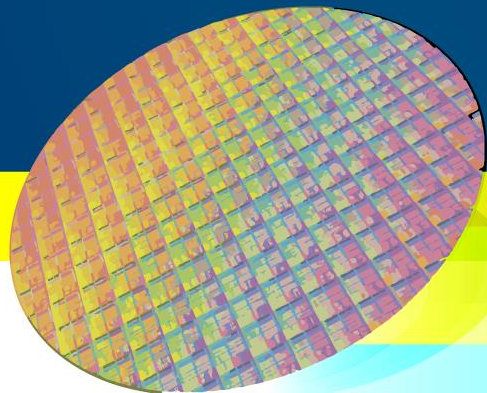


志聖法人說明會

2467.TT

Investor Conference



**Andy Huang**, Co-head

Venue: Taiwan Stock Exchange Taipei 101  
November 26<sup>th</sup>, 2020

This presentation contains some forward-looking statements that are subject to substantial risks and uncertainties. Typically, these statements contain words such as “anticipate” , “believe” , “could” , “estimate” , “expect” , “intend” , “plan” , “forecast” , “project” , “predict” , “potential” , “continue” , “may” , “should” , “will” , and “would” or similar words. You should consider these forward-looking statements carefully because such statements are only our expectations or projections about future events, and actual results may differ materially from those expressed or implied by such statements. The forward-looking statements in this presentation include, but are not limited to, growth rates for various markets estimated by third party sources, future products and technology development, widespread market acceptance of the hosted delivery model, future revenue growth and profitability. You should be cautioned that the forward-looking statements are no guarantee of our future performance. The forward-looking statements contained in this presentation are made only as of the date of this presentation and we undertake no obligation to update the forward-looking statements to reflect subsequent events or circumstances, except as required by law.

This presentation and the information contained herein are the property of CSUN MFG. Ltd. **Neither this presentation nor any of its contents may be reproduced to a third party without the prior written consent of CSUN MFG Ltd.**

- **Growth Opportunities & Product Development**
- **Q&A**

# Growth Opportunities & Product Development

-G2C **Alliance**(C SUN 、 GPM 、 GMM)

## Advantages Of Strategic Alliances

-2019-2021 Operating Results Growth Opportunities :

- **Advanced Packaging(SEMI)**
- **Flat Panel Display (FPD)**
- **Printed Circuit Board(PCB)**

2467  
**c sun**  
志聖

**tcf**  
創峰

5443  
**GPM**  
均豪

6640  
**GMM**  
均華

**UTRON**  
祁昌

- 
- Each partner own different core technologies and deeply rooted in electronic industry.
  - Can integrate partner's resources to cater customer's need swiftly.
  - 33% of Actiance's employees are R&m.
  - **1,618**, RD members **529**. (529/1618)

