

PSI Company Roadshow

Q4. 2022

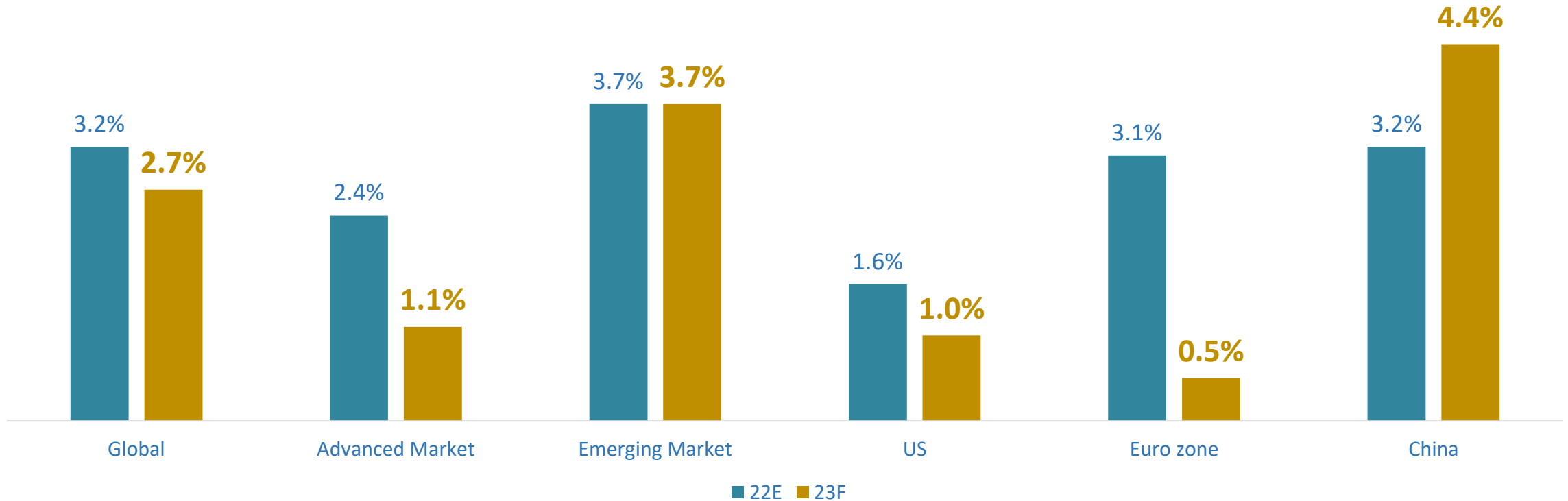
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- The numbers of the presentation are prepared under IFRS.

Industry Overview

GDP Growth FCST

- The world economy is facing the risk of another downturn due to the Russian Ukrainian war, China's lockdown measures, and tight fiscal policies to cope with rising prices

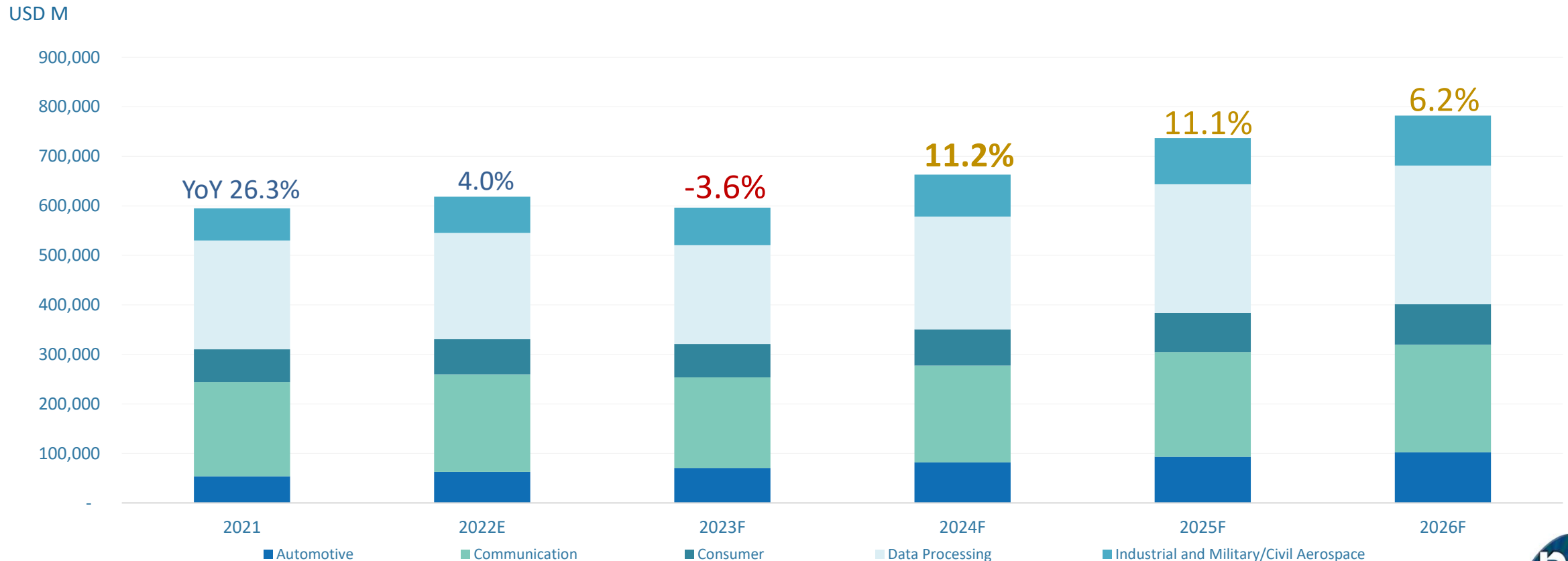


Source: IMF Oct. 2022



Semiconductor Sales FCST

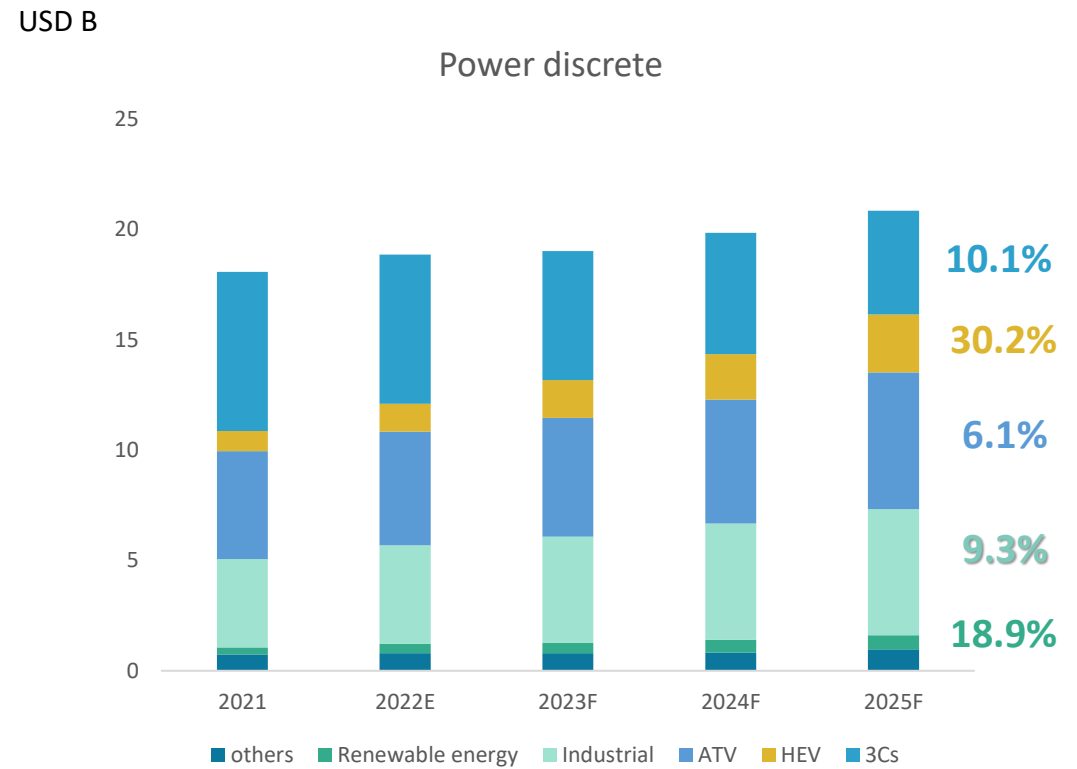
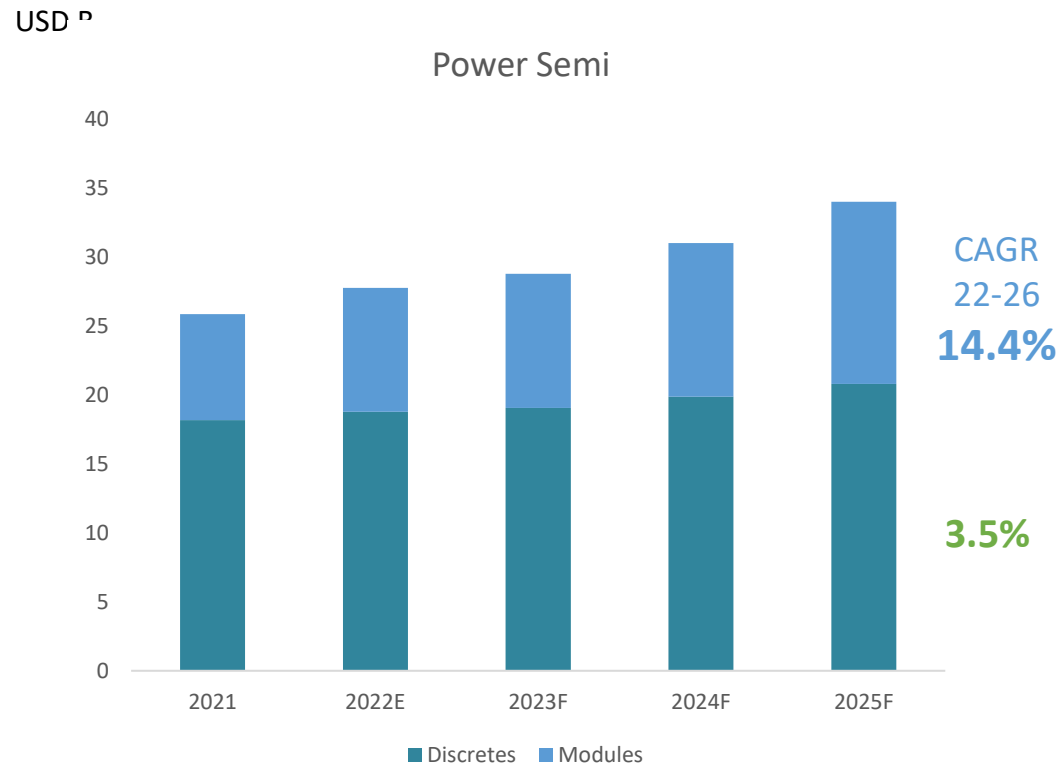
- Semiconductor end use applications in the automotive market will witness the highest CAGR of 13.4% between 2021 and 2026. Especial in HPC & power discrete.



