



# Nanya Technology

**Credit Suisse**

**17<sup>th</sup> Annual Asian Technology Conference**

Presentation to Investors and Analysts 7 September 2016

**Dr. Pei-Ing Lee** , President & Spokesman

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# Agenda



- |     |                      |
|-----|----------------------|
| 01. | NTC Overview         |
| 02. | Revenue & Results    |
| 03. | Capex & Bit Shipment |
| 04. | Market Outlook       |
| 05. | Business Outlook     |



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# 01

## OVERVIEW



# NTC Overview



## IDM Company

- DRAM Design, Production & Sales
- Founded in 1995, IPO in 2000
- Headquarters: Taoyuan, Taiwan
- Employees: 2,500
- Formosa Plastic Group (FPG) has 75.8% equity ownership

## Technology & Capacity

- 30nm (>95%) & 42nm (<5%)
- 20nm scheduled for pilot run in 1Q 2017.
- Capacity : 60,000 WSPM\* (12" )

## Partnerships with Micron

- Technology license
- NTC owns 24% of Inotera's share
- Support Inotera share swap transaction process

# Product Portfolio

Nanya is actively developing broadest portfolio of memory solutions – in products ranging from 512Mb to 8Gb memory products of consumer memory (DDR~ DDR4) and low power memory (LPDDR ~ LPDDR3)



## Consumer

- DDR4 ~ DDR
- Packaged & SiP



## Mobile

- LPDDR3 ~ LPDDR
- KGD, PoP & MCP



## Auto & IT

- DDR4 ~ DDR2
- LPDDR3 ~ LPDDR
- Packaged & KGD



## Custom

- Foundry
- Non-JEDEC DRAM

SiP = System in Package

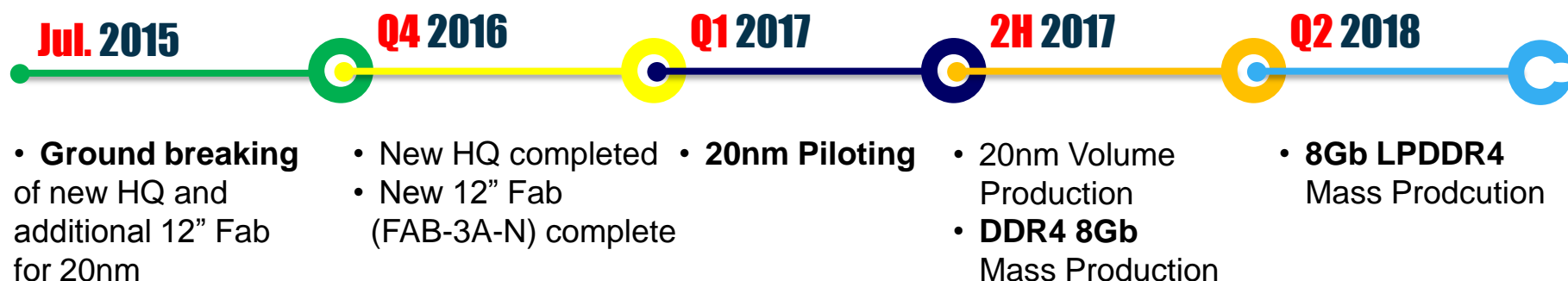
KGD = Known Good Die

PoP = Package on Package

MCP = Multiple-Chip Package

# 20nm Technology Plan

- Plan to convert 30K WSPM to 20nm Technology.
- Additional clean room space will be needed, output schedule for 2H 2017.
- Total capacity remains at 60K WSPM. (30K convert to 20nm, 30K at 42/30nm)





