

Focus on China Panel Session

Perspectives of
Semiconductor Assembly
Manufacturing in China

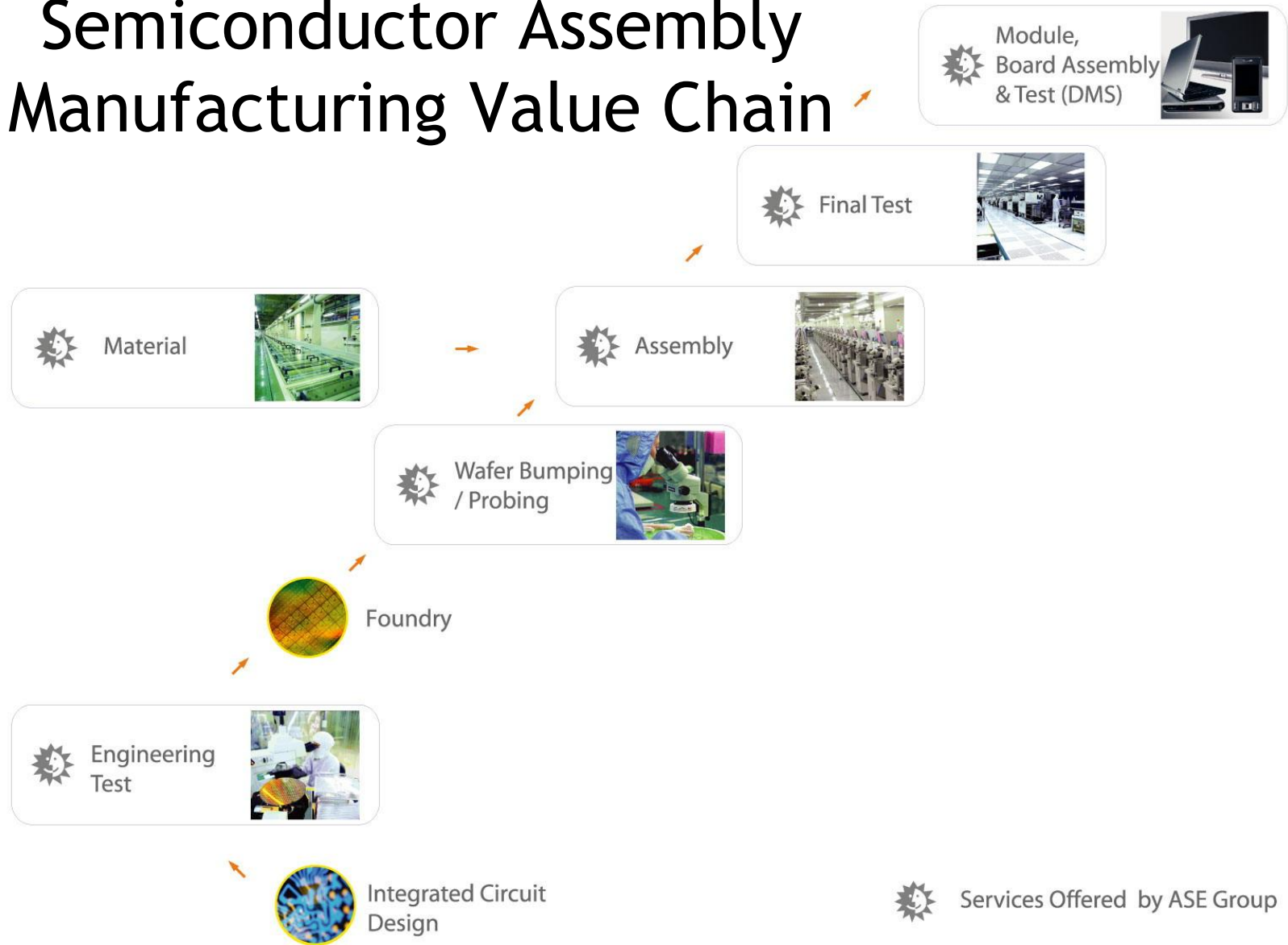
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Chen**

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Semiconductor Assembly Manufacturing Value Chain

