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# **2022 Operation Briefing of Nan Ya PCB Corp.**

**March 7<sup>th</sup> 2023**



# 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

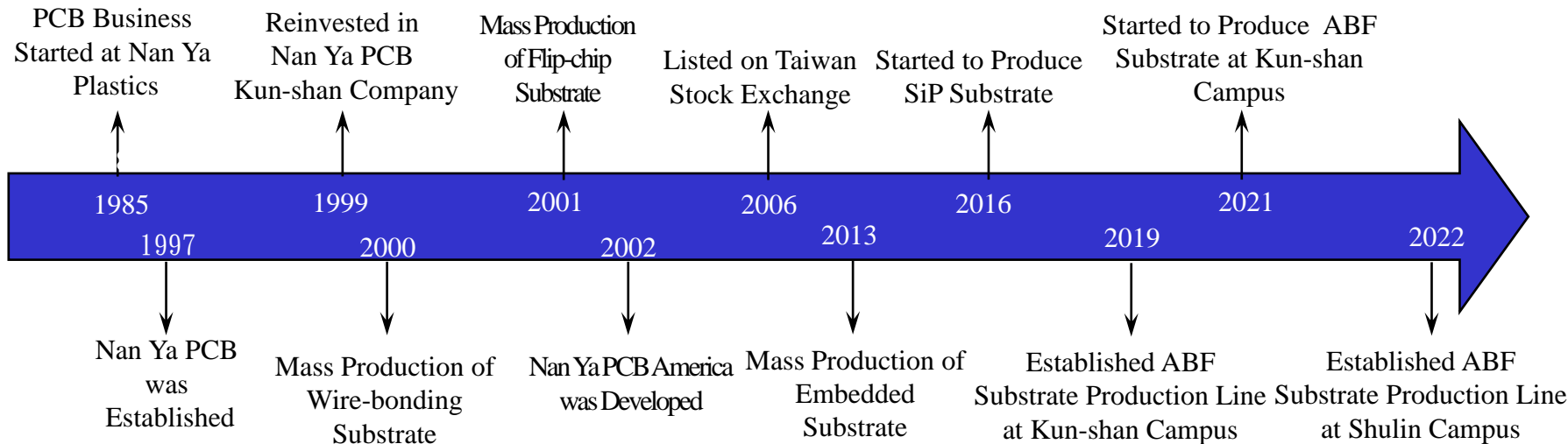
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- **Subsidiary Company of Nan Ya Plastics Corp.**
- **Manufacture and Sell IC Substrates and PCBS**
- **2022 Consolidated Revenues: NTD 64.6 Billion**
- **Market Value: NTD 144.6 Billion(December 31<sup>st</sup> 2022)**
- **Production Locations : Taiwan and China**



