

*Better water Better world*  
All rivers are clean and no water is polluted.



6641

**GSD**  
**Technologies**  
**Co.,Ltd.**

2024.05.20

GREEN · SAFE · DEVELOPMENT





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Company

Profile

01



## GSD Technologies Co., Ltd.



Stock code

6641



Industry

Green Energy &  
Environmental  
Services



Established

2013/10



Staffs

611



Capital

NTD 370 m

Major business

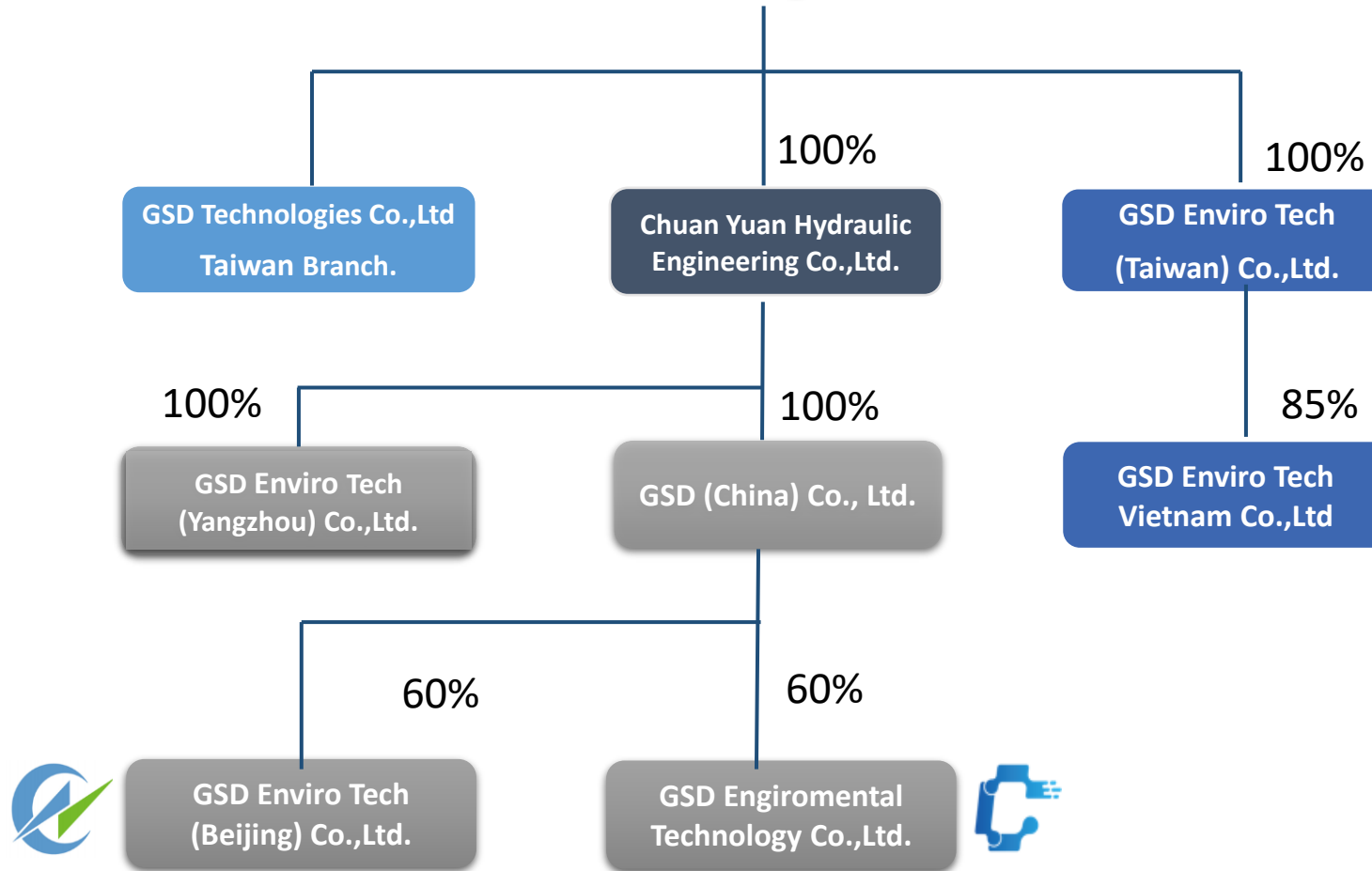
- ◆ Environmental equipment manufacturing, sales & technical services.

Brand  
Plant

- ◆ GSD
- ◆ Pinghu in Zhejiang & Yangzhou in Jiangsu



## GSD Technologies Co.,Ltd.



## Philosophy

**GREEN** Friendly commitment to the earth's environment and ecology.

**SAFE** Responsible commitment to customer / supplier / employee / stakeholder/other relative organization.

**DEVELOPMENT** Commitment to sustainable development of the company.

## Mission

To optimize the ecological environment and benefit to the world.

## Vision

**Environment** : All rivers are clean and no water is dirty.

**Company** : Being paragon to all brands, being leader in WWTP industry.

**Colleague** : To enable our staff' s devotion in wonderful career and life.



## Comprehensive provider of environmental governance



### Equipment RD/Manufacturing

Over 11 product Series

Water recycle & delivery | Sludge treatment | Resource utilization



### Equipment & process integration

Provide equipment integration general contracting services for various water treatment projects.