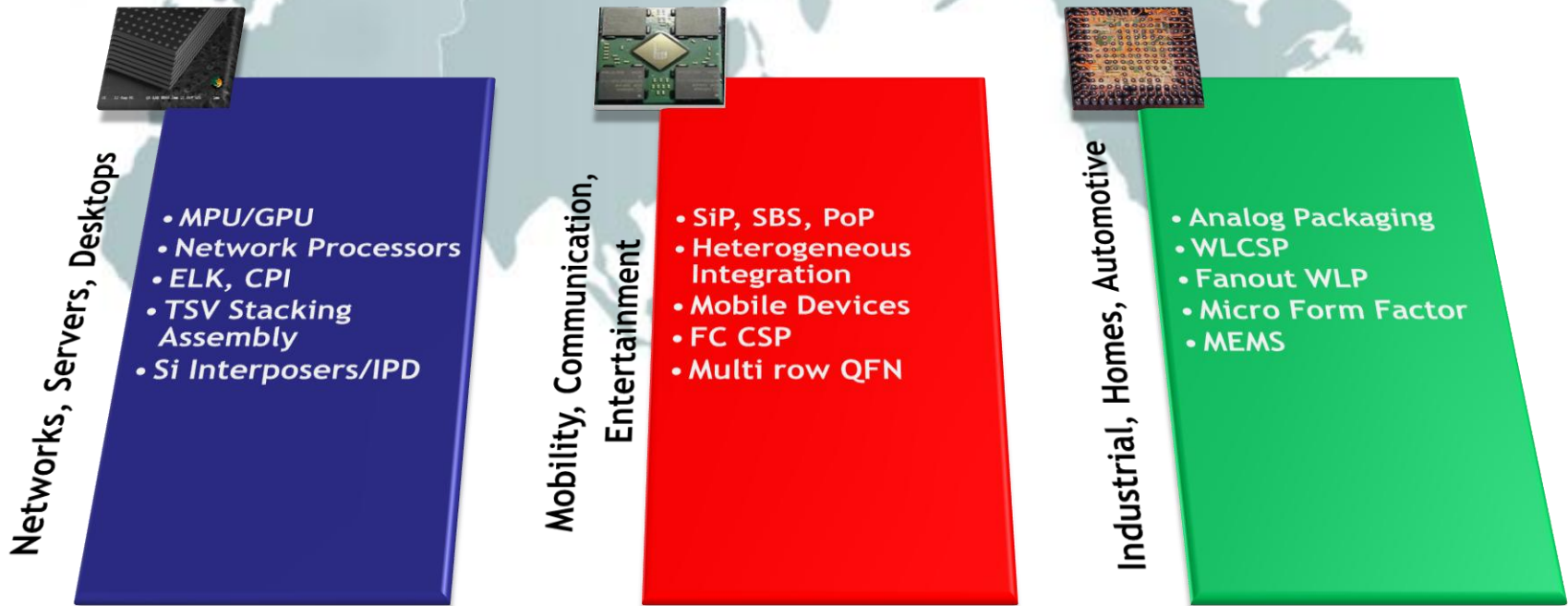


What does ASE offer?



- Full Turnkey Service
 - Assembly
 - Test
- Substrate
- EMS

- Lowering Cost/Creating Value
 - Cu Wire Bond
- High Density Matrix
- Low Pin & Discrete
- Economies of Scale



Investment in China

- Strategically located within China Semi Cluster
 - Proximity, efficiency, easy access
 - Desirable location for customer supply chain access
- Knowledgeable educated human resources
 - Universities & research institute
- Investments and infrastructure
 - Long term vision and plans

ASE Worldwide Locations



Suzhou, China (ASEN)



ASE Weihai, China



Shanghai, China (Material)



Paju, Korea



Shanghai, China (A&T)



