



nepes

2022 纳沛斯集团简介



Semiconductor | Artificial Intelligence | IT Materials



关于纳沛斯



事业领域



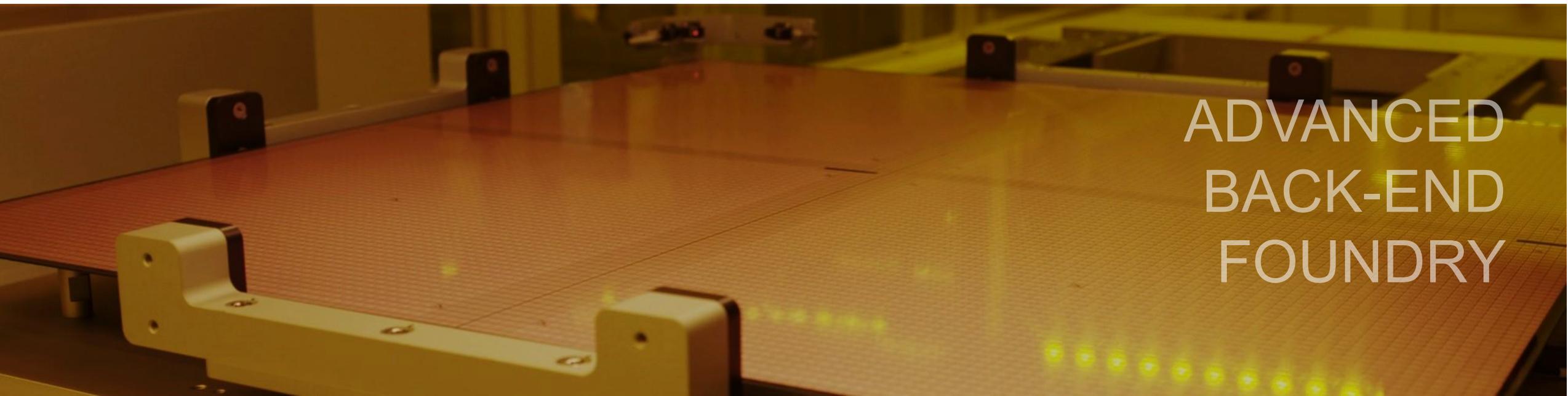
核心技术



国际化纳沛斯



企业文化



ADVANCED
BACK-END
FOUNDRY



纳沛斯在决定公司名称的那一刻就开始了4D管理



词源(希伯来语)

נֶפֶשׁ(nepesh)

永恒的生命 / 精力充沛

长寿企业



什么是 4D (4th dimension) 管理?

