

# PSI Roadshow

---

25 July 2023

# Safe harbor notice

- Psi's statements of its current expectations are forward-looking statements subject to significant risks and uncertainties and actual results may differ materially from those contained in the forward-looking statements.
- Information as to those factors that could cause actual results to vary can be found in PSI's Annual or Quarterly Report filed with Taiwan Stock Exchange Corporation (TWSE) and such other documents as PSI may file with, or submit to the TWSE from time to time.
- Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events, or otherwise.
- The numbers of the presentation are prepared under IFRS.

# Agenda

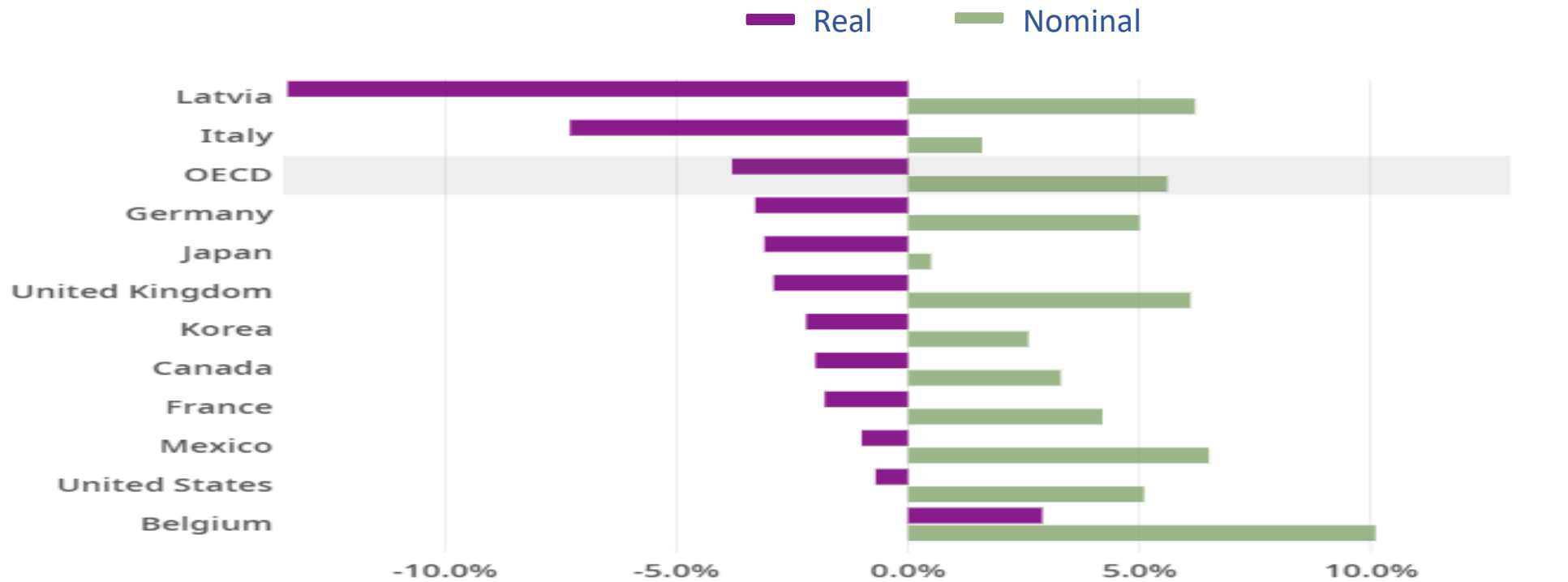
- 2H23 Macro & Semi outlook
- Semi Growth Drivers
- ESG
- Key Takeaways

# 2H23 Macro & Semi Outlook

---

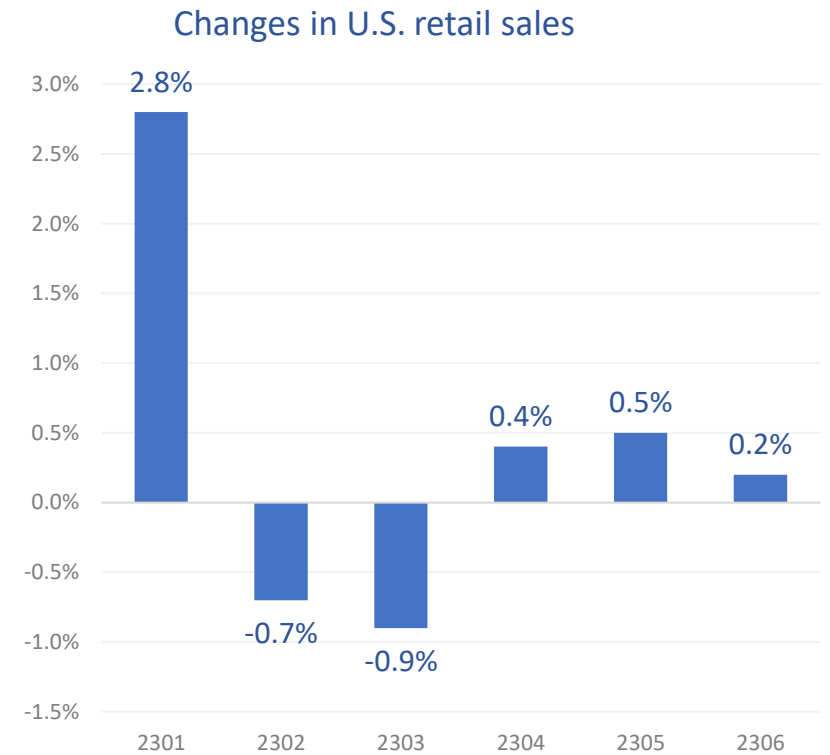
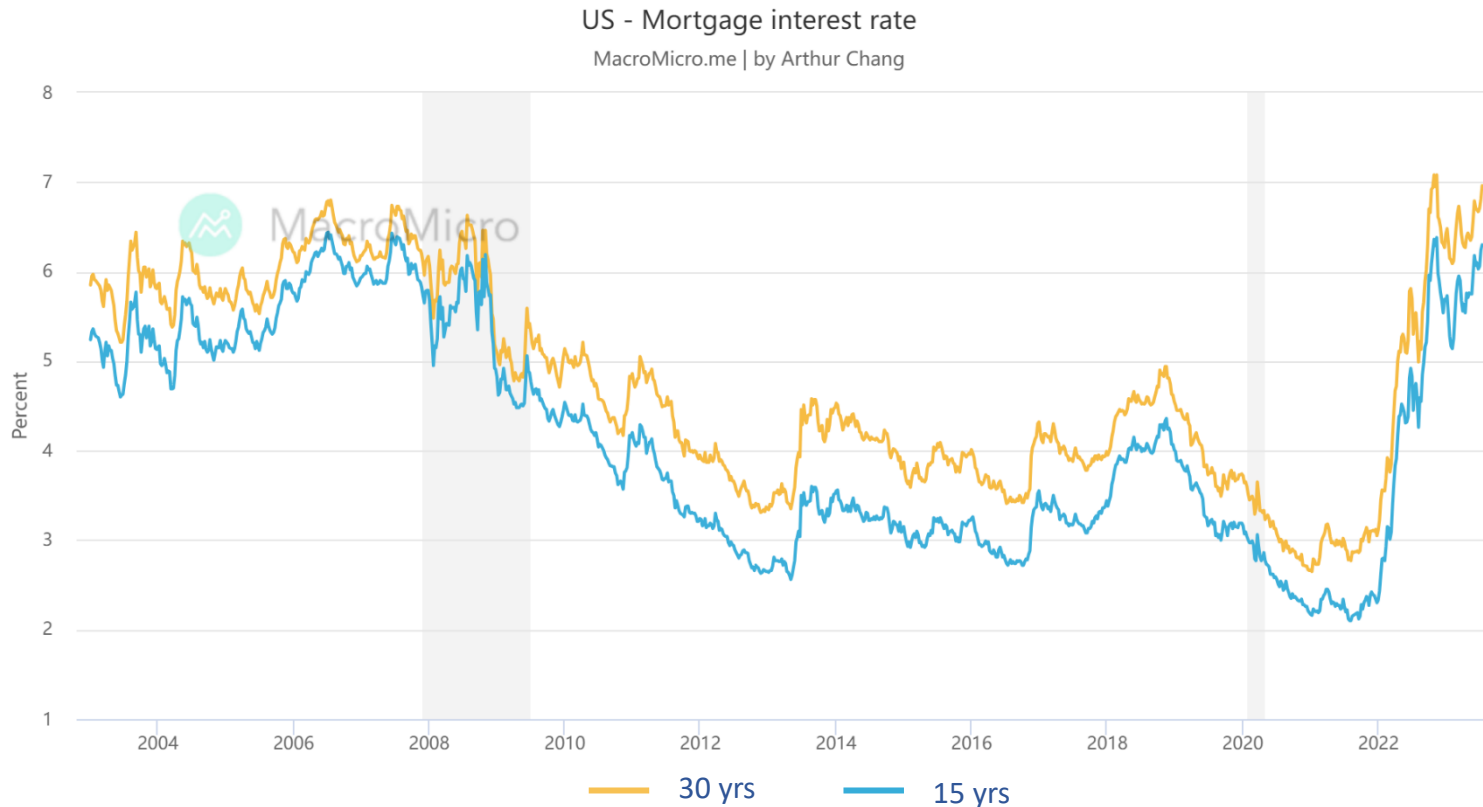
# Macro Economic

- Inflation leads to a decrease in real disposable income



# US Economic

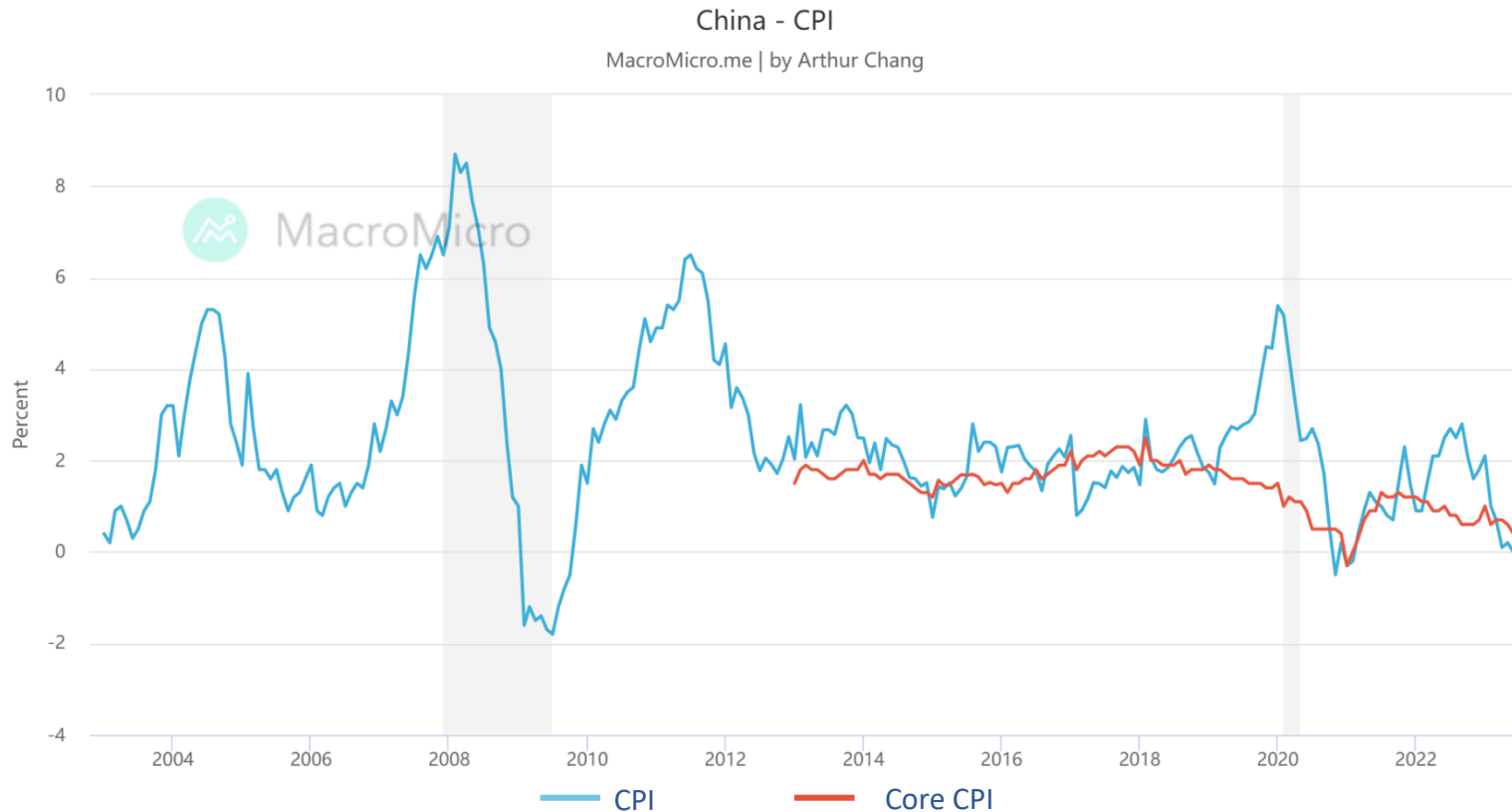
- **Consumption** is lower than expected.



