

Company Introduction

PSK Inc.
Hwasong, Korea(HQ)

PSK Inc.
Wuxi, China

PSK Asia
Linkou, Taiwan

PSK Tech America
Austin, USA

PSK Asia
Singapore

PSK Inc.

Disclaimer

The following material was prepared based on the information currently available to the management of PSK on the purpose of discussion with PSK's investors only.

Some of the information and data in this material have been prepared based on assumptions and forward-looking statements. Please note that such forward-looking assumptions and statements involve known and unknown risks, uncertainties and other factors and may be subject to change.



Company Introduction

1990년 설립,
29년간 반도체장비 전문기업,
코스닥 상장 중견기업

우수제조기술연구센터,
세계일류상품생산기업,
World Class 300



인원 470명, 매출 3,283억 원,
영업이익 670억 원 (2018년 기준)

세계 1위 제품 다수 보유
PR Strip, Contact Cleaning,
Descum, Reflow,
New Hard Mask Strip

청년친화 강소기업,
직무발명보상우수기업,
일하기 좋은 기업 인증

Company Introduction

■ Main Business : Semiconductor Equipment

- ▶ Wafer Fabrication: Dry Strip, Dry Cleaning, Hard Mask Strip, Etch Back, Power Device Etcher
- ▶ PKG Equipment: Descum, Reflow

■ Corporate History

- 1990. 6 Founded
- 1994. 1 200mm Dry Strip System ULTIMA Ⅲ
- 1997. 1 IPO, Listed in KOSDAQ
- 1997. 2 200mm Dry Strip System DAS-Ⅲ
- 1999. 3 300mm Dry Strip System TERA21
- 2005. 2 300mm Dry Strip System SUPRA Ⅲ
- 2006. 5 300mm BUMP Descum System Ecolite300
- 2006. 11 300mm Dry Native Oxide Cleaning System INTEGER IV
- 2007. 10 300mm Dry Strip System SUPRA V. *Global No.1 in Dry Strip*
- 2009. 10 300mm Oxide Etchback PROFILER
- 2012. 03 Power Device Etcher(Japan)
- 2012. 07 SEMIgear (PKG Fluxless Reflow)
- 2012. 09 TSV Surface Treatment System, Ecolite II
- 2014. 05 New Hardmask Strip System OMNIS
- 2015. 12 Non O2 Dry Strip System ZEDIUS
- 2016. 12 FOPLP Surface Treatment System
- 2018. 1 300mm Vacuum Dry Strip System SUPRA XP

