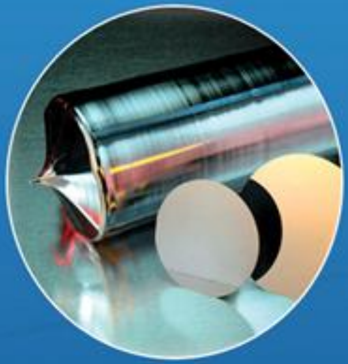


Sino-American Silicon Products Inc.

2016 / 04

Legal Disclaimer

This document is for informational purposes only and is not an offer to buy or the solicitation of an offer to sell any securities.

SAS's statements that are not historical facts are forward-looking statements that indicate actions or results of actions that may occur in the future, based on current available information and underlying assumptions.

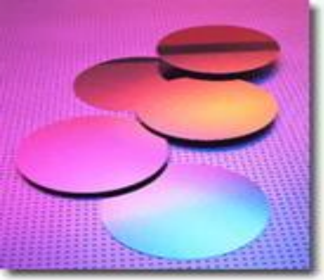
SAS does not warranty their accuracy, reliability and completeness. There are a number of factors such as economic conditions, firms abilities, industry environment that could cause actual results and developments to differ materially from those expressed or implied by forward looking statements. Investors should not place undue reliance on them.

Solar Business Sector

Aleo Fab in Germany

Sino-American Silicon Products Inc.

SAS Company Profile

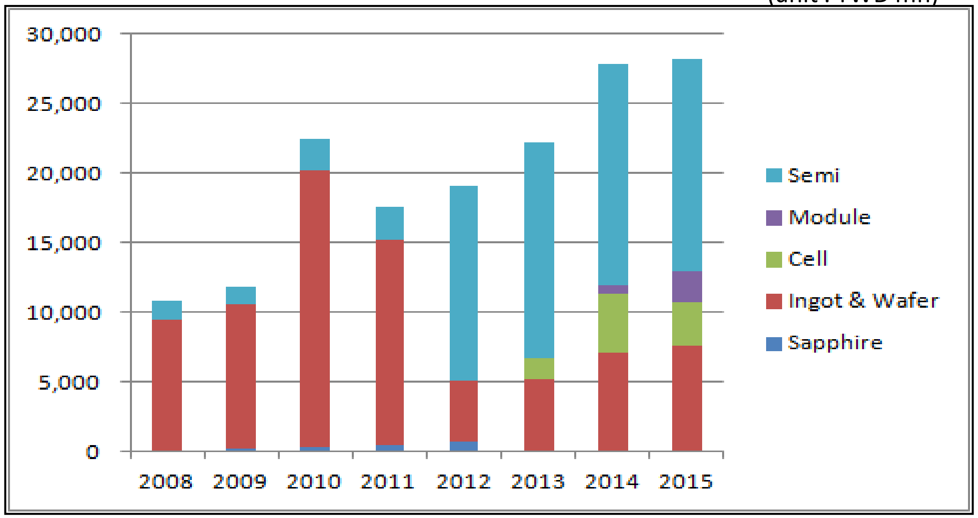


- **Established** : 1981
- **Paid-in Capital** : TWD 5,800mn
- **Employees** : 4,647 (2016/02)
- **Headquarter** : Hsinchu Science Park, Taiwan R.O.C.
- **Products** : Solar Wafer / Cell / Module / Power Plant
  Semiconductor Wafer (3”~12”)
- **Revenue** : *2015 Jan~ Dec TWD 28,283 mn*
  : *2016 Jan~ Mar TWD 7,091 mn*

～ all-time high ～

2014 2015

(unit : TWD mn)



SAS Milestones

1981 Sino-American Silicon Products Inc. established

……

1999 SST established in China

2000 Enter Solar Ingot / Wafer Business

2001 SAS IPO in Taiwan (5483 TT)

2008 Acquired GlobiTech Incorporated, TX, USA

2011 Company spin off – SAS / GWC / SSC

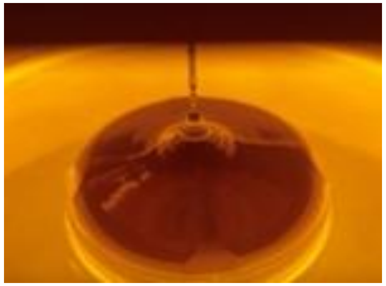
2012 Acquired Covalent Silicon, Japan

2014 Acquired ALEO module fab of Bosch group, Germany
Merged Sunrise Global Solar Energy Co., Ltd. Taiwan

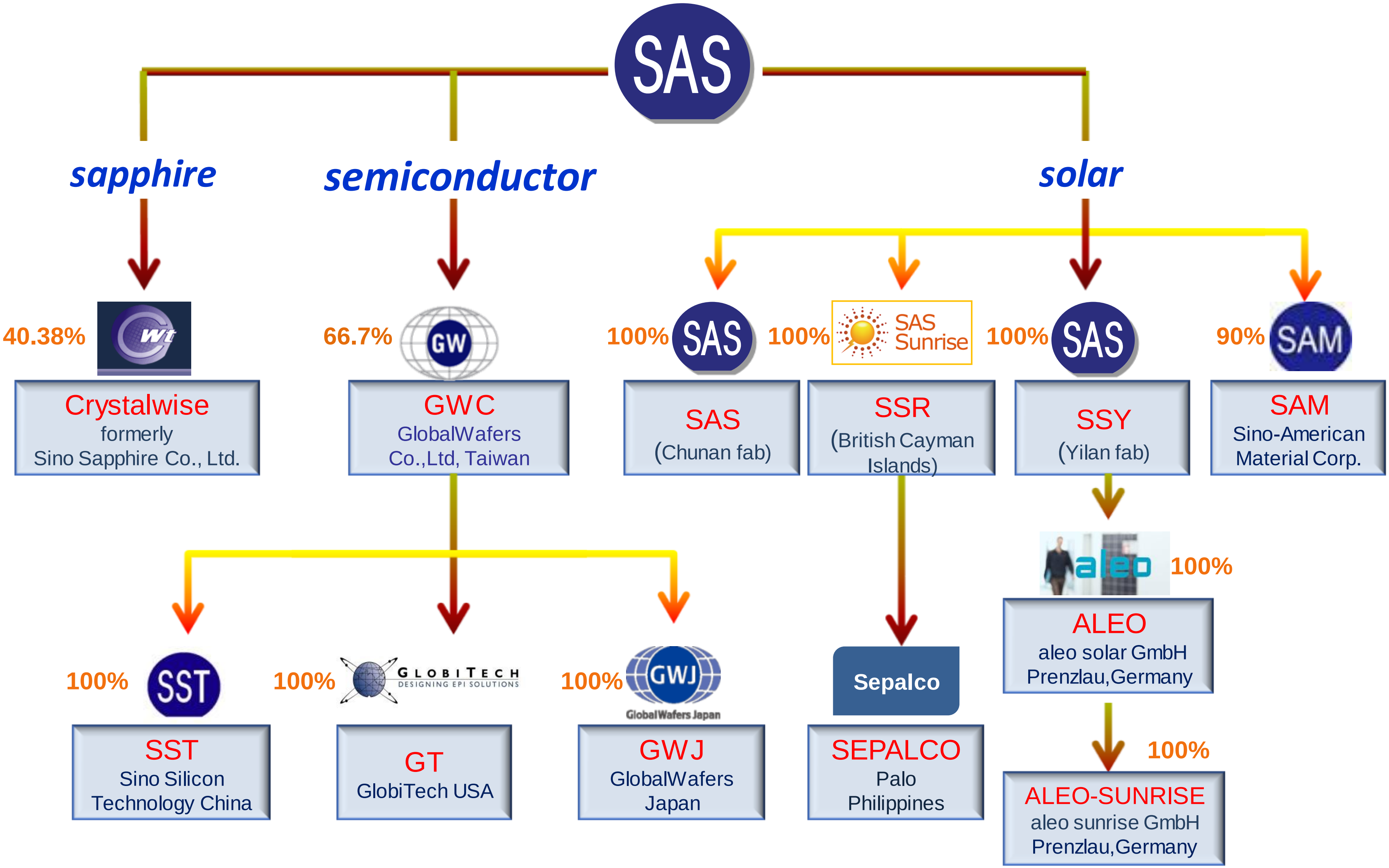
2015 SAS Sunrise Inc. (SSR) established for Solar Power Plant, Project Palo ground breaking

2015 GWC IPO in Taiwan (6488 TT)

2016 50MW Power Plant(Project Palo) completed in Mar 2016



Organization Structure



SAS Group (Solar)

SAS Consolidated Financial Statements

TWD mn	2013	%	2014	%	2015	%
Revenue	22,215	100	27,821	100	28,269	100
Gross Margin	2,439	11	3,498	13	4,271	15
Operating Profit	629	3	1,447	5	2,237	7
PBT	128	-	1,925	7	1,960	6
PAT	295	1	1,128	4	535	1
Total Debt & Debt ratio	19,088	48	19,304	47	17,617	38
ROE (%)	1.62		6.16		4.21	
EPS	0.57		2.06		0.93	

*ROE: annualized rate

SAS – Solar Financial Statements

TWD mn	2013	%	2014	%	2015	%
Revenue	6,662	100	11,917	100	12,982	100
Gross Margin	(1,226)	(18)	(233)	(2)	196	2
Operating Profit	(1,583)	(24)	(906)	(8)	(464)	(4)
PBT	149	2	1,287	11	671	5
PAT	295	4	1,128	9	531	4
Total Debt & Debt ratio	11,467	36	11,193	35	10,577	32
ROE (%)	1.51		5.66		2.32	
EPS	0.57		2.06		0.93	

