

2022 Welcome to Invest in TAIWAN



Most Reliable and Innovative Partner in Asia

<https://investtaiwan.nat.gov.tw>

Presentation Outline



Why Taiwan



Investment
Opportunities



Investment
Incentives



Investment
Services

Why Taiwan

- Best Trusted and Resilient Supply Chain Partner
- Well-developed Industrial Clusters
- Competitive R&D Capacities
- Talented Human Resources
- Secure IP Protection
- Friendly Living Environment

Best Destination for Investment

#4 in the world
(#2 in Asia)

2021 Business Environment Risk
Intelligence (BERI) Report

World Competitiveness

#8 in the world
(#3 in Asia)

IMD World Competitiveness
ranking 2021

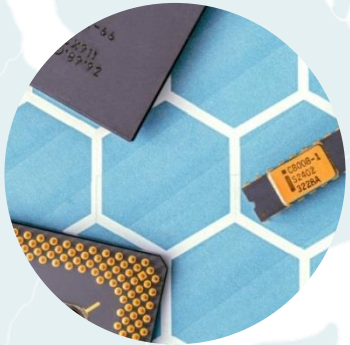


Why Taiwan: Best Trusted and Resilient Supply Chain Partner



► New Opportunities

- Supply chain adjustment of multinational enterprises
- Searching for trusted and resilient supply chain partners



► New Technologies

- Emerging semiconductor: Market scale reaches US\$600 billion in 2025
- 5G applications: Market scale reaches US\$1.33 trillion in 2025
- AI business: Market scale reaches US\$11 trillion in 2025

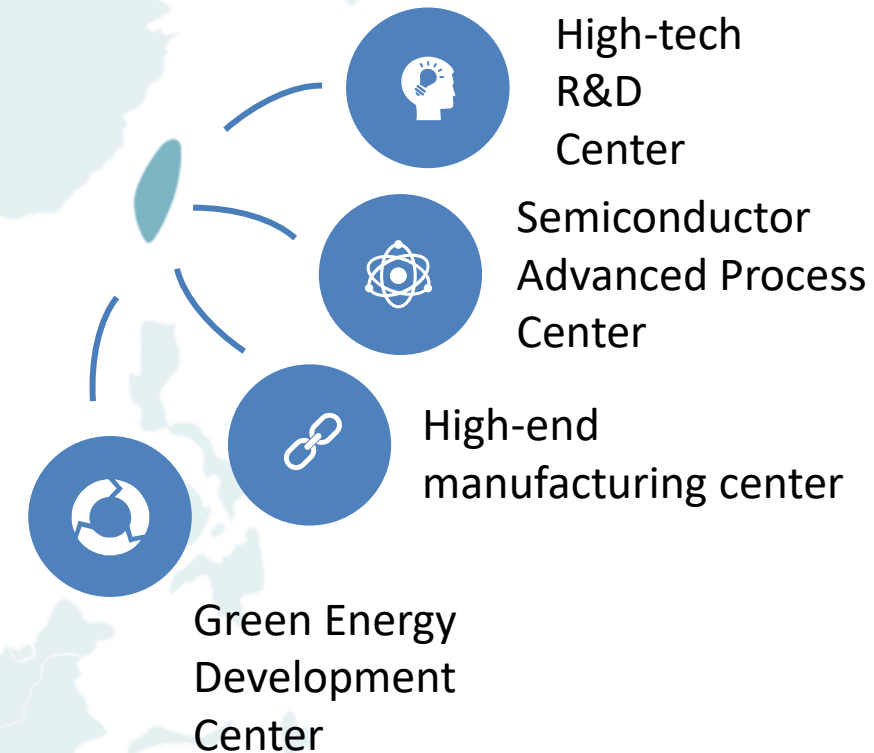


► New Demand

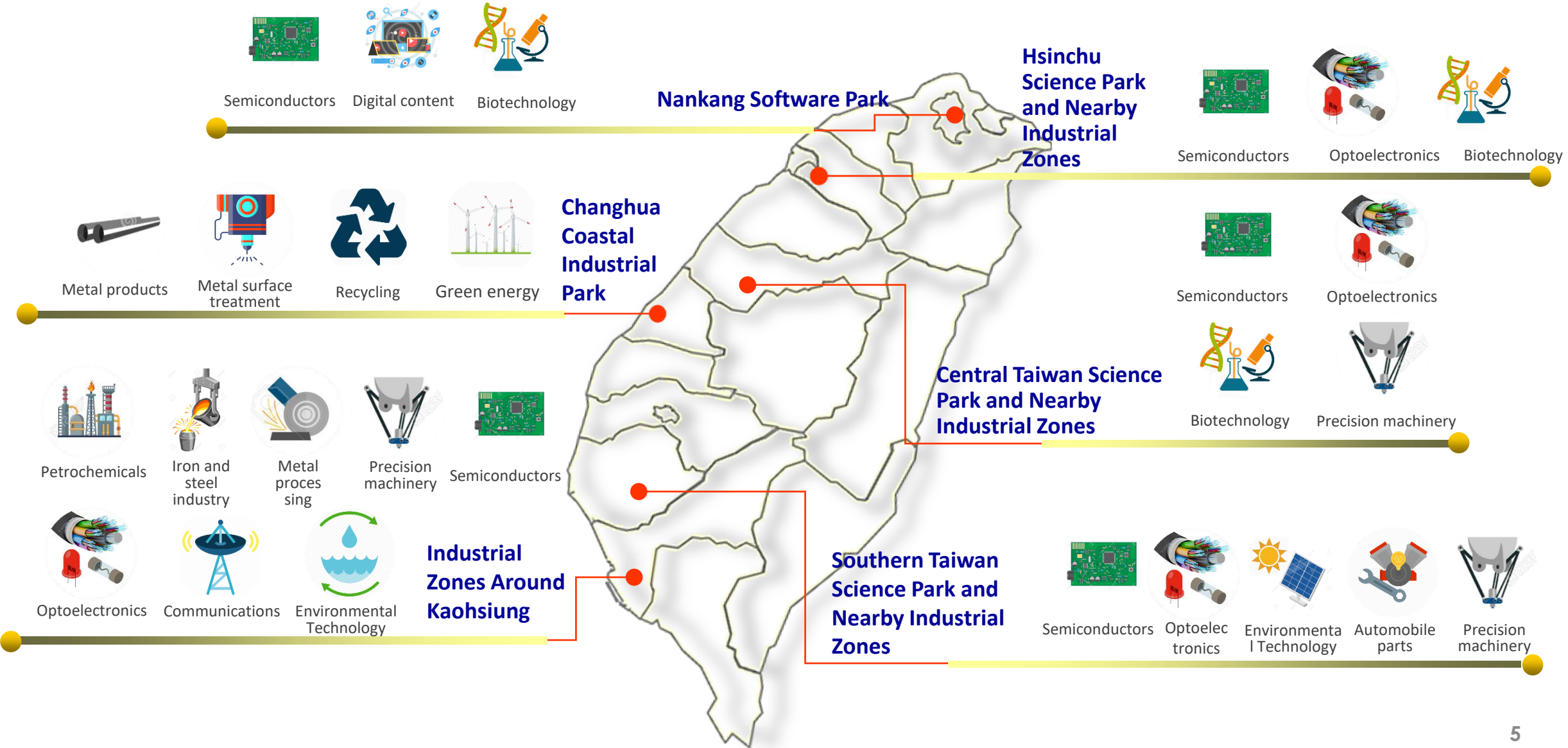
- Epidemic prevention related products and systems
- Rise of new working styles
- Contactless economy

