

MOEA



TAIWAIN

KEY INNOVATIVE INDUSTRY —
SMART MACHINERY



To stimulate economic growth and create new momentum for industrial development, since 2016 the government has been actively promoting the “5+N Innovative Industries” development program including the smart machinery, biomedicine, Asia Silicon Valley (Internet of Things), green energy, national defense, and circular economy industries, plus advanced semiconductors and other key industries.

TAX AND TARIFF INCENTIVES

- Business income tax rate is **17%**.
- Up to **15%** of R&D expenses may be credited against the profit-seeking enterprise income tax payable by the company in the current year.
- Imported machinery that is not yet manufactured domestically may enjoy tariff-free treatment.
- Royalty payments to foreign companies for imported new production technologies or products that use patents, copyrights, or other special rights owned by foreign companies are, with the approval of the Ministry of Economic Affairs, exempt from the business income tax.
- For operators stationed in Export Processing Zones, Science Parks and Free Trade Zones, imported raw materials, fuel, materials, semi-processed goods, and self-use machinery may be exempt from import duty, commodity tax, and sales tax. The business tax rate in such areas is zero on goods and services shipped abroad.

R&D SUBSIDIES

- **Global Innovation and R&D Partnership Plan**
Subsidies are available for up to **50%** of total spending by foreign enterprises on the establishment of R&D centers in Taiwan.
- **Advanced Technology Research Plan**
Subsidies are available for **40%** to **50%** of total development funding for new technologies that are not yet mature in Taiwan and that will, in the future, generate strategic products, services, or industries.
- **Integrated R&D Plan**
Subsidies are available for **40%** to **50%** of total project cost for the integration of key and cross-sector technologies.
- **Industrial Upgrading and Innovation Program**
For companies having R&D teams in Taiwan, subsidies are available for **40%** - **50%** of project funding for projects that conform to government programs and up to **40%** of funding for projects generated by the applicants themselves.



POLICY FOCUS

- **Smart Machinery**

Core and application technologies will be developed in line with the promotion of Industry 4.0, and the up-, mid-, and down-stream sectors will be integrated in connection with local, international, and future trends. Priority will be given to introducing smart manufacturing into large manufacturers and SMEs, making effective use of leverage and diffusion effects to stimulate rapid annual growth in production value.

