MATERIAL SCIENCE SERVICE

汎銓科技　AI晶片分析平台

www.msscorps.com

MSSCORPS. (6830)

Introduction & Performance

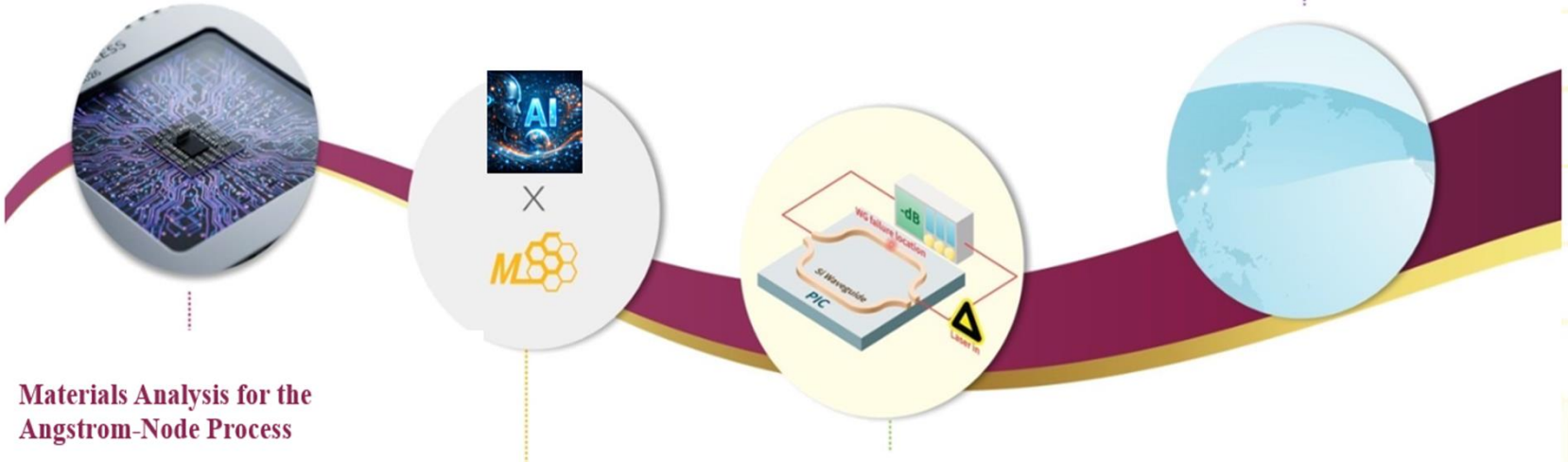
Form No: Q4-MA01 Ver.1.2

免責聲明 Disclaimer

- This presentation includes forward-looking statements. All statements, other than statements of historical facts, that address activities, events or developments that Material Science Service Corp. expects or anticipates will or may occur in the future (including but not limited to projections, targets, estimates and business plans) are forward-looking statements.
- MSS's actual results or developments may differ materially from those indicated by these forward-looking statements as a result of various factors and uncertainties, including but not limited to market demand, change in legal, financial and regulatory frameworks, government policies, financial market conditions, and other risks and factors beyond our control.
- MSS does not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.

2026 Operational Outlook: The Harvest Year

Completed Global Footprint: Taiwan, China, U.S., and Japan — Accelerated Synchronized Growth in 2026



Materials Analysis for the Angstrom-Node Process

Expanding Our AI Customer Base

Silicon Photonics Division Expands from Service to Equipment Sales

- Developed and assembled three proprietary SiPh analysis systems (patented in Taiwan and Japan)
- Launching PD- and QA-ready SiPh testing equipment in 2026
- Transitioning from technical services to equipment commercialization, creating a new business model

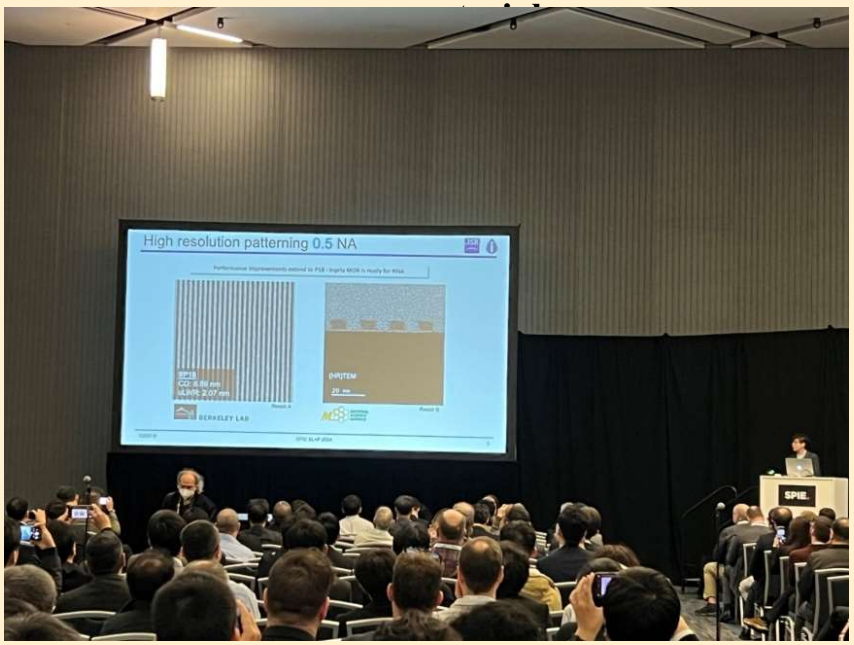
Deepening Technology Capabilities in the Angstrom Era

As advanced semiconductor manufacturing enters the Angstrom-node era, MSSCORPS continues to strengthen and specialize in next-generation analytical technologies, including MOR materials analysis and APT. The Company has completed the establishment of the SAC-TEM Center, which has recently passed customer audits and is set to commence operations, contributing to revenue growth.

