



# Nanya Technology Q4 2022 Investor Conference

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# Safe Harbor

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# 01

## Q4'22 REVENUE & RESULTS



# Q4'22 Financial Results Summary

Amount in Million NT\$, except for EPS & BVPS	Q4'22 (Unaudited)		Q3'22		QoQ	Q4'21		YoY
Net Sales	7,954	<b>100%</b>	11,022	<b>100%</b>	-27.8%	21,399	<b>100%</b>	-62.8%
Gross Profit (Loss) <i>Gross Margin(%)</i>	1,037	<b>13.0%</b>	3,597	<b>32.6%</b>	-71.2%	10,563	<b>49.4%</b>	-90.2%
Operating Income (Loss) <i>Operating Margin(%)</i>	-1,544	<b>-19.4%</b>	920	<b>8.3%</b>	-267.8%	8,023	<b>37.5%</b>	-119.2%
EBITDA* <i>EBITDA Margin (%)</i>	2,218	<b>27.9%</b>	4,717	<b>42.8%</b>	-53.0%	11,850	<b>55.4%</b>	-81.3%
Non-operating Income (Expense)	121**	<b>1.5%</b>	2,243	<b>20.3%</b>		101	<b>0.5%</b>	
Income Tax Benefit (Expense)	272	<b>3.4%</b>	-522	<b>-4.7%</b>		-1,670	<b>-7.8%</b>	
Net Income (Loss) <i>Net Margin (%)</i>	-1,151	<b>-14.5%</b>	2,641	<b>24.0%</b>	-143.6%	6,454	<b>30.2%</b>	-117.8%
Earnings Per Share (NT\$)	-0.37***		0.85			2.08		
Book Value Per Share (NT\$)	58.41****		59.29			55.85		