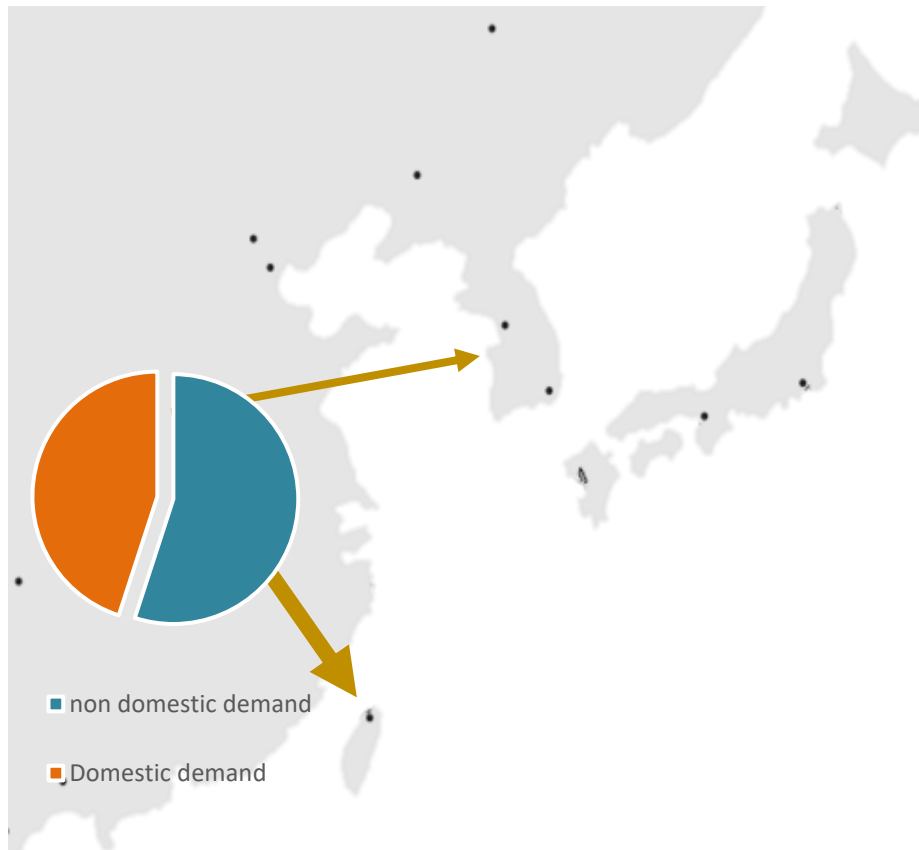
Source: Gartner Q3. 2022

Power Semi Sales FCST

- New energy is the major demand driver for power discrete



Benefiting From BIS Restriction

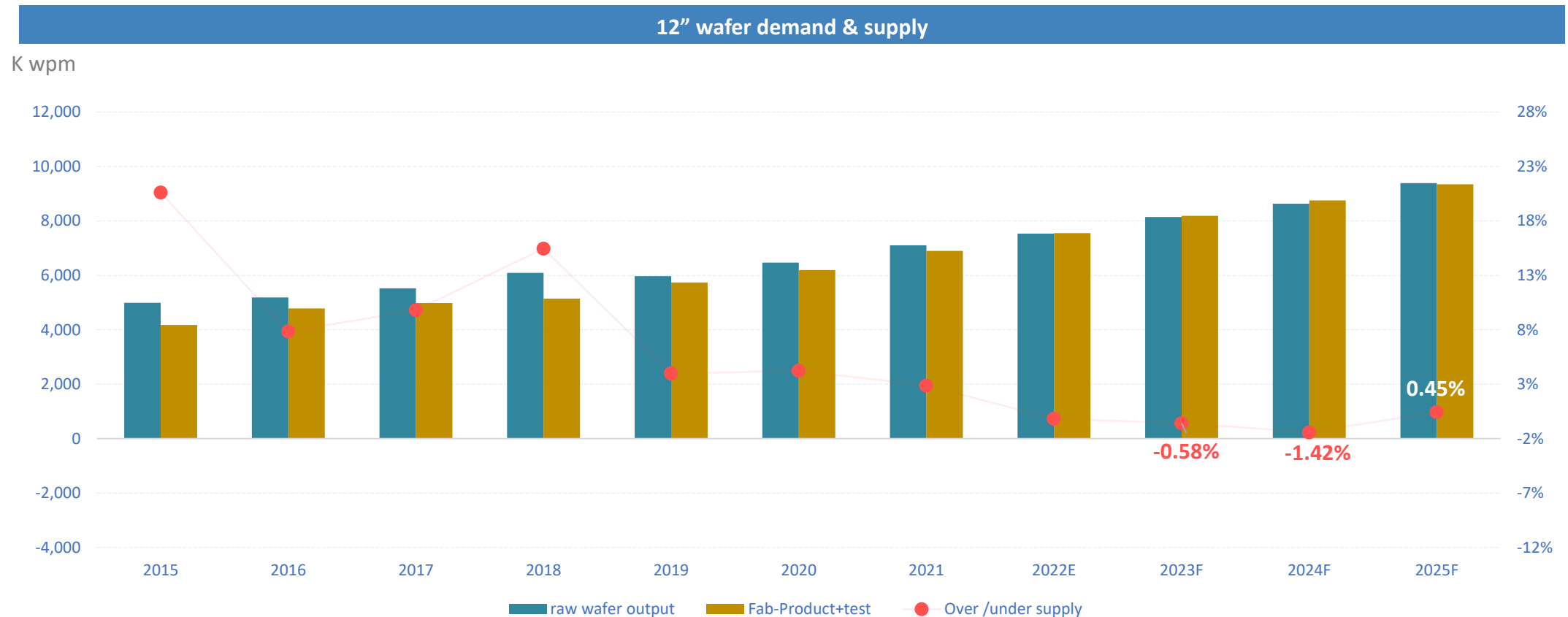


- All about security : One world, two systems.
- Non-domestic demand is transferring to Taiwan & Korea.
- Logic IC, power IC, and power discrete.

