

# 昇佳電子

## 投資人會議簡報

# 免責聲明

- This presentation includes forward-looking statements. All statements, other than statements of historical facts, that address activities, events or developments that Sensortek Technology Corp. expects or anticipates will or may occur in the future (including but not limited to projections, targets, estimates and business plans) are forward-looking statements.
- Sensortek's actual results or developments may differ materially from those indicated by these forward-looking statements as a result of various factors and uncertainties, including but not limited to material cost increase, market demand, change in legal, financial and regulatory frameworks, government policies, financial market conditions, and other risks and factors beyond our control.
- Sensortek does not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.

# I. 公司簡介

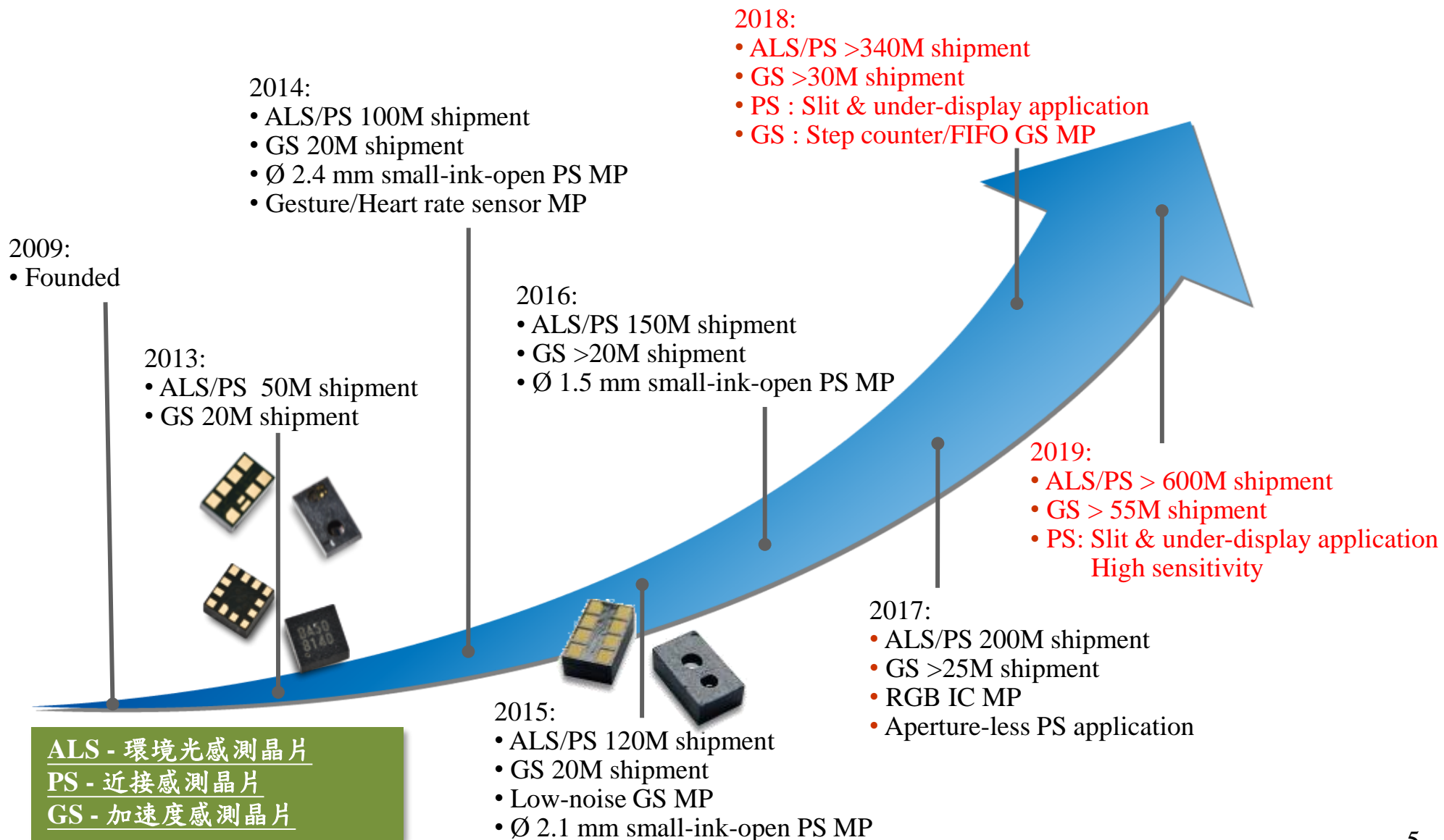
# 關於我們

<b>Company Name</b>	Sensortek Technology Corp.
<b>Founded</b>	December 1, 2009
<b>Capitalization</b>	NT377,813,480
<b>Chairman and CEO</b>	Sheng-Su Lee
<b>Number of Employees</b>	133
<b>Location</b>	Tai Yuen Hi-Tech Industrial Park, Jhubei City, Hsinchu County
<b>Products</b>	<ul style="list-style-type: none"><li>• <b>Optical Sensors</b><ul style="list-style-type: none"><li>- Ambient Light Sensors (ALS)</li><li>- Proximity Sensors (PS)</li><li>- Color Temperature Sensors (RGB)</li></ul></li><li>• <b>MEMS Sensors</b><ul style="list-style-type: none"><li>- Accelerometer Sensors (GS)</li></ul></li></ul>

# 董事結構

Title	Name		Education and Experience
Director	Sitronix Technology Corporation	LEE, SHENG-SU	M.S., electronic engineering, National Taiwan University President, Sitronix Technology Corp
		MAO, YING-WEN	Institute of Microelectronics, Cheng Kung University General Manager, Sitronix Technology Corp
		YANG, CHU-YUAN	M.S., electronic engineering, National Taiwan University Project Manager, Sitronix Technology Corp General Manager, Sensortek Technology Corp
Director	TSENG, HUA-CHENG		Department of Electronic Engineering, National Taiwan Ocean University Chairman, Magnachip semiconductor Ltd, Taiwan branch