MOR – Ultra-Sensitive Materials Analysis

Entering High-NA EUV Next-Generation Materials Analysis

Establishing a strategic entry point into advanced



Atomic-Scale Analysis Technology: APT

Providing atomic-scale compositional and defect analysis capabilities

Pushing the frontier of analytical technology

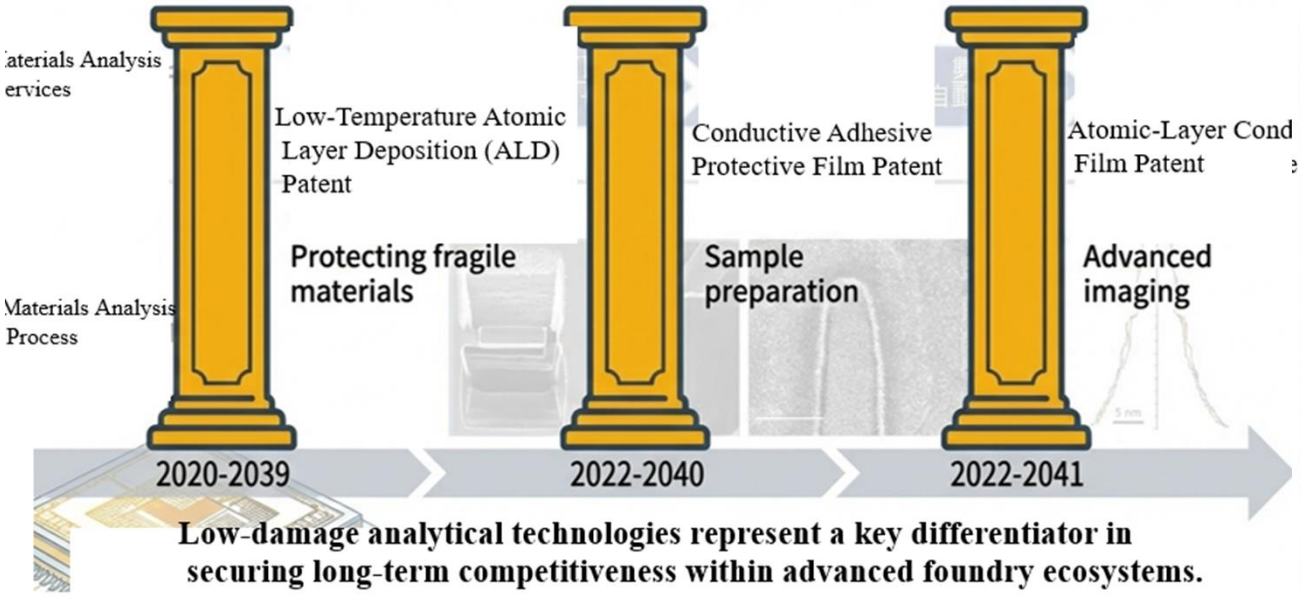
CS-TEM Facility Deployment and Equipment Installation

State-of-the-Art TEM Infrastructure

Enhancing comprehensive materials analysis capabilities
Supporting advanced process R&D and volume production demands

The SAC facility is built to world-class materials analysis standards, featuring a fully controlled environment and precision instrument installation space. The facility design meets stringent semiconductor industry requirements for vibration isolation and electromagnetic shielding.

Strengthening Our Proprietary IP Portfolio
Building High Barriers to Entry Through Technology Leadership



Low-damage analytical technologies represent a key differentiator in securing long-term competitiveness within advanced foundry ecosystems.

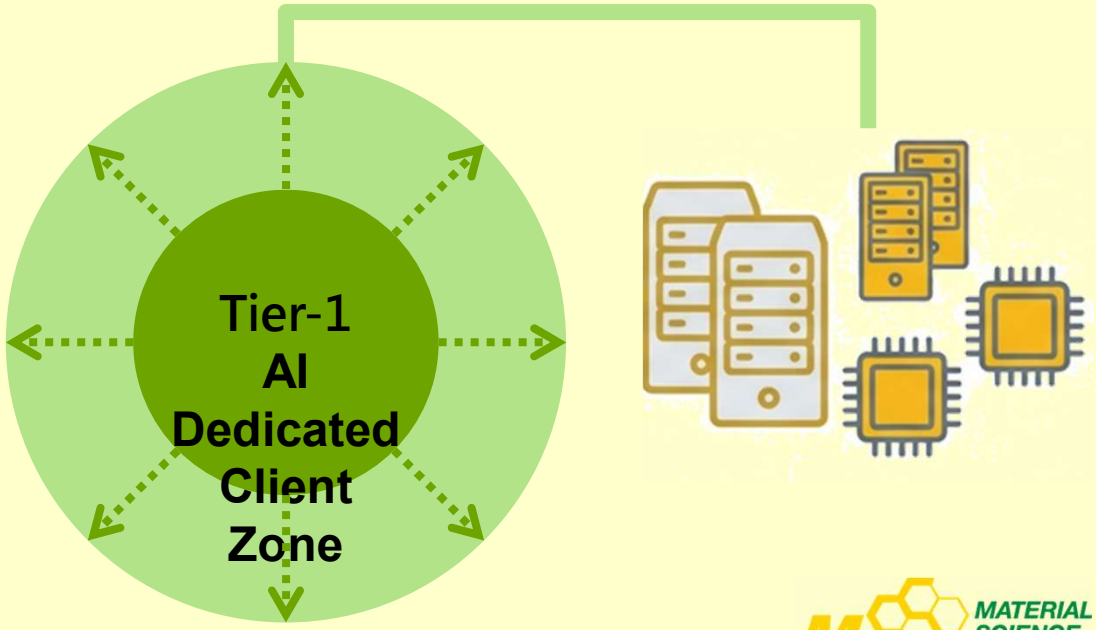
2026 and Beyond – Four Strategic Growth Engines

Scaling the Zhubei AI Client Hub to Support Tier-1 AI Industry Leaders

Expansion of the Tial-1 AI Client Zone

Tier-1 AI customers have partnered with MSSCORPS to establish a dedicated **AI Client Zone**, with continued expansion underway.
Amid explosive growth in AI chip demand, requirements for advanced packaging and heterogeneous integration analysis have increased significantly. MSSCORPS has become a key strategic partner to leading U.S. AI semiconductor manufacturers.