- **Cultivating Talent for the Smart Machinery Industry**

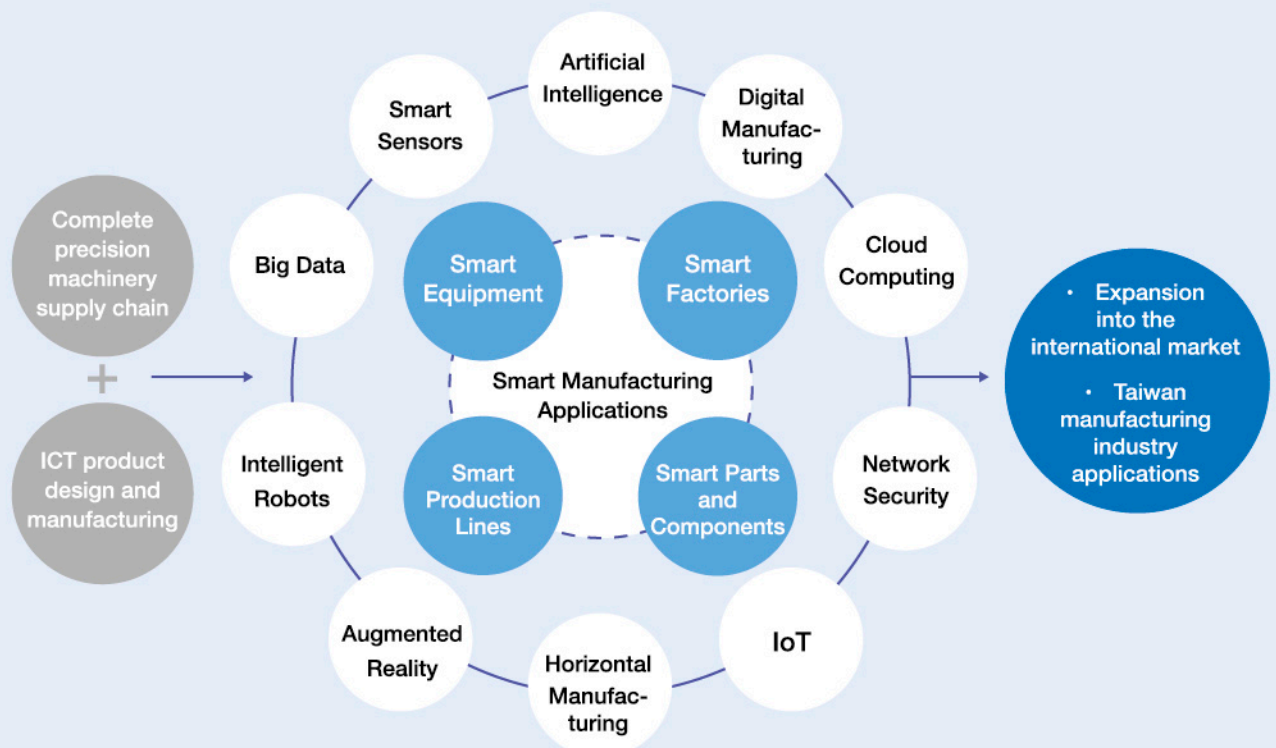
Between 2017 and 2020, an estimated US\$70 million will be invested in the Central Taiwan Science Park and the Southern Taiwan Science Park to establish an intelligent robot self-manufacturing site as well as to cultivate new enterprises and train professional researchers.

- **Smart Machinery Industry Promotion Program**

The Executive Yuan approved the “Smart Machinery Industry Promotion Plan” on July 21, 2016 with the aim of developing smart machinery applications by combining the advantages of Taiwan’s machinery industry and ICT industries to develop smart machinery applications. A number of supporting policies have been implemented to accelerate development of the smart machinery industry:

- ▶ Establishment of a “Smart Machinery Industry Promotion Office” to help build up an ecosystem for the smart machinery industry.
- ▶ Establishment of a Smart Machinery Development Center at Shuinan Smart City in Taichung.
- ▶ Establishment of a Smart Machinery Industrial Park at Fengzhou in Taichung City as the home base for the manufacturing of smart machinery products.

Leveraging Taiwan's Mature Existing Industries to Develop The Smart Machinery Industry



INVESTMENT ENVIRONMENT

- **Mature Machinery Industry Clusters**

Central Taiwan is already an established center for the international machinery industry. Additionally there is specific machinery industry clustering in specific areas of Taiwan, including clusters for machine tools and key parts and components, semiconductor production equipment, intelligent robots, and automation components.

- **Global Manufacturing Base for Information/Communications and Semiconductor Industry Components and Equipment**

Taiwan is an important global base for the manufacturing of parts, components, and equipment for the information /communications industry and semiconductor industry, and Taiwan possesses industrial networks and systems for supporting the development of smart machinery. Taiwan has a clear advantage, in terms of parts and components, equipment, and supply chain, in supporting the development of the smart machinery industry.

