the overall satisfaction score of manufacturers was 86.53 and 88.14, the highest among the three parks.</p>
<p>1,336 sessions</p>	<p>A total of 18 special inspection programs and 1,336 labor supervision and inspection sessions were implemented under the labor supervision and inspection program from 2022 to 2023.</p>
<p>360 sessions</p>	<p>As of 2023, a total of 360 health check-ups in Houli Park were held with a total of 8,312 participants in Telephone interviews and subsidized 6,204 participants' health check-ups, in order to implement a good neighbor program.</p>
<p>23,314 participants</p>	<p>Set up staff clinic in CTSP, with a total of 23,314 outpatient visits from 2022 to 2023.</p>
<p>185 manufacturers</p>	<p>In order to strengthen and implement relevant human rights issues, four seminars were held from 2022 to 2023, and about 185 manufacturers participated.</p>
<p>2,400 participants</p>	<p>Carried out epidemiological follow-up investigations in Houli Park, and cumulatively completed questionnaires and blood biochemical tests for 2,400 participants until 2023 (once every 5 years), continuing to track health changes in the residents.</p>
<p>4,631 participants</p>	<p>As of 2023, 4,631 person-sessions were engaged in various industry-university cooperation plans, talent cultivation plans, talent training and training of master's and doctoral talents and talents needed by the industry. (Emerging technology application plan: 223 person-sessions, talent cultivation plan: 1,376 person-sessions, talent training plan: 1,876 person-sessions, CTSP precision health industry cross-domain promotion plan: 464 person-sessions, accelerated industrial intelligence upgrade and digital optimization plan: 692 person-sessions).</p>
<p>96 teams</p>	<p>From 2022 to 2023, 96 teams of "From IP to IPO (FITI)" were coached, among which 5 teams won the Outstanding Entrepreneurial Award, 10 teams won the Entrepreneurial Potential Award, and 16 new companies were introduced to CTSP.</p>



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Social Performance

53 tasks	In order to strengthen the importance of water environment protection, cooperate with Yunlin County Environmental Protection Bureau to join the water environment patrol team and effectively grasp the changing trend of river water quality and quantity, 53 patrol missions were carried out in 2022 and 2023 respectively, and no abnormal situation was found.
100%	The progress of the first phase of the standard factory building in Huwei Park is 100%, which was completed on February 2, 2023 and obtained the use license.



Managing Performance

+8.3%	The export value was approximately NT\$9,180.33 billion in 2022 and the export value was approximately NT\$4,992.64 billion in 2023, an increase of 8.3% from 2022.
4,300 jobs	From 2022 to 2023, we handled 4 joint recruitment activities and 109 recruitment activities by a single manufacturer, releasing about 4,300 job vacancies.
+3.88%	The number of employees reached 55,295 in 2022 and the number of employees reached 54,940 in 2023, an increase of 3.88% from 2021.
27 sessions	We held a total of 27 investment promotion briefing sessions from 2022 to 2023.
241 manufacturers	As of 2023, we introduced a total of 241 manufacturers.

Managing Performance

NT\$ **15,953.2**
million

- In 2022-2023, the "Emerging Technology Application Program" approved 11 R&D programs, which led manufacturers to invest NT\$ 57.33 million in R&D.
- In 2022-2023, CTSP Cross-domain Promotion Plan for Accurate Health approved 11 cases of medical cooperation in Industry-University-Research and 1 case of market expansion, which led manufacturers to invest NT\$ 58.739 million in R&D.
- In 2022-2023, the "Plan for Accelerating Industrial Intelligence Upgrade and Digital Optimization" approved and subsidized 8 cooperative development cases in Industry-University-Research, which led manufacturers to invest NT\$ 43.463 million in R&D.

1,376
participants

In 2022-2023, the Science Park Talent Cultivation Grant Program approved 25 module courses and enterprise internship courses, with a total subsidy amount of NT\$ 16 million and a total of 1,376 participants trained.

Excellent

In 2022-2023, the Ministry of Interior's business assessment plan for building construction management was awarded as excellent, which included the commencement audit of building construction management (including construction plan), construction inspection, construction penalty for violating building laws and regulations, issuance of use license and inspection of the current situation of the park site.

Blueprint for sustainable development

1. Vision (Purpose of Establishment)

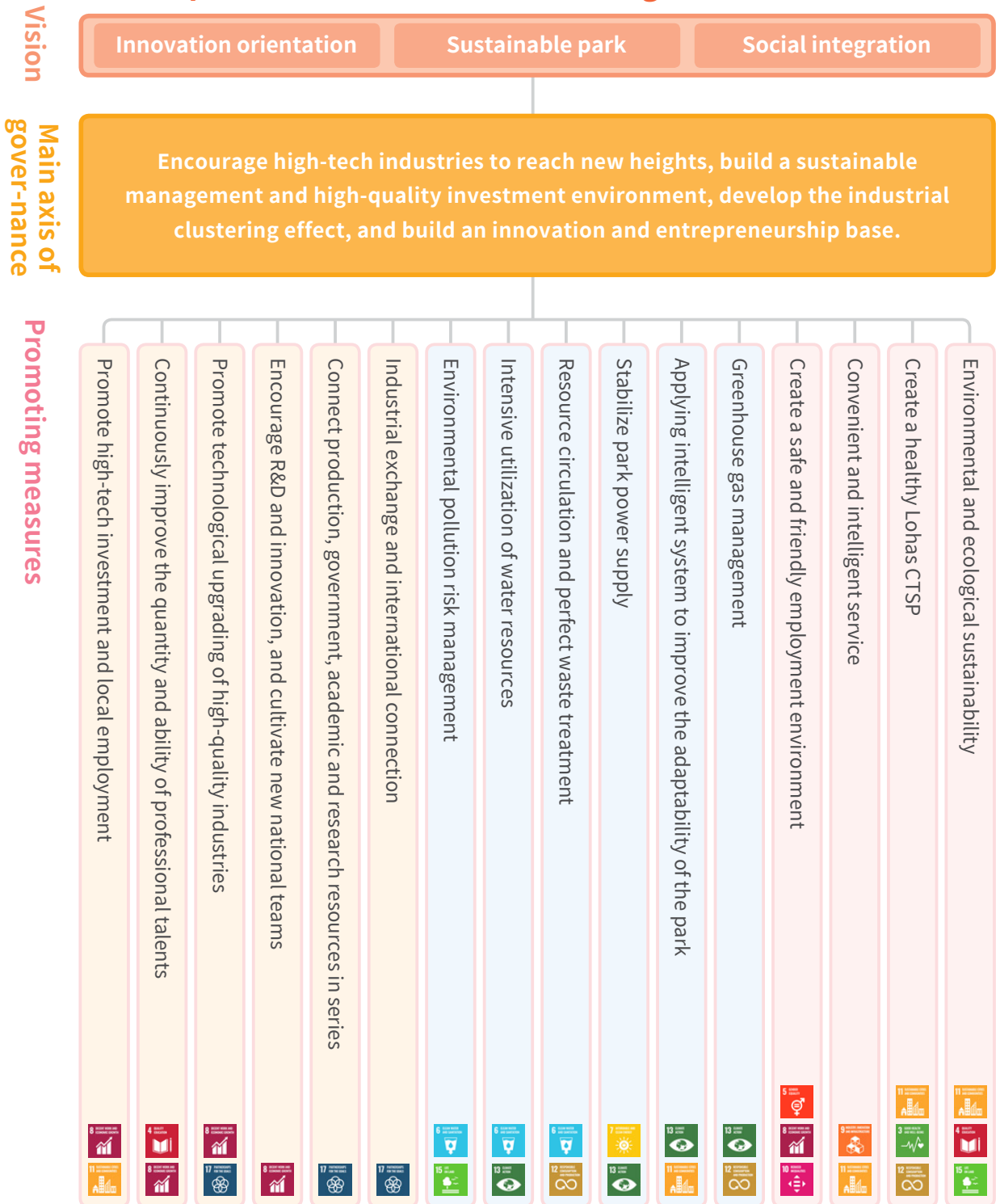
The purpose of the establishment of the Science Park is to provide an excellent industrial development environment, introduce advanced technology industries and scientific and technical talents, give play to the industrial clustering effect, and promote the rapid transformation and upgrading of the domestic industrial structure. CTSP Bureau takes "promoting the industrial upgrading in the central region and promoting the balanced development of the region" as its mission, and at the same time, it is committed to considering the sustainable environment, making great efforts to promote the balanced development of all aspects of society, and to interact with local governments for mutual prosperity and win-win, and taking "innovation orientation," "sustainable park," and "social integration" as our mission " to achieve the highest goal of our efforts, CTSP will become the most competitive science park in the world.

2. Major Core Objectives

CTSP Bureau's core contribution to Taiwan's Sustainable Development Goals (T-SDGs) lies in promoting economic development, environmental management, urban and rural development, and cross-regional cooperation. To build a sustainable green park, CTSP Bureau is committed to balancing economic development and environmental sustainability. This is achieved through continuous improvement of the industrial investment environment, job creation, and promotion of environmental and ecological maintenance. These efforts will foster a high-quality work environment and strengthen CTSP's connection to the local community. Furthermore, CTSP Bureau will utilize green technology to drive the circular economy, guide manufacturers towards continuous development of energy-saving and carbon-reduction initiatives, and establish a sustainable and innovative smart park. CTSP Bureau's main core objectives align with T-SDGs 6, 12, and 13, with secondary contributions to goals 4, 5, 7, 8, 9, 11, and 17.

3. Sixteen Promotion Measures

The link between vision, governance axis, promotion measures and core goals of T-SDGs

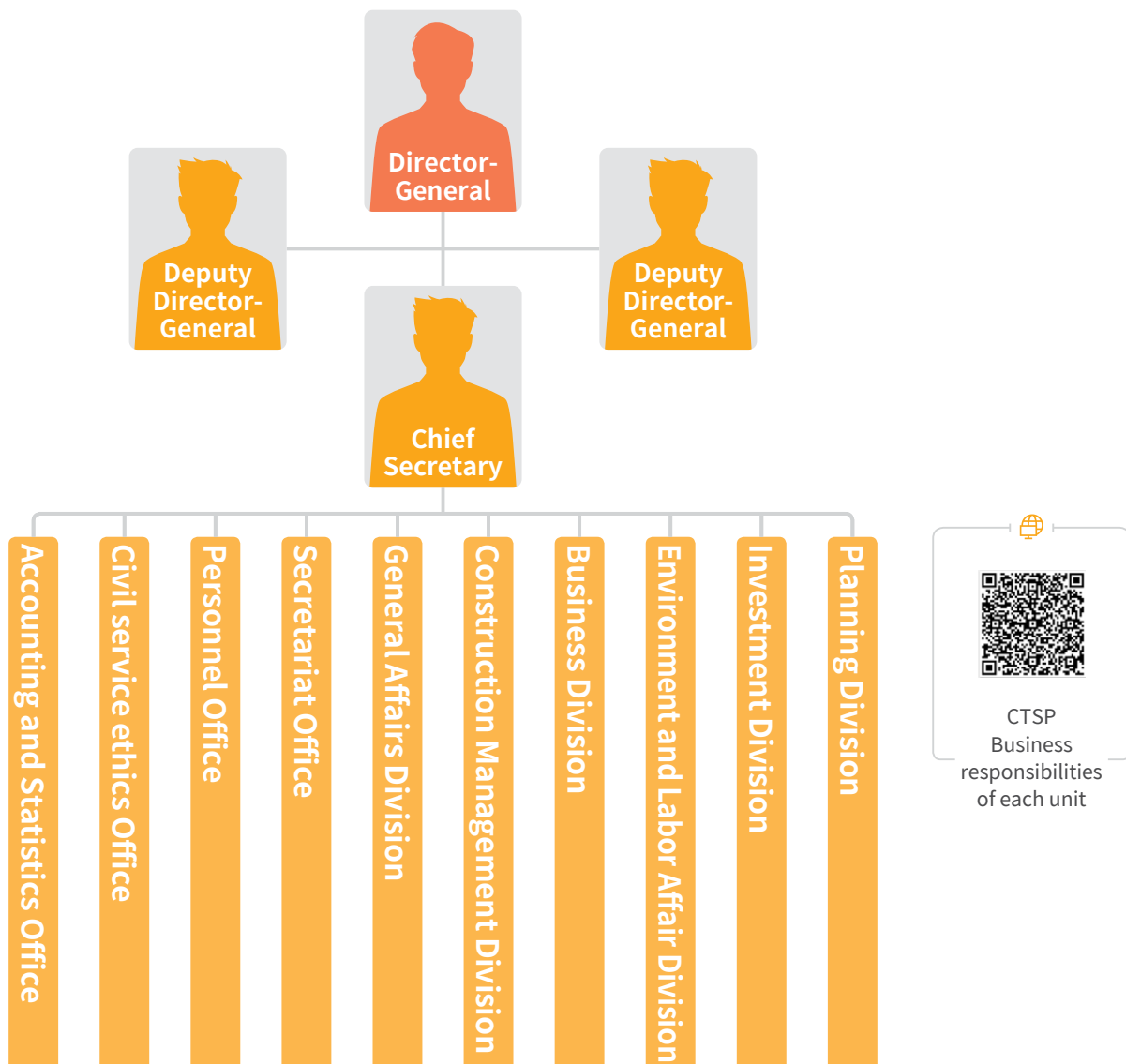


Organizational structure and promotion mechanism

1. Organizational structure and membership

According to the Organic Law of the NSTCCTSP Bureau and business requirements, the Bureau has set up 6 divisions and 4 offices. In particular, it has formulated and announced the service items in accordance with the spirit of the "Government Service Innovation and Improvement Plan" issued by the Executive Yuan, so as to enhance the overall service efficiency of the Bureau and the satisfaction of the park manufacturers, create a good research and development environment, nurture outstanding talents, and strive to create a new niche in the technology industry.

Organizational Diagram





Business responsibilities of each unit

Planning Division

Service description

1. Planning and promotion of park development policies, strategies and related measures.
2. Development of CTSP Bureau's annual policy plan.
3. Management of important administrative plans and project plans.
4. Management, supervision, coordination and liaison of the parks under its jurisdiction.
5. Preparation and consolidation of budget estimates for public service and operating funds.
6. Operating fund financial planning, analysis, audit and fund scheduling.
7. Business coordination of experimental middle schools in the park.
8. Regulations, contracts, litigation, legal advice and other legal matters.
9. Other relevant planning matters.

Investment Division

Service description

1. Consultation, answer, review, operation guidance and services for the establishment of park enterprises.
2. Study and analysis of the investment strategy and the formulation of investment laws and regulations in the park.
3. Introduction and management of innovative breeding centers and research institutions.
4. Promotion of industrial innovation and entrepreneurial development in the park.
5. Draft plans for attracting investment at home and abroad and introducing industries into the park.
6. Promoting the innovation and development of scientific and technological research in the park.
7. Training of scientific and technical personnel and acquisition and adjustment of human resources in the park.
8. International cooperation in the park, domestic and international guest reception, image promotion and marketing promotion.
9. Examination of the norms for professionals to enter the park for communication.
10. Other relevant investment matters.



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Environment and Labor Affairs Division

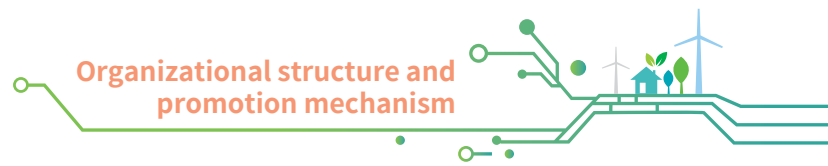
Service description

1. Consultation, publicity and coordination of labor disputes in the park's labor laws and gender equality work laws.
2. Counseling by labor organizations and labor associations in the park, and planning and promotion of cultural, recreational and recreational activities for workers.
3. Staff welfare counseling and labor employment promotion and counseling.
4. National defense reserve training, suspending the recruitment and business coordination of industrial and commercial groups.
5. Planning and coordination of safety protection system, police security, disaster prevention and emergency response in the park.
6. Coordination of civil defense business in the park.
7. Review and management of applications for environmental protection permits of park enterprises.
8. Planning and promotion of environmental protection business in the park.
9. Occupation safety and health management and labor inspection.
10. Other matters related to labor and environmental protection.

Business Division

Service description

1. Planning and implementation of industrial and commercial registration (including company registration, factory registration and movable property secured transaction registration) of park manufacturers.
2. Review and guidance management of the entry of industrial and commercial services into the zone.
3. Promotion and implementation of industrial and commercial administrative business (including the issuance of tax exemption certificates for enterprises in the park, operation investigation and review of final accounts) and the formulation of laws and regulations.
4. Licensing and management of hiring foreign specialized or technical personnel.
5. Trade, bonded and park business management fee collection laws and regulations.
6. Planning and implementation of business related to trade, issuance of certificates of origin, import and export visas for goods, and bonded business management fees in the park.
7. Planning and integration of the business aspects of the customs clearance system in the park.
8. Management of warehousing and logistics business in the park.
9. Other relevant industrial and commercial matters.



Construction Management Division

Service description

1. Construction and maintenance of public works, park green space, flood detention pond and landscape facilities in the park.
2. Construction and maintenance of standard factories, dormitory and other public buildings in the park.
3. Coordination of water supply and demand in the park and the promotion of water conservation policies.
4. Coordination of power supply and demand in the park, safety guidance and issuance of registration licenses for electrical technicians.
5. Construction of sewage treatment plants and discharge pipes.
6. Review of water and electricity use plans of park manufacturers.
7. Park road excavation permit issued.
8. Construction and maintenance of soil and water conservation facilities.
9. Other related construction matters.

General Affairs Division

Service description

1. Establishment of the Park, substantive planning, and formulation and review of relevant plans.
2. Review and change of urban plan of the park, review and change of non-urban land, urban design review, land use control and building management.
3. Acquisition of land in the park.
4. Management and income of public property.
5. Rental and sale of factories, houses and other related buildings.
6. Traffic planning and management.
7. Other matters related to land planning, land administration and construction management.

Secretary Office

Service description

1. Seal keeping and management of documents and files.
2. Management of deliberation, cashier, finance, repair, procurement and other affairs.
3. Management of real estate, such as the general office, official business and head quarters of the Bureau.
4. The bureau archives, property, vehicle management.
5. Management of workers (including technicians and drivers).
6. Management of all matters that do not belong to other groups and offices.

Personnel Office	Service description
	Responsible for the personnel affairs of this bureau.
Civil service ethics Office	Service description
	Responsible for the service ethics affairs of this bureau.
Accounting and Statistics Office	Service description
	Responsible for the annual plan, accounting and statistics of the Bureau.

I Budget scale

As a public agency, the CTSP Bureau is funded by the Treasury Fund in addition to self-financing. The budget includes the funds for conducting official business of the CTSP Bureau, and the Park operating fund.

In 2022 and 2023, the final accounts of official revenue were NT\$ 16 million, and the final accounts of official revenue were NT\$ 483 million (including NT\$ 174 million in personnel expenses) and NT\$ 663 million (including NT\$ 182 million in personnel expenses) respectively; In 2022 and 2023 (excluding CTSP Experimental Middle School), the final accounts of operating fund income were NT\$ 4.938 billion and NT\$ 4.279 billion respectively, the final accounts of costs and expenses were NT\$ 3.662 billion (including NT\$ 120 million in employment expenses) and NT\$ 4.142 billion (including NT\$ 118 million in employment expenses), and the final accounts of fixed assets construction improvement and expansion plans were NT\$ 1.767 billion and NT\$ 2.029 billion respectively. In addition, the business tax paid totaled NT\$ 29 million and NT\$ 46 million respectively.

Budget scale of CTSP Bureau in 2023 (excluding CTSP Experimental Middle School)

Item	Amount
Annual final accounts (including personnel expenses final accounts, ^{Note 1})	NT\$ 663 million (NT\$ 182 million)
Final accounts of total business income	NT\$ 4.279 billion
Total business cost final accounts	NT\$ 4.142 billion
Final accounts of fixed assets construction improvement and expansion plan	NT\$ 2.029 billion

Note :

1. Personnel costs include the treatment of statutory staff, contract employees, technicians and workers, bonuses, other allowances, overtime duty fees, retirement savings and insurance.
2. All budgets and final accounts are open and transparent and announced in CTSP Bureau official website, and readers can check online by themselves.



CTSP Bureau's Budget,
Final Accounts and Monthly
Accounting Report

I Staff establishment

In 2023, CTSP Bureau had a total of 139 employees, with the Director-General appointed by the Executive Yuan to take charge of the overall affairs, two deputy Director-Generals and one chief secretary appointed by NSTC, and 37 people in management positions (no ethnic minorities or foreign employees are in charge), including 121 employees, 6 hired employees, 6 contract employees, 6 working-level personnel, and all colleagues are residents in Taiwan.

The Bureau encourages the employment of employees with physical and mental disabilities and promotes measures to create a caring and friendly workplace. In 2023, there were 5 employees with physical and mental disabilities, including staff and contract employees, with an employment rate of 3.6%, which is in line with the norms of the Law on the Protection of the Rights and Interests of People with Physical and Mental Disabilities.

CTSP Bureau is a government agency; all employees are full-time, all employees are public servants and residents in Taiwan, and there are no part-time or temporary employees. The total number of employees is shown in the following table.

Personnel Profile of CTSP Bureau in 2023

Category	Female			Male		
	Under 30	30-49	Above 49	Under 30	30-49	Above 49
Age						
Supervisor	0	2	14	0	4	17
Non-supervisor	0	33	12	1	33	5
Employee	0	2	2	0	1	1
Contract employee	0	3	3	0	0	0
Working-level personnel	0	1	2	0	1	2
Total		74			65	

Note:

1. There were no part-time employees in 2023.
2. The laborers dispatched by the labor service do not employ children to engage in heavy and dangerous work.
3. Working-level personnel: 2 workers, 3 technicians and 1 driver.

I New entry and departure

All employees have the status of public servants and are protected by the Law on the Protection of Public Servants and the Law on the Employment of Public Servants. The reason for leaving their posts is retirement, promotion or job change. If the directors and executives of various units take time off or change jobs, retire or leave their posts, they will be handled in accordance with the provisions of the Notes for Job Agents of various offices. Contracted employees are employed once a year, so the minimum notice period of the Labor-based Law is not applicable.

CTSP Bureau employs (hires) employees in accordance with the relevant laws and regulations on the appointment of public servants and the labor standards law, and no child workers (aged 15 and under 16) are employed; No child labor was employed by the outsourced workers who provided labor services, and no child labor was employed by CTSP Bureau in 2023.

Proportion of New Employees to Departed Employees in 2023

Category	Female			Male		
	Under 30	30-49	Above 49	Under 30	30-49	Above 49
Age	Under 30	30-49	Above 49	Under 30	30-49	Above 49
New employee	0	5	0	0	3	0
Total proportion	0.00%	3.60%	0.00%	0.00%	2.16%	0.00%
Departed employee	0	1	1	0	3	6
Total proportion	0.00%	0.72%	0.72%	0.00%	2.16%	4.32%

Note:

1. No part-time employees in 2023.
2. The laborers dispatched by the labor service do not employ children to engage in heavy and dangerous work.
3. The statistics of new employees and departing employees include working-level employees.

2. A Clear Distribution of Work and Responsibilities

CTSP Bureau expands the three sustainable visions of the park into 16 promotion measures. By examining the correlation between the businesses involved in the park and T-SDGs, it corresponds the business of each room to the major core goals, and is mainly responsible for handling the relevant promotion work, discussing the implementation progress of the work through meetings and official letters from time to time, and then reporting the relevant implementation results at the management review meeting.

Vision	Main axis of governance	Promoting measures	Business related unit
Innovation orientation	Encourage high-tech industries to reach new heights	Promote high-tech investment and local employment	Investment Division, Business Division, Environment and Labor Affairs Division
		Continuously improve the quantity and ability of professional talents	Investment Division
		Promote technological upgrading of high-value industries.	Investment Division
	Build an innovation and entrepreneurship base.	Encourage R&D and innovation and cultivate new teams.	Investment Division
	Develop the industrial clustering effect	Tandem production, government, academic and research resources	Investment Division
		Industrial exchange and international connection	Investment Division
Sustainable Park	Constructing sustainable management and high-quality investment environment	Environmental pollution risk management	Environment and Labor Affairs Division
		Intensive utilization of water resources	Construction Management Division
		Resource circulation and perfect waste treatment	Environment and Labor Affairs Division
		Stabilize park power supply	Construction Management Division, General Affairs Division, Secretariat Office
		Applying intelligent system to improve the adaptability of the park	Construction Management Division, Environment and Labor Affairs Division
		Greenhouse gas management	Environment and Labor Affairs Division, Construction Management Division, General Affairs Division
Social integration	Constructing sustainable management and high-quality investment environment	Create a safe, healthy and happy workplace environment	Environment and Labor Affairs Division, Planning Division
		Convenient and intelligent service	Business Division, General Affairs Division, Construction Management Division
		Create a healthy Lohas CTSP	Environment and Labor Affairs Division, General Affairs Division
		Environmental and ecological sustainability	Environment and Labor Affairs Division

3. Promote the Decision-making, Implementation and Supervision process of T-SDGs

CTSP Bureau has been committed to the sustainable development of the park for a long time, and has published five sustainability reports. This is the first time to compile the VDR report, and to summarize the business results in a systematic way, showing CTSP's contribution to the sustainable development goal of Taiwan. The main unit in charge of this report is the Environment and Labor Affairs Division. With the authorization and support of CTSP Bureau's top decision-making level (Director-General, two Deputy Directors-General and the Chief Secretary), after working out the implementation details of VDR together with the sustainable editorial team, it explained the relevant work of VDR to colleagues in all units and specifically linked T-SDGs to the normal business of the park.

The business results of each unit are compiled into the VDR report by the Environment and Labor Affairs Division and the editorial team, and the contents are also reviewed and checked by the heads of each unit, and finally printed by the Director-General for distribution, so as to ensure that the decision-making management and business execution units have the same goals and jointly achieve the sustainable development vision of CTSP Bureau. In the future, CTSP Bureau will regularly compile VDR reports to review the changes in the external environment and the achievement of self-defined tracking indicators, and continuously revise the promotion of related businesses.