Source: MacroMicro, Jul. 2023

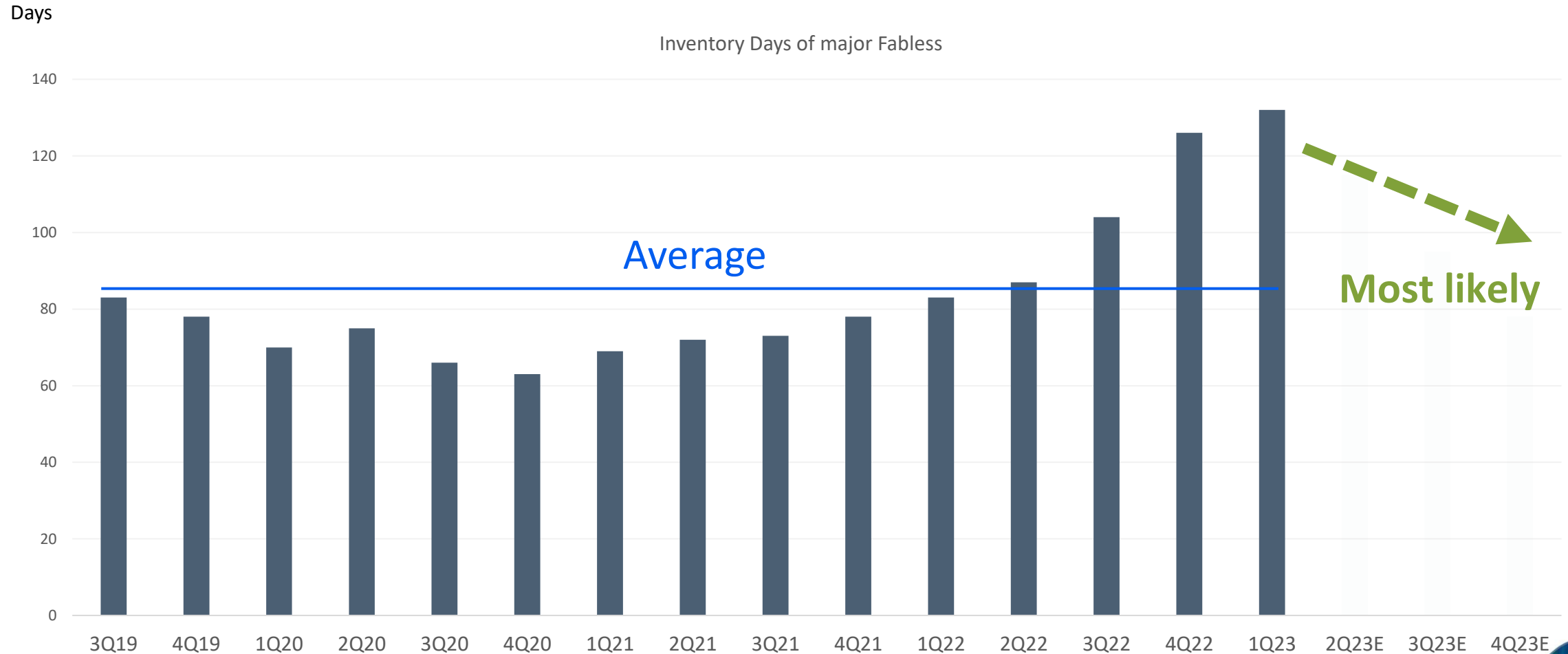
# China Economic

- China **deflation fears** add to growth concerns



Source: MacroMicro, Jun. 2023

# Semi Fabless Inventory

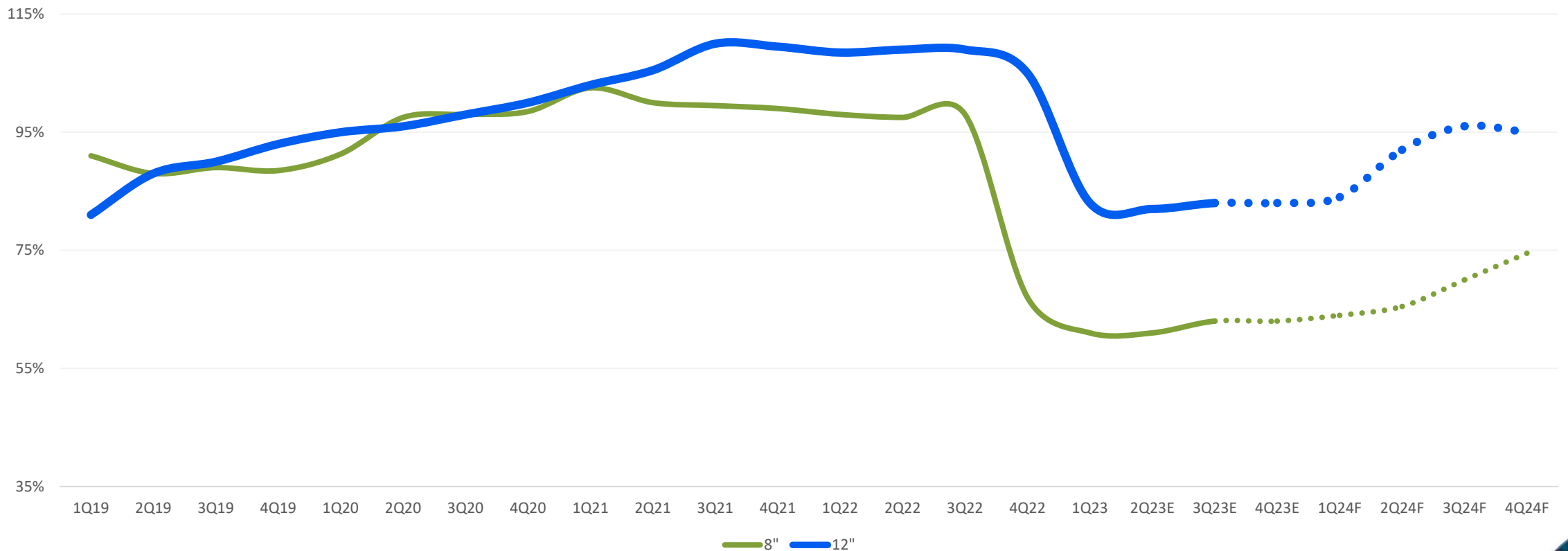


Source: Bloomberg, Mizuho



# Foundry UTR

- Slowing demand of automotive recently
- Back to upcycle in 1H24



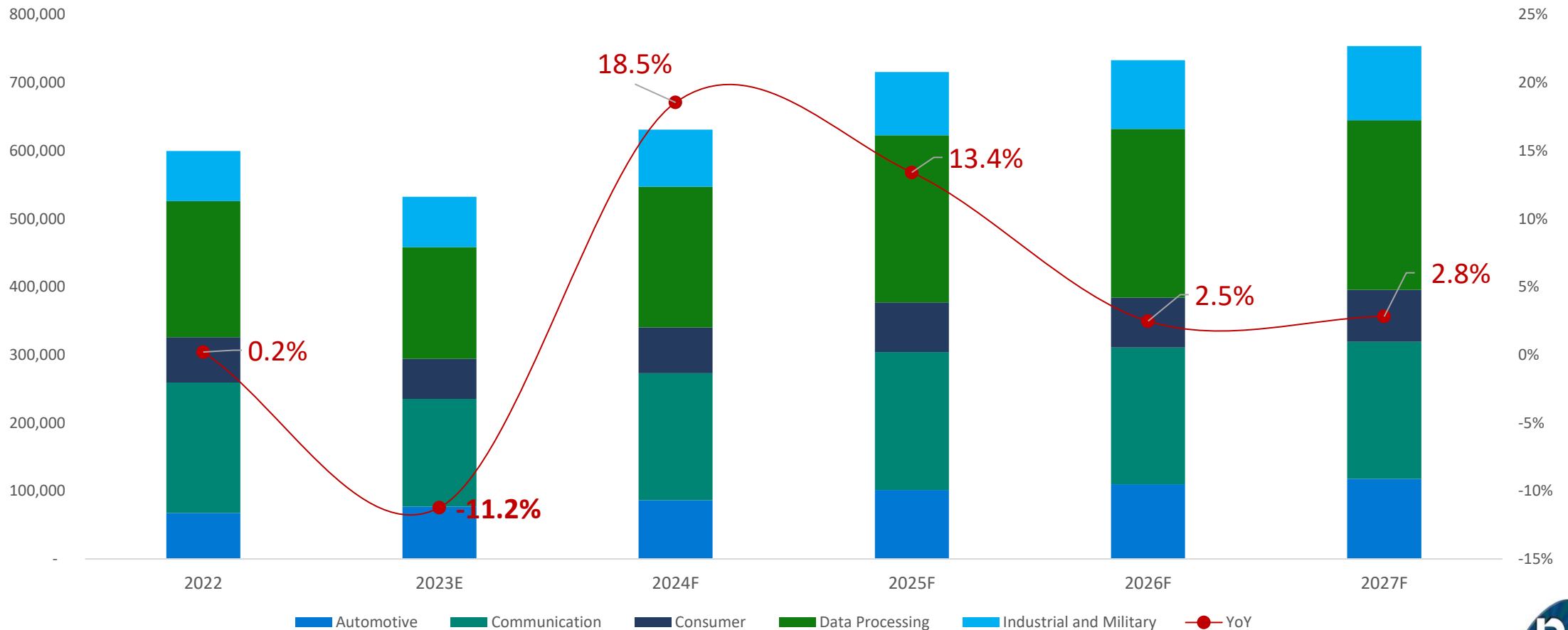
Source: company data, Research institution

