

Smart Solutions for a Better Future

List of Taiwan Smart Solutions

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Smart Cities Consulting

跨學科研究發展、跨域結合、執行政策、策略和技術

永續發展城市競爭力

Taiwan Smart Solutions Association CIECA-Taiwan Smart Cities Committee

December, 2024

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Definition and Overview of Taiwan Smart Solutions

TAIWAN SMART SOLUTIONS
SECURING A BETTER FUTURE



- **Taiwan Smart Solutions** represent a comprehensive approach to harnessing cutting-edge technology and innovation to address complex societal challenges and drive economic growth.



Achieving Net Zero Emissions

TAIWAN SMART SOLUTIONS
SECURING A BETTER FUTURE



Core Solutions

- Due to the rapid advancement of Taiwan's AIoT industry, many **world-leading smart solutions** have been derived, which has **significantly lowered the threshold for digital transformation of enterprises**.
- Use Taiwan smart solutions such as **smart factories, deep energy-saving, remote expert systems**, and **digital twins** to help traditional industries quickly initiate digital transformation and **reduce carbon emissions** to **achieve corporate carbon neutrality and net zero goals**.



Taiwan Smart Solutions

Use smart diagnosis to connect smart cities through IoE solutions

TAIWAN SMART SOLUTIONS
SECURING A BETTER FUTURE



1. Taiwan Smart Solutions Can Help

2. A Critical Step to Unlocking Manufacturing Potential

Digital Transformation of Manufacturing SMEs

3. Smart Factory War Room

4. Smart Clamp Sensor: Carbon footprint data collection, management and analysis

5. Digital Twin Applications

6. Taipei Underground 3D Road Pipeline & Information Center

7. Digital Twins as a Service (DTaaS), Drone as a Service (DaaS)

8. Earthquake Disaster Management

9. Airport Digital Twin

10. High Precision 3D City Model Building

11. Benefits of Taiwan Digital Twin Solutions

12. Autonomous Robot as a Service (ARaaS): intelligent gas detection and inspection vehicle

13. Farmers as a Service (FaaS)

14. Reality Virtual Reality: **Global Expert Support**

15. New Generation DC Charger: Validation by Top-Tier Global Clients

16. Zero Emission E-Bus

17. BRPV: Green Intelligent Power Generation Building Materials

18. Smart Energy (Deep-Energy Saving)

19. Smart Water

20. Smart Mobility

21. Smart Grid Solution

22. AI-ESG Smart Training Center

23. Glocalization: Taiwan Inside Smart Solutions

24. AI-ESG SmartPro Services

25. AI-Based Carbon Monitoring Software

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Use smart diagnosis to connect smart cities through IoE solutions

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Taiwan smart solutions can play an important role in responding to Digital and Green Dual Transformation needs:

- Digital monitoring and management:** Use the Internet of Things (IoT) and big data technology to **establish a carbon emission monitoring and management system and Reduce unnecessary carbon tariff burdens.**
- Green supply chain management:** Track the carbon footprint and origin of all products.
- Smart energy conservation and energy management:** Real-time monitoring and control of energy consumption to **optimize energy efficiency.** Identify potential energy savings and help companies develop energy saving measures and strategies.
- Digital innovation and green product development:** helps businesses improve efficiency and reduce energy consumption and carbon emissions
- Cloud computing and data analytics:** Identify potential areas for improvement and develop carbon emission reduction strategies
- Smart manufacturing:** improve production efficiency and resource utilization, while reducing carbon emissions.
- Electric vehicles and energy storage technologies:** There is an increased demand for low-carbon transportation and energy storage because of CBAM.
- Green finance and sustainable investment:** Use data and intelligent algorithms to assess the risks and rewards of green projects, attract green investment and drive a low-carbon transition.



TM

6



New opportunities for Blue Ocean Strategy

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A Critical Step to Unlocking Manufacturing Potential Digital transformation of manufacturing SMEs



ideal factory



New opportunities for Blue Ocean Strategy

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A Critical Step to Unlocking Manufacturing Potential Digital transformation of manufacturing SMEs



- Handwritten Reports
- Old Equipment
- Lack of employees with digital expertise
- Not enough \$\$

factory in reality

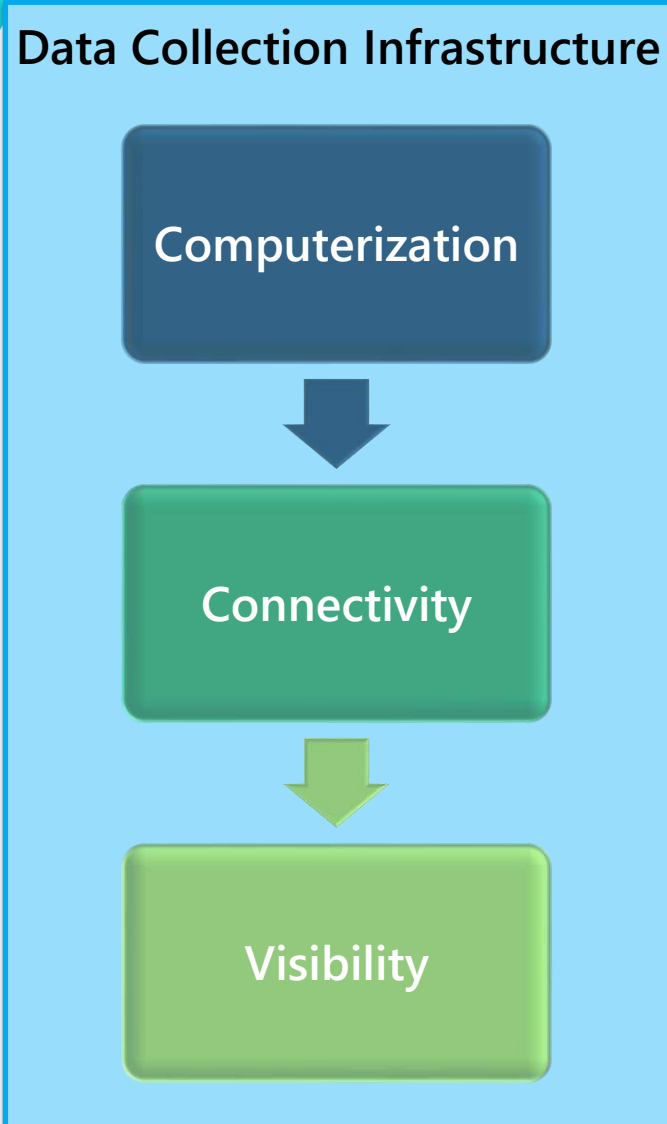


New opportunities for Blue Ocean Strategy

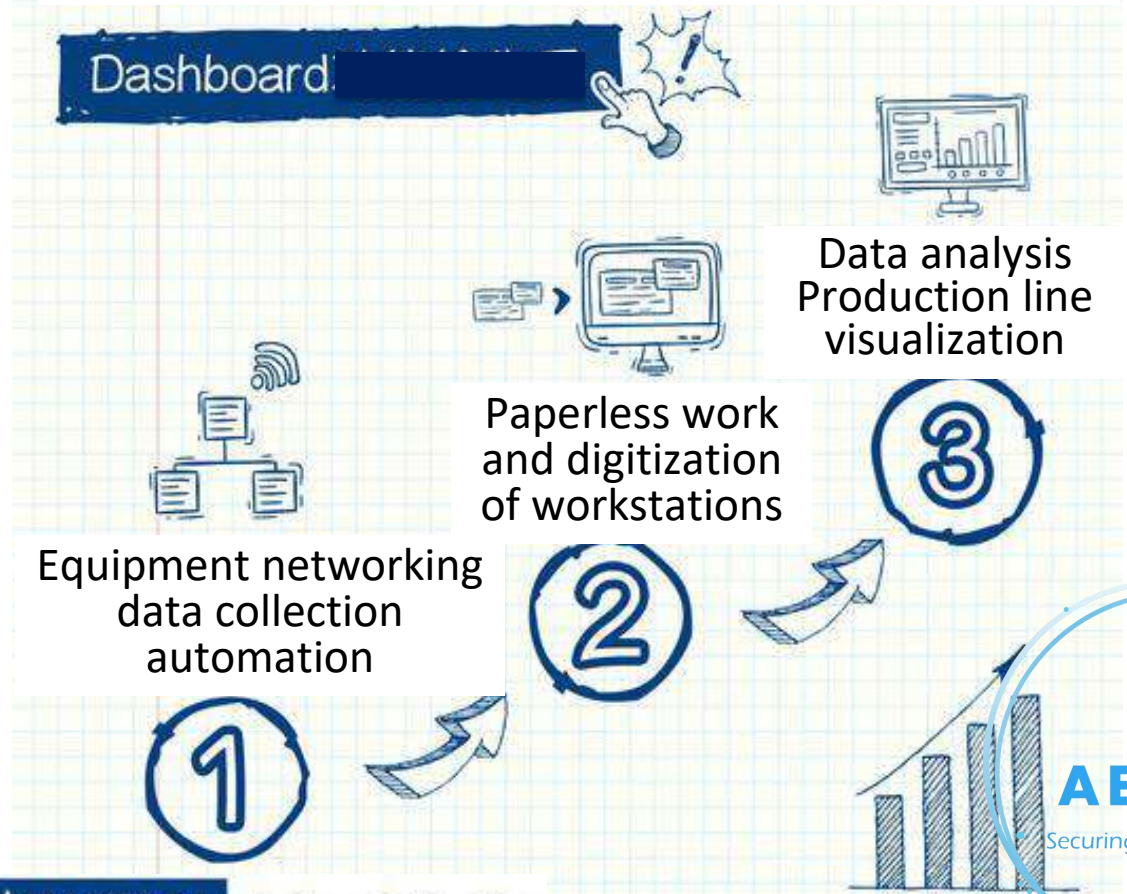


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A Critical Step to Unlocking Manufacturing Potential