### Energy saving solution

Providing assessment diagnosis, energy-saving solutions and equipment support for water treatment.



### Environmental intelligence services

Provide intelligent energy-saving solutions for plant/system.  
Equipment health management | Process optimization  
Precise system control | Cost reduction & efficiency improvement management.



### Operation & maintenance

Undertake water treatment projects, equipment maintenance & repair services for municipal & industrial.

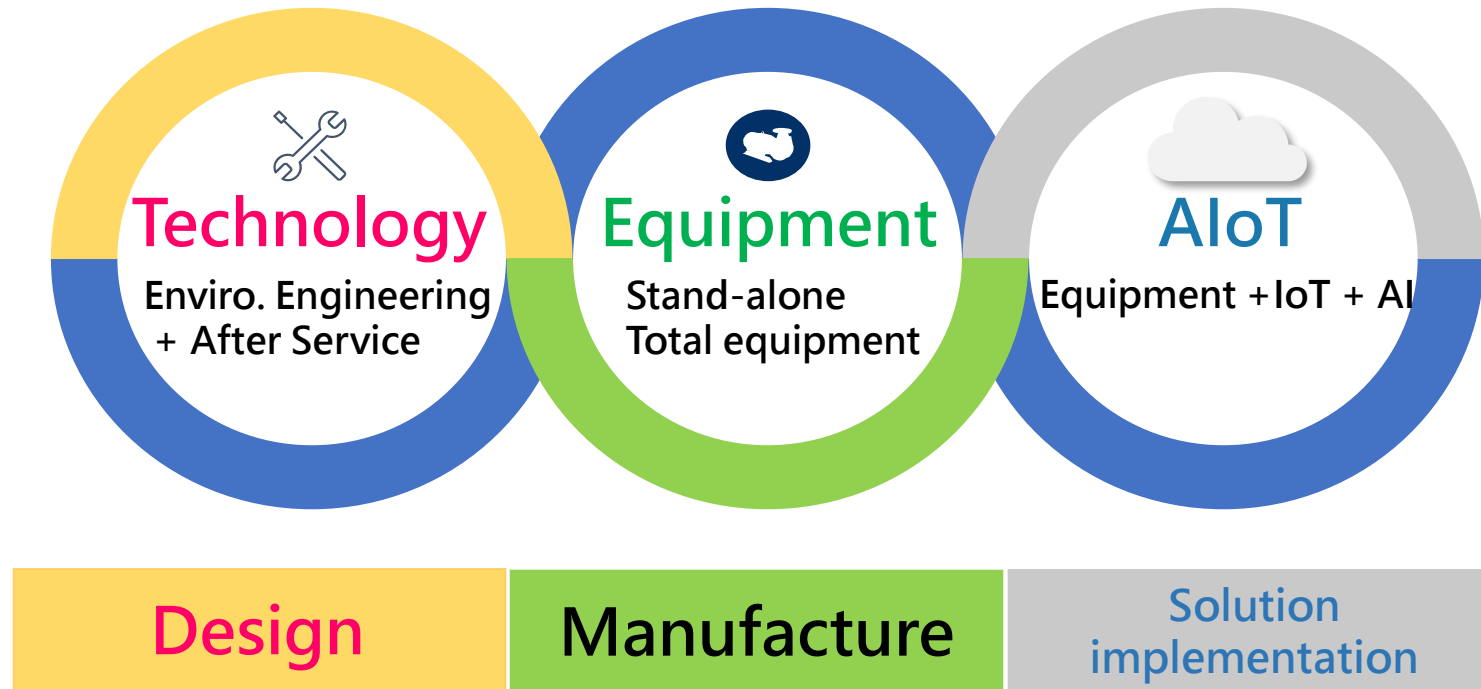


### Sludge treatment solution

Various cooperation models help users with sludge disposal, efficient mud-water separation, drying, and resource utilization.



## Comprehensive service provider of environmental governance





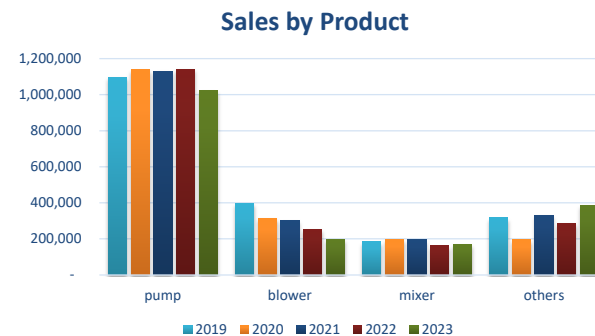
# Operating Performance

02

# Product Sales/ Income Statement

Items	2019	2020	2021	2022	2023
Revenue	1,992,051	1,846,674	1,960,518	1,840,584	1,774,243
Sales margin	771,093	739,951	751,949	660,284	569,600
Op. Income	240,532	262,105	203,227	115,651	-13,341
EBIT	282,631	290,949	256,126	201,685	43,647
Net income	227,154	215,511	212,274	173,925	38,182
EPS	6.79	6.52	6.30	5.00	1.28