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# 02

## REVENUE & RESULTS



# 2015 & 1H'2016 P&L Results

				
	Unit: NT\$B			
	2015	1Q'16	2Q'16	1H'16
<b>Revenue</b>	43.9B	10.4B	8.9B	19.3B
<b>Gross Profit</b> <i>Gross Margin (%)</i>	17.3B <b>39.4%</b>	3.4B <b>32.7%</b>	2.5B <b>28.4%</b>	5.9B <b>30.7%</b>
<b>Operating Income</b> <i>Operating Margin (%)</i>	13.5B <b>30.7%</b>	2.6B <b>25.3%</b>	1.7B <b>18.5%</b>	4.3B <b>22.2%</b>
<b>Non-operating Income</b>	4.2B	-0.79B	-0.6B	-1.4B
<b>Net Income</b> <i>Net Margin (%)</i>	17.1B <b>39.1%</b>	1.8B <b>18%</b>	0.4B <b>4.4%</b>	2.2B <b>11.6%</b>
<b>Capital</b>	24B		27B	
<b>EPS</b>	<b>7.07</b>	<b>0.68</b>	<b>0.14</b>	<b>0.82</b>

## Company highlights in Q2'16

- ASP decreased mid-single digits.
- EBITDA Margin: 35.4% of Q2'16.
- Recognized NT\$ 457M loss from Inotera's loss in Q2.
- Recognized NT\$ 765M tax from undistributed earnings.

# 1H'16 Cash Flows

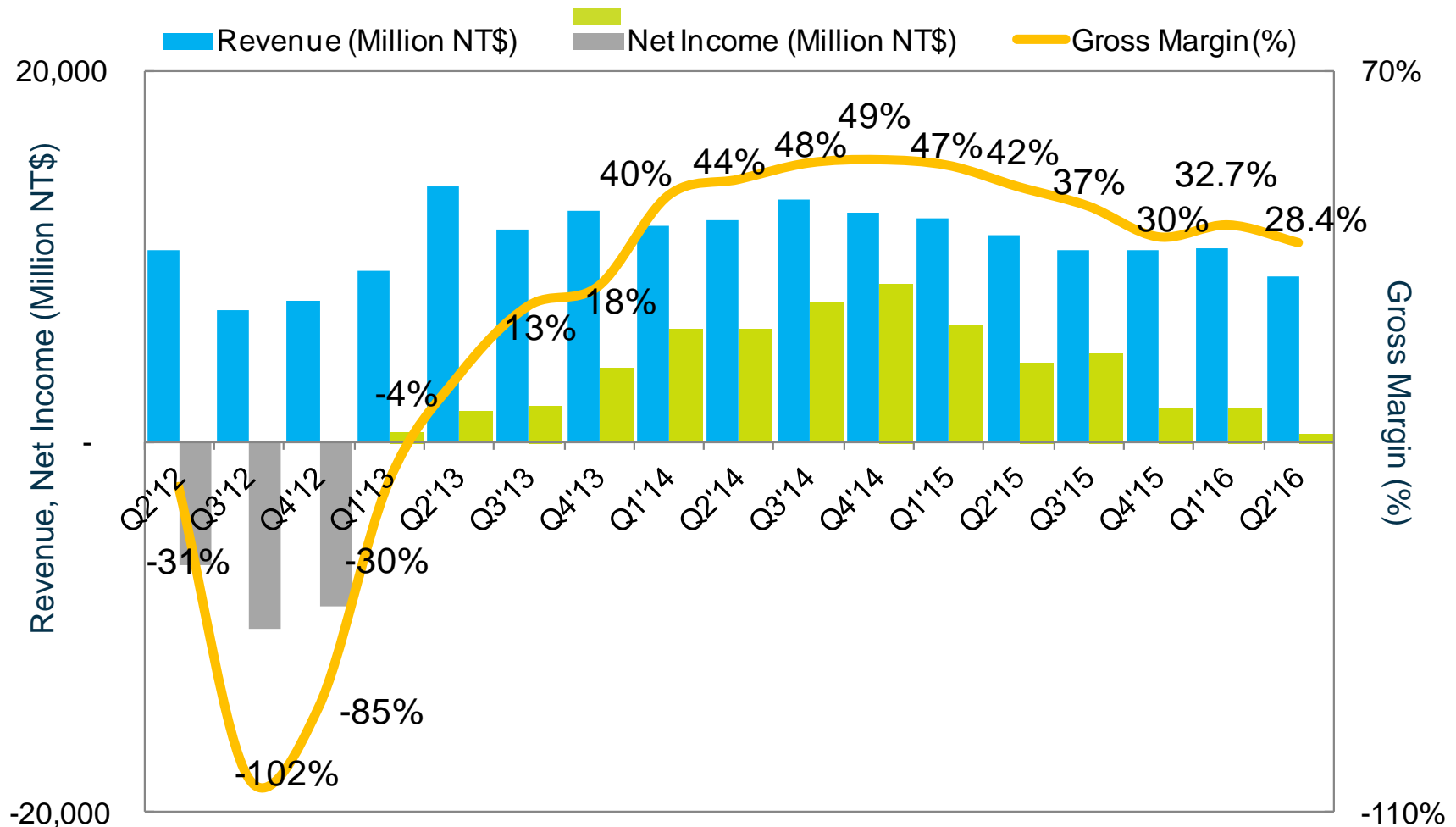
(Unit: Million NT\$)	1Q'16 Audited & Consolidated	2Q'16 Audited & Consolidated	1H'16 Audited & Consolidated
<b>Beginning Balance</b>	<b>3,104</b>	<b>14,545</b>	<b>3,104</b>
Cash from Operating Activities	4,449	3,343	7,792
Capital expenditures	-866	-1,689	-2,555
Long-term & Short-term loans	155	1	156
Investments and others	7,703*	-239**	7,464
<b>Ending Balance</b>	<b>14,545</b>	<b>15,961</b>	<b>15,961</b>
Free Cash Flow <sup>(1)</sup>	<b>3,583</b>	<b>1,655</b>	<b>5,238</b>