合力共創 同行致遠

**G<sub>2</sub>C**

Go Go Champion  
Great to Customers

# SiP Process Equipment System in a Package

系統級封裝

**GPM**  
Wafer AOI  
GSVW-0302



**c sun**  
CP test OVEN  
MOL

**GMM**  
Jig Saw  
Pick & Place  
KS956



**GMM**  
Laser Mark  
SU30



**GPM**  
Grinder  
GSGF-2000



**GMM**  
Inspection Sorter  
KS962



**GMM** Auto Mold  
GM-210



**c sun** Oven  
QMO-2D



**c sun**  
Inline type Plasma  
SA400



**c sun**  
Oven  
QMO-2D



Sputter

**GMM**  
Pick & Place  
KS962



**c sun**  
Inline type Plasma  
SA400



Wire Bond

**GMM**  
Die Bond  
KB9300



Wafer Saw

**GPM**  
Wafer AOI  
GSVW-0302



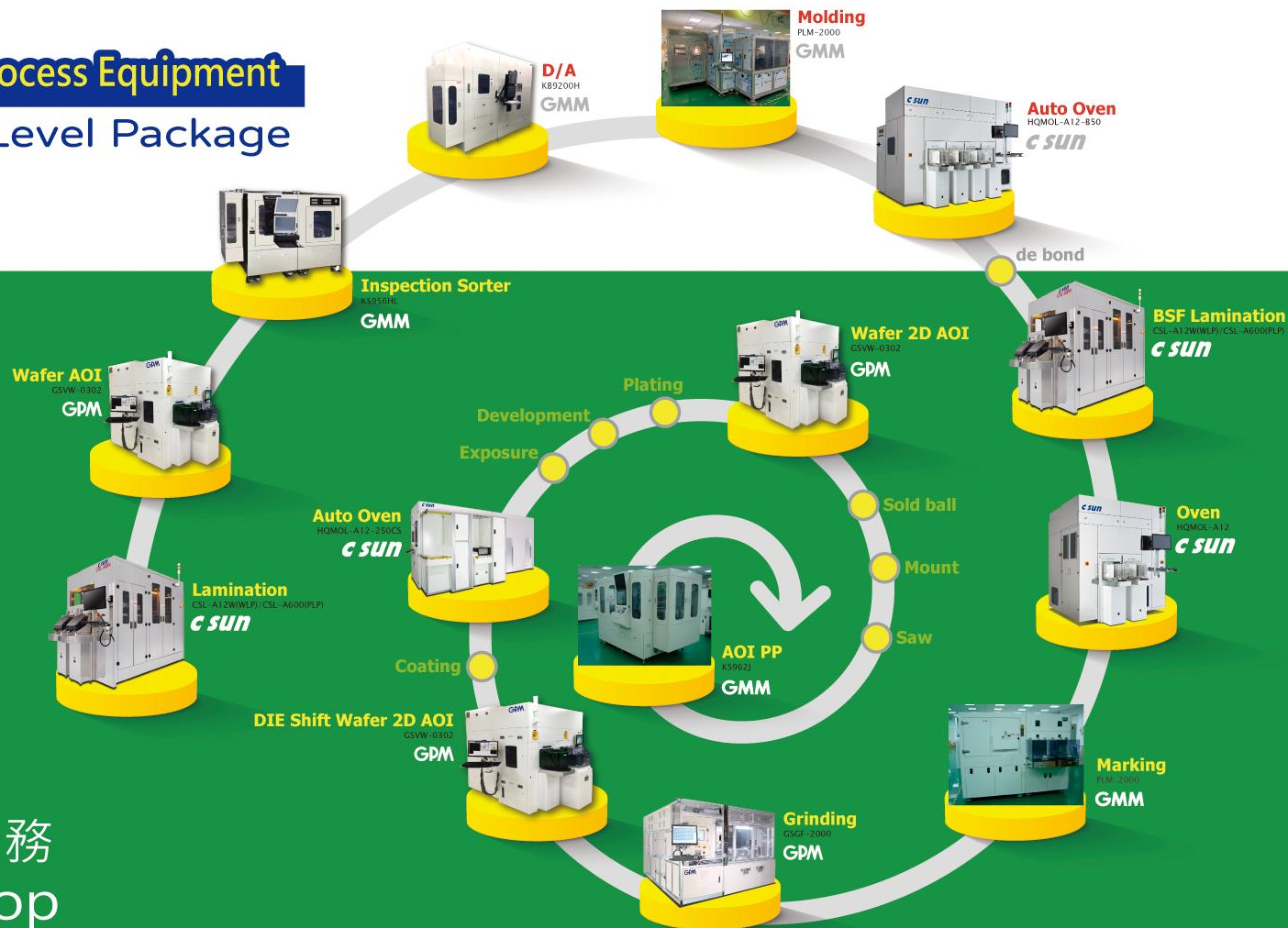
G2C 一站式服務  
One Stop Shop



# Fan Out Process Equipment

Fan Out Wafer Level Package

扇外型封装

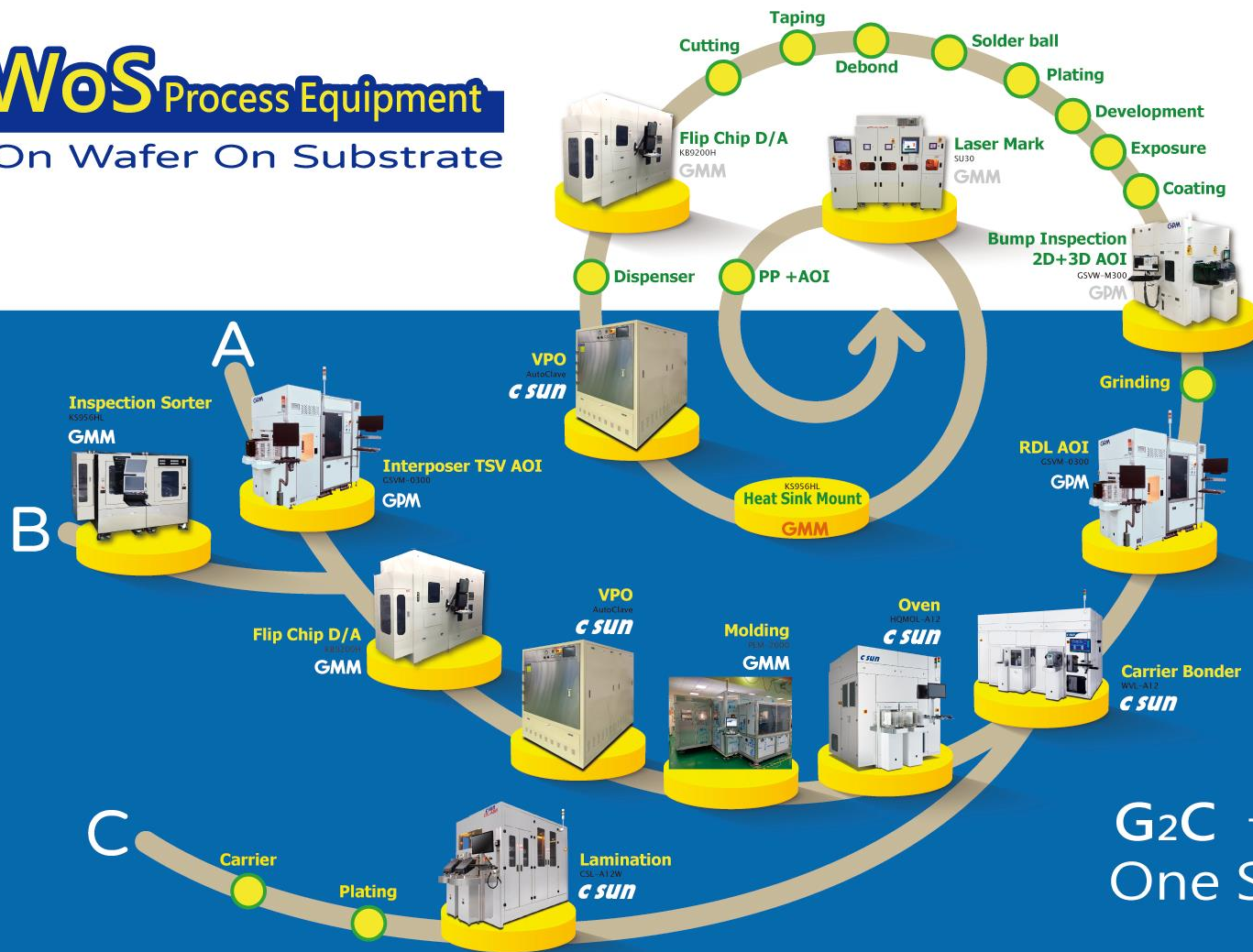


G2C 一站式服務  
One Stop Shop



# CoWoS Process Equipment

Chip On Wafer On Substrate



G2C 一站式服務  
One Stop Shop

# 2020~2021 Semiconductor Opportunities

## Trend and market development

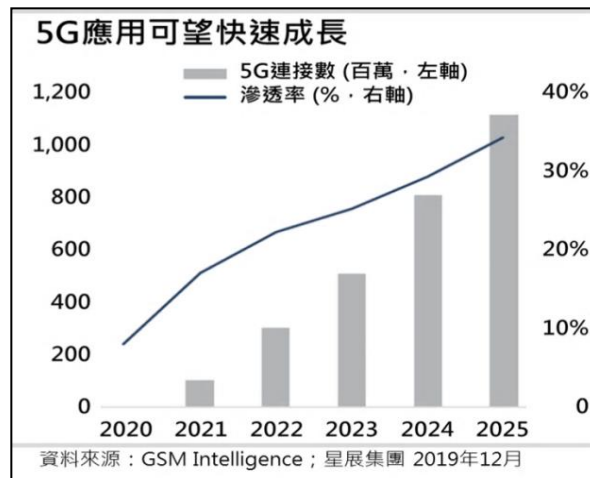
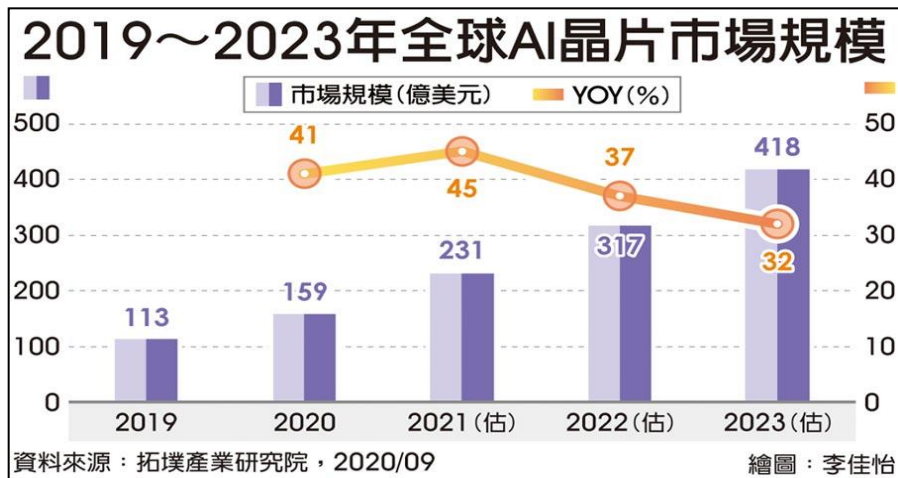
- The development of advanced packaging technologies spur the growth of 5G and AIoT silicons.
- The demand of silicons for 5G, AI and Autonomous car.