- **Exclusive AI Zone:** Premium security protocols and priority production support
- **Sustained Tier-1 Growth Momentum:** Continued expansion of demand from leading AI players
- **Strategic Co-Development:** Early involvement in advanced AI chip and silicon photonics innovation



Silicon Photonics Testing, Analysis & Equipment Sales

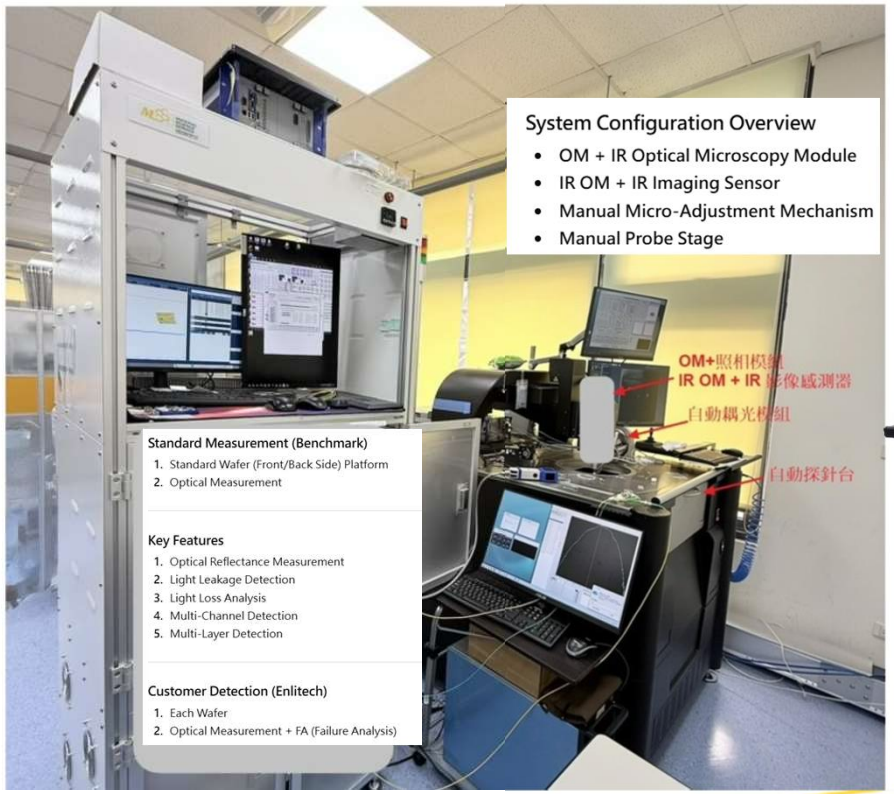
Category	MSS HG	Enlitech Night Jar
Prober External Module Name	Optical Detection System	High-Resolution Imaging Detection Module
Prober External Module – Internal Hardware Configuration	IR OM + IR Imaging Sensor	IR OM + IR Imaging Sensor (+ additional modules)
Prober External Module – Software Configuration	Imaging Software	Imaging Software (+ additional functions)

Taiwan Patent No. 1870008B
(Applies to MSS HG system architecture)

Integrated Imaging Module within HG Tester
(Built-in imaging module in HG Tester system)

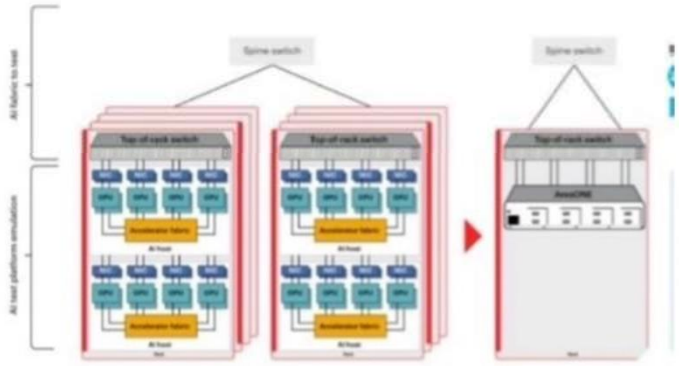
In-house Equipment Deployment (MSS Internal Use)

- "The red-highlighted areas represent our proprietary and patent-protected innovations."
- "The blue-highlighted components are non-essential elements and do not fall within the scope of the patent claims."



- "This slide presents the commercial version of the system schematic diagram."
- "The diagram illustrates the mechanical layout and system architecture for customer deployment."