# Semi Growth Drivers

---

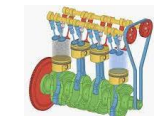
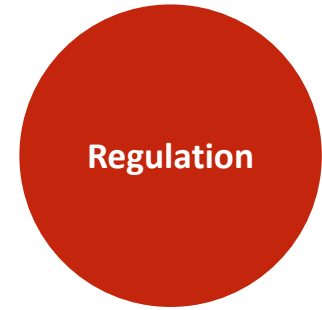
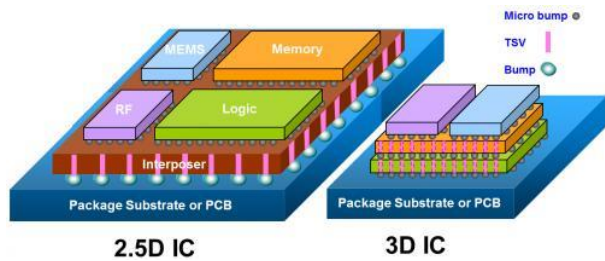
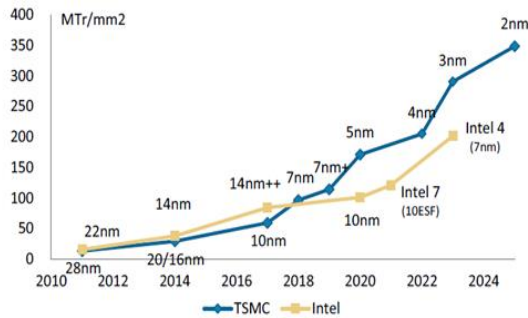
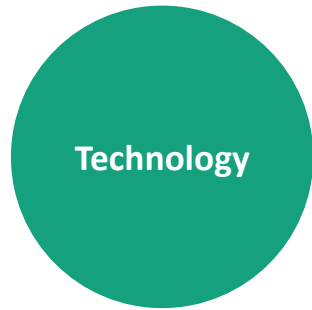
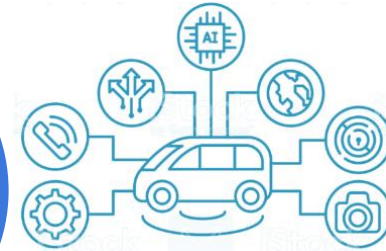
# Return To Expansion Cycle

USD M **Driven by AI (Data processing) & Smart EV (Automotive)**



Source: Gartner, Apr. 2023

# High Computation And Efficiency Continuing



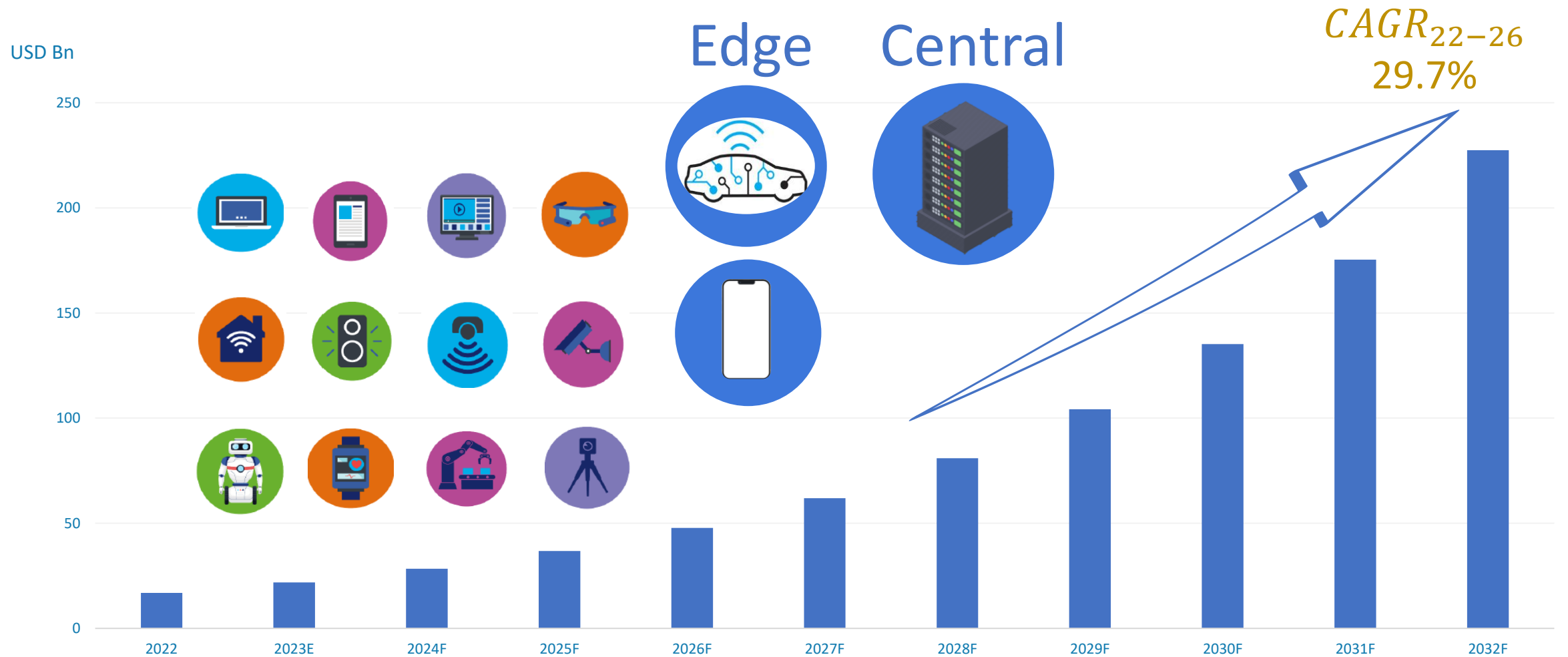
EU final approval to become law to ban sale of CO2-emitting cars by 2035



Eu: Efficiency requirement from 94% to 96%  
USA: Data center efficiency improvement

Source: Company data, EU

# AI Chip Market Size

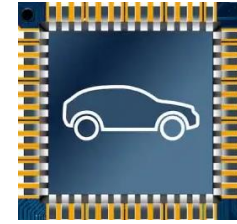


Source : Precedence Research, January 2023

# Smart EV – 4C



Picture: [NSPE](#)