# Company Profile

## Milestone

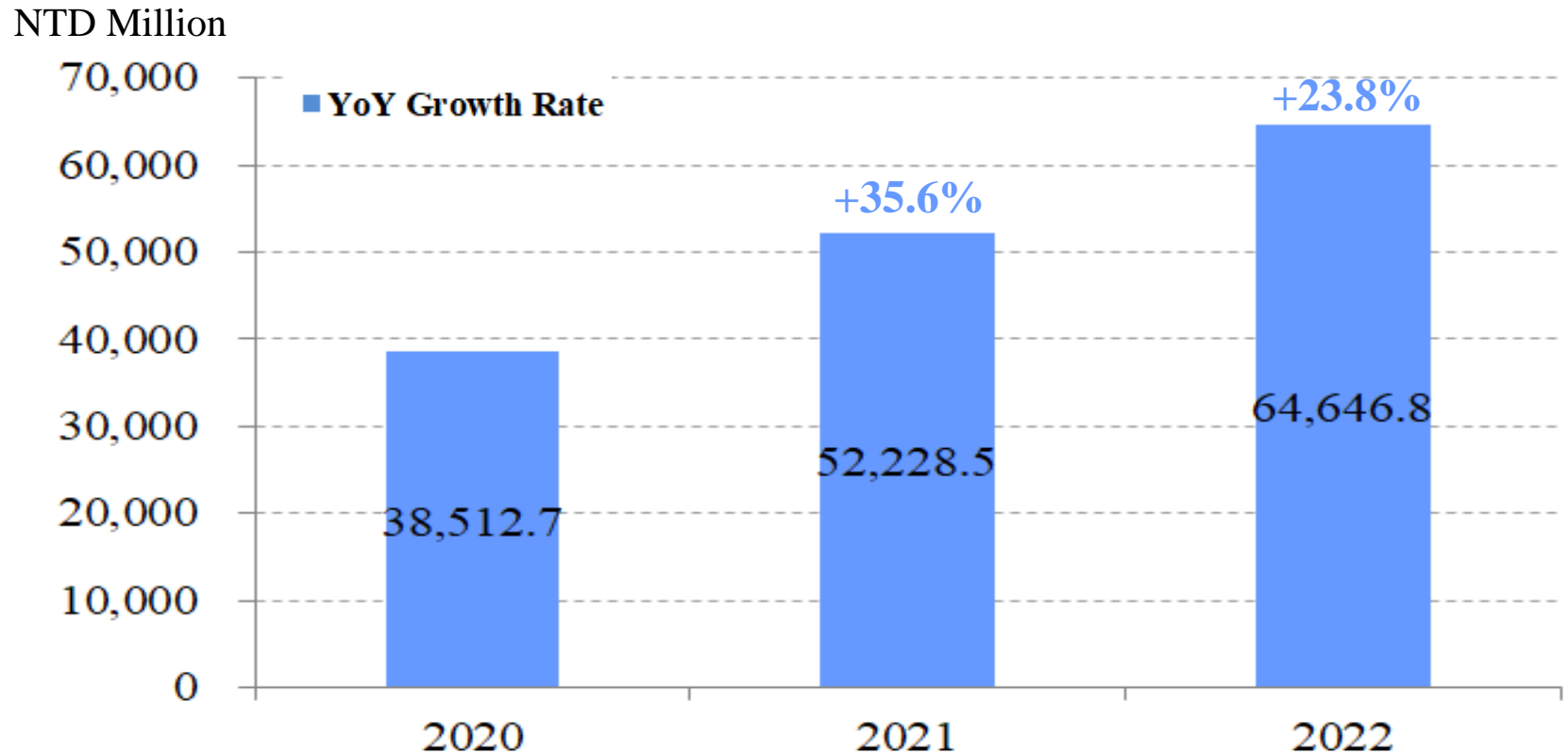


- **1985 : PCB business unit was formed at Nan Ya Plastics Corp. and started manufacturing PCBs**
- **1997 : Approved by the Board of Nan Ya Plastics, Nan Ya PCB Corp. was established via reinvestment**
- **1999 : Reinvested Nan Ya PCB Kun-shan Company with capital of USD29.8 million**
- **2000 : Started 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**
- **2019 : In response to market demand, Nan Ya PCB Corp. started to build ABF substrate production line at Kun-shan Campus**
- **2021 : Kun-shan Campus started to manufacture ABF substrates**
- **2022 : Shulin Campus started to manufacture ABF substrates**



# Financial Status

## Consolidated Revenues(IFRS) in Last 3 Years



- **Revenues in 2021 were 35.6% greater than those in 2020:**

Work from home and stay at home entertainment drove demands and lifted the Company's performance with a significant annual growth in revenues.