Taiwan's New Value · New Position

Innovation, Trust, Safety



Why Taiwan - Well-developed industrial clusters



Why Taiwan: Abundant R&D Capacities



 財團法人生物技術開發中心
Development Center for Biotechnology

Biotechnology Center



財團法人
紡織產業綜合研究所
Taiwan Textile Research Institute



Textile Research Institute



 財團法人資訊工業策進會
INSTITUTE FOR INFORMATION INDUSTRY

Institute for Information Industry



 金屬工業研究發展中心
METAL INDUSTRIES RESEARCH & DEVELOPMENT CENTRE

Metal Industries Research and Development Center



工業技術研究院
Industrial Technology Research Institute



Industrial Technology Research Institute



車輛研究測試中心
Automotive Research & Testing Center



Automotive Research & Testing Center



財團法人塑膠工業技術發展中心
PLASTICS INDUSTRY DEVELOPMENT CENTER



Plastics Industry Development Center



中國生產力中心
China Productivity Center



China Productivity Center

Why Taiwan - Talented Human Resources

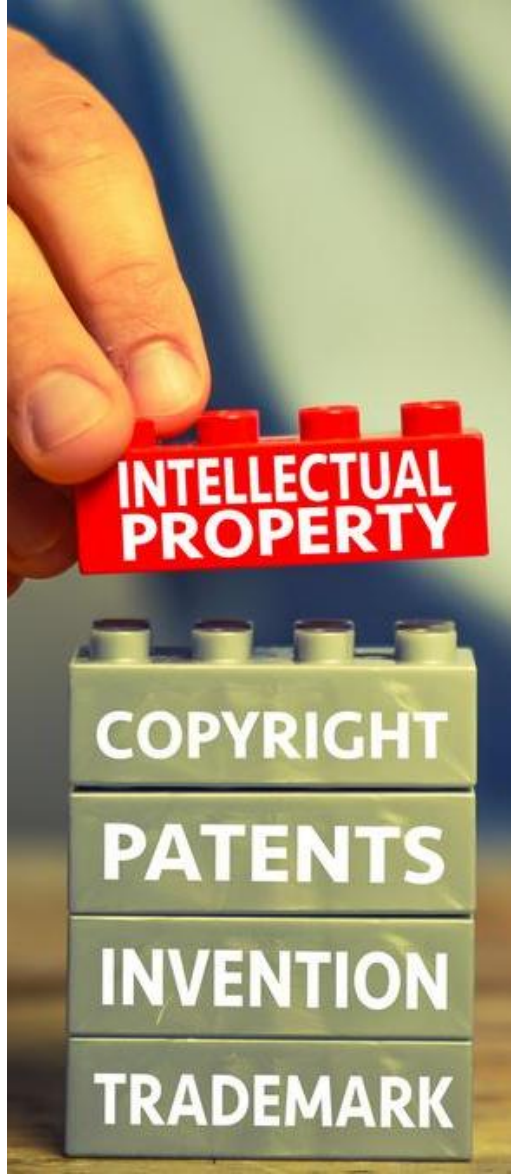
"IMD Talent Ranking 2021"

- Taiwan ranked **#16** in the world and **#3** in Asia
- Readiness ranked **#9** in the world
- Investment & Development ranked #20 in the world
- Appeal ranked #22 in the world

Education level

- 53.08% **bachelor's degrees or higher** of total labor force in 2020
- 8.82% **master's degrees or higher** of total labor force in 2020

Why Taiwan - Secure IP Protection



Comprehensive regulatory system: The "Commercial Case Adjudication Act" and "Intellectual Property and Commercial Court Organization Act" became effective on July 1, 2021. Professional judges and investigators are appointed to increase the efficiency in processing commercial cases.

Establishment of Patent Prosecution Highway (PPH) with multiple countries: Taiwan has signed PPH agreements with countries including the United States, Japan, South Korea, Poland, and Spain to speed up the review of patent cases.

Establishment of the Intellectual Property and Commercial Court

Establishment of the Intellectual Property Rights Police Team

Economic freedom recognized by the international community: The aforementioned measures are recognized by the international community. According to the "2021 Index of Economic Freedom" published by the U.S. Heritage Foundation, Taiwan **ranked 6th** among the 184 economies around the world.



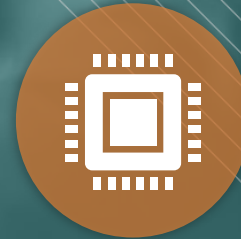
Why Taiwan – Friendly Living Environment

#1 in Asia, #1 in the world (Expat Insider 2021)