Takahata, Japan



Kunshan, China



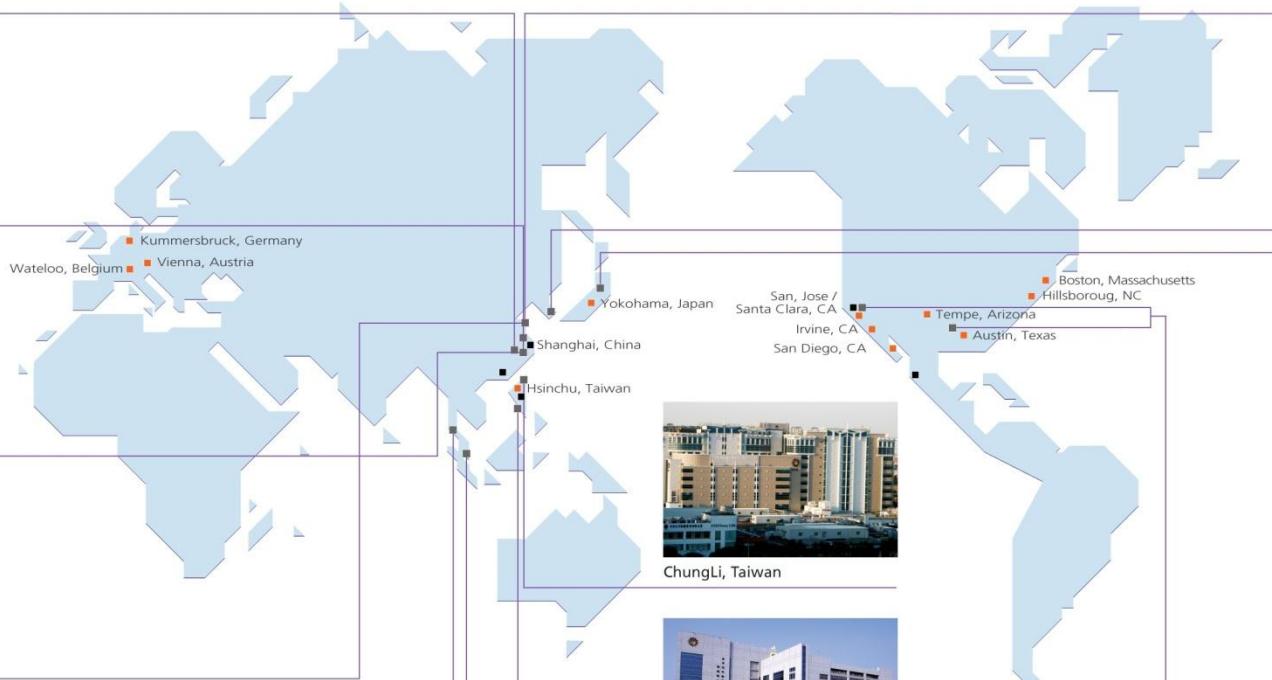
ISE Labs
Fremont, California
Austin, Texas



