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鑫科材料科技股份有限公司

ThinTech Materials Technology Co., Ltd.(TTMC)

Investor Conference
2023.12.20



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Safe Harbor Statement



This presentation may contain forward-looking statements. All statements without limitation other than historical and current fact are including business outlook, predictions and estimates forward-looking statements. Such statements are based upon management' s current beliefs and expectations which are subject to various risks, uncertainties and other factors that could cause actual outcomes and results to differ materially.

We caution readers not to place undue reliance on forward-looking statements as these statements speak only as of the date they are made, and we disclaim any obligation to, update or alter any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law or regulation.

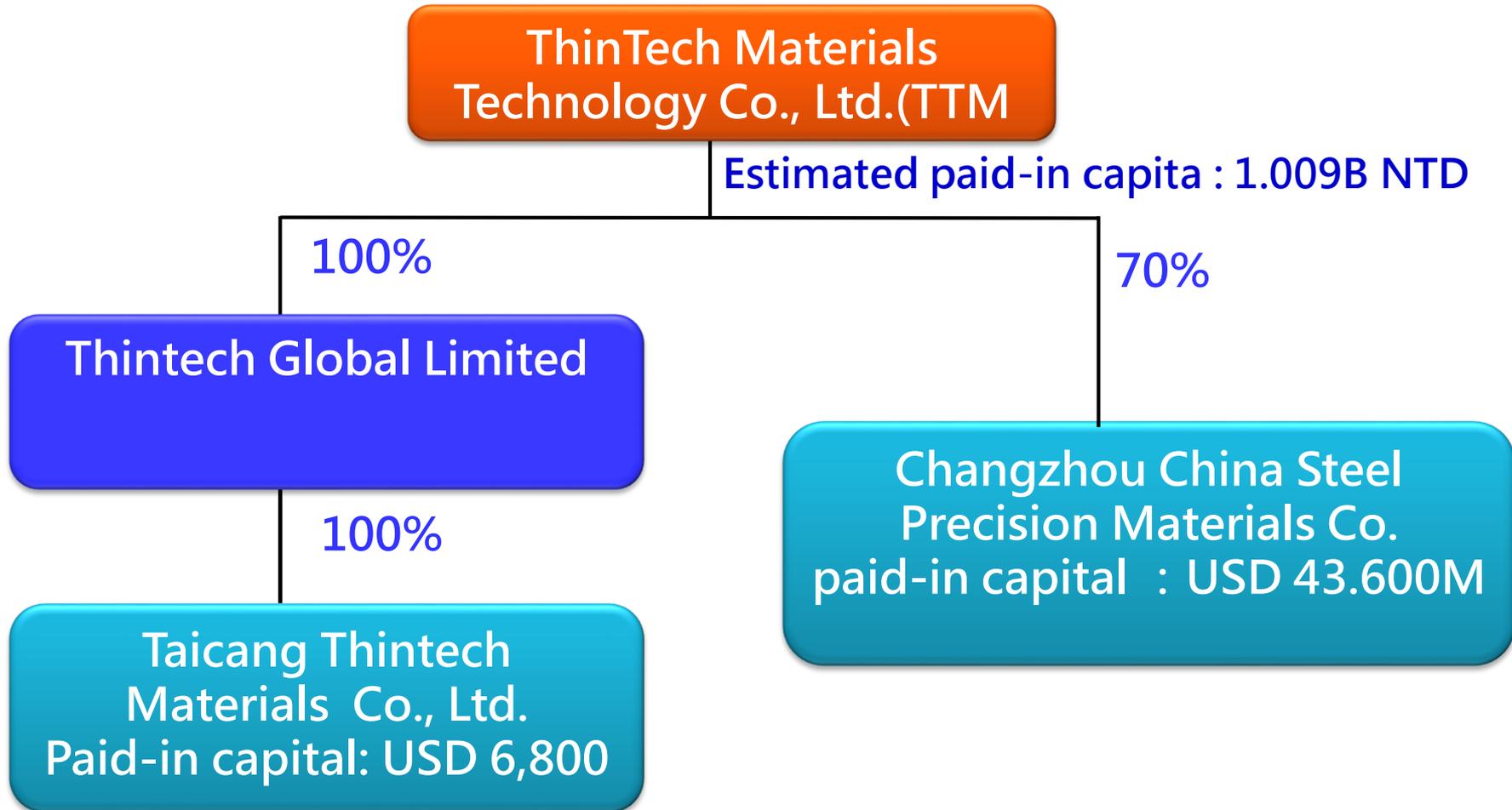
This cautionary statement is applicable to all forward-looking statements contained in this presentation.

I. Company Profile - Overview

Established	March, 2000
New Main Factory Setup	March, 2006
Address	No.1, Luke 8th Rd., Lujhu District, Kaohsiung City 82151, Taiwan R.O.C.
Factory Area	30,000m ²
Capital	Paid-in capital NTD 735 million
Employees	209
Investor Profile	CSC Group (GAINS Investment Co., CHINA STEEL CHEMICAL), United Renewable Energy Co., Ltd. · other corporate and individual shareholders.
Management Team	Chairman: Chao-Hsiang Lee (November, 2023 on board) President: Yeong-Tsuen Pan

I. Company Profile

-Company Organization (after acquisition)



I. Company Profile

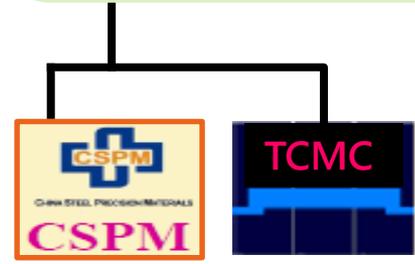
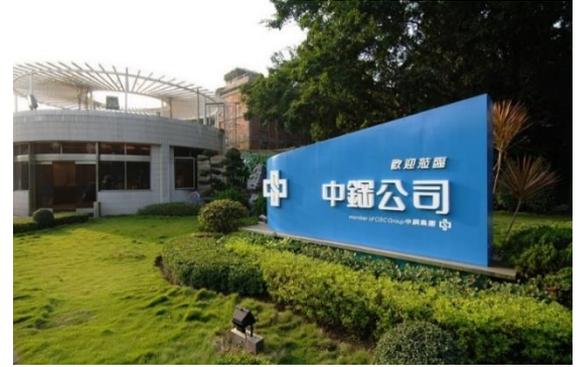
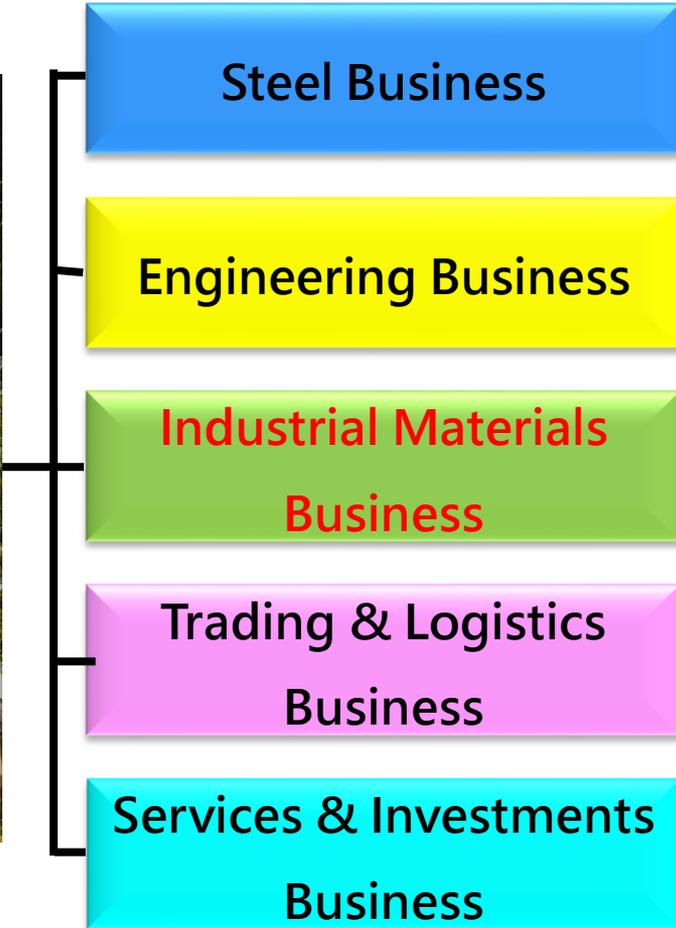
-Recent important chronicles