產業趨勢（AI + 光通訊）



Industry Trends (AI + Optical Interconnect)

- Rapid growth in AI data centers (**800G → 1.6T**)
- **Silicon Photonics (SiPh)** and **Co-Packaged Optics (CPO)** becoming mainstream architectures
- Optical interconnect performance and yield are emerging as key bottlenecks

Technology Challenges (Industry Pain Points)

- **Optical Loss** cannot be precisely localized
- Failure Analysis (**FA**) cannot be effectively performed
- Direct impact on **SiPh and CPO production yield**

✓ Optical loss localization is a critical entry point for SiPh failure analysis

汎銓核心優勢

MSS Core Advantages

✓ Optical Loss Detection System (Patented Portfolio)

- Patent coverage across Taiwan / Japan / United States

✓ In-House Developed Equipment (Deployed)

- 3 systems completed and successfully adopted by customers

MSS 全球佈局運營

上海辦公室

南京廠房

深圳廠房

川崎廠房

Sunnyvale 廠房

日本

美國


台灣 總部 本部

FA/ SA/ 矽光子 MA


竹北營運三廠 (建廠中)

MA/ FA/ AI 專區


竹北營運二廠

MA


竹北營運一廠

FA/ AI 專區


RA驗證中心

RA


南科廠房

MA


SAC-TEM Center

MA (14A/10A)

Semiconductor equipment/materials research and development

Global Collaboration Strategy Across the Semiconductor Development Cycle	U.S. Equipment Vendors	Japan Equipment Vendors
Equipment Vendor R&D Engagement • Global equipment leaders develop next-generation etch platforms within dedicated R&D centers • Define critical tool parameters and performance benchmarks • Optimize process windows and validate material compatibility	United States – Silicon Valley	Greater Tokyo Area, Japan(Tokyo, Yokohama, Kawasaki, Tsukuba, etc.)
Customer-Side Demonstration & Process Optimization •Localized prototype deployment near key customers •Hands-on operation by customer R&D teams •Joint optimization of process parameters and material integration •Data-driven benchmarking (throughput, yield, CD uniformity, roughness) to define final tool settings and production-ready recipes	**Hsinchu** *(R&D FAB)*	**Hsinchu** *(R&D FAB)*
Technology Transfer to Volume Production FAB •Align production FAB quality with R&D reference standards •Standardize materials and validated process recipes •Perform tool-by-tool PRS qualification prior to release •Confirm parity across critical KPIs (CD control, profile integrity, defect density, throughput) before production ramp	**Hsinchu / Tainan / Taichung** *(Volume Production FAB)*	**Hsinchu / Tainan / Taichung** *(Volume Production FAB)*

Analytical Technology Segmentation & Growth Potential

Category	Service Type	Technology Platform	MSS niche	2024Q4 Revenue proportion	2025Q4 Revenue proportion	Expected growth in 2026-2027
Advanced processes (Angstrom era)	MA	PR protection technology	3rd generation EUV PR protection technology	54.6% 91.32 M NTD	47.7% 92.71M NTD	
	MA		Advanced EUV PR protection technology			
	MA		Selective deposition sample preparation technology			
	MA	low-k protection technology	BEOL: low-k structure protection technology			
	MA		BEOL: low-k damage analysis technology			
	MA		Novel 2D materials analysis method			
	MA	Ultra-thin sample method	Ultra-thin sample protection method			
	MA		FEOL: GAA etch byproduct bonding state analysis			
	MA		MEOL: ALE etch byproduct comparison platform			
	MA		High aspect ratio structural TEM analysis technology			
	MA	Auto-measurement	Artificial intelligence for automatic measurement			
Mature processes	MA	ML ball height/ML defect	Optical component analysis technology: ML ball height/ML defect	12.7% 21.20M NTD	7.7% 15.12M NTD	
	MA		Wearable device AR/VR product lens integration analysis			
	MA	Compound Semiconductor	Epitaxial defect quantitative analysis technology			
	MA		Carrier concentration distribution analysis in compound semiconductors			
	MA		Integrated stress analysis technology			
	MA	OLED	Ultra-low contrast imaging technology for layer structures			
	MA	CCL/FCCL	Soft material slicing technology			
	MA		General materials analysis (SEM/FIB CS/Reversed MA/SIMS)			
IC failure analysis	FA	Compound Semiconductor	High voltage and high temperature test (1000V, 300C)	10.1% 16.94M NTD	7.9% 15.43M NTD	
	FA		Ultrathin sample preparation technology for EFA			
	FA	Circuit edit technology	Signal lead technology			
	FA		Backside signal lead technology			
	FA		Adding external multiple passive components technology			
	FA		Precise local RDL removal technology			
	FA		Filpchip front side FIB technology			
	FA		General failure analysis (decap/delayer/electrical property/CRD/IC Reverse/SAT/3D Xray)			
Silicon photonics	MA	Silicon photonics structure	Large-area rapid cutting method for silicon photonics/Conductive preparation method for silicon photonics/Low-curtain effect cutting method for silicon photonics	6.3% 10.63M NTD	7.8% 15.24M NTD	
	FA	Silicon photonics photoelectricity test	Light characteristics and attenuation detection for silicon photonics			
	FA		Optical path abnormality positioning, circuit break, light leakage detection for silicon photonics			
	FA		12-inch silicon photonic photometric platform with fully automatic light scanning			
	MA	Advanced package	PFIB/hybrid metal bond/TSV分析技術			
	FA	FA for advanced process chips	3nm製程去層次技術/um to nm positioning, direct nano probe measurements on devices			
	FA	Advanced package	Large IC packaging and carrier board separation technology/THZ-TDR open /Thermal xyz fault isolation/3D Xray			
Abroad	MA	Specialized ALD Deposition & Ultra-Thin Film Technologies	Advanced Photoresist Protection / Low-k Structure Protection / High-Aspect-Ratio TEM Technologies	16.2% 27.16M NTD	29.1% 56.97M NTD	
Silicon Photonics Testing Equipment Sales (HG Line)	Equipment Sales	Silicon Photonics Testing Equipment	Optical loss inspection systems entering revenue phase Supporting SiPh chip failure analysis applications Capacity expansion aligned with growing demand from high-speed optical module and broader photonics markets			

