



GlobalWafers Co., Ltd.
環球晶圓股份有限公司

**Global Family,
Global Solutions!**

GlobalWafers (6488TT)

Q2 2023 Earnings Call

2023/08/01





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Executive Comment



Executive Comments

➤ Financial Highlights

● Revenue

- ✓ Q223 → NT\$17.9 billion, 2.0% YoY, record high over the same period !
- ✓ 1H23 → NT\$36.5 billion, 7.9% YoY, record high !
- ✓ Continuous growth for six times every half-year since 1H20!

(NT\$ mn)	1H20	2H20	1H21	2H21	1H22	2H22	1H23
Revenue	27,216	28,143	30,014	31,116	33,846	36,441	36,512

● Gross Profit (%)

- ✓ Q223 → 37.7%
- ✓ 1H23 → 39.2%

● Operating Income (%)

- ✓ Q223 → 29.1%
- ✓ 1H23 → 31.0%

Note:
1. Q223: Second quarter of 2023
2. 1H23: First half year of 2023



➤ Financial Highlights

● Net Profit (%)

- ✓ Q223 → 26.8%
- ✓ 1H23 → 26.8%, the second highest !

● EPS

- ✓ Q223 → NT\$11.00
- ✓ 1H23 → NT\$22.49, the second highest !

● Prepayment

- ✓ NT\$38.3 billion (US\$ 1.2 bn)³, the third highest !
- ✓ Received new prepayments of NT\$1.5 billion in 1H23

Note:

1. Q223: Second quarter of 2023
2. 1H23: First half year of 2023
3. FX Rate: NTD:USD = 31.14, including guarantee



➤ Industry & Overview

● Global Economy

- ✓ The global GDP growth is forecasted to rise due to easing inflation and stronger real incomes. However, the economy continues to confront notable pressures, including the high inflation and energy prices.

● Semiconductor Industry

- ✓ The global semiconductor industry, including memory, is expected to decline in 2023 due to chip oversupply, but a rebound is anticipated in 2024 as fabs increase production.
- ✓ Material market growth to resume in 2024 as industry recovers, with fabs ramping up leading-edge logic and automotive/power device production to mitigate 2023 revenue decline.
- ✓ Automotive, industrial electronics, and generative AI are key drivers of semiconductor market revenue.
- ✓ Despite excess inventory, Q223 global silicon wafer area shipments increased compared to Q123, with the 300mm wafer also showing quarterly growth among all wafer sizes.



➤ Industry & Overview

● Automotive

- ✓ The key drivers of automotive semiconductors include EVs, ADAS, AVs, and infotainment systems with features like navigation, Wi-Fi, smartphone integration, voice commands, and audio/video services.

● Generative AI & AI Server

- ✓ The generative AI market, fueled by AI models, will see demand from sectors like AI model training infrastructure, digital advertising, and AI servers.
- ✓ AI servers are in high demand across sectors like cloud services, e-commerce, intelligent manufacturing, financial insurance, healthcare, and ADAS.

● Compound Semiconductor

- ✓ SiC and GaN are the significant drivers of fast growth in the compound semiconductor industry.
- ✓ The compound semiconductor market is propelled by the automotive industry, particularly the EV sector, and the growing renewable capacity, alongside the rapid adoption of SiC and GaN power devices.



➤ ESG

● Corporate Governance Evaluation

- ✓ The Company has been awarded **top 5% corporate governance among all Taiwan listed companies for 5 consecutive years** and included as one of the **Top 30 companies in TIP TPEX ESG 30 Index, and the FTSE4Good Index Series**, continuing its commitment to improving corporate governance and fulfilling ESG responsibilities.

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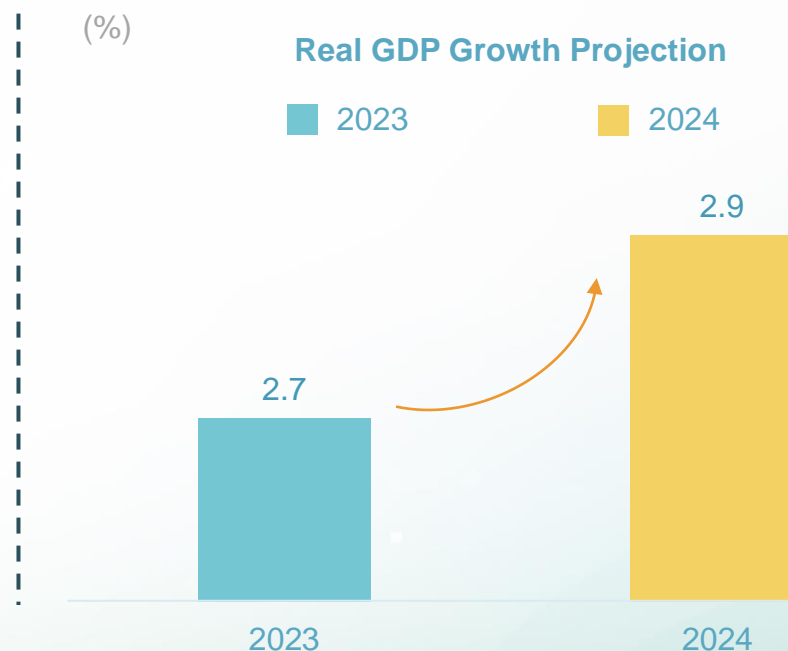
Industry Overview

Global GDP Growth Forecast

- The OECD's June 2023 World Economic Outlook predicts the global GDP growth in 2023 is projected to be 2.7% but will gradually pick up to be 2.9% through 2024 as inflation moderates and real incomes strengthen.
- The global economy is showing signs of improvement, but the upturn is weak and faces significant pressures include the underlying inflation pressures remain high, despite a decline in headline inflation due to lower energy prices.

2023 Economic Outlook

2.7% → 2.9%
Real GDP growth projection
from 2023 to 2024



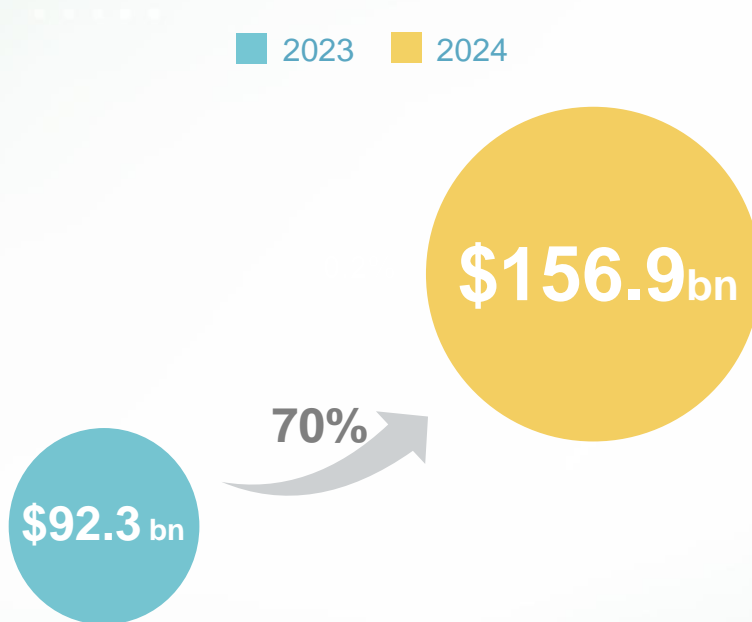


Worldwide Semiconductor Market Forecast

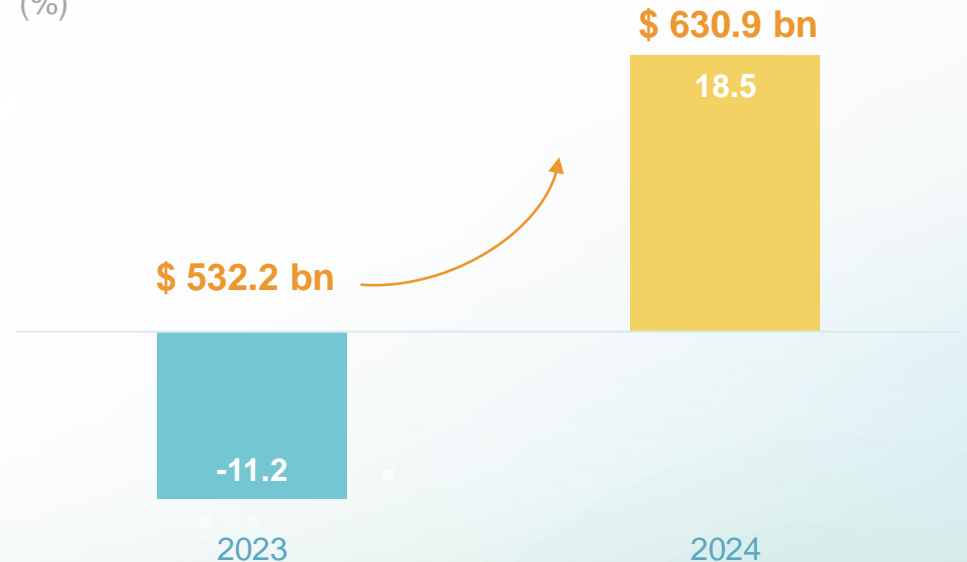
- Gartner predicts that the global semiconductor revenue is anticipated to experience an 11.2% decline in 2023 but is expected to rebound in 2024 with a revenue growth of 18.5%, reaching US\$630.9 billion.
- An oversupply of chips is accelerating the decline of the semiconductor market in 2023, with the memory industry expected to decline to a market size of \$92.3 billion, but a rebound is projected in 2024 with a 70% increase, reaching \$156.9 billion.