One-Stop Rapid Deployment of Smart Factories



ADVANTECH Enabling an Intelligent Planet



smart factory



Meat Processing Case: Data Collection Infrastructure

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Installing sensors and wiring

Meatball factory



temperature



plug and play.
No-code setup



Customized
Industrial
Computers



smart factory





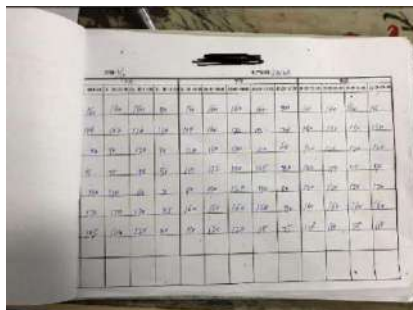
Meat Processing Case: Data Collection Infrastructure



Realtime Monitoring



7/24 Digital Recording



Dashboard



Data-based optimization

smart factory

- **Lower Costs**
Annual US\$300,000 Saving
Raw Material saving 62%
- **Improve Efficiency**
OEE rate increase 6.44%
(Overall Equipment Effectiveness)

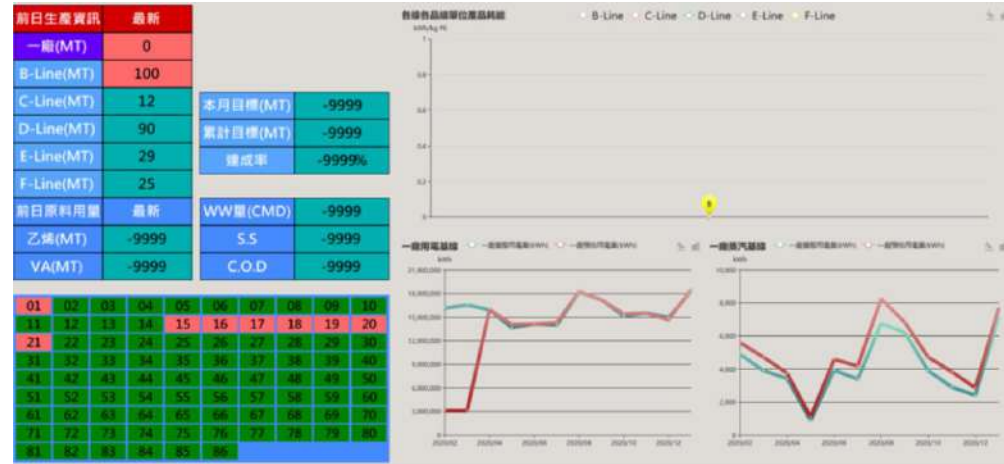




New opportunities for Blue Ocean Strategy

A Critical Step to Unlocking Manufacturing Potential

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smart factory

Smart Factory Enterprise War Room

- Cloud Solutions
- Pain points for SMEs





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Smart Clamp Sensor: Carbon footprint data collection, management and analysis

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Real-time energy footprint collection



Data transmission



Visualization and insight



解決很多安裝上的複雜和不便,只要把指示器鉤上迴路,設定一下,就完成了
because we do not need to use manpower to install



Taiwan Smart Solutions

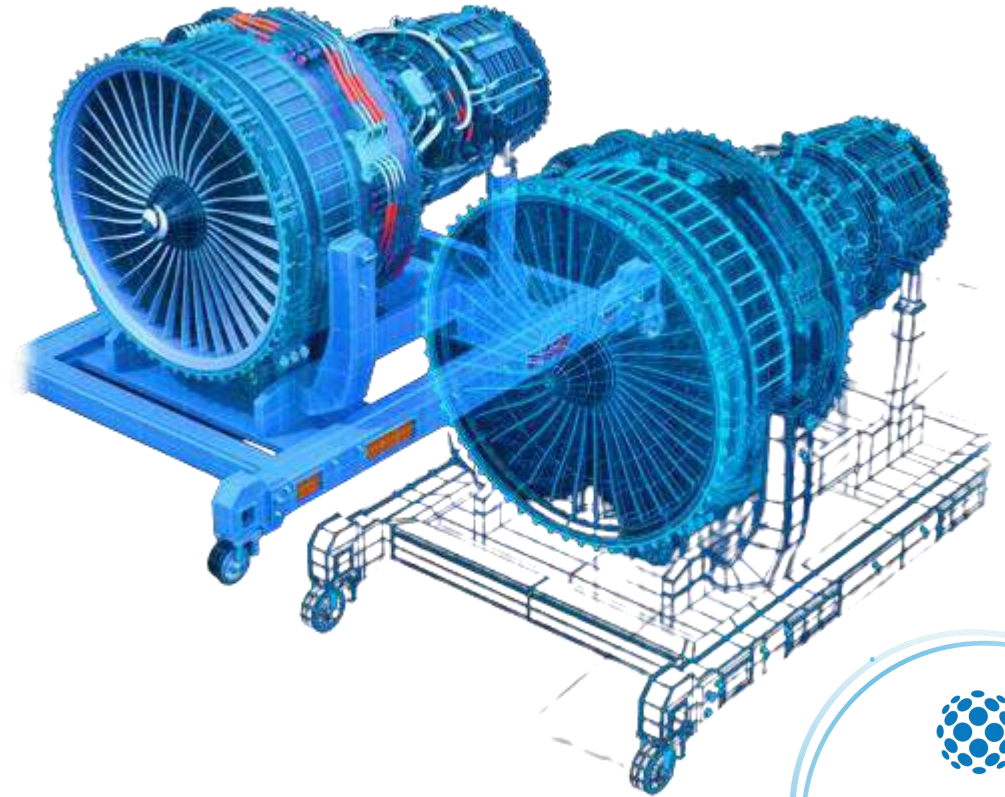
A Critical Step to Unlocking Business Potential

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5

- **Sensors** vibration, temperature, pressure, humidity
- **Communication networks** data transmission from physical devices to the digital world
- **Data Platform** can use advanced AI/machine learning algorithms to provide actionable insights for data-driven decisions.



digital twins

[Why is Digital Twins Technology so Important to the Aviation Sector \(pvplive.net\)](http://pvplive.net)



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A Critical Step to Unlocking Business Potential

Digital twins have been recognized by the international consulting firm Gartner as one of **the top 10 global technology** trends for three consecutive years. This innovative concept offers a dynamic model that seamlessly integrates digital technology with operational mechanisms, paving the way for the sustainable development of future industrial planning and construction.

Benefits of digital twins:

1. Improve planning and design
2. Enhance collaboration and communication
3. Improve operational efficiency
- 4. Enhance sustainability and reduce carbon emissions**
5. Reduce costs

Through **precise mapping of physics and digital industries, integration of virtual and real, and smart feedback, after processing, analysis, and judgment**, the digital model can reflect the current status of urban buildings, infrastructure, and mechanical equipment in a timely manner, and generate feedback, thereby establishing an **evidence-based policy-making procedures, optimize industrial construction and services, add value, reduce materials and carbon emissions in planning, design and construction, and help create a lower-carbon and more sustainable environment**^{1,32}

[Click here to view the video](#)



A digital twin is a **virtual replica of a physical object or system, used to simulate its behavior and performance.**

digital twins

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A Critical Step to Unlocking Business Potential

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Source: Geospatial World



digital twins



GEOSPATIAL
WORLD





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digital twins

SCC AD4 Smart City Core Platform

智慧城市核心平台

人工智能 無人機 4D模型





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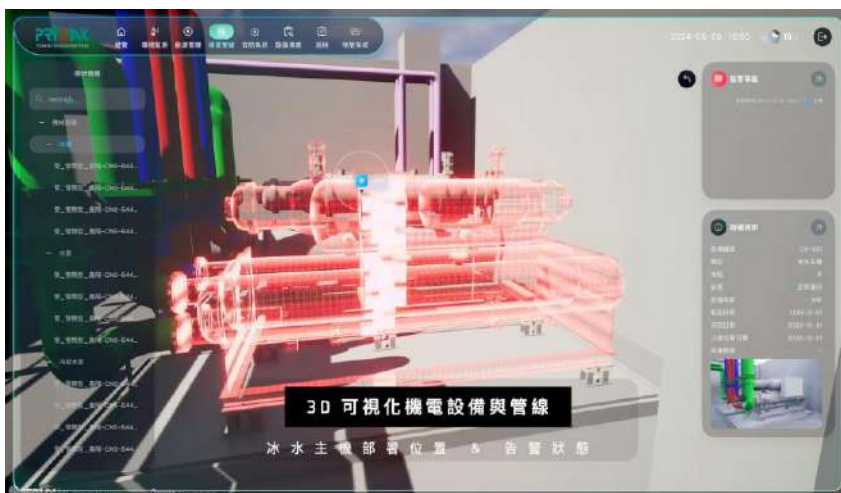
A Critical Step to Unlocking Business Potential

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- IoT, Building Control, Big Data Analytics, and Cross-System Data Integration.
- In addition to automatically collecting greenhouse gas emission activity data, it can also implement energy-saving and carbon reduction strategies in real-time.

digital twins

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[Click here to view the video](#)



TD100-M690



Aerial Photos



3D Model



Mesh Data

無人機多影像照片

幾何校正

區域網聯合高度調整

多影像比對

DSM生成

正攝影像調整

3D 數據庫 (DSM, DOM, TDOM, 向量數據、三維模型)

