

www.txccorp.com

*Think of Frequency
Think of*



法人說明會

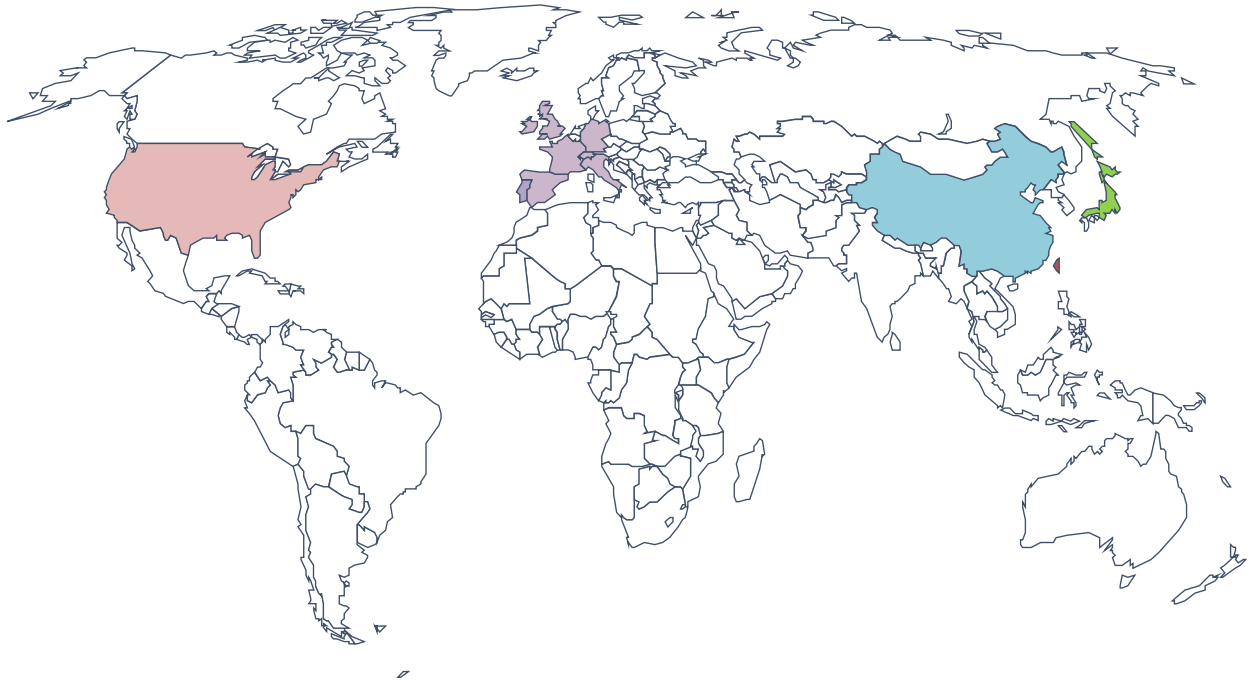
2015/5/14

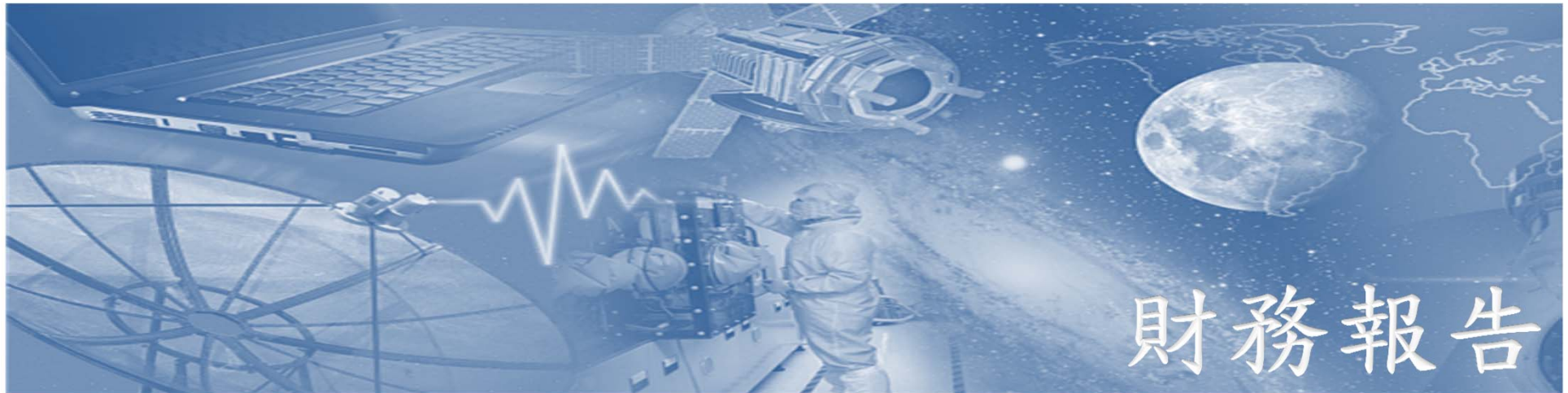


Think of Frequency, Think of TXC

議程

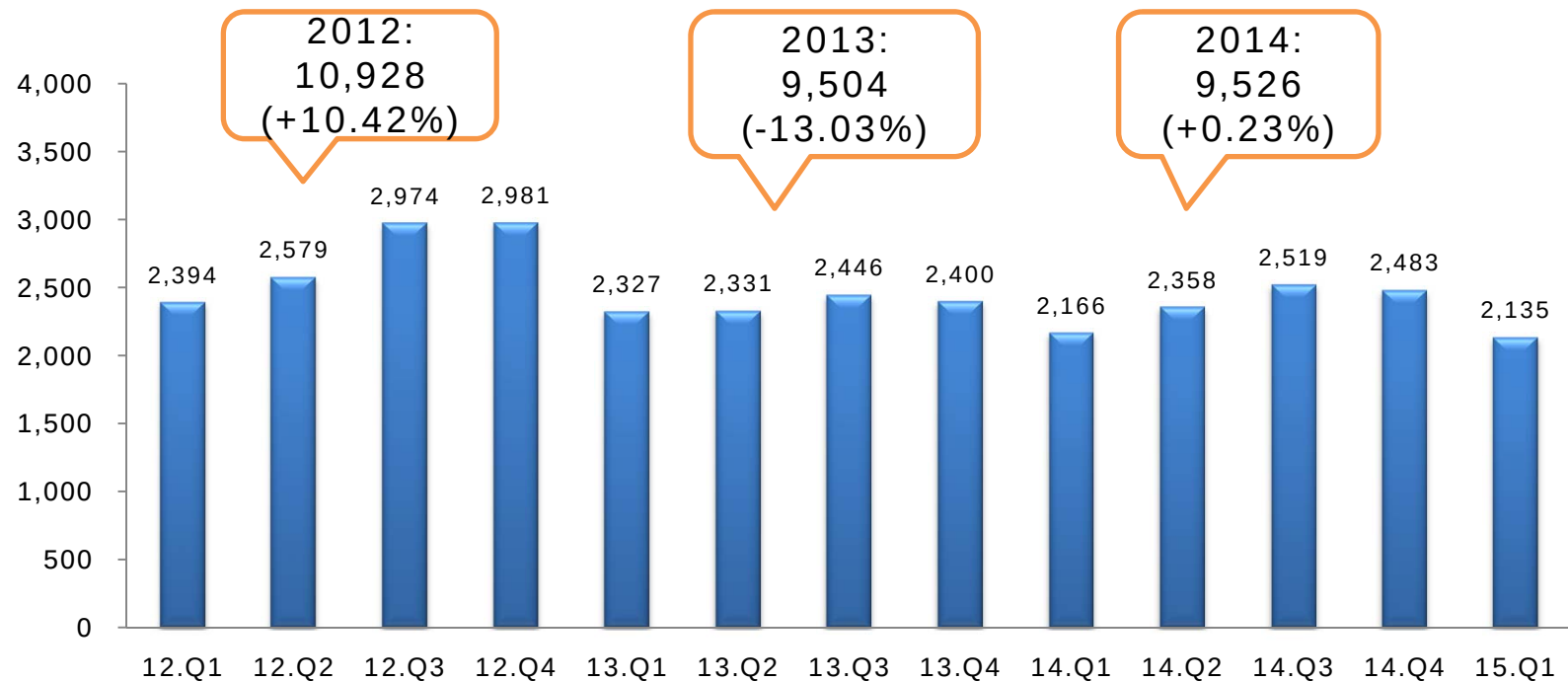
- 財務報告
- 市場概況
- 產品發展
- 營運重點
- Q&A





營收趨勢

(單位:新台幣百萬元)

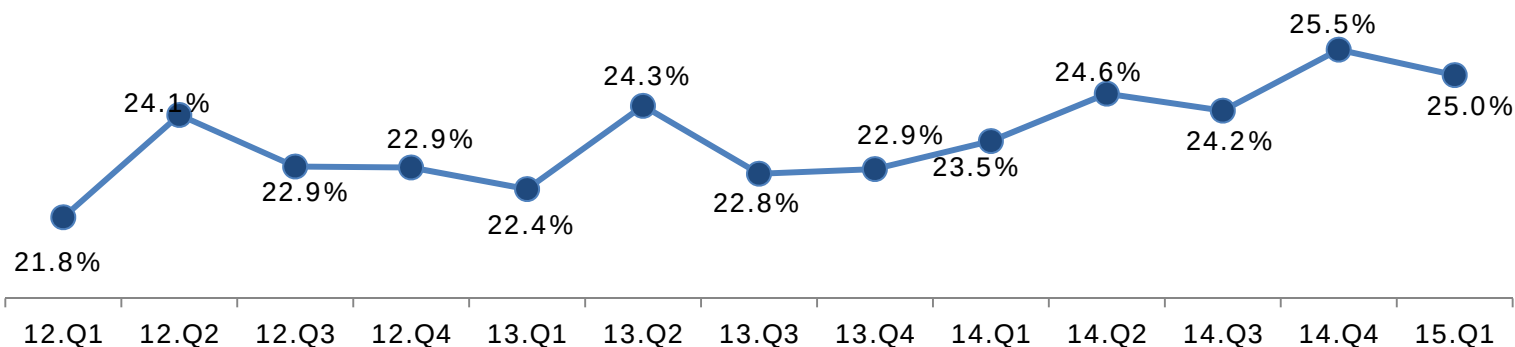


	12.Q1	12.Q2	12.Q3	12.Q4	13.Q1	13.Q2	13.Q3	13.Q4	14.Q1	14.Q2	14.Q3	14.Q4	15.Q1
Revenue (QoQ)	-8.1%	7.7%	15.3%	0.2%	-21.9%	0.2%	4.9%	-1.9%	-9.8%	8.9%	6.8%	-1.4%	-14.0%
Revenue (YoY)	3.1%	4.2%	19.2%	14.4%	-2.8%	-9.6%	-17.8%	-19.5%	-6.9%	1.2%	3.0%	3.5%	-1.4%