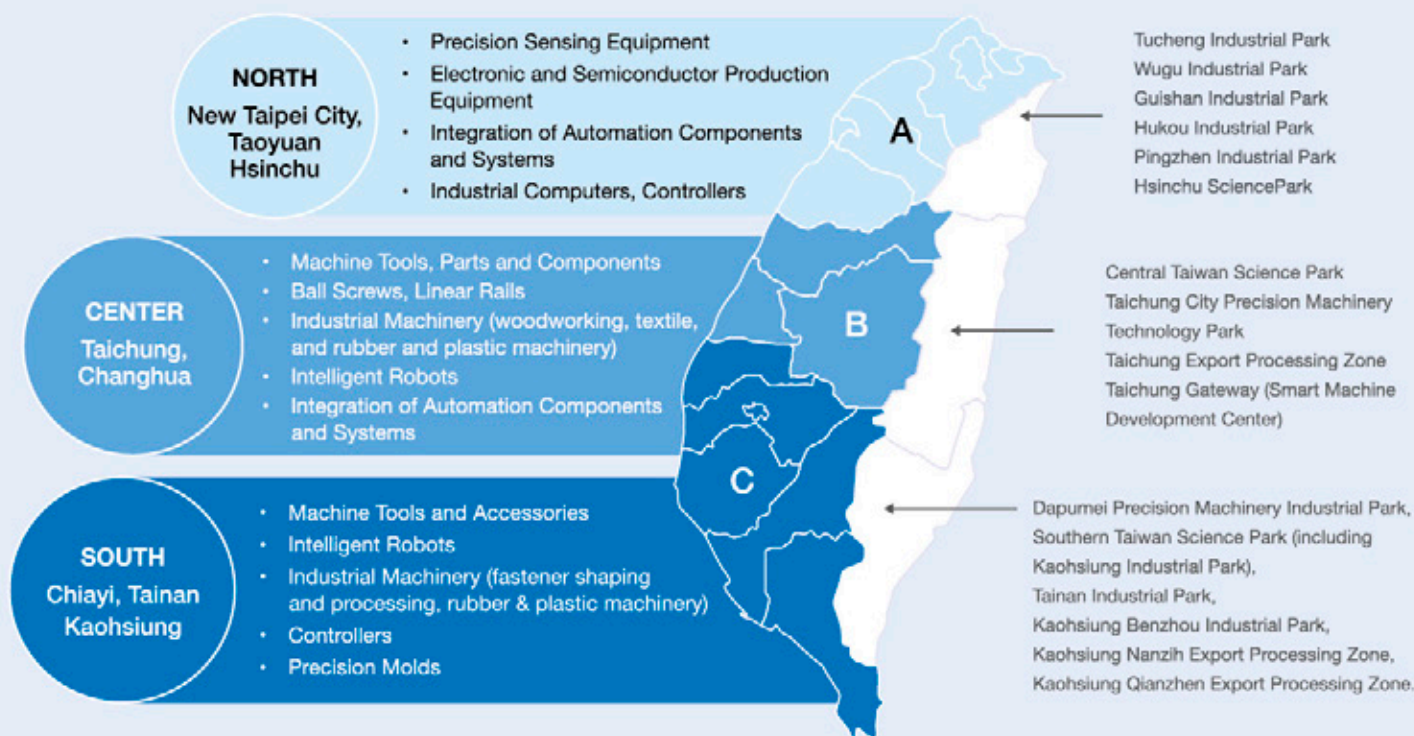
- **Applications Market for the Manufacturing of Machinery and Equipment**

Taiwan has internationally competitive semiconductor and flat screen display, electronics and information/communications, automobile parts and components, bicycles, aviation parts and components, metal products, textiles, and other industries, all of which are main application markets for smart machinery products and solutions.

- **Industrial Parks for Smart Machinery Investment**

There are many science parks and industrial estates in Taiwan that offer an environment conducive to investment and the establishment of manufacturing facilities, including science parks in Taichung, Tainan, and Kaohsiung; the Shuinan Smart City and Fengzhou Smart Machine Industrial Park in Taichung, and the Dapumei Precision Machinery Industrial Park in Chiayi.

Precision Machinery Clusters in Taiwan



INVESTMENT OPPORTUNITIES

A Hub for International Smart Machine Research and Development

International research firms and manufacturers can establish new companies or set up research and development centers or production bases in Taiwan, or engage in joint R&D ventures, technology transfer, or other means of joint participation in the development of Taiwan's smart machinery industry and the global smart manufacturing and applications market.

