



Investor Presentation



**SOLAR APPLIED
MATERIALS TECH. CORP.**
(1785 TT/TW)

September 2022

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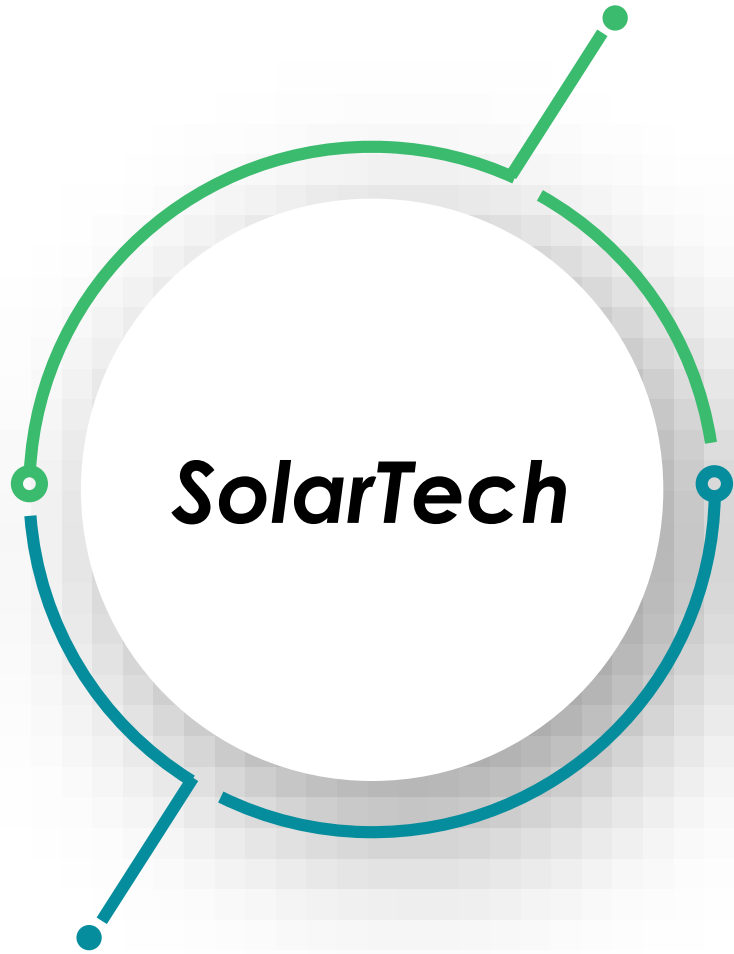
Measurement

An aerial photograph of a modern university campus. The central focus is a large building with a prominent green roof, which is divided into several rectangular sections by concrete walkways. The building's facade is primarily white with large sections of blue-tinted glass. To the right, another large building with a similar architectural style is visible. The foreground consists of a wide, paved area and a green lawn with scattered trees. In the background, a range of mountains is visible under a cloudy sky.

PART 1

Understandings

Circular Economy



Advanced Material Solutions

We are

A Leading Circular Materials Technology Company

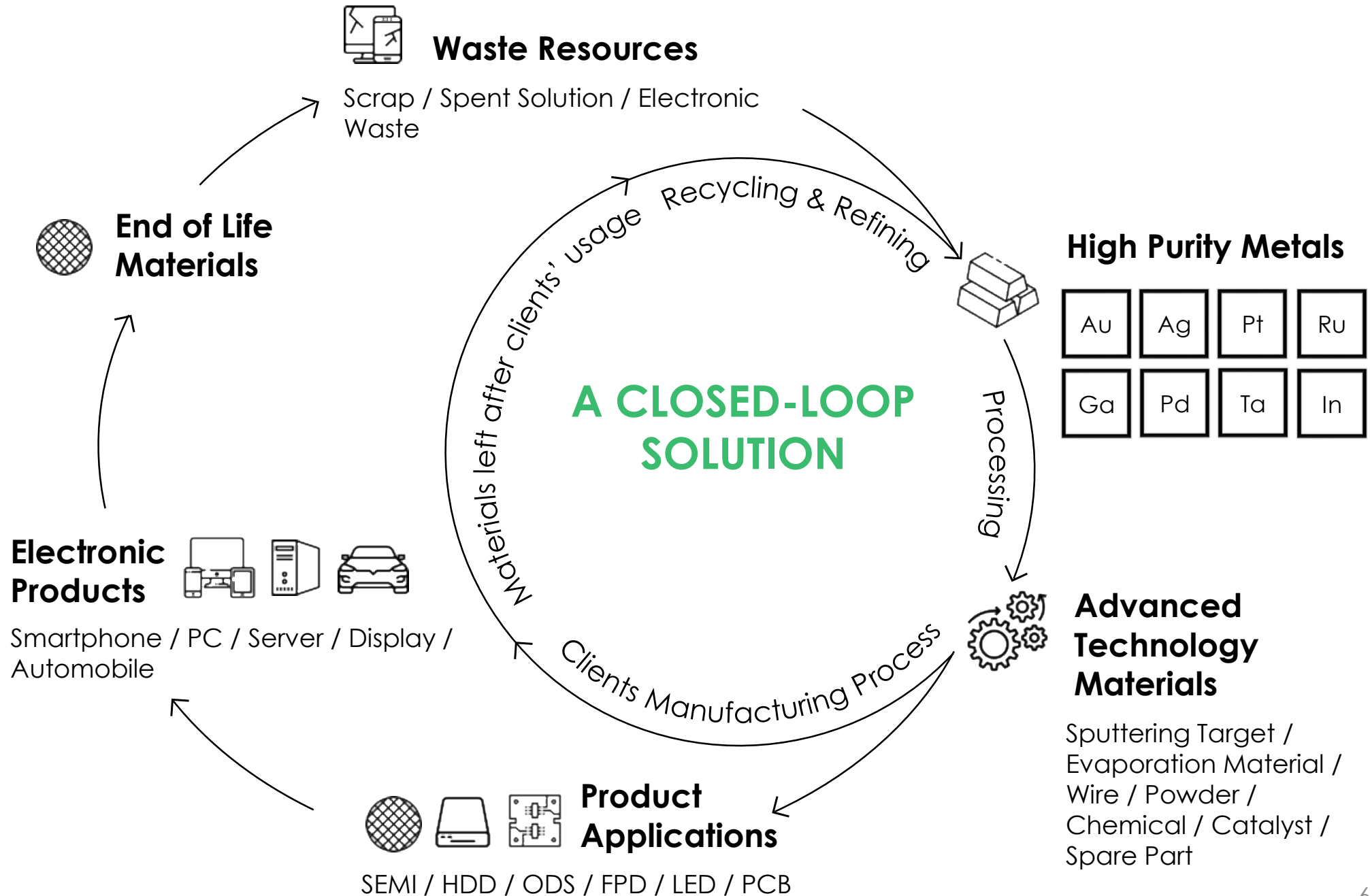
with an extensive expertise in the fields of
material science, chemistry and metallurgy

We are **UNIQUE**

because we provide truly innovative material solutions
to solve our customers' most complex
technical challenges

in the most **SUSTAINABLE** way

Enabling circular economy



SOLAR at a glance

1978

Founded

2005

Listed (1785 TT)

1,662

Employees (2021)



Tainan, Taiwan

Headquarters



NT\$31.4 Bn

Total Sales in 2021

+17.6% YoY

NT\$5.4 Bn

Value Added Sales in 2021

+20.4% YoY

NT\$20.2 Bn

US\$670 Mn

Market Cap as of Nov, 2022

Solar's Industry Position

World No.1

Hard Disk Drive

Data Storage Sputtering Target

Taiwan No.1

Semiconductor

Precious Metal Sputtering Target

Taiwan No.1

Optoelectronics

Precious Metal Recycling



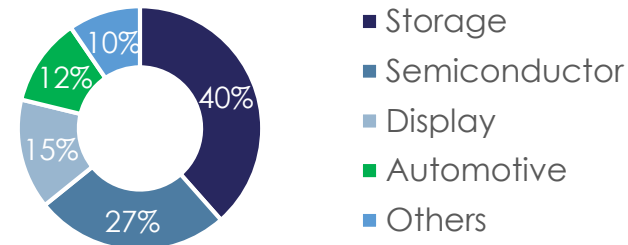
5 Factories

Located in Taiwan
and Mainland China

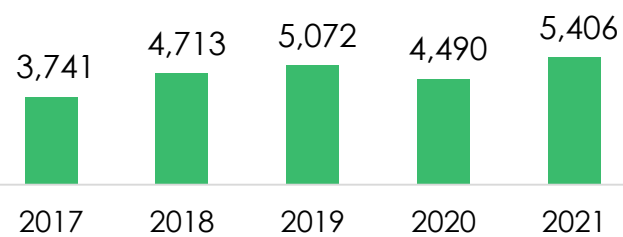
Hsinchu, Taiwan

Tainan, Taiwan

Value Added Sales
Breakdown by Applications (FY 2021)



Value Added Sales (NT\$m)



Company milestone

Alloy design and target manufacturing for thin film applications



PGC / PSC

Taiwan No.1



Build Gold and Silver
Chemical
Capabilities

1978



ODS

**(Optical Data Storage)
Sputtering Target**

World Leading

Sputtering target
manufacturing

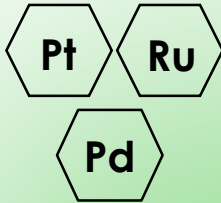
1998



MDS

**(Magnetic Data Storage)
Sputtering Target**

World Leading



Complex alloy
design and
manufacturing

2004



**OE (Optoelectronics)
Sputtering Target
(FPD / PV / LED)**



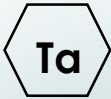
Ceramic target
manufacturing

TCO (Transparent
Conductive Oxide)
materials design

2008



SEMI

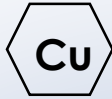


Ultra high purity
semiconductor
materials

2016



SEMI



1st in SEMI industry
Copper Circular
Economy

2018



**More Than Target
Digital Transformation**

Drive Digital
Transformation to
Expand Margin

2021

**Recycling and refining of
precious / rare metals**

Why invest in Solar ?

- We are a global leader in advanced materials solutions. We are the world's largest manufacturer of sputtering targets for hard-disk drives (HDD), as well as Taiwan's largest manufacturer of sputtering targets for semiconductors. Our unique foundation as a **circular** materials company and our ability to provide our customers with **mission-critical solutions** have allowed us to emerge as a preferred partner throughout our customers' technology roadmap.
- We are well-positioned to benefit from several megatrends in the industry, including
 - 1) **Increasing complexity in electronic devices requires more sophisticated chips and solutions, leading to a rise in demand for advanced materials;**
 - 2) **The growing importance of local supply chains and substitutes; and**
 - 3) **Companies' shift towards a circular economy.**These trends are expected to enhance the competitiveness of our company and will provide a significant growth opportunity for our revenues and earnings.
- In light of these factors, we aim for a **50% CAGR** in our front-end semiconductor materials value-added sales (VAS) in the next five years, which should result in **double-digit growth** in value-added sales and earnings to support further value-enhancing investments and sustained dividend payout to our shareholders.