Penang, Malaysia



Singapore



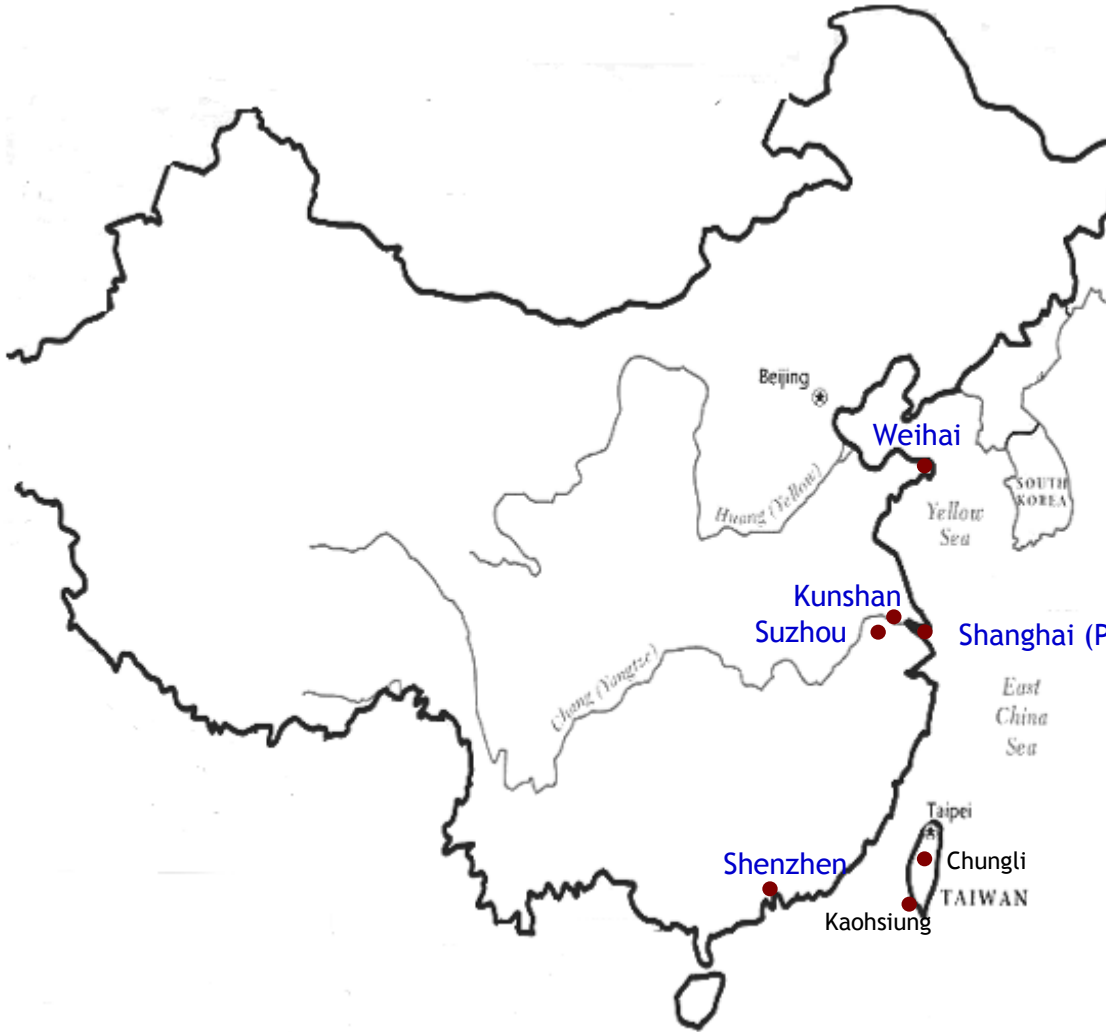
ChungLi, Taiwan



Kaohsiung, Taiwan

- Sales and Representative Offices
- IC Service
- System Service

ASE's Footprint in China



- Shanghai
IC Assembly, Test Substrate EMS



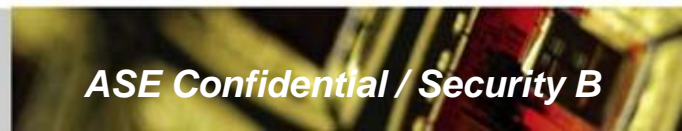
- Suzhou
IC Assembly, Test



- Weihai
Discrete IC Assembly, Test



- Kunshan, Shenzhen
IC Assembly, Test , EMS



ASE Shanghai Assembly Facility



Total Floor Space: 88,000 m²

- BLDG #1: 33,000 m²
- BLDG #2: 33,000 m²
- BLDG #3: 22,000 m²

- Early Floor Space and Capacity Readiness
- Close to local foundries / substrate vendor