Opportunities Arising from the Development of Smart Machinery

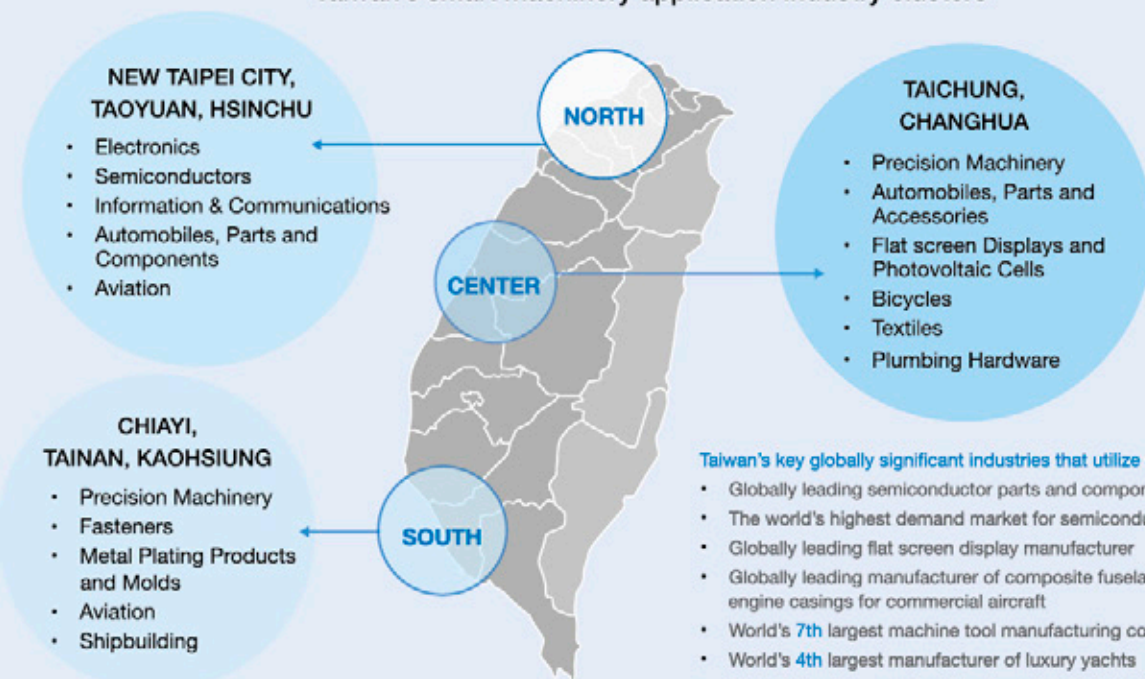
- Digital simulation and analysis, product life cycle management, big data analysis, machine learning, artificial intelligence.
- Smart sensors, industrial and service robots, semiconductor front-end production and advanced packaging equipment, additive manufacturing, aerospace machine tools, and high-end controllers.

- Solutions that span sensors and control devices, production equipment and production lines, and integrated information for smart enterprise operation.

Participation in Opportunities from Sustainable Growth

- Taiwan is the 7th-largest manufacturer of machine tools in the world with a production value of US\$4.62 billion in 2015, accounting for a 5-6% share of the global market. The smart machinery industry is expected to enjoy a compound annual growth rate of 2% up to 2019, increasing to more than 5% in 2023.
- Taiwan's semiconductor industry continues to invest in advanced production processes. Firms in the supply chains of the information and communications, display panel, automotive, and electric vehicle industries are also investing in the installation of smart automated production lines. Lucrative business opportunities will derive from the stable growth in demand for smart machines.

Taiwan's smart machinery application industry clusters



Taiwan's key globally significant industries that utilize smart machinery

- Globally leading semiconductor parts and components manufacturer
- The world's highest demand market for semiconductor equipment
- Globally leading flat screen display manufacturer
- Globally leading manufacturer of composite fuselage parts and jet engine casings for commercial aircraft
- World's 7th largest machine tool manufacturing country
- World's 4th largest manufacturer of luxury yachts
- Globally leading manufacturing base for metal fasteners