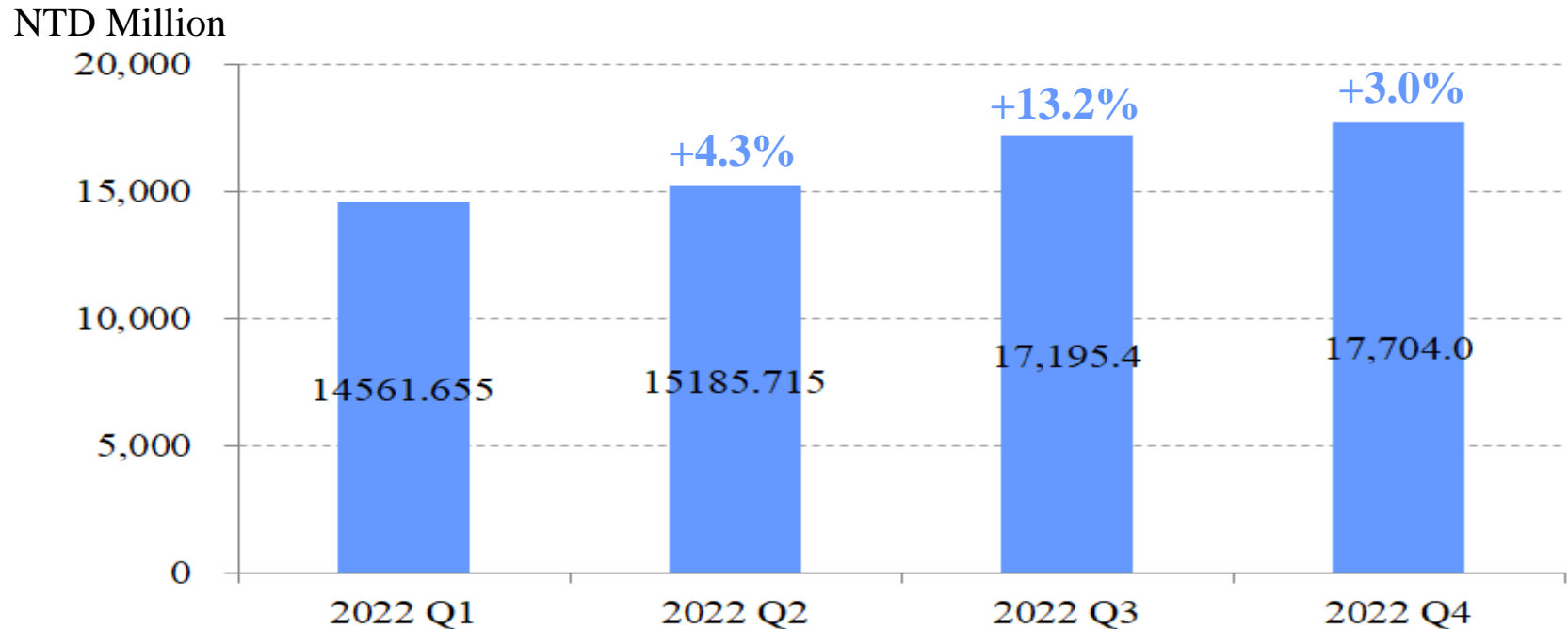
- **Revenues in 2022 were 23.8% greater than those in 2021:**

Nan Ya PCB was helped by the increasing demands in 5nm PC CPU and SiP application IC substrates, and the revenues grew annually.



# Financial Status

## Quarterly Consolidated Revenues(IFRS) in a Year



■ **Revenues in 22Q2 were 4.3% greater than those in 22Q1:**

Better product mix led by increasing high value product sales offset the impacts of Kunshan lockdown in April and pandemic outbreak in May, and enabled quarterly revenue growth.

■ **Revenues in 22Q3 were 13.2% greater than those in 22Q2:**

22Q3 revenues were helped by the launch of 5nm PC CPU substrates and showing strong QoQ growth.