- In March, it issued the third domestic guaranteed conversion corporate bond.
- Obtained IATF 16949:2016 automotive industry quality management system certification in May.
- In June, the shareholders' meeting approved the acquisition of 70% of the equity of Changzhou China Steel Precision Materials Co., Ltd. with cash and new ordinary shares as consideration.
- The company won the 2023 Commendation Award from the Occupational Safety and Health Administration of the Ministry of Labor. Enterprise Sustainability Report Public Occupational Health and Safety Indicators Evaluation - Outstanding Enterprise. After the active evaluation of a total of 159 listed companies (7 companies with excellent electronic performance), the company was selected as an electronic company. Ranked among the top 10% of outstanding enterprises in the industry, winning the award for two consecutive years.
- Kaohsiung City's workplace employee health service promotion plan won: Excellence Group (Level 2).

I. Company Profile

-Industrial Material Business Group



TTMC belong to Industrial materials business group, **focusing on opt-electric and semiconductor sputtering targets**. The market territory includes Taiwan, China, Japan, Europe and USA.



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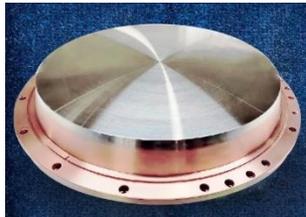
III. Company Profile

-Products Development Trace

- TTMC is established on March 2000, nearly 23 years so far.
- Products Development trace can be divided into three stages:
- **Early(2000-2005):** Focus on **Optical storage media (OSM)** targets (Ag, Al, Dielectric)
- **Middle(2006-2020):** extend to optical targets for decoration(**DEC**), passive components(**PAC**), Display, Crystal Oscillators (**OSC**) (Mo, Cu, Ti)
- **Near(2021~):** launch into semiconductor (**SEMI**) industry, strategy: process from back to front end, Size from small to large, and targets accompanied with slugs.



Semi Slug



Semi target



OSM



DEC & PAC



Display



OSC



SEMI





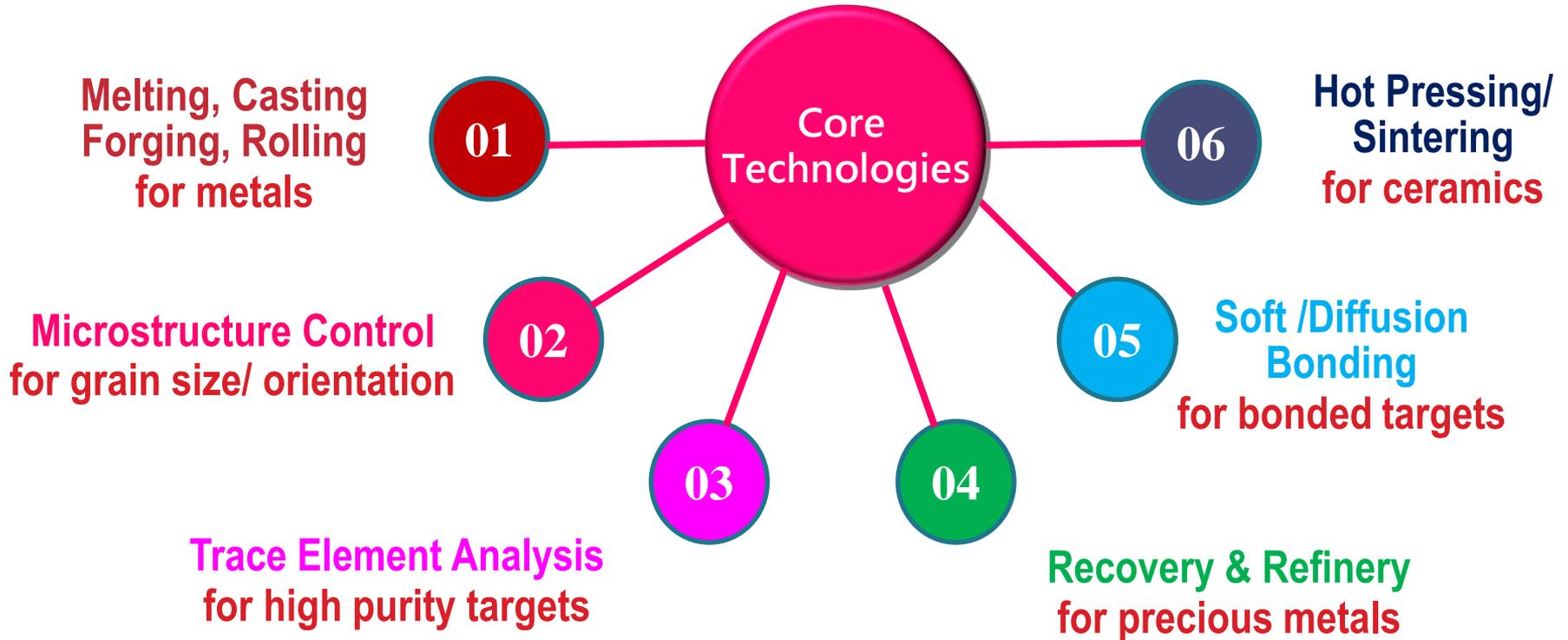
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II. Competitive Advantages

- Certification



Item	Description
Quality Management System	ISO 9001, IECQ-QC 080000, ISO 17025, IATF 16949
Occupational Health and Safety Management System	ISO 45001, ISO 14001
Authorized Economic Operator	AEO
Certified Products	<ul style="list-style-type: none"> (1) Dielectric target for Blu-ray disc and several recording targets for Blu-ray disc and archiving files discs (2) Al/ Mo/ Cu rotary targets certified for generation 8.5 TFT-LCD, being the first supplier in Taiwan. (3) Cu, SUS, NiV, Ti, Ag, Au sputtering targets qualified by SEMI customers. (4) Ag 、 Ni 、 NiV 、 Ti 、 Sn slugs qualified by SEMI customers. (5) Nickel alloy pickling C-hook qualified by customer. (6) Biomedical composite materials qualified by customer.



➤ **TTMC features the core technologies for both metal and ceramic targets for opt-electric & semiconductor industries.**

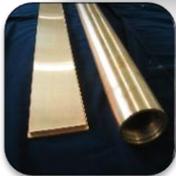


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III. Prod. Tech. & App. -Product manual

Sputtering Target Products



Display/Touch Panel

(planar/rotary type, Al, Mo, Cu, Ti)



Optical Storage

(ZnS, TRA-, TRB- series...)



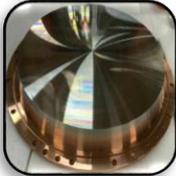
Quartz Crystal/Passive component

(Ag, Ag-alloy)



Tool & Decorative Coating

(Al, Cu, Ti, Ni-alloy)



Semiconductor Industry

(Al-Cu, Ti, NiV, Ag)

Specialty Alloys Products



Sputtering Equipment Consumed Parts



Biomedical Products

(B Neutron Capture Treatment moderator)