Worldwide Memory Market Revenue Forecast, 2023-2024

Worldwide Semiconductor Revenue Forecast, 2023-2024



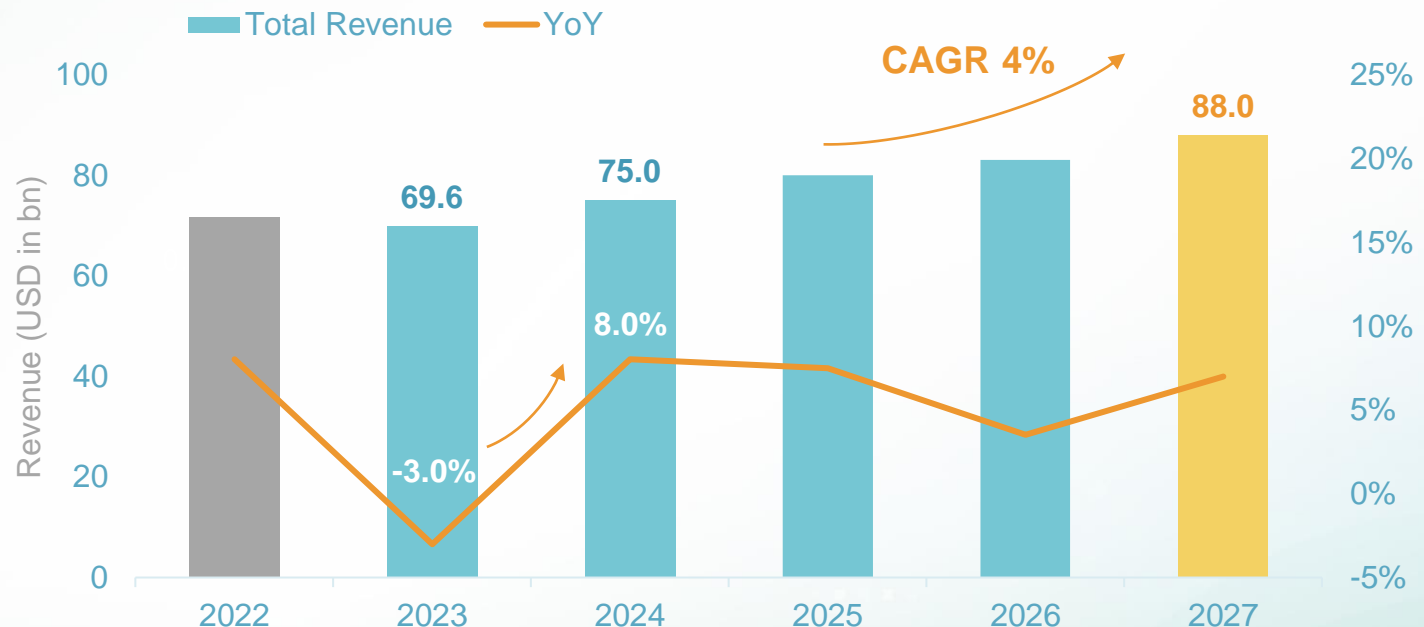
(%)



Worldwide Semiconductor Material Market Forecast

- In 2023, the semiconductor materials market will decline, but growth in leading-edge logic and automotive/power device production will mitigate the decline. A strong recovery is forecasted in 2024, with material revenues increasing by 8% to nearly US\$75 billion.
- The market is projected to achieve a CAGR of 4% over the next five years, resulting in a market size of US\$88 billion by 2027.

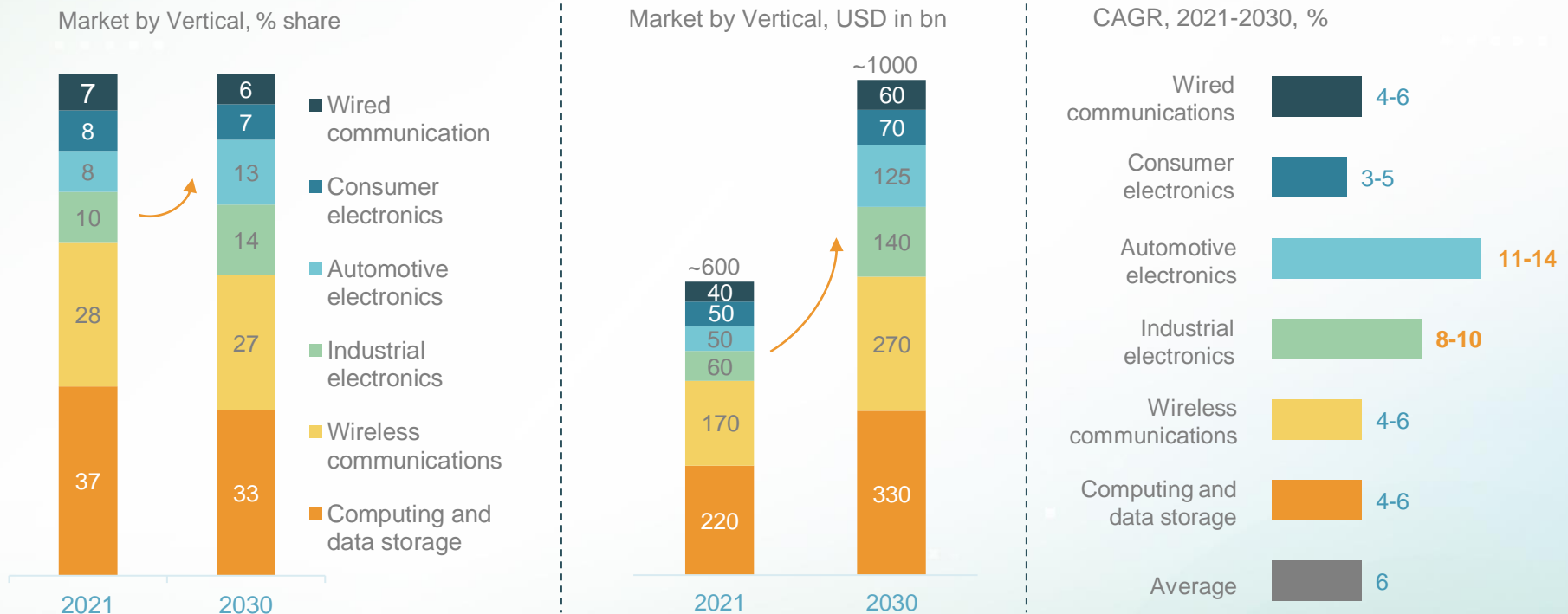
Worldwide Semiconductor Material Market Forecast, 2023-2027



Worldwide Semiconductor Market Forecast (By Segment)

- Looking further ahead, McKinsey analysis shows that demand for semiconductors is set to rise by 6% to 7% a year up to 2030.
- Sectors include industrial and automotive are likely to face continuing tightness of supply, both in the short and medium terms, given predicted growth in demand of 10% and 14% CAGR in 2030.

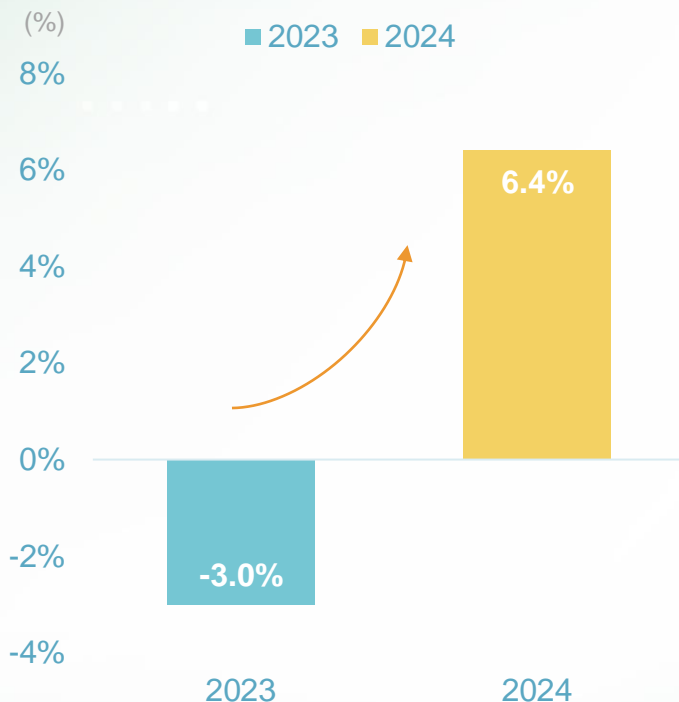
Worldwide Semiconductor Market Forecast, 2021-2030



