



INVESTOR PRESENTATION

November 2025

This presentation contains statements about management's future expectations, plans and prospects of our business that constitute forward-looking statements, which are found in various places throughout the presentation, including, but not limited to, statements relating to expectations of orders, net sales, product shipments, expenses, timing of purchases of assembly equipment by customers, gross margins, operating results and capital expenditures. The use of words such as “anticipate”, “estimate”, “expect”, “can”, “intend”, “believes”, “may”, “plan”, “predict”, “project”, “forecast”, “will”, “would”, and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. The financial guidance set forth under the heading “Outlook” contains such forward-looking statements. While these forward-looking statements represent our judgments and expectations concerning the development of our business, a number of risks, uncertainties and other important factors could cause actual developments and results to differ materially from those contained in forward-looking statements, including any inability to maintain continued demand for our products; failure of anticipated orders to materialize or postponement or cancellation of orders, generally without charges; the volatility in the demand for semiconductors and our products and services; the extent and duration of the COVID-19 and other global pandemics and the associated adverse impacts on the global economy, financial markets, global supply chains and our operations as well as those of our customers and suppliers; failure to develop new and enhanced products and introduce them at competitive price levels; failure to adequately decrease costs and expenses as revenues decline; loss of significant customers, including through industry consolidation or the emergence of industry alliances; lengthening of the sales cycle; acts of terrorism and violence; disruption or failure of our information technology systems; consolidation activity and industry alliances in the semiconductor industry that may result in further increased customer concentration, inability to forecast demand and inventory levels for our products; the integrity of product pricing and protection of our intellectual property in foreign jurisdictions; risks, such as changes in trade regulations, conflict minerals regulations, currency fluctuations, political instability and war, associated with substantial foreign customers, suppliers and foreign manufacturing operations, particularly to the extent occurring in the Asia Pacific region where we have a substantial portion of our production facilities; potential instability in foreign capital markets; the risk of failure to successfully manage our diverse operations; any inability to attract and retain skilled personnel, including as a result of restrictions on immigration, travel or the availability of visas for skilled technology workers.

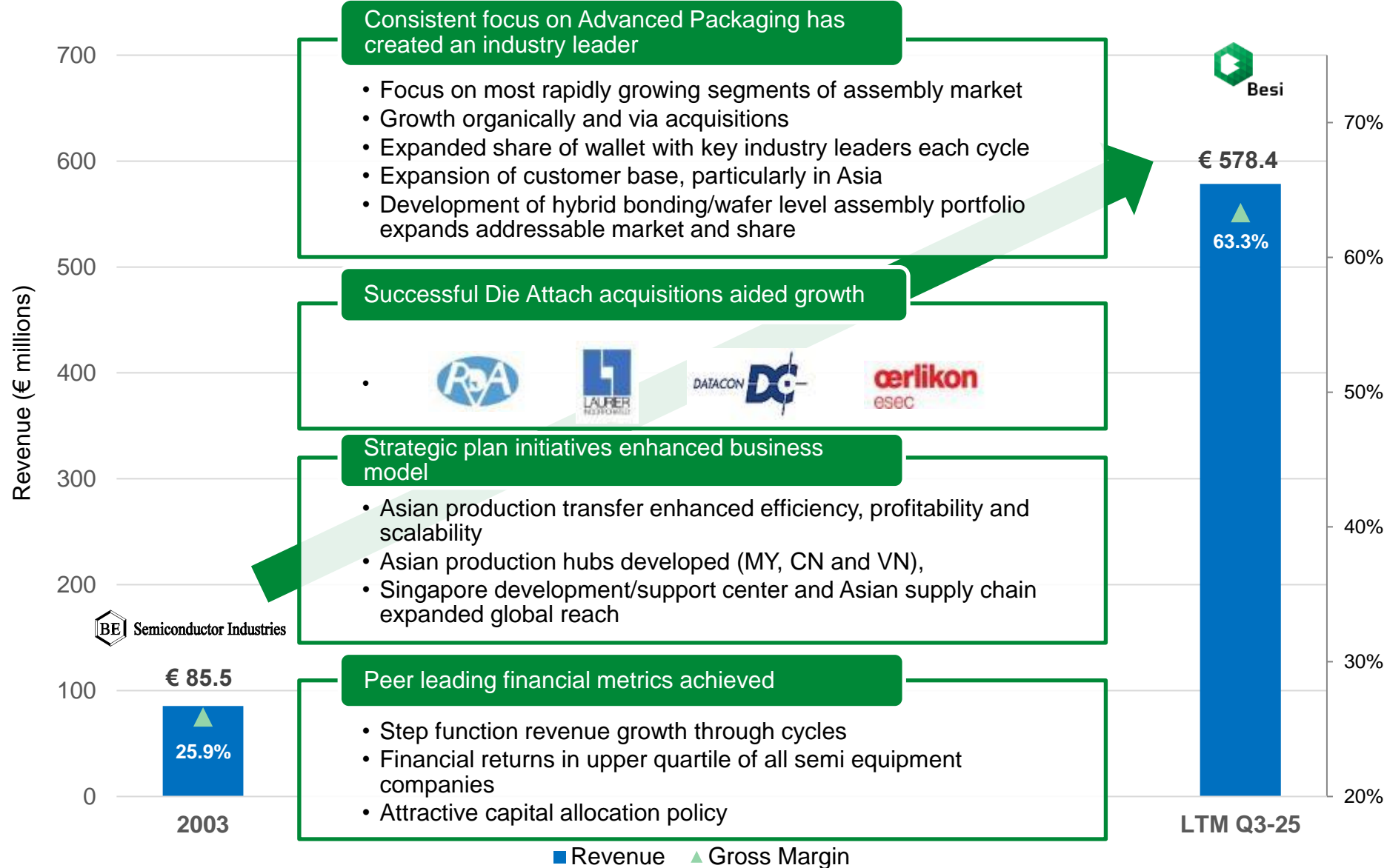
In addition, the United States and other countries have recently levied tariffs and taxes on certain goods and could significantly increase or impose new tariffs on a broad array of goods. They have imposed, and may continue to impose, new trade restrictions and export regulations. Increased or new tariffs and additional taxes, including any retaliatory measures, trade restrictions and export regulations, could negatively impact end-user demand and customer investment in semiconductor equipment, increase Besi's supply chain complexity and manufacturing costs, decrease margins, reduce the competitiveness of our products or restrict our ability to sell products, provide services or purchase necessary equipment and supplies. Any or all of the foregoing factor could have a material and adverse effect on our business, results of operations or financial condition. In addition, investors should consider those additional risk factors set forth in Besi's annual report for the year ended December 31, 2024 and other key factors that could adversely affect our businesses and financial performance contained in our filings and reports, including our statutory consolidated statements. We expressly disclaim any obligation to update or alter our forward-looking statements whether as a result of new information, future events or otherwise.

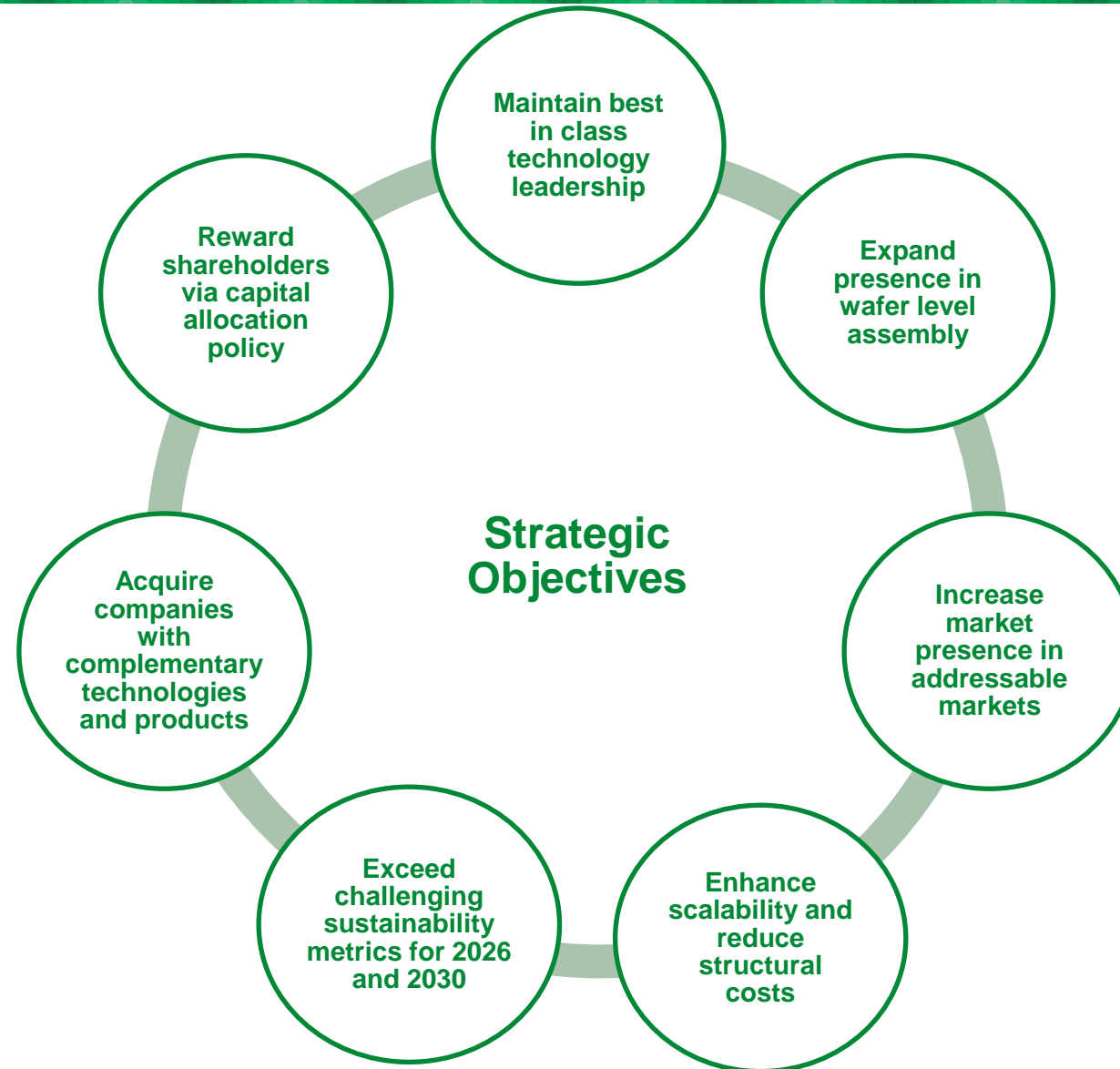
- I. Company Overview
- II. Market Overview
- III. End-User Market Trends
- IV. Financial Update and Summary



I. COMPANY OVERVIEW

Company History





Capital Allocation

Attractive capital allocation program

€ 2.3 billion of dividends and share repurchases since 2011*

Represents ~32% of total revenue

Strategic/Financial

Disciplined execution has created leader in advanced packaging

Best in class financial metrics

Superior through cycle financial performance versus peers

Shareholder Return

Superior Total Returns:**
206% (3 year)
306% (5 year)
2,666% (10 year)

Consistent TSR outperformance versus peers

Upper quartile ranking for all semi-equipment companies

* Includes share repurchases through September 30, 2025

** Through September 30, 2025

Market Positioning: From Processed Wafer to Assembled Chip



Total Semiconductor Manufacturing Equipment 2024 (E): \$ 120B

Front end: \$ 106.7B
(89%)

Assembly: \$ 5.1B
(4%)

Test: \$ 8.2B
(7%)



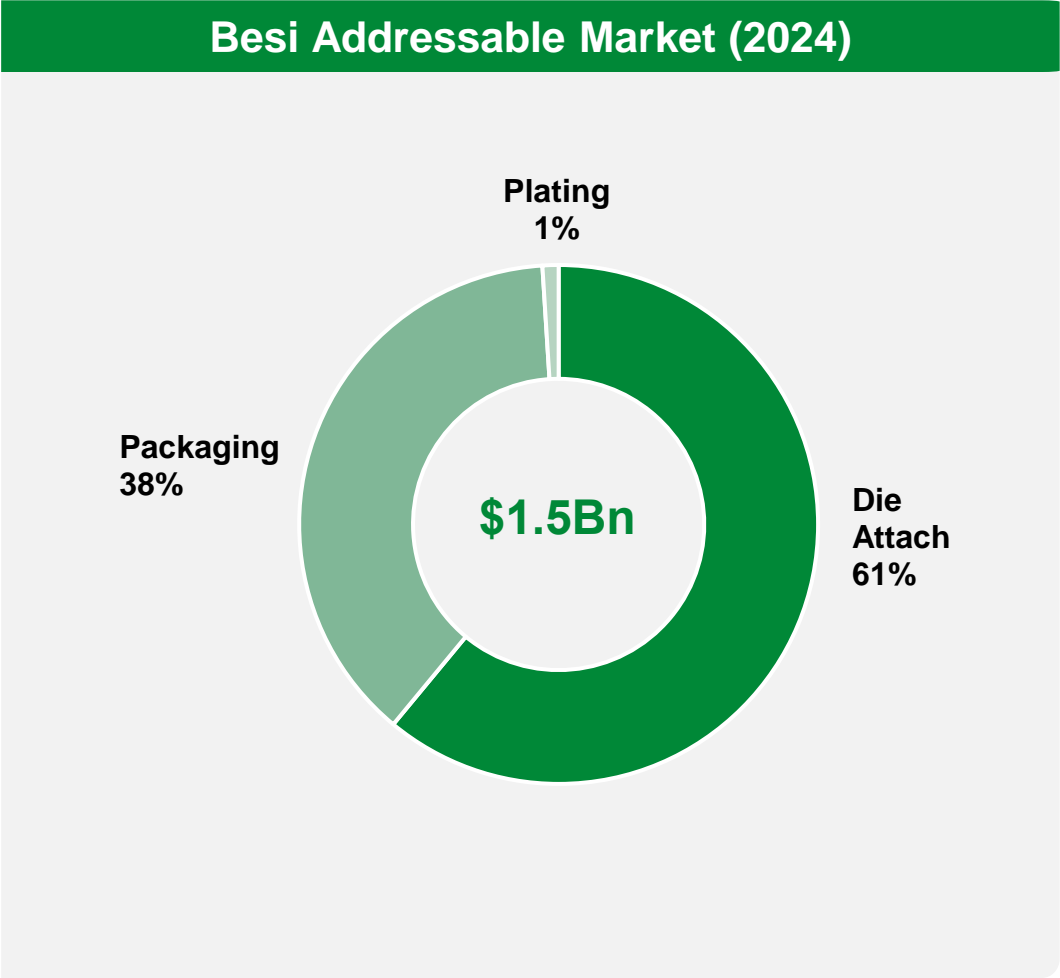
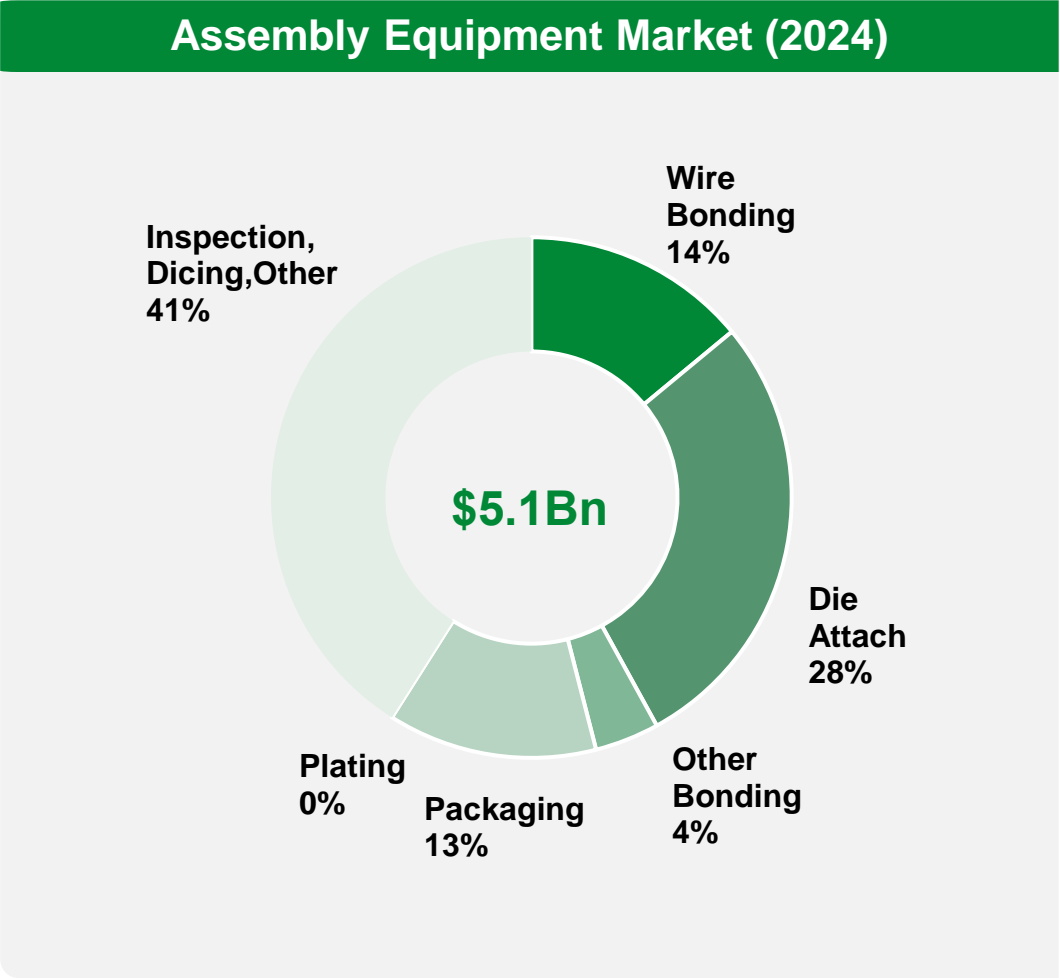
Assembly Process