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

\*Completed NT\$ 11.7 billion capital injection and invested NT\$ 3.8 billion on short term money market fund in Q1'16

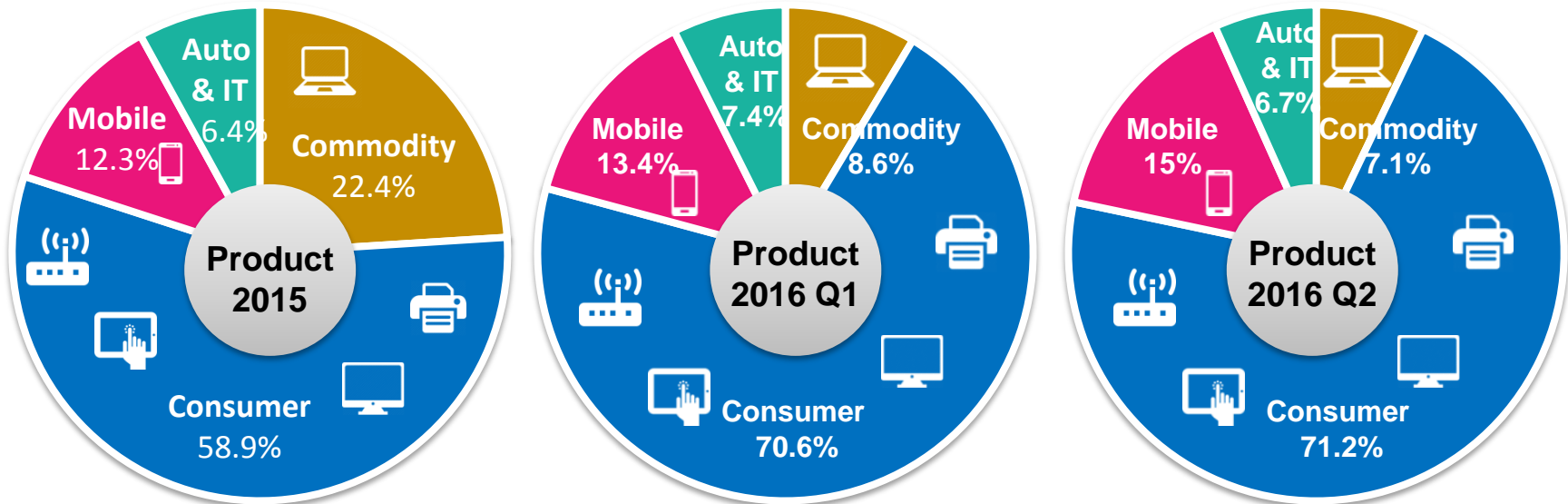
\*\* Mainly for Investment on short term money market fund

