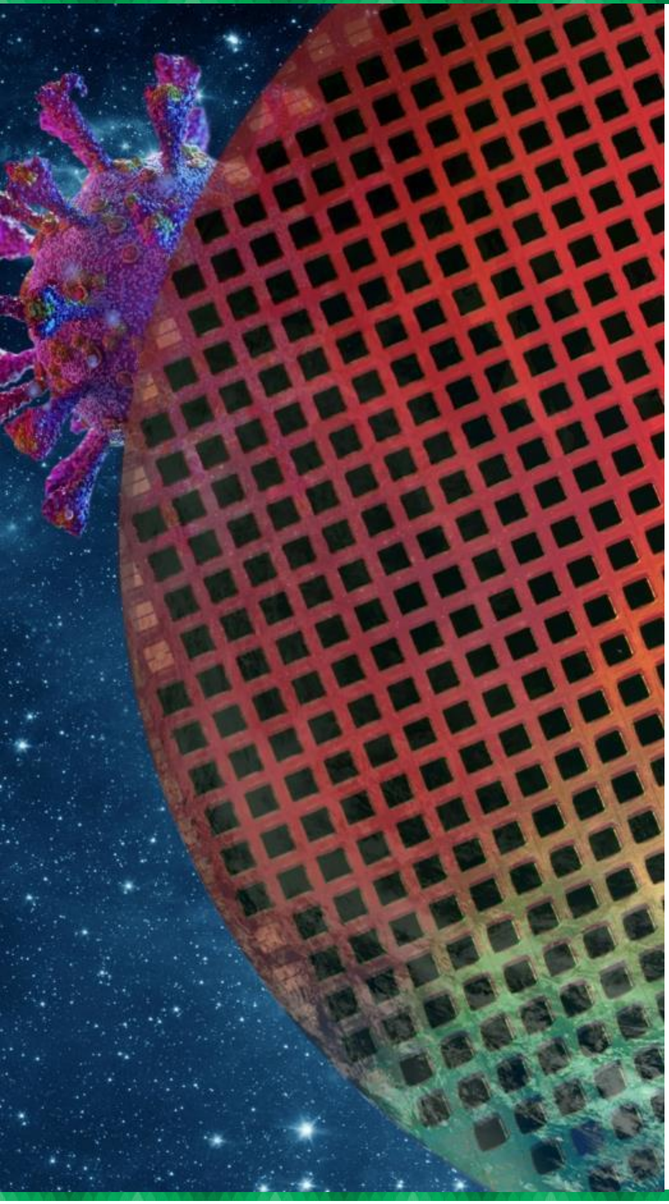


INVESTOR PRESENTATION

October 2022

Safe Harbor Statement

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 pandemic and measures taken to contain the outbreak, 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; our ability to mitigate the dislocations caused by the flood at one of our Malaysian 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 as a result of the COVID-19 pandemic; those additional risk factors set forth in Besi's annual report for the year ended December 31, 2021 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.

Agenda

I. COMPANY OVERVIEW

Besi Overview

Corporate Profile

- Leading assembly equipment supplier with #1 and #2 positions in key markets. ~30%+ addressable market share
- Broad portfolio: die attach, packaging and plating
- Strategic positioning in substrate and wafer level packaging
- ~75% of systems used for advanced packaging applications
- Global operations in 6 countries; 2,015 employees. HQ in the Netherlands

Financial Highlights

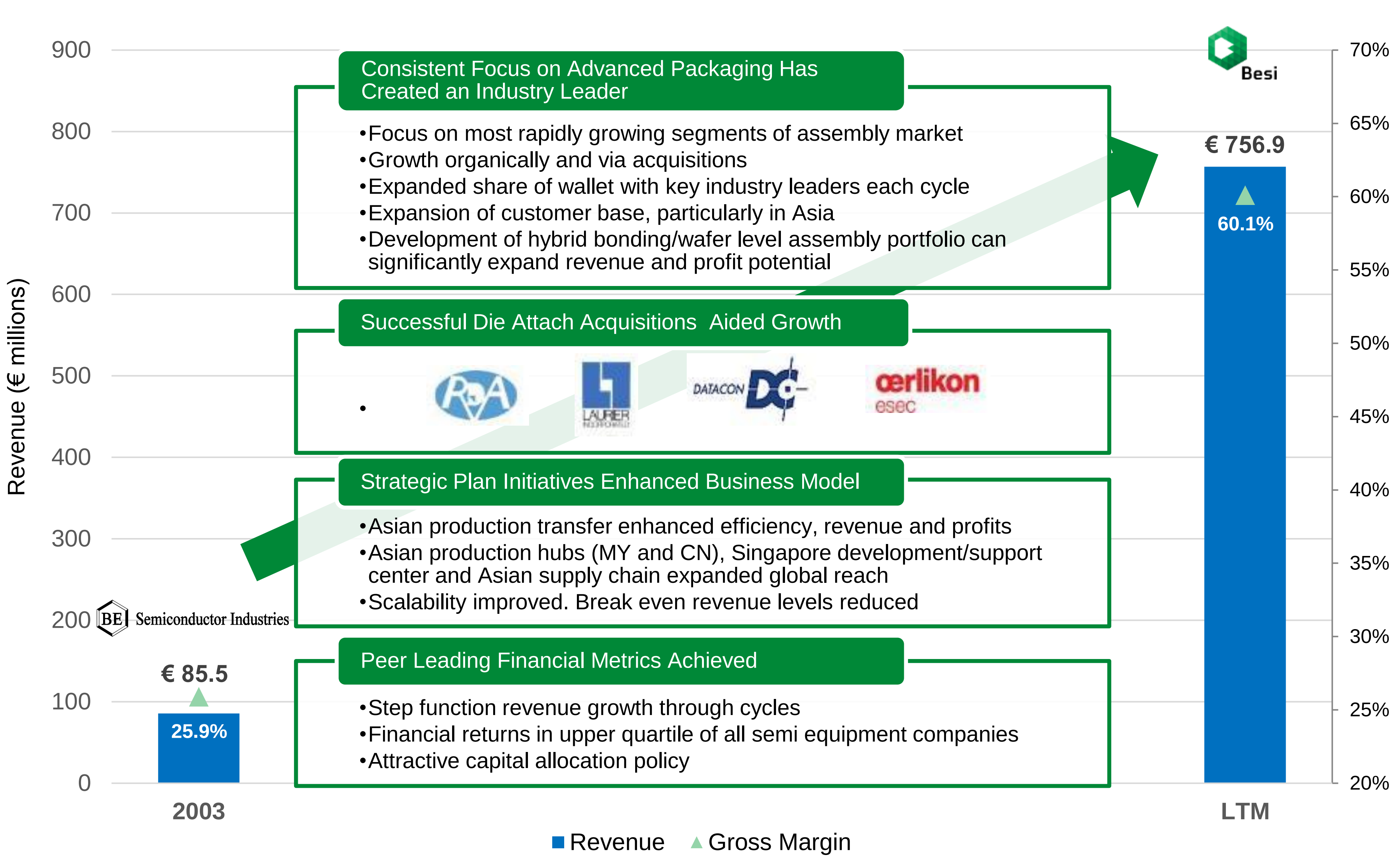
- LTM revenue and net income of € 756.9 million and € 267.6 million
- Cash/deposits at Q3-22: € 661.8 million
- Net cash/deposits at Q3-22: € 342.5 million
- € 1.3 billion of dividends and share repurchases since 2011*

Investment Considerations

- Leading position in advanced packaging. Ever more critical part of semi value chain
- Peer leading financial metrics
- Multiple growth drivers: Digital and cloud infrastructure build out, smart everything, 5G, AI, HPC, data centers, vehicle electrification
- Hybrid bonding adoption and expansion of wafer level assembly portfolio hold potential to significantly expand revenue and profit potential

* Includes share repurchases through September 30, 2022

Company History



Consistent Focus on Advanced Packaging Has Created an Industry Leader

- Focus on most rapidly growing segments of assembly market
- Growth organically and via acquisitions
- Expanded share of wallet with key industry leaders each cycle
- Expansion of customer base, particularly in Asia
- Development of hybrid bonding/wafer level assembly portfolio can significantly expand revenue and profit potential

Successful Die Attach Acquisitions Aided Growth

Strategic Plan Initiatives Enhanced Business Model

- Asian production transfer enhanced efficiency, revenue and profits
- Asian production hubs (MY and CN), Singapore development/support center and Asian supply chain expanded global reach
- Scalability improved. Break even revenue levels reduced

Peer Leading Financial Metrics Achieved

- Step function revenue growth through cycles
- Financial returns in upper quartile of all semi equipment companies
- Attractive capital allocation policy

History of Superior Long-Term Value Creation

Capital Allocation

- Attractive capital allocation program
- € 1.3 billion of dividends and share repurchases since 2011*
- Represents ~25% of total revenue

Strategic/Financial

- Disciplined execution has created leader in advanced packaging
- Best in class financial metrics
- Superior through cycle financial performance vs. peers

Shareholder Return

- Superior Total Returns **:
  113% (3 year)
  124% (5 year)
- Consistent TSR outperformance vs. peers
- Upper quartile ranking for all semi-equipment companies

* Includes share repurchases through September 30, 2022
** As of October 28, 2022

Industry Leading Equipment Portfolio

Die Attach (82% of 2021 Revenue)

Multi-Module Attach

- 2200 evo
- 2200 evo $^{\textit{plus}}$
- 2200 evo $^{\text{hS}}$
- 2200 evo $^{\textit{advanced}}$
- 2200 evo $^{\text{hf}}$ Q1-22

Epoxy / Soft Solder

- 2100 hS
- 2100 hS $^{\text{i}}$
- 2100 sD $^{\textit{advanced i}}$
- 2100 hS $^{\text{ix}}$ Q4-21
- 2009 SSI
- 2100 SSI Q2-22
- 2100 DS

Flip-chip

- 8800 CHAMEO $^{\textit{advanced / PLP}}$
- 8800 FC CHAMEO $^{\textit{Ultra}}$ Q2-22
- 8800 FC Quantum $^{\textit{adv / sigma}}$
- 8800 FC Quantum $^{\textit{hs}}$
- 2100 FC $^{\text{hS}}$

Direct Lid Attach

- DLA
- TGB 2.0 New

Embedded Bridge Attach

- DBA New

Thermo Compression

- 8800 TC $^{\textit{advanced}}$
(Substrate)
- 8800 TC $^{\textit{NEXT}}$
(Chip to Wafer) Q4-21

Hybrid Bonding

- 8800 CHAMEO $^{\text{ultra}}$
plus New

Packaging & Plating (18% of 2021 Revenue)

Leadframe Molding

AMS-i
- MEMS
- Sensors

AMS-X New
- HD Leadframe
- Power Devices

Substrate Molding

AMS-LM
- Substrate strip format
- Exposed die

Wafer & Panel Molding

FML
- Wafer molding
- Panel molding

Trim and Form

FCL-X/P
Leadframe trim & form
Sorting

Singulation

FSL
Substrate strip singulation
Sorting
Stepcut New

Plating

- Leadframe
- Solar
- Film & Foil
- Chemical Deflash Q3-21
- Wettable Flank New

Customer Ecosystem

Customers

IDMs

Qorvo, Micron, ST, Samsung, TDK, Bosch, NXP, Infineon, Skyworks, OSRAM, Renesas, Lumileds

Subcontractors

LG Innotek, ASE Group, Amkor Technology, Sharp, tsmc, JCET, SPIL, PTI, TF 通富微电, TF-AMD, UTAC, Hua Tian, Foxconn

OEMs

Qualcomm, Broadcom, Dell, MediaTek, Samsung, AMD, Delphi, Lenovo, Fujitsu, LG, Motorola Mobility

End Products

- Diversified, blue chip customer base, top 10 = ~53% of 2021 revenue
- Leading IDMs and subcontractors. 55%/45% order split in 2021
- Also supply leading fabless companies: Qualcomm, AMD, Broadcom, MediaTek via subcontractors
- Long term relationships, some exceeding 50 years

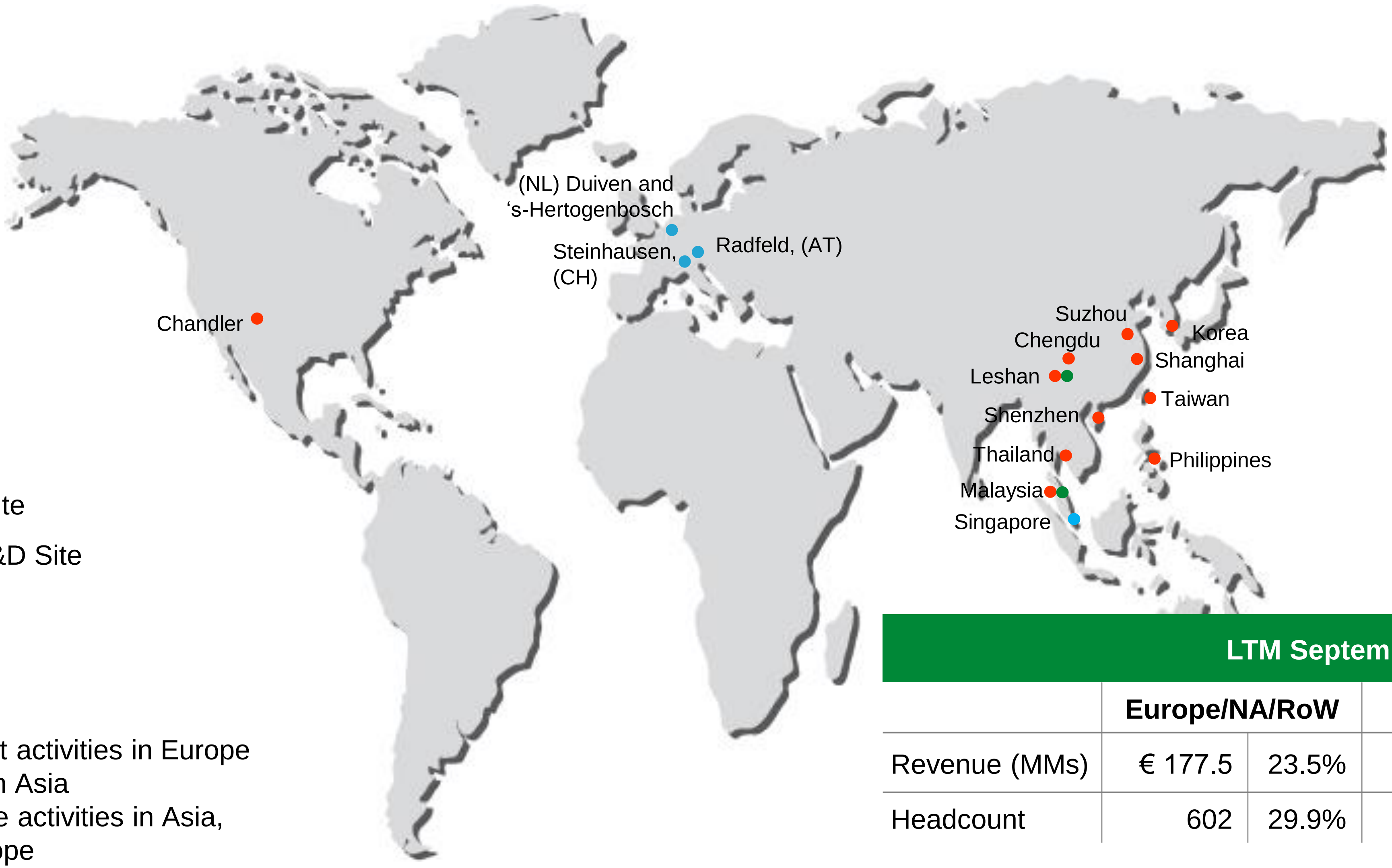
From Processed Wafer to Assembled Chip

Semiconductor Manufacturing Equipment 2021: $104.1B*		
Front end: $89.0B (86%)	**Assembly: $6.5B (6%)**	**Test: $8.6B (8%)**

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, October 2022

Current Operational Profile



- Sales Office
- Production Site
- Sales and R&D Site

- Development activities in Europe
- Production in Asia
- Sales/service activities in Asia, US and Europe

LTM September 30, 2022				
	Europe/NA/RoW		Asia	
Revenue (MMs)	€ 177.5	23.5%	€ 579.4	76.5%
Headcount	602	29.9%	1,413	70.1%