Remark: \* EBITDA = Operating income + Depreciation & Amortization Expenses

\*\* FX loss unfavorable NT\$2,336M QoQ

\*\*\* EPS is based on weighted average outstanding shares of 3,098M

\*\*\*\* BVPS is calculated based on 3,098M outstanding shares

# Quarterly Revenue Results

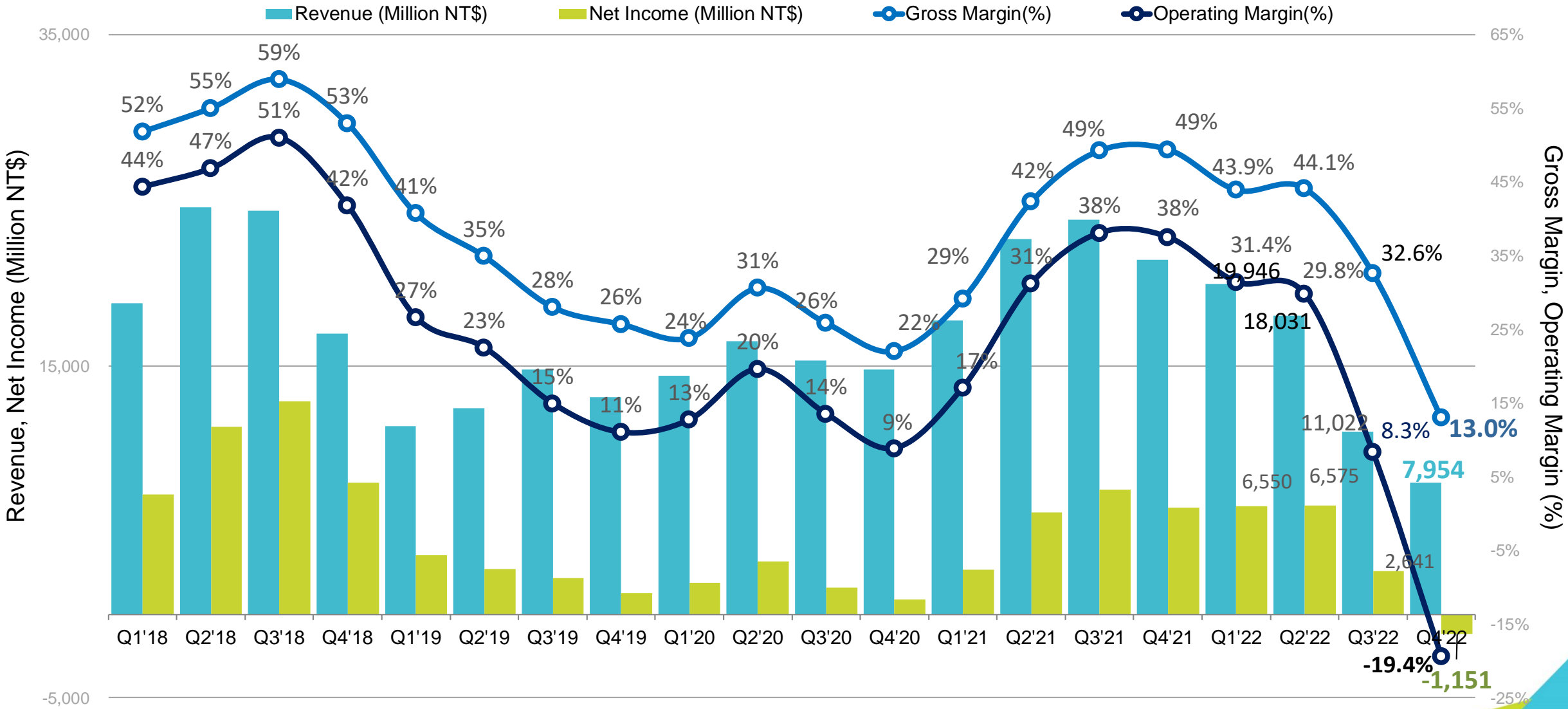
	QoQ Q4'22 vs. Q3'22	YoY Q4'22 vs. Q4'21
Revenue	-27.8%	-62.8%
Shipment	Decreased low-single digits%	Decreased low-thirties%
ASP	Decreased mid-twenties%	Decreased low-fifties%
Exchange Rate	Increased low-single digits%	Increased low-teens%

- Q4'22 Revenue decreased by 27.8% QoQ
- Q4'22 Bit shipment decreased by low-single digits% QoQ
- Q4'22 ASP decreased by mid-twenties% QoQ

# Q4'22 vs. Q3'22 Results Comparison

Amount in Million NT\$	Q4'22 (Unaudited)	Q3'22	QoQ (PPT* Delta)	Remarks
<b>Net Sales</b>	7,954	11,022	-27.8%	<ul style="list-style-type: none"> <li>■ ASP decreased mid-twenties%</li> <li>■ Bit shipment decreased low-single digits%</li> <li>■ FX positive low-single digits% increase</li> </ul>
<b>Gross Profit (Loss)</b> Gross Margin(%)	1,037 <b>13.0%</b>	3,597 <b>32.6%</b>	-19.6%	■ Q4'22 Gross profit decreased NT\$ 2,560M, mainly due to ASP and shipment decrease
<b>Operating Expense</b>	2,581 <b>32.4%</b>	2,677 <b>24.3%</b>	8.1%	■ Operating expenses decreased NT\$ 96M
<b>Operating Income (Loss)</b> Operating Margin(%)	-1,544 <b>-19.4%</b>	920 <b>8.3%</b>	-27.7%	■ Q4'22 OP income decreased NT\$ 2,464M
<b>Net Income (Loss)</b> Net Margin (%)	-1,151 <b>-14.5%</b>	2,641 <b>24.0%</b>	-38.5%	<ul style="list-style-type: none"> <li>■ Net Income decreased NT\$ 3,792M               <ul style="list-style-type: none"> <li>• OP Income decreased NT\$ 2,464M</li> <li>• FX loss unfavorable NT\$2,336M</li> <li>• Interest income favorable NT\$281M</li> <li>• Income tax favorable NT\$794M</li> </ul> </li> </ul>