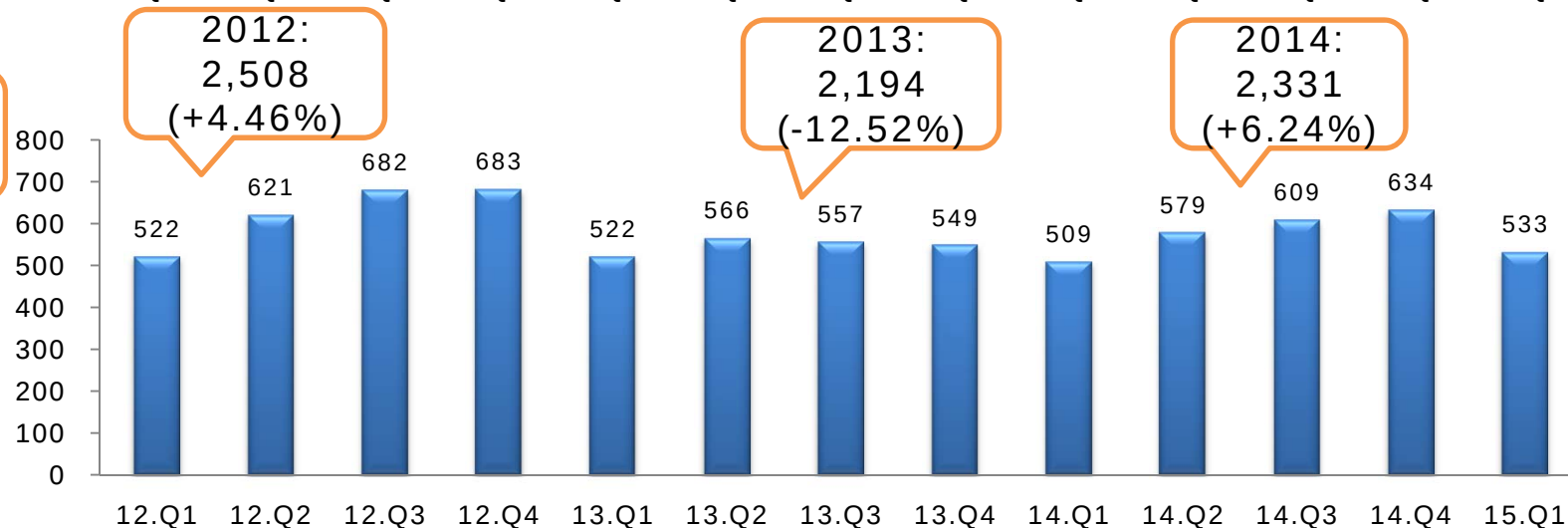
毛利趨勢

(單位:新台幣百萬元)

毛利率



毛利

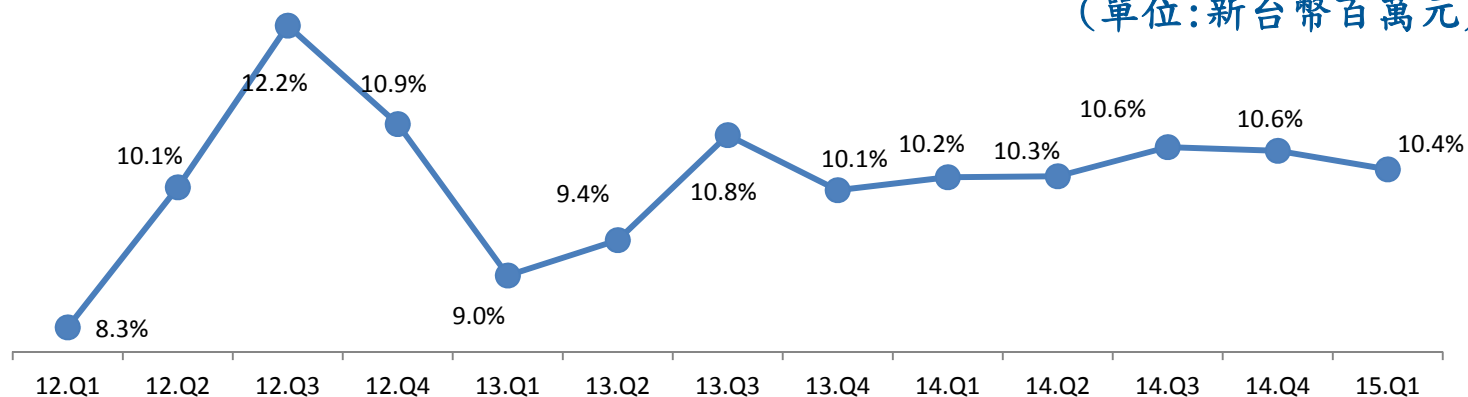


	12.Q1	12.Q2	12.Q3	12.Q4	13.Q1	13.Q2	13.Q3	13.Q4	14.Q1	14.Q2	14.Q3	14.Q4	15.Q1
Gross Profit (QoQ)	-10.9%	19.0%	9.8%	0.1%	-23.6%	8.4%	-1.6%	-1.4%	-7.3%	13.8%	5.2%	4.1%	-15.9%
Gross Profit (YoY)	-9.4%	2.0%	8.3%	16.6%	0.0%	-8.9%	-18.3%	-19.6%	-2.5%	2.3%	9.3%	15.5%	4.7%

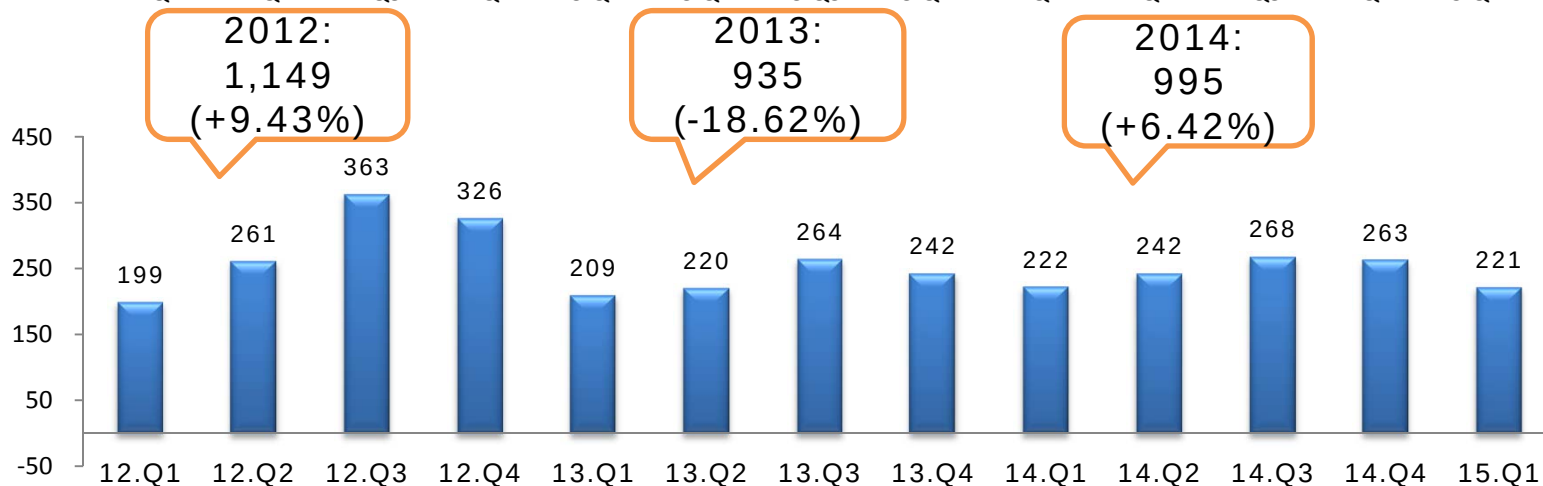
淨利趨勢

(單位:新台幣百萬元)

淨利率



淨利



	12.Q1	12.Q2	12.Q3	12.Q4	13.Q1	13.Q2	13.Q3	13.Q4	14.Q1	14.Q2	14.Q3	14.Q4	15.Q1
Net Profit (QoQ)	-23.5%	31.2%	39.1%	-10.2%	-35.9%	5.3%	20.0%	-8.3%	-8.3%	9.0%	10.7%	-1.9%	-16.0%
Net Profit (YoY)	-16.0%	5.2%	19.0%	25.4%	5.0%	-15.7%	-27.3%	-25.8%	6.2%	10.0%	1.5%	8.7%	-0.5%

主要損益指標

單位:新台幣仟元	2013 (T-IFRS)	2014 (T-IFRS)	成長率	Q1 2014 (T-IFRS)	Q1 2015 (T-IFRS)	成長率
營業收入	9,503,583	9,526,243	0.2%	2,165,532	2,135,069	-1.4%
營業毛利	2,194,030	2,331,149	6.2%	509,403	533,220	4.7%
營業淨利	951,154	1,004,002	5.6%	214,156	216,792	1.2%
稅前淨利	1,061,765	1,145,755	7.9%	253,048	243,611	-3.7%
稅後淨利	935,161	995,174	6.4%	222,112	221,065	-0.5%
毛利率	23.1%	24.5%	-	23.5%	25.0%	-
營業利率	10.0%	10.5%	-	9.9%	10.2%	-
淨利率	9.8%	10.4%	-	10.3%	10.4%	-