Independent Director	HSU, CHUN-YI		Institute of Business Administration, University of Texas at Austin Executive Director, United Management Consulting Corp
Independent Director	HUANG, SHU-CHUN		Institute of Technology of Management, National Chiao Tung University Strategic Marketing Department Manager, Vanguard International Semiconductor Corp
Independent Director	LU, JEN-CHI		Institute of Accounting, Chung Yuan Christian University Deputy manager, Deloitte Touche Tohmatsu Limited

# 產品發展歷程



## II. 公司產品簡介



# 光學感測晶片

## Ambient Light Sensor

→ screen brightness control  
環境光感測晶片 → 調節螢幕亮度



## Optical sensor shipment

2017: >200M  
2018: >340M  
2019: >650M

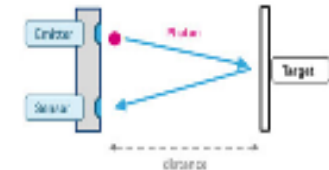
## Proximity Sensor

→ turns off the display (anti-touch)  
近接感測晶片 → 關屏(防誤觸)

- PS (w/T) + ALS visible sensor solution
- PS (w/T) + ALS invisible solution
  - ✓ Under-display solution (屏下方案) → AMOLED displays
  - ✓ Slit type (狹縫方案) → TFT displays
- PS (w/T) + RGB

## IR Transmitter

→ IR LED or IR Laser (VCSEL)



16:9 screen



Bezel-less screen





# ALS / PS 放置位置趨勢

## Waterdrop Screen

狹縫(Slit) ALS/PS

狹縫(Slit) PS / 屏下 ALS

前攝旁 ALS/PS

(Aside of Front Facing Camera)



## Bezel-less Screen

屏下(Under-display) ALS/PS

狹縫 (Slit) PS / 屏下 Under-display ALS

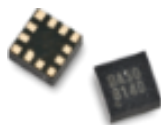


# 微機電感測晶片

## Accelerometer Sensor (GS)

→ Rotation detection

加速度感測晶片 → 屏幕旋轉偵測

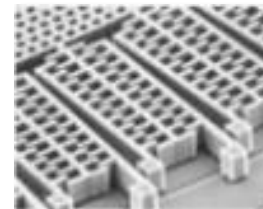


### GS shipment

2017: >25M

2018: >30M

2019: >55M



✓ GS for smartphones

✓ Low-power GS for wearable & IoT devices



Screen rotation



Automatic mute



Game control



Gesture detection



Answering aid



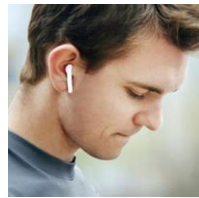
# Optical Sensors + G Sensors

## 穿戴裝置與非手機領域應用

### True Wireless Stereo (TWS) earphones

Accelerometer sensor → click detection

P-sensor → on/off switch



FreeBuds 3

#### Click detection

- Incoming call  
Click to answer  
Double click to reject
- AI assistant  
Click to pause  
Double click to switch