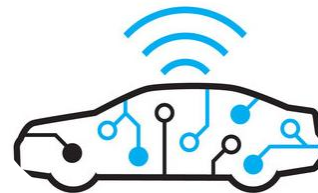
Chips



Center console

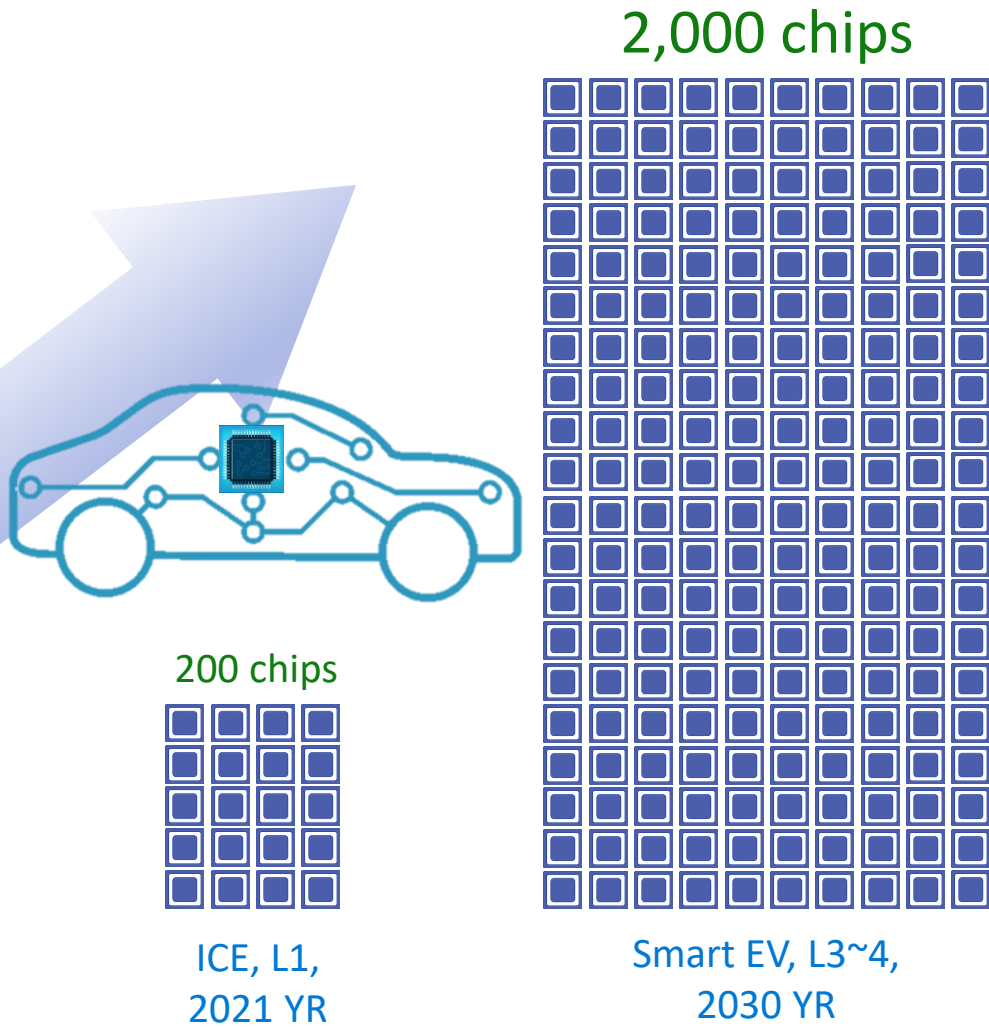


Charger

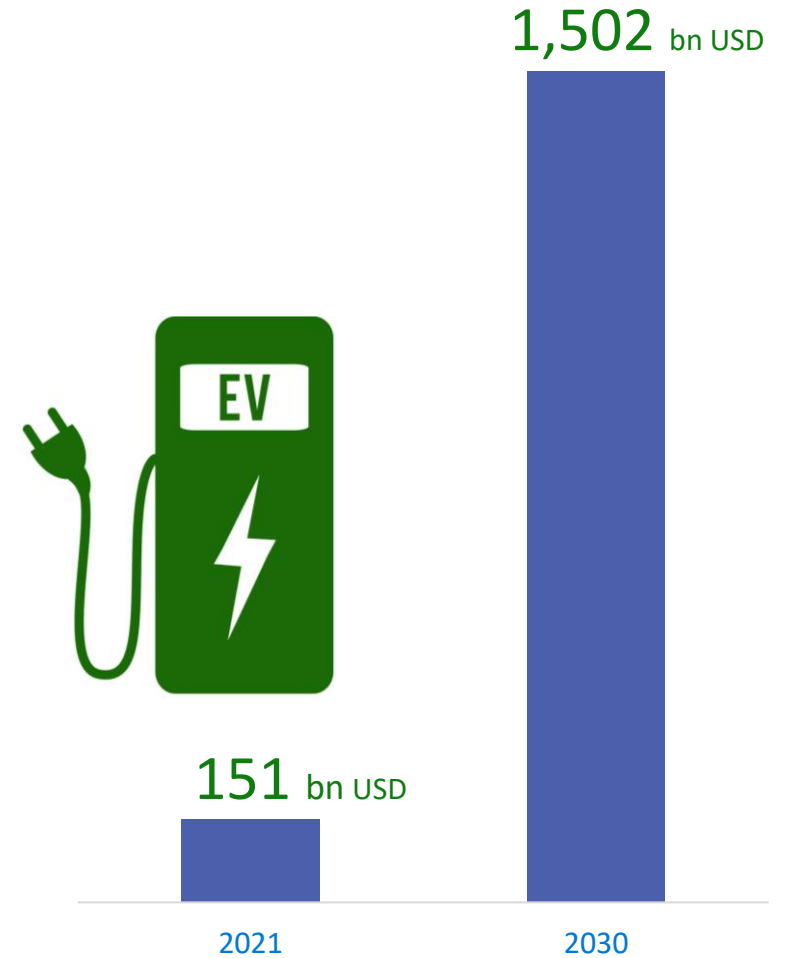


Connectivity

# Semiconductor Content 10x Increasing



- Sensor 275%
- EV/HEV 214%
- ATV HPC 1,500%



# Wafering Business Line

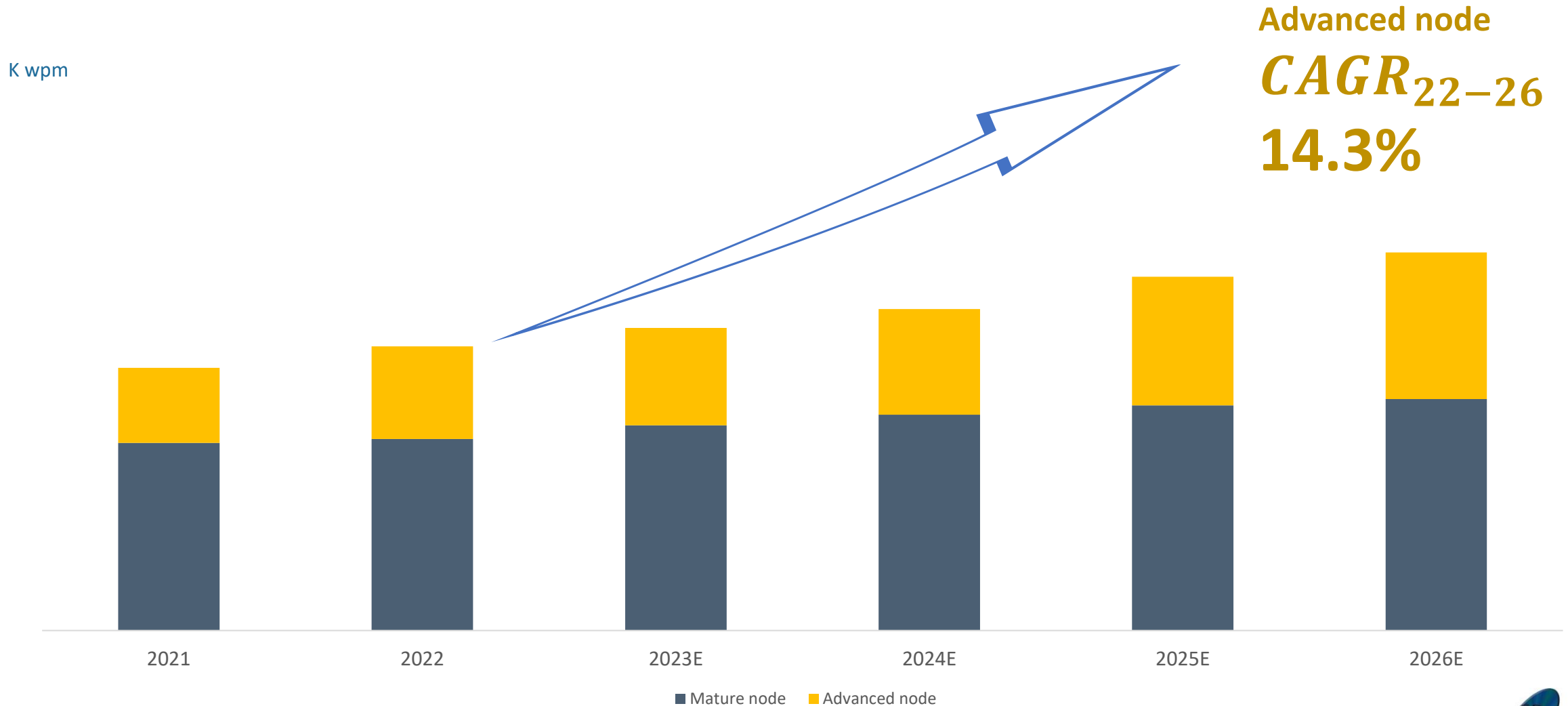
---

*Reclaim primarily driven by the increasing in advanced processes*

*Test wafer growing, due to the usage of carrier wafers in SoIC*



# Advanced Node: Major Growth Driver

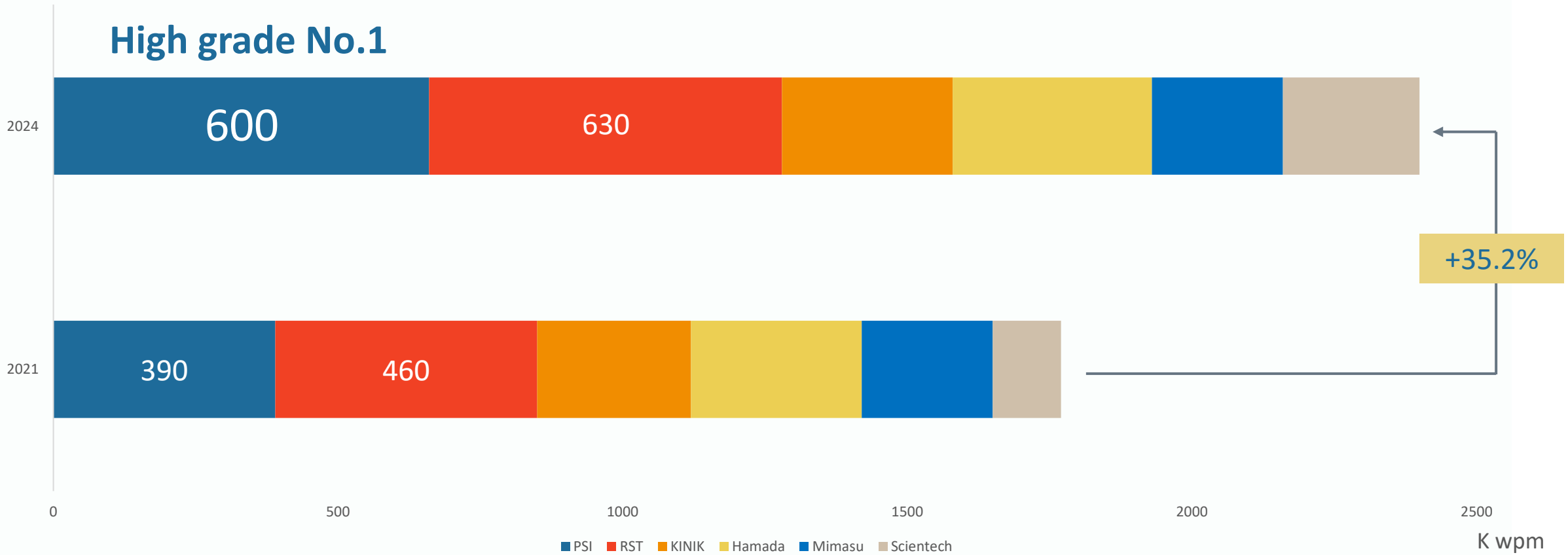


Source: Research institution

# Reclaim Major Players' Capacity

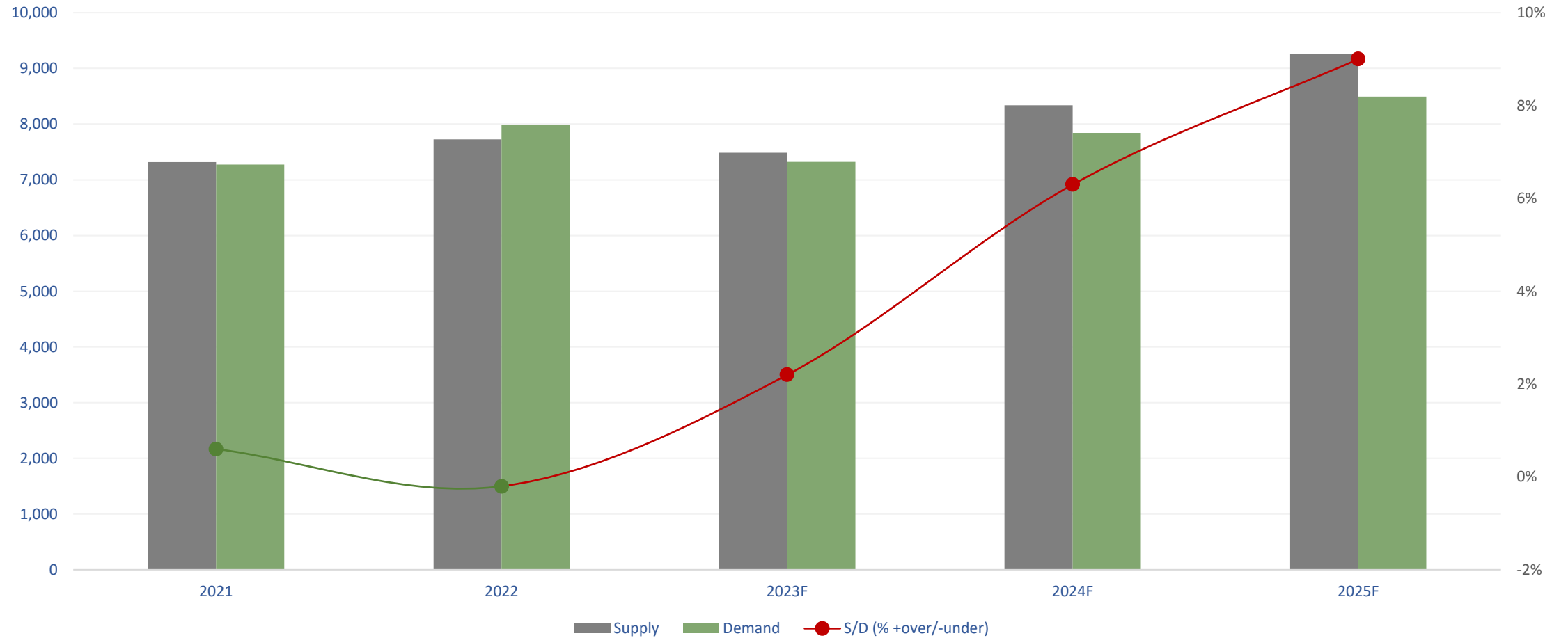
12" capacity