Company Introduction - Products

■ PR Strip



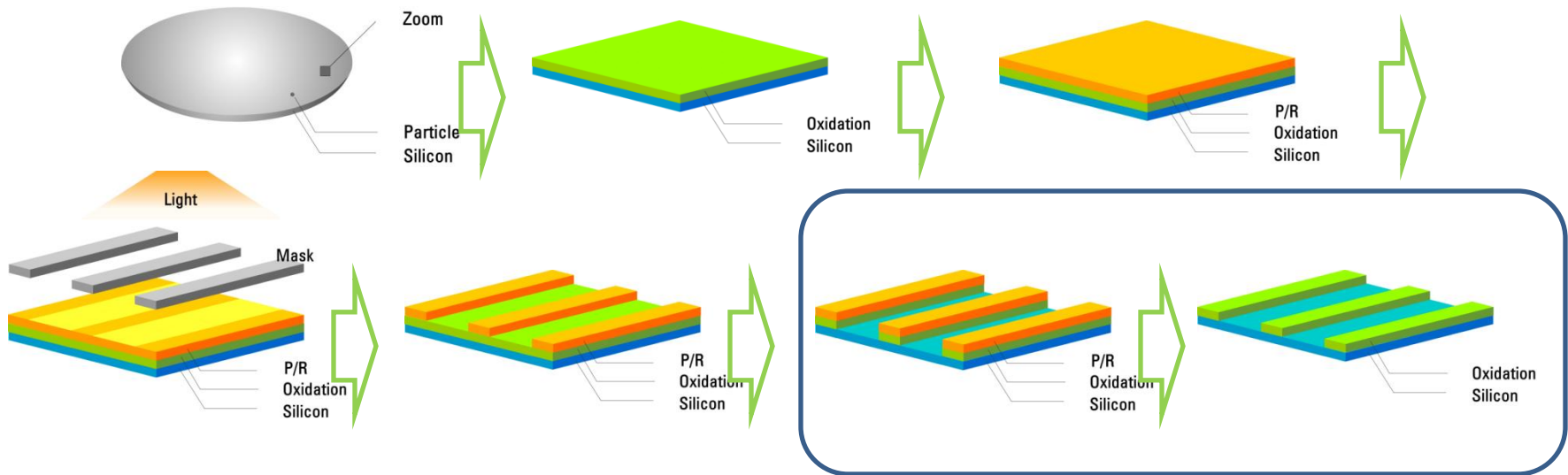
SUPRA V
300mm Dry Strip



SUPRA N
300mm Advanced Dry Strip



FUTAS
300mm H₂ Dry Strip



Company Introduction - Products

■ Dry Cleaning



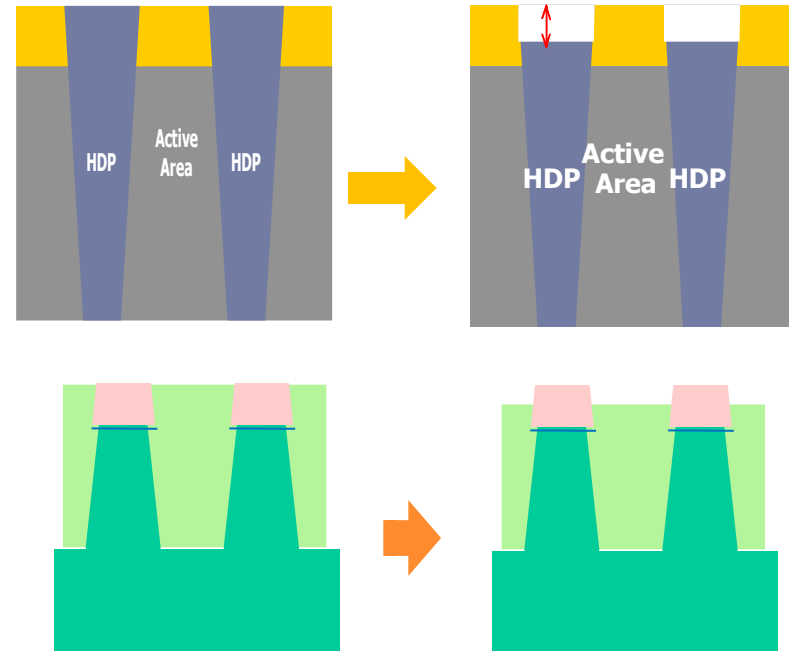
INTEGER Plus



■ Etch Back (Advanced Dry Cleaning)



PROFILER



Company Introduction - Products

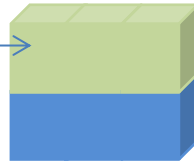
■ New Hard Mask Strip



Si Wafer →

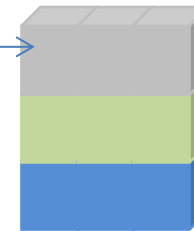
(1) Wafer 원판

Oxide 막
증착



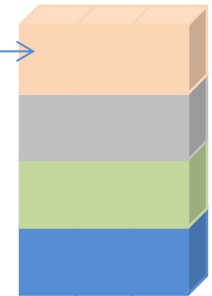
(2) 증착
Deposition

Hard mask 막
증착



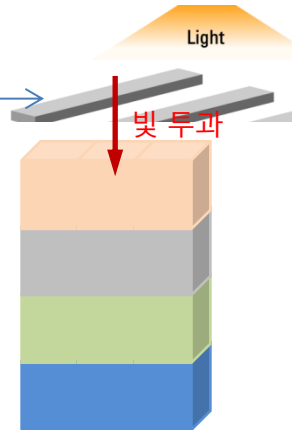
(3) 증착
Deposition

Photoresist 막
Coating



(4) PR Coating

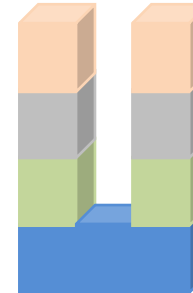
Photomask 판 →



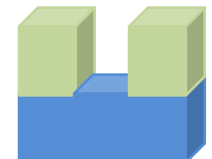
(5) 노광
Exposure



(6) 현상
Develop



(7) 식각
Etch



(8) Strip
PR막질과 Hard
Mask 막질 제거

Company Introduction - Products

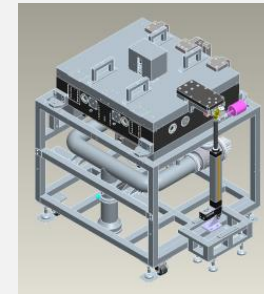
■ WLP Descum : Semiconductor Packaging, LED Descum & Treatment Process