item	2019		2020		2021		2022		2023	
	AMT	%	AMT	%	AMT	%	AMT	%	AMT	%
pump	1,097,049	55.07	1,138,671	61.66	1,130,537	57.67	1,141,152	62.00	1,020,794	57.53
blower	395,382	19.85	313,497	16.98	302,771	15.44	251,843	13.68	195,996	11.05
mixer	182,604	9.17	199,597	10.81	195,171	9.96	161,280	8.76	170,973	9.64
others	317,016	15.91	194,909	10.55	332,039	16.94	286,309	15.56	386,480	21.78
Total	1,992,051	100.00	1,846,674	100.00	1,960,518	100.00	1,840,584	100.00	1,774,243	100.00



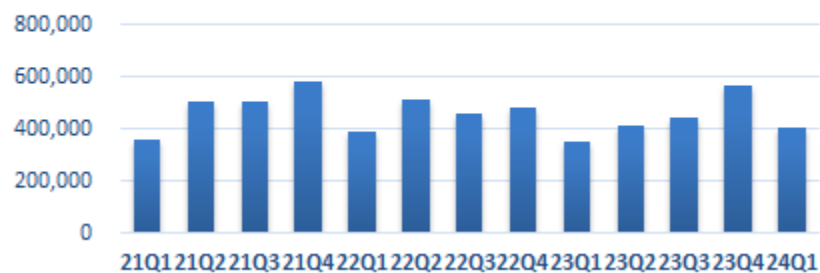
2023 Project contract revenue  
144,737 thousands NTD(8.16%)



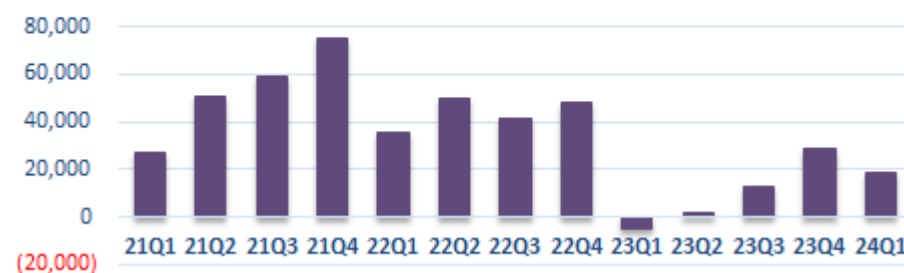
# Income statement

Items	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2022Q2	2022Q2	2023Q1	2023Q2	2023Q3	2023Q4	2024Q1
Net Sales	361,672	506,872	507,774	584,200	391,236	509,063	455,796	484,489	352,805	414,039	441,625	565,774	406,800
Sales margin	145,642	211,623	183,314	211,370	127,867	170,944	170,179	191,294	122,625	142,974	145,136	158,865	128,786
Op. Income	24,959	67,917	43,095	67,256	13,659	30,197	30,975	40,820	(7,673)	(4,761)	238	(1,145)	4,157
EBIT	30,530	62,506	76,860	86,230	32,735	58,067	47,239	63,644	(404)	3,721	13,944	26,386	24,169
Net income	27,205	50,316	59,438	75,315	35,017	49,698	41,026	48,184	(5,099)	1,379	12,856	29,046	18,923

Revenues



Net Income



## EPS & dividend (NTD %)

Items	2019	2020	2020	2022	2023
EPS(1)	6.79	6.52	6.3	5.0	1.28
EPS(2)	6.79	6.55	5.91	5.0	1.28
Cash dividend	4.5	4.5	4.5	3.5	1.0
payout ratio (%) (N1)	66%	69%	76%	70%	78%

EPS(1): counted by average shares

EPS(2): counted by year end shares

N1: counted by EPS(2)



# Industry Overview

03



## TW

Taiwan's Chief Accountant Office estimates that the economic growth rate in Q1 of this year (2024) is 6.51%, mainly due to better-than-expected exports; private consumption in the first quarter contributed 2.1% to economic growth. ( 2023Q1 : -3% )

## CHINA

China's GDP growth in Q1 of 2024 was 5.3% compared with the same period last year, which was better than expected. Mainly driven by the expansion of the manufacturing industry, industrial production increased by 6.1% compared with the same period last year, and retail sales grew modestly by 4.7%. ( 2023Q1 : 4.5% )

## Viet Nam

Vietnam's GDP growth in the first quarter hit the highest level in five years, reaching 5.66%, which was higher than expected. Exports, investment, and consumption all grew, with exports growing by 17%. Consumption continued to recover, and the tourism industry grew significantly. Economic growth was approximately as high as before the epidemic. 90%. Vietnam's National Assembly passed a full-year target of 6% to 6.5%. ( 2023Q1 : 3.3% )

## COP 28



Energy efficiency  
management



## 2023 is the hottest year ever

### Conclusions...

The "Global Stocktaking Resolution" states that to achieve temperature control goals, carbon emissions must be reduced **by 43% in 2030** compared with 2019, and countries must propose new nationally **determined carbon reduction contributions in 2025**.