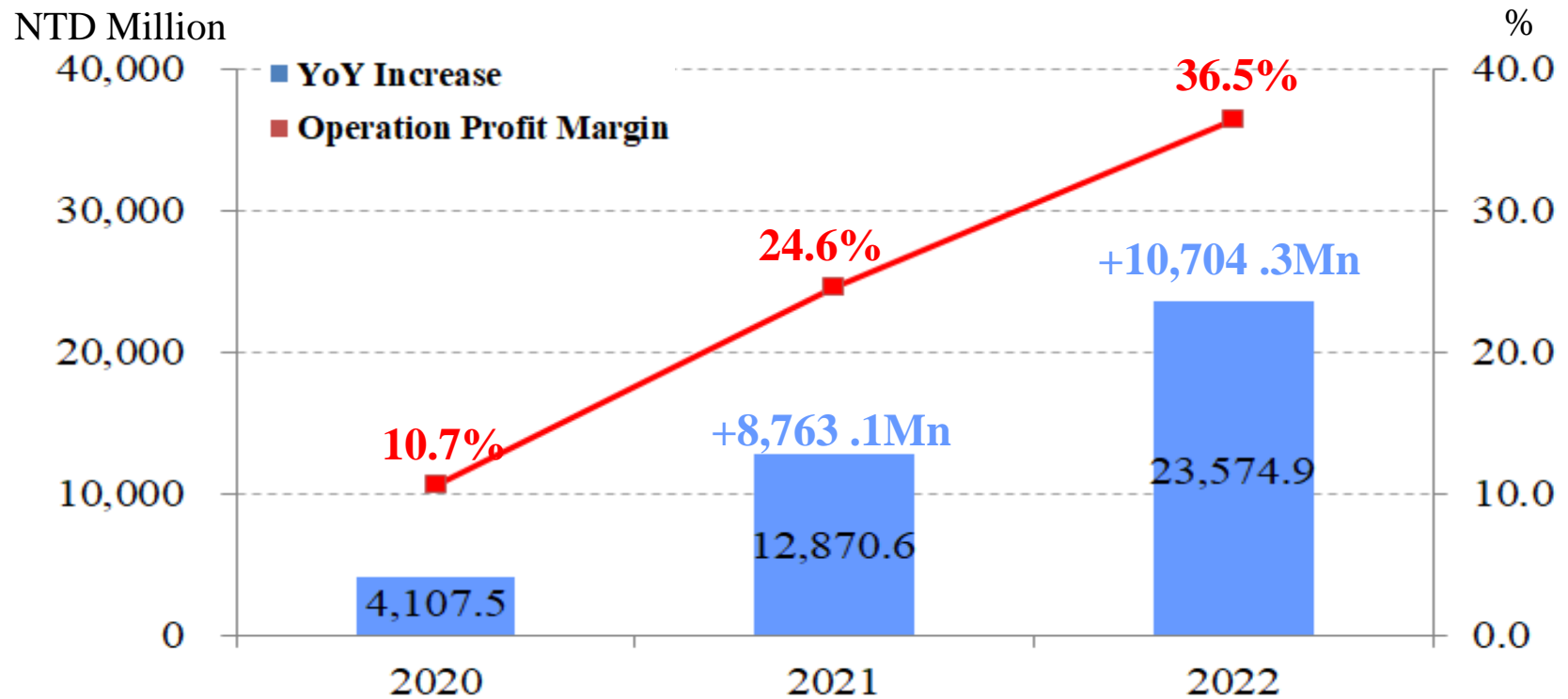
■ **Revenues in 22Q4 were 3.0% greater than those in 22Q3:**

Because of greater sales in large area and high layer counts products, the Q4 revenues grew from Q3.



# Financial Status

## Operation Profits(Losses) in Last 3 Years



- **Operation profits in 2021 were increasing NTD 8,763.1 Mn from 2020:**

In addition to the contribution from the better product mix and the new IC substrate capacities at Kunshan Campus, we applied AI to manufacturing management to improve the yield rate and efficiencies to boost operation profits and margin.

- **Operation profits in 2022 were increasing NTD 10,704.3 Mn from 2021:**

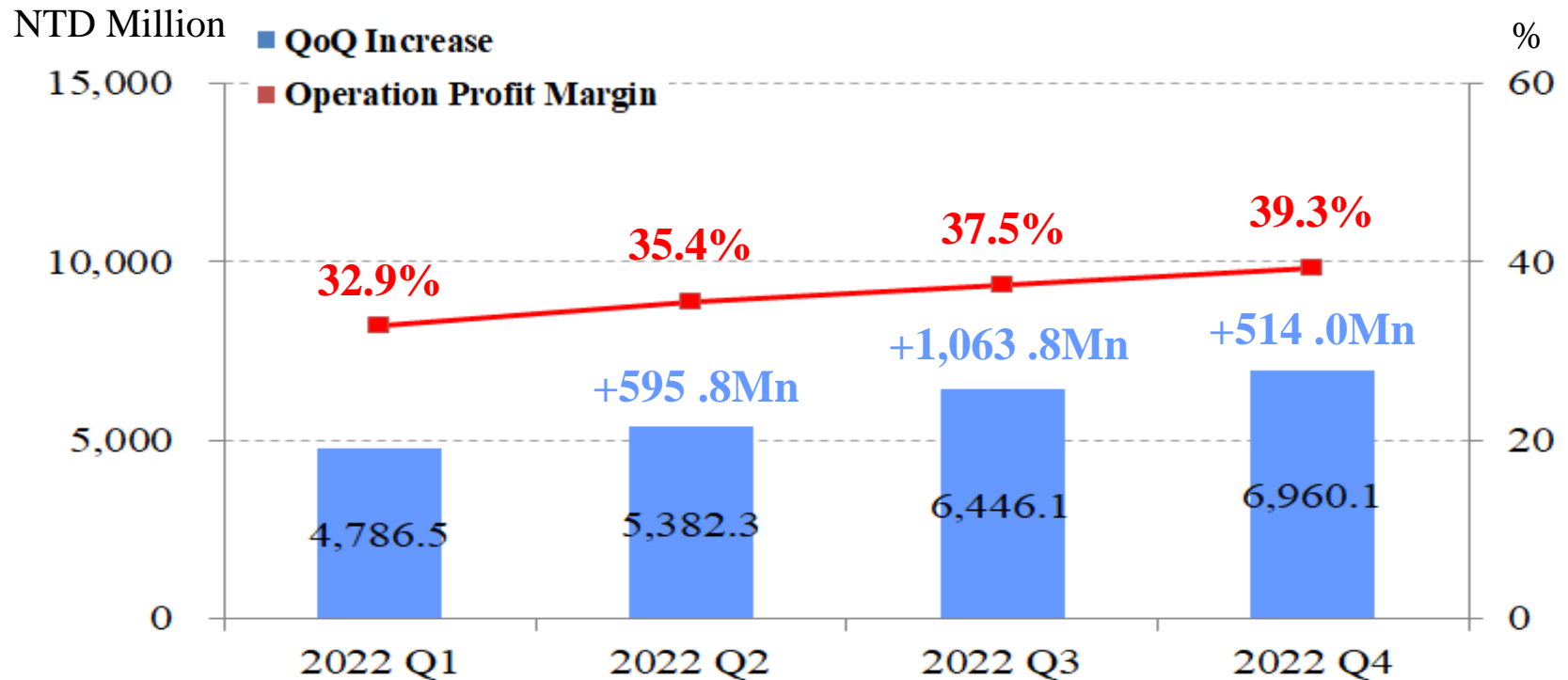
Because of better output led by debottleneck and greater sales in large area and high layer counts products, the operation profits continued to grow.