为了让公司能成为有丰盛收获的长寿企业，
使**创造、创新、创拓**事宜和**有趣、满足、快乐**事宜
不断发生的经营管理。

Corporate Identity



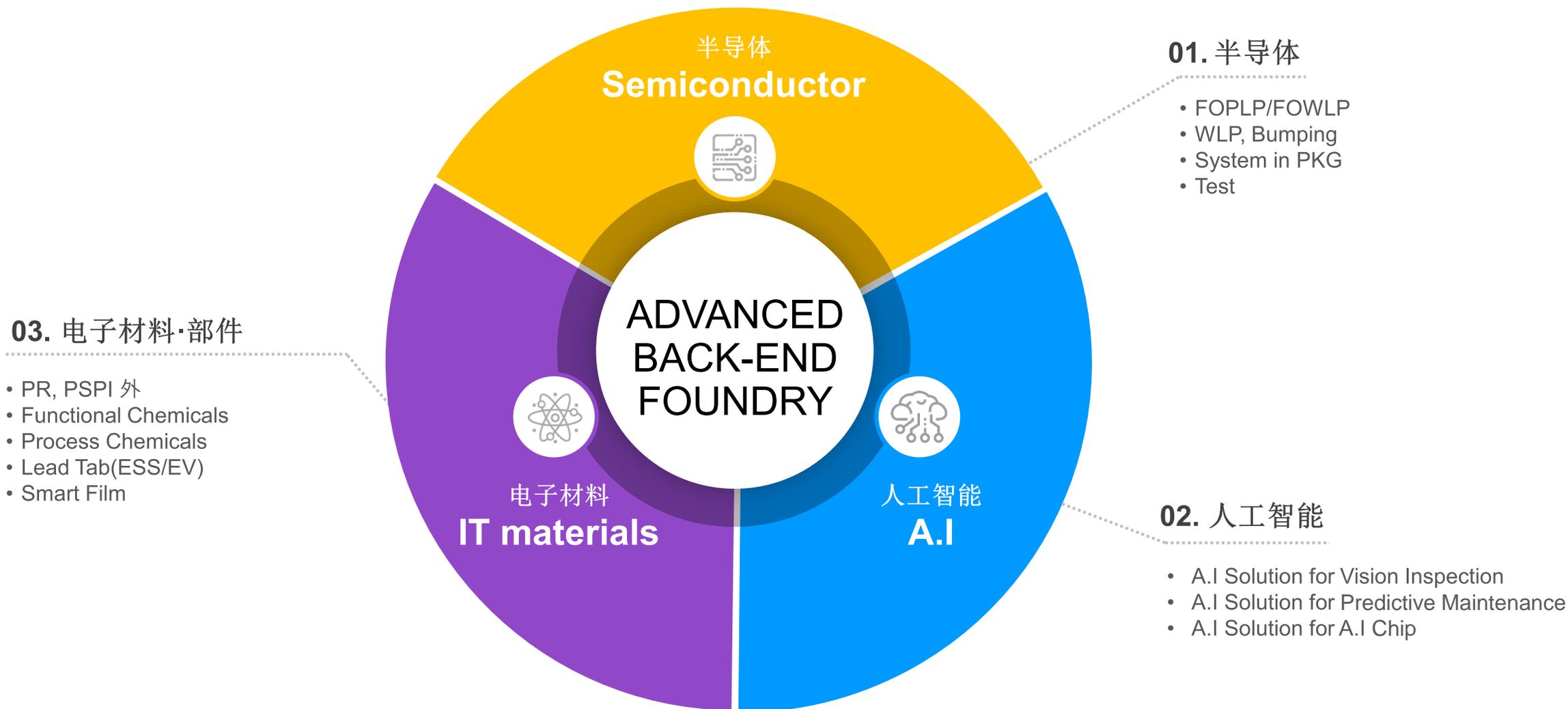
Trademark



公 司 名	株式会社 纳沛斯
公司成立日	1990年 12月
公司上市日	1999年 12月(KOSDAQ 033640)
集团董事长	李柄九 (Byung-Koo Lee) 先生
海外法人	中国、美国、菲律宾、印尼



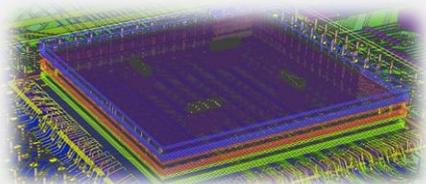
nepes是先进后端晶圆代工(Advanced Back-end Foundry)专业化企业，将在拉动系统半导体产业的未来发展



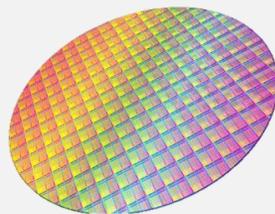


neipes通过FOPLP、nSiP 等尖端半导体技术正在更换国际供应链的地形

半导体供应链



IC 设计



硅制造



封装 (WLP¹ / PLP²)



测试制程

IDM

OSATS

Fabless
设计公司

Wafer Foundry
晶圆代工厂

Bumping, RDL³ Processing

Back-end Foundry (后端晶圆代工)



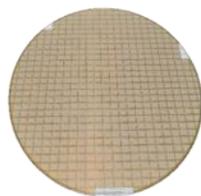
- ¹ Wafer Level Package / 晶圆级封装
- ² Panel Level Package / 板级封装
- ³ Re-Distribution Layer / 阶层再分配

※ 2020年 指定为韩国国家核心技术



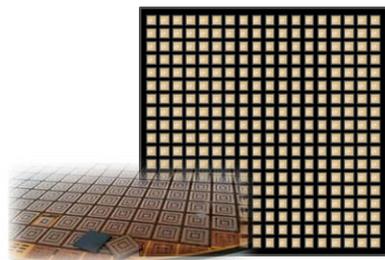
nepes的End-fab技术是将高性能半导体制成轻薄短小化的核心技术

Fan in WLP



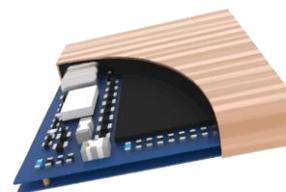
200mm / 300mm

Fan out WLP/PLP



300mm rd. / 600mm sq.

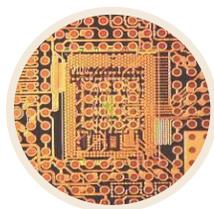
nSiP



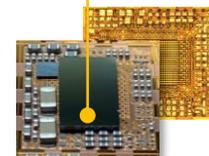
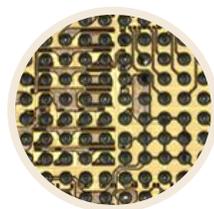
Small & Thin SiP(End fab+PLP)