# Quarterly Financial Highlights



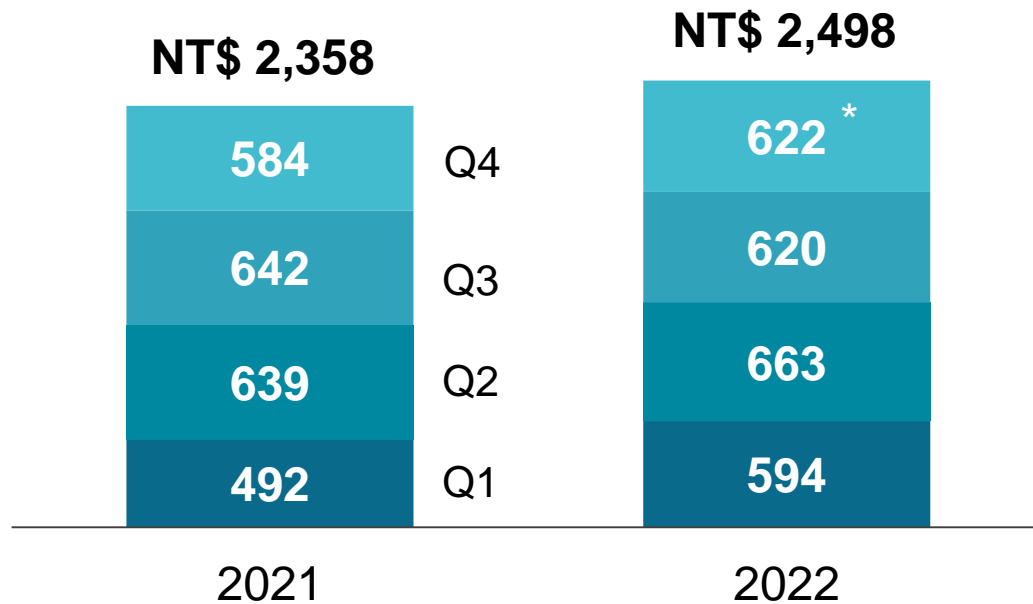


# Operating Expenses

## SG&A Expenses

(Million NT\$)

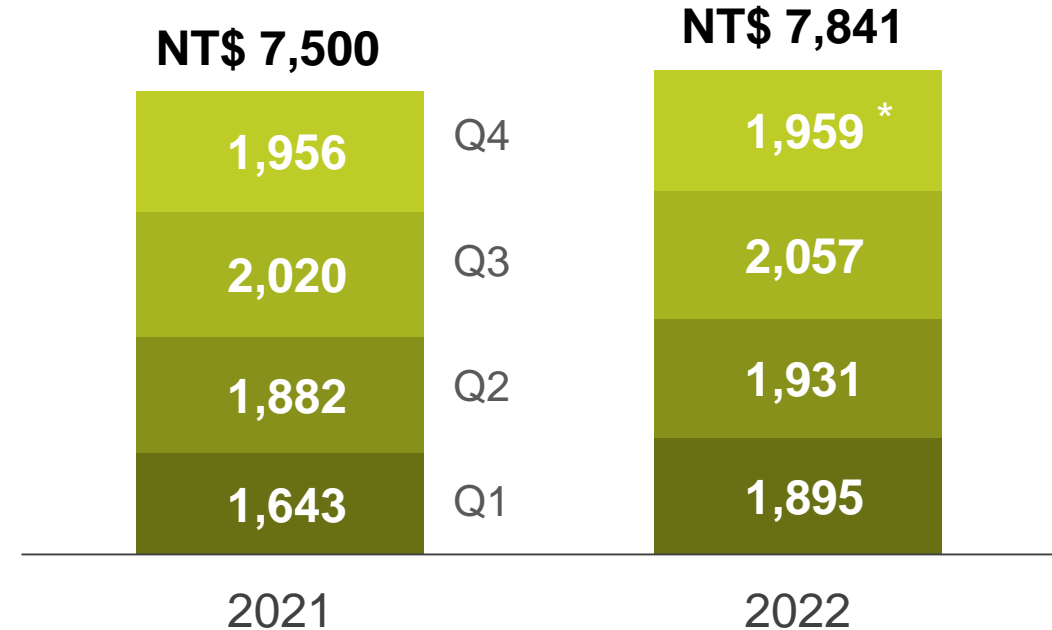
\* Unaudited number



## R&D Expenses

(Million NT\$)