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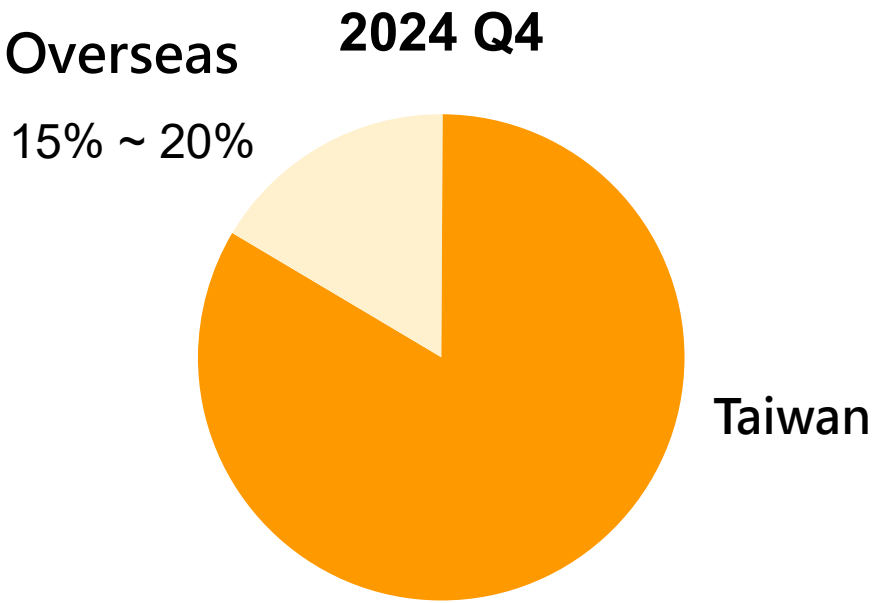
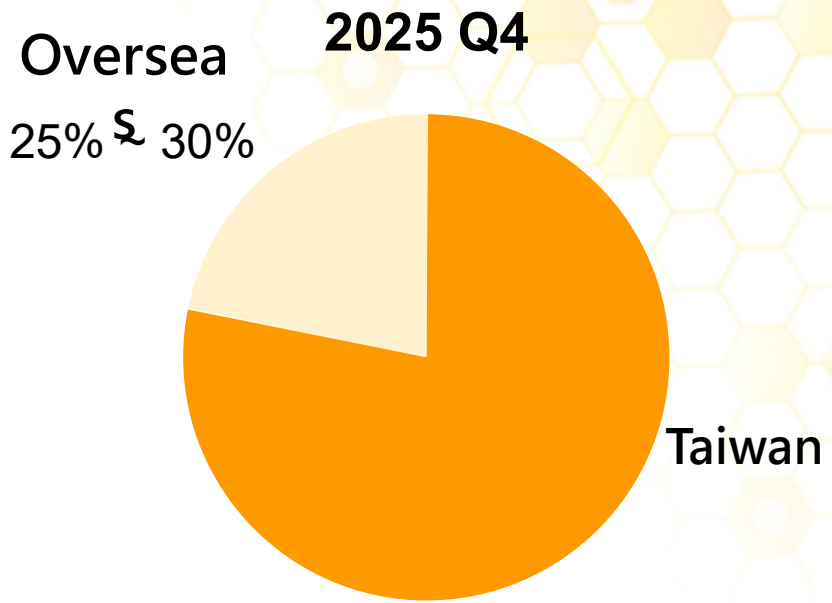
Thank you for listening, and welcome your guidance

Q&A

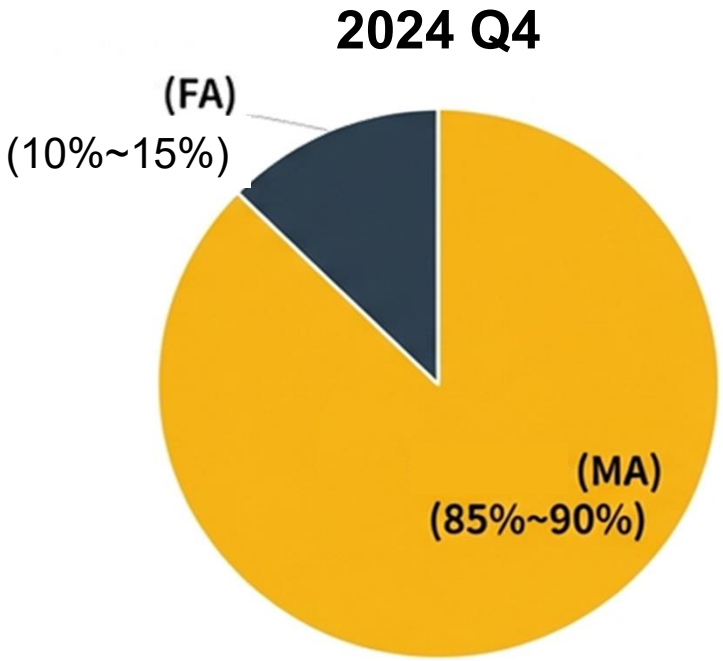
Key Institutional Investor Focus: Changes in Market Landscape