Dicing	Die Attach	Wire Bond	Packaging	Plating	
	✓		✓	✓	Leadframe Wire Bond
	✓		✓		Substrate Wire Bond
	✓		✓		Substrate Flip Chip / TCB
	✓		✓		Wafer Level Hybrid, EMIB, TCB, Flip Chip, FOWLP

Source: TechInsights, September 2025



Assembly Equipment Market Composition



Source: TechInsights, September 2025

Industry Leading Assembly Equipment Portfolio

Die Attach (81% of 2024 Revenue)

Multi-Module Attach



Epoxy / Soft Solder



Flip-chip



Direct Lid Attach



Embedded Bridge Attach



Thermo Compression



Hybrid Bonding



Packaging and Plating (19% of 2024 Revenue)

Leadframe Molding



Substrate Molding



Wafer and Panel Molding



Trim and Form



Singulation



Plating



Wet Processing



Serving Blue Chip Customers Across Key End-Markets

Customers

- **Diversified, blue chip customer base**
 - Top 10 customers ~52% of 2024 revenue
 - One customer > 10%
- **Supplying leading IDMs, fabless producers and subcontractors**
 - Sell direct to IDMs
 - Sell to fabless producers via subcontractors
 - 55% IDMs/45% foundries/subcontractors order split in 2024
- **Long-term relationships**
 - Many exceed 50 years

Foundries/Subcontractors



Independent Device Manufacturers (IDMs)



Fabless IDMs



End-User Markets

Computing
43%



Mobile
20%

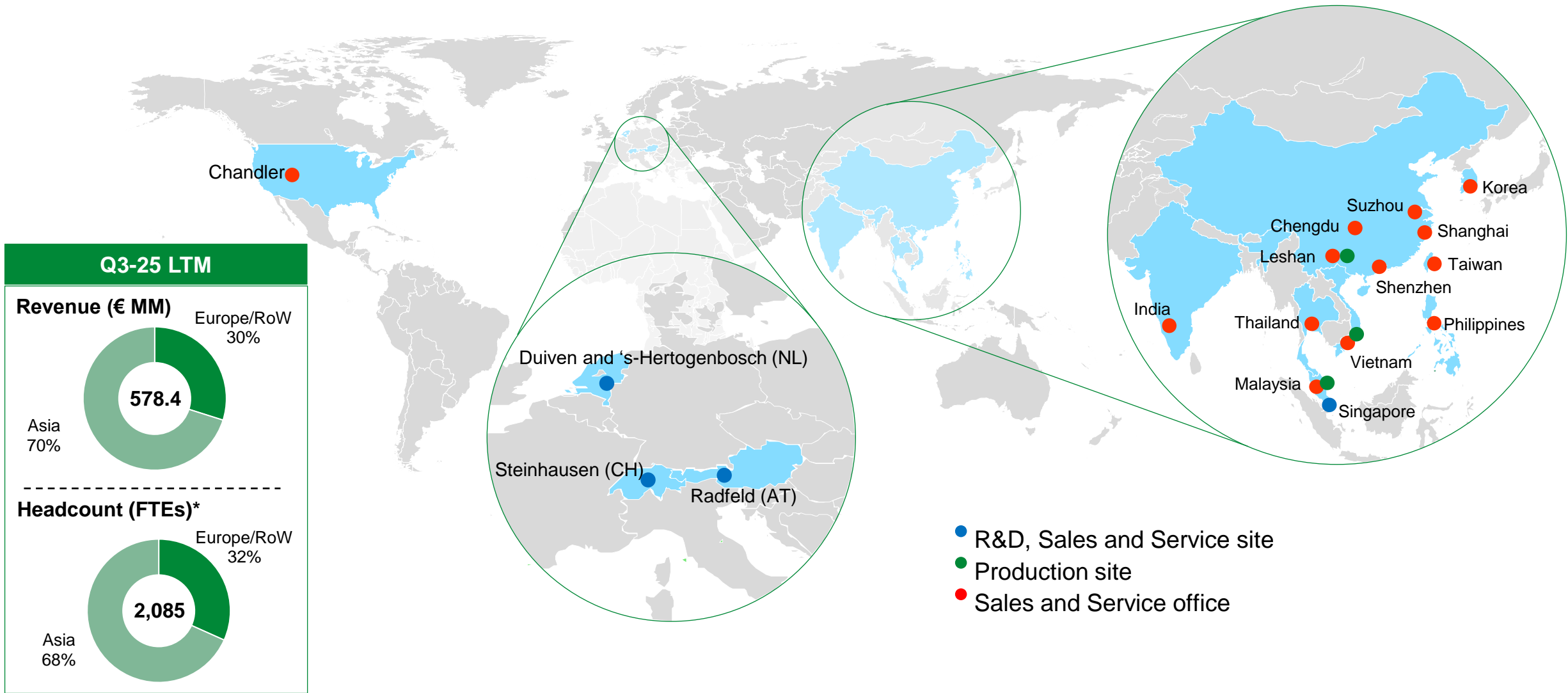


Auto/
Industrial
21%



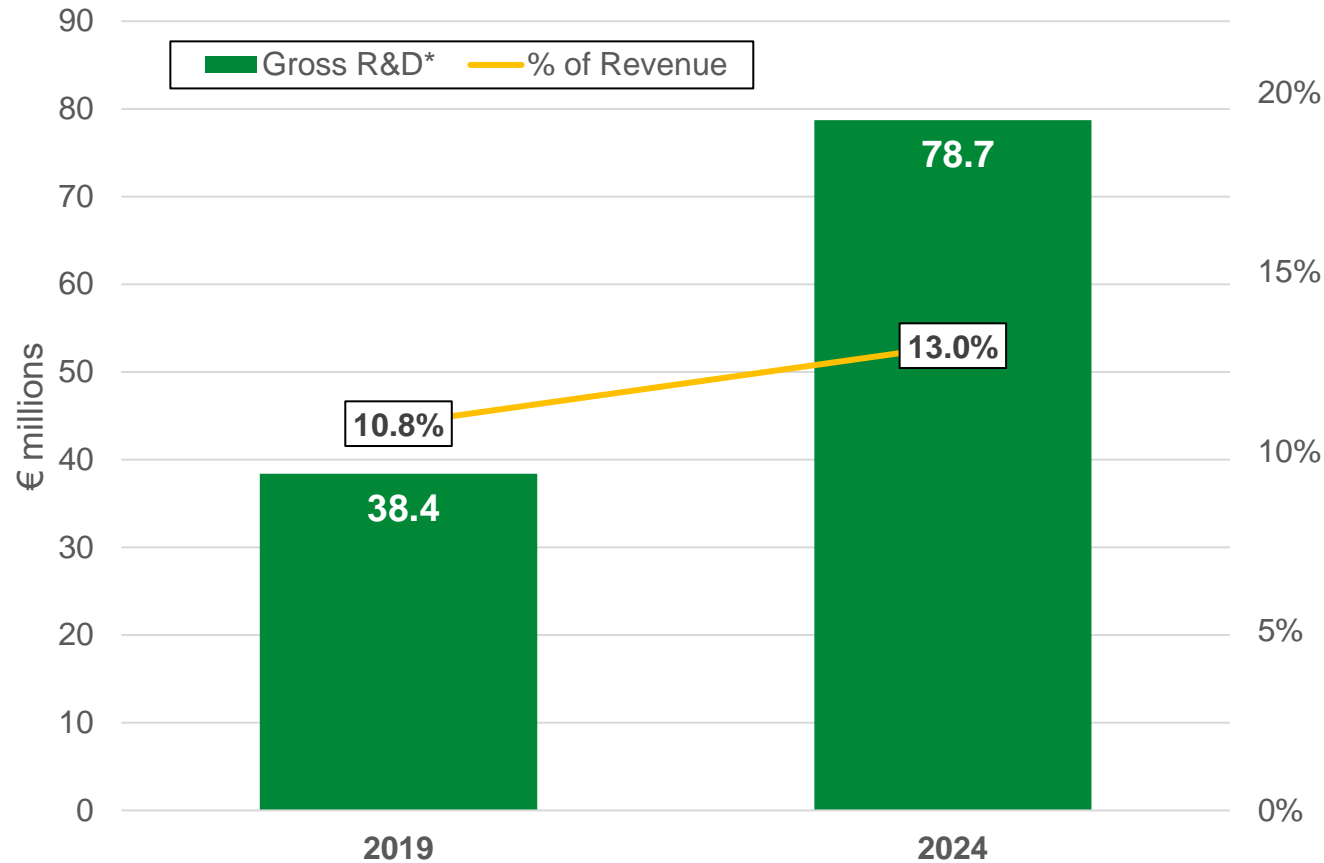
Fiscal 2024 data.

Global Operations Supported by European Development Centers and Asian Production Footprint/Supply Chain



* Headcount per quarter ending. Including temporary headcount.

Significant R&D Investment in Support of New Product Introductions



* Gross R&D spending excludes impact from capitalization/amortization of R&D costs

Innovation is a key driver of our business:

- New opportunities for each next-generation advanced packaging system

Significant R&D investment in advanced packaging over past 5 years to support:

- New 2.5D/3D IC assembly structures for AI
- Portfolio enhancements for next market upcycle

Key areas of current focus:

- 50 nm accuracy hybrid bonder
- TCB Next for memory and logic applications
- Advanced CoWoS:
 - 1 micron accuracy Evo
 - Next gen flip chip

Summary Financials

Year Ended December 31, (€ MM)	2023	2024	YTD Q3-25	YTD Q3-24
Orders	548.3	586.7	434.6	464.8
<i>Growth (%)</i>	-17%	+7%	-7%	
Revenue	578.9	607.5	425.0	454.1
<i>Growth (%)</i>	-20%	+5%	-6%	
Gross Profit	375.8	395.9	268.0	297.8
<i>Margin (%)</i>	65%	65%	63%	66%
EBITDA	239.1	224.2	140.7	166.2
<i>Margin (%)</i>	41%	37%	33%	37%
Operating Income	213.4	195.6	116.8	145.0
<i>Margin (%)</i>	37%	32%	27%	32%
Net income	177.1	182.0	88.8	122.7
<i>Margin (%)</i>	31%	30%	21%	27%
Net Cash*	113.0	143.8	-7.8	110.7

Long-term growth in cyclical business

- Increased revenue, profitability and market share per cycle

Strong margins and profitability

- Attractive gross and net margins maintained through cycles due to advanced packaging product mix, cost control efforts, flexible supply chain and Asian production

YTD Q3-25 results reflect contrasting growth trends:

- AI strength vs. mainstream assembly weakness
- Q3-25 orders up 36.5% vs. Q2-25 and 15.1% vs. Q3-24 due to increased demand by Asian subcontractors for 2.5D AI applications
- Gross margin at lower end of target model due to significantly lower USD vs. EUR
- Operating income levels also reflect increased R&D and sales/service to support wafer level assembly activities

Strong cash generation supports shareholder friendly capital allocation policy

* Calculated as Cash and cash equivalents, including deposits minus total debt. Excludes lease liabilities.