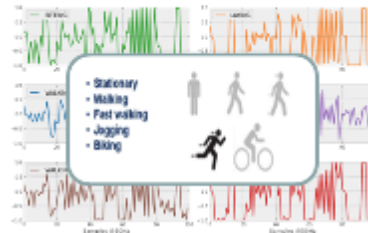
### Smart watches & fitness trackers

Accelerometer sensor → motion detection

Optical sensor → heartbeat detection



運動偵測 / 計步  
Motion detection



抬手亮屏 / 動態心率輔助  
Heartbeat detection

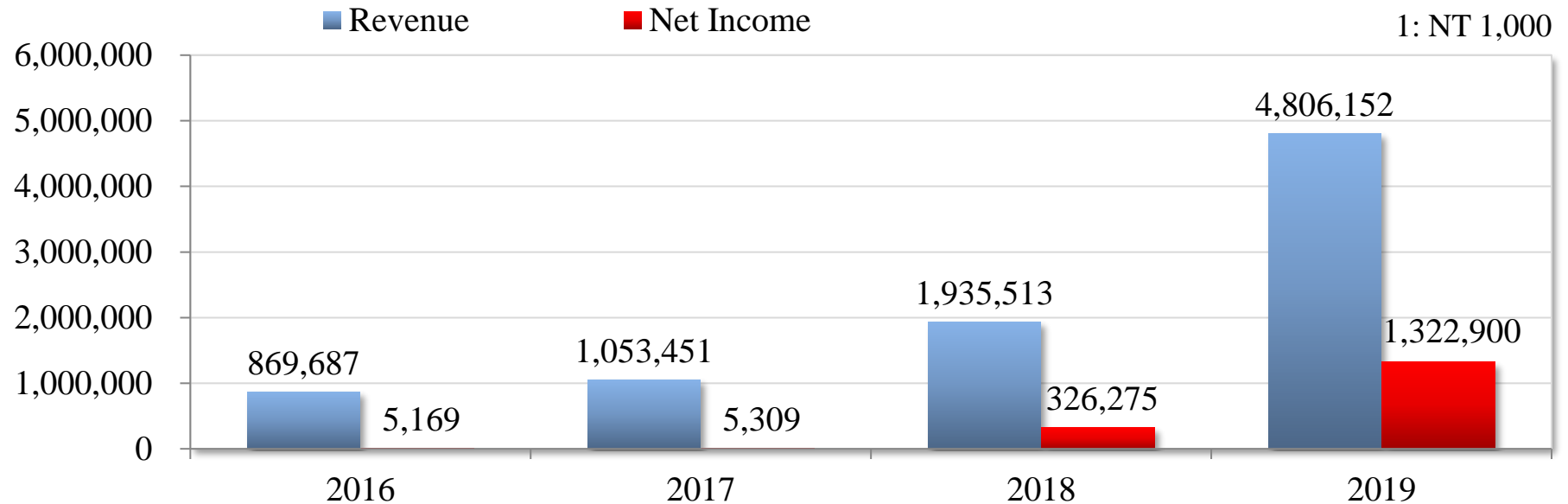


睡眠偵測 / 久坐提醒  
Sleep quality monitoring



# III. 經營實績

# 經營實績



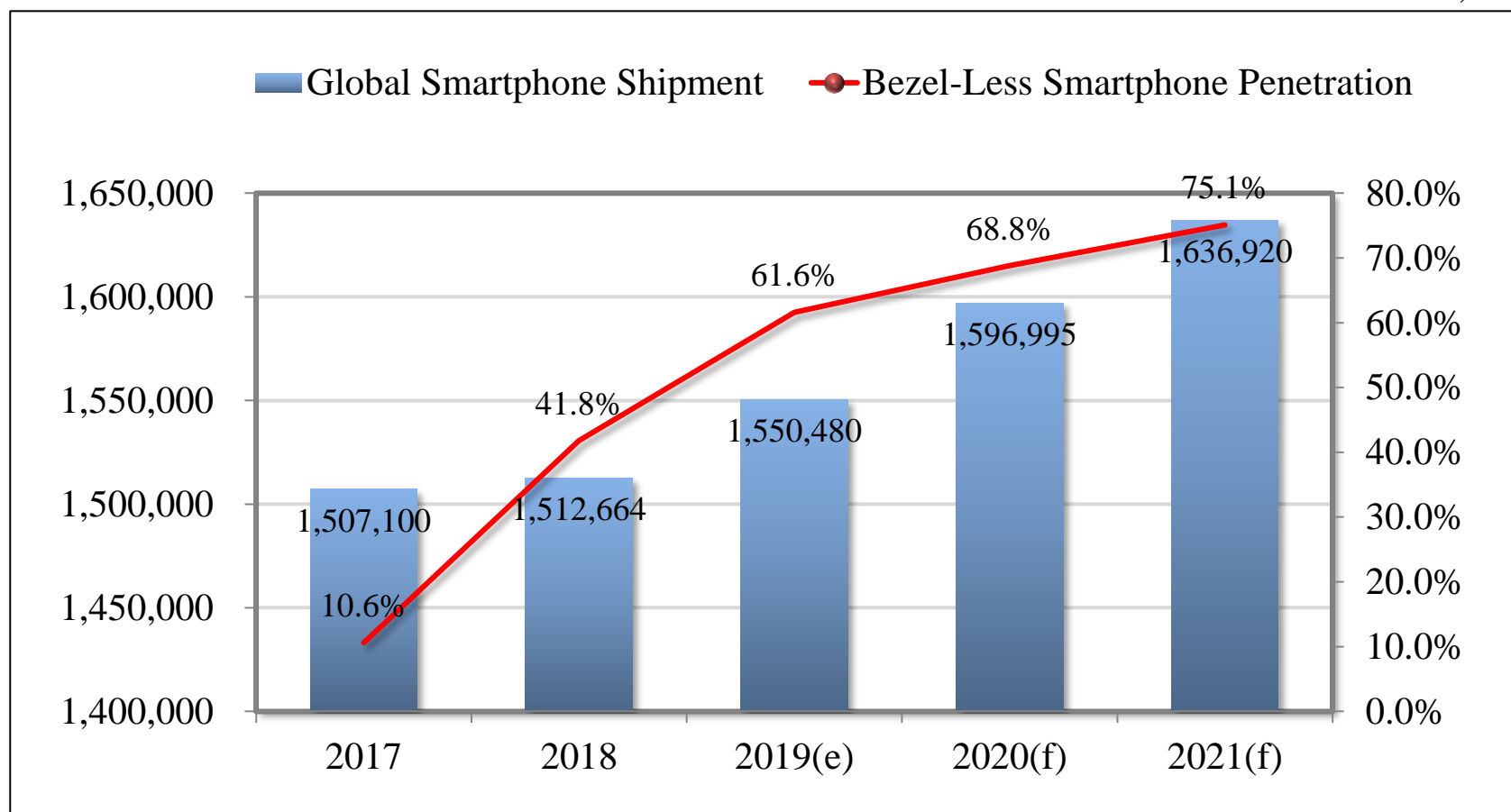
Item	2016	2017	2018	2019
Revenue	869,687	1,053,451	1,935,513	4,806,152
Gross Margin	137,375	158,184	649,442	2,018,872
Gross Margin %	15.80%	15.02%	33.55%	42.00%
Operating Income	4,931	8,751	366,646	1,497,236
EBIT	5,874	5,601	372,357	1,508,063
Net Income	5,169	5,309	326,275	1,322,900
EPS (NT Dollars)	0.14	0.14	8.64	35.01

Note: EPS is adjusted by current capital 37,781 thousand shares.