# Financial Status

## Quarterly Operation Profits in a Year

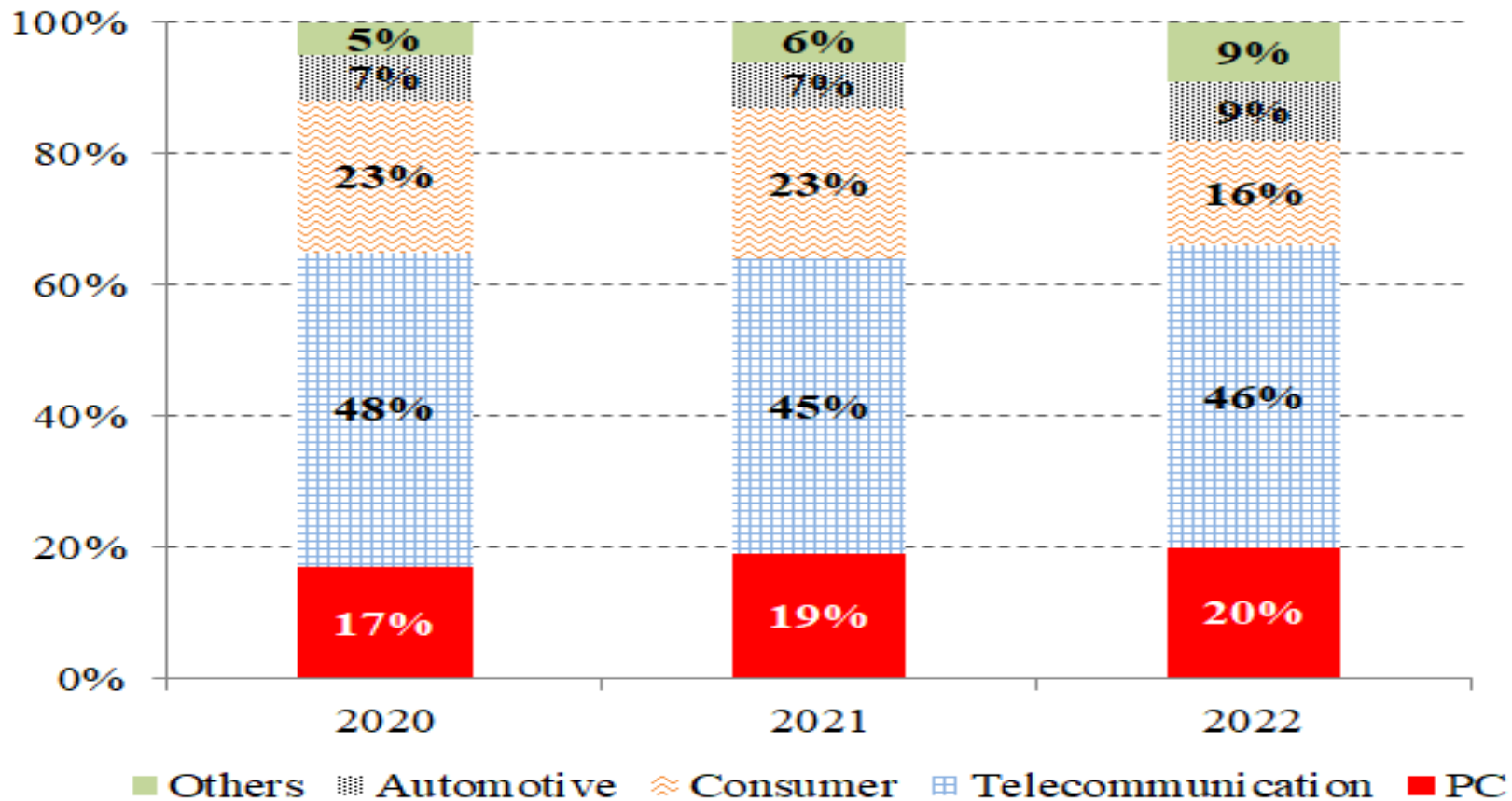


- **Operation profits in 22Q2 were increasing NTD 595.8 Mn from 22Q1:**  
In addition to better large area and high layer count IC substrates sales, the adoption of AI in manufacturing improved efficiencies and yield rate and lifted profits.
- **Operation profits in 22Q3 were increasing NTD 1,063.8 Mn from 22Q2:**  