Beyond Reclaim

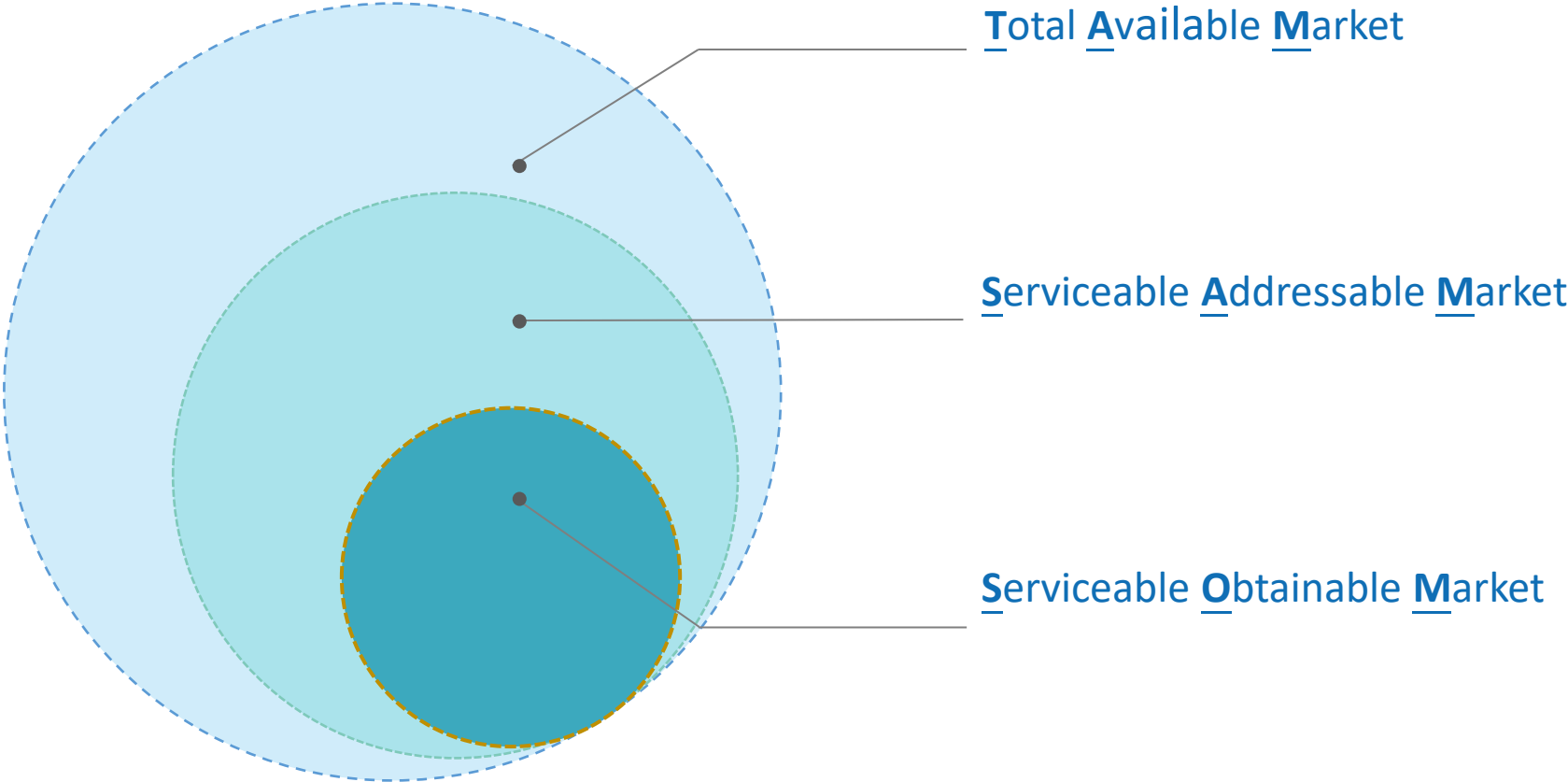
Silicon Raw Wafer FCST

- Wafer makers will allocate resource to concentrate on prime wafer, even though, it still just meet foundries and IDMs' need.
- D/S low single digital means that test wafer still shortage. **23F: > 47.3Kwpm, 24F: > 122.5Kwpm**