主要資產負債指標

單位:新台幣仟元	2014 (T-IFRS)	Q1 2014 (T-IFRS)	Q1 2015 (T-IFRS)
流動資產	7,806,568	7,476,459	8,050,907
固定資產	5,815,679	5,980,832	5,733,789
總資產	13,622,247	13,457,291	13,784,696
流動負債	2,791,774	3,098,978	3,678,563
長期負債	1,935,897	1,750,805	1,063,582
總負債	4,727,671	4,849,783	4,742,145
股東權益	8,894,576	8,607,508	9,042,551
負債比率	34.7%	36.0%	34.4%
流動比率	279.6%	241.3%	218.9%
速動比率	220.4%	183.6%	170.3%
每股淨值	28.71	27.79	29.19

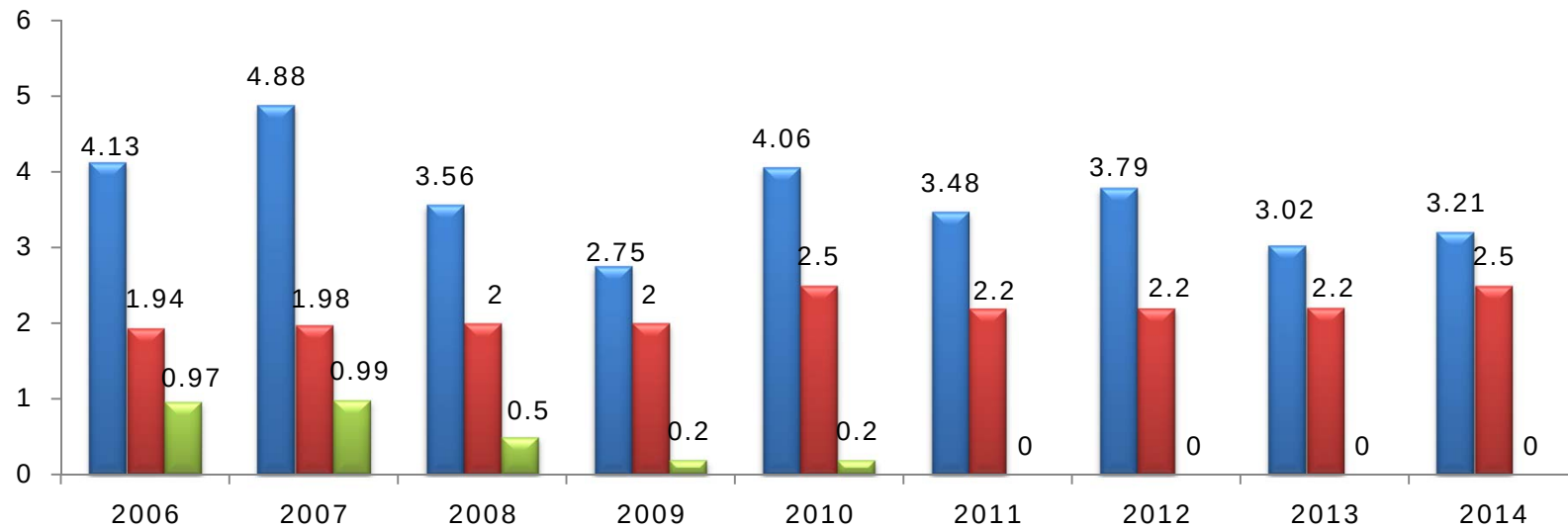
2015年資本支出

(單位:新台幣)

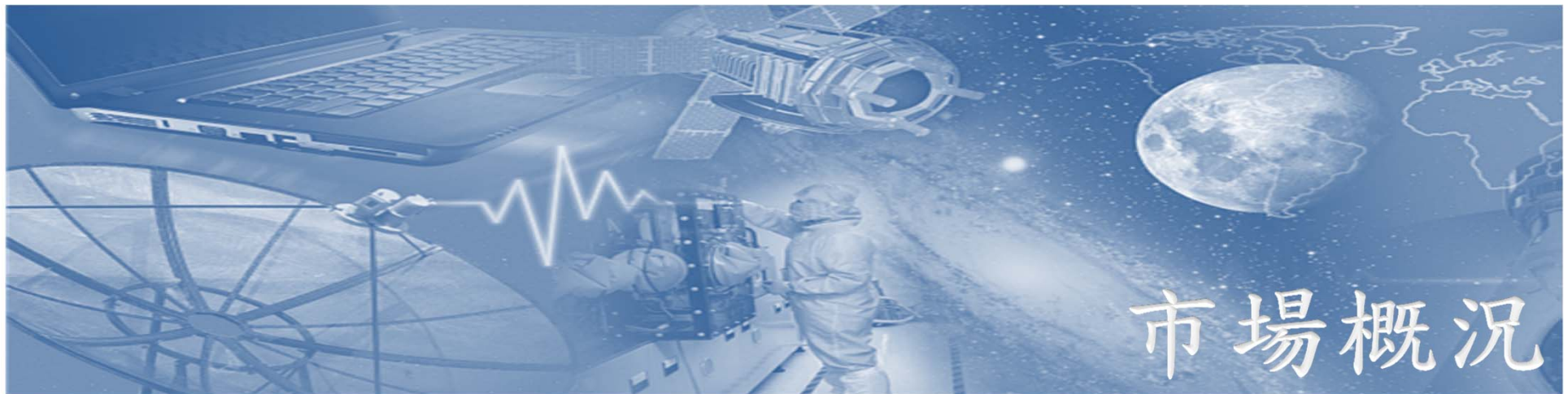


股利政策

(單位:新台幣元)

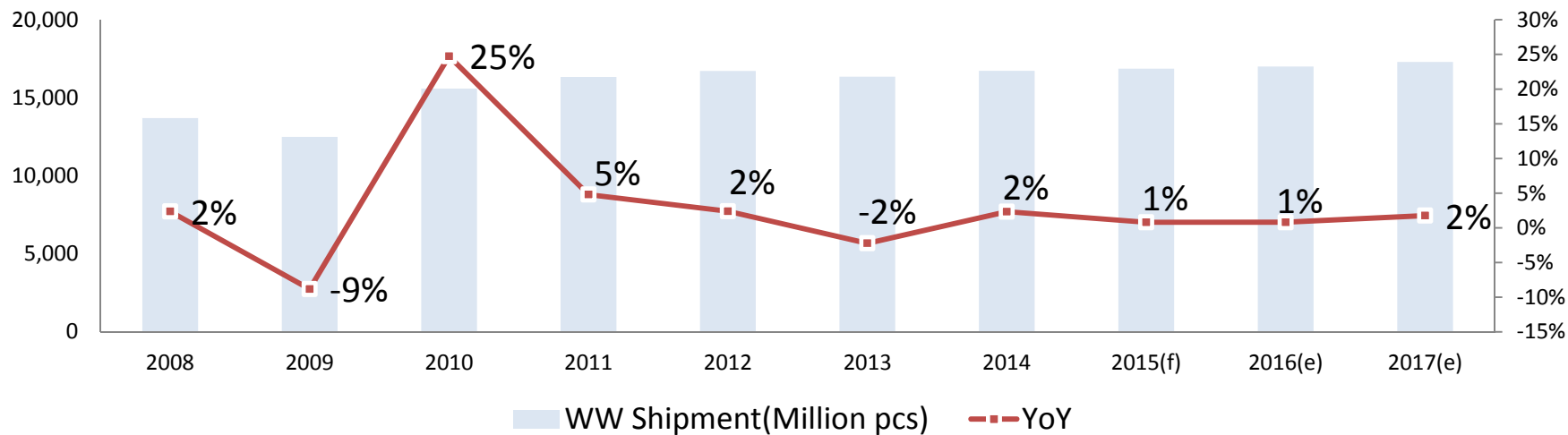


	2006	2007	2008	2009	2010	2011	2012	2013	2014
每股盈餘	4.13	4.88	3.56	2.75	4.06	3.48	3.79	3.02	3.21
現金股利	1.94	1.98	2	2	2.5	2.2	2.2	2.2	2.5
股票股利	0.97	0.99	0.5	0.2	0.2	0	0	0	0
3/31股價	60.6	54.6	32	52.1	55.9	43.55	44.85	40.7	40.05
殖利率	3.20%	3.63%	6.25%	3.84%	4.47%	5.05%	4.91%	5.41%	6.24%