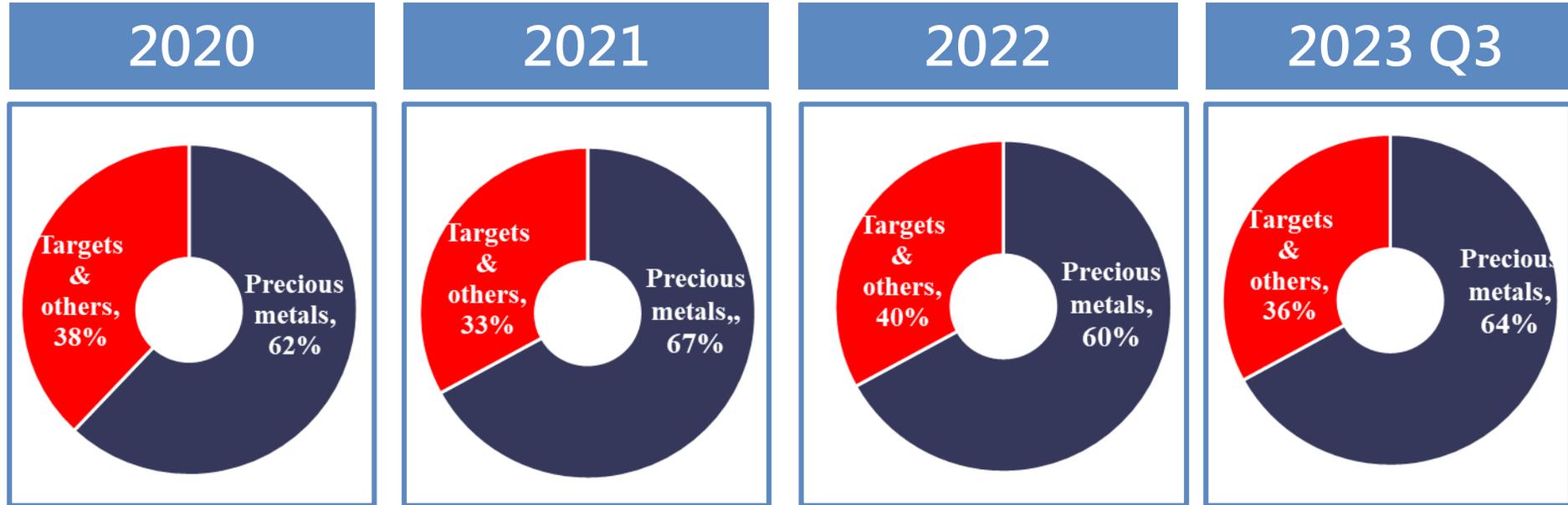
Ni-base Superalloys



Ti-consumer Products

IV. Operational Overview

-Sales Revenue Ratio by Product

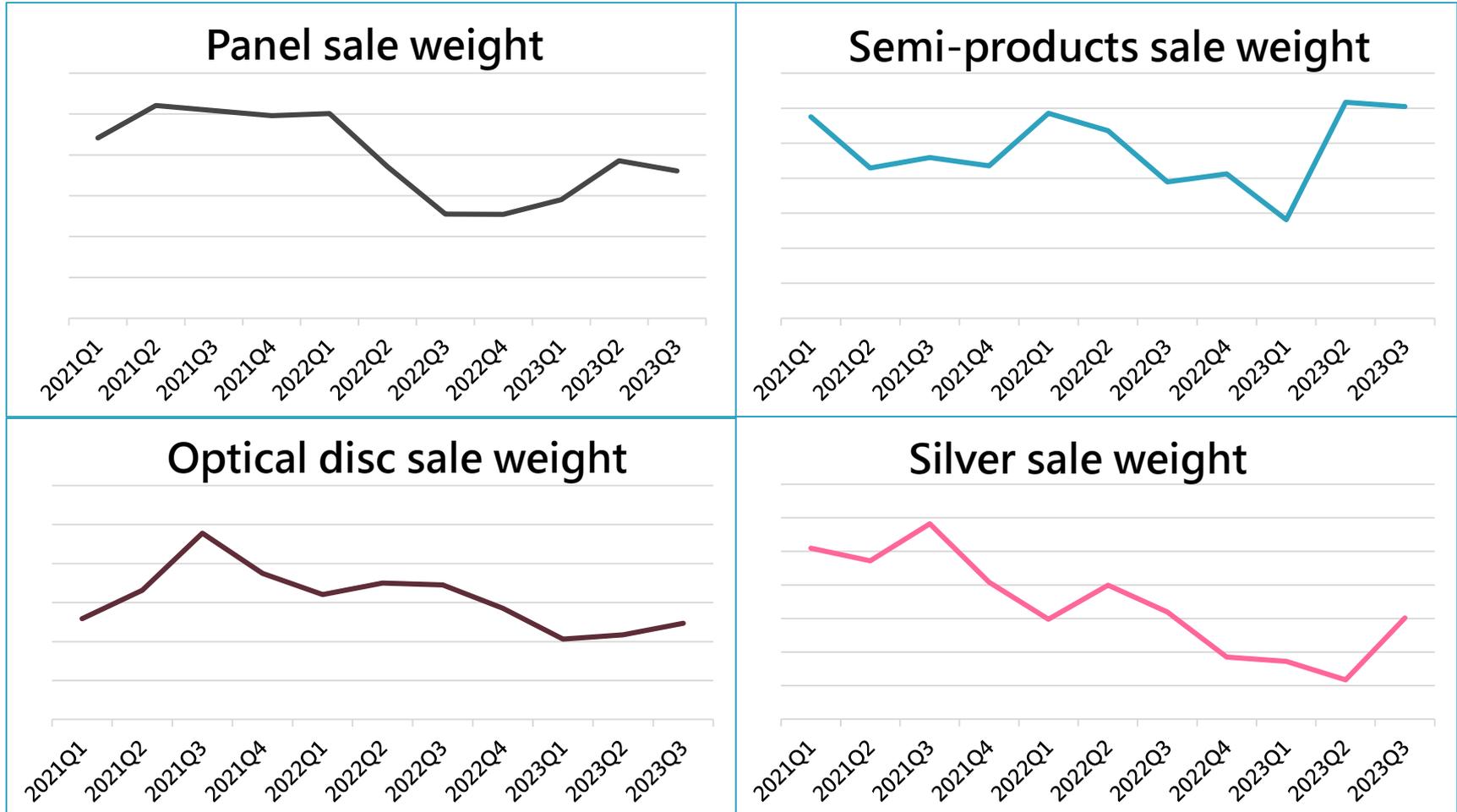


The company's business strategy has changed by optimizing its product mix and increasing the revenue share of high-margin products. In 2023, due to factors such as the destocking and adjustment of inventory positions in the panel industry in the first half of the year, the ratio of high-margin products will be low. It is expected that panel demand will continue to pick up thereafter.



II、Operational Overview

-Sales trend of major products



The panel industry was still on a slight downward trend in the third quarter due to the economic environment, while the optical disc, silver and semiconductor fields rebounded.

III. Financial Performance



-2023Q3 consolidated profit and loss

Unit : thousand NTD (except EPS in NTD)

Items	2023Q3	2022Q3	Increased (decreased) Amounts	Increased (decreased) Percentages
Operating Revenue	1,801,593	2,022,364	(220,771)	(11)
Operating Costs	1,653,988	1,840,107	(186,119)	(10)
Gross Profit	147,605	182,257	(34,652)	(19)
Gross Margin	8%	9%	(1%)	(11)
Operating Expenses	111,095	111,031	64	-
Operating Profit	36,510	71,226	(34,716)	(49)
Non-Operating Income and Expenses	14,483	21,238	(6,755)	(32)
Operating profit Before Tax	50,993	92,464	(41,471)	(45)
Net Income(Losses)	39,676	72,821	(33,145)	(46)
Net Income Margin	2%	4%	(2%)	(50)
Earnings Per Share	0.54	0.99	(0.45)	(45)

The main reason is that this year's H1 customers are still in the state of destocking, resulting in a decrease in revenue compared with the same period last year.

Outside the industry, the dollar index fell and fluctuated affects exchange benefits to decrease compared with the same period last year.



