



# Tongtai Machine & Tool Co., Ltd. 2023 Investor Conference

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# Agenda

- 01 Tongtai and TTGroup Introduction**
- 02 Operating Performance of 2023 Q3**
- 03 Machine Tool Market Trends & Product Development**
- 04 PCB Market Trends & Product Development**

# 01 Tongtai & TTGroup Introduction

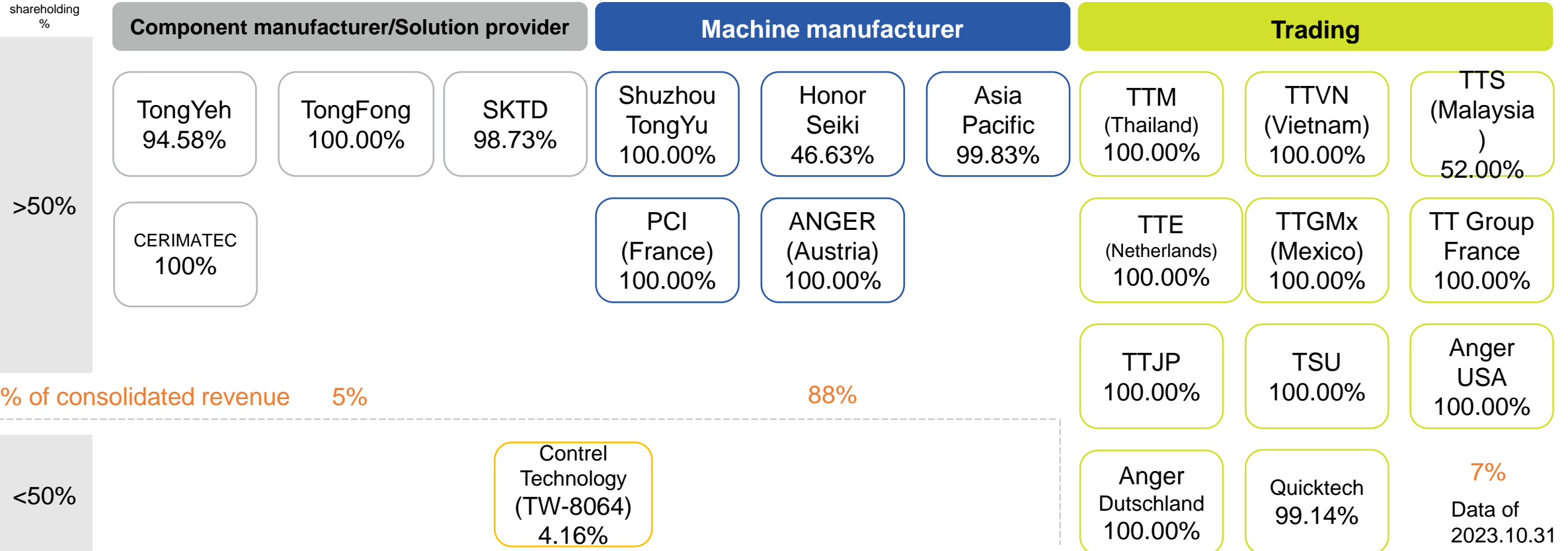


# Group Investment Structure

Data : Tongtai Finance and Accounting Department



**Tongtai (TW-4526)**  
Machine manufacturer





# Tongtai Introduction

Tongtai Machine & Tool Co., Ltd, established in 1969, was listed on the Taiwan stock market in 2003. Our headquarters is located in Kaohsiung, Taiwan. Starting with special purpose machines, the machine tool factory now has the most extensive product line in Taiwan.



## Profile

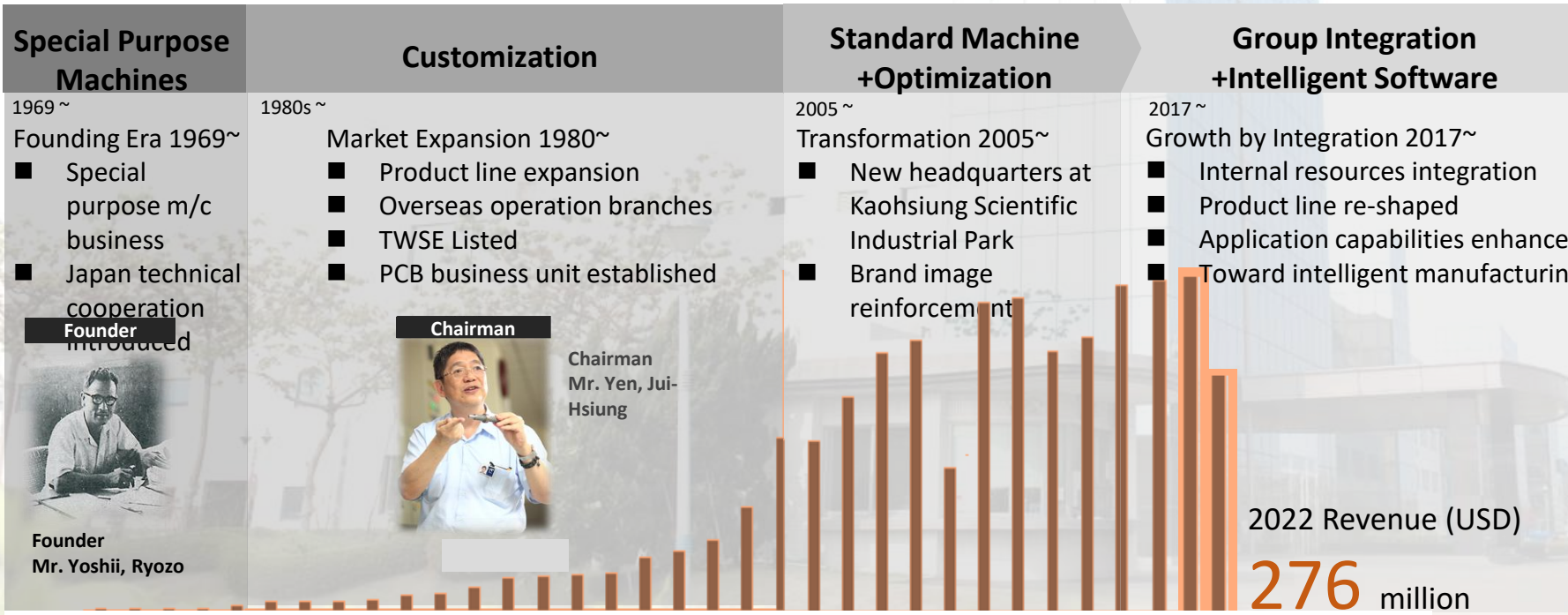
- Capital: NT\$2.56 billion
- Stock code: 4526.TW
- Chairman: Mr. Yen Jui-Hsiung
- Number of employees: 650 (TTG 1800)
- Certifications: ISO 9001, ISO 14001, ISO 50001, ISO 45001, AEO

## Vision

The best partner who can assist industries to reach success

## Mission

To be the machinery equipment's leading provider of integrated solutions.



**2023** 天下雜誌  
CommonWealth Magazine  
Taiwan Top 2000 Survey

**403<sup>rd</sup>** | **1<sup>st</sup>**

Taiwan's top 2000 manufacturers' rankings (Revenue) | Taiwan's machine tool manufacturers' rankings (Revenue)

## Machine Tools

### Turning

As a specialized machine tool manufacturer, we specialize in listening, analyzing, and integrating customer's pain points. In addition to traditional lathe and milling machines, according to the engineering division, we can combine turning and milling machines with 5-axis machining according to the customer's processed material, production volume, manufacturing process, etc., to form the engineering integration and division with the best customer benefit.