- The trend of hereto-integration of technologies is undergoing and the growth of the advanced packaging sector is speeding up.
- CSUN and G2C alliance have manufacturing bases cross the Strait and ready to integrate for the new reality



# 2020~2021 Semiconductor Opportunities

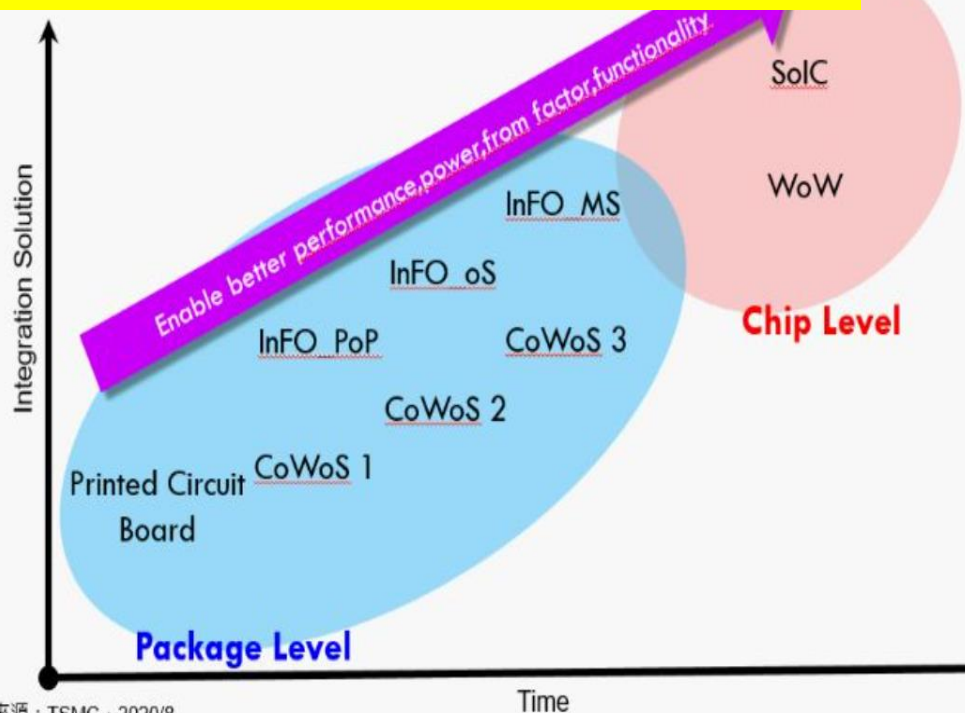
## Trends/ market development

- The development of advanced packaging technologies spur the growth of 5G and AIoT silicons.
- The demand of silicons for 5G, AI and Autonomous cars is clear sky.
- COF packaging is in shortage as driver IC bumps into production bottlenecks.