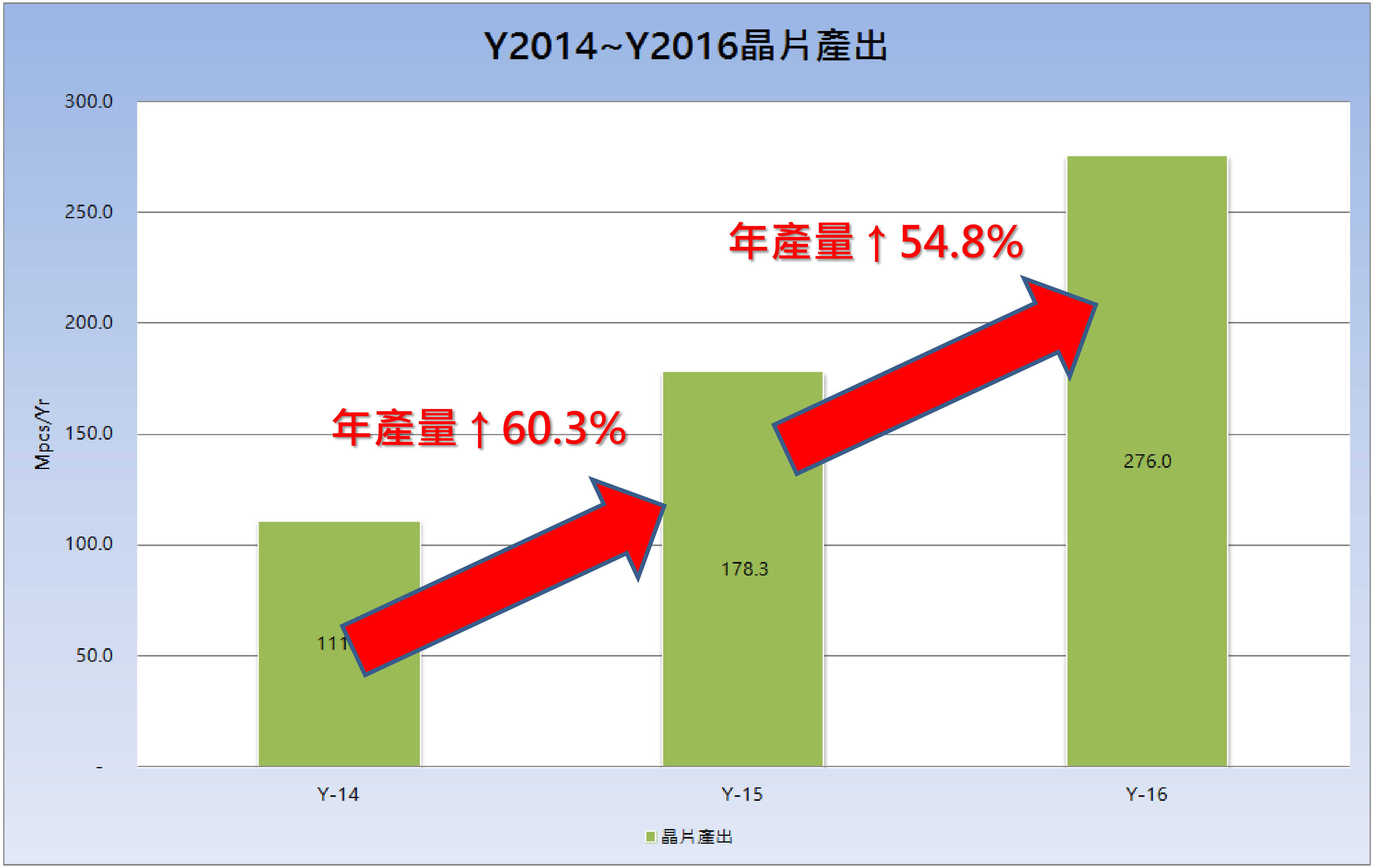
*ROE: annualized rate

SAS Solar Manufacturing Site

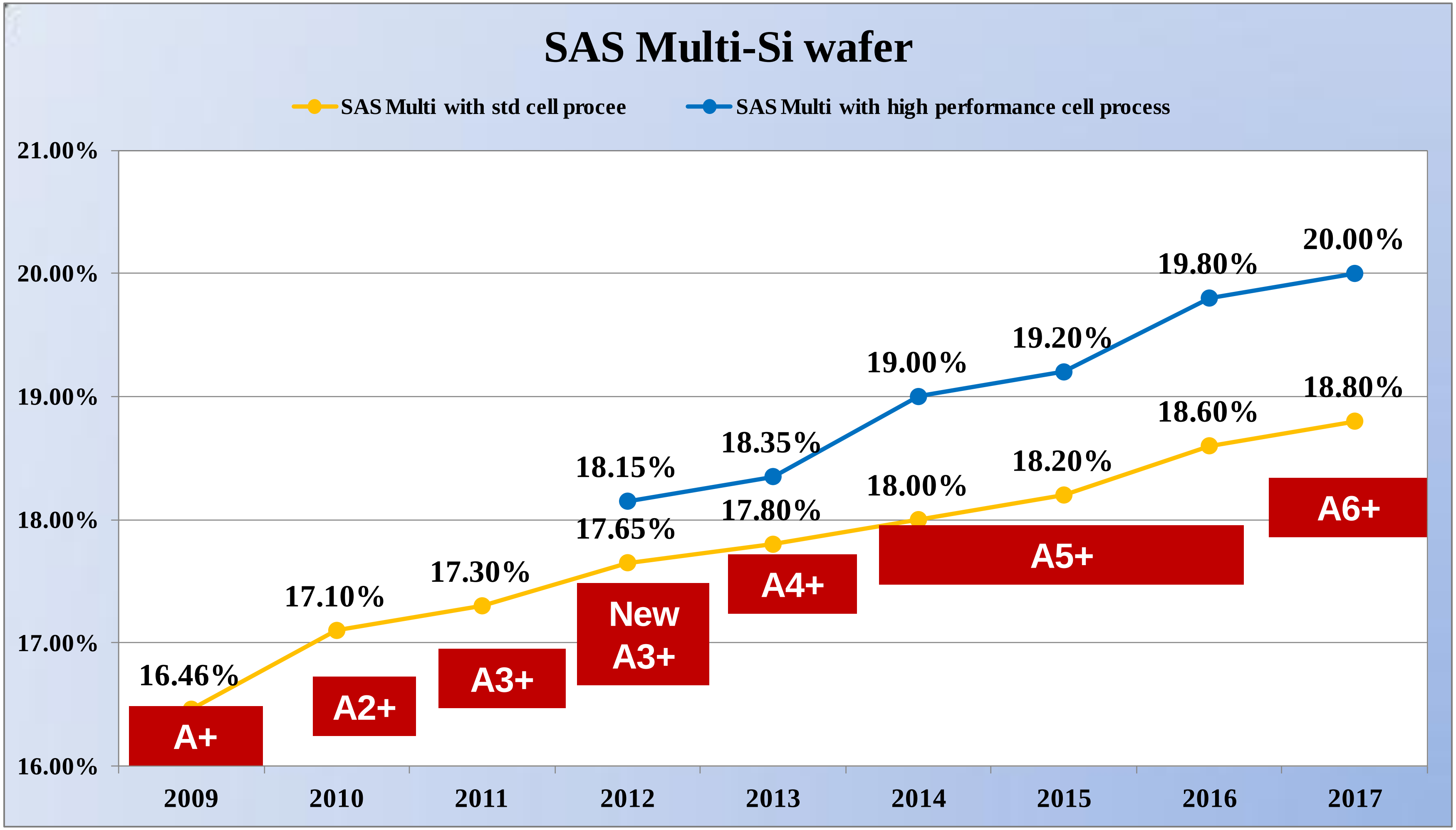
(unit: MW)

	Company	Products	2015	2016	Location
SAS	SAS	*Wafer*	*1,000*	*1,200*	*Taiwan*
	SAS	*Cell*	*800*	*800*	*Taiwan*
	Aleo-Sunrise		*0*	*200*	*Germany*
	aleo	*Module*	*340*	*340*	
	SAS Sunrise	*Solar Farm*	*0*	*50~100*	*Philippines*
	SAM	*EVA*	*40*	*90*	*Taiwan*

