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# **2018 Operation Briefing of Nan Ya PCB Corp.**

**March 28<sup>th</sup> 2019**



# Disclaimer

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**The description of historical events might include the information that was not reviewed by accountants. Thus, it might be insufficient to fully exhibit the financial status or operation results of Nan Ya PCB Corp.**

**The actual operation results, financial status, and sales outlook in the future might be different from what will be indicated or implied in this meeting. The reasons may be including but not limited to the market demand, price fluctuation, competition dynamic, global economy, supply-chain, foreign exchange rate, and other risks that the Company cannot control.**

**Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.**



# Agenda

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- **Company Profile**
- **Financial Status**
- **Future Product Development**
- **Operational Goals**

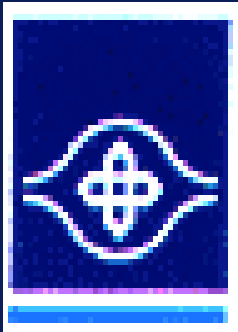


# **Company Profile**

## **Business Overview**

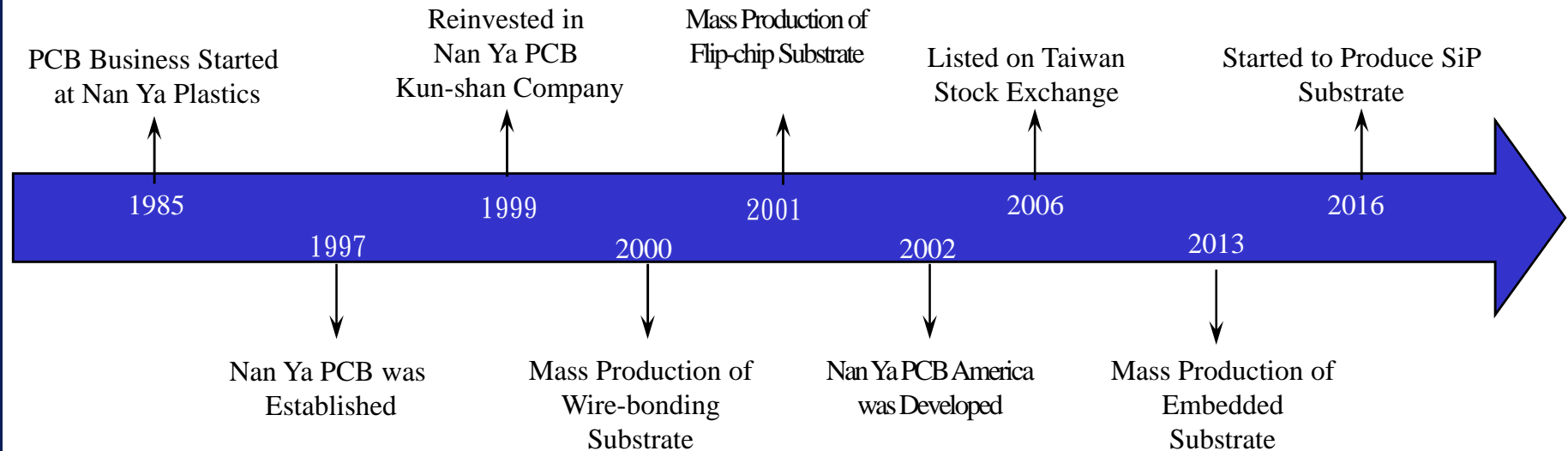
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- **Subsidiary Company of Nan Ya Plastics Corp.**
- **Manufacture and Sell PCBs and IC Substrates**
- **2018 Consolidated Revenues: NTD 28.8 Billion**
- **Market Value: NTD 21.8 Billion(December 28<sup>th</sup> 2018)**
- **Production Locations : Taiwan and China**