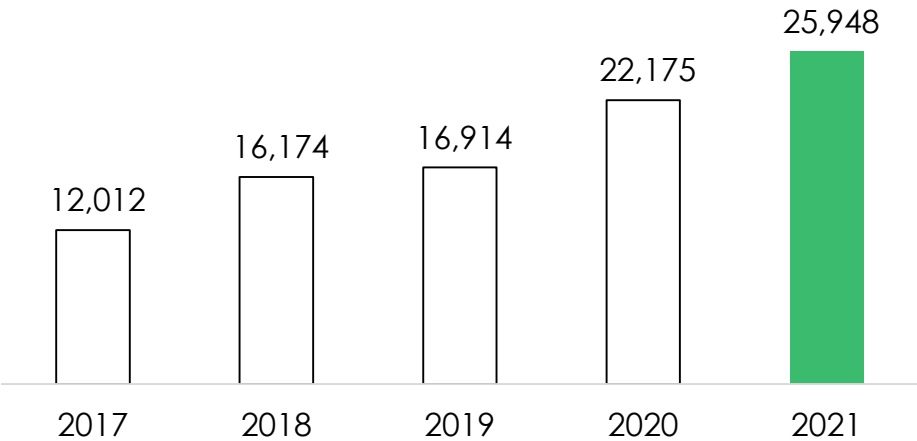
Strong track record of growth generation

Precious Metals Sales

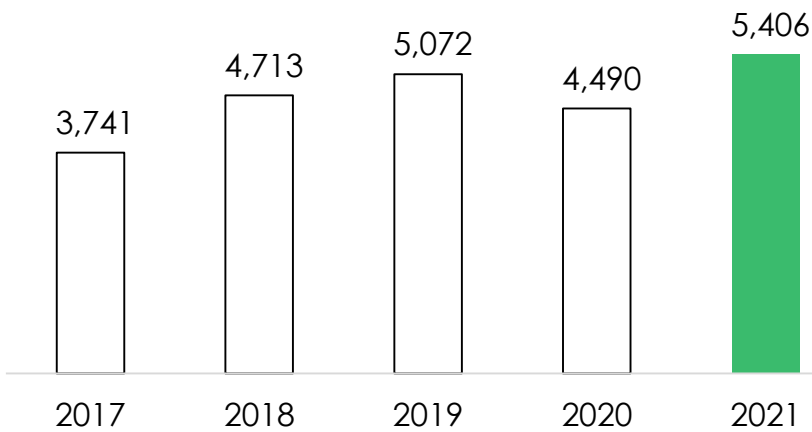


Precious metals are sold mainly as part of raw materials in products. In addition to the growth of business volume, revenue is also subject to changes in precious metal price trends (depending on if the materials are on consigned basis or not).

Precious Metals Sales (NT\$mn)



Value Added Sales (NT\$mn)

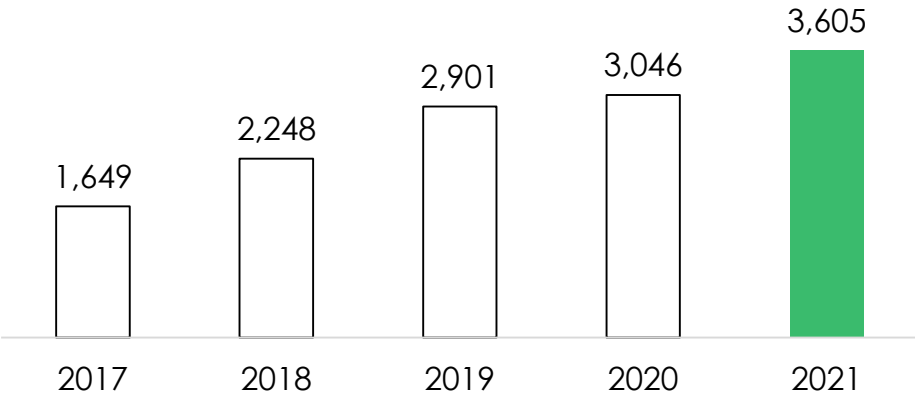


Value Added Sales (VAS)

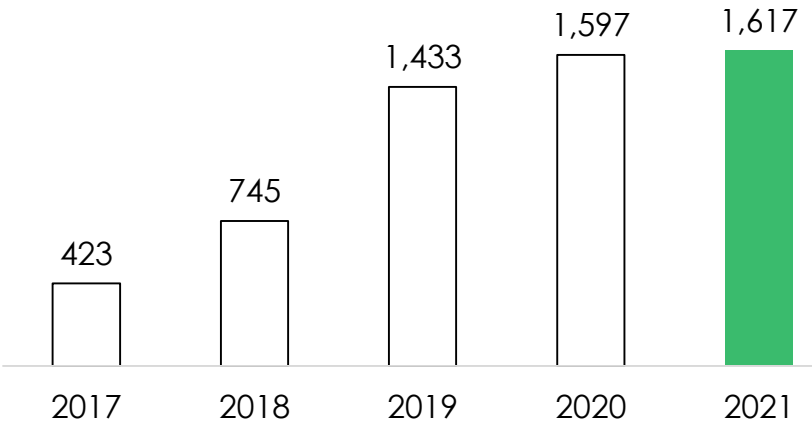


Value-added sales (VAS) reflect the true value of the products that we deliver to our customers, regardless of the precious metal prices.

Gross Profit (NT\$mn)



Operating Profit (NT\$mn)



Led by a strong team of experienced professionals

Chairman/President



C.F. Huang

黃啓峰

*30 of years
of industry experience*

- Vice President, Operations & Engineering, Continental Teves Taiwan

**VP
Semi & Storage BU**



Gary Chung

鍾怡歡

*25 of years
of industry experience*

- General Manager, Life Fusion Inc.
- Sales Manager, Applied Materials Taiwan

**AVP
Optoelectronics BU**



Seward Hu

胡書華

*20 of years
of industry experience*

- Senior Director, Assistant Vice President Optronics Corp.
- Sales Manager, Optoelectronics BU, Solartech

**AVP
Recycling BU**



Vincent Huang

黃明山

*25 of years
of industry experience*

- Manager, ChipMOS TECHNOLOGIES INC.
- Deputy Director, Precious Metal BU, Solartech

**VP
Intelligence Operations
Center**



Ben Hong

洪本展

*30 of years
of industry experience*

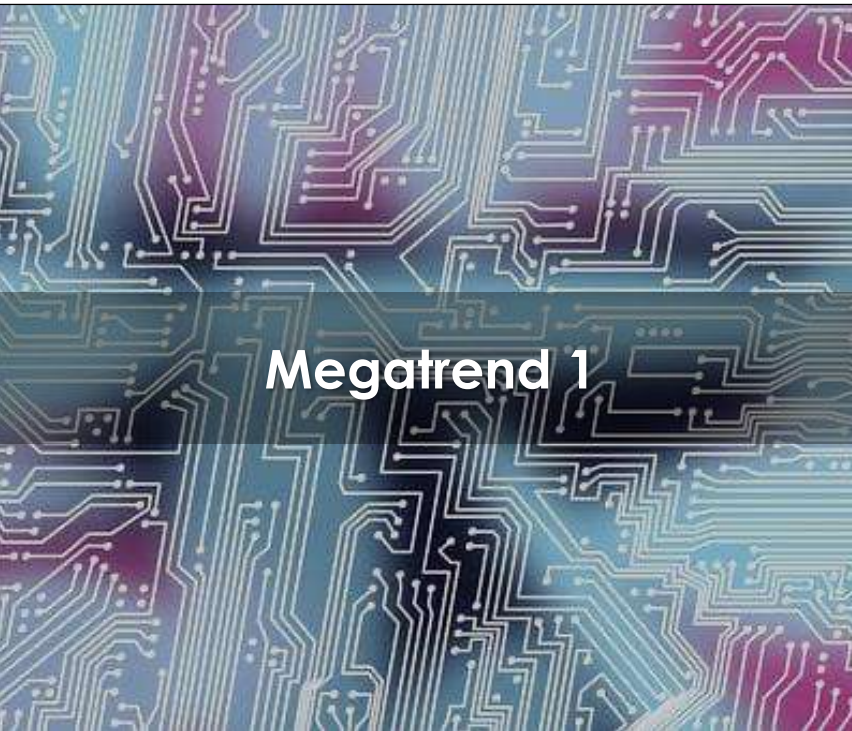
- Vice President, Quanta Computer Inc.
- Executive Vice President, Inventec Multimedia & Telecom Corporation

A close-up, high-contrast photograph of an industrial welding process. A bright, glowing yellow-orange molten metal pool is visible at the point of contact between a welding torch and a metal workpiece. The background is dark and blurred, showing industrial equipment and structures. The overall tone is dramatic and technical.

PART 2

Trends & Technologies

Key megatrends that propel our growth



Increasing complexity of
electronic devices
requiring new solutions and
more varieties of alloy materials

More Volumes



The growing importance of
local supply chains
and substitutes

More Shares



Companies' shift
towards a
circular economy

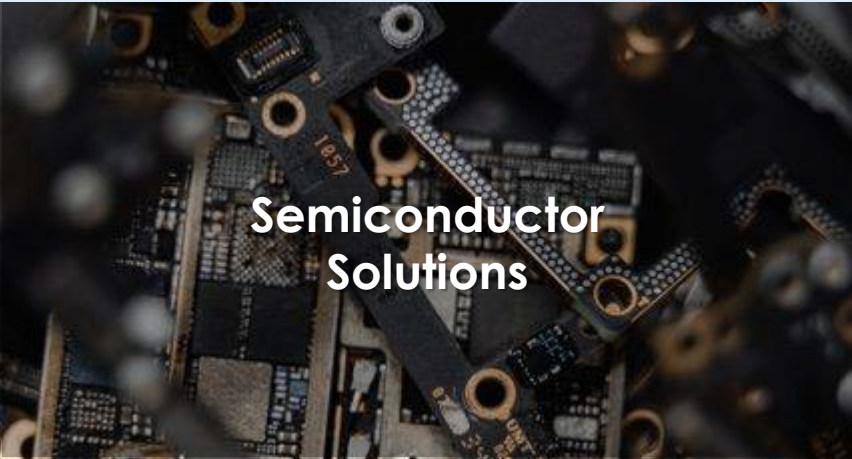
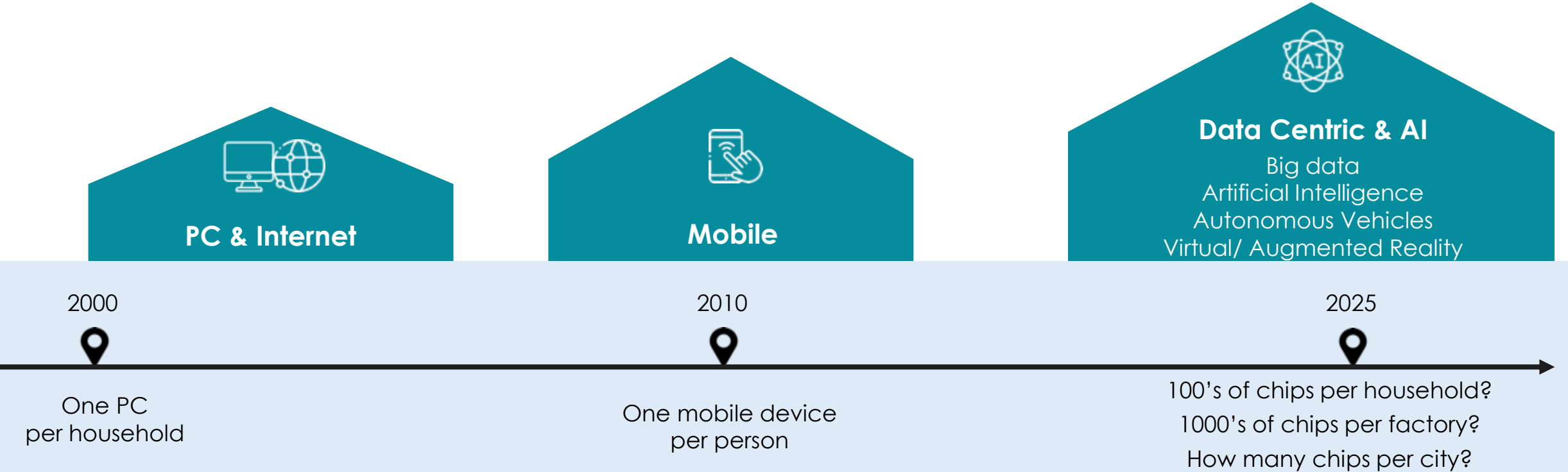
More Needs