Prior Long Term Target

€ 1 billion +++

40%+

62 - 66%

35 - 50%

Net Zero GHG by 2030

100% from renewable sources

Revenue

Addressable Market
Share

Gross Margin

Operating Margin

Scope 1 & 2 Emissions

Global Energy Needs

New Long Term Target

€ 1.5 - 1.9 billion

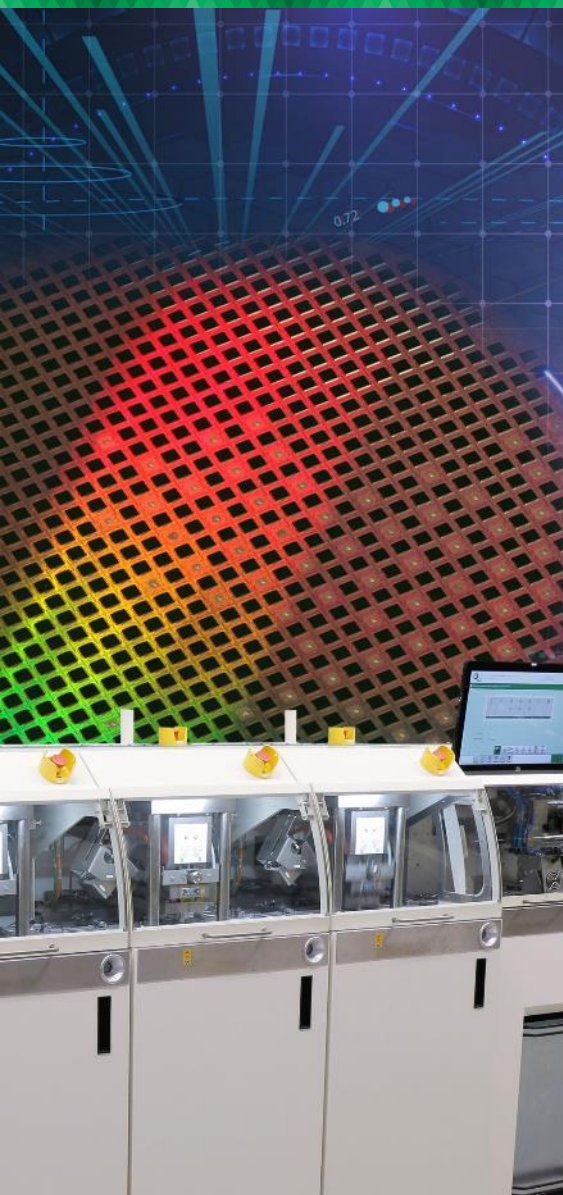
40%+

64 - 68%

40 - 55%

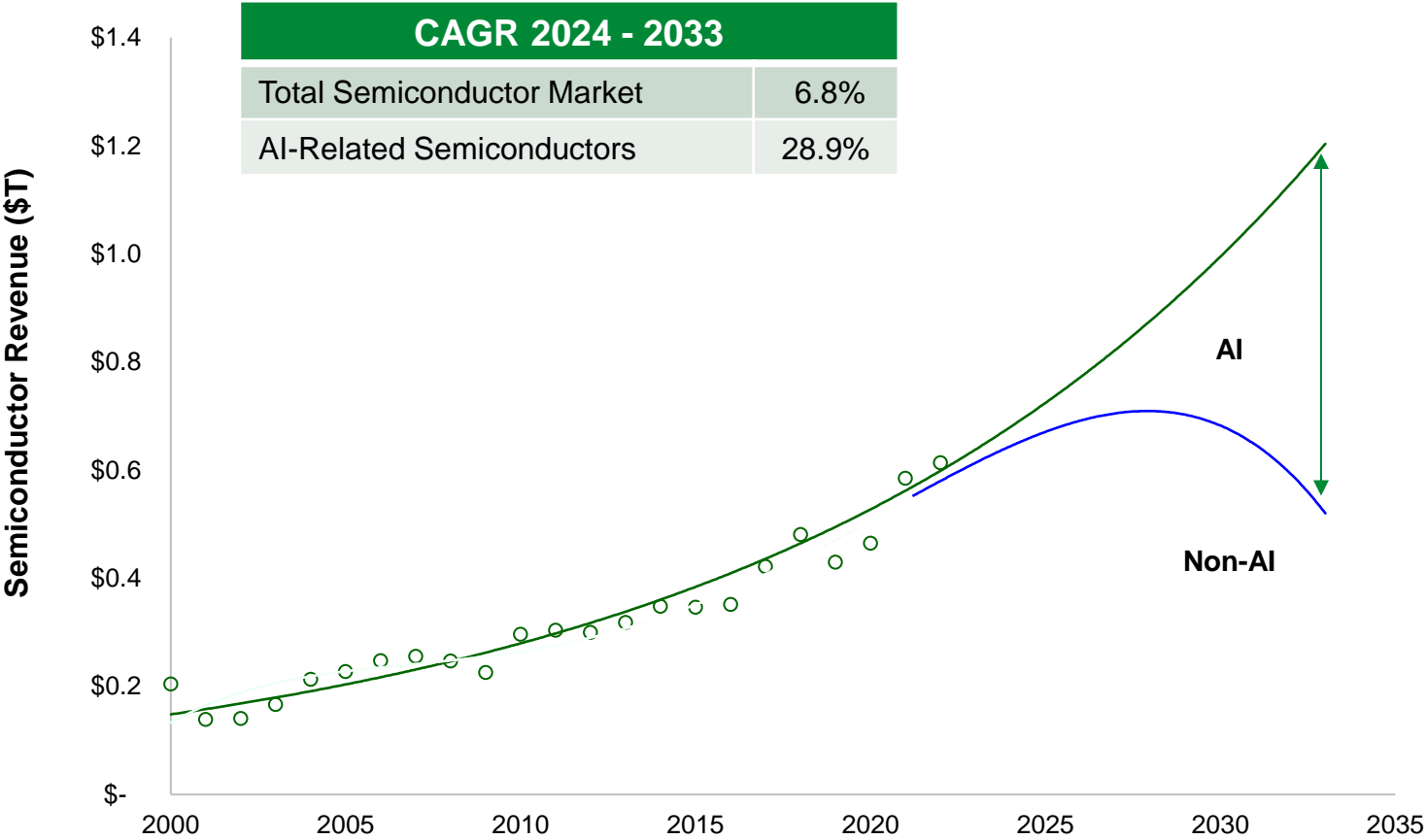
Net Zero GHG by 2030

100% from renewable sources



II. MARKET OVERVIEW

AI is Driving Long-Term Semiconductor Revenue Growth



Sources: TechInsights 2025, Precedence Research Nov 2024



Humanoid Robotics



Autonomous Taxis



AI Wearables (AR/VR)



AI Smartphones



AI Personal Computers

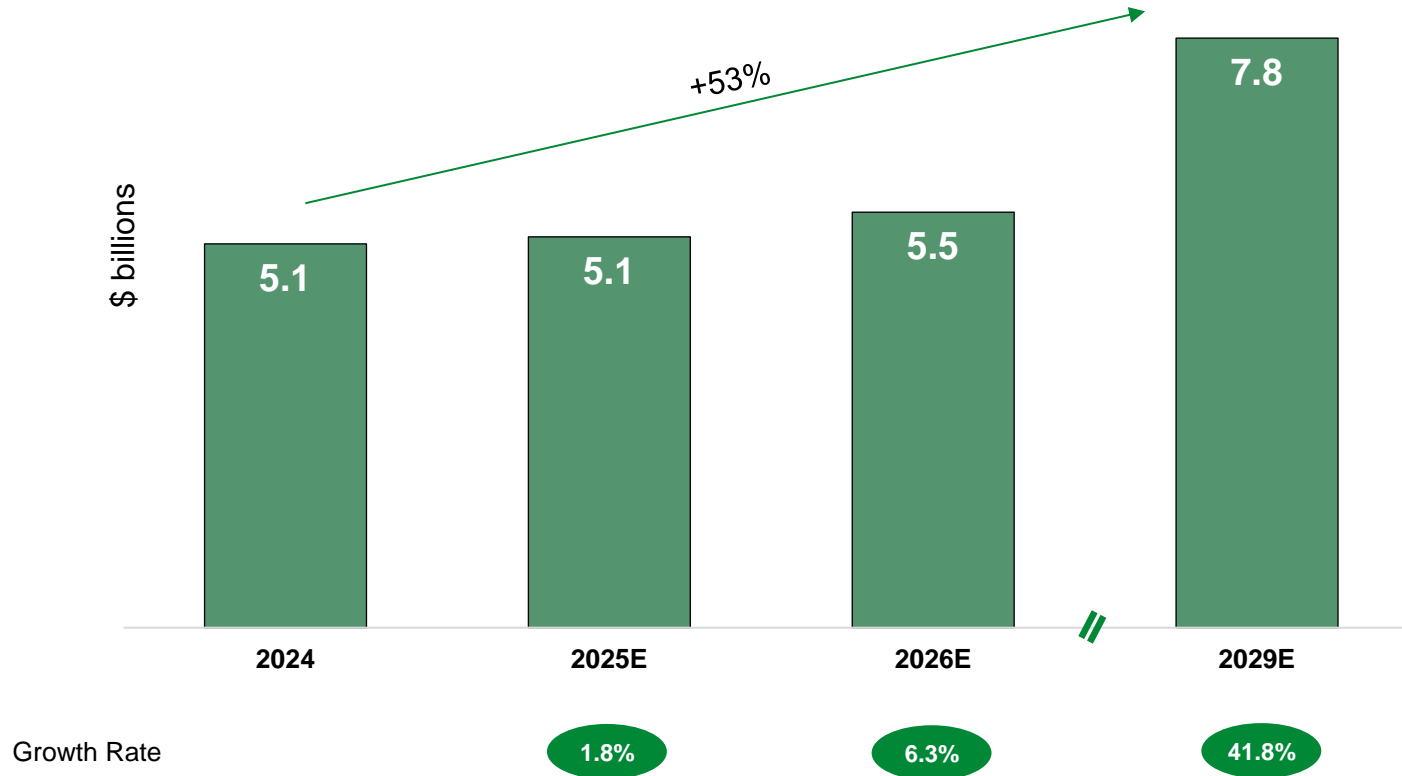


Data Center AI Infrastructure

Approximately \$100B investment in progress or planned

Packaging Fab Projects	# Projects	Cost (\$B)
Taiwan	4	26.1
USA	6	24.5
Europe	4	9.3
Korea	2	9.1
Singapore	1	7.0
China	7	6.3
India	2	6.0
Malaysia	1	1.3
Vietnam	1	1.0

Source: TechInsights, Besi May 2025



Near term assembly growth revised downwards by Techinsights for 2024-2026

- 8% increase anticipated now for 2024-2026
- Vs. 59% at beginning of year
- Strength in AI and HBM applications offset by weakness in many mainstream markets

Long-term growth trends intact:

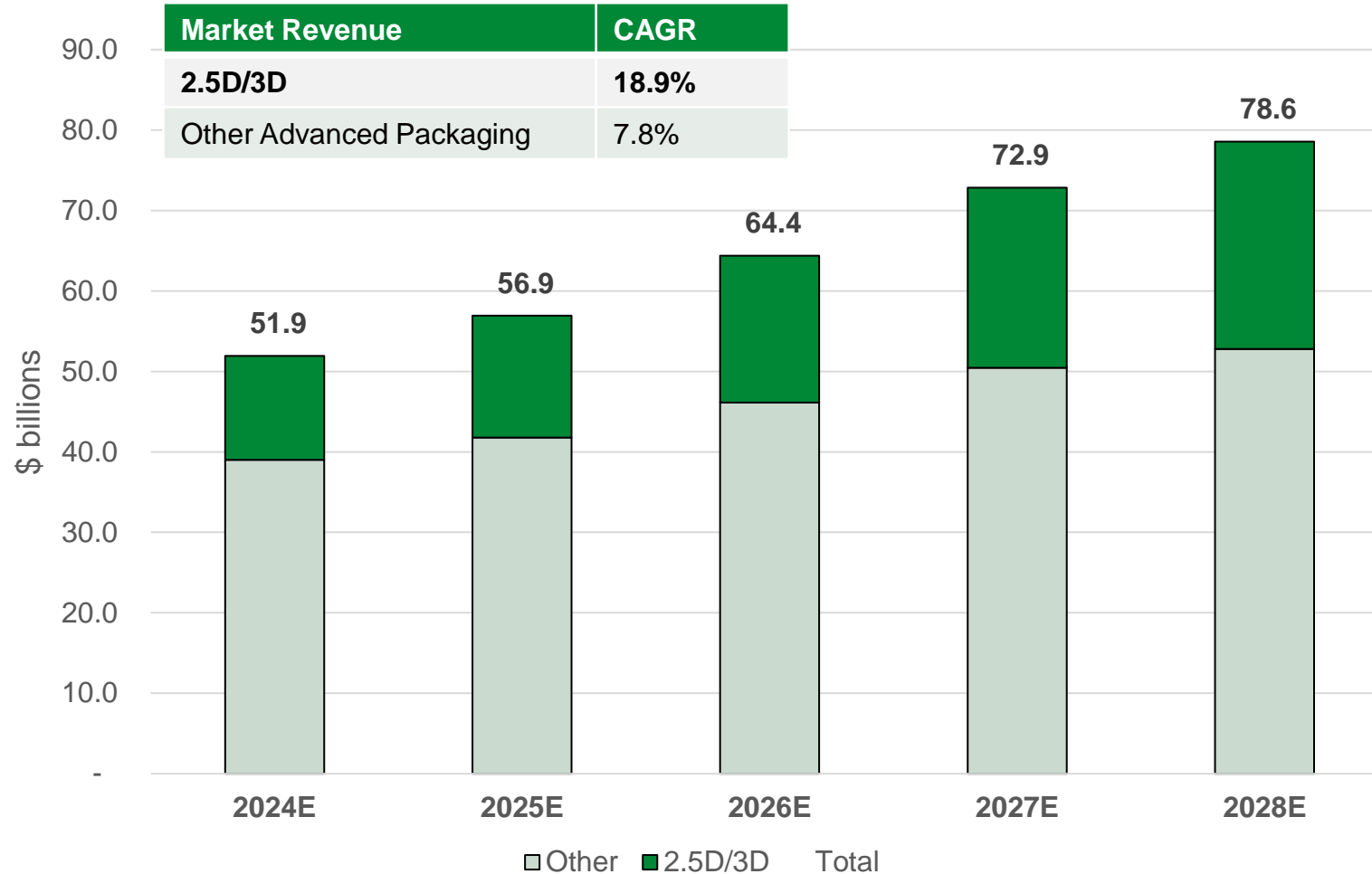
- 53% increase expected 2024-2029
- Expansion of AI/use cases
- Advanced packaging growth expected in all end-user markets

Besi expects to significantly outperform assembly market growth

Source: TechInsights, September 2025. Assembly equipment revenue excludes service revenue

Advanced Packaging Revenue Forecast to Grow Rapidly

2.5D/3D Fastest Growing Segment

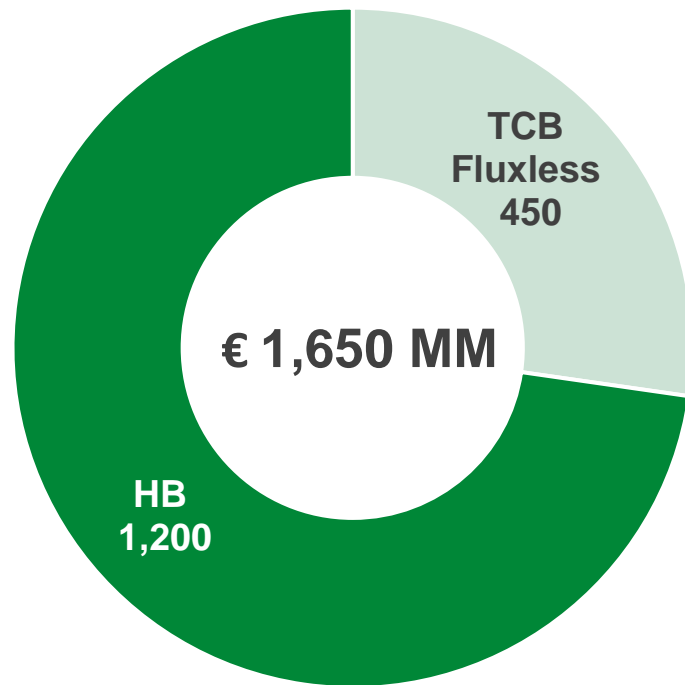


Besi Portfolio Well Positioned by Node Size and Accuracy

- ~70% of Besi equipment revenue from advanced packaging
- ~50% equipment revenue from advanced die placement (< 7 micron accuracy)
- ~50% of revenue AI-related
- Entering Fluxless TCB market

Source: Yole, December 2024

Estimated 2030 Hybrid Bonding & TCB Fluxless Market Size (€ MMs)



Hybrid bonding estimated to be largest assembly segment by 2030

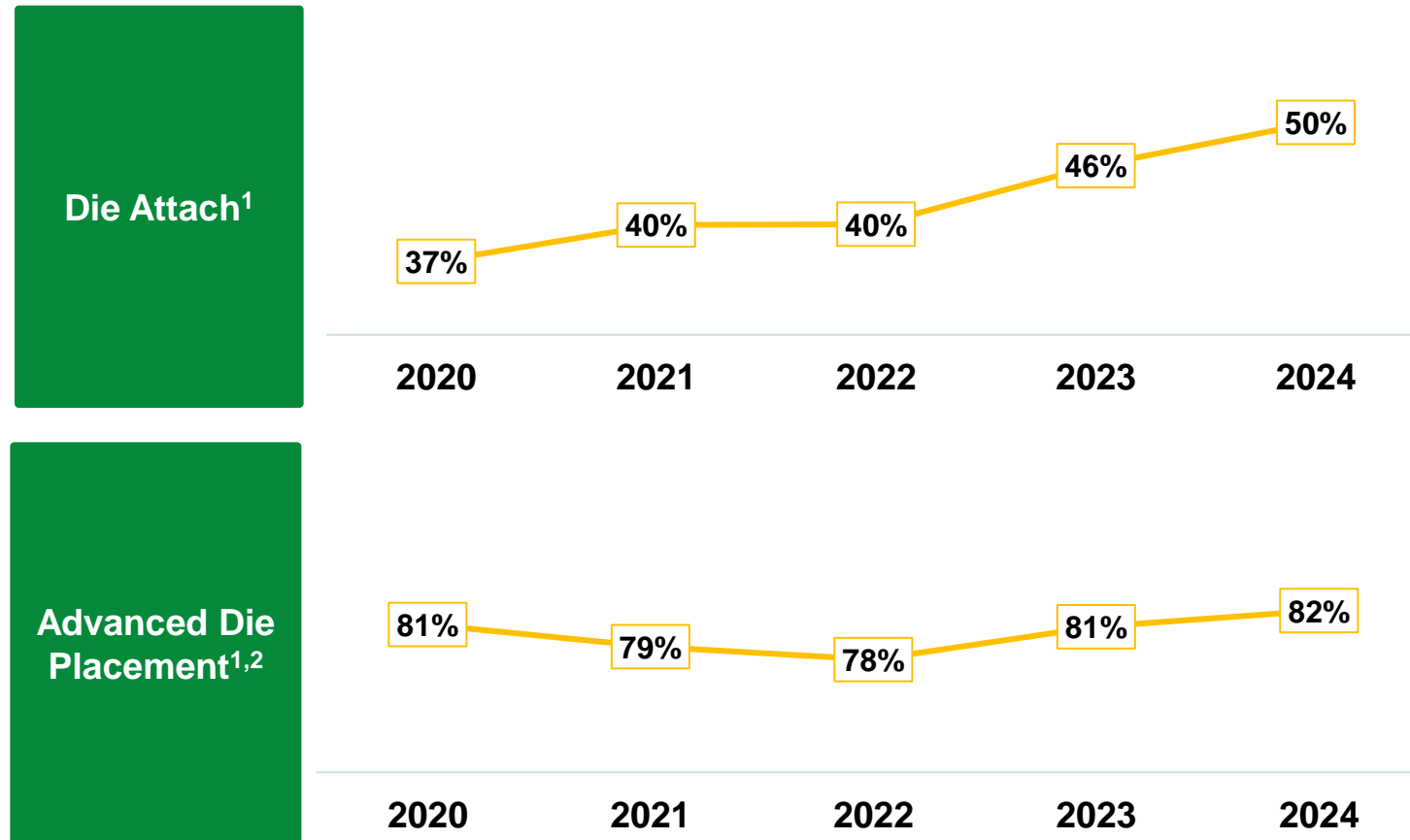
- Assumes transition from TCB to hybrid bonding as from HBM5
- Estimated market size in 2030 = ~350 units (mid case)