Summary Financials

Year Ended December 31, (€ millions, ex share data)	2019	2020	2021	YTD-21	YTD-22
Revenue	356.2	433.6	**749.3**	577.6	**585.1**
% seq. change	*-32%*	*+22%*	***+73%***		***+1.3%***
Orders	348.7	472.1	**939.1**	736.5	**483.3**
Gross margin	*55.8%*	*59.6%*	***59.6%***	*60.5%*	***61.1%***
EBITDA	111.7	169.0	**335.1**	263.1	**262.3**
Pretax income	78.1	137.5	**303.8**	250.4	**245.4**
Net income	81.3	132.3	**282.4**	215.3	**200.5**
Net margin	*22.8%*	*30.5%*	***37.7%***	*37.3%*	***34.3%***
EPS (diluted)	1.06	1.67	**3.39**	2.84	**2.53**
EPS (basic)	1.12	1.82	**3.70**	2.58	**2.40**
Dividend per share	1.01	1.70	**3.33**		
Net cash & Deposits	130.3	198.7	**370.4**	287.8	**342.5**

Long term, step function growth in cyclical business
- Increased revenue, profitability and market share per cycle

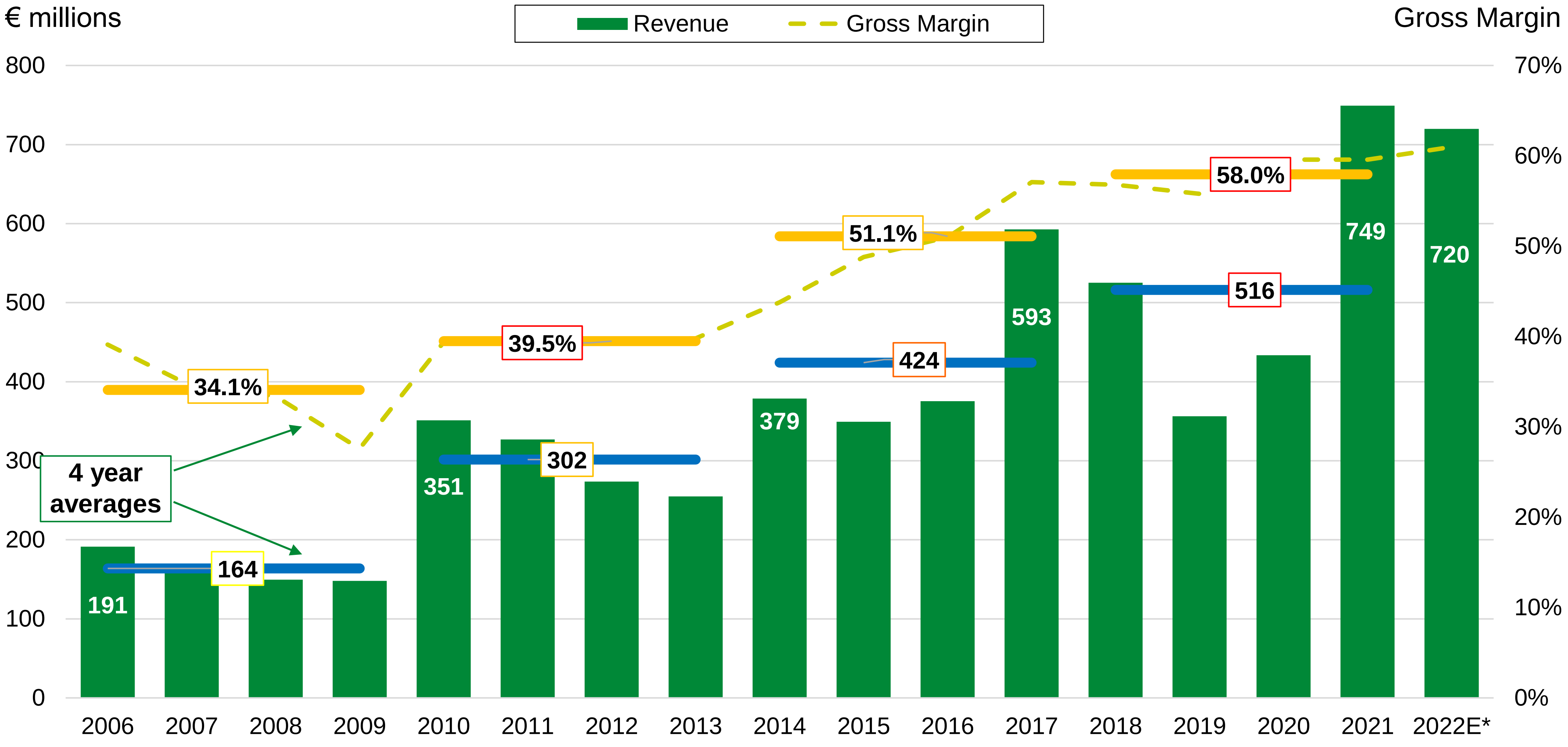
Strong upturn in 2021 despite supply chain disruptions
- Revenue and orders grew 72.8% and 98.9% vs. 2020
  - Across all end-user markets and geographies
  - New 5G smart phone product cycle
  - Initial hybrid bonding shipments

YTD-22 Revenue +1.3% and Net Income -6.9% vs. YTD-21
- Industry downturn began in Q2-22
- Order weakness reflected lower demand for high-end smartphones, by Chinese subcontractors and for computing applications

Strong margins and profitability
- Peer leading gross and net margins due to strong market position and flexible Asian production/workforce
- Cost control efforts lead to significant operating leverage

Strong cash generation supports shareholder friendly capital allocation policy

Through Cycle Revenue and Gross Margin Trends

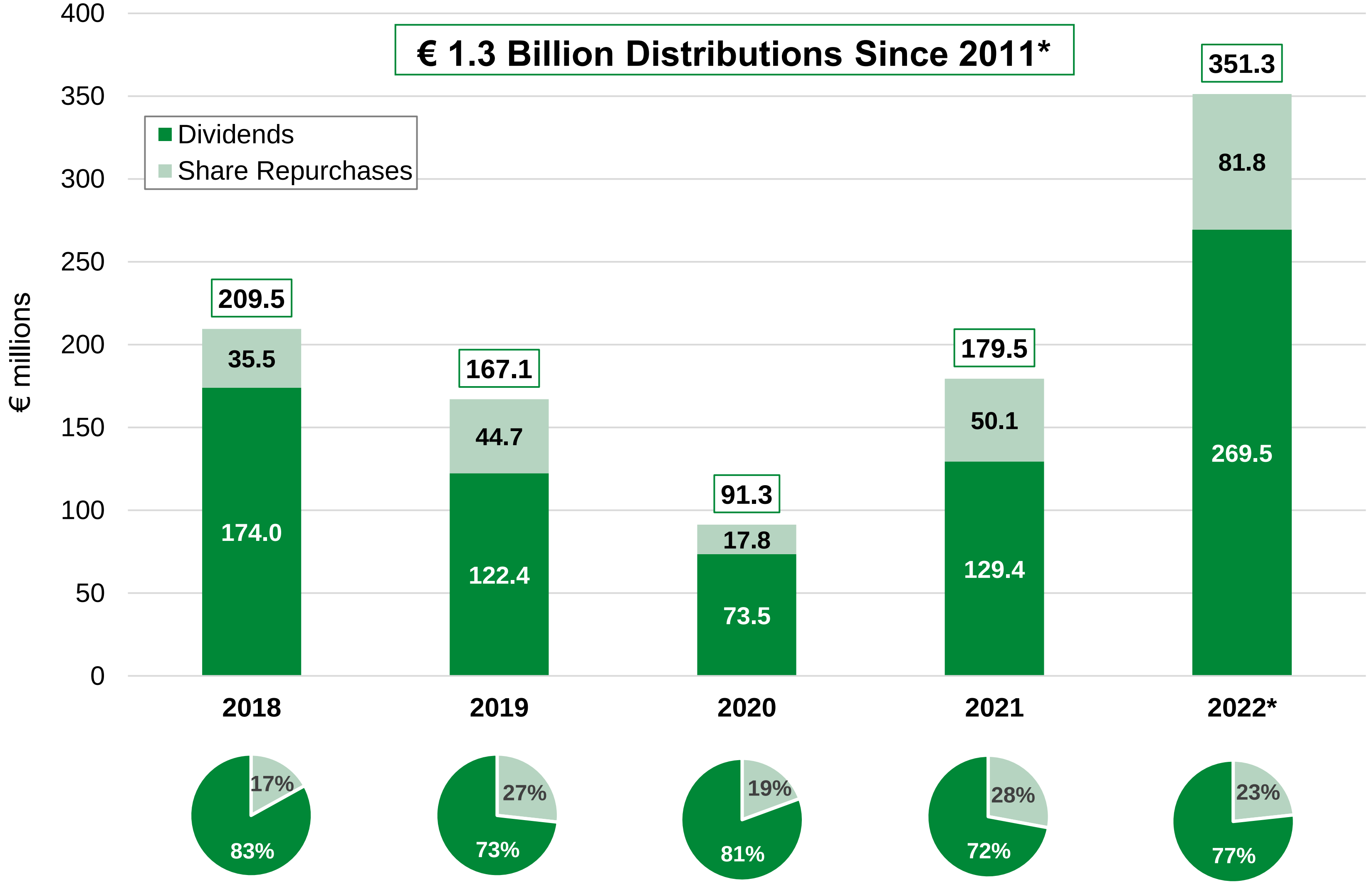


* 2022 including midpoint of guidance for Q4-22.

Business Model Objectives

Revenue	€ 1 billion++
Addressable Market Share	40%+
Gross Margin	58-62%
Net Margin	35-40+%
Headcount Split	80% Asia/20% Europe/NA
Scope 1 and 2 Emissions	60% reduction
Global Energy Needs	65% from renewable sources

Capital Allocation Trends



- **Record € 351.3 million distributed YTD-22**
- **€ 185 million share repurchase program completed:**
  - From July 2018-2022
  - 5.1MM shares
  - Average price € 36.10
- **New € 300 million program:**
  - Started August 1, 2022
  - Expected completion Q4-23
  - Represents ~8% of shares outstanding

* Includes share repurchases up to September 30, 2022

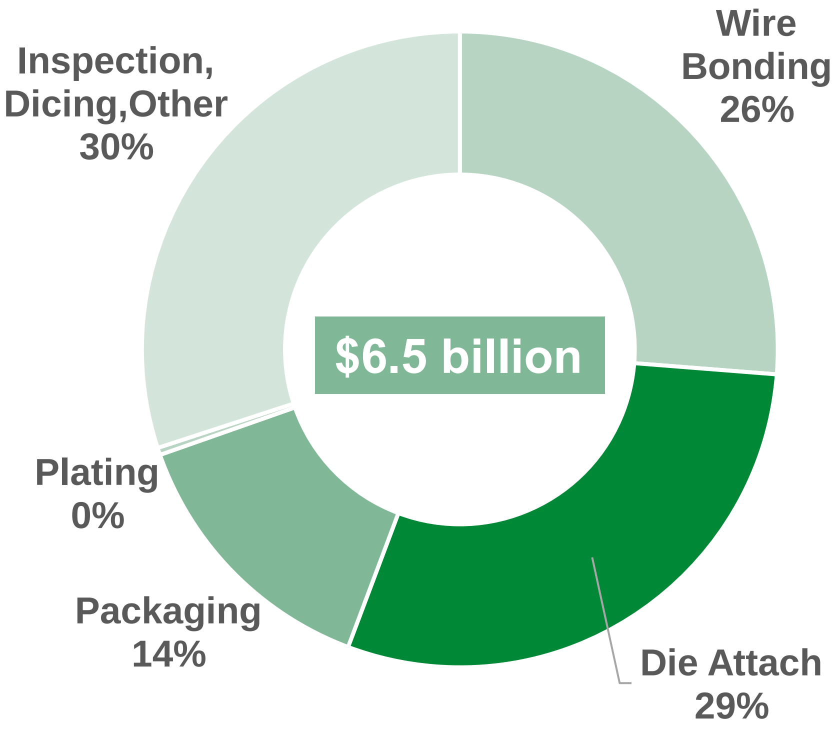
II. MARKET OVERVIEW

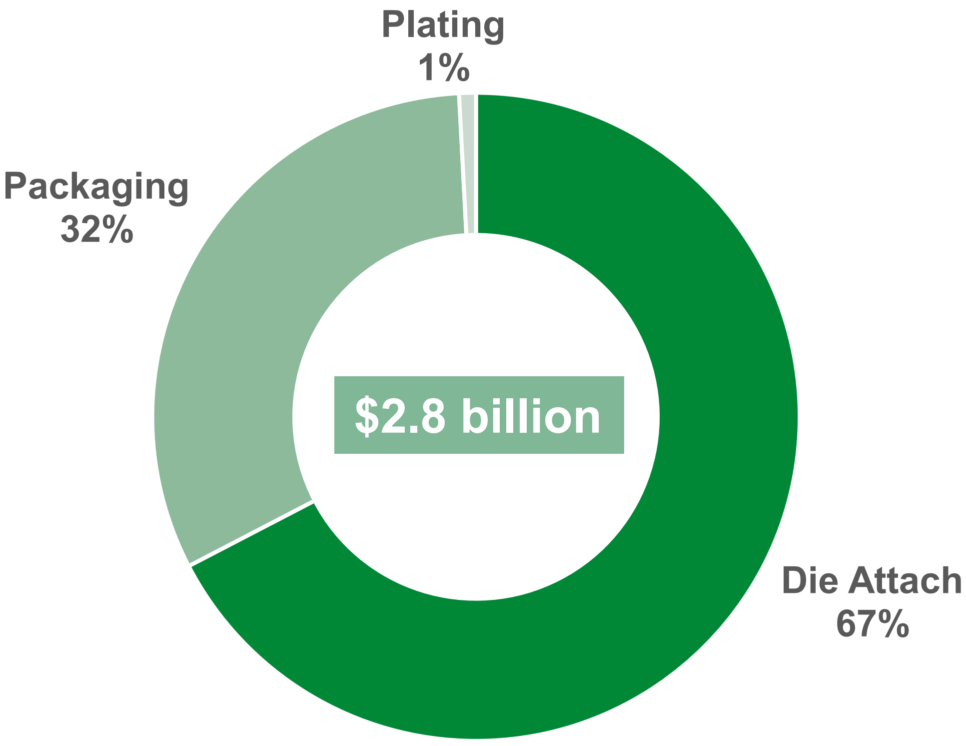
What Drives Besi's Business?