Megatrend 1

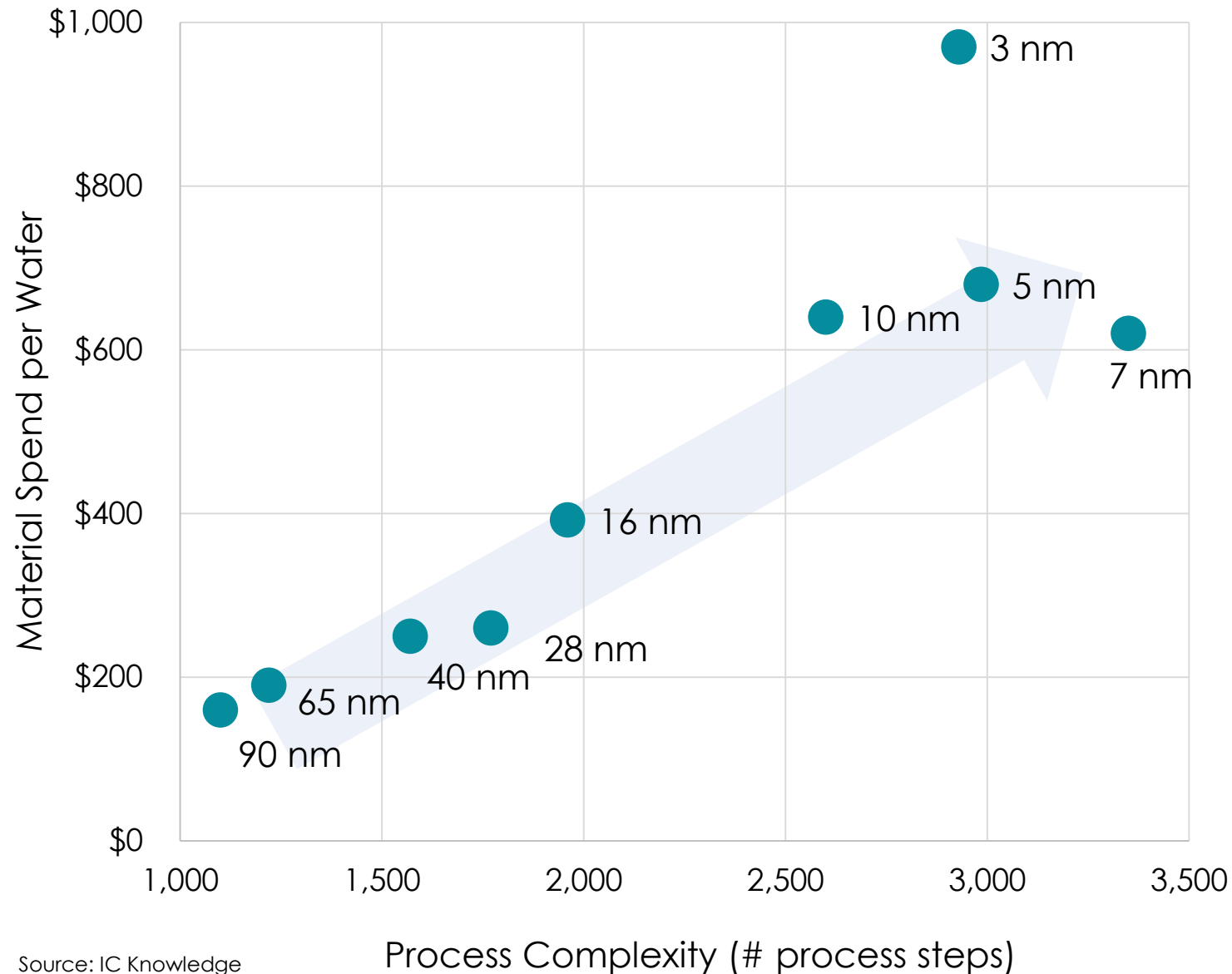
Increasing complexity of electronic devices requiring new solutions and more varieties of alloy materials

- The era of the Data-Centric Environment requires a wide range, and a large quantity of chips, storage, and display solutions to deliver the myriad functions and applications being designed.
- With these new drivers, there comes an expectation for higher-quality, higher-performing materials at a faster pace.
- As application nodes advance, increased purity and alloy varieties are essential to customers' requirements.

Industries driven by the era of the data-centric environment

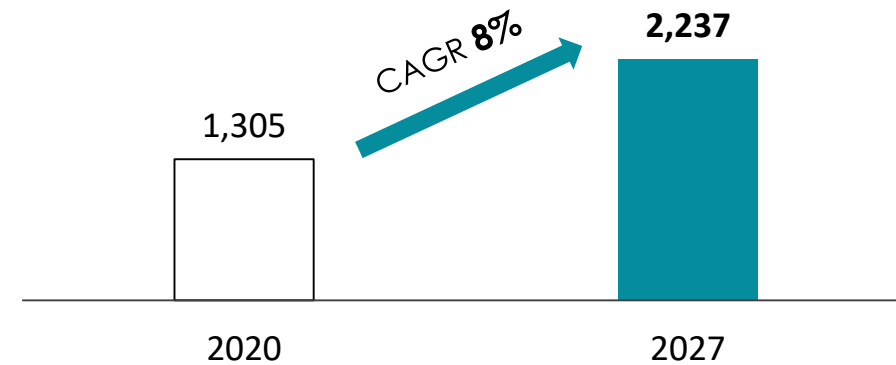


More complex chip drive more materials demand

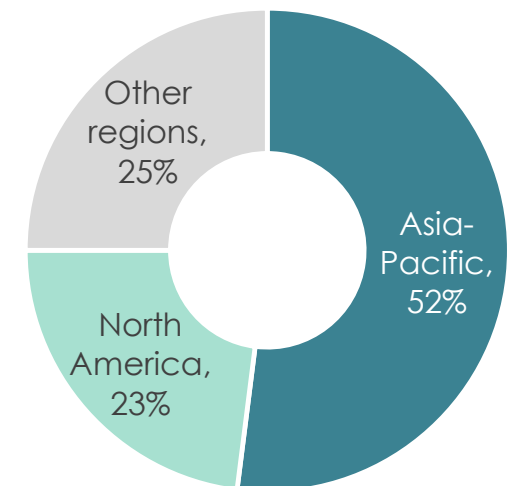


Source: IC Knowledge

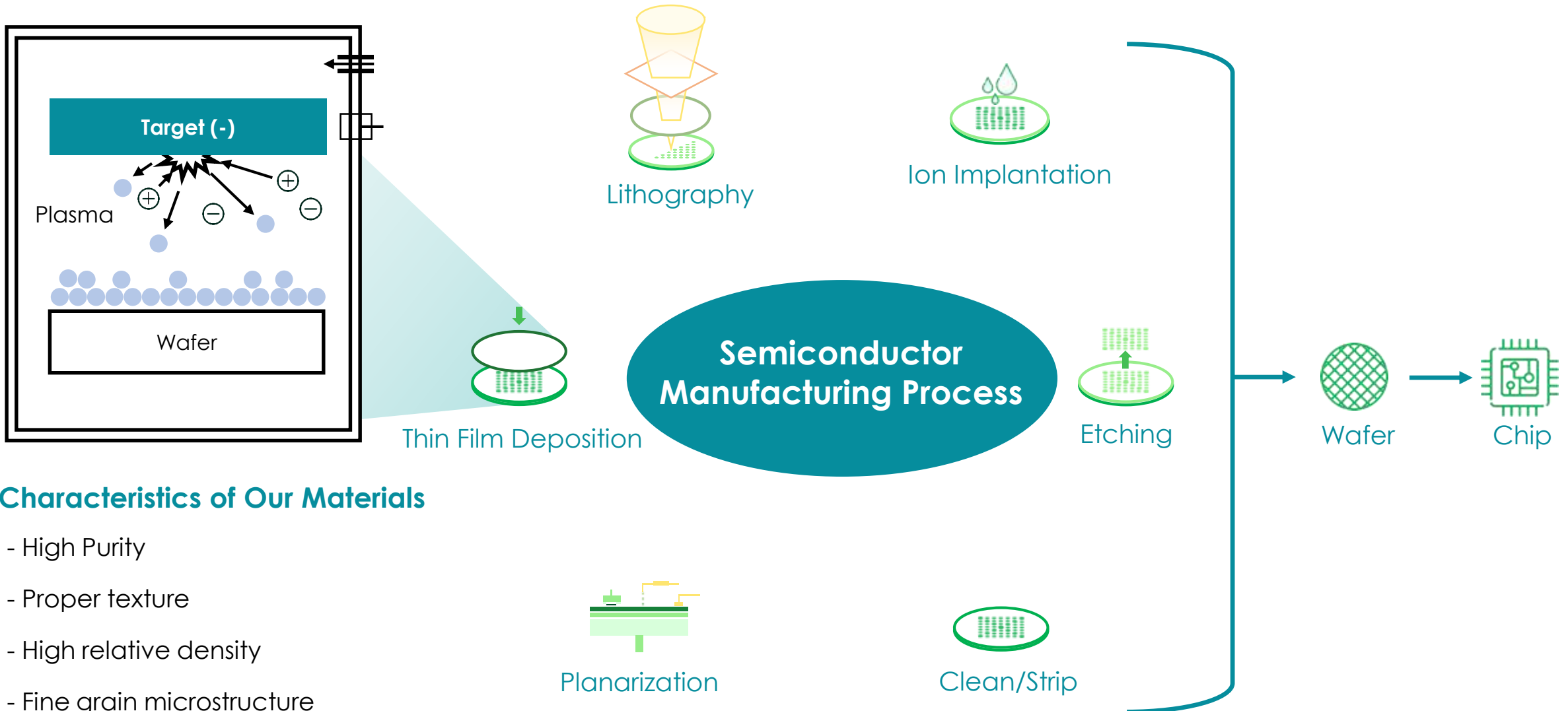
Global Sputtering Target for Semi (Value in US\$m)