Besi entering Fluxless TCB market

- Emerging market with significant growth potential
- Focused on highest value added advanced chiplet and memory applications
- Estimated market size in 2030 = ~100 units (mid case)

Source: Besi estimates. Mid case scenario hybrid bonding

Leading Market Shares in Besi's Key Die Attach Markets



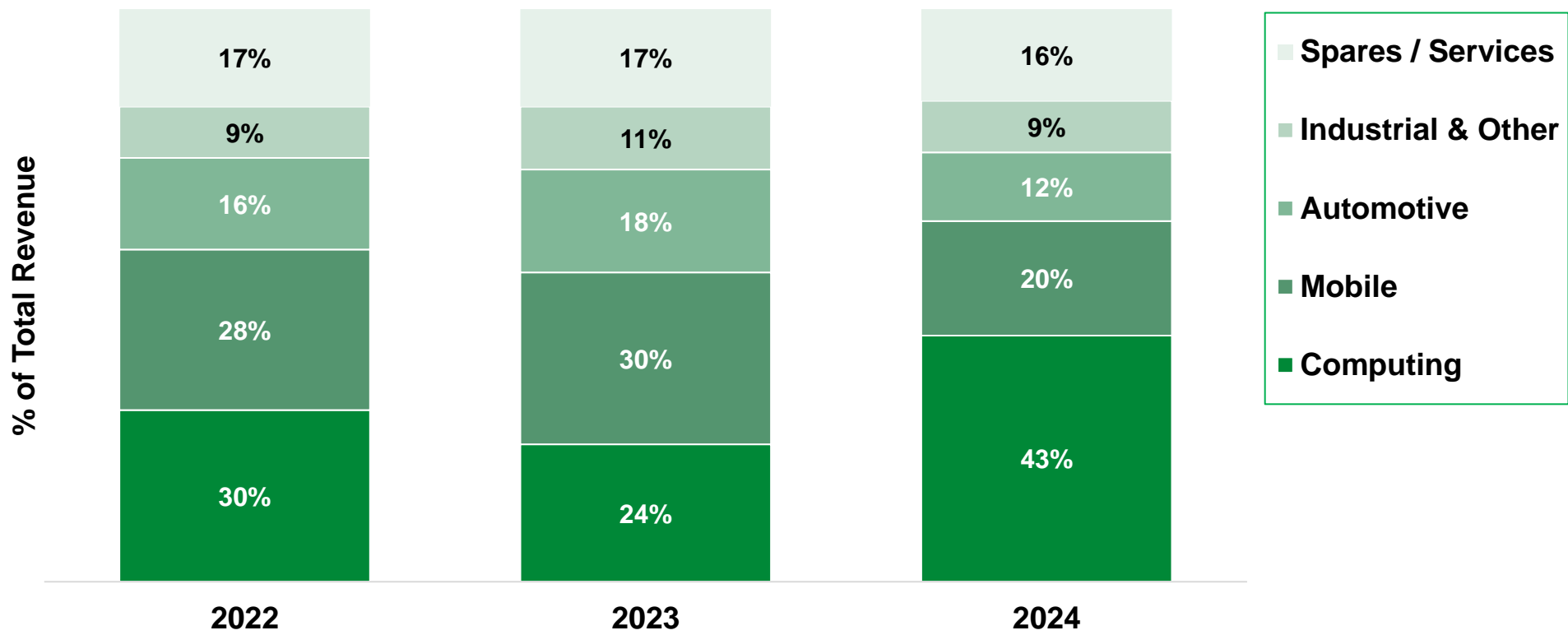
Source: TechInsights, September 2025

1) Excludes TCB, wire bonding, dicing, and other

2) Advanced die placement defined as < 7 micron accuracy per TechInsights

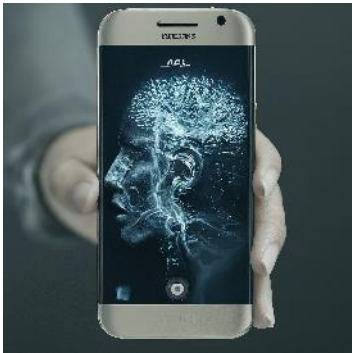


III. END-USER MARKET TRENDS



Principal Growth Drivers in Besi's End-User Markets

Computing	Mobile	Automotive	Industrial / Other
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Generated by ImageFX



Generative AI	On Device AI	Autonomous Driving	Factory Automation
<ul style="list-style-type: none">• Datacenters• Edge AI tablets/PC/laptops• Gaming	<ul style="list-style-type: none">• Adv. cameras & 3D imaging• 5G advanced → 6G• Under display biometric ID• New AR/VR devices	<ul style="list-style-type: none">• Advanced cameras/sensors• Vehicle electrification• SiC & GaN power devices• Connectivity/infotainment	<ul style="list-style-type: none">• Smart grid• Industrial IoT• Clean energy

Advanced Packaging Solutions Critical to Development of Next Generation Applications

Besi's Advanced Packaging Solutions

- Hybrid bonding
- TCB chip-to-wafer
- High accuracy flip-chip
- Fan-out, embedded bridge
- EVO multi module
- Thermal management
- Wafer/substrate molding



2.5D/3D Process Applications

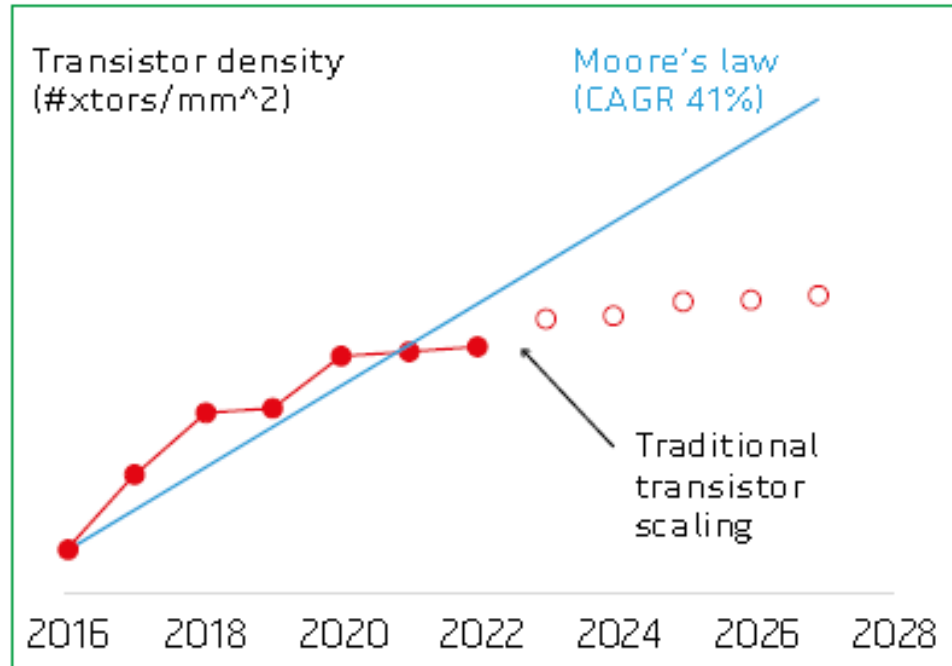
- 3D IC logic
- High Bandwidth Memory (HBM)
- Chip on Wafer on Substrate (CoWos)
- Photonics chiplets
- Die embedding
- Thermal lid attach
- Encapsulation



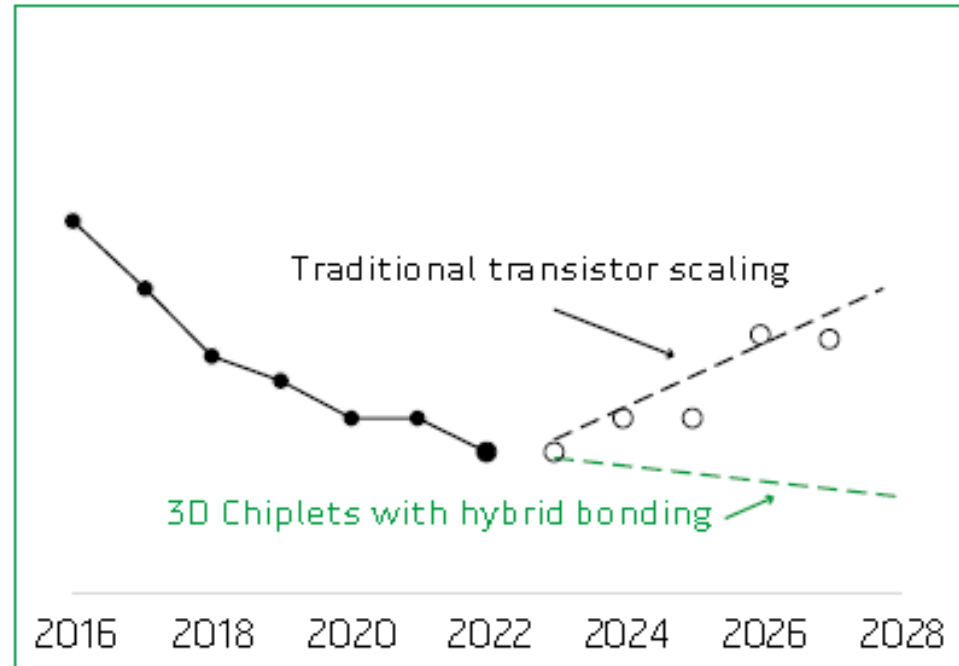
End-User Applications

- Mobile:
 - On-device AI
 - Advanced cameras and sensors
 - 5G/6G mobile
- Computing:
 - Datacenters
 - Edge AI laptops/PCs
 - New AR/VR devices
- Auto/Industrial:
 - Autonomous driving
 - Vehicle electrification
 - Smart grid/clean energy

Moore's Law Scaling Is Slowing



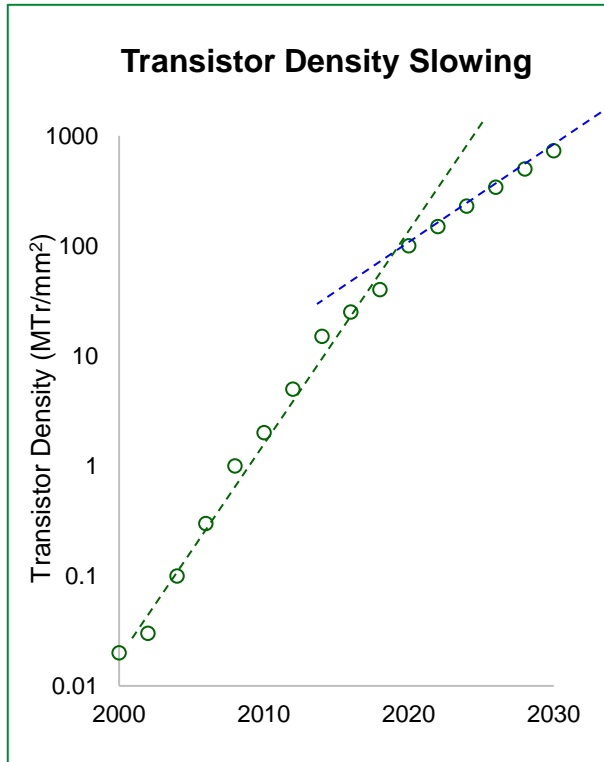
Cost Per Transistor Is Increasing



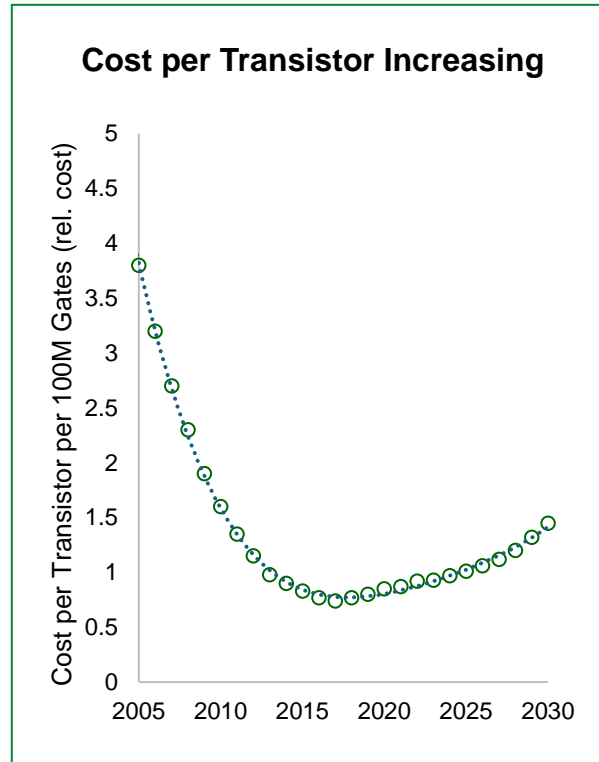
Source: Qualcomm and Besi

Slowing of Moore's Law Accelerates Adoption of Chiplets & 3DIC

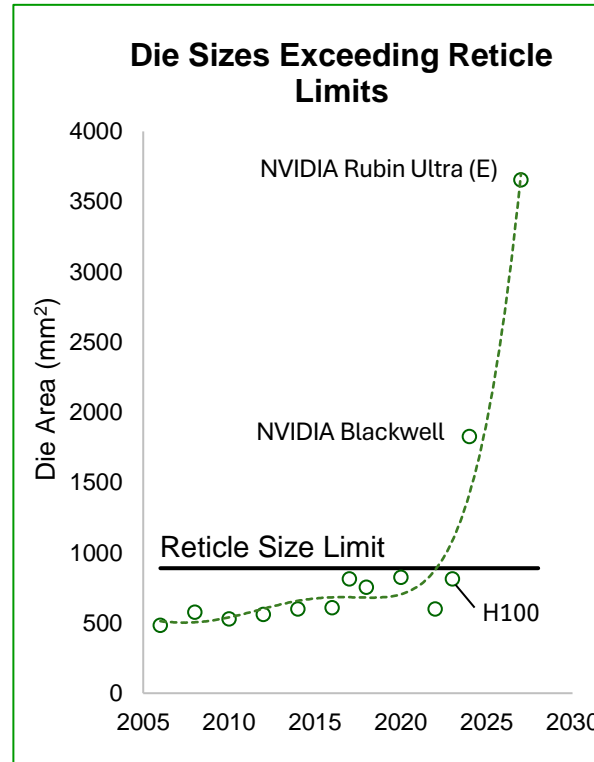
- **Moore's Law slowing** as data volumes grow exponentially and commercial applications expand
- **Customers adopting chiplets**, connected via hybrid bonding and TCB, to optimize device function per node and reduce cost