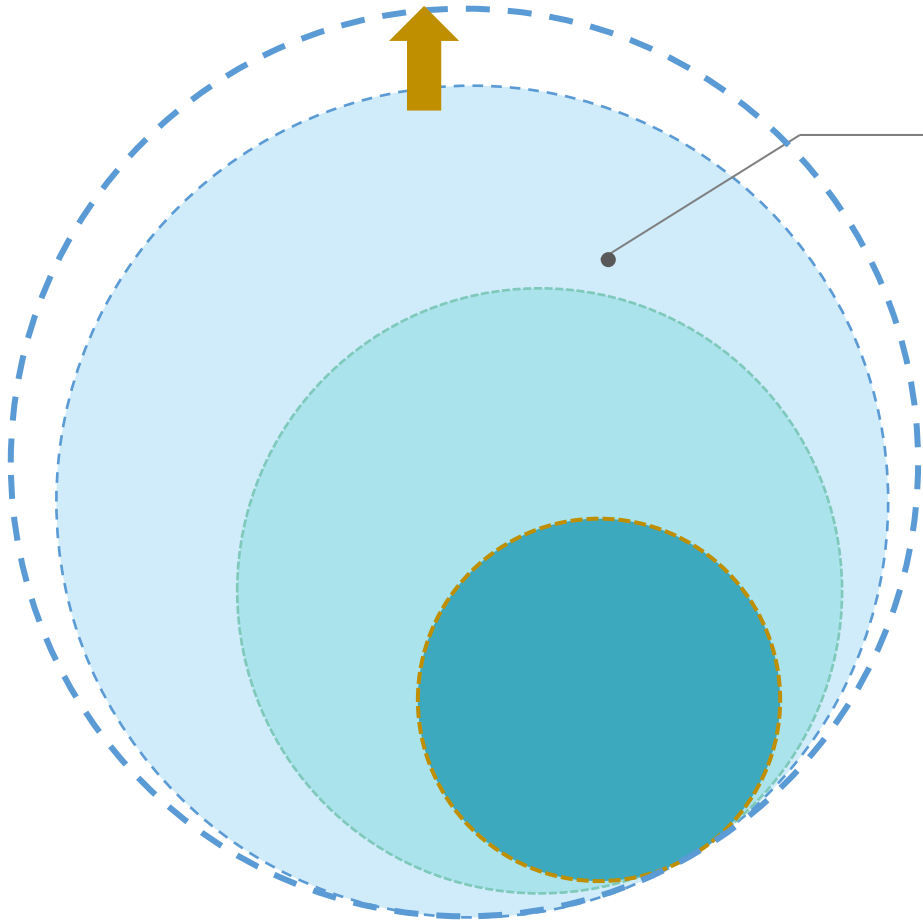


Source: Gartner, Semi.org, Nov. 2022

TEST Wafer: TAM SAM SOM



TEST Wafer Growing TAM

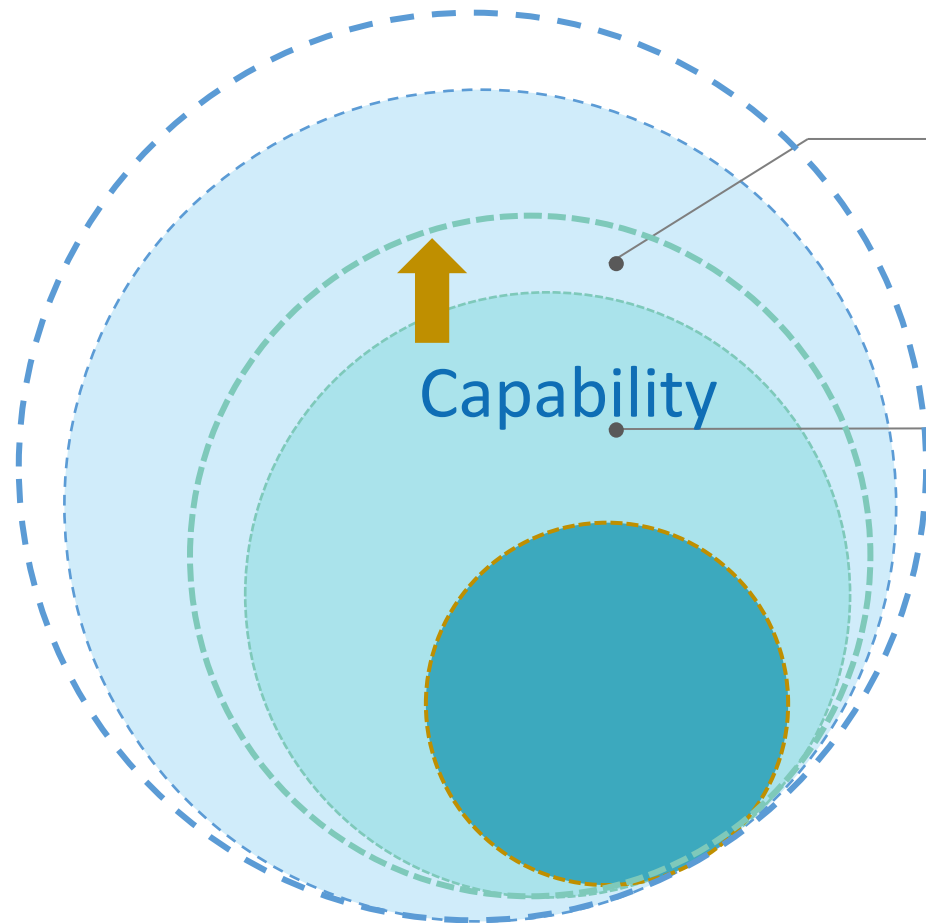


Total Available Market

- HPC: Automotive, AI, Server, Datacenter



TEST Wafer Growing SAM



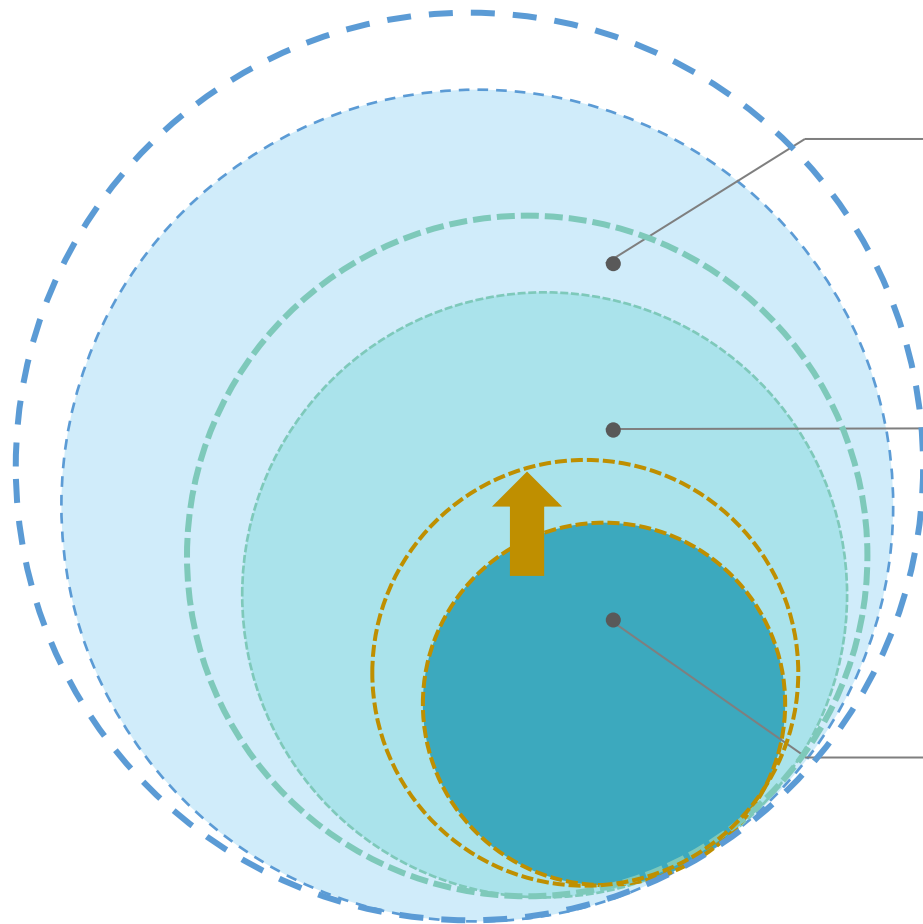
Total Available Market

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Serviceable Addressable Market

- **Tech. EVO:** Power via; 3nm, 2nm, and beyond
- **Heterogeneous integration:** CIS BSI, 2.5D Si interposer

TEST Wafer Growing SOM



Total Available Market

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Serviceable Addressable Market

- **Tech. EVO:** Power via; 3nm, 2nm, and beyond
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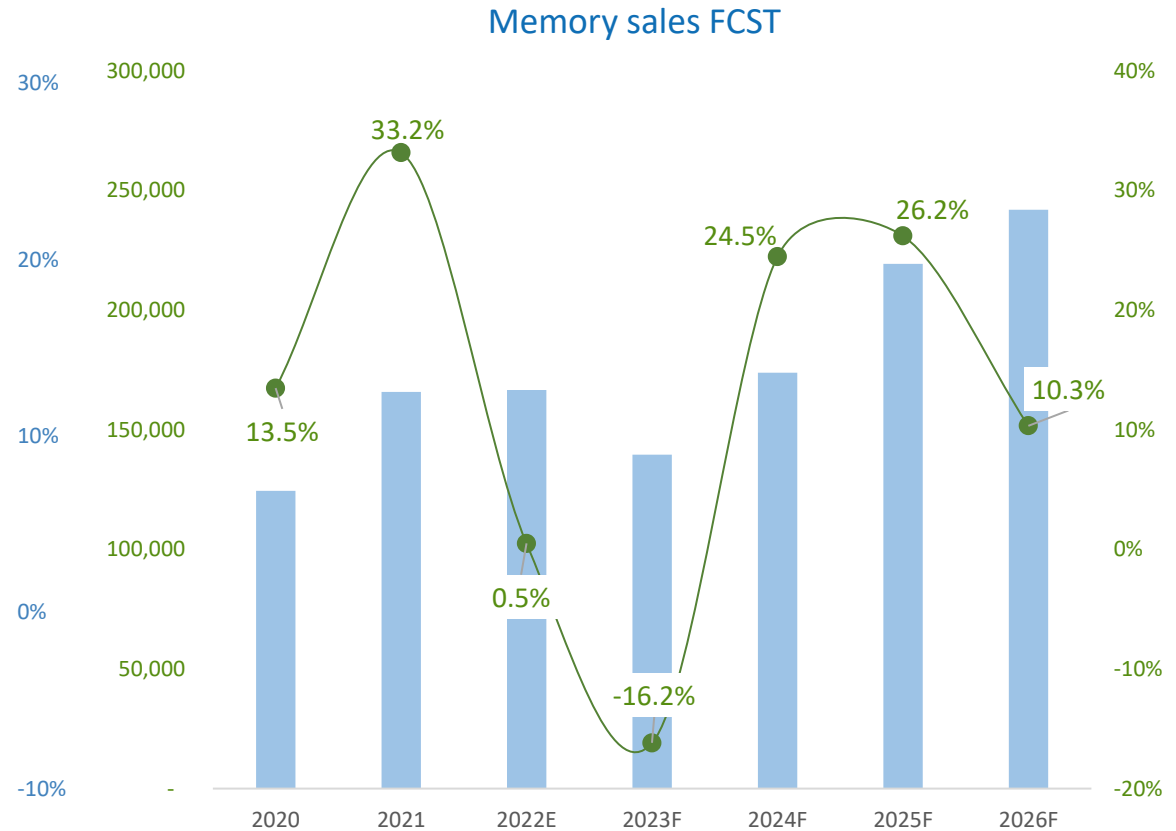
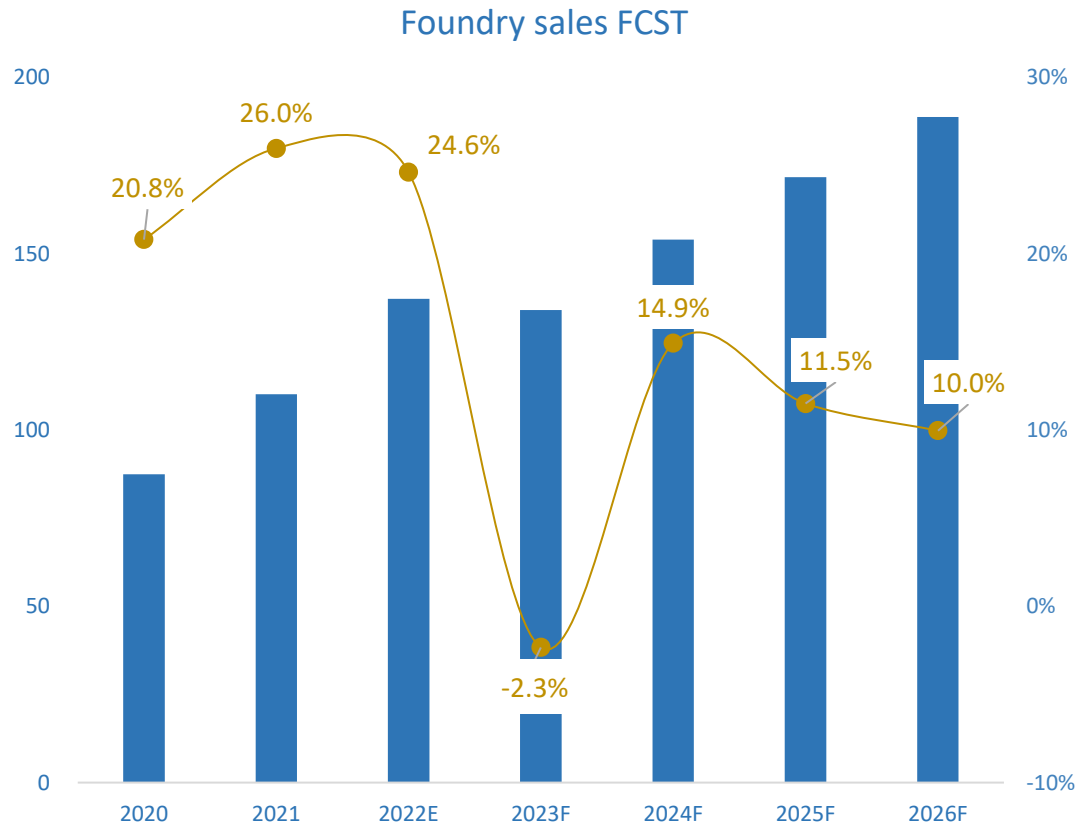
Serviceable Obtainable Market

- Gaining market share from tier-2 supplier

TAM Is Growing

- Foundry sales 21-26 CAGR 11.4%; Memory 7.9%
- The tier-1 foundry will outperformance with CAGR 15-20%