Sputtering Target Consumption



Our products are used in thin film deposition processes



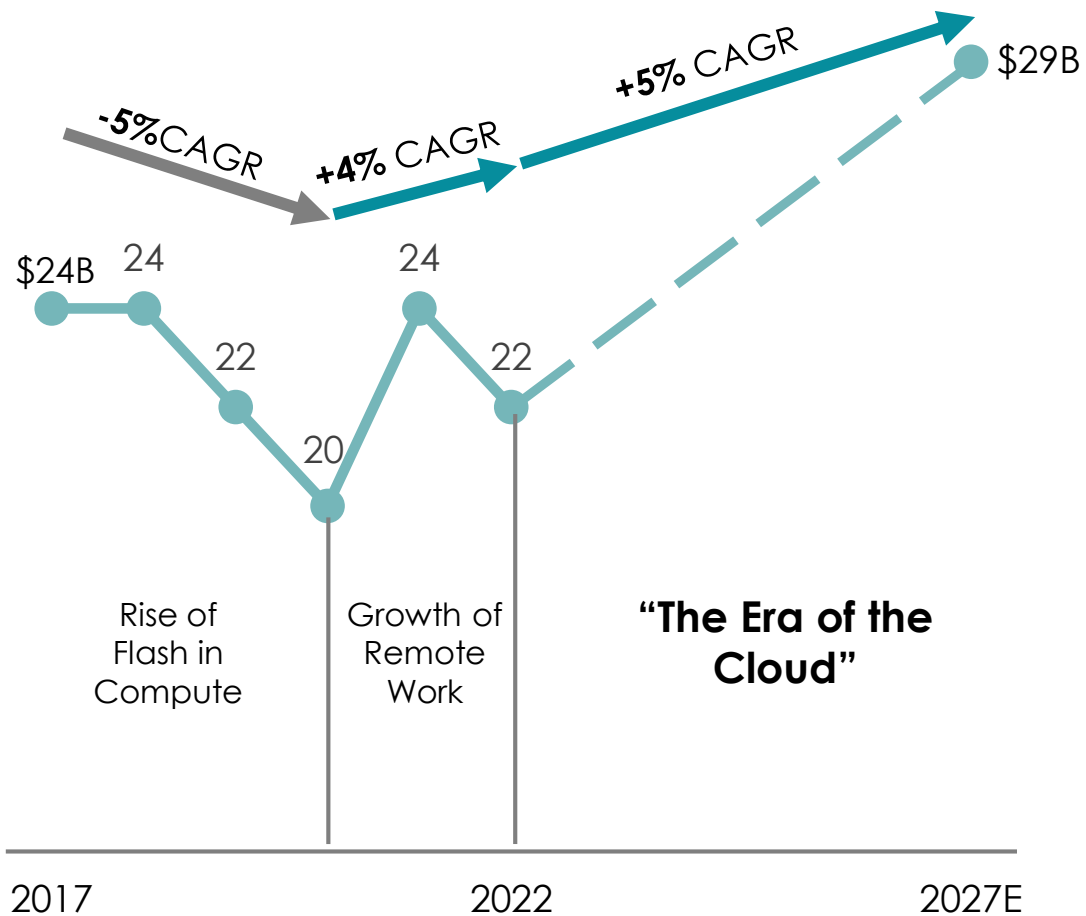
Characteristics of Our Materials

- High Purity
- Proper texture
- High relative density
- Fine grain microstructure
- Uniform microstructure

Data explosion drive higher HDD capacity demand

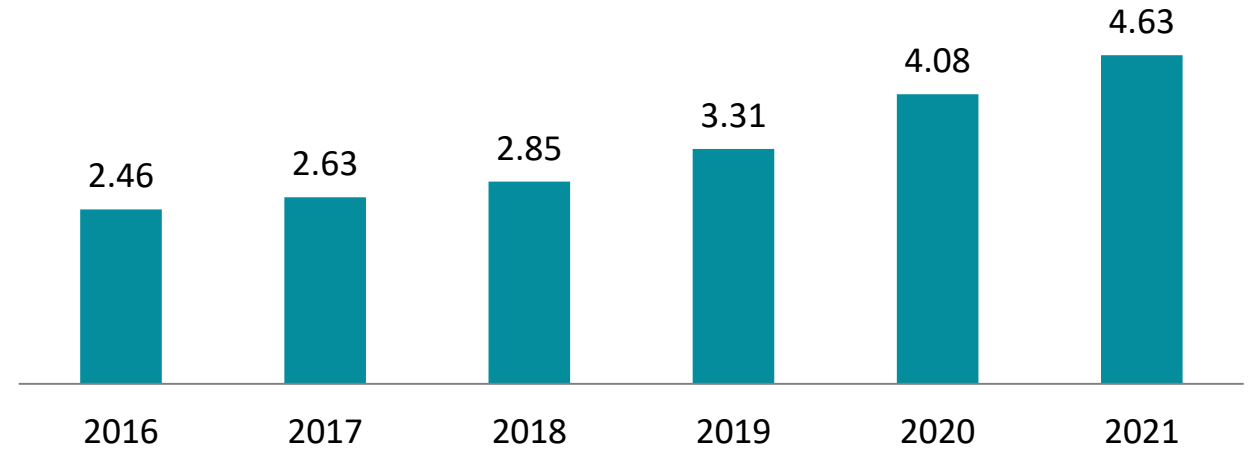
HDD Revenue TAM (US\$bn)

2017-2027E

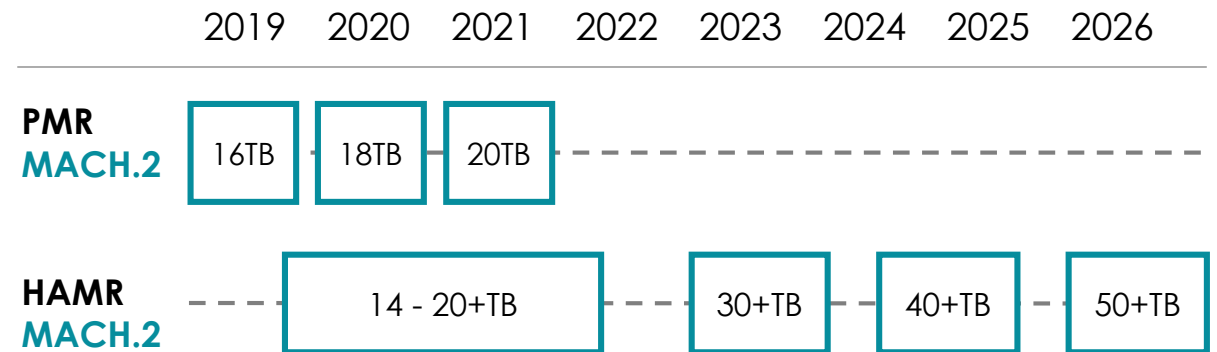


Source: WDD Investor Day, 2022/5

Average HDD platters in each drive



Seagate Product Roadmap



Source: Seagate 2021 Analyst Day, 2021/2

Megatrend 2

The growing importance of local supply chains and substitutes

- The pandemic and supply-chain disruption have inspired a build-out of local supply chains, particularly for critical materials and components.
- Taiwan remains the largest semiconductor hub in the world.
- Growing needs for finding local substitutes, particularly those previously dominated by foreign suppliers.
- Closer collaboration in the supply chain to develop mission-critical “designed-in” solutions.

Establish partnership with customers to develop “designed-in” solutions

4 - We provide customers the best solution to solve their manufacturing bottleneck

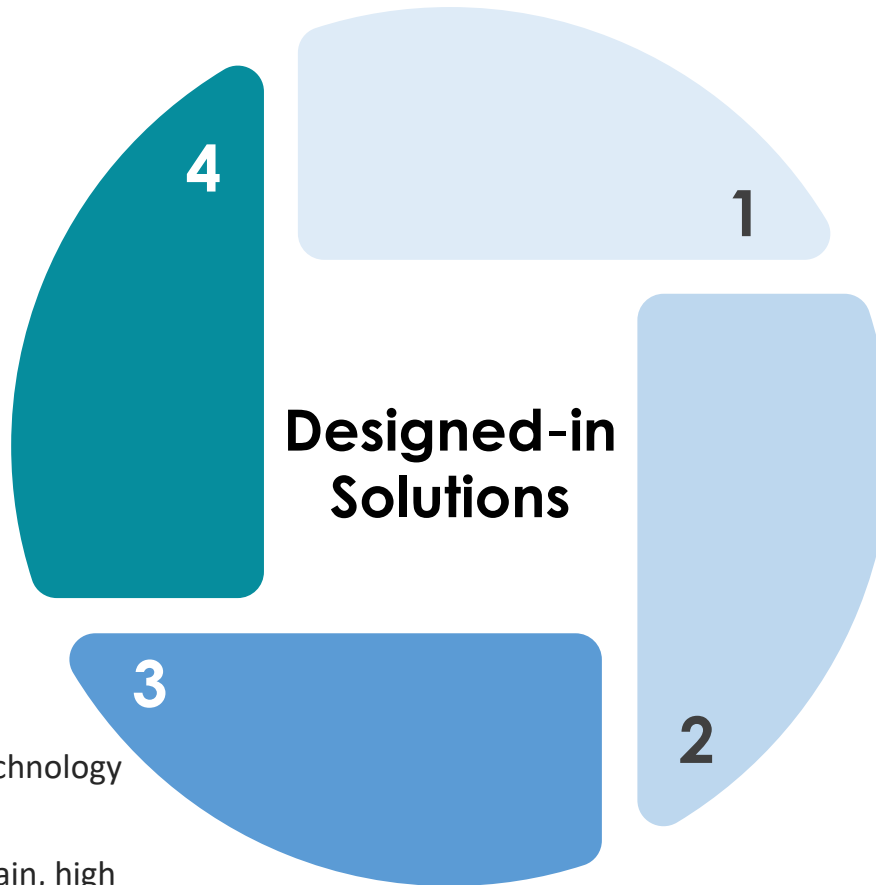
High Performance Products

Rapid Engineering Response
(Time to Market)

Value-Added Solution
(Green Circular Economy)