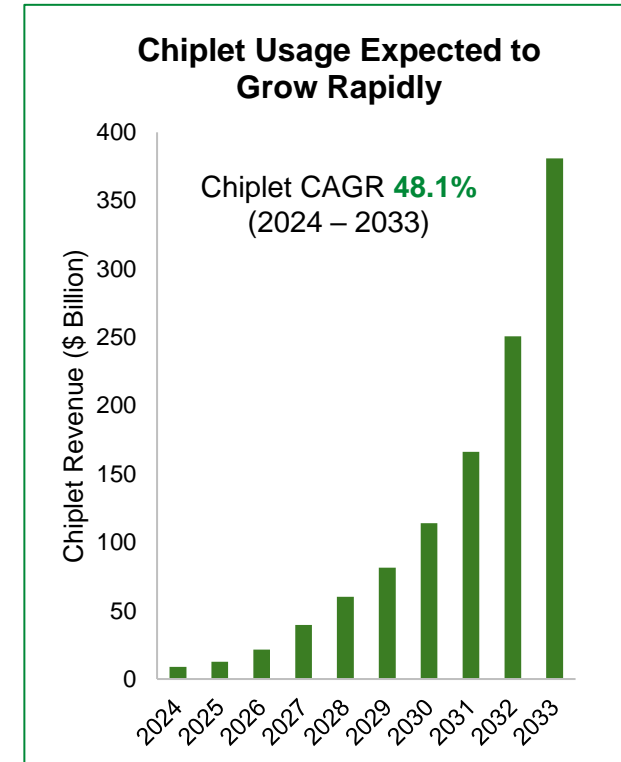
Source: IRDS 2023 Edition



Source: Tom's Hardware, IEDM 2023 - Google



Source: Besi

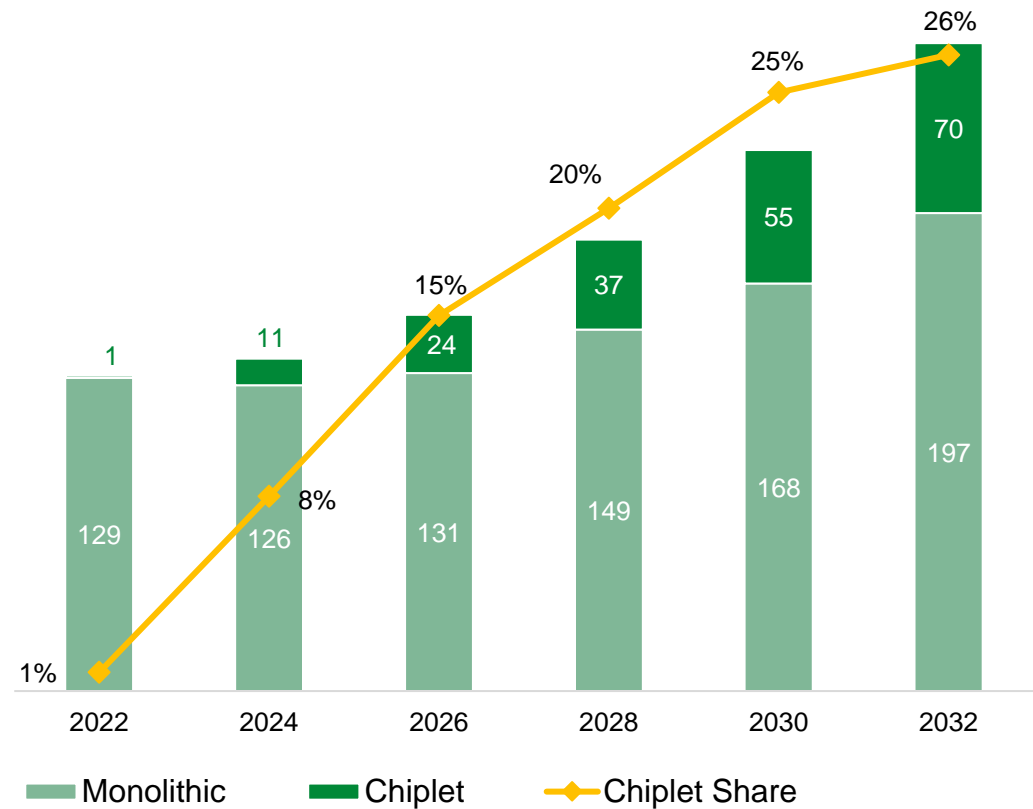


Source: Dimension Market Research January 2025

Chiplet Usage Increasing Rapidly Due to Favorable Economics for Advanced Applications

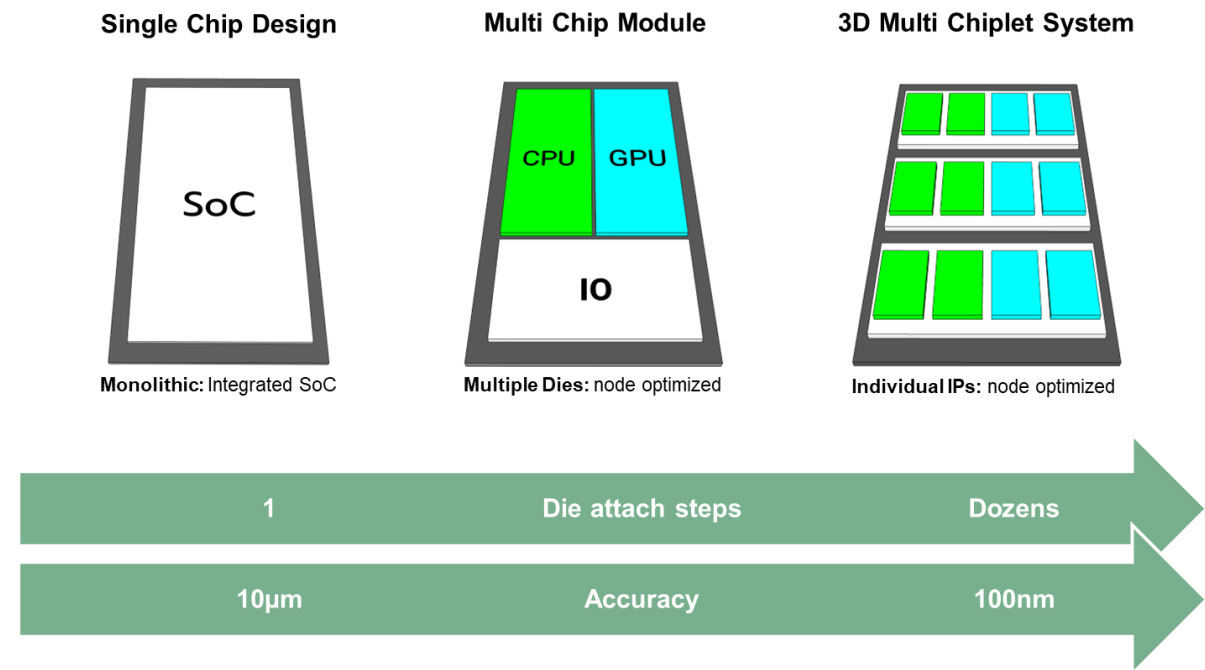
Wafer Foundry Addressable Market

\$ Bn



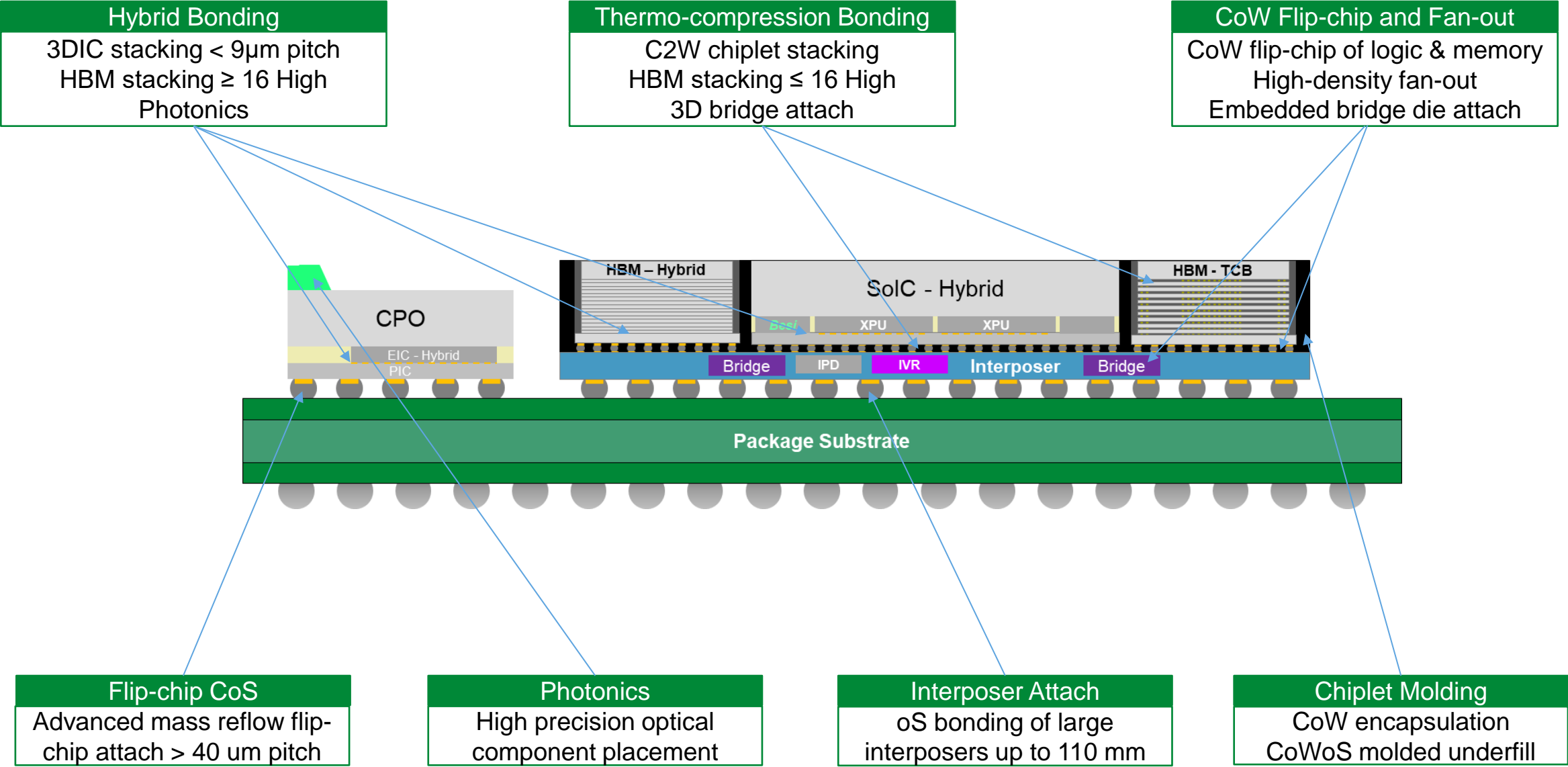
Source: CSM foundry model, ISM foundry model

Chiplet Adoption Drives Higher Capital Intensity



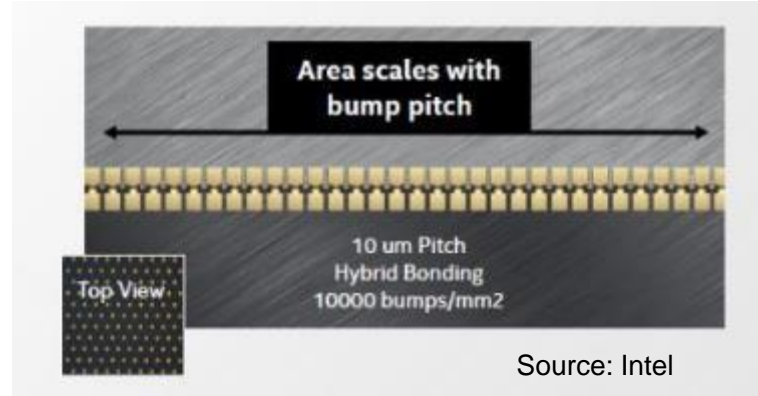
Source: Intel

AI Chiplet Packages Require a Variety of Advanced Packaging Solutions



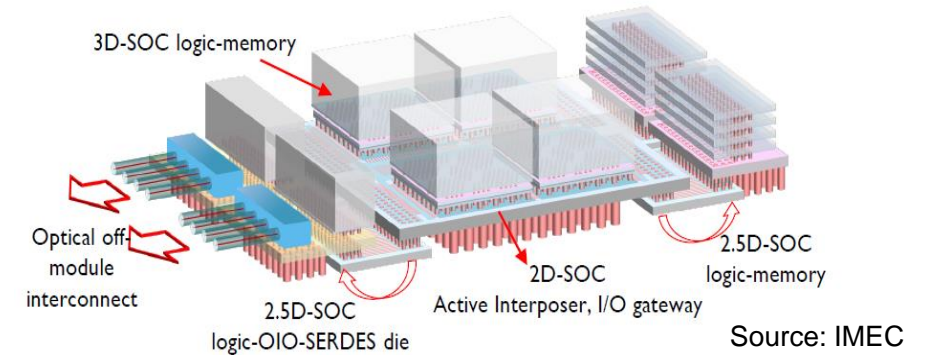
Hybrid Bonding Enables Faster, More Complex Devices With Submicron Placement Accuracy and Less Power/Heat Generation

Direct Cu-Cu 3D Interconnect



1,000x increase in contact density

Heterogeneous Chiplet Integration



More transistors per package

New Chip Architectures

- Quasi-monolithic 3D
- Optimal use of nodes
- Customized designs
- Highly configurable

Increased Performance

- Highest compute power
- Increased data transfer
- Higher bandwidth
- Higher speed

Lower Cost of Ownership

- Higher die yield
- Lower energy per bit
- Lower cost per contact
- Lower heat dissipation

Hybrid Bonding Will Become Mainstream Advanced Packaging Solution



Perception: *Hybrid bonding is too expensive for widespread adoption*

Micro-bump C2W TCB	Performance Factor	Hybrid Bonding
1X	Interconnect Density	15X
1X	Speed	11.9X
1X	Bandwidth Density	191X
1X	Energy Efficient Performance, EEP	>100X
10X	Cost per Interconnect*	1X

Reality:

HB provides superior cost:






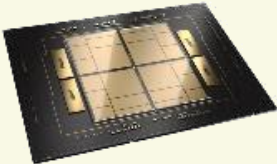
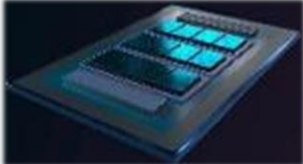
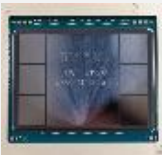
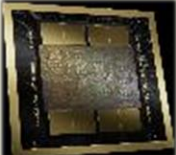

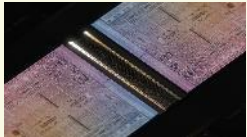
- Requires higher infrastructure cost but delivers 10x lower cost per interconnect
- Increases energy-efficient device performance by >100x, lowering data center operating cost
- Reduces HBM stack temperature by 20%, lowering system cooling cost
- Provides flexibility to combine most cost-efficient silicon nodes
 - First commercial product with hybrid interconnect was a consumer-oriented gaming CPU (AMD Ryzen)

In addition:

HB essential to semiconductor and system design progress:

- Enables more energy-efficient performance and the extension of Moore's law
- Enables HBM roadmap and tighter integration of optical and mixed signals

Important Process Step In Future Product Roadmaps

	SoC	Split Die	Chiplets and Hybrid Bonding	
AMD	Opteron Server CPUs	1st Gen EPYC CPU (2017)	2nd Gen EPYC (2019)	3rd Gen EPYC (2022) with Hybrid Bonding
				
intel		Sapphire Rapids CPU (2023)	Clearwater Forest CPU w/ Hybrid Bonding (2025)	
				