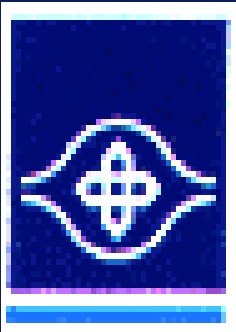


# Company Profile

## Milestone

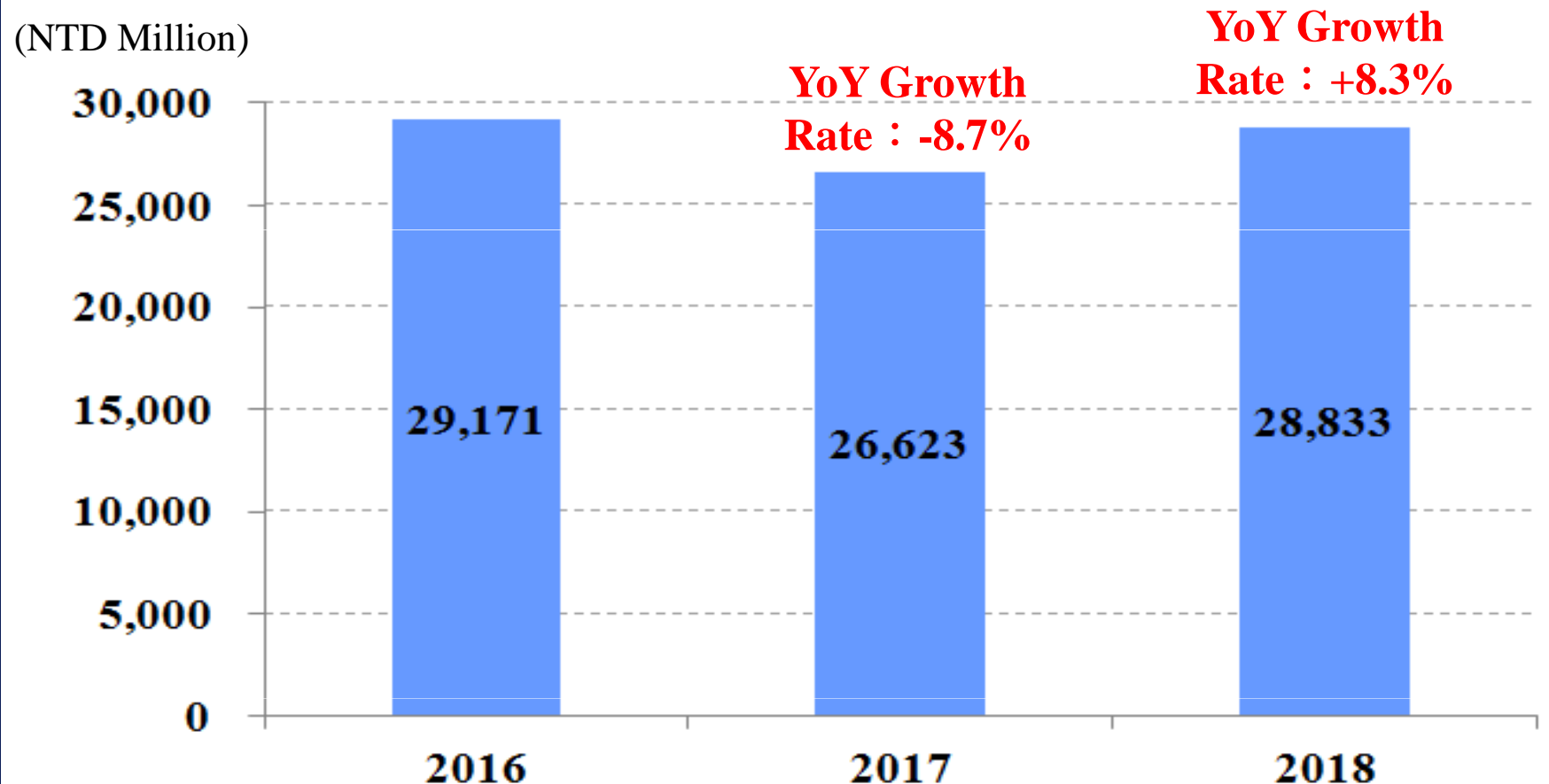


- **1985 : PCB business unit was formed at Nan Ya Plastics Corp. and started manufacturing PCBs**
- **1997 : Approved by the Board of Nan Ya Plastics, Nan Ya PCB Corp. was established via reinvestment**
- **1999 : Reinvested Nan Ya PCB Kun-shan Company with capital of USD29.8 million**
- **2000 : Started manufacturing wire-bonding substrates**
- **2001 : Upgraded technologies and produced flip-chip substrates**
- **2002 : Established Nan Ya PCB America Corp.**
- **2006 : Listed on Taiwan Stock Exchange with ticker 8046 TT**
- **2013 : Upgraded technologies and produced Embedded substrates**
- **2016 : Started to produce System in Package (SiP) substrates**