### Milling



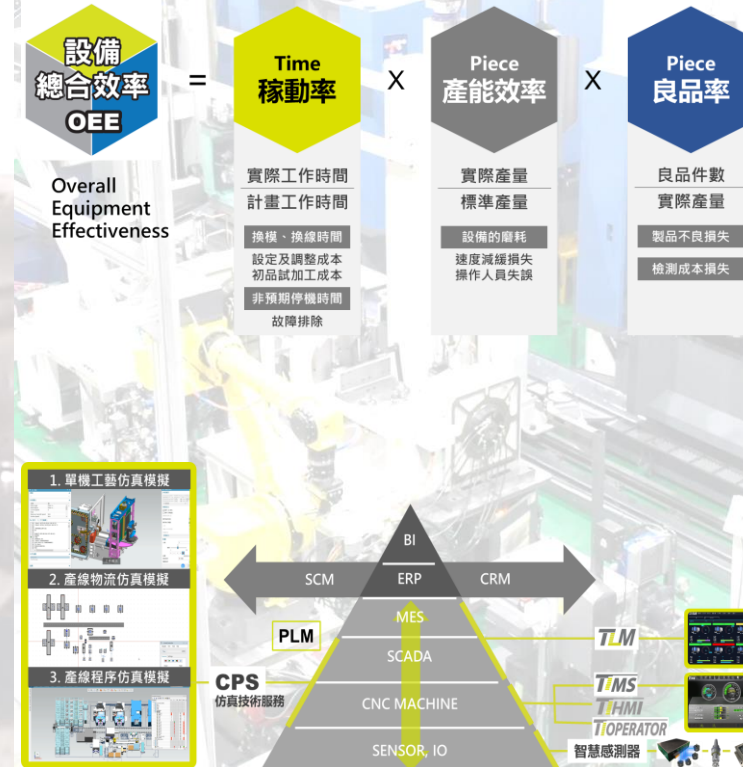
### Grinding

Tongtai has developed its ultrasonic technology for many years, specializing in grinding ceramic hard and brittle materials, and has built up many hard and brittle material processing databases. We are now integrating our pneumatic/hydrostatic technology to develop wafer substrate grinding and polishing equipment.



## Smart Manufacturing

### Automation x Intelligence



# TTGroup – The Members



- Machining center
- CNC lathes
- Boring & Milling
- Automation
- Additive MFG.
- Special Purpose M/C
- PCB M/C
- Laser Machining M/C



- TMV-850QII Series
- TCS Series
- VTX Series
- VP Series
- CT-350
- TB Series
- SH Series



- Vertical Lathe
- Vertical Mill-Turn
- Special Purpose M/C



- High Speed Series
- Heavy Duty Series
- PL Series



- Large Gantry M/C
- Large 5-Axis M/C
- Large Moving-Column M/C
- Horizontal 5-Axis M/C



- MT Series
- G/SK Series
- G800 Series
- GM/SKM Series
- MTH Series
- MC Series
- HS Series



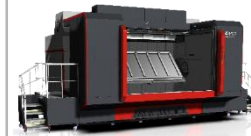
- Compact Turn-Mill



- I-42 Ultimate
- I-42 Twin
- T8 Hybrid-Y



- High Speed Horizontal M/C
- Special Purpose M/C
- Automation



- Meteor Series
- TS630/900/3000



- Transfer Centers
- Automation
- High Speed Horizontal M/C



- SP2-P-3000



Flagship Models



Automotive



Aerospace



3C



Hardware



Energy



Bio-Medical



Automation





# Industry Focus

## Aerospace



## Electric Vehicle



## Energy



**02**

## **Operating Performance of 2023 Q3**

# Condensed Consolidated Statement of Comprehensive Income

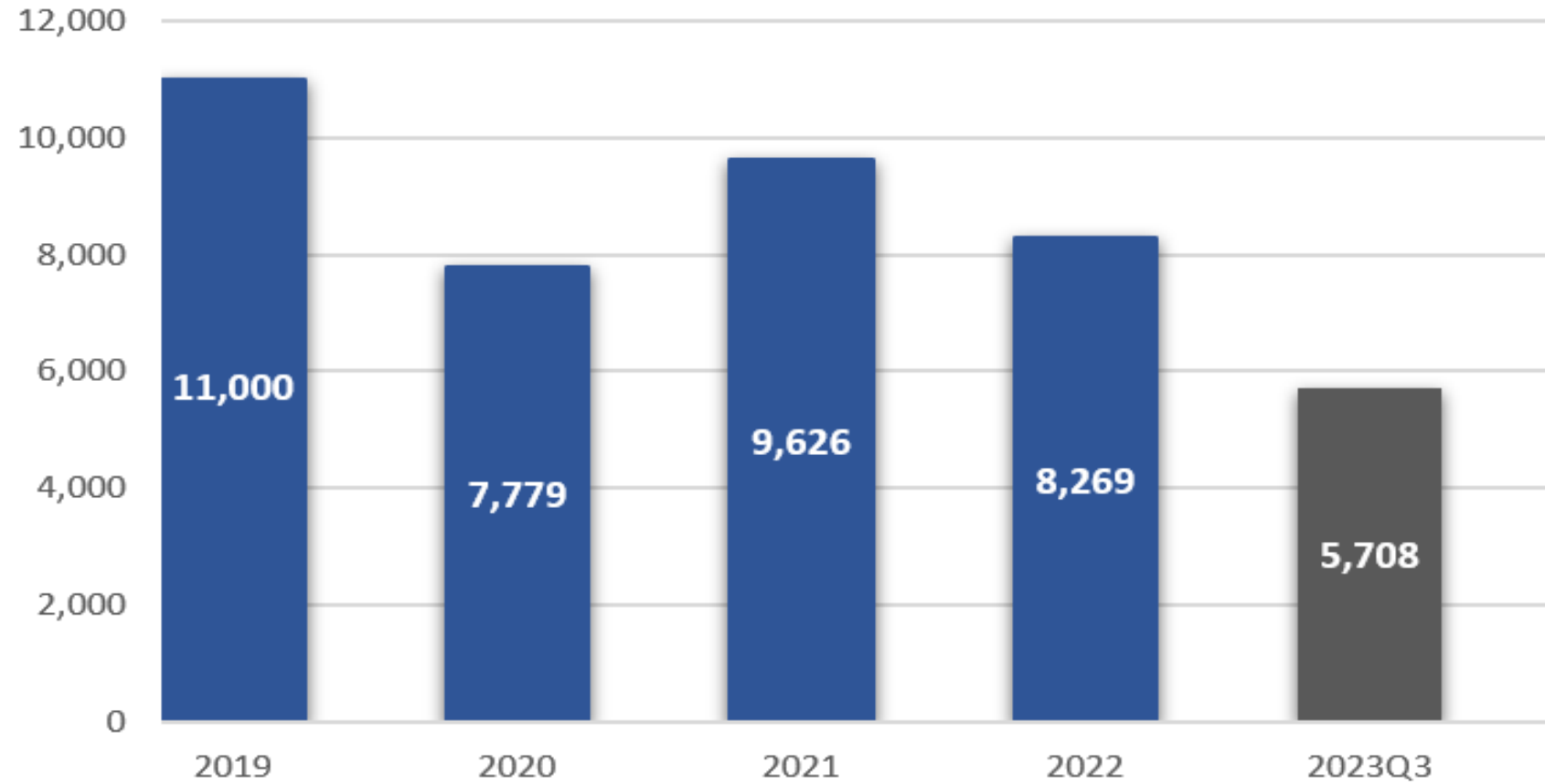
Unit: In NT\$ million, Except Earnings (Loss) Per Share in NT\$

Items	2023 Q3		2022 Q3		2022		2021		2020	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Revenue-Consolidated	5,708	100%	6,137	100%	8,269	100%	9,626	100%	7,779	100%
COGS	4,467	78.3%	4,812	78.4%	6,445	77.9%	7,748	80.5%	6,671	85.8%
Gross Margin	1,241	21.7%	1,325	21.6%	1,824	22.1%	1,878	19.5%	1,108	14.2%
Operating Expenses	1,259	22.0%	1,231	20.1%	1,661	20.1%	1,709	17.8%	1,778	22.9%
Operating Profit (Loss)	(17)	-0.3%	94	1.5%	163	2.0%	169	1.8%	(670)	-8.6%
Net Non-Op. Profit	55	1.0%	105	1.7%	50	0.6%	55	0.6%	157	2.0%
Net Income before tax	38	0.7%	199	3.2%	213	2.6%	224	2.3%	(513)	-6.6%
Net Income after tax	52	0.9%	141	2.3%	143	1.7%	156	1.6%	(397)	-5.1%
Net Profit (Loss)										
Attributable to owners of the Company	(12)		110		91		173		347	
EPS	-0.05		0.43		0.36		0.68		-1.36	
ROE	0.9%		2.5%		2.5%		2.8%		-6.9%	
Debt Ratio	61.1%		63.4%		61.9%		64.8%		65.9%	