Major Core Goals and Promotion Results

vision : Innovation Orientation

Main axis of governance: Encourage high-tech industries to reach new heights, build an innovation and entrepreneurship base, develop the industrial clustering effect

Core Goals 4 and 8



Ensure comprehensive, fair and high-quality education and advocate lifelong learning



Promote inclusive and sustainable economic growth, enhance labor productivity, and ensure that all people enjoy quality employment opportunities

Corresponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>4.4 Enhance the skills of young people to acquire information and communication technology (ICT), and increase the technical and vocational skills of young people to acquire related jobs.</p> <p>8.6 Implement the integration of learning and application and training measures to strengthen the employability of young people.</p>	<ul style="list-style-type: none"> In 2022, there were 12 modular courses and enterprise internship courses, and in 2023, there were 13 courses. Science and technology manpower training in the park (professional and technical personnel training program) has offered 282 hours of courses in 2022 and 300 hours of courses in 2023. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> In 2024-2025, at least 20 module courses and enterprise internship courses will be subsidized (Science Park Talent Cultivation Subsidy Scheme) From 2024 to 2025, at least 600 hours of courses will be offered in the park's scientific and technological manpower training (professional and technical personnel training program). <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> Shorten the gap in the study and employment of talents in the science and technology industry. Improve the professional knowledge and skills of employees of CTSP manufacturers. Industry and academic cooperation training course subsidy (Science Park Talent Training Grant Scheme) has at least 10 module courses and enterprise internship courses every year, so as to shorten the gap between talents in science and technology. Science and technology manpower training in the park (professional and technical personnel training program) offers at least 300 hours of courses every year to improve the professional knowledge and skills of CTSP factory employees. 	Industry-University R&D section

Corresponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>8.2 Improve the added value of industries and promote the high-value development of industries such as Internet of Things and digital economy.</p>	<ul style="list-style-type: none"> There were 18 cases in 2022, and 13 cases in 2023, respectively, to promote the cooperation between industry and academia (application of emerging technologies in science parks, accelerated industrial intelligence upgrading and digital optimization, and cross-domain promotion of CTSP precision health industry). Coaching innovation teams, there were 50 teams in 2022 and 46 teams in 2023. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> In 2024, there are 21 subsidies for promoting the cooperation project between industry and academia (emerging technology application project in science park, accelerated industrial intelligence upgrade and digital optimization project and cross-domain promotion project of CTSP precision health industry). In 2025, there will be more than 18 subsidy cases to promote the cooperation plan between industry and university. From 2024 to 2025, there will be more than 80 coaching innovation teams. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> Assist the park manufacturers to develop innovative technologies and enhance the national industrial competitiveness. We will promote at least 10 subsidies for the Industry-University Cooperation Program every year to help the park manufacturers develop innovative technologies and enhance the national industrial competitiveness. The Innovation and Entrepreneurship Incentive Plan counsels at least 30 innovation teams every year, and establishes more than 4 start-up companies to create a high-quality entrepreneurial environment and build an ecological chain of start-up industries. 	<p>Industry-University R&D section</p>

Challenges/opportunities faced

Since its establishment, CTSP has built a complete industrial settlement of semiconductors, optoelectronics, precision machinery, biotechnology, etc. However, the land in the park is limited, so the future operation scale will also enter a mature stage from a rapid growth period. In addition to encouraging existing manufacturers to invest in innovative R&D and talent cultivation, the bureau will create a new career peak, enhance the added value of products, and introduce new companies to stay in the park, so that technology can stay in the park and the development of the park can be activated with innovation.

Specific actions and promotion highlights

> **Promote high-tech investment and local employment**

Other core objectives involved

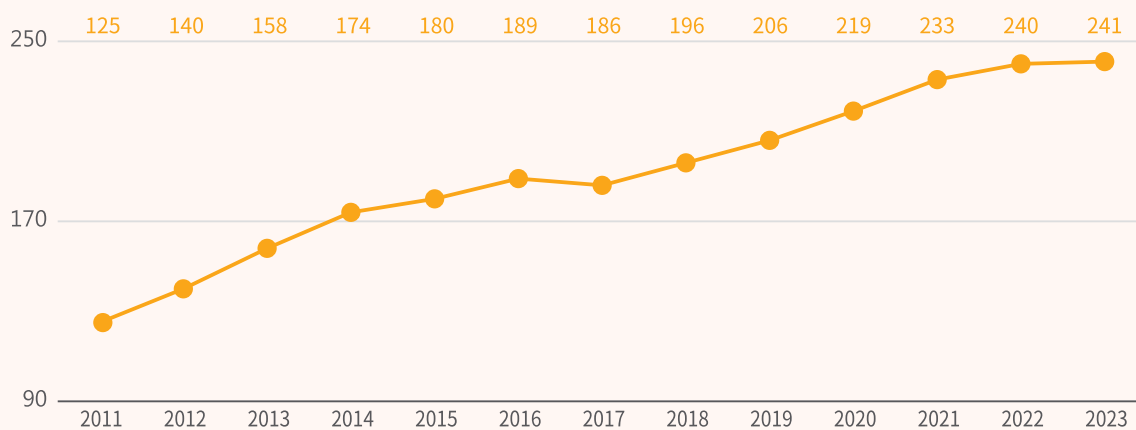


Implementation content and promotion results

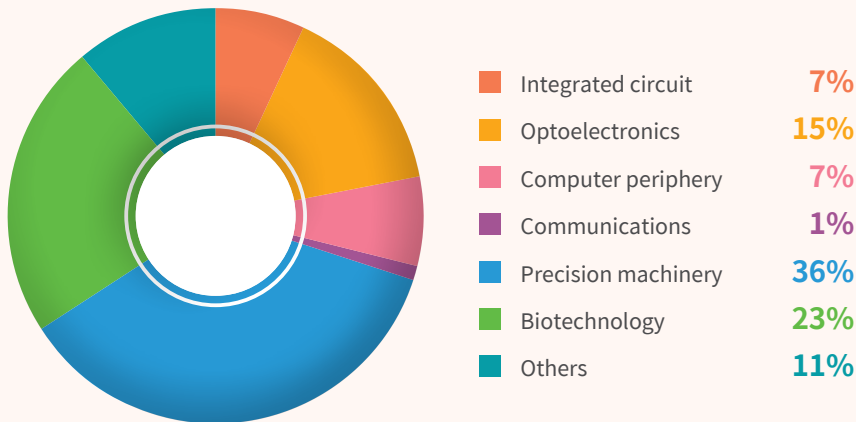
1. Overview of development

CTSP Bureau actively attracts investment. By the end of 2023, there were 241 effectively approved manufacturers, and 14 research institutions and breeding centers were introduced. According to statistics, the total investment/capital increase in 2022 and 2023 was NT\$ 166.183 billion and NT\$ 50.8603 billion respectively.

Number of approved manufacturers



Proportion of industries in 2023



Manufacturer query
Detailed manufacturer information can be found on the website

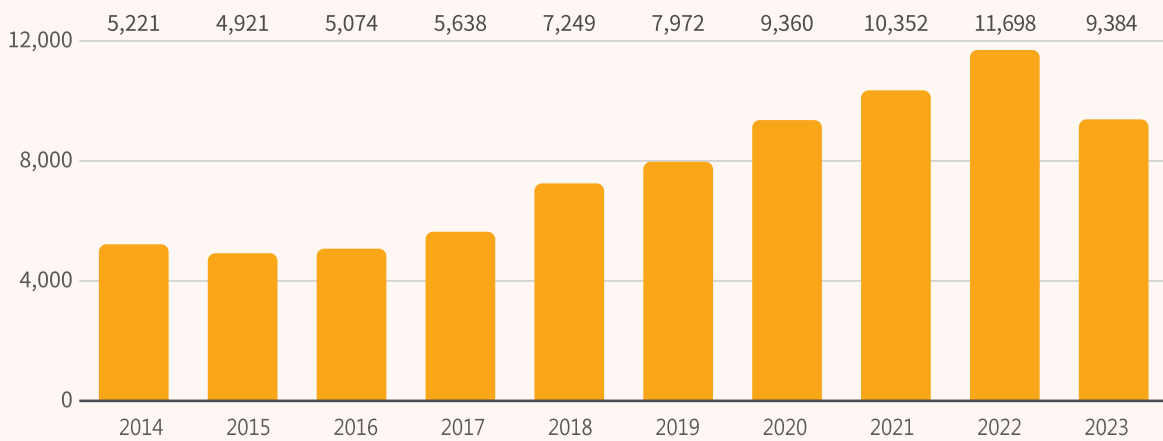
In 2023, the business turnover of the park reached NT\$ 938.396 billion, which was the third highest in the past years, with a decrease of 19.78% compared with NT\$ 1,169.811 billion in 2022, mainly due to the decline in terminal demand of the integrated circuit industry with the highest turnover.

The integrated circuit industry is affected by the global economic environment, and the demand for terminal electronic products is weak. Customers continue to adjust their inventory and adopt more advanced processes, which makes the capacity utilization rate of manufacturers decline, resulting in a 23.40% decline in turnover. However, manufacturers continue to lay out special processes and achieve differentiation through technological diversity to improve the capacity utilization rate. The photoelectric industry benefited from the reduction of global panel production capacity supply. Under the improvement of the supply and demand structure, the quotation of TV panels increased, which increased the turnover by 0.11%. In the precision machinery industry, customers are facing the pressure of destocking, and the purchase of equipment is delayed or the capital expenditure is reduced, resulting in a 7.69% decline in turnover. The biotechnology industry benefited from the gradual opening of the market for new drugs and the warming of the contact lens market, with a turnover increase of 15.12%; In addition, the beneficiary manufacturers of computer and its peripheral industries expanded their production capacity and the orders for electric bicycles in the US market increased, with a turnover growth of 21.27%.



CTSP turnover in recent 10 years

Unit: NT\$ 100 million



Turnover of various industries in recent two years

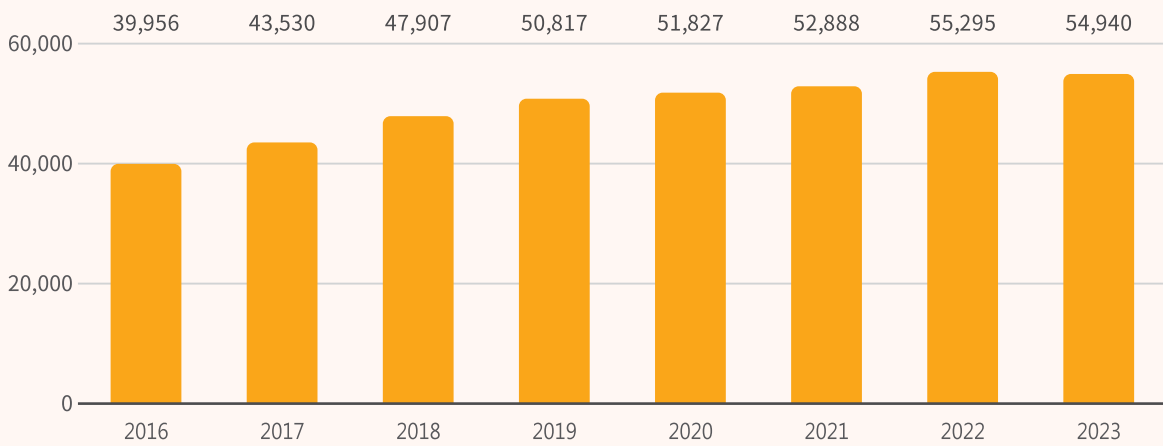
Unit: NT\$ 100 million

Industry category	2022		2023		Growth rate (%)
	Turnover	Proportion	Turnover	Proportion	
Integrated circuit	9,930.86	84.89	7,607.36	81.07	-23.40
Photoelectricity	1,233.12	10.54	1,234.52	13.15	0.11
Precision machinery	330.17	2.82	304.76	3.25	-7.69
Biotechnology	93.59	0.80	107.74	1.15	15.12
Computer periphery	69.02	0.60	83.70	0.89	21.27
Communications	6.17	0.05	5.46	0.06	-11.62
Others	35.17	0.30	40.43	0.43	14.94
Total	11,698.10	100.00	9,383.97	100.00	-19.78

2. Employment growth

With the number of CTSP manufacturers growing year by year, the number of employees in December 2022 was 55,295, and the number of employees in December 2023 reached 54,940, an increase of 3.88% compared with 2021. The semiconductor industry accounts for 44.24% of the employment in all industries, followed by the photoelectric industry with 31.17%; According to the distribution of academic qualifications, the proportion of employed people above junior college is as high as 78.77%; By gender, the ratio of male to female is 65.35% and 34.65% respectively.

Statistics of CTSP employees



Joint recruitment activities of manufacturers

4 sessions

In 2022-2023, we held a "joint recruitment activity for manufacturers" with Taichung Employment Service, with a total of 4 sessions, providing more than 4,000 jobs.



Photo taken at the recruitment event.

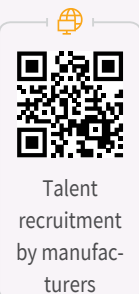
Talent recruitment activities of a manufacturer

109 sessions

Together with Yunlin-Chiayi-Tainan Reginal Branch of Workforce Development Agency of the Ministry of Labor and Taichung Employment Service, assist the manufacturers in the park to handle the recruitment activities of single manufacturers to meet the individual recruitment needs of manufacturers, with a total of 109 companies, providing more than 300 jobs.



There is an endless stream of job seekers in front of the recruitment booth of manufacturers, hoping to get suitable jobs.

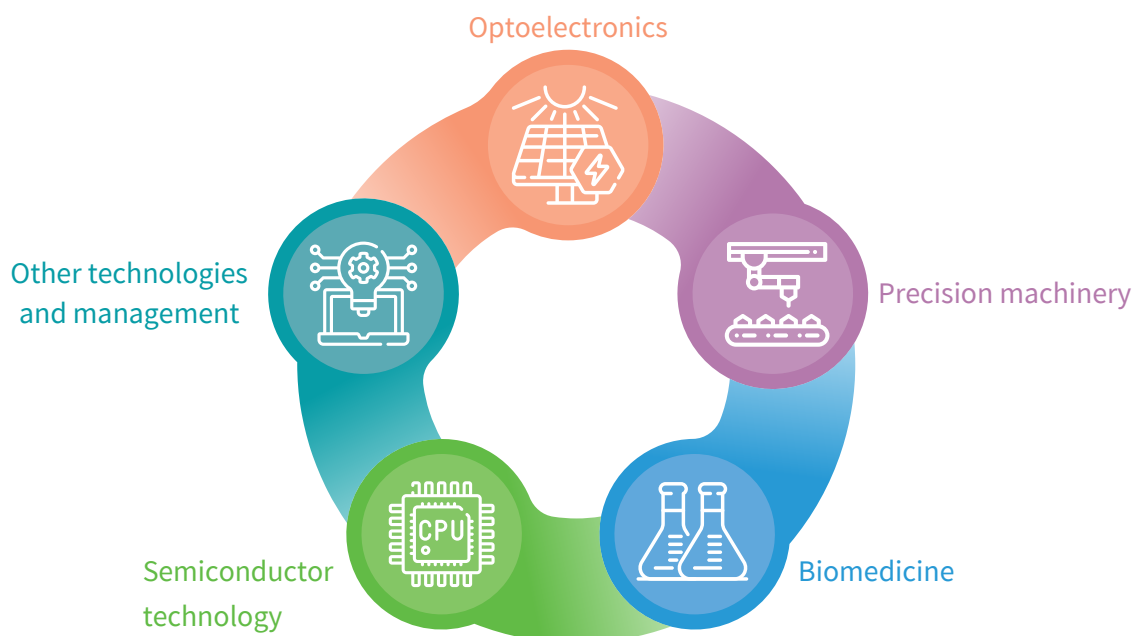


> Continuously improve the quantity and ability of professional talents

● Implementation content and promotion results

1. Professional and technical personnel training

In order to meet the needs of the park manufacturers to recruit and train technical talents, and to improve the professional knowledge and skills of the employees of the park manufacturers, CTSP Bureau continues to handle the "Professional and Technical Talents Training Plan" every year, offering courses in five fields, including optoelectronics, other technologies and management, semiconductor technology, biomedicine and precision machinery, which not only provides diversified learning channels for the employees of the park manufacturers, but also improves the on-the-job human quality and professional skills, thus building the core and key capabilities of the employees in the park.



From 2022 to 2023, CTSP Bureau offered 97 training courses in five fields, with 1,876 trainees, and made digital learning courses to provide convenient learning methods for employees in the park, effectively saving time and space and achieving the purpose of efficient learning.

2. Talent Cultivation Plan of Science Park

In order to encourage colleges and industries around the park to jointly offer modular courses and enterprise internship course, we can master the practical needs of technical manpower in the science and technology industry through cooperation between industry and university and training courses in the industry. Through enterprise internship opportunities to increase practical experience, enhance the employment function of prospective graduates, shorten the gap between talents in science and technology industry, effectively make up for the manpower gap needed by the industry, and implement the plan of rooting high-quality talents. From 2022 to 2023, a total of 25 module courses and enterprise internship courses were approved, with a total subsidy of NT\$ 15.95 million and a total of 1,376 talents trained.

Specific actions and promotion highlights

➤ **Promote technological upgrading of high-value industries**

Other core objectives involved



● Implementation content and promotion results

1. Accelerate industrial intelligence upgrade and digital optimization plan

Since 2022, CTSP Bureau has promoted the "Accelerated Industrial Intelligent Upgrade and Digital Optimization Plan", hoping to develop innovative solutions for software and hardware integration by condensing the R&D and innovation energy of Industry-University-Research, and assist the park manufacturers to strengthen the transformation and upgrading of intelligent and innovative technologies, upgrade the manufacturing technologies of key software and hardware equipment, modules and components, and promote the intelligent and high-value development of the industry. In 2022-2023, it planned to approve 8 cooperative development projects in Industry-University-Research and subsidize the park manufacturers by 31.048 million dollars.

The approved plan covers intelligent storage, intelligent processing system, automatic test process integration, AI thermal displacement modeling technology, blockchain application, intelligent screen washing production system, intelligent material dispatching and storage technology, intelligent machine vision identification, etc. Through the integration of technologies such as cloud application service and intelligent production line equipment, production efficiency, speed and flexibility will be implemented in flexible production, and through the development of related technologies, the application of multiple intelligent manufacturing technologies will be derived, and cross-domain application talents will be cultivated.



2023

Central Taiwan Science Park Bureau
Voluntary Department Reviews

Approved Manufacturers in the "Accelerated Industrial Intelligence Upgrade and Digital Optimization Plan"

2022 Planning field		Manufacturers		2023 Planning field		Manufacturers	
Intelligent machinery		Gallant Precision Machining Co., Ltd.				Mosa Industrial Corp.	
		Laser Application Technology Corporation					
Wisdom manufacturing		Tan Kong Precision Tech Co.,Ltd.		Wisdom manufacturing		William tools Co., Ltd.	
		Mosa Industrial Corp.				Tan Kong Precision Tech Co., Ltd. CTSP Branch	
		Orange Electronic Co., Ltd.					

2. Cross-domain promotion plan of CTSP precision health industry

In order to promote R&D and innovation of precision health industry in central area, integrate ICT information and communication energy with Bio-biomedical industry, and introduce it into the field of medical care, since 2022, the bureau has promoted the Cross-domain Promotion Plan of CTSP precision health industry, taking precise disease prevention/prediction, precise diagnosis, precise treatment and care as the planned development field, promoted the cooperation between biomedical industry and medical institutions in central area, and promoted the technology transfer, product development or integration of relevant manufacturers for clinical verification and application of precision health products.

In 2022-2023, the subsidy scheme approved 11 medical cooperation cases and 1 marketing case in Industry-University-Research, providing about NT\$ 38.16 million to help manufacturers invest in R&D, manufacturing and industrial marketing of products such as precise prevention, diagnosis, treatment and care.

Approved manufacturers of "CTSP Precision Health Industry Cross-domain Promotion Plan"

2022 Planning field	Manufacturers	2023 Planning field	Manufacturers
Precision prevention	Ideabus Technology Co., Ltd.	Precision diagnosis/ treatment	Taiwan SURGLASSES Inc.
Precision therapy	Ever Supreme Bio Technology StemCyte Taiwan Co., Ltd. Taichung Branch	Precision therapy	Microware Precision CO., Ltd. Ever Supreme Bio Technology
Precision care	H.P.B. Optoelectronics Co., Ltd.	Precision diagnosis	Precise Big Data company AIXMED Inc. GeneReach Biotechnology Corp. CatchGene Co., Ltd.
Precision diagnosis	Taichung Veterans General Hospital		

> Encourage R&D and innovation and cultivate new teams

● Implementation content and promotion results

1. Emerging technology application plans and innovative products

In order to implement the policy axis of high employment growth and industrial innovation, and encourage scientific undertakings to form alliances with different industries or academic circles to jointly engage in the research and development of emerging technologies, CTSP Bureau promotes the "Emerging Technology Application Plan", conducts cross-industry alliances with the guidance of industrial demand, and at the same time introduces forces from all walks of life, encourages industry and academia to jointly invest in the development of "industrial heterogeneous integration and key technologies", promotes the cultivation of innovative technical talents, solves market problems, cultivates new companies and creates talent value, so as to achieve industrial innovation transformation.

From 2022 to 2023, a total of 11 subsidized R&D projects were approved, and the approved subsidy amount was NT\$ 43.02 million. In addition, in order to encourage the manufacturers in the park to actively innovate, research and develop new products, a special award for innovative products of excellent manufacturers was set up. From 2022 to 2023, a total of 25 products won awards.



2023

Central Taiwan Science Park Bureau
Voluntary Department Reviews

Approved Manufacturers of "Emerging Technology Application Program"

2022 Planning field	Manufacturers	2023 Planning field	Manufacturers
Photoelectricity	Raystar Optronics., Inc	Photoelectricity	Raystar Optronics., Inc.
	TAIWAN COLOR OPTICS, INC		
Wisdom machinery	Mosa Industrial Corp	Photoelectricity	H.P.B. Optoelectronics Co., Ltd.
	Hong Yang Precision Industry Co., Ltd.		
	Taiwan Master Hill Technology Co., Ltd.		
	ROBUFF Co., Ltd.		
	Awea Mechantronic Co., Ltd. Taichung Branch		
Biotechnology	GeneReach Biotechnology Corp.	Biotechnology	GeneReach Biotechnology Corp.

Winner list of "Excellent Manufacturer's Innovative Product Award"

2022 Award-winning organization	Award-winning product	2023 Award-winning organization	Award-winning product
LINCO TECHNOLOGY CO., Ltd.	Semiconductor system-level package conformal shield PVD coating equipment	AUO Corporation Taichung Branch	49-inch DQHD 360Hz R1000 curved esports display panel
AUO Crystal Corp.	Automatic silicon wafer sorter	ARWIN CORPORATION-Taichung Branch	Extremely black and high contrast Mini LED vehicle display module
AUO Corporation Taichung Branch	34-inch WQHD 165Hz R1000 curved AmLED esports display panel	Raystar Optronics., Inc.	Ultra-high penetration OLED display
WINSTAR Display Co., Ltd.	CAN bus intelligent display module	Unique Materials	Quantum dot photoresist solution
ARWIN CORPORATION-Taichung Branch	AMOLED large-size precision metal mask (15.6" 4K2K notebook computer)	WINSTAR Display Co., Ltd.	Intelligent man-machine interface module
H.P.B. Optoelectronics Co., Ltd.	Vehicle-mounted Ethernet camera	Light Textile Inc.	Sewing machine and sewing method

Winner list of "Excellent Manufacturer's Innovative Product Award"

2022 Award-winning organization	Award-winning product	2023 Award-winning organization	Award-winning product
Gallant Precision Machining Co., Ltd.-CTSP	Intelligent preventive maintenance diagnosis system	Gallant Precision Machining Co., Ltd.-CTSP	Multi-product intelligent glass grinding equipment for next-generation display
Mosa Industrial Corp.	Electronic gas cylinder sealing piece breaking device		
DIP PRINTING TECHNOLOGIES CO., Ltd.	Advanced packaging ultra-fine line inkjet equipment	UVAT TECHNOLOGY CO., Ltd. CTSP BRANCH	Fan-out packaging metallized seed layer film sputtering equipment
GeneReach Biotechnology Corp.	POCKIT Central GeneReach novel coronavirus (orf 1ab) detection reagent		
CH BIOTECH R&D CO., Ltd.	plant growth regulator	Mosa Industrial Corp.	R-Tire tire quick repair kit
MEDICALTEK CO., Ltd.	Darwin MS-301 3D Endoscopic Imaging System	Yung Sheng Optical Co., Ltd.	Real water filter blue light clear solar polishing contact lens
POJIALI Health Technology Co., Ltd.	Pressure-free high-flux hollow fiber membrane filter core		
Orange Electronic Co., Ltd.	Special two-in-one tire pressure monitoring device for tire puncture safety device	Orange Electronic Co., Ltd.	Commercial large tire pressure monitoring and intelligent trailer system with automatic positioning function

2. Innovation and Entrepreneurship Incentive Plan

In order to implement the innovation economy and promote the transformation of the park, NSTC promotes the "From IP to IPO (FITI) Plan" to bridge the gap between "innovation" and "entrepreneurship" and help the new team dream of taking off. CTSP Bureau actively cultivates colleges and universities, excavates excellent technologies, and counsels to participate in the NSTC 「From IP to IPO (FITI) Plan ". It also helps to transform its creativity into a feasible business operation mode, and provides customized guidance for business model planning, chain industry, market expansion and business field, etc., to provide the energy needed by the new team to start a business,

foster it to thrive into a scientific career, build and improve the new entrepreneurial ecosystem, and become an important incubator for cultivating new teams and a base for accelerating growth. By the end of December 2023, the innovation and entrepreneurship field has been stationed in 45 start-up companies, and 6 have been approved as park manufacturers; A total of 331 FITI teams have been coached, and 97 teams have set up companies, helping to raise funds for new ventures totaling NT\$ 150 million.

In 2022, 50 teams were selected for the "FROM IP TO IPO (FITI)" team to receive the CTSP Bureau counseling service, among which 2 teams (Taiwan Jungu, Intelligent Farming in Chiayi's hometown) won the Outstanding Entrepreneurial Award, and 7 teams (Olproheal, Duromaker, iCHASE, Mag Technology, AST.AI, Jueshi Rebirth, Linggle) won the Entrepreneurial Potential Award. Introduce seven start-up companies into the new start-up field, assist 50 teams to win prizes in the entrepreneurial competition or obtain government subsidy programs, and assist the matchmaking company FITI team-Ant Ke, Sonicballonn and Duromaker to receive NT\$ 7.6 million, NT\$ 6.5 million and NT\$ 5.4 million respectively in the budding program in 2022, and assist the teams of Taiwan Jungu and Olproheal to participate in the Asian Biotechnology Exhibition, Noklin to participate in the Taipei Women's and Children's Products Exhibition, and AST.AI to participate in Medical.

In addition, in 2023, 46 teams were selected for the "FROM IP TO IPO (FITI)" team to receive CTSP Bureau's counseling service, among which 3 teams (Taiwan Excellent Aquatic Seedling Biotechnology, National Taiwan University mesoView Team, TPDH) won the Outstanding Entrepreneurial Award, 3 teams (Vasscan, Tricuss, Oxygen Cube) won the Entrepreneurial Potential Award, and 9 start-up companies were introduced to the new field to assist 46 teams to participate in entrepreneurial competitions and win prizes or receive government subsidy programs, coaching the FITI team PackAge+ in 2020 and the team uCup in 2022 to jointly obtain the subsidy of NT\$ 950,000 from the Service Industry Innovation R&D Plan in 2023; AI-Twins won the outstanding team of Taiwan Youth Entrepreneurship Tomorrow Star and received NT\$ 1 million venture fund. We assisted PetSci to win the silver medal in the high-quality innovation group of "2023 11th Information Application Service Innovation and Entrepreneurship Rookie Selection" and DE.Vote to be selected in the second stage of "Public Innovation. Case 100" and won a prize of NT\$ 400,000, and AGAI won the "2023 Green Technology Innovation Award Competition" and won the prize of Sunmoon Semiconductor Company Group. We assisted McPass.UT to participate in the Inno VEX exhibition, Olproheal to participate in the 2023 North American Biotechnology Exhibition, and coached Taiwan Spike® to

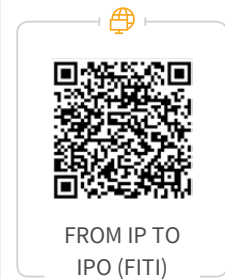
participate in the Taipei International Automation Industry Exhibition, and handled more than 31 media meetings, symposiums and exchange meetings. In recent years, in addition to providing team entry and customized counseling, angel investors, senior executives of enterprises and entrepreneurs-related counseling practitioners have been invited to form a platform for entrepreneurs, and the resources needed for related entrepreneurship have been continuously connected to build a sustainable and competitive entrepreneurial environment.