\* Unaudited number



# Cash Flows

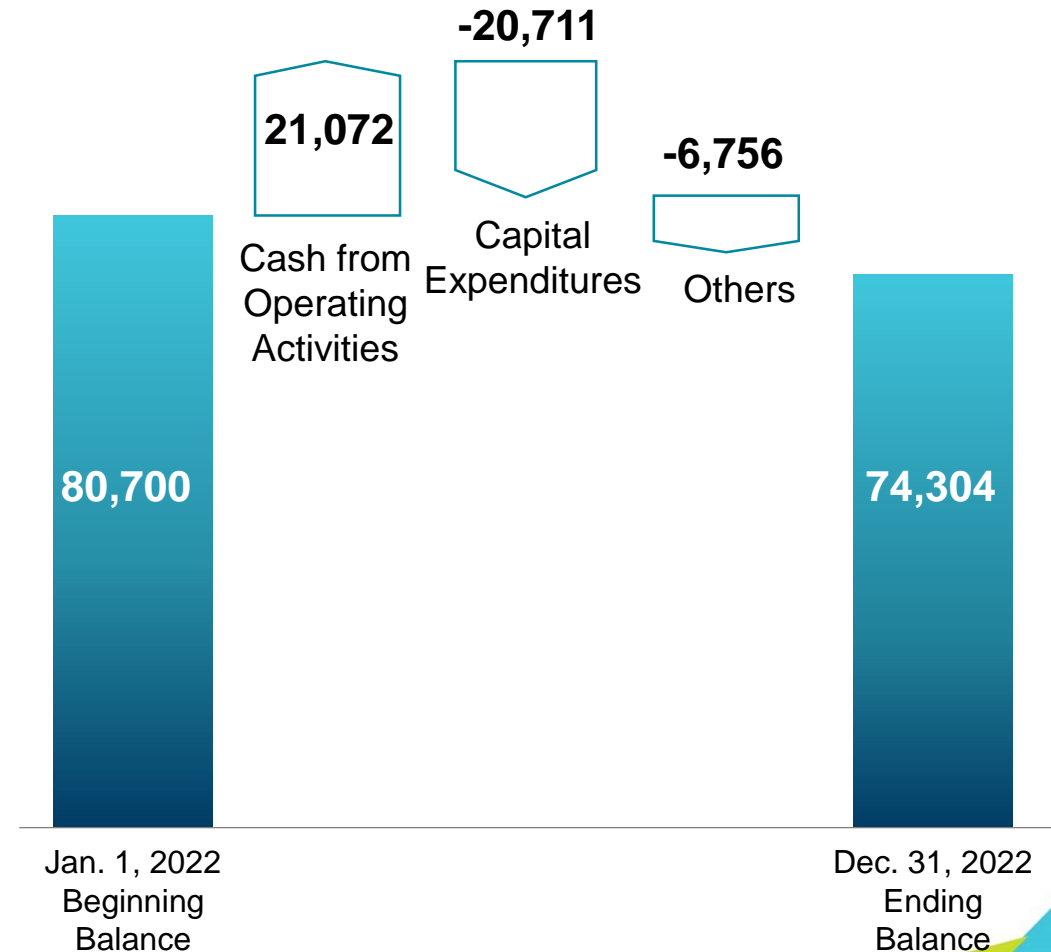
Unit: Million NT\$	Q4'22 (Unaudited)	Q3'22
<b>Beginning Balance</b>	<b>83,012</b>	<b>94,973</b>
Cash from Operating Activities	690	2,739
Capital Expenditures	-6,651	-7,517
Others	*-2,746	** -7,183
<b>Ending Balance</b>	<b>74,304</b>	<b>83,012</b>
Free Cash Flow <sup>(1)</sup>	<b>-5,961</b>	<b>-4,778</b>

(1) Free Cash Flow = Cash from operating activities – Capital expenditures

- \* - NT\$ 2.78 billion of exchange rate changes on cash and cash equivalents
- \*\* 1. - NT\$ 11.47 billion of dividend payout  
2. +NT\$ 3.78 billion of exchange rate changes on cash and cash equivalents

## Year 2022 Cash Flow

Unit: Million NT\$



The background features abstract geometric patterns. On the left, there are overlapping triangles in shades of blue and yellow. On the right, there is a network of grey dots connected by thin lines, forming a web-like structure.