# Financial Status

## Consolidated Revenues(IFRS) in Last 3 Years

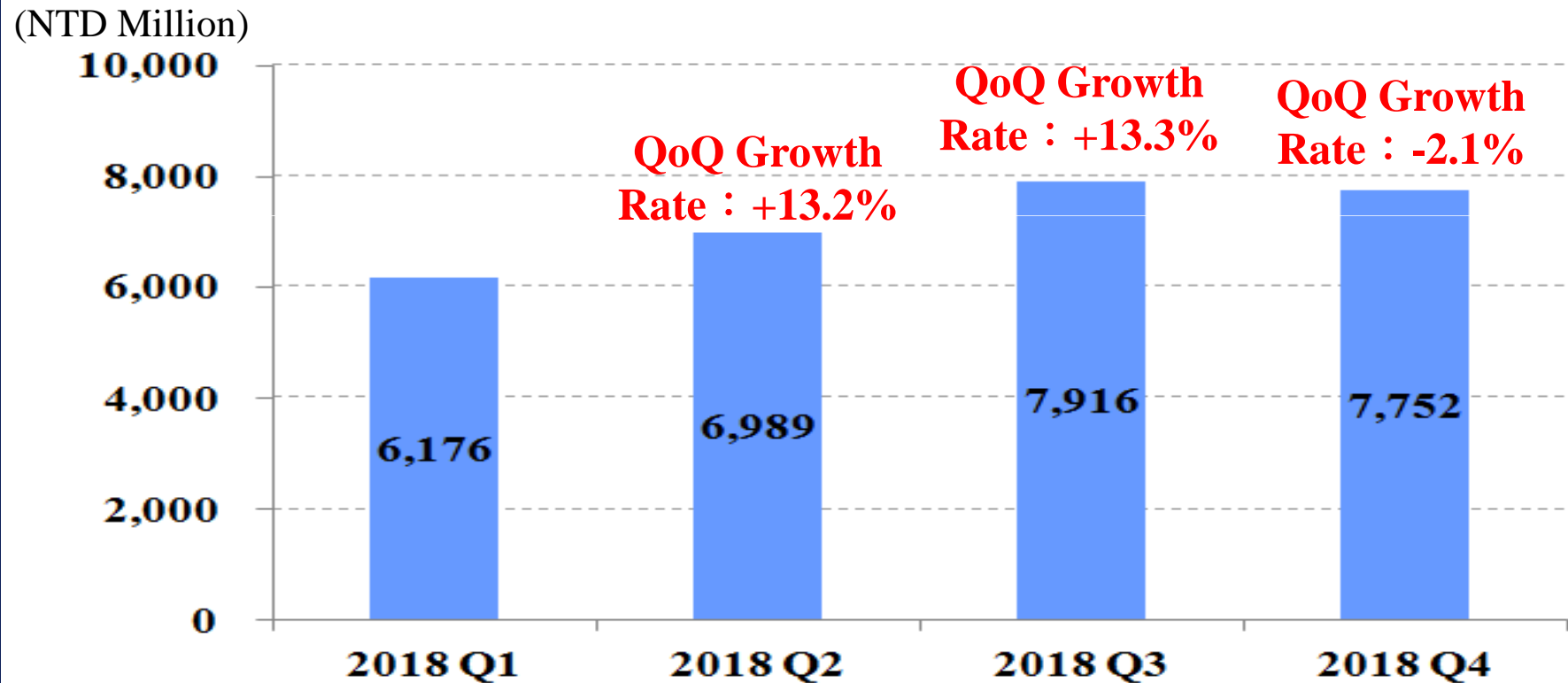


- **Revenues in 2017 were 8.7% less than those in 2016:**  
Because of weak sales in PCs, Nan Ya PCB strategically adjusted the product structure. Thus, revenues in 2017 declined from 2016.
- **Revenues in 2018 were 8.3% greater than those in 2017:**  
Nan Ya PCB lifted average selling price by actively rolling out more high value products. Hence, revenues in 2018 grew from 2017.