三維自動建模



Aerial model of Tainan Transfer Station





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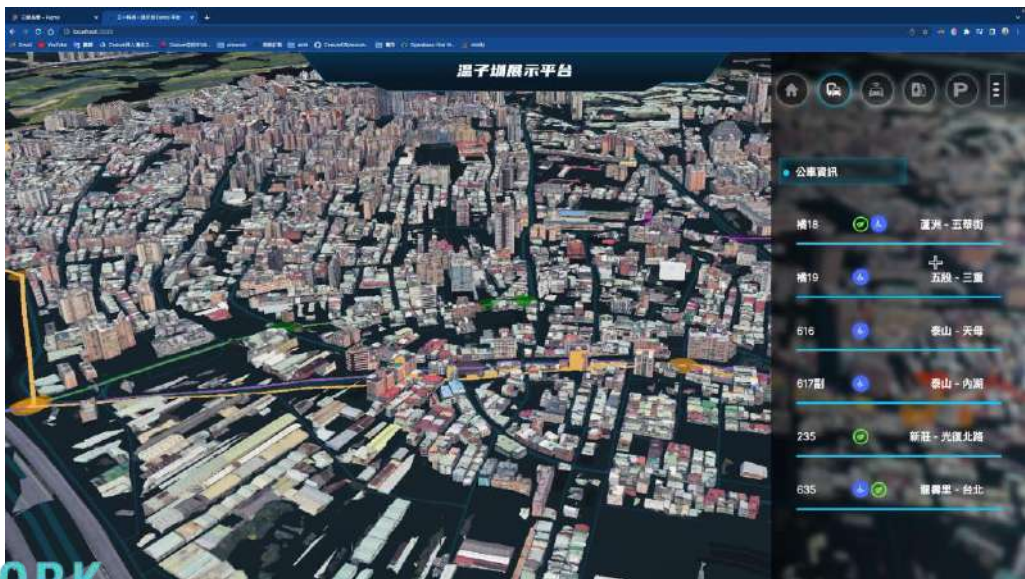
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City cctv



Parking space
remaining data query

Bus dynamic
information



Parking lot area
statistics calculation





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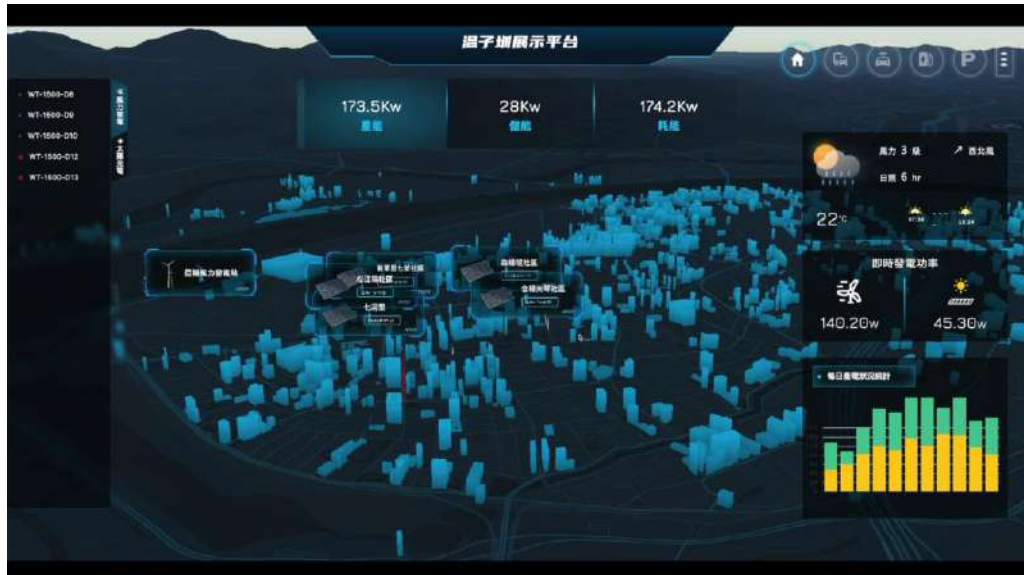


Data exchange with SOA - Demonstration of various IoT data and future scalability

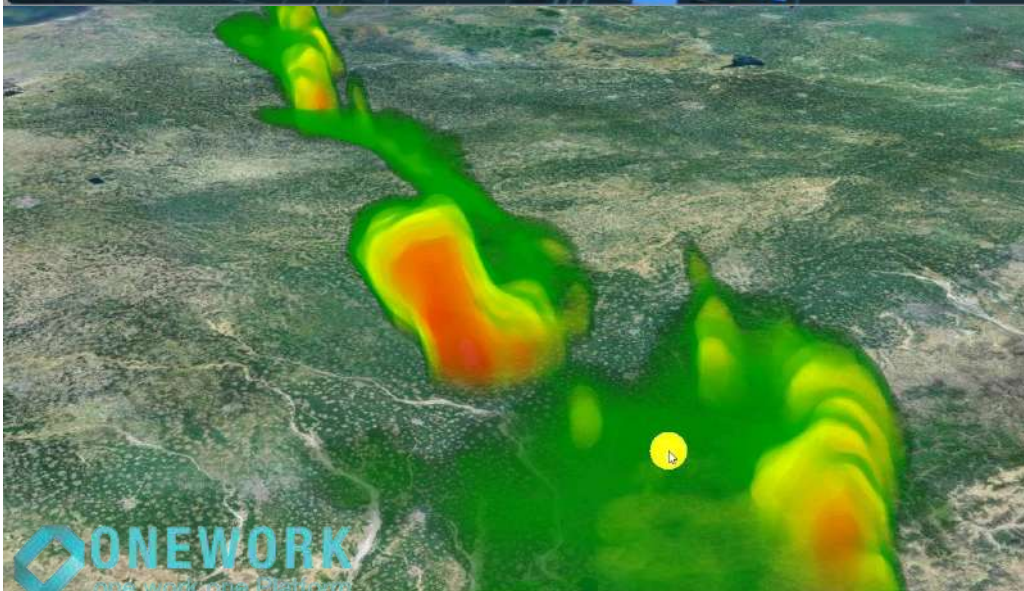
Air Quality



energy storage facility



Weather Dynamic simulation



Charging pile



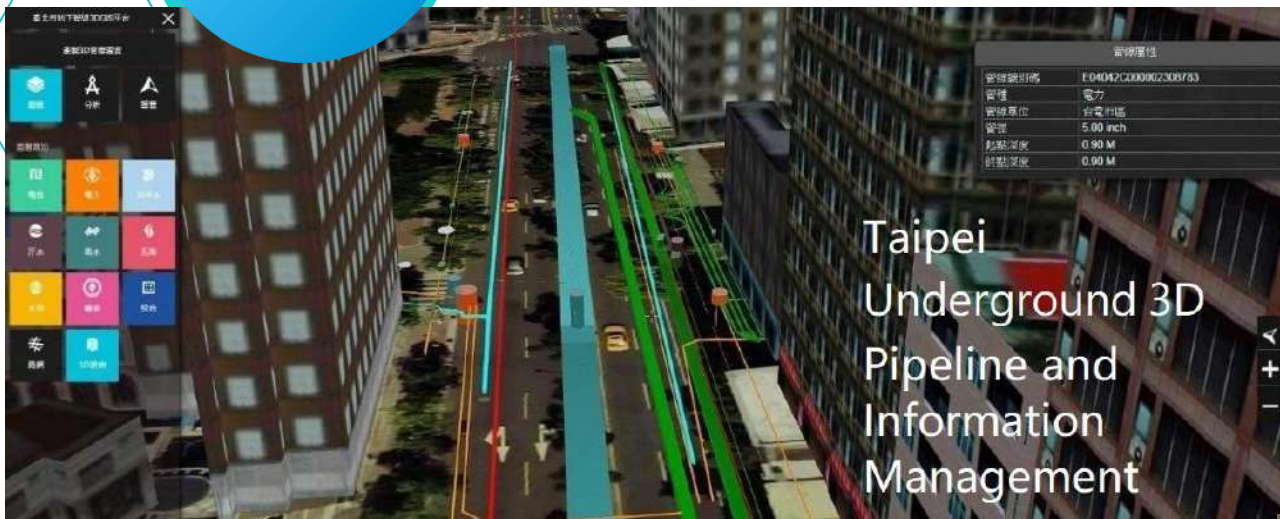


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Taipei Underground 3D Road Pipeline & Information Center

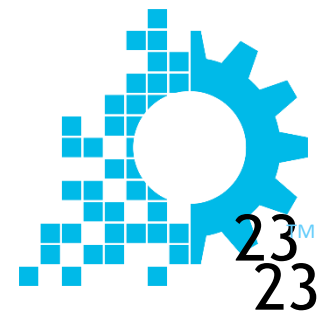
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Taipei Underground 3D Pipeline and Information Management



Taipei Underground 3D Pipeline and Information Management





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Digital Twins as a Service (DTaaS), Drone as a Service (DaaS)

[Click here to view the video](#)

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digital twin

The screenshot displays the Earthbook interface with a 3D digital twin of an industrial facility. The main view shows a top-down perspective of the facility with various structures and pipes. A white line indicates a drone's flight path. On the right, there are two video thumbnails: the top one is labeled '(可見光) 2022-08-23 20:49:55 20220823巡檢-1.MP4' and shows a close-up of industrial tanks; the bottom one is labeled '(熱影像) 2022-08-23 20:49:55 DJI_0833.MP4' and shows a thermal view of the same area. The interface includes navigation controls like zoom in (+) and zoom out (-) buttons, a home button, and a search icon. At the bottom, there is a coordinate display: '緯度 25.0613°N 經度 121.1096°E 高程 10.0m' and a 5m scale bar. The Earthbook logo is visible in the bottom center.