Nearly 200 countries have pledged to “transform their energy systems **away from fossil fuels**” .

Accelerate **methane reduction** by 2030

Global **renewable energy** production capacity will be tripled by the end of 2030, and the **energy efficiency** improvement rate will be doubled.

**Extreme climate impacts the world and water crisis becomes increasingly severe.**

The "State of Global Water Resources report 2022" released by the United Nations World Meteorological Organization in December 2023 shows that due to climate change (drought, extreme rainfall), accelerated melting of glaciers, and human activities, the global water cycle is losing balance. More than 50 % of catchments experienced cyclical deviations from normal discharge, with most areas becoming drier.

The 2023 United Nations World Water Development Report shows that in the past 40 years, global water consumption has increased at an annual rate of about 1%, and 10% of the world's population lives in countries with high or severe water shortages.

The "Global Water Report 2022" released by the non-profit organization CDP in March 2023 pointed out that companies should publicly disclose water-related information through the CDP Water Security Questionnaire (Water Security) and promote strengthened water resources management to reduce water risks. . According to CDP statistics, the number of entrepreneurs worldwide who responded to the CDP questionnaire in 2022 will increase by 42% compared to 2021, accounting for half of the market value of global listed companies.

**Water resources management issues are gradually receiving more attention.**



**Chatting with AI will also waste water! ChatGPT requires "drinking" 500ml of water to answer 5 to 50 questions.**

Source <https://e-info.org.tw/node/237603>

**In addition to ESG,  
Water positive issues are trending.**

**Positive benefits of water resources: refers to the enterprise obtaining water resources from the environment, and not only restoring the water after use, but also restoring more water resources; the amount of water restored, regenerated, and replenished > the amount of water used**

**Companies that declare to achieve "positive water efficiency" in 2030: Microsoft (2020. 9); Facebook and PepsiCo (2021.8), Google (2021.9 declared to use 20% more water for restoration), Amazon 2030 water positive efficiency. TSMC's goal: water consumption per unit product in 2030 will drop by 30% compared with 2010, and the replacement rate of recycled water will reach more than 60%; Intel will achieve 100% water resource positive efficiency by 2030; Samsung Electronics will strive to maintain actual water consumption in 2030 at the level of 2010 level,**

## Keywords for Mainland China Two Sessions

**High-quality development** has become the main theme

**New productivity** has the points for **high technology, high efficiency and high quality**. The key is advanced productivity.

Starting from 2024, **long-term special government bonds** will be issued for several consecutive years, with an initial issuance of **CNY 1 trillion**.

**Green development** is the foundation for high-quality development, giving priority to ecology and green development. Accelerate the development of green transformation and help reach carbon peak and carbon neutrality.

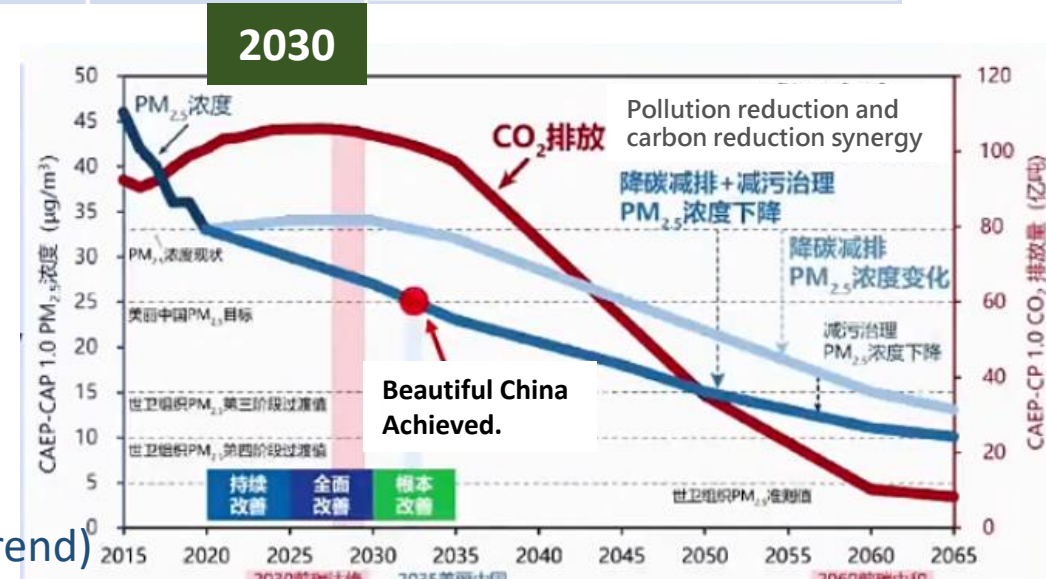
2016-2020	2021-2025	2026-2030	2031~
Water 10 <sup>th</sup> Stage 1	Water 10 <sup>th</sup> Stage 2		Water 10 <sup>th</sup> Stage 3
<ul style="list-style-type: none"> <li>• Improve water quality.</li> <li>• Reduce polluted water.</li> </ul>	<ul style="list-style-type: none"> <li>• Improve total water quality.</li> <li>• Initial restoration of aquatic eco-functions.</li> </ul>		<ul style="list-style-type: none"> <li>• Improvement of ecological environment quality.</li> <li>• Make the ecosystem back to normal cycle.</li> </ul>
13 <sup>th</sup> Five-plan	14 <sup>th</sup> Five	15 <sup>th</sup> Five	