# 02

## 2022 REVENUE & RESULTS

# 2022 Consolidated Income Statement

Amount: Million NT\$	2022 (Unaudited)		2021		YoY
Net Sales	56,952	100.0%	85,604	100.0%	-33.5%
Cost of Goods Sold	35,610	62.5%	48,560	56.7%	
Gross Margin	21,342	37.5%	37,044	43.3%	-42.4%
SG&A Expenses	2,498	4.4%	2,358	2.8%	
R&D Expenses	7,841	13.8%	7,500	8.8%	
Operating Income	11,003	19.3%	27,186	31.8%	-59.5%
Non-operating Income (Exp.)	5,870*	10.3%	581	0.7%	
Income before Tax	16,873	29.6%	27,767	32.4%	-39.2%
Income Tax Benefit (Expense)	-2,259	-4.0%	-4,918	-5.7%	
Net Income	14,614	25.7%	22,849	26.7%	-36.04%
EPS(NT\$)	4.72		7.40		
Book Value Per Share(NT\$)	58.41		55.85		

\* FX gain NT\$ 3,187M, interest income NT\$ 1,393M, equity income NT\$ 574M and other income



# 2022 vs. 2021 Results Comparison

Amount in Million NT\$	2022 (Unaudited)		2021		YoY (PPT* Delta)	Remarks
<b>Net Sales</b>	56,952		85,604		-33.5%	<ul style="list-style-type: none"> <li>■ Bit shipment decreased twenties YoY</li> <li>■ ASP decreased low-teens% YoY</li> <li>■ FX positive mid-single digits% YoY</li> </ul>
<b>Gross Income (Loss)</b> Gross Margin(%)	21,342	<b>37.5%</b>	37,044	<b>43.3%</b>	-5.8%	<ul style="list-style-type: none"> <li>■ Gross Income decreased by NT\$ 15,702M mainly due to shipment and ASP decrease</li> </ul>
<b>Operating Expense</b>	10,340	<b>18.2%</b>	9,858	<b>11.5%</b>	6.7%	<ul style="list-style-type: none"> <li>■ SG&amp;A expense increased NT\$ 140M, R&amp;D expense increased NT\$ 342M</li> </ul>
<b>Operating Income (Loss)</b> Operating Margin(%)	11,003	<b>19.3%</b>	27,186	<b>31.8%</b>	-12.5%	<ul style="list-style-type: none"> <li>■ Operating Income decreased NT\$ 16,184M</li> </ul>
<b>Net Income (Loss)</b> Net Margin (%)	14,614	<b>25.7%</b>	22,849	<b>26.7%</b>	-1.0%	<ul style="list-style-type: none"> <li>■ Net Income decreased by NT\$ 8,235M mainly due to:               <ul style="list-style-type: none"> <li>• Operating Income decreased NT\$ 16,184M</li> <li>• FX gain favorable NT\$ 3,510M (2022: NT\$ +3,187M; 2021: NT\$ -323M)</li> <li>• Interest income increase NT\$ 1,119M</li> <li>• Income tax favorable NT\$ 2,659M</li> </ul> </li> </ul>