Winning team coached by CTSP in 2022 From IP to IPO (FITI)

Item	First echelon	Second echelon
Entrepreneurial Excellence Award The prize for each team is NT\$ 1 million.	Taiwan Jungu	none
	Intelligent Farming in Chiayi's hometown	
Entrepreneurial Potential Award The prize for each team is NT\$ 250,000	Olproheal	AST.AI
	Duromaker	Jueshi Rebirth
	iCHASE	Linggle
	Mag Technology	

Winning team coached by CTSP in 2023 From IP to IPO (FITI)

Item	First echelon	Second echelon
Entrepreneurial Excellence Award The prize for each team is NT\$ 1 million.	Taiwan Excellent Aquatic Seedling Biotechnology	mesoView Team
		TPDH
Entrepreneurial Potential Award The prize for each team is NT\$ 250,000	Vasscan	Oxygen Cube
	Tricuss	



CTSP startup team dreams took off and made great achievements in the FITI competition.



Intensive planning

Because the land in Taichung Park and Houli Park, where CTSP semiconductor industry is located, has been fully rented, CTSP Bureau is now handling the second phase of expansion of Taichung Park, and will follow the successful experience of park development in the past to achieve a balance between economy and environment, and continue to promote park manufacturers to carry out innovative technology research and development, look forward to diversified industrial layout, and promote the cultivation of innovative technical talents to create a new operating peak.



Core Goals
17



Establish multiple partnerships and work together to promote a sustainable vision

Corresponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>17.8 Actively participate in the discussion and negotiation of WTO trade and environment issues, strengthen mutual support between trade and environment, and promote a universal, standardized, open, non-discriminatory and fair multilateral trading system.</p>	<ul style="list-style-type: none"> ● Participate in exhibitions at home and abroad, assist the park industry to expand marketing, and promote business opportunities. There were 5 exhibitions in 2022 and 4 exhibitions in 2023. ● CTSP joined hands with 52 park manufacturers to participate in "TAIWAN Medical Technology Exhibition", "Asian Biotechnology Exhibition" and "New Southbound Taiwan Image Exhibition Online Exhibition" to show the strong strength of R&D and manufacturing of biomedical industry in central area. We also participated in the "Dusseldorf Medical Equipment Exhibition in Germany" and "Tokyo International Medical Exhibition in Japan", visited 32 enterprises and newly-established fields, and introduced the investment environment and industrial settlement development of CTSP, so as to encourage high-quality manufacturers to invest in Taiwan and expand the international business of the park. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● From 2024 to 2025, we will participate in four domestic and international exhibitions, joined hands with more than 40 park manufacturers and visited more than 15 units abroad to promote investment and cooperation opportunities. ● It is estimated to receive 2,500 domestic and foreign visitors. ● At least 2 domestic exhibitions. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● Participate in at least 3 exhibitions at home and abroad every year, assist the park industry to expand marketing and promote business opportunities. ● It is estimated to receive 2,500 domestic and foreign visitors. ● At least 2 domestic exhibitions. 	<p>Industry-University R&D Section and Business Promotion Section</p>

Challenges/opportunities faced

Twenty years after the establishment of CTSP, the industrial settlements of semiconductors, optoelectronics, precision machinery, biotechnology, etc. in the park have taken shape. However, science and technology continue to make iterative progress, and enterprises need to keep up with the latest technological development trends to lay out future business opportunities and seek a new round of operational growth. As a government agency, CTSP Bureau fully understands the direction of the government's industrial policy, and can help manufacturers invest in the development of emerging technologies at an appropriate time by connecting the rich academic and research resources around the park, so as to reserve innovative momentum.

Specific actions and promotion highlights

> Tandem Industry, Government, Academy and Research Resources

● Implementation content and promotion results

1. Technical Forum

On June 2nd, 2023, CTSP Bureau held the "Seminar on the Development and Application of Smart Manufacturing Trends", and invited experts and scholars in smart manufacturing-related fields from Huwei University of Science and Technology, National Cheng Kung University and Intelligent Machinery Technology Center of ITRI to give speeches on industrial trends, technological development and scientific and technological achievements.

All the invited speakers have implemented the NSTC or the Ministry of Economic Affairs' science and technology plan, and they are deeply experienced in forward-looking technology and industrial practice. It is hoped that through this activity, many innovative technologies and practical experience analysis will be shared, which will drive manufacturers to introduce innovative technologies and train talents for intelligent manufacturing R&D industries, so as to improve operational efficiency and further promote the whole industry to internationalization.



Seminar on the Development and Application of Smart Manufacturing Trends

On July 14th, 2023, the publication and technical forum of "Cross-domain Transformation in 2023, Creating New Opportunities" was held. With the theme of cross-domain integration and digital transformation, experts, scholars and teams implementing NSTC minor league projects were invited to share development trends and related cases in view of forward-looking technologies such as "industry trends", "cross-domain integration", "digital transformation" and "smart future", so as to encourage manufacturers to make good use of the cooperation plan between industry and university in the park, transform the research and development energy into industrial kinetic energy, and help park manufacturers grasp market trends and international trends through cross-domain integration and digital transformation to create new business opportunities in the industry.



Cross-domain transformation in 2023, creating new opportunities again

2. Industry-university alliance

In order to promote the field verification and industrial development of the precision health industry, CTSP Bureau, Taichung Veterans General Hospital, National Cheng Kung University, Chung Hsing University and STSP Bureau jointly held the "Five-Party Alliance Industry-University Media Meeting" on August 13, 2023, which promoted the field verification of industry-government-university-institute and clinical field, and

transformed it into marketable products and services, so as to implement innovative services in industrial applications, promote information sharing and exchange, and accelerate cross-domain integration and development.

At the meeting, 30 enterprises including CTSP manufacturers and innovative teams were invited to participate in the exhibition, and professional technology was published on the Pitch stage, providing opportunities for medical media cooperation and negotiation and exchange in Industry-University-Research-Medical. It is expected that through the five-party alliance, manufacturers in CTSP Park will communicate with medical institutions and academic research institutions across disciplines, work together to lay out innovative applications of precision prevention, diagnosis, treatment and care, enhance the overall output value and business opportunities, promote the development of biomedical innovation and technology, foster a precise and healthy industrial chain, and promote settlement development and product clinical practice. In this way, CTSP Park will promote the development of medical institutions.



Five-Party Alliance Industry-University Media Meeting

3. Industry-university integration

CTSP Industry-University-Training Association, initiated by CTSP Bureau, is one of the most important platforms for promoting the cooperation between industry-university-training in central Taiwan. With the goal of promoting the regional integration of industry-university cooperation, CTSP has established a cooperation network between manufacturers and academic research circles, held forums, academic lectures, talent matchmaking and other activities one after another to gather the energy of industry-university-research, and in recent years, it has actively participated in innovative activities in industry-university circles, indirectly promoting cooperation between academic circles and industry.

In order to assist the manufacturers in the park to connect with the innovative technology energy of the media-integrated research institutes, CTSP Bureau held the "CTSP Park Media-integrated Exchange Conference" in 2023, focusing on the three axes of intelligent manufacturing, intelligent upgrading and digital optimization, and invited research and development experts such as Industrial Research Institute, Metal Center, Precision Machinery R&D Center, Zhongxing University, Qinyi University of Science and Technology, and Huwei University of Science and Technology to share research and development achievements and technology applications.

In this activity, 24 latest technological achievements were exhibited by 6 research institutes on site. It is hoped that the industry can combine smart manufacturing and smart new technologies to turn R&D energy into a driving force for economic growth, and in the future, it will continue to strengthen cooperation with research institutes to jointly improve product production technology and competitiveness.



Media-integrated Exchange Conference



> Industrial Exchange and International Connection

● Implementation content and promotion results

1. Actively attract investment and external marketing

In order to continuously promote the development of high-tech industries in Taiwan, CTSP Bureau devotes itself to investment promotion and marketing, actively explores potential high-tech manufacturers and promotes them to understand the overall investment environment of CTSP. In 2022, it handled 13 investment promotion briefings, introduced 20 manufacturers to invest, and completed 7 capital increase cases and 3 factory expansion cases; In 2023, a total of 14 investment briefings were held, 20 manufacturers were introduced to invest, 15 manufacturers' capital increase cases and 2 manufacturers' factory expansion cases were completed.

In addition, in order to market CTSP Park, attract investment and promote industry, we also actively participated in large-scale domestic exhibitions, including 2022 Asian Biotechnology Exhibition, 2022 Taipei International Automation Industry Exhibition, 2023 Asian Biotechnology Exhibition and 2023 Taipei International Automation Industry Exhibition, in order to show CTSP's business performance and establish and strengthen the image of high-quality parks.

Actively attract investment	Domestic investment promotion	Marketing CTSP
<p>In 2022, 20 manufacturers were introduced to invest.</p>	<p>Held 13 investment promotion briefings.</p>	<p>Participated in the 2022 Asian Biotechnology Exhibition and the 2022 Taipei International Automation Industry Exhibition.</p>
<p>In 2023, 20 manufacturers were introduced to invest.</p>	<p>Held 14 investment promotion briefings.</p>	<p>Participated in the 2023 Asian Biotechnology Exhibition and the 2023 Taipei International Automation Industry Exhibition.</p>



CTSP Erlin Park Investment Briefing Meeting

From July 28 to 31, 2022, CTSP Bureau joined hands with 10 park manufacturers to participate in the BIO Asia-Taiwan 2022, in order to seize the new version of the post-epidemic biotechnology industry and expand international publicity. Pharmaceutical Sentia Corp., a CTSP manufacturer, was awarded the "Taiwan Bio Award–Industrial Innovation Award in 2022", demonstrating CTSP's determination to create an innovative medical ecosystem by combining cutting-edge biotechnology fields. From July 27 to 30, 2023, CTSP Bureau joined hands with 12 park manufacturers to participate in BIO Asia Taiwan 2023, to seize the new version of the biotechnology industry and expand international publicity, so as to build the brand image of the science park settlement through the BIO network and attract cross-domain links and new investment.

Through the joint exhibition of the park manufacturers, the achievements across the fields of precision health, biological new drugs, innovative medical care, medical materials and automation will be displayed, which will help attract biotech manufacturers to jointly build an innovative medical ecosystem. In the future, CTSP will continue to combine the research and development of top biotech medical materials in the central area to build a precision health industrial chain, and help manufacturers to expand overseas markets, connect with the international community, and let the world see the quantity and energy of biotechnology in Taiwan.



BIO Asia-Taiwan 2023

From August 24th to 27th, 2022, the CTSP Bureau of Taipei International Automation Industry Exhibition (Automation Taipei 2022) focused on "smart machinery settlement and cross-domain integrated development", and invited manufacturers from six home areas to show their achievements in the fields of industrial automation, robotics, smart manufacturing, integration of technology and software intelligent systems by way of joint exhibition. From August 23 to August 26, 2023, CTSP brought together the R&D and manufacturing capacity of bright manufacturers and newly-created teams in the fields of smart manufacturing and economic machinery in the park, and invited 11 manufacturers in the park to participate in the "Taipei International Automation Industry Exhibition" in order to attract the attention of professional buyers and investors in a team battle. The exhibition area focuses on "cross-domain integrated development of intelligent mechanical settlements", showing achievements across industrial automation, intelligent manufacturing, robotic arms, measuring and identifying instruments, intelligent system integration and other fields and the innovative kinetic energy of the vigorous development of the park.

CTSP Bureau also continues to promote the "Accelerated Industrial Intelligence Upgrade and Digital Optimization Plan", which is expected to promote the industry to move towards intelligence and high value, and accelerate the industrial upgrading and innovation in the park.



2023 Taipei International Automation Industry Exhibition

In 2022, CTSP Bureau joined hands with 11 biotech medical materials manufacturers to participate in the "2022 Taiwan Medical Science and Technology Exhibition-Theme Pavilion of Science Park" to present the implementation results of the plan in a joint exhibition, showing the top technology and manufacturing energy in the fields of precision health, minimally invasive surgical materials, intelligent assistive devices and other high-end medical materials products.

CTSP Bureau actively uses the niche of precision machinery and photoelectric industry in central area, introduces professional technologies such as automatic control, mechanical design and photoelectric measurement into smart medical and biomedical industries, encourages manufacturers to invest in product research and development, design and manufacture, assists in participating in exhibitions at home and abroad to expand the market, and aims at "linking medical cooperation in the central area of Industry-University-Research to promote clinical verification of precise health products", deepens domestic national use and clinical verification marketing, and promotes commercialization and market expansion of domestic biomedical products.



2022 Taiwan Medical Science and Technology Exhibition-Theme Pavilion of CTSP

In 2023, CTSP Bureau integrated seven manufacturers who implemented the Cross-domain Promotion Plan of CTSP Precision Health Industry Park to participate in the " Taiwan Medical Science and Technology Exhibition -Theme Pavilion of Science Park", focusing on "Linking Precision Health Industry Chain Science Park with International Cooperation", showing the achievements of CTSP in promoting the implementation of Industry-University-Research Medical Cooperation Plan in central area, and grasping the emerging medical business opportunities in the post-epidemic era.

Facing the ever-changing medical market trend, CTSP aims at the application wave of advanced age and digital technology from the aspects of precise prevention, diagnosis, treatment and care. AI technology has been widely used in the biomedical field, helping to accelerate the development of new drugs, improve industrial efficiency, optimize care needs, etc. CTSP has invested planning resources to actively assist the biomedical industry to enhance the R&D energy, accelerate the commercialization of precision health R&D achievements, promote the innovative development of the medical materials industry in central area, improve the precision health ecosystem, assist in participating in domestic and international exhibitions to expand the market, and build a precision health brand in Taiwan.




Taiwan Medical Science and Technology Exhibition-Theme Pavilion of CTSP

2. International integration and exchange

CTSP Bureau not only keeps good communication with the industry by participating in domestic associations, but also actively participates in international conferences and exchange activities organized by the associations of science parks (IASP, ASPA), learns the advantages of each science park, and shares the experience in park management. In September 2022, Deputy Director-General led a team to attend the annual meeting of the World Association of Science Parks (IASP) held in Seville, Spain. In October 2022, Chief Secretary led a delegation to Jeju, South Korea to attend the board meeting and annual meeting of the Asia Science Parks Association (ASPA); In September 2023, Deputy Director-General led a team to attend the annual meeting of the World Association of Science Parks (IASP) held in Luxembourg; In November, 2023, Business Division led a delegation to Istanbul, Turkey to attend the board meeting and annual meeting of the Asia Science Parks Association (ASPA).

Participating organizations of CTSP Bureau at home and abroad

	Name of participating organization	Status	CTSP international cooperation and exchange
Domestic	CNAIC	Member	
	TITA	Member	
	AICSPCT	Member	
Overseas	ASPA	Director	
	IASP	Member	
	AURP	Member	



Mr. Hsu (third from the right) of CTSP Bureau Deputies Director-General attended the IASP 2023 Annual Meeting with members from three other parks.

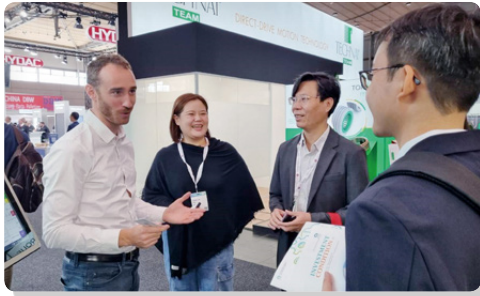


Young Jin Yang Mr. Jiang (second from the right), Chief Secretary of CTSP Bureau communicates with Young Jin Yang (third from the right), Chairman of Einstein S&C, at the ASPA 2022.

In order to enhance international visibility, CTSP Bureau continuously links sister parks, and interacts with local governments and enterprises through foreign visits, so as to understand the international newly-created ecosystems and industrial pulse, and at the same time, it helps park manufacturers to expand their markets and increase cooperation opportunities. In October 2022, Deputy Director-General led his colleagues to Japan to attend the 20th anniversary of Kitakyushu Sister Park and the bilateral seminar between Taiwan and Japan. In November, 2022, the chief secretary led a delegation to Germany to participate in the Medical Equipment Exhibition in Dusseldorf (Medica 2022), and visited the largest innovation and acceleration base in Cologne, Startplatz, and also visited the internationally renowned independent testing and certification institutions, Germany's Rhine (TV), dynamic plastics manufacturer IGUS and Merck Group headquarters.

In May 2023, Director-General led his colleagues to visit Israel's Ministry of Innovation and Technology and Israel's Innovation Bureau. Strengthen bilateral exchanges between bilateral science and technology and related government departments. In June 2023, the representative of the planning team leader attended the Science Park Innofair held in Gyeongju, South Korea. In September 2023, Director-General led his colleagues to visit Japanese trading companies, CTSP sister parks and research parks in Tokyo and Kyoto. By introducing CTSP's investment environment and industrial settlement development, we can attract high-quality Japanese businessmen to invest (or increase capital) in Taiwan, link foreign sister parks and expand international business exchanges in the parks, as well as understand and care about the overseas development status of new companies under the guidance of CTSP Bureau.

In September, 2023, Deputy Director-General led his colleagues to Europe to participate in the International Machine Tool Exhibition in Hanover, Germany, to learn about the latest technological pulse of the global machine tool industry, and at the same time to conduct investment promotion, and to visit potential investment manufacturers, introduce the investment environment and industrial development status of CTSP through exchange visits, and actively strive for international manufacturers to invest in Taiwan; In October, 2023, the chief secretary led colleagues from Investment Division to Japan to participate in the international medical exhibition Medical Japan, and exchanged ideas and attracted investment with local enterprises, research institutes, accelerators, venture capitalists and park manufacturers.



CTSP Bureau Depth Director-General, Mr. Shi (2nd from right) visits PÓKA Gergely, sales manager of Hungarian distributor (NCT) (1st from left) during the Hanover exhibition.

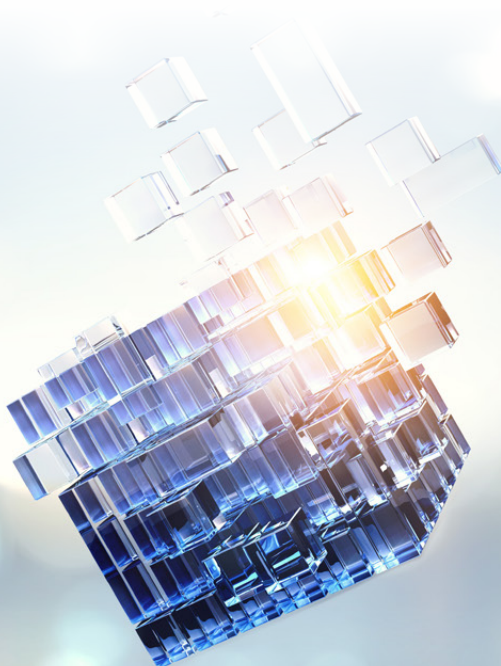


CTSP Bureau Director-General, Mr. Hsu (4th from the right) visits Hirokazu Saito, President of Ogara Optical Society, for investment promotion in Japan (3rd from the left).



Intensive planning


In order to expand the comprehensive effect of industrial settlements, CTSP Bureau actively establishes close relations with partners from all walks of life, integrates the resources of industry, government, academia and research, and promotes the continuous upgrading of the park's manufacturers. By participating in international exhibitions, CTSP Bureau helps to link the international market, communicate with overseas enterprises, understand the development trends and latest technologies, explore the possibilities of cooperation and common development, attract more foreign enterprises to enter the park, and promote the internationalization process of the park, with a view to the sustainable development of the park.




vision : Sustainable Park

Main axis of governance: Building a sustainable management and high-quality investment environment

**Core Goals
6 and 12**



Ensure environmental quality and sustainable management of environmental resources



Promote green economy and ensure sustainable consumption and production mode

Corres-ponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>6.3 Improve people's living hygiene, improve the water quality of rivers, strengthen the promotion of proper treatment of waste water, take the secondary treatment discharge water of public sewage plants as a new water source, improve the utilization efficiency of water resources, reduce the demand of traditional water resources development, strengthen the inspection and control of industrial waste water discharge, investigate suspected pollution sources, curb the occurrence of water pollution, optimize the water quality of rivers to protect national health and maintain the ecological system, strengthen the flow of chemical substances, and improve management efficiency.</p>	<ul style="list-style-type: none"> ● The total amount of water pollution permit application is controlled, and the sewage from the factory in the park is 100% managed. ● 100% of the discharged water from the sewage plant meets the standard, and the water quality of surface water is regularly inspected and monitored every year. ● The recovery rate of process water for semiconductor and optoelectronic industries in each park was 91.4% in 2022 and 91.9% in 2023. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● Continue to coach and check that the park manufacturers comply with the environmental permit documents and 100% management ● The discharge water is tested for 100 times. ● Continue to coach park manufacturers to save water and electricity. Achieve an 85% recovery rate of process water for semiconductor and optoelectronic industries in each park. ● In the initial operation of Erlin Park, a set of reclaimed water treatment system has been set up, with a treatment capacity of 600CMD, which can treat the sewage entering the factory at the initial stage. The estimated water production in 2024 is 151,160 M³, and the estimated water production in 2025 is about 161,959 M³. ● The total amount of waste permit applications will be controlled, and the recycling rate of waste will remain above 90%. 	<p>Environment and Labor Affair Division, Construction Management Division</p>



2023


Corres-ponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>6.4 Promote water conservation, improve water use efficiency, so that the average water consumption will no longer increase significantly, promote the water recovery rate of manufacturers in industrial areas, promote the water recovery rate of manufacturers in science parks, and promote the strengthening of multiple water sources such as water saving, reclaimed water and seawater fresh water, so that the annual fresh water consumption will no longer increase significantly.</p> <p>6.e Strengthen the recycling of business waste resources, properly handle business waste, implement the total amount control strategy of science park, and guide the park manufacturers to reduce waste production and improve recycling rate.</p> <p>12.4 Reduce waste generation through green production, improve the technical capacity of waste recycling, promote the development of the resource recycling industry towards higher efficiency, and</p>	<ul style="list-style-type: none"> ● In 2022, Erlin Park completed the second set of 400 CMD complete equipment, which can treat the sewage from the initial manufacturers, and the water output in 2023 was 46,447.6 M³. ● The total amount of waste permit applications was controlled, and the recycling rate of waste was 96.1%. 	<ul style="list-style-type: none"> ● Erlin Park will set up a water resource regeneration center and a dual water supply pipeline by stages, with the final goal of 20,000 M³ per day. The supply and demand of reclaimed water in the park will be reviewed in a rolling way, and special management will be set up in time to provide water suppliers or reclaimed water in neighboring areas for business access to improve efficiency. Erlin Park Water Resources Center is expected to complete 2,500CMD in June 2024 and another 2,500CMD in February 2025. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● 100% of the discharged water from the sewage plant meets the standard, and the water quality of the ground water body is regularly inspected and monitored every year. ● The total amount of water pollution permit application shall be controlled, and the sewage from the factory in the park shall be 100% managed. ● Continue to coach park manufacturers to save water and electricity. The recovery rate of process water for semiconductor and photoelectric industries in each park is 86%. ● Other CTSP bases (Taichung and Houli) will cooperate with the planning schedule of regional reclaimed water development plans (such as water supply in 2024 by Shuinan and water supply in 2028 by Fengyuan) to jointly promote the utilization of water resources. 	

Corres-ponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
manage chemical substances and wastes in accordance with international conventions.		<ul style="list-style-type: none"> The total amount of waste permit applications will be controlled, and the recycling rate of waste will remain above 90%. 	

Challenges/opportunities faced

CTSP Bureau is committed to maintaining the balance between economic development and environmental protection. The development of each park must conform to the contents of environmental impact assessment documents, review conclusions and commitments, and manage potential environmental impacts through actions such as review, audit and monitoring. However, with the expansion of operation scale, the consumption of various resources and the output of waste are also increasing simultaneously. Therefore, how to maintain the stable operation of the park under the limited resource conditions, and respond to the government's policy of promoting circular economy to create a "resource-recycling" ecological park is one of the major challenges of this bureau.

Specific actions and promotion highlights

> **Environmental Pollution Risk Management**
Other core targets involved


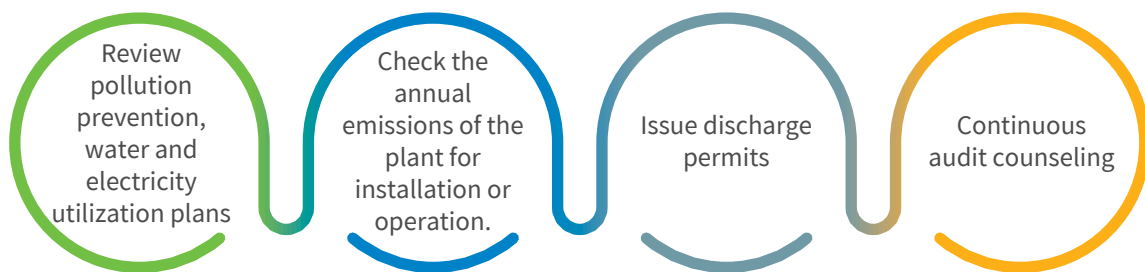
Implementation content and promotion results

1. Environmental review and audit

In order to maintain the sustainable environment of the park, CTSP Bureau grasps the impact of investment behavior on the whole park by implementing total amount control and license review, so as to meet the contents of environmental impact assessment documents, review conclusions and commitments, and then conducts on-site inspection and tracking, further requiring park manufacturers to do their own management work and jointly safeguard the environmental quality of the park.

Central Taiwan Science Park is a park that implements total amount control. Enterprises that want to enter the park must put forward estimates of the total amount of individual pollution at the investment application stage. If the total amount of approved distribution needs to be increased after the official entry, they should apply for change again. The bureau will handle the approval according to the total amount of approved distribution in the park, and report it to the local competent authorities. There were 108 cases of total amount of pollution application and change in 2022-2023, and 104 cases passed.

In order to facilitate the application of environmental protection permits by park manufacturers, the single window mechanism is adopted in the park. Since 2003, the Bureau has successively applied to the Ministry of the Environment to entrust the examination of permits in various parks, so that the manufacturers stationed in the park can quickly obtain various environmental protection permit documents required for production. From 2022 to 2023, a total of 338 applications for environmental protection documents were accepted, and 319 cases were passed (including the application in 2021, which was passed in 2022 or 2023). The cases that failed were returned to the manufacturer for correction or the cases were still in the application process.



Review process of application for environmental protection documents

In 2022-2023, CTSP Bureau conducted a total of 465 licensing audits to find out whether the business units really fulfilled the licensing contents. If this bureau finds that the business units do not conform to the licensing contents, this bureau will immediately send a letter asking the business units to make improvements and submit relevant application documents to handle the licensing changes or changes, and also carry out the auditing of recycling institutions. The staff of this bureau and experts and scholars in related fields will assist in the auditing operation to ensure that the recycling institutions outside the park properly handle the industrial wastes in the park and prevent the outside people from recognizing them as polluting the environment.



Permit check of water pollution sources



Permit check for fixed pollution sources



Inspection by experts and scholars of fixed pollution sources



Waste disposal plan check



Inspection by experts and scholars of recycling institutions



Inspection by experts and scholars of recycling institutions

At night or on holidays, the Bureau conducts sampling and testing of flue gas from the factory owners in the park, and monitors whether the exhaust gas discharged by the factory owners in the park complies with laws and regulations through qualified testing institutions certified by the Ministry of the Environment. The test results from 2022 to 2023 were in compliance with relevant regulations.