## Ecological policy

Carbon reduction 、 Pollution reduction  
、 Green expansion 、 Growth

Pollution reduction and  
carbon reduction synergy

(Pollution and carbon emissions are on a downward trend)



**China establishes total carbon emission control system.**

**Total carbon emission control is carried out from 3 dimensions of national, local and industry.**

**"Dual control of carbon emissions" will change corporate behavior and force local economies to transition to zero-carbon.**

**Promote "dual control of energy consumption" to gradually shift to "dual control of carbon emissions"**

China's total carbon emissions control system sets out goals and clarifies regional and industry responsibilities. For provinces where direct emissions have peaked, total carbon emission control will be implemented during the "14<sup>th</sup> Five-Year Plan" period. For provinces that have reached carbon emission peaks during the 14<sup>th</sup> Five-Year Plan period, both total carbon emissions and intensity controls will be implemented. For the 15<sup>th</sup> Five-Year Plan period, Provinces with carbon peaks will implement carbon emission intensity controls.

Such as steel, cement, non-ferrous metals and construction reached their peaks during the 14<sup>th</sup> Five-Year Plan, such as petrochemicals, coal chemicals and transportation reached their peaks at the end of the 15<sup>th</sup> Five-Year Plan and the power industry entered a peak platform at the end of the 15<sup>th</sup> Five-Year Plan.

Dual control of energy consumption refers to the implementation of "dual control" actions of total energy consumption and intensity.

Dual control of carbon emissions refers to the "dual control" action of the total amount and intensity of greenhouse gas emissions.

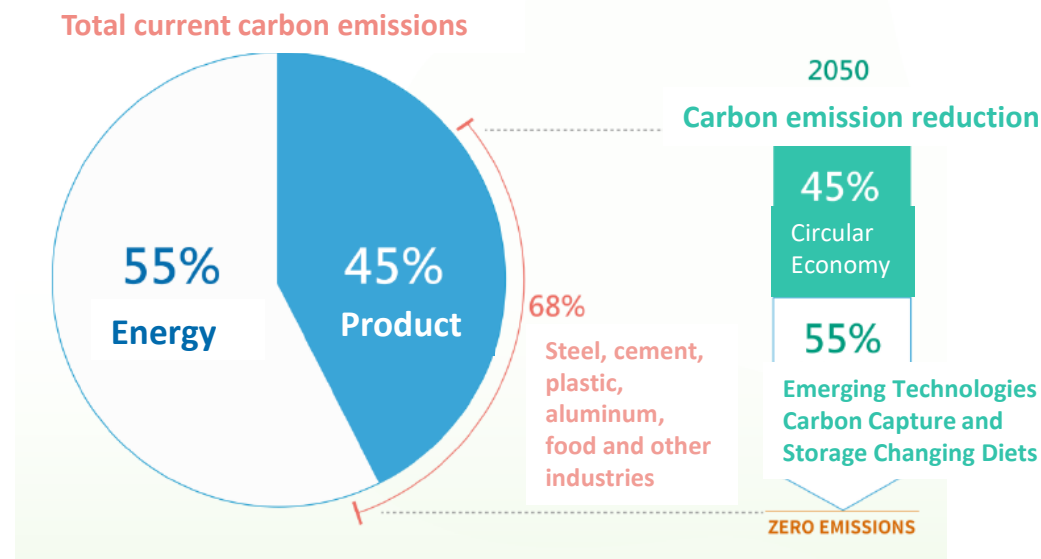
## Taiwan's Net Zero Transition

### Carbon reduction target raised to **24%±1%**

Taiwan plans to increase its carbon reduction target in 2030 from a 20% reduction compared to the base period of 2005 to **24% ± 1%**, and will maximize the carbon reduction results before 2030 through investment in "Twelve Key Strategies".

### Twelve key strategies create **5.9 trillion** output value

By promoting the "Twelve Key Strategies", in addition to reducing carbon emissions equivalent to 29% in 2020, it can also create huge business opportunities. It is expected that from 2023 to 2030, it will drive private investment of more than **4 trillion** and create an output value of **5.9 trillion**.