# Financial Highlights



# Sales Breakdown by Application

Quality and compliance are top of mind for Nanya, moving beyond TS16949/ AEC-Q100 certification in order to achieve high reliability in diversify applications.







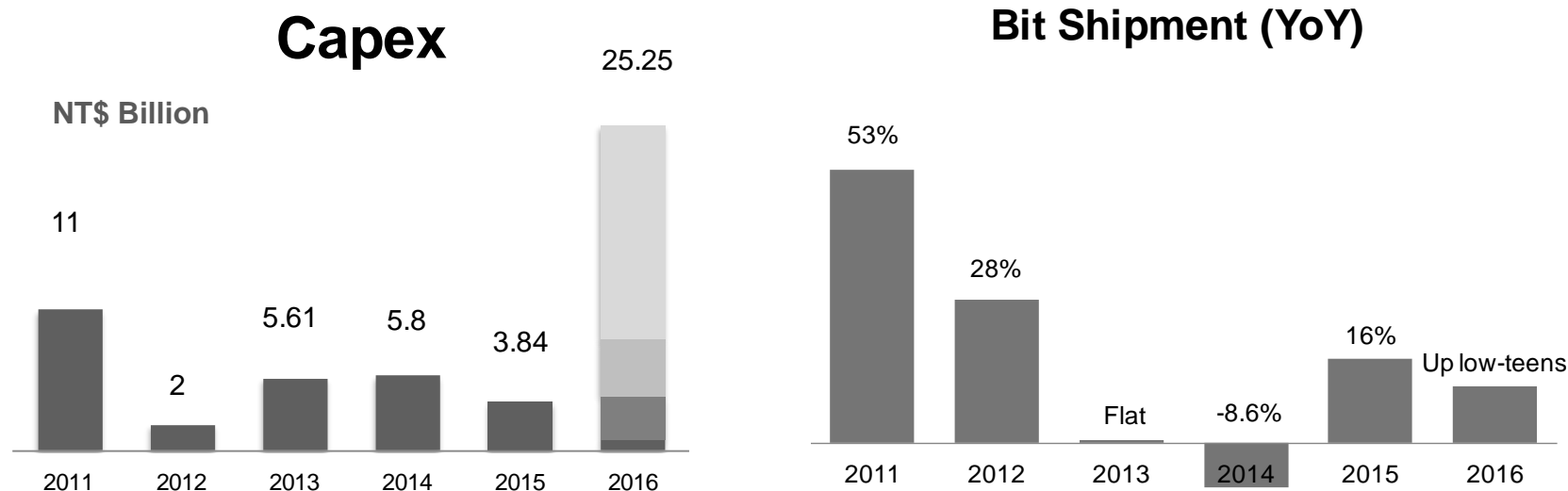
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## CAPEX & BIT SHIPMENT

# Capex & Bit Shipment



## ■ Capital Expenditure (Capex)

- NT\$ 1,686M Capex of Q2'16.
- Estimated NT\$ 25,253M for 2016 Capex. (20nm Conversion Capex in 2016 guided for NT\$ 23,632M)

## ■ Bit Shipment

- Q2'16 bit shipment decrease 7.6% QoQ.
- Estimated bit shipment up single digits in Q3'16.
- 2016 bit shipment guidance to increase low-teens yoy.