Macro GDP trends	Selection of IDM and supply chain partners	Timing of customer roadmaps
Meeting demanding technical specs	Performance in 24/7 production environments	Competitive cycle times and scalability

Assembly Equipment Market Composition

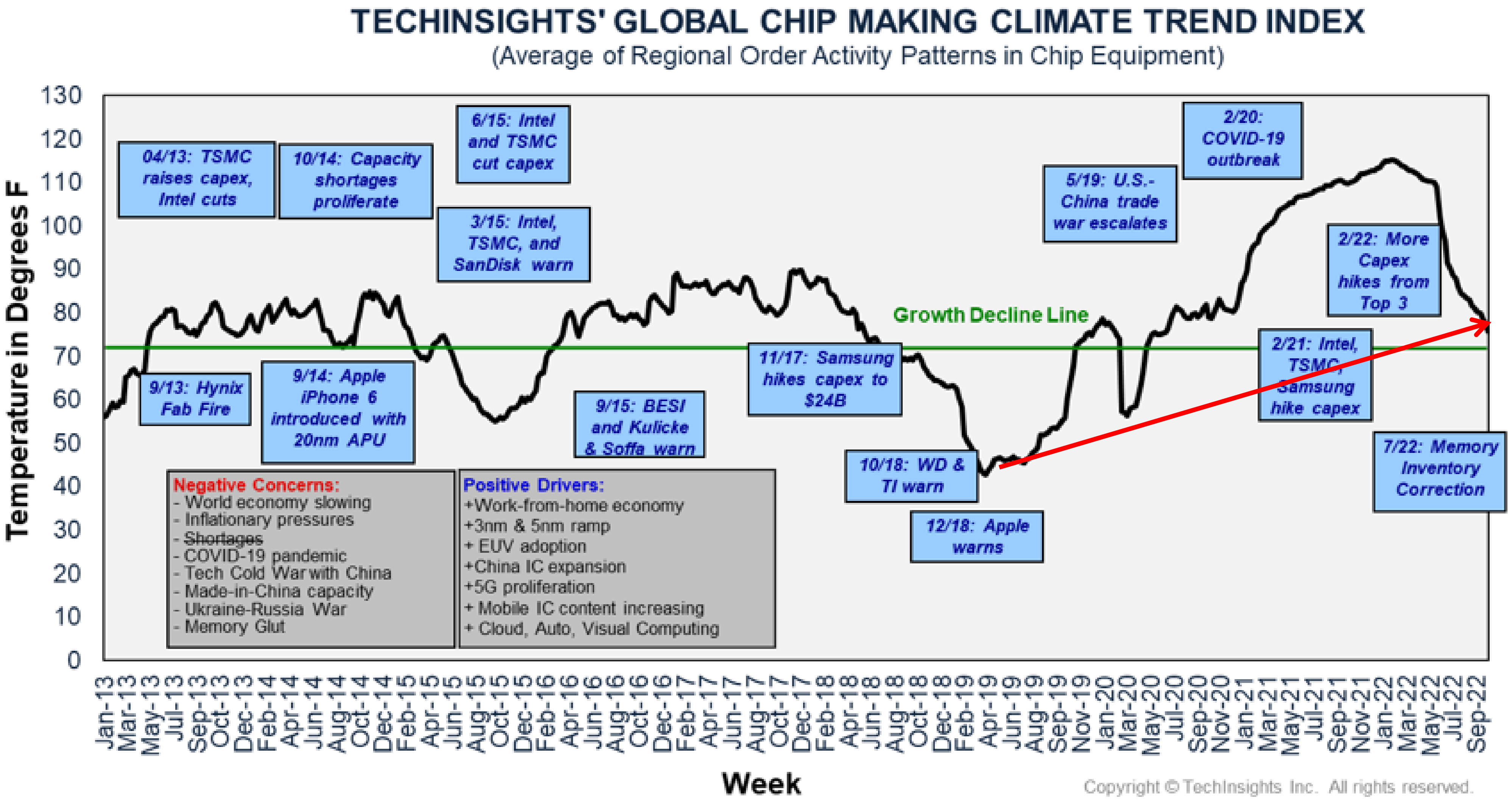
Assembly Equipment Market (2021)	Besi Addressable Market (2021)





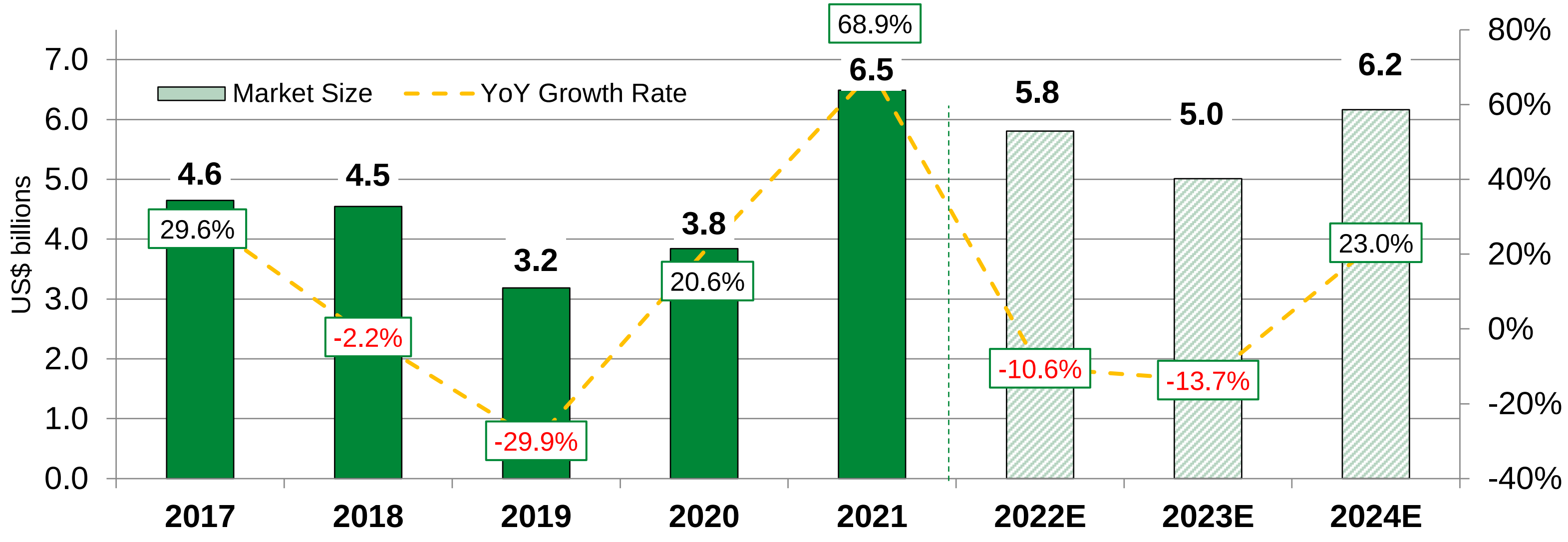
Source: TechInsights, October 2022

Market Conditions Have Weakened Significantly Since Q2-22

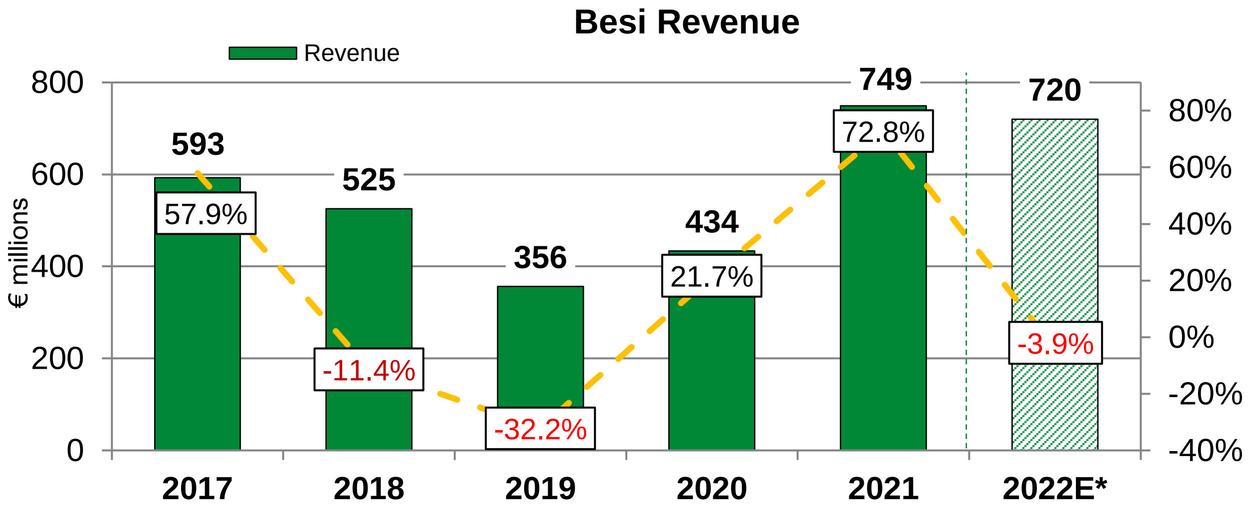


Source: TechInsights, October 2022

Assembly Forecast Also Revised Downwards for 2022 and 2023



Source: TechInsights, October 2022. Assembly equipment revenue excludes hybrid bonding contribution and service revenue.



* 2022E assumes midpoint of guidance for Q4-22

Tech Insights forecasts $ 5.8 billion market in 2022 (-10.6%)

- Growth rates for 2022 and 2023 adjusted downwards:
  - -10.0% → -10.6% for 2022
  - - 3.5% → - 13.7% for 2023
  - Excludes hybrid bonding and spares/service revenue
- New US/China regulations add new uncertainty

Strong secular fundamentals intact:

- 5G, datacenter, AI and HPC primary drivers
- Investment in new process technologies: hybrid bonding/CSP
- New advanced packaging fabs being constructed globally

Industry Inventory Correction Underway. Besi Downcycle Began in Q2-22

Many Headwinds Affect Near Term Orders:

- Decelerating GDP growth/inflation-higher interest rates
- Digestion capacity post 2020/2021 build
- Weaker high-end mobile demand
- Decelerating growth and Covid lockdowns in China
- Slowing growth data center/automotive
- Disruptions to global supply chains
- Geopolitical conflict US/China

Some Potential Offsets:

- Automotive spending still strong in 2022
- 2023 High-end iOS smartphone cycle
- Hybrid bonding and wafer level assembly investment cycle
- 47 new fabs coming online in next three years
  - Many focus on advanced packaging

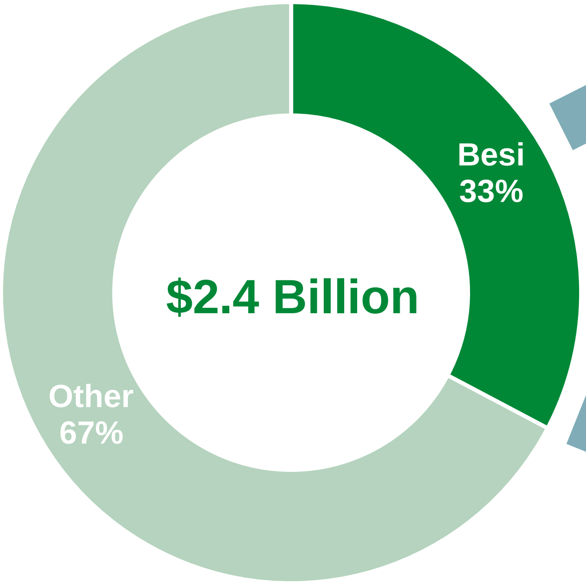
Besi Addressable Market Share Increasing Particularly in Key Die Attach Markets

	2016	2017	2018	2019	2020	2021	∆ '21/'20	∆ '21/'16
Assembly Market ($MM)	3,587	4,648	4,546	3,186	3,843	**6,522**	+69.7%	+81.8%
Besi Market Share	9.9%	12.7%	11.2%	10.1%	10.7%	**11.9%**	**+1.2pts**	**+2.0pts**
Addressable Market ($MM)	1,507	1,948	1,859	1,251	1,403	**2,374**	+69.2%	+57.5%
Besi Market Share	23.7%	30.2%	27.3%	25.8%	29.2%	**32.6%**	**+3.4pts**	**+8.9pts**
Die Attach	30.4%	38.2%	33.2%	30.8%	36.8%	**41.9%**	**+5.1pts**	**+11.5pts**
Packaging & Plating	13.6%	14.7%	17.0%	16.8%	15.3%	**15.2%**	**-0.1pts**	**+1.6pts**
% of Besi Revenue	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**∆ 1yr**	**∆ 5yr**
Die Attach	75%	82%	76%	76%	82%	**82%**	**-**	**+7pts**
Packaging & Plating	25%	18%	24%	24%	18%	**18%**	-	-7pts

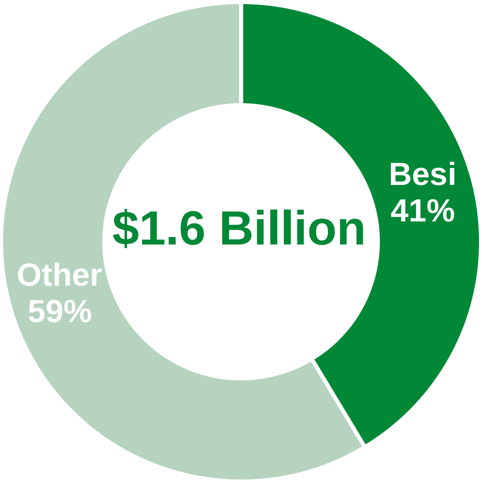
Source: TechInsights, June 2022

Leader in Addressable Market, Die Attach Market and Advanced Die Placement

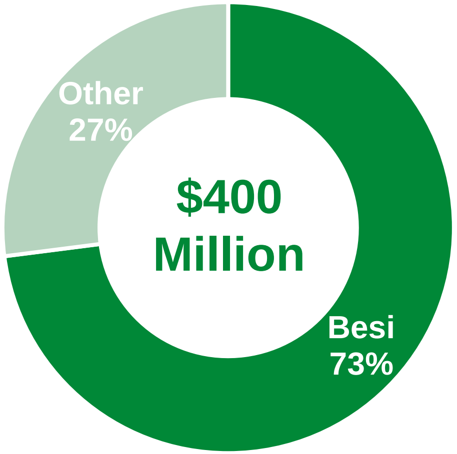
2021 Addressable Market*



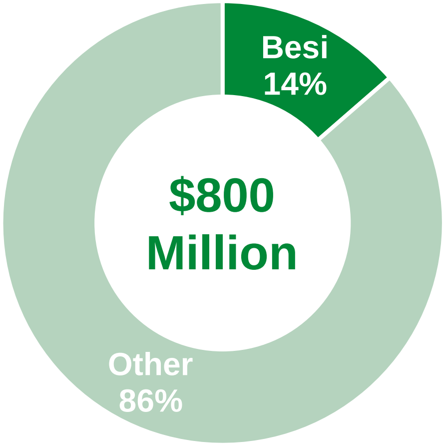
Die Attach
(82% of Revenue)



Advanced Die Placement**



Packaging & Plating
(18% of Revenue)



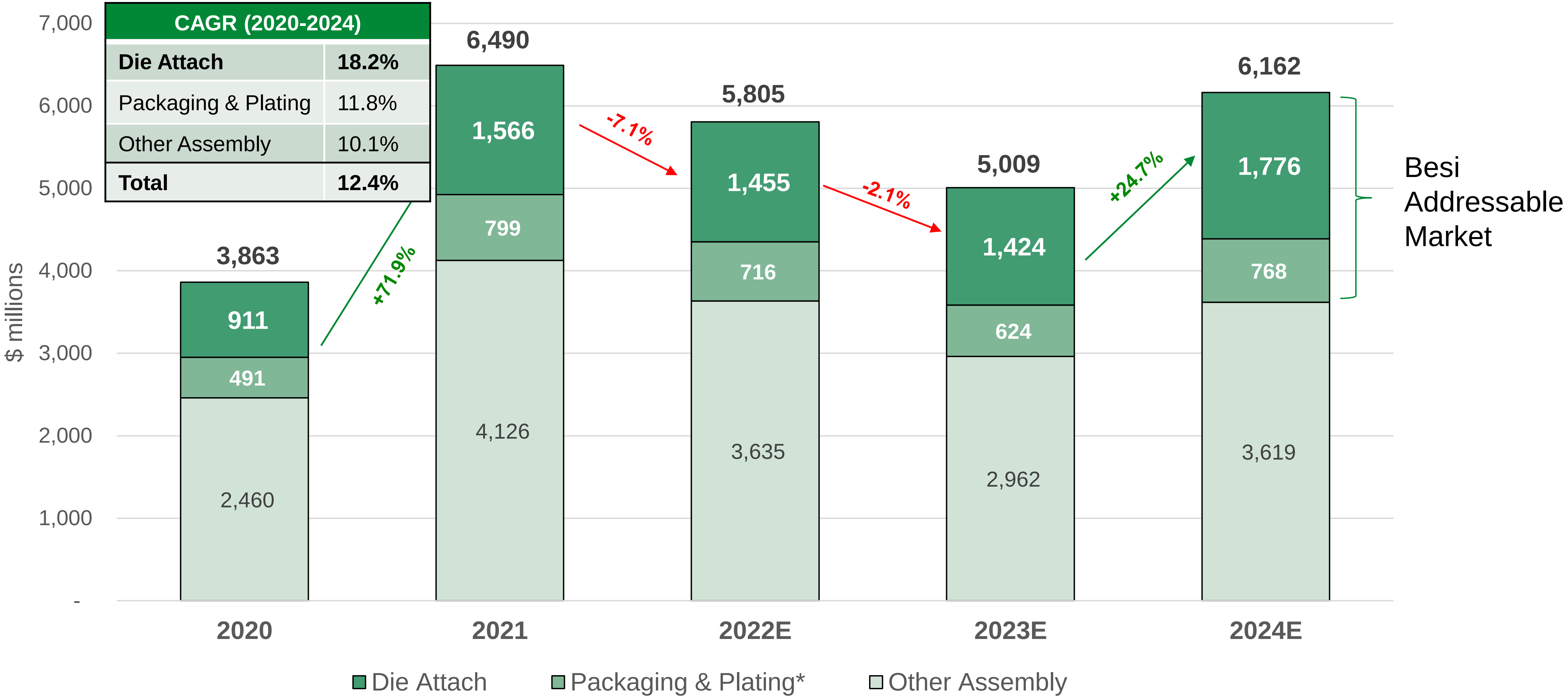
* Excludes wire bonding, dicing, and other.

** Advanced die placement defined as < 7 micron accuracy per TechInsights

Source: TechInsights, October 2022. Equipment only.