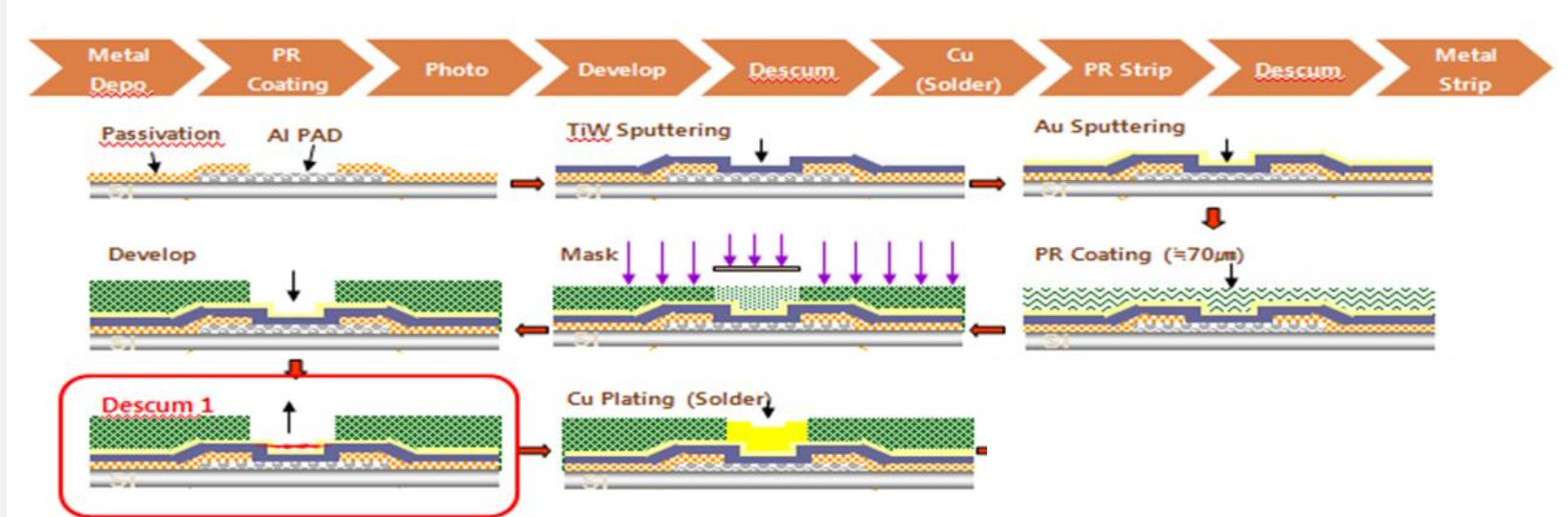
ECOLITE3000
300mm Descum



ECOLITE II
300mm/400mm Descum



ECOLITE XP
Panel Type Descum

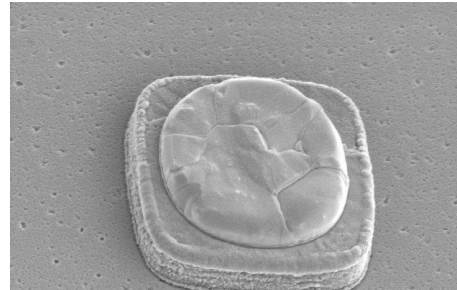


Company Introduction - Products

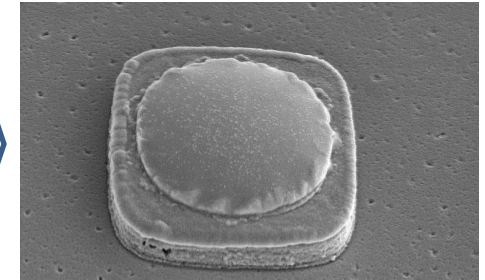
■ WLP Reflow (SEMIgear Inc.)



GENEVA STP

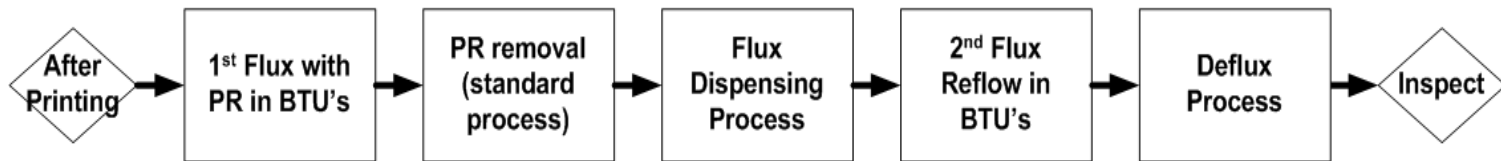


Before Reflow

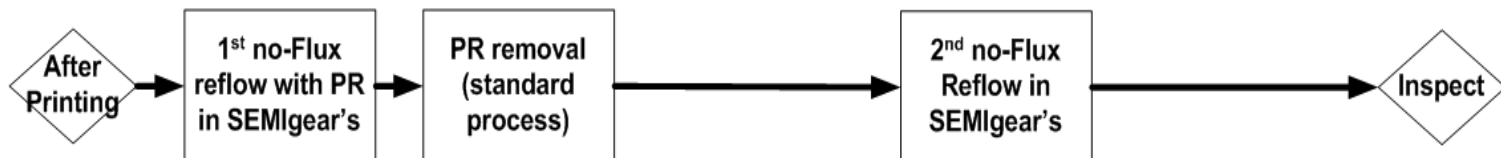


After Reflow

Scheme 1 - Conventional Flux Reflow for Screen Printing Solder



Scheme 2 - SEMIgear no-Flux Reflow for Screen Printing Solder



Company Introduction

“Serving Worldwide Customers Anytime and Anywhere!”



Company Introduction

■ Dry Strip Market Share : Worldwide No. 1

Top 50 Companies Revenue from Shipments of Dry Strip - Worldwide (Millions of \$US)

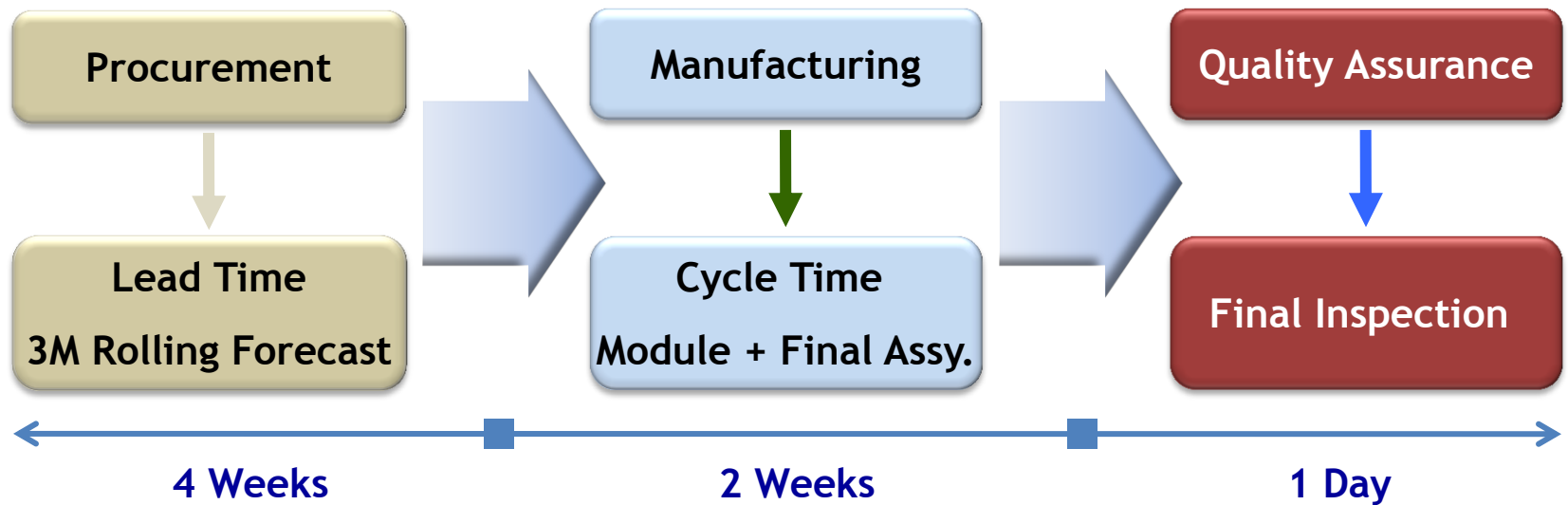
Total Market		244.9	302.5	23.5%	100.0%
Rank 2016	Rank 2017	Revenue 2016	Revenue 2017	Change (%) 2017	Share (%) 2017
1	1 PSK	90.9	161.1	77.2%	53.3%
2	2 Lam Research	68.1	59.6	-12.5%	19.7%
3	3 Hitachi High-Technologies	33.1	40.1	21.1%	13.3%
4	4 Mattson Technology	22.6	27.3	21.1%	9.0%
6	5 Hitachi Kokusai Electric	3.2	1.3	-59.1%	0.4%
5	NM Ulvac	16.8	-	-100.0%	NM
	Others	10.4	13.1	26.0%	4.3%
	Total Market	244.9	302.5	23.5%	100.0%