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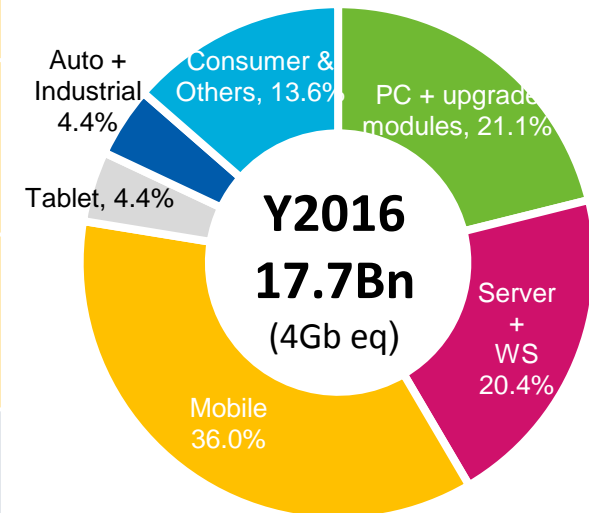
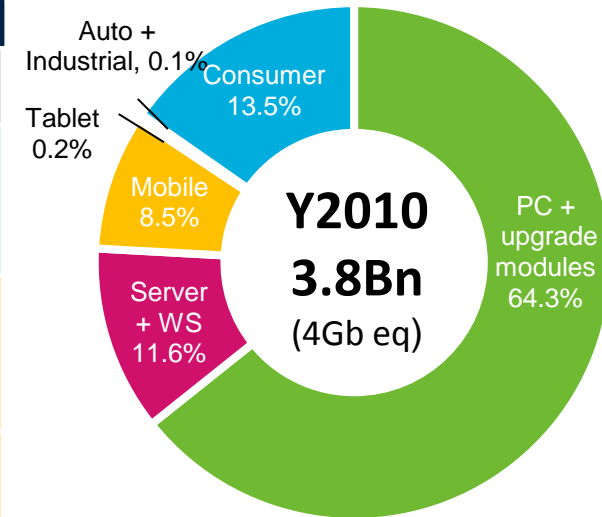


# 04

## MARKET OUTLOOK

# Demand Diversifying

		Y2015		Y2016		YoY		
Unit : QTY(Mu)   C/B(GB)		QTY,	C/B	QTY	C/B	QTY(Y/Y)	C/B(Y/Y)	Bit Growth
P2P	Cloud Server 	15.6	85.1	17	110	9.0%	29.3%	40.9%
	PC 	288	4.7	270	5.1	-6.3%	8.5%	1.7%
	Tablet 	202	1.8	180	2.1	-10.9%	16.7%	4.0%
	Smart Phone 	1,398	1.6	1,480	2.1	5.9%	31.3%	38.9%
	LCD TV 	214	1.5	223	1.8	4.2%	20.0%	25.0%
M2M	Car 	87.4	0.3	91.3	0.6	4.5%	100.0%	108.9%



Source: Gartner, IHS, NTC MKT

Expected demand bit growth of 2016 to increase low 20% range yoy.



# DRAM Industry Environment

## Supply Side

- Suppliers reduce commodity DRAM output; commodity DRAM spot price rebound in the middle of June.
- Solid NAND Flash demand expected, suppliers may allocate Capex from DRAM to NAND which will further lead to stable market situation in 2H16.

## Demand Side

- Expect DRAM demand 2H'16 better than 1H'16.
- Holiday seasonality demand, potential consumer demand will stimulate DRAM demand. Expect content growth in new smartphone models to drive demand growth. Server and cloud computing remain growth momentum.