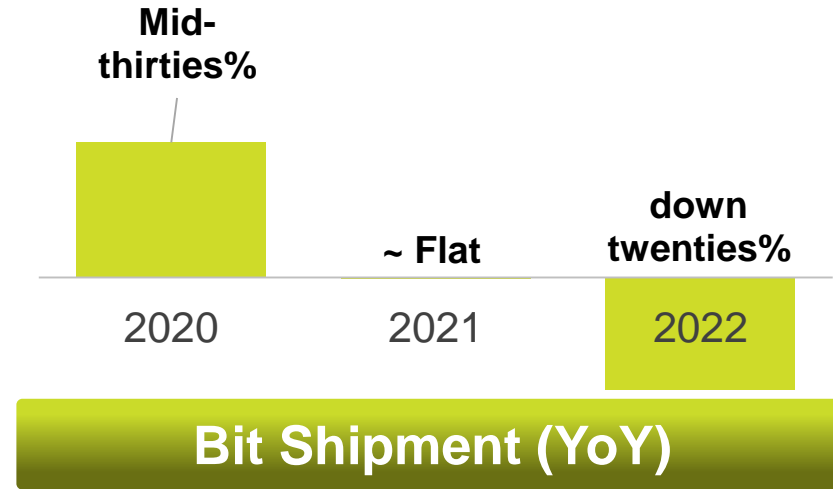
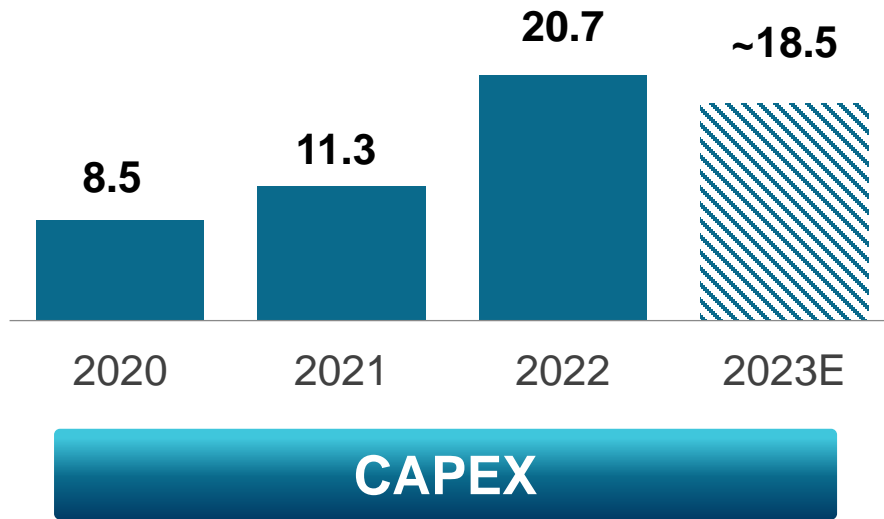
The background features abstract geometric shapes on the left side, including triangles and polygons in shades of blue and yellow. On the right side, there is a network diagram consisting of grey dots connected by thin grey lines, forming a web-like structure.

# 03

## CAPEX & BIT SHIPMENT

# CAPEX & Bit Shipment

NT\$ Billion



## Capital

### Expenditure<sub>(CAPEX)</sub>

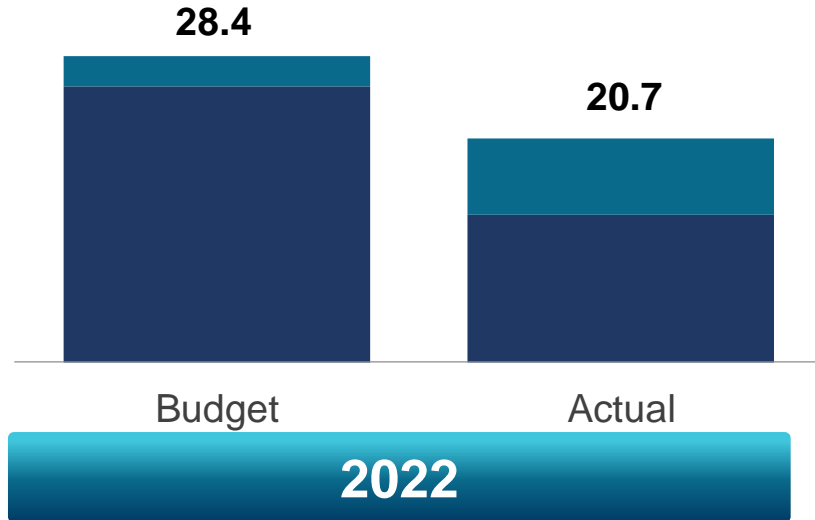
- 2022 CAPEX reduced 27% to NT\$ 20.7B from NT\$ 28.4B
- 2023 CAPEX plan estimated ~ NT\$ 18.5B subject to BoD approval