Growth Expected to Favor Besi's Product Portfolio, Particularly Die Attach

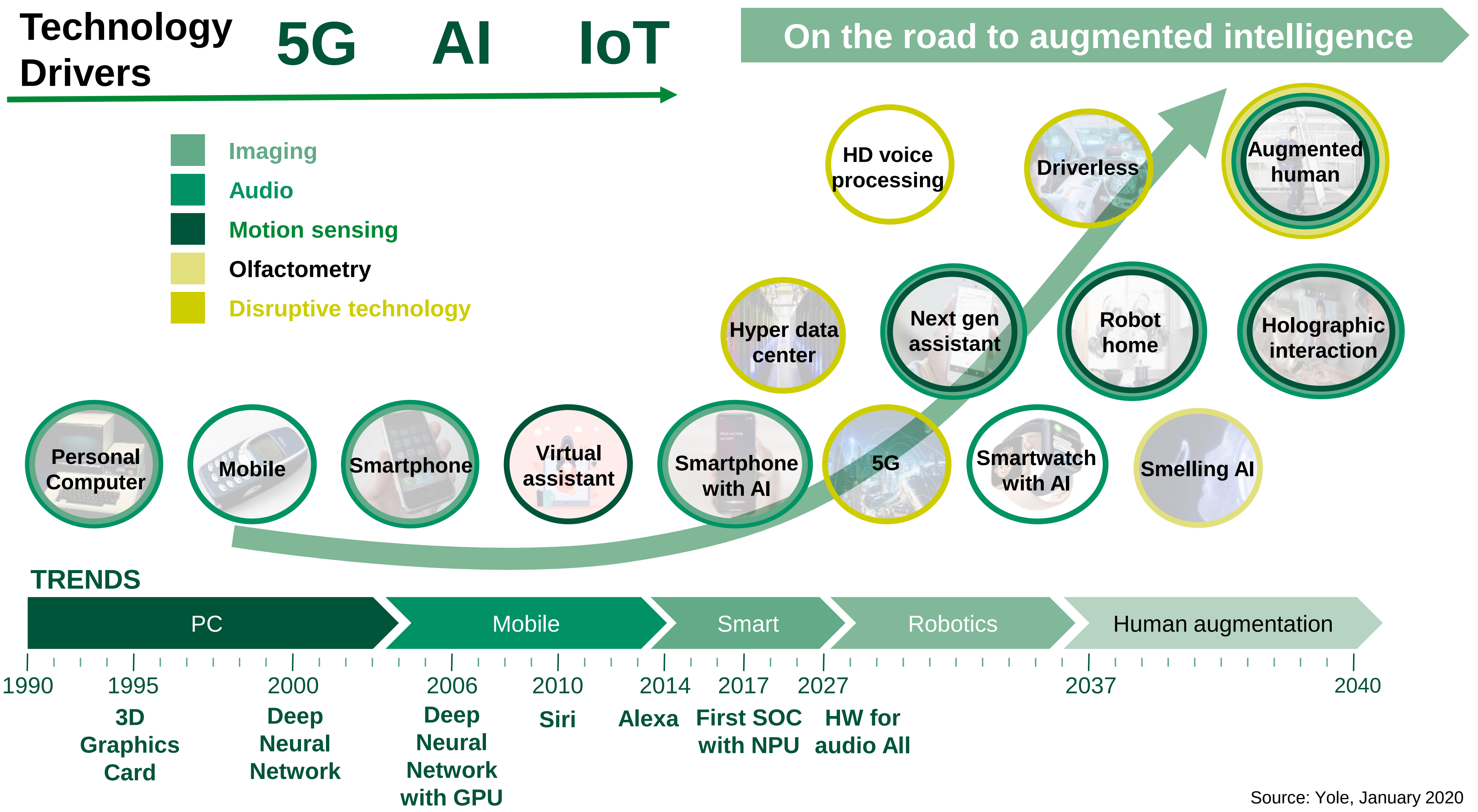
CAGR (2020-2024)	
Die Attach	**18.2%**
Packaging & Plating	11.8%
Other Assembly	10.1%
Total	**12.4%**



Source: TechInsights, October 2022. Addressable market revenue excludes hybrid bonding contribution.

* Packaging & Plating includes only Besi's addressable segments. Non-addressable reported in other assembly market.

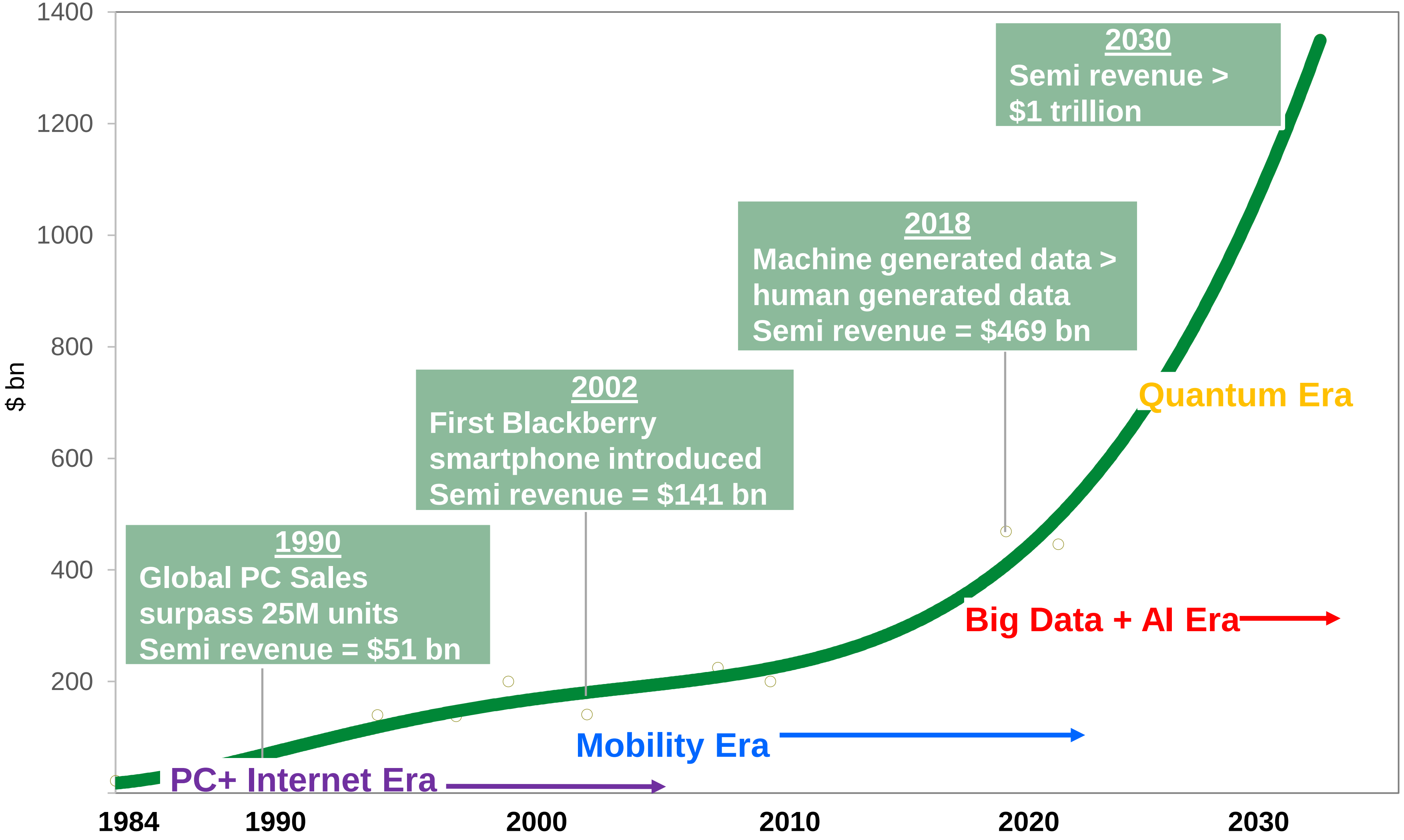
Digital Society Drives Greater Computing and Data Needs



Source: Yole, January 2020

Semiconductor Growth Accelerating

$500 B sales over past ~50 years → $1.4T sales over next 10 years



Projected Growth 2020-2030E

	2020	2030	CAGR
Non-Memory	$235B	$678B	11.2%
Memory	$133B	$467B	13.4%
Other ICs	$79B	$206B	10.1%
Total Semis	$446B	$1,351B	11.7%

Data source: Semi 2022

Advanced Packaging Critical to Next Generation Applications

Besi

Growth Drivers

Mobile Revolution

- Mobile internet
- Messaging
- Social media
- Shared economy
- Gaming
- Geo-location
- Audio/video
- Auto electronics

Digital Society

- Smart mfg, cities, mobility and homes
- Internet of everything
- 5G mobile/wearable devices
- Artificial intelligence
- Driverless cards
- Data mining
- Cloud servers
- VR/AR
- High performance computing

Enablers

Greater miniaturization

Higher accuracy

Greater complexity

Besi

Die Bonding and Packaging portfolio

Lower power consumption

Increased density

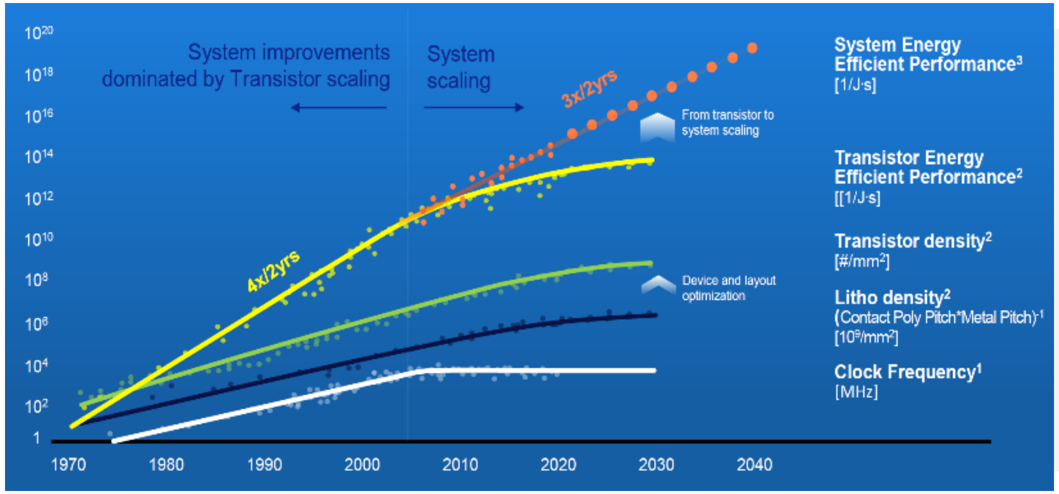
Higher performance

Requiring Increased Density, Higher Accuracy and Smaller Form Factors for Next Generation Devices

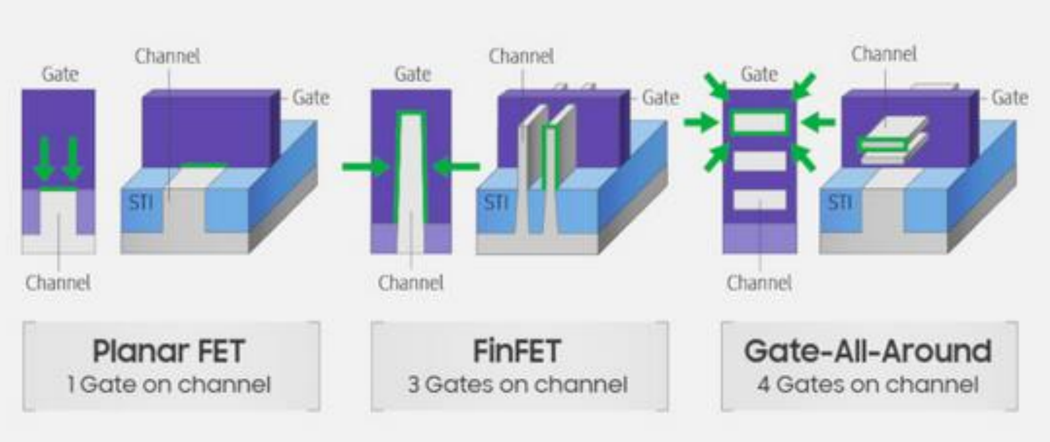
Besi

Front-End Wafer Fab

- **Transistor scaling**
- **Lithography**
- **New 3D structures**



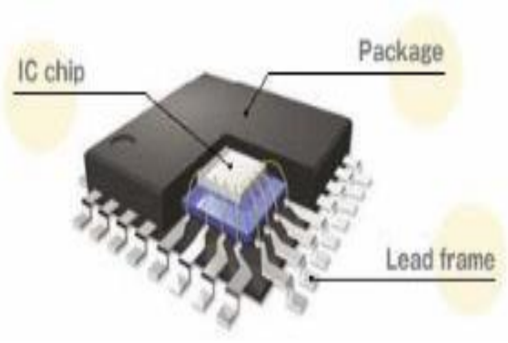
Source: ASML 2021



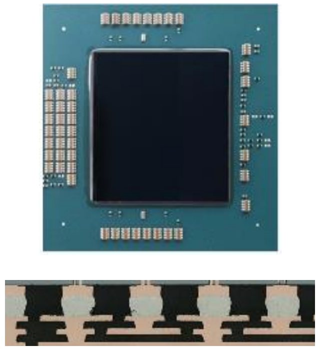
Source: Samsung

Back-End Assembly

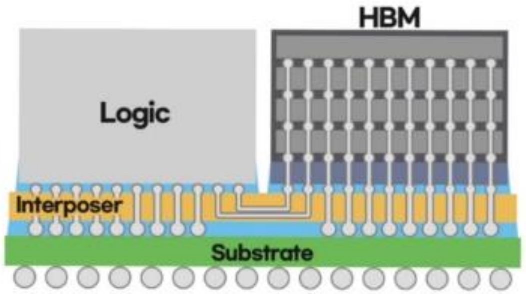
- **More contacts**
- **Smaller pitches**
- **Thinner, denser and more complex packages**
- **Stacked 3D structures**
- **WLP/FOWLP packages**



From simple wire bond

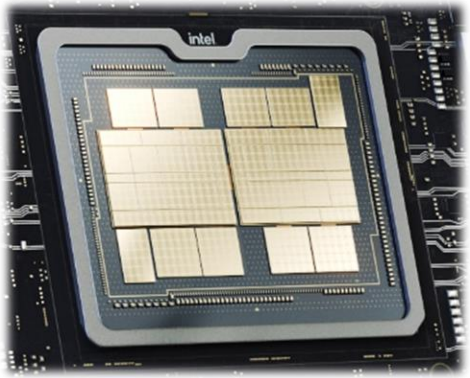


To flip chip and SiP



Source: Samsung

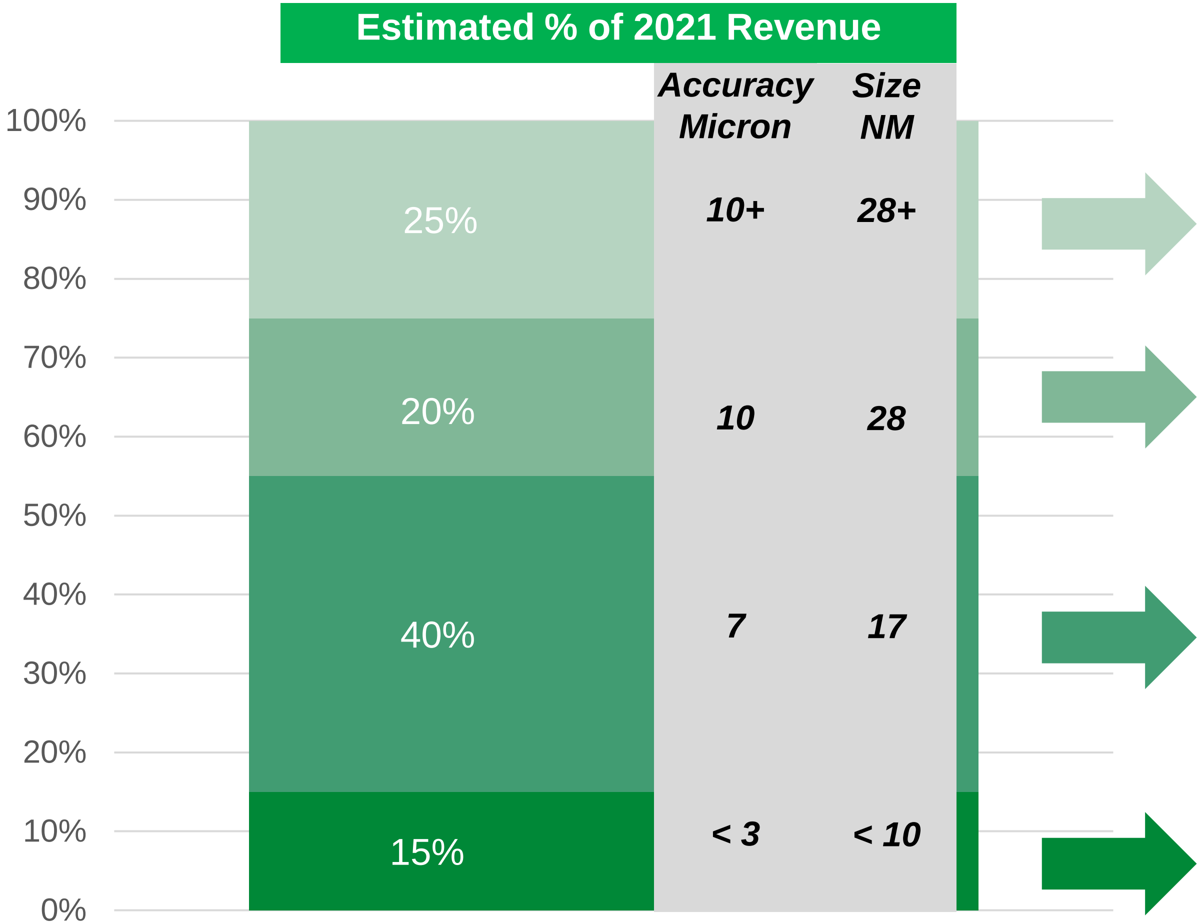
To complex 3D structures with TSVs, microbumps and thin dies



Source: Intel

To chiplet systems enabled by Hybrid Bonding

Besi Portfolio Well Positioned by Node Size and Accuracy



Typical Application	Besi Equipment
Automotive, SiP Power	*Die Attach Packaging Plating*
IOT General ICs	*Die Attach Packaging Plating*
Computer, PC, Mobile Cloud Computing	*Die Attach Packaging*
High Performance Computing Memory, Hybrid Bonding	*Die Attach Packaging*

- **75% of Besi equipment revenue advanced packaging as per VLSI definition**
- 55% equipment revenue is < 7 micron accuracy and < 17 nanometer node size
- Most rapidly growing market segment

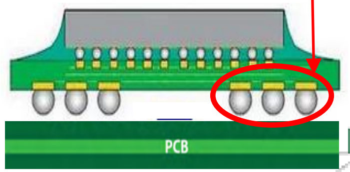
Why is Hybrid Bonding Important?