## IV. 市場概況及產業地位

# 智慧型手機規模及趨勢

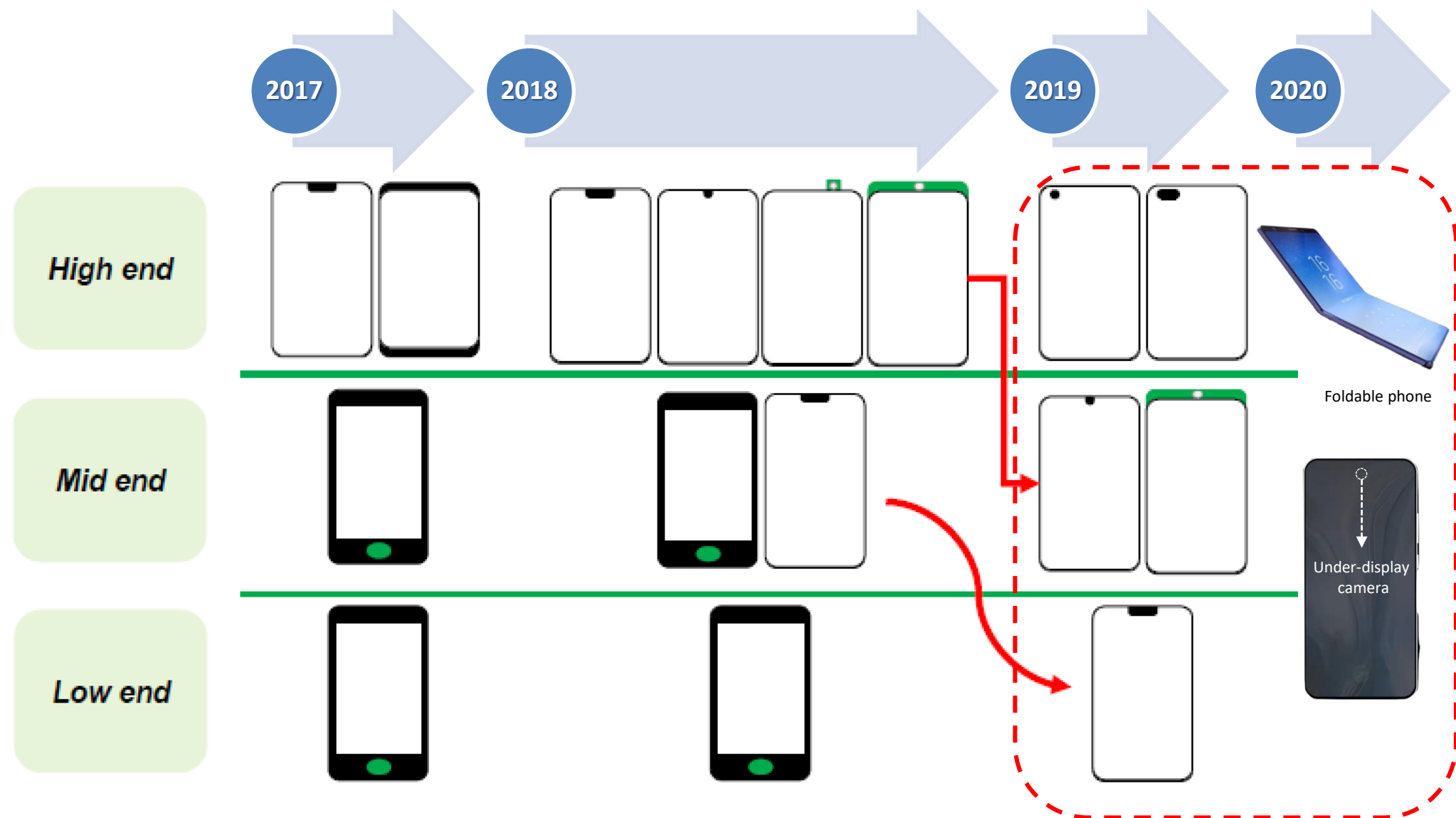
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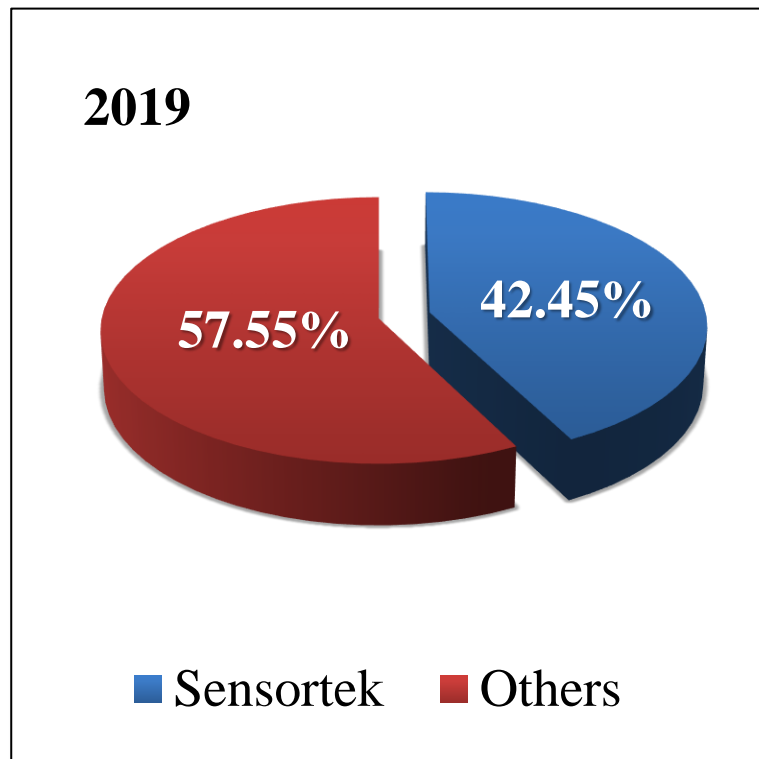
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# 智慧手機螢幕全屏化 → 屏下技術為主流