Source: Resource recycling and zero waste key strategic action plan (draft)  
Environmental Protection Department



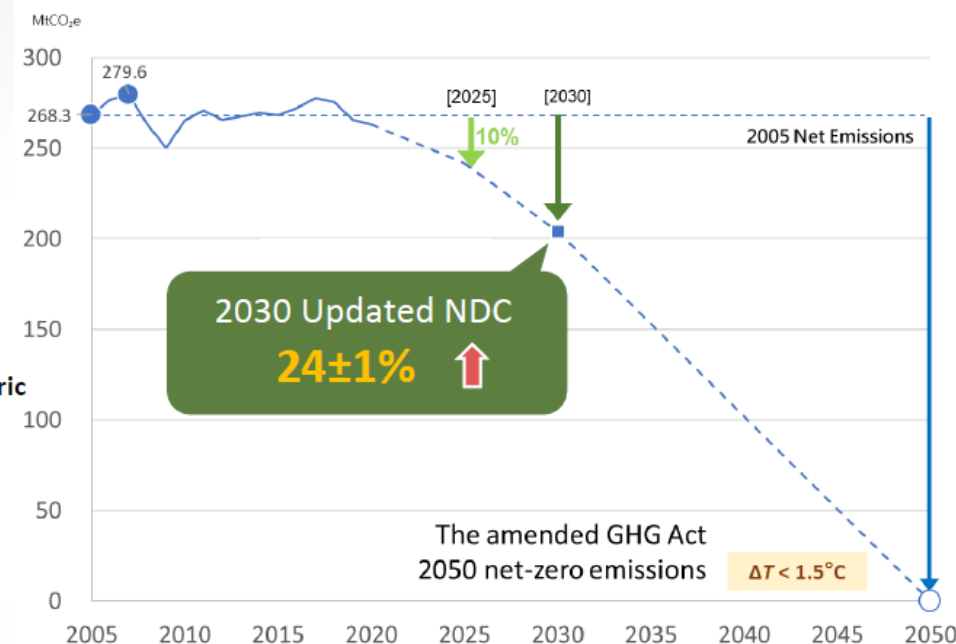
## Taiwan's Net Zero Transition

### 2030 Updated NDC

Integrated implementation of 12 key strategies  
Expand central/local/public-private collaboration and international cooperation to increase carbon reduction efforts and cultivate negative carbon potential

#### 2030 Updated NDC Key Strategies

- All Renewables
  - ▶ Installed capacity increases from 9.6 GW in 2020 to 45.46 ~ 46.12 GW in 2030 (Offshore Wind 13.1 GW, Solar PV 31 GW)
- Energy Saving
  - ▶ Increasing electricity saving by 34.57 TWh
  - ▶ Saving heat by 2,273 MLOE
- Electric Vehicles
  - ▶ All urban buses and official vehicles are electric
  - ▶ New electric sedans up to 30%
  - ▶ New electric motor scooters up to 35%
- Carbon Sinks and Negative Emissions
  - ▶ Natural carbon sinks (forests/soil/ocean): 1.4 MtCO<sub>2</sub>e
  - ▶ CCUS: 4.6 MtCO<sub>2</sub>e
- International Collaboration
  - ▶ Responding to Article 6 of the Paris Agreement, promoting carbon reduction overseas



➤ Equivalent to 29% of GHG emissions of 2020





# Operating Strategy

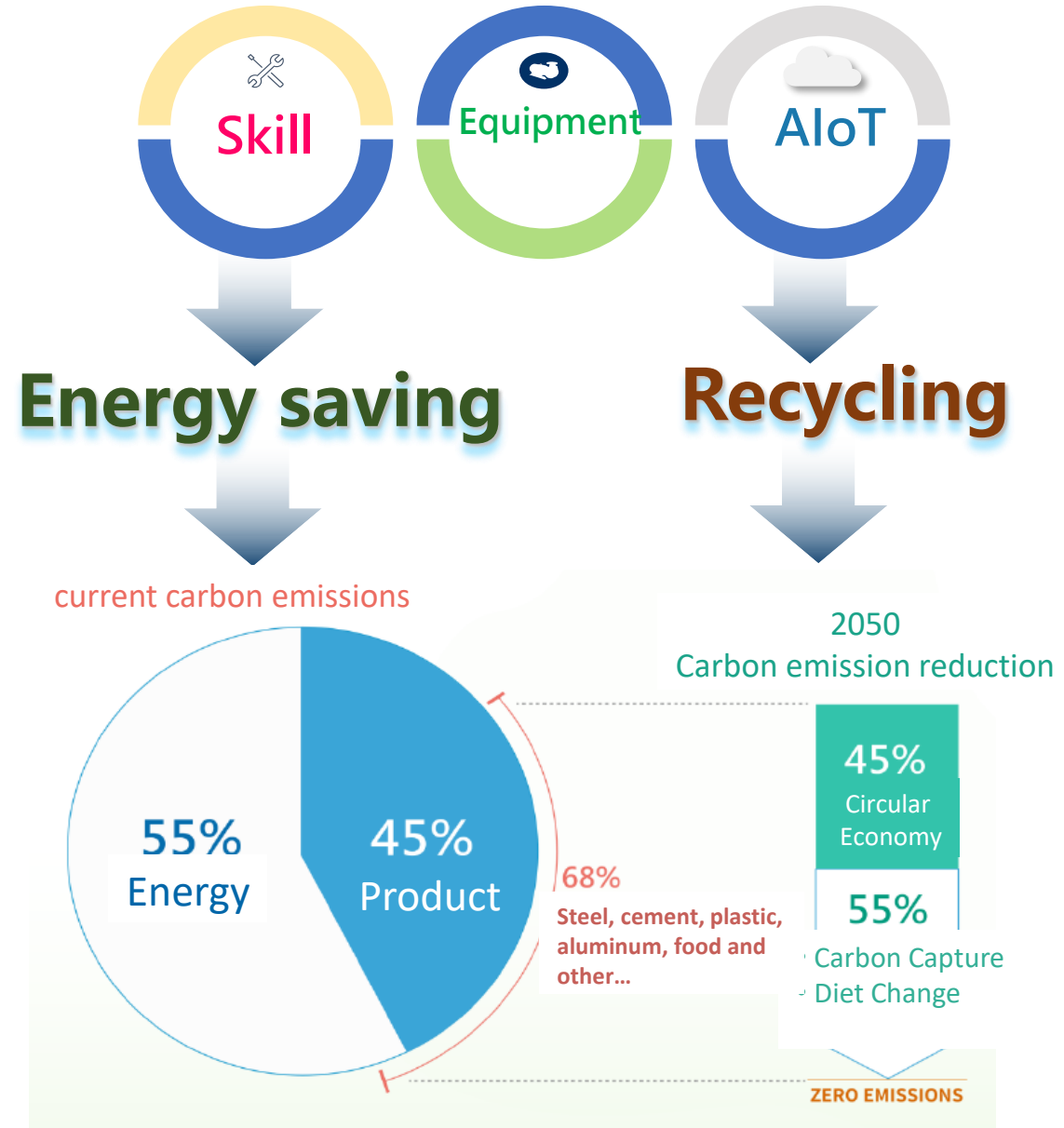
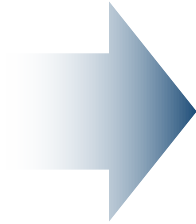
04