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Earthquake Disaster Management

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[Click here to view the video](#)



2022/9/18 Earthquake in Yuli, Hualien, Taiwan



digital twins





AIRPORT DIGITAL TWIN



digital twins

济南机场

托质量 托质量

中央空调: 24.1°C
 东航登机口前厅: 23.4°C
 东航登机口: 22.3°C
 行李室: 21.5°C
 入口大厅: 20.4°C
 东航入口: 22.2°C
 西航入口: 25.3°C
 东航登机口前厅: 25.4°C
 东航登机口: 24.4°C

今日总耗电量: 264.7 kWh
 今日总耗冷量: 135.1 kWh

BIM 智慧运维管理系统
 BIM operation maintenance management system

室内环境

16:09:04 | 31°C

前厅能耗统计
 32.75kWh | 2865元 | 562元

室内环境指数
 1562 | 6857

旅客客流
 192 | 108

室内环境及旅客人流

广州白云国际机场

摄像头选择
 摄像头列表: 未选择

摄像头选择

摄像头列表: 未选择

济南机场

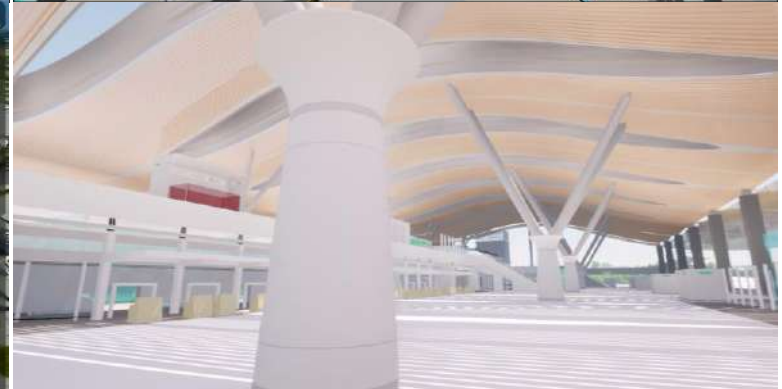
今日耗电量: 2.8 kWh
 本月耗电量: 92.8 kWh
 年度耗电量: 186.6 kWh
 年度能耗占比: 15.9 %
 室内平均温度: 26.3 °C
 室内平均CO2浓度: 375.1 ppm
 室内平均PM2.5浓度: 25.6 μg/m³

济南机场

能源管理

能耗分析
 昨日耗电量: 32.6 kWh
 今日耗电量: 1.22 kWh
 本月耗电量: 12.31 kWh

西航能耗统计
 32.6 kWh



广州白云国际机场

能源管理

能耗分析
 今日耗电量: 1.53 kWh
 本月耗电量: 12.31 kWh

西航能耗统计
 1.53 kWh

广州白云国际机场

能源管理

能耗分析
 今日耗电量: 1.63 kWh
 本月耗电量: 12.31 kWh

西航能耗统计
 1.63 kWh

广州白云国际机场

能源管理

能耗分析
 今日耗电量: 1.63 kWh
 本月耗电量: 12.31 kWh

西航能耗统计
 1.63 kWh

通过物联网及智能设备来通过传感器监控耗能设备(比如中央空调、换气扇、电梯、大型电机、供电设备等)的运行



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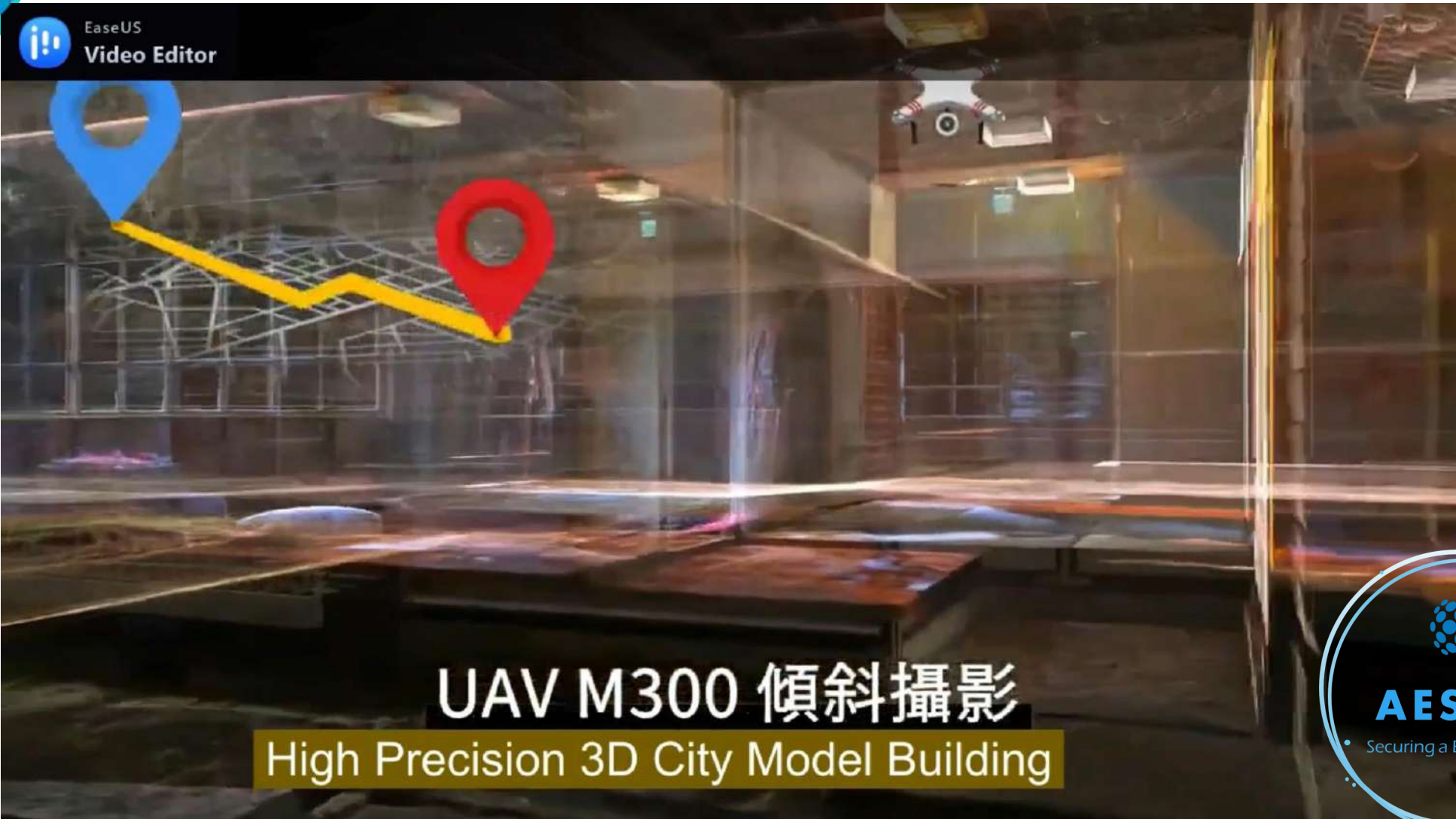
High Precision 3D City Model Building

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10

[Click here to view the video](#)



EaseUS
Video Editor

UAV M300 傾斜攝影

High Precision 3D City Model Building



digital twins



Taiwan Smart Solutions

Use smart diagnosis to connect smart cities through IoE solutions

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Benefits of Taiwan Digital Twin Solutions

- 1. Production process optimization:** Model a virtual production environment and find the best production configuration and processes to reduce your carbon footprint
- 2. Carbon footprint calculation and management:** By simulating real-world physical systems and ecosystems, digital twin technology can collect and integrate carbon emissions-related data to provide accurate carbon footprint assessments and reports.
- 3. Resource utilization optimization:** Simulate and optimize the use of resources, including energy, raw materials, and other resources. **Through real-time monitoring and data analysis, companies can maximize the use of resources, reduce waste, and reduce carbon emissions.**
- 4. Performance analysis and improvement:** Provide a detailed analysis of the production process and the efficiency of the equipment. Use these insights to identify and improve areas of energy inefficiency, reducing energy consumption and corresponding carbon emissions.
- 5. Simulation testing and validation:** Provide a virtual environment for testing and validation, reducing the time and cost required for actual testing, Evaluate the carbon performance of products and processes to select the best mitigation strategy.