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III. Financial Performance

-2023Q3 consolidated assets and liabilities



Item	2023Q3	%	2022Q3	%	增(減)金額	增(減)%
Cash and cash equivalents	151,584	8	98,565	6	53,019	54
Net accounts receivable	292,195	16	246,122	15	46,073	19
stock	682,056	37	700,851	42	(18,795)	(3)
Prepayments	85,333	5	39,630	2	45,703	115
total current assets	1,360,441	73	1,181,273	71	179,168	15
Property, Plant and Equipment	234,403	13	239,890	14	(5,487)	(2)
right-of-use assets	119,690	6	126,571	8	(6,881)	(5)
Total non-current assets	484,362	27	486,830	29	(2,468)	(1)
total assets	1,844,803	100	1,668,103	100	176,700	11
short-term loan	109,669	6	90,386	5	19,283	21
Safe-haven financial liabilities – current	80,689	4	115,578	7	(34,889)	(30)
Total current liabilities	346,662	18	362,788	22	(16,126)	(4)
corporate debt payable	188,618	10	-	-	188,618	-
Lease liability – non-current	104,725	6	110,413	7	(5,688)	(5)
Total non-current liabilities	300,026	16	118,384	7	181,642	153
total liabilities	646,688	34	481,172	29	165,516	34
Total equity	1,198,115	66	1,186,931	71	11,184	1

Increase in prepayments and short-term borrowings: Prepayments for silver materials and investment funds resulted in an increase in borrowings compared with the same period last year.

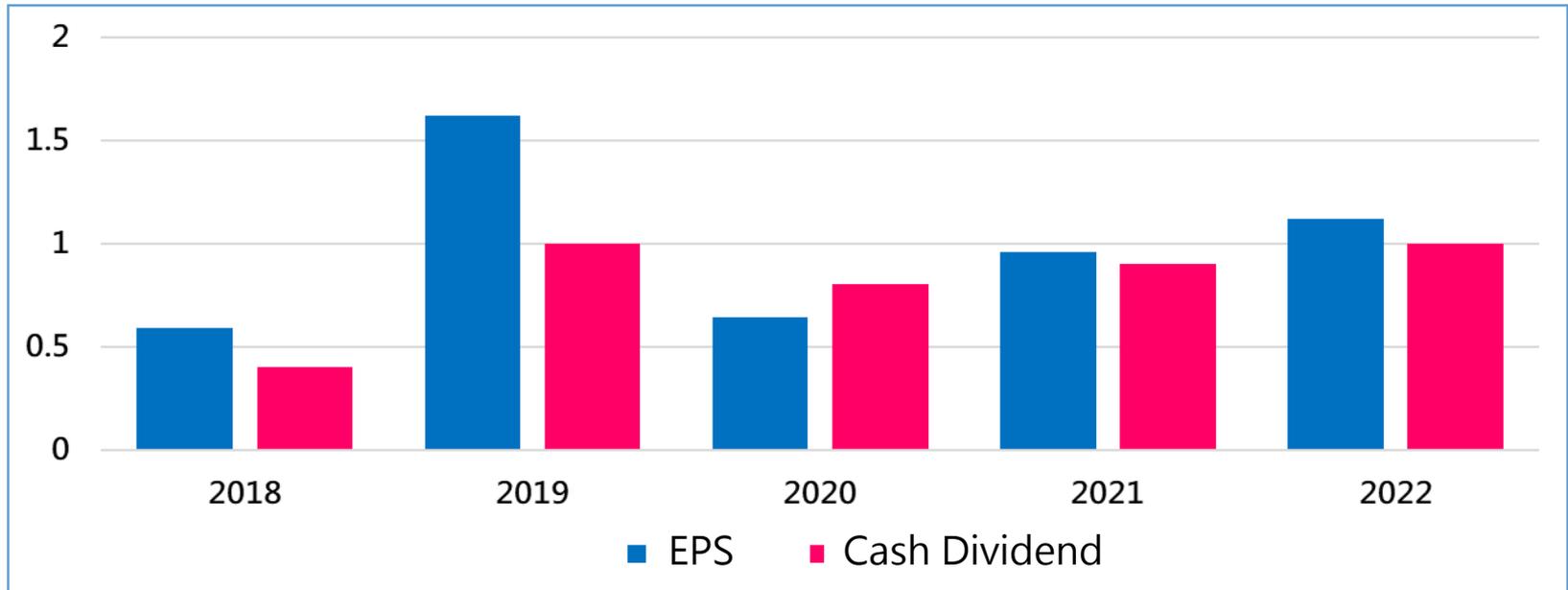
III. Financial Performance

-EPS and Cash Dividend



Year	2018	2019	2020	2021	2022
EPS	0.59	1.62	0.64	0.96	1.12
Cash Dividend	0.4	1	0.8	0.9	1
Dividend	68%	62%	125%	107%	89%

Unit : NTD/per share





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VI. ESG Executive Status



-ESG Future Goals

E Environmental

- Integrate the benefits of resource recycling and energy conservation of process facilities, with the goal of reducing carbon emission intensity and energy intensity by 3%.
- Short-chain/continuous optimization design of the process to achieve carbon reduction goals through low-carbon manufacturing.
- Work with specific customers and raw material suppliers to build a circular economy resource recycling and reuse model for precious metals (Au and alloys) and high-purity metals (Al, Cu).
- Promote ISO-14064 greenhouse gas examine.

S Social

- Amity and neighborliness for the disadvantaged and donates more than 20 safety boxes to the village every year.
- Through organizational initiatives, we work with national organizations to organize social welfare activities, more than one per year, to expand social participation.
- Innovate and develop materials for advanced medical equipment to achieve high-end treatment equipment for use in large hospitals.

G Governance

- Rolling improve corporate governance and maintain the second level of corporate governance assessment.
- Establish a risk management committee.
- Develop an intellectual property patent management plan.
- Strengthen personnel's information security awareness to achieve 100% education, training completion rate, and zero major information security
- Proactively prepare a sustainability report and move towards obtaining third-party certification (mid-term) incidents.

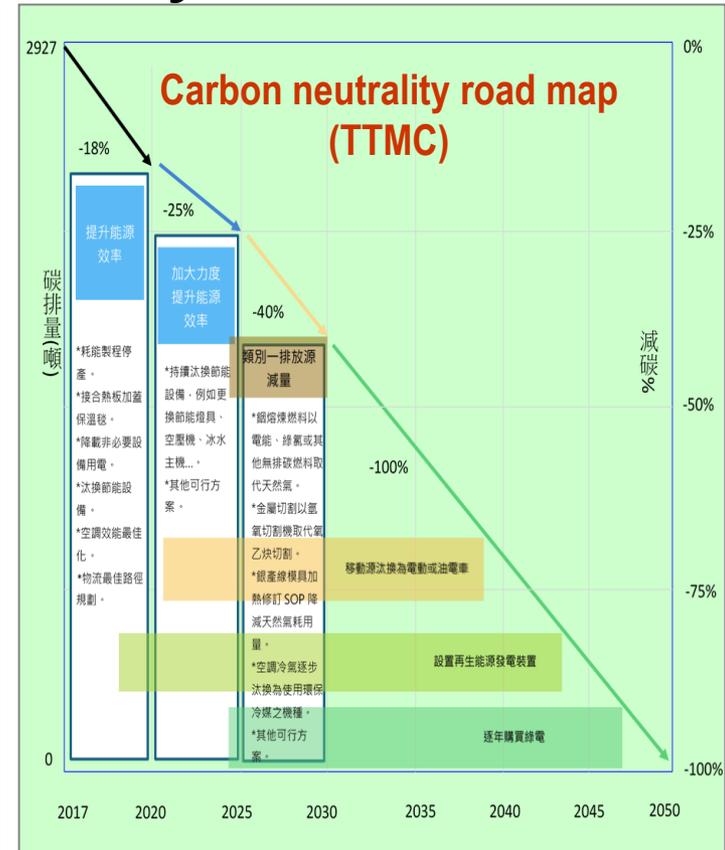


VI. ESG Executive Status



-ESG executive summary

E Friendly environment	Aim	Result
Energy Use Intensity	3%↓	Increased 3.73% (due to the decrease in target shipments affected by the economy, if indirect energy consumption is deducted, it dropped 27% from the same period last year)
Greenhouse gas emission intensity	3%↓	A decrease of 2.21% (due to the decrease in target shipments affected by the economy)
Achieve carbon reduction through low-carbon manufacturing (reduced electricity consumption)	1%↓	Compared with the same period last year, the temperature dropped by 200,000 degrees, a decrease of 7%.
Recycling water system to reduce tap water consumption	5%↓	A decrease of 12.76% compared with the same period last year
Plan to ship in batches to reduce dispatch and transportation fuel	3 trips↑	Reduce dispatch of vehicles by up to 3 times per week Compared with the base period (2021 Y), gasoline decreased by 35.8%/diesel decreased by 34.1%
Circular economy resource recycling and reuse business model	1	In view of the application extension development of the completed 5NCu refining and recycling technology, a small amount of trial production of 5N Cu slug products was carried out. The precious metal Au circular economy has produced a cumulative output of 13.3kg as of September.
Promote ISO-14064 Greenhouse Gas Inventory		The first greenhouse gas inventory report was completed in June 2012. It is expected to carry out third-party external verification in the second quarter of 2015.