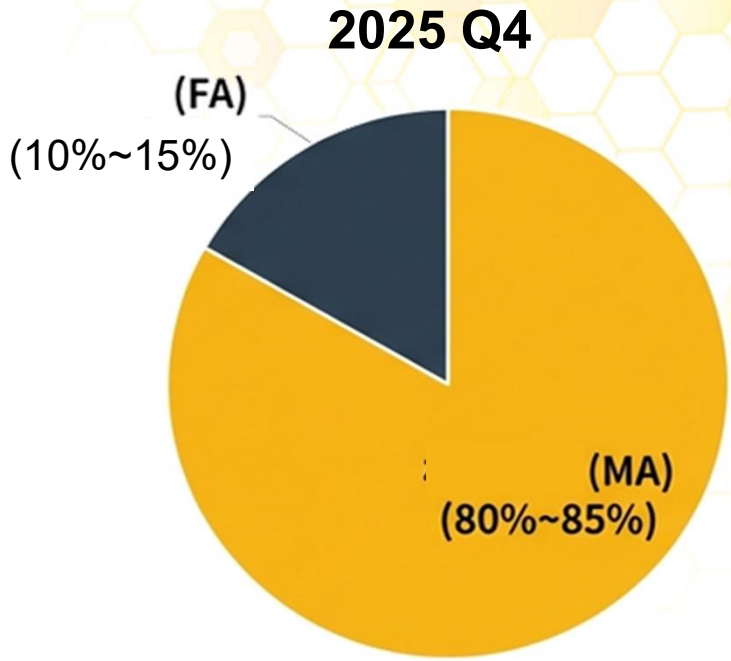




- **Changing global market dynamics are opening new growth avenues and influencing our strategic positioning.**
- **Revenue exposure to Mainland China continues to rise, driven by accelerated semiconductor development and increasing demand for advanced materials characterization services**

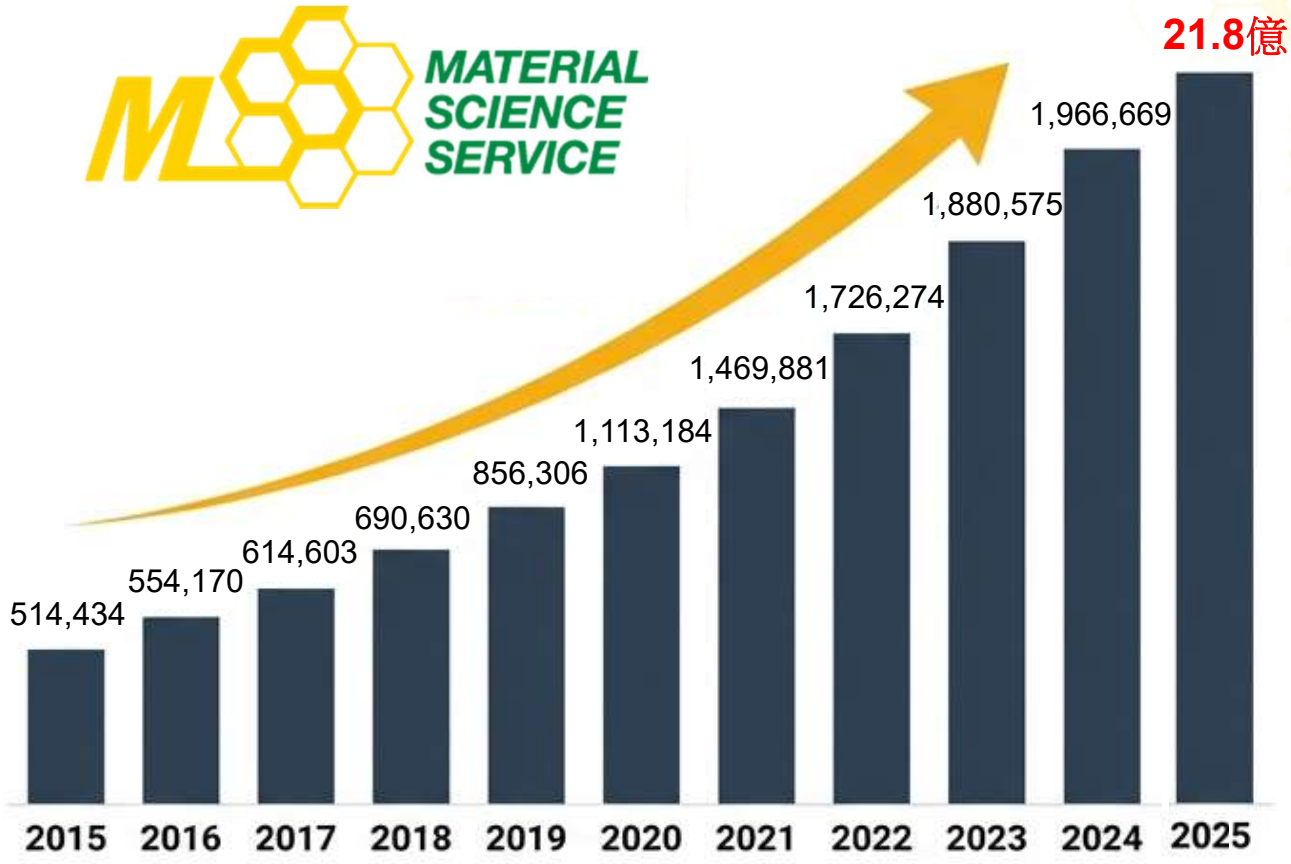
Key Institutional Investor Focus: Changes in Market Mix





Sustained >80% Mix of High-Barrier MA Services
Ensuring a Structurally Superior Gross Margin Profile