ASE Shanghai Housing Center

Total landscape 77K M²

Total floor space 21K M²

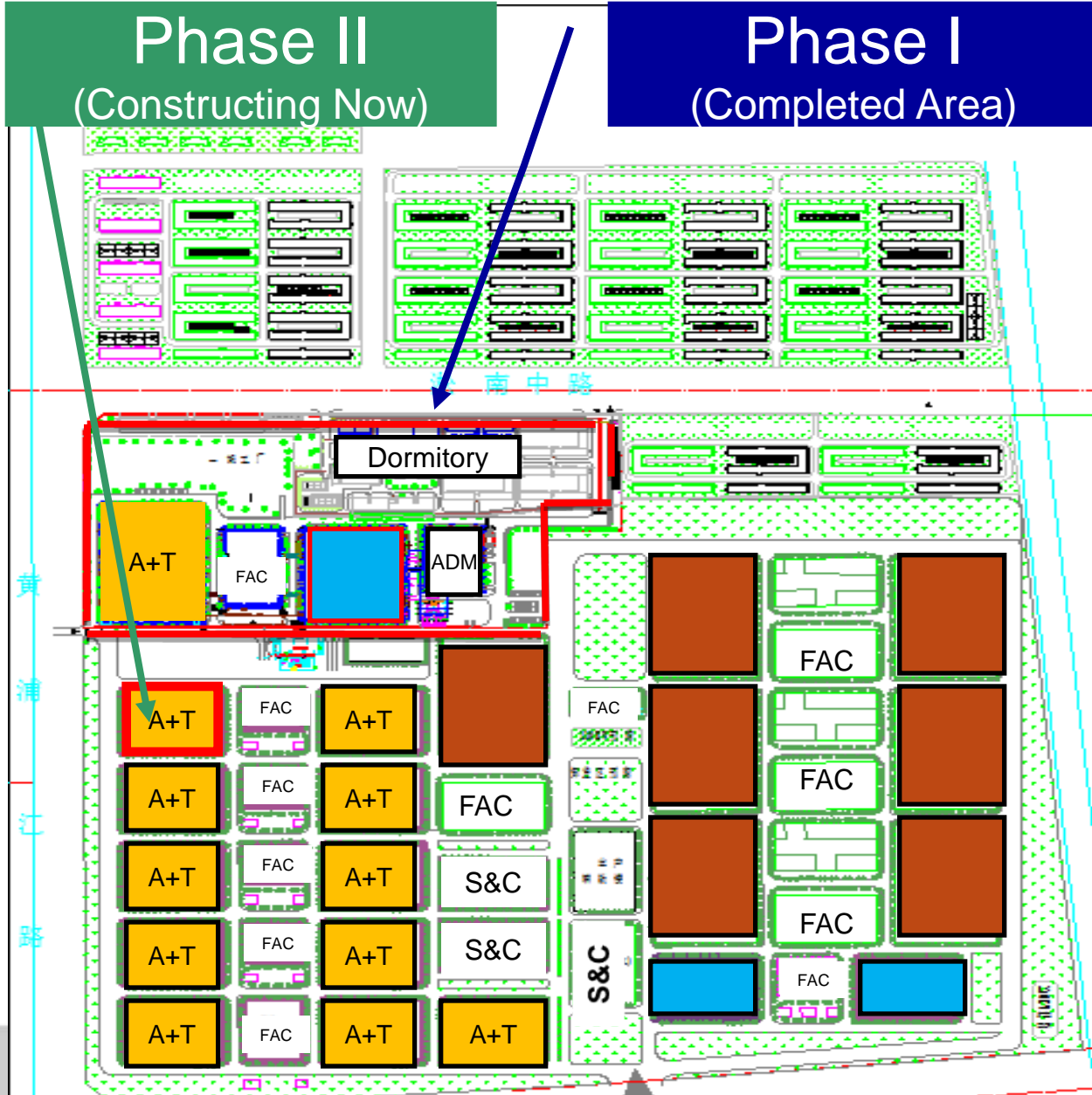
15 min drive from Shanghai factories

>30 buildings with 6000 rooms