NVIDIA	H100 GPU	B100 GPU (2024)	Future chiplet architectures	
				
Apple	M1 MaxCPU	M1 Ultra CPU (2022)		
				

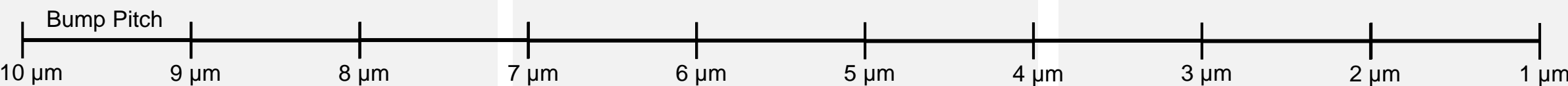
Besi's Hybrid Bonding Roadmap



Generation 1:
200nm



Industry Standard for
Hybrid Bonding



Generation 1+:
100nm



New Standard: 100nm
Bonder

10% Productivity increase

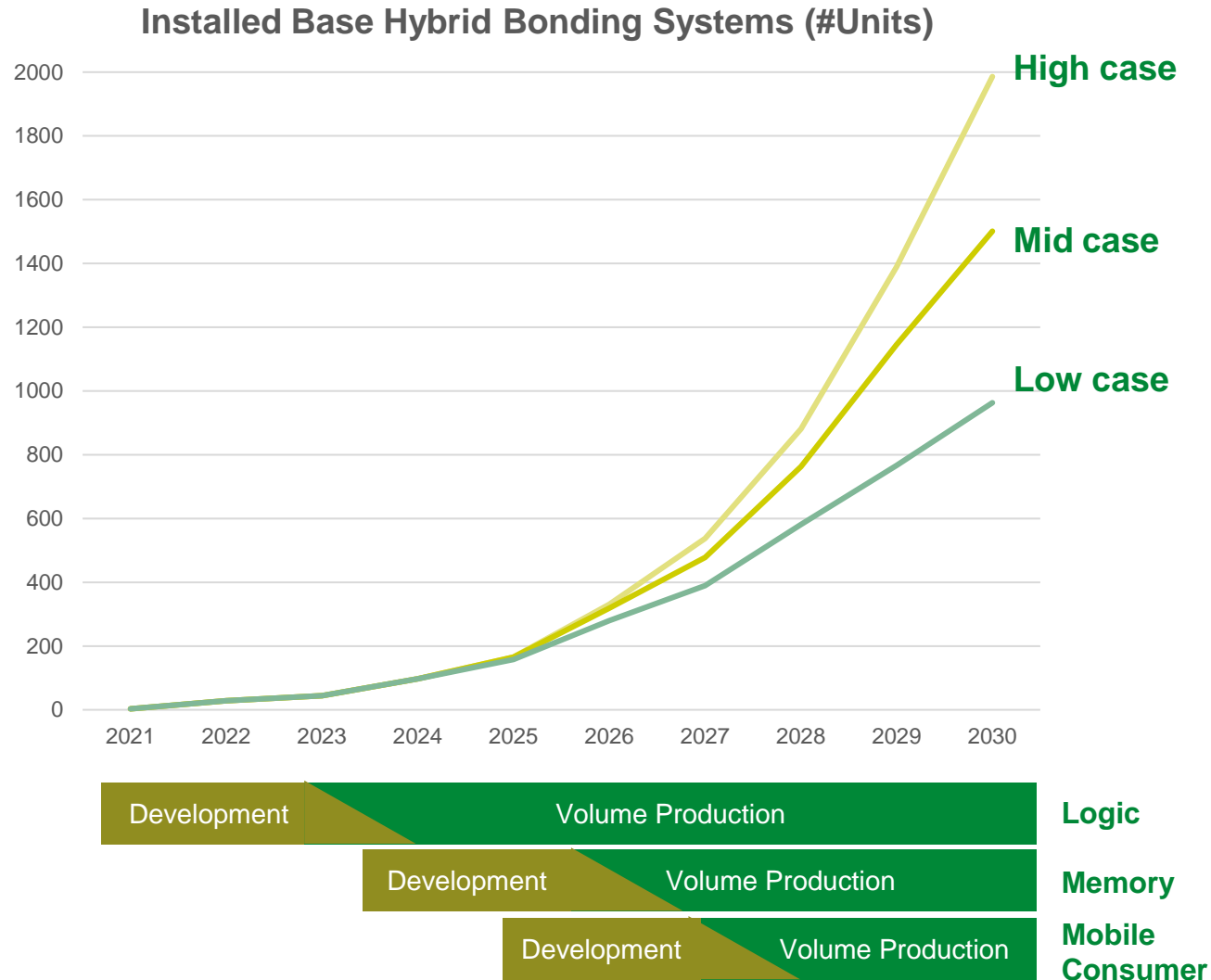
Generation 2:
50nm



Working on 50nm Bonder

30% Productivity increase

Hybrid Bonding Market Potential – Logic and Memory Cases Confirmed



Estimated 960 – 2,000 systems cumulatively by 2030
Up ~7% for low and mid cases vs. 2024 CMD

Low case (logic):

- Logic adoption confirmed
 - AMD and Intel progressing as expected
 - Broadcom adopting SoIC for custom AI ASICs
 - High-end PC/laptop CPUs expected to adopt SoIC by end of 2025
 - Many AI device players in development

Mid case (Memory & CPO):

- Memory adoption confirmed
 - All leading players evaluating both HB and TCB for HBM4
 - First hybrid bonded HBM4e 16 high stacks in 2026
 - HBM 5: Hybrid bonding only
- Co-packed optics moves from upside potential to reality

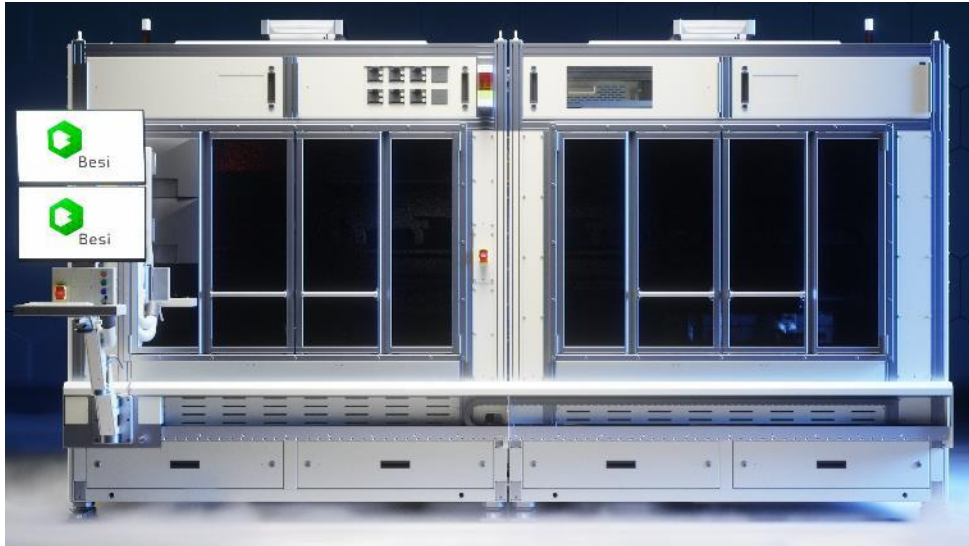
High case:

- Emerging applications becoming more tangible
 - Smart glasses adopting D2W fusion bonding
 - Micro displays
 - Sensors
 - Smartphones

Source: Besi estimates, June 2025

TCB Next Complements Hybrid Bonding To Offer Customers Complete Portfolio for Next Gen AI Applications

9800 TC Next Thermo Compression Bonder

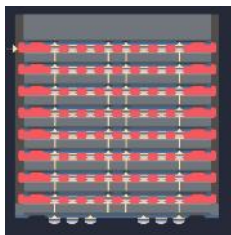


Key Features

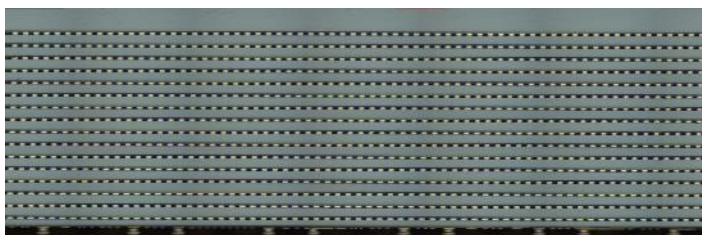
Best in Class C2W TCB for Chiplet Packages

- NCF, NCP, TC-CUF and TC fluxless bonding processes with micro-inert chamber
- Chip-to-Wafer and chip-to-substrate configurations
- 0.5 um placement accuracy for ultra fine pitch chiplets
- High throughput up to 2500 CPH. Dual gantry
- Front-end automation and process control
- AI^x active bond quality monitoring

HBM Stacking up to 16 die high

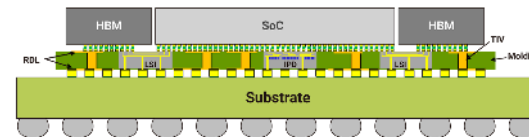


Source: SK Hynix

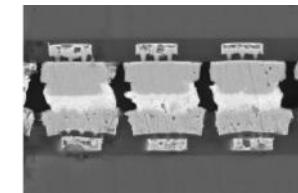


16 HBM die stacking example

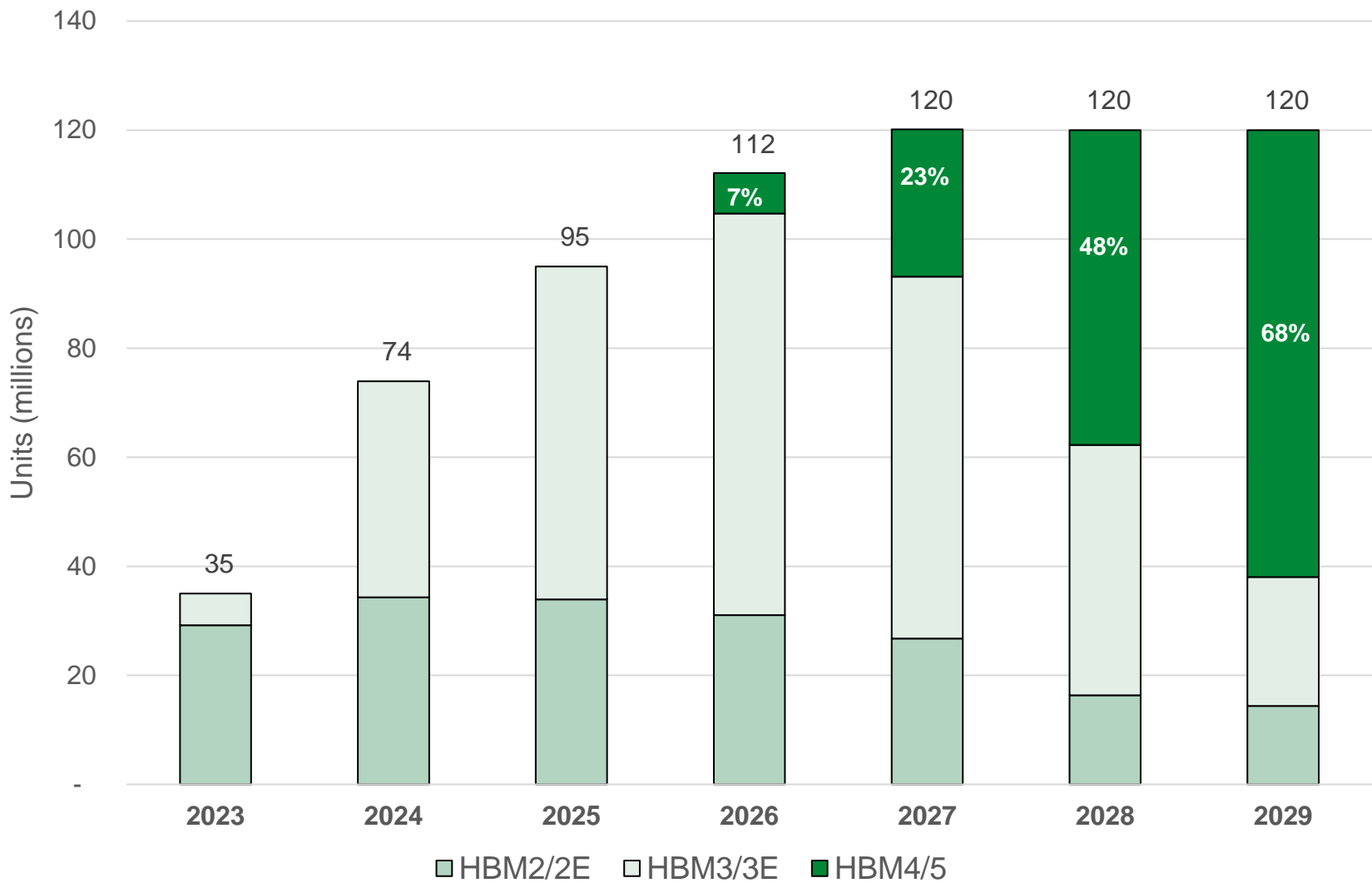
AI XPU and Advanced Logic Applications



Source: TSMC

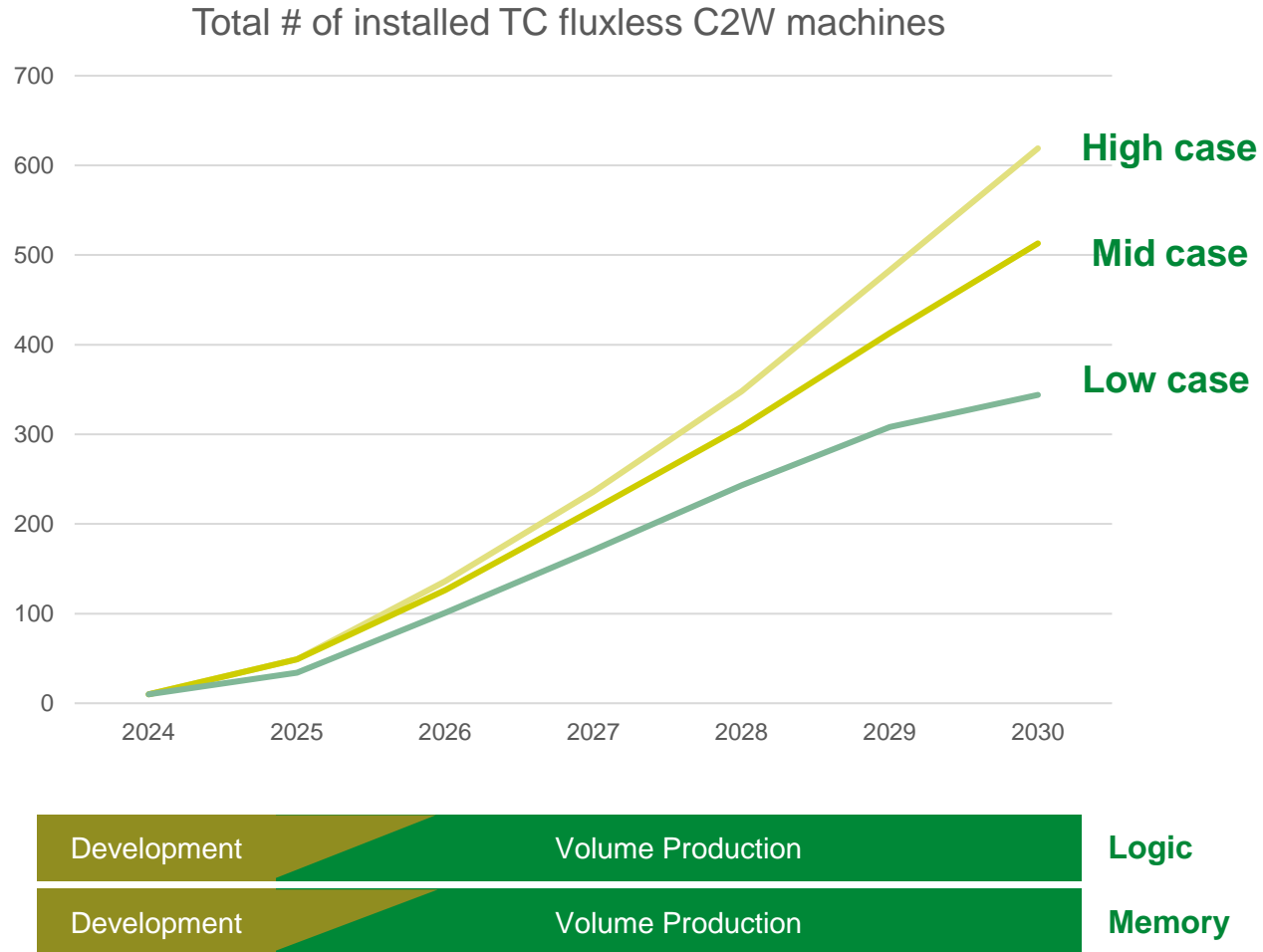


HBM4/5 Adoption Expected Starting in 2026. Important Drivers for Both Hybrid Bonding and TCB Next Growth