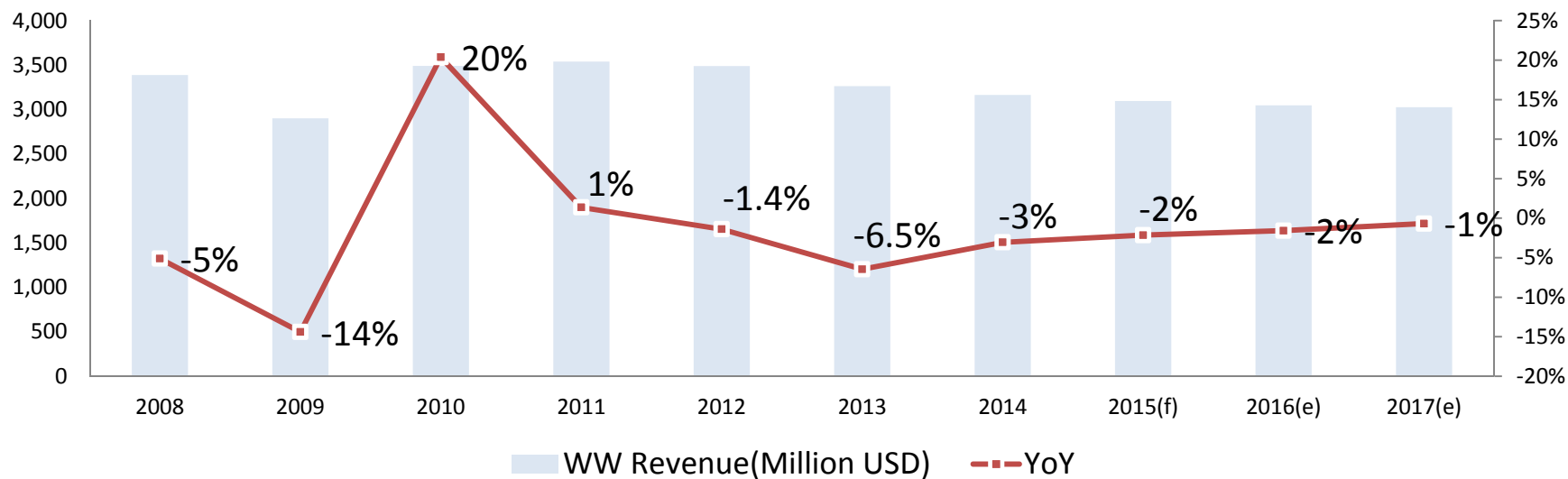


全球石英元件市場概況

Worldwide X'tal & Oscillator Shipment Y2008~2017



Worldwide X'tal & Oscillator Revenue Y2008~2017



2014年全球排名第3

2014 Rank	Company Name	2014 Revenue (M)	Percent of Total
1	Epson Toyocom	\$449	14.1%
2	NDK	\$417	13.1%
3	TXC	\$323	10.1%
4	KCD	\$293	9.2%
5	KDS	\$264	8.3%
6	Vectron	\$176	5.5%
7	SiWard	\$99	3.1%
8	Hosonic	\$95	3.1%
9	Rakon	\$71	2.2%
10	Failong	\$65	2.0%
	Other Companies	\$938	29.3%
	Total Revenue	\$3,190	100.0%