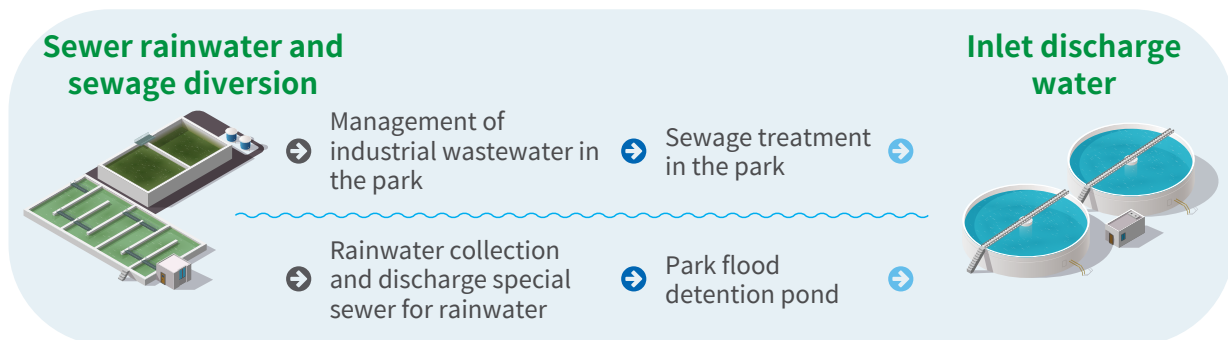


Sampling test of the manufacturer's discharge pipeline

The bureau sets up a toll-free environmental complaint hotline 0800-777795 to provide 24-hour service, and conducts on-site inspections and handling operations. In 2022-2023, it accepted 13 complaints from the public, including 7 complaints about air pollution, 4 complaints about noise, 1 complaint about water pollution and 1 complaint about waste. The bureau immediately handled the complaints after receiving them. All the complaints in 2022-2023 have been closed.

2. Centralized sewage treatment

All CTSP parks have established a perfect rainwater and sewage diversion sewer system, and the acceptance rate of industrial sewage in the park reaches 100%. The wastewater is properly treated by the sewage treatment plant and discharged only after it meets the national discharge water and environmental impact assessment standards. The rainwater sewer system not only collects rainwater in public areas, but also manufacturers must design rainwater collection pipelines when building factories, and set rainwater discharge ports to be incorporated into the rainwater sewer system, which will be discharged into the flood detention basin in the park and then merged into the receiving water body. The Bureau also regularly arranges sampling inspection plans for sewage and sewer systems in various parks to understand the system conditions and ensure the normal water quality.



The sewage treatment plants in the park are all three-stage treatment systems, adopting standard biological treatment units of activated sludge (AO biological nitrogen removal system and contact aeration method adopted by Taichung and Houli sewage plants), and adding chemical coagulation and physical filtration treatment units in subsequent units to improve the treated water quality and reduce the impact on the bearing water body.

The operators of Zhongxing Park are mainly research and experimental industries, and no process wastewater is generated. The laboratory wastewater from the manufacturers in the park is cleared and treated by qualified manufacturers, and the domestic sewage is brought into the sewage sewer of the park and transported to Zhongzheng Road Sewage Treatment Plant for proper treatment and then discharged.

Discharge data of sewage plants in each park in 2022

Project/Park		Taichung Park	Houli Park-Houli Base	Houli Park-Qixin Base	Huwei Park
Discharge location		Datu River	Daan River	Daan River	Xinqizi large ditch
Annual discharge (million liters)		27,501	6,573	1,759	267
Average daily discharge (CMD)		75,384	18,008	4,819	731
BOD ₅ (mg/L)	Discharge water standard	25	25	25	30
	EIA commitment value	20	10 (seven-day average)	10 (seven-day average)	20
	Average monitoring value	2.2	2.0	2.0	2.0
COD (mg/L)	Discharge water standard	80	80	80	100
	EIA commitment value	80	80	60	80
	Average monitoring value	33.1	41.9	31.8	25.5
SS (mg/L)	Discharge water standard	25	25	25	30
	EIA commitment value	20	10 (seven-day average)	10 (seven-day average)	20
	Average monitoring value	6.2	3.5	2.4	1.8
Total dissolved solids(mg/L)	Average monitoring value	4,373	4,044	2,377	2,168

Discharge data of sewage plants in each park in 2023

Project/Park		Taichung Park	Houli Park-Houli Base	Houli Park-Qixin Base	Huwei Park
Discharge location		Datu River	Daan River	Daan River	Xinqizi large ditch
Annual discharge (million liters)		26,865	6,303	2,224	292
Average daily discharge (CMD)		73,600	17,270	6,094	799
BOD ₅ (mg/L)	Discharge water standard	25	25	25	30
	EIA commitment value	20	10 (seven-day average)	10 (seven-day average)	20
	Average monitoring value	<2.0	2.0	2.0	2.0
COD (mg/L)	Discharge water standard	80	80	80	100
	EIA commitment value	80	80	60	80
	Average monitoring value	27.3	34.5	32.7	27.6
SS (mg/L)	Discharge water standard	25	25	25	30
	EIA commitment value	20	10 (seven-day average)	10 (seven-day average)	20
	Average monitoring value	4.7	3.7	3.2	2.4
Total dissolved solids(mg/L)	Average monitoring value	3,583	4,535	2,313	2,098

3. Environmental quality monitoring

In order to effectively prevent pollution discharge and minimize the impact of park operation on the environment, CTSP Bureau conducts environmental monitoring every year according to the environmental monitoring plan contained in the environmental assessment document, including air quality, noise and vibration, water quality of discharge water, surface water quality, groundwater quality, sediment, soil, ecology, traffic volume and cultural assets,



etc., with a total of 4,338 points/times from 2022 to 2023. The environmental monitoring results of our bureau are all open and transparent, and published on the CTSP Park Environmental Information Integration Network for public browsing.

In order to further understand the current situation of environmental factors other than environmental assessment documents, the bureau added some supplementary monitoring items from 2022 to 2023, including air quality, noise and vibration, water quality of discharged water, surface water quality and groundwater quality, and conducted a total of 1,169 additional environmental monitoring points/times from 2022 to 2023.



Environmental quality monitoring - photochemical monitoring station in Taichung Park



Environmental Quality Monitoring-Houli Park-Qixin Base General Air Quality Measuring Station



Noise and vibration



Discharge water quality



Surface water quality



Groundwater quality



River bottom mud



Soil quality



Agricultural implant

In addition, in order to improve the reliability of monitoring data, the Bureau also carried out parallel monitoring in 2022-2023, including general air quality, acid and alkali gas, odor, flue detection (including night detection), water quality of civilian wells and other items, and carried out synchronous testing from time to time to ensure the quality of monitoring data. At the same time, in order to understand the night emission situation of manufacturers, it conducted six flue spot night checks in 2022-2023 together with the Environmental Protection Supervision Subcommittee (local leader). It is hoped that the impact of park operation on the environment can be truly understood through irregular testing.

> Intensive Utilization of Water Resources

Other core targets involved



● Implementation content and promotion results

1. Stabilize the water supply in the park

Manufacturers in CTSP Park use water from Taiwan Water Corporation, and the water sources in each park are different due to the scheduling of Taiwan Water Corporation, namely:

Park	Water supply source (water release area)
Taichung Park	Liyutan Reservoir + Deji Reservoir
Houli Park	Liyutan Reservoir
Erlin Park	Surrounding water systems
Zhongxing Park	Jiji Barrage
Huwei Park	Rinnai Water Purification Plant and Hushan Reservoir

Note:
It shows that all the parks in Taiwan are Low-Medium (1-2), and the strongholds of each park are not set in national or international protected areas. Taking water to apply for authorization from the government for legal use of water sources has no significant impact on water sources.

In recent years, due to the influence of climate change, the rainfall in our country has been uneven, and the frequency of droughts and floods is high, which not only has a potential impact on the production and operation of the park, but also on people are more concerned about the issue that industrial water may affect people's livelihood. In order to alleviate the pressure on regional water resources, the bureau actively communicates and coordinates with government units, and the BOT case of the Shuinan water recycling center subsidized by the central government is under construction and is expected to be completed in 2024. In the future, it can supply 10,000 tons of recycled water every day, provide stable industrial water for CTSP Taichung Park, and promote the overall industrial development. In addition, in response to the change of water conditions, CTSP Bureau takes the following drought-resistant measures to face the severe water conditions and stabilize the water demand of the park.

- 1 Inter-ministerial cooperation and rolling review of water conditions: actively cooperate with the resolution of the Central Disaster Response Unit for each stage of Drought, and review the response measures with the Water Resources Department, Taiwan Water Corporation and other units in order to reduce the impact of water shortage.
- 2 Set up an emergency response team, strengthen communication on the water regime, and strictly control the water-saving target: Set up an emergency response team and invite manufacturers and relevant units to explain the water regime at each stage, study countermeasures, advocate manufacturers to strengthen water saving, implement water-saving and water-limiting measures at each stage in coordination with the policies of the Water Resources Department, adopt overall total amount control, collect water meter reading data of park manufacturers every week, and regularly invite large water users to check the water-saving situation, so as to control the water-saving effect and achieve the water-saving target.
- 3 Strengthen guidance and verification: check the effectiveness of self-reported water saving by large water users, and review the effectiveness of water saving through meetings, letters, telephone tracking, on-site visits and counseling, so as to achieve the goal of water saving.
- 4 Coordinate the response of park manufacturers:
 1. Reduce the water consumption of tap water in the plant area and suspend the non-essential water supply.
 2. Improve the recycling rate of process water.
 3. Add or prepare water-saving equipment for factory production lines.
 4. Open flood detention ponds and sewage plants to discharge water for secondary water use.
 5. Start the water truck mechanism in time to stabilize industrial operation and public water demand.

2. Water-saving counseling in the park

CTSP Bureau carries out statistics, management and dispatching of water and electricity consumption for users in NSTC Science Park in accordance with the Measures for the Control of Water and Electricity Counseling. In order to alleviate the potential impact of water resources on the production of the park, the bureau continues to provide counseling and publicity on water saving and water recovery. The water consumption data of the park in recent three years are as follows:

Project/Year	2021	2022	2023
Water intake (use) (million liters)	50,648	52,475	52,141
Water consumption (million liters)	13,962	16,320	16,456
Water intake (use) intensity (million liters/NT\$ 100 million)	4.89	4.49	5.56

Note:

1. The denominator of electricity consumption and water intensity is the total turnover of Central Taiwan Science Park in the current year. (The turnover in 2021 was NT\$ 1,035.232 billion, NT\$ 1,169.8 billion in 2022 and NT\$ 938.4 billion in 2023).
2. Every kilowatt hour = 1kWh = 3,600 kilojoules.
3. Water consumption = water intake - water discharge.
4. The water consumption does not include Zhongxing Park.

Since 2007, CTSP has conducted water-saving counseling for 48 times so far, with a cumulative water-saving potential of 11.98 million M³/year, which can equate to save 7.54 water of Shigangba Reservoir every year (the effective capacity of Shigangba is 1.605 million M³) and reduce the emission of 1,870 metric tons of CO₂e/ year. In 2023, CTSP conducted water-saving counseling for 3 times, with a total water-saving potential of 153,333. In addition, according to the CO₂e of 1-degree water announced by Taiwan Water Corporation in 2023, the benefits of "energy saving and carbon reduction" measures can be converted. For every M³ of tap water saved, the CO₂e emission can equate to be reduced by about 0.156 kg, and the CO₂e can be reduced by 23.92 metric tons per year.

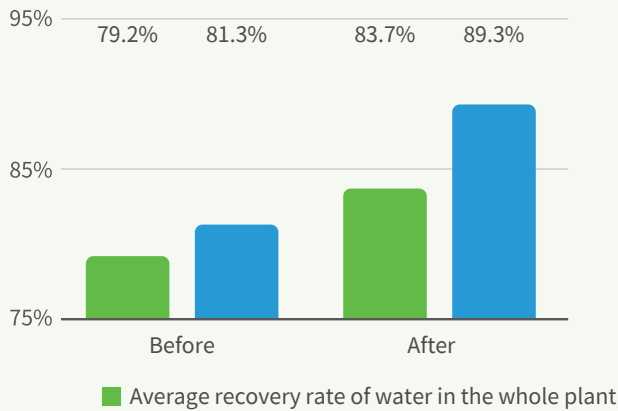
Performance of Water Saving Counseling in 2022

Year	2022	
Project	Before	After
Average recovery rate of water in the whole plant	79.2%	83.7%
Average recovery rate of process water	81.3%	89.3%

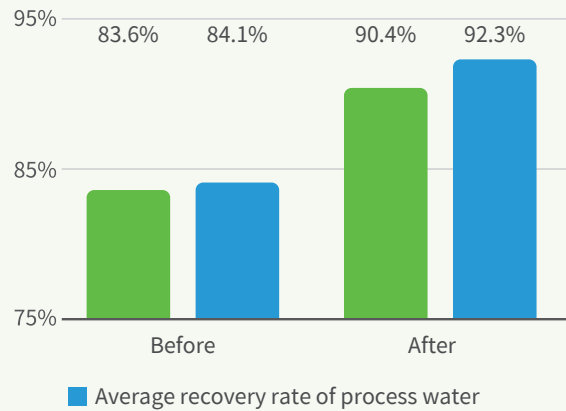
Performance of Water Saving Counseling in 2023

Year	2023	
Project	Before	After
Average recovery rate of water in the whole plant	83.6%	90.4%
Average recovery rate of process water	84.1%	92.3%

Performance of Water Saving Counseling in 2022



Performance of Water Saving Counseling in 2023



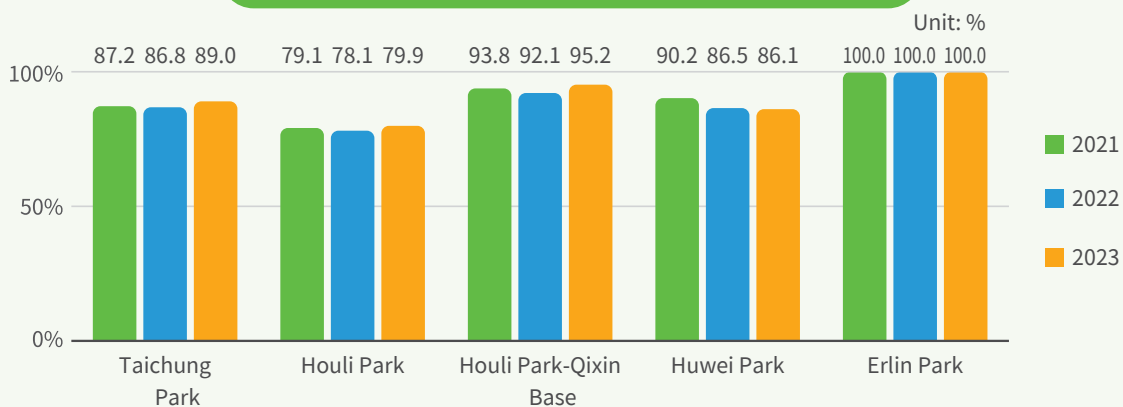
Water recovery rate in each park

Park/Year	2021	2022	2023
Taichung Park	87.2%	86.8%	89.0%
Houli Park	79.1%	78.1%	79.9%
Houli Park-Qixin Base	93.8%	92.1%	95.2%
Huwei Park	90.2%	86.5%	86.1%
Erlin Park	100.0%	100.0%	100.0%

Note:

1. Recovery rate (reuse rate) = recycled water volume/(original water intake+recycled water volume) *100
2. Zhongxing Park is a newly established park in 2019. It is positioned as a research and development park in the planning stage, and most of the water is used for people's livelihood. (65.4%)

Water recovery rate in each park

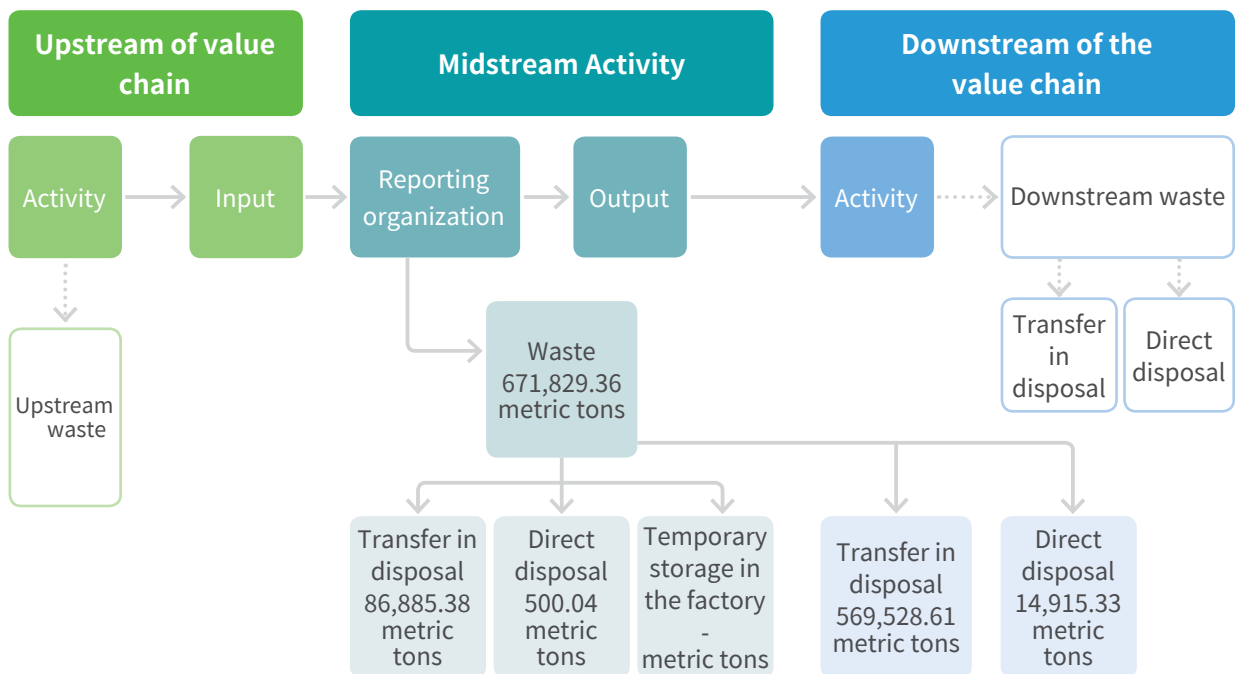


› Resource circulation and perfect waste treatment

● Implementation content and promotion results

1. Declaration and verification mechanism

The park enterprises under the jurisdiction of this bureau must report the waste output and storage data online after obtaining the permission of the waste cleaning plan. The bureau will also check from time to time and check whether the waste removed by the enterprise has obtained the proper handling documents certified by the disposal agency to ensure that there is no arbitrary dumping after the waste is removed.



General industrial wastes are mainly sent to public and private disposal institutions for disposal, or handled in accordance with the relevant provisions of the Waste Cleaning Law on resource recovery and reuse. Hazardous industrial wastes are transported to the comprehensive industrial waste disposal center or qualified Grade A public and private waste disposal institutions under the guidance of the Ministry of Economic Affairs, or handled in accordance with the relevant provisions on reuse, and the real-time tracking system (GPS) is installed on the clearing machine for management.

2022-2023 Waste in CTSP

Unit: metric tons

Composition of waste	Hazardous wastes		Non-hazardous waste		Remark
	On site	Off site	On site	Off site	
Transfer in disposal	14,668.74	275,470.05	72,216.64	287,613.06	Reuse, recycling and other recycling operations
	290,138.79		359,829.70		
Direct disposal	0	6,445.50	500.04	14,915.33	Incineration (excluding energy recovery), burial, Solidification and other disposal operations
	6,445.50		15,415.37		
Amount	296,584.29		375,245.07		-
Total amount of waste			671,829.36		
Resource utilization ratio			96.75%		

Statistics from January 1, 2022 to December 31, 2023.

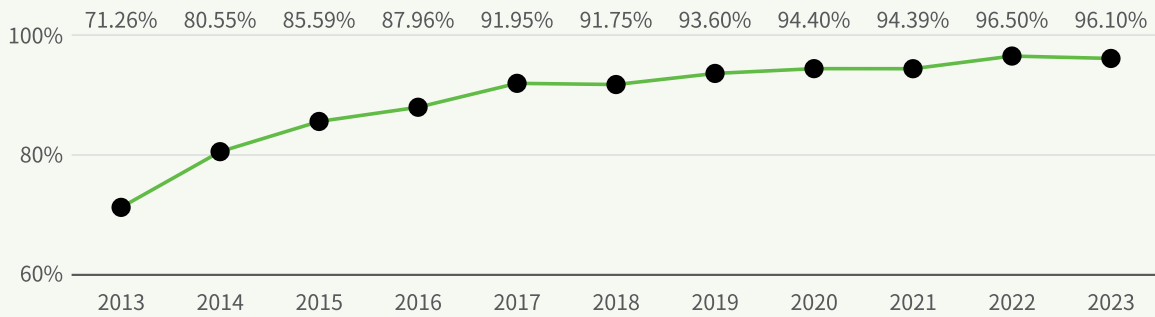
2. Promote circular economy

With the sustainable development of the park, the total amount of industrial waste has increased synchronously. The Bureau actively assists and counsels the park manufacturers in waste reduction and recycling, provides suggestions on source reduction and waste recycling technology, and can substantially assist the park manufacturers in reducing the output of end waste, and selects and commends excellent units for waste reduction and resource recycling in the park. In 2022-2023, four excellent manufacturers and four excellent professionals were selected, and after the commendation, the excellent manufacturers were invited to share their experiences.

In 2022-2023, a total of four applications for recycling were approved (two of which were pilot projects), and the recycling rate of waste in the parks under the jurisdiction of this bureau was increased to 96.1% (only off-site recycling), which was better than the recycling rate of industrial waste in the whole country. 193 waste inspections and publicity on source reduction were completed, and 2 publicity sessions on recycling technology and regulations were held.



CTSP off site resource data over the years



Note: The trend chart over the years is the value of departure resources (excluding on-site)



Commendation Meeting for Outstanding Units in Waste Reduction and Resource Recycling



Reuse application site survey review meeting



Reuse institutional experts and scholars to track and coach

The Bureau cooperated with TSMC, an indicator manufacturer, to build a resource recycling (utilization) center in Taichung Park by using the land for environmental protection facilities in the park, and recycled finished products with high-value recycling technology will be recycled to various manufacturers in the park or sold to the outside, which will help reduce the overall outsourcing of raw materials and outsourcing of abandoned resources in the park and gradually turn CTSP Park into an ecological park with "resource recycling". At present, the center plans to recycle three electronic products, two industrial products and one solvent zero waste. It is expected to operate in 2024 and in 2025, with a processing capacity of about 384 metric tons/day and an annual carbon reduction of about 40,000 tons, which is equivalent to the carbon absorption of 113 Da'an Forest Parks.



Intensive planning

The Shuinan Water Resources Recovery Center under construction is expected to officially supply water to CTSP in 2024. The Bureau has been communicating with government units to promote the use of reclaimed water as the main source of industrial water, and promised in the EIA that 100% of the water increased in the second phase of the expansion of Taichung Park will be used, so as to prevent the water used in the second phase of the expansion from affecting the people's livelihood in Taichung City. The Taichung Municipal Government has also submitted the "Promotion Plan for the Supply of Reclaimed Water from Taichung Public Sewage Treatment Plants to CTSP Taichung Park" to the Land Department of the Ministry of the Interior for consideration.

The promotion of the circular economy depends on the continuous progress of recovery and reuse technologies. At present, the resource recycling (reuse) center, which is cooperating with TSMC, has been introduced into the park, mainly focusing on high-value chemical products, hoping to reduce the impact of waste on the environment with the maturity and scale expansion of technology.



Core Goals 7



Ensure that everyone can enjoy affordable, stable, sustainable and modern energy

Corresponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
7.2 Improve the capacity of renewable energy devices	From 2022 to 2023, a total of about 7.419MW of solar photovoltaic power was added, which made the cumulative capacity of solar power generation devices in CTSP Park exceed 59MW by the end of 2023.	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> By 2025, the cumulative solar photovoltaic installation will reach 76.77MW. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> Continuously respond to the rolling adjustment of the "solar photovoltaic plan" launched by the Executive Yuan. 	General Affairs Division

Challenges/opportunities faced

In response to the impact of climate change, the world has set off a trend of net zero carbon emission and accelerated the construction of renewable energy. In response to the central government's "Green Roof Plan" policy, this bureau has jointly promoted solar power generation with park manufacturers, adding a total of about 7.419MW of solar photovoltaic devices from 2022 to 2023, so that the cumulative capacity of CTSP solar power generation devices has exceeded 59 MW by the end of 2023.

However, with the decrease of free roof area, it is not easy to set up solar photovoltaic systems in the future. Moreover, due to the active energy transformation in our country, intermittent renewable energy has also had a certain impact on the stability of the traditional power system, and it still depends on the upgrading of the national grid to meet the needs of rapid change and decentralized dispatching of renewable energy.

Specific actions and promotion highlights

➤ **Stabilize Park Power Supply**

Other core targets involved



● Implementation content and promotion results

1. Energy Saving, Energy Creation

In order to achieve the goals and requirements of the Executive Yuan's energy-saving and carbon-reduction project, this Bureau implemented power-saving measures including replacing power-saving lamps, controlling the number of light sources in the Bureau according to the time of use, replacing a total of 560 sets of LED grille-type lamps (2 feet and 4 lamps), and using air conditioners, set the indoor air-conditioning temperature to 26-28 degrees, increased the ice melting temperature and shorten the air-conditioning opening time. The annual electricity consumption has been decreasing year by year from 2.02 million kWh since 2009. According to statistics, the total annual electricity consumption of 2022 and 2023 is 1.64 and 1.67 million kWh, compared with 2009, with an annual decrease of 18.6% and 17.3%.

CTSP Bureau carries out statistics, management and dispatching of water and electricity consumption for users in NSTC Science Park in accordance with the Measures for the Control of Water and Electricity Counseling. In order to alleviate the overall electricity consumption increase of the park, the bureau continues to provide counseling and publicity on electricity saving. Since 2014, CTSP Bureau has continuously implemented on-the-spot energy-saving guidance for park manufacturers and has handled 42 sessions so far. With an energy saving potential totaling 125,579 MWh per year, and potential annual energy saving increase target of 4.3 MWh. The water consumption data of the park in the past three years are as follow:

Project/Year	2021	2022	2023
Electricity consumption(kWh)	12,281,819,084	12,667,840,733	12,468,529,254
Electricity consumption (GJ)	44,214,549	45,604,227	44,886,705
Power consumption intensity (GJ/ NT\$ 100 million)	4,271	3,898	4,783

Note: The turnover in 2021 was NT\$ 1,035 billion, NT\$ 1,169 billion in 2022 and NT\$ 938.4 billion in 2023.

In response to the "Solar Photovoltaic Project" launched by the Executive Yuan, CTSP and the Park manufacturers are committed to promoting solar power generation, making good use of the existing Park plant construction area, making the most effective space planning and utilization between land and buildings, and improving the environment to practice the concept of symbiosis between the science Park and the land, and gradually to promote the diversification of energy and sustainability development. On November 8, 2023, the "Solar Photovoltaic Installation Promotion and Information Seminar and Matchmaking Meeting" was held to encourage manufacturers in the Park to strengthen the installation of solar photovoltaic facilities. By the end of 2023, the total installation capacity of the park will be 59.93MW.