Short-term goal: reduce emissions by 25% from 2017 to 2025.

Mid-term goal: reduce emissions by 40% from 2017 to 2030.

Long-term goal: Aim to achieve carbon neutrality by 2050.



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VI. ESG Executive Status

-ESG executive summary (Cont.)



Social care	Aim	Result
Amity and neighborliness, care for the disadvantaged	20 cases	20 cases, with a total of donations to approximately 260 marginalized households in the past eight years.
Love never stops	Show your love, donate materials, and help in urgent need	In response to World Vision Taiwan's red envelope campaign, company employees voluntarily raised and donated NT\$25,000. Activity to rescue excess Wendan, purchasing 800 kilograms from Tainan Wendan Park. Assisted 19 local people with disabilities to find employment and training opportunities, providing a total of 55 people in three years.
Industry-university cooperation	15 cases	On October 26, a letter of intent for industry-university cooperation was signed with the School of Design of National Cheng Kung University, and the company plans to develop 15 digital models of new titanium consumer product designs, in addition to promoting industry-university cooperation and talent cultivation platform.
Community Guardian	Established Thintech coastal patrol volunteer team	Participated in Gao City Environmental Protection Bureau-Haiziliao Coastal Beach Cleaning Activity in March. In June, the Thintech Coastal Patrol Volunteer Team was awarded the flag by Kaohsiung City Environmental Protection Bureau. Participate in the beach cleanup activity at Qie Fu Coast Park in July.
Developing materials for advanced medical devices	1. Complete the development of domestic equipment and medical materials 2. Localization and localization of materials used to build medical equipment	Development will be completed in 2022 and two sets of finished products will be shipped. In December 2022, it will enter mass production and supply of biomedical materials for deceleration of boron neutron capture therapy equipment (BNCT).



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VI. ESG Executive Status

-ESG executive summary (Cont.)



Corporate Governance	Aim and Result
Rolling improve corporate governance and maintain the second level of corporate governance assessment	<p>2023 announced that the 2022-year evaluation has ranked in the second level (6%~20%) of all OTC companies for four consecutive years, which is higher than the average score of the second level of all OTC companies.</p> <p>In May 2023, the Chinese and English meeting manual, annual report and 2022 financial report were completed to improve the quality of information disclosure.</p>
Establish a risk management committee	<p>Risk items from external factors to the company's operations have been assessed (1) Information security (2) Overseas reinvestment companies (3) Raw material supply management (4) Operation and production costs (5) International inflation (fund management, new product development) Risks) (6) Water conditions in Taiwan and reported to the board of directors in November.</p>
Prepare "Sustainability Report"	<p>We will continue to prepare "Sustainability Reports" to disclose ESG-related information, refer to SASB and TCFD standards and disclose ESG-related information, and expect to complete third-party certification in 2017.</p>
Information security awareness education and training completion rate 100%	<p>Information security penetration has been held for three consecutive years. In addition to effectively improving employees' information security awareness, the rate of successful penetration has dropped from 3.6% to 1.8% year by year.</p> <p>A total of 91 people attended 61 hours of information security education, training and promotion (100%), and there were no major information security incidents.</p>
Intellectual Property Patent Management Plan	<p>Completed the revision of "Patent Management Work" and intellectual property management education.</p> <p>The total number of global patent applications has accumulated to 11, the total number of patents approved has accumulated to 5, and 5 are under review.</p> <p>11 confidential documents on company technology research and development are under management.</p> <p>16 trademarks (11 from Taiwan, 3 from China, and 2 from Japan).</p>



Ⅶ. Future Prospects & Opportunities

-Operation Strategy

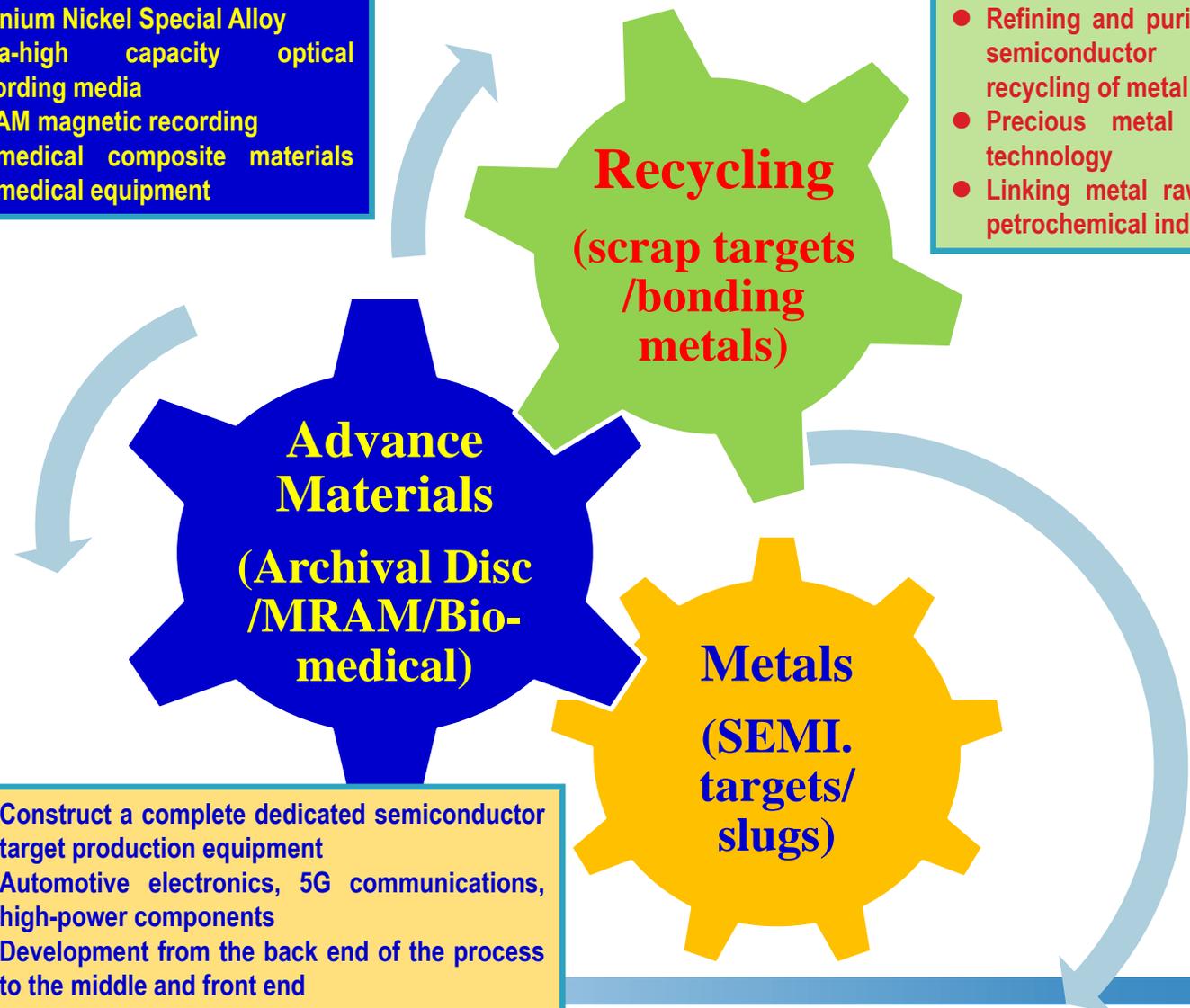
- 1 • **Manufacturing digital transformation to improve competitive advantage.**
- 2 • **Expand OEM business and promote strategic alliances**
- 3 • **Expand special alloys and leverage the synergy of the group**
- 4 • **Advanced technology research and development to cultivate growth potential**
- 5 • **Innovative circular materials, moving towards net-zero carbon emissions**



VII. Future Prospects & Opportunities -strategy canvas for product developments

- Titanium Nickel Special Alloy
- Ultra-high capacity optical recording media
- MRAM magnetic recording
- Biomedical composite materials for medical equipment

- Refining and purifying optoelectronic and semiconductor residual targets → recycling of metal targets
- Precious metal refining and recovery technology
- Linking metal raw material industry and petrochemical industry → Recycled metal



- Construct a complete dedicated semiconductor target production equipment
- Automotive electronics, 5G communications, high-power components
- Development from the back end of the process to the middle and front end



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VII. Future Prospects & Opportunities -Semiconductor Target



Equipment Progress

The construction and installation of rolling mills, high/low temperature heat treatment furnaces, turning/milling machines, cleaning and packaging clean rooms, and ultrasonics have been gradually completed. It is planned to complete acceptance in December 2023 and put into mass production in 2024.