0.4 mm



0.9 mm

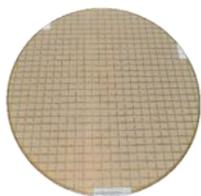


应用产品

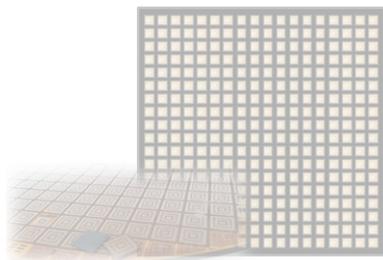




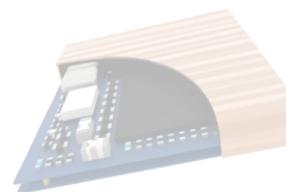
nepes的End-fab技术是将高性能半导体制成轻薄短小化的核心技术



200mm / 300mm

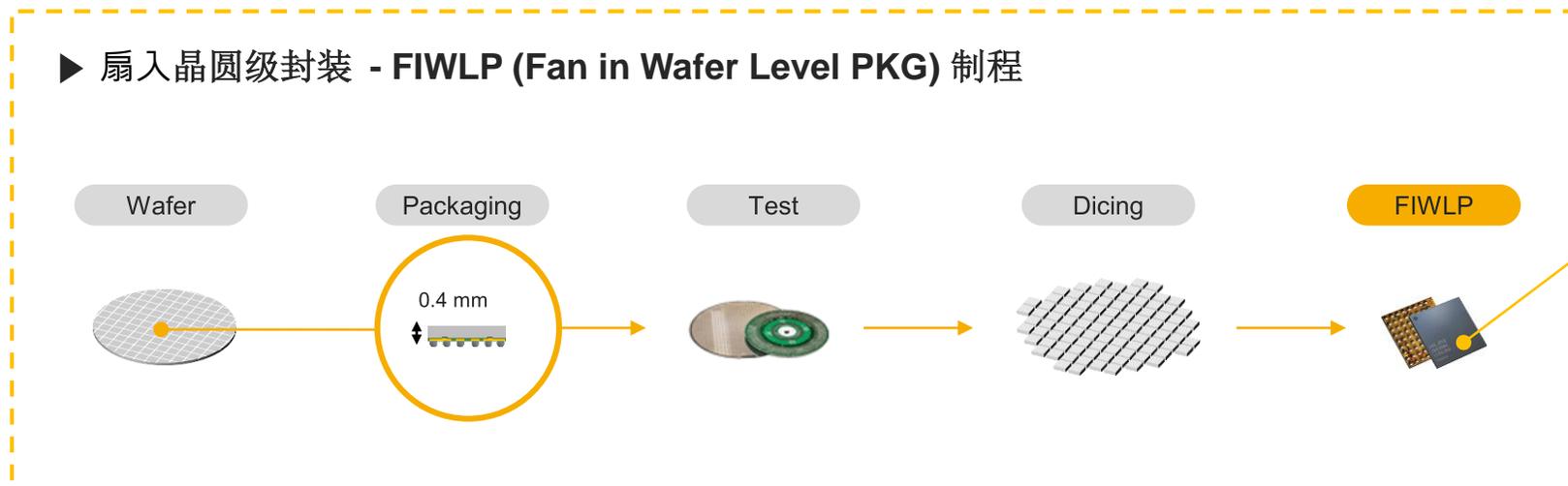


300mm rd. / 600mm sq.



Small & Thin SiP(End fab+PLP)