2. Strengthen the toughness of power system

On March 3, 2022, due to the failure of Taipower equipment, some manufacturers in the CTSP Park experienced a power voltage drop, but fortunately, there was no serious impact on the production line. In response to various power accidents, the bureau has already handled the power quality improvement plan in the Park, discussed the power quality of the park, and carried out research and analysis. From the power supply side of power plants, transmission and distribution, substations and the power equipment of the park manufacturers, the improvement countermeasures were proposed, which can optimize the power quality of the park and improve the reliability of power supply stability.

In the future, a smart grid will be built in the newly-built park, and the practice of promoting and advising the park manufacturers to apply smart grid is put forward. At present, 15 factories in the park have completed the construction of energy management systems, among which the introduction penetration rate of manufacturers with electricity consumption above 25,000KW in the park is 100%. In addition, the bureau evaluates the feasibility of setting up an energy storage demonstration site by itself or cooperating with manufacturers. At present, the cumulative amount of energy storage system built in grid-connected 6.8MWh has been submitted to Taipower for impact audit.




Intensive planning

CTSP Bureau continues to cooperate closely with Taipower, and holds power quality improvement meetings with the industrial associations and manufacturers in the park. When power accidents (such as voltage drop and power failure) affect the power supply of the factory owners in the park, the bureau immediately coordinates Taipower to find out the cause of the accident and restore it as soon as possible. At the same time, it understands the affected situation of the factory owners in the park through mechanisms, reviews the cause of the accident and studies the improvement measures of the factory owners to reduce the impact of the power supply accident.

The Bureau will continue to cooperate with the terms of large power users, encourage manufacturers to expand the construction scale of developing self-use electricity as much as possible, and plan new parks and newly leased land to build factories in the future, requiring advanced process semiconductor manufacturers to obtain 20% renewable energy, and it is estimated that 100% renewable energy will be used in 2050.

Core Goals 13



13 CLIMATE ACTION

Complete mitigation and adaptation actions to cope with climate change and its impact

Corresponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
13.1 Enhance climate change adaptability, strengthen resilience and reduce vulnerability	<ul style="list-style-type: none"> ● Maintain and ensure the normal operation of various systems in the smart park (chemical self-declaration system, environmental monitoring information system, traffic information management system, flood control system, etc.). ● Continue to operate the 24-hour emergency response center in the park. ● Implement emergency drills, related courses or publicity briefings twice in 2022 and twice in 2023. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● Continue to operate the 24-hour emergency response center in the park. ● Implement emergency drills, related courses or publicity briefings at least twice a year. ● Maintain and ensure the normal operation of all systems in the smart park. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● Continuously improve the emergency response capability of park manufacturers and joint defense organizations, and strengthen operational resilience. ● Maintain and ensure the normal operation of various systems (chemical self-declaration system, environmental monitoring information system, traffic information management system, flood control system, etc.) in the smart park. ● Implement emergency drills, related courses or publicity briefings at least twice a year. 	<p>Climate change identification team (Environment and Labor Affair Division, Construction Management Division, General Affairs Division, Planning Division, Business Division)</p>
13.2 Implementation of greenhouse gas stage control targets	<ul style="list-style-type: none"> ● From 2022 to 2023, 9 sessions of greenhouse gas inventory counseling meetings, 4 sessions of energy conservation and carbon reduction promotion meetings, 2 sessions of zero-carbon transformation briefing sessions or technical forums, and 2 sessions of environmental protection seminars and environmental protection related topics briefing sessions were held. ● Conduct water-saving counseling 3 sessions a year. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● Water-saving counseling is conducted three sessions a year, and it is expected to increase water-saving potential by 150,000 M³ and reduce carbon consumption by 23,400 kilograms per year. ● Handle 5 publicity meetings related to environmental protection and energy saving every year. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● Water-saving counseling is conducted three sessions a year, and it is expected to increase water-saving potential by 150,000 M³ and reduce carbon consumption by 23,400 kilograms per year. ● Handle 5 GHG Protocol counseling meetings, 2 greenhouse gas or zero-carbon transition related briefing sessions or technical forums. 	<p>Environment Protection Section Maintenance Engineering Section</p>

Challenges/opportunities faced

The impact of climate change caused by global warming is becoming more and more significant. In 2022, our country officially announced the "2050 Net Zero Emission Policy Path Blueprint", and in 2023, it revised the "Greenhouse Gas Reduction and Management Law" into the "Climate Change Response Law". With the 2050 net zero goal written into law, enterprises have clearly felt the urgency of reducing carbon.

Since 2014, CTSP Bureau has continuously implemented on-the-spot energy-saving guidance for park manufacturers to help optimize energy efficiency. However, due to the scale of investment and the growth of enterprise operations, the overall electricity consumption has continued to rise, and greenhouse gas emissions have also increased simultaneously. It is still necessary for our national energy transformation policy to promote the progress and various carbon capture technologies to be mature before we can significantly reduce the carbon emissions in the park.

In recent years, increased variability in rainfall has led to numerous water shortage crises in Taiwan. In response to these potential risks, CTSP Bureau has adopted forward-looking technology and built an intelligent disaster prevention system to reduce disaster losses.

In recent years, because hacker attacks are frequent, information security issues may lead to risks such as data leakage, network attacks, identity theft, etc. These risks will not only cause huge economic losses, but also damage its reputation. Therefore, in addition to strengthening the information security of CTSP, we should also assist the park manufacturers establishing information security measures.

Specific actions and promotion highlights

> **Applying Intelligent System to Improve the Adaptability of the Park**

Other core targets involved



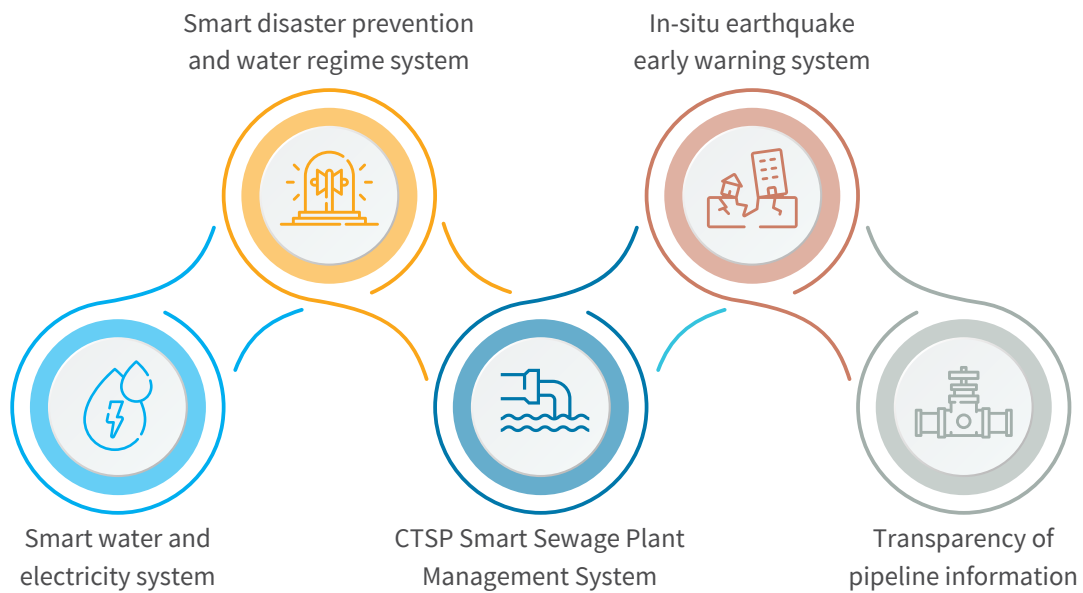
● Implementation content and promotion results


1. Smart sustainable development plan

In recent years, due to the increase in rainfall variability, there have been many water shortage crises in Taiwan. After CTSP Bureau's assessment, in 2021, "average rainfall change and water resources pressure" was listed as a major climate change risk, and various water resources response plans were implemented by the Construction Management Division.

In order to immediately identify and respond to various potential risk impacts, the bureau has introduced forward-looking technology into the intelligent management of the park, and used information and communication technology (ICT) to build intelligent disaster prevention and water regime systems, earthquake early warning systems, and update the pipeline drawings of the park to the database of the geographic information system, hoping to minimize losses when disasters come. From 2022 to 2023, CTSP Bureau continued to provide the maintenance service of water emotion measurement Internet of Things, connecting observation and forecast information, and matching with existing water information, updating the current water situation and future water situation prediction in the adjacent areas of the park hour by hour. In addition, CTSP Bureau has set up seismic data acquisition and information transmitter of seismic sensors in each park, and set up an integrated communication group of seismic information to present earthquake magnitude and acceleration information in real time when an earthquake occurs, so as to improve the disaster control and emergency response efficiency of CTSP Bureau's units and personnel in charge of earthquake disaster early warning and prevention.

Science Park Smart Sustainable Development Project





Smart water and electricity system construction plan

Smart technology and internet communication capabilities can provide safe lighting and energy saving, grasp the water supply situation in real time, avoid wasting water resources, and complete the construction of smart water management exhibition platform. Among them, the first-stage construction of smart water system in Taichung Park was completed in February 2020, and it is expected that the construction of smart water system in Houli Park will begin in 2024.



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Smart disaster prevention and water regime system

We can judge and explain the results of water regime in the next 6 hours or 72 hours and evaluate the flooding risk, and formulate decision-making support scripts for typhoon and flood disasters. When disasters occur, drones are used for patrol inspection, and the image recognition system established by artificial intelligence is used to detect anomalies, so as to facilitate the bureau to send personnel to check and repair as soon as possible, and the LINE water regime robot is used to broadcast warning messages and decision-making suggestions in real time.



CTSP Smart Sewage Plant Management System

The intelligent operation management system, including the intelligent emergency response control system for sewage discharge and the sewage sewer system, ensures that the water quality discharged by sewage plants all year round meets the national discharge water standards and the strict standards of environmental assessment, builds water quality (quantity) monitoring and cameras at important nodes of sewers to collect big data for analysis, and quickly provides decisions by combining multimedia such as web pages, TV walls, newsletters, LINE and display robots. In addition, a second water recycling treatment mold factory was built, and the intelligent remote control effectively solved the sewage treatment problem in CTSP experimental middle school.



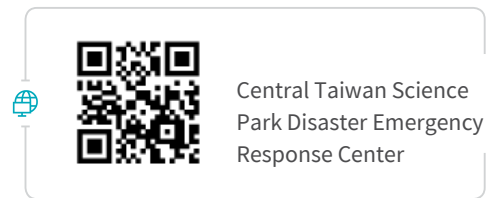
In-situ earthquake early warning system

In order to improve the earthquake disaster and emergency response function of the park, the "in-situ earthquake early warning system" was established, which was deployed in five CTSP parks. By using the speed difference between P wave and S wave, it was possible to give an early warning in a few seconds to several tens of seconds for earthquake response.



Transparency of pipeline information

In addition to the pipes for people's livelihood, there are also special industrial gases and other pipelines needed by the manufacturers in the park. The bureau has set up a patrol notification system for facility workers to manage. If inspectors find any damage, they can immediately notify the repair, and the repairers will send back the latest status after the completion. In addition, a new broadband pipeline maintenance system was built to provide online application, notification and inquiry for the unit, so as to improve the efficiency of administrative operations.



2. Joint protection of information security

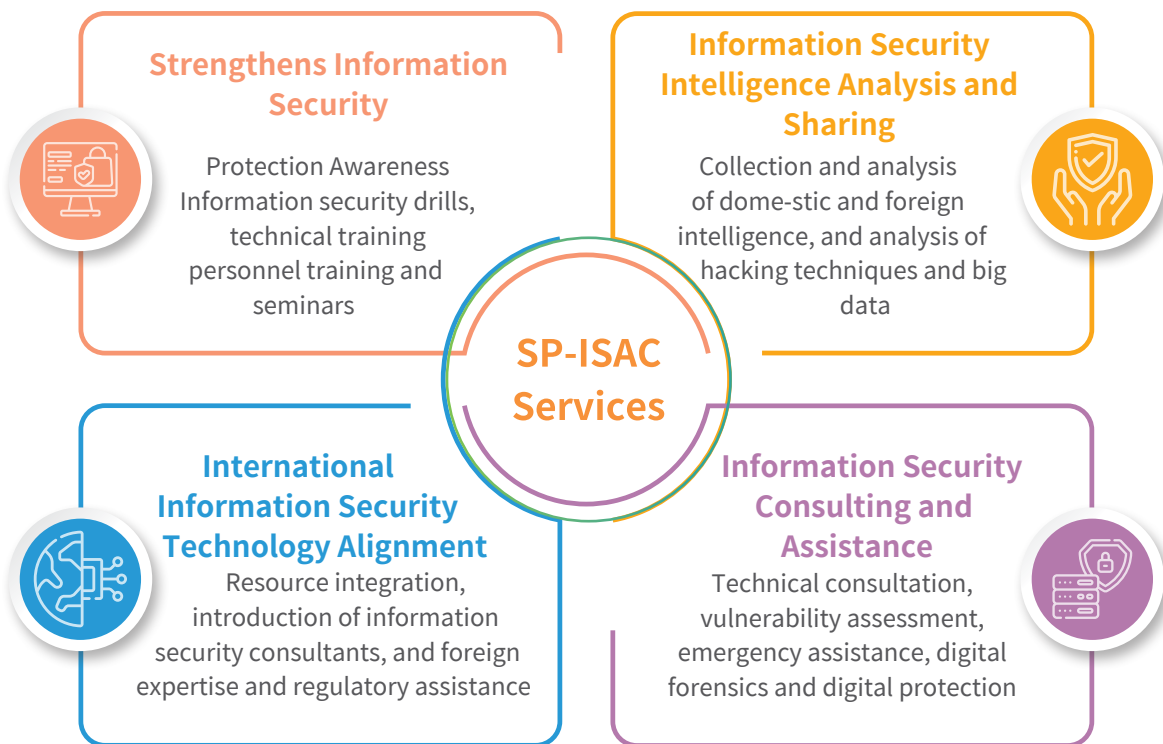
Through intelligent systems, we improve the resilience of the park, including intelligent disaster prevention and water information systems, earthquake early warning systems, and real-time updating of water information and earthquake information to reduce the losses in potential risk shocks. On the other hand, with the continuous innovation of network technique and technology, the introduction of digital information system can break the time and space constraints and help organizations improve their operational efficiency. With the increasing risk of information security, CTSP Bureau, as a government agency, passed the information security verification of ISO 27001:2013 many years ago, and added the privacy information management system of ISO 27701 :2019 in 2022. In addition, we regularly implement security measures such as security inspection, security and health inspection, security threat detection and management mechanism of Infocomm, government configuration benchmark, security weakness notification mechanism of Infocomm, internal information security and social engineering education and training according to the matters to be done in Infocomm Security Management Law, and continue to update software and hardware equipment to implement relevant information security protection. In the last three years, there has been no leakage of important information in this bureau. We also continue to cooperate with the Executive Yuan to promote various information and communication security management operations, and the co-construction computer room of NSTC and its three parks (HSP, CTSP and STSP) is also built in CTSP, which is under the responsibility of the project maintenance team, and the information security control measures are also implemented as required, hoping to provide perfect and safe information services for the three parks.

The Science Park Information Sharing and Analysis Center (SP-ISAC) is planned and promoted by NSTC and belongs to HSP, CTSP and STSP. Through:

- (1) Early warning: research and analysis of sharing information and international information and security technology from time to time.
- (2) Strengthen the internal security management and protection energy in the park: provide technical training, personnel training, seminars and meetings, and assist security drills.

On September 20, 2023, SP-ISAC held the APT (Advanced Persistent Threats) attack detection and protection course. According to the development trend of APT-related information security, it introduced the use of various common knowledge in the practical environment, built basic security defense technology based on background knowledge, and added various new application services as the technical core. In order to focus on the defense field of APT and reduce the risk of APT, it is necessary to implement vulnerability scanning, so as to assist enterprises to find vulnerabilities at the first time, and take immediate steps to fix vulnerabilities and curb hackers.

Protection objectives such as assisting in improvement and emergency response: grasp the overall real-time situation through the feedback of information on security incidents and network security threats from the manufacturers in the park, and release the information on security threats (such as information on product and equipment security vulnerabilities and blacklist of attack threats) to other manufacturers in the park to achieve joint defense.



Source: National Center for High-performance Computing

> **Greenhouse gas management**

Other core targets involved



● **Implementation content and promotion results**

1. Greenhouse gas inventory

The CTSP Bureau counts the greenhouse gas emissions in 2022 for the top 15 manufacturers accounting for the total turnover of the whole park, as shown in the following table (the greenhouse gas emissions in 2023 will be collected after being counted by the greenhouse gas emissions information platform of the Climate Change Department of the Ministry of Environment in August 2024). Among the above-mentioned 15 manufacturers, there are only five manufacturers in the first batch who should be checked and registered for greenhouse gas emissions (operation control, the base year is mainly based on the inventory of each factory), which is required to be completed the entire factory previous greenhouse gas emissions at the end of August each year.. For those inventory and registration of greenhouse gas emissions that are not required, there are 2 companies checked and registered by entrusting third- party inspections while the remaining 8 are checked independently.

2022 Annual gas emissions that account for the top 15 companies in the Park's total turnover

Number of manufacturers	15
Scope 1 (10,000 metric tons of CO₂e)	77.66
Scope 2 (10,000 metric tons of CO₂e)	563.42
Total emissions (10,000 metric tons of CO₂e)	641.08
Turnover (NT\$100 million)	11,698.11
Emission intensity (10,000 metric tons of CO₂e /NT\$100 million)	0.05

In addition, this Bureau requires manufacturers stationed in Houli Park to conduct regular greenhouse gas inventory and reporting operations based on the EIA document of the Houli Park, and implement the greenhouse gas inventory and statistics of Houli Park in August each year. (data statistics for 2023 have not been completed before the issuance of this report). Among the manufacturers in Houli Park, there are only 2

of the first batch of manufacturers that should check their registered greenhouse gas emissions (operational control rights; the base year is based on the inventory check of each factory), while the rest perform self-inspection.

The above-mentioned CTSP Houli Park greenhouse gas inventory inspections are conducted in accordance with ISO 14064-1 and the greenhouse gas inspection guidelines. The carbon dioxide emission coefficient is calculated in accordance with the statistical method of the National Greenhouse Gas Inventory Guidelines (referred to as IPCC 2006 Guidelines) formulated by the IPCC, and the GWP value according to the regulations of the Environmental Protection Agency. The warming potential of the fourth assessment report of the IPCC in 2006 should be adopted after 2016.

CO₂e Emissions in Houli Park

Project/Year	2019	2020	2021	2022
Scope 1 (10,000 metric tons of CO ₂ e)	11.49	13.57	17.10	15.25
Scope 2 (10,000 metric tons of CO ₂ e)	97.64	109.72	131.05	148.34
Total emissions (10,000 metric tons of CO ₂ e)	109.13	123.29	148.15	163.59
Turnover of Houli Park (NT\$100 million)	1,340.68	1,192.36	1,417.75	1,604.15
Emission intensity (10,000 metric tons of CO ₂ e/NT\$100 million)	0.08	0.10	0.10	0.10

2. Promote net zero carbon emissions

On 23 March 2022, the Ministry of Science and Technology and the three Parks' Bureaus held the "6th Meeting of the Park Business Report", which aims to formulate specific carbon reduction promotion methods, and to cooperate with the formulation of relevant indicators and incentives and other implementation measures, and to guide park manufacturers to work together to promote carbon reduction in order to achieve the carbon reduction target of the science park in 2025.

In 2022 and 2023, the Bureau held two discussion meetings to promote greenhouse gas emission reduction in the park, to strengthen the independent carbon reduction capacity of park manufacturers, and held the "Award for Excellence in Carbon Reduction in Science Park" to encourage park manufacturers to actively promote energy conservation and carbon reduction through competition, so as to promote all parks to work together to implement carbon emissions and achieve their goals.



Discussion meeting on promoting greenhouse gas reduction in the park



Awards for Excellence in Carbon Reduction in Science Park

In response to frequent updates or amendments to various environmental protection related laws and regulations, this Bureau will hold various legal promotion briefings from time to time every year to strengthen business attention and comply with various environmental protection laws and regulations. From 2022 to 2023, a total of 10 regulatory publicity briefing meetings, 2 chemical inspection publicity briefing meeting, 1 environmental protection seminar, 1 environmental protection related topic briefing meetings were held, and 31 on-site counseling meetings of experts and scholars in the park manufacturers were handled.

In addition, the Bureau also provides consulting services on environmental protection business for park manufacturers. Through face-to-face communication with the industry or case-by-case counseling, we can understand the difficulties of the industry in the process of operation or in the writing of environmental protection documents, and then assist in finding solutions. From 2022 to 2023, we offered consulting services in a total of 2,539 cases. (Excluding summary regulatory consultation and case status inquiry)



Waste recycling technology publicity briefing



Environmental protection seminars



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Intensive planning

According to the framework of "General Description of Taiwan 2050 Net Zero Emission Path and Strategy" released by the National Development Council, we actively promote the related actions of net zero transformation. Our specific measures include the construction and integration of carbon reduction capacity, the promotion of energy conservation, energy storage and energy creation, process carbon reduction and circular economy, and the creation of a green and low-carbon living environment. In addition, we cooperate with relevant policies or regulations such as the Climate Change Response Law and the international carbon border adjustment mechanism. Coaching manufacturers to accelerate the voluntary reduction and product carbon footprint management, and obtain the energy of carbon rights exchange, so as to reduce carbon emissions and enhance the international green competitiveness of manufacturers. By 2023, the carbon reduction has reached 468,900 metric tons of CO₂e, and it is estimated that the carbon reduction will reach 1,054,200 metric tons of CO₂e by 2025, and efforts will continue to be made towards the goal of zero emission in 2050.

In terms of information security, CTSP will actively promote information security management and promotion seminars in order to enhance the information security awareness of employees and park manufacturers and reduce the risk of information security incidents. In the aspect of smart sustainable development plan, CTSP takes various water resources response plans: smart water and electricity system, set up smart disaster prevention water information system, CTSP smart sewage treatment plant management system, on-site earthquake early warning system, and transparency of pipeline information for avoiding wasting water resources, formulate decision-making support scripts for typhoon and flood disasters, solved the sewage treatment problem in CTSP experimental middle school, improve the earthquake disaster and emergency response function of the park, improve the efficiency of administrative operations.

vision : Social integration

Main axis of governance: Building a sustainable management and high-quality investment environment

Core Goals 5 and 8



Achieve gender equality and the empowerment of all women



Promote inclusive and sustainable economic growth, enhance labor productivity, and ensure that all people enjoy quality employment opportunities

Corresponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>5.5 Encourage administrative units at all levels to employ women as directors and heads, promote women's participation in politics and political parties, increase the ratio of female police officers and female managers of listed companies, and provide guidance and encourage women to be corporate representatives.</p>	<ul style="list-style-type: none"> ● The rate of employing women as supervisors at or above the first level is 50%. ● Implement labor laws and gender equality propaganda at least three sessions a year. In 2022-2023, the total number of participating manufacturers reached 372 sessions, and the number of participants exceeded 530. ● 70 inspections of working conditions (including gender equality) are carried out every year. ● The number of occupational safety and health inspections was 689 in 2022 and 647 in 2023. ● The death rate of one million people in major occupational accidents is maintained below 20. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● The proportion of women employed as supervisors at or above the first-level units is at least one-third. ● Perform 500 inspections of working conditions. ● At least three publicity meetings on the implementation of labor laws and gender equality work laws are held every year. ● Check the working conditions (including gender equality) at least 70 times a year. ● 40 sessions of on-the-spot counseling, publicity meetings, education and training, emergency drills and sharing meetings are held every year. ● The death rate of one million people in major occupational accidents every year is less than 20. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● At least one-third of women are employed as supervisors at or above the first-level units. ● Carry out at least 500 occupational safety and health inspections every year. ● Promote occupational safety and health on-site counseling, at least 10 sessions a year. 	<p>Labor Inspection Section, Labor Administration Section Personnel Office</p>

Corresponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
8.7 Promote work safety and protect the rights and interests of female workers participating in trade unions.	<ul style="list-style-type: none"> Promote occupational safety and health on-site counseling, with a total of 33 sessions in 2022 and 85 sessions in 2023. 	<ul style="list-style-type: none"> Construct a sustainable and disaster-free healthy workplace environment, and create zero work-related injuries and zero occupational accidents. At least four publicity meetings on the implementation of labor laws and gender equality work laws are held every year. Check the working conditions (including gender equality) at least 75 times a year. 	

Challenges/opportunities faced

CTSP Bureau cooperates with NSTC's planning, actively develops high-tech industrial settlements and promotes local economy. Besides land resources and hardware facilities, talent quantity is also an important condition for building a high-quality investment environment. Therefore, the Administration actively assists the cultivation of high-tech professionals, and encourages enterprises to establish safer and more stable working conditions, promote equal rights in the workplace and attract more talents to work in CTSP, so as to promote the stable operation and even sustainable operation of enterprises.

Specific actions and promotion highlights

> **Create a Safe, Healthy and Happy Workplace**

Other core targets involved



Implementation content and promotion results

1. Promote equal rights in the workplace

In order to promote gender equality in decision-making, CTSP Bureau has 14 heads, deputy heads, chiefs of staff and heads of first-level units, including 7 female heads, and the rate of employing women as heads of first-level units and above is 50%. In order to cultivate the gender sensitivity of our staff, we incorporated a gender perspective into the planning and implementation of various policies and decrees, and conducted gender mainstreaming training courses in various ways, such as special lectures, online learning or film appreciation. In 2022 and 2023, the participation rate was over 90%.

In order to ensure the equal employment opportunities of employees in the CTSP Bureau, it has set up the Employment Discrimination Appraisal and Gender Work Equality Council to prevent employers from discriminating against job seekers or employees they employ, or from unfair treatment with gender work rights. From 2022 to 2023, a total of four employment discrimination appraisal and gender equality working committees were held, and three cases of gender equality work complaints and one case of employment discrimination complaints were considered (three cases did not violate the gender equality work law or the employment service law, and one case was withdrawn).

In order to strengthen and implement relevant human rights issues, in 2022-2023, seminars were held in accordance with the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Gender Equality Work Law to promote relevant laws and regulations in the workplace. The lectures included laws and regulations on gender equality, prevention and treatment of sexual harassment, etc. The Health Bureau of Taichung Municipal Government was also invited to promote "Creating a Friendly Breast-feeding Environment in the Workplace", so as to enhance the professional knowledge of business personnel of manufacturers and promote equal rights in the workplace. A total of 4 seminars were held, with a total of about 185 manufacturers participating.

This Bureau actively counsels park manufacturers to promote equal rights in the workplace, and annually organizes the Outstanding Public Institution evaluation activity on Promoting Equal Rights in the Workplace to encourage enterprises to actively implement labor laws and regulations and build a harmonious working environment. In the 2021 event, Taiwan Nitto Optical Co. earned the Special Award and AUO Crystal Co., and AUO Co. the Outstanding Award. In addition to statutory matters, the promotion of other workplace equality issues includes the promotion of gender wage equality and the Female Executives Association, flexible work arrangements, priority parking spaces for pregnant women and exclusive dust-free clothing, etc. The intention to promote equal rights in the workplace can be seen everywhere.