Source: Yole, December 2024

Fluxless TCB C2W Market Potential



Estimated 350 – 600 systems cumulatively by 2030

Fluxless TCB applications bridge gap between conventional TCB and hybrid bonding

Memory:

- Next generation AI devices driving strong HBM demand in near term
- Increased HBM stacking requirements driving TC technology towards fluxless

Logic:

- Requirements for increased accuracy and chiplet architectures driving conversion of mid-end logic applications from mass reflow flip-chip to TC fluxless

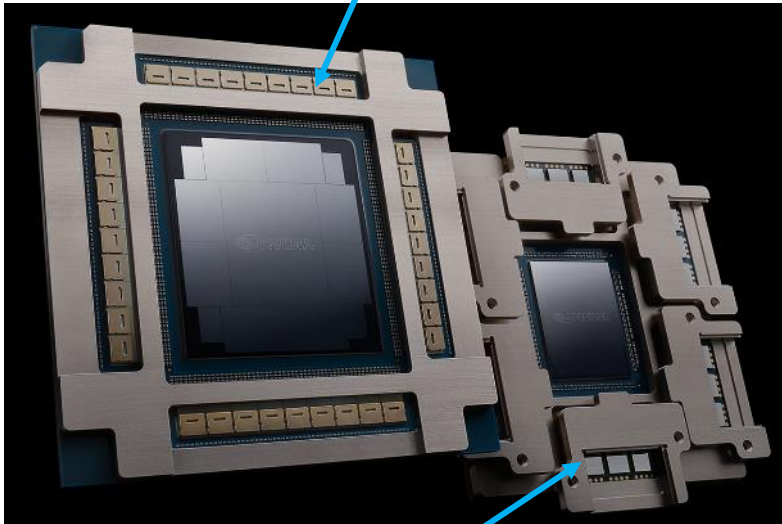
Source: Besi estimates, June 2025

Silicon Photonics Another Driver of 2.5D/3D Assembly Growth

NVIDIA Confirms Hybrid Bonding Adoption In CPO Switches

Introduced family of network switch products using co-packaged optics (CPO) in March 2025

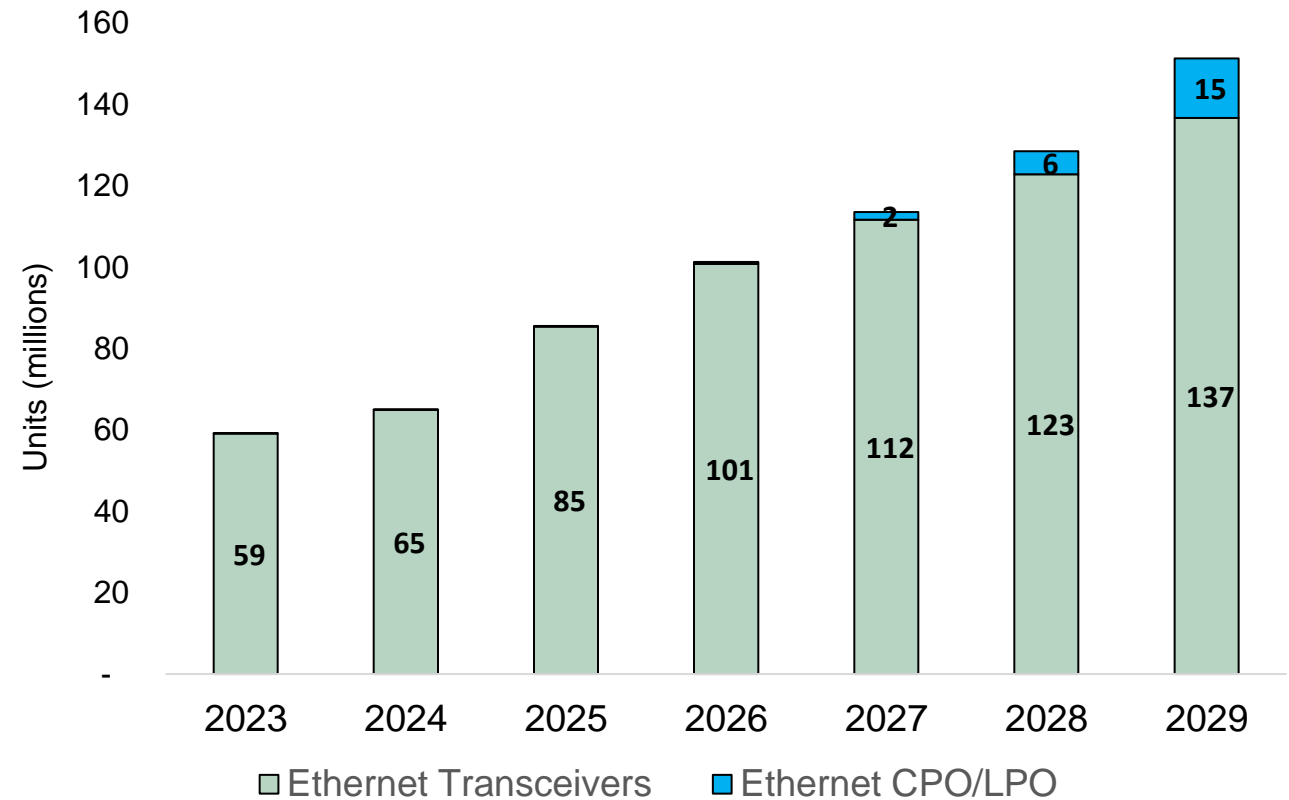
Spectrum-X™ Ethernet switch with 36 3D photonics chiplets



Quantum-X800 InfiniBand switch with 18 3D Photonics chiplets

- TSMC's COUPE technology uses hybrid bonding to assemble the 3D photonic chiplets
- Multiple hybrid bonded chiplets per switch device

Ethernet Transceiver Unit Shipment Forecast* 2023 – 2029



* Includes external pluggable optical transceivers and co-packaged optics.

Source: LightCounting October 2024

Generative AI accelerating

- Drives investments in next generation devices and applications requiring advanced packaging

New use cases emerging from cloud to edge computing to co-packaged optics

Promise of AI **requires new 2.5D/3D assembly solutions** to further Moore's Law

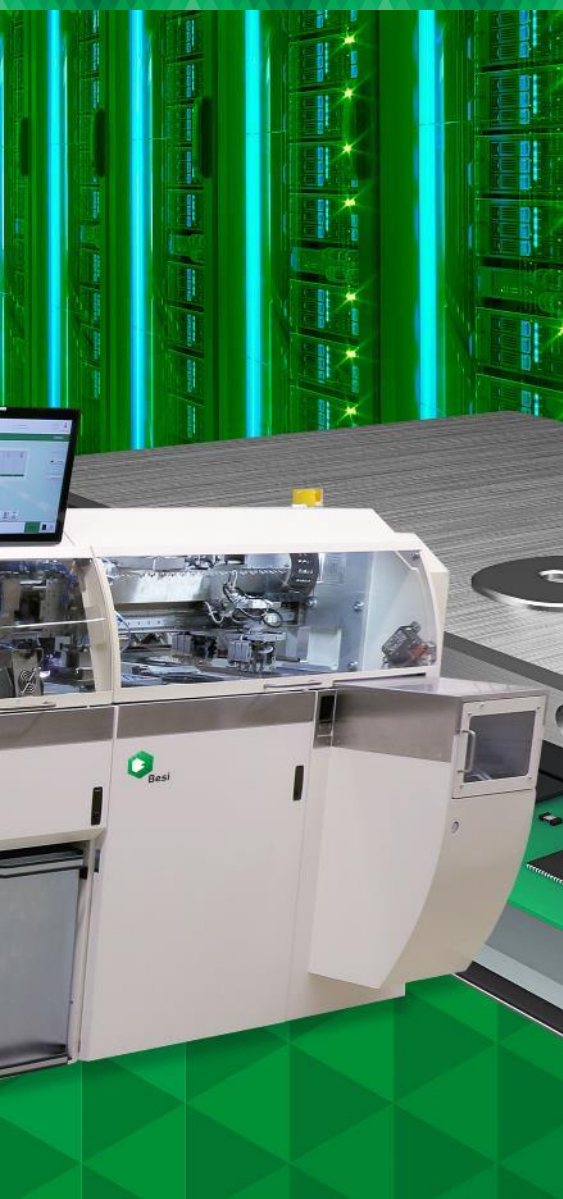
Advanced packaging one of **key differentiators to realize AI promise** including energy efficient data center performance and new consumer edge AI devices

Accelerated advanced packaging innovation expected in 2026-2030 across logic, memory, consumer and I/O

Expanded R&D investment continues

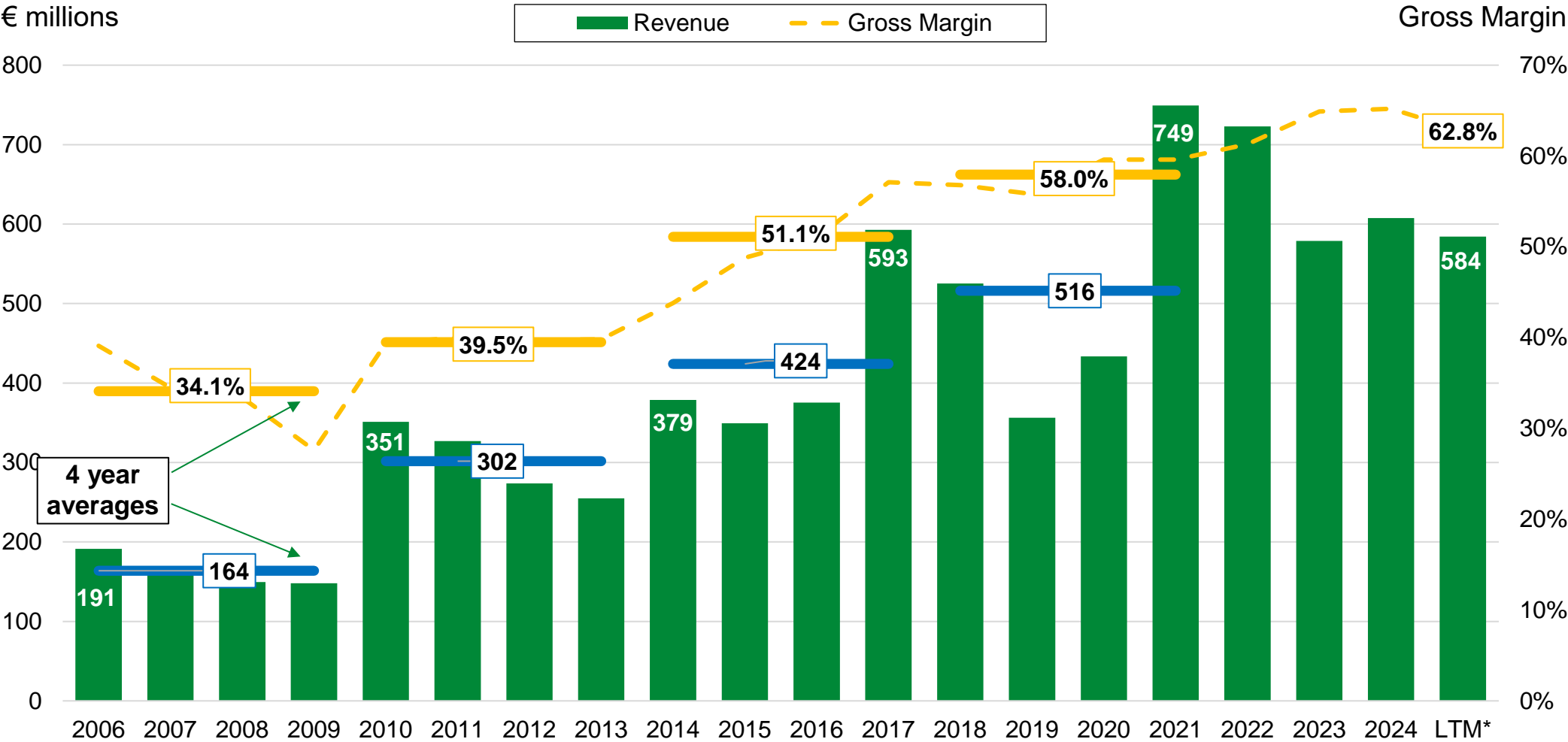
- YTD Q3-25 gross spending up 14.4% vs. YTD Q3-24
- New product introductions in 2025-2026 expected to accelerate growth and increase market share

Favorably positioned in highest growth segments: Datacenters, Photonics, AI PCs, Mobile, EV/autonomous driving



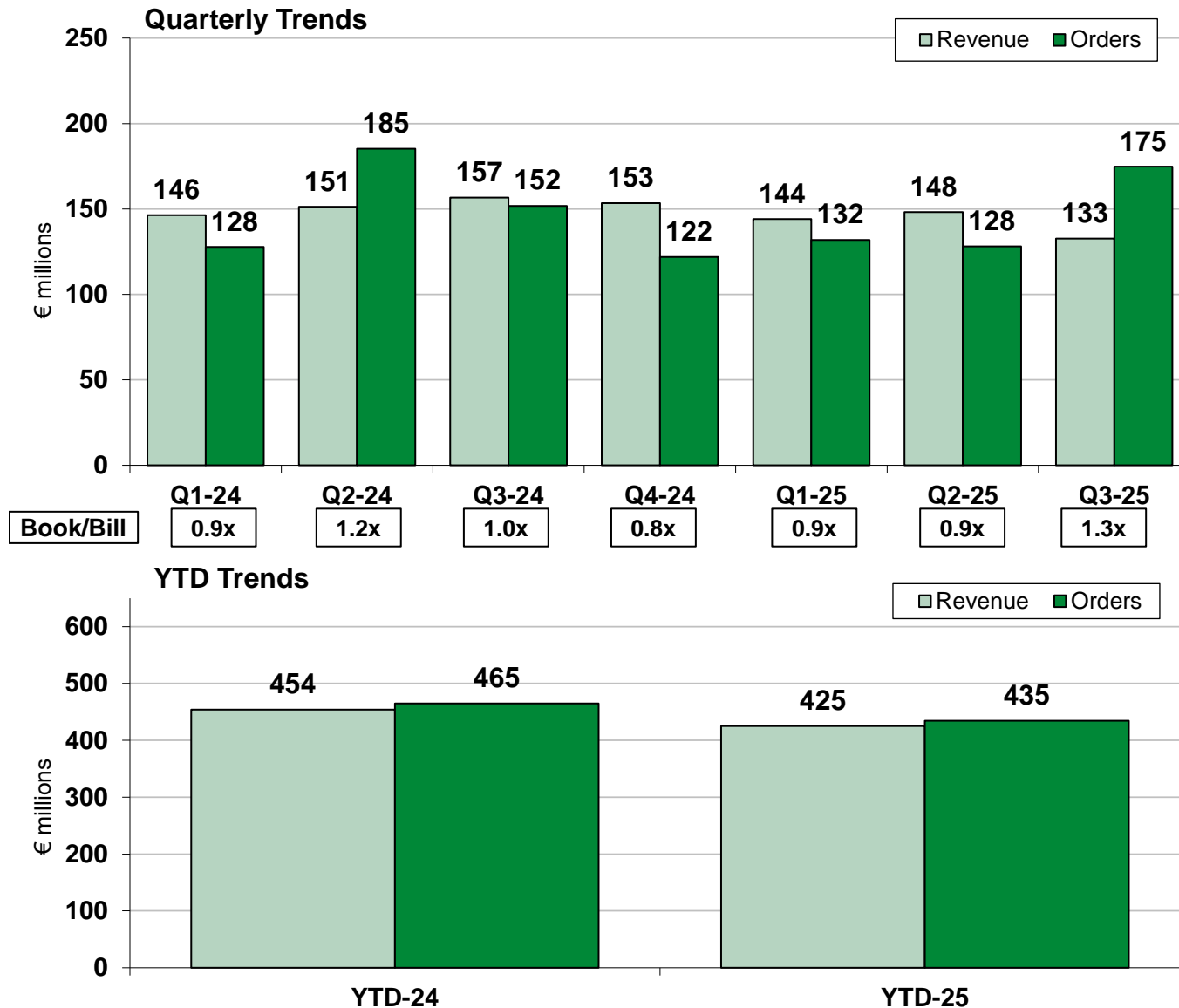
IV. FINANCIAL UPDATE AND SUMMARY

Higher Through Cycle Revenue and Gross Margin Trends



* LTM including midpoint of guidance for Q4-25

Revenue/Order Trends



Q3-25 vs. Q2-25

- **Revenue: -€ 15.4 million (-10.4%)**
 - At midpoint of guidance
 - Lower hybrid bonding and mobile shipments
- **Orders: +€ 46.7 million (+36.5%)**
 - Significant increase by Asian subcons for 2.5D datacenter and photonics applications