Data Source: 2020-2022 Audited Consolidated Report/2022 Q3, 2023 Q3 Reviewed Consolidated Report

# Consolidated Revenue

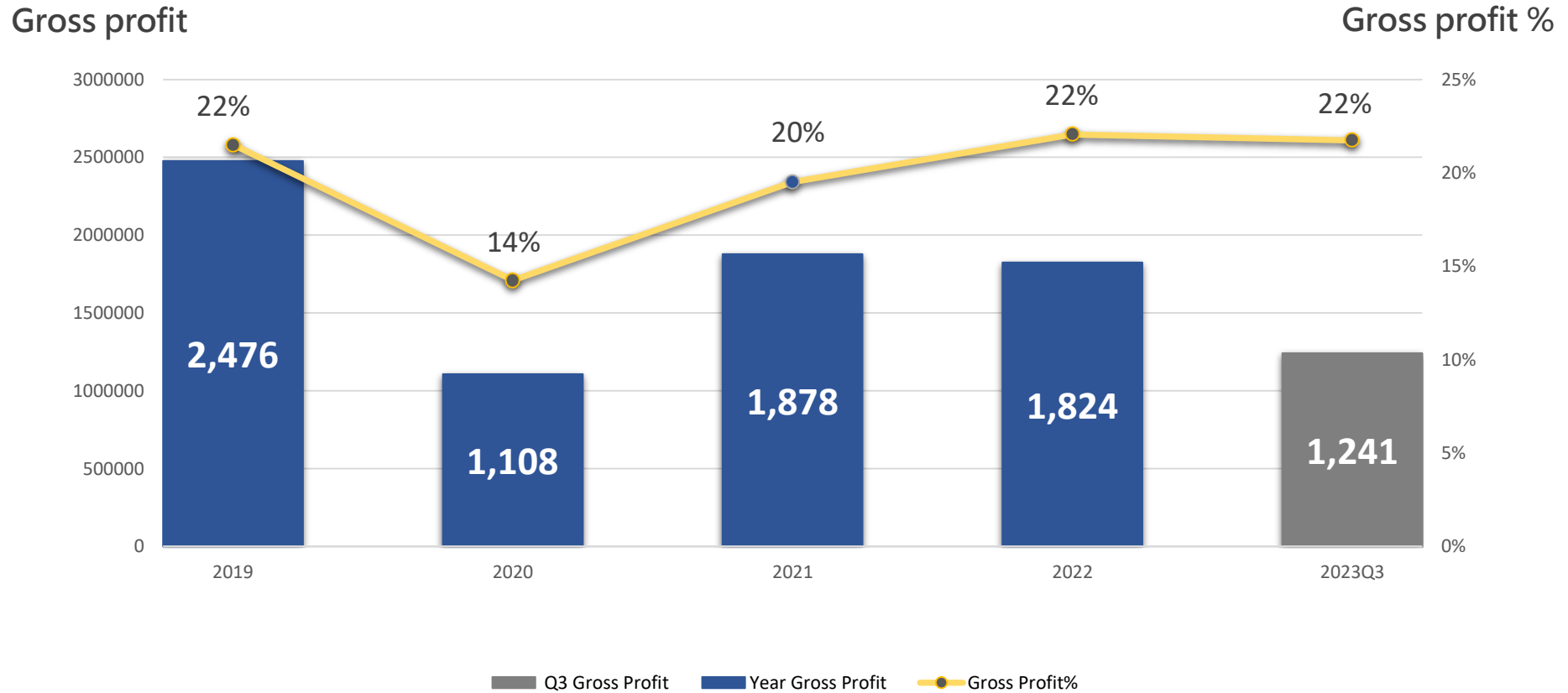
Unit: In NT\$ million



Data Source: 2019~2022 Audited Consolidated Report, 2023 Q3 Reviewed Consolidated Report

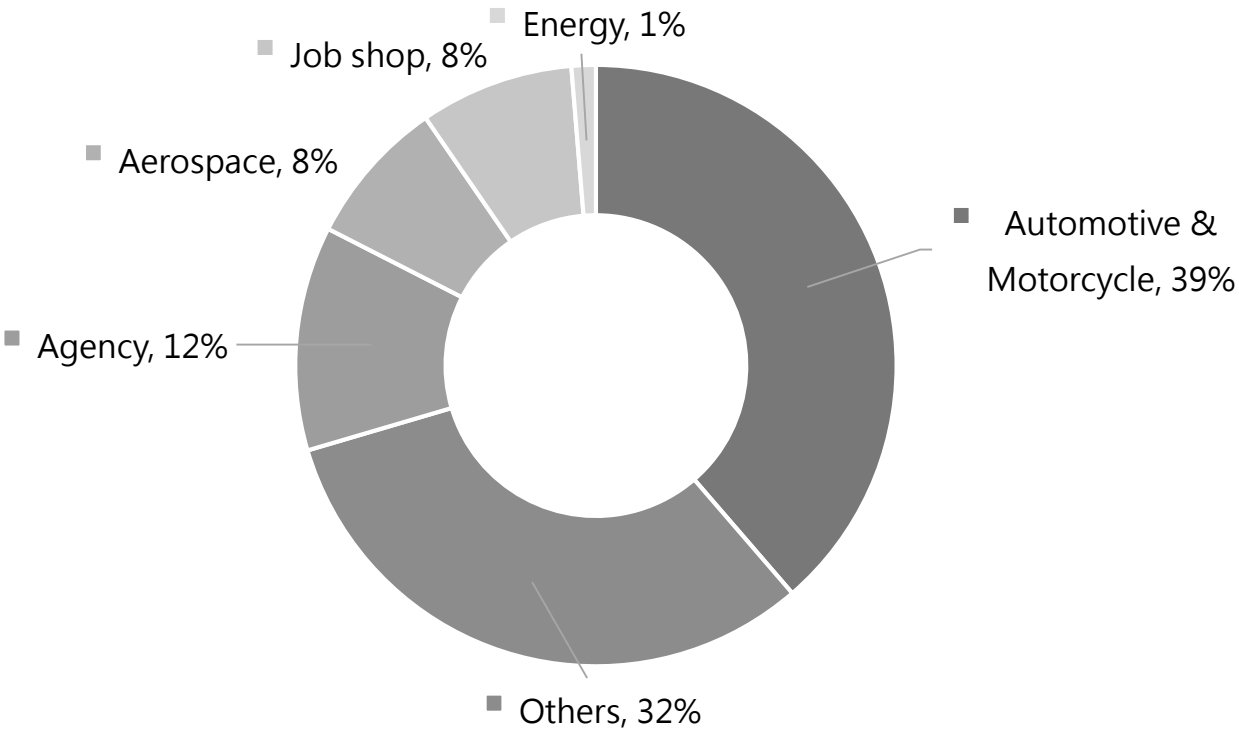
# Consolidated Gross Profit and Gross Profit %