List of Winners

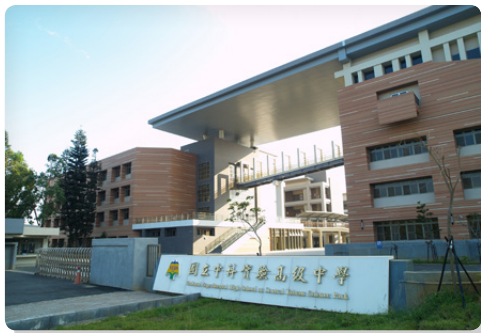
Award 2022	Name of award-winning manufacturer	Award 2023	Name of award-winning manufacturer
Excellent award	MICRON MEMORY TAIWAN CO., Ltd.	Excellent award	TSMC
Merit award	Gallant Precision Machining Co., Ltd.	Merit award	MICRON MEMORY TAIWAN CO., Ltd.
	EPISTAR CORPORATION		Corning Display Technologies Taiwan
	WINSTAR Display Co., Ltd.	Gallant Precision Machining Co., Ltd.	

2. Provide holistic education resources for children in the park

In order to meet the educational needs of employees' children in the park, CTSP Bureau established the National CTSP Experimental High School in 2010, followed by junior high school departments in 2016, bilingual departments in 2019 to enroll students in grades 7-12 and 1-6 in 2021, non-profit kindergartens in 2022, new school buildings in 2023, and the second quarter of 2025 is expected. In August of the same year, the elementary school department was established and enrolled students, completing the last educational puzzle of CTSP's "five-in-one", providing a good and high-quality school environment from kindergarten to high school, and cultivating future generations with various abilities and knowledge to benefit the students in the central region.

Science Park is the place with the highest fertility rate in our country. The construction of new school buildings in CTSP Shizhong will improve the education and nursery resources in the park. The non-profit kindergartens in Taichung Park practice the government's early childhood education policy and advocate the core values of "public-private partnership, professional integration, community service and equality and respect". In line with the double-income family life style, kindergartens provide childcare services from 8 am to 5 pm every Monday to Friday, and can extend the nursery time to 7 PM, and take care as usual in winter and summer vacations.

In addition, CTSP is also committed to building a high-quality campus that combines science and technology with humanities, so that students can grow up in the innovative spirit of the science park, which not only inspires students' innovative ideas and practices, but also gives consideration to the cultivation of humanities.



The National CTSP Experimental Senior High School



kindergarten in Taichung Park

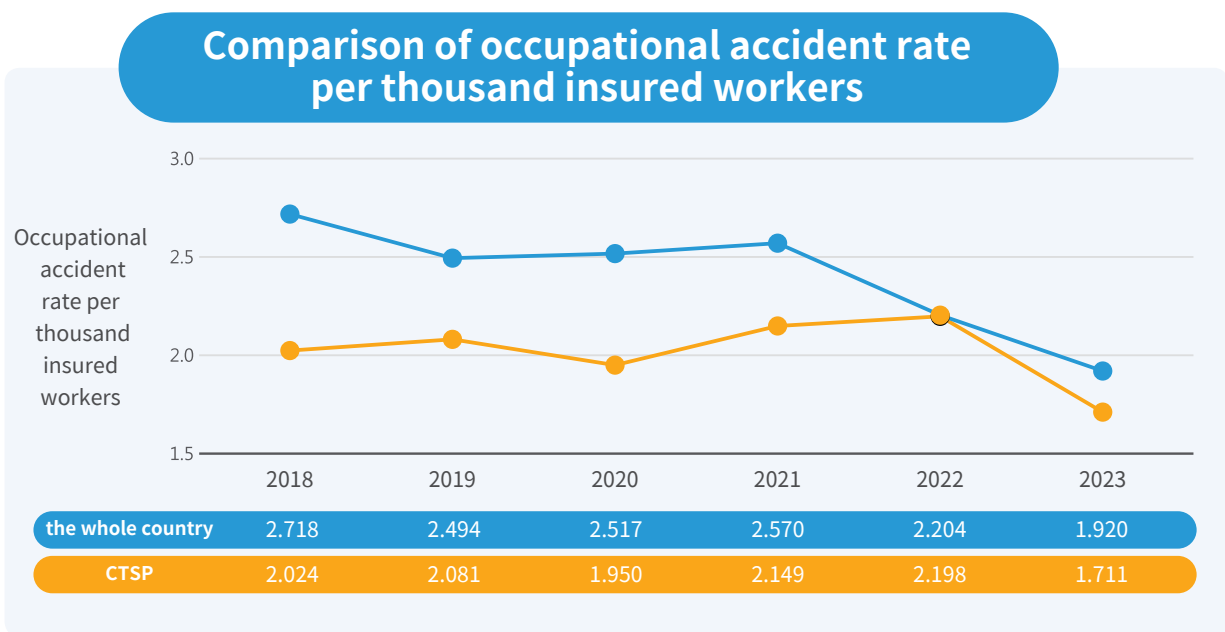
3. Create a safe and healthy park

In advocating occupational safety and health, counseling, and performing labor inspections, the Park adopts a one-stop service and advance safety assessment and guidance mechanism through information technology to strengthen business units' self-management and expansion of the full staff participation mechanism. In addition, diversified use of disaster prevention resources is utilized in order to effectively improve the overall safety and health standards of the Park, promote labor health and labor inspection efficiency, and construct a safe, healthy, and humanized labor environment.

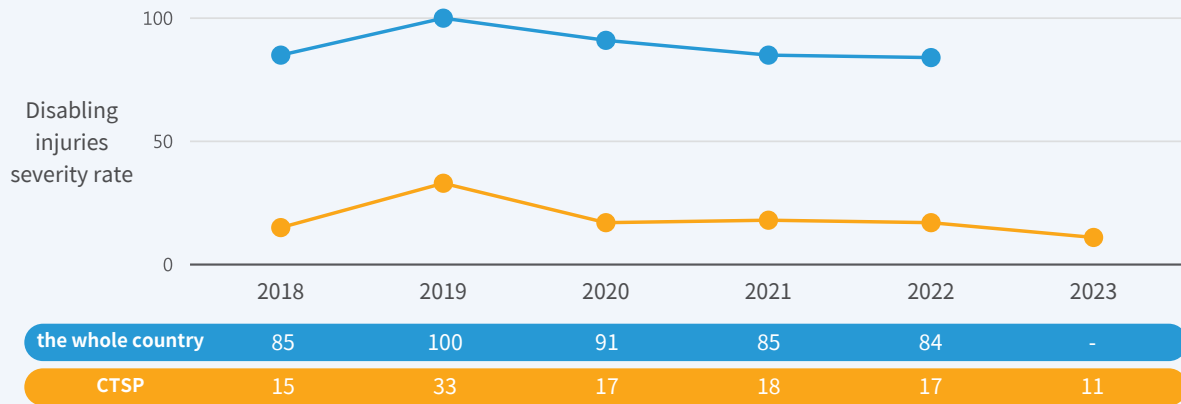
The health and safety status of workers in the CTSP from 2022 to 2023 was as follows :

Project/Year	2022	2023
Disabling Injuries	116	93
Disabling Injuries Frequency	1.11	0.90
Disabling Injuries Severity Rate	17	11

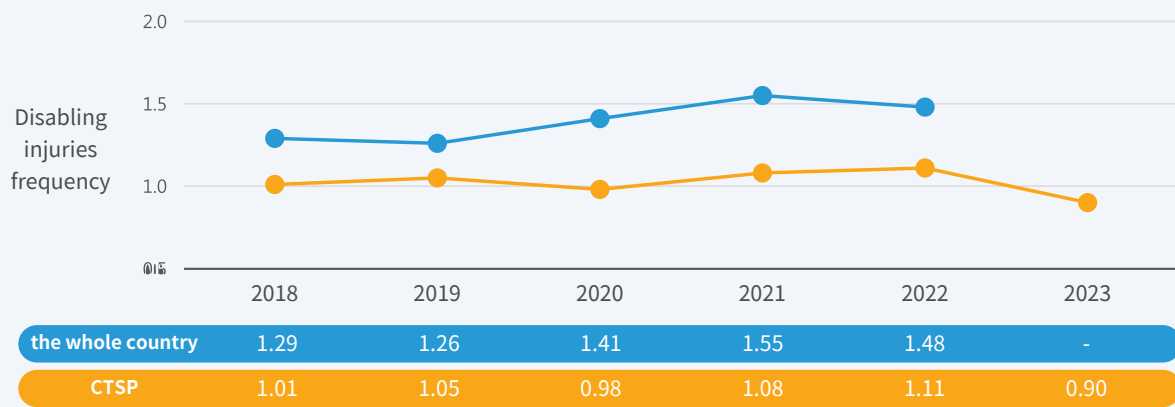
There were 1 deaths attributed to work- related occupational disasters each in 2022 and 2023. In addition to conducting occupational disaster investigations in accordance with the law and writing a report to the Occupational Safety and Health Administration of the Ministry of Labor for review, counseling was given to the public institutions to make improvements and strengthening the concept of occupational safety and health. Related occupational disaster cases are expanded to publicize the knowledge of the park manufacturers to review similar risks in the factory and take preventive measures to prevent the same disaster from recurring.



Statistical comparison of the severity rate of occupational disability injury



Statistical comparison of the rate of occupational disability injury frequency



🎯 Improve the safety and health performance of the park

CTSP Bureau actively uses inspection, guidance and publicity to improve the safety and health culture in the park, and requires the park institutions to implement independent management measures to ensure a safe and healthy working environment and good working conditions through labor inspection methods such as hierarchical management, diligent investigation and severe punishment.



Discussion, project counseling and inspection by senior managers of occupational accident factories

◎ Strengthen chemical safety management

In order to strengthen the inspection of the implementation of chemical and fire safety management, and to review the improvement measures, the bureau established a chemical self-declaration system many years ago to integrate the chemical information in the park, and required the manufacturers to simultaneously put the chemical substance list, quantity and layout map in the sentry post of the factory and other places that can be easily obtained and provided to the disaster relief units immediately, in coordination with the guidance and joint inspection mechanism. Jointly inspected with Taichung Municipal Government, Yunlin County Government Fire Bureau, Environmental Protection Bureau, and Chemical Management Department of Ministry of Environment for public dangerous goods, toxic substances and places where chemical substances are concerned, totaling 28 times, making the disaster prevention and rescue of the park perfect and will continue to improve in the future.

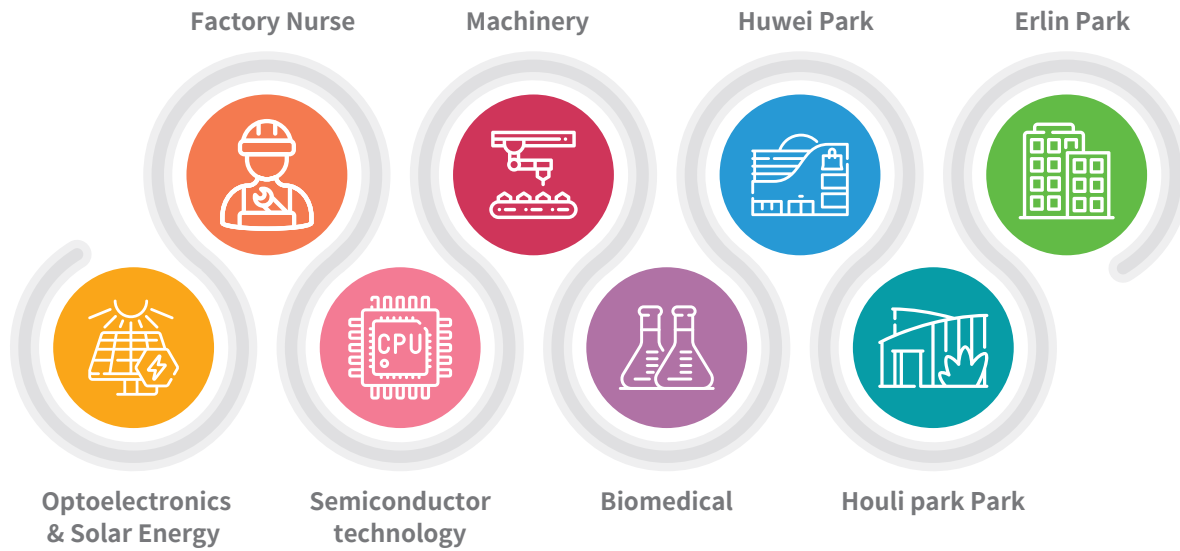
◎ Physical and Mental Wellbeing of Park Workers

The CTSP Bureau's industrial and commercial service building has an employee clinic on the first floor of the Central Taiwan Science Park. It is operated by the affiliated hospital of China Medical University. It also has outpatient clinics for occupational medicine, Chinese and Western medicine, and rehabilitation. In 2022 and 2023, there were a total of 11,361 and 10,703 outpatient visits. In addition to outpatient clinics, it also handles various health promotion advocacy such as first aid education and training for personnel, breast ultrasound exam, pap smear test, adult health exam, abdominal ultrasound, oral cancer prevention, sports, mental health, physical fitness, vaccination, and other lectures and consultations, etc. Professional medical doctors are also invited to the Park companies with a number of 7,132 and 6,664 faculties participated in 2022 and 2023 for the physical and mental health of the workers in the Park and improving the occupational health promotion work of the park manufacturers.

◎ Occupational Safety Advocacy

In order to promote a culture of industrial safety in the Park, the CTSP Bureau actively counsels the CTSP Association for Occupational Safety and Health Promotion which is divided into eight major occupational safety families. Though the method of large factories leading small factories, regular meetings are held every quarter to promote safety and health laws, exchange disaster prevention information, share safety and health management experience, discuss chemical management and emergency response to accidents, and mutual support for rescue facilities, etc., giving full play to the role mutual support plays in emergency response to accidents.

Eight Major Occupational Safety Families



Implementation Status of Occupational Safety and Health from 2022 to 2023

Activities related to Occupational Safety and Health	2022	2023
Project Counselling Plan	2 plans	2 plans
Laws and Regulations Training and Briefings	12 sessions	15 sessions
Workplace Safety Performance Unit and Health Promotion Visits	1 session	1 session
Occupational Safety and Health Seminars	1 session	1 session
Labor Supervision and Inspection Plans	18 items	18 items
Labor Supervision and Inspections	689 sessions	647 sessions
Violation of Occupational Safety and Health Act	71 acts	67 acts
Work suspensions	30 occurrences	26 occurrences

Relevant implementation of labor laws (including gender equality work law) from 2022 to 2023

Activities related to labor laws and regulations (including gender equality work law)	2022	2023
Laws and Regulations Training and Briefings	3 sessions	4 sessions
Inspections of working conditions(including gender equality)	70 sessions	83 sessions
Friendly workplace visit	1 session	1 session



Seminar on disaster prevention and response, safety and health



Smart Technology Occupational Safety and Health Exhibition



Fire extinguishing training with real fire



Visits of Outstanding Industrial Safety Units

◎ Scientific and technological work safety improves the effectiveness of safety and health management

In recent years, Central Taiwan Science Park Bureau has actively advised park manufacturers to use AI image recognition and virtual reality technology to assist disaster prevention measures and improve the effectiveness of safety and health management. Through publicity, observation and achievement sharing, park manufacturers are encouraged to invest in innovative technology and intelligent technology to strengthen the effectiveness of hazard prevention and enhance the industrial safety culture, and create sustainable management and labor welfare in the park through quality labor health care services and health promotion. In 2023, CTSP Bureau used the virtual reality (VR) chemical hazard general education course entrusted by the Institute of Labor and Occupational Safety and Health to handle three sessions of chemical hazard prevention education and training, and improved the safety and health management ability of chemical storage tank maintenance, chemical facility pipeline maintenance, storage tank filling and chemical waste liquid disposal in public institutions through the somatosensory interaction of virtual reality.

◎ Disaster prevention drills in the Park

On October 19, 2022, the Bureau handled the "2022 Central Taiwan Science Park Disaster Prevention and Rescue Observation Exercise" with MOSA INDUSTRIAL CORPORATION, the Central Environmental Accident Professional and Technical Team of the Ministry of

Environment, Yunlin County Fire Bureau, Environmental Protection Bureau and other emergency defense units. This exercise simulated a major earthquake with a magnitude of 5 or above in the central region, which caused damage to the factories and buildings in Huwei Park. The collision between the tank truck carrying the food additive nitrous oxide and the stacker carrying the public dangerous goods nitroguanidine, resulted in accidents such as fire on the stacker, injury to the driver, being trapped and chemical leakage. On October 18, 2023, we handled the "2023 Central Taiwan Science Park Disaster Prevention and Rescue Observation and Exercise" with the emergency defense units such as Silicon Precision, Taichung Municipal Government Fire Department, Environmental Protection Bureau, and the Central Environmental Accident Professional and Technical Team of the Ministry of Environment. The exercise scenario is to simulate a strong earthquake with a magnitude of more than 5 in the central region, causing damage to the factory buildings in Taichung Park. And the handling of accidents such as the collision between a tank truck carrying N-Methylpyrrolidone (NMP) and a stacker carrying barrels of acetone, which caused the stacker to catch fire, the driver to be injured, the driver to be trapped and the chemical leakage, and the handling of unmanned aerial vehicles breaking into the accident site without permission.



In 2022, CTSP Park observed and practiced disaster prevention and rescue



The fire department used water mist to guard the tank car from leaking and stopping drilling



In 2023, CTSP Park observed and practiced disaster prevention and rescue



The factory in the park drills the chemical leakage prevention response, and the fire department protects it with water mist




Intensive planning

CTSP Bureau is committed to creating a high-quality investment and employment environment. With the improvement of national quality and labor consciousness, workers have paid attention not only to career development prospects, but also to occupational safety, human rights, education, health care and other conditions in the overall consideration of employment. Therefore, this bureau also actively promotes gender equality in the workplace, labor inspection, occupational safety and health counseling, etc. In order to improve the educational resources in the park, CTSP has planned to become a "five-in-one" complete middle school covering kindergarten to senior high school, helping employees in the park to achieve a balance between work and family.




Core Goals 9 and 11



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

Construct affordable, safe, environmentally friendly, resilient and sustainable transportation



11 SUSTAINABLE CITIES AND COMMUNITIES

Construct cities and villages with inclusive, safe, resilient and sustainable characteristics

Corres-ponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>9.1 Improve the traffic volume of highway public transport, Taiwan Railway and High Speed Rails.</p> <p>9.4 Reduce the number of road traffic accident deaths.</p> <p>11.2 Provide a safe, affordable, accessible and sustainable transportation system for all. Including improving road safety, expanding public transport and meeting the transport needs of the disabled, the elderly, women and children.</p>	<ul style="list-style-type: none"> ● The number of CTSP tour bus services in 2022 is 79,120 and 95,604 in 2023. ● The number of shuttle bus service in Huwei Park was 4,620 in 2022 and 5,452 in 2023. ● The proportion of traffic accidents was 57.14% before the establishment of the "Pilot Plan of Smart Road Safety System in Science Park" (2019), and it decreased after the establishment, reaching 32.61% in 2022 and 26.08% in 2023. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● The number of CTSP tour bus services exceeds 95,000 every year. ● The number of shuttle buses in Huwei Park exceeds 5,000 every year. ● The Trial Plan of Smart Road Safety System in Science Park will be improved as needed. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● The number of itinerant bus services in CTSP Park exceeds 100,000 every year. ● The number of shuttle buses in Huwei Park exceeds 6,000 every year. ● The Trial Plan of Smart Road Safety System in Science Park will be improved as needed. 	Traffic planning section
<p>11.3 Construct and implement the planning and management of cities and villages with public participation, social inclusion and sustainable development.</p>	<ul style="list-style-type: none"> ● Handled the "All-People Coastal Beach Cleaning Activities for Environmental Protection Homes", and cleaned up 860 kilograms of garbage in 2022 and 550 kilograms in 2023. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● Handle the "Clean Beach Activities for All People in Environmental Protection Homes" and clean up 500 kilograms of garbage. ● Handled 10 meetings of Central Taiwan Science Park Taichung Park, Houli Park (Houli Base and Qixin Base) and Erlin Park "Environmental Protection Supervision Team". 	Environment protection section

Corres-ponding to specific goals	Core goal approach (2022-2023 performance)	Customized tracking indicators (customized short, medium and long-term goals)	Unit
<p>11.3 Construct and implement the planning and management of cities and villages with public participation, social inclusion and sustainable development.</p>	<ul style="list-style-type: none"> ● Organized 10 meetings of "Environmental Protection Monitoring Group" of Central Taiwan Science Park Taichung Park, Houli Park (Houli Base and Qixin Base) and Erlin Park in 2022 and 2023 respectively. ● Conducted 44 publicity sessions of "Strengthening Neighborhoods, Health Care Plan", with a total of 1,652 telephone interviews and 1,214 health checks. 	<ul style="list-style-type: none"> ● Every year, 40 publicity meetings, 950 telephone interviews and 900 health checks of "Strengthening Neighborhoods, Healthcare Plan" are held. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● Handle the "Clean Beach Activities for All People in Environmental Protection Homes" and clean up 500 kilograms of garbage in 2030. ● Handle 10 meetings of Central Taiwan Science Park Taichung Park, Houli Park (Houli Base and Qixin Base) and Erlin Park "Environmental Protection Supervision Team". ● Every year, 40 publicity meetings, 950 telephone interviews and 900 health checks of "Strengthening Neighborhoods, Healthcare Plan" are held. 	<p>Environment and Labor Affair Division</p>
<p>11.12 Improve the energy saving and carbon reduction benefits of buildings.</p>	<ul style="list-style-type: none"> ● As of 2023, 42 buildings have obtained the Green Building Label, 3 diamond-level smart building, 1 diamond-level ecological community and 6 have obtained the green factory label of the Ministry of Economic Affairs. 	<p>Short-term goals (2024~2025)</p> <ul style="list-style-type: none"> ● In coordination with the development project of public buildings in the park and the progress of building factories by the stationed manufacturers, it is estimated that one building with green building label or above will be obtained. <p>Medium and long-term goals (2030)</p> <ul style="list-style-type: none"> ● If the construction cost of public buildings is more than 50 million, green building signs should be obtained according to the regulations. It is estimated that there are 4 buildings with green building labels or above. ● Continue to promote manufacturers to obtain green building label certification. 	<p>Planning and construction section</p>

Challenges/opportunities faced

Since its inception, the CTSP has been committed to balancing economic development, social harmony, and environmental protection. In the past, the CTSP has faced criticism from local groups regarding the potential impact of science park development on the surrounding communities' living environment. However, guided by the spirit of public service, the CTSP has actively listened to public opinion and implemented improvements based on local resources and needs. Through concrete actions, the CTSP has built a sustainable science park that promotes "co-prosperity of production, life, ecology, and life." The CTSP continues to maintain good relationships with surrounding residents through communication and follow-up monitoring mechanisms. The CTSP has also attracted various lifestyle service providers and planned activities and facilities that encompass food, clothing, shelter, transportation, education, and recreation, creating a living environment that is suitable for both living and working. Additionally, the CTSP plays an active role in ecological conservation.

Specific actions and promotion highlights

> Convenient and Intelligent Service

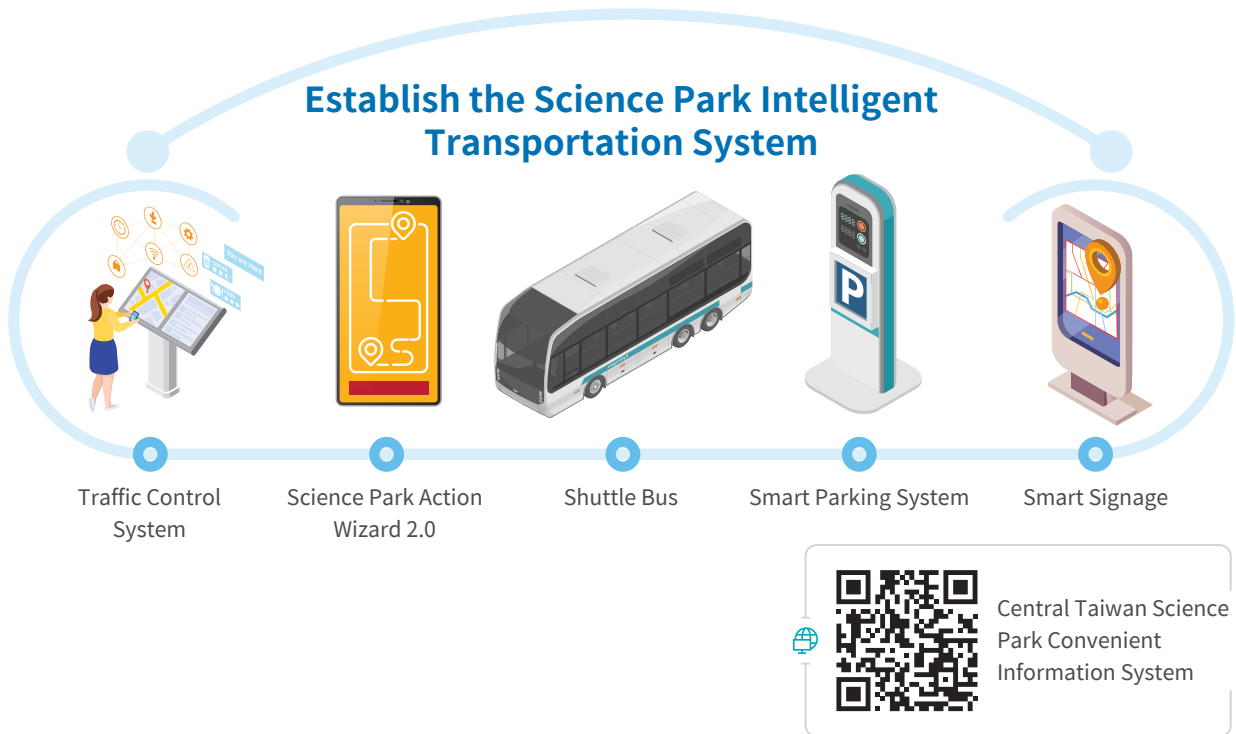
- **Implementation content and promotion results**

1. Intelligent transportation system

CTSP has made great achievements in promoting the construction of high-tech industrial settlements in the central region, and the traffic flow in and out of the park is huge. In order to reduce the traffic accident rate and waiting time, the bureau has developed an intelligent transportation system in the park, using ICT technology to integrate traffic control, mass transportation and parking lot information, and improve the convenience of employees and related industries in commuting and contacting public transportation.

CTSP Traffic Convenience Information Network can quickly find out the real-time dynamic information of road traffic conditions, buses, parking lots and so on in CTSP Park. In order to improve service quality and provide more convenient services, the bureau updated the traffic convenience information network in 2022, and the number of page views in 2023 exceeded 32,000. The shuttle bus in Huwei Park served 10,072 passengers and traveled 21,675 kilometers, which was equivalent to reducing CO₂ emission by 5.7 metric tons. The shuttle bus in CTSP Park took 174,724 passengers

and traveled 312,684 kilometers, which was equivalent to reducing CO₂ emission by 99.6 metric tons. (Calculation method: The existing shuttle buses are all the latest sixth phase emission environmental protection standards, and it is estimated that the carbon reduction calculated by changing the shuttle bus is about 0.57 kgCO₂/ person).



In order to improve the problem of collision between right-turning cars and straight-moving locomotives, the Pilot Project of Smart Road Safety System in Science Park was set up at two important intersections in Taichung Park in 2021, and the dynamic warning information is provided by sensing equipment to detect the vehicle dynamics before the possible accident, thus effectively improving the road traffic safety in the park. The proportion of traffic accidents in the pilot area to the total intersection accidents dropped sharply from 57.14% in 2019, to 32.61% in 2022 after the system was established, and to 26.08% in 2023.