# 2020~2021 Advanced Packaging Technology Trend.

Advanced packaging technologies are moving to chip level – TSMC is the bellwether



## TSMC 3DFabric™



SoIC: System on Integrated Chips



InFO: Integrated Fan-Out  
CoWoS: Chip on Wafer on Substrate  
RDL: Redistribution Layer  
LSI: Local Si Interconnect

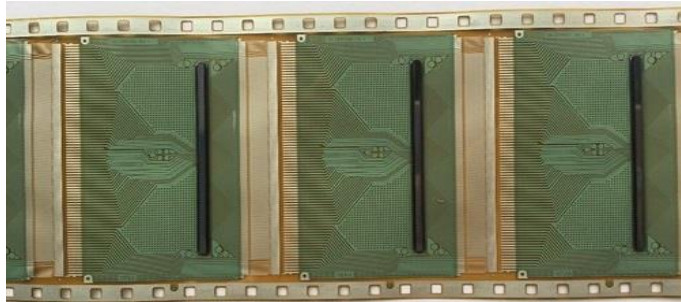


# COF Industrial Application-Floating R2R (Roll to Roll) Oven

**c sun**

13

- Fully automated non contact type R2R oven has been moved in customer in China in Q1 2020 and repeat order is received.
- Applications: **COF**, FPCB, Flex panel display and flex-electronics.



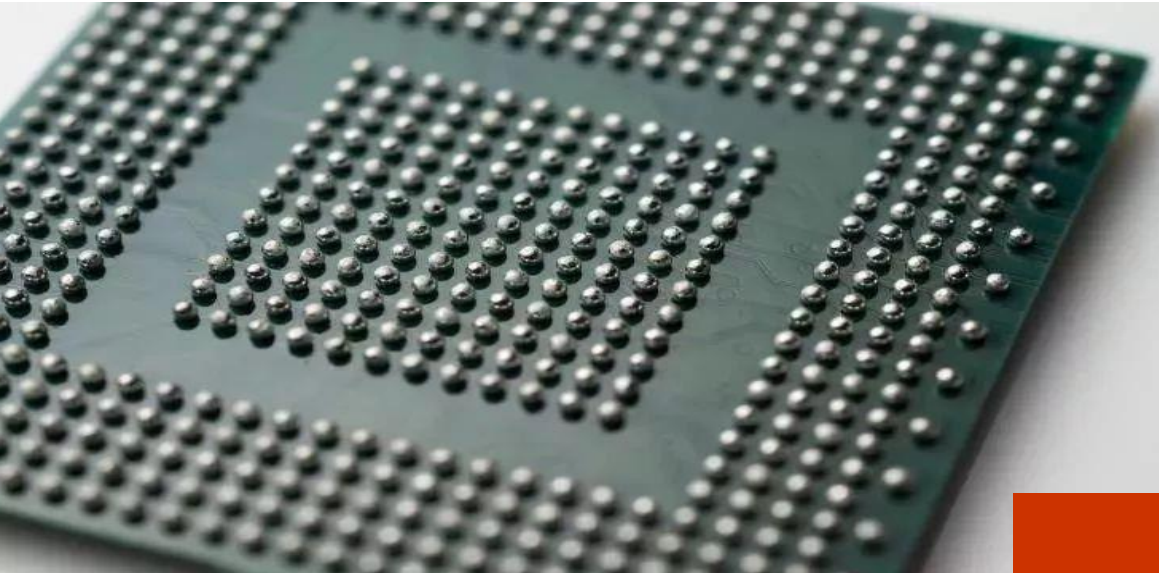
Non-Contacted Roll to Roll Automated Oven

# 3D Packaging & AutoClave Process- VPO(Vacuum Pressure Oven)

*c sun*

14

- For chip on wafer and u bump de-bubbling.
- Delivered to packaging big names.
- VPO connecting with OHT is certified by big name DRAM manufacturer in multi stacking process.



Vacuum Pressure Oven

RF Module Integration Trend: Power Amplifier / Filter Integration.



**Wafer-form Auto Roller Laminator**



**Auto Mylar Peeler**



# WLP / PLP Advanced Packaging Equipment *c sun*

16

- RDL Fan-Out Package process vacuum lamination and Automated Oven Line.
- Wafer vacuum lamination equipment was prepared prior to mass production in T company and started placing repeat orders, for the SoW process base line.
- Burn in Auto Oven has been passed the Mainland DRAM factory verification, and new projects are currently under negotiation.