High grade No.1



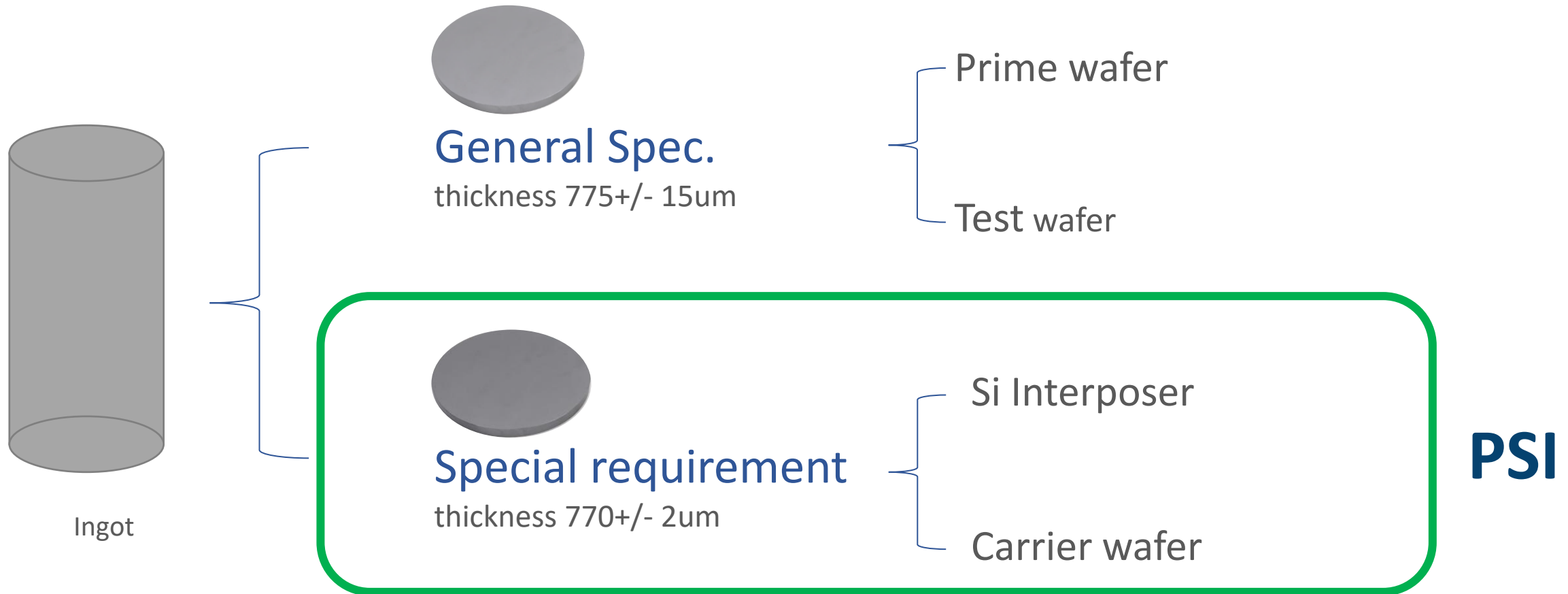
Source: PSI, RST, company data

# Raw Wafer: Supply > Demand



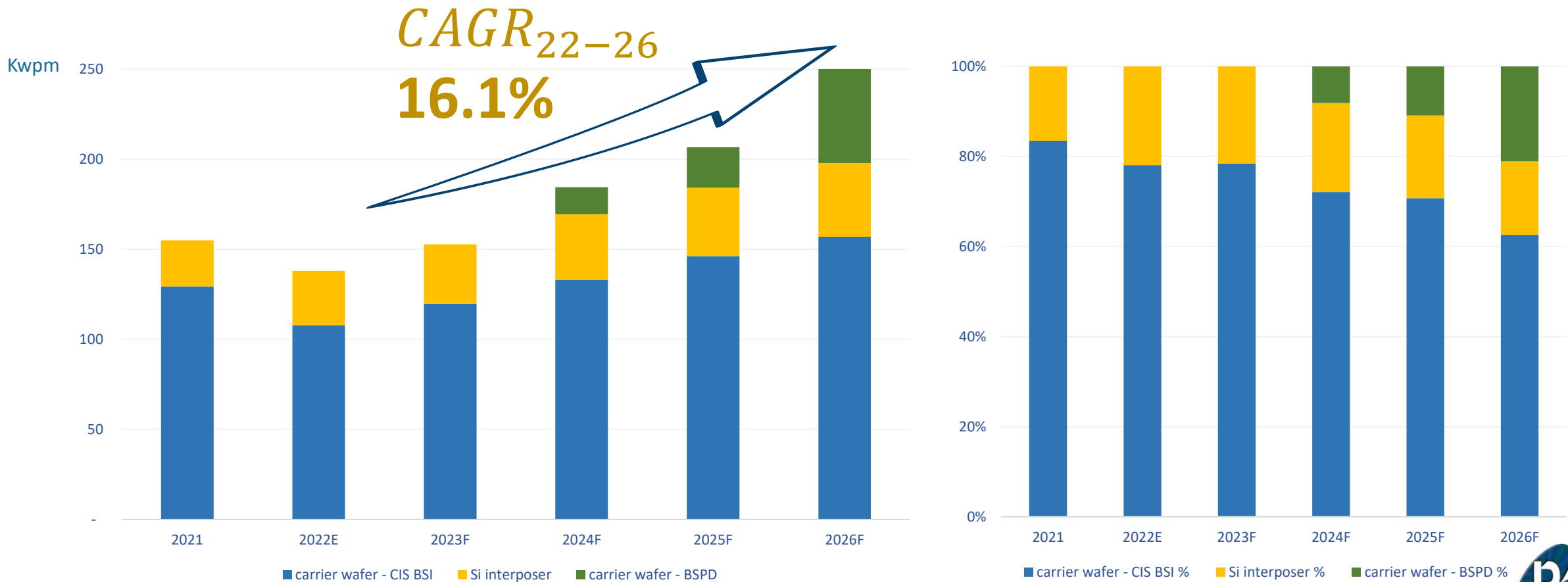
Source: Company data, Sumco, UBS

# Entry Strategy



# Market Size – Si Interposer & Carrier wafer

- Carrier wafer includes CIS BSI & BSPD
- Si interposer major for 2.5, 3D packaging and SoIC (SoIC not include in this chart)



Source: Company data, Digitimes

# Thinning Business Line

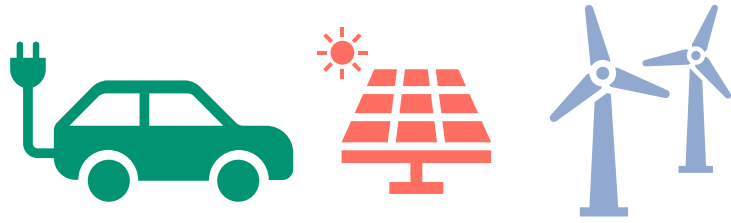
---

*Power discrete/ Sic benefit from the growth of EVs*

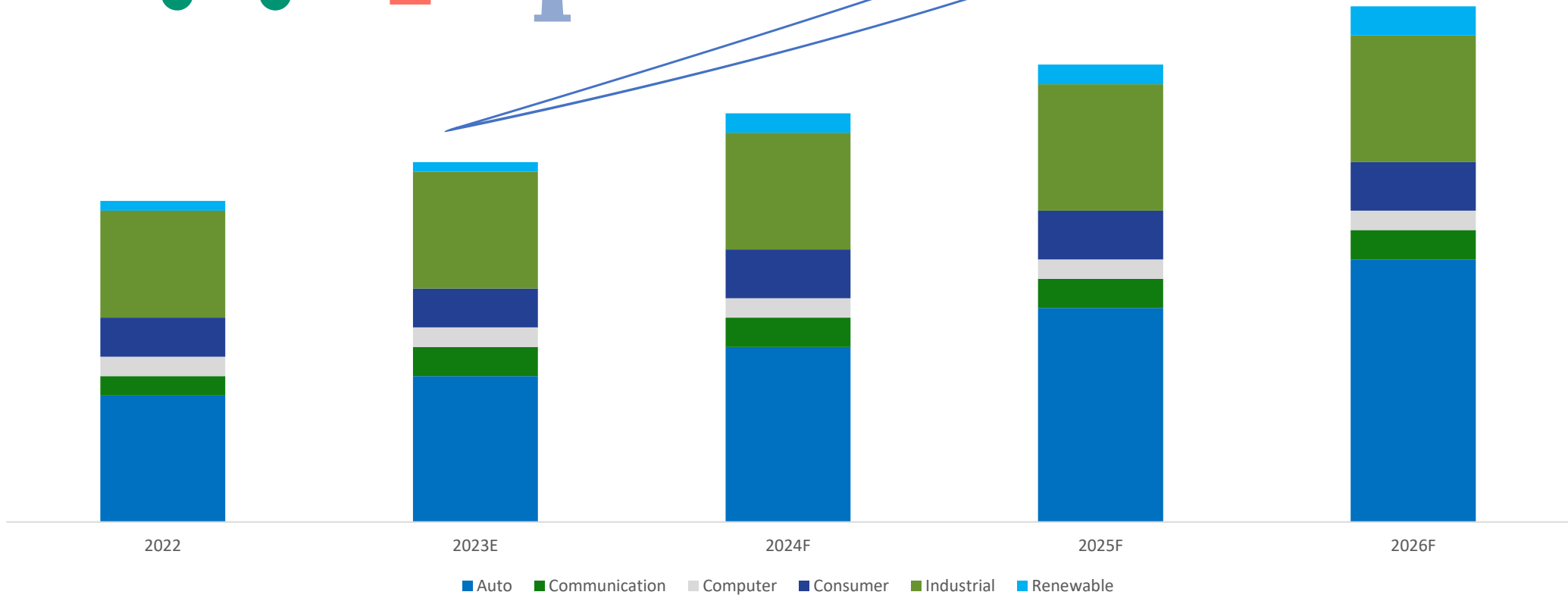
*12" thinning application is larger, due to advanced packaging & SoIC*