*Gartner (April, 2018)

Company Introduction

■ Manufacturing Timeline (Order-to-Delivery): 6 Weeks

► From Order Entry to Customer Delivery



Company Introduction

■ Shareholders' Structure

- ▶ Total issued stocks : 20,331,604 shares (as of December 31, 2018)
par Value : KRW500

- ▶ **Shareholders** (as of December 31, 2018)

PSK HOLDINGS INC.	6,533,917	32.1%
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Financial Results

■ B/S (Consolidated)

(unit: KRW)

	Q4, 2018		Q4, 2017	
Current assets		227,272,015,044		203,881,129,475
Cash and cash equivalents	56,363,883,850		52,646,253,279	
Account receivable	45,036,318,175		36,700,385,229	
Current Financial assets	65,182,095,418		64,285,845,001	
Inventory	56,719,317,025		49,432,945,178	
Non-current assets		91,617,585,649		72,810,963,883
Property, plant and equipment	45,932,687,536		27,996,699,889	
Goodwill	4,757,423,286		4,558,718,637	
Intangible assets	16,532,342,131		17,190,571,860	
Long-term financial assets	19,876,180,207		19,249,634,929	
Total assets		318,889,600,693		276,692,093,358
Current liabilities		42,294,365,067		40,742,803,164
Trade notes and accounts payable	25,012,800,408		26,297,793,239	
Tax liabilities	11,449,907,847		10,314,587,728	
Non-current liabilities		5,496,242,341		7,633,727,038
Long-term Provisions, Estimated	2,696,775,731		4,142,883,489	
Deferred tax liabilities	2,611,529,738		3,303,287,321	
Total liabilities		47,790,607,408		48,376,530,202
Capital stock	10,165,802,000		10,165,802,000	
Earned surplus	232,801,169,529		186,347,008,880	
Total shareholders' equity		271,098,993,285		228,315,563,156

2018 Estimate

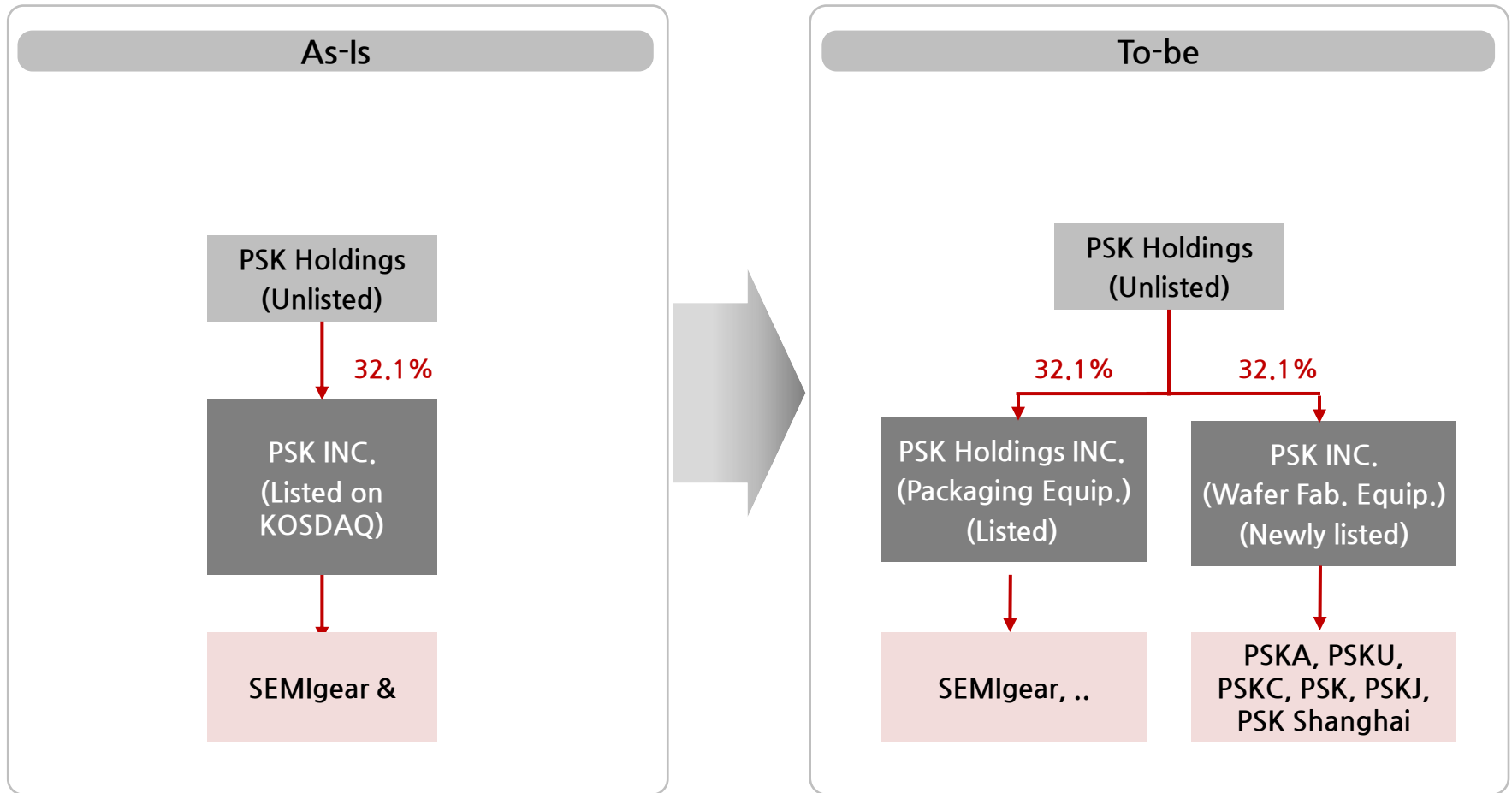
I/S (Consolidated)