Because of the contribution from the 5nm PC CPU substrates, 22Q3 profits were greatly growing from 22Q2.
- **Operation profits in 22Q4 were increasing NTD 514.0 Mn from 22Q3:**  
Better sales in larger area and high layer counts IC substrates propelled the profits.



# Financial Status

## Revenue Structure(By Applications)



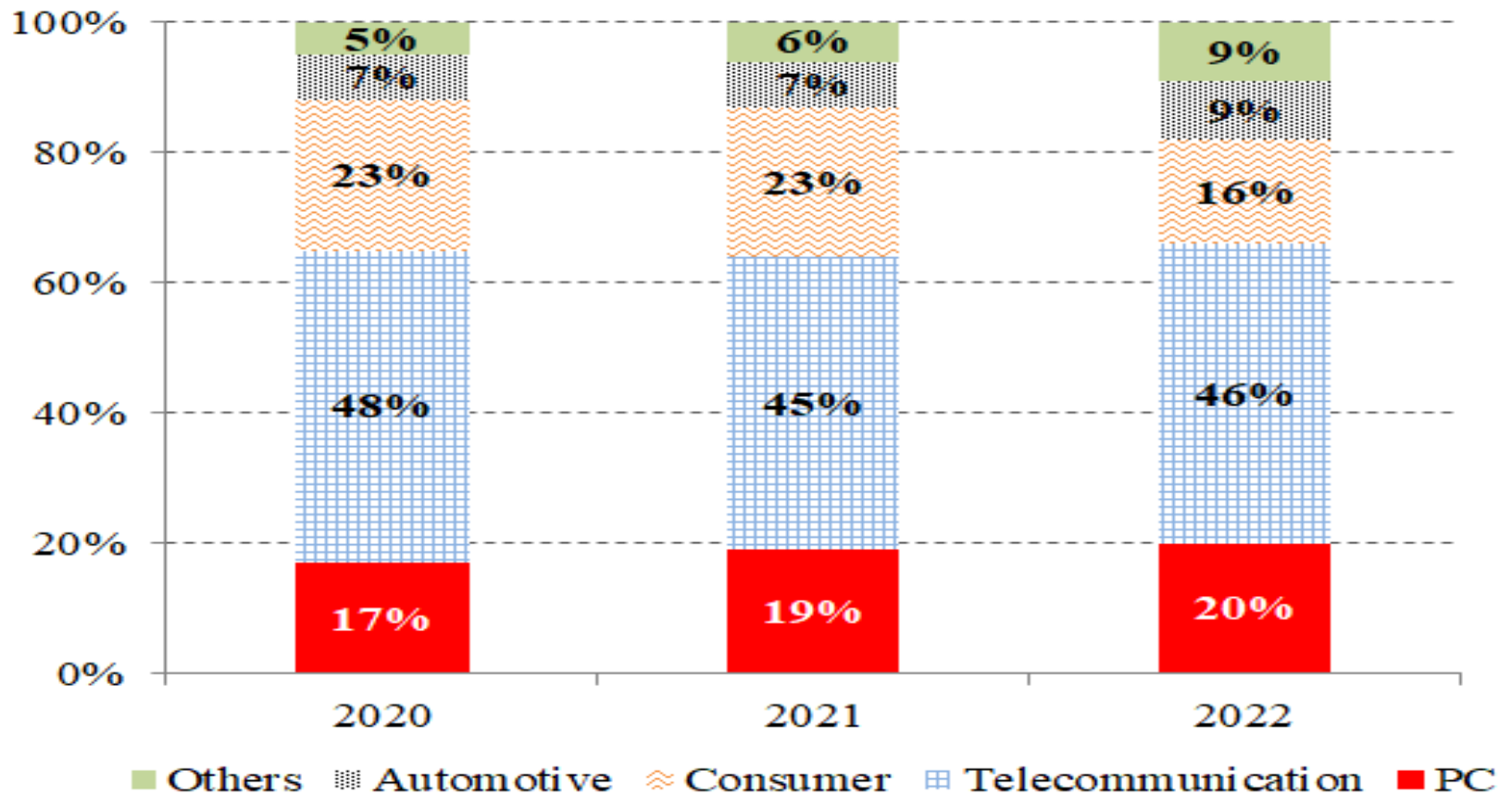
■ Because of the launch of 5nm CPU and recovery in telecom equipment, the PC and telecom product revenues grew in 2022.