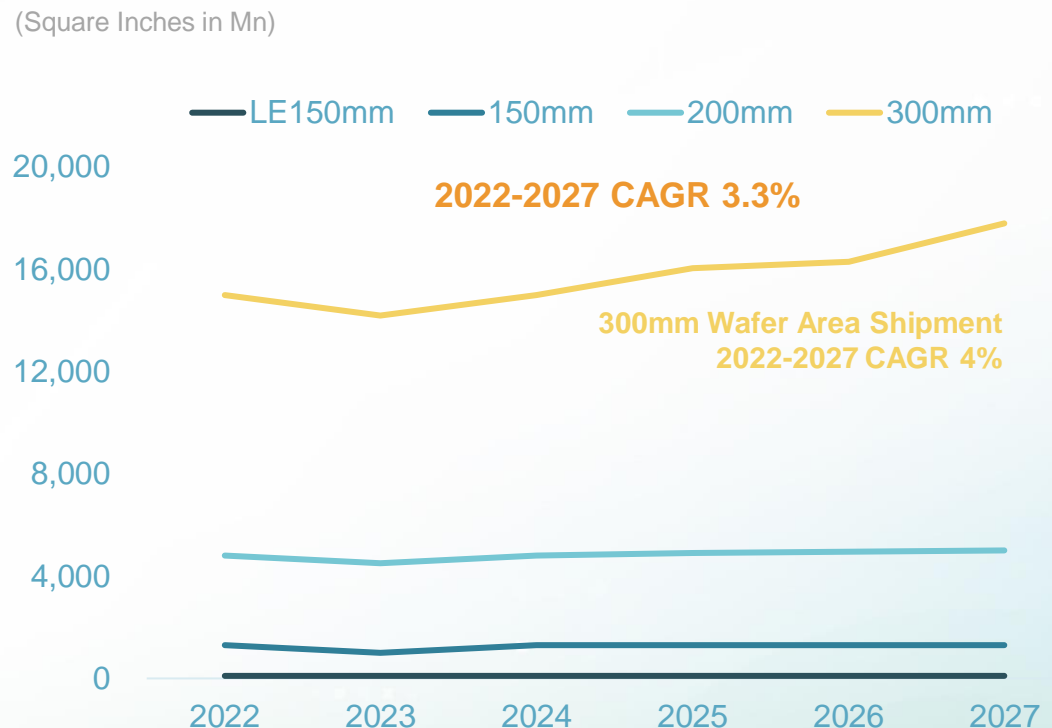
Silicon Wafer Area Shipment Forecast

- Despite an estimated decline of 3% in total wafer shipments in 2023, a rebound in growth rate is expected in 2024, with an anticipated increase of 6.4%.
- The CAGR for total wafers from 2022 to 2027 is expected to approach 3.3%, with a notable increase of CAGR over 4% for 300mm wafers.

Silicon Wafer Area Shipment Forecast, 2023-2024



Silicon Wafer Area Shipment Forecast (By Segment), 2022-2027

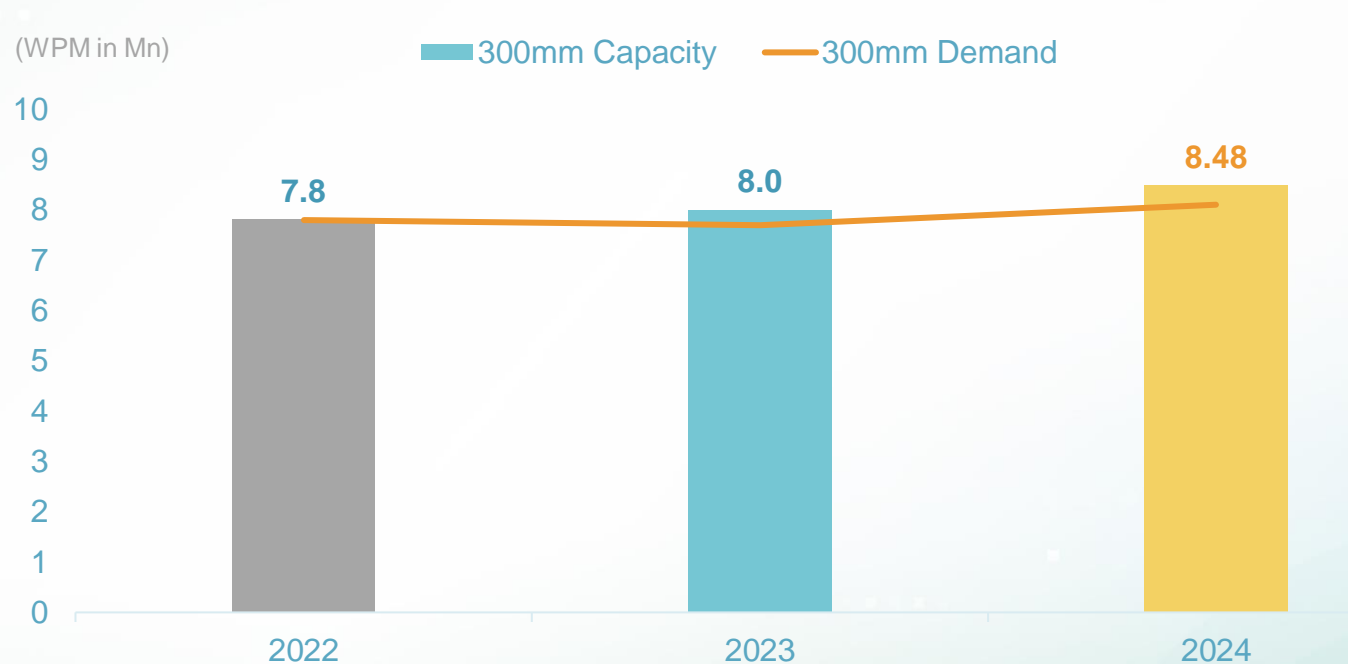




300mm Supply Demand Balance

- The available 300mm capacity will increase from 7.8 million wpm in 2022 to around 8 million wpm in 2023 and reach 8.5 million wpm in 2024.
- Additional greenfield capacity will come online in 2024. The forecasted growth in 300mm shipments will sustain aggregate 300mm capacity utilization in the upper 90% range.

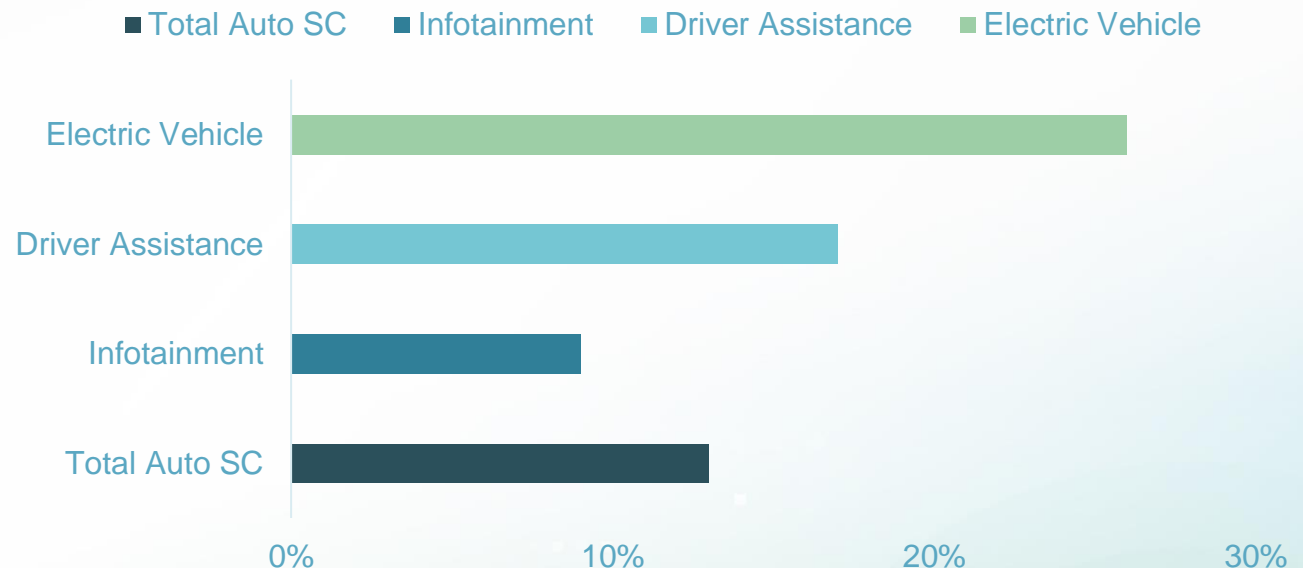
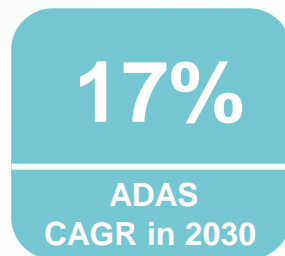
300mm Silicon Wafer Supply & Demand Forecast, 2022-2024



Drivers of Automotive Semiconductor

- The main drivers of automotive semiconductors include EVs, ADAS, AVs, and infotainment systems.
- McKinsey predicts a 17% CAGR for ADAS between 2022 and 2030, with AVs accounting for 12% of vehicle sales in 2030 and increasing to 37% by 2035.
- Vehicle infotainment systems with navigation, wi-fi, smartphone integration, voice commands, and audio/video services are widespread. The market for automotive infotainment is expected to grow at a CAGR of 9% to 11% from 2022 to 2030.