Multi Wafer Output



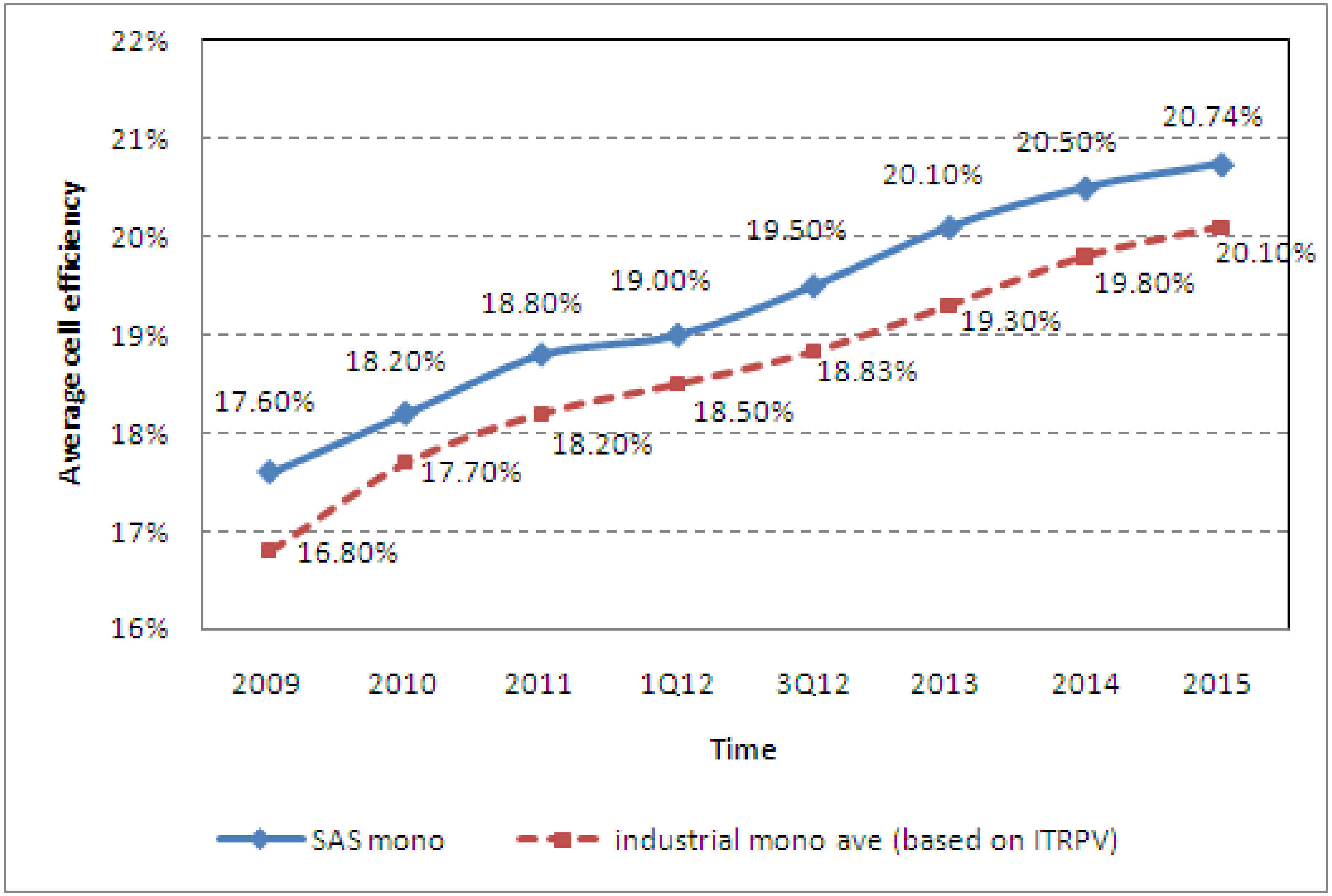
Multi Wafer Technology Roadmap



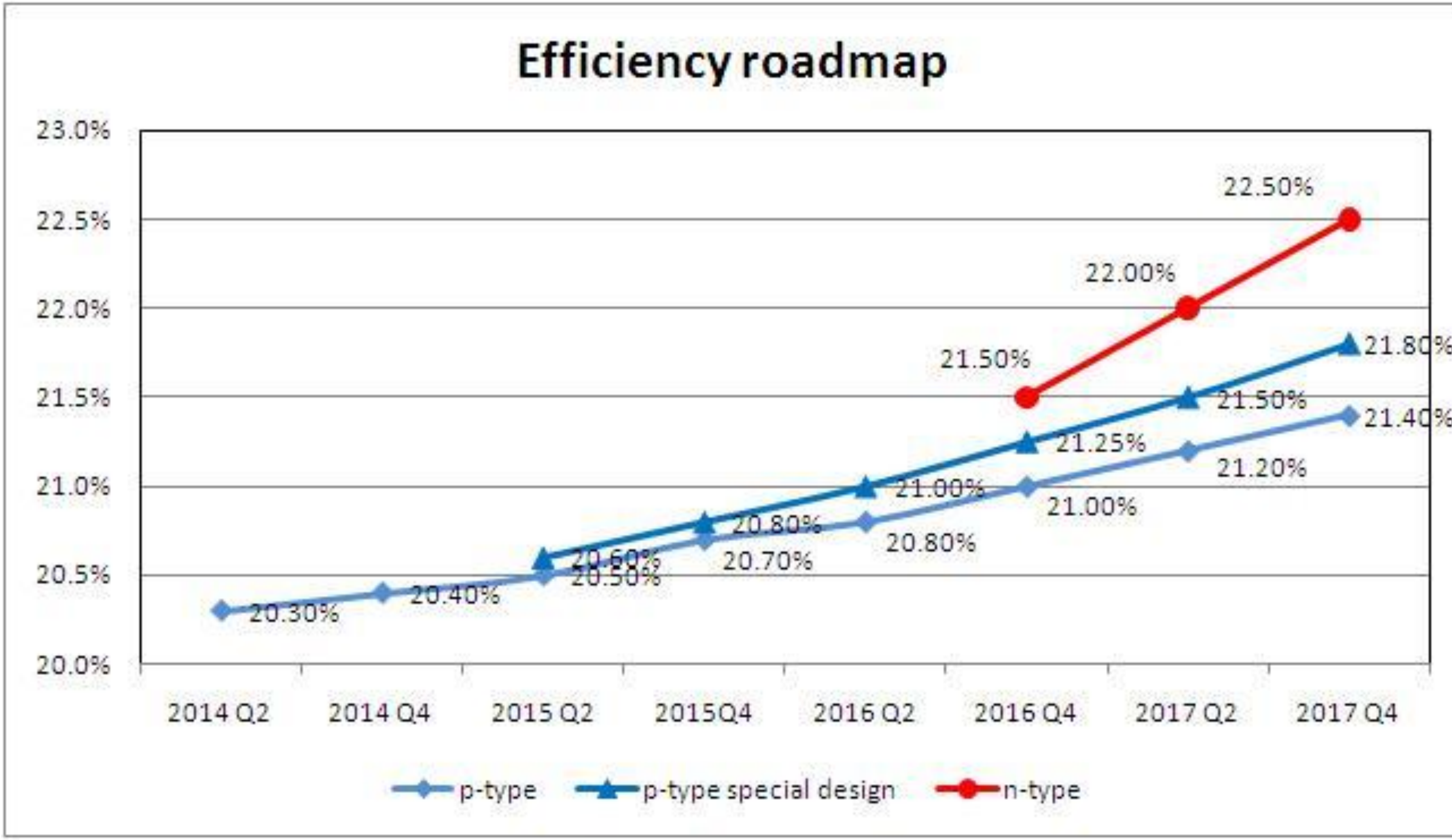
continued to improve ↗

SAS Cells Performance

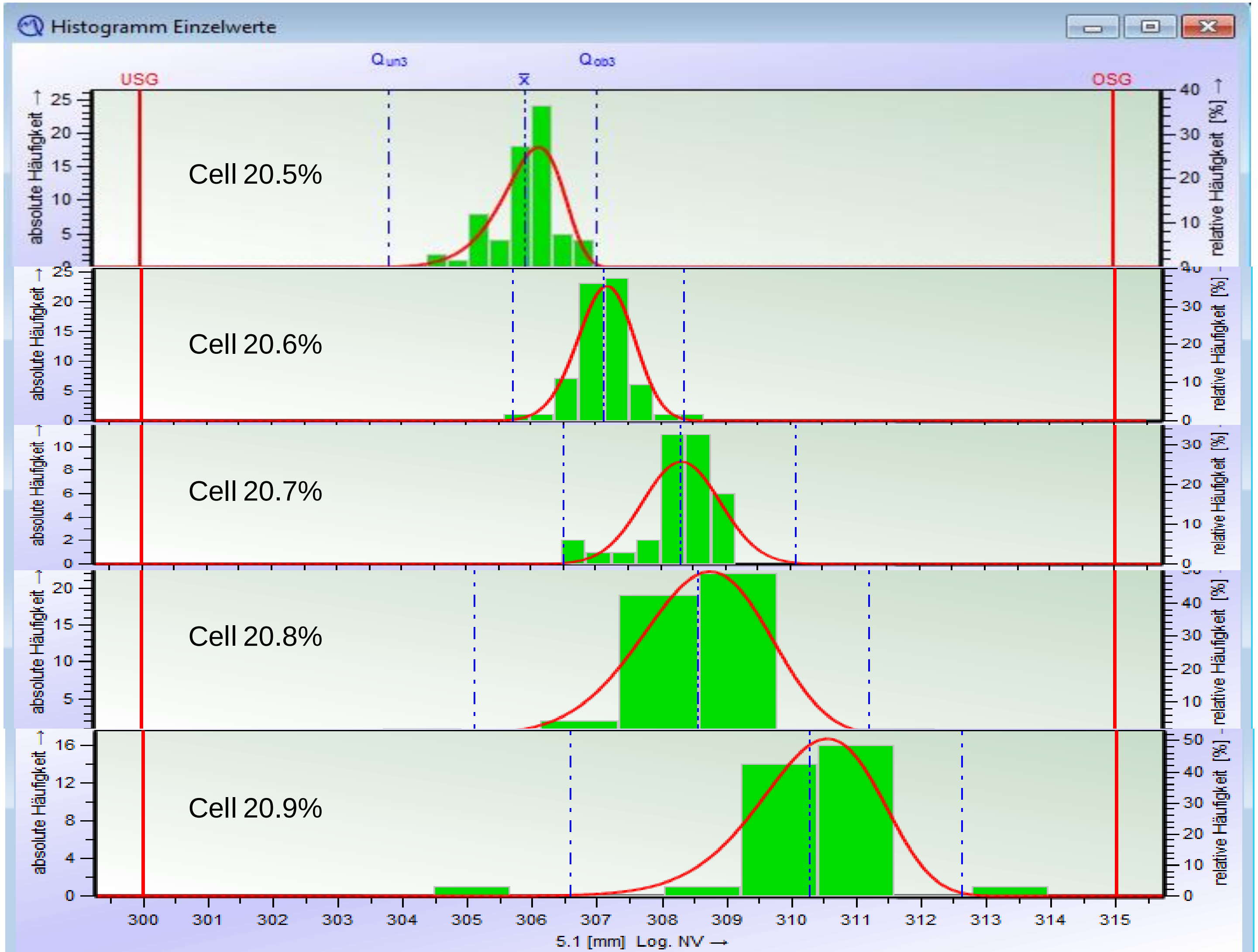
- SAS's cell efficiency is always higher than industry average, usually at least 0.5% absolute higher.



Efficiency Roadmap – P-type + N-type



High Power Module



Module Power

- Module power of 314W achieved!
- Best CTM gain in mass-production
- With new generation Celco cells 315W+ or even 320W cell is achievable

Aleo products are the best solution

aleo

aleo S19

aleo S79 Black line

aleo S79 Solrif Black line

aleo S25

higher production and space utilization

For certifications and updated warranties of aleo PV panels please visit: http://www.aleo-solar.de/en/products/guarantees/

Presence along the solar value chain

SAS

SAS | SAS | aleo | SAS Sunrise

Silicon → Ingot → Wafer → Cell → Module → D2D / Sales → Project Development → Project Investment → Yield Co.









Ingot
- DSS Technology
- High Eff.

Wafer
- High Eff. Multi-wafer
- Robust wafer (R-Wafer)

Cell
- High Eff. cell Celco
- next generation Celco

Module
- Premium segment Made in Germany
- >300W output
- High Eff. module

D2D / Sales
- Direct to dealer
- More than 2,100 customers worldwide

Project Development
- Feasibility study
- Site selection
- Energy Yield Prediction
- Permits& Licensing

Project Investment
- Insurance
- Legal & Technical
- Due Diligence
- Economic and Financial Modeling
- Plant Design
- Construction
- Commissioning
- Operations & Maintenance

Yield Co.
- Portfolios Management
- Stable Performance
- Long Term Investment Return
- Risk Control

SAS dedicate to provide the PV Total Solutions with Competitive LCOE and WACC.

能源計算器的平準化成本Levelized cost of electricity (LCOE) 加權平均資本成本(Weighted Average Cost of Capital，WACC)

SAS Power Plant Roadmap

- Company name: SAS Sunrise Inc. (SSR)
- Established : Jun 2015
- Business scope : Solar Power Plant
- Project Palo (Sepalco)
  . Location : Palo Philippines
  . Capacity : 50MW
  . Completion in March 2016
  . 20 years contract with Philippines government
  . To use mainly ALEO high conversion-efficiency mono module
  . Commercial operation from Jun 2016, output 72M(KWH)/year
  . Carbon emission reduction 52,000 MT/year
  . Revenue contribution around TWD 400mn/year

- 2016, 2017 & onward :
  Philippines (Palo 2), USA, Japan, Emerging Countries and Taiwan..