2. Industrial and commercial service facilities

CTSP has banks, convenience stores, restaurants, large conference halls, and entertainment places after work, which makes the functions of the park more convenient and complete. In order to enable the park manufacturers, visiting guests and the public to enjoy a good network environment and industrial and commercial services, the bureau continues to improve the relevant construction and services in the park, and the establishment is as follows:

Free Wi-Fi in the Park

Wi-Fi hotspots have been set up in the public spaces of the CTSP for the convenience of park manufacturers, visitors and employees to use the Internet for free. To date (December 2023) of the project, a total of 179 wireless network hotspots have been completed, with an achievement rate of 293%, and has been accessed a total of 1,589,844 times to the end of December 2021.

Business Service Platform Website

A total of 30 manufacturers have been stationed in the Bureau's Industrial and Commercial Service Building by the end of December 2023, with an occupancy rate of 100%, encompassing financial, medical, employment, postal, transportation, catering, corporate finance, as well as accounting and law firms and other related industrial and commercial service industries, enhancing operational efficiency. In order to enhance the industrial and commercial service information of each Park, the Bureau established the Business Promotion Platform Website. This platform has three main functions: Mobile App download, industrial and commercial service information and related links.



Business Service Platform Website



Business Service Platform Website

Taxi calling service system

In order to provide convenient transportation services for the public, a "taxi calling service" system is added to the security counter in the lobby on the first floor of the administrative building, which can call a taxi through simple network operation and quickly solve the problem of riding. In addition, the same car-calling system has been added to single and family dormitories in Taichung Park, and guests and colleagues in need are welcome to make good use of it.



Quickly solve your ride needs through online inspection operations



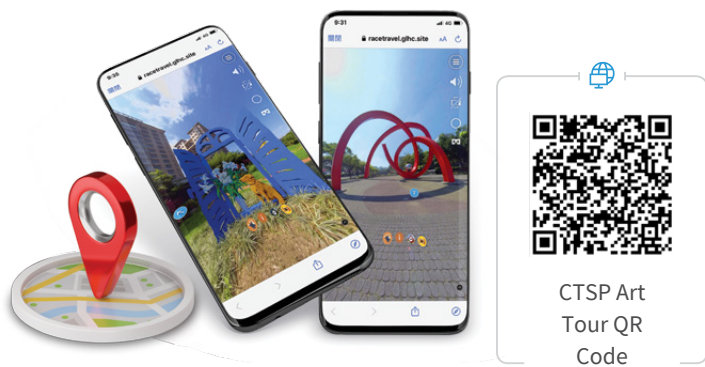
Setting "Taxi-hailing service" system on the first floor of the Bureau and the Industrial and Commercial Services Building

Bonded business management system

- In order to improve the efficiency of administrative services and meet the needs of practical operation and management, some provisions of the Measures for the Administration of Bonded Business in Science Parks have been revised since 2022. This review and revision of laws and regulations include the practical needs of self-built manufacturers of leased land to import bonded goods, simplify the operation procedures for bonded goods leaving the zone, strive for export timeliness and protect the rights and interests of enterprises in the park, so as to promote bonded business in science parks. After reaching a consensus with the Customs Department of the Ministry of Finance, the Customs in San Park and the Science and Industry Association of Taiwan Province Science Park, the draft notice was handled for 60 days on August 8, 2023, which was handled by HSP according to the revision procedure, and the NSTC was revised and promulgated on May 7, 2024.
- The bonded business management system is established in line with laws and regulations. The system includes operations for exporting bonded goods, commissioned processing operations for bonded goods, scrapping operations for bonded goods, and operations for transferring (yielding) bonded machinery and equipment, etc. In 2022 and 2023 the total number of applications was 273 and 260.

CTSP Art Tour: Smart Digital Surround-View Guide

In response to the development and operation history of the CTSP and the humanistic care contained within, the achievements of past public art projects are continued with digital collection import technology aimed at local memories and intellectual assets in five dimensions: people, culture, land, property, and scenery. In the first stage, a total of 9 public art works in Taichung Park and 2 in Houli Park are expected to be incorporated into a 3D Smart Digital Surround-View Guide to CTSP, so that VIPs and those unable to visit the Park in person can enjoy it online. The beauty of the art works in the Park, and the establishment of a 3D Guide Info Station in the Park, guides visiting VIPs and the public to cross the limitations of time and space, helping them enjoy the beauty of CTSP through 3D virtual reality surroundings at specific scenic spots, creating a benign science, technology and humanistic interaction, thus achieving the purpose of expanding the benefits of the public art installation project.



Customs clearance of the new electronic visa system

The customs clearance system of Science Park provides three-in-one services: visa, storage and transportation, customs declaration, and convenient customs clearance of import and export goods in the park, and is in line with the operation of "single window of customs, ports and trade" of the Customs Department, providing the processing operations for enterprises in the park to quickly and reliably grasp the information of import and export customs clearance and prevent manufacturers from counterfeiting, and providing uninterrupted services throughout the year. In 2022, after completing the two required functions of upgrading the application system information security protection and expanding the transmission of customs clearance data, the system function adjustment and testing will be continued in 2023, including the functions of intensive signing and examination and query of statistical reports. In 2023, there were 215 applications for various import and export licenses.

➤ **Create a Healthy Lohas CTSP**

Other core targets involved



● **Implementation content and promotion results**

1. Building a low-carbon ecological community

⊙ **Ecological community and green factory**

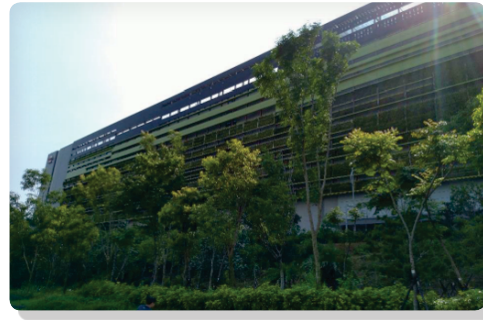
CTSP Park is committed to promoting the sustainable environment, hoping to achieve symbiosis and co-prosperity with environmental protection since development. Many achievements have been achieved in the buildings in the parks under its jurisdiction. In addition to continuing the work of "CTSP Taiwan Park Eco-community Certification (-EEWHEC)" in 2020 and obtaining the diamond-level eco-community green building label certificate, the Bureau became the fifth community in Taiwan to obtain the diamond-level label. By 2023, 12 buildings had obtained the EEWHEC diamond-level green building label, one gold-level green building label and eight bronze-level green building labels.

CTSP Bureau officially obtained the certificate of green building label for diamond-level ecological community in May 2020. The development of the park was carried out by "phased development" and "ecological construction method". Starting from the health and comfort of life, it carried out a comprehensive and systematic environmental protection design for the park environment, emphasizing symbiosis and common

prosperity with the environment. In 2022 and 2023, the carbon reduction benefits reached 10,120 tons and 6,942 tons respectively. In addition to continuing to provide energy-saving counseling to manufacturers, the bureau also attaches great importance to the green coverage rate of the park, and invites professional manufacturers to plant and maintain green plants in the park, which not only beautifies the landscape benefits of the park, but also achieves the effect of reducing carbon.



TSMC diamond-level green building



Three-dimensional greening of TSMC company



Copper-level green building of standard workshop in Huwei Park



◎ Park greening combined with leisure activities

The green space of the base is the basis of symbiosis and common prosperity between man and nature. CTSP Bureau continuously plans the landscape improvement project of the park every year, and continuously maintains the existing green belt. Therefore, the legal open space in each building base is set as concentrated as possible to cooperate with the shrinking space for greening, and the effect of carbon reduction is achieved by counseling the park manufacturers to save electricity. In 2023, 3,882 arbor trees and 110 shrubs were newly planted. 373 plants, carbon sequestration capacity is 223 metric tons/year, and the ecological green network connects parks and green spaces in the park with an area of about 239 hectares, accounting for more than 37% of the park area. Combined with the ecological flood detention pool park and the public open system planned before the development of each park, it forms a circular green belt boundary of each base, with a bicycle lane of about 6 kilometers. Nowadays, Taichung Park has become one of the routes for many cyclists to relax on holidays, and the park green spaces in each park have also become an important rest environment for residents in the surrounding communities.



Taichung Park Shuijuetou Park



Taichung Park shady trail

In order to enhance the communication between the park and its neighboring communities, we continue to organize visits for good-neighborly exchanges between relatives and friends. At the same time, we also hold a number of labor recreation and welfare activities every year, such as beach cleaning activities, softball competitions, road running, environmental education, etc., to promote the physical and mental health of employees in the park through activities.



Clean Beach Activity



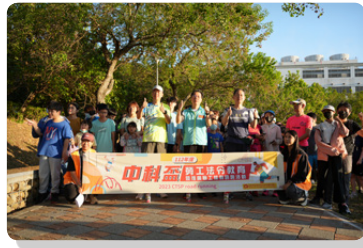
Clean Beach Activity



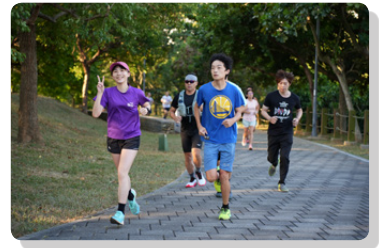
Ball competition



Ball competition



Road running



Road running

2. Good neighborly and friendly environment related activities

◎ Hosting related community activities

In order to strengthen mutual neighborly relationships with community groups, in 2022-2023, the Bureau assisted various organizations in organizing community events, including the Zhongyi Community Development Association of Daya District of Taichung City, Gentleman Association of Taichung City, Taichung FU AN Kiwanis International, Taichung City Croquet Promotion Association for People with Physical and Mental Disabilities, Taichung City Great Taichung Women's Association, Yong'an Community Development Association of Da'an District of Taichung City, Kende Community Development Association of Huwei Town of Yunlin County. A total of ten events were held.

◎ **Health Risk Assessment and Epidemiological Investigation**

According to the four major health risk assessment steps in the Technical Guidelines for Health Risk Assessments announced by the Environmental Protection Agency, this Bureau conducted five health risk assessments in Taichung Park, four in Houli Chising Park, and one in Erlin Park in 2023.

In order to take care of the community residents, Chising Park has continued to implement the Good Neighbor Health Care Project for residents in Houli District and Da'an District since 2011, providing free health checkups for eligible residents. From 2022 to 2023, 44 advocacy sessions, 1652 telephone interviews and 1,214 health check-ups were conducted. From 2011 to 2023, a total of 360 publicity sessions, 8,312 telephone interviews and 6,204 health check-ups were handled. In addition, after Chising Park started operation, an epidemiological follow-up survey was conducted every 5 years. As of 2023, a total of 2,400 questionnaire surveys and blood biochemical tests have been carried out.



Implementation of the Good Neighbor Health Care Project

◎ **Keeping Watch: The Water Environment Patrol Team**

The CTSP Bureau was invited by the Environmental Protection Bureau of Yunlin County to set up the Water Environment Patrol Team at the Huwei Science Park Sewage Treatment Plant. In addition to providing environmental protection expertise, experience and technology, the CTSP Bureau also uses the Patrol Team to perform the work of guarding adjacent rivers and waters, effectively grasp the changing trends of river water quality and quantity, and increase the environmental sensitivity of the patrol team through the gradual accumulation of local river inspection experience. Subtle changes in the river can be detected and notified as soon as possible to prevent illegal discharge or dumping by industry or the public, implementing the effectiveness of good neighborly relations. 53 patrol tasks were carried out in 2022 and 2023, and on July 23, 2022, they participated in the beach cleaning activity of "National Ocean Day 2022-Clean the Ocean and Walk in Mailiao Township".



National Ocean Day 2022-Clean the Ocean and Walk in Mailiao Township for Implementation of Clean Beach

3. Environmental protection tracking and supervision

According to the Environmental Impact Assessment Enforcement Rules, the competent authority of the purposed business should track the activities during the process or after the completion of the development. Therefore, the Ministry of Science and Technology established an environmental impact assessment tracking team for the development of the science park, which is composed of experts, scholars, and representatives of the park manufacturers and agencies. From 2012 to 2023 they performed 3 follow-up meetings with this Bureau.

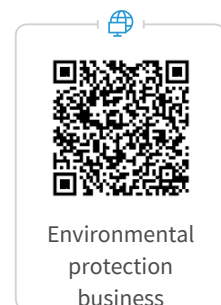
Before the development of CTSP Park, the environmental impact assessment documents were submitted for review in accordance with the Environmental Impact Assessment (EIA) law, and the environmental impact assessment briefing was conducted in accordance with the procedures. After the review was passed, the environmental impact assessment documents and commitments were indeed handled. Taichung, Houli and Erlin Park were all handled in accordance with the key points of environmental protection supervision, and an environmental protection supervision team was established. Taichung Park has a total of 5 experts and scholars (including environmental engineering, soil and water conservation and health risks), 5 representatives of non-governmental organizations, 16 local directors and 1 representative of local authorities, 1 representative of manufacturers and 28 external members. Houli Park has a total of 7 experts and scholars (including environmental engineering, soil and water conservation, environmental safety and public health), 7 district heads and directors, 4 additional members and 1 representative of local authorities. Twenty external members participated, including five experts and scholars (including environmental engineering, soil, land administration and environmental safety), five representatives of civil society organizations and four representatives of relevant institutions and units, and 14 external members participated, so as to enhance the extensive participation of environmental supervision, hold regular supervision meetings and keep track of the development of the park.



The 3rd meeting of CTSP Taichung Park Environmental Protection Supervision Team in 2023



NSTC EIA tracking team meeting-site survey of huwei park



2022~2023 TSP Development plan environmental assessment review, tracking and supervision meeting handling situation

Organizer	Category	Conference Name	Sessions
Environmental Protection Agency	EIA supervision	On-site inspection of environmental impact assessment and supervision of the environmental impact specifications of each Park's development plan	4
	On-site inspection		
Ministry of Science and Technology	Environmental Assessment Tracking	Environmental Impact Assessment Tracking Group for the Development of Science Parks of the Ministry of Science and Technology meeting	3
CTSP Bureau	EIA supervision	Central Taiwan Science Park Taichung Park Environmental Protection Supervision Group meeting	8
	EIA supervision	Central Taiwan Science Park Houli Park (Houli Base and Chising Base) Environmental Protection Supervision Group meeting	8
	EIA supervision	Central Taiwan Science Park Erlin Park Environmental Protection Supervision Group meeting	4
Total			27

› Environmental and ecological sustainability

Other core targets involved



● Implementation content and promotion results

1. Maintain an eco-friendly environment

⊙ Ecological survey of the Park

Maintaining the ecology of the Park is one of the firm principles of the CTSP. In accordance with the EIA commitment, an ecological survey is carried out in each Park (Taichung, Houli, Erlin, and Zhongxing) on a regular basis every year, and the rich species in the Park are recorded. On the migration route of migratory birds in East Asia, the number of northern migratory birds that come to spend winter is often more than that of summer migratory birds that come here to breed in summer. In addition, some resident birds have the habit of descending migratory in winter, so it can be recorded in autumn and winter that most of them belong to winter migratory birds, or the descending migratory birds in winter. If the weather is warm in spring and summer, there are many species of resident birds.



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The surrounding environment of the Park is mostly grassland or farmland. Most of the recorded species are common species. Because amphibians and reptiles breed in spring and summer, the number of species is the largest in spring and summer. The monitoring site of the water area is the downstream water body of the specially-managed water outlet of Houli Park and the sewage discharge outlet of Zhongxing Park. The project includes fish, benthic organisms, aquatic insects, and phytoplankton. In 2021, because the various parks of CTSP are committed to ecological environment conservation, the ecological survey results have shown the habitat of increasing species. In the future, we will continue to promote environmental conservation, so that more species are willing to come and enrich the habitat of the Park.

Zhongxing Park

Conservation Species

Second-class conservation category: colored snipe, crested goshawk, oriental bee eagle, crested vulture, black-winged kite and collared owl.

Endemic to Taiwan

Mammals: giant red flying squirrel, red-bellied squirrel, weasel badger, white-nosed heart, Taiwan Shanqiang.

Bird endemic species: Taiwan bamboo chicken, small curved mouth, five-color bird.

Bird-specific subspecies: Swift, Brown Three-toed Quail, Golden-backed Dove, crested goshawk, crested vulture, brown-headed snipe, yellow-headed fantail warbler, tree magpie, big curly tail, black-pillow blue harrier, pink parrot's beak, red-billed blackbird, Chinese Pulsatilla, mountain red-headed, South Asian nighthawk and collar-horned owl.

Amphibians: tree frog.

Reptiles: Swanhao's climbing lizard.

Fish: Taiwan Province stone, tall bustard, thick-headed horse-billed goby, Hershey's spiny goby, Mingtan kiss tiger, short-kissed red-spotted kiss tiger, Ketagalan new rice shrimp, fake sawtooth rice shrimp, Sun Moon Lake crab, yellow and green crab.

Houli Park

Conservation Species

Second-class conservation category: crested vulture, kestrel and crested goshawk.

Three-class conservation category: Red-tailed Shrike.

Endemic to Taiwan

Bird endemic species: bamboo chicken, five-color bird.

Bird endemic subspecies: big curly tail, spotted-necked dove, pearl-necked dove, golden-backed dove, tree magpie, Chinese Pulsatilla, red-billed blackbird, brown-headed snipe, yellow-headed fan-tailed warbler, crested goshawk, pink parrot beak and brown-backed shrike.

Endemic species of fish: Echinocheilus ho, Cynodon crassipes, Taiwan Province Pebble, Mingtan Kissing Shrimp Tiger, Taiwan Stone.

Erlin Park

Conservation Species	Endemic to Taiwan
<p>Second-class conservation category: colored snipe, water pheasant, osprey, black-winged kite, crested vulture, oriental zeyi, crested goshawk, sparrow hawk, oriental ostrich, kestrel, oriole, oriental bee hawk and Taiwan thrush.</p> <p>Third-class conservation category: Swallow, Red-tailed Shrike.</p>	<p>Mammals: Hershey musk deer.</p> <p>Birds: five-colored birds, small curved mouths, and Taiwan thrush.</p> <p>Reptiles: Swann's lizard, Penglai grass lizard.</p>

Taichung Park

Conservation Species	Endemic to Taiwan
<p>Taichung Park</p> <p>Second-class conservation category: kestrel, myna, Taiwan thrush, collared owl, crested vulture, crested goshawk and black-winged kite.</p> <p>Third-class conservation category: Red-tailed Shrike.</p> <p>Expansion land</p> <p>Second-class conservation category: kestrel, myna, Taiwan thrush, collared owl, crested goshawk and black-winged kite.</p> <p>Three-class conservation category: Red-tailed Shrike.</p>	<p>Taichung Park</p> <p>Endemic species: small curved beak, five-colored bird, Taiwan thrush, Swann's lizard, and dense corrugated gray butterfly.</p> <p>Endemic subspecies: South Asia Nighthawk, Swift, Myna, Black Pillow Blue Owl, Big Curly Tail, Yellow-headed Fan Tail Warbler, Brown-headed Snipe Warbler, Mountain Red Head, Tree Magpie, Pulsatilla, Red-billed Blackbird, Pink Parrot Mouth, Collared-horned Owl, Golden-backed Dove, Big Crown Vulture, and crested Cangtou.</p> <p>Expansion land</p> <p>Endemic species: Rishikawa brown bat, red-bellied squirrel, small curved mouth, five-color bird, Taiwan bamboo chicken, Taiwan grass lizard, Swann's lizard, honey ripple gray butterfly.</p> <p>Endemic subspecies: South Asia Nighthawk, Swift, Myna, Black Pillow Blue Owl, Big Curly Tail, Yellow-headed Fan-tailed Warbler, Brown-headed Snipe Warbler, Mountain Red Head, Tree Magpie, Taiwan Thrush, Pulsatilla, Red-billed Black Snipe, Pink Parrot Mouth, Collared-horned Owl, Golden-backed Dove and Phoenix-headed Cangshan.</p>



Small Curved Beak (Pomatorhinus musicus)



Five-color bird

◎ Ecological rehabilitation

According to the commitment of EIA, the Bureau has set up 15 nest boxes in Guangfu Elementary School (Zhongxing New Village), Guangrong Elementary School, Guanghua Elementary School, Learning Center and Hushan Farm near Zhongxing Park. On March 14th, 2022, it was found that the collar-horned owl in the target species lived in the first nest box, including two collar-horned owl eggs. By April, it was observed that two chicks had hatched successfully and followed up. In addition, it is recorded that *Hemidactylis platyurus* came to live and use. In addition, the Bureau has also set up 13 nest boxes in Huwei Sewage Treatment Plant and Guangfu Elementary School (Huwei Town), which are mainly used for bat breeding, wintering and general habitat, and observed the biological utilization of East Asian house bat, Horikawa brown bat and Yellow Bat. In 2022 and 2023, the number of bat nest boxes used was 138 and 135 respectively.



East Asian house bat



Horikawa's brown bat



Yellow Bats

2. Promote environmental education

◎ Clean Beach Activity

CTSP Bureau and Community Development Association have been holding beach cleaning activities for the 11th year. CTSP invited park manufacturers to lead employees, together with Da 'an District Office, Guike Li Community Development Association staff and volunteers, to jointly clean up the garbage on the beach next to Guike Ecological Park in Da 'an District on September 23rd, 2023, so as to protect the environment and keep the coast clean.

In addition to actually cleaning up the beach garbage, beach cleaning activities are the practice of environmental education, and appeal to the public to understand the seriousness of marine pollution, and start with small actions such as reducing the use of disposable plastic products in daily life, implement waste reduction and jointly protect the environment. This time, with the cooperation of about 300 participants, about 50 bags and 550 kilograms of garbage were picked up, and we work together to practice green action and love the earth.



2023 Da 'an Clean Beach Activities

◎ **Environmental Education Courses**

CTSP Bureau's sewage treatment plants in Taichung, Huwei, and Houli Park have all been certified by the Environmental Protection Agency as environmental education facilities. They actively promote environmental education to make local residents better understand the role of sewage plants, and at the same time take root in the development of elementary and middle school education courses, run certification courses, invite students from neighboring schools to participate in course programs and provide suggestions for improvement, convey the function of environmental protection and education of sewage treatment plants. The plants not only achieve the effect of close friendship and good neighborliness, but also serves the purpose of environmental education. In 2022, there were 33 environmental education activities for sewage plants in Taichung, Huwei and Houli Park, with a total of 822 participants. In 2023, 79 environmental education activities were held, with a total of 2,427 participants.

- ◎ On January 8, 2022, we jointly promoted the environmental education carnival stall with the Central Environmental Education Places Alliance, including AUO Sustainable Foundation, TSMC No.15 Factory and other units.
- ◎ On March 30, 2023, the handover ceremony of the Central District Environmental Education Places Alliance was held, and a memorandum of cooperation was signed with 20 environmental education places and 16 units of the Alliance, including AUO Sustainable Foundation and TSMC No.15 Factory.
- ◎ On May 2, 2023, the environmental education certification site was extended.
- ◎ On September 2-3, 2023, in cooperation with the 33rd International Symposium on Academic and Practical Exchange of Environmental Education, we went to the National Taichung University of Education to set up a booth, in order to design a way to break through the customs, effectively publicize the importance of water resources reuse and understand sewage treatment.



Environmental education course experience-
Daming Elementary School



Lesson Plan Trial for Junior High School Students-Dahua Junior High School-Traveling to the World of Water Demons



Lesson plans for professional fields - jointly organized study courses with Tunghai University



Intensive planning

CTSP is now handling the second phase development of Taichung Park expansion, inheriting the successful construction experience of the park in the past, copying the planning for this expansion project, and considering the strategic action of the 2050 net zero path, the improvement of the transportation system, the improvement of the resilience of public facilities, and the response to environmentally sensitive areas. It is expected that after the park is developed, it will not only promote the employment of the surrounding neighbors, but also improve the quality of life of residents, while maintaining the ecological balance and achieving the development goal of "innovation, tolerance and sustainability".



Future prospects

In the future, CTSP will continue to combine the existing ICT in the park, AI, 5G communication, big data and other emerging technologies, assist in upgrading key industrial technologies, industry-university cooperation, talent cultivation, innovation and entrepreneurship, industrial transformation, and developing innovative service models, create a new blueprint for the industry, grasp the opportunities of global supply chain restructuring, and follow NSTC's 2035 scientific and technological vision of "forward-looking innovation, democracy, tolerance and sustainability". CTSP Bureau will strive to build CTSP into a "exquisite and diverse, excellent life, energy-saving and sustainable" science park by promoting the following strategies:

◎ **Promote industrial innovation and transformation**

Promote the innovation-industry-university cooperation plan, promote the industrial technology upgrading and the cultivation of innovative technical talents, so as to strengthen the international competitiveness, and introduce new teams with growth potential, provide diversified counseling and resources, build a complete innovation and entrepreneurship ecosystem, drive the park to develop new capacity and innovation transformation, and create a new blueprint for the industry.

◎ **Accelerate the development of the park and attract investment**

Accelerate the development and investment invitation of the park, expand the scale of the existing science and technology industries in the central region, drive the upstream and downstream industrial chain manufacturers to enter, strengthen the industrial clustering effect, and lay out characteristic industries to promote the diversified development of the park's industries. In addition, we will continue to optimize the soft and hard infrastructure of the park, improve the service capacity and management ability of the park, and expand the attraction of enterprise investment.

◎ **Create a high-quality sustainable park**

In line with the "Policy Direction of Net Zero Transformation in Taiwan 2050", we will promote the park's net zero carbon emissions and demonstration sites and other related work, guide manufacturers to develop energy-saving and carbon-reducing measures, continuously guide manufacturers to save water and electricity, promote the application of renewable energy and diversified water resources, and reuse waste, so as to provide a high-quality living environment and facilitate life functions, improve educational resources in the park, maintain occupational safety and environmental ecological protection at the same time, take green management as the goal, fulfill social enterprise responsibilities, and move towards a high-quality and sustainable environment.

◎ **Cultivate emerging scientific and technological talents in the future**

Linking the park manufacturers with innovative kinetic energy and rich digital technology, we will jointly build the CTSP Digital Innovation Center, which will focus on the promotion of digitalization and emerging technologies through multi-service platforms, provide fields and professional technologies, create a nurturing and communication environment, and further promote the goal of introducing and shaping future talents.