## Bit Shipment

- 2022 YoY bit shipment down twenties% due to weak market demand
- 1H'23 weak demand may continue
- Production output reduction targeting up to 20% dynamically for 2023

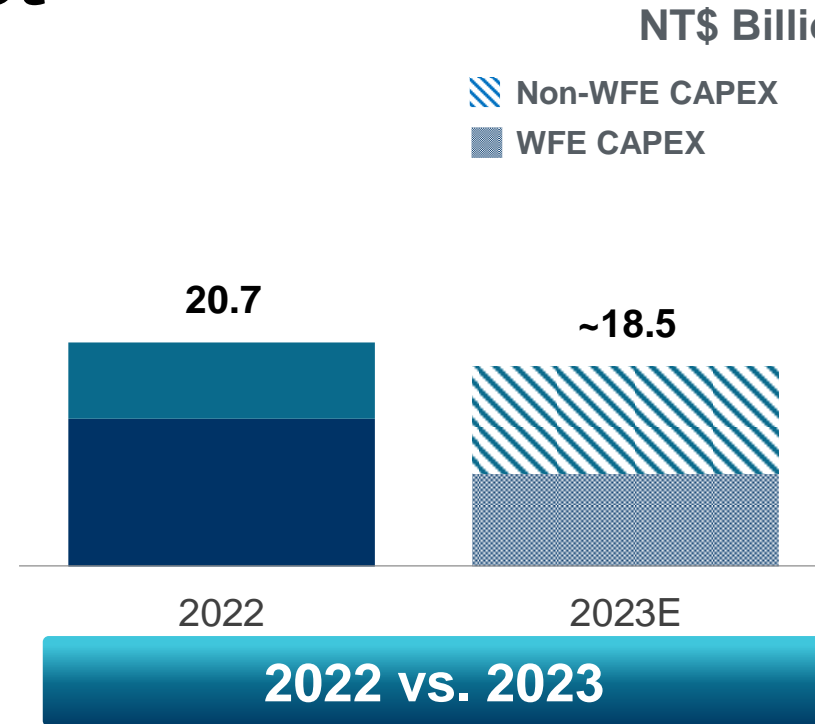
# CAPEX Update and Forecast

■ Non-WFE CAPEX  
■ WFE CAPEX



- Actual CAPEX 27% less than original budget
- Cut 2022 WFE CAPEX by almost half

▨ Non-WFE CAPEX  
■ WFE CAPEX



- 2023 CAPEX plan approx. NT\$ 18.5B
- WFE CAPEX less than 50% of total
- CAPEX plan subject to BoD approval



An abstract geometric design on the left side of the slide, featuring overlapping triangles in various shades of blue and yellow-green, connected by a network of white lines.

# 04

## MARKET OUTLOOK

A faint, light gray background graphic on the right side of the slide, consisting of a network of interconnected dots and lines, resembling a molecular or digital structure.

# Market Outlook(2023)

## Outlook

- Q1'23, DRAM market to remain soft, due to corporates spending and consumer purchasing power decline. Globally, Economics downturn triggered by high inflation and interest rates. Regionally, Russia-Ukraine conflict & China COVID measures impact on supply chain & its domestic demand.
- Q2'23 some global and regional impact may remain uncertain or marginally improved; 2H'23, potentially, DRAM market may gradually recover from downturn

## Supply

- Q1'23 DRAM suppliers' inventory continue to increase, some vendors took actions on CAPEX reduction, capacity adjustment and slowing down process migration

## Demand

- **Server Market:** Enterprise cloud demand healthy, however consumer cloud vendors to reduce investment due to sluggish economy. 2H'23, as the components supply imbalance issue solved, the new CPU platform & DDR5 may stimulate server DRAM demand
- **Mobile Market:** U.S. & Korea mobile phone makers shipment relatively healthy. China brand smartphone relatively sluggish. Q2'23 inflation and inventory impact gradually eased; 2H'23 potentially, smartphone shipments may recover
- **PC Market:** Annual PC shipments continue to decline; average DRAM content remain growth
- **Consumer Market:** Q1'23 TVs and consumer electronics sales conservative, may improve in 2H23; Networking, industrial and automotive demand relatively healthy

The background features abstract geometric patterns. On the left, there are overlapping triangles in shades of blue and yellow. On the right, there is a network of grey dots connected by thin lines, forming a web-like structure.