Unit: In NT\$ million ; %

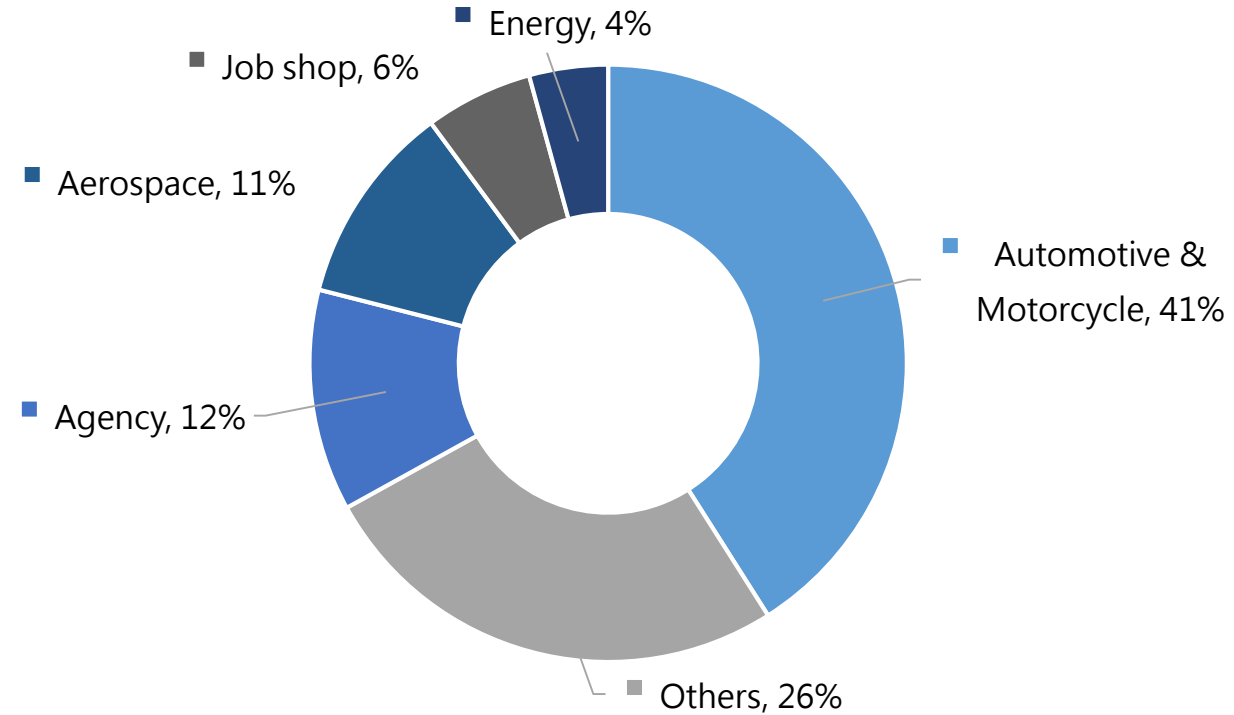


Data Source: 2019-2022 Audited Consolidated Report & 2023 Q3 Reviewed Consolidated Report

# Consolidated Revenue by Industry



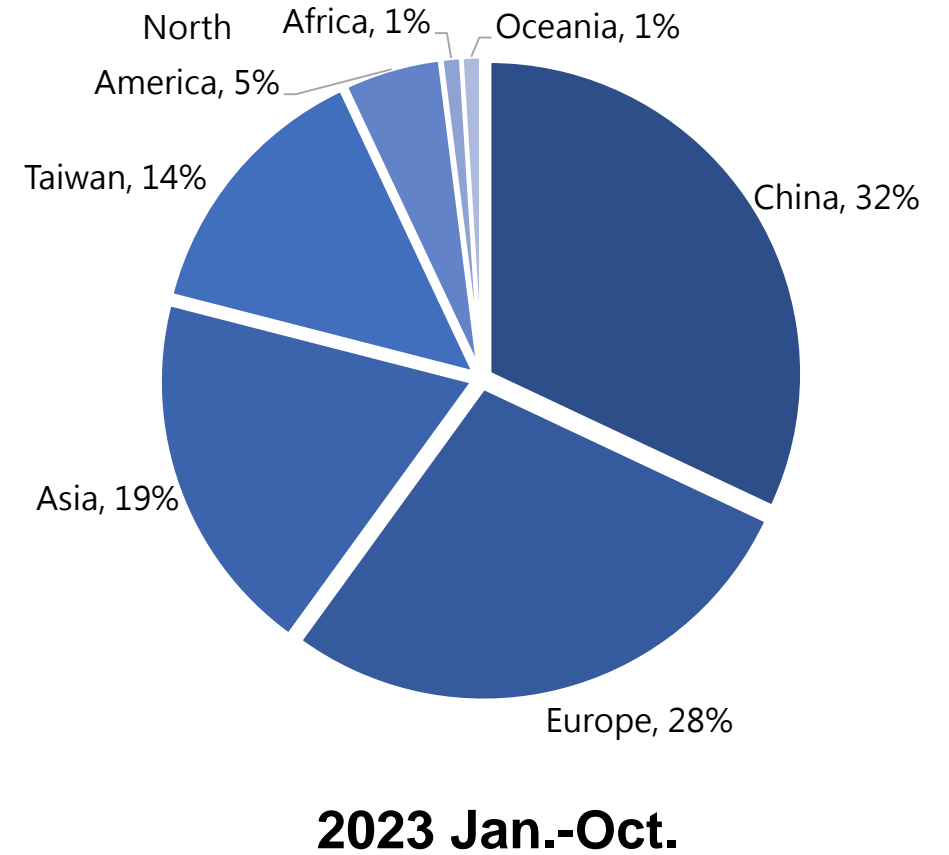
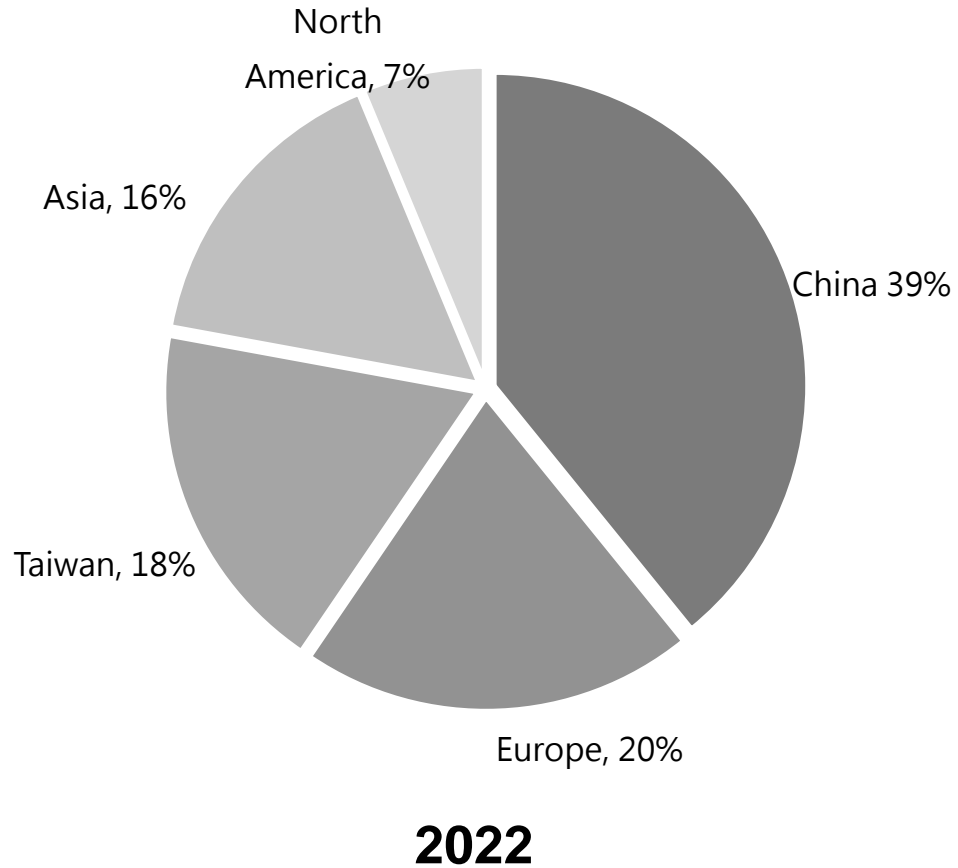
**2022**