*TXC total revenue included others

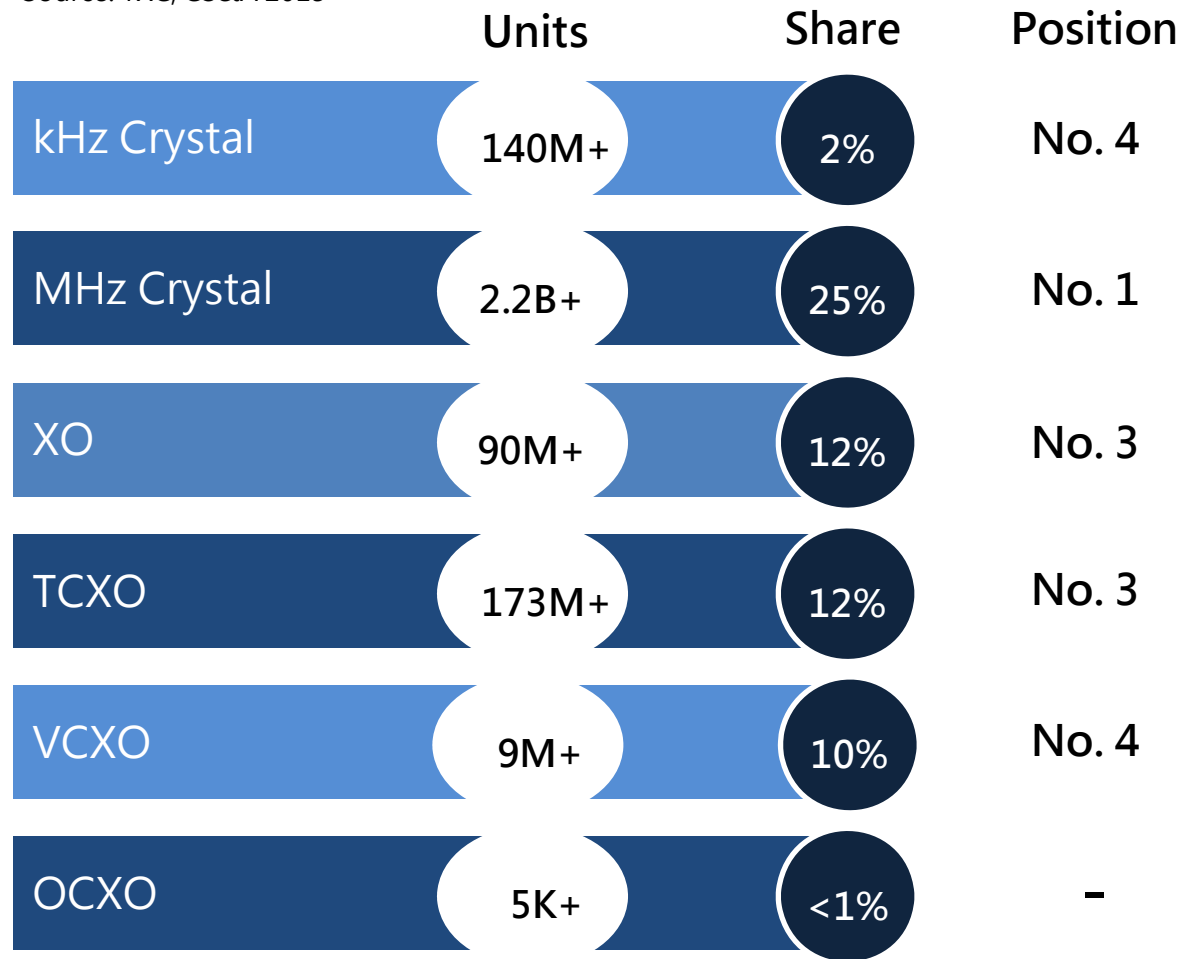
Source: TXC, CS&A 2015



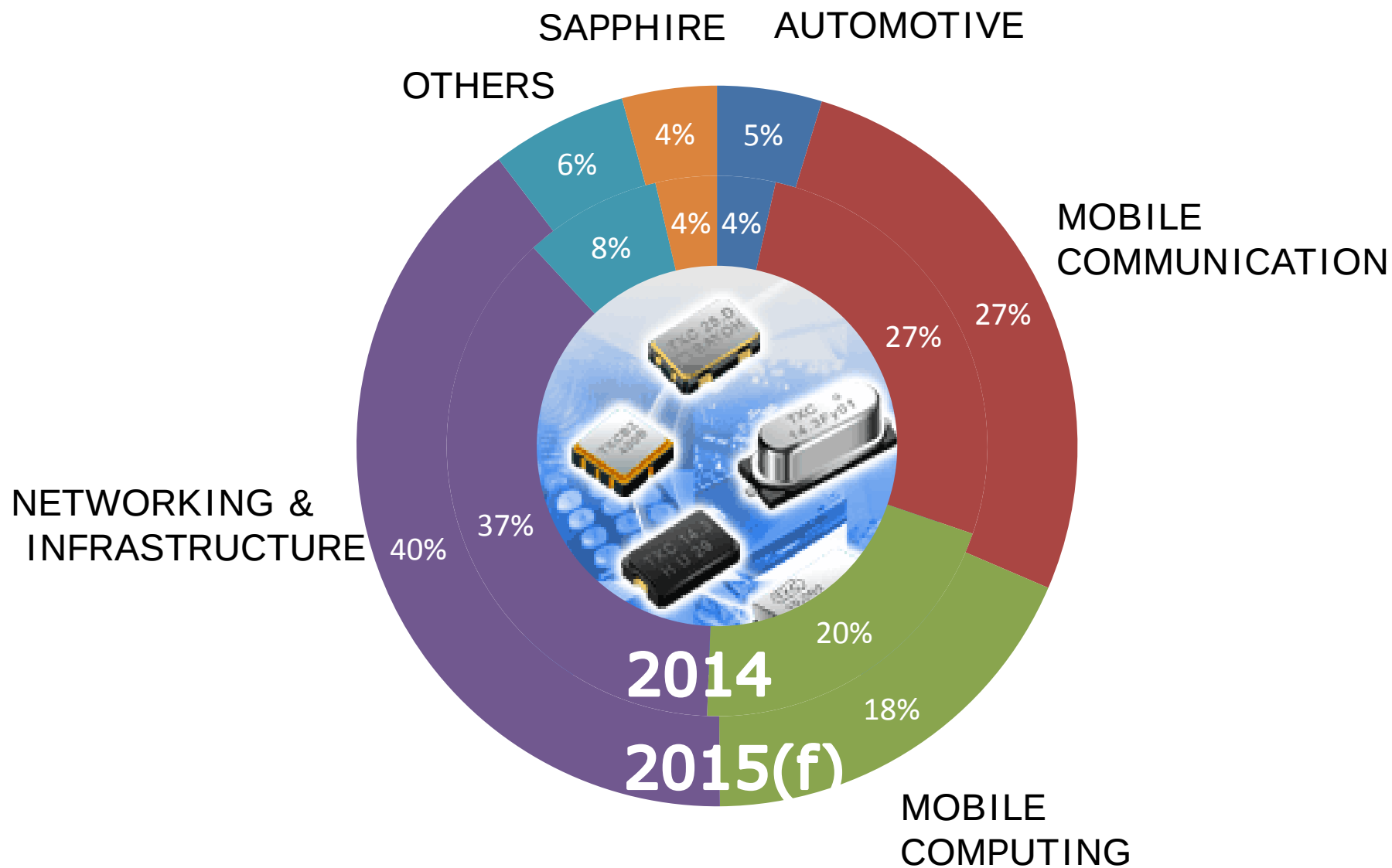
Think of Frequency, Think of TXC

2014年台灣晶技各產品之市佔率及排名

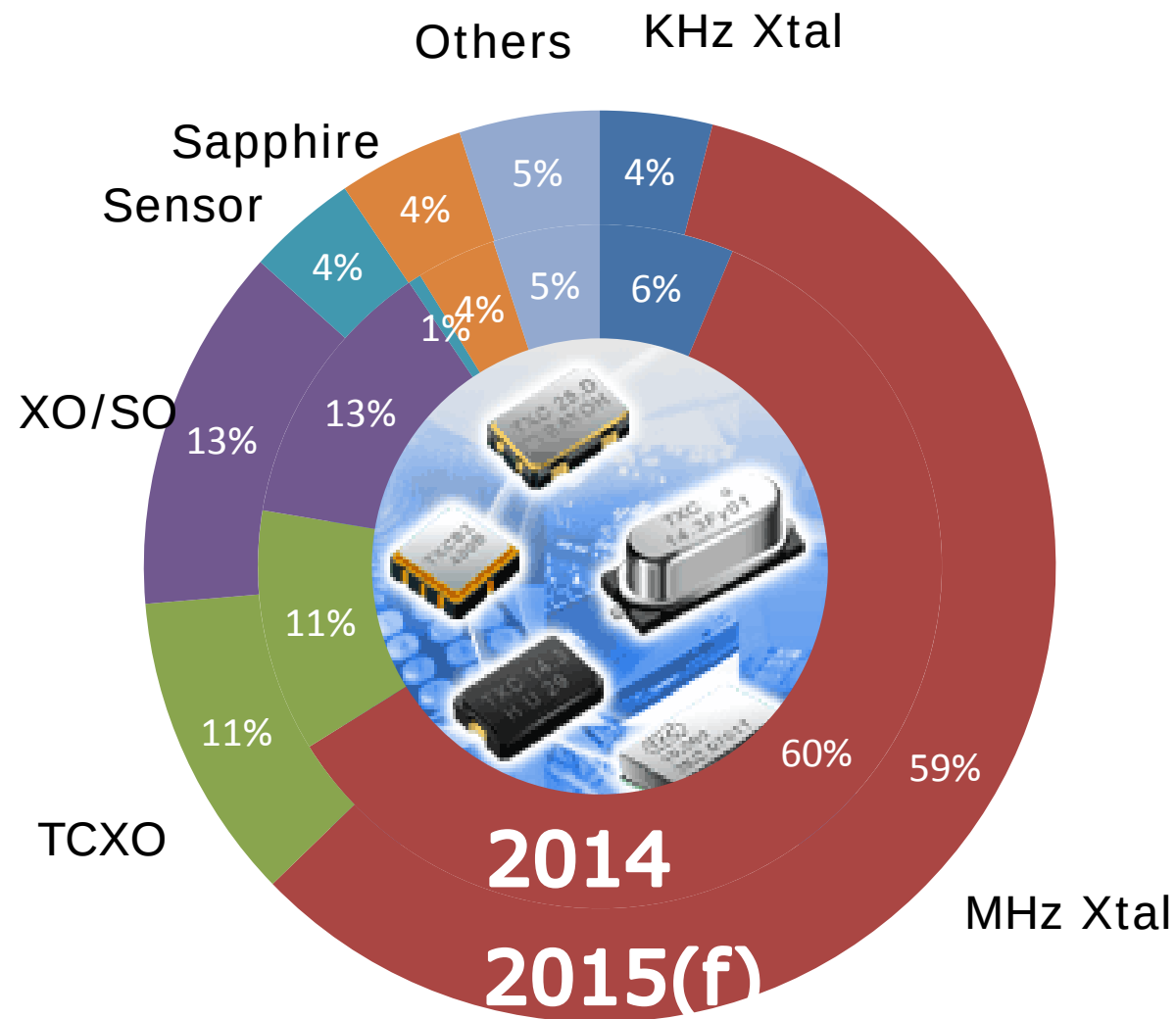
Source: TXC, CS&A 2015



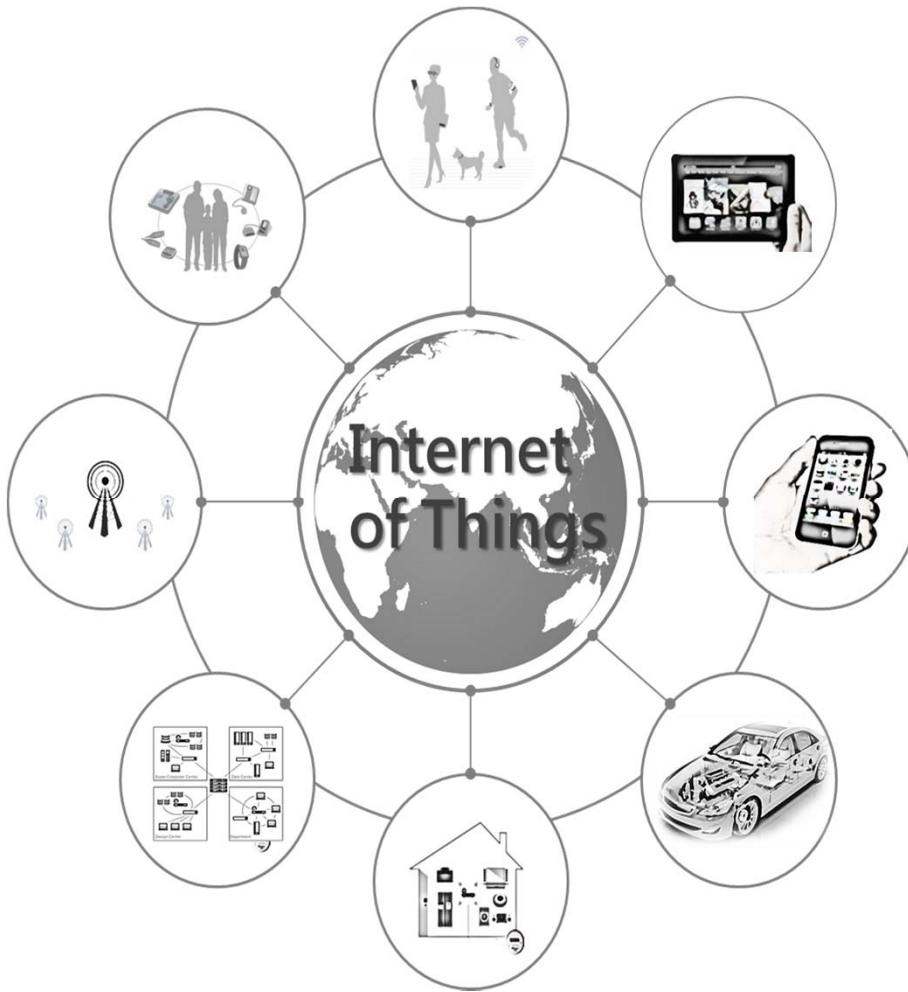
台灣晶技-產業別銷售比重分析



台灣晶技-產品別銷售比重分析



物聯網發展概況



智能產品，如手機、電視、汽用、家庭及工業設備等皆可透過網際網路互相連結，並達到以下目的：

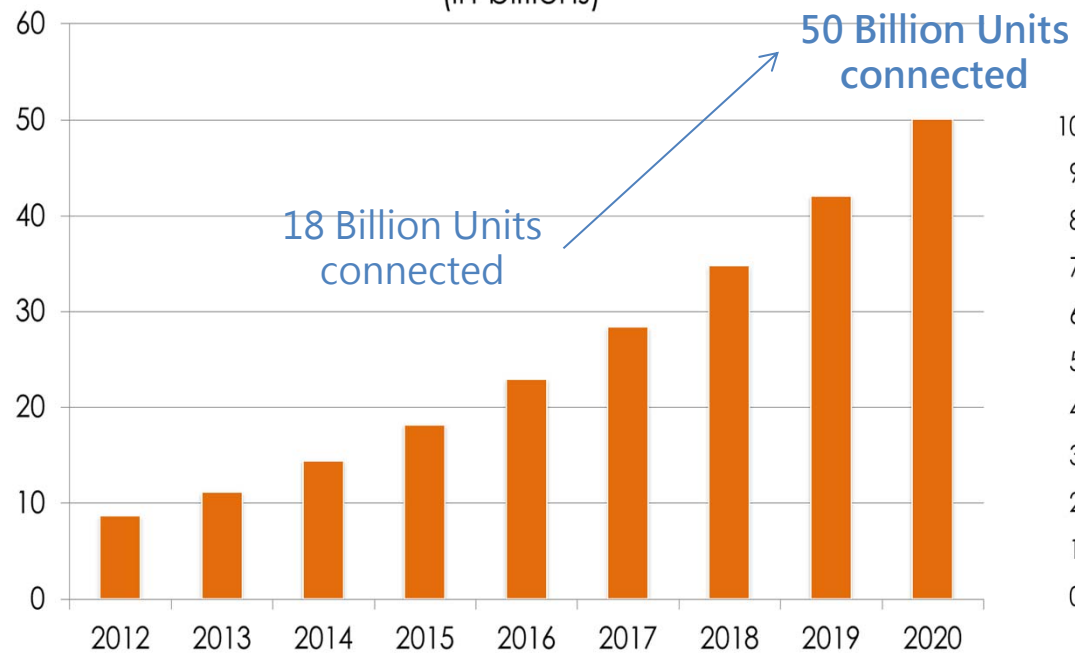
1. 使系統自動化
2. 使訊息傳輸更為便利
3. 收集資訊

這些互相連網及連結的事物稱之為物聯網（IoT）

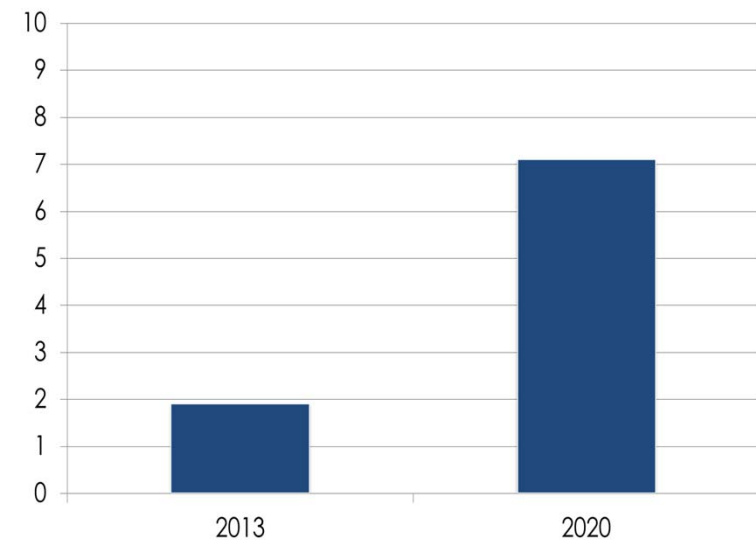
物聯網發展趨勢

7兆美元之商機

Total Internet of Things
Connections
(in billions)