Wafer –Form Vacuum Laminator



Burn in AUTO OVEN

- The production scale of 2.5D TSV advanced packaging expands with the application of AI chips, and continues to increase volume.
- As 3D TSV enters into the mass production stage, the specifications nearing to its requirement and production scale continue to grow. It is estimated to have a double-digit growth in demand for the equipment within 5 years.



Auto oven



High clean ring-spoke furnace tube.



Carrier Bonder

# 2020~2021 PCB Technology & Opportunity

***c sun***

- Prompt plant construction for IC Carrier and HDI Board
- 5G Servo Board
- Mass Production for Mini LED Base.



# Fast Plant construction for IC Carrier and HDI Board

**c sun**

19

- IC Substrate/Substrate Type and HDI High-End Packaging Equipment.
- Demand for ABF process equipment continues to increase.



Ultra-thin board high-end laminating machine



Multi-chamber vacuum laminating line (ABF)



ABF Mylar Peeler Machine

# 5G Servo Board

**c sun**

20

- Significant increase in demand for 5G base stations and cloud server servo boards .
- Actively expanding the market for LCP



Fully Auto Exposure  
System



RTR Auto Exposure  
Machine



Roll to Roll Auto  
Laminator



# Mini LED Circuit Base Mass Production

**c sun**

21

- The massive backlighting conversion of smart phones to mini LEDs, has tremendously increase the demand.



Auto Vacuum  
Laminating Line



Auto Roller Laminating  
Machine



Auto Single-Sided  
Peeling machine





## Prime Proven Technology in the industry covering

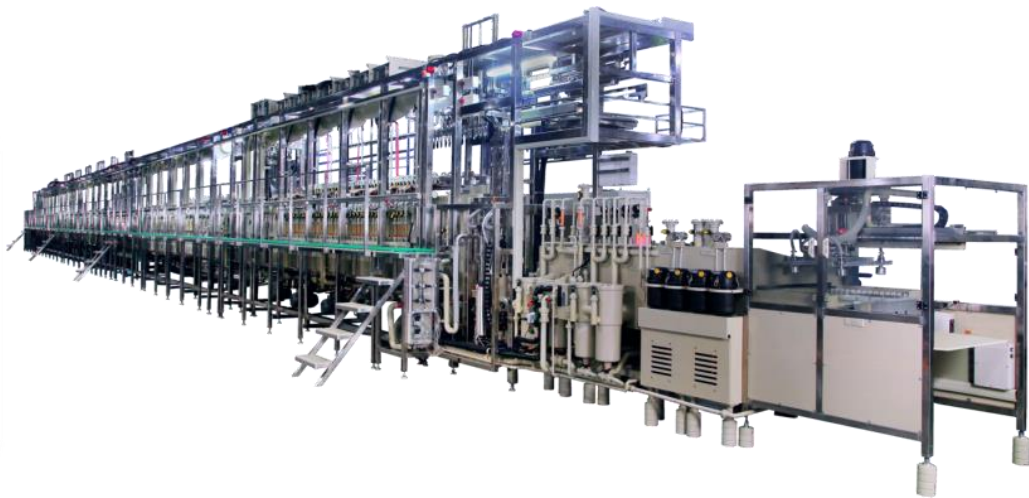
- High Frequency and Speed for 5G Communication
- High reliable automotive electronics
- Market for thin and compact FPC
- Expansion and Transformation of Industry 4.0

Multiple growth in output & 5G construction and product applications drive.