Investment Opportunities

Six Core Strategic Industries
5 + 2 Innovative Industries



Semiconductors



Asia Silicon Valley



Next-Generation
Vehicle



Smart Machinery



Biomedicine



Green Energy
Technology



National Defense
Industry



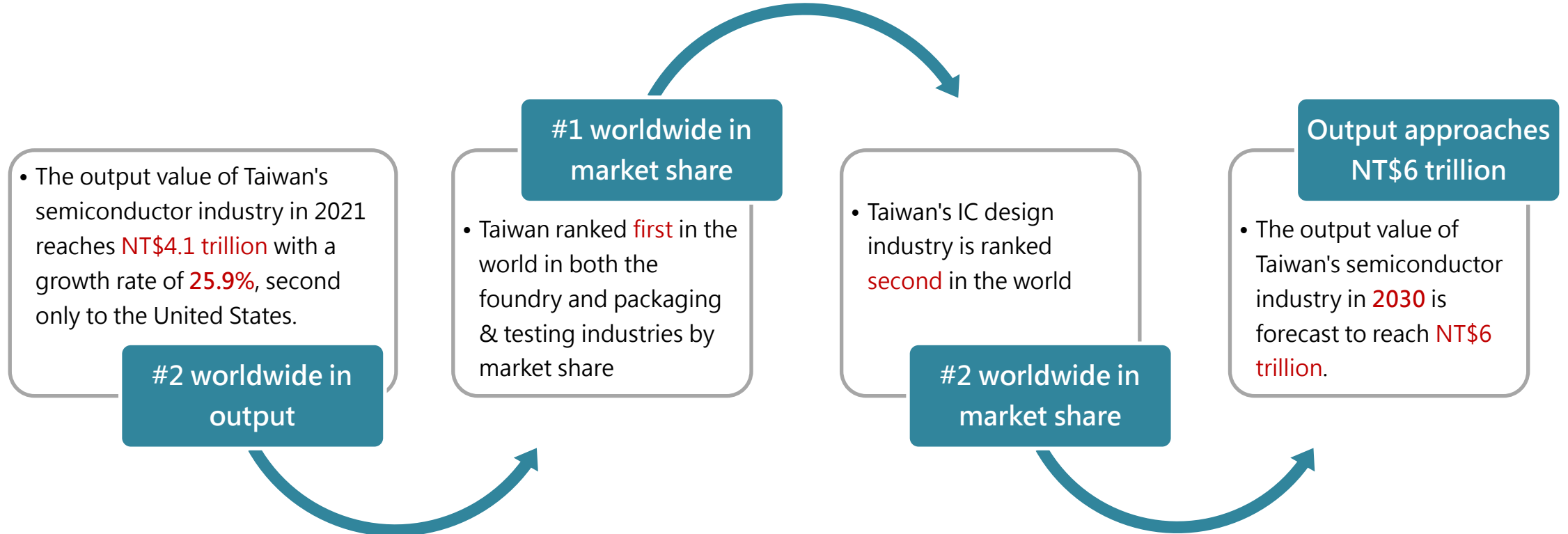
Circular Economy



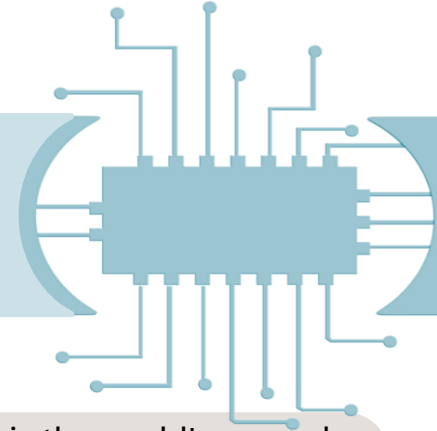
Agricultural
Modernization

Investment Opportunities - Semiconductors | Capabilities and Vision

Taiwan's semiconductor industry has become an important partner and pillar of support in global high-tech innovation and R&D



Investment Opportunities - Semiconductors | Business Opportunities



Taiwan's advantages in semiconductor clusters and clustering effects power immense market demand of related supply chains

2020

- Global sales of semiconductor manufacturing equipment reached a record high of US\$68.9 billion and Taiwan is the world's second largest market in terms of demand for equipment.
- Global sales of semiconductor materials grew by 4.9% year on year to a record high of US\$55.3 billion. The sales value in Taiwan's market increased by 8.2% to US\$12.38 billion, making it the world's largest market for semiconductor materials for 11 consecutive years.

2021

- Global sales of semiconductor manufacturing equipment grew by 34% from 2020 to US\$65.3 billion, and Taiwan's semiconductor equipment investment reached NT\$161.8 billion, making it the second largest market in the world.
- Asia dominates global investment in foundry and memory output capacity and Taiwan leads the world in foundry OEM output capacity.

⋮
2024

- From 2021 to 2024, the compound annual growth rate (CAGR) will reach 10.5% for Taiwan's foundries, 7.9% for IC design, 7.5% for memory, and 7.2% for IC packaging.

Investment Opportunities - Semiconductors |

Successful Cases



- Micron Technology, Inc., a major global memory manufacturer, expanded the production line at its Taichung plant in 2019 and added cleanroom space and technology upgrades. The new A3 Plant was inaugurated in June 2021.

- SUSS MicroTec, a major semiconductor equipment manufacturer based in Germany, invested NT\$500 million to set up operations in Hsinchu Science Park in August 2019. It inaugurated its manufacturing center in Hsinchu Science Park (its first plant in Asia) in December 2020 for the manufacture of photoresist coaters/developers, scanners, photomask process equipment, and other key high-precision lithographic process equipment.

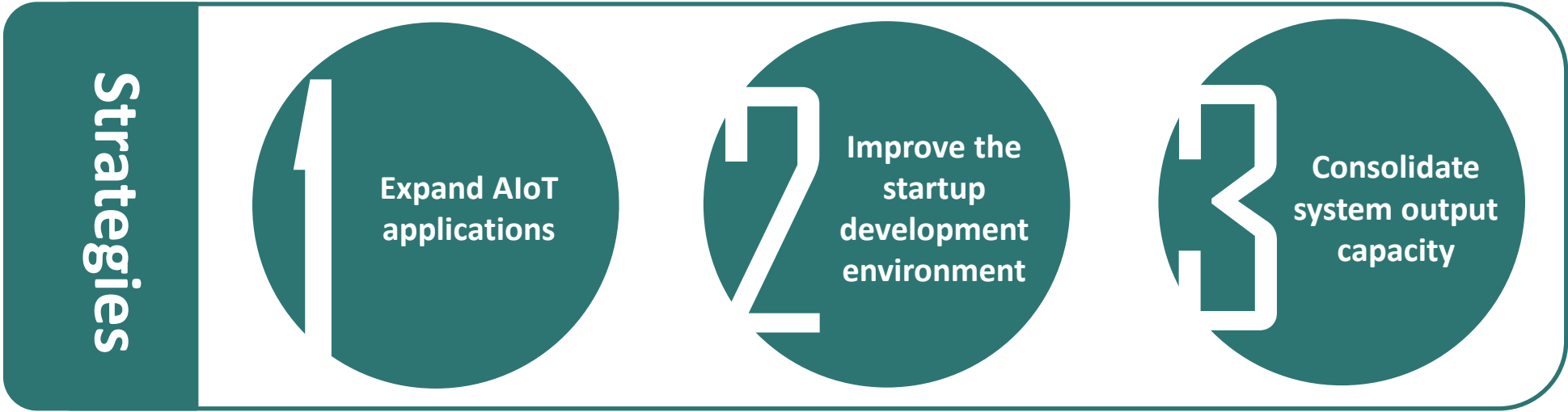


- Applied Materials, the world's largest producer of semiconductor and display equipment, has invested in its Global Technology Learning Center (GTLC), Display Equipment Manufacturing Center and R&D Laboratory, 8" Wafer and Semiconductor Equipment Manufacturing Center, and Asia Continental Distribution Center. It also invested more than NT\$3 billion to create the world's first manufacturing and R&D center for display equipment which was inaugurated in 2019.

- Tokuyama, a major supplier of semiconductor chemical materials from Japan, has established plants in Hsinchu and Yunlin, and it announced the joint venture "Formosa Tokuyama Advanced Chemicals" with FPG in September 2020. Both parties invest NT\$1 billion in with equal shareholding for the construction of the electronic-grade isopropyl alcohol (IPA) plant in Kaohsiung City to pursue business opportunities in 5nm and 3nm advanced semiconductor fabrication.