(unit: KRW)

	FY2018		FY2017	
	Q4	12 months	Q4	12 months
Revenue	71,883,648,496	328,262,337,649	65,089,554,450	275,390,544,841
Cost of Sales	44,288,491,517	183,587,657,558	40,341,021,292	156,290,407,073
Gross Margin	27,595,156,979	144,674,680,091	24,748,533,158	119,100,137,768
SG&A	25,403,091,648	77,688,583,973	20,374,769,669	61,421,771,513
Operation Profit	2,192,065,331	66,986,096,118	4,373,763,489	57,678,366,255
Operation Profit %	3.0%	20.4%	6.7%	20.9%
Finance income	2,333,517,505	11,219,080,951	1,402,229,669	6,591,785,942
Finance expenses	2,927,838,305	9,169,569,389	3,235,837,710	7,493,043,750
Other non-operating income	208,630,167	718,283,262	132,989,118	1,311,639,109
Other non-operating expenses	137,864,529	250,491,089	(306,699,119)	5,138,231,707
Profit before Tax	1,668,510,169	69,503,399,853	2,979,843,685	52,950,515,849
Tax	584,885,065	16,478,388,101	530,376,158	13,507,095,045
Net Profit	1,083,625,104	53,025,011,752	2,449,467,527	39,443,420,804
Net income (loss) per share: Basic	53	2,609	120	1,940
Net income (loss) per share: Diluted	53	2,609	120	1,940

Split-off

Divided into two companies, Packaging Equipment and Wafer Fabrication Equipment

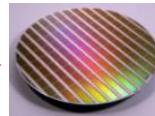


Split-off

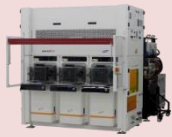
Product Line-up

○ Wafer Fabrication

○ Packaging & Test



P
S
K



PR Strip



Dry Cleaning



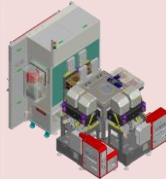
Hard mask Strip



Etch Back



Power Device Etch



New Product



PKG Descum



PKG Reflow

P
S
K
H



PKG Reflow
(Wafer Level)



PKG Reflow
(Panel Level)