Solar cell tariff to US market

※ US Commerce 1st final tariff & 2nd preliminary tariff (July, Dec 2015 & Jan 2016)

表、中美2012太陽能雙反重審稅率比較表

中美2012太陽能雙反第一次重審稅率終判 (2015/7月)

公司名稱	反補貼	反傾銷	合併稅率
英利	20.94%	0.79%	21.73%
比亞迪	15.43%	9.67%	25.10%
天合光能 阿特斯 晶科 昱輝 其他配合廠商	20.94%	9.67%	30.61%
光為	23.28%	9.67%	32.95%
無錫尚德	20.94%	33.08%	54.02%
其他中國廠商	20.94%	238.95%	259.89%

*英利旗下的Yingli Green Energy Holding 及 Yingli Green Energy International Trading的稅率不同於英利，稅率為20.94%+9.67%=32.95%

中美2012太陽能雙反第二次重審稅率初判 (2015/12月)

公司名稱	反補貼(E)	反傾銷	合併稅率(E)
比亞迪	15.43%	7.27%	22.70%
天合光能	20.94%	4.53%	25.47%
阿特斯 晶澳 無錫尚德 其他配合廠商	20.94%	7.27%	28.21%
光為	23.28%	7.27%	30.55%
英利	20.94%	11.47%	32.41%
其他中國廠商	20.94%	238.95%	259.89%

*本次反補貼稅率為EnergyTrend先以持平做預估，實際稅率仍以後續美國商務部公佈為準。

Source: EnergyTrend, Dec., 2015

中美2012太陽能雙反第二次重審稅率初判 (2016/1月)

公司名稱	反補貼	反傾銷	合併稅率
天合光能	19.62%	4.53%	24.15%
晶澳 無錫尚德	19.62%	7.27%	26.89%

Source: Collected by EnergyTrend

Date: 2016.01.08

◆ **Taiwan:** anti-dumping only
ave. 19.5%(1st final)

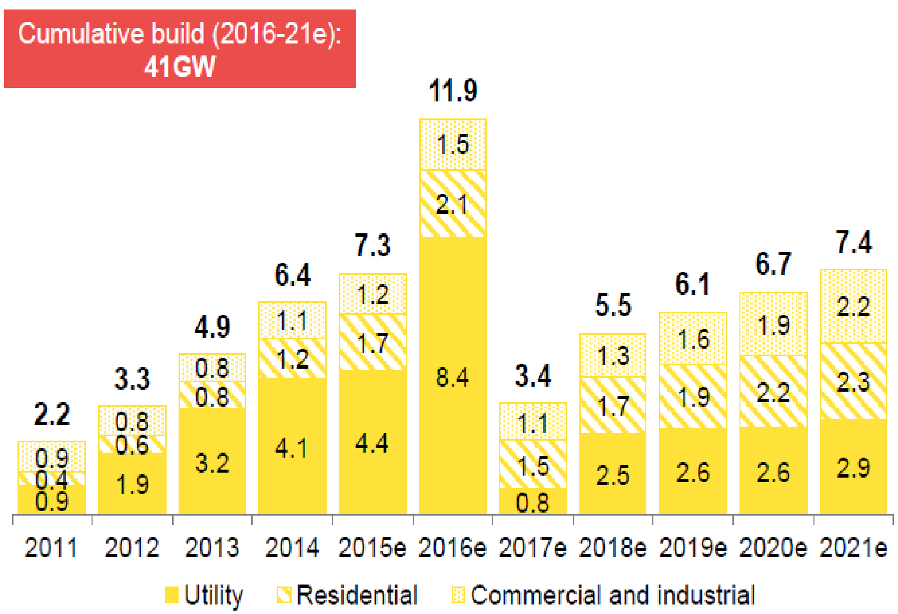
◆ **China:** anti-dumping/subsidy
ave. 31%(1st final)
ave. 24~26%(2nd preliminary)

US policy of reducing import tax tariff continuously will surely accelerate solar installation boom in 2016 & onward

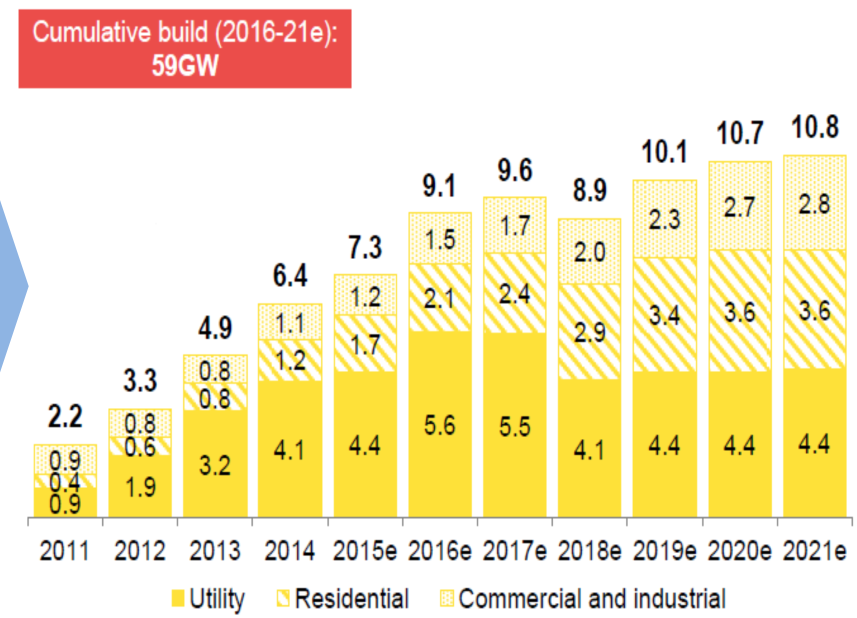
Impact of Tax Credit Extension (US)

SAS

before 5 years Tax Credit extension



with 5 years Tax Credit extension



Source: Bloomberg New Energy Finance 2015/12

Extra 20~25 GW solar installation till 2021

EU Anti-Circumvention investigation result

※ EU Commission announced investigation result (22 Dec 2015)

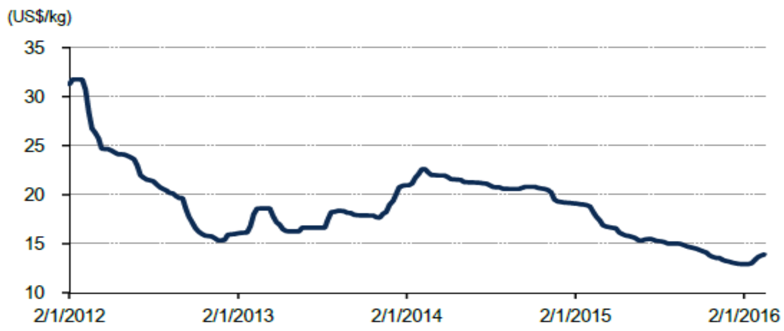
◆ **Including SAS, total 21 Taiwan-based solar cell, module makers, plus 5 Malaysia-based makers have passed EU anti-circumvention investigation.**
➔ ZERO tariff
(Exempted from EU anti-dumping tariffs of 53.4% and anti-subsidization tariffs of 11.5%)

EU anti-circumvention exempted list			
Taiwan			Malaysia
安集科技 ANJI Technology	英懋達 Inventec Energy	錸德 Ritek	友達 AUO
友達 AUO	英穩達 Inventec Solar	**中美矽晶 Sino-American Silicon**	偉創力 Flextronics
太陽光電 Big Sun Energy	樂福LOF	昇陽光電 Solartech	韓華Q Cell
長生太陽能 EEPV	明徽 Ming Hwei	光陽Sunengine Corporation	松下Panasonic
益通 E-TON	茂迪 Motech	聯景 Topcell	TS Solartech
昱晶 Gintech	新日光 NEO Solar	元晶 TSEC	
同昱 Gintung	全能 Perfect source	有成 Win Win Precision	

Polysilicon, Solar Prices & Stats

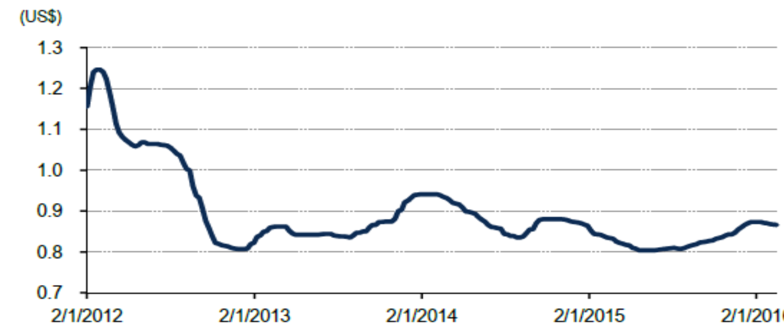
SAS

Polysilicon spot price



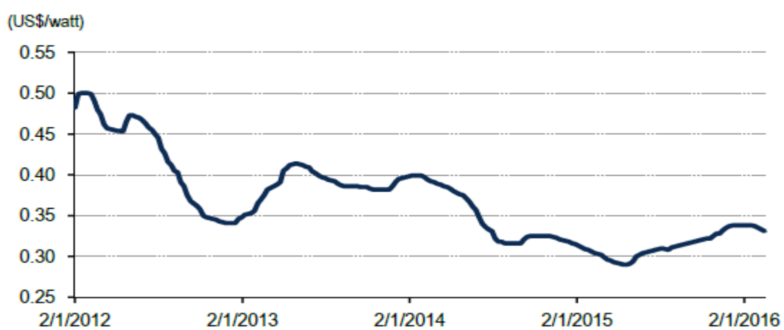
Source: PV insights, BofA Merrill Lynch Global Research

Solar wafer (156mm) spot price



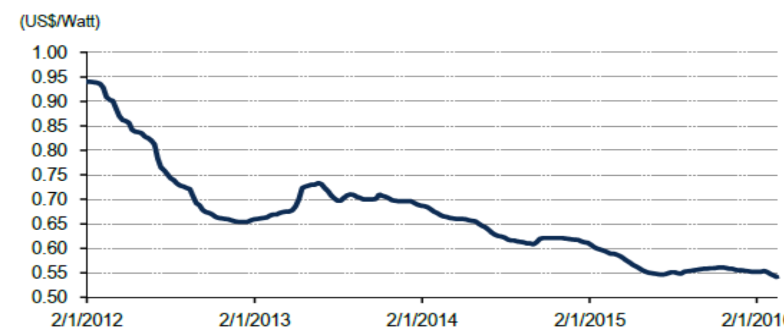
Source: PV insights, BofA Merrill Lynch Global Research

Solar cell spot price



Source: PV insights, BofA Merrill Lynch Global Research

Solar module spot price



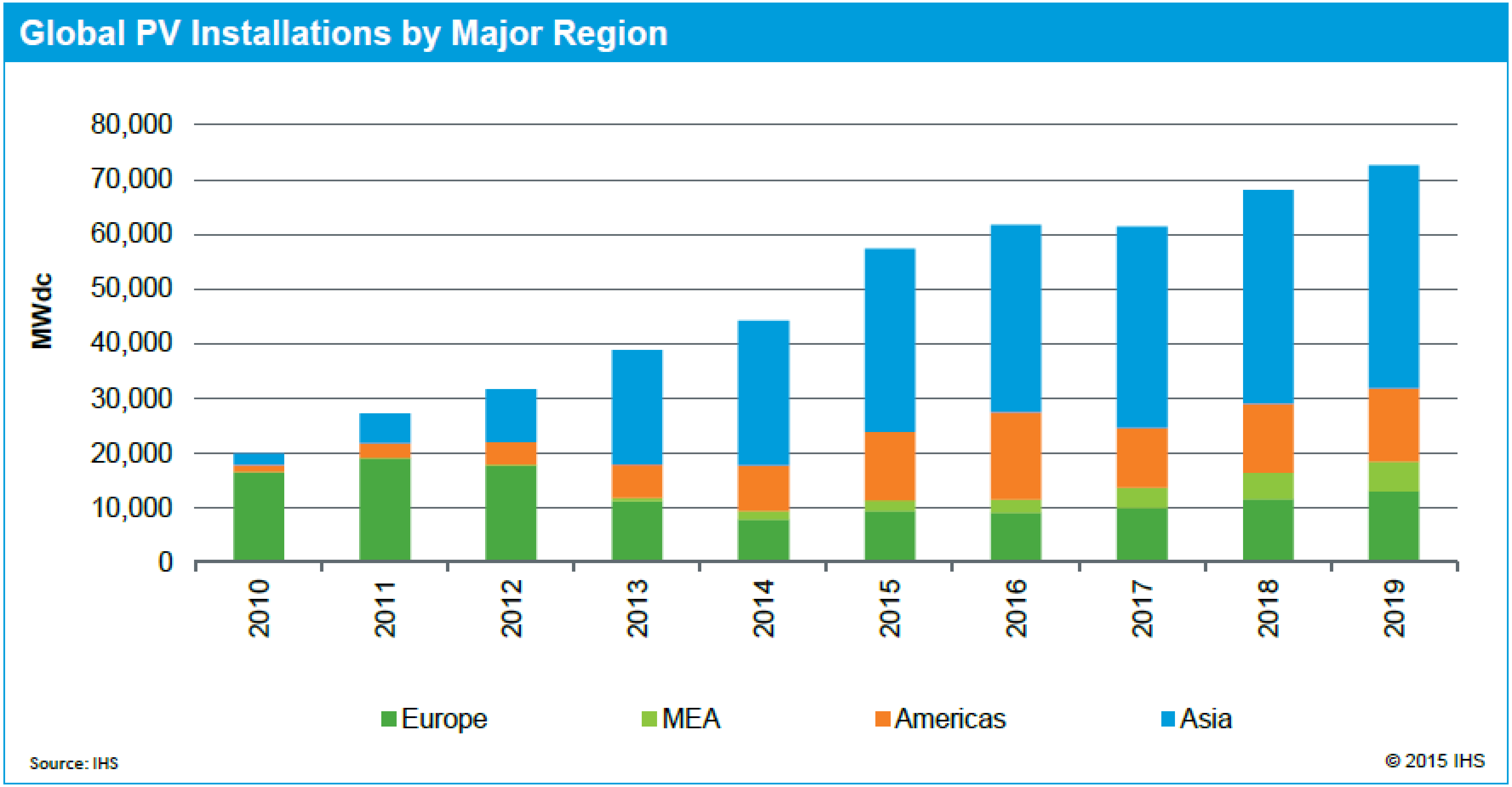
Source: PV insights, BofA Merrill Lynch Global Research