3 - To develop advanced materials with high-end manufacturing technology

- High purity material refining technology
- Advanced smelting, sintering and molding technology (low gas content, high density)
- Advanced texture control technology (fine grain, high uniformity, specific texture)
- High-end diffusion bonding technology
- High-end sputtering target cleaning technology



1 - We work with our customers to understand their current and future challenges



Customer
Technology
&
Product
Roadmaps

2 - Applying our core competencies and expertise

Materials Science

Alloy Design

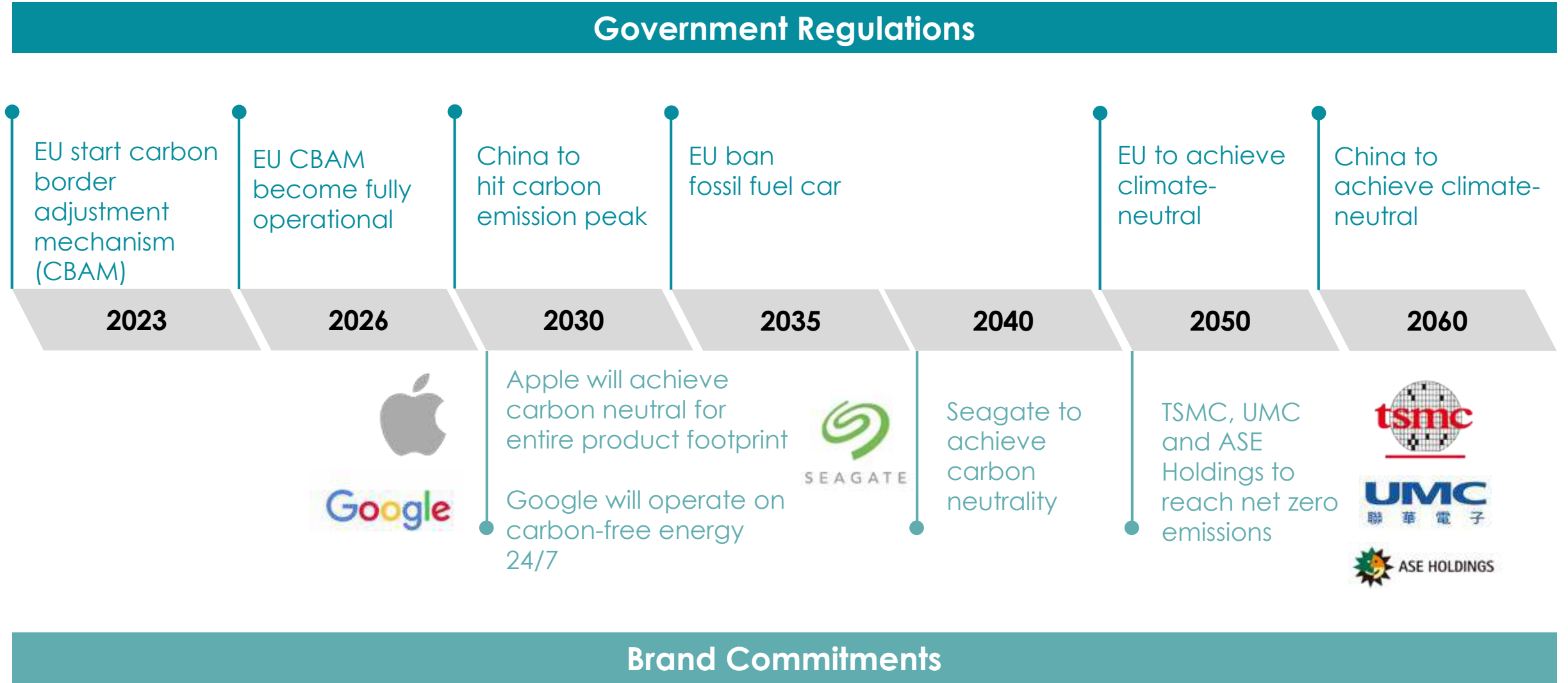
Applications and
Process Know-How

Megatrend 3

Companies' shift
towards a
circular economy

- Stricter legislation and pressure from society continue to push companies for a lower carbon footprint.
- Increasing resource scarcity and need for closing the loop.
- Growing complexity of materials to recycle, in particular end-of-life materials.
- Solutions to allow companies to provide higher recycled content and lower carbon footprint.

Rising Environmental Awareness



A group of five healthcare workers, three women and two men, are standing in a row. They are all wearing white full-body protective suits, hoods, and face masks. The two men in the back row are also wearing glasses. They are all looking directly at the camera with their arms crossed. The background is a plain, light-colored wall.

PART 3

Prioritization

Strategic shift towards high-value markets

2016 – 2020 Transformation

- Defined new strategy
- Streamlined business portfolio; Introduction of circular business model
- Right-sized cost structures and de-leverage
- Aligned the team

2020 – 2022 Focus

- Purpose-built portfolio focused on high-end semiconductors materials
- Eliminating low-margin products
- Locked in cost structure
- Disciplined investment for growth

2022 & Beyond Acceleration

- Growing semiconductor shares
- Provide adjacent technologies that add additional value to existing customers
- Leverage existing channels to market and extends customer base
- Applies core capabilities to new markets outside of the semiconductor industry

Scale Up

- Capacity investments synchronized to customers' expansion plans.
- Ability to tackle industry challenges & supply reliability.
- Continue localizing footprint close to customers in Taiwan and elsewhere in the world.

Optimize our Portfolio

- Commitment to relevant portfolio breadth in high-growth areas.
- Targeted expansion of portfolio into other adjacencies.

Level up in Tech

- Further sharpen focus on profitable innovation, addressing key inflection points.
- Address sustainable innovation and continue to invest in R&D.

Achieve Operational Excellence

- Digital transformation to deliver maximum value.
- Accelerating our strategy to deliver breakthrough operations performance

Responsible Business

- Closed-loop metal recycling solution support climate change mitigation.
- Committed to continued advancing ESG initiatives.

Provide Best-fit Solutions to Customers' Most Advanced Technology

Technical Requirements for Flexible Materials

• Diversified Application Size

- Current PVD sputtering targets can manufacture conductive films with resistance of $> 100\Omega$.
- No additional investment needed for coating equipment.

• High Flexibility

- Passed R3 200K bending test.
- Enable clients for borderless design



• High Reliability

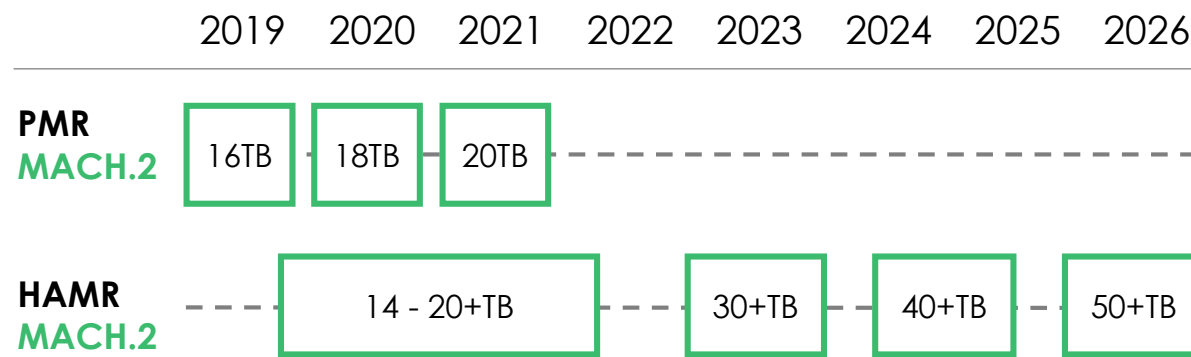
- 100% oxide ceramic material to enhance product reliability.
- Indirectly lower the cost of module packaging by high stability materials.

The New HAMR Recording Technology

• Rising demand for greater storage capacity

- Data growth fuel the demand for larger HDD Capacity.
- HDD leading company actively moves toward new HAMR recording technology since PMR technology is reaching its limit.

• Seagate product roadmap: Moving from PMR to HAMR



Source: Seagate 2021 Analyst Day, 2021/2

Digital transformation to deliver maximum value

Connecting Our Factories...



...To Capture the Data

One Standard



... Based Upon Lean Workflow

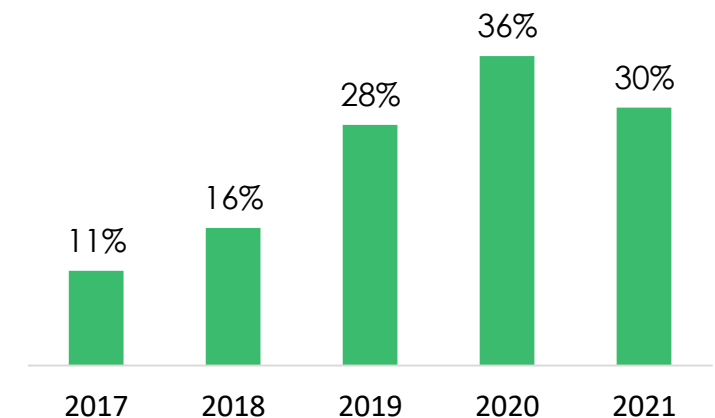
Transformed With Automation



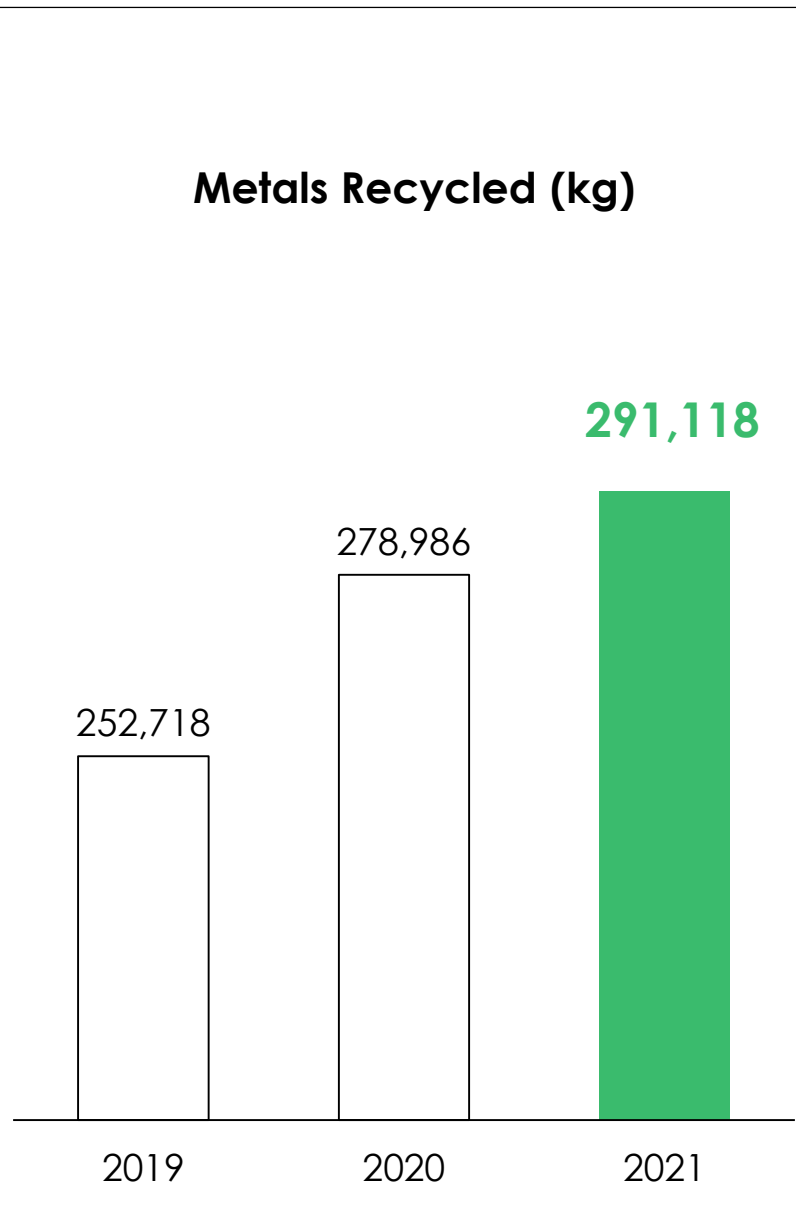
- Yield optimization
- Predictive algorithms
- Proactive maintenance work
- Real-time fault detection & resolution
- Real-time carbon footprint monitoring
- Remote problem-solving expertise