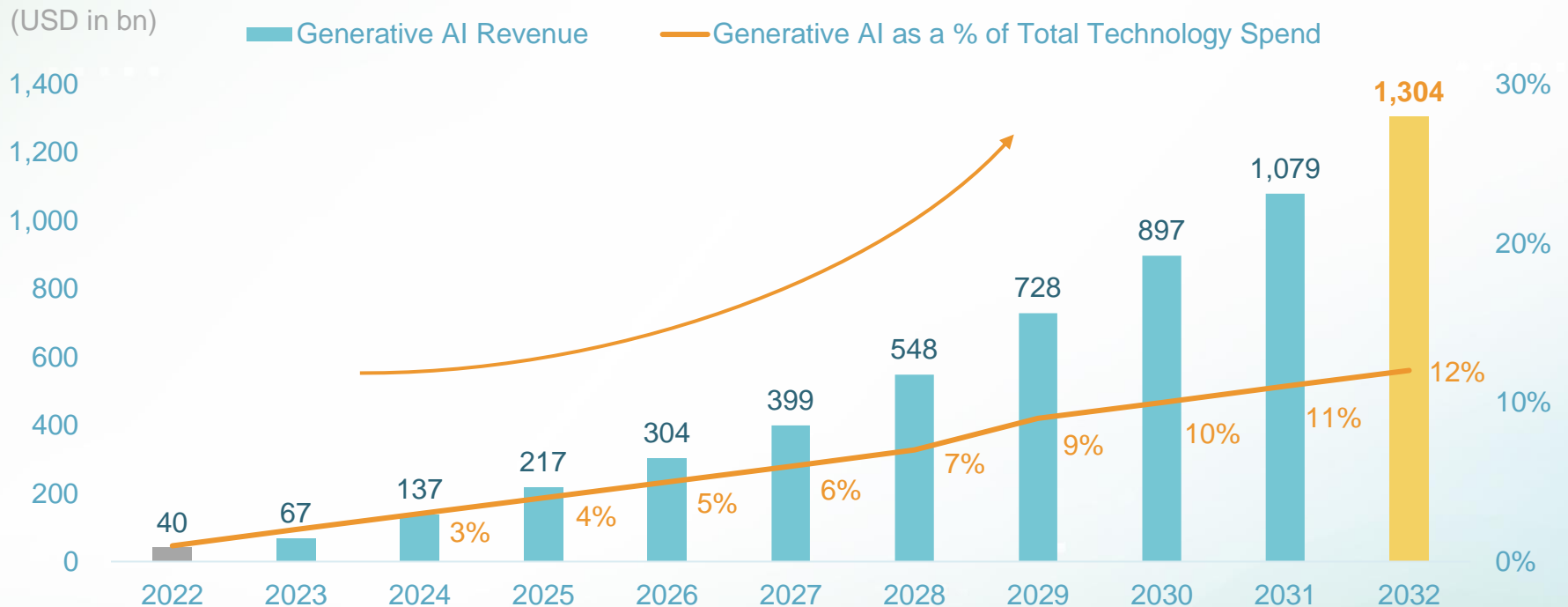
Automotive Semiconductor Market CAGR, 2022-2030



Generative AI

- The generative AI market, driven by AI models like ChatGPT, is projected to reach \$1.3 trillion per year by 2032, a significant increase from \$67 billion.
- The demand for generative AI will come from sectors like infrastructure for training AI models, digital advertising, and AI servers.

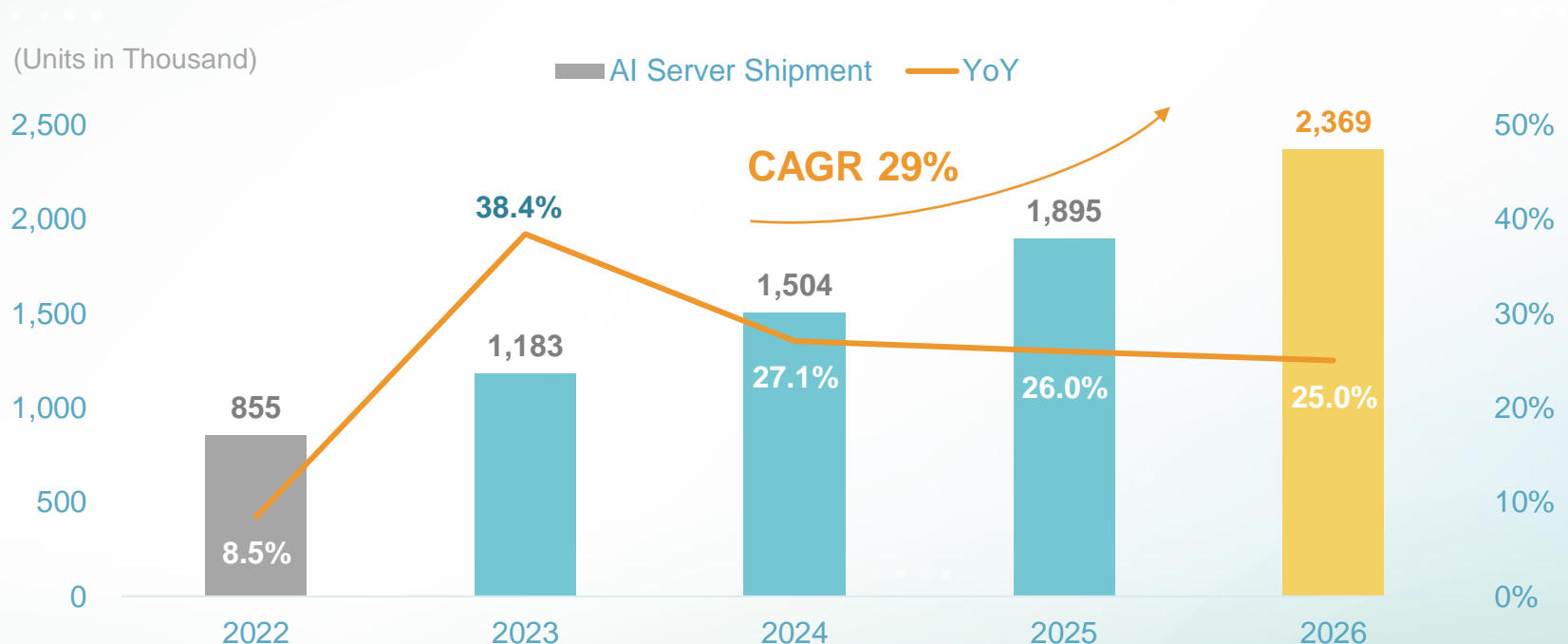
Generative Ai Market Forecast, 2022-2032



AI Server

- TrendForce predicts a substantial surge in AI server shipments for 2023, with 38.4% growth and a projected CAGR of 29% from 2022 to 2026, reaching around 2.4 million units in 2026.
- The demand for AI servers is being driven by AI computations in various professional fields, such as cloud and e-commerce services, intelligent manufacturing, financial insurance, smart healthcare, and advanced driver-assistance systems.

Global AI Server Shipments Forecast, 2022-2026

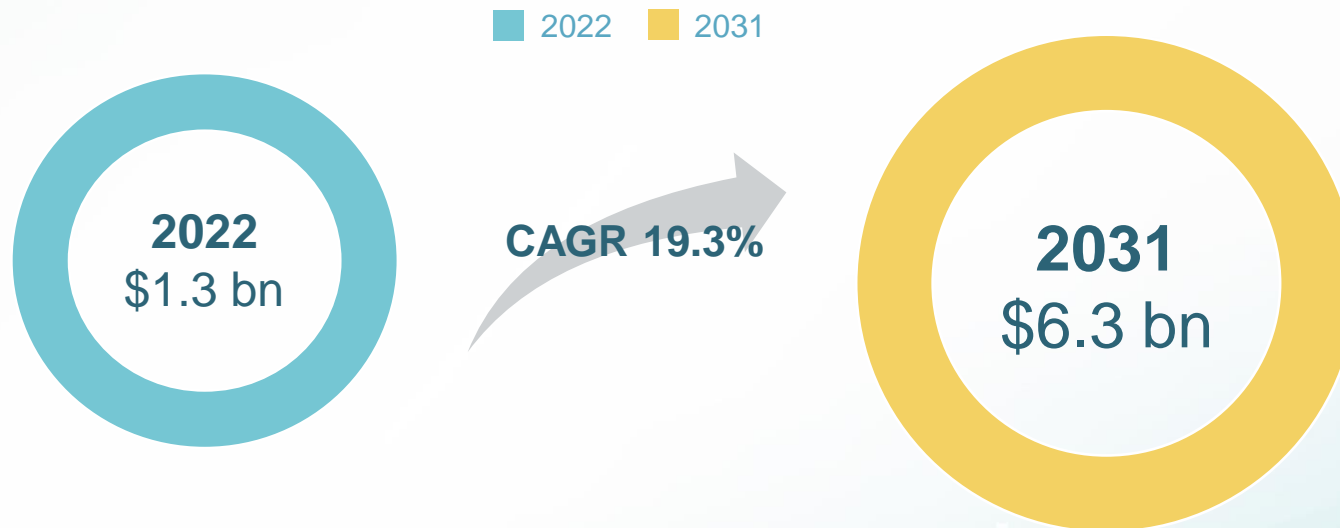




SiC Power Device Market

- The global SiC power devices market is expected to grow at a CAGR of 19.3% from 2023 to 2031, reaching US\$ 6.3 billion by 2031.
- The rise in adoption for SiC semiconductor devices is driven by the increased demand for high-efficiency and high-power density applications, enabling applications in power supplies for high-speed rail, solar energy systems, HEV, EV, and networking servers.