**2023 Jan.-Oct.**

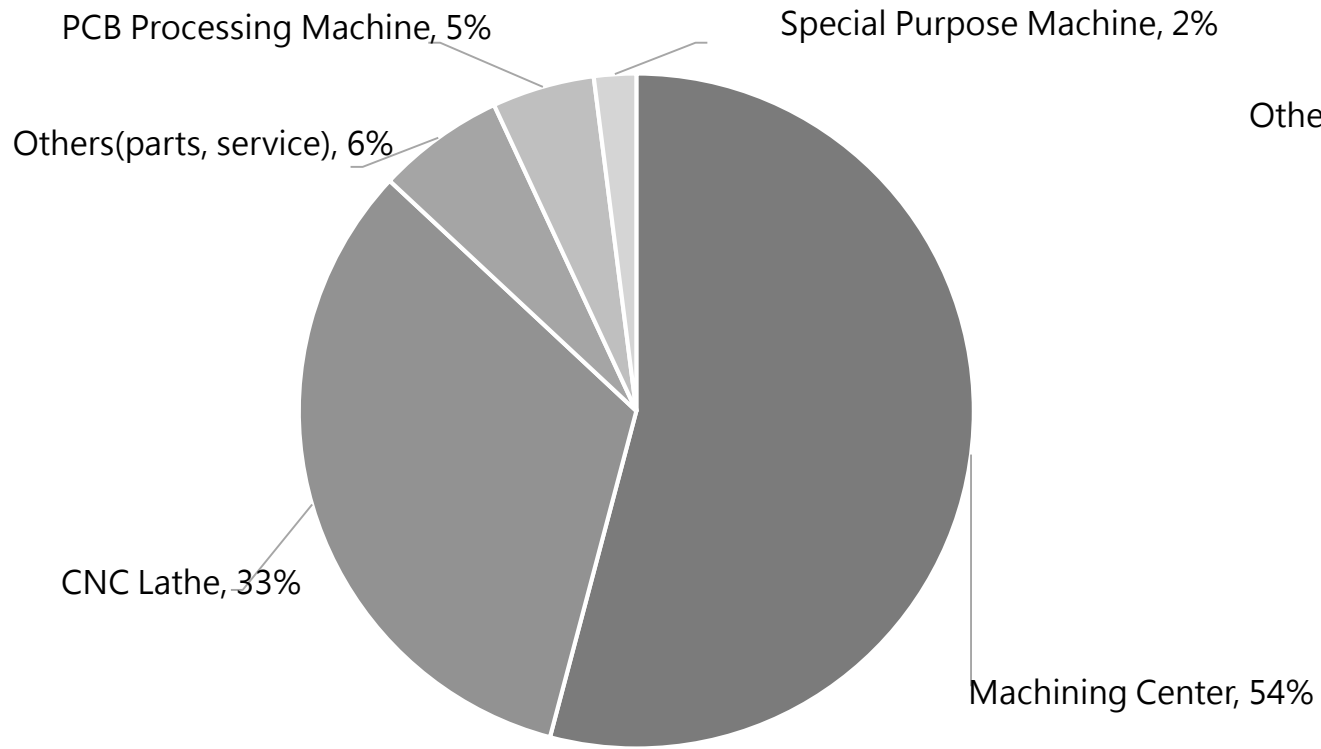
Data : Tongtai Finance and Accounting Department

# Consolidated Revenue by Region

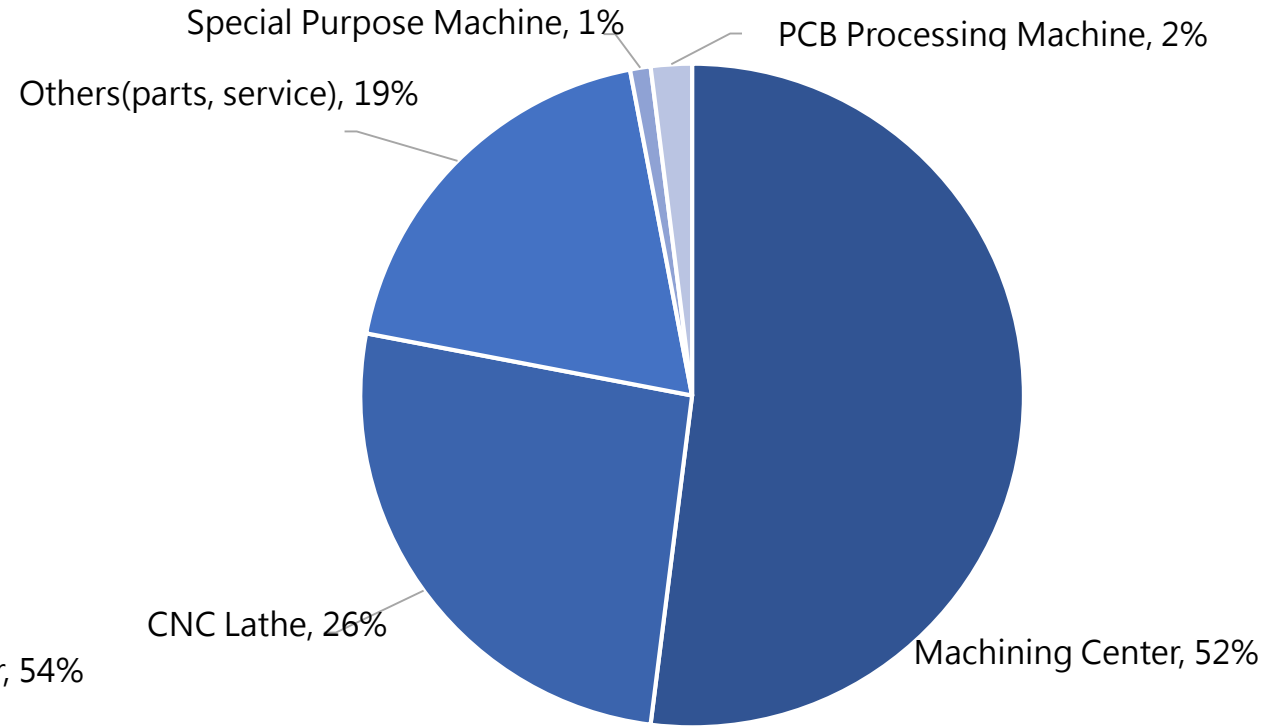


Data : Tongtai Finance and Accounting Department

# Consolidated Revenue by Product



**2022Y**



**2023 Jan.-Oct.**

Data : Tongtai Finance and Accounting Department





## 03 Machine Tool Market Trends & Product Development



# Machine Tool Market Trends

## Electric Vehicle

IEA estimate that 35% of new cars sold in 2030 will be electric.

## Energy

The issue of global warming has led to the emergence of green power generation

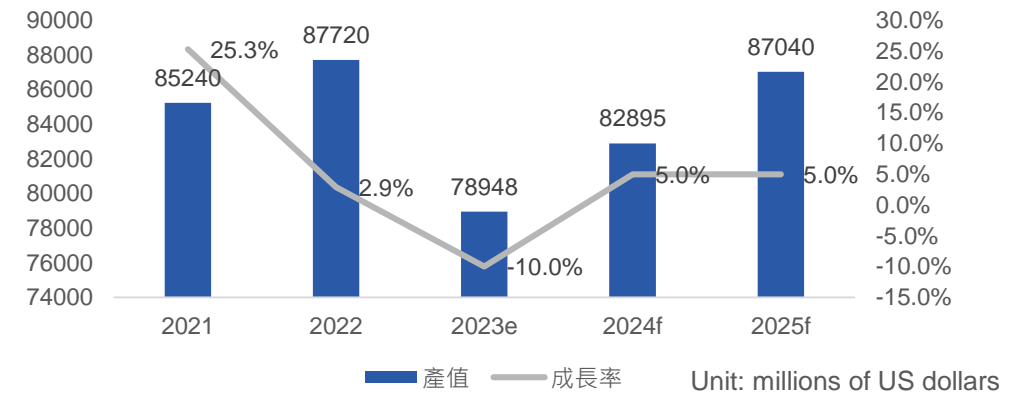
## Aerospace

Demand for airframes is expected to rise yearly as countries rapidly resume trade and travel from the gradual lifting of the global blockade from 2022 onwards.