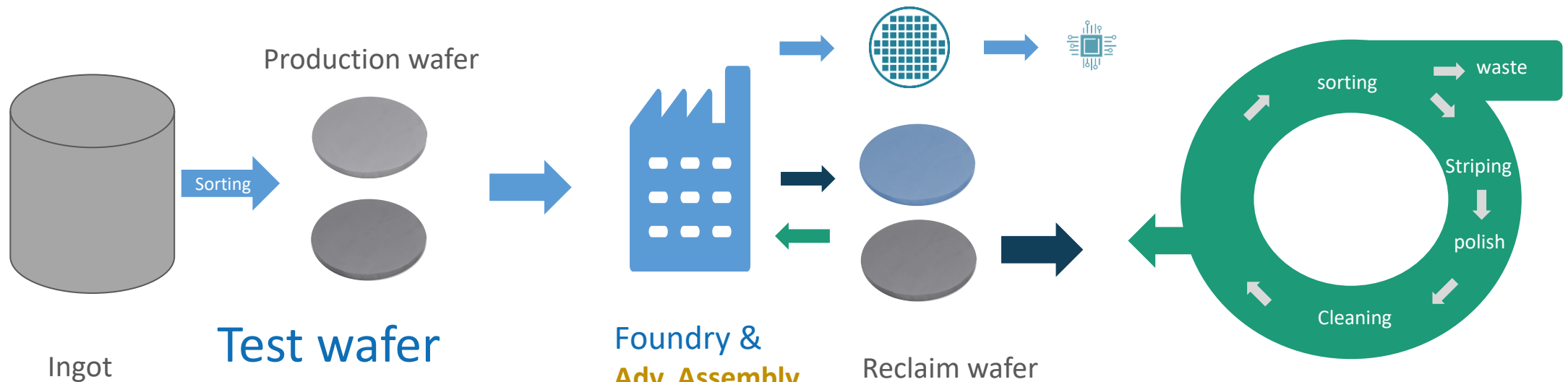
USD Bn



Source: Gartner, IC insights, Digitimes research, Oct. 2022

PSI's SAM Is Growing

Silicon Wafer Life Cycle



Test wafer

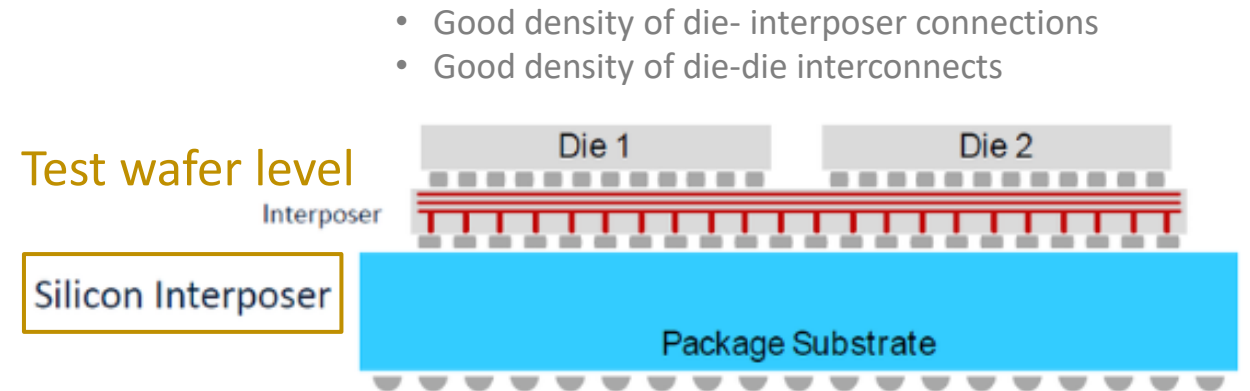
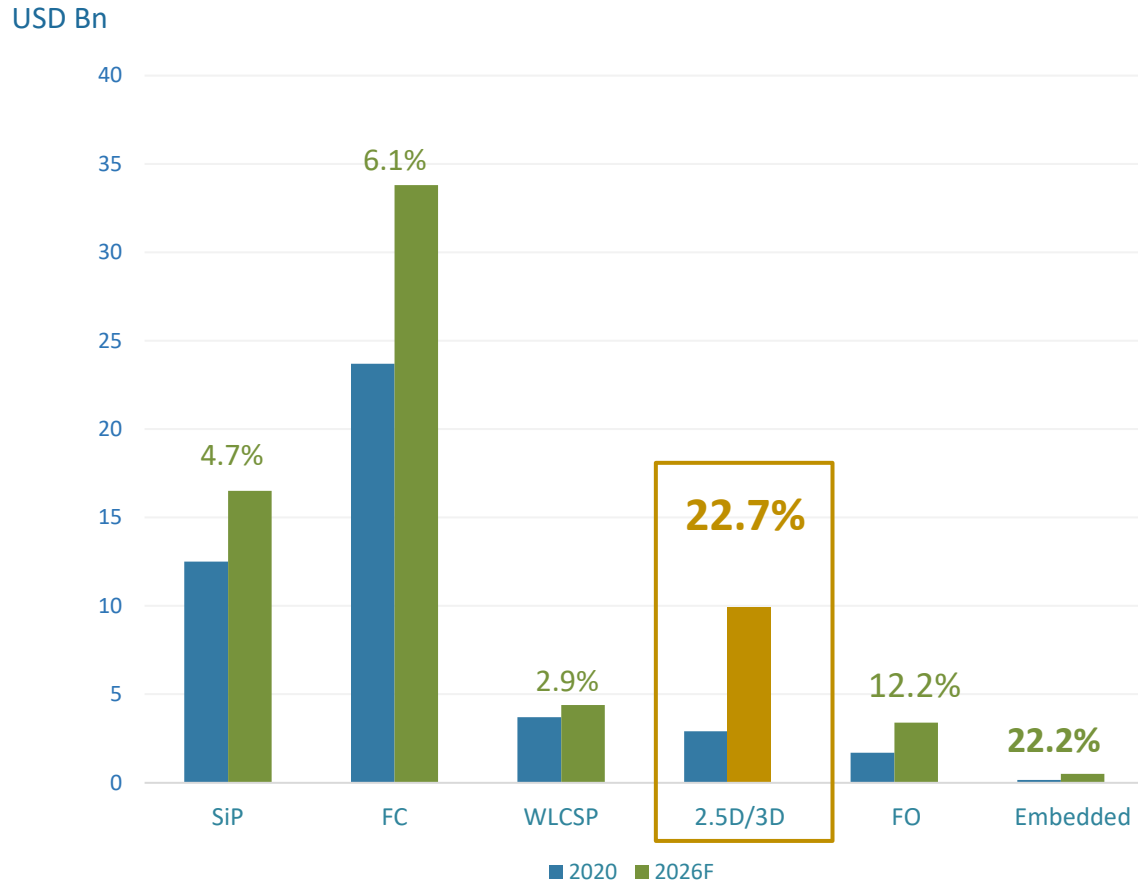
- Si interposer
- Carrier wafer
- Monitor wafer