# Financial Status

## Quarterly Consolidated Revenues(IFRS) in 2018

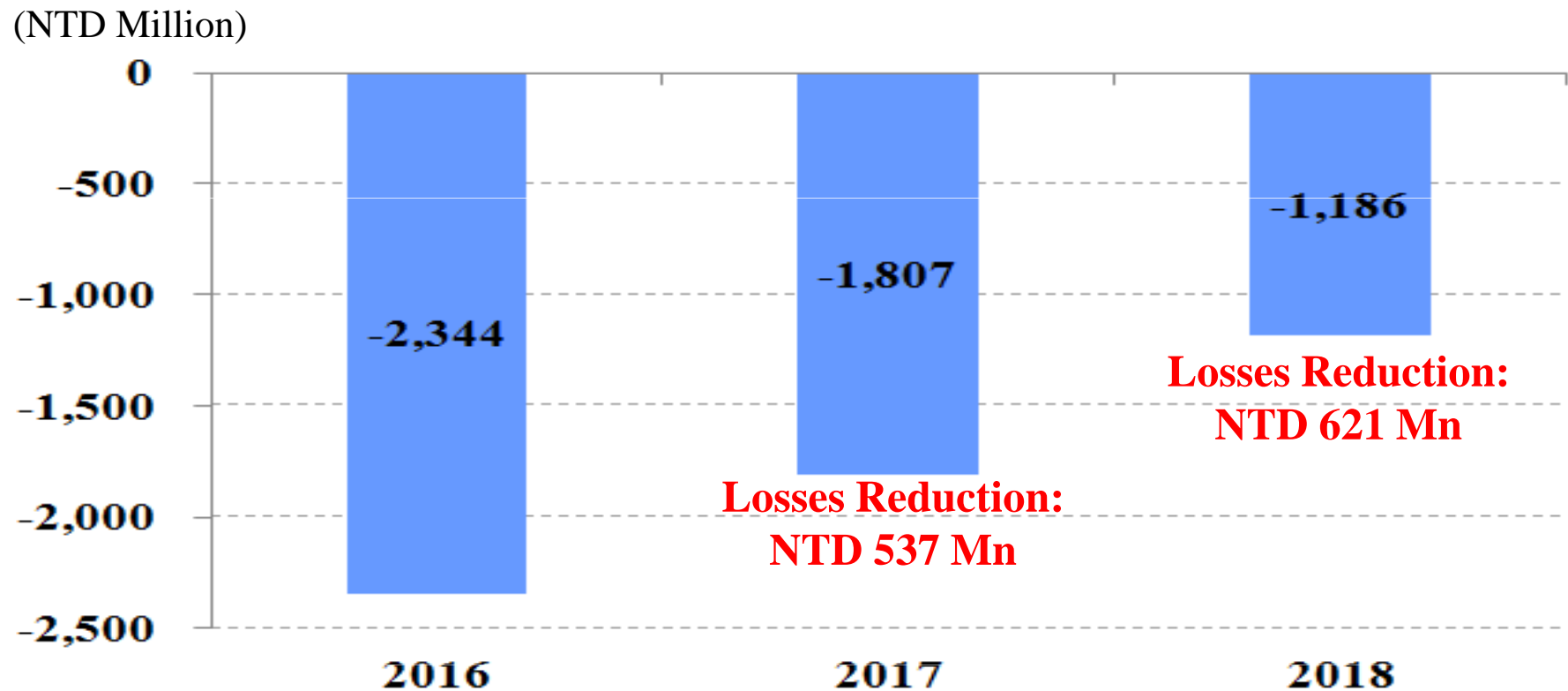


- **Revenues in 18Q2 were 13.2% greater than those in 18Q1:**  
Sales in 18Q2 broke away from the slow seasonality of 18Q1. Thus 18Q2 revenues grew from 18Q1.
- **Revenues in 18Q3 were 13.3% greater than those in 18Q2:**  
With greater demands in SiP and ABF substrates, 18Q3 revenues kept growing.
- **Revenues in 18Q4 were 2.1% less than those in 18Q3:**  
Because the slow season of consumer electronics and automotive electronics, 18Q4 revenues declined from 18Q3.