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12

PIVA Autonomous Robot as a Service (ARaaS)

[Click here to view the video](#)

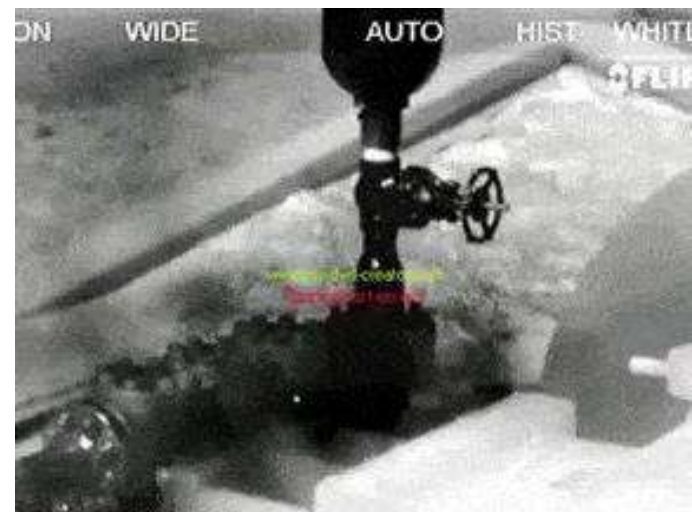


Temperature
Abnormalities

Gas
Anomalies



- Regular self-propelled inspection
- System transmission exception
- Improve industrial safety management
- IP65/international explosion-proof



intelligent gas detection
inspection vehicle

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AAROW

Autonomous Robot as a Service (ARaaS)

[Click here to view the video](#)

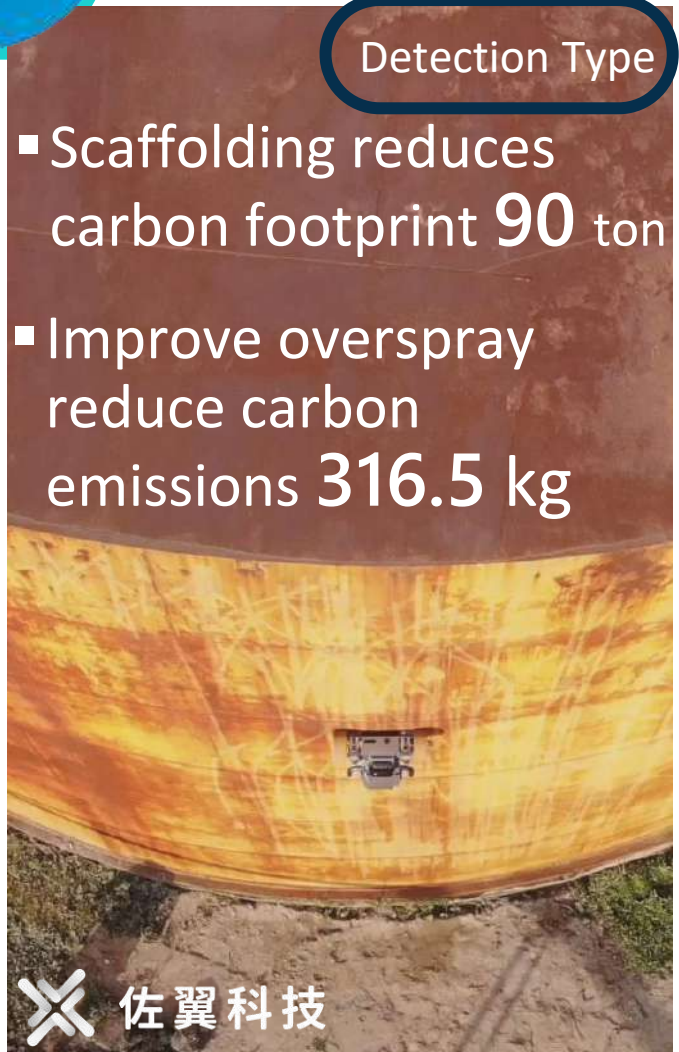
[Click here to view the video](#)

[Click here to view the video](#)

12

Detection Type

- Scaffolding reduces carbon footprint **90** ton
- Improve overspray reduce carbon emissions **316.5** kg

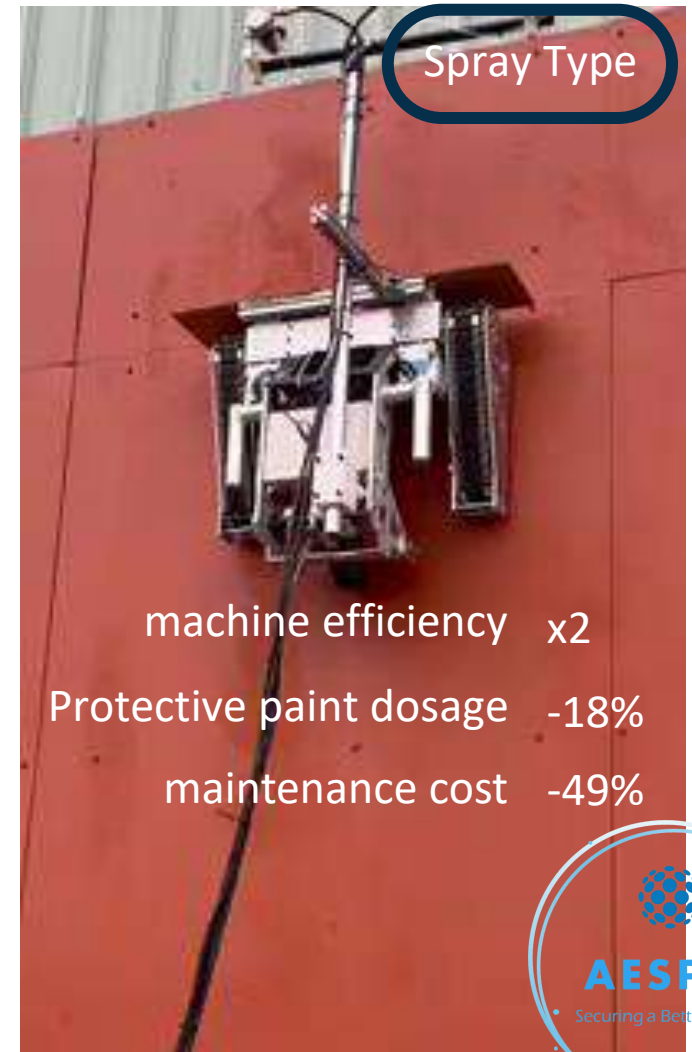


佐翼科技

Scrape-off Type



Spray Type



- machine efficiency x2
- Protective paint dosage -18%
- maintenance cost -49%



bucket overall maintenance smart car

Farmers as a Service (FaaS)



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- 40%-50% manpower saving
- Reduce cost by 1.3 times

KIAO Smart Agriculture PlatformCode

Connects to different systems

LINEBOT Human-Machine Joint Decision-Making,

Meteorological early warning, small regional disaster early warning and prevention notices

allow farmers to better grasp the response mechanism



[Click here to view the video](#)

科技已改變耕作型態

Smart Agriculture Platform



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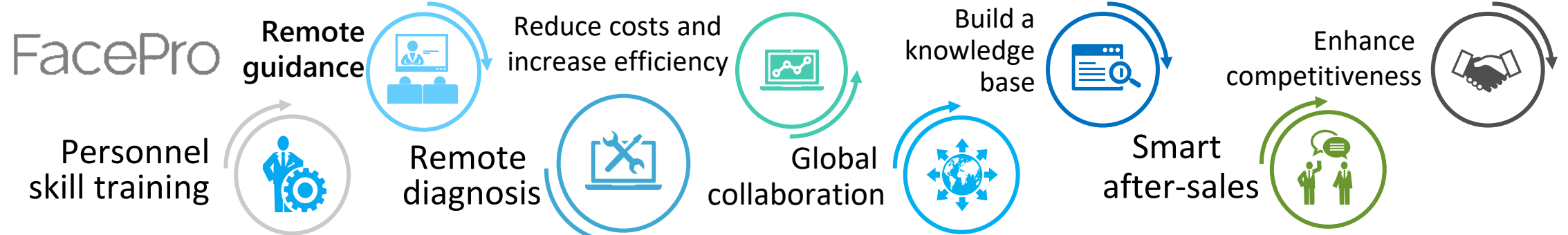
14

- Use an innovative expert system provides efficient, **real-time remote global expert support**, training and resources are sharing via first-person perspective.

- **Reality Virtual Reality (RVR)**
- Connecting two real-world in a metaverse environment
- **Send employees to remote workplaces without travel**



global expert support





Taiwan Smart Solutions

New Generation DC Charger

180kW DC to DC Charger. Combining with ESS and green energy.
Validation by Top-Tier Global Clients

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New Generation DC Fast Charger

Our design mission is to achieve carbon neutrality through innovative technology in a complete product line, fully modular and designed for large open spaces and urban planning. Our goal is to be environmentally responsible and bring innovative solutions for a brighter future.





Taiwan Smart Solutions

e-Bus

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智能與綠能化電動巴士 Intelligent & Green E-bus



Taiwan Smart Solutions

Strength of Our E-bus

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16



Taiwan

Taiwan brand, Taiwan design,
made in Taiwan



Flexibility

Flexibility in shifting &
scheduling, no limitation for
daily endurance.



User-Friendly

Low-floor with 2 or 3 doors



Quality

Japan battery, Germany motor, Taiwan
control system



Battery Life Cycle

Over **10 years** as power battery, could be used another 10
years as energy storage battery. Over 20,000 cycles*



Fast Charging

Charge from 10% to 90% within **15 mins**, suitable for
urban parking lot plan

Taiwan ITS

FMS : Fleet managements system

IVI Monitor: In-vehicle Infotainment

ADAS: Advanced driver-assistance system

OBDII: On-board diagnostics

TPMS: Tire-pressure monitoring system

DVR 8 cameras: Digital video recorder

E-payment, WiFi, Audio announcements





Building Reinforce PhotoVoltaics (BRPV) Technology

17

The 6.4MW green building materials solar energy project in the Green Intelligent Power Generation Building Materials Industrial Park of AccelSpirit Technology Production Base has successfully realized grid-connected power generation.

With an installed capacity of 6.4MW, the daily power generation can reach 26,000 kWh, and the annual power generation is expected to be 7.56 million kWh.