• Major Foreign Investors in Taiwan

Vieda of Finland, a heavy-duty electric motor manufacturer, has entered into a joint venture with TECO for the production of high-performance motors and driver systems for ships and automobiles. The cloud computing unit of IBM of the USA has formed a strategic alliance with ASUS for the launch of a joint cloud strategies initiative and plans to launch HealthBot, a healthcare robot, in Taiwan. Safran of France and the Rolls-Royce Group have engaged in joint ventures with AIDC, Aerowin Technology, Magnate Technology, Drewloong Precision, and NAFCO for the production of parts and components for aircraft engines. Israel and Taiwan have engaged in joint ventures in digital manufacturing, high-end medical materials, new-generation communications, and information security. UL, a global safety testing firm based in the U.S., will establish a test center for IoT. Siemens of Germany and Yencheng Machinery have jointly developed solutions for pharmaceutical machines to help speed up research and development in biopharmaceuticals in Taiwan.

Taiwan's Business Opportunities for Smart Machinery

Smart Machine Tools

The global and Asian markets for the machine tool sector are worth US\$80 billion and US\$50 billion, respectively. Taiwan is the world's 7th-largest machine tool producer, with an annual production value of US\$4 billion.

Semiconductor Production Equipment

The market for semiconductor production equipment in Asia is worth US\$31 billion. Taiwan has the biggest market, worth more than US\$12 billion.

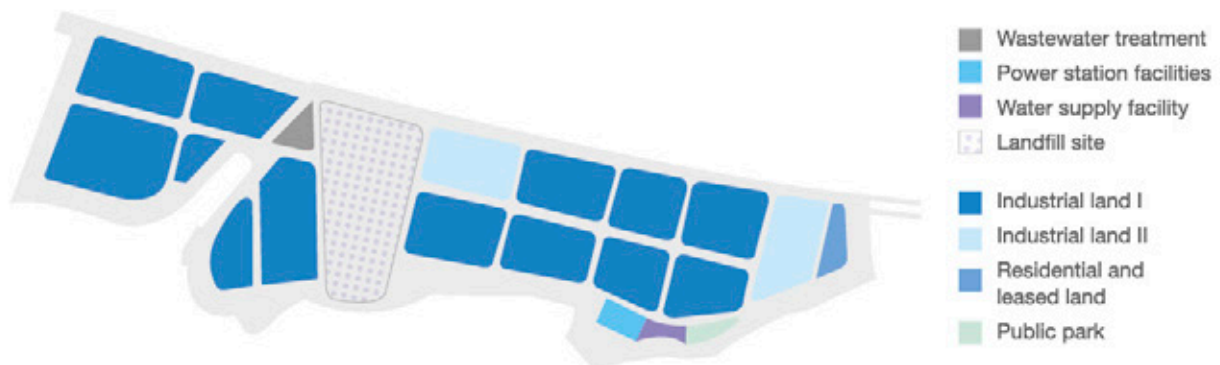
Intelligent Robots

In 2015, the market size for industrial robotic systems was worth US\$35 billion, with 65% of the demand coming from Asian countries. From 2017 to 2019, the global installation volume of industrial robots will show a compound annual growth rate of 13%.

Smart Factories

The global market for smart factories will exceed US\$1700 billion in 2022, of which 25% will be in Asian countries. The world market value will enjoy a compound annual growth rate of 9.3%.

Taichung Fengzhou Technology-Based Industrial Park Smart Machinery Industrial Park Phase II (55.41 hectares)



DEPARTMENT OF INVESTMENT SERVICES, MINISTRY OF ECONOMIC AFFAIRS (INVESTAIWAN SERVICE CENTER)

As the one-stop window for the promotion of FDI and the provision of investment services in Taiwan, DOIS provides investors with all necessary assistance during the investment process. Its services include information gathering, investment evaluation, partner finding and matchmaking, and access to water, electricity and land in the beginning stage of the investment process; application for permits and incentives during the investment implementation period; and the elimination of operational obstacles, assistance for the expansion of operational scale, and help for the implementation of new startup investments after the investment process is completed. For investment projects in excess of NT\$500 million, DOIS provides special courtesy services by designated project managers.



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