Investment Opportunities - 5G/AIoT | Asia Silicon Valley 2.0

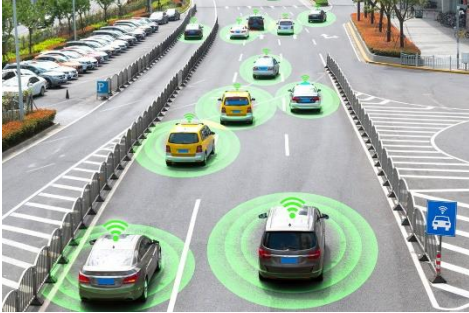


Targets

3 companies	5 %	20 projects	40 projects	200 companies
Development of international system integrators	Global share of IoT output value in 2025	Export AIoT solutions	Facilitate diverse exit of startups	Facilitate success of startup enterprises

Investment Opportunities - 5G/AIoT |

IoT Business Opportunities



Smart Transportation

Smart Street Lighting
& Smart Roadside
Parking Solutions



Smart Home

Smart Modification of
Old Buildings & Public
Housing Innovation



Smart Manufacturing

Develop Industry 4.0
National Team to
achieve Technological
Independence



Smart Medicine

Smart Healthcare
Platform & Smart
Medical Solutions



Smart Agriculture

UAV Monitoring & IoT
Agricultural Technology



Smart Business

Smart Retail & Smart Business
Community



Smart Logistics

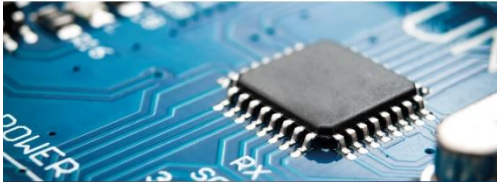
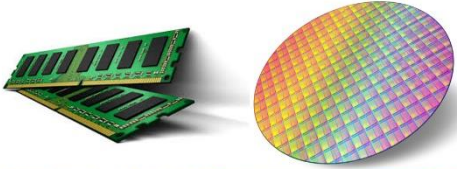
Intelligent Cold Chain
Management



Smart Grid & Environmental Monitoring

Investment Opportunities - 5G/AIoT |

Successful Cases



- **Qualcomm** established Manufacturing Engineering, Testing Center and Innovation Center in Taiwan in response to the advent of the 5G and AI era, based on Taiwan's sound R&D capacities and ICT ecosystem.



- Tech giant **Google** has developed the largest engineering team in Asia in Taiwan. It inaugurated the brand-new office area in January 2020 and announced the establishment of its third data center in Douliu, Yunlin in September of the same year. It also used the "Intelligent Taiwan Program" to recruit digital talents and cultivate YouTube and developer communities.

Investment Opportunities - 5G/AIoT | Asia New Bay Area

- Government launched the "Asia New Bay Area 5G AIoT Innovation Park" in the second half of 2020. Kaohsiung City Government and Ministries of the central government consolidated their resources to invest NT\$11 billion in 5 years for the development of the industrial park to create a talent center, startup hub, and 5G AIoT smart facilities.
- In November 2020, the Kaohsiung City Government, ministries of the central government, international firms such as Microsoft Taiwan, Cisco Taiwan, and Amazon's cloud service provider AWS, and domestic telecommunications operators including Chunghwa Telecom and Far EasTone jointly formed the "Asia New Bay Area 5G AIoT International Alliance" as they set up operations in the Asia New Bay Area in Kaohsiung.
- In December 2021, the "Asia New Bay Area 5G AIoT Innovation Park" set up by the Ministry of Economic Affairs has inaugurated. At the same time, National Cheng Kung University also entered the "Smart Semiconductor and Sustainable Manufacturing College" set up in the Kaohsiung Software Park. These two projects will drive more business opportunities and added value to startups in Asia New Bay Area.



Investment Opportunities - Next-Generation Vehicle | Capacity and Vision

AM
&
OEM

In addition to high domestic sales, Taiwan-made auto components are also exported in large quantity to markets in North America and Europe. Taiwan is also a significant player in the aftermarket (AM) and OEM markets.



Lithium batteries, drive motors, reduction gears, power storage systems, power control modules, power control systems, and telematics produced in Taiwan have gained a foothold in the international auto makers' EV supply chain.



Over 70% of Tesla's current suppliers are Taiwanese companies.



Taiwan aims to achieve full electrification of buses by 2030. Through the "Smart Electric Bus Project", domestic electric bus and key components manufacturers are encouraged to invest in upgrading and development to enter the supply chain of major domestic and foreign manufacturers.

Investment Opportunities - Next-Generation Vehicle | Business Opportunities



Strong Demand

Despite the epidemic in 2020, global sales still grew at an annual growth rate of more than 40% to 3.1 million. The ratio of overall automobile sales increased from 2.5% in 2019 to 4.4%.

In 2025, global electric car total sales will reach close to 15 million. And, the total sales will reach 25 million in 2030 which will account for 10% and 15% of all road vehicle sales, respectively.



Innovation and Cooperation

Taiwan has a comprehensive supply chain and advanced technologies for vehicles, machinery, and materials. It has advantages in the technologies of the electronics industry (e.g., automotive communication, safety system, and driving assistance system). It also offers flexibility for producing small batches of diverse products and ability to develop innovative cross-industry cooperation models to meet the needs of the automotive industry.



Secure Supply Chain

International auto makers can make good use of the existing foundation that's been laid by Taiwanese ICT firms and makers of auto components. They can also set up a Taiwan-centered regional production network that serves as a backup production base or supply source for important components to disperse supply chain risks.

Investment Opportunities - Next-Generation Vehicle |

Successful Cases

MIH Electric Vehicle Alliance

More than 1,000 companies from 43 countries/regions around the world (encompassing hardware, software, and services) have joined the MIH open platform launched by Foxconn in October 2020 to accelerate the development of electric vehicles.

NVIDIA, US maker of graphics chips

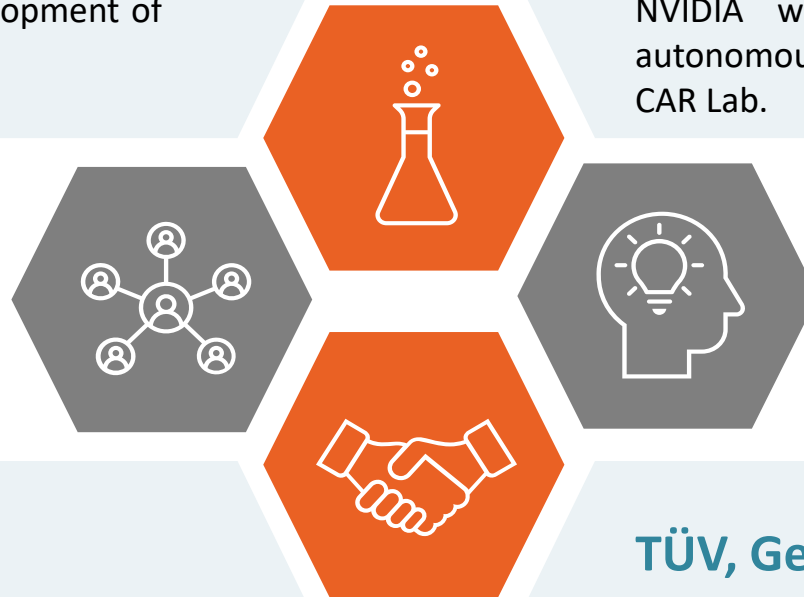
NVIDIA signed an MOU in 2019 to engage in cooperation with the National Applied Research Laboratories (NARLabs), which is subordinate to Taiwan's Ministry of Science and Technology. NVIDIA will take part in efforts to develop Taiwan's autonomous vehicle industry, and will cooperate with Taiwan CAR Lab.