Foundry & Adv. Assembly

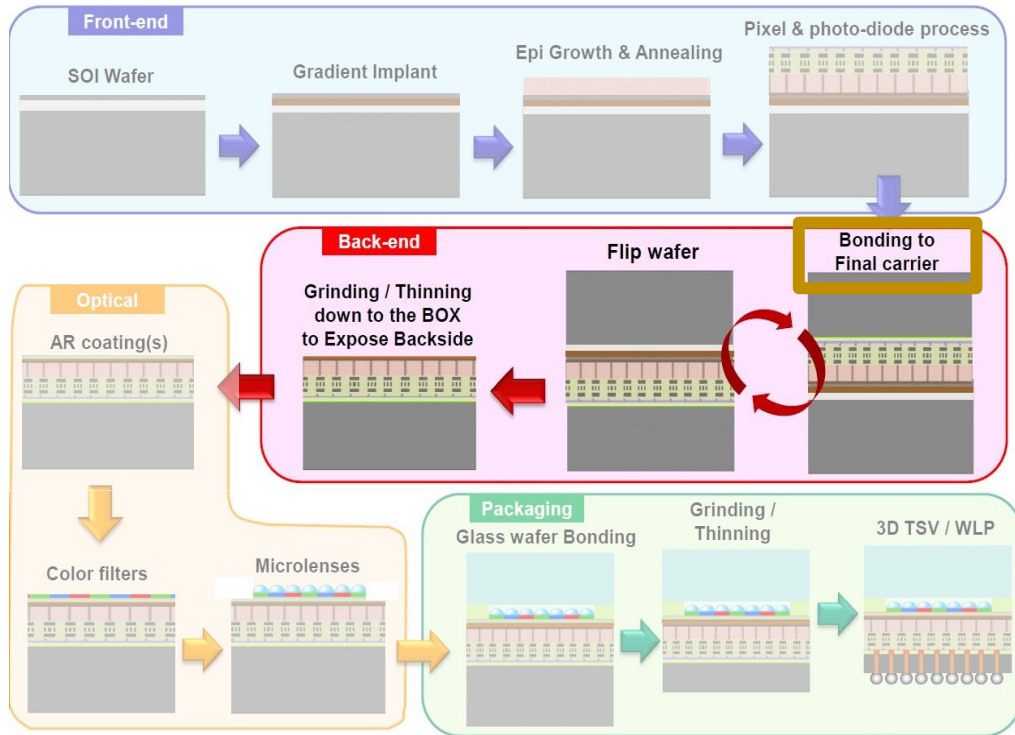
- 2.5D packaging
- CIS BSI

Reclaim wafer

2.5D/3D Packaging 20-26 CAGR 22.7%

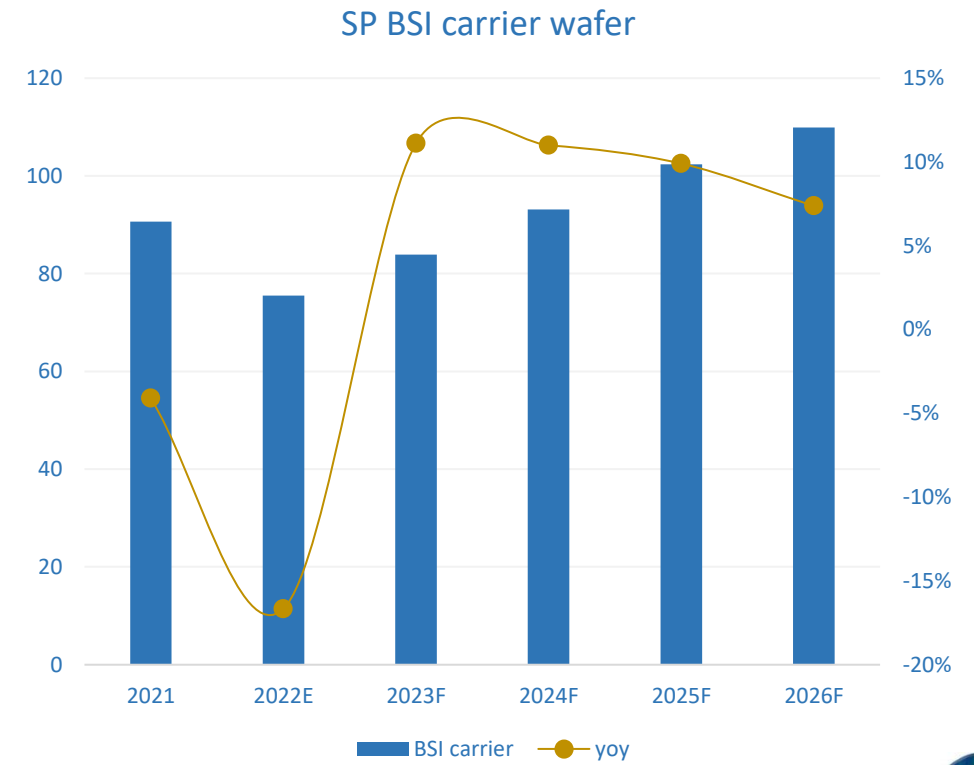


CIS BSI Consume Test Wafer 1:1



Test wafer level,
global flatness is
major priority

Kwpm



Source: Sumco ,Yole, Statista

WW No.1 Automatic Wafering Fab in 2022



Picture: PSI

- Output reach 60k wpm in Nov. 22
- Industry 4.0 automation and green energy compliant factories
- Brand new construction and operation model for future site expansion
- Fulfill QCDS criteria to enlarge test wafer business territory