SiC Power Device Market Forecast



Source:

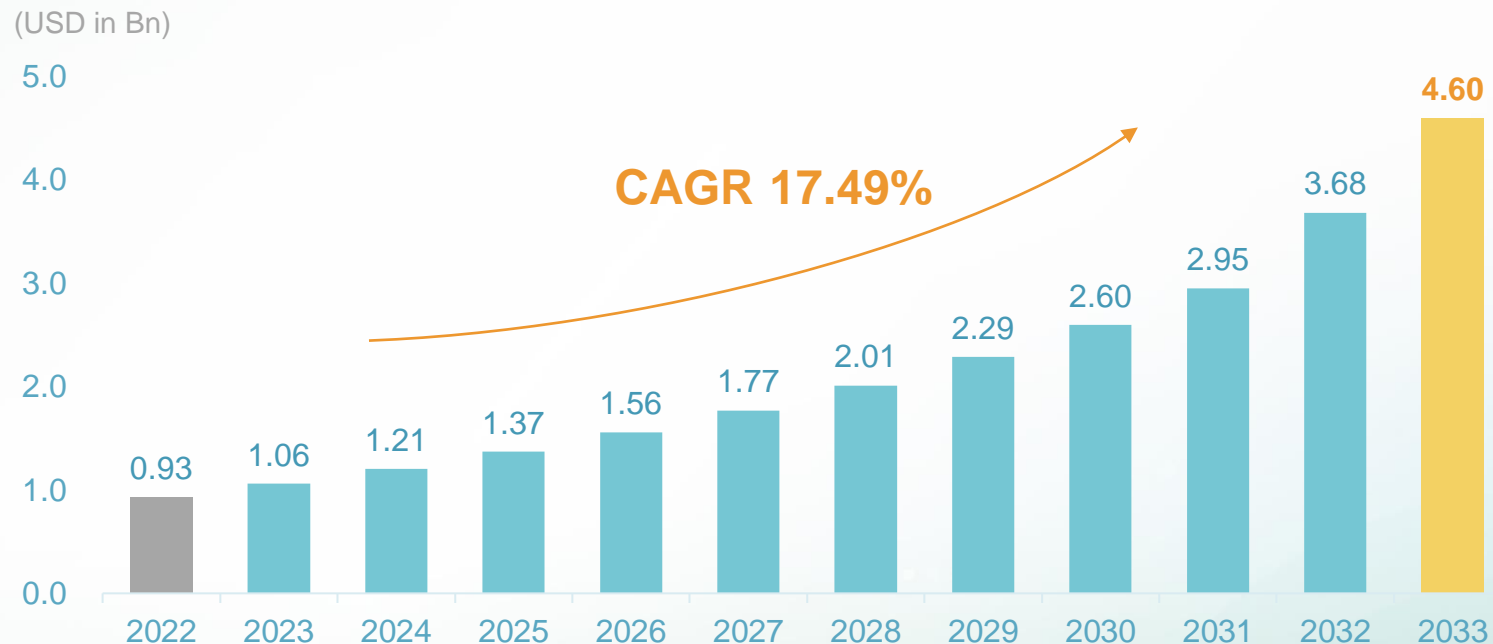
1. Yahoo Finance, June 2023
2. Transparency Market Research, June 2023



GaN Power Device Market

- The GaN power devices market is forecasted to reach around USD 4.6 billion by 2033, with a CAGR of 17.49% between 2023 and 2033.
- The demand for GaN power devices is fueled by emerging uses like electric vehicles, renewable energy systems, and 5G communication networks. Additionally, the increasing need for data centers and cloud computing has further driven the adoption of GaN power devices.

Global GaN Power Devices Market Forecast, 2023-2033



Source:
1. EnterpriseAppsToday, March 2023
2. 11Press, March 2023



03

Financial Performance



Financial Highlight : Q223 vs. Q123 vs. Q222

(NT\$ Mn, except EPS)	Q223	Q123	Q222	QoQ	YoY
Revenue	17,896	18,616	17,540	-3.9%	2.0%
Gross Profit %	37.7%	40.6%	43.6%	-2.9%	-5.9%
Operating Income	5,210	6,103	6,401	-14.6%	-18.6%
Operating Income %	29.1%	32.8%	36.5%	-3.7%	-7.4%
Net Profit	4,789	5,000	2,716	-4.2%	76.3%
Net Profit %	26.8%	26.9%	15.5%	-0.1%	11.3%
EPS	NT\$11.00	NT\$11.49	NT\$6.24	-NT\$0.49	NT\$4.76
EBITDA* ¹	7,691	7,907	5,488	-2.7%	40.2%
EBITDA %	43.0%	42.5%	31.3%	0.5%	11.7%
EBIT	6,057	6,302	3,983	-3.9%	52.1%
ROE* ² (annualized)	32.7%	35.6%	23.6%	-2.9%	9.1%
ROA* ³ (annualized)	11.2%	11.8%	7.3%	-0.6%	3.9%

1. EBITDA = Net Profit + Tax + Interests + Depreciation + Amortization.
2. ROE = Net Profit / Average Shareholders Equity
3. ROA = (Net Profit + Interest*(1- Effective Tax Rate))/Average Asset



Financial Highlight : 1H23 vs. 1H22

(NT\$ Mn, except EPS)	1H23	1H22	YoY
Revenue	36,512	33,846	7.9%
Gross Profit %	39.2%	43.1%	-3.9%
Operating Income	11,312	12,292	-8.0%
Operating Income %	31.0%	36.3%	-5.3%
Net Profit	9,789	4,462	119.4%
Net Profit %	26.8%	13.2%	13.6%
EPS	NT\$22.49	NT\$10.25	NT\$12.24
EBITDA* ¹	15,598	7,290	114.0%
EBITDA %	42.7%	21.5%	21.2%
EBIT	12,359	4,321	186.0%
ROE* ² (annualized)	34.5%	19.7%	14.8%
ROA* ³ (annualized)	11.7%	6.1%	5.6%

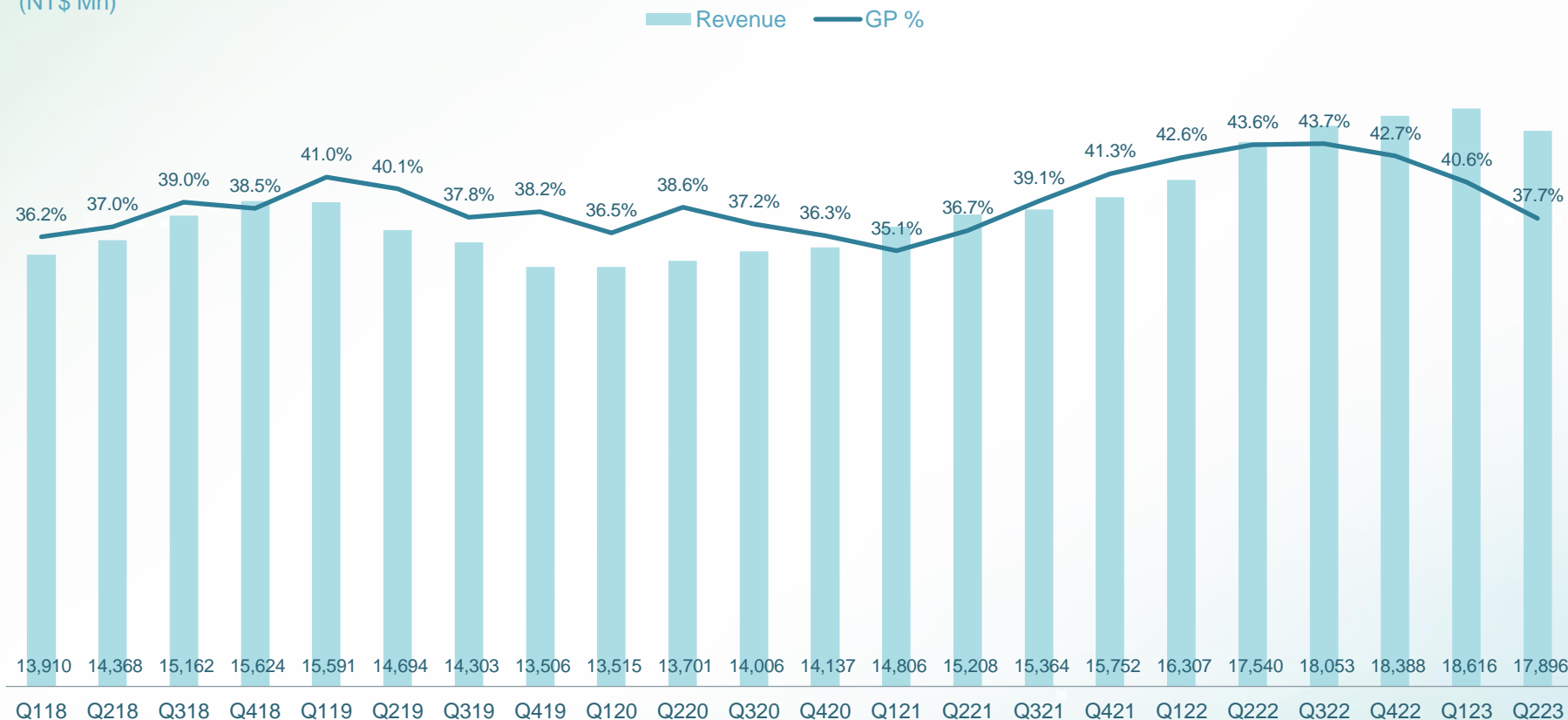
1. EBITDA = Net Profit + Tax + Interests + Depreciation + Amortization.
2. ROE = Net Profit / Average Shareholders Equity
3. ROA = (Net Profit + Interest*(1- Effective Tax Rate))/Average Asset