Dormitory from Engineers & Operators



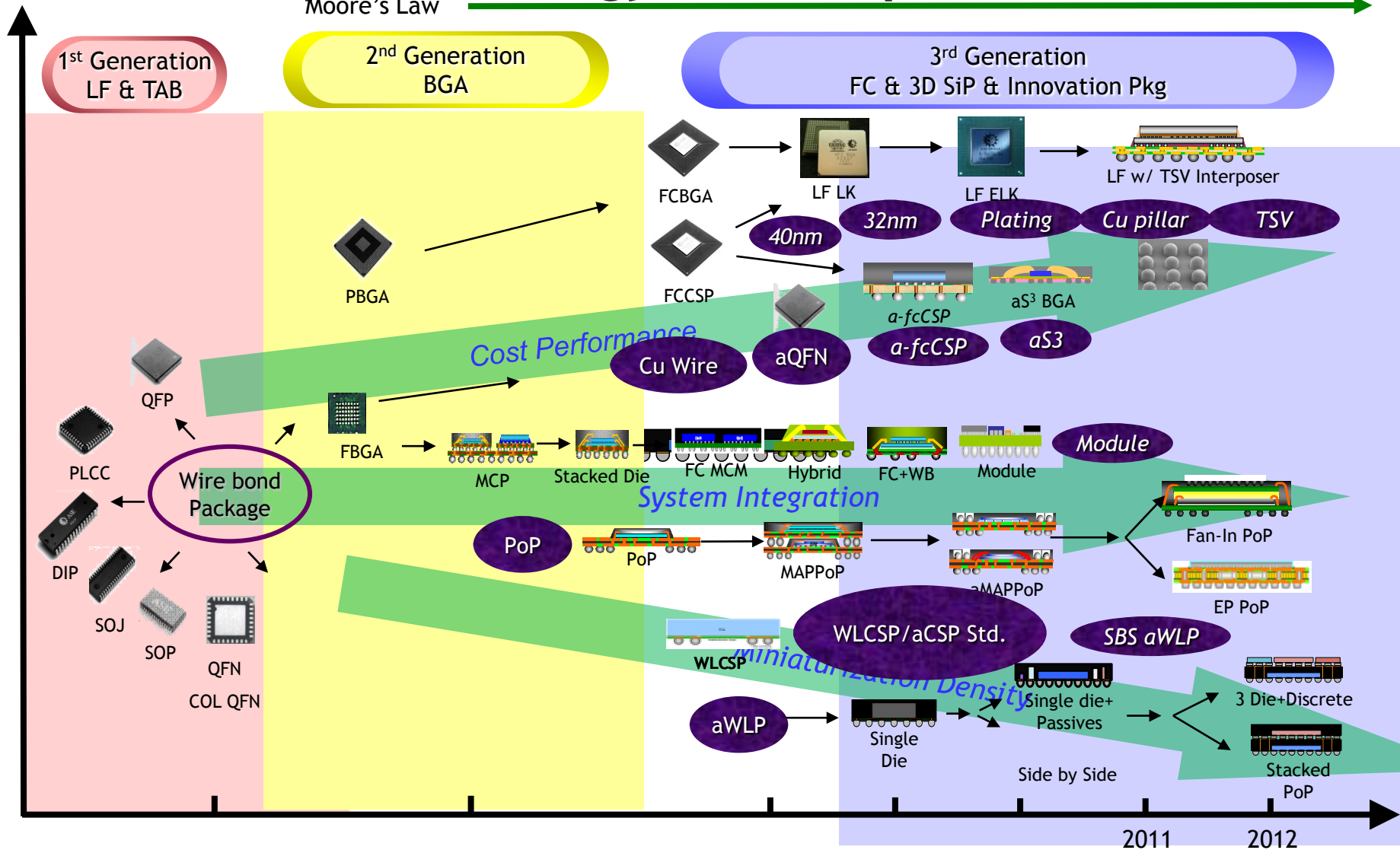
ASE Kunshan Space Plan



- Overall Land Space: 1,073,998 m²
(256 acre.)
- Operation Area is about 10 times larger than ASES