Power Efficiency

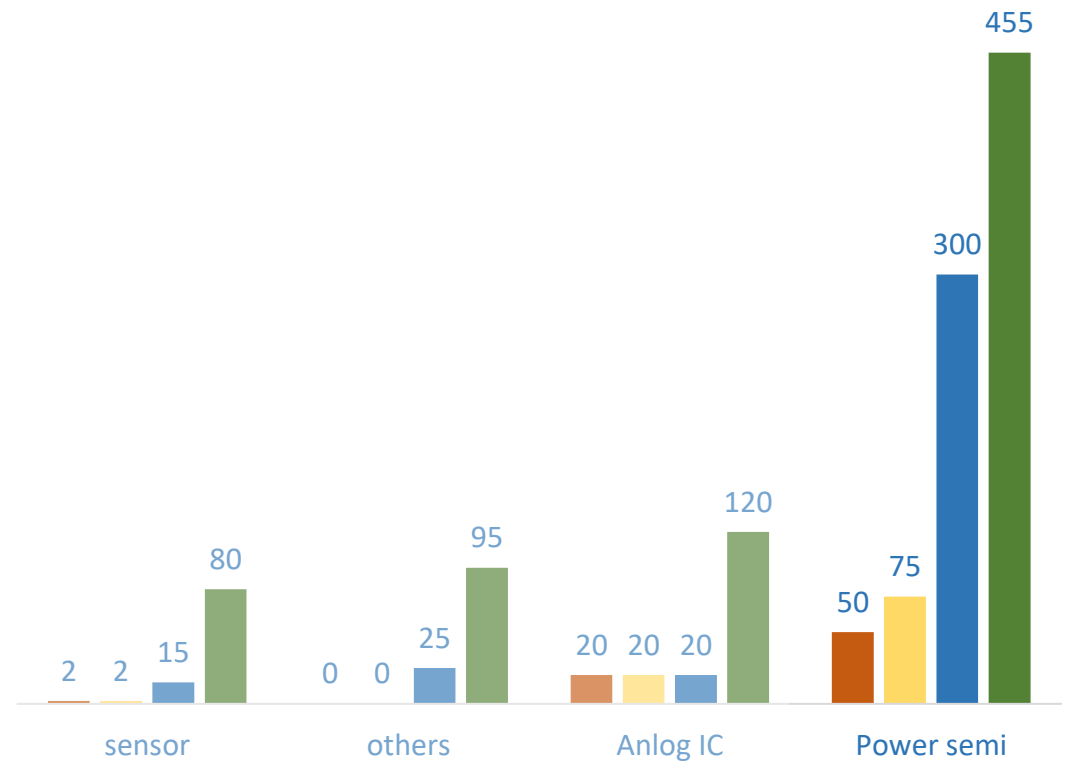
EV Power The Semiconductor

160-284 MOSFETs & 48 IGBTs Per Car



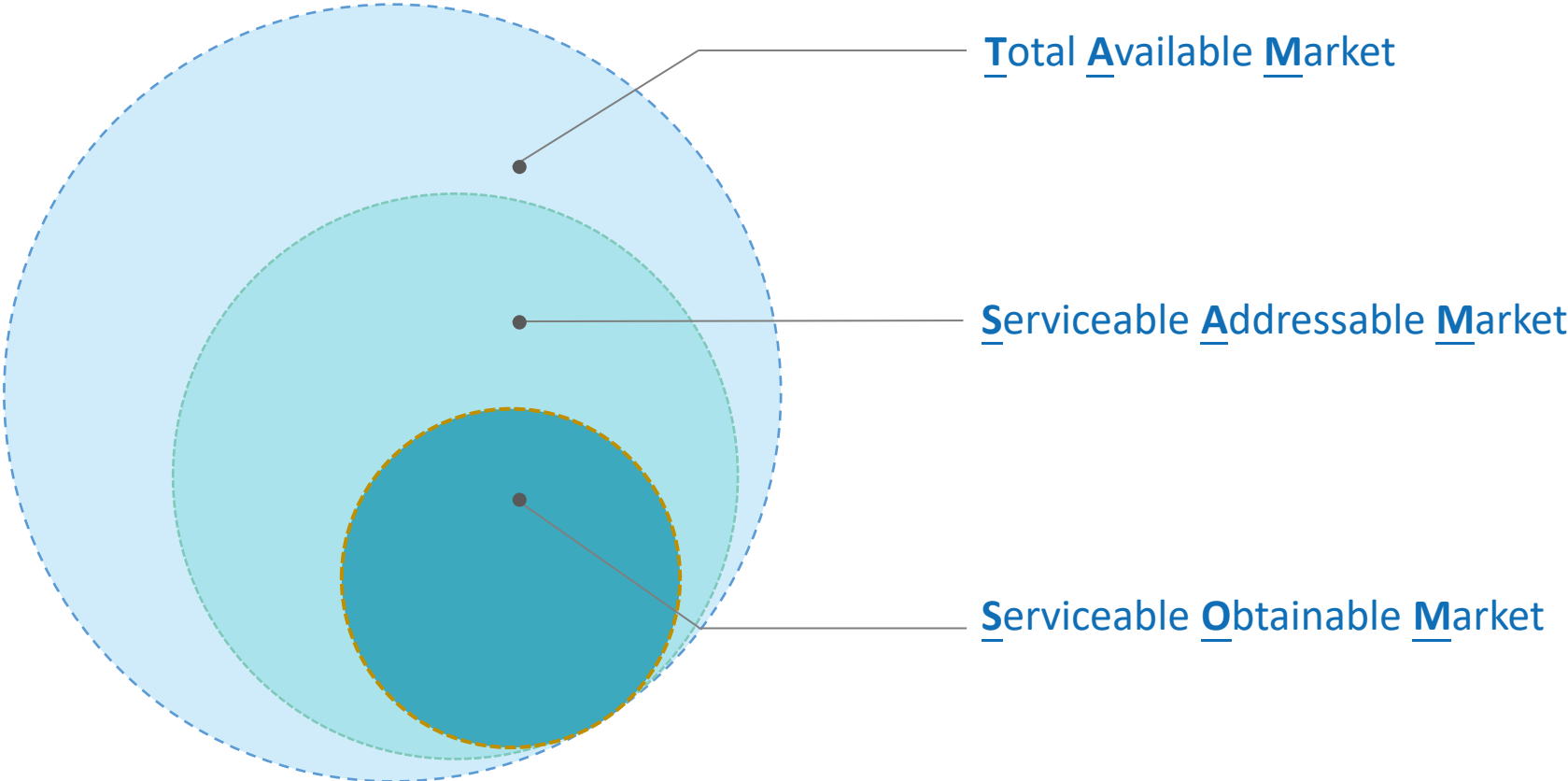
USD

ICE hybrid 48V hybrid EV

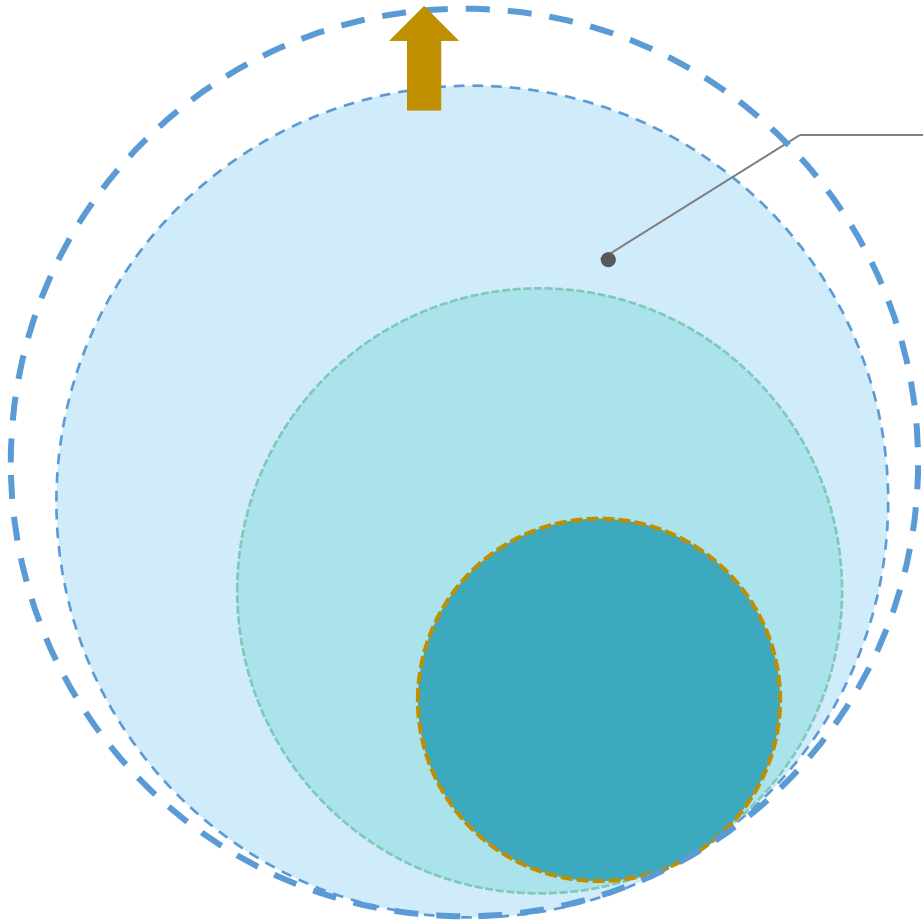


Source: Zodiac consulting, Infineon

Thinning: TAM SAM SOM

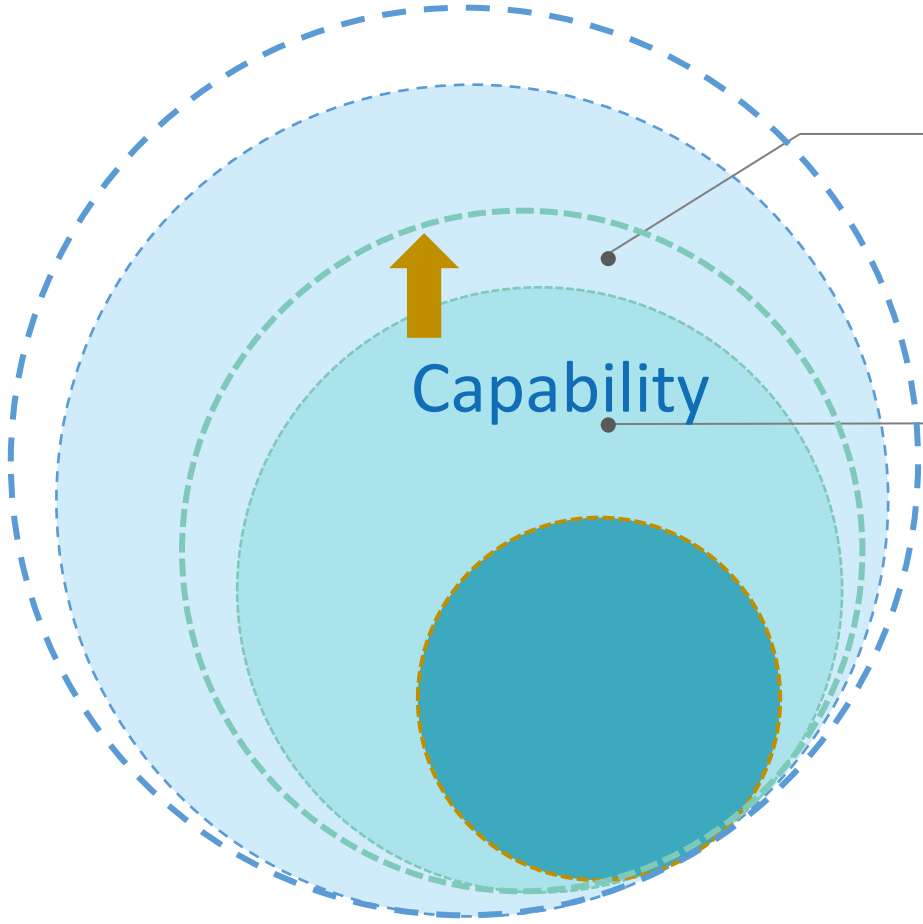


Thinning Growing TAM



Total Available Market
• Electric & Electronic Vehicle

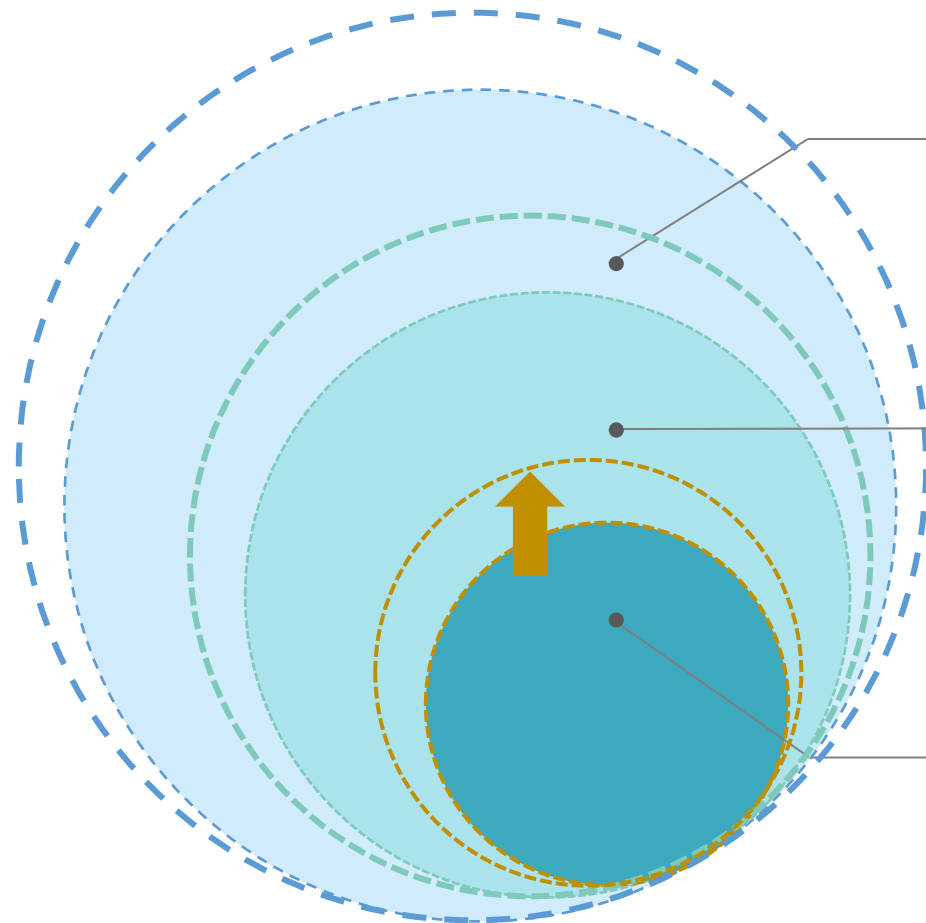
Thinning Growing SAM



Total Available Market
• Electric & Electronic Vehicle

Serviceable Addressable Market
• Automotive grad thinning process
• MEOL total solution: FSM, BGBM, CP, Carrier bound