Internet of Things Market Size
(in trillions of dollars)



Source: IDC

物聯網之發展是無止盡的

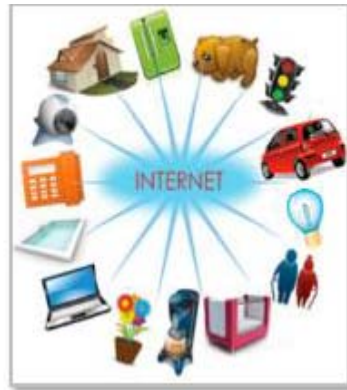
Everything Networked & Connected

M2M (機器對機器)



單一機器設備透過移動通訊進行有效之控制

IoT (物聯網)



所有的機器設備皆可透過網路互相溝通

IoE (萬物聯網)



所有的人、作業、資訊、事件均被連結到一起，信息將轉化為行動，實現新的能力及提供豐富體驗

物聯網結合各種通訊技術

台灣晶技可提供各種的物聯網解決方案

感測元件



Accelerometer
Gyro
E-Compass
Pressure
Light & Proximity

持續研究發展更多的感測元件

連結



LTE
Bluetooth, WiFi, NFC
GNSS
ZigBee

發展高效能及小型化之石英元件

應用



Software
Apps

強化感測元件相關程式

These are **TXC** focuses
Think of Frequency, Think of TXC

Source: TXC, IDC

台灣晶技提供各種輕薄短小且高效能之石英元件應用於各類型之智慧型手機、筆記型電腦及平板電腦之無線傳輸功能



Source: BER

- 3G/4G LTE
- WiFi
- BT/BLE
- NFC
- GNSS

Crystal

Smallest and Thinnest
1.2x1.0x0.30mm

TSX

Smallest and Thinnest
1.6x1.2x0.55mm

TCXO/VCTCXO

High stability $\pm 0.5\text{ppm}$
Smallest: 1.6x1.2x0.55mm

QUALCOMM
MEDIATEK

intel

BROADCOM

HISILICON

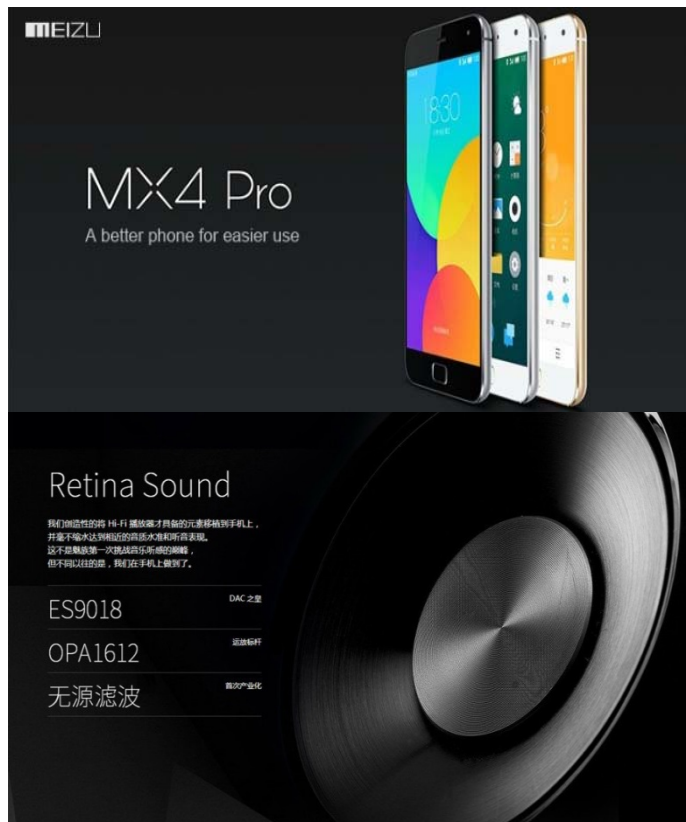
SPREADTRUM

NXP

TXC

Think of Frequency, Think of TXC

新型Hi-Fi音響將導入智慧型手機、筆記型電腦、平版電腦及耳 機產品，台灣晶技所提供的低雜訊之XO將應用至DAC晶片 (**100dBc/Hz @ 10Hz**)



Source: MEIZU, ESS



- HiFi
Audio



New

XO

Phase noise $\leq$ -
100dBc/Hz @ 10Hz;
2.5x2.0x0.75mm

台灣晶技已成功切入感測元件，未來仍將持續研發應用在智慧型手機相關應用之感測元件



New

Sensors

2013 Q2 launched
Combo Ambient Light + Proximity Sensors (LED/VCSEL)

- Smallest package 2.5x2.0mm
- Slim package 4.5x0.9mm

2015 Q2 launched
Anti-magnetic interference and low power e-Compass Sensors

- 3-Axis e-Compass, 1.6x1.6mm
- 6-Axis e-Compass, 2.5x2.5mm (Magnetometer + Accelerometer)

無線傳輸及感測元件的技術已被應用在穿戴產品、智慧家庭及醫療設備，預期將為台灣晶技帶來新的成長動能



Source: Apple, Fitbit, CTimes

New

Sensors

Ambient Light + Proximity
e-Compass

Crystal

Smallest and Thinnest
1.2x1.0x0.30mm

TSX

Smallest and Thinnest
1.6x1.2x0.55mm

TCXO/VCTCXO

High stability $\pm 0.5\text{ppm}$
Smallest: 1.6x1.2x0.55mm

XO

Phase noise $\leq -100\text{dBc/Hz}$
@ 10Hz; 2.5x2.0x0.75mm

微型基地台及基地台相關產品為本公司重要的成長與獲利來源

OCXO

Ultra Stability $\pm 3\text{ppb}$
Stratum 3/3E

S3-TCXO

Ultra Stability $\pm 100\text{ppb}$
Stratum 3

VCXO

Ultra Low Jitter $\leq 50\text{fs}$
Frequency up to 700MHz

XO, SO

Ultra Low Jitter $\leq 50\text{fs}$
Frequency up to 800MHz

Crystal

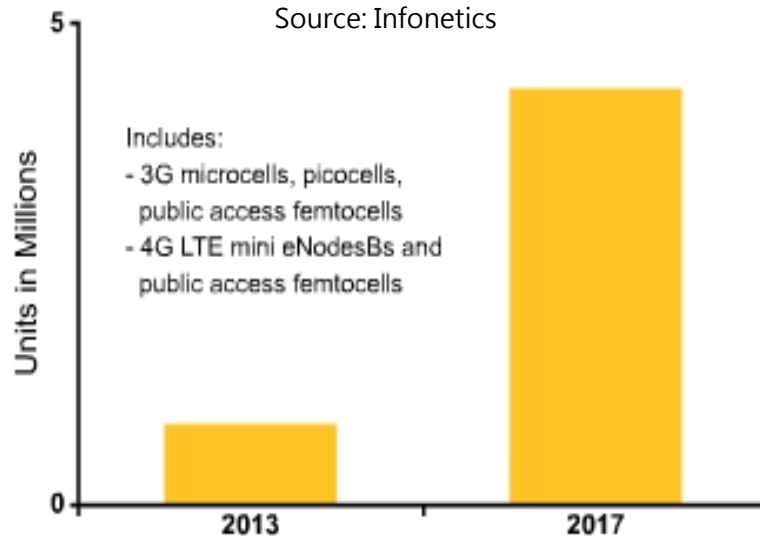
High Stability $\pm 10\text{ppm}$
Frequency up to 400MHz

32kHz RTC

High Stability $\pm 5\text{ppm}$
Temperature Compensated

Unit shipments of small cells are growing
at a 75% compound annual growth rate

Source: Infonetics



ZTE



TXC

Think of Frequency, Think of TXC

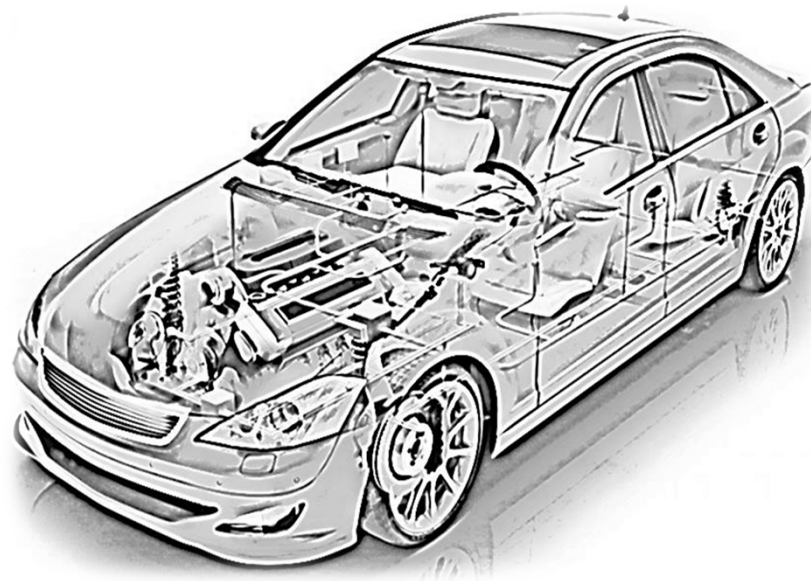
台灣晶技生產各種高可靠度汽車專用之石英元件 相關產品皆符合AEC-Q100與AEC-Q200之標準

Telematics &
Infotainment System

Security Electronic
System

Safety Electronic
System, TPMS

Advanced Driver
Assisted System



ISO/TS 16949 Certified

Crystal (AEC Q200)

Metal Can: -40~105°C
Glass: -40~150°C
Seam: -40~125°C

XO (AEC Q100)

Seam: -40~105°C

TCXO (AEC Q100)

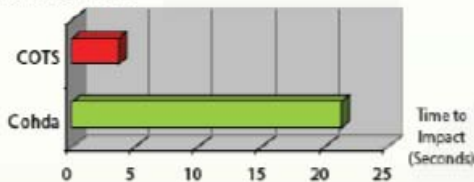
Seam: -40~105°C

Notes: G3: -40~85°C / G2: -40~105°C / G1: -40~125°C / G0: -40~150°C

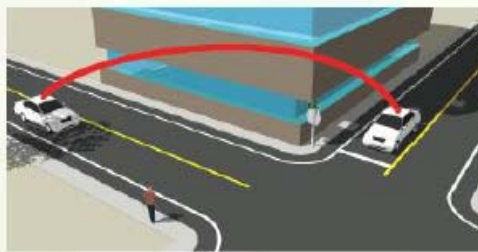
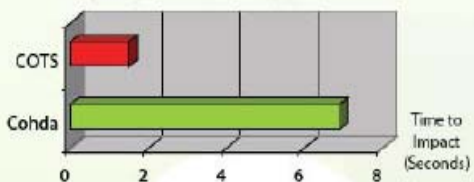
車輛間資訊互相連結將成為未來的趨勢，例如V2V(車對車通訊技術)及ADAS(先進駕駛輔助系統)；特殊規格的TCXO將應用於相關產品

- 802.11p

Do Not Pass Warning
Reliable connectivity at extended range in safety-critical scenarios.