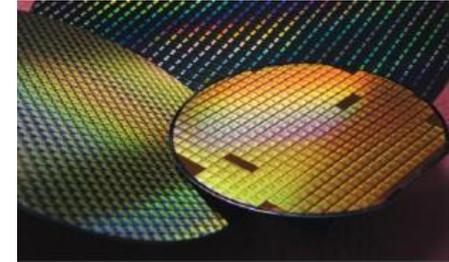
Revenue Benefit

The equipment construction can reduce rolling outsourcing and transportation costs, and expand the range of products in the factory. It is expected to increase the output value by at least NTD 80 million per year.

Certification

It has obtained IATF 16949 certification in May 2023, which means that the product meets the quality requirements of the automotive industry from design and development to production and manufacturing processes.

IC manufication



Wafer thinning



IC Packaging



VII. Development Strategy

-Supply Chain of SEMI Metals Targets



Suppliers

霍尼威爾-美
(Honeywell)

普萊克斯-美
(Praxair)

東曹-日
(Tosho)

日礦金屬-日
(JX NMM)

江豐電子-陸
(KFMI)

有研億金-陸
(Grikin)

光洋科-台
(Solar)

鑫科材料-台
(TTMC)

End users

tsmc

UMC

Samsung

PSI

iST

MicroSilicon

ASC

SPIL

Amkor

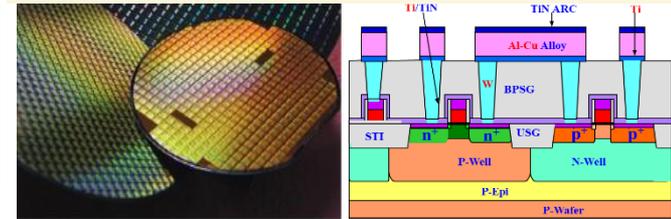
Application (Metallization film)

FEOL
-IC
fabrication

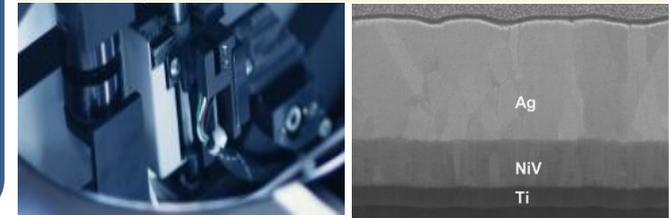
MEOL
-Wafer
thinning
-FSM/BSM

BEOL
-IC
packaging
-UBM
-Anti EMI

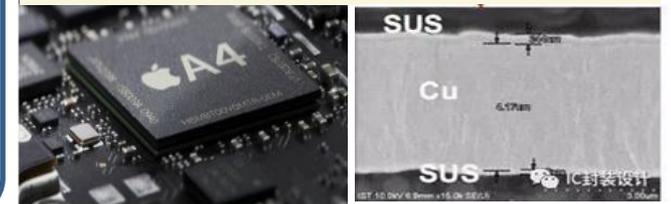
FEOL-IC fabrication targets (Al/Ti/Cu/Ta)



MEOL-FSM/BSM targets (Ti/NiV/Ag)



BEOL-Anti EMI Targets (Cu/SUS)



Al/Ti/Cu/Ta
High Purity
Metal Targets



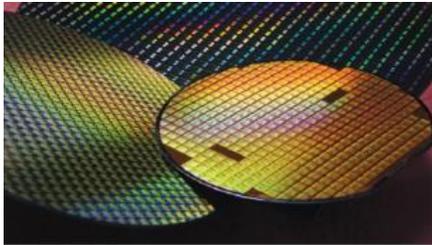


VII. Status of SEMI Metals Targets



- The advanced IC manufacturing process can be simply divided into three stages: front-end (FEOL)-IC manufacturing, Middle-end (MEOL) - wafer thinning, and back end (BEOL) - IC packaging.

IC manufacturing



Wafer thinning



IC packaging



- The proportion of targets and evaporation materials used for advanced semiconductors and the number of customers are gradually increasing. The revenue share in 2023 is expected to increase from 12.9% in 2020 to 20%, and the number of customers has also grown from 11 to 27.
- In addition to first-generation silicon semiconductors, it is also advancing into the field of second- and third-generation compound semiconductors. Its application areas include back-end packaging (Cu target, SUS target, Ti target), mid-end wafer thinning (Ti target, NiV target, Ag target) and front-end IC manufacturing (Ag target, Au target, Al-Si target) is distinguished from SAMC front-end Cu alloy target and Ni-Pt target.



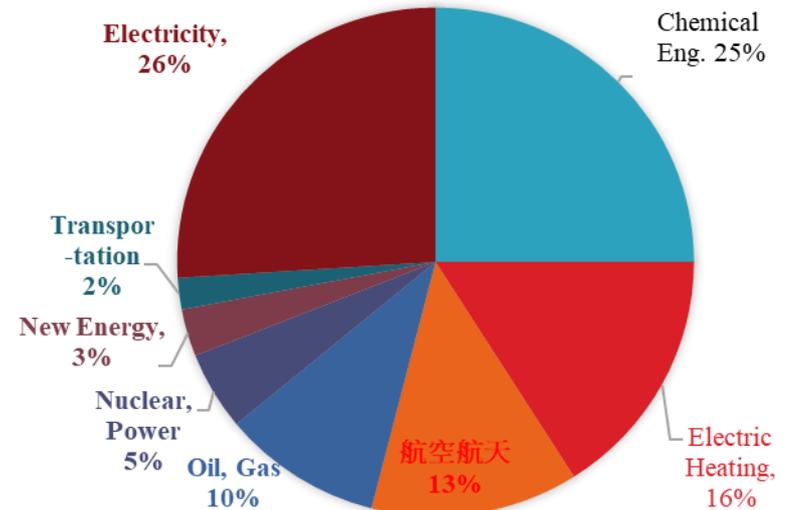
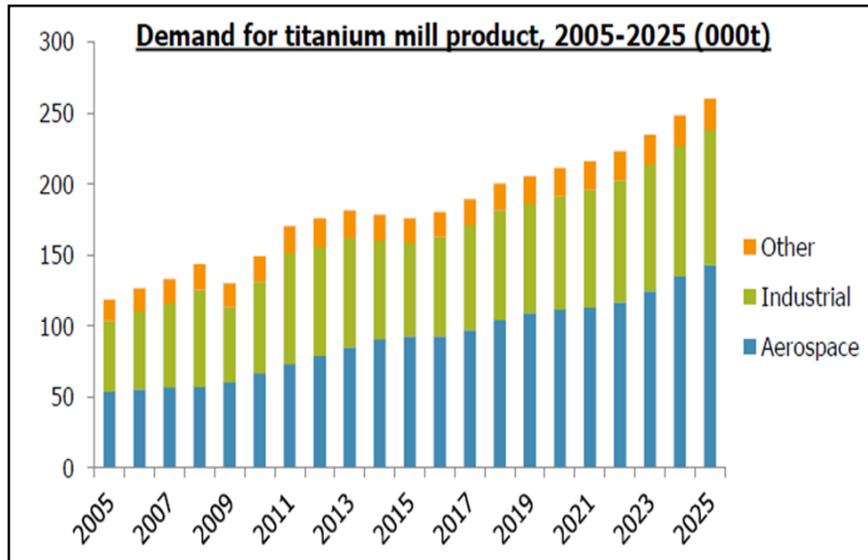
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VII. China Steel Precision Materials Co. -Advanced Specialty Alloy Applications



- CSPM was established in 2011. The company is located in Wujin Economic Development Zone, Changzhou City, Jiangsu Province, China. It is an important subsidiary of China Steel Corp. Group in the field of specialty alloys. The main shareholders of the company are listed on the right.
- CSPM mainly produces pure titanium, titanium alloys, and nickel-based alloy plates, pipes and other products, accounting for nearly 80% of the overall revenue.
- Due to the metal properties of titanium and nickel-based alloys, they are used in various fields, and the demand trend is growing year by year.