▶ 扇入晶圆级封装 - FIWLP (Fan in Wafer Level PKG) 制程



应用产品

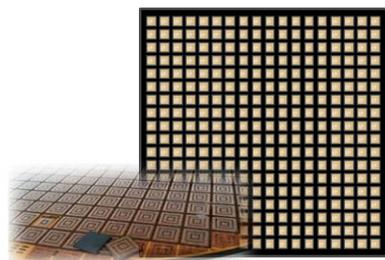




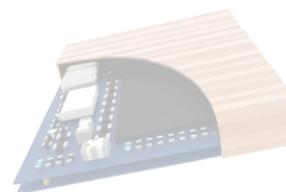
nepes的End-fab技术是将高性能半导体制成轻薄短小化的核心技术



200mm / 300mm

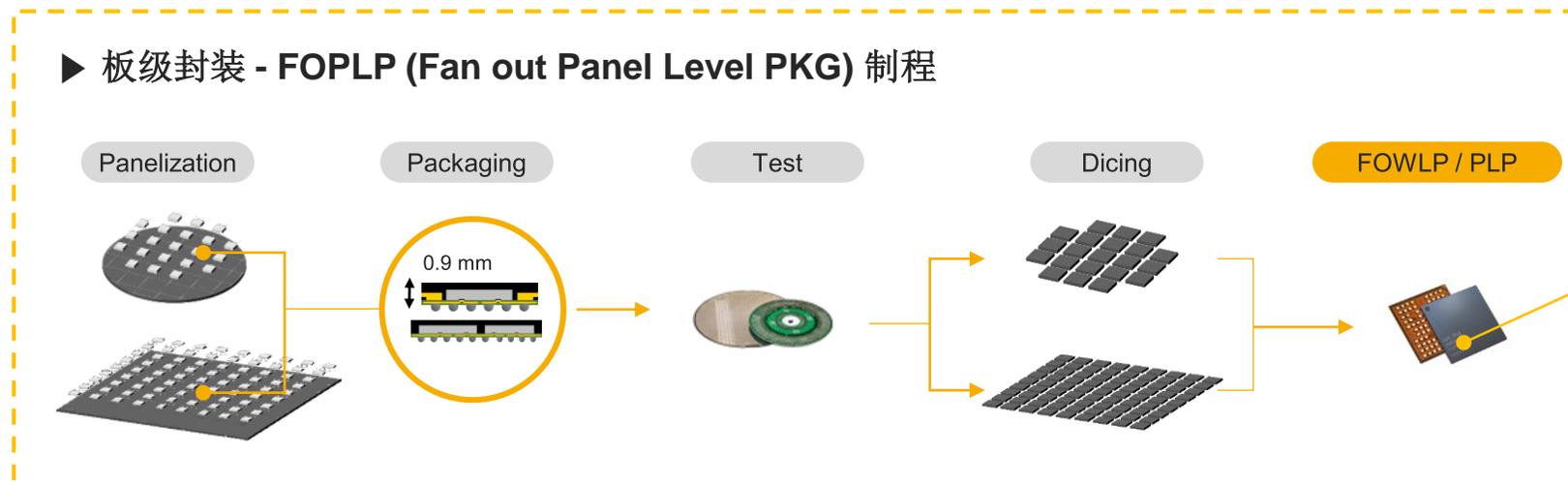


300mm rd. / 600mm sq.



Small & Thin SiP(End fab+PLP)

▶ 板级封装 - FOPLP (Fan out Panel Level PKG) 制程



应用产品

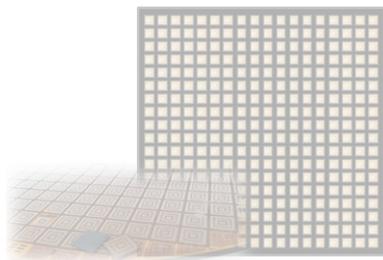




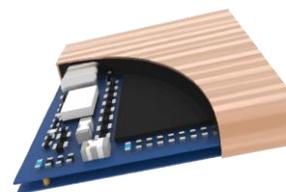
nepes的End-fab技术是将高性能半导体制成轻薄短小化的核心技术



200mm / 300mm



300mm rd. / 600mm sq.



Small & Thin SiP(End fab+PLP)

▶ 什么叫 nSiP(System in PKG)?