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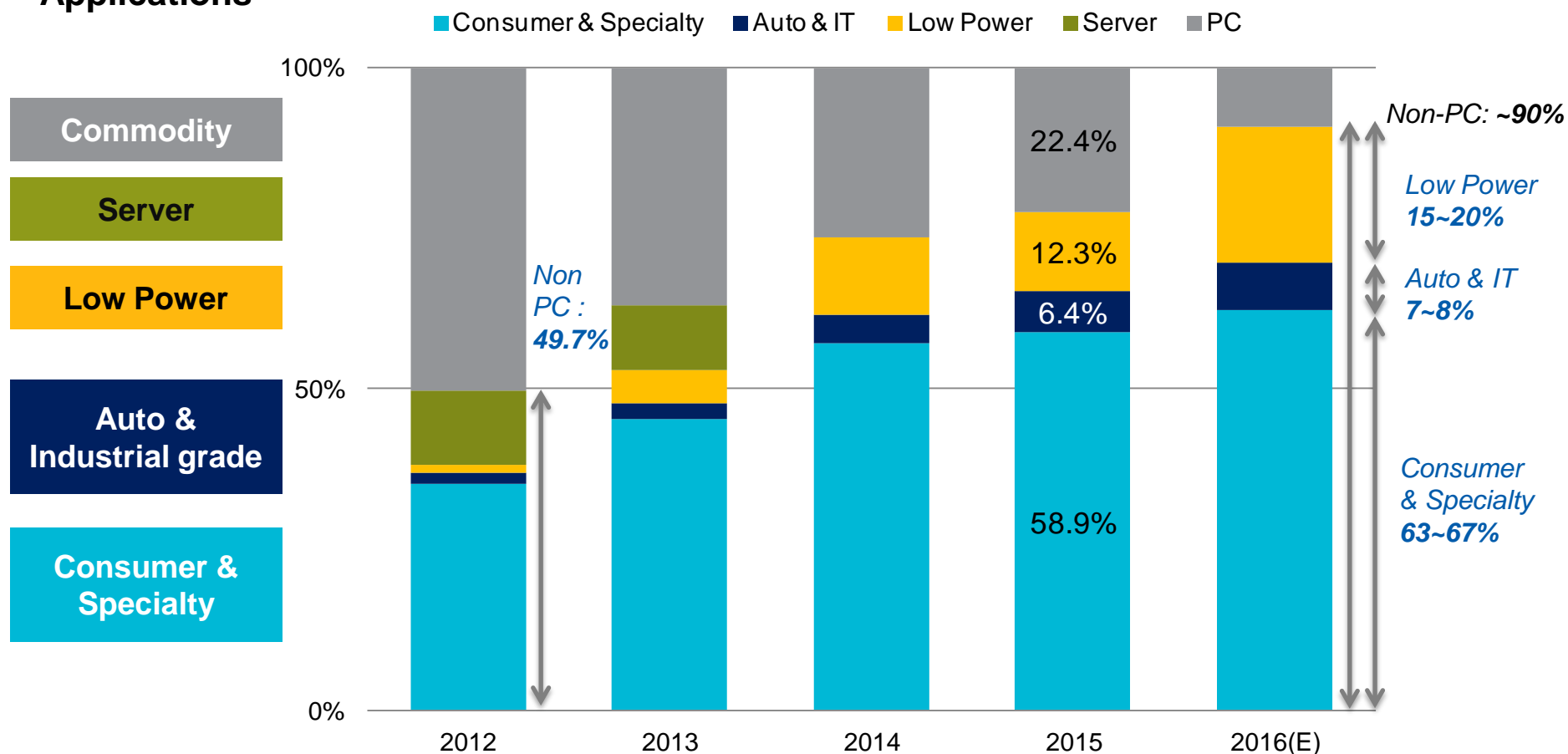