Shareholder	Holding ratio
TTMC Co.	70%
Walsin Lihwa Co.	30%





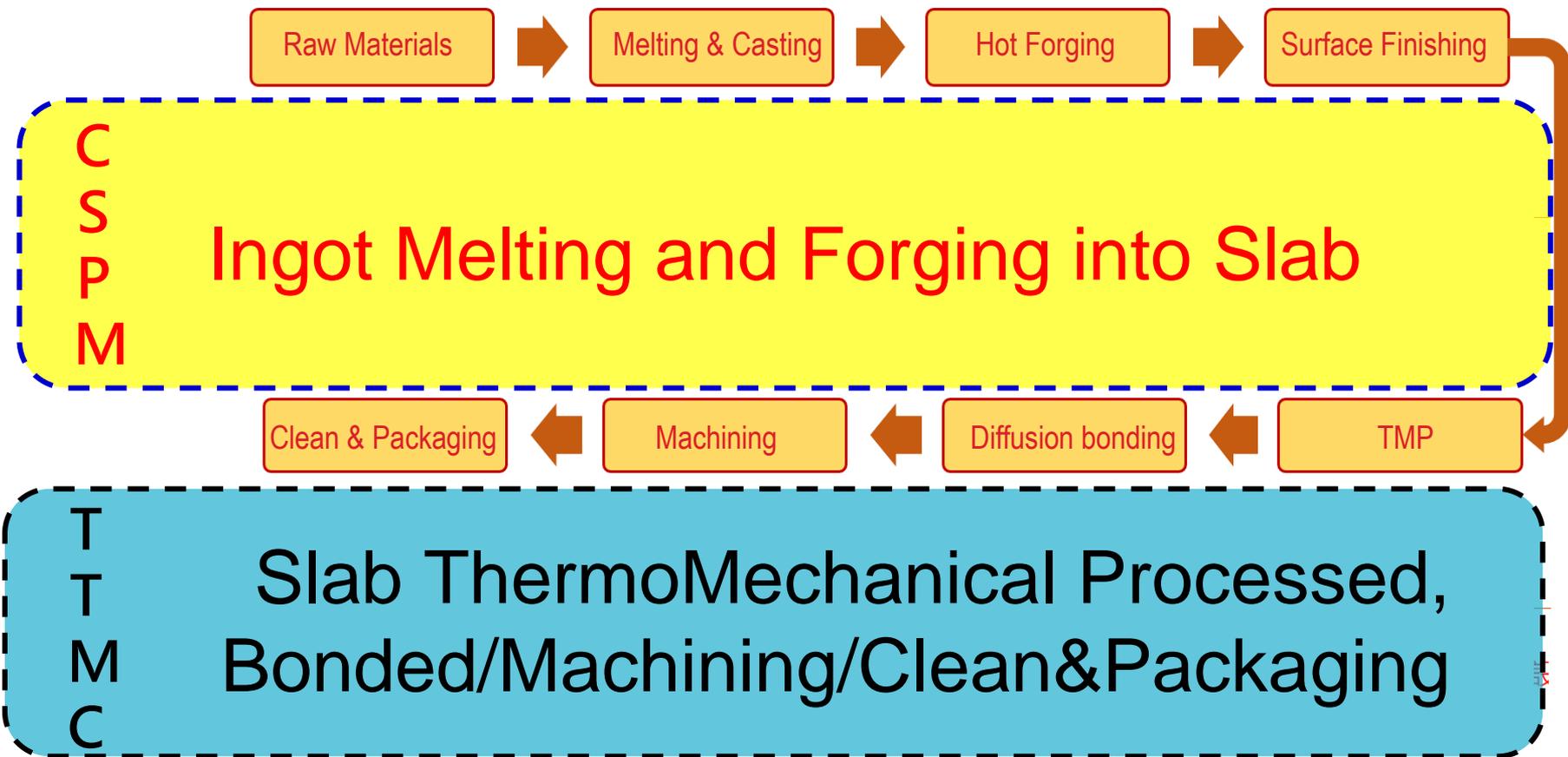
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VII. China Steel Precision Materials Co. - Up- and Down-stream integration w TTMC



● Manufacturing Technology Vertical Integration Synergy

Review of Vertical Integration Synergy on Target Manufacturing Technology



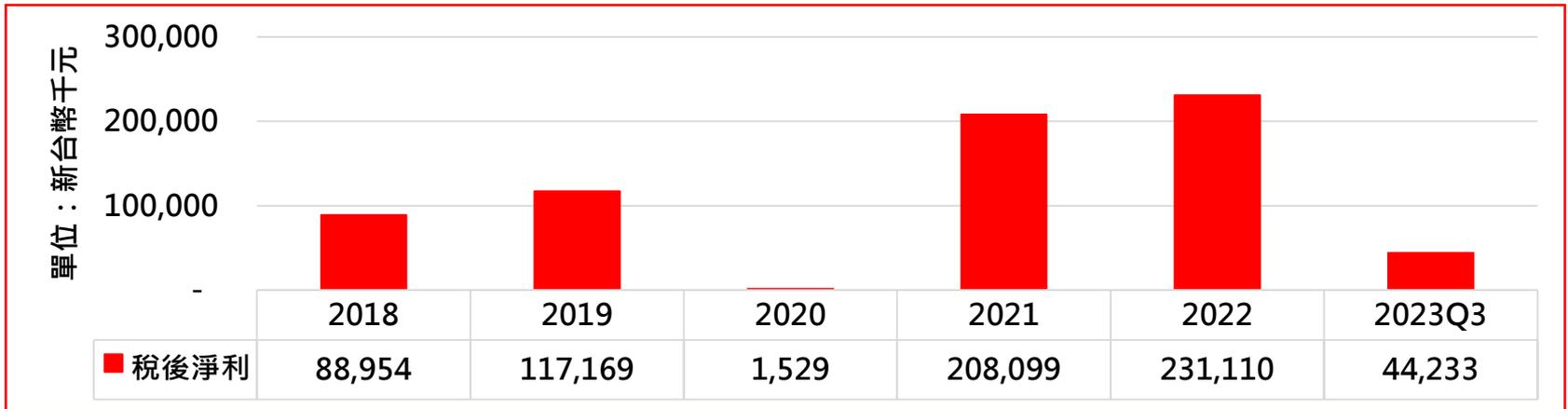


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VII. China Steel Precision Materials Co. - Financial Performance