应用产品





预测维护

AI芯片

过程自动化

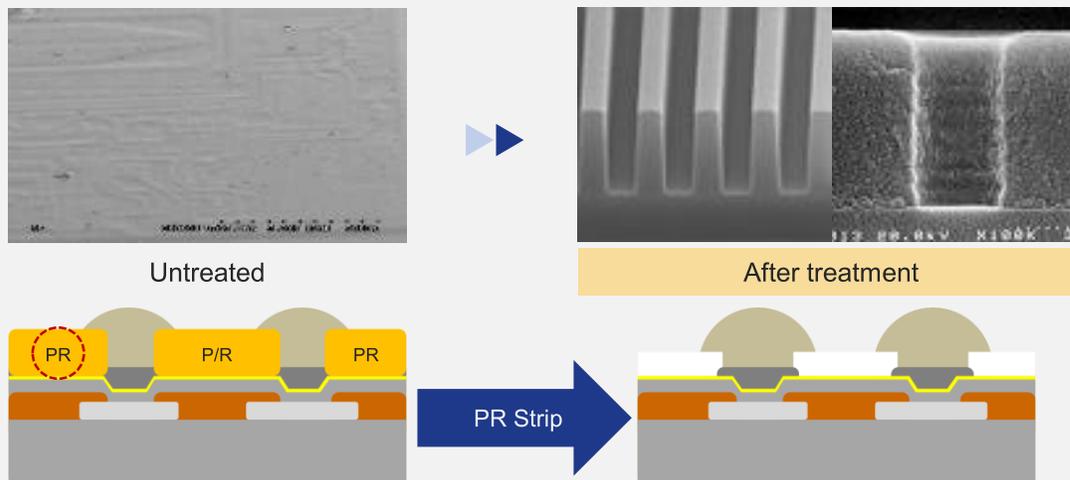
视觉检查

产品及服务

- 视觉检查AI解决方案
- 预测维护AI解决方案
- AI芯片解决方案

工艺化学制品

- PR
- Developer
- Stripper
- Etchant
- HSN

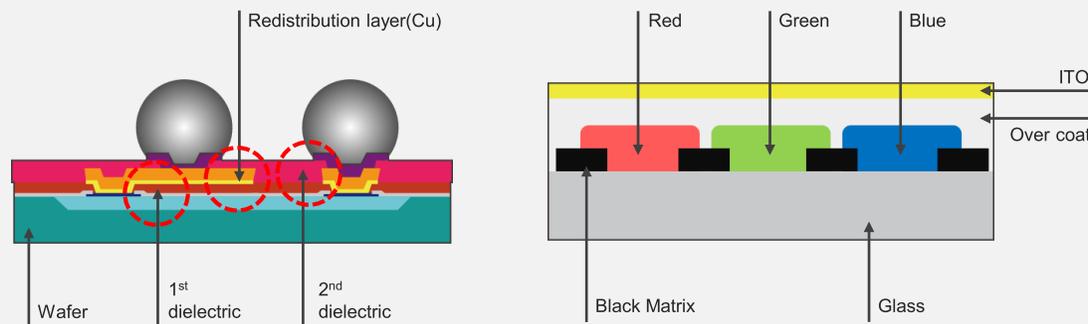


应用产品

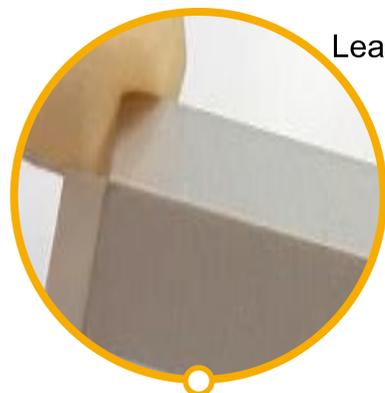


功能性化学制品

- ILD/PSPI
- Cu Plating
- Color paste



半导体
显示屏 (LCD, OLED)
太阳能电池



Lead Tab



锂电池阳极



锂离子电池

服务 & 产品

- 锂离子电池
- Lead Tab
- 锂电池阳极电极

应用范围





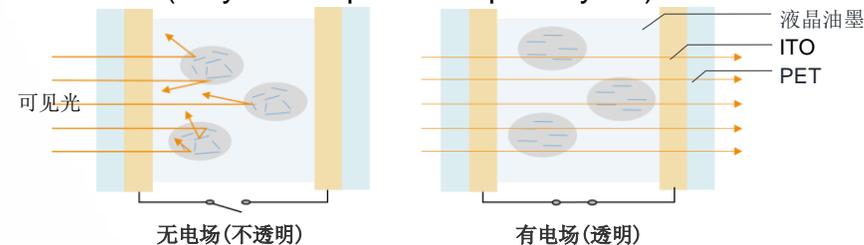
变色膜 (Super LC)



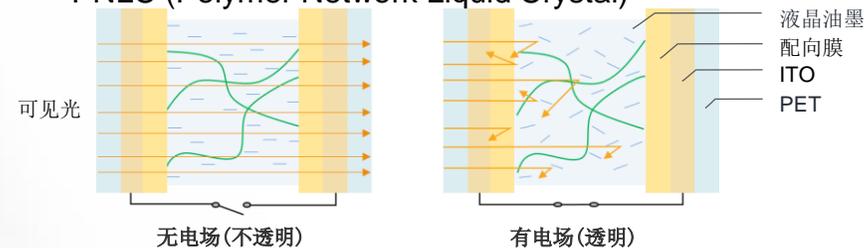
采用于广告的事例

Super LC的结构及原理

• PDLC (Polymer Dispersed Liquid Crystal)

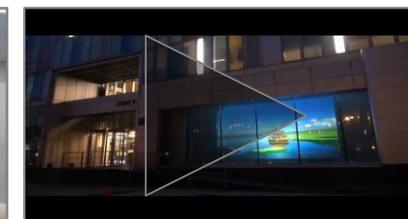


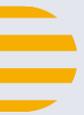
• PNLC (Polymer Network Liquid Crystal)