Thinning Growing SOM



Total Available Market

- Electric & Electronic Vehicle

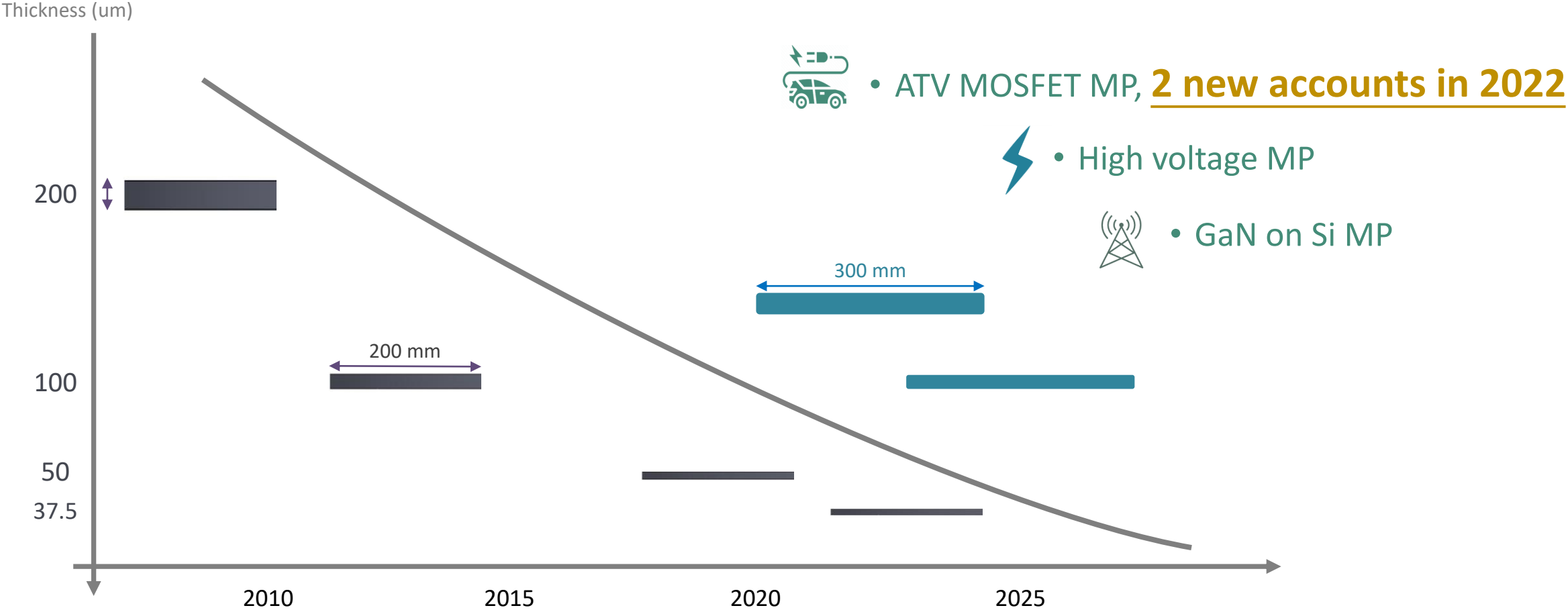
Serviceable Addressable Market

- Automotive grad thinning process
- MEOL total solution: FSM, BGBM, CP, Carrier bound

Serviceable Obtainable Market

- Potential benefit from US BIS restrictions

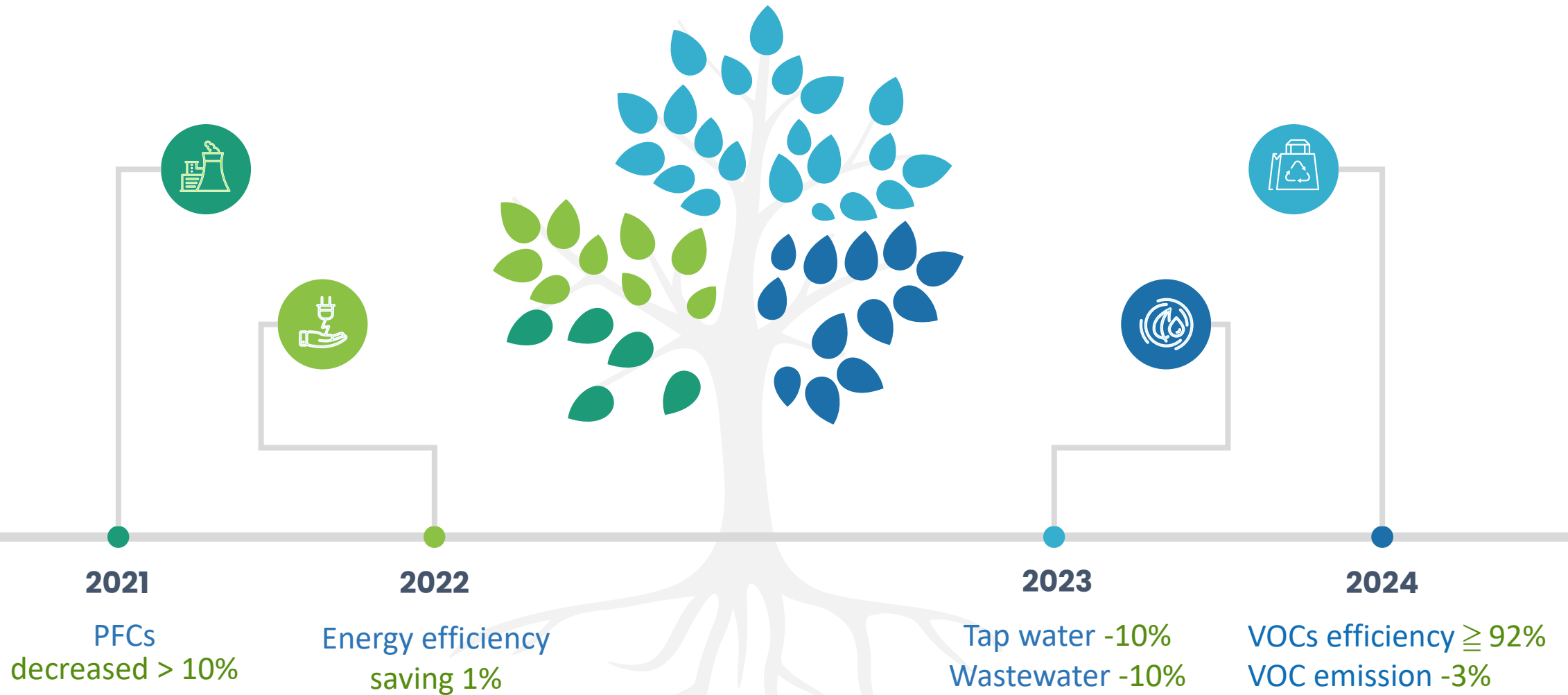
Thinning Roadmap



Source: Psi, image_shutterstock

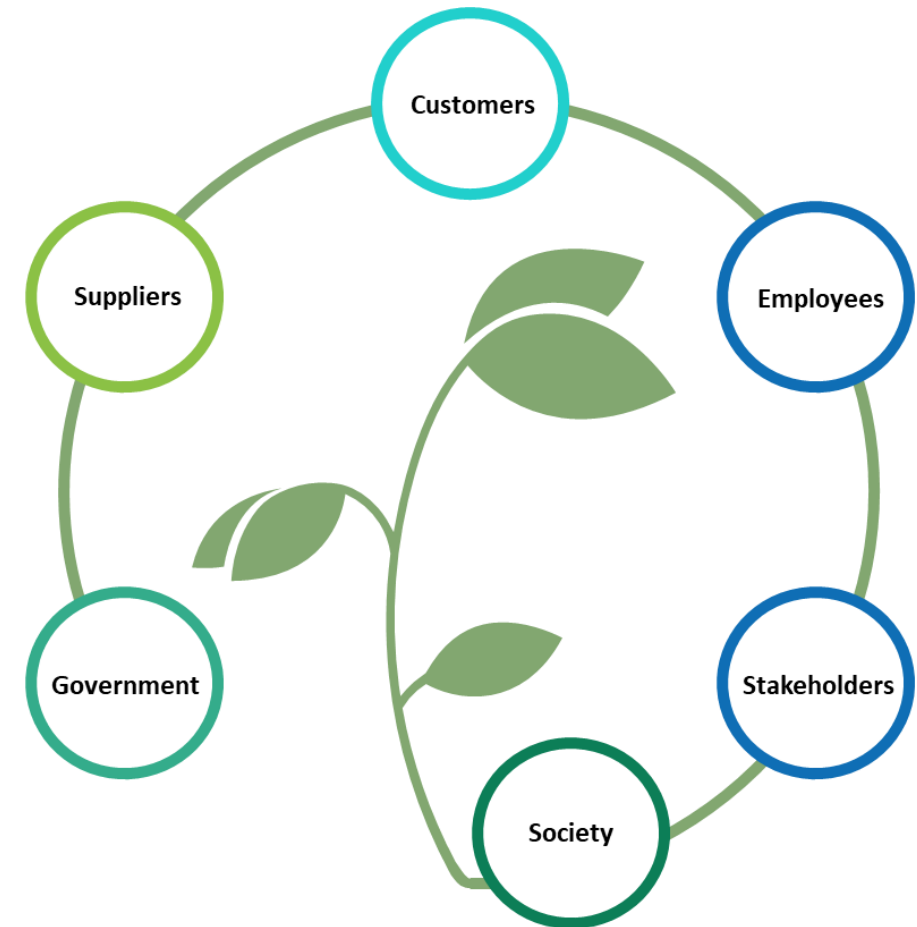


Green Manufacturing Goal



Key Takeaways

- PSI is continuously pursuing to be an ESG compliant supply chain partner.
- Reclaim new fab delivery as we said, Reclaim & Test expansion plan in 2023 unchanged.
- Thinning QoQ growth in 2022 as we said; dynamic macro uncertainty increase in 1H23.
- Semiconductor face headwind in 1H23; expected to recover from 2H23 as best wish.



PSI is A Rising Company