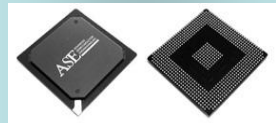
ASE Group Technology Roadmap

Moore's Law 90 nm 65 nm 45 / 40 nm 32 / 28 nm



ASESH Package Milestone

2001



PBGA

2002~2003



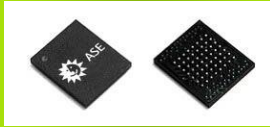
SiP BGA



HS BGA



QFP, L/TQFP

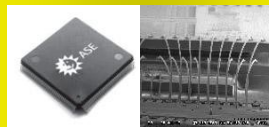


FBGA

2004~2008



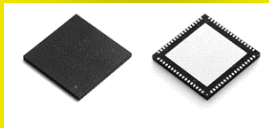
Stack FBGA



Stack QFP



T/LQFP-EP



QFN



SO PDIP

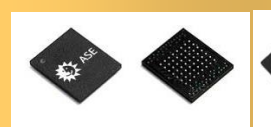
2009



UFBGA



Side by side PBGA



Cu wire FBGA



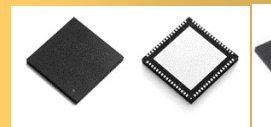
Cu wire PBGA



Cu wire QFP



T/LQFP T/LQFP-EP

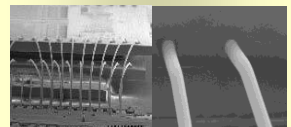


Cu wire QFN

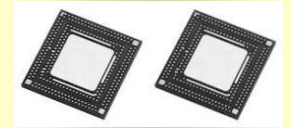


Cu wire SO

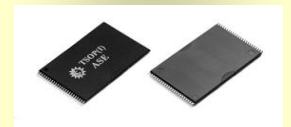
2010~2012



Multi stack/FOW

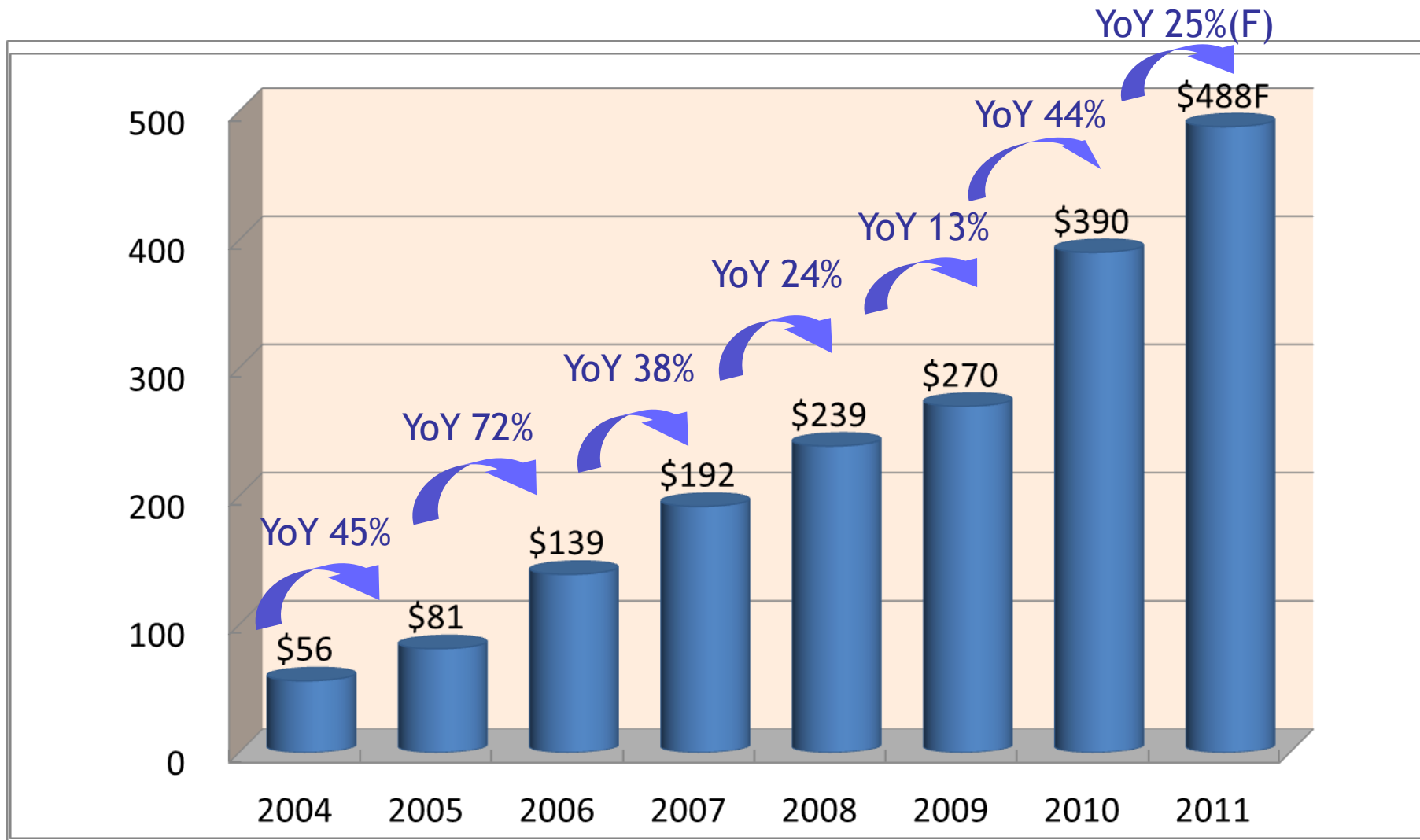


aQFN



TSOP(I)

ASE Shanghai Revenue





**ASE Customer
Wafers**

Trillions of Electronic Packages from Millions of Wafers

Thank you for your interest