Source : PV Insights, BofA Merrill Lynch Global Research 2016/03

Price decline drive solar installation popularized..

Global PV Demand by Region

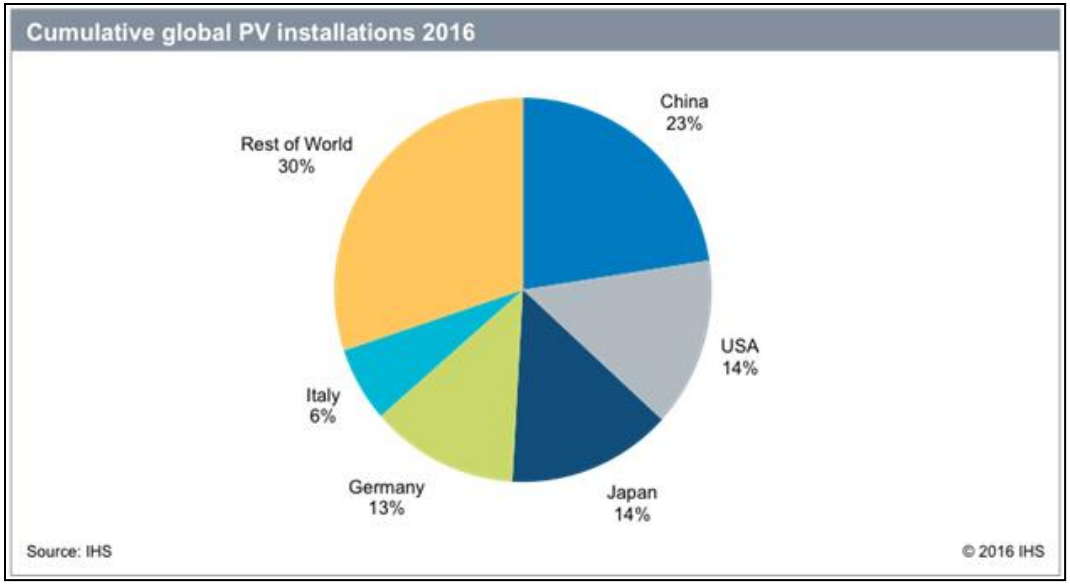
SAS

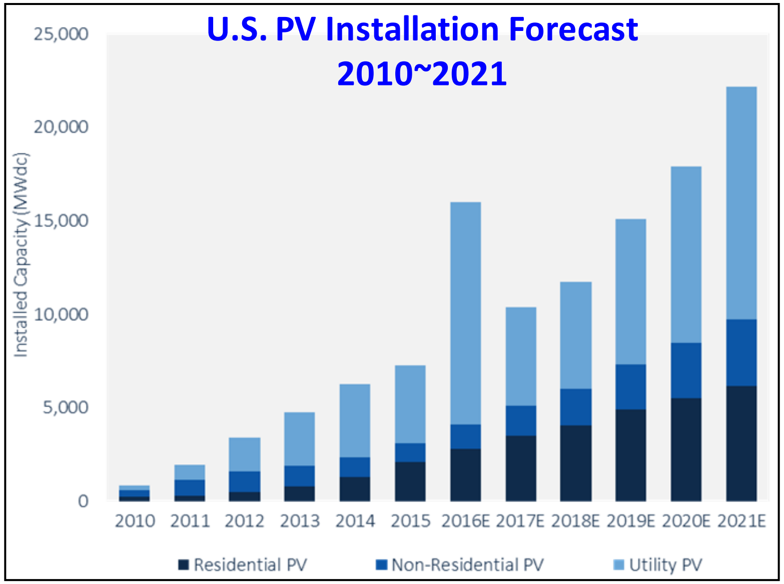


IHS revised installation upward to 69GW in 2016

(17%↑ yoy, 2016/02**)**

Cumulative PV Installation in 2016





Source : IHS 2016/02

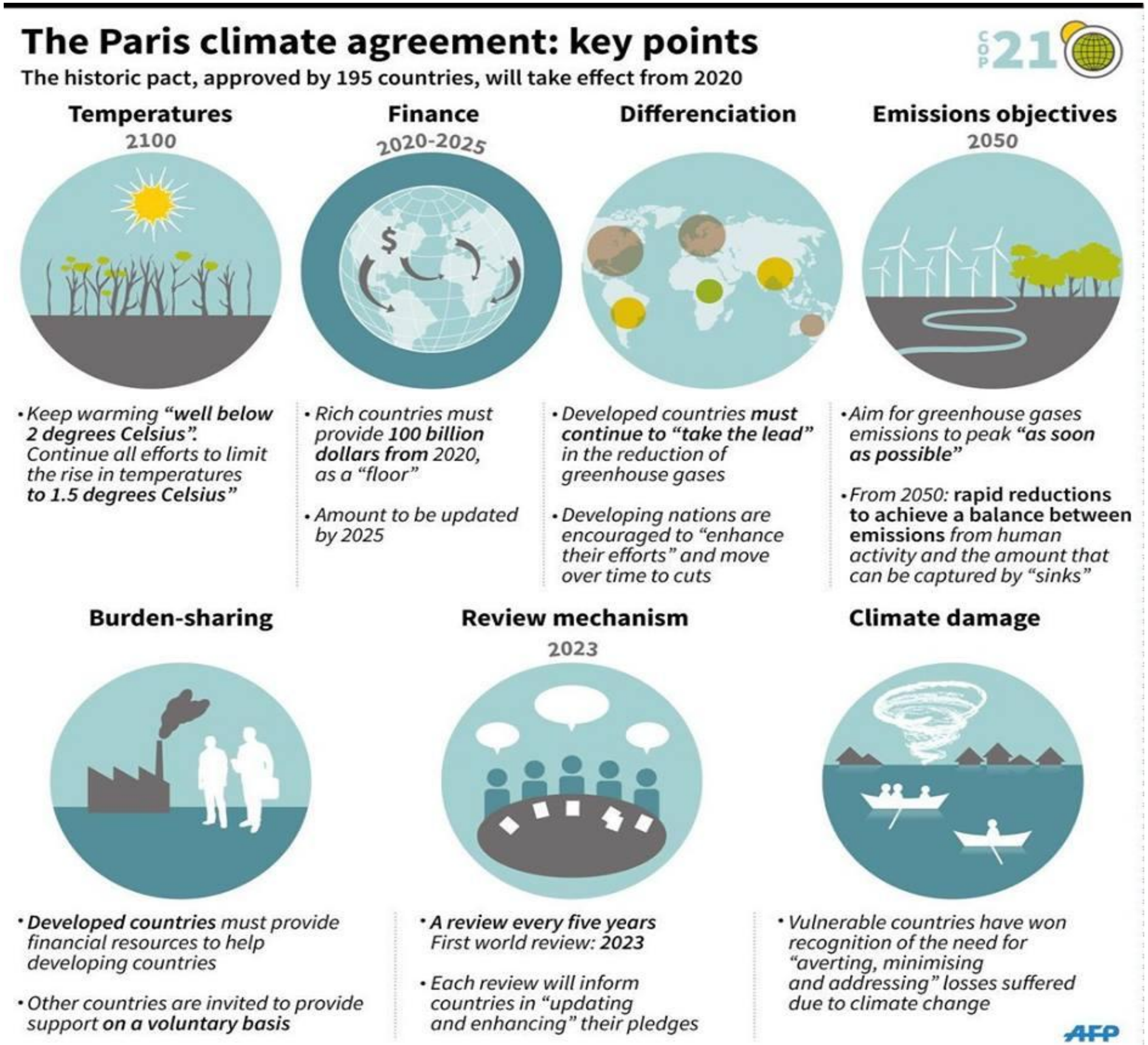
Source : GTM Research 2016/03

In 2016:

- **Cumulative Global PV installation to surpass 310 GW**
- **China, USA, Japan, Germany & Italy, top 5 accounting for 70%**
- **By 69GW installation, increasing in US, India, China..**
- **U.S. to install 16GW in 2016, vs. 7.3GW in 2015**

COP 21 Decisions in Dec 2015

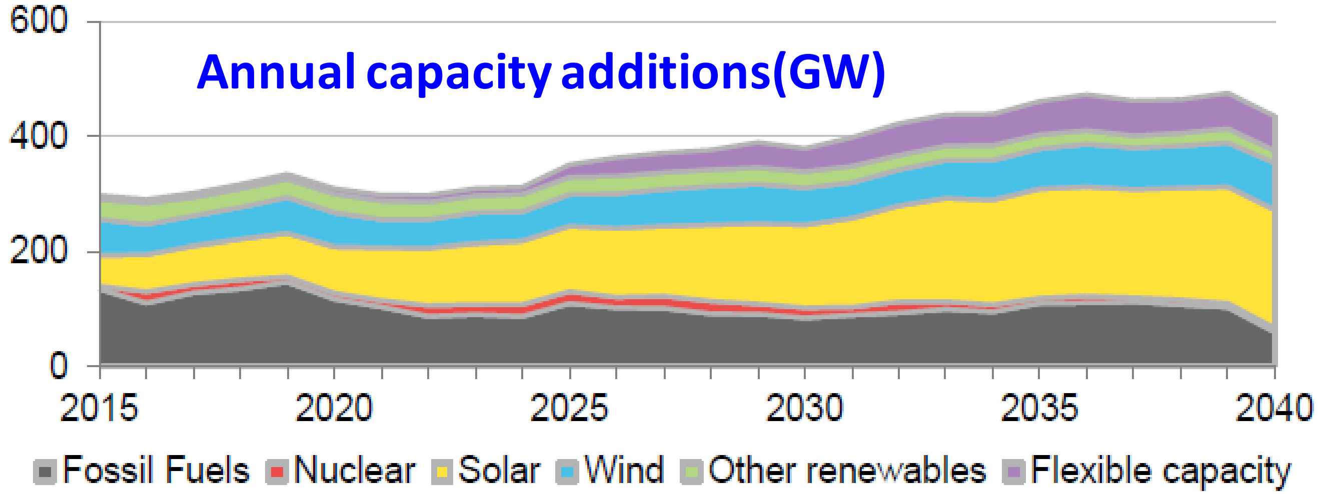
SAS



next step?