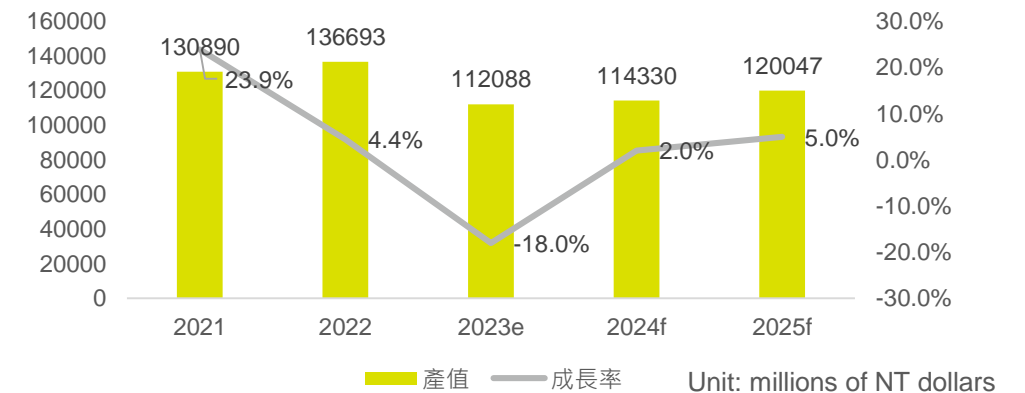
## Semiconductor

Generative AI provides growth momentum for the Semiconductor industry.  
Vendors of related manufacturing process components have ample opportunities.

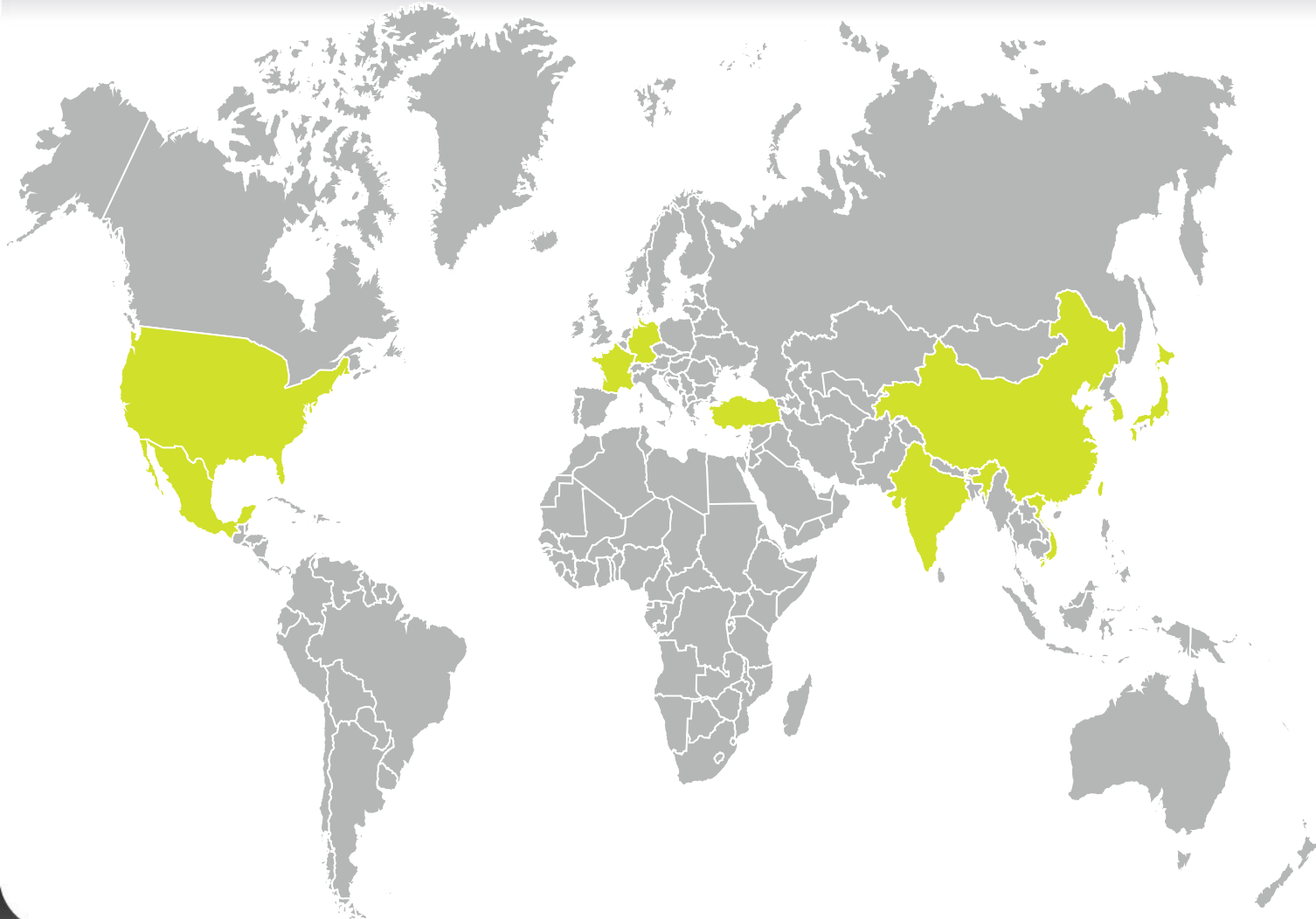
Global Machine Tools Production Value and Growth Rate



Taiwan Machine Tools Production Value and Growth Rate



# Industry Layout



## Electric Vehicle

Aim at the car body and battery components. Europe and USA markets are focused.

## Aerospace

Aim at diverse alloy aircraft components. Korean, Turkish, and Indian markets are focused.

## Energy

Aim at large-scale wind power workpieces.

United States, Mexico, India, and Turkey markets are focused.