Revenue & Gross Profit (%)

Revenue & Gross Profit (%)

(NT\$ Mn)



Note:
1. Q223 Gross Profit decreased :Mainly due to increasing power cost, depreciation and unused capacity charges



EBITDA & EPS

EBITDA

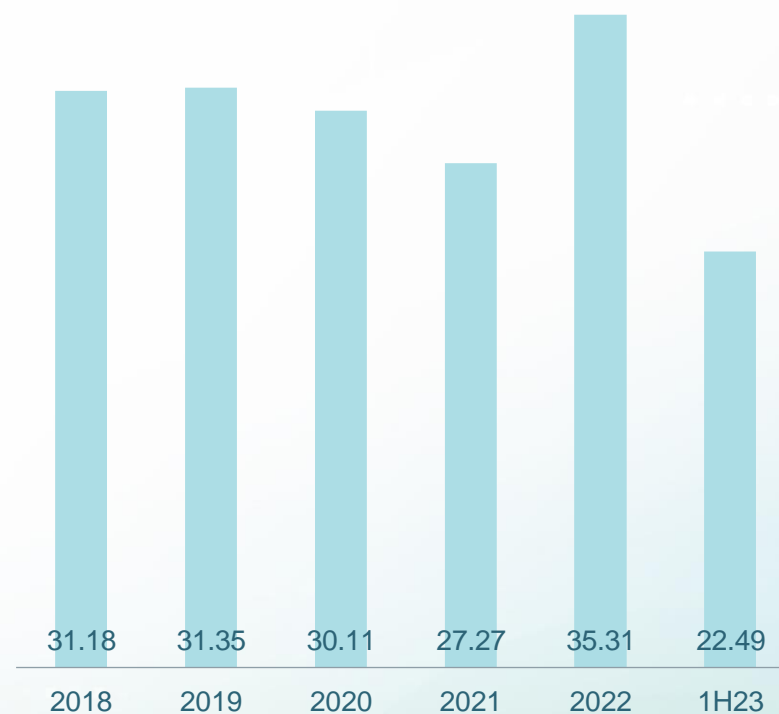
(NT\$ Mn)

■ EBITDA — EBITDA to Revenue



EPS

(NT\$)





Income Statement

Income Statement

(NT\$ Mn)	2021	2022	Q123	Q223	1H23
Revenue	61,131	70,287	18,616	17,896	36,512
<i>Growth (%)</i>	10.4%	15.0%	1.2%	-3.9%	7.9%
Gross Profit	23,286	30,342	7,551	6,744²	14,295²
<i>Gross Profit (%)</i>	38.1%	43.2%	40.6%	37.7%	39.2%
EBITDA	22,507	25,526¹	7,907	7,691	15,598
<i>EBITDA (%)</i>	36.8%	36.3%	42.5%	43.0%	42.7%
Operating Income	17,693	24,983	6,103	5,210	11,312
<i>Operating Income (%)</i>	28.9%	35.5%	32.8%	29.1%	31.0%
Profit before Tax	16,445	20,107¹	6,885	6,766³	13,651³
<i>Profit before Tax Margin (%)</i>	26.9%	28.6%	37.0%	37.8%	37.4%
Net Profit	11,870	15,367¹	5,000	4,789³	9,789³
<i>Net Profit (%)</i>	19.4%	21.9%	26.9%	26.8%	26.8%
EPS (NT\$)	27.27	35.31¹	11.49	11.00	22.49

1. Due to the valuation of realized gains/loss of Siltronic shares measured at fair value through profit or loss and impacts from other factors

2. Q223 Gross Profit decreased: Mainly due to increasing of energy cost, depreciation and unused capacity charges

3. Q223 Net Profit increased: Due to dividends received from holding Siltronic shares, the valuation of realized gains/loss of Siltronic shares measured at fair value through profit or loss & FX gains



Balance Sheet

Balance Sheet

(NT\$ Mn)	2021	2022	Q123	Q223
Assets				
Cash and cash equivalents	65,894	80,491	74,200	48,827 ¹
Account receivable	9,118	10,160	10,253	10,726
Inventories	7,295	8,535	9,233	9,213
Property, plant and equipment	33,943	39,487	42,873	49,591
Other assets	34,395	30,823	39,411	54,754
Total assets	150,645	169,496	175,971	173,111
Liabilities				
Short-term loan	6,264	6,544	7,911	23,013 ²
Account payable	4,340	4,176	4,993	4,815
Long-term loan	45,125	42,780	45,235	22,641 ³
Other liabilities	49,284	61,672	59,663	63,597 ⁴
Total liabilities	105,013	115,172	117,802	114,066
Shareholder equity	45,632	54,324	58,169	59,044

Cash-related other assets include:

(NT\$ Mn)	Q223
Deposits in banks held for three months or more	25,449
Restricted cash	3,091

*Restricted cash is temporarily deposited for tax consideration, could be used when necessary.

1. Q223 Cash and cash equivalents decreased: Deposits in banks for over three month are classified in other assets & Repurchase of ECB
2. Q223 Short-term loan increased: Mainly due to reclassification of ECB based on liquidity from long-term loan to short-term loan
3. Q223 Long-term loan decreased: Reclassification of ECB based on liquidity from long-term loan to short-term loan
4. Q223 Other liabilities increased: Increased in deferred income tax liabilities



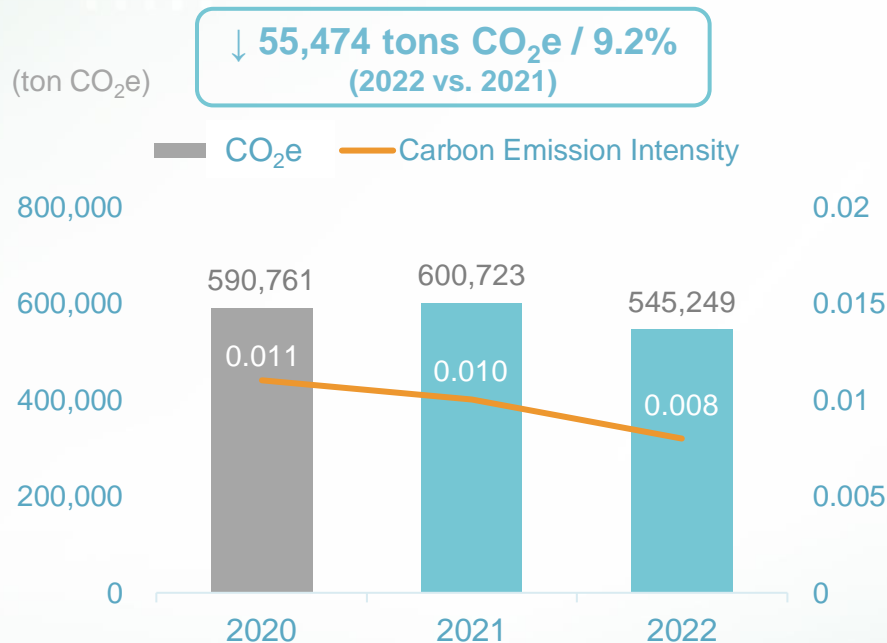
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ESG