- Efficient and reliable sourcing
- Better execution
- Leaner, simpler product line-up

Solar's operating profit as % of value added sales



Reducing carbon emissions through material recycling



469,782 tons

of carbon emissions saved
per year

equivalent to

carbon footprint generated by

105,097 people

per capita carbon emission in the
world (2019, 4.47 ton)

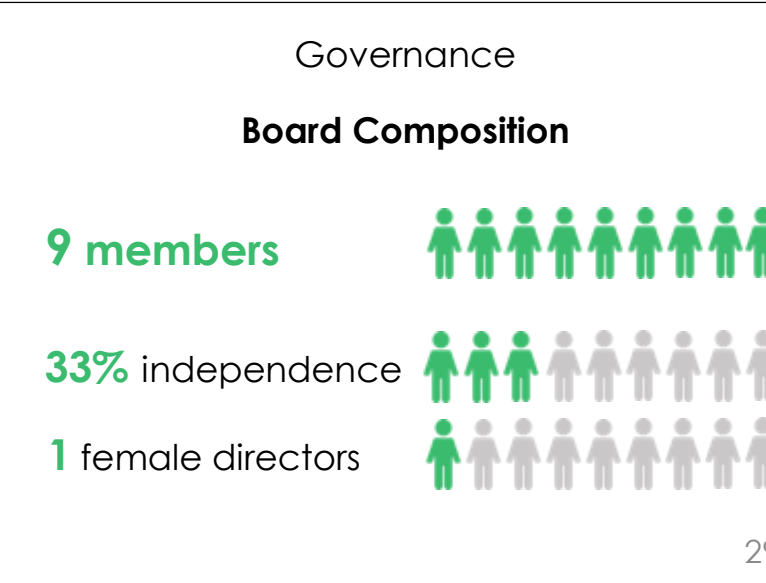
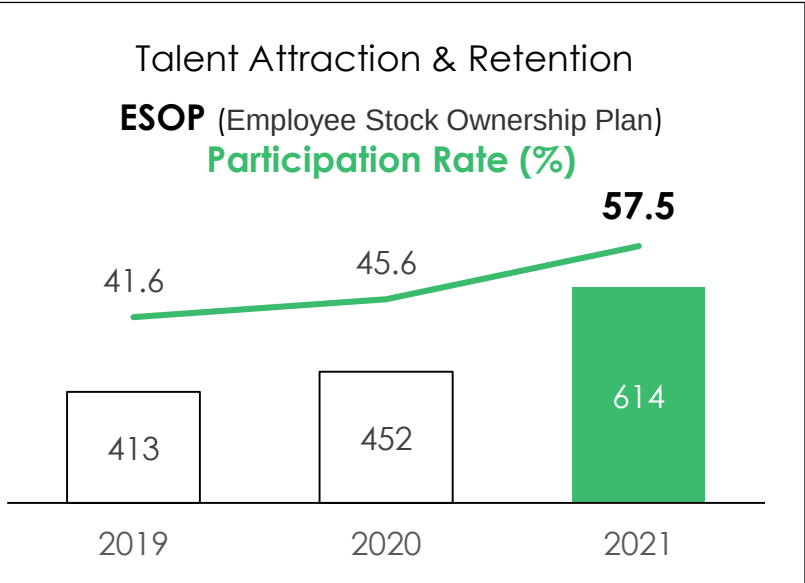
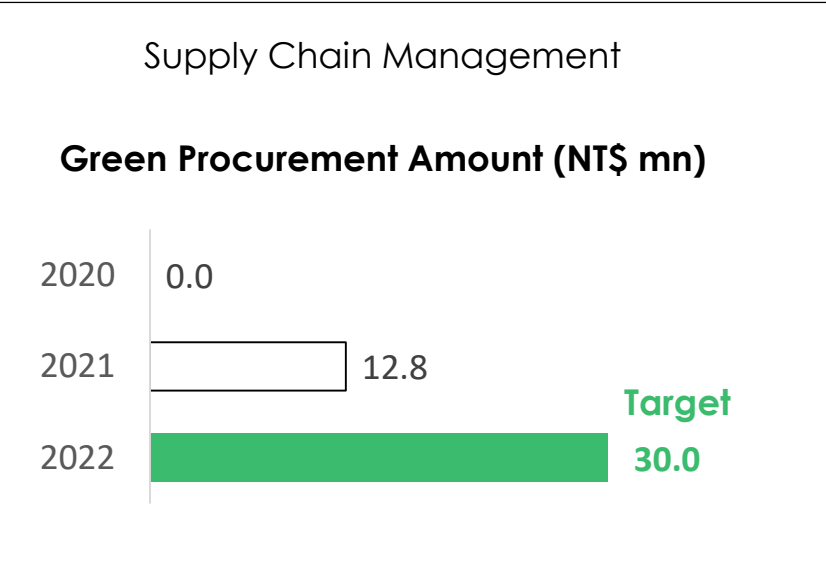
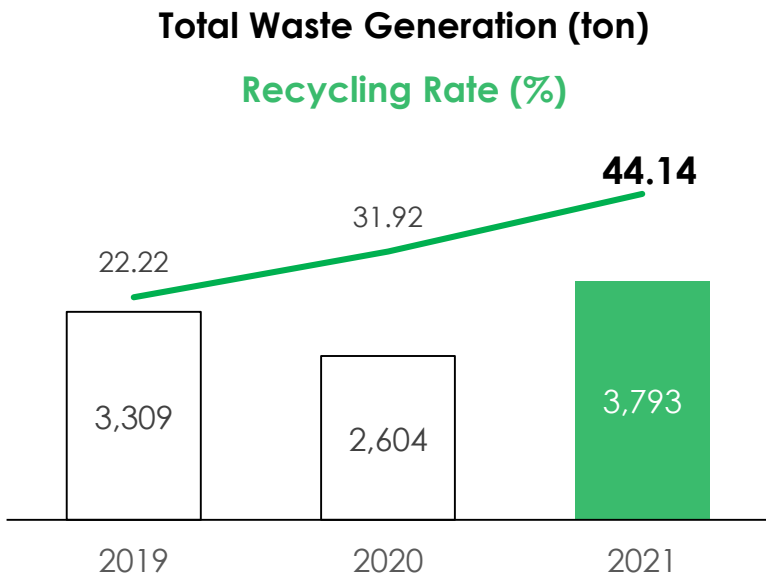
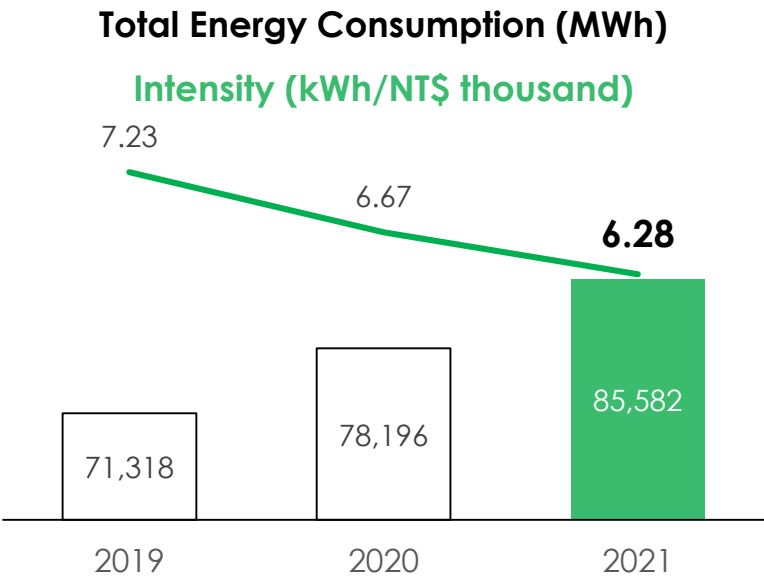
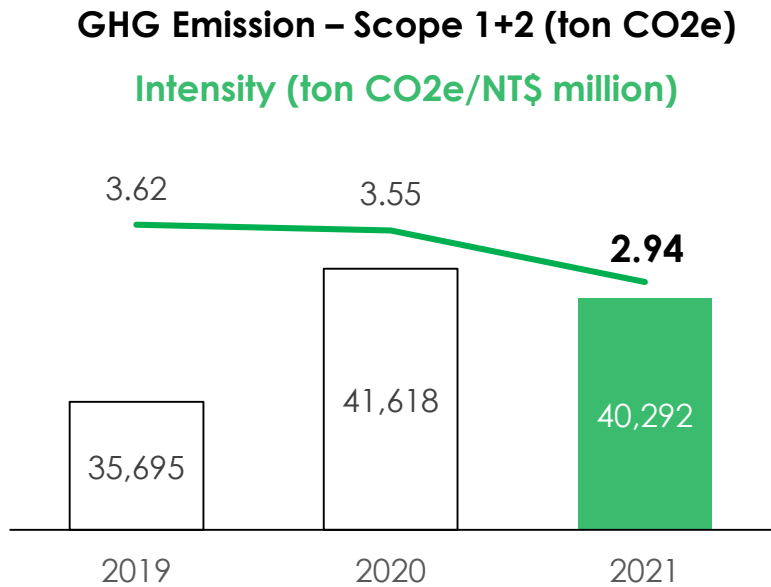
equivalent to