# Electric Vehicle Industry Solution

## System & part's size confirmation



## Electric vehicle & Lightweight parts

Battery, motor, and electric control system

Chassis system

Car body



## Capacity requirements

High-Mix  
Low-Volume

General

Multiple processing  
in a machine

High capacity

## Recommended solutions

Economy

Standard VMC/HMC

Conventional table-type APC

Conventional structure



Efficiency

Flexible modules

Rotate-type APC

Three axes with  
moving columns

Two spindles

Linear motor in X axis

Individual movement

Two individual tables

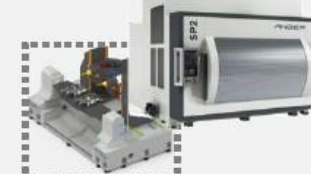
High  
efficiency  
solutions

TYPE A



Extra big box-shaped parts

TYPE B & C



Long-shaped parts

TYPE D



General box-shaped parts

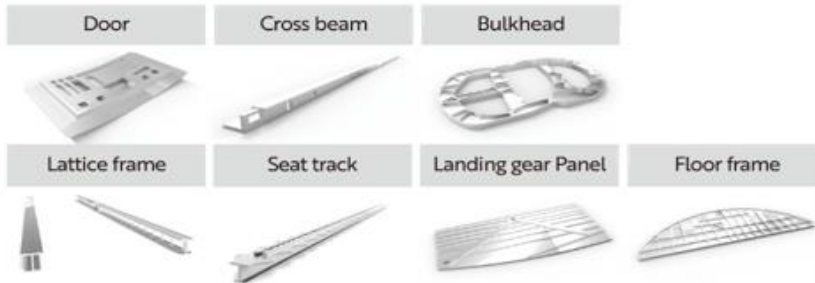
TRAPEC Aiming at Aerospace

## KEY-PARTS OF AIRCRAFT STRUCTURE

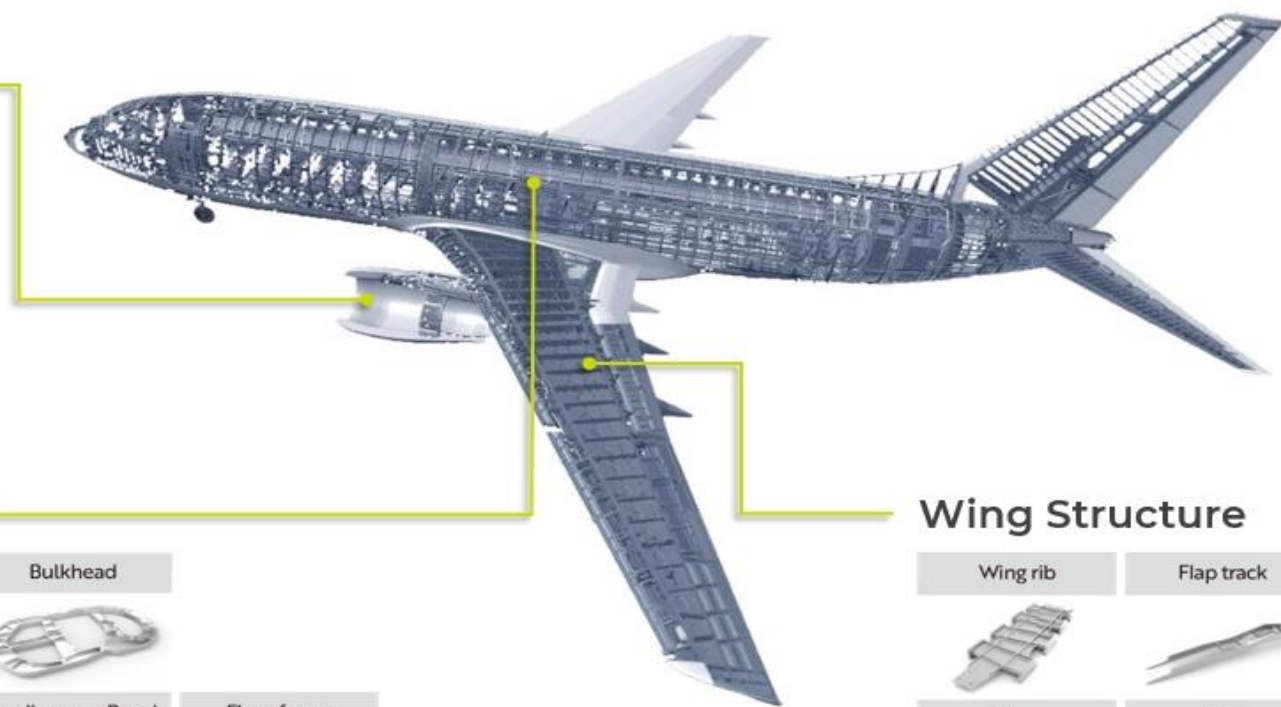
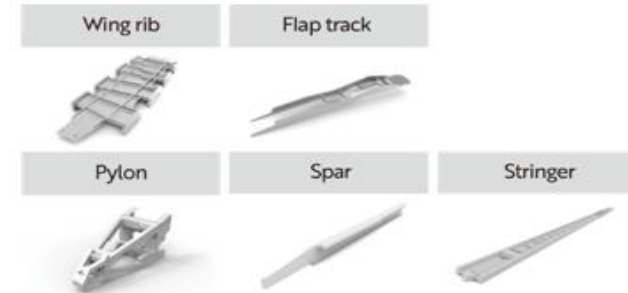
### Engine Part



### Fuselage Structure



### Wing Structure



**04**

## **PCB Market Trends & Product Development**



# PCB Market Trends

## China+1

Due to geopolitical factors, various industrial chains seek production bases outside Taiwan and China. Southeast Asia is the most popular place.

## Inventory Adjustment

Inventory adjustment is expected to come to an end. The cell phone, PC/NB, and consumer electronics markets will gradually recover.

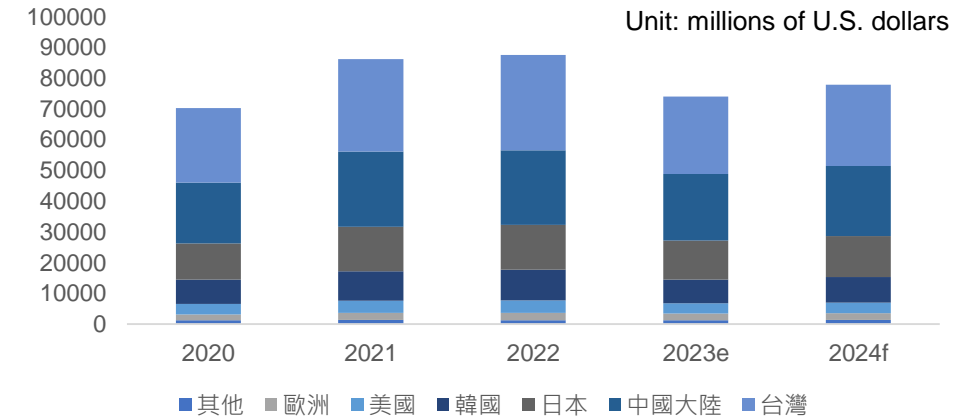
## AI Server and Automotive

Automotive PCB usage composite growth rate is 7.1% from 2022 to 2028. High-end server PCB compound growth rate is 6.4% from 2022 to 2027

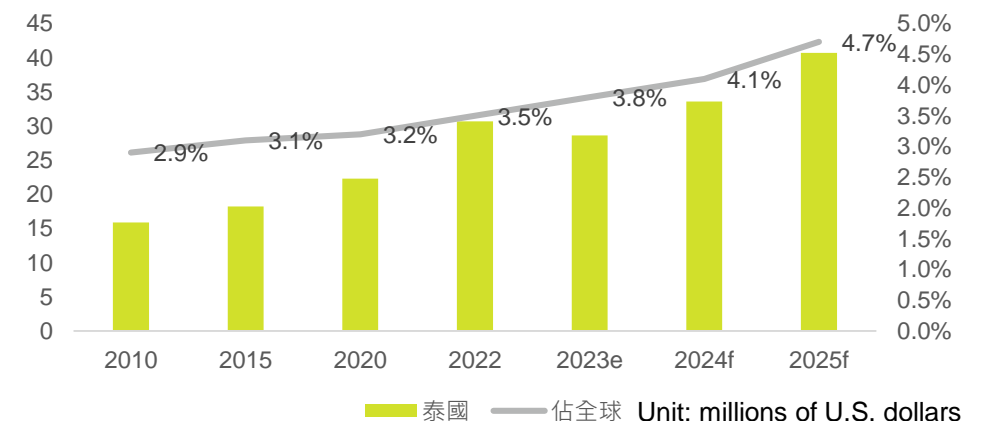
## IC Substrate

In response to the development of semiconductors, it is a critical development project in Japan and Korea and will remain a hot topic in the next few years.