# 05

## BUSINESS OUTLOOK

# 2016 Revenue Breakdown Guidance

## Applications



\* Revenue portion by Application

# Summary

## Highlights

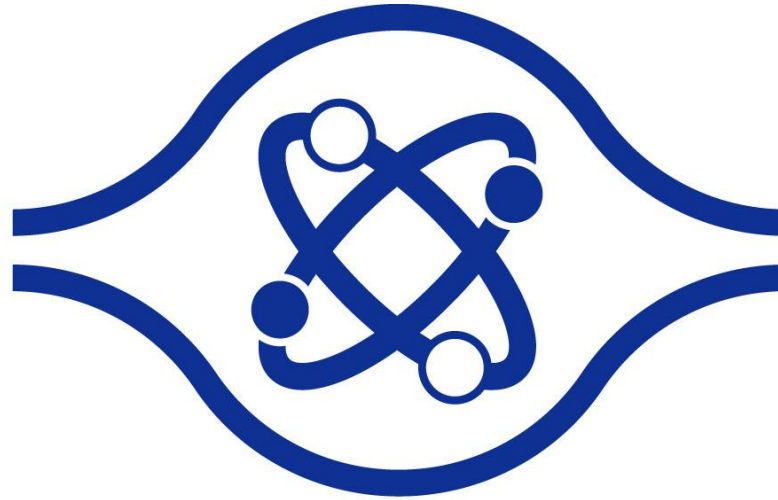
- Q3 2016 bit shipment expect to increase single digits due to seasonality demand.
- Plan to complete 20nm Fab construction by 2016. Start 20nm technology pilot run in Q1 2017.

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## Inotera Transaction Updates

- Parties continue to work on transaction process.
- Nanya Technology will support its completion.
- The companies expect to provide an update toward the later part of calendar 2016.





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Thanks & Questions

# 2Q'16 Consolidated Income Statement

Amount: Million NT\$	Q2'16 Audited		Q1'16 Audited		QoQ	Q2'15 Audited		YoY
Net Sales	8,933	100.0%	10,398	100.0%	-14.1%	11,156	100.0%	-19.9%
Cost of Goods Sold	6,396	71.6%	6,999	67.3%		6,468	58.0%	
Gross Margin	2,537	28.4%	3,399	32.7%	-25.4%	4,688	42.0%	-45.9%
SG&A Expenses	395	4.4%	388	3.7%		425	3.8%	
R&D Expenses	491	5.5%	378	3.6%		354	3.2%	
Operating Income	1,651	18.5%	2,633	25.3%	-37.3%	3,908	35.0%	-57.8%
Non-operating Income (Exp.)	-599	-6.7%	-788	-7.6%		847	7.6%	
Income before Tax	1,052	11.8%	1,845	17.7%	-43.0%	4,755	42.6%	-77.9%
Income Tax Benefit (Expense)	-647	-7.2%	0	0.0%		-490	-4.4%	
Profit from Continuing Operation	405	4.5%	1,845	17.7%		4,265	38.2%	
Income (Loss) from Discontinued Operation	0	0.0%	0	0.0%		0	0.0%	
Net income attributable to noncontrolling interests	8	0.1%	-4	0.0%		10	0.1%	
Net Income attributable to NTC	397	4.4%	1,849	17.8%	-78.5%	4,254	38.1%	-90.7%
EPS(NT\$)	0.14		0.68			1.75		
Book Value Per Share (NT\$)	22.03		24.84			19.62		

# 2015 Income Statement

Amount: Million NT\$	Y2015		Y2014		YoY
	Audited & Consolidated		Audited & Consolidated		
Net Sales	43,876	100.0%	49,108	100.0%	-10.7%
Cost of Goods Sold	26,568	60.6%	26,939	54.9%	
Gross Margin	17,308	39.4%	22,169	45.1%	-21.9%
SG&A Expenses	1,867	4.3%	1,987	4.0%	
R&D Expenses	1,954	4.5%	1,378	2.8%	
Operating Income	13,487	30.7%	18,805	38.3%	-28.3%
Non-operating Income (Exp.)	4,190	9.5%	12,928	26.3%	
Income before Tax	17,677	40.3%	31,733	64.6%	-44.3%
Income Tax Benefit (Expense)	-506	-1.2%	-2,481	-5.1%	
Profit from Continuing Operation	17,171	39.1%	29,251	59.6%	
Income (Loss) from Discontinued Operation	0	0.0%	-1,056	-2.2%	
Net income attributable to noncontrolling interests	30	0.1%	-47	-0.1%	
Net Income attributable to NTC	17,141	39.1%	28,242	57.5%	-39.3%
EPS(NT\$)	7.07		11.77		