Intersection Collision Warning & Movement Assist
Extends connectivity to non-line-of-sight conditions – dramatically improving V2V applications.



New

TCXO/VCTCXO

High stability $\pm 0.5\text{ppm}$
Smallest: 2.5x2.0x0.9mm

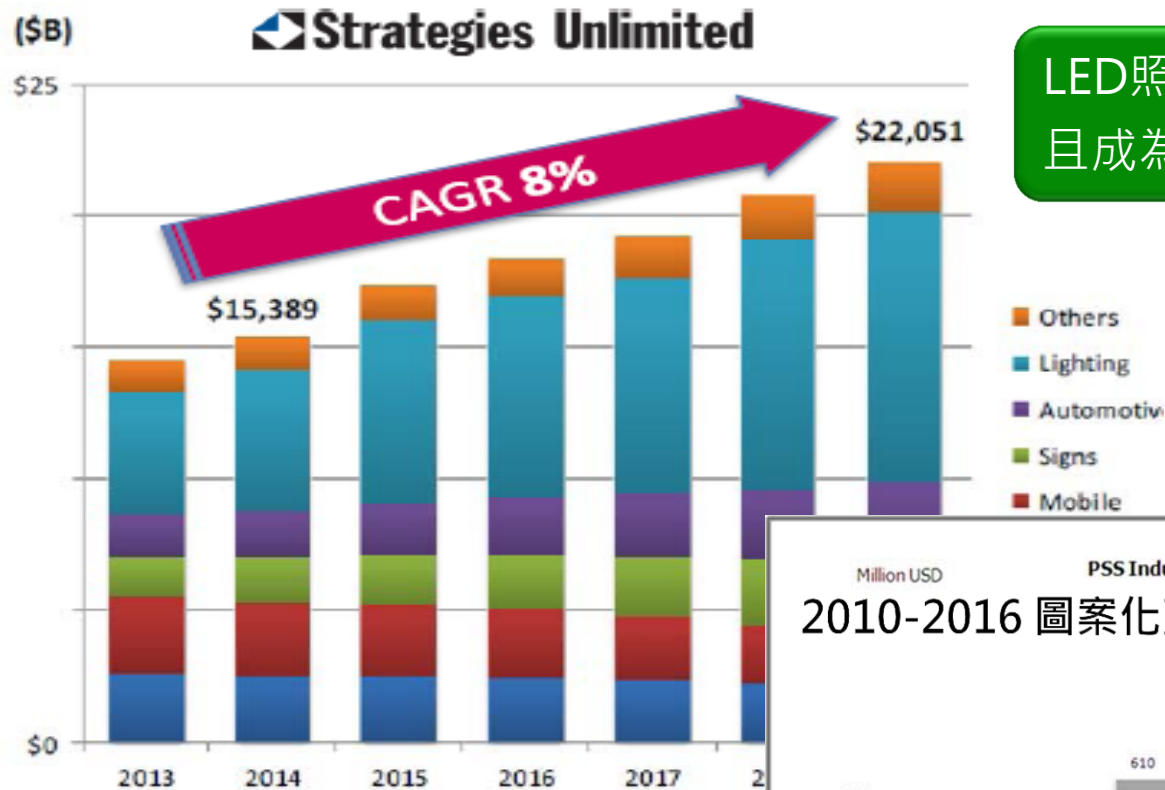
Source: Codha Wireless, NXP



TXC

Think of Frequency, Think of TXC

LED及PSS市場趨勢



LED照明需求持續成長
且成為LED產業成長的主要動力

Ref.: LED Forum, Epistar, Mar 25, 2015

LED照明及PSS需求仍持續成長
且短期內沒有替代性產品或技術

Million USD PSS Industry Market Value Forecast
2010-2016 圖案化藍寶石基板市場產值



PSS需求持續成長
且大尺寸比重逐年增加

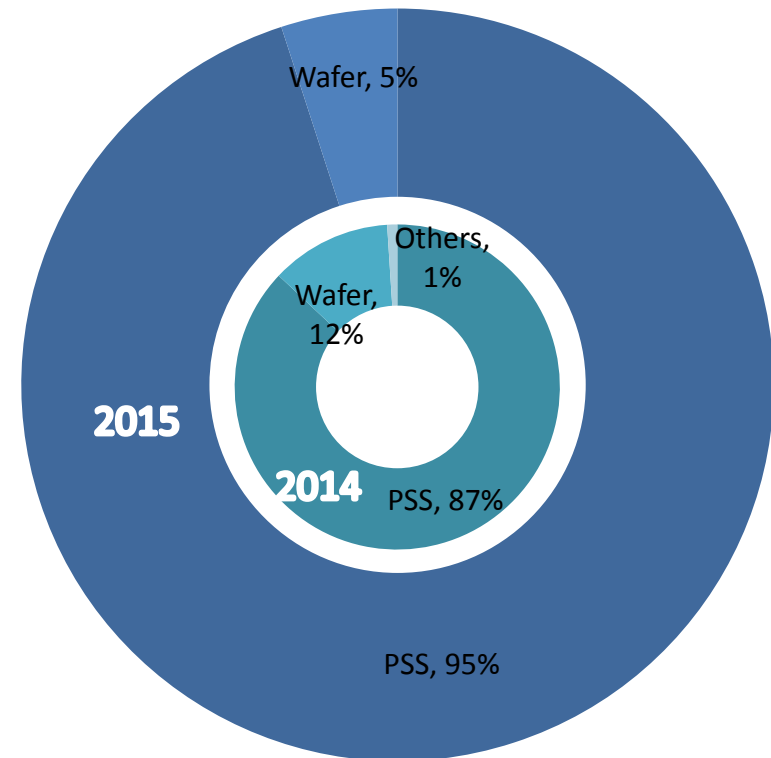
Ref.: LED inside, July, 2014

2015 LED營運策略

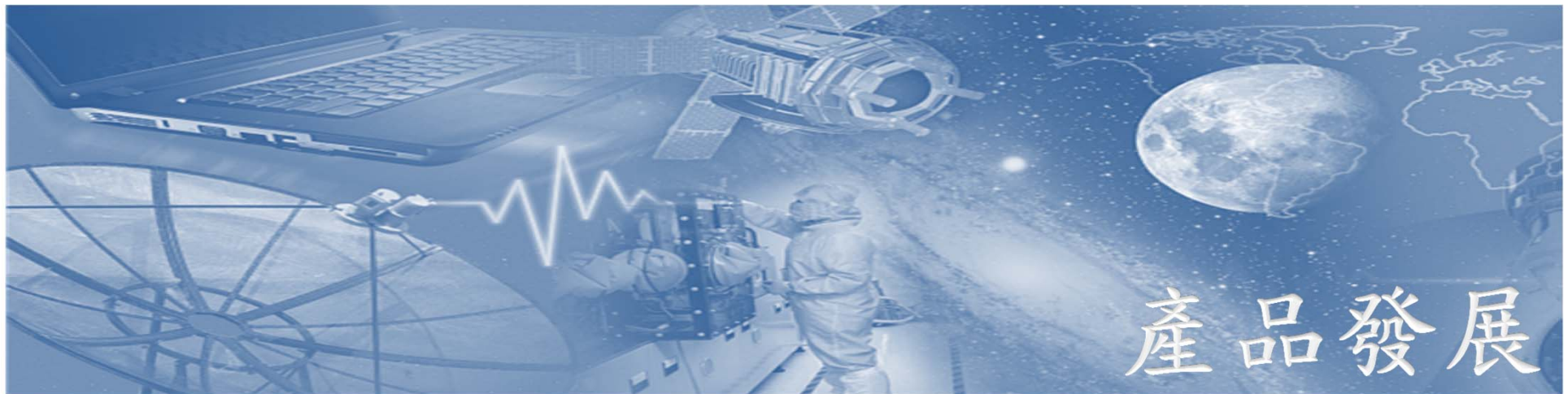
◆穩定成長為2015年的策略目標

- 主力聚焦 4" PSS產品，並發展6"產品
- 維持台灣主力客戶、積極開發大中華市場
- 提升產品良率、產出最大化
- 成本持續改善

◆2015 4" PSS目標出貨量400k，較2014成長100%



**2014-2015 Revenue Breakdown
by products**



產品發展藍圖

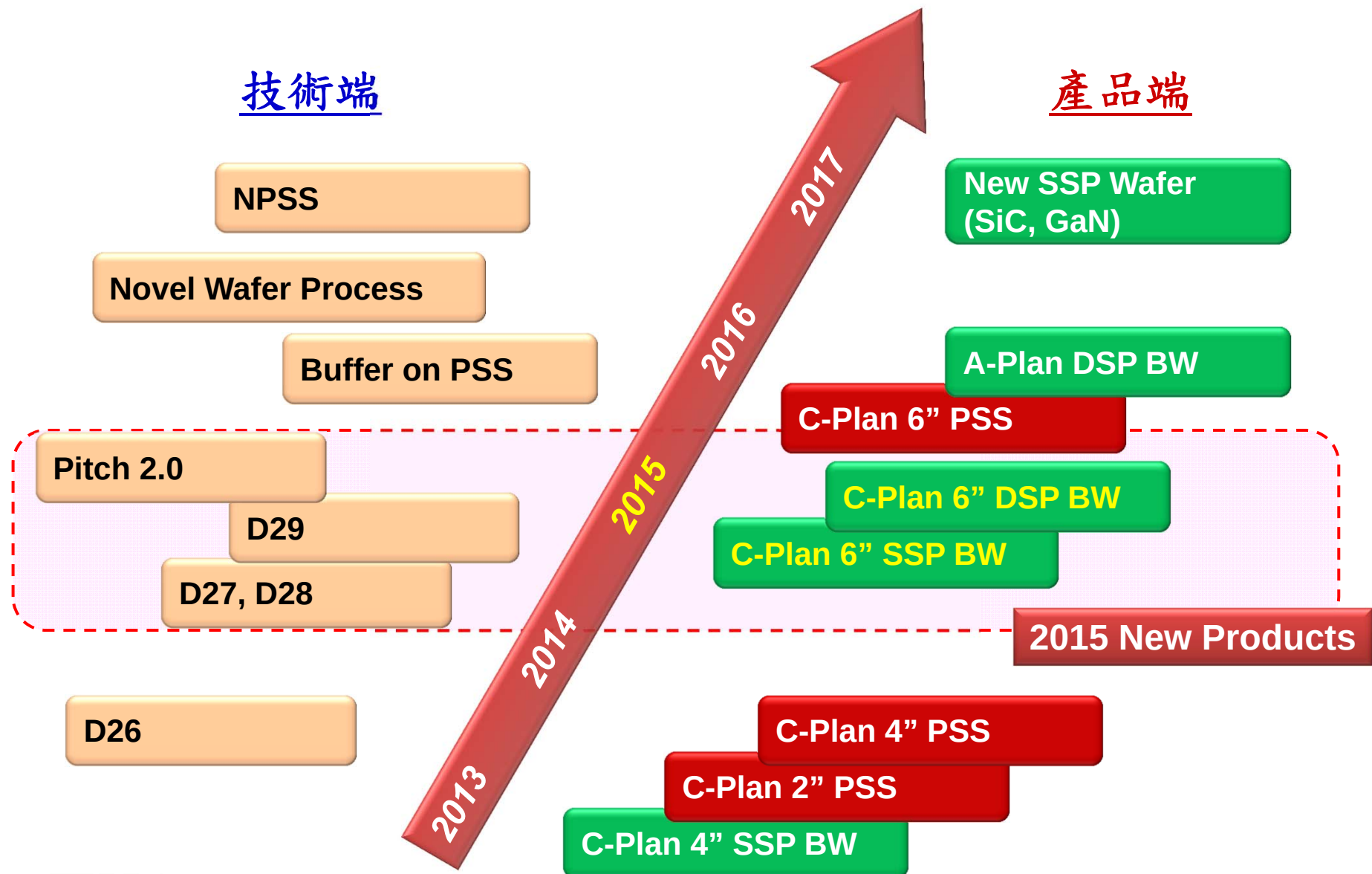
Seam = Seam seal
Glass = Glass Seal

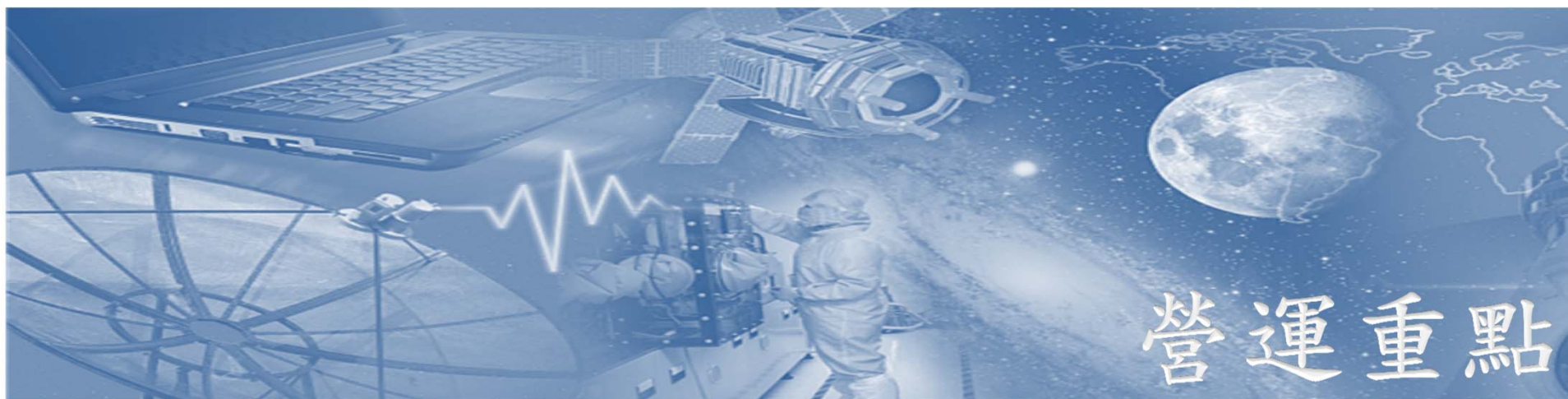
		2015	2016	2017
Product Size	MHz Crystal	♦ 2520 G2 ♦ 1612 Glass ♦ 2016 G2 ■ 1612 (G1)	♦ 1210 (G2) ■ 3225 (G0) ♦ 1210 Seam ♦ 1612 (G1) ■ 2016 (G0)	♦ 2520 G1 ■ 2520 (G0) ■ 1612 (G0) ♦ 1008 Crystal