Strategic Inflection Point: From Steady Profit to Structural Explosion

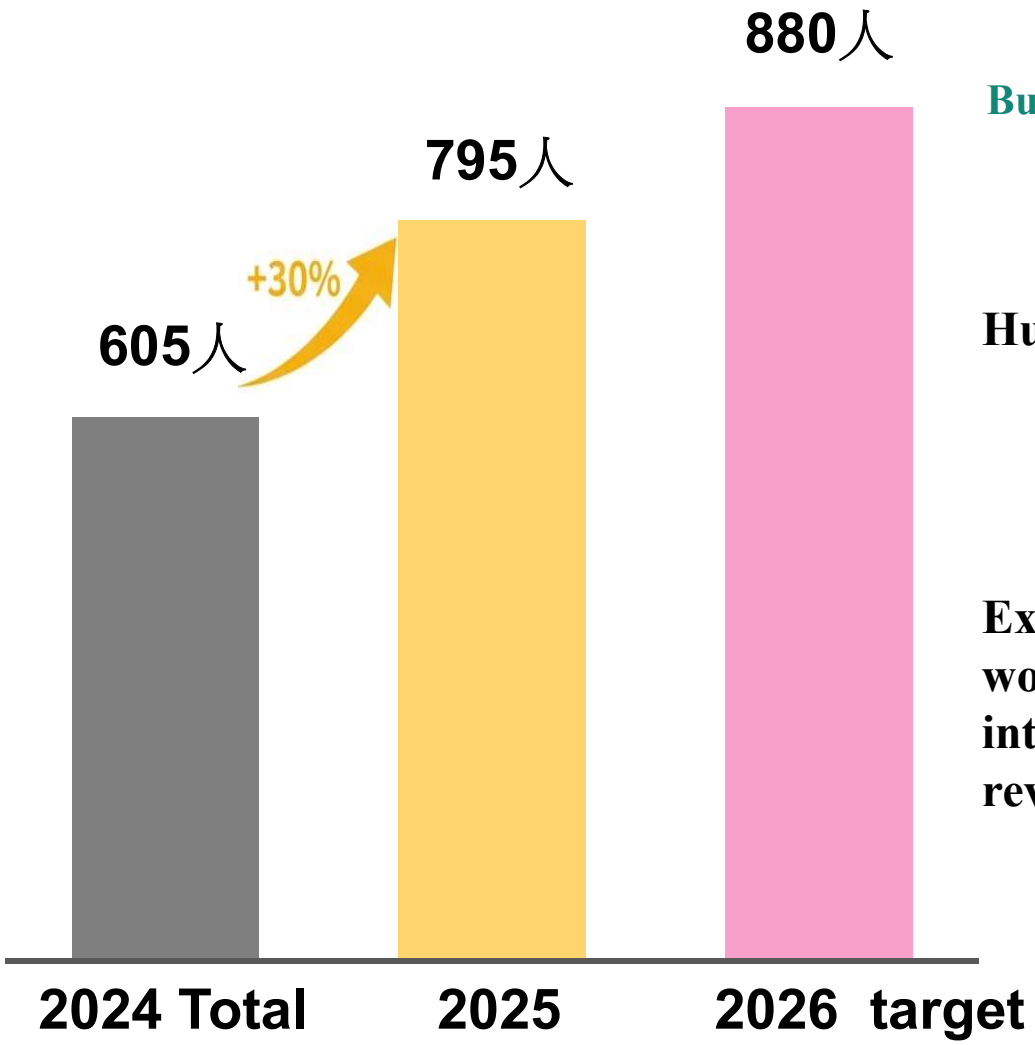


Four Major Growth Drivers for 2026

- Angstrom Generation
- Silicon Photonics
- AI Zone (Expansion of US Clients)
- Global Layout

2015-2025 Revenue Compound Growth Rate (CAGR)

Talent Arms Race: Preparing for Explosive Demand in 2026



Strategic Investment in Human Capital. Building a Strong Foundation for Sustainable Future Growth

Human Capital as a Growth Multiplier

- Scaling high-end technical talent aligned with advanced-node demand
- Strengthening silicon photonics testing and R&D capabilities

Execution capacity begins with people — workforce readiness directly translates into scalable production output and revenue growth.

Company Overview

MSSCORPS CO., LTD. (MSS)

Established	Listed	Founder
July 27, 2005	Officially listed on August 31, 2022	Gino Liu Chairman / President

NT$534 Million	795
Capital	Employees
NTD	Technical and Engineering Teams

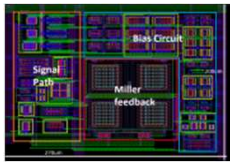
Core Service Offerings

- **Materials Analysis (MA)**- Providing advanced process R&D support to foundries and equipment/material suppliers
- Failure Analysis (FA)- Assisting IC design houses and manufacturers in rapid root cause identification and defect resolution

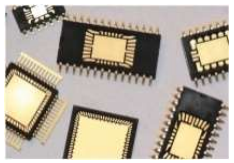
The role of MSS in the semiconductor industry supply chain-FA

Item & Positioning

Failure analysis service (IC Hospital)