1,200 central park

at New York

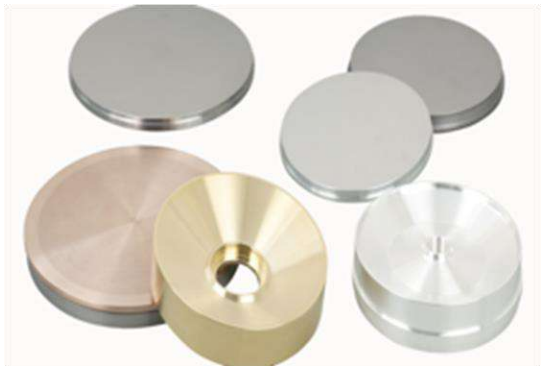
Source: Solar ESG Report

Continued progress in ESG



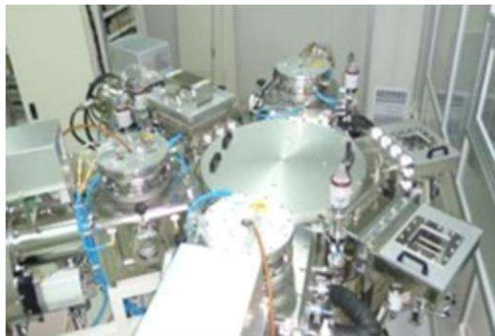
SolarTech's unique capabilities underpin our success (4Ps)

Products



World-class materials science capabilities; proprietary alloy portfolio

Processes



Unique process technologies with proven execution at scale

People



Committed team of materials science and engineering experts

Partnerships



Deep customer partnership from R&D to final delivery

**Rapidly
Expanding
Served
Markets**

+

**Growing
Market
Share**

=

**Double-Digit Value-Added
Sales & Earnings CAGR for
2022-2026**

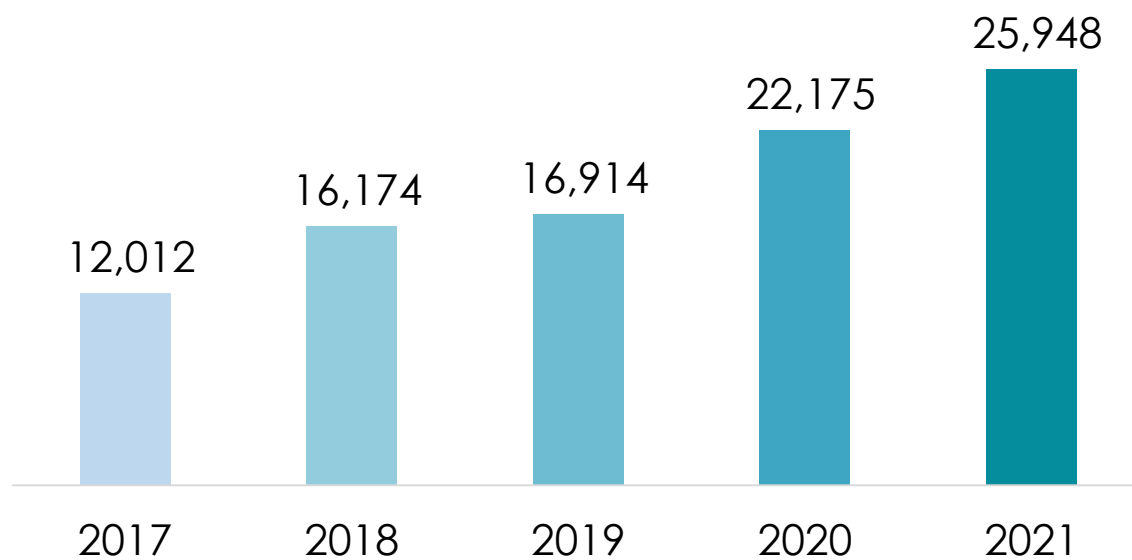
A scientist wearing a white lab coat, purple gloves, safety glasses, and a grey respirator mask with yellow straps is using a white pipette to transfer liquid into a small vial. The background shows laboratory equipment, including shelves with bottles and a rack of test tubes.

PART 4

Measurement

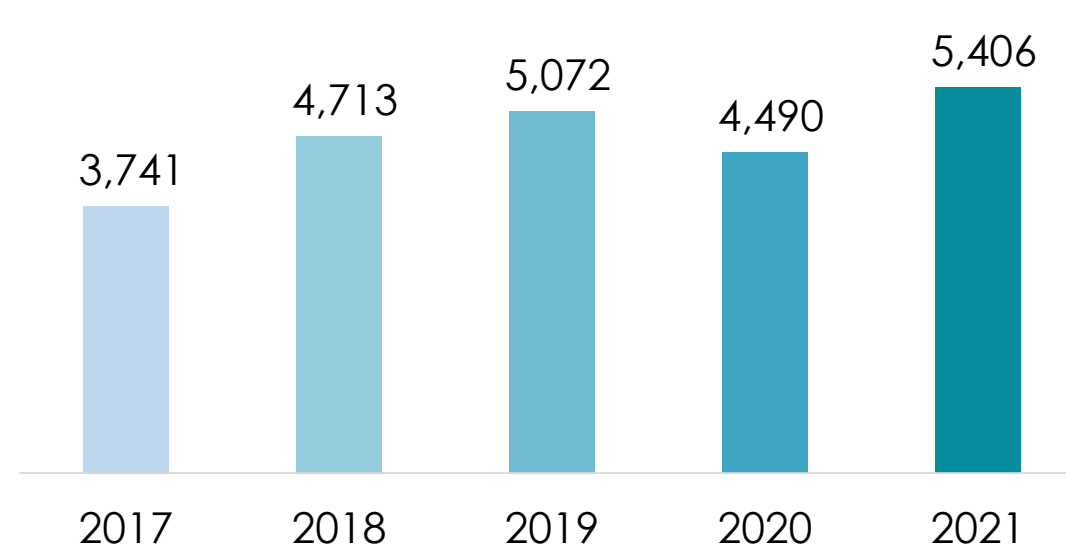
Our revenue model and trends

Precious Metals Sales (NT\$m)



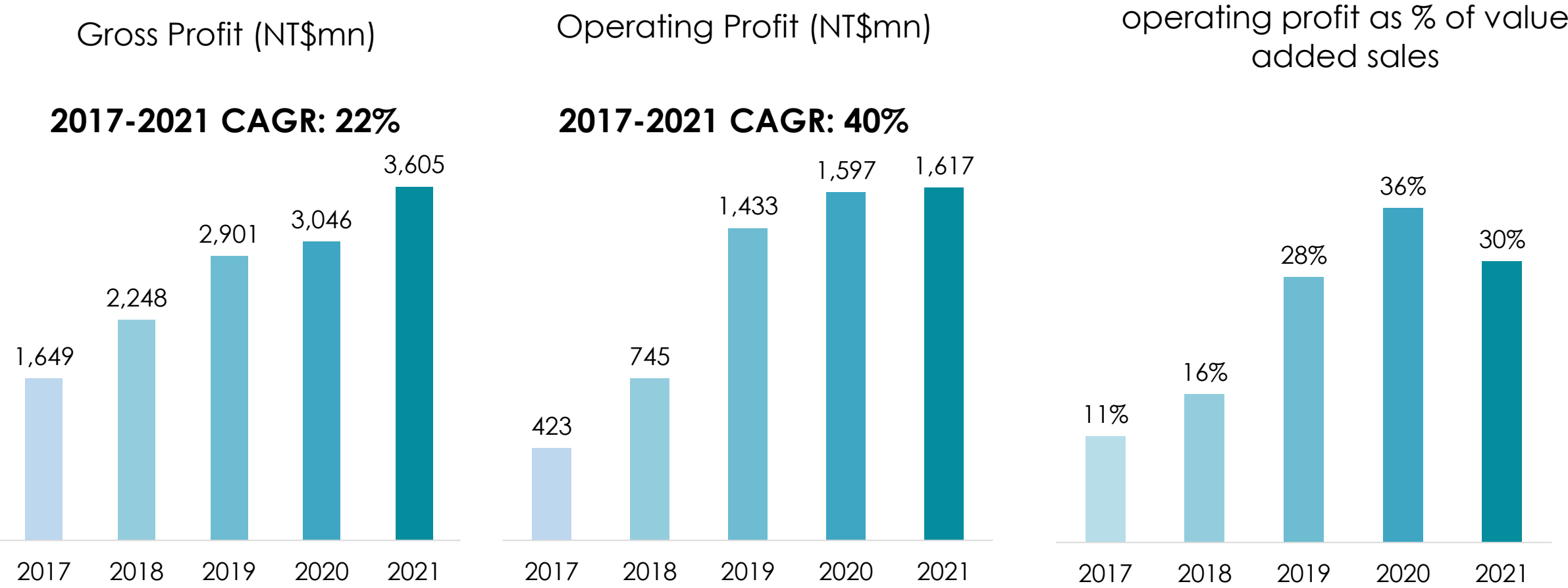
Precious metals are sold mainly as part of raw materials in products. In addition to the growth of business volume, revenue is also subject to changes in precious metal price trends (depending on if the materials are on consigned basis or not).

Value Added Sales (NT\$m)

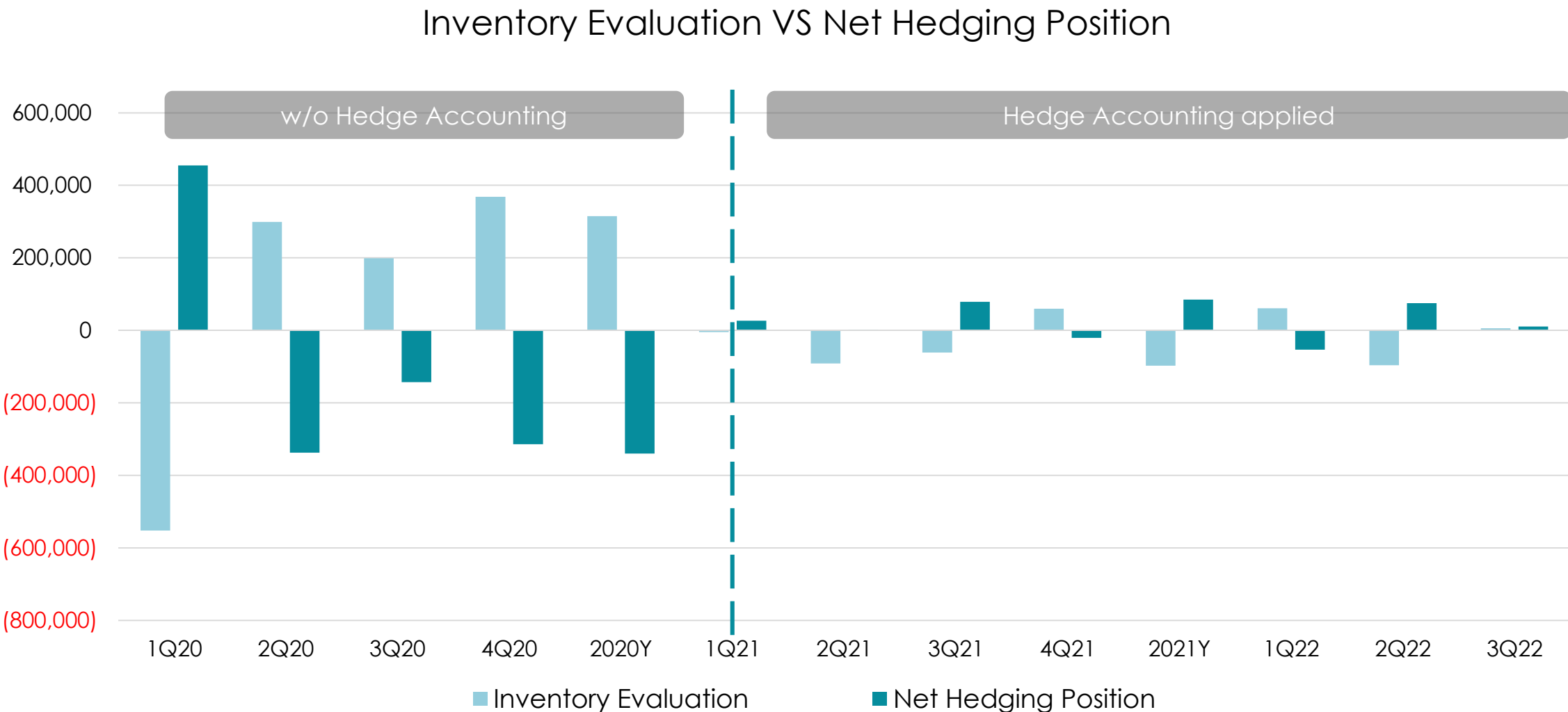


Value-added sales (VAS) reflect the true value of the products that we deliver to our customers, regardless of the precious metal prices.