# Financial Status

## Operation Profits(Losses) in Last 3 Years



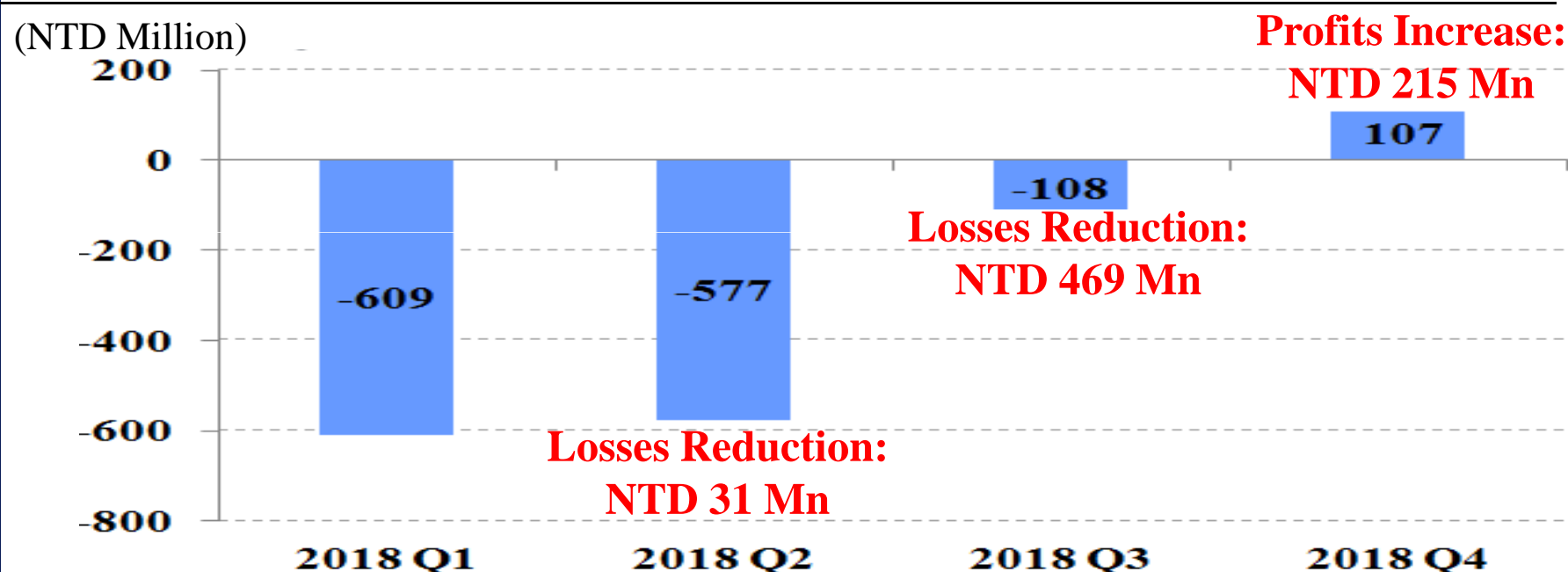
- **Operation losses in 2017 were narrowing NTD 537 Mn from 2016:**  
With strategically lowered the unprofitable PC application substrates orders, the operational losses in 2017 were shrinking from 2016.
- **Operation losses in 2018 were narrowing NTD 621 Mn from 2017:**  
Nan Ya PCB improved the product mix by actively rolling out more high value products. Thus, the operational losses in 18Q1~18Q3 kept decreasing from 2017.