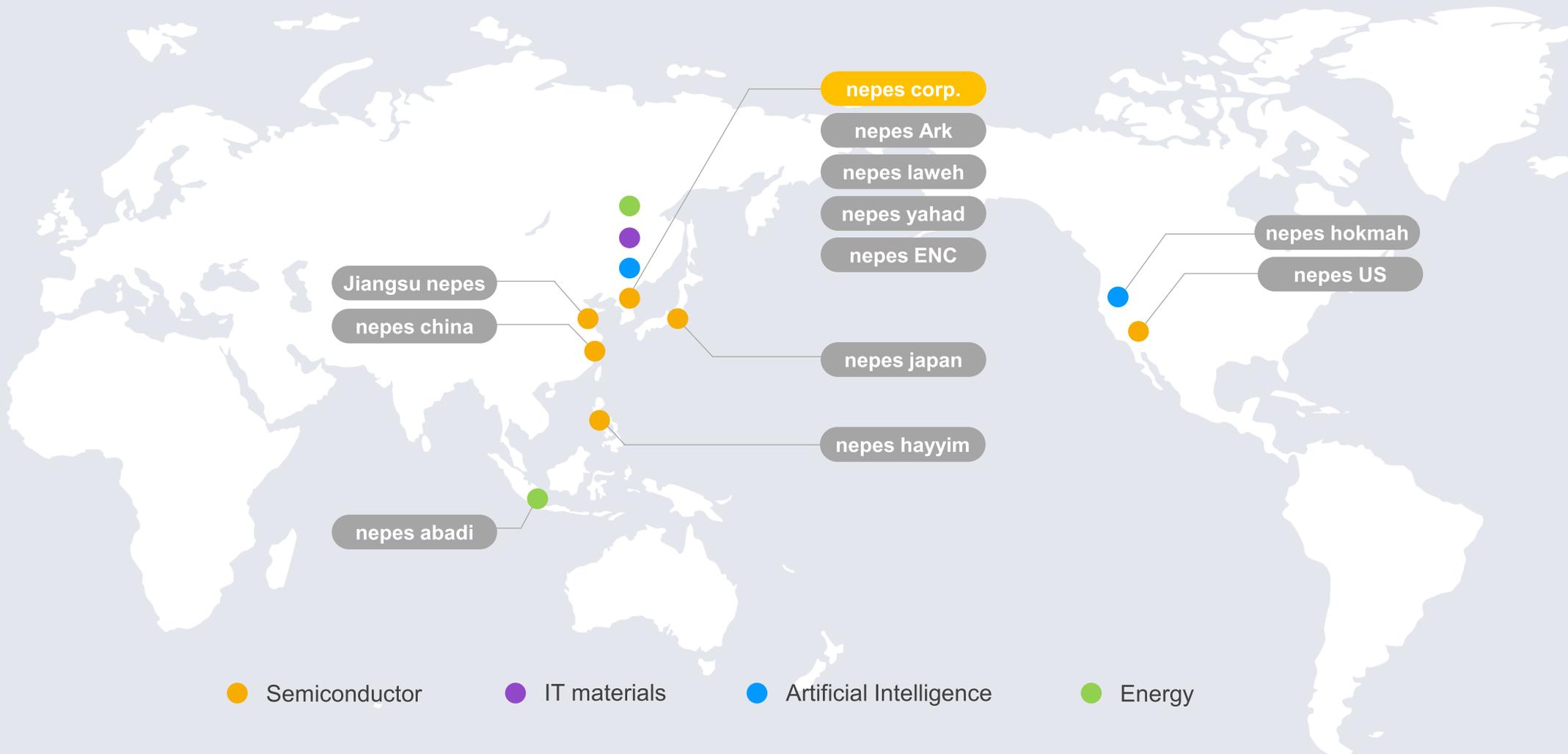
服务 & 产品

- Building & Interior
- Signage & Electronics





将我们的技术和产品服务于世界各地。





企业文化

纳沛斯以企业文化为基础创造业绩来持续成长



Global
NO.1
企业文化



3.3.7 LIFE



nepes
nepes corporation

感谢！

To Him who alone does great wonders, His love endures forever. Psalm 136:4

* A dandelion means 'Gratitude' in the language of flowers

nepes corporation

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白宫报告引述里的认定

通过拜登总统的行政命令，白宫在 2021年6月发布半导体供应链调查报告书；

- 报告书里强调尖端封装对于国家保安的重要性，并且建议了加强国内半导体制造生态体系，同时照明了国际前十尖端封装企业之一的nepes。

BUILDING RESILIENT SUPPLY CHAINS, REVITALIZING AMERICAN MANUFACTURING, AND FOSTERING BROAD-BASED GROWTH

100-Day Reviews under Executive Order 14017

June 2021

A Report by
The White House

Including Reviews by
Department of Commerce
Department of Energy
Department of Defense
Department of Health and Human Services

Advanced Packaging: Current Resilience [43p.]

The top 10 advanced packaging companies include: two IDMs (Intel (U.S.) and Samsung (South Korea)); a foundry (TSMC (Taiwan)); the top five global OSATs (ASE Group (Taiwan), SPII (Taiwan), Amkor (U.S.), Powertech Technology (Taiwan), and JCET (China)) and two smaller OSATs: **Nepes (South Korea)** and Chipbond (Taiwan)). These 10 companies process approximately three-fourths of all advanced packaged chips.⁹²

[Source: The White House, 'Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-based Growth', Jun '21]

通过加入ASIC获得认定

通过IBM的招请2022年5月加入了美国半导体创新联盟-ASIC (American Semiconductor Innovation Coalition)