Strong profitability



Hedge Accounting (under IFRS 9)



A system was built to trace and provide the existence of economic relationship between the hedged item and hedging instrument.

3Q22 Income Statement

NT\$m	3Q22	2Q22	3Q21	QoQ (%)	YoY (%)
Revenue	6,029	6,961	8,261	-13.4	-27.0
Value-added Sales	1,352	1,519	1,361	-11.0	-0.7
Gross Profit	848	945	983	-10.2	-13.7
Operating Expenses	515	525	626	-1.8	-17.7
Operating Profit	333	420	356	-20.8	-6.6
Non Operating Income/(Loss)	273	44	60	-	-
Pretax Income	606	464	417	30.6	45.3
Tax Expenses	69	83	41	-17.2	67.9
Net Income to Parent	527	365	362	44.3	45.8
Basic EPS (NT\$)	\$0.89	\$0.62	\$0.61	43.5	45.9

Key Financial Ratios (%)					
Gross Margin	14.1	13.6	11.9	0.5 pts	2.2 pts
Operating Expense Ratio	8.5	7.5	7.6	1.0 pts	1.0 pts
Operating Margin	5.5	6.0	4.3	-0.5 pts	1.2 pts
Effect Tax Rate	11.4	17.9	9.8	-6.6 pts	1.5 pts
Net Margin	8.7	5.2	4.4	3.5 pts	4.4 pts

9M22 Income Statement

NT\$m	9M22	9M21	YoY (%)
Revenue	20,626	23,290	-11.4
Value-added Sales	4,230	3,889	8.8
Gross Profit	2,798	2,678	4.5
Operating Expenses	1,503	1,549	-3.0
Operating Profit	1,295	1,129	14.7
Non Operating Income/(Loss)	248	29	-
Pretax Income	1,543	1,159	33.2
Tax Expenses	239	184	30.2
Net Income to Parent	1,263	936	35.0
Basic EPS (NT\$)	\$2.13	\$1.61	32.3

Key Financial Ratios (%)			
Gross Margin	13.6	11.5	2.1 pts
Operating Expense Ratio	7.3	6.7	0.6 pts
Operating Margin	6.3	4.8	1.4 pts
Effect Tax Rate	15.5	15.9	-0.4 pts
Net Margin	6.1	4.0	2.1 pts

3Q22 Balance Sheet

NT\$m	3Q22		3Q21	
	Amount	%	Amount	%
Total Assets	26,789	100%	24,626	100%
Cash	2,734	10%	2,972	12%
AR & NR	1,771	7%	1,915	8%
Inventories	10,847	40%	9,195	37%
Fixed Assets	8,072	30%	7,123	29%
Total Liabilities	13,740	51%	12,551	51%
AP & NP	1,193	4%	289	1%
Total Equity	13,050	49%	12,075	49%

Key Financial Ratios			
Cash Conversion Days	192.0	128.2	
Debt ratio (%)	51.3	51.0	

9M22 Cash Flow

NT\$mn	9M22	9M21
Beginning Balance	3,149	2,161
Operating Cash Flow	1,485	(30)
Capital Expenditures	(435)	(250)
Investments and Others	(359)	(822)
Cash Dividend Paid	(890)	(710)
Financing Cash Flow	(1,196)	1,958
Ending Balance	2,734	2,972

Income Statement Summary

NT\$m	2017	2018	2019	2020	2021
Revenue	15,754	20,887	21,987	26,665	31,355
Gross Profit	1,649	2,248	2,901	3,046	3,605
Operating Expenses	1,226	1,503	1,468	1,449	1,988
Operating Profit	423	745	1,433	1,597	1,617
Non Operating Income/(Loss)	-257	-275	-185	-452	-40
Pretax Income	166	470	1,248	1,145	1,577
Tax Expenses	49	56	186	261	268
Net Income to Parent	115	389	1,039	843	1,256
Basic EPS (NT\$)	\$0.33	\$0.98	\$2.35	\$1.69	\$2.15

Key Financial Ratios (%)					
Gross Margin	10.5	10.8	13.2	11.4	11.5
Operating Expense Ratio	7.8	7.2	6.7	5.4	6.3
Operating Margin	2.7	3.6	6.5	6.0	5.2
Effect Tax Rate	29.5	12.0	14.9	22.8	17.0
Net Margin	0.7	1.9	4.7	3.2	4.0

YoY Growth (%)					
Revenue	-37.6	32.6	5.3	21.3	17.6
Gross Profit	134.8	36.3	29.0	5.0	18.4
Operating Profit	-	75.8	92.4	11.5	1.3
Net Income to Parent	-	239.1	167.1	-18.8	48.9
Basic EPS	-	197.0	139.8	-28.1	27.2

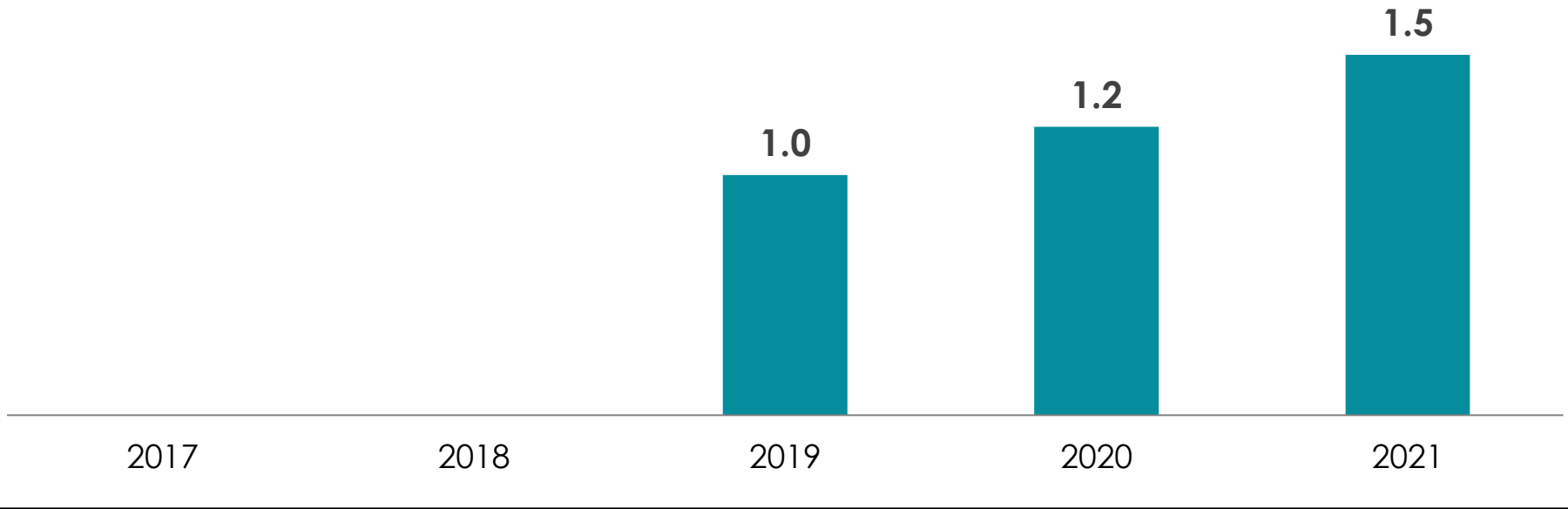
Balance Sheet Summary

NT\$m	2017	2018	2019	2020	2021
Total Assets	19,055	19,832	21,274	21,259	25,422
Cash	714	795	590	2,161	3,149
AR & NR	1,615	1,465	1,594	1,820	2,099
Inventories	5,484	6,927	7,407	7,893	9,474
Fixed Assets	7,079	6,384	7,031	6,877	7,321
Total Liabilities	14,471	14,662	13,275	12,752	12,984
AP & NP	826	285	352	230	623
Total Equity	4,584	5,170	7,999	8,506	12,438

YoY Growth (%)					
Total Assets	-0.9	4.1	7.3	-0.1	19.6
Cash	151.1	11.3	-25.8	266.6	45.7
AR & NR	-6.3	-9.3	8.8	14.1	15.4
Inventories	10.0	26.3	6.9	6.6	20.0
Fixed Assets	-12.1	-9.8	10.1	-2.2	6.4
Total Liabilities	-5.0	1.3	-9.5	-3.9	1.8
AP & NP	-10.6	-65.5	23.5	-34.6	171.1
Total Equity	14.7	12.8	54.7	6.3	46.2

Key Financial Ratios (%)					
A/R Days	38.7	26.9	25.4	23.4	22.8
Inventory Days	135.5	121.5	137.1	118.2	114.2
A/P Days	22.6	10.9	6.1	4.5	5.6
Cash Conversion Days	151.5	137.6	156.4	137.1	131.4
ROE (%)	2.8	8.3	16.2	10.5	12.4
ROA (%)	1.6	3.4	6.4	4.9	6.2
Debt ratio (%)	75.9	73.9	62.4	60.0	51.1

Dividend Payout and Capex



	2017	2018	2019	2020	2021
Payout Ratio (%)	-	-	48%	84%	71%
Dividend Yield* (%)	-	-	2.4%	2.5%	3.8%
Capex (NT\$ mn)	142	266	991	352	706
Capex to Sales (%)	0.9%	1.3%	4.5%	1.3%	2.3%

*Note: Cash yield is calculated based on Solar's market cap on the day before ex-dividends.



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