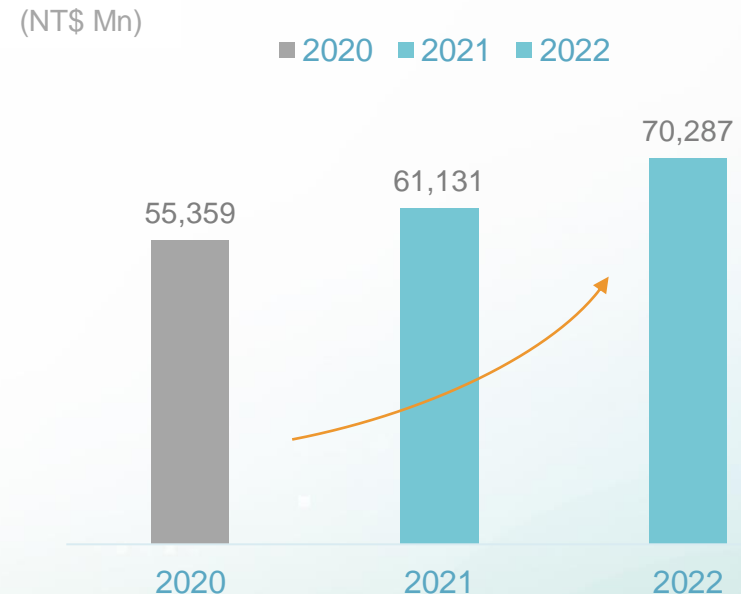
ESG Highlights – Sustainable Environment – GHG

- In 2022, **CO₂ emissions decreased by around 9.2%**, leading to a **reduction of approximately 55,474 tons CO₂e**, primarily attributed to changes in production capacity and management improvements in energy usage across various factory areas.
- Despite the Company's revenue has **increased for three consecutive years**, while the **GHG Emission Intensity¹ has been decreasing from 0.011 in 2020 to 0.008 in 2022**, highlighting the accomplishments in energy conservation and the resulting economic benefits through environmentally friendly practices.

Total GHG Emission, 2020-2022



Consolidated Revenue, 2020-2022

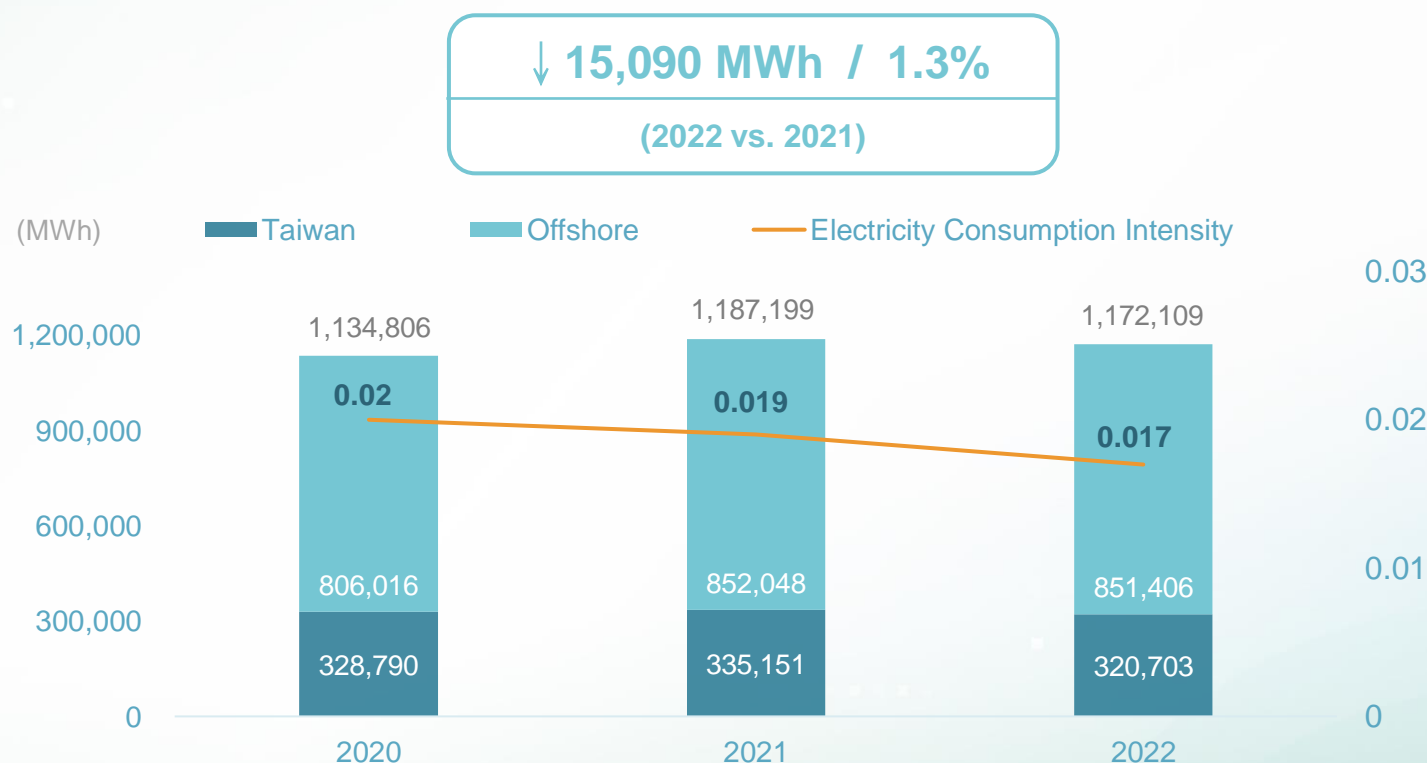


1. GHG Emission Intensity = ton CO₂e / Consolidated revenues(NTD thousands)

ESG Highlights – Sustainable Environment – Power (1)

- The Company introduced **ISO 50001** and achieved total **electricity consumption decreased by 1.3% (15,090 MWh) in 2022** compared to 2021.
- Despite the Company's **revenue has increased for three consecutive years, electricity consumption Intensity¹ has gradually decreased from 0.02 in 2020 to 0.017 in 2022.**

Total Electricity Consumption by Plants Worldwide, 2020-2022



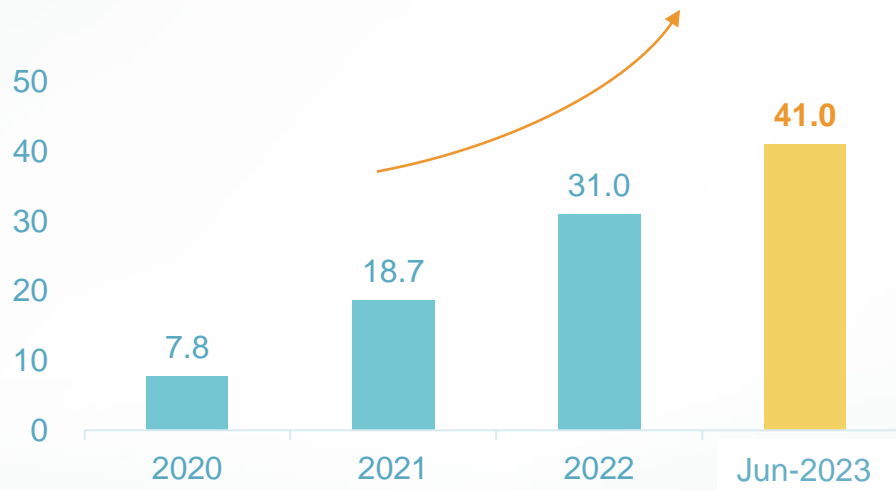
1. Electricity Consumption Intensity = MWh / Consolidated revenues(NTD thousands)

ESG Highlights – Sustainable Environment – Power (2)

- The **cumulative solar capacity** in 2022 has **grown by 65.8%**, from 18.7 MW to 31 MW, compared to 2021.
- As of June 2023, the cumulative solar capacity has reached **41 MW**, generating around **50,000 MWh annually** and resulting in a **reduction of 25,000 tons of CO₂e per year**, which is equivalent to **planting 2,035,124 trees**.
- With **2 solar power related SPVs** and **52 solar power plants**, securing power supply and expanding green energy weight.
- In October 2022, the Company became an **official member of RE100**, demonstrating dedication to increasing the utilization of green energy and making a commitment to **achieving 100% renewable energy usage by 2050**.