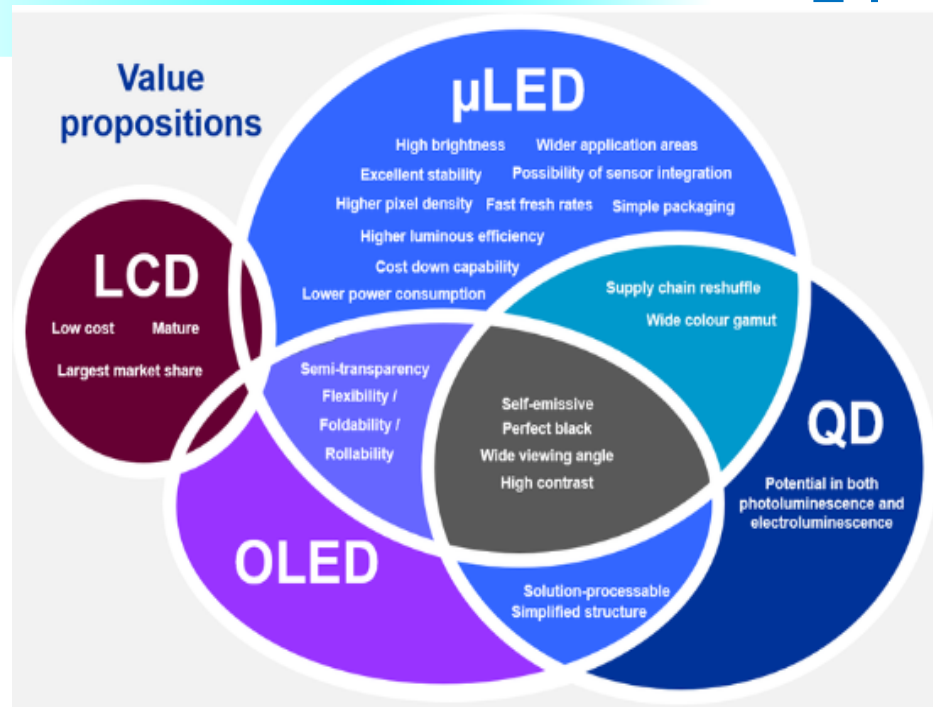
## IC Substrate Ultra-Thin Board Equipment Promotion 23

- Optimize equipment and commercial market promotion



# 2020~2021 FPD Industry overview and opportunities

- Mainland Customer G10.5 、 G8.6 TFT/OLED slows down in plant construction.
- Large-scale applications of high-end automotive modules (3D)
- Mini LED/Micro LED manufacturing process.
- Gaming Panel Monitor demand promotes requirement of high-end processes.



# Car Panel Oven, Curing & Lamination

- Demand for Taiwan's automotive panels expand and modification of Taiwan's automotive panels continues to increase.
- There are special line order from cars manufacturers. Q2, orders from I-company on car panel module automation line and Q3 H-company car panel aging line.
- 2020/Q4 lamination technology is introduced into the automotive panel laminating process.



Panel Curing Process Line



Panel Film Line

# 3D Curved Protective Glass for car

**c sun**

26

- High-End Protective Glass Anti-glare and Anti-fingerprint layer baking line for car panel.
- Delivered to Japanese glass factory A company.  
Mass production for verification in Q3
- Negotiating co-operation with major China manufactures



# Mini /Micro LED Application

- Mini LED backlight applications will gradually be used in high-end panels
- Micro LED experimental lines are successively being introduced to gear up for mass production.
- The glass backplane process has managed to introduce Oven, UV, and Plasma equipment for production line applications.
- Have received an order from a major company in Q2, for applying plasma to mini LED cleaning and glue removal equipment.
- Q4 Micro LED RD line





# Continuous Demand in Gaming Monitor

**c sun**

28

- In Y2020, Gaming LCD shipments is forecasted to be 12.2 million units.
- There is a 37% growth compared with Y2019.
- The continuous increase in IPS and VA Technologies, as result a demand for new equipment.



年度	2020年		2024年		年複合成長率 (%)
產品	出貨量 (萬台)	ASP (美元)	出貨量 (萬台)	ASP (美元)	
電競桌機	1,480	699	1,580	671	1.6
電競螢幕	1,240	348	1,600	341	6.4
電競筆電	2,230	967	3,020	955	7.9
總量	4,960	-	6,190	-	5.7

資料來源：IDC，2020/9

整理：翁毓嵐

图一、2017年~2020年电竞液晶显示器面板类型比例



Source: TrendForce, Jul. 2020

- The G2C platform creates and provides equipment integration advantages.
- Follow up on advanced packaging capital expenditures with the foundry company T.
- Keeping up with the capital expenditures with advanced packaging of OEM T company.
- System-in-package applications are widely used and continue to cultivate the capital expenditures of major packaging in A and C Company.
- IC substrates and mini LED applications continues to expand, and heavy investment from Taiwan-funded factories.
- Increase servo boards in HDI and capital expenditures on equipments are high.
- The Mainland G10.5 and G8.6 plants continues to build.
- The large size high-end vehicle modules has led to the demand for dedicated production process from car manufacturers.





**Thank You**