Global PCB Production Value by Major Countries

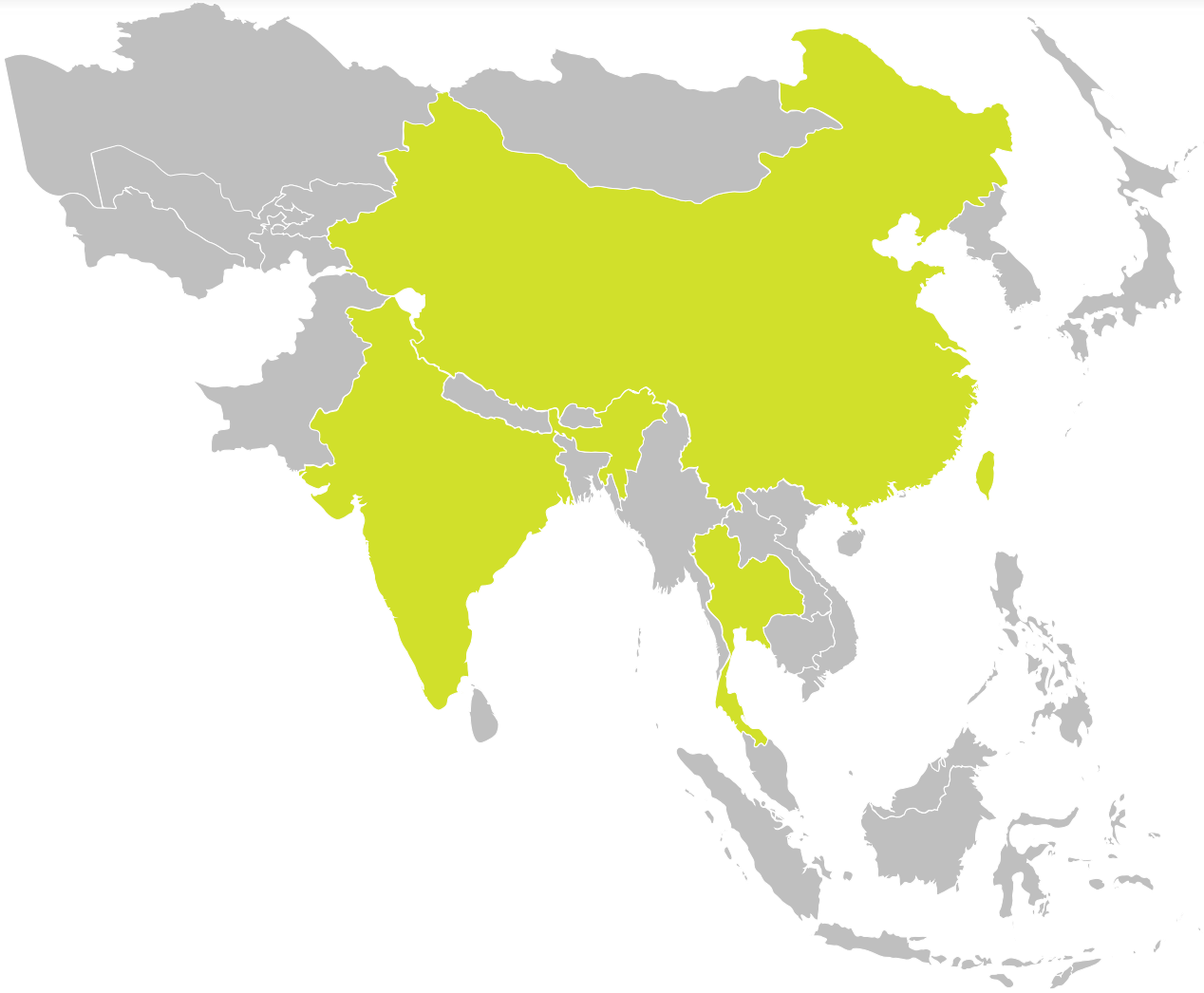


Thailand's Production Value and Global Share





# PCB Industry Layout



## AI Server PCB & IC Substrate

Respond to the AI server PCB and IC substrate market, focusing on the input and development of Taiwan's major board manufacturers.

## Taiwan, Southeast Asia, India

We will deepen our relationship with the Taiwan, Southeast Asia, and India markets by responding to external factors such as geopolitics and inflation.

## Intellectualization/Automation

Focus on drilling machines with linear motors, laser drilling technology, and intelligent/automation development for high-end customer technology.





# Wide Band Gap Semiconductors Market Trends

## 8-inch

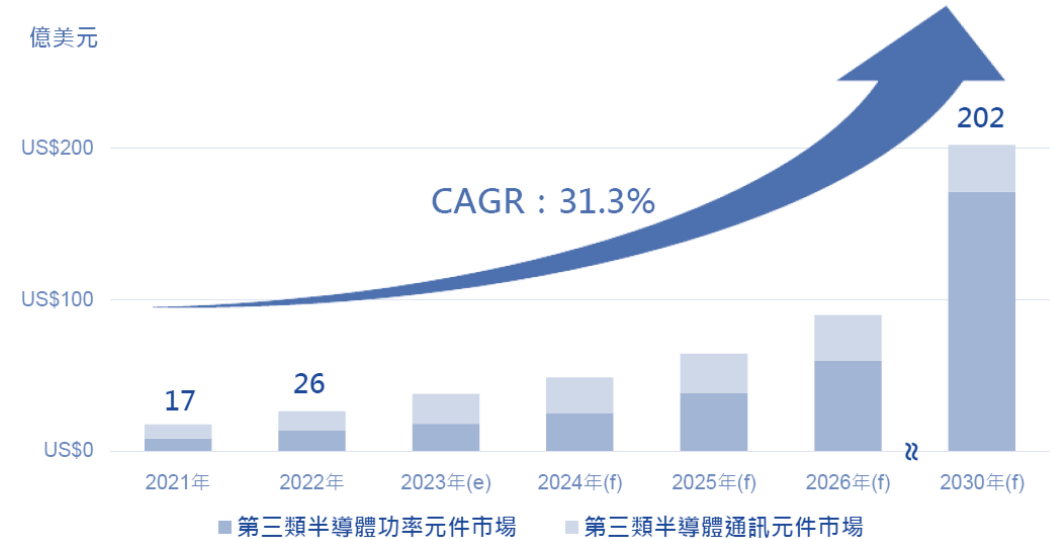
Major international companies are actively expanding their production capacity to capture the market, and developing towards 8-inch manufacturing process.

## Cost down

Reducing product costs through the development of new substrate and process technologies.

## High Pressure/High Temperature Applications

Focusing on the development of emerging applications such as low-carbon transformation, 5G private network, automotive electrification and automotive electronics.



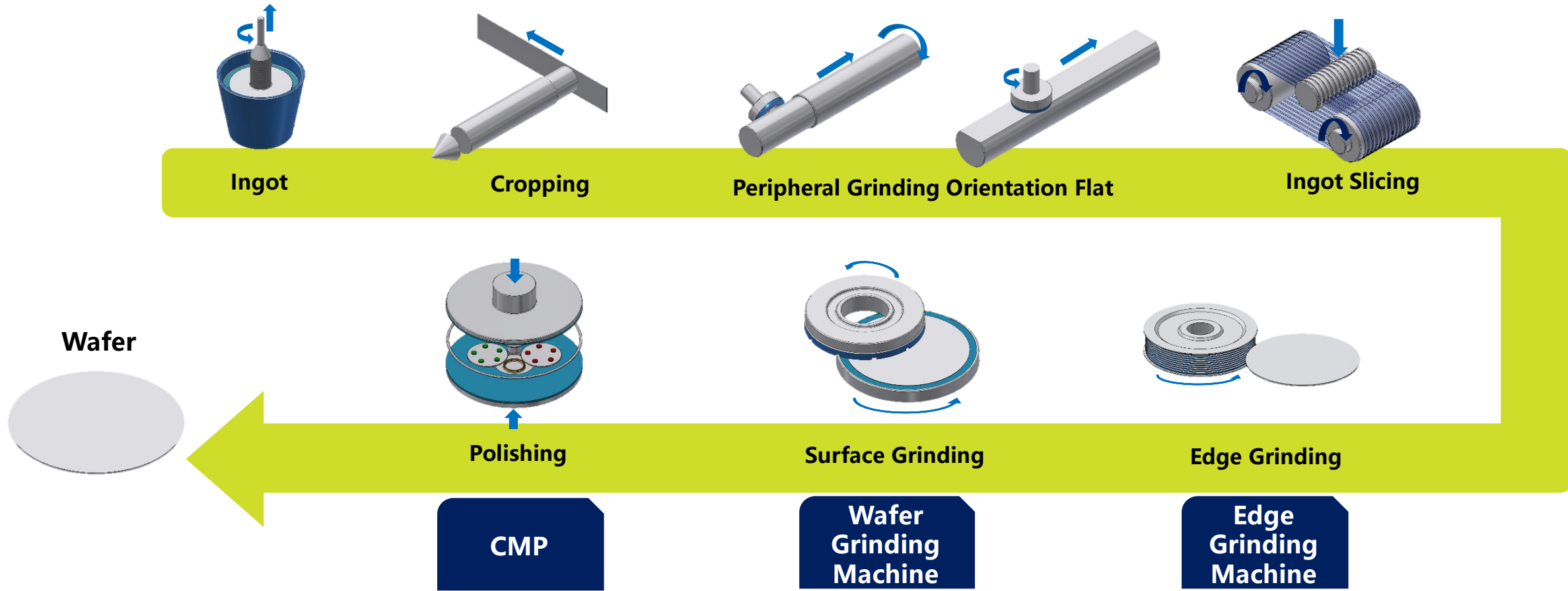
- Power Components: Global market grows from \$0.8 billion (2021) to \$17.1 billion (2030) CAGR 39.8%
- Communication Components: Global market to grow from \$0.9bn (2021) to \$3.1bn (2030) CAGR 14.7%

Data : MIC



# Tongtai Wafer Substrate Processing Layout

## Wafer Substrate Manufacturing Process





## 7 solution solve the problems you meet during machining!

- ① Intelligent manufacturing solution
- ② Automation solution
- ③ Multi-axes solution
- ④ Additive manufacturing solution
- ⑤ Carbon management solution
- ⑥ Industrial solution for Electric vehicle/ Aerospace/ Energy
- ⑦ Dr.TT platform