Direct Cu-Cu Interconnect

Eliminates need for interposer & solder balls

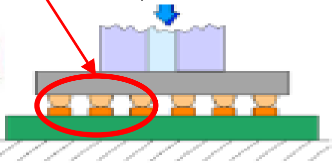
Results in smaller, thinner form factor to design more complex devices

Flip Chip

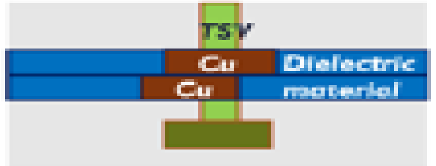


TCB

Heat compression force

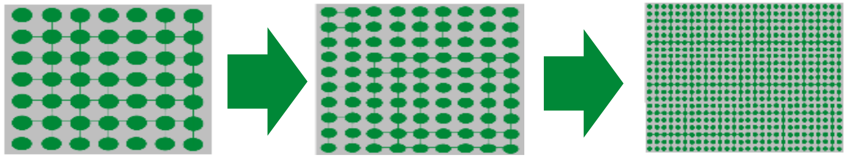


Hybrid Bonding



Ultra-High Bandwidth & Speed

Contact density increased by factor of 1000x by eliminating solder balls, reducing distance between contacts & increasing speed & data transfer



Flip Chip: 25-400/mm²

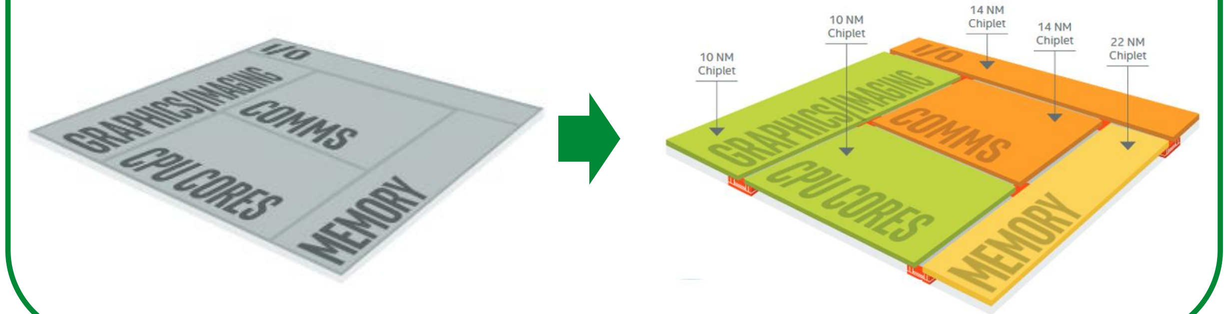
TCB: 156-625/mm²

Hybrid Bond: 10k-1MM/mm²

Current design achieves 122 nano placement accuracy at 2,000 uph

Design Flexibility

Hybrid bonding facilitates development of new 3D chiplet architectures and increased features/functionality in smaller form factor



Lower Cost of Ownership

Lower Cost of Ownership

- Performance and functionality increased
- Fewer chips required
- Material cost lower
- Cost per contact lower
- Lower heat dissipation
- Energy consumption lower

Energy Efficiency

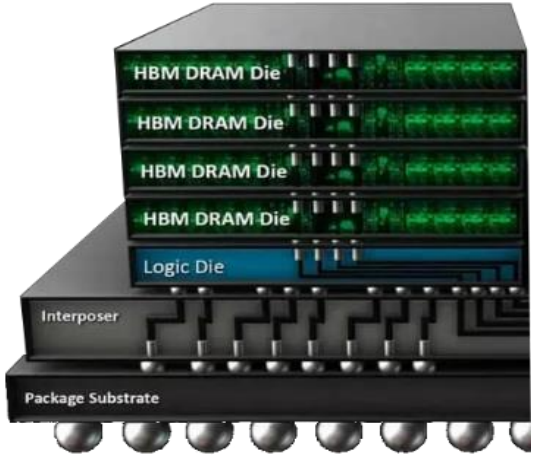
Process	Flip Chip	TCB	Hybrid Bonding
Energy/Bit	0.5pJ/bit	0.1pJ/bit	<.05pJ/bit

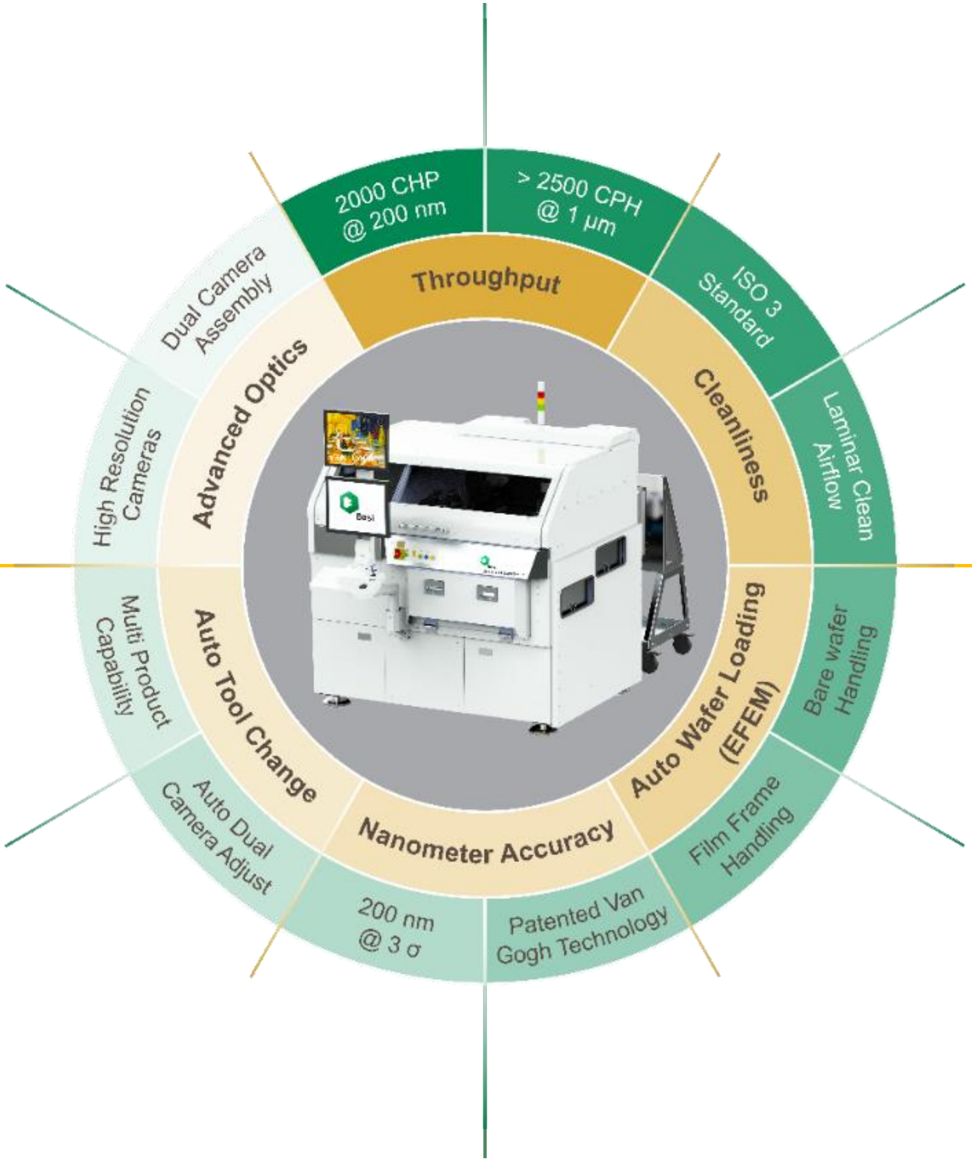
Smaller devices draw less electrical power

Applications Driving Hybrid Bonding Growth

Logic

Memory





Sensors & Display

Mobile

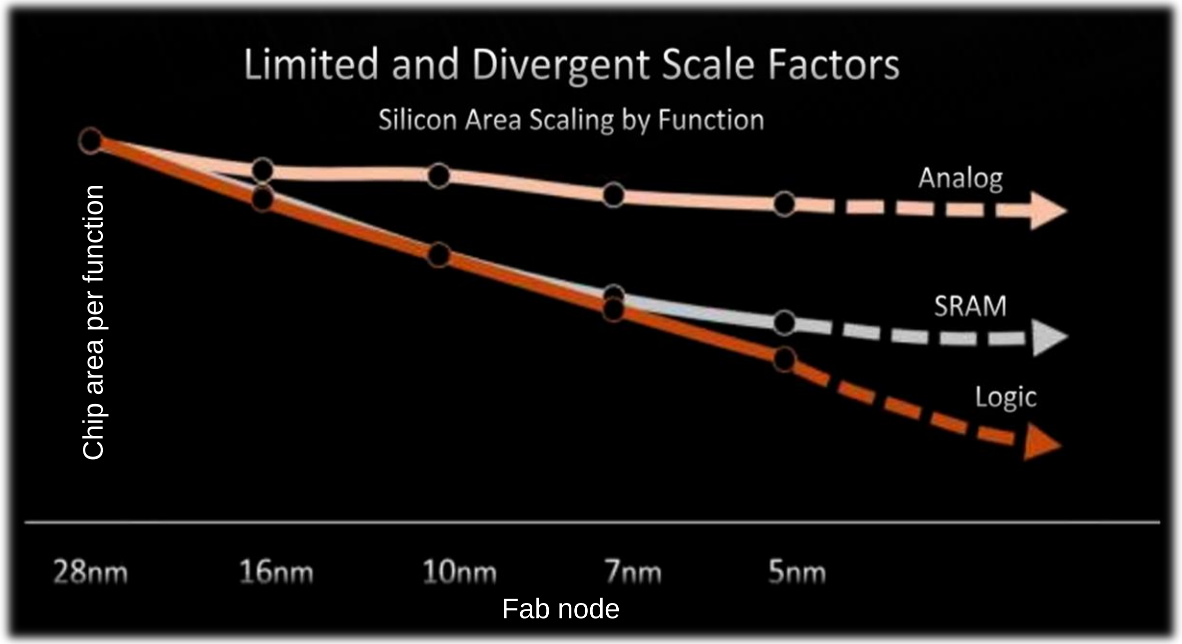
Slowing of Moore's Law Drives Adoption of Chiplet Architectures and New Assembly Solutions

Problem

- Moore's Law is slowing
- Some functions don't shrink as node sizes reduce
- Die sizes are increasing beyond reticle limit

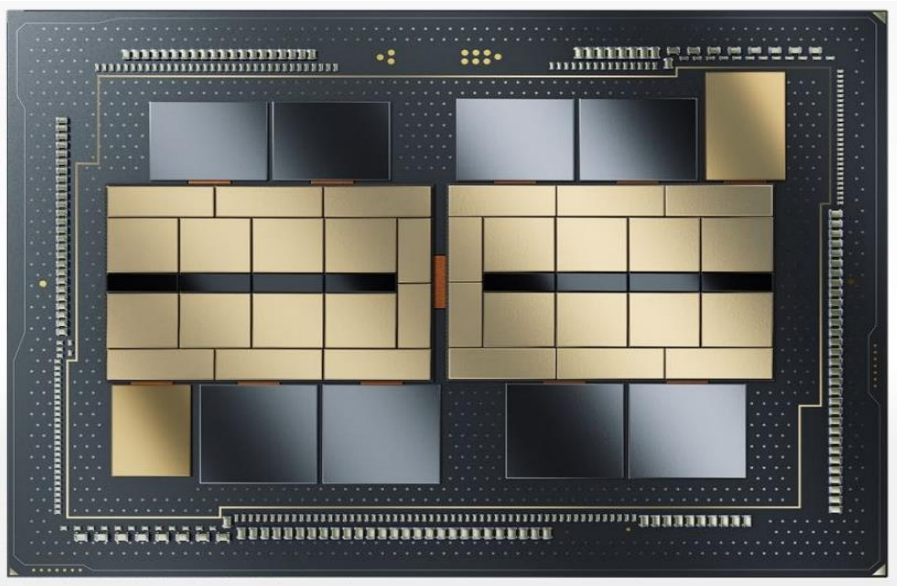
Solution

- Split the SoC into multiple, smaller **chiplets**
- Optimize scale per function
- Connect chiplets within the package utilizing advanced **chip-to-wafer die attach**



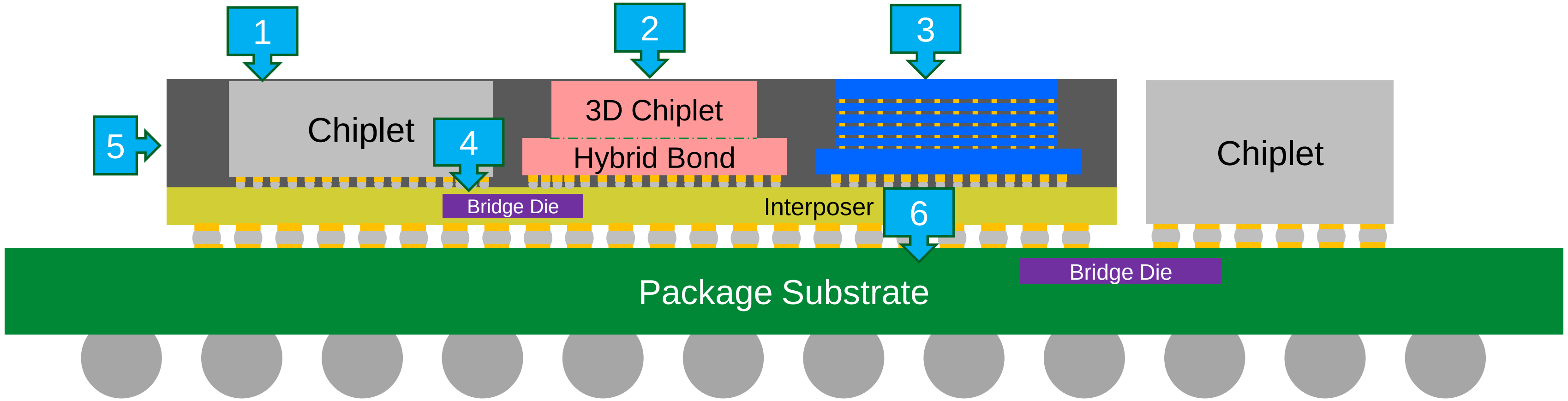
Source: AMD

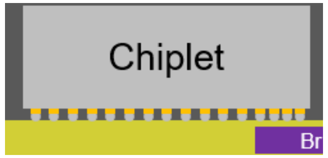
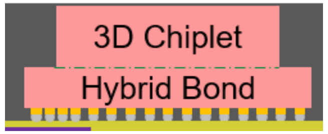
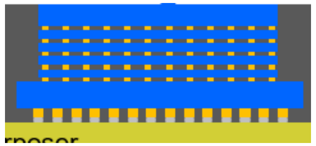
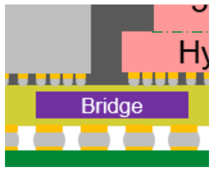
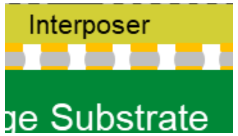
Intel's Ponte Vecchio: 47 Chiplets in One Package