Cumulative Solar Capacity, 2020-2023/6

(MW)



2 solar power related SPVs



52 solar power plants¹

Secure power supply and expand green energy weight

2030

20%

2035

35%

2040

50%

2050

100%

100% Renewable Energy Usage by 2050



Carbon Removal



Purchase Carbon Offset Products



Improve Energy Efficiency



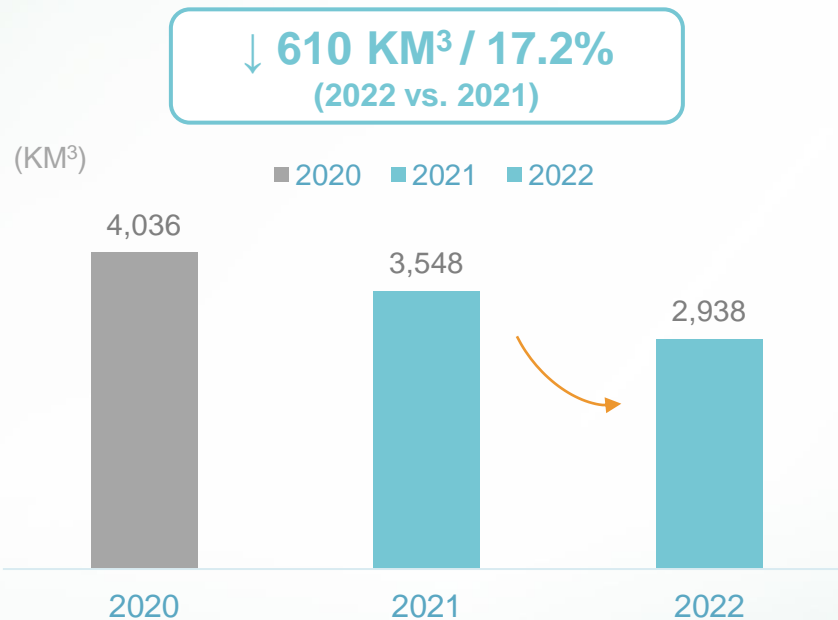
Adopt Renewable Energy

1. As of 2023/06/30

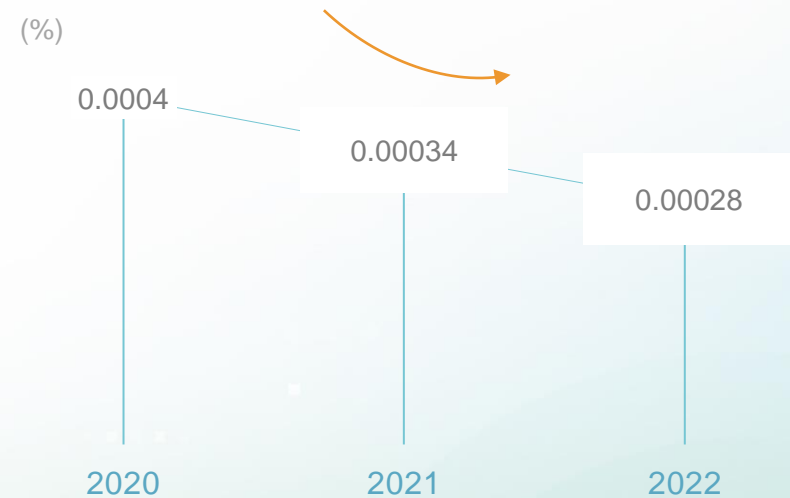
ESG Highlights – Sustainable Environment – Water

- For **three consecutive years**, water consumption consistently decreased, with a significant **17.2% (610 kM³) reduction** in 2022 compared to 2021.
- Despite capacity expansion, the Company has successfully **reduced water consumption intensity¹ from 0.0004 in 2020 to 0.00028 in 2022**.
- Despite the global water scarcity crisis, the Company optimizes water usage, minimizes consumption, maximizes revenue, maintains uninterrupted shipments, and continuously adjusts operations to develop eco-friendly business models.

Water Consumption Quantity, 2020-2022



Water Consumption Intensity¹, 2020-2022



1. Water Consumption Intensity = KM³ / Consolidated revenues(NTD thousands)

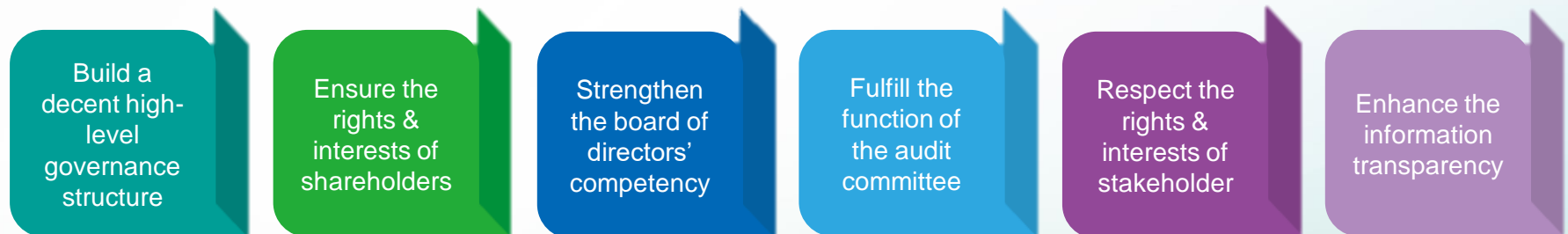
ESG Highlights – Corporate Governance

- The Company has been consistently recognized for its **top 5% corporate governance** among all Taiwan listed companies for **five consecutive years**. It is also included as one of the **Top 30 companies in the TIP TPEX ESG 30 Index, FTSE4Good Index Series**, and ranked in the **top 100 of the Big 2000 by Commonwealth Magazine¹**.
- In order to fulfill corporate culture with integrity and achieve benefits for stakeholders, the Company enhances the information transparency and build up a high-level governance structure.

Top 5% Corporate Governance



High-level Operation Management



1. Evaluated the company's relative performances in 2022

ESG Highlights – Social Welfare

- The Company holds charity events covering 4 aspects: **education, children, disability and volunteer** to foster a belief about love and responsibility.
- The Company is committed to caring for underprivileged communities by extending to concrete actions and educational initiatives.
- In order to encourage employee participation in social welfare activities, the Company matches employee **donations on a 1:1 basis (every contribution made by employees will be matched 1:1 by the company)**, aiming to spread love and warmth to places in need of assistance.

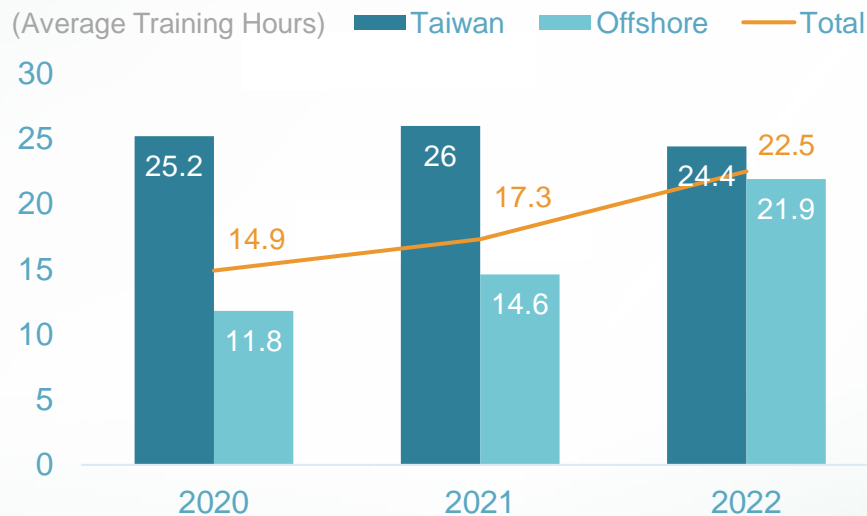
Social Welfare Activities Key Achievements in 2022



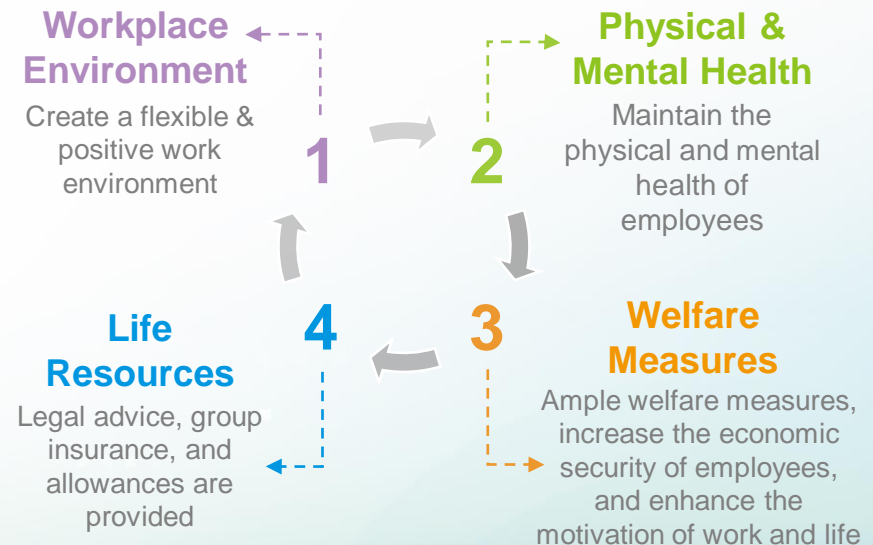
ESG Highlights – Employee Welfare

- The Company prioritizes employee care, **including workplace safety, health, resources, and welfare** to foster higher self-worth and a joyful working atmosphere for our employees.
- Employee remuneration is **adjusted annually** based on objective data, including macroeconomic indicators, consumer price indices, job positions, years of service, and professional capabilities, to ensure fairness and prevent discrimination.
- The Company **provides an annual education training program** to equip employees with relevant knowledge, technology, and skills. The **average hours of employee education and training increase each year**, ensuring continuous professional development for all employees.

Average Employee Education & Training Hours, 2020-2022



Employee Welfare Program





04

Q&A



GlobalWafers Co., Ltd.
環球晶圓股份有限公司



Thank You



Learn More on
Our Website