Nidec

Nidec issued a joint announcement with Foxconn and Foxtron Vehicle Technologies in July 2021 to establish a joint venture in Taiwan for the R&D, production, and sales of motor systems and various automotive motor products.

TÜV, Germany

TÜV established a brand-new IoT laboratory in August 2019 and introduced the latest equipment to enhance the development of IoV and related inspection services in Taiwan.



Investment Opportunities - Smart Machinery | Capacity and Vision



Intelligentization of Industrial Machinery



Industrialization of Smart Machinery

Resources Platform

- R&D clusters
- Nurture cross-sector talent
- International collaboration & M&A



Fill in Visionary Industrial Needs

- Aeronautics & Astronautics
- Smart robots
- Precision medical devices processing
- ICT equipment

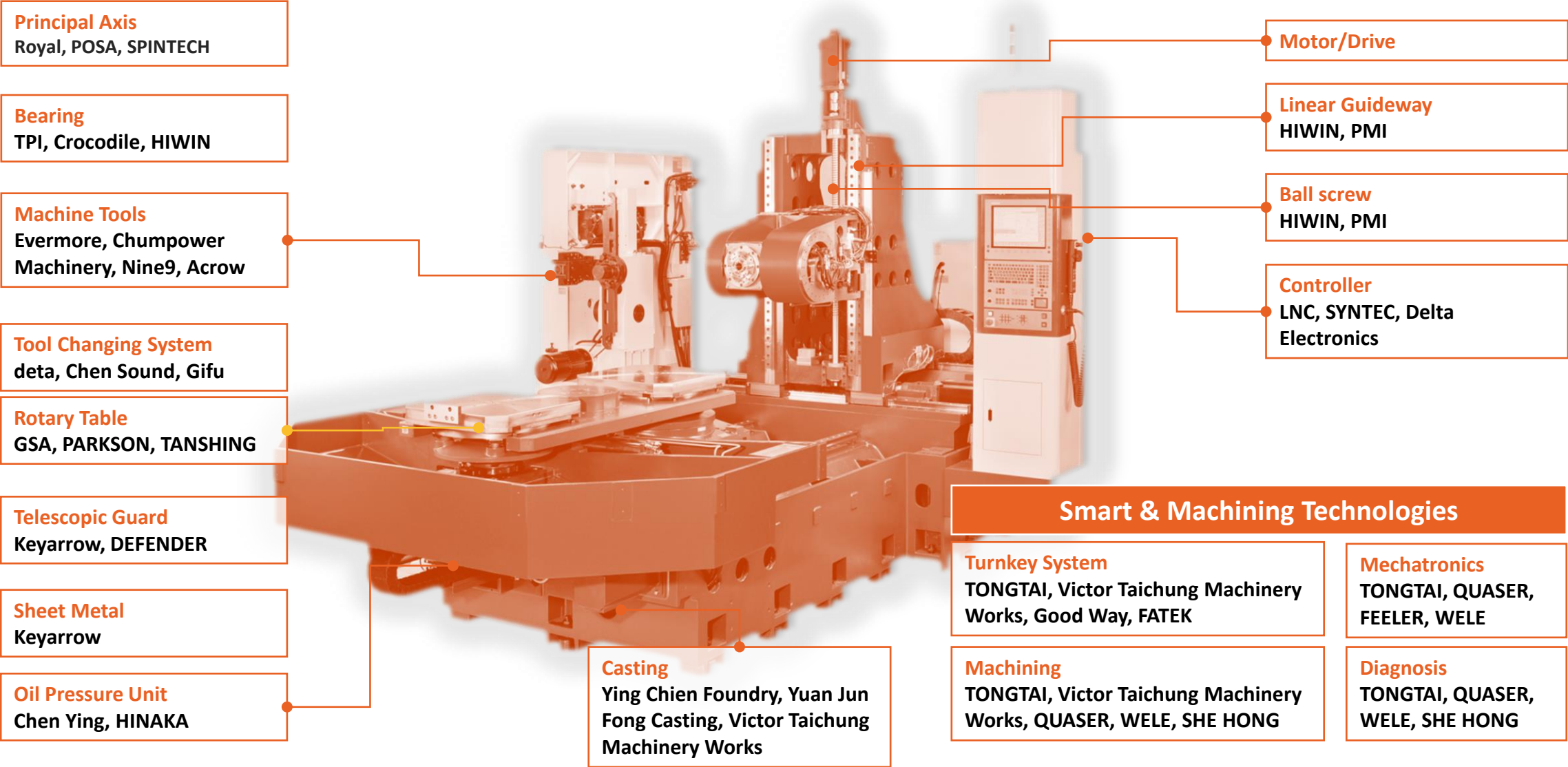


Global Expansion

- To drive exports to overseas markets



Investment Opportunities - Smart Machinery | Taiwan Supply Chain



Investment Opportunities - Smart Machinery |

Business Opportunities

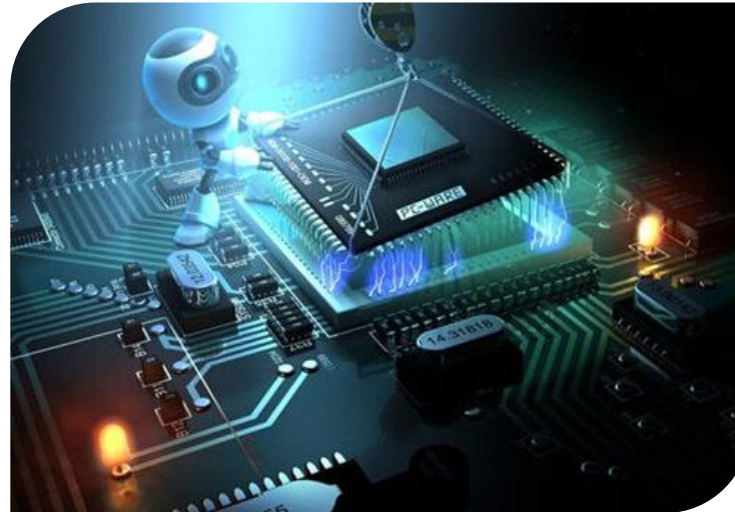
Consolidation of ICT Technology Development with Industry 4.0 Advanced Technologies