HDW



Thermal Test

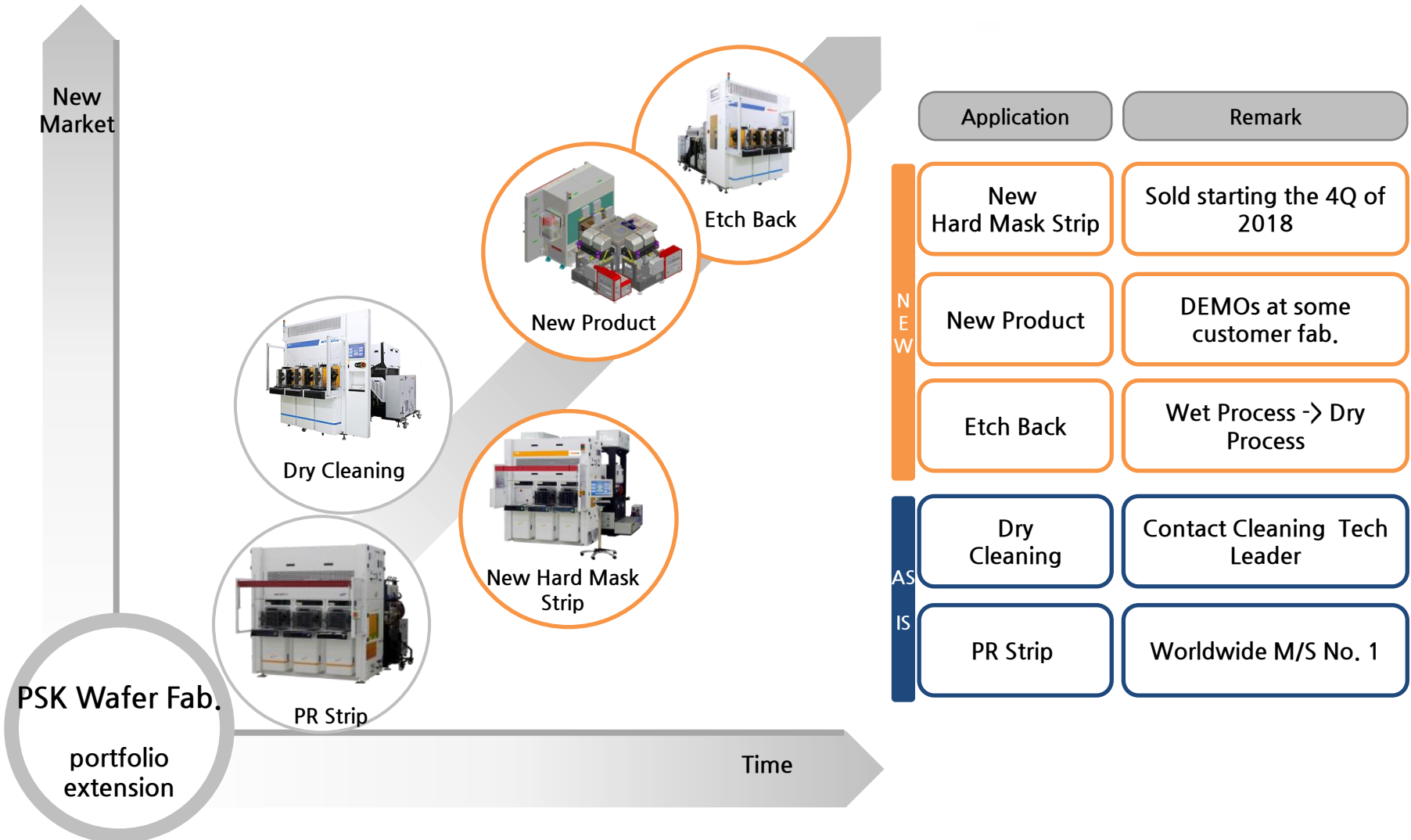
Split-off

Category	Sub-category	Wafer Fabrication Equipment Biz	Packaging Equipment Biz
Marketing	고객	소수의 대형 고객	다수의 중소형 고객
	마케팅, 영업	다수 인원이 특정 고객 담당	1명이 다수 고객 담당
	고객 요구 제품	동일 또는 유사한 다량의 장비	다양한 사양의 소량의 장비
R&D	기술서비스	다수 인원이 특정 고객 기술서비스, 기술서비스 인원이 고객사 내 시설에 상주	소수인원이 다수 고객 및 지역에 기술서비스, 기술서비스 인원이 고객사 시설 밖에 사무실 임대하여 대기
	공정의 대상이 되는 기판	원형 Wafer type (300mm)	원형 Wafer type -> 사각형의 Panel Type, 특히 Panel Type은 사이즈도 고객사마다 다름(최대 600*600mm).
Manufacturing	Footprint	Footprint(장비 하단면적) 유사	Footprint(장비 하단면적) 다양
	생산	상대적 소품종 다량생산	다품종 소량생산
	장비모델간 유사성	장비 모델들 간 모듈구성, 제조 공간 및 제조 Lead Time 유사	장비 모델들 간 모듈구성, 제조 공간 및 제조 Lead Time 다양