Source: Intel

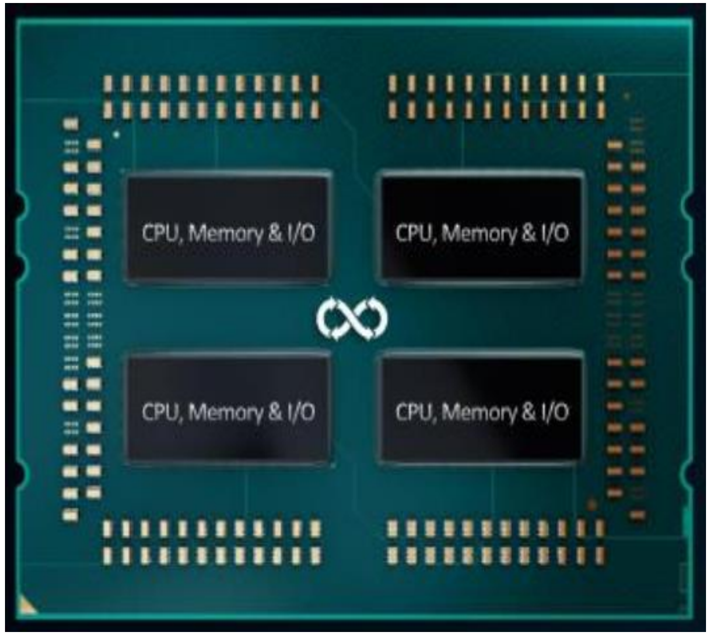
New 3D Chiplet Structures Use Variety of Advanced Assembly Processes



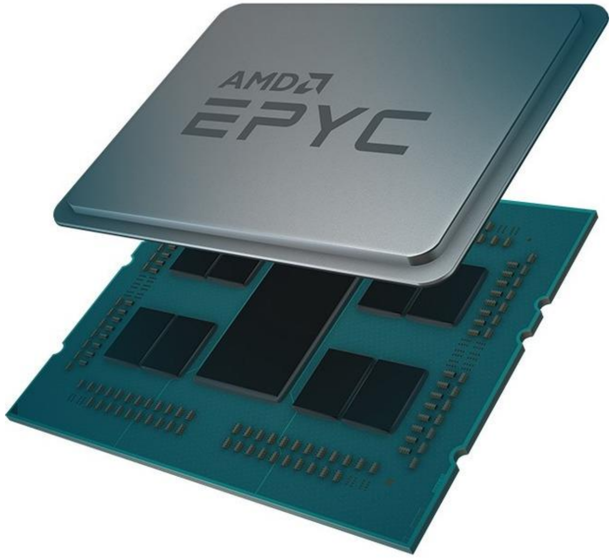
1 Chip to Wafer TCB	2 Hybrid Bonding	3 High Bandwidth Memory Stacking	4 Embedded Bridge Die Attach	5 Wafer Level Die Molding	6 HD Interposer to Substrate
					
TC Next C2W	8800 Chameo Ultra Plus	8800 TC Advanced 8800 Chameo Ultra+	8800 Chameo Ultra	FML	2200 evo

New Chiplet Architectures Increase Process Steps/Capital Intensity

2017	2019	2022
1st Gen EPYC	**2nd Gen EPYC**	**3rd Gen EPYC**
4 flip-chip placement steps	**9 flip-chip placement steps**	**> 30 die placement steps** including hybrid and flip-chip



Source: AMD



Besi Process Solution:

8800 FC Quantum
ASP: $500k
UPH: ~9,000

→

8800 Ultra Accurate C2W Hybrid Bonder:
ASP: $1.5MM-$2.5MM
UPH: ~1,500

Estimated Timetable Per Application

2022	2023	2024	2025	2026	2027	2028

Computing

Servers

Datacenters

High performance computing

Artificial Intelligence

Consumer

PC

Laptop

Gaming

Entertainment

Memory/Mobile

High bandwidth memory

High-end smartphone

Smart watch

Air pods

Auto/Industrial

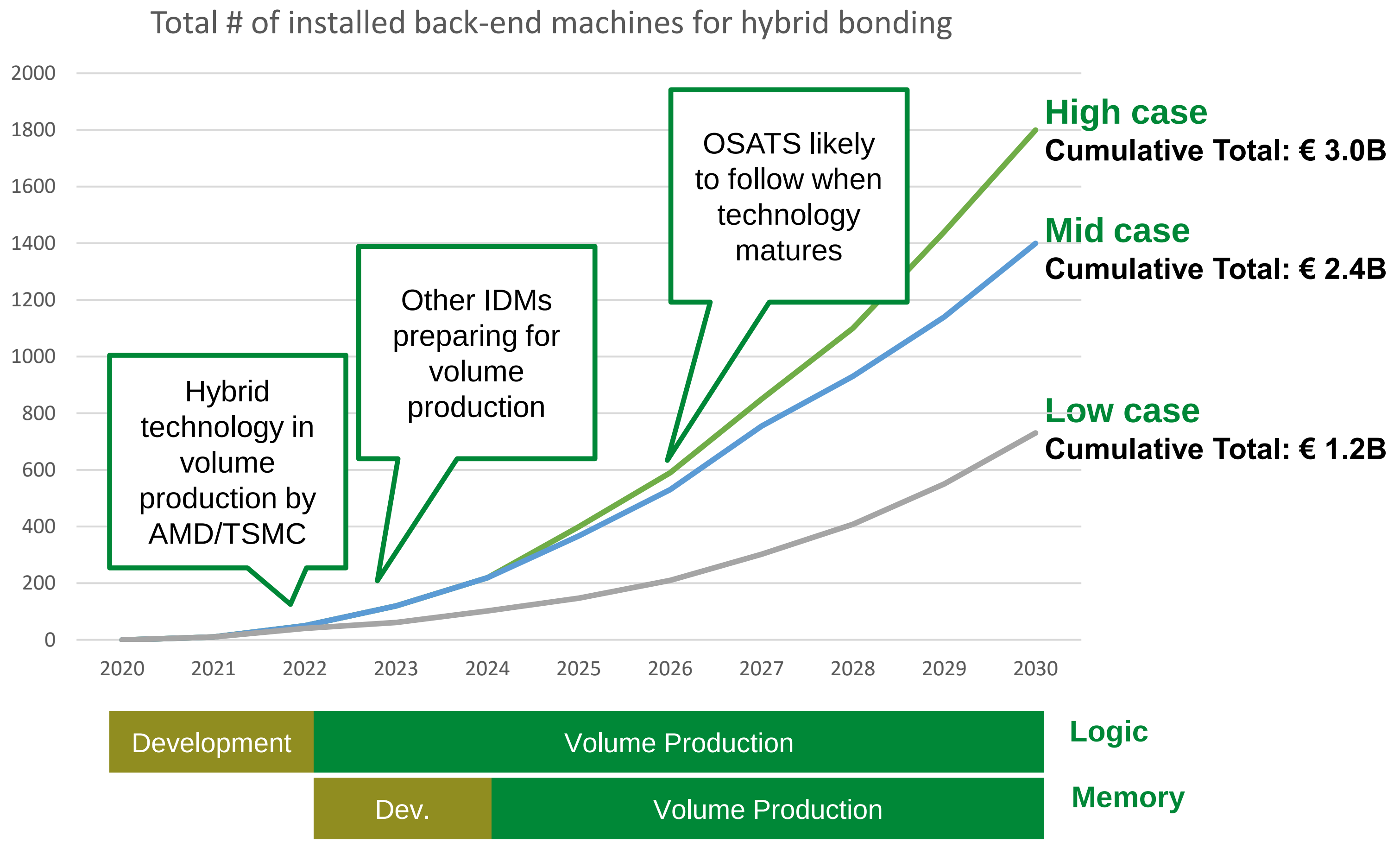
Autonomous driving

Vehicle electrification

Hybrid Bonding Adoption Gaining Traction

Hybrid Bonding Equipment Market

Estimated 700 – 1,800 systems by 2030

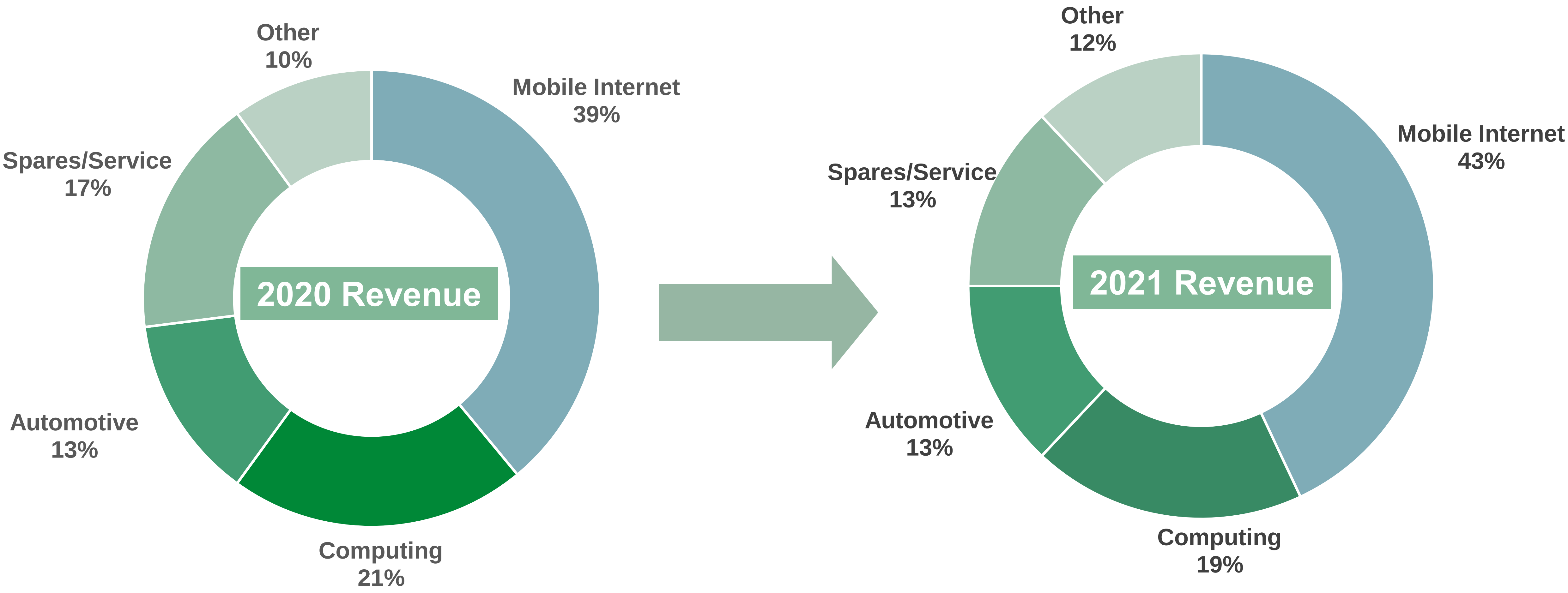


Source: Besi estimates

- **Hybrid now on radar of all major semi producers**
- **Not question of if, but when and how large the market opportunity**
- **Upside market potential expanded**
  - Tracking to mid case currently
- **Expected rollout sequence:**
  1. Logic
  2. Memory
  3. Mobile
  4. Subcontractors