Annual savings:

- Standard coal 2261.8 tons
- Reduced CO2 emissions by 7091.36 tons
- Reduced NOx emissions by 30,719.75 tons



Patented Solar Energy



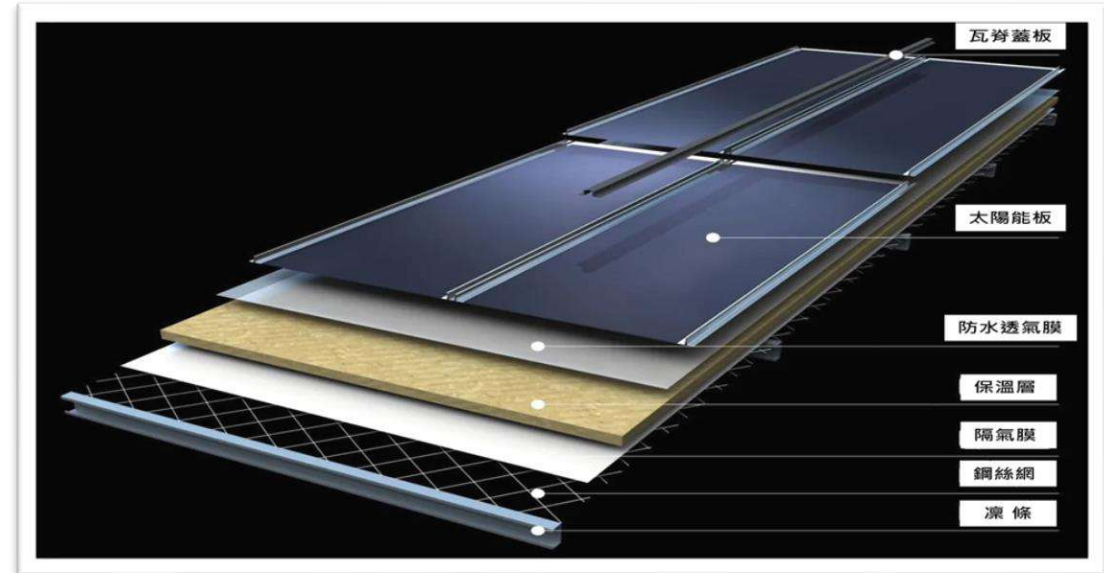
17

Building Reinforce PhotoVoltaics (BRPV) Technology

The world's leading unique BRPV robust and safe photovoltaic building materials production technology

Applications: new intelligent photovoltaic tiles, new power generation curtain wall materials, prefabricated BRPV building materials products, new power generation carport materials, new highway power generation sound insulation screen materials, etc.

- Low voltage, High safety, Fireproof and Waterproof Smart photovoltaic building materials.



Patented Solar Energy

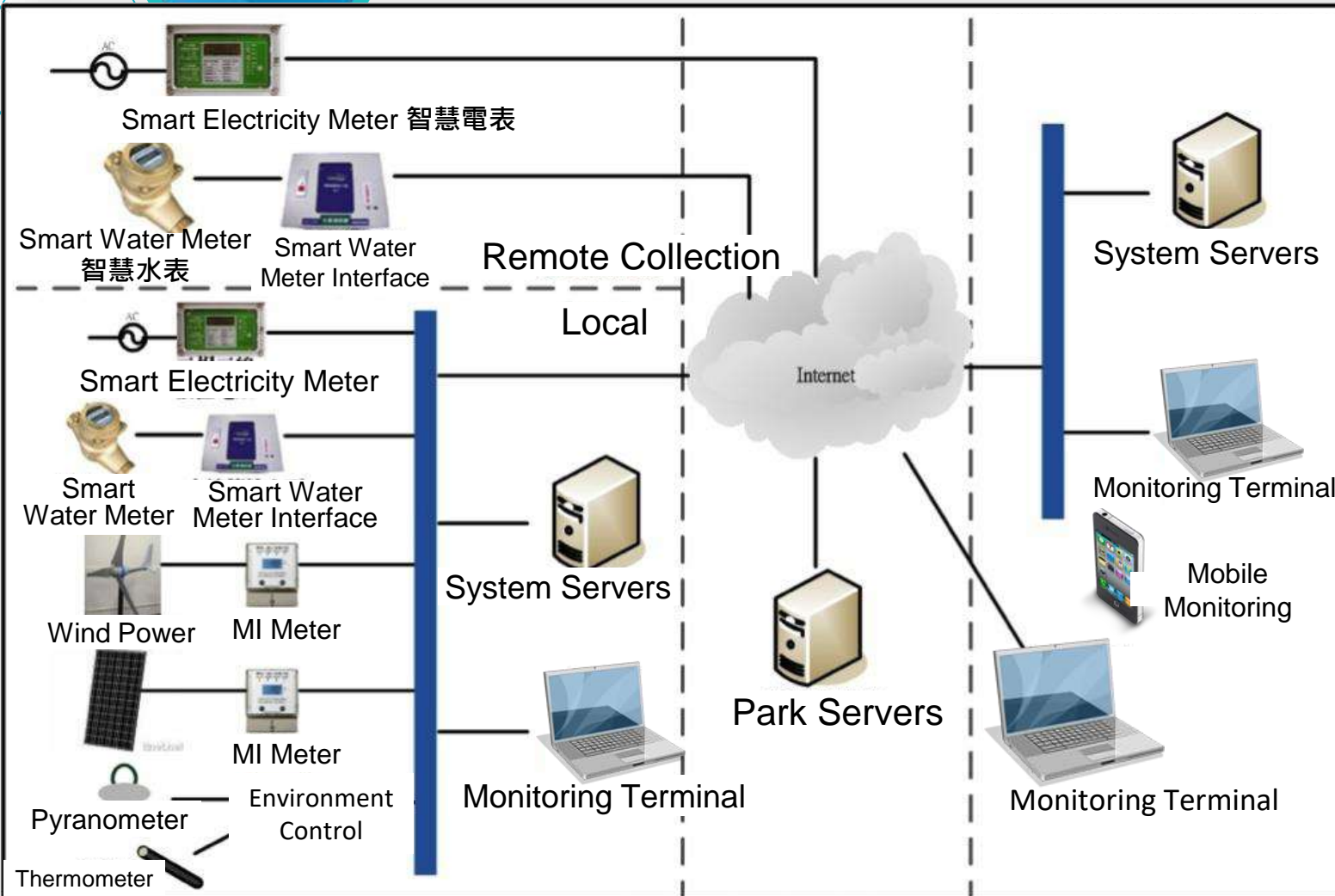


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Smart Energy

Energy Management is **Visible, Controllable**, and **Optimizable**, greatly Reducing Energy Costs



Smart Park Energy Grid 智慧電網

- Real-time data of water, electricity and gas
- Energy use environment parameters
- Key energy-consuming equipment
- Energy flow diagram
- Energy efficiency assessment of various departments
- Lamps, air conditioners, heat, air, etc. switch flow control according to environmental scenes
- Power data alarm location
- Environmental parameter warning location
- Pipeline fault location
- Balance energy, cut peaks and fill valleys
- Energy-saving parameter monitoring





TAIWAN SMART SOLUTIONS
SECURING A BETTER FUTURE

Taiwan Smart Solutions

Deep Energy-Saving

Smart Energy Management System

18



Successful cases:
Energy saving results
in shopping malls,
hospitals, restaurants,
and data centers

<p>Reduce</p> <p>21,270 Metric tons of carbon emissions</p> <p>41,970,000 kWh</p>	<p>Save electricity bills 17,769,521 元</p> <p>Save electricity 7,184,167 度</p> <p>Save carbon emissions 3,657 公噸</p> <p>Average Saving Energy Rate >45.0%</p>	<p>Save electricity bills 9,200,000 元</p> <p>Save electricity 3,680,000 度</p> <p>Save carbon emissions 1,873 公噸</p> <p>Average Saving Energy Rate >25.6%</p>
<p>Howard</p> <p>Save electricity bills 3,176,850 元</p> <p>Save electricity 1,200,317 度</p> <p>Save carbon emissions 611 公噸</p> <p>Average Saving Energy Rate >23.0%</p>	<p>Howard</p> <p>Save electricity bills 4,384,384 元</p> <p>Save electricity 1,566,886 度</p> <p>Save carbon emissions 797.5 公噸</p> <p>Average Saving Energy Rate >42.6%</p>	<p>HAVI</p> <p>Save electricity bills 3,240,060 元</p> <p>Save electricity 1,345,925 度</p> <p>Save carbon emissions 685 公噸</p> <p>Average Saving Energy Rate >39.8%</p>
<p>EVERGREEN</p> <p>Save electricity bills 2,797,166 元</p> <p>Save electricity 1,187,623 度</p> <p>Save carbon emissions 604.5 公噸</p> <p>Average Saving Energy Rate >22.1%</p>	<p>Save electricity bills 1,102,167 元</p> <p>Save electricity 392,096 度</p> <p>Save carbon emissions 199.5 公噸</p> <p>Average Saving Energy Rate >25.6%</p>	<p>Save electricity bills 1,102,167 元</p> <p>Save electricity 392,096 度</p> <p>Save carbon emissions 199.5 公噸</p> <p>Average Saving Energy Rate >14.3%</p>



1. Power optimization
2. Power dispatch
3. Deep energy saving
4. Carbon emission management



18

Smart Energy-Saving Management of Ice Machine System

Telstra Bali Cable Station Average energy saving rate in 2021: **52%**

- Ice machine start and stop optimization maintains efficient load and stabilizes host efficiency
- Equipment frequency conversion control, sensing field requirements, dynamic parameter control
- Global system management, considers equipment energy consumption and improves energy-saving benefits
- Air conditioning system and ice water side optimization
- Improve equipment and system efficiency and reduce human operating errors



Period	51	52	53	54	55	56	57	58	59	60	61	62
Month	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22
Baseline electricity consumption	248,655	260,475	295,099	352,620	372,236	406,796	412,015	391,219	339,896	303,867	281,691	258,123
Actual electricity consumption	120,338	129,040	140,480	204,940	226,760	203,560	179,662	173,060	150,580	135,920	123,020	106,720
Energy saving degree	128,317	131,435	154,620	147,680	145,476	203,236	232,352	218,160	189,316	167,947	158,671	151,403
Energy saving efficiency(%)	51.6%	50.5%	52.4%	41.9%	39.1%	50.0%	56.4%	55.8%	55.7%	55.3%	56.3%	58.7%
Expected energy savings	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%



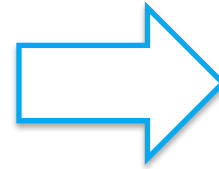
Taiwan Smart Solutions

Smart Water

TAIWAN SMART SOLUTIONS
SECURING A BETTER FUTURE



Traditional Water Meter



Smart Add-On Meter



- Automated data reading: Optical Character Recognition
- Smart alert: detect leakage
- Low Energy Solution: Long-Range and Low-Power Wide Area Network (LoRA) for concentrated areas. 4G/5G Narrow-Band IoT (NB-IoT) for widely-distributed areas.