# Power Discrete: Continuing Growth

USD B

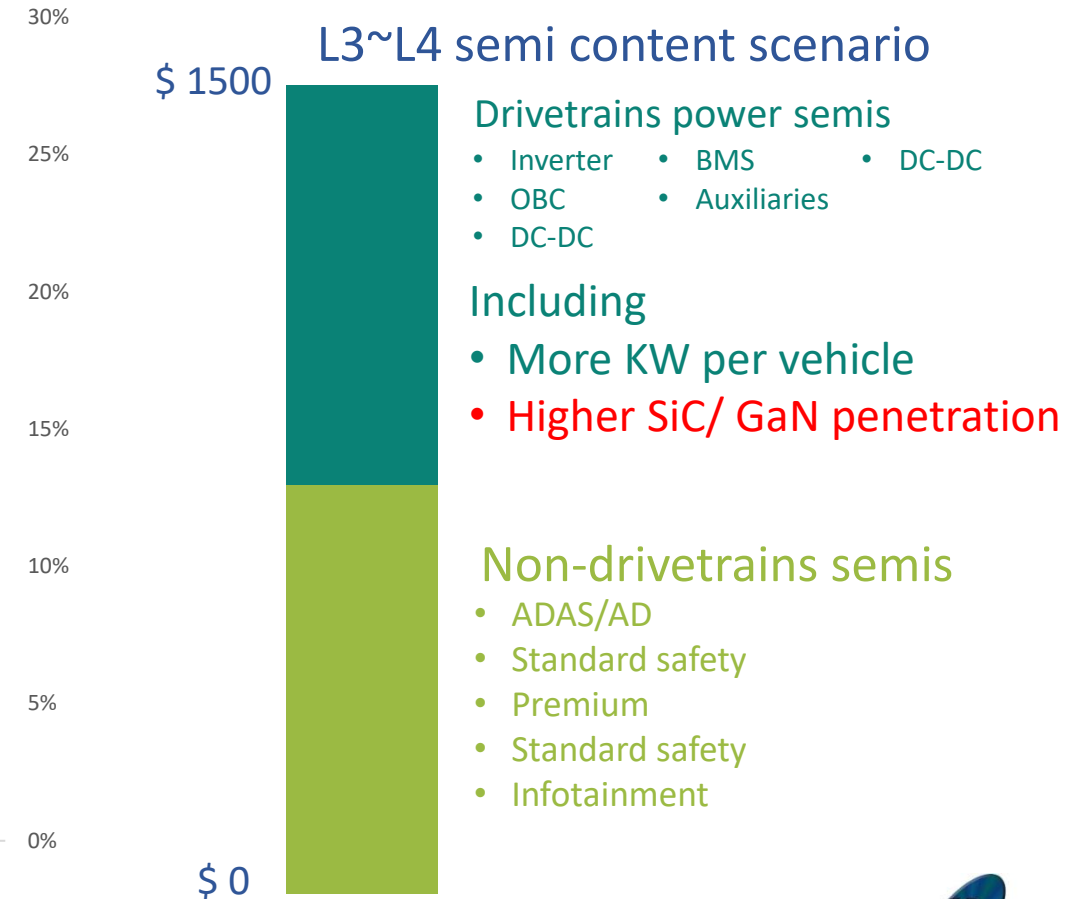
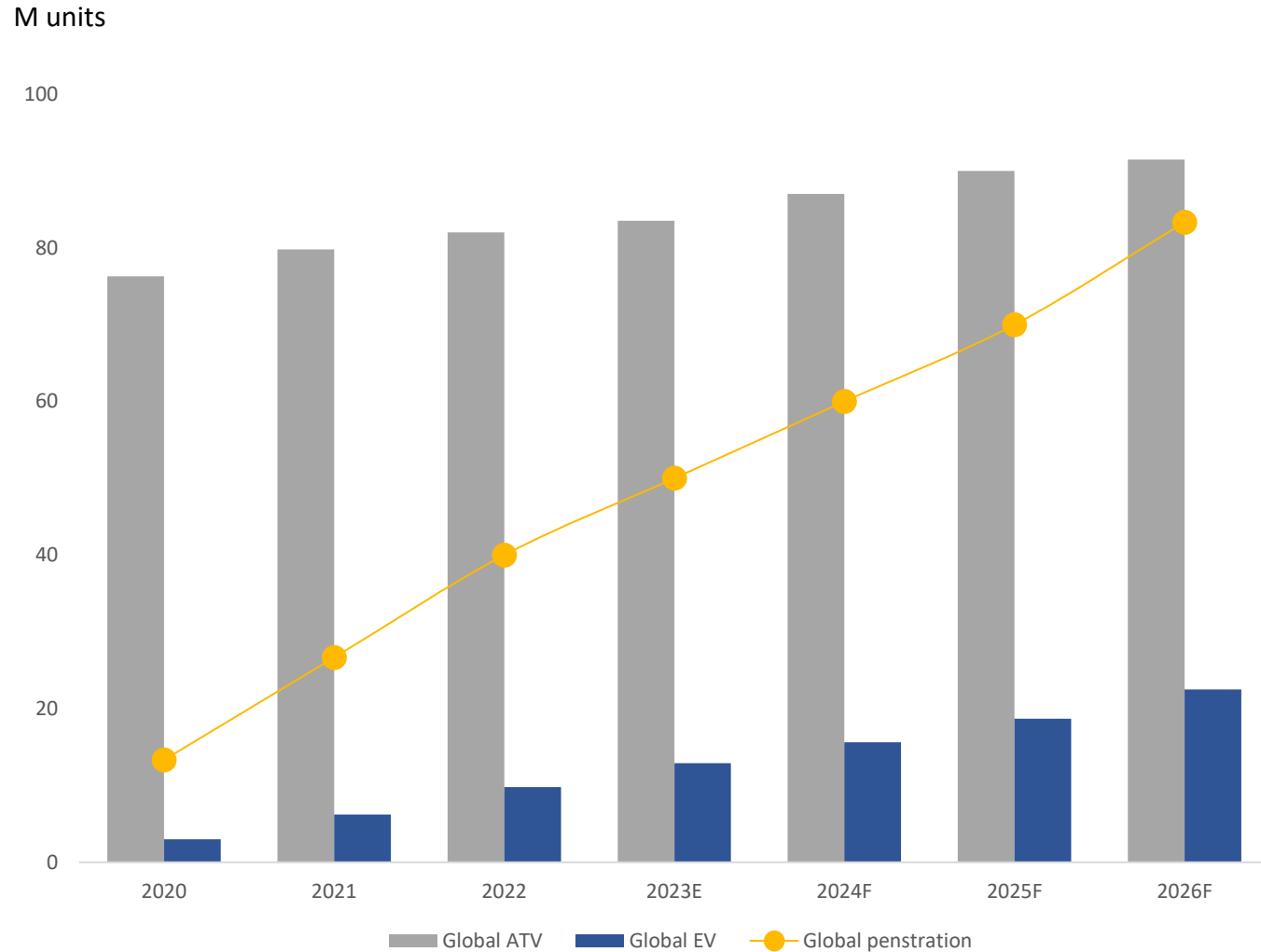