III. END USER MARKET TRENDS

Besi End-User Markets



Source: Company estimates

Mobile: Besi's Largest End-User Market

RF Front End
Antennas
GPS

RF
Tranceiver
Modem

Local
Connectivity
WiFi/NFC

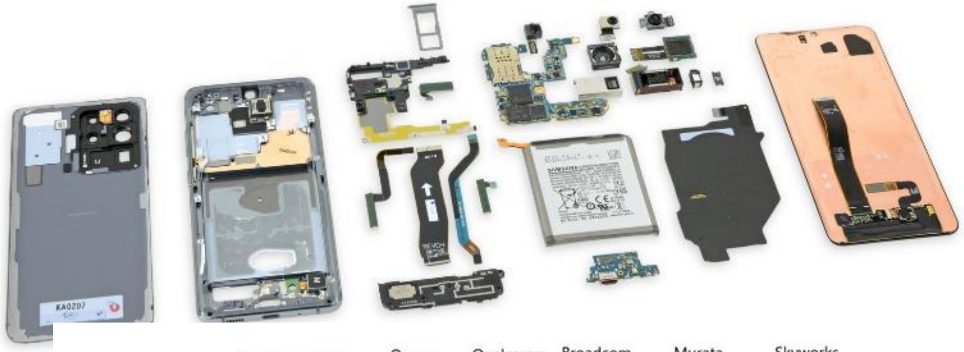
Microphone
Cameras
Sensors

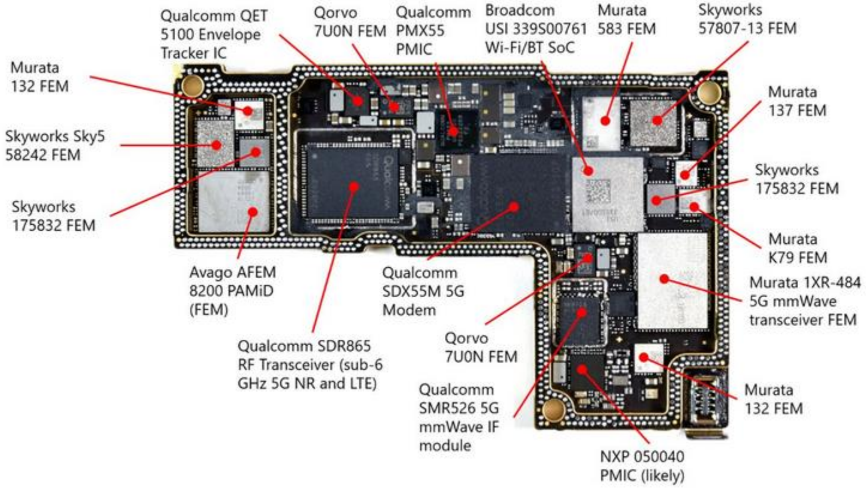
Display
TouchScreen

Power
Battery

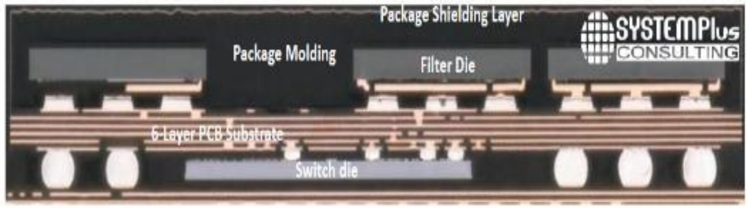
Memory

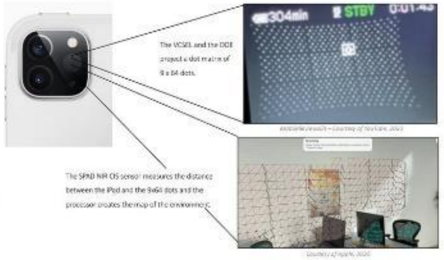
Application
Processor





Lidar





Source: Unitedlex.com and ifixit.com and System plus

Besi Involved in Almost All Components

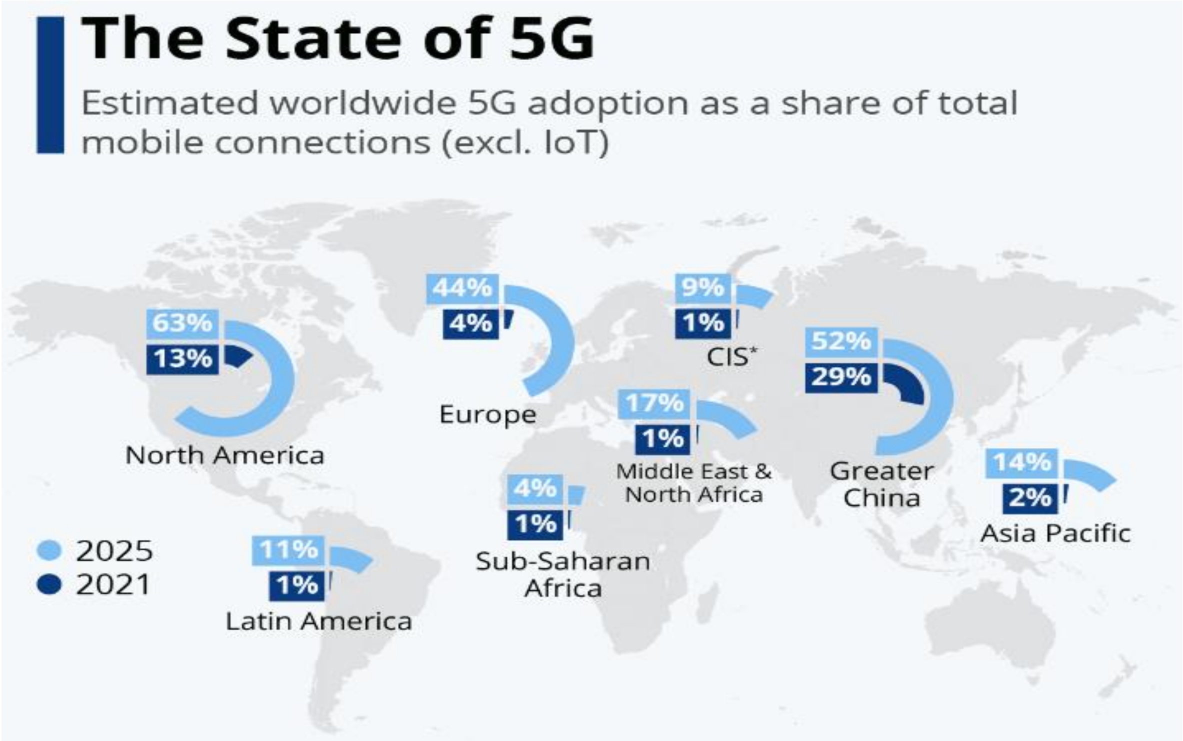
Main Components	Besi system Utilized
Processor	8800CHM, MMS-LM
DRAM Memory	2100sD, FSL
NAND Flash	2100sD, AMS-W/LM/FCQ8800
PM IC	2100sD, AMS-W/LM
Motion coprocessor	2100sD, AMS-W/LM
Gyroscope	2100xP, 2100sD, AMS-W/LM, FCL
3-ax accelerometer	2200evo
barometric sensor	2200evo
Charging IC	2100xP, 2100sD, AMS-W/LM, FCL
Power Delivery IC	21000xP
Wireless charging IC	2100xP, 2100sD, AMS-W/LM
Communications	**Besi system Utilized**
Wifi/Bluetooth module	AMS-W/LM / 2100HSi
NFC	8800FCQ, AMS-W/LM,2009SSI
LTE Modem	8800FCQ, AMS-W/LM
Low Band LTE PAD	2200evo, FSL
Mid Band PAD	2200evo, FSL
High Band PAD	2100xP, 2100sD, AMS-W/LM
RF Transceiver	2100xP, 2100sD, AMS-W/LM
RF Receiver	2100xP, 2100sD, AMS-W/LM
Envelop Tracking IC	8800FCQ, AMS-W/LM
Antenna Switch	2100xP, 2100sD
PA	2100xP, 2100sD, AMS-W/LM
PA Module	2200evo, 2100sD
GSM PA module	2200evo, 2100sD
Video/Audio	**Besi system Utilized**
Cameras Back side	2200evo
Cameras Front Side	2200evo
Face ID	2200evo
Image Sensor	2200evo
Dot Projectors	2200evo
2+4 microphones	2100sD
Audio Codec	2100xP, 2100sD, AMS-W/LM
Touch screen control	2100sD
Touch Transmitter	FCL
OLED PMIC	2100xP

Mobile: Increasing 5G Adoption is Primary Growth Driver Will Generate New Smartphone Applications and Features

Growth in new features and functionality requires new/advanced assembly systems to achieve higher performance and more compact form factors

5G rollout is progressing, still mid-cycle adoption rates

- mmWave 5G deployment and 6G research in progress

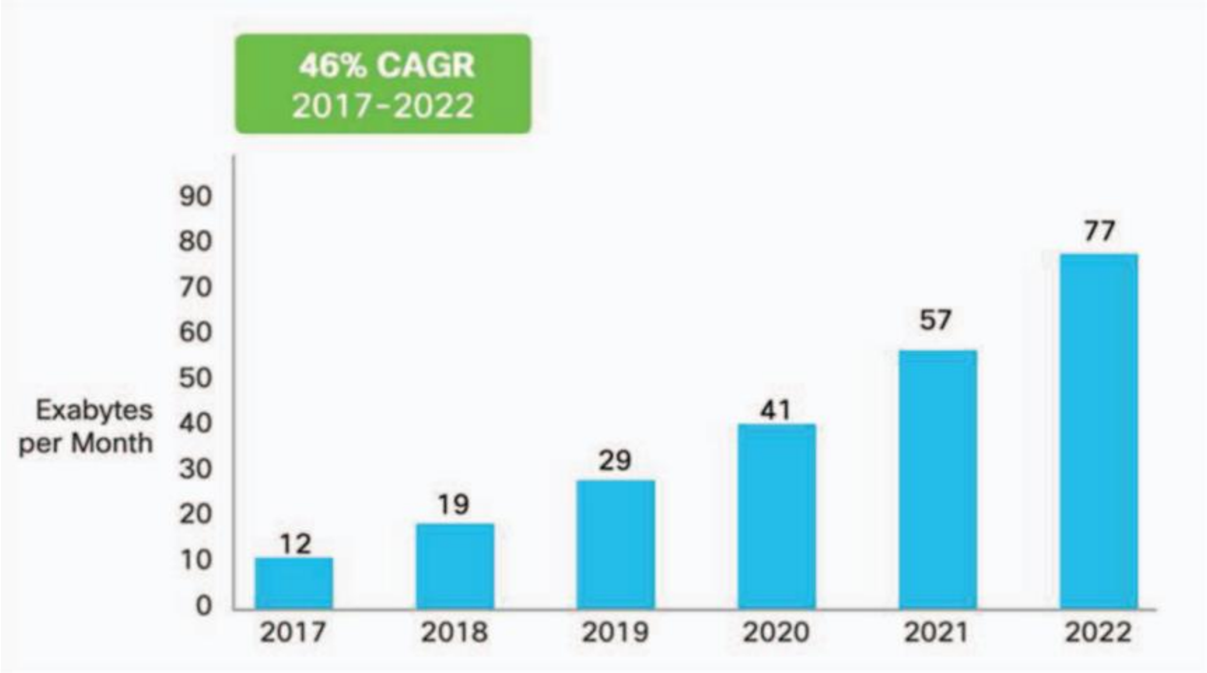


Source: IDC

Mobile data traffic is growing rapidly

- Growth in new features and functionality requires new advanced assembly systems

Global mobile traffic growth 2017-2022



Source: Cisco, 2022 ECTC

Computing Demand Expanding Rapidly

Advanced computing expanding to many commercial applications Primary driver: hyperscale cloud infrastructure buildout

HPC driving rapid innovation in **chiplet** assembly technologies

AI/Vision/Recognition

Medical

Super Computers

Mobile Phones

Industry 4.0

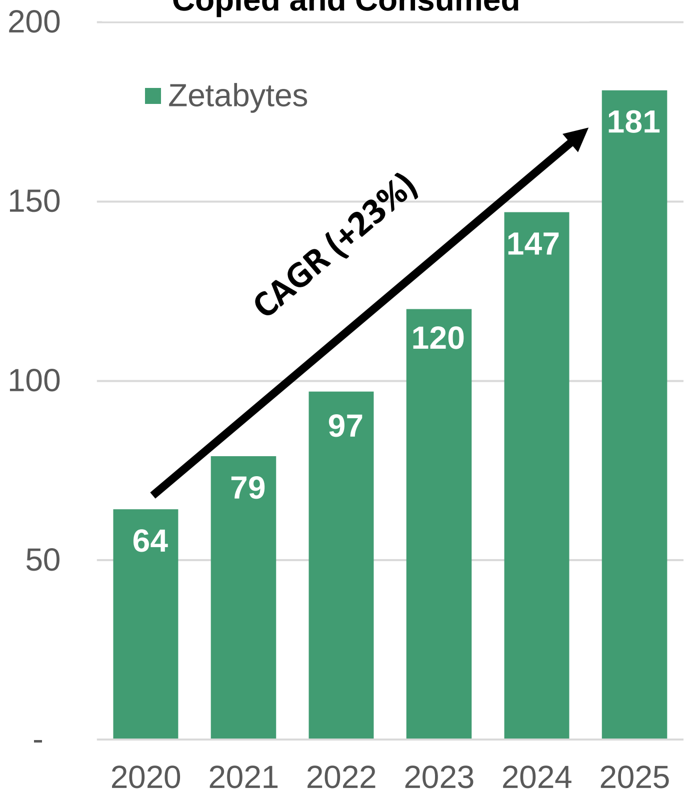
Autonomous Driving

Datacenters

Laptops/Gaming/ Engineering

Data volumes growing exponentially

Information Created, Captured, Copied and Consumed

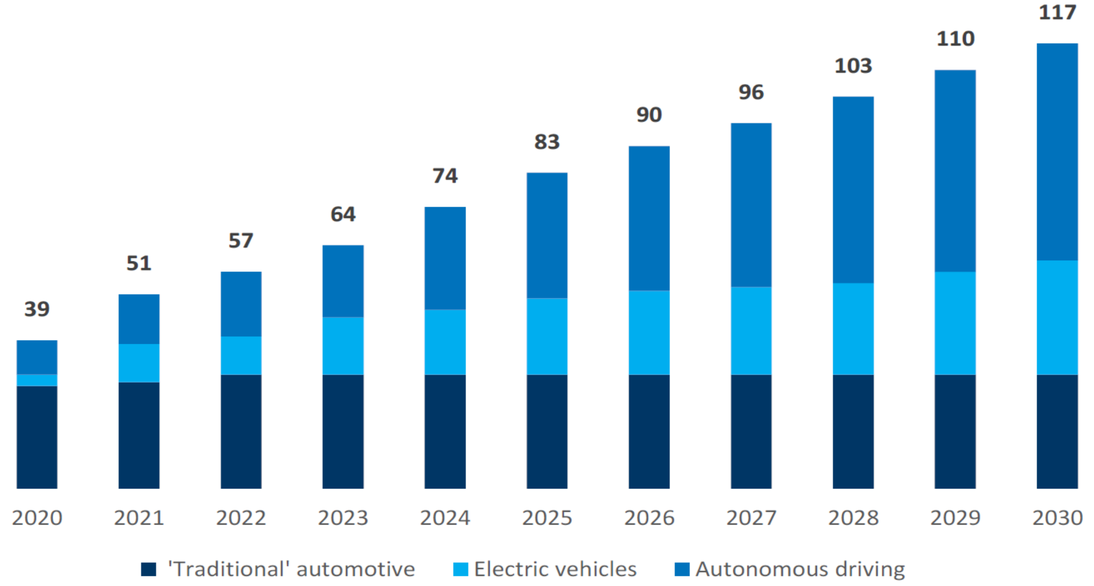


Source: Statista, June 2021

Automotive: Growth of EV and Autonomous Driving Will Increase Semiconductor Content and Cost per Car

Majority of cars produced by 2030 will have an EV drive train

IDC Automotive Semi Market Forecast ($ bn)



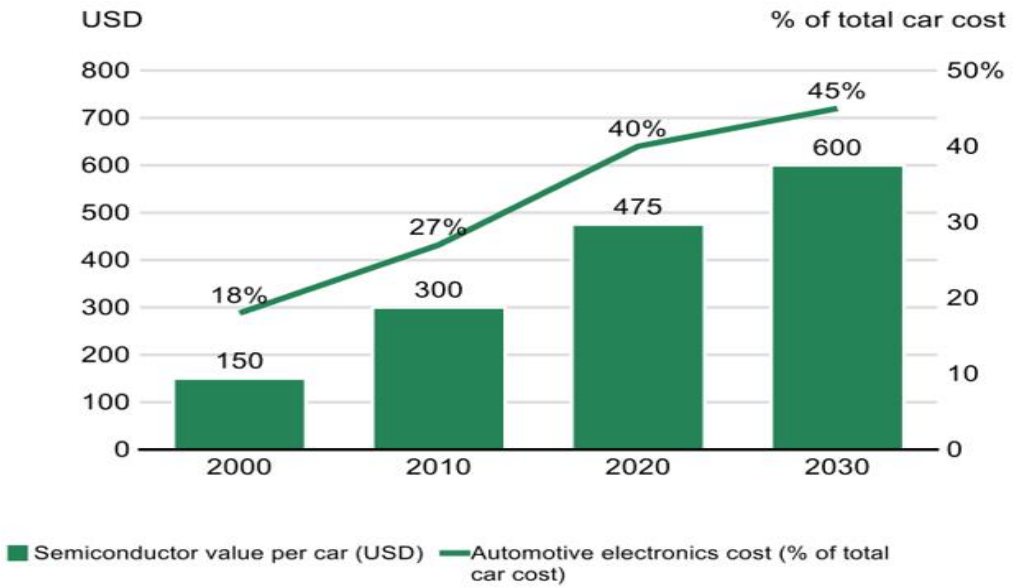
Source: Gartner, ASML Position Paper – European Chips Act

12% CAGR in automotive semi sales 2020 – 2030

- Semis for electrification to grow by 26% CAGR
- ADAS Semiconductors to grow by 20% CAGR

Almost all will have some level of autonomous driving

Semiconductor content per car is increasing

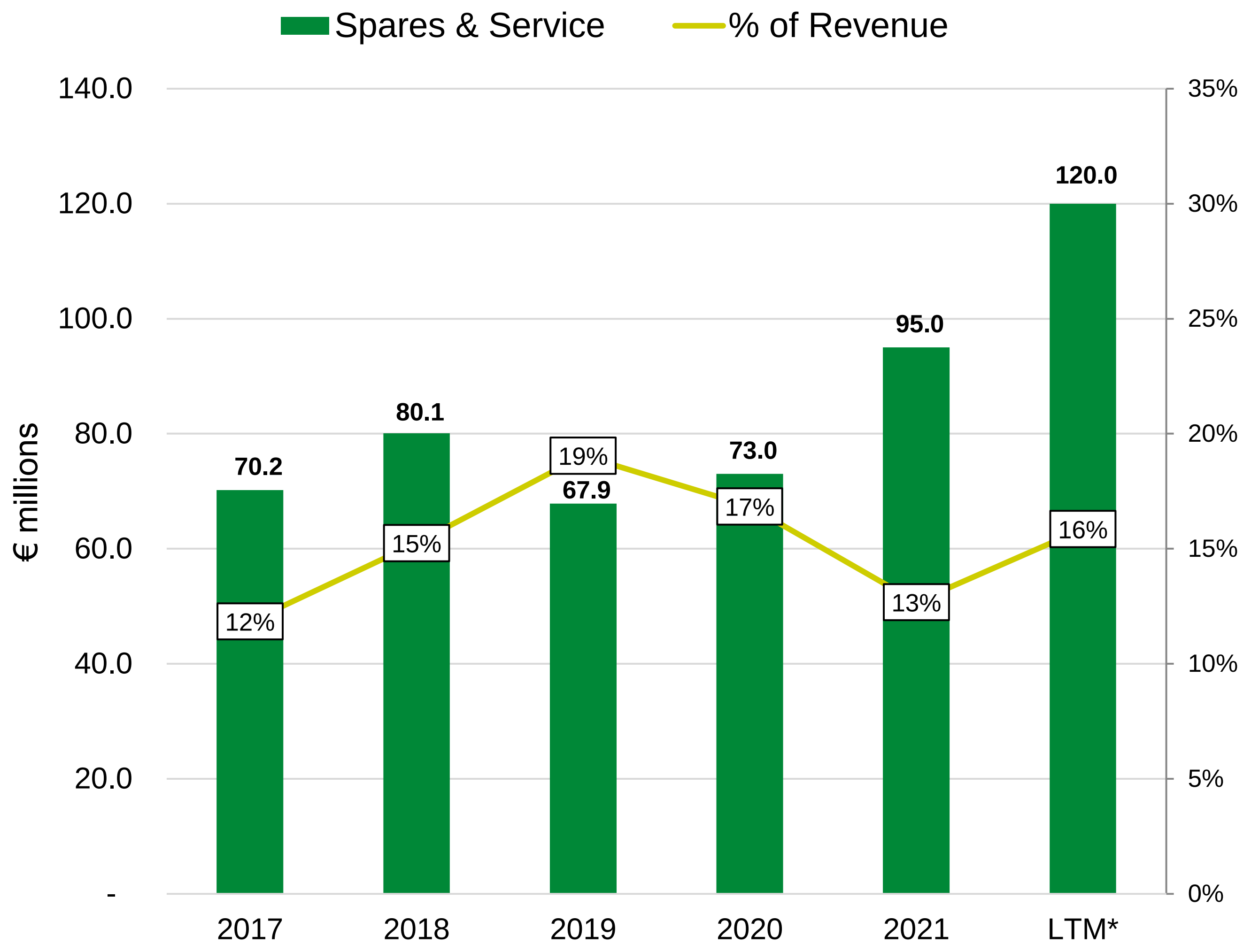


Source: IHS Markit and Deloitte Insights, July 2020

Upward trend anticipated to continue

- More sensors: cameras, radar, ultrasonic, LIDAR
- Increased use of AI, V2E connectivity