■ Due to changes in consumption behaviors and the severe inflation, consumer electronics related revenue ratios was declining in 2022.



# Financial Status

## Revenue Structure(By Applications)



- Evs and better penetration rate of automotive electronics drove the demands in automotive PCBs. The related sales ration grew in 2022.
- Nan Ya PCB actively explored the AI and HPC fields and successfully gained more high value orders from those areas. Thus, the revenue ratio of others continued to grow.



# Future Product Development

## Continue to Expand High Value Products

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### ■ ABF Substrate

We will continue to collaborate with clients to develop application substrates for 5nm PC CPU, server CPU, switch chip, and 4nm game console processors. Shulin phase 1 and Kunshan phase 2 are going to reach full utilization in Q1, and we are dedicated to the early production of Shulin phase 2 to further increase the volumes of high value products. ◦

### ■ BT Substrate

Given the trend of heterogeneous integration remains, we will develop new generation all sorts of SiP substrates for mobile device, such as communication, motion sensor, and bio sensor. Also to meet the growing demands in the datacenter and 5G, we will produce 5G optical communication modules, high-end signal switches, and 5G mmWave antenna application products.

### ■ Conventional PCB

As the designs of consumer electronics and automotive electronics are becoming sophisticated, the consumption of HDI and interposer are increasing. Thus, we will produce interposers for new generation 5G smartphones as well as HDIs for high-end PC mother boards, graphic cards, LED, and industrial driverless cars to improve the product mix.



# Operational Goals

## Management Guidelines

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- Cultivating R&D and manufacturing technology talents to enhance R&D power, develop new materials and technologies to improve manufacturing capabilities and yield rates, and add values in products.
- Participating in clients' product design, co-developing products, offering raw data, and sharing manufacturing information to shorten the delivery time.
- In response to the growing trend of 2.5D/3D packaging, we will develop more high-end IC substrates to lift the sales ratio of high value products.
- Continuing to apply AI to operation and management, implementing intelligent production, and optimizing manufacturing conditions to improve the yield rate and efficiency.
- Expanding cross-strait high-end IC substrate capacities to boost the output of high value products and maintain our competitive edges and respond to the U.S. and China semiconductor trends.
- Implement ESG projects, and set STB target to fulfill corporate social responsibilities.
  - Have reduced 8,927 Ton CO<sub>2</sub>e/year and 24,895 kWh/day in 2022.
  - Ongoing projects will continue and install solar power systems in 2023, which is estimated to reduce 334 Ton CO<sub>2</sub>e/year annually.
  - Strive to reduce the greenhouse emission by 25% from 2020 to 2030.



Thank You