# GSD

# ESG

Green product

Green management



## Mechanical energy saving

40% of total revenue

## Upgrading & transformation

Improve energy eff. by process transformation

## Energy saving

- To smart equipment
- AIoT process control
- Intelligent inspection

Participate in public construction

Promote green products  
Assist owners in saving energy & reducing consumption

## Green-manufacturing

- water-based paint
- recyclable turnover box
- solar energy generation

## Employee Benefits

- Skill competition
- Physical activity
- Retired employees

## Enviro Day

- Parent-child enviro education between employees.
- Feedback to our community
- Invite friend factory to participate

## Green Product

- Energy saving to reduce carbon emissions, including mechanical & process .
- Smart energy saving & resource utilization (sludge, water recycling, SRF).

## Green Management

Carbon emissions and carbon footprint inventory, setting 30/50 goals, ESG issues and formulating green investment strategies.

# Sustainable operation

www.gsd.net.tw



**15+ families**

Disadvantaged families assistance



**Jiaxing  
Green Factory  
Award**

**嘉兴市绿色工厂**

嘉兴市经济和信息化局  
2023年6月5日



**330 ton**

CO2 emission reduction



Vegetarian promotion



Recycle activities





## Awards and honors

### 2023 Winner of the "Green Technology Innovation Award Competition" of the Ministry of Economic Affairs

The R&D team once again used the "Quantitative Analysis Solution for Microbial Load of Factory Wastewater Discharge" to solve the factory's problem such as increased production line output, the biological treatment unit in the wastewater system is overloaded, or the wastewater is failed to meet discharge standards. GSD won the championship, and join with Hopax Chemical Industrial Co., Ltd. to build an empirical field and create a win-win situation.

### 2022 Winner of the "Green Technology Innovation Award Competition" of the Ministry of Economic Affairs

Award " of the Small and Medium Enterprises Division of the Ministry of Economic Affairs. Two cases, the "Plant Wastewater Discharge PH/COD (Chemical Oxygen Content) Prediction System" and the "Waste Soil Abnormal Image Object Detection System". GSD was selected as the priority cooperation by Juhe International Co., Ltd.

### 2021 "Data Innovation and Application Competition"

### 2020 Winning the First "Urban Data Reality







## A historical district project in Zhejiang Province

- Collect and monitor through SCADA;
- Information is uploaded to achieve centralized management;
- The database provides statistics and analysis.

# Georgia GUDARI water supply control system

- Solve the problem of equipment inspection to achieve fewer people on duty;
- One-stop management of reservoirs, water wells and sub-stations to improve operational efficiency;
- Use precise dosing to reduce consumption.

Tender	Amount ( tax included)	Project progress (2024.4.30)	Estimated finish date
New Taipei City Cleaning Team Sewage Treatment and Management Turnkey Project	39.88 M	Completion declared	Completion declared
The 3 <sup>rd</sup> and 4 <sup>th</sup> expansion project of the water resources treatment plant in the Agricultural Biotechnology Park.	244M	62.71%	2024.8
Pingtung Linbian Township A Line Water Pumping Station Project	23.98M	52.15%	2024.5
Taoyuan Agricultural Logistics Park Construction Project-Sewage Treatment Plant Project and Three- Year Trial Operation	194 million	Start in May	Construction 660 days

## Yuh Shan Environmental Engineering Co., LTD. (Stock code: 7715)

Company Stock listed in TPEx Emerging stock market at NT\$**45**/share in 2024.1.12 .

Revenue in 2023 reached NT\$1.462 billion, with net profit of NT\$95.55 million.

In early 2023, GSD obtained the West District renovation project with an estimated total amount of **2.719 billion**.