Overall  
*CAGR*<sub>22-26</sub>  
**12.6%**



Source: WSTS, Gartner

# BEV Semi Content Growth

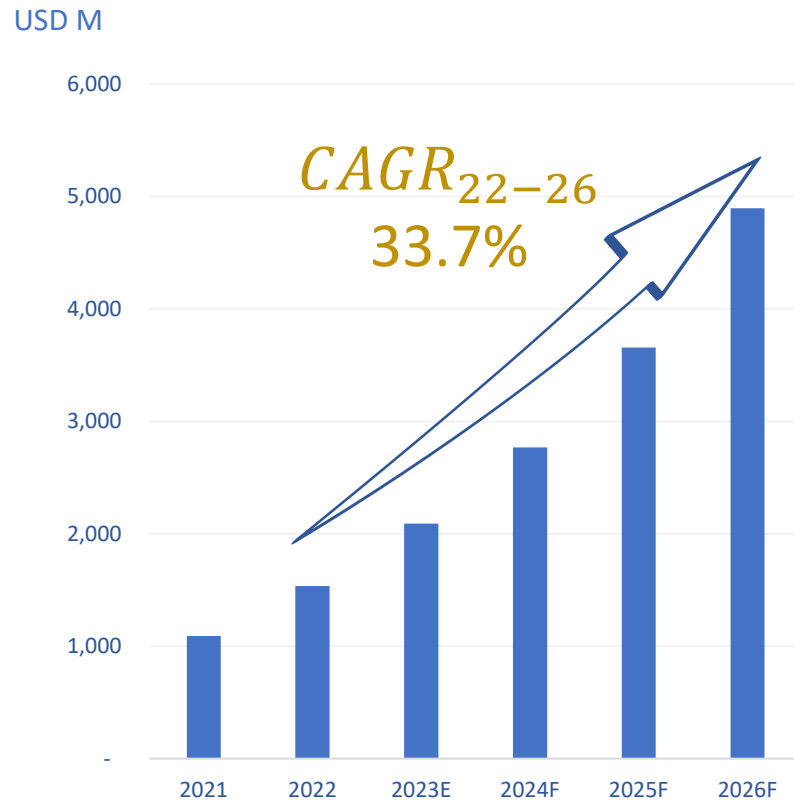


Source: IHS, Infineon

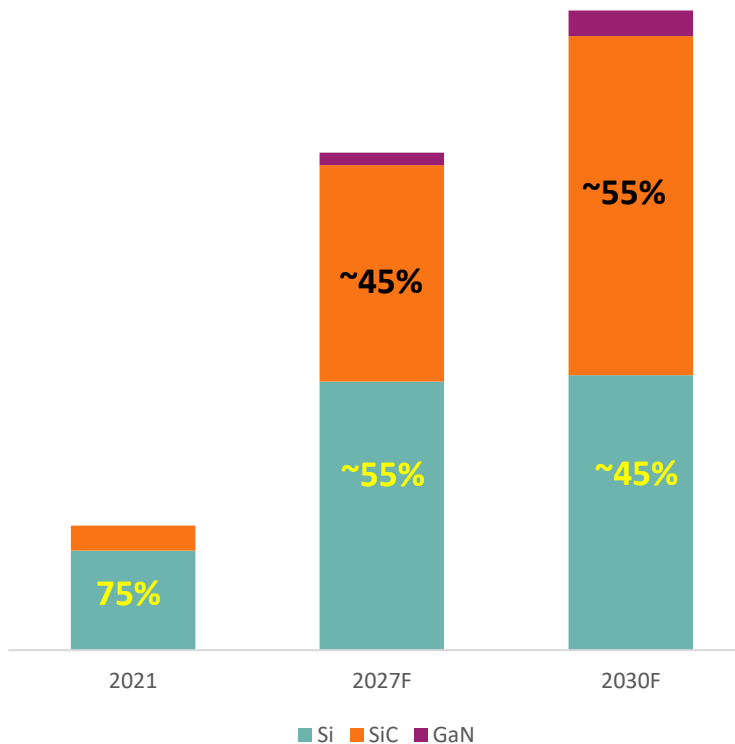


# SiC: Thinning Process Next Step

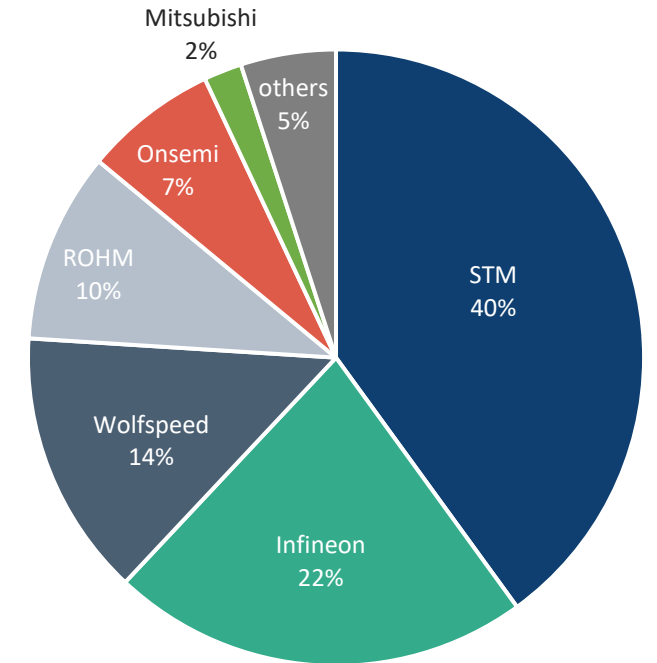
WW Sales SiC



SiC to take lead in the 2027-2030



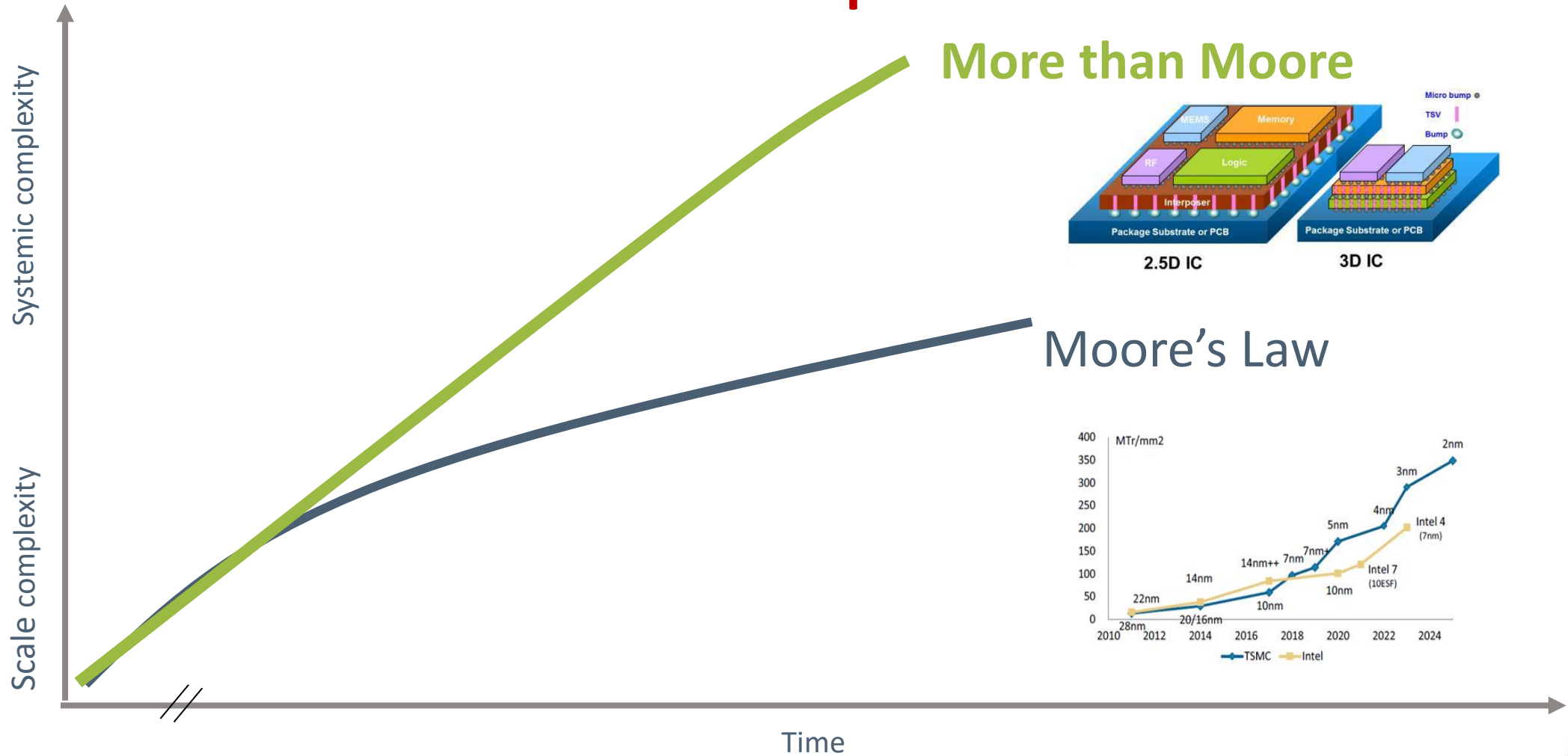
SiC power device market share



Source: Digitimes, Infineon, Yole

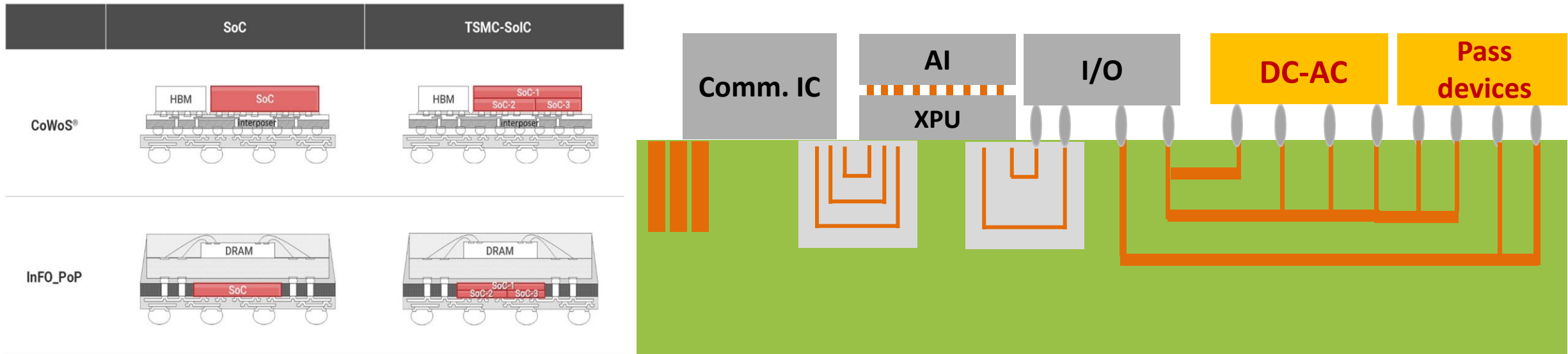
# More Than Moore

**Chiplet and advanced packaging complement each other.**



# 12" Thinning Generating Revenue From 2024

- DC-AC IC & pass devices thinning process



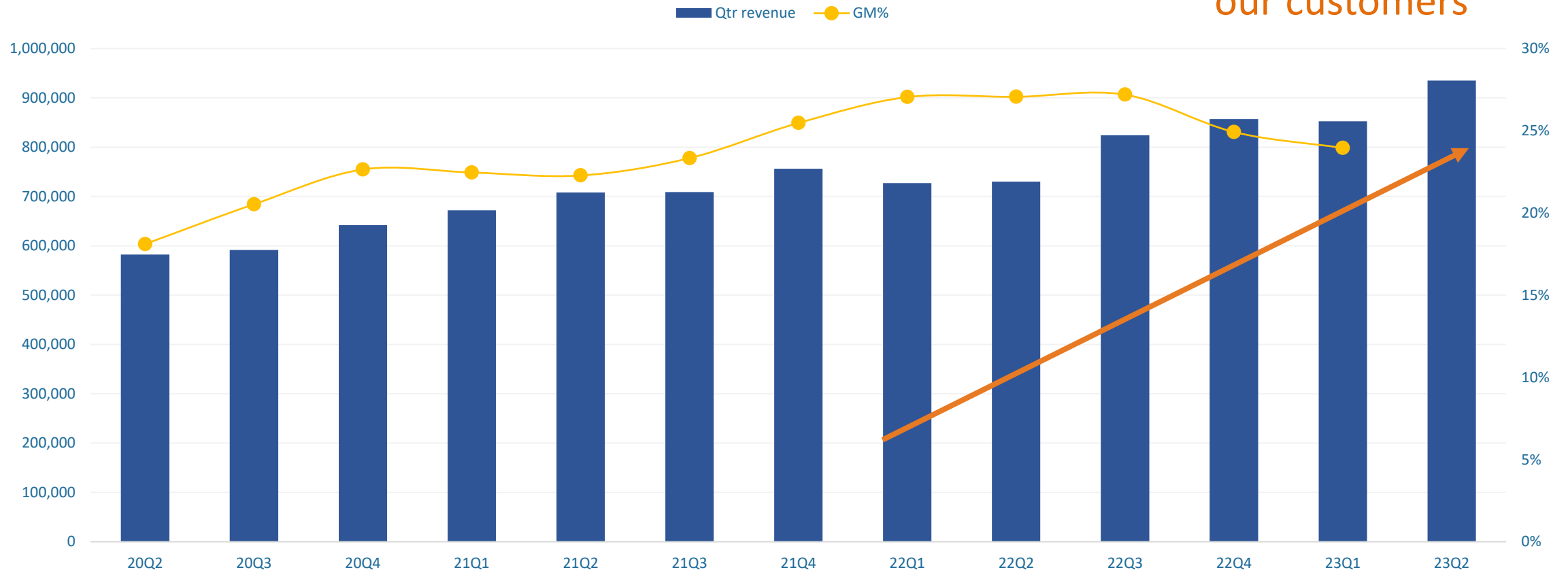
# Finance

---

# Revenue And Gross Profit

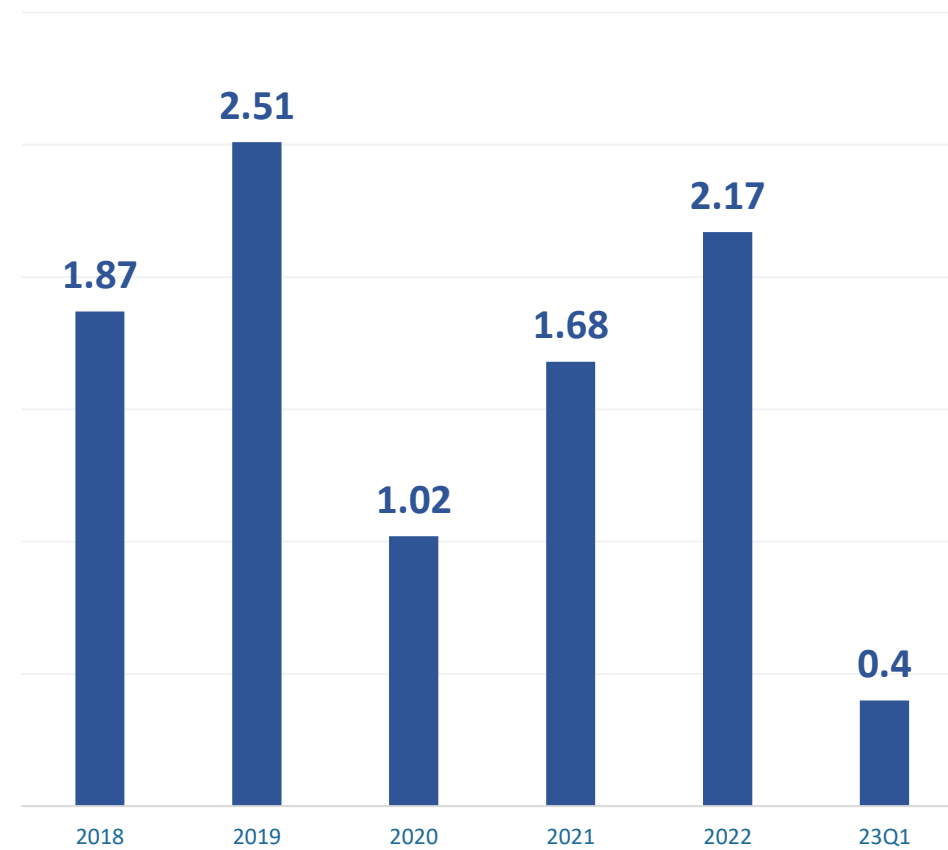
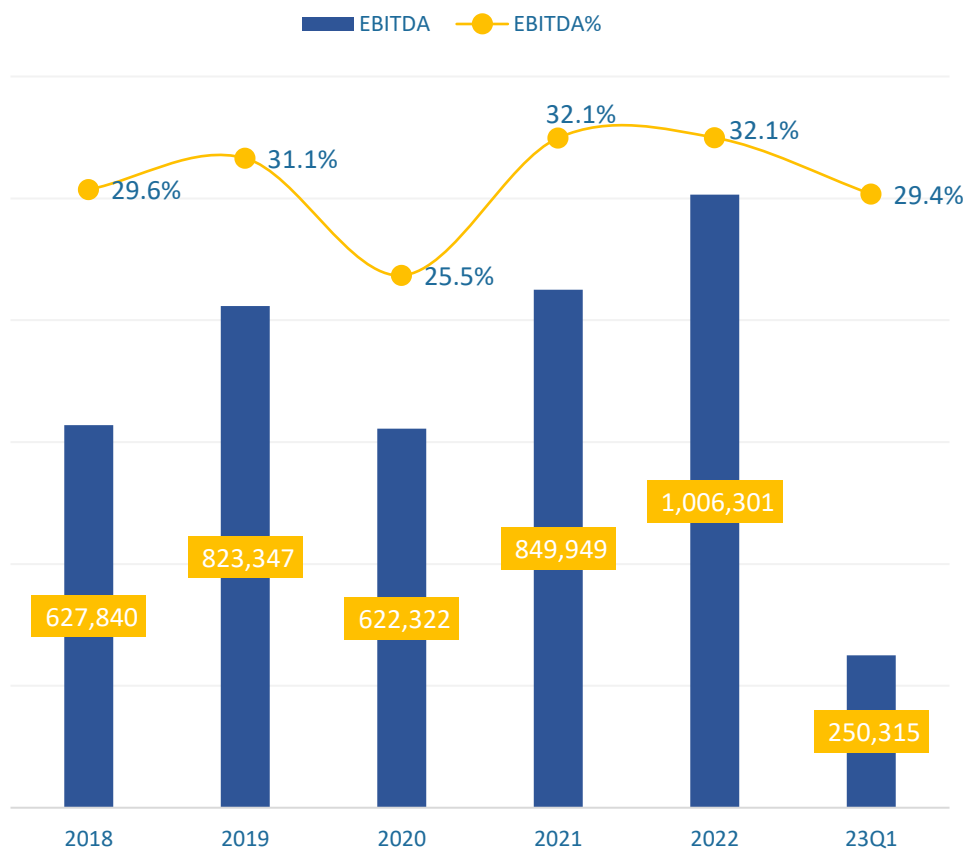
NTD K