# Financial Status

## Quarterly Operation Profits(Losses) in 2018

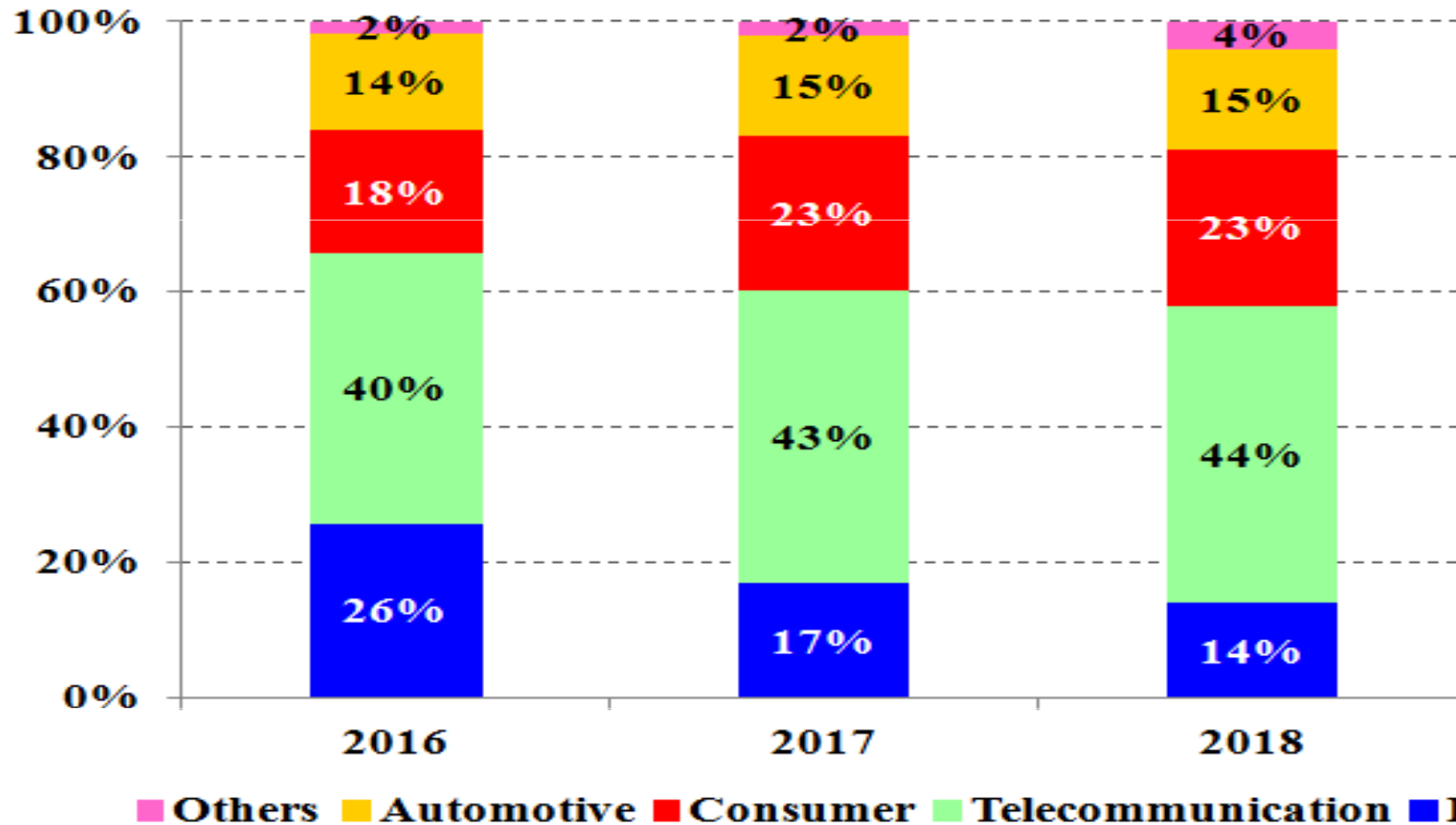


- **Operation losses in 18Q2 were narrowing NTD 31 Mn from 18Q1:**  
With the operations of clients resumed, the 18Q2 utilization rate recovered from 18Q1. Thus, the 18Q2 operation losses decreased.
- **Operation losses in 18Q3 were narrowing NTD 469 Mn from 18Q2:**  
The 18Q3 operation losses were significantly less than those in 18Q2 because of greater shipments of high value products and ongoing manufacturing enhancements, improving efficiencies and yield rates.
- **Operation profits in 18Q4 were increasing NTD 215 Mn from 18Q3:**  
Because of a better product mix and yield improvements in the new generation telecom products, 18Q4 became profitable.

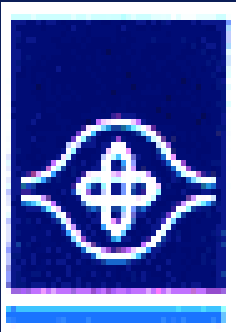


# Financial Status

## Revenue Structure(By Applications)



- The PC contributions continued to decline because of weak market demand and our product mix restructure.
- Nan Ya PCB actively explored the fields of telecommunication equipment, wearable device (Consumer Electronics), and high performance computing (Others). Thus the contributions from these segments have grown.



# Future Product Development

## Continue to Expand High Value Products

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### ■ 5G Telecommunication Equipment

We will collaborate with our clients to produce PCBs and IC substrates used in 5G telecom equipments. Because of the larger body size, higher layer counts, more complicated design, and higher technology threshold, the average selling prices can be lifted.

### ■ SiP(System in Package) Substrate

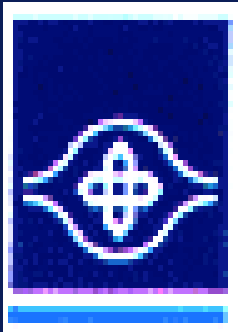
Since mobile, wearable, IoT, and e-business devices continue to integrate different types of chips and package them into an IC substrate to meet the electronics trend of light, thin, short, and small, the demand in SiP substrates is expected to continue to grow.