# 05

## BUSINESS REVIEW & OUTLOOK

# Nanya Business Review & Outlook

## Finance

- Q4'22 EPS NT\$ -0.37; Y2022 EPS NT\$ 4.72

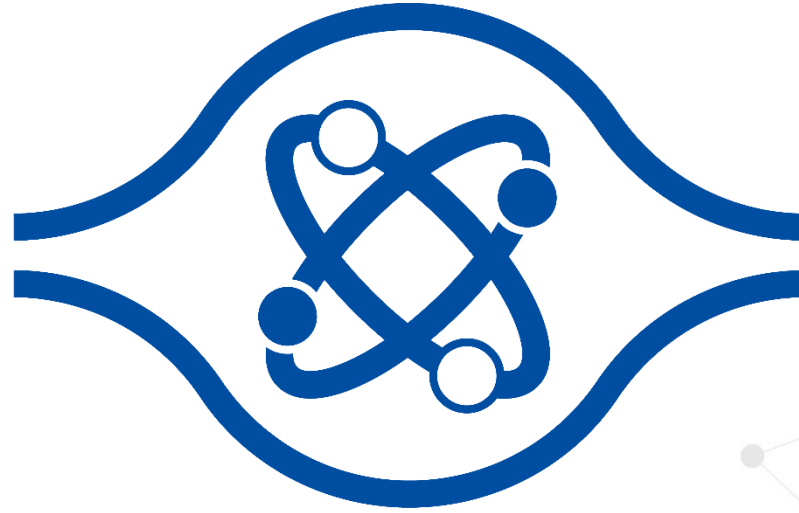
## Operation

- Flexible approach in adjusting product mix, production output and CAPEX to better respond weaker market demand
- 1st 10nm-class (1A) product small volume production; 2nd 10nm-class (1B) piloting and target small volume production in 2023
- Nanya consecutively selected into DJSI World Index and Emerging Markets Index
- Nanya received CDP Water Security “A” list, Climate Change leadership level

## Market Outlook

- Q1'23 global economy slowdown, DRAM market remain soft, Q2'23 need to monitor China recovery, global supply chain restructure & inflation trend





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# Thanks & Questions

# Q4'22 Consolidated Income Statement

Amount: Million NT\$

	Q4'22 (Unaudited)		Q3'22		QoQ	Q4'21		YoY
Net Sales	7,954	100.0%	11,022	100.0%	-27.8%	21,399	100.0%	-62.8%
Cost of Goods Sold	6,917	87.0%	7,425	67.4%		10,836	50.6%	
Gross Margin	1,037	13.0%	3,597	32.6%	-71.2%	10,563	49.4%	-90.2%
SG&A Expenses	622	7.8%	620	5.6%		584	2.7%	
R&D Expenses	1,959	24.6%	2,057	18.7%		1,956	9.1%	
Operating Income	-1,544	-19.4%	920	8.3%	-267.8%	8,023	37.5%	-119.2%
Non-operating Income (Exp.)	121	1.5%	2,243	20.3%		101	0.5%	
Income before Tax	-1,423	-17.9%	3,163	28.7%	-145.0%	8,125	38.0%	-117.5%
Income Tax Benefit (Expense)	272	3.4%	-522	-4.7%		-1,670	-7.8%	
Net Income	-1,151	-14.5%	2,641	24.0%	-143.6%	6,454	30.2%	-117.8%
Earnings Per Share (NT\$)	-0.37		0.85			2.08		
Book Value Per Share(NT\$)	58.41		59.29			55.85		