Spares/Service Activities Represent Important Area of Growth



- **Has Increased to 15-20% of revenue since 2017**
  - Diverse customer base
  - Less cyclical part of business
  - Highly profitable

- **Revenue will increase as installed base grows, particularly wafer level**

* Last twelve months ended September 30, 2022

IV. STRATEGY

Summary Strategy

Strategic Initiatives 2022

Revenue Growth Initiatives

Engine 1

- Next gen high end smart phones features & functionality
- Advanced logic and memory capex for HPC/data center
- Expanded Photonics applications
- EV & Autonomous Driving
- New assembly solutions for SiC & GaN power devices

Engine 2

- Increase engagement top logic and memory players
- New 5G, AI, HPC and smart phone applications
- New wafer level product introductions

Production/Supply Chain

- Adjusting supply chain and HC to current trends
  - 13% HC reduction vs. Q1
  - 65% reduction Asian temporary production staff
- Ramp HB production. Reduce lead times
- New 125,000 sq ft. Malaysian facility opened

Development

- R&D up 49% YTD 2022
- Next generation HB roadmap
- Introduce new wafer level assembly systems:
  - Embedded Bridge Die Attach
  - TCB C2W

Organization

- Implement strategic initiatives 2021-25 to reduce structural costs

Besi Well Positioned to Capture Next Generation Opportunities

Multiple long term drivers for secular growth

- Computing: Big data, AI, edge computing, photonics
- Mobile: Continued roll-out of 5G, wearables, and deployment of mmWave 5G
- Automotive: EV and autonomous driving

Slowing of Moore's Law drives innovation in chiplet architectures

- Chiplets = more die placement steps = higher capital intensity
- Besi is well positioned with leadership in hybrid bonding and sub-micron die attach

New mobile technologies on the horizon

- New wearable devices like AR glasses with challenging form factors & advanced cameras
- Potential adoption of hybrid bonding in mobile processors
- 3D IC integration, advanced camera systems and 3D sensing for increased security

Transition to EVs with autonomous driving

- New SiC and GaN power devices requiring new die attach processes
- Increase in sensing and on-board computing content for safety and automation
- Requires advanced process control

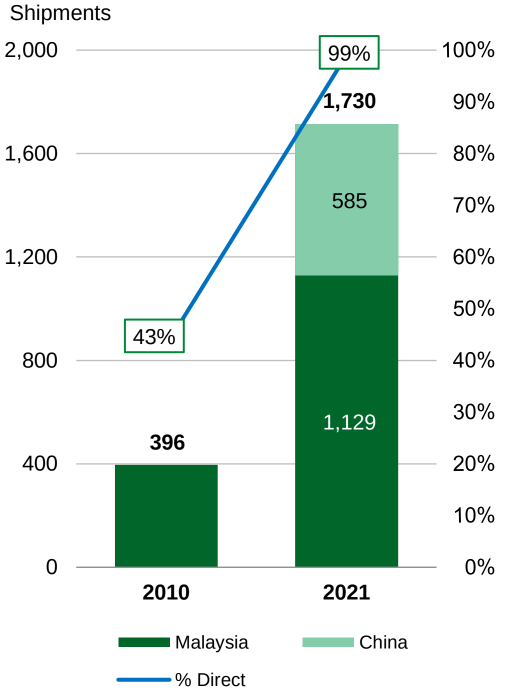
Asian Production Transfer Has Improved Profitability and Cash Flow

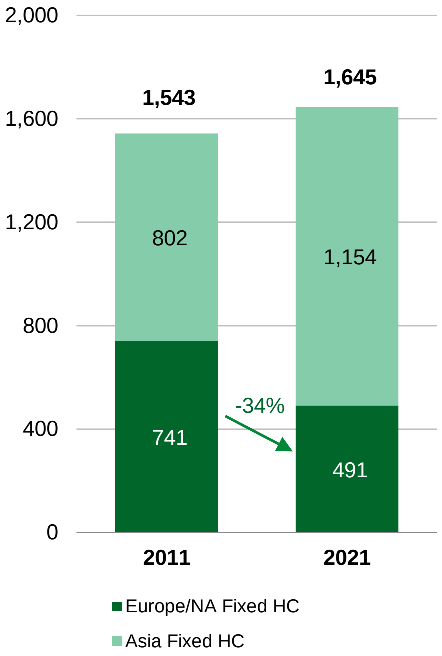
Asian Production Has Significantly Expanded

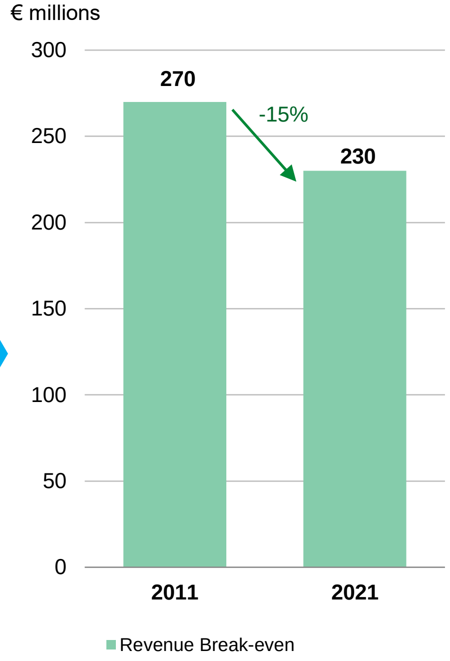
Leading to Lower Fixed European and NA Headcount

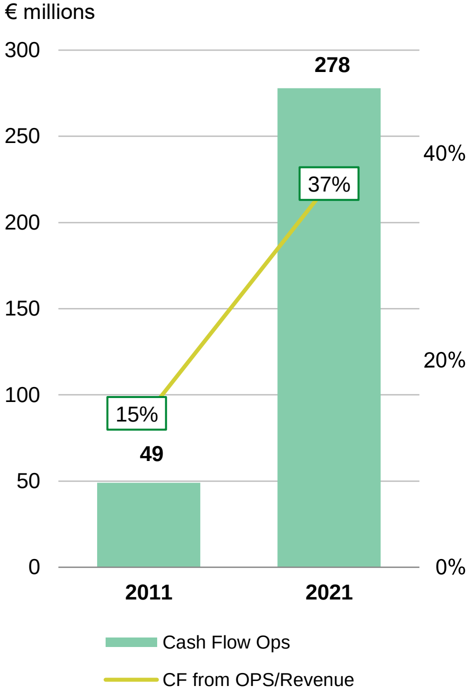
And Reduced Break Even Revenue Levels

And Improved Cash Generation

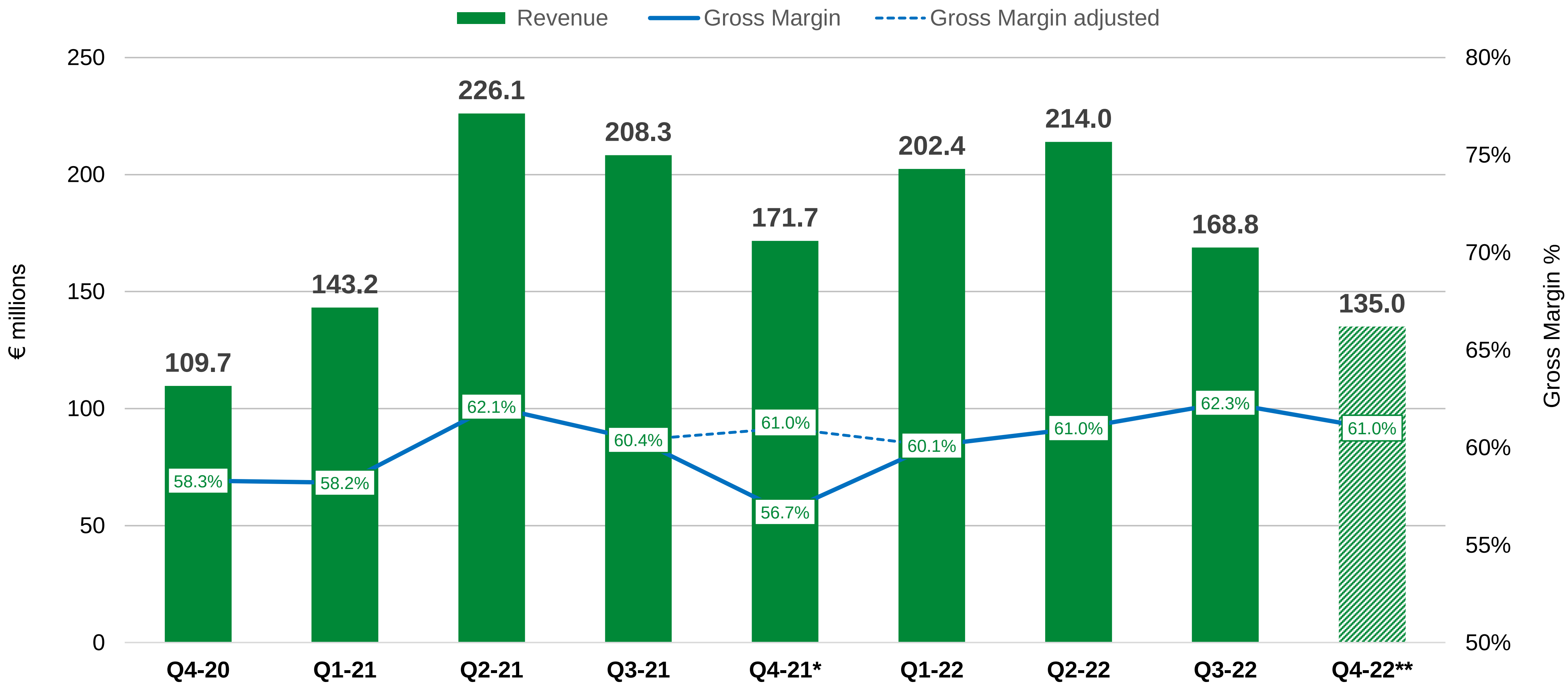








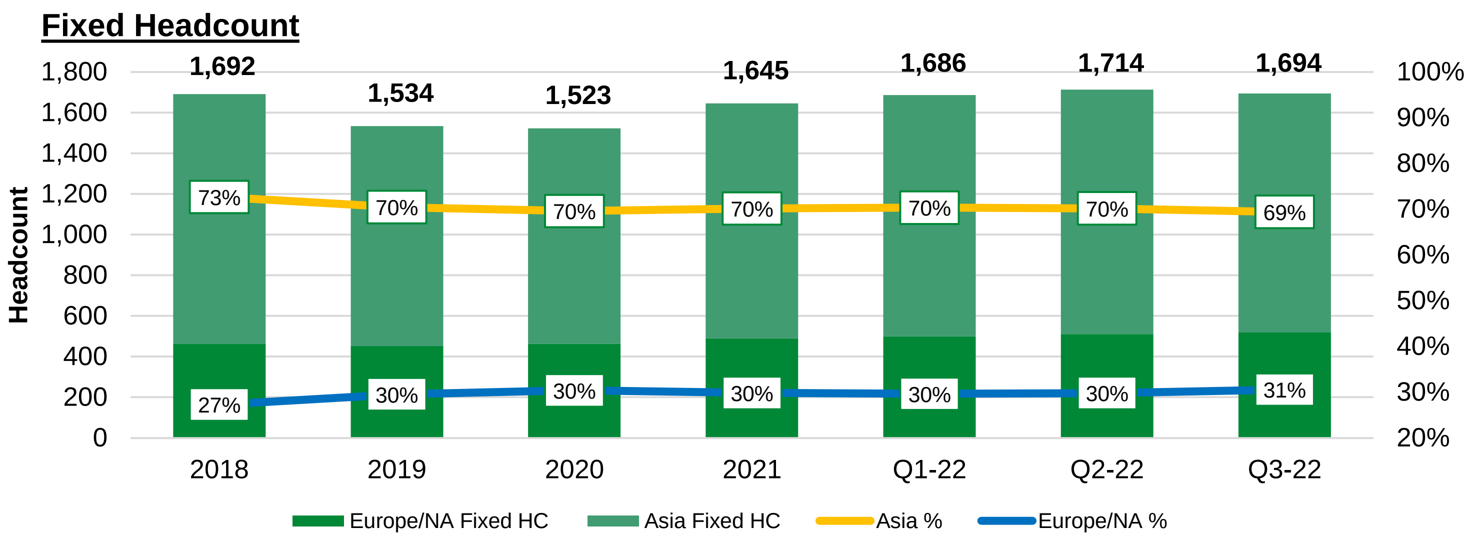
Flexible Production Model Has Generated Consistent Gross Margins in Market Cycles

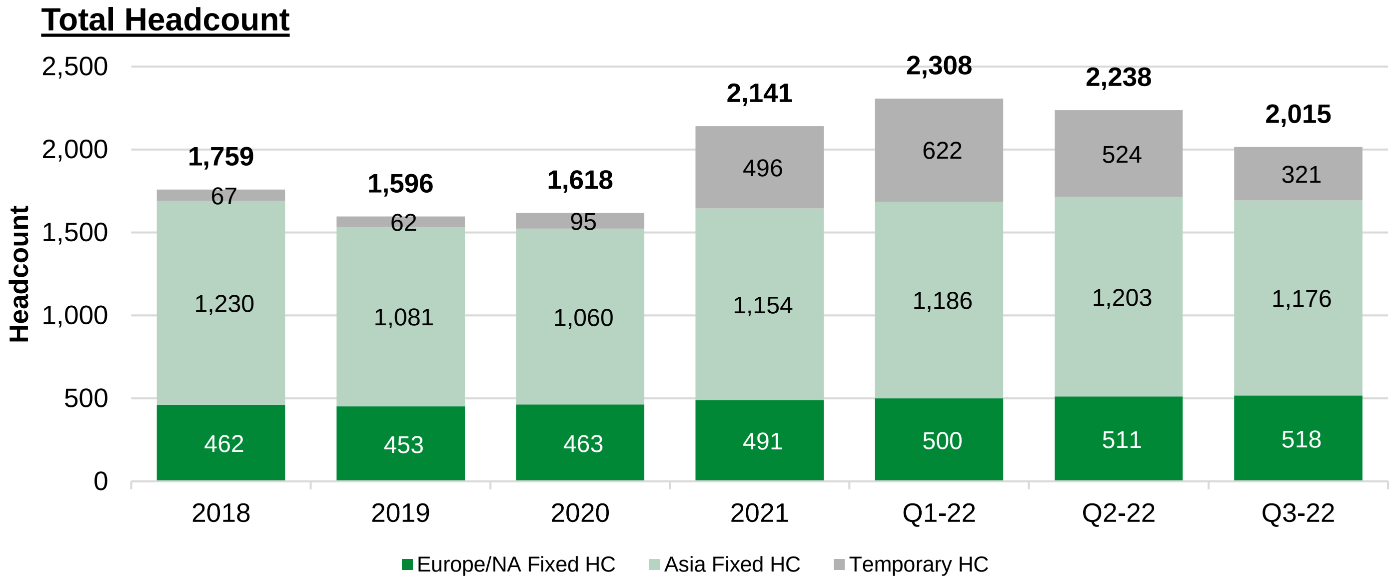


* Includes € 7.4 million (4.3 gross margin point) inventory charge in Q4-21 related to a flood of one of Besi's Malaysian production facilities.

** Assumes midpoint of guidance for Q4-22

Flexible Asian Workforce Has Enhanced Scalability