### ■ Automotive

As the developments of electronic vehicles and autonomous cars continues, the demand in automotive PCBs also increases. Because this type of product is featured with high quality and dependability, the average selling price remains stable.

### ■ AI/HPC

Because the products applied in data centers are characterized with complex design, not only do the matching IC substrates need to be larger and the layer counts are higher, but also require excellent heat dissipation. With the help of the rising growth in AI and high performance computing, the prices of this kind of IC substrates are higher than others.



# Operational Goals

## The Company Seeks Becoming Operation Profitable

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### ■ 18Q4 Operation Profits became Profitable

Not only did we dedicate our efforts to lifting high value products and enhancing the product mix, but also improving the yield rate of large body and high layer counts IC substrates. Thus, 18Q4 became operation profitable.

### ■ 19Q1 is a Traditional Slow Season

Since 19Q1 is a traditional slow season for the sales of electronics, we will mitigate the impacts through implementing cost reduction projects.

### ■ To Seek Becoming Operation Profitable in 2019

**Sales Expansion:** The Company has collaborated with clients at the stage of product designs to shorten the learning curve. In 2019, we will roll out products applied in AI/HPC, 5G telecom, and 7nm graphic chips. In addition, we will develop the latest generation SiP substrates and the PCBs used in automobile active safety systems to enhance the sales.

**Costs Reduction:** We will continue to improve the yield rate and efficiency through introducing intelligent manufacturing. Also, we will strengthen our operation performance via implementing cost control projects. This year, we will strive to achieve the goal of operation profitable.



# Thank You