Growing in sync with our customers



# EBITDA & EPS

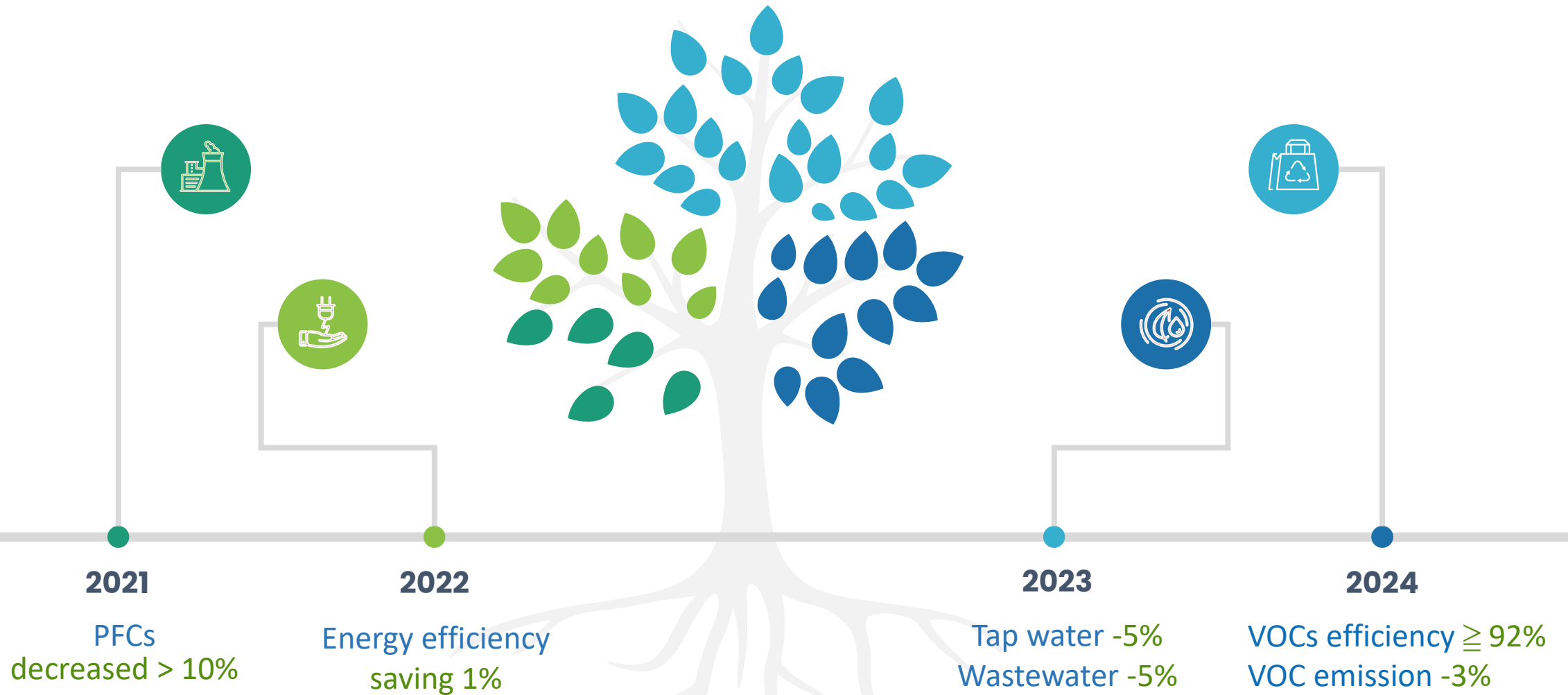
NTD K



# ESG

---

# Green Manufacturing Goal





# PSI ESG Report

昇陽國際半導體股份有限公司  
Phoenix Silicon International Corporation

承諾 · 永續 · 創新  
Promise Sustainable Innovation

## 2022 永續報告書 Sustainability Report

### 關於本報告書

昇陽國際半導體股份有限公司(以下稱昇陽半導體或本公司)主要提供半導體晶圓專業的加工服務,兩大事業項目為晶圓加工及晶圓薄化,以技術創新與品質優先的敬業精神,拓展全新測試晶圓領域,提供客戶更具競爭力的全方位服務。

#### 報告主軸

本公司持續致力於企業社會責任,落實健全公司治理,並善盡環境保護及社會重大議題關注的責任。本報告書是昇陽半導體第一本永續報告書,我們每年將持續發行此報告,揭露本公司在環境面、社會面、經濟面之相關資訊與執行成果,以及未來公司永續發展之願景與策略。

#### 報告書依據

本報告書內容架構主要是參照全球永續性報告協會GRI Standards (2021) 新版所列之指導方針及架構撰寫,同時符合「上市公司編製與申報永續報告書作業辦法」之要求。本報告書所揭露資料經由相關單位主管檢視,覆核後之修訂稿,再進行行政審核程序送各層主管核閱後定稿出版。

#### 報告書邊界與揭露期間

發行時間: 2023年6月  
涵蓋時間: 2022年1月1日至2022年12月31日  
涵蓋範圍: 報告書涵蓋範圍包含昇陽半導體總公司及中港分公司  
工廠據點:  
竹科總廠: 新竹科學園區新竹市力行路6號  
竹科二廠: 新竹科學園區新竹市力行路8號3、4樓  
竹科三廠: 新竹科學園區新竹市研新四路12之2號  
中港廠: 台中市梧棲區建7路2號

#### 聯繫窗口

財務部 單芸蕪 電話: 03-5641888 電子信箱: ESG@psi.com.tw  
公司網站: <https://www.psi.com.tw>

### 董事長的話

各位關注昇陽半導體的朋友們:

這是昇陽半導體的第一本永續報告書,我們超前臺灣證券交易所的法規要求,於2023年下半年出版永續報告書,以體現公司治理健全,關注環境保護與社會重大議題,在充滿機會與挑戰的2022年,終端市場因高通量晶圓及庫存調整而需求疲弱,在昇陽半導體經營團隊與全體同仁共同努力下,2022年營收達到新台幣31.38億元,連續兩年創下歷史新高,年成長率為18.12%,營業利益達到新台幣3.08億元,年成長率達32.44%,我們專注致力於本業,以具體數字展現我們的耐力與爆發力,為利害關係人創造價值與利益。

在十倍速時代競爭環境下,昇陽半導體用科技實踐創新,提升自動化及智慧製造技術含量,提升成長動能及深綠特色製造,全球最先進的再生晶圓廠-中港分公司,已於2022年9月正式進入量產,昇陽半導體12吋再生及測試晶圓總產能在2022年底已達到每月46萬片。在2022年產能增加11%的同時,其用電量減少11%,用水量下降7%及廢水量下降9%,超前本公司制定的ESG環境目標指數,實現了節能減排與推動可再生能源等可持續性發展的舉措。

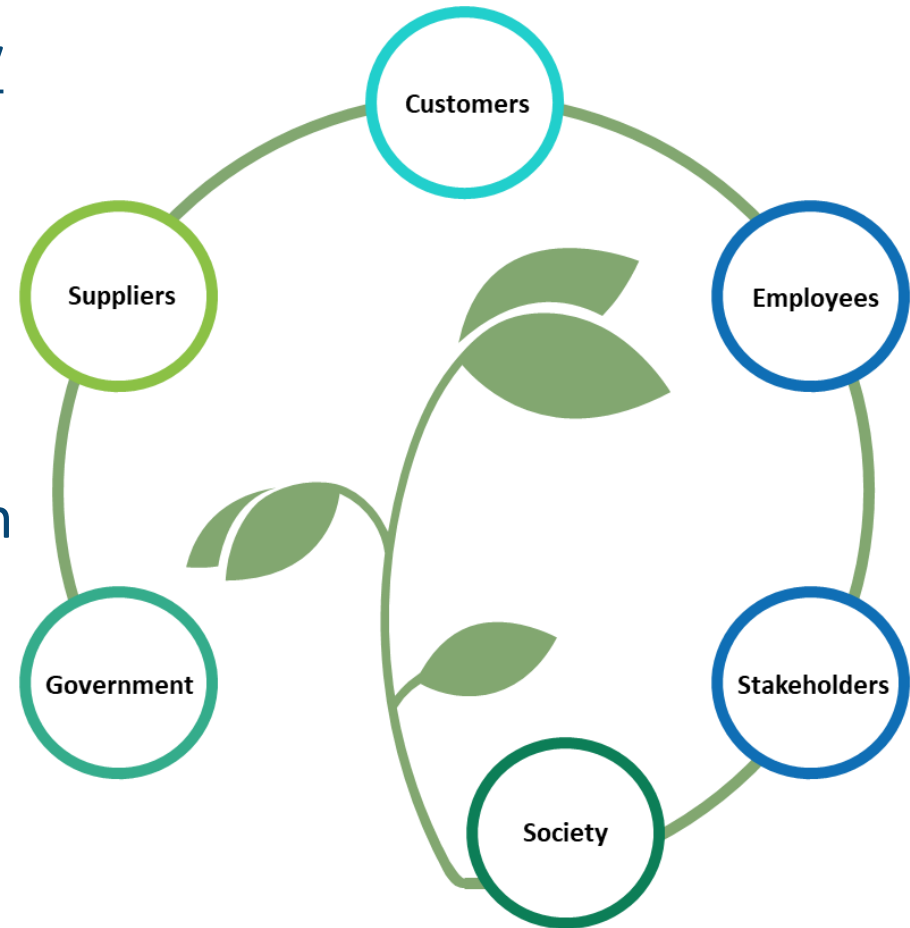
在成長的同時,我們不斷地完善員工福利,致力打造安全健康的友誼職場,並成立員工持股信託,創造利益共享機制;我們重視人才培育及訓練,深耕校園促進產學合作交流,以落實專業技術人才培育;對社會注重更是不遺餘力,我們與員工與公益團體合作,關懷社會弱勢及促進在地農業發展,發揮企業正面影響力並與社會共益前行。

昇陽半導體正走在一條永續的路上,我們以「Promise, Sustainable, Innovation」為永續宗旨,承諾以對社會負責和環境永續的態度,持續創新技術以優化利害關係人關注的議題,由昇陽台灣半導體產業鏈為根基,進一步拓展至全球半導體新生態,以誠信創新高本,以人才環境為先,追求讓世界級半導體企業,達成永續經營的企業目標!

董事長 蔡幸川

# Key Takeaways

- In near term, PSI and most others are **facing uncertainty from China economy recovery.** Despite inventory will digest away in 1-2 quarters, the shadow of on-time picking demand still exists .
- PSI, looking ahead, has been prepared in advance to **catch the opportunity to be brought by AI and EV** which will prosper economics growth in next decade.
- PSI, with eternal vision in mind, has been promising the **commitment in environmental sustainability and business profit through continuous innovation.**



Thank you

---