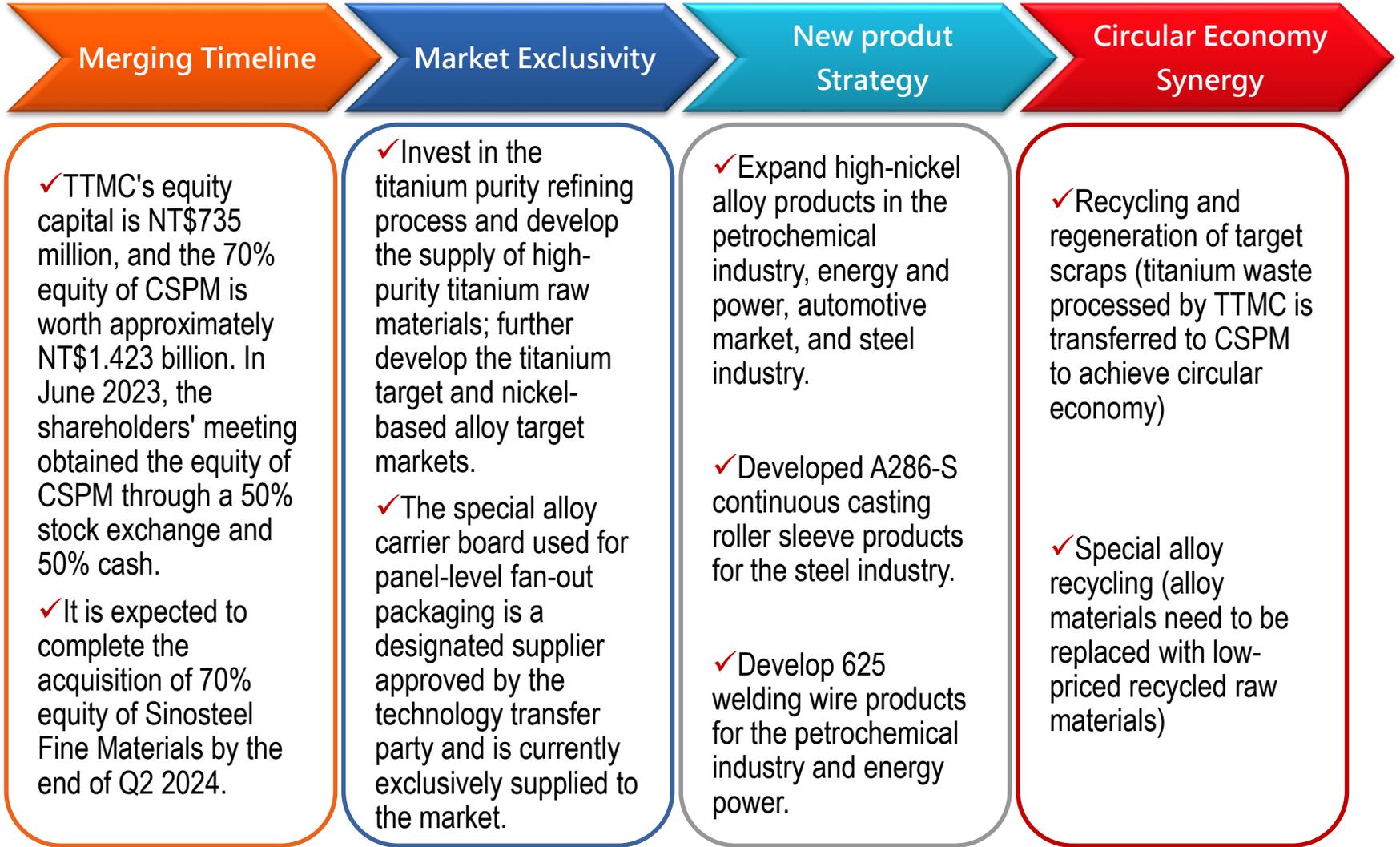
- CSPM' main products (titanium tubes, titanium blanks and nickel tubes, etc.) have successfully established a foothold in China's titanium metal industry in recent years due to its mature technology, excellent product quality, operational performance and proper coordination of procurement and sales strategies. Therefore, with market demand and sales increase in the past, the company's profits show growth. Except in 2020 and this year, due to the sharp drop in market metal prices, revenue and profits were lower than expected.
- The recovery of the Chinese market in Q3 2023 is still less than expected, resulting in a decline in titanium product orders, and the decline in market metal prices has also caused a significant decline in gross profit margin. It is estimated that metal quotations have stabilized in Q4, and orders for high-margin products for 3C applications have been received. In addition, sales of nickel products have remained at normal levels. Q4 profits are expected to be higher than Q3.



Note: 2023Q3 is calculated based on the closing RMB exchange rate of 4.3935 on 2023.09.30.

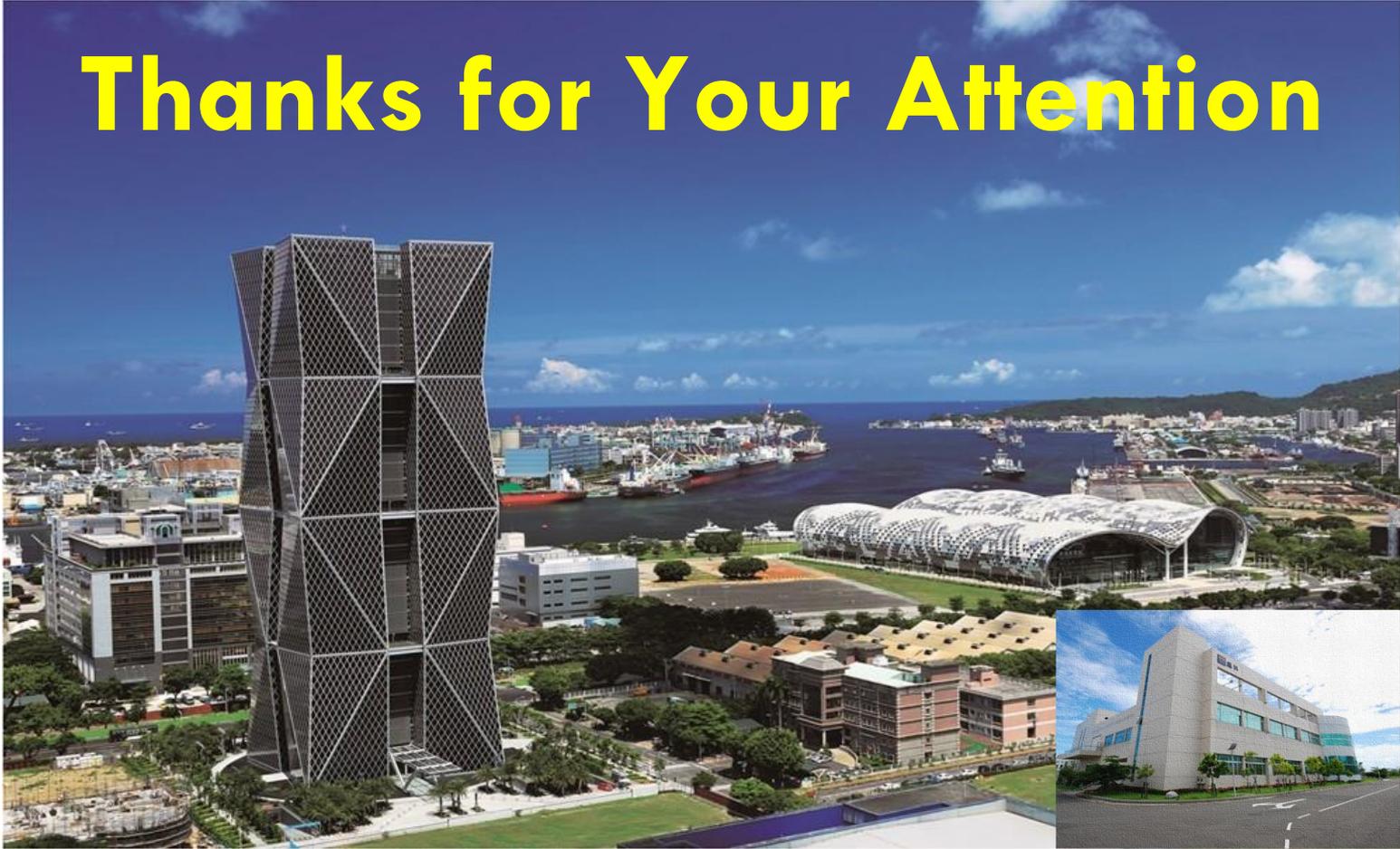


VII. China Steel Precision Materials Co. - M&A Timeline and Prospect



Q&A

Thanks for Your Attention



New Vision Of Materials Application