- Digital Simulation & Analysis
- Product Lifecycle Management
- Big Data Analysis
- Machine Learning
- Artificial Intelligence (AI)



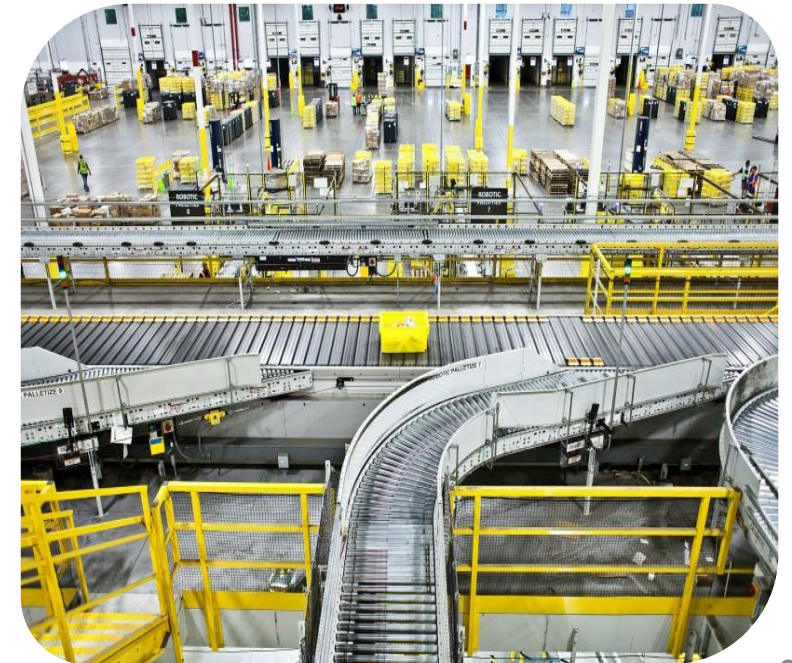
Integration of Software and Hardware Capabilities to Realize Smart Industries

- Smart Sensor
- Industrial & Service Robot
- Semiconductor FEOL & Advanced Packaging
- 3D printing
- Aerospace Machine Tool & Advanced Controller



Develop Customized Total Solutions

- Integrated Smart Factory Solution
- Smart Manufacturing System by Industry



Investment Opportunities - Smart Machinery |

Successful Cases



YASKAWA

- Yaskawa Electric, based in Japan, is the fourth largest industrial robot manufacturer in the world. In 2018, Yaskawa Electric invested NT\$200 million for the construction of a factory in the Taichung Science Park of Central Taiwan Science Park as a robotics R&D and exhibition center. It will help local precision machinery manufacturers transition to smart manufacturing and usher in the era of AI artificial intelligence.
- The factory has inaugurated in June 2021.



- Rockwell Automation, a company based in the United States, launched a large-scale investment program in Taiwan in 2018. It selected Taichung for the construction of the "Smart Manufacturing Taiwan Demonstration Site" and launched the "Automation Industry Talent Cultivation Program".
- In 2020, it helped a Taiwanese pharmaceutical manufacturer adopt application performance management (APM) to quickly set up smart systems. The project has become a benchmark case study for its innovative applications in the biotechnology and pharmaceuticals industry in Taiwan.
- In response to smart manufacturing and low-carbon trends, Rockwell Automation will actively develop predictive maintenance systems for semiconductors equipment, Internet of Machines, and energy conservation equipment for heavy industries in Taiwan.



Investment Opportunities - Biotechnology & Pharmaceutical Industry | Hub of Asia by 2025



Integrate Innovation Clusters

- Drug development accelerated and industry output increased by integrating local unique medical devices and clusters

Establish Comprehensive Ecosystem

- Capabilities enhanced by talent, capital, topic selection, intellectual property, laws and regulations, and resources

Promote Specialized Key Industries

- Precision medicine
- World-class specialty clinic clusters
- Healthy lifestyle industry

2025
Targets

US\$ **300**
billion
output

20
new drugs

80
niche devices sold
overseas markets

10
Successful brand
names

Investment Opportunities - Biotechnology & Pharmaceutical Industry | Business Opportunities



Prescription Drugs

- Driven by the growing aging population worldwide and new therapeutic approaches, the global drug market is expected to reach **US\$1.5 trillion** by 2023.
- Relaxation of regulations in 2021:
 - 1) The latest "Regulations Governing the Administration or Use of Specific Medical Technology-based Testing or Laboratory Medical Instruments" (hereinafter referred to as the Regulations) amended and promulgated by the Ministry of Health and Welfare included regulations on laboratory developed tests (LDTs) and supports cell treatment.
 - 2) The Executive Yuan passed the draft of the "Act for the Development of Biotech and New Pharmaceuticals Industry" which included contract development and manufacturing organization (CDMO) in the scope of incentives.

Medical Equipment

- The global medical equipment market may reach **US\$475.3 billion** by 2022, with Americas, Western Europe, and Asia Pacific being the top three major markets.
- Taiwan's ICT industry has advantages such as a comprehensive supply chain and industrial clusters. Compal and Wistron have cooperated with the medicine industry and invested in the field of smart medicine.



Investment Opportunities - Biotechnology & Pharmaceutical Industry | Successful Cases

Roche

- Roche has accumulated over 50 years of experience in Taiwan, and it has established its first demonstration site for intelligent healthcare and clinical decision making in Asia Pacific in collaboration with Changhua Christian Hospital in August 2020.
- In March 2021, Roche jointly launched a platform for the use of Taiwanese biobanks for the development of precision treatments for cancers in collaboration with the Ministry of Health and Welfare and the National Health Research Institutes.
- In June 2021, Genconn Biotech launched the Roche home-use SARS-CoV-2 Antigen Rapid Test Kit, which was one of the first products approved after Taiwan began permitting rapid tests at home.

MSD

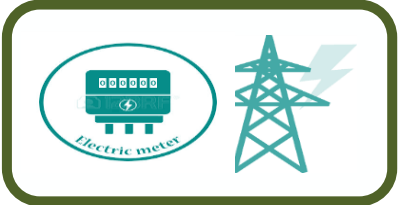
- MSD set up its largest clinical research team in Taiwan and recognized Taiwan's clinical trial environment including high-quality clinical trial operations, professional and smooth procedures, and the potential for becoming the center of innovative medicine in Asia Pacific.
- In July 2021, MSD collaborated with National Taiwan University Hospital and Taoyuan Hospital in the phase 3 clinical trial of Molnupiravir, an oral medication for COVID-19. It has started the enrollment and execution of the trial.