- IBM及会员企业高度期待nepes的WLP和FOPLP等尖端封装的专业知识，会给联盟提供巨大的价值。



www.asicoalition.org

Coalition Members Include



nepes独特的经营哲学认定为能使组织持续成长的创新竞争力，已多次在各种国际学术会议上以案例介绍。

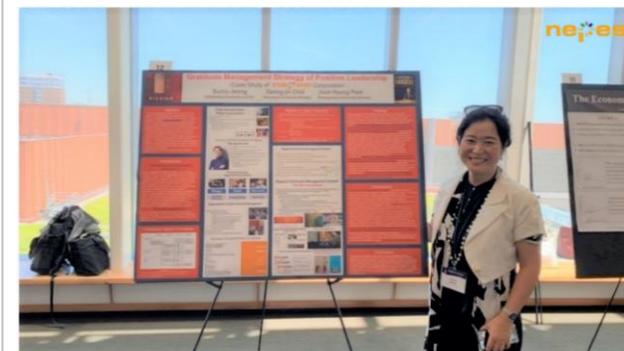
2022 GLOBAL CONFERENCE ON IHRM

SAVE THE DATE! MAY 19-21, 2022

FIFTH GLOBAL CONFERENCE ON INTERNATIONAL HUMAN RESOURCE MANAGEMENT



CIHRS
Center for International
Human Resource Studies



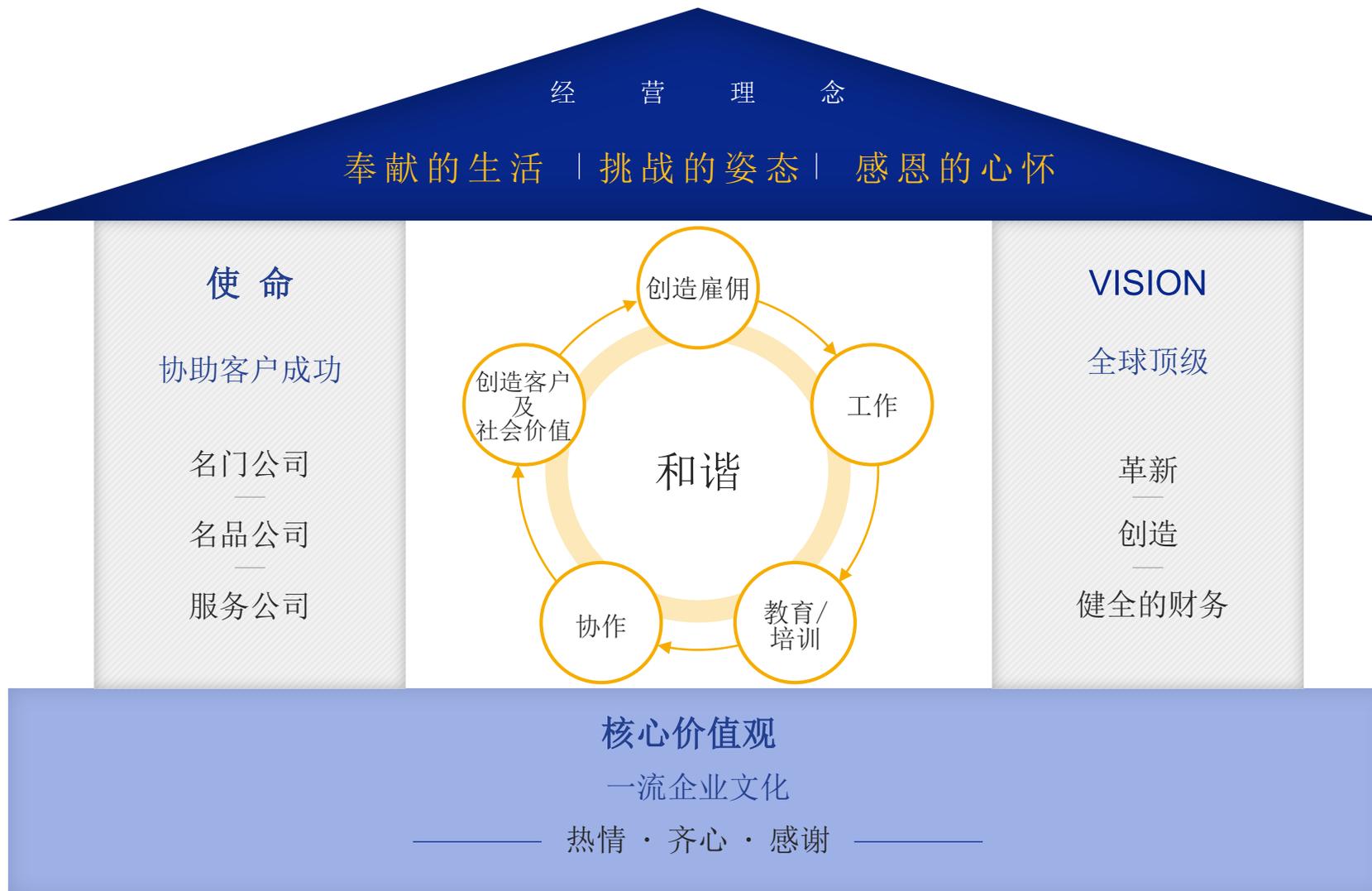
Professor Sunny Jeong (Wittenberg University) presented the case of nepes corporation.