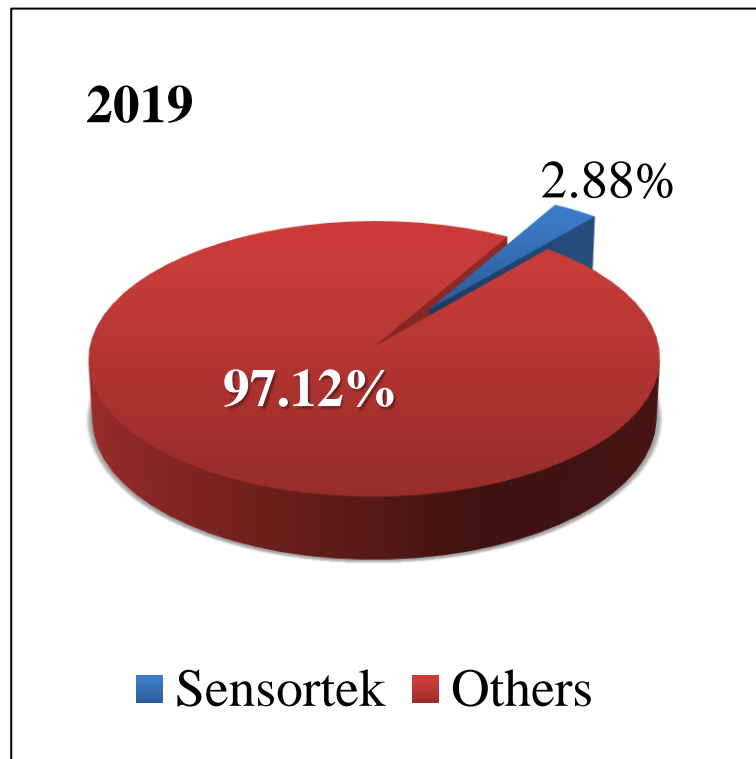


# 與同業競爭比較 – ALS / PS Sensor



- Slit design for smartphones
- Under-display design for smartphones
- Customization

## 與同業競爭比較 – G Sensor



- Good quality and reasonable price
- Has entered the TWS market successfully via existing channels
- Significant room for growth in the future

## V. 未來發展計劃

# 未來研發計畫

## 1. PS + ALS for front displays → 協同前螢幕之應用

- Under-display PS (屏下方案) + ALS → for AMOLED displays
- Slit type PS (狹縫方案) + ALS → for TFT displays
- PS+RGB sensors

## 2. Light sensor for rear cameras → 協同後相機之應用

- RGB sensors (更精準色溫偵測 more precise light detection)
- RGB + flicker sensors

## 3. Other applications → 延伸至非手機之應用

- Smart watches, fitness trackers, TWS, etc.

## 4. Speeding up MEMS development → 加速MEMS產品線

- Gyroscopes
- A + Gyro (2 in 1) for high-end smartphones

## VI. 公司治理

# 公司治理

- Organization: 4 directors and 3 independent directors
- The Company has established an audit committee and a compensation committee.
- Complies with "Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies" to stipulate the following rules:
  - 1) Ethical Corporate Management Best Practice Principles
  - 2) Rules and Procedures of Shareholders Meeting
  - 3) Rules and Procedures of Board of Directors Meeting
  - 4) Election Procedure of Directors
  - 5) Audit Committee Charter
  - 6) Compensation Committee Charter



**Thank You 謝謝**