Investment Opportunities - Green Energy |

Development Strategy

System integration



Energy generation



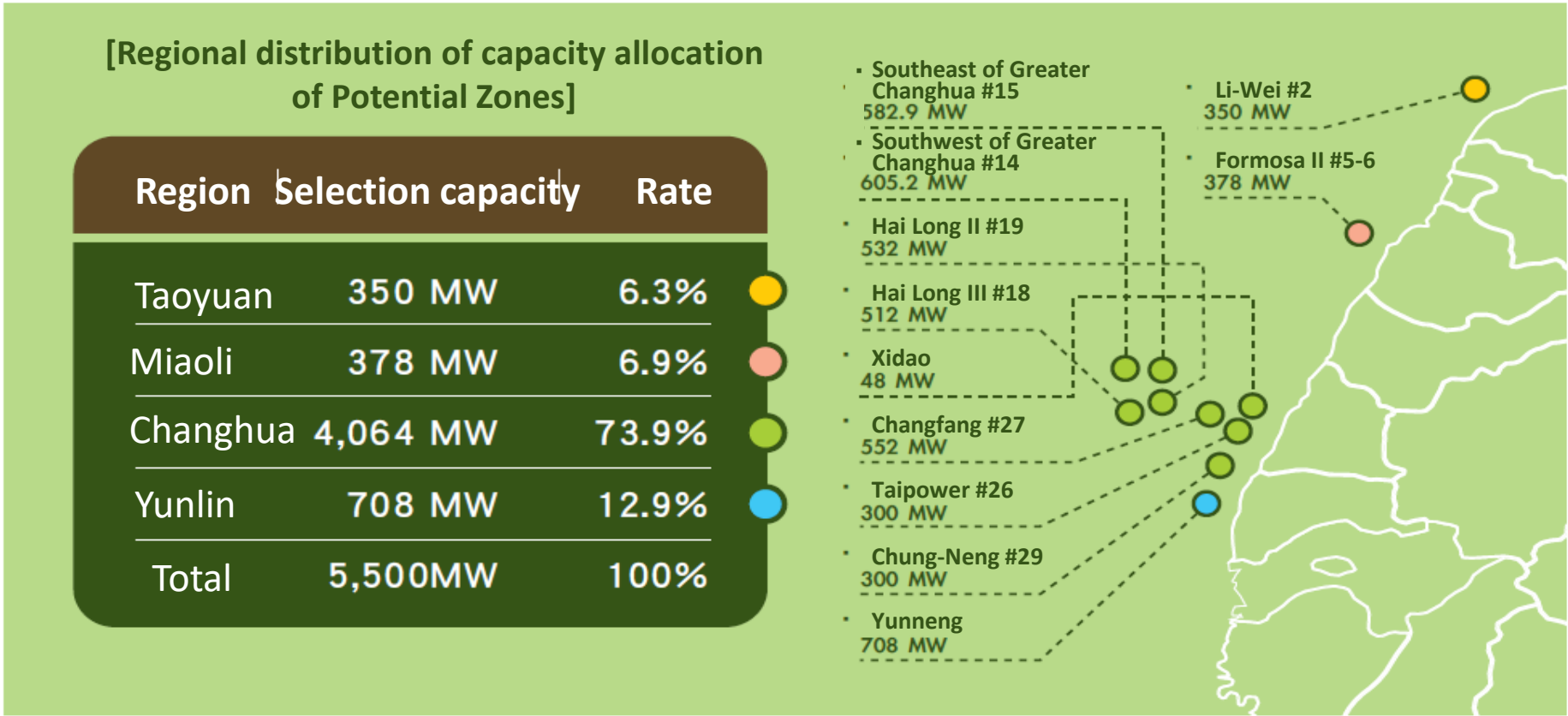
Power storage



Energy conservation



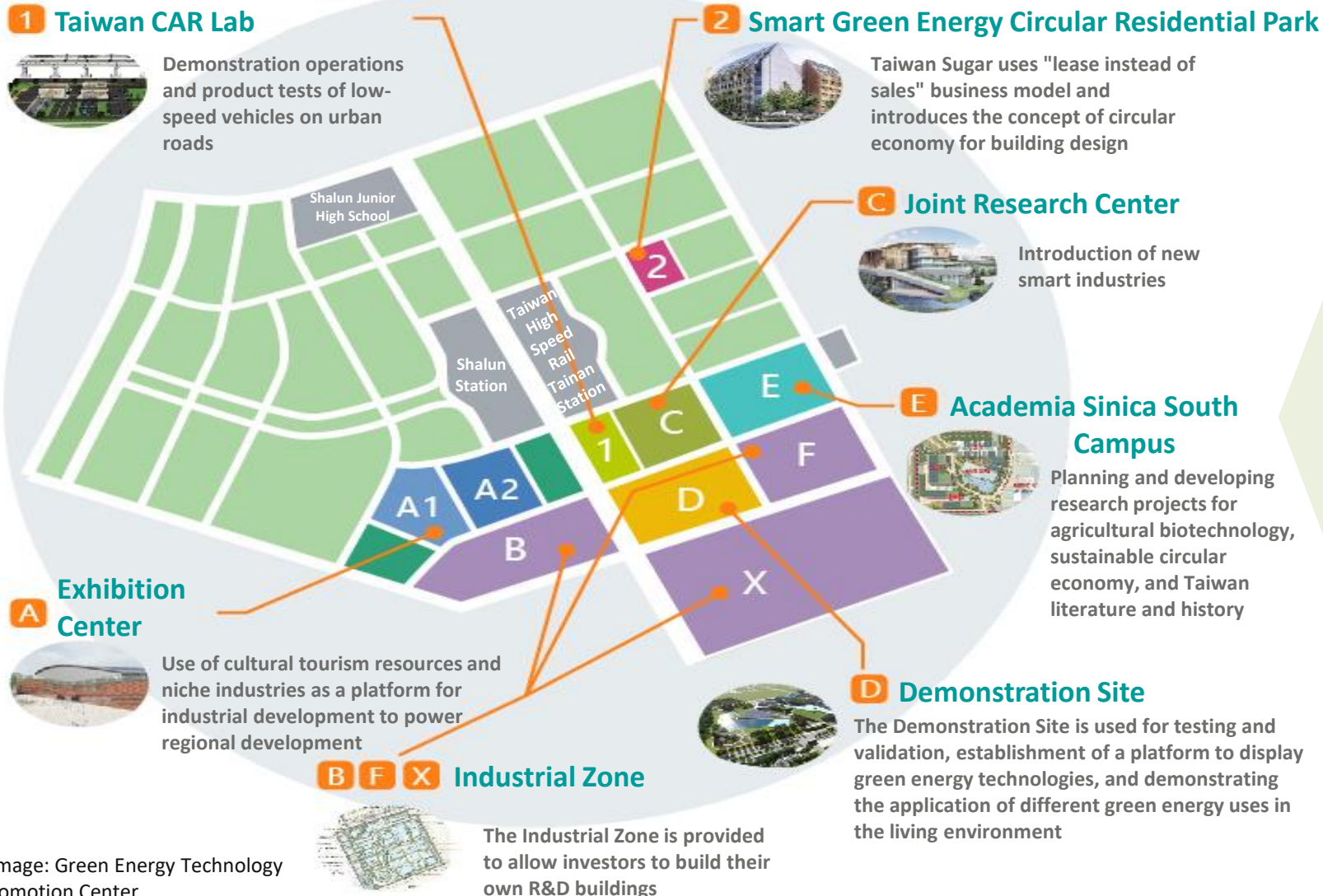
Overview of wind power siting in Taiwan



Source: Bureau of Energy, Ministry of Economic Affairs

Investment Opportunities - Green Energy | Shalun Smart Green Energy Science City

The "Shalun Smart Green Energy Science City" of Tainan was officially inaugurated at the end of 2020.