Presented by:
 MICHIGAN ROSS
CENTER FOR POSITIVE ORGANIZATIONS

1) 2022.5.19-21 @ St.John's 大学
国际人事经营国际会议

2) 2022.6.23-24 @ Michigan 大学
美国肯定组织学研究会议

nipes是以一贯性的实践来实现 **经营理念** 的企业





nepes是 优秀人才集合在一起的共同体。



nepes LOGO



‘以感谢联接的n家族共同体’

固有的问候语

superstar

‘superstar’ 是尊重对方
纳沛斯固有的尊称招呼语

市场趋势

小型规格
(基于晶圆级平台)

高集成度晶圆级系统封装

技术路标规划

Conventional PKG

QFP
QFN
FCBGA

Bumping

Gold Solder

Etc(Cu Pillar, CNA bumping)

WLP

8"WLP 12"WLP

Chip 0.4mm

Fan-out WLP/PLP

nPLP™
600x600mm

Chip 0.9mm

System in PKG

Multi-Chip Packaging

System in packaging

One Package Module

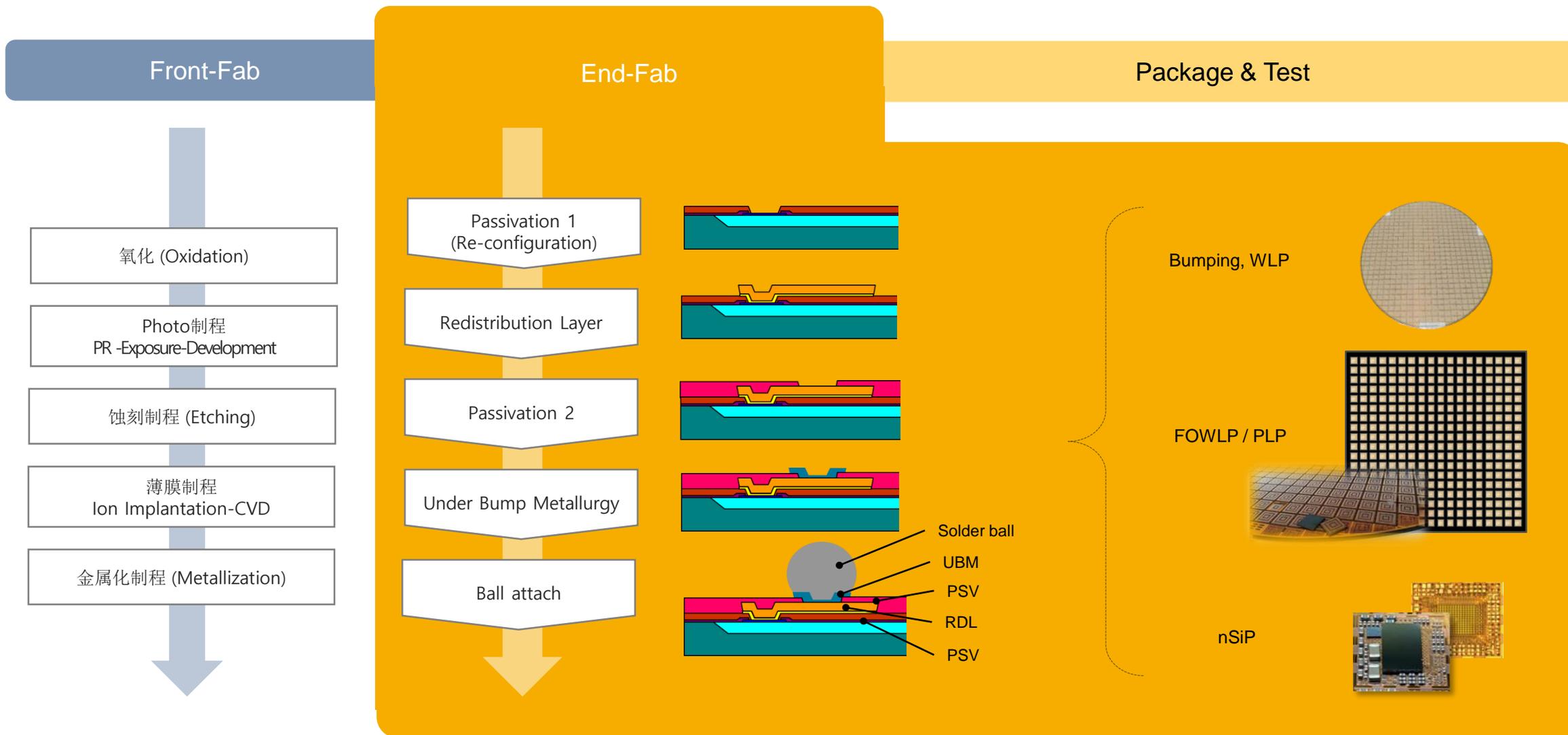
- AP, PMIC
- Flash Memory
- Neuromorphic

定位

Other OSAT
Conventional wire bonding packaging & Typical WLP technology

nepes 后端晶圆代工
(Bump, WLP, FOWLP, FOPLP, nSiP, TEST)

是指Front-Fab 工程后，钝化、RDL制程及Bump制程



- nepes的FOPLP为行业内最大Panel尺寸是小板级的标准
- 通过FOWLP的经验和内部化，以End-Fab技术为基础确保了独有的FOPLP技术