Appendix

Appendix 1 : Compilation Methodological Description

**Appendix2 : List of Tracking Indicators for Promoting
T-SDGs**

Appendix3 : Communication among stakeholders

Appendix 1: Compilation Methodological Description

About this Voluntary Department Reviews (VDR)

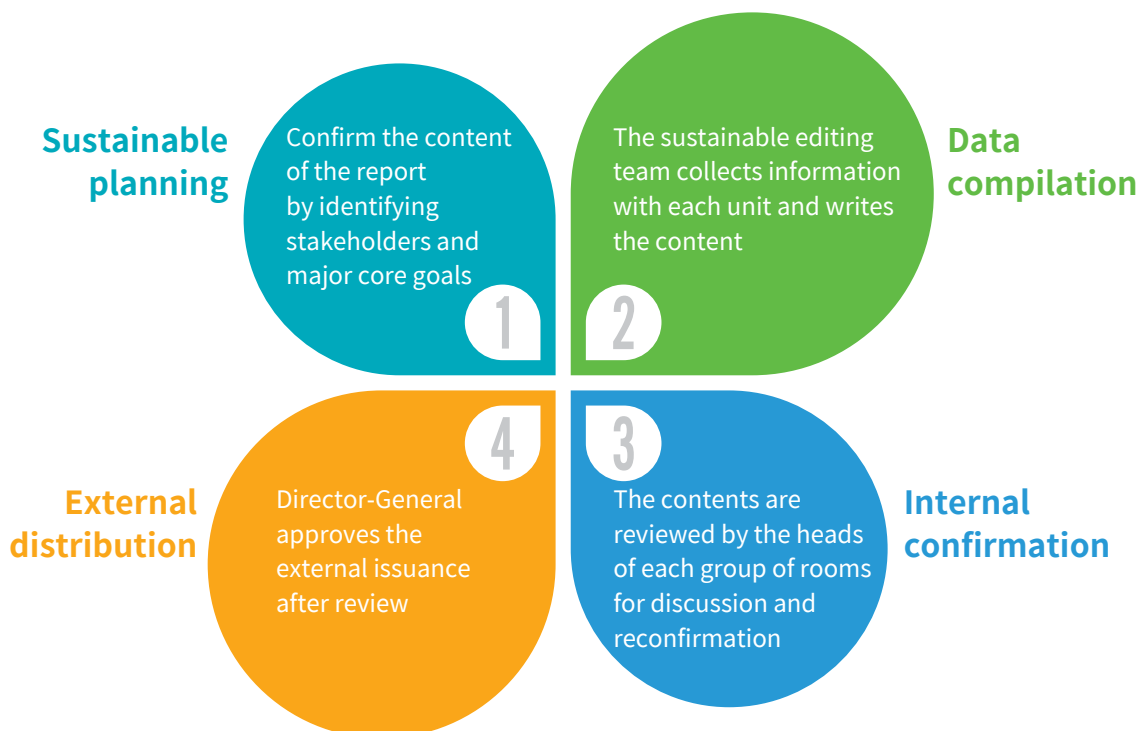
This report is the first Sustainable Development Goals (SDGS) Voluntary Department Reviews (VDR) issued by CTSP Bureau, and follows the writing principles and structure suggested in the Guidelines for Writing Voluntary Department Reviews. The contribution of CTSP Bureau to the sustainable development agenda of our country in 2030 and the promotion of Taiwan Sustainable Development Goals (T-SDGS) process is described in detail.

Category

The information disclosed in this VDR covers the business achievements of CTSP Bureau from 2022 to 2023, including the development vision, governance axis and promotion measures, as well as the performance data of tracking indicators corresponding to major core objectives.

Assembly process of VDR

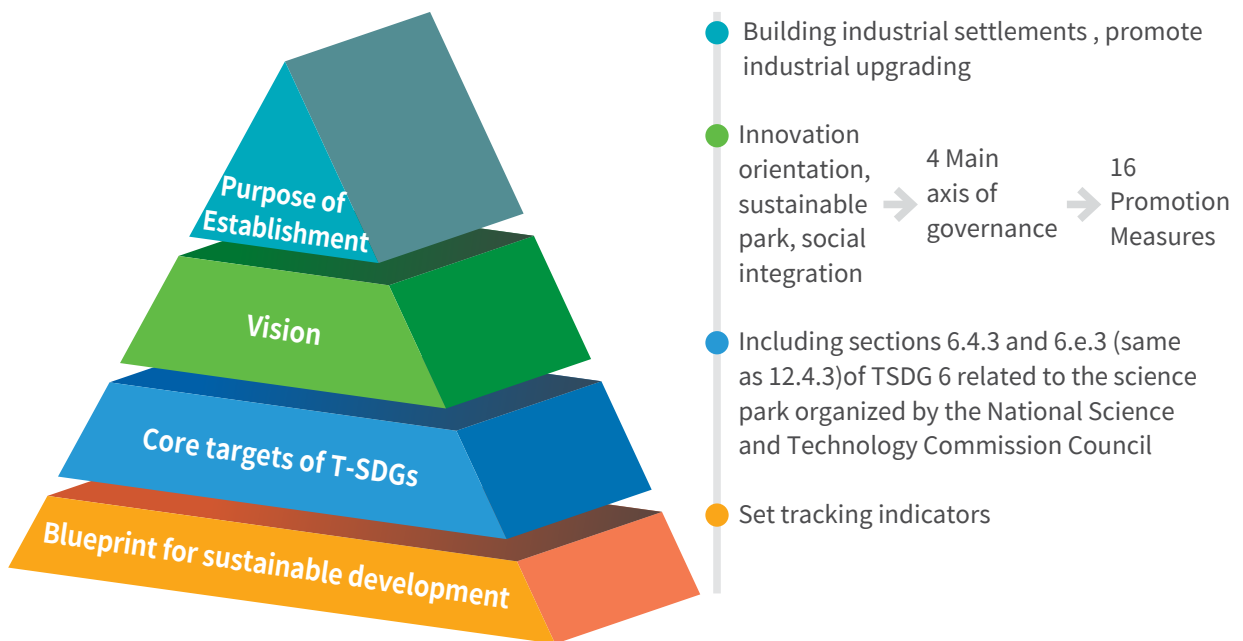
The contents of this VDR are compiled by the sustainability editorial team, and approved for distribution after being confirmed by the directors of relevant business units and reviewed by the Director-General.



Report structure

CTSP Bureau introduces a four-tier structure, carries out organizational positioning and current situation inventory, sets tracking indicators through discussion by the report editing team, links the specific targets of T-SDGs with the actual business of each unit, establishes a complete blueprint for the sustainable development of CTSP Bureau, and checks itself through this structure to ensure that the policy, management and implementation of this bureau can be aligned with the core targets of T-SDGs.

CTSP Bureau VDR four-tier structure



Identification process and results of major core targets of T-SDGS

CTSP Bureau adheres to the spirit of "universal participation and inclusiveness" in the UN's 2030 Agenda for Sustainable Development, collects opinions from all stakeholders by issuing questionnaires, and identifies CTSP Bureau's major core targets in T-SDGs through systematic analysis and combining with the views of internal management.

Identification process of major core targets

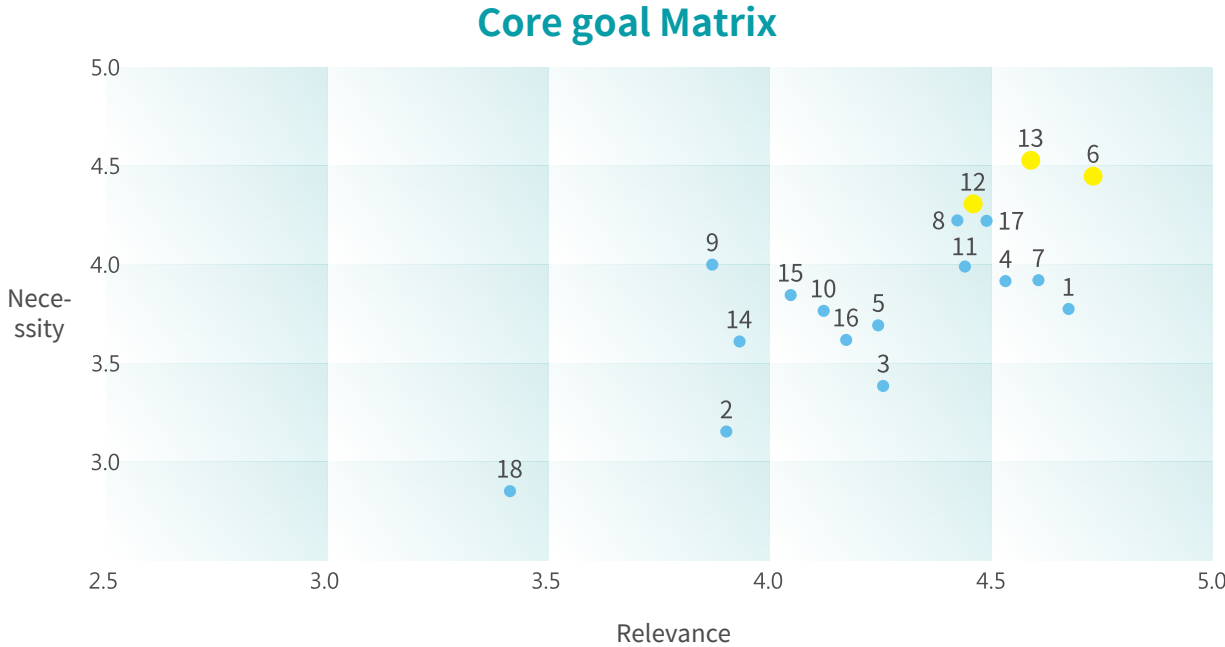
1

Identify stakeholders

According to the principle of AA1000 SES, considering the stakeholder groups in close contact with each office, after internal discussion, nine categories of stakeholders in 2023 were identified, including employees, government agencies, park undertakings, academic research institutions, non-governmental organizations, suppliers, industrial and commercial services, neighboring communities and media.

<p>Design T-SDGs questionnaire 2</p>	<p>Based on the 18 core targets of T-SDGs, the questionnaire integrates the core spirit of each target and the relevant business content of the Bureau into a concise narrative, so as to lower the reading threshold for readers, and designs two major items (five-point scale) respectively, so as to facilitate readers to understand the actual meaning of the core targets.</p>
<p>Questionnaire survey 3</p>	<p>Through questionnaire survey on the opinions of internal management and external stakeholders, 173 questionnaires were collected to assess the relevance of 18 core targets to CTSP Bureau's business and the necessity of promoting the core targets.</p>
<p>Significance analysis and identification 4</p>	<p>Taking "relevance" and "necessity" as the "significance" indicators to evaluate the core targets of CTSP Bureau, the collected questionnaires are quantitatively analyzed and related charts are drawn to visually present the analysis results.</p>
<p>Review and discussion 5</p>	<p>The analysis results are discussed internally, to assess whether the policy objectives have covered the relevant targets or whether it is feasible to promote the targets with existing resources, and then to identify the major core targets of T-SDGs with reference to the opinions of external experts.</p>

In 2023, CTSP Bureau identified the major core targets of T-SDGs, which were ranked as 6, 12, 13, 8, 17, 11, 7, 4, 5 and 9 according to the scores of questionnaire analysis, while the other targets were not directly related to the park business.



Rank	Item		
Primary		Core Goals 6: Ensure environmental quality and sustainable management of environmental resources.	
		Core Goals 12: Promote green economy and ensure sustainable consumption and production mode.	
		Core Goals 13: Complete mitigation and adaptation actions to cope with climate change and its impact.	
Major Core Goals	Secondary		Core Goals 8: Promote inclusive and sustainable economic growth, enhance labor productivity, and ensure that all people enjoy quality employment opportunities.
			Core Goals 17: Establish multiple partnerships and work together to promote a sustainable vision.
			Core Goals 11: Construct cities and villages with inclusive, safe, resilient and sustainable characteristics.
		Core Goals 7: Ensure that everyone can enjoy affordable, stable, sustainable and modern energy.	
		Core Goals 4: Ensure comprehensive, fair and high-quality education and advocate lifelong learning.	
		Core Goals 5: Achieve gender equality and the empowerment of all women.	
		Core Goals 9: Construct affordable, safe, environmentally friendly, resilient and sustainable transportation.	

Rank	Item
General goals	Core Goals 1: End poverty in all its forms everywhere.
	Core Goals 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
	Core Goals 3: Ensure healthy lives and promote well-being for all at all ages.
	Core Goals 10: Reduce inequality within and among countries.
	Core Goals 14: Sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts.
	Core Goals 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.
	Core Goals 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
	Core Goals 18: Achieve a non-nuclear homeland by 2025

The core targets related to the Science Park sponsored by the State Science and Technology Commission are 6 and 12, including the target 6.4.3: the process water recovery rate of the manufacturers in the Science Park, and the target 6.e.3: the reuse rate of industrial waste in the Science Park. (Same as indicator 12.4.3), indicator 12.4.3: Reuse rate of industrial waste in science park. (same as indicator 6.e.3).

VDR Publishing

CTSP Bureau is scheduled to publish "Sustainable Development Goals (SDGS) Voluntary Department Reviews (VDR)" every year, and publish it on the official website at the same time. If it is not published in that year for some reason, it will disclose the relevant contents in other publications.

Current Release Version: July 2024.

Contact Information

It is expected that through this VDR, the general public and relevant stakeholders will know more about CTSP Bureau's efforts and achievements in promoting sustainable development, and refer to feedback from all walks of life as the basis for continuous improvement. If you have any questions or suggestions about CTSP Bureau's "2023 Sustainable Development Goals Voluntary Department Reviews (VDR)", please contact us.

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Appendix 2: List of Tracking Indicators for Promoting T-SDGs

Indicator progress: ● Reached the 2023 indicator ○ Not reached the 2023 indicator, ■ Not reaching the statistical cycle

Core target	Specific target	Customized indicator	Indicator progress	Latest data		Basic value	Target value
				2022	2023	2021	2030
4	4.4	The subsidy for training courses in cooperation between industry and university (talent training subsidy scheme in science park) is continuously handled, and at least 10 module courses and enterprise internship courses are subsidized every year.	●	12 courses	13 courses	12 courses	10 courses
		Continue to handle the training of science and technology manpower in the park (professional and technical personnel training plan), and offer at least 300 hours of courses every year.	●	282 hours	300 hours	258 hours	300 hours
5	5.5	The proportion of women employed as supervisors at or above the first-level units is at least one third.	●	50%	50%	43%	34%
		Implement labor laws and gender equality propaganda at least three sessions a year.	●	3 sessions	3 sessions	3 sessions	4 sessions
		70 inspections of working conditions (including gender equality) are conducted each year.	●	70 sessions	70 sessions	73 sessions	75 sessions
		Carry out at least 500 occupational safety and health inspections every year.	●	689 sessions	647 sessions	781 sessions	500 sessions
		Promote occupational safety and health on-the-spot counseling, and handle at least 10 sessions a year.	●	33 sessions	85 sessions	15 sessions	10 sessions
		The death rate of one million people in major occupational accidents remains below 20.	●	1 person	1 person	0 person	0 person
6	6.3	The total amount of water pollution permit application shall be controlled, and the sewage from the factory in the park shall be 100% managed.	●	100%	100%	100%	100%



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Core target	Specific target	Customized indicator	Indicator progress	Latest data		Basic value	Target value
				2022	2023	2021	2030
6	6.3	100% of the discharged water from the sewage plant meets the standard, and the water quality of surface water is regularly inspected and monitored every year.	●	100%	100%	100%	100%
	6.4	Continue to coach park manufacturers to save water and electricity. Achieve 85% recovery rate of process water for semiconductor and optoelectronic industries in each park.	●	91.4%	91.9%	91.1%	86%
		In the initial operation of Erlin Park, a set of reclaimed water treatment system has been set up, with a treatment capacity of 600CMD, which can treat the sewage that entered the factory at the initial stage.	●	11,530.2 M ³	46,447.6 M ³	Not yet operational	3,574,810 M ³
	6.e	The total amount of waste permit applications is controlled, and the recycling rate of waste remains above 90% * (higher than the indicators 6.e.3 and 12.4.3).	●	Off-site resource only: 96.1% (Including the ratio of on-site and off-site resources: 96.75%)		94.15%	94.15%
7	7.2	From 2022 to 2023, a total of about 7.419MW of solar photovoltaic devices were added, which made the cumulative capacity of solar power generation devices in CTSP Park exceed 59MW by the end of 2023.	●	56MW	59MW	52MW	Rolling adjustment
8	8.2	Continue to promote the review of subsidy cases for innovative technology research and development plans, and subsidize at least 10 cases every year.	●	18 cases	13 cases	13 cases	10 cases
	8.6	We will continue to provide subsidies for cooperative training courses between industry and university (Talent Training Grant Scheme in Science Park), and subsidize at least 10 module courses and enterprise internship courses every year.	●	12 courses	13 courses	12 courses	10 courses
		Continue to handle the training of science and technology manpower in the park (professional and technical personnel training plan), and offer at least 300 hours of courses every year.	●	282 hours	300 hours	258 hours	300 hours

Core target	Specific target	Customized indicator	Indicator progress	Latest data		Basic value	Target value
				2022	2023	2021	2030
8	8.7	Implement labor laws and gender equality propaganda at least three sessions a year.	●	3 sessions	3 sessions	3 sessions	4 sessions
		70 inspections of working conditions (including gender equality) are conducted each year.	●	70 sessions	70 sessions	73 sessions	75 sessions
		Carry out at least 500 occupational safety and health inspections every year.	●	689 sessions	647 sessions	781 sessions	500 sessions
		Promote occupational safety and health on-the-spot counseling, and handle at least 10 sessions a year.	●	33 sessions	85 sessions	15 sessions	10 sessions
		The death rate of one million people in major occupational accidents remains below 20.	●	1 person	1 person	0 person	0 person
9	9.1	The number of shuttle bus services in CTSP Park exceeds 95,000 per year.	●	79,120 people/times	95,604 people/times	87,944 people/times	100,000 people/times
		The shuttle bus service in Huwei Park exceeds 5,000 passengers per year.	●	4,620 people/times	5,452 people/times	4,383 people/times	6,000 people/times
	9.4	After the establishment of "Pilot Plan of Smart Road Safety System in Science Park", the proportion of traffic accidents in the pilot area to the total accidents at intersections decreased.	●	32.61%	26.08%	32.26%	On-demand improvement
11	11.2	The number of shuttle bus services in CTSP Park exceeds 95,000 per year.	●	79,120 people/times	95,604 people/times	87,944 people/times	100,000 people/times
		The shuttle bus service in Huwei Park exceeds 5,000 passengers per year.	●	4,620 people/times	5,452 people/times	4,383 people/times	6,000 people/times
11	11.3	In order to enhance the communication between the park and the neighboring communities, 40 publicity sessions of "Strengthening Neighborhoods, Health Care Plan" are held every year.	●	publicity meetings, 1,652 telephone interviews and 1,214 physical examinations	42 publicity meetings, 774 telephone interviews and 764 physical examinations	40 sessions, 950 telephone interviews and 900 health checks	



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Core target	Specific target	Customized indicator	Indicator progress	Latest data		Basic value	Target value
				2022	2023	2021	2030
11		Handle the "Clean Beach Activities for All People in Environmental Protection Homes"	●	860 Kg	550 Kg	600 Kg	500 Kg
	11.3	Handle the meetings of "Environmental Protection Supervision Team" of Central Taiwan Science Park Taichung Park, Houli Park (Houli Base and Qixin Base) and Erlin Park.	●	10 sessions	10 sessions	10 sessions	10 sessions
	11.12	CTSP Park is committed to promoting the sustainable environment, and for the sake of symbiosis and common prosperity with the environment, it has continuously set the goal of accumulating building labels.	●	47 awards	52 awards	43 awards	57 awards
12	12.4	The total amount of waste permit applications is controlled, and the recycling rate of waste in the resource recycling center is maintained above 90% * (higher than the indicators 6.e.3 and 12.4.3).	●	Off-site resource only: 96.1% (Including the ratio of on-site and off-site resources: 96.75%)	94.15%	94.15%	94.15%
13	13.1	Maintain and ensure the normal operation of all systems in the smart park.	●	100%	100%	100%	100%
		Continue to operate the 24-hour emergency center in the park.	●	100%	100%	100%	100%
	13.2	Conduct publicity meetings on environmental protection and energy conservation every year.	●	9 GHG Protocol coaching sessions 4 publicity meetings on energy conservation and carbon reduction 2 zero-carbon transition briefing sessions 2 seminars on environmental protection		3 energy-saving publicity meetings	5 GHG Protocol coaching sessions 2 briefings or technical forums on greenhouse gas or zero-carbon transition
		Conduct water-saving counseling every year.	●	3 sessions	3 sessions	1 sessions	3 sessions

Core target	Specific target	Customized indicator	Indicator progress	Latest data		Basic value	Target value
				2022	2023	2021	2030
17	17.8	Observe and visit through domestic and foreign receptions, participate in various large-scale exhibitions, and share experiences.	●	5 sessions	4 sessions	3 sessions	3 sessions

Appendix 3: Communication among stakeholders

CTSP Bureau has identified nine categories of stakeholders in accordance with the principle of AA1000 SES, and considered their attributes and business relationships, and established a continuous interactive channel to meet the smooth communication needs of all parties. The bureau can also learn about the expectations of all sectors for the development of the park as a reference for the planning of CTSP's sustainable policy.





2023

Stakeholder	Stakeholder Importance	Communication Channels	Communication Effectiveness
Employees	The service capability of the Bureau is derived from having excellent employees. The CTSP Bureau attaches great importance to employee input and maintaining smooth, interactive communication channels to ensure maximum efficiency.	<ul style="list-style-type: none"> Education and training Sexual harassment complaint hotline Director-General's mailbox Internal e-bulletin Official notification system 	<ul style="list-style-type: none"> ● The average time spent on employee education and training was about 63 hours per person.
Park Enterprises	The core governance goal of the Bureau is to expand the output value of the CTSP. Therefore, smooth and unimpeded communication with manufacturers is maintained at all times, and exchanges with industry associations to facilitate the economic development of the Central Taiwan region.	<ul style="list-style-type: none"> Publicity, seminars & briefings Phone contact Manufacturer visits Official website announcements Official Documents Satisfaction surveys Trade association seminars Trade association director and supervisor meetings 	<ul style="list-style-type: none"> ● Holds about 3 publicity sessions on labor laws such as the Labor Standards Act and the Gender Equality Work Act every year. ● 10 Environmental protection regulation briefings, and 31 Park business counseling seminars. ● Overall satisfaction survey score of manufacturers in 2022 and 2023 were 86.53 and 88.14. ● 3 Manufacturers received water and energy conservation counseling. ● Co-organized 2 CSR lecture and experience sharing session with the Allied Association for Science Park Industries. ● In 2023, the demonstration site of "Service Contact Center of High-tech Enterprise Service Anti-corruption Platform in Science Park" was established, and a total of 1 contact meeting, 1 self-created service, 2 enterprise discussions, 1 enterprise visit (deepening communication) and 1 enterprise practice sharing were held.

Stakeholder	Stakeholder Importance	Communication Channels	Communication Effectiveness
Neighboring Communities (Organizations and the Public)	Bureau adheres to the goal of co-existence and co-prosperity with neighboring communities, therefore attaches great importance to public opinion.	<ul style="list-style-type: none"> Borough chief seminars Publicity, seminars, and briefings In-person visits Petition hotline 	<ul style="list-style-type: none"> Held 44 Good Neighbors Health Care Project publicity sessions, with 1652 telephone interviews and 1214 health checks conducted.
Government Agencies	As a public agency, the Bureau is also responsible for the promotion of government orders by higher-level agencies and business-related authorities.	<ul style="list-style-type: none"> Phone contacts Official documents Email Publicity, seminars and briefings 	<ul style="list-style-type: none"> Cooperate with the competent authorities in continuing policy promotion.
Non-governmental Organizations (NGO's)	In order to dispel external doubt regarding the environmental impact of the production activities in the Park, the Bureau actively cooperates with NGO's to ensure normal operation status through substantive review meetings and visits.	<ul style="list-style-type: none"> Environmental impact assessment (EIA) briefings Environmental supervision meetings Park visits Review meetings In-person visits 	<ul style="list-style-type: none"> Held a total of 12 EIA review, tracking and supervision meetings for various development plans. Every year, "CTSP Park Human Resources and Employee Welfare Committee Visits" is held once to lead the park manufacturers to observe the excellent practices of the interviewed companies in human resources management, workplace equality, employee welfare, talent training and employee care.
Academic Research Institutes	Through links to academic research institutes, academic research is introduced into industrial entity applications, which can help promote the upgrading of park businesses. Therefore, the Bureau actively plays an intermediary communication role.	<ul style="list-style-type: none"> Official documents Phone contacts Project briefing 	<ul style="list-style-type: none"> Organized 11 forum sessions. Held 2 technical exchange meetings.
Suppliers	The Bureau must communicate with suppliers to ensure that all services meet the needs to maintain stable daily Park operations.	<ul style="list-style-type: none"> Phone contacts On-site inspections Irregular meetings 	<ul style="list-style-type: none"> Conducted more than 1,500 on-site inspections for engineering projects. Provide consultation hotline.

Stakeholder	Stakeholder Importance	Communication Channels	Communication Effectiveness
Media	The bureau maintains interactive and smooth communication with the media. The Bureau can promptly release public opinion responses to issues to avoid the dissemination of misinformation.	<ul style="list-style-type: none"> Press releases Press conferences 	<ul style="list-style-type: none"> Issued 75 press releases. A total of 8 press conferences were held
Business Services	The convenience of park business services affects workers' willingness to work in the Park. Therefore, the Bureau maintains close communication with the business services industry.	<ul style="list-style-type: none"> Impromptu meeting Business services industry networking forums Email Park satisfaction survey 	<ul style="list-style-type: none"> Established a business services platform website with 1,703 pageviews In October 2023, 80 participants went to the central offices of the Legislative Yuan and the surrounding services industry to observe and learn

In addition to the above-mentioned channels for stakeholder interaction, the Bureau also adheres to the principle of openness of government information, publishes major news or various news from time to time on the "Central Taiwan Science Park Global Information Network", provides various publicity materials and publications for the general public to download, and sets up various themed websites with charts and simple text presentation, so that readers can easily understand the sustainable operation direction and performance of CTSP.



CTSP Official Website



CTSP Corporate Sustainability Website



CTSP Annual Reports



CTSP Newsletter



Facebook CTSP Facebook Fan Page



Facebook TSP News Facebook Public Group

Park satisfaction survey

The feedback from manufacturers is an important basis for CTSP Bureau to improve or upgrade various services in the park. CTSP Bureau forms a working group every year to handle the manufacturer's visit plan and take the initiative to understand the manufacturer's needs. In 2023 and 2022, it will be handled in a written and entity-based manner, and the feedback will be actively handled and answered according to the manufacturer's wishes, and invited to participate in seminars or visit the factory to improve the service quality of the park.

In order to ensure fair, objective and consistent service quality evaluation indicators, to encourage the Bureau to pay attention to the satisfaction of its service targets, and to achieve the purpose of improving service quality, the Ministry of Science and Technology commissions a professional survey company to conduct a satisfaction survey every year. The CTSP's 2022 and 2023 manufacturer's "overall satisfaction" score was respectively 86.53 and 88.14, and was the highest in the three Science Parks. The bureau would actively respond to and deal with the relevant feedback from manufacturers, and track and control them. It has reached the customer-oriented customer satisfaction goal, and has strived for their support and trust to the Park. In the future, we will continue to pay attention to the needs of manufacturers to get more affirmations and positive comments from manufacturers. In addition, a survey was also conducted on the surrounding residents to understand the evaluation of the surrounding residents on the Park.

General Complaints' channel

CTSP Bureau, according to the "Essentials of Handling People's General Complaints Cases by the Executive Yuan and its subordinate offices", handles General Complaints cases with the principle that the time limit should not exceed 30 days when interviews, hearings or investigations are needed. From 2022 to 2023, there were 420 cases of People's General Complaints (including 83 administrative innovation suggestions, 25 administrative decree inquiries, 97 administrative violations and 215 administrative rights and interests protection).

- ⊙ Telephone : +886-4-2565-8588
- ⊙ Director-General's email
- ⊙ Toll-free environmental complaint hotline : 0800-777795
- ⊙ Address : No. 2, Jhongke Rd., Situn District, Taichung City 40763, Taiwan (R.O.C.)
- ⊙ Accessible environmental complaint hotline: 04-25658588 Extension 7715 or 7716

Year	Item	Number of petitions received			
		Administrative innovation suggestions	Administrative decree inquiries	Administrative violations	Administrative rights and interests protection
2022		28	9	41	119
2023		55	16	56	96

Notification report on people's anti-corruption incident

- ⊙ Telephone : +886-4-25658588#6801、6811、6813
- ⊙ email : discipline@ctsp.gov.tw



2023

Central Taiwan Science Park Bureau
Voluntary Department Reviews



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Publisher Central Taiwan Science Park Bureau, Ministry of Science and Technology

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Date of Issuance July,31,2024



Central Taiwan Science Park Bureau ,
National Science and Technology Council