宏碁通信股份有限公司



Taiwan Smart Solutions

Smart Mobility

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AI-based Smart Mobility with Energy Saving and Carbon Reduction

Users can perceive the convenience brought by smart mobility

- Smart Parking
- Smart Bus Stops
- Multimodal Services
- Flexible Mobility as a Service (MasS)
- Shared Mobility
- Green Automotous
- Complete Street
- Livable Community



Taipei's solar-powered Smart bus stand sign

- Realtime parking information
- Available parking spaces
- Parking guide
- Parking space number
- Automatically record the license plate number
- Time to park/leave
- Amounts payable
- Member confirmation and automatic payment
- Multiple payment methods
- Time reminder
- Parking photo confirmation
- Vehicle search





Taiwan Smart Solutions



Smart Mobility: Traffic Enforcement & Management

- Cross red light detection
- Right turn under red light detection
- No parking zone detection
- Speed limit detection
- Parking zone detection
- Vehicle detection





Taiwan Smart Solutions

Smart Mobility: Traffic Enforcement & Management

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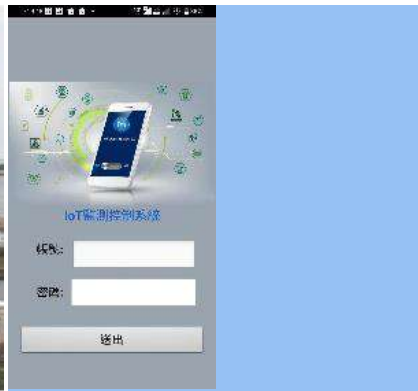
Taiwan Smart Solutions

Smart Monitoring Uexcellence System

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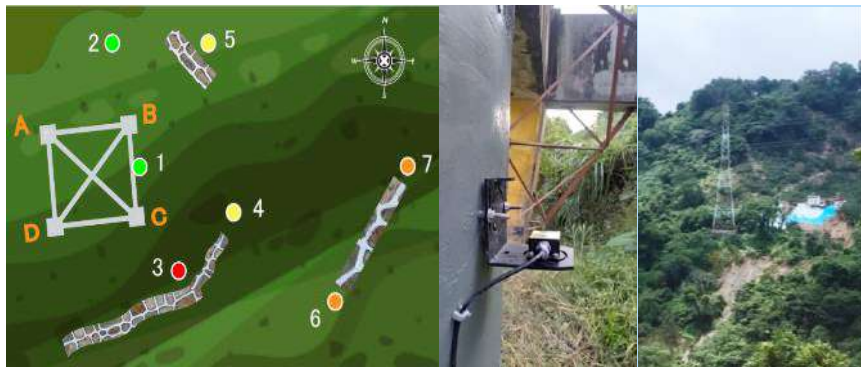
AI Smart Engineering Surveillance System



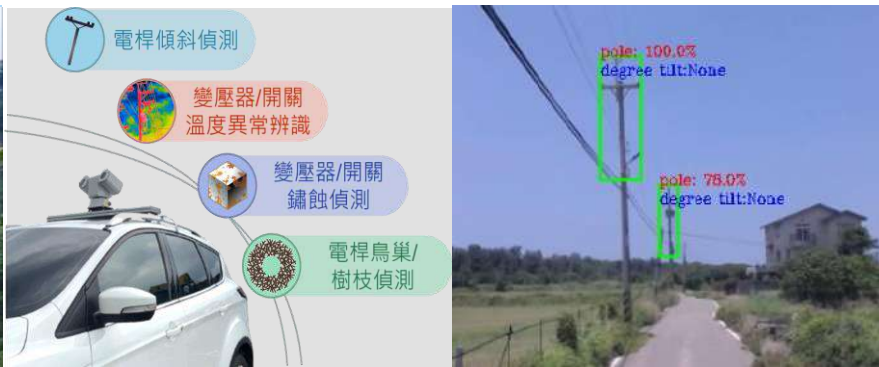
IoT Engineering Machine Authorization Control System



South American Emergency Response Center & AIoT Water Measurement Station



Earth Slope IoT System for Tower Base Safety Monitoring



AI Inspection Vehicle for Electric Pole & Road Check



Smart Safety Helmet





Taiwan Smart Solutions

Smart Grid Uexcellence System

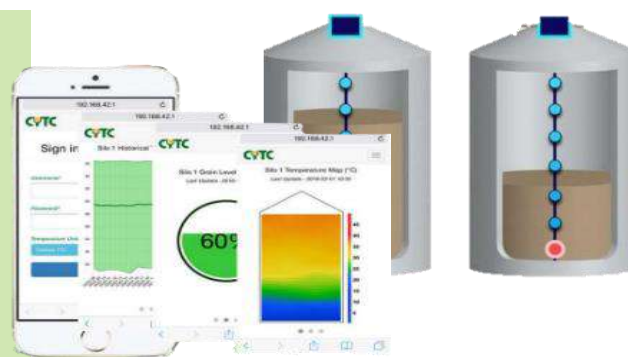
TAIWAN SMART SOLUTIONS
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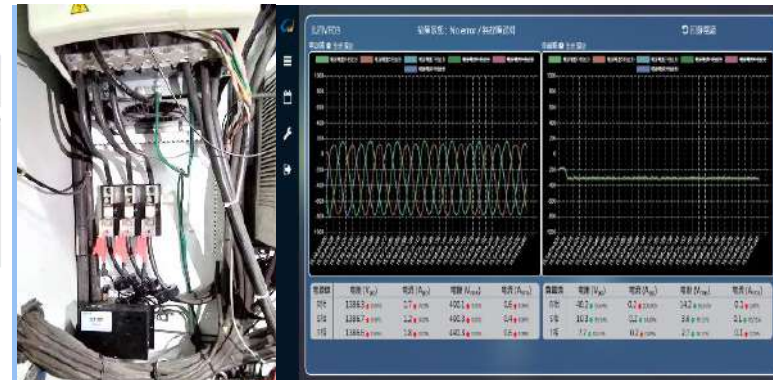
Dynamic Thermal Rating Monitoring



AIoT Cable Oil Leak Alarm System



IoT Coal Silo Smoldering Warning system



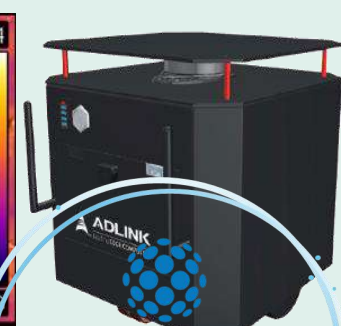
AIoT Real-time CB Inverter Waveform Monitoring



IoT Wireless CT Leakage Detection



Real-time Underground Cable IoT Status Detection and Wireless Life Alarm



AI Inspection Robot for Tunnel Cable Joint Box

AESPro
Securing a Better Future



Taiwan Smart Solutions

Use smart diagnosis to connect smart cities through IoE solutions

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There are much more Smart Chip-based Taiwan Smart Solutions....

Smart Education, Smart Water Metering, Smart Building, Smart Energy, Smart Industry Park, Smart Environment, and AI Solutions for business and more....



Taiwan can Help!





Taiwan Smart Solutions

Use smart diagnosis to connect smart cities through IoE solutions

TAIWAN SMART SOLUTIONS
SECURING A BETTER FUTURE



Taiwan Inside Smart Solutions....

Different from the traditional AIoT trading of individual hardware components, Taiwan Smart Solutions is a set of "Taiwan Inside" smart solutions including smart chips, sensing components, IPC, AI, cloud services, algorithms, and related software and hardware. Work with local partners to modify UI, UX, language, and obtain local certifications.



Taiwan Inside Smart Solutions

TAIWAN SMART SOLUTIONS
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Glocalization

A new win-win international business model



Different from the traditional AIoT trading of individual devices, **Taiwan Smart Solutions is a set of "Taiwan Inside" smart solutions** including **smart chips, sensing components, IPC, AI, cloud services, algorithms,** and related software and hardware. Work with **local partners** to modify UI, UX, language, and to obtain local certifications with a local brand and logo.