Revenues	%
Environmental engineering revenue	89.59
Waste disposal revenue	9.30
Consultant Survey Income	1.11
Total	100.00



# YUH SHAN

In recent years, Taiwan investment in ASEAN has accounted for nearly 50% of the overall foreign investment.

Verify investment and proportion in ASEAN



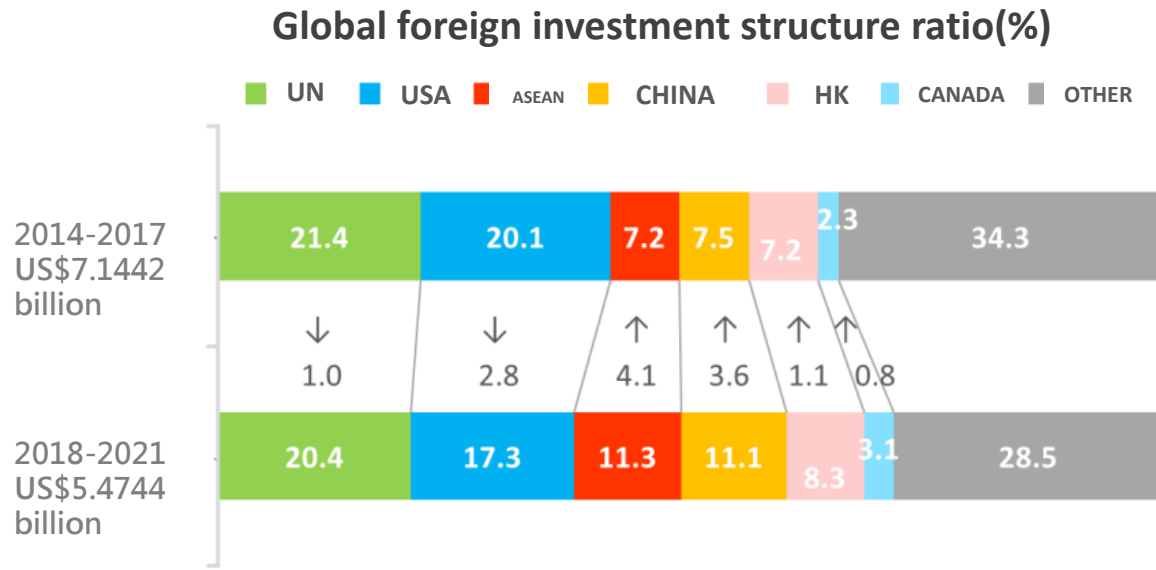
Taiwan's proportion of investment in ASEAN  
**Keep increasing**

Taiwan's investment in ASEAN crossed the billion-dollar in 2006. In 2012, due to a major investment case in Singapore, the investment amount reached a historical high of 5,724 million U.S. dollars, accounting for more than 70% of the total approved foreign investment. In 2013- In 2017, the average annual investment in ASEAN was approximately US\$2.4 billion.

After the start of the U.S.-China trade war, as the supply chain shifted, China increased its investment in ASEAN, reaching US\$5,640 million and US\$4,732 million in 2021 and 2022 respectively, accounting for 44.8% and 44.8% of the overall approved foreign investment. 47.5%.



## ASEAN foreign investment surpasses mainland China and ranks third in the world



Data source : UNCTADSTAT.

- After the trade and technology disputes between USA and China, as well as the baptism of risk control due to the raging epidemic, global foreign investment fell to US\$5.4744 billion from 2018 to 2021, a decrease of 23.4% from 2014-2017. However, investment in ASEAN bucked the trend and grew by more than 20%.
- From 2018 to 2021, the global proportion of foreign investment in ASEAN exceeded 10% and rose to 11.3%, an increase of 4.1 % from 2014-2017, and the ranking surpassed mainland China and jumped to the 3<sup>rd</sup> in the world.

Data source: 2023.6.29 Statistics Division of the Ministry of Economic Affairs: Overview of the current economic situation (Analysis of foreign direct investment in ASEAN in recent years)

**ASEAN foreign  
investment  
Keep increasing**

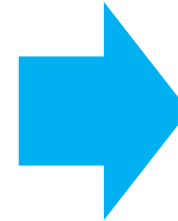
## GSD Business Development Strategy in Southeast Asia

Taiwan's New Southbound Policy



### PARD CENTER

- Combining the advantages
- Provide full range services
- Equipment procurement
- Project implementation
- Environmental engineering intelligence
- Maintenance services



### ASEAN market



PARD CENTER :  
Product Application +  
Regional Development Center





Stock  
Code : 6641

## Disclaimer

- This presentation is a summary and assessment of the past, present and future operations of our company at the time of the presentation. It contains forward looking statements that will be affected by risks, uncertainties and inferences, some of which will partially be beyond our control. The actual conclusions may differ greatly from these forward-looking statements.
- The information provided (including views on the future) does not express or imply that it is correct, complete and reliable ; nor does it represent a complete exposition of the company, the state of the industry and the subsequent major developments.
- The expectation for the future in this presentation reflects our company's view so far. If there is any change or adjustment, our company is not responsible for reminding and updating at any time.

# Thank you !