IC Design / Photomask



Packaging / Substrate / Flexible Board / PCB Applications

Content

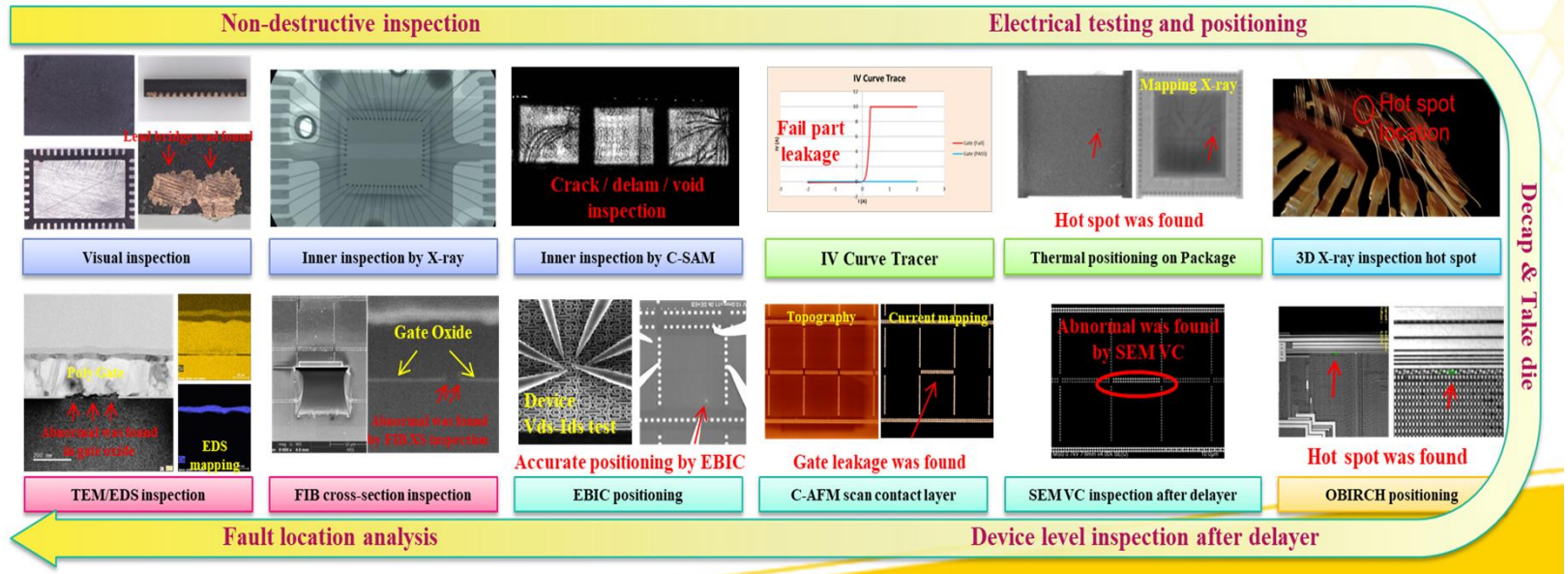
Resolving IC Design Errors and Identifying Root Causes of IC Failures to Accelerate Time-to-Market

- IC debugging and repair, enabling designers to pinpoint design flaws and validate corrective actions
- Post-production analysis of defective units, including re-measurement, fault localization, structural and compositional analysis using EFA & PFA technologies to determine root causes

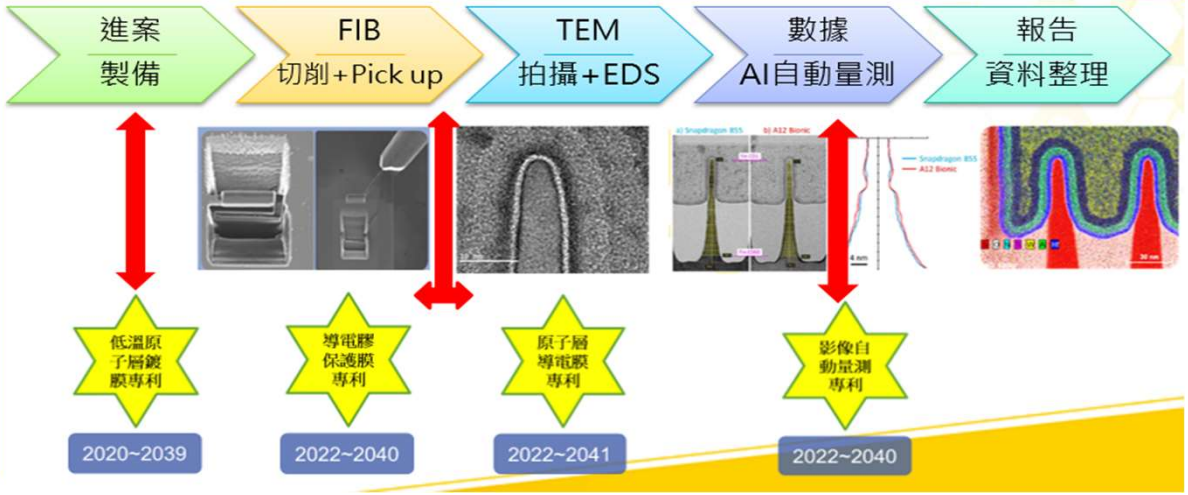
MSSCORPS' Low-Damage Analytical Technologies

- Originated from leading foundry requirements and extended downstream across the semiconductor ecosystem
- Increasing material diversity, hardness variation, thinner layers, and weaker interlayer bonding demand advanced protection techniques
- Developed proprietary protection processes and patents to minimize thermal and electrical interference and prevent human-induced defects

Failure analysis Process



The role of MSS in the semiconductor industry supply chain-MA

Positioning	Content
: Materials Analysis(MA) (R&D leader)	 Providing transistor structure and composition analysis enables FAB to quickly achieve the following tasks: If MSS's technology stagnates or slows down, our clients' R&D schedules will be delayed! 1. Developing state-of-the-art processes, determining new equipment models/new materials/process parameters 2. Implementing mass production; newly built production line equipment must demonstrate consistency with the RD line 3. During mass production, continuously improving production line yield.
Wafer foundry/equipment/ materials	
: Materials Analysis(MA) Process	
Patent Name	低溫原子層鍍膜專利 / 導電膠保護膜專利 / 原子層導電膜專利 / 影像自動量測專利
Patent Period	2020~2039 / 2022~2040 / 2022~2041 / 2022~2040

Business Model Transformation: From Silicon Photonics Testing & Analysis to Equipment Sales

Measurement & Localization | Patented Technologies

Building a technology moat and establishing differentiation

Patent-Protected Silicon Photonics Measurement and Failure Localization Technologies

事　　由：臺灣發明專利核准領證通知
申 請 人：汎銓科技股份有限公司
專利名稱：光損偵測裝置
發 明 人：柳紀綸、周學良、李宗育
申請日期：2023/09/06
申請案號：112133805
本所編號：ITW230090

In-House Equipment Platform「Helmet Gecko」