	MHz Crystal Thermistor	♦ 2016 TSX ♦ 1612 TSX	■ 2016 ACAP TSX	
	KHz Crystal	♦ RTC SOP04 (G2)	♦ RTC 3225	
	XO/MO/SO	♦ 5032 (G2) ♦ 3225 (G3) ♦ 2520 (G3) ♦ 2016 (G3)	♦ 3225 (G1) ♦ 2520 (G1) ♦ 1612 (G2)	♦ 5032 (G1) ♦ 2016 (G1) ♦ 1612 (G1)
	VCXO	♦ 3225 (25~200MHz) ♦ 5032 (25~200MHz) ♦ 7050 (25~200MHz)	♦ 5032 (2 GHz) ♦ 7050 (2 GHz)	♦ 3225 (2 GHz)
	TCXO	♦ 3225 (G2) ♦ 2520(G2) ♦ 2016(G2)	♦ 7050 S-3 (G2) ■ 3225 TCXO ♦ 3225 S-3 (G2) ♦ 1612 (G2)	♦ 3225 (G1) ♦ 2520 (G1) ♦ 2016 (G1)
	OCXO	♦ 3627 SC-Cut ♦ 2525 SC-Cut ♦ 1409 AT-Cut	9775 SC-Cut	♦ 7050 SC-Cut
	Sensor	♦ 2520 PS+ALS(PA22A) ♦ 4509 PS+ALS(PA233) ♦ 1616 3-Axis E-compass ♦ 2425 6-Axis E-compass ♦ 1212 3-Axis E-compass ♦ 2520 PS(PA224)	♦ RGB Sensor ♦ Pressure ♦ 4509 PS+ALS (wide ALS) ♦ 1010 3-Axis E-compass	♦ Pulse Sensor ♦ Gas Sensor ♦ 0808 3-Axis E-compass

TXC

Note : ■ Automotive Products **Think of Frequency, Think of TXC**

LED產品發展藍圖





重點里程碑



營運總結

01

營收將逐季穩定成長;同業競爭仍會產生價格壓力

02

毛利率將可維持略優於2014年

03

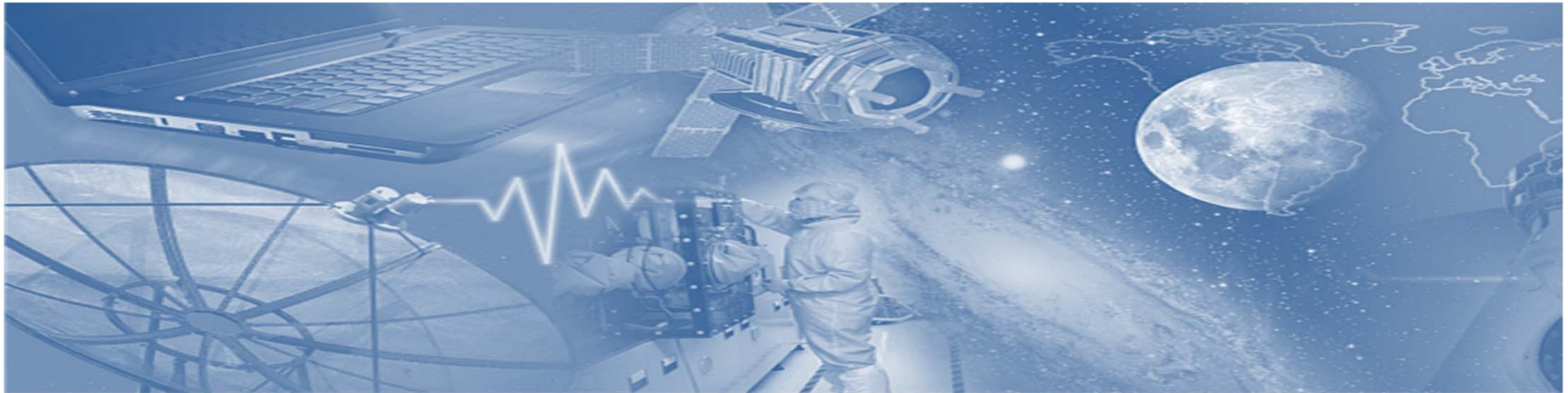
汽車、網通、物聯網及穿戴式相關之新產品將帶來新的營收動能

04

隨著巨量數據分析(Big Data Mining)之應用，4G/LTE 將成為高階產品主要的成長動能

05

本公司將持續發展新產品並創造新的商機



Thank you