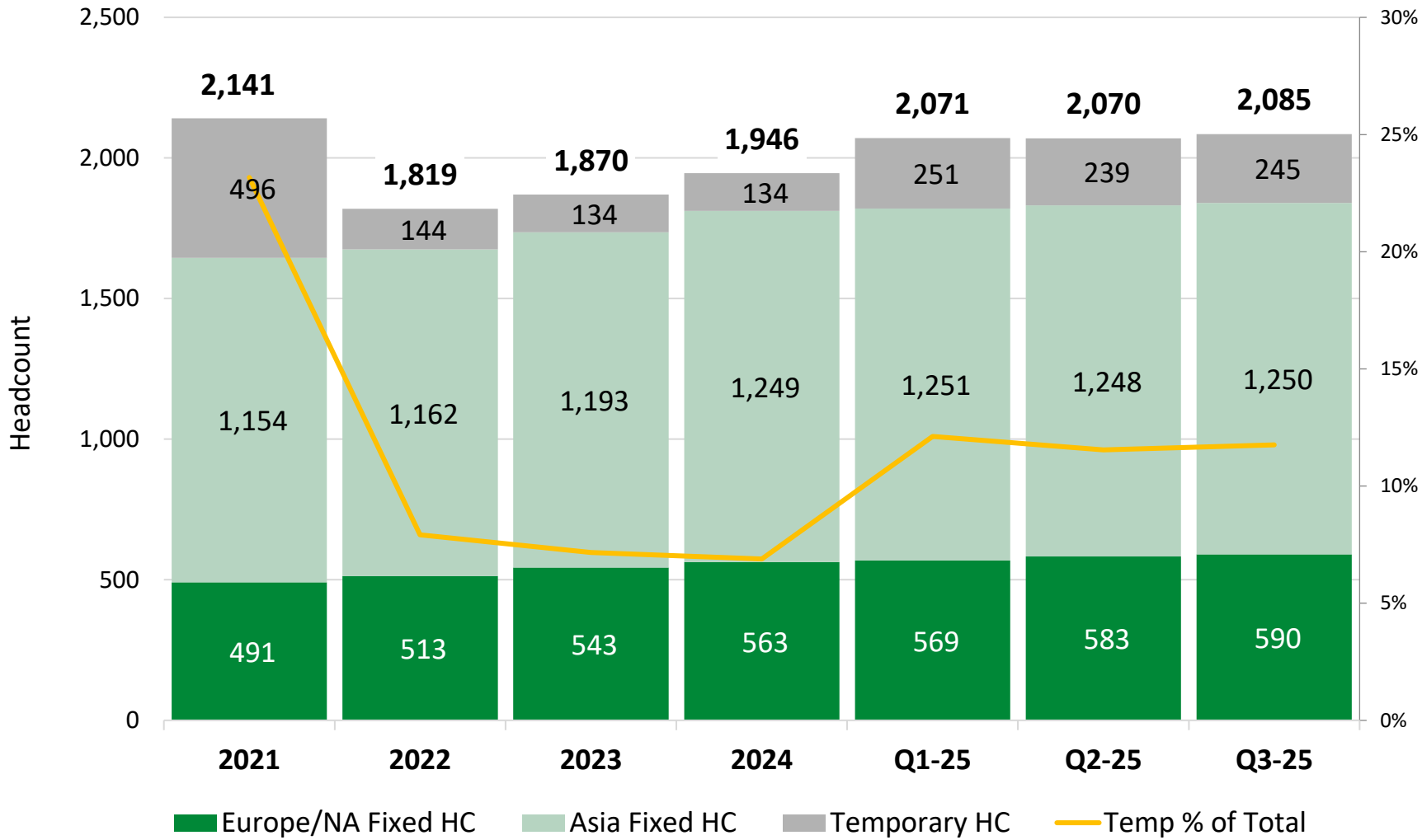
Q3-25 vs. Q3-24

- **Revenue: -€ 23.9 million (-15.3%)**
 - Broad based weakness across end user markets
- **Orders: +€ 22.9 million (+15.1%)**
 - Increased customer investment in 2.5D datacenter and photonics applications

YTD-25 vs. YTD-24

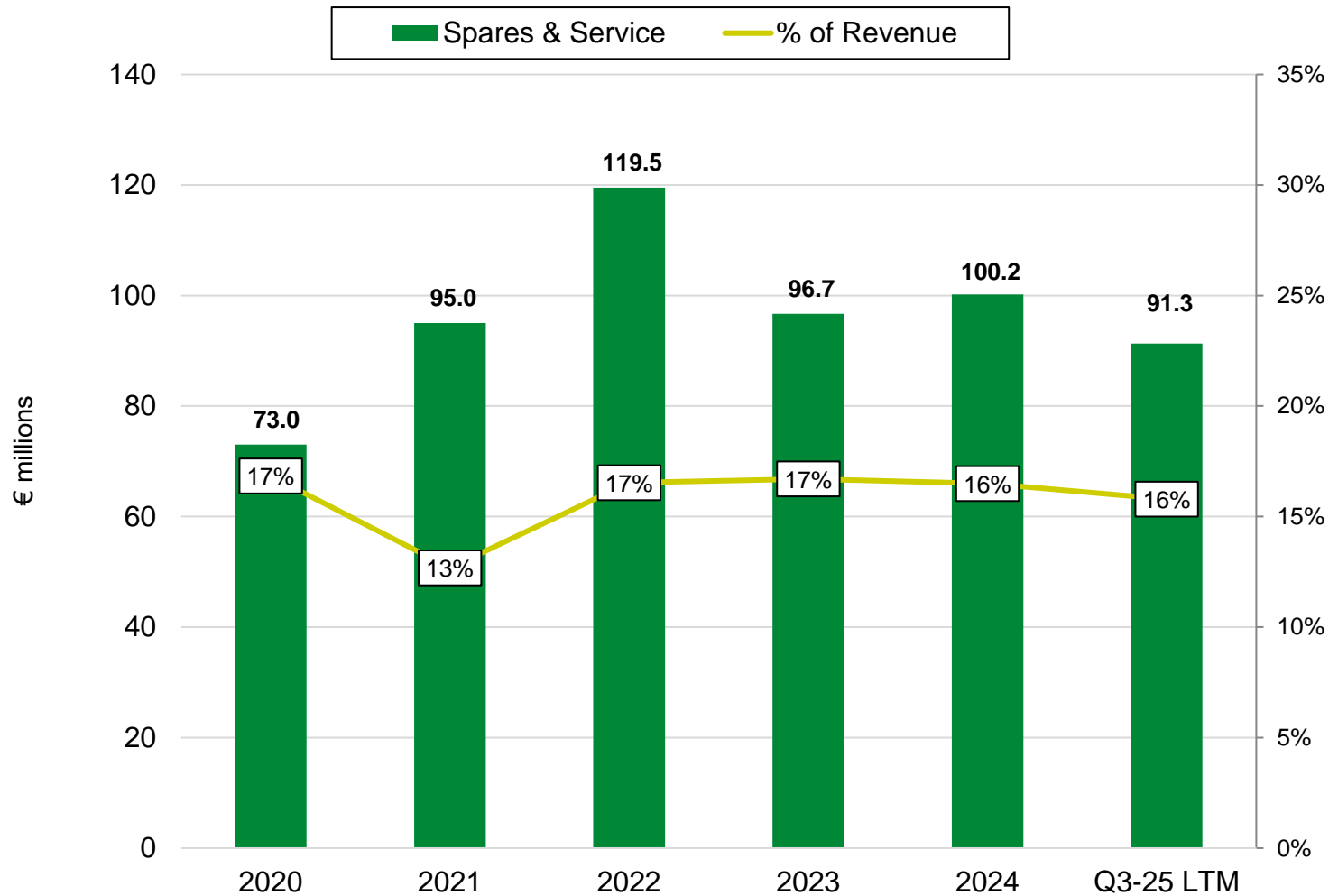
- **Revenue: -€ 29.1 million (-6.4%)**
 - Ongoing industry downturn
 - Partial offset: Growth by Asian subcons for datacenter applications and increased hybrid bonding shipments
- **Orders: -€ 30.2 million (-6.5%)**
 - Lower bookings for hybrid bonding and mobile
 - Partial offset: increased orders for AI related computing applications

Headcount Trends



• Increasing European and Asian fixed headcount to support wafer level assembly expansion

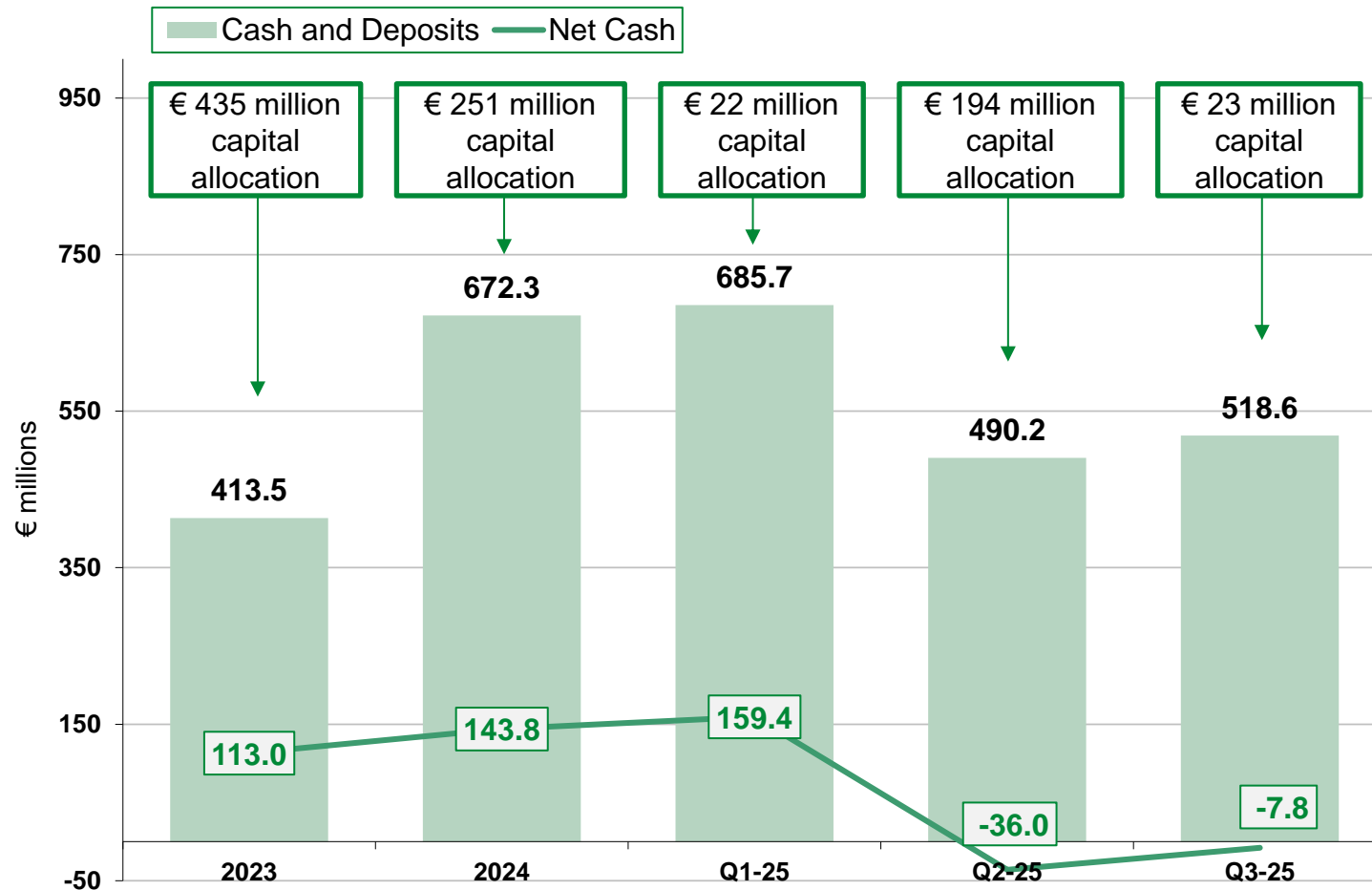
Spares/Service Activities Important Area of Growth



- **Revenue +30% since 2020**
- **Represent ~16% of revenue**
 - Diverse customer base
 - Less cyclical part of business
 - Highly profitable
- **Revenue will increase as installed base grows, particularly wafer level**

Strong Liquidity Position Maintained

New € 60 Million Share Repurchase Program Initiated



Q3-25 vs. Q2-25

- Cash and deposits of € 518.6 million
 - + € 28.4 million primarily due to:
 - + € 59.8 million cash flow from operations
 - € 23.1 million capital allocation
 - € 1.1 million capex
 - € 6.4 million capitalized R&D
- Net cash of -€ 7.8 million at end of Q3-25 improved by € 28.2 million

Q3-25 vs. Q3-24

- Cash and deposits -18.6% vs. Q3-24 due to lower profits and purchase of Duiven facility

Capital Allocation

- Capital allocation of € 239 million YTD-25 vs. € 229 million YTD-24
- Current € 100 million share repurchase program completed in October 2025
 - New € 60 million program initiated

Debt Outstanding

- € 196.2 million Convertible Notes
- € 350 million 4.5% Senior Notes due 2031

Guidance Q4-25 and FY2025



€ in millions

Q3-25

Q4-25

Revenue

€ 132.7

+15%
to
+25%

Gross Margin

62.2%

61%
to
63%

Operating Expenses

€ 48.5

+5
to
+10%

FY 2025E*

vs. FY 2024

€ 584.3

-3.8%

62.8%

-2.4
pts

€ 203.4

+1.5%

* Assumes midpoint of guidance for Q4-25

**Assembly market
ever more critical in
semiconductor value
chain**

**Disciplined strategic
focus has created an
industry leader**

**Long term secular
trends drive
advanced packaging
growth**

**Wafer level assembly
for AI applications
promising new
growth opportunity**

**Market presence has
grown via key IDMs,
supply chains and
partners**

**Tech leadership and
scalability result in
superior financial
returns**

**Commitment to
sustainable growth
and fighting climate
change**

**Attractive capital
allocation policy**