- It aims to **create an innovative green energy industry ecosystem**
- It includes the Academia Sinica South Campus, Joint Research Center, Green Energy Technology Pilot Program Site, Research Park, and Exhibition Center
- The "**Green Energy Technology Pilot Program Site**" will be used to create a green energy technology development and demonstration application environment for domestic and foreign green energy R&D technologies and industrial tests, certification, and matchmaking, which will increase the benefits of the clustering in the green energy industrial chain.

Investment Opportunities - Green Energy |

Business Opportunities

Photovoltaic opportunities = NT\$1.2 trillion

- 20GW of solar equipment will be setup by 2025
- Includes investment in photovoltaic module plants and large (>10MW) photovoltaic system engineering technologies

Wind power opportunities = NT\$1.5 trillion

- 6.5 GW of wind power equipment will be setup by 2025
- 1.5GW of development capacity from 2026 to 2035
- They include offshore wind power towers, underwater foundations, land transportation, marine work vessels, marine engineering, wind turbine components, power facilities, and third-party certification centers

Successful Projects



Northland Power, Canada



CSBC



Siemens Gamesa Renewable Energy



Hai Long Offshore Wind Farm Project

- Siemens Gamesa Renewable Energy began the construction of a nacelle assembly plant in the domestic offshore wind power production area in the Port of Taichung in 2019 and became the first of the resident businesses to open.
- It officially began production in August 2021 and successfully assembled the first nacelle produced in Taiwan. It also became the only nacelle assembly plant for offshore wind turbines outside Europe.

Investment Opportunities - Circular Economy | Opportunities



High-Value & New Green Energy Materials

US\$3.3
billion
investment

US\$10
billion
output

US\$40
billion
related output

- 35 high-value new materials
- 20 green new materials

Recycle

6,000 kg/month
rare-earth element metals disposed
but little has been processed & collected

- Taiwan tops the world in recycling industrial and general waste
- Recycled PET bottles, coffee grounds, etc. can become fabric for cloths



Investment Opportunities - Circular Economy |

Successful Cases



- In response to the rapid increase in market demand, Swedish air filter producer Camfil officially began operations in its new plant in Tainan in March 2021.
- It will support the continuous growth of the semiconductor, biotechnology, and turbocharger machinery industries by reducing transportation times with local production.



- Veolia Environment, a French company and the world's largest environmental and public utility services company, signed a contract with SCI Pharmtech, a producer of active pharmaceutical ingredients in Taiwan, in August 2020. They will work together to expand the business opportunities in the circular economy through the purification and reuse of chemical solvents.
- The two companies will invest approximately NT\$300 million to establish a joint venture in Taiwan. Trial operations are set to begin in 2 years.



- Tanaka Precious Metals, a company based in Japan with the largest global market share in fuel cell catalysts, has accumulated more than 35 years of experience in Taiwan. It focuses on the development of rare metal refining and precision analysis technologies, and will pursue development in six major fields including automobile, semiconductors, consumer electronics, next-generation energy, healthcare, and environmental protection.

Investment Incentives



Tax Incentives



R&D Subsidies



Special Zones
Incentives



Incentives for
Global Talent

Investment Incentives - Tax Incentives

R&D tax
deductible
Up to 15%

Making
Substantive Investment
by Undistributed Earnings
**Free Surtax for
undistributed
earnings**

Importing
Machinery Local-
Manufacturers
Cannot Produce
**Free Import
Duty**

5G/Smart Machinery
Investment tax
deductible
Up to 5%
Note: Draft

Royalty payments to
patents, copyrights
**Income Tax
Exempt**

Investment Incentives - Special Zones Incentives

General Tax Incentives

Exemption from import duty, commodity tax, and business tax on imported

Raw materials/fuel/materials/semi-processed goods/machinery

1

Zero business tax on

Goods and services shipped abroad

Raw materials, fuel, materials, semi-processed goods, and machinery procured from a tax zone

2

Free Trade Zones

- For enterprises who engaged in only preparatory or auxiliary activities in Taiwan, and handling with procurement, import, storage or transport in FTZ area, the sales income shall be 100% exempt from Profit-seeking Enterprise Income Tax.
- Exempt from
 - ◆ Alcohol tax
 - ◆ Tobacco health and welfare surcharge
 - ◆ Trade promotion service fee, and harbor service fee

Science Parks

R&D Subsidies

- ◆ Up to NT\$10 million
- ◆ 50% of total project cost

3. Investment Incentives - R&D Subsidies

Global R&D Innovation Partner Program

Subsidies are available up to 50% of total spending by foreign enterprises on the establishment of R&D centers in Taiwan.

Industrial Technology Foresight Research Program

Subsidies are up to 40% - 50% of total development funding for the new potential, technologies.



Investment Incentives - Incentives for Global Talent



Provides retirement, health insurance and tax benefits

- Professionals tax cut for 3 years
- Lifting restrictions on National Health Insurance coverage
- Strengthening retirement security



Relaxed residency regulations for parents, spouses and children

- Issuance of personal work permits in Taiwan for the grown children
- Liberalizing permanent residency applications for spouses and children
- Extend visiting visa



Relaxed work, visa and residency regulations

- Four-in-one "Employment Gold Card"
- Job-seeking visas
- Work permit for foreign freelance artists



Tax Deferral for the Technology Stocks & Employee Stock Bonus

- Exempted from individual income tax liability for the current year
- Paying taxes based on the price of stocks as acquired or transferred, whichever is lower

Investment Services

The background of the slide is a light teal color. It features a large, faint compass rose in the lower-left quadrant, with a 3D sphere in the center. In the upper-right quadrant, the word "INVEST" is written in a large, bold, sans-serif font, with a line graph superimposed over it. The line graph shows a fluctuating upward trend.

- Single Contact and Customized Services

Investment Services - Single Contact and Customized Services



One-stop services

Comprehensive one-stop services and investment assistance

Rapid response within 24 hours

Integrated online and offline response within 24 hours

Search assistance for land

Assistance for land acquisition and improved referral services

Removing barriers by inter-departmental meetings

Removing investment barriers on different levels and across different government agencies



More information



InvesTaiwan



Pre-investment Exploration

- Focusing on key industries and countries
- Promoting Taiwan's investment opportunities
- Providing customized investment information



Investment and Establishment

- Visiting the companies with investment potential
- Removing investment barriers by inter-departmental meetings



Investment Operations

- Interviewing on after-investment operation by company visits
- Removing investment barriers
- Promoting reinvestment or new investment projects in Taiwan