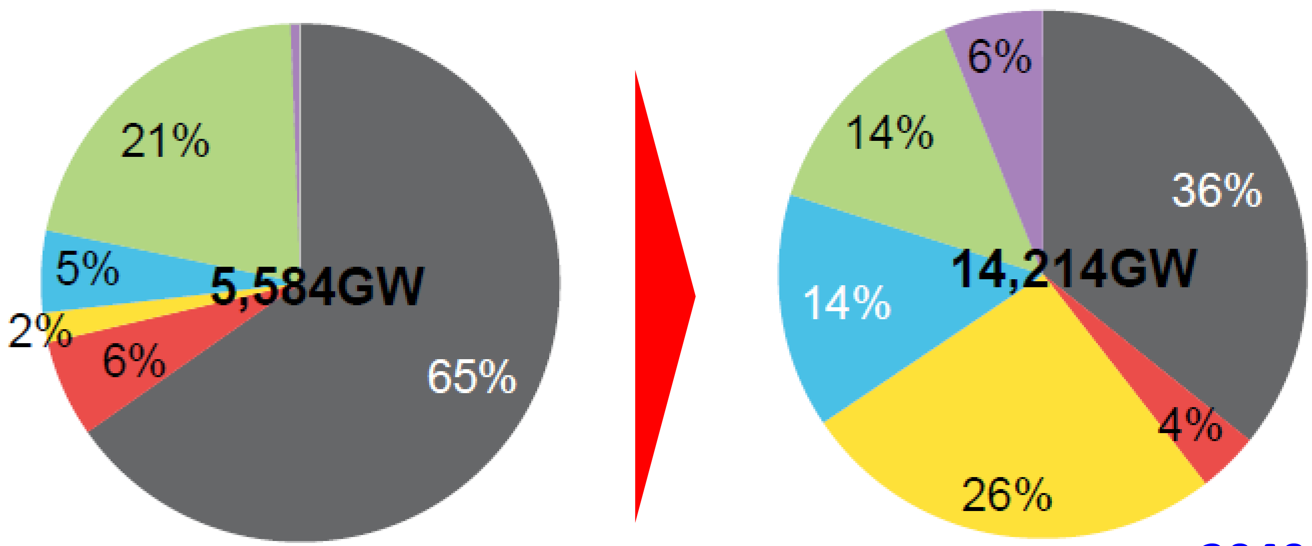
Source: Bright Green Enterprise 2015/12

WW Power-Generating Mix Trend



In next 25 years:

- Solar will boom worldwide
- accounting for 35% (3,429GW) of capacity additions
- nearly a third ($3.7 trillion) of global investment
- split evenly between small- and utility scale
- real solar revolution will be on rooftops, driven by high residential and commercial power price & the availability of residential storage in some countries



2012 (Solar=2%)

2040 (Solar=26%)

Source: Bloomberg New Energy Finance 2015/06

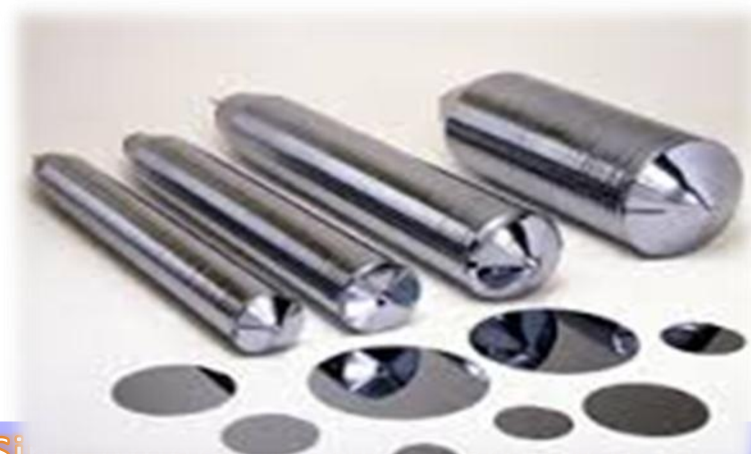
Semiconductor Business Sector

GWC fab in Niigata, Japan

GlobalWafers Co., Ltd.

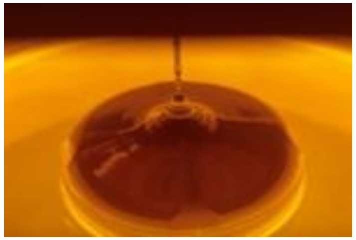
Company Profile

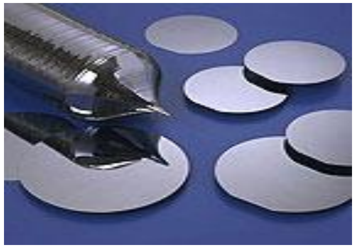
Established	2011 (Spin off from SAS)
IPO	2015/09/25 Listed in Taipei Exchange (6488 TT)
Headquarter	HsinChu Science Park, Taiwan, R.O.C.
Products	3” ~ 12” Semiconductor Wafers
Manufacturing Sites	Taiwan, China, U.S.A. & Japan
Paid-in Capital	NTD $3.693 billion
Chairperson & CEO	Doris Hsu
Employees	2,507 (2016/02)



Milestones

1981	Sino-American Silicon Products Inc. established
……	
1998	New owners and management team join SAS
1999	SST established in China
2001	SAS IPO in Taiwan (5483 TT)
2008	Acquired GlobiTech Incorporated, TX, USA
2011	Company spin off – SAS / GWC / SSC
2012	Acquired Covalent Silicon, Japan
2015	GWC IPO (Taipei Exchange)





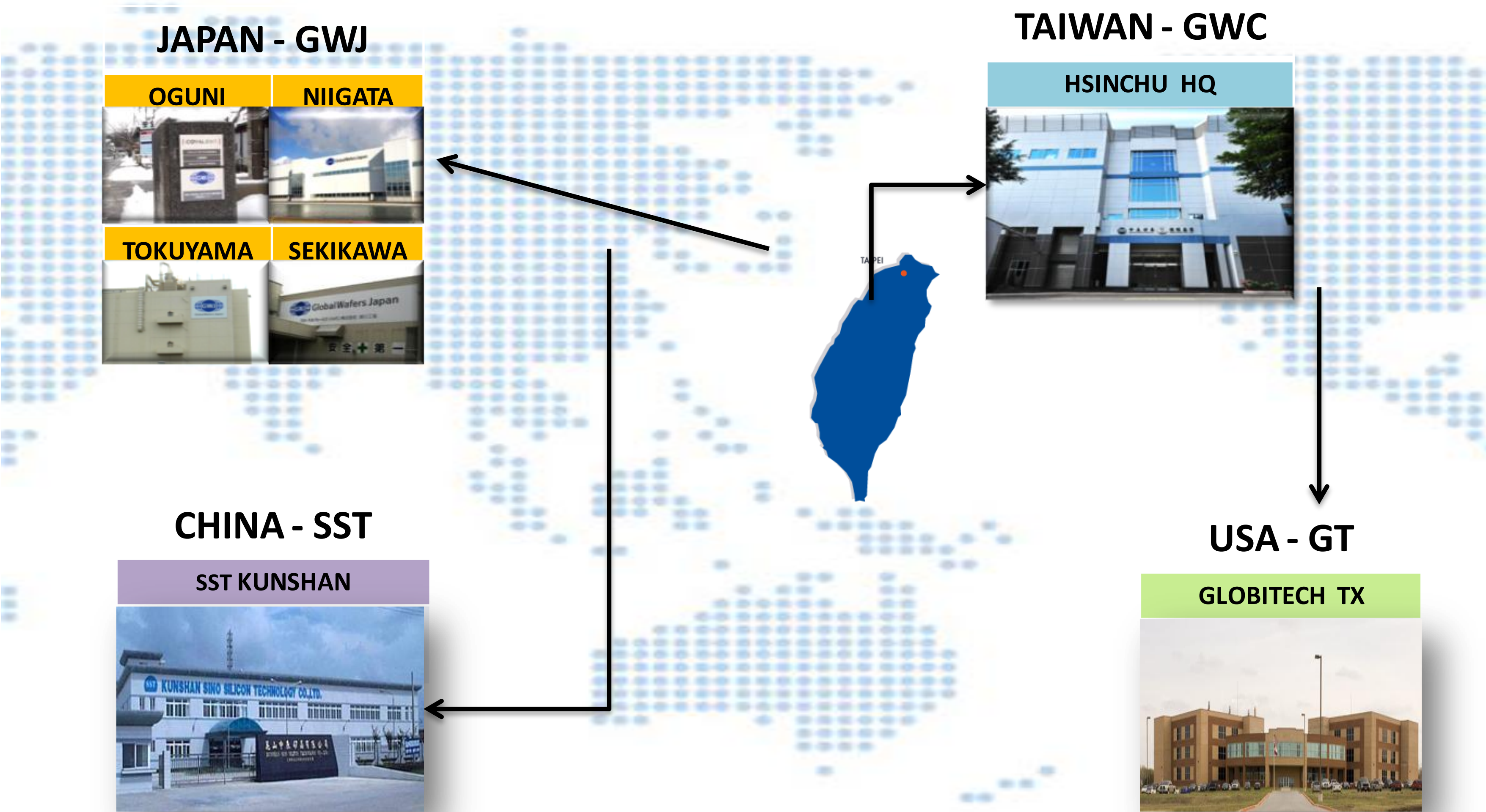
Organization

GWC

GlobalWafers Co.,Ltd, Taiwan

- 100% — **SST** Sino Silicon Technology China
- 100% — **GT** GlobiTech USA
- 100% — **GWJ** GlobalWafers Japan

Global Manufacturing Sites



2015 Best Supplier Award from TI

TI recognizes 14 suppliers with annual excellence awards

- AECOM – remediation and environmental services
- ASM Pacific Technology Ltd. – leadframes
- CH2M – architectural and engineering services
- Enplas Semiconductor Peripherals Pte. Ltd – test materials
- FUJIFILM Ultra Pure Solutions – chemicals
- **GlobalWafers Co., Ltd. – silicon wafers**
- Inventec Appliances Corp. – contract manufacturing
- JX Nippon Mining & Metals – sputtering targets
- Logisticorp Group – transportation services
- Mitsui Chemicals Tohcello Inc. – backgrind tapes
- OnPoint, LLC – LED lighting, project management and design consulting
- Shinko Electric Industries Co., Ltd. – tape substrate
- Tesec Corporation – test handlers
- Tokyo Electron Limited – wafer fab equipment

Texas Instruments

New Products Roadmap

Items	Application
8" ultra heavy dopant ingots growth	Low power consumption device
GaN on Silicon	Power device/ RF
Nano-structure wafers	Ultra thin wafers/ Strengthen substrate
Ultra high resolution CIS wafers	Image sensor、Sensor
Next generation automotive power device **SiC wafers**	Automotive power, High temp. power, Microwave & RF devices, UV LED, Photodiodes, Blue laser diodes

Specializing in next generation wafer development

Consolidated Financial Statements
2015 <I>

Million NTD	2013	%	2014	%	2015	%
Revenue	15,570	100.0	15,922	100.0	15,310	100.0
Gross Profit	3,663	23.5	3,728	23.4	4,073	26.6
Operating Profit	2,194	14.1	2,336	14.7	2,685	17.5
PBT	2,204	14.2	2,679	16.8	2,808	18.3
PAT	1,948	12.5	2,095	13.2	2,044	13.3
Total Debt & Debt ratio	7,939	37.7	8,184	38.3	7,091	29.7
ROE(%)	14.83		15.87		13.66	
EPS(NTD)	6.14		6.60		5.80	

Consolidated Financial Statements

2015 <II>

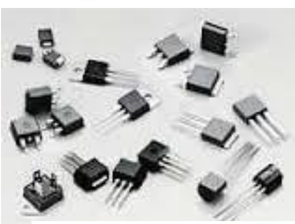
Million NTD	2015.1Q	%	2015.2Q	%	2015.3Q	%	2015.4Q	%
Revenue	4,044	100.0	3,983	100.0	3,764	100.0	3,519	100.0
Gross Profit	1,019	25.2	1,055	26.5	1,118	29.7	881	25.0
Operating Profit	688	17.0	705	17.7	755	20.1	537	15.3
PBT	665	16.4	740	18.6	841	22.3	562	16.0
PAT	476	11.8	512	12.9	594	15.8	462	13.1
Total Debt & Debt ratio	7,148	31.4	8,871	39.0	7,009	29.9	7,091	29.7
ROE(%)	13.2		13.9		15.7		12.36	
EPS(NTD)	1.40		1.47		1.69		1.24	

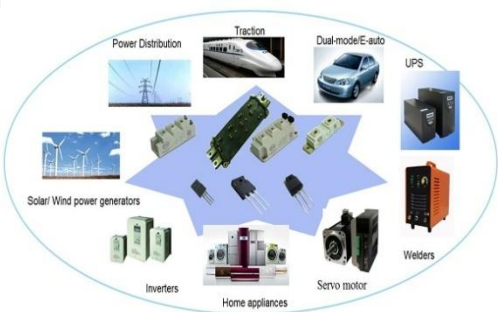
GWC Wafers are used for....

Strong demands in IoT，Automotive、LCD Drive IC 、Handset device ....



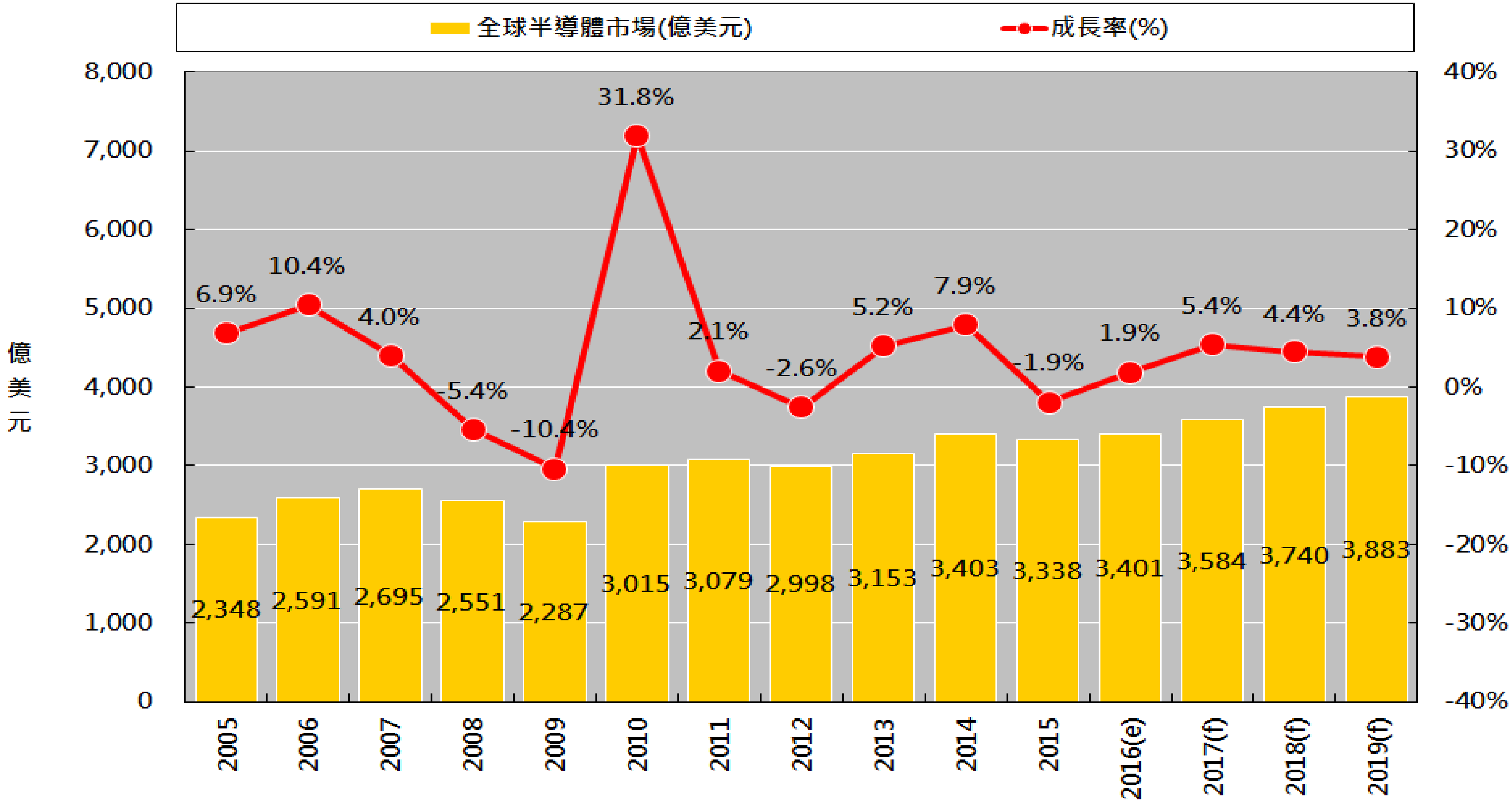

Automotive devices
Power/Discrete device
Memory Applications
LCD Driver IC/CIS/Logic
Consumer Electronic
Industrial Applications



Smart phone is driving new MEMS developments

Global Semiconductor Market trend

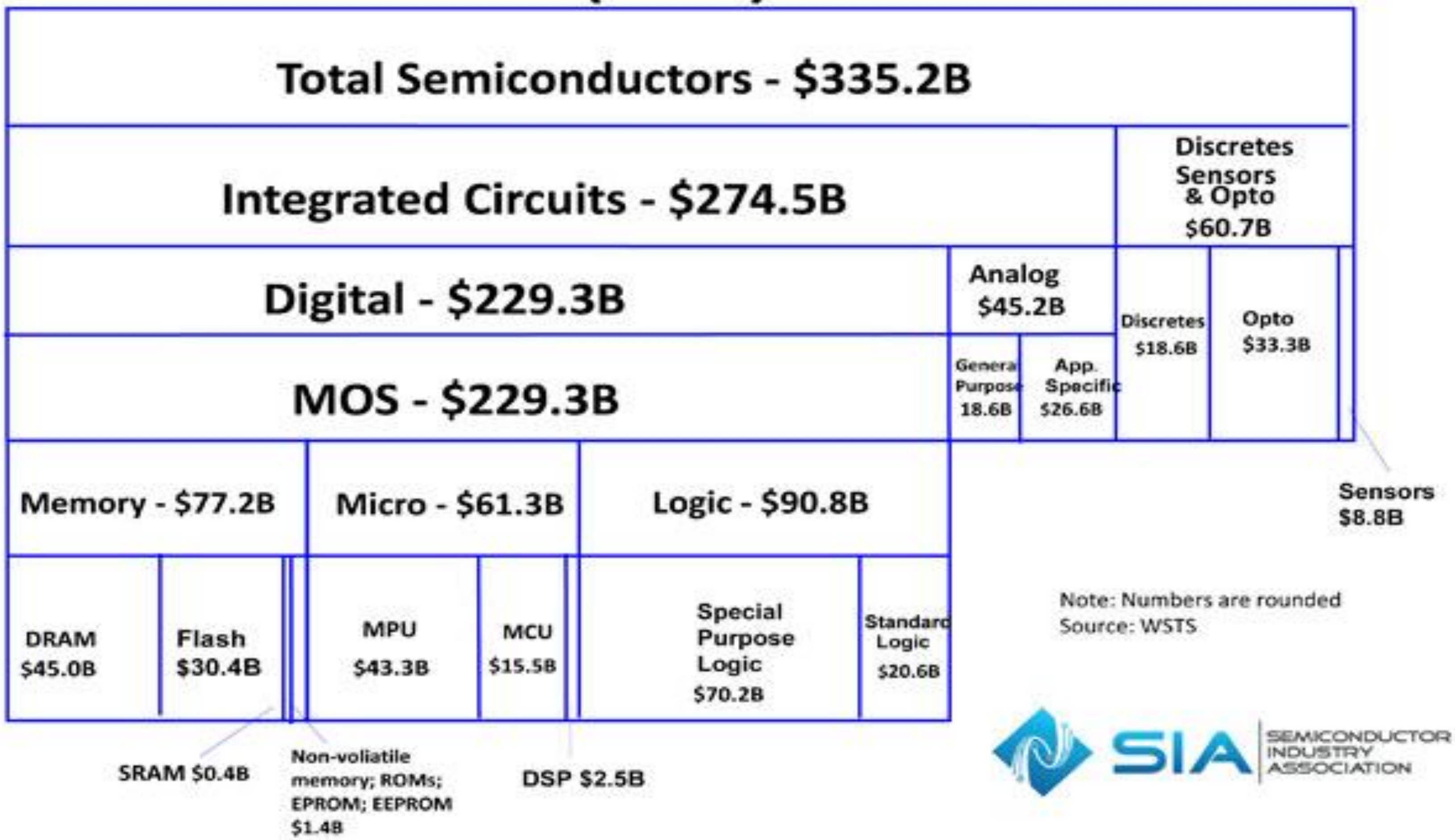


Source: Gartner, WSTS, 工研院IEK 2016/02

Gartner revised worldwide semiconductor revenue declined from -0.8% to -1.9% in 2015 **(2016/01)**

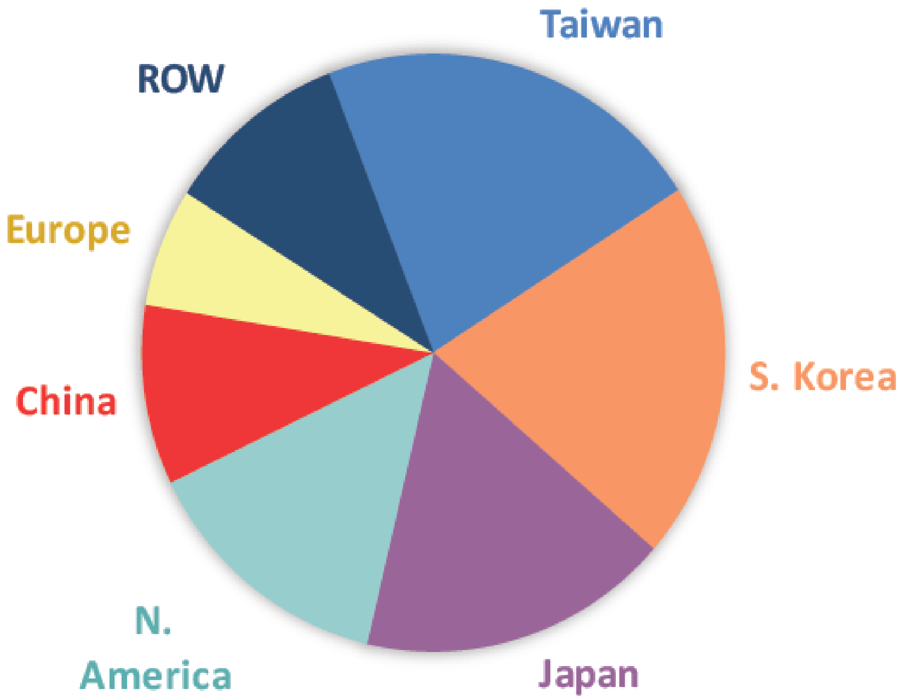
2015 IC Product Breakdown

Worldwide Semiconductor Market Product Breakdown (2015)



Wafer Capacity at Dec 2015

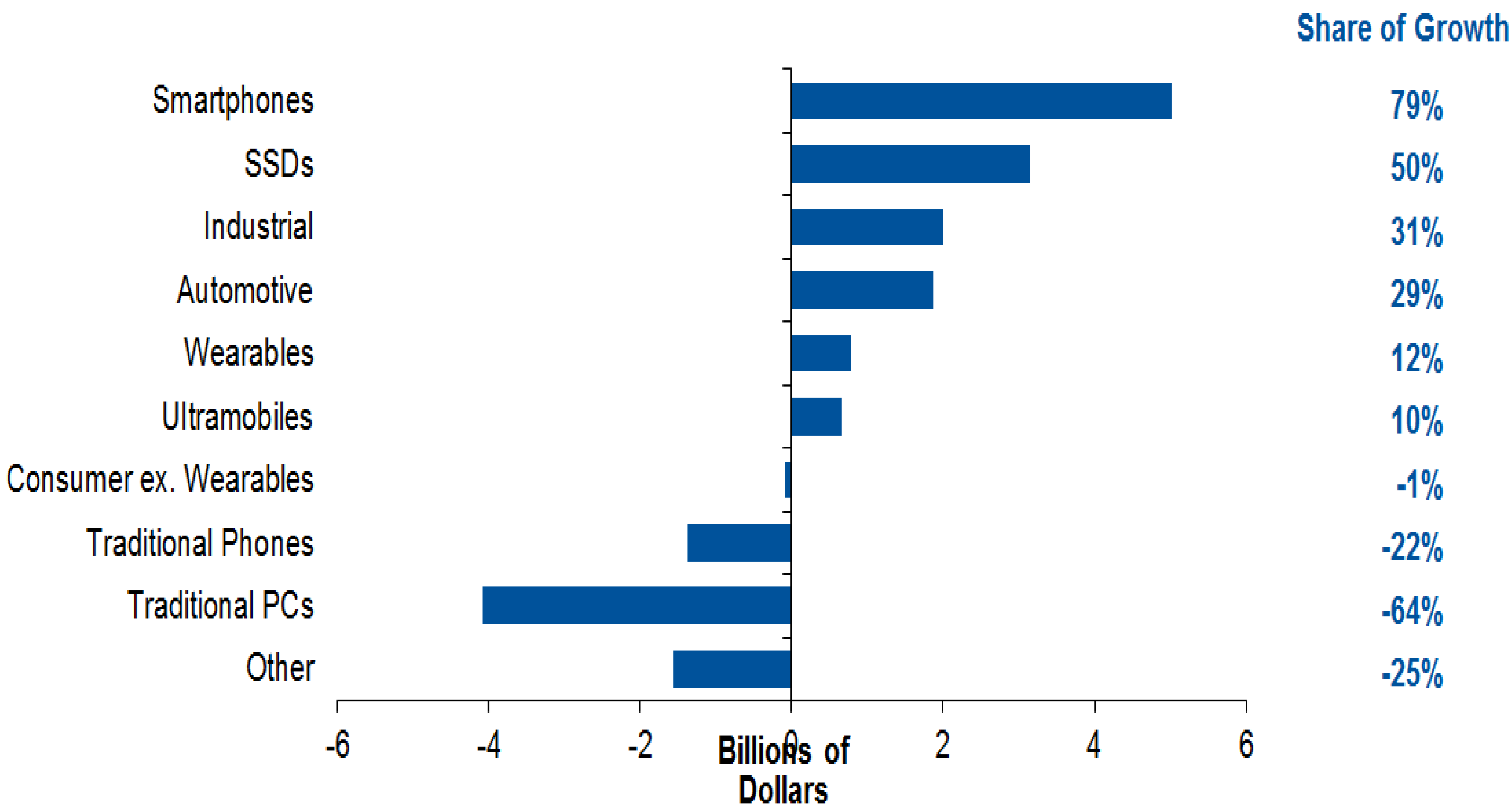
(Monthly Installed Capacity in 200mm-equivalents)



Region	Installed Capacity (K w/m)	% of Worldwide Total
Taiwan	3,547	21.7%
S. Korea	3,357	20.5%
Japan	2,824	17.3%
N. America	2,320	14.2%
China	1,591	9.7%
Europe	1,046	6.4%
ROW	1,665	10.2%
TOTAL	16,350	100%

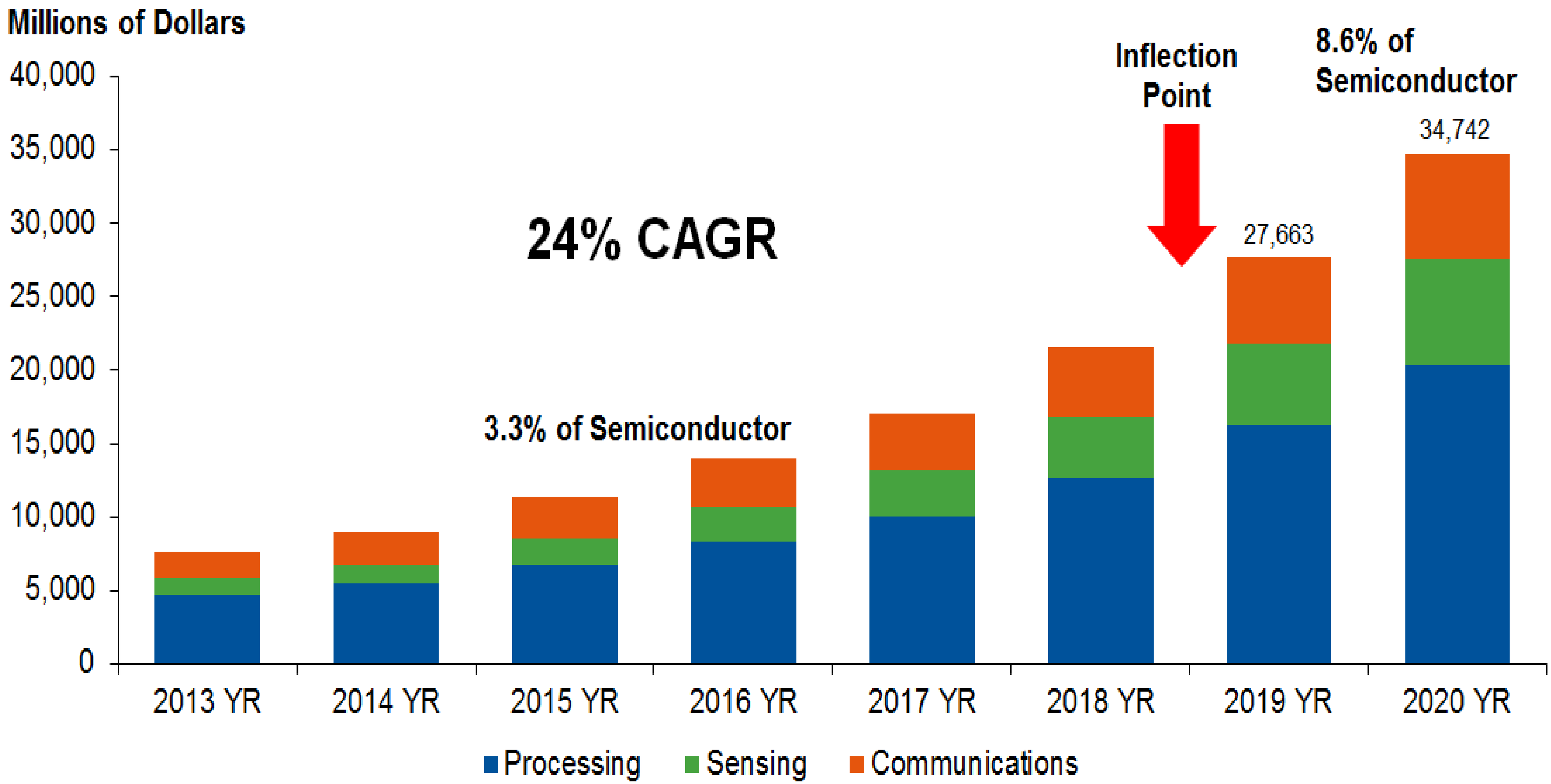
Source: IC Insights 2016/02

2015~2016 Growth Contribution by Electronic Application



Source: Gartner, 工研院IEK 2016/02

Global IoT Market Trend



Source: Gartner, 工研院IEK 2016/02

Dividend Policy

Sino-American Silicon Products inc.		
Year	EPS	Dividend
2010	10.5	TWD 5.5
2011	1.02	TWD 0.85
2012	(4.9)	-
2013	0.57	TWD 1.0
2014	2.06	TWD 1.8
2015	0.93	TWD 1.5

GlobalWafers Co., Ltd.		
Year	EPS	Dividend
2011	-	spin off
2012	3.44	TWD 2.8
2013	6.14*	TWD 5.5
2014	6.60	TWD 5.7
2015	5.80	TWD 5.0

* If using ROC GAAP, it would be 6.22

Q&A