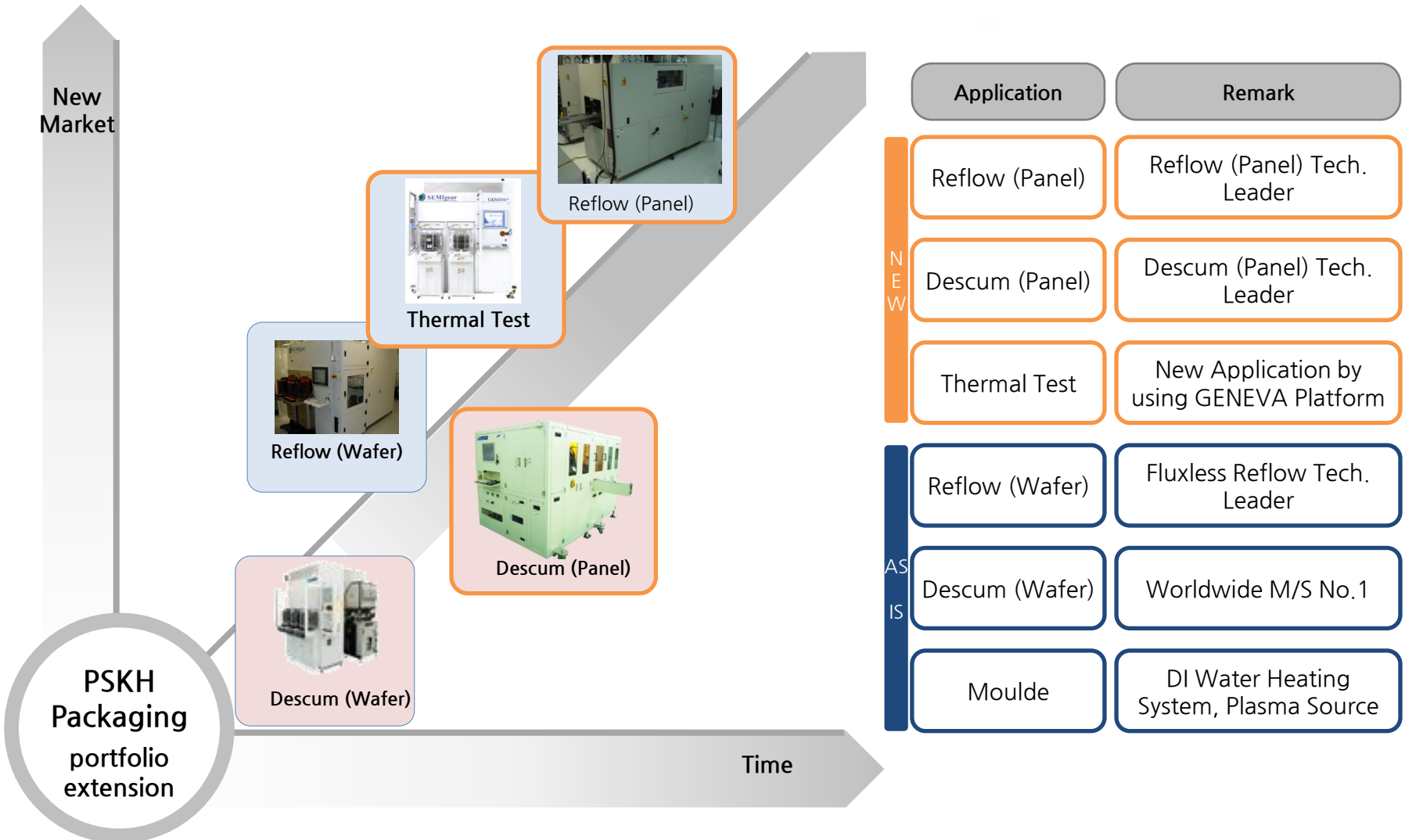
=> 전공정과 패키징공정 부문간 차이점 증가

=> 각 부문 신규 장비 확대에 따른 분할을 통해 각각 사업 특성에 따른 전문성 강화 필요

Wafer Fabrication Equipment -New Products

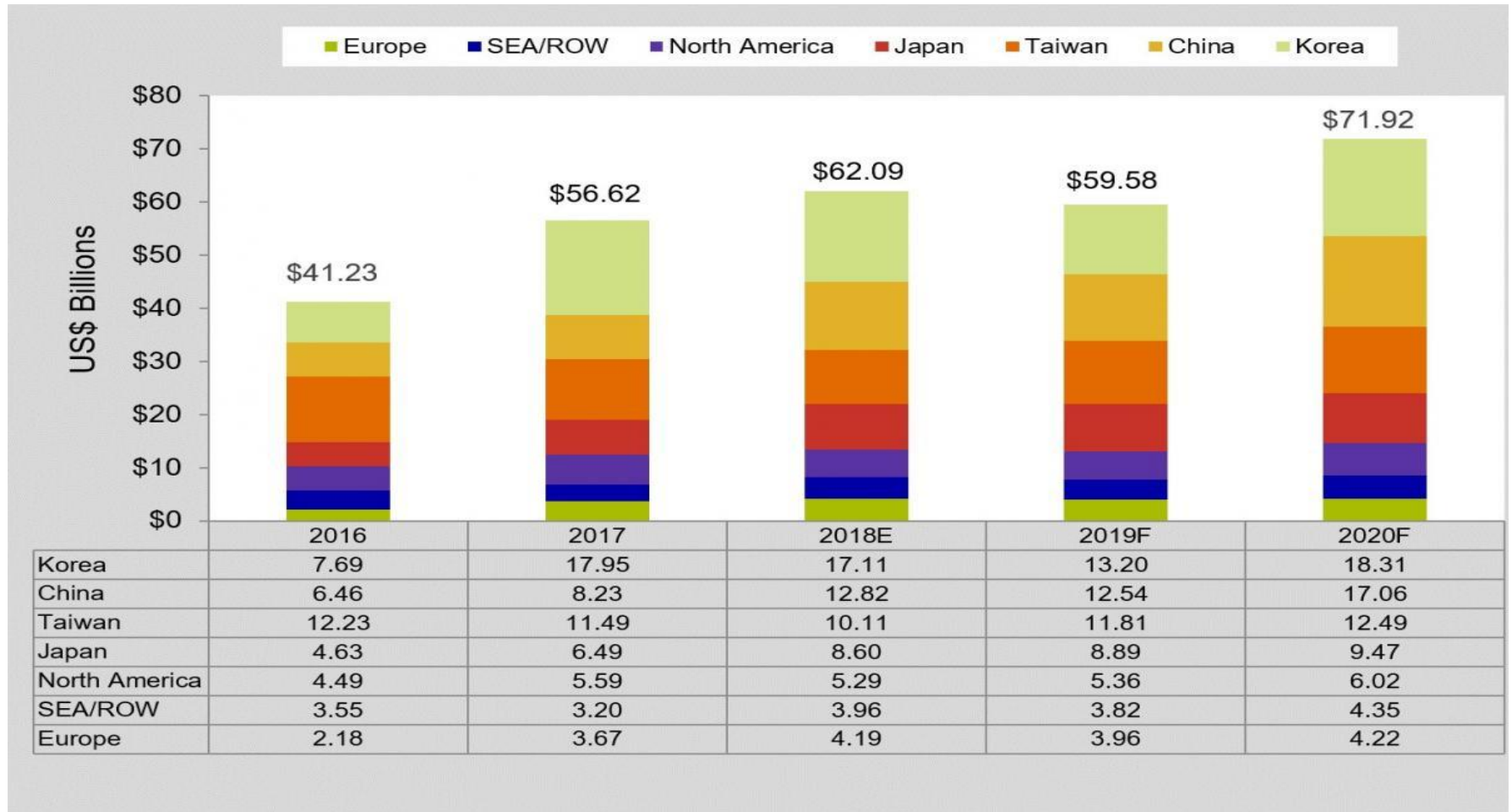


Packaging Equipment - New Products



Continuous Growth

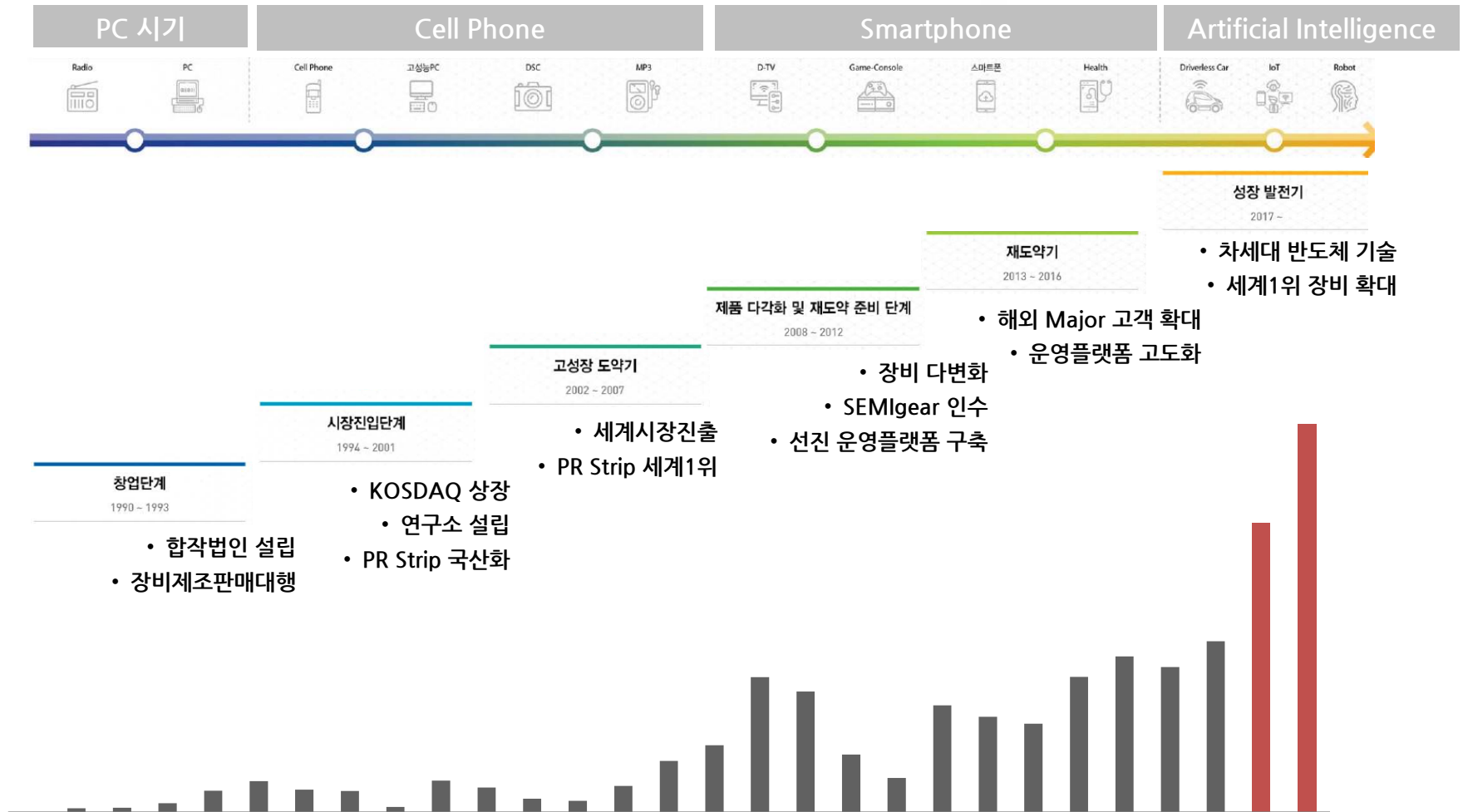
Semiconductor Equipment Market by Regions