- Taiwanese manufacturers indirectly enter specific new international markets
- International partners gain world class smart solutions without significant R&D investment

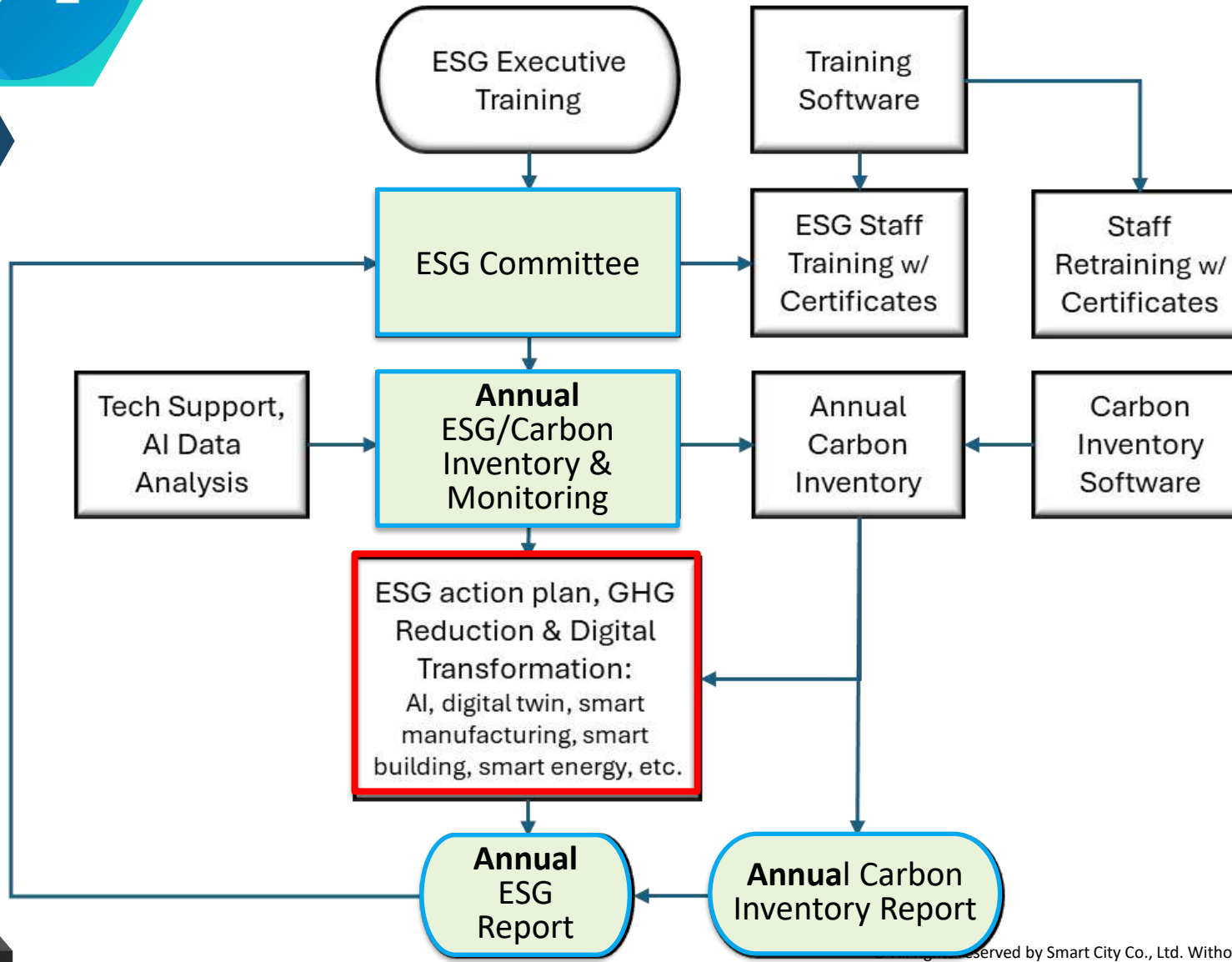
Taiwan Smart Solutions

AI-ESG SmartPro (AESPro) Process

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24



We have:

ISO 14064 Carbon inventory of organizational or corporate activities

ISO 14067 Product carbon footprint

ISO 14068 Carbon neutral

ISO 50001 Energy management



AESPro

Securing a Better Future

TM





Achieving net zero emissions

AI-Based Carbon Monitoring Software

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GHG
溫室氣體盤查

碳排儀表板

麟數據 | 台北總部 | 繁體中文 | Hi, Ping

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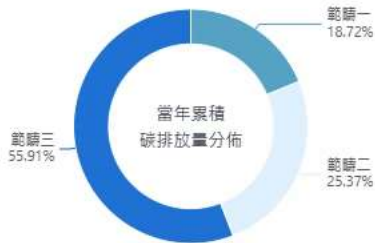
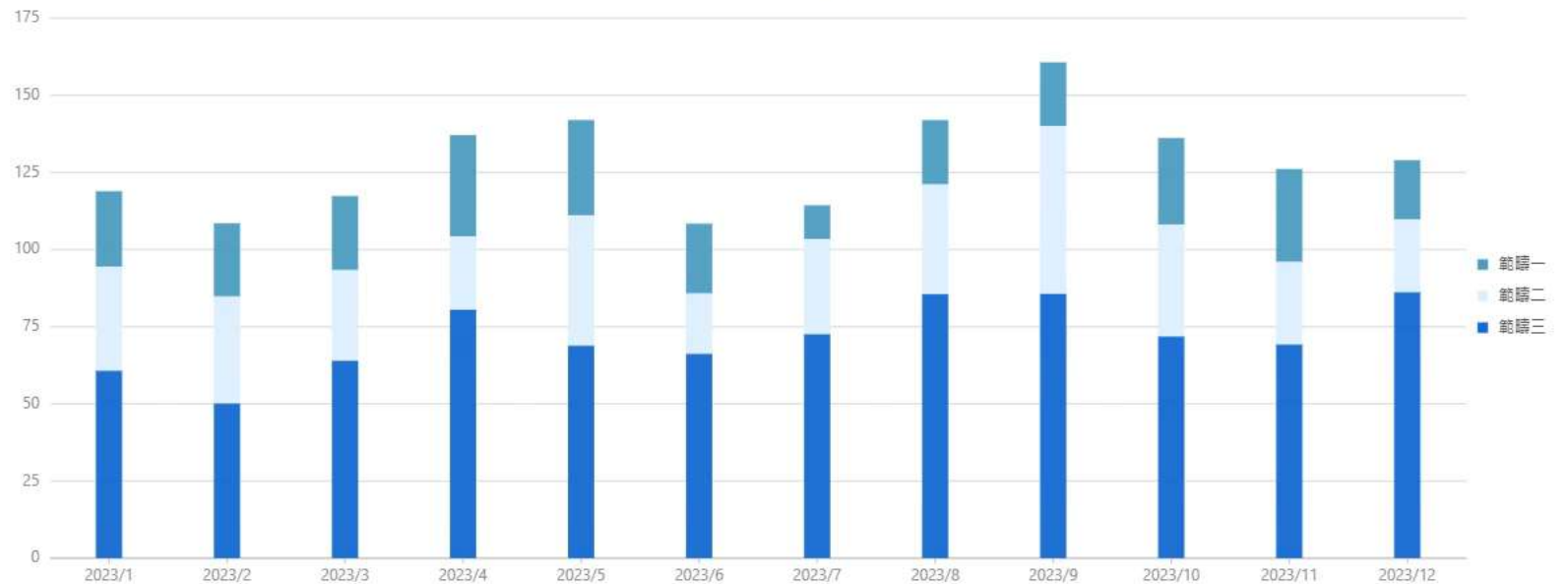
2024

實際總碳排放量

1,540.87 ▼ 3.41%



每月碳排放量



■ 範疇一：類別一
 ■ 範疇二：類別二
 ■ 範疇三：類別三~類別六

類別細項累積碳排放量



設備累積碳排放量



碳排儀表板

排放源鑑別

顯著性評估

係數管理

設備清單

活動數據

查證與報告下載

目標與歷史碳排

會員管理

組織設定

關帳設定

溫室氣體盤查



Smart Solutions For a Better Future

Reimagining Our Cities to be Smarter and More Sustainable



Present

- President of Taiwan Smart Solutions Association
- Advisor of World Bank & European Bank for Reconstruction and Development (EBRD)
- Executive Board Director of CIESA-Taiwan
Chairman of Smart Cities Committee & Taiwan-Estonia Committee

Professional

- Fellow of the European Carbon Offset Tokenization Association
- MoEA AI Coach Certificate
- MoEA ESG Report Writing Practical Training Course Certificate
- ISO 14067 Product Carbon Footprint Lead Verifier/AFNOR
- ISO 14064-1 Greenhouse Gas Inventory Lead Verifier/AFNOR
- ISO 14068-1 Carbon Neutrality Lead Verifier/Bureau Veritas

Honors

- 2006 "US Biennial Transportation Planning Excellence Award", USDOT/American Planning Association (APA)
- 2006 "US National Award for Outstanding Individual Leadership", Association of Metropolitan Planning Organization (AMPO)

Served

- Chairman, ICT Council of Asia-Pacific Chamber of Commerce and Industry
- Member of Taipei City Smart City Committee
- Member of Taipei City Urban Development Committee
- Chairman, Technical Committee, American Asso of Metro Planning Org
- Director of R&D and Technology, New York Metro Transp Council
- Member of ASTM Int'l Standards Org ITS Archived Data User Services Committee
- Adjunct lecturer, Civil Engineering, NYU School of Engineering
- Chief Strategy Officer, CSI Software Technology Company
- Asia Region Director of French software company "City Lab"

James Chiao



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