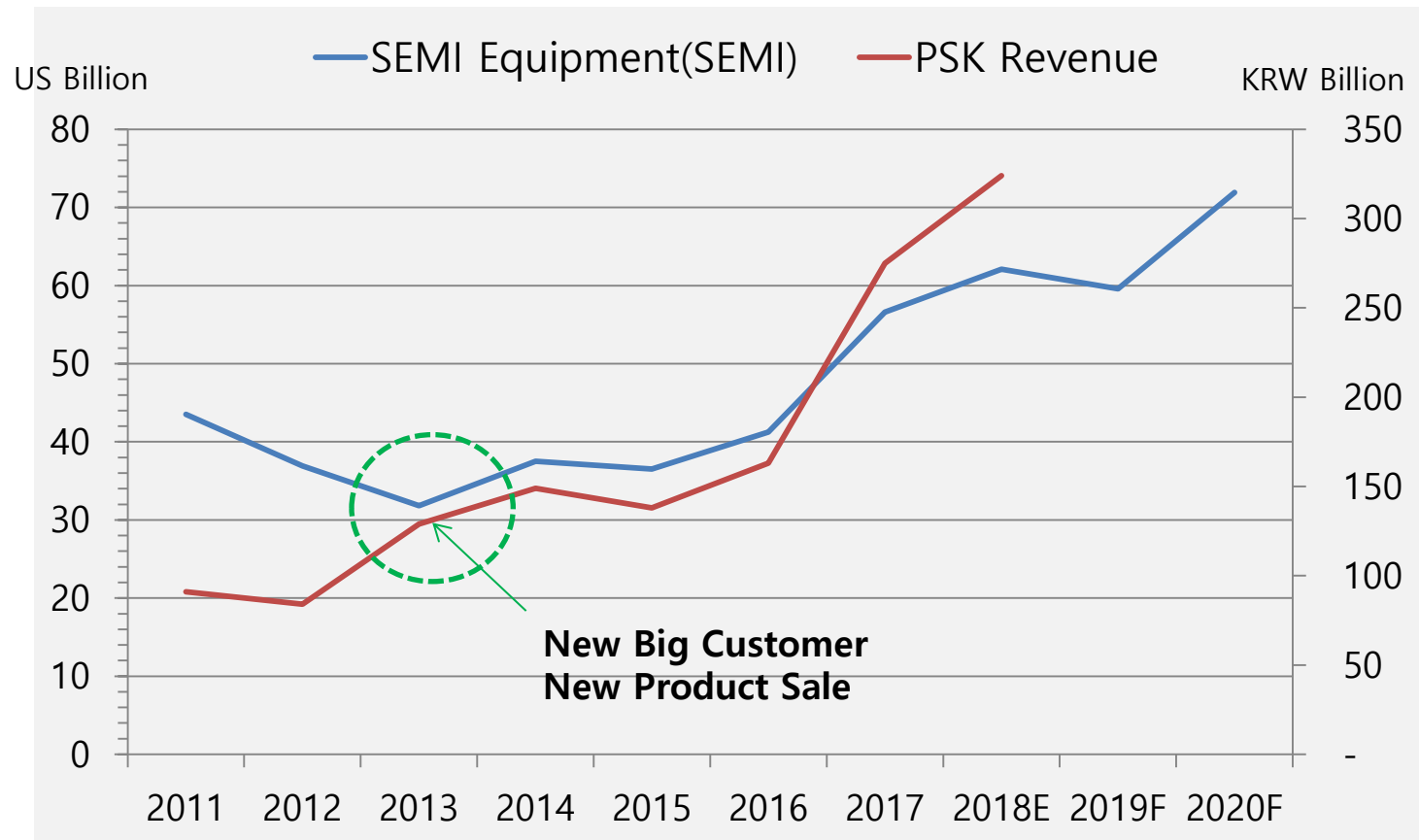
※ Source: SEMI(Dec., 2018)

Continuous Growth

반도체 장비 1세대 기업으로서 반도체 시장의 성장과 함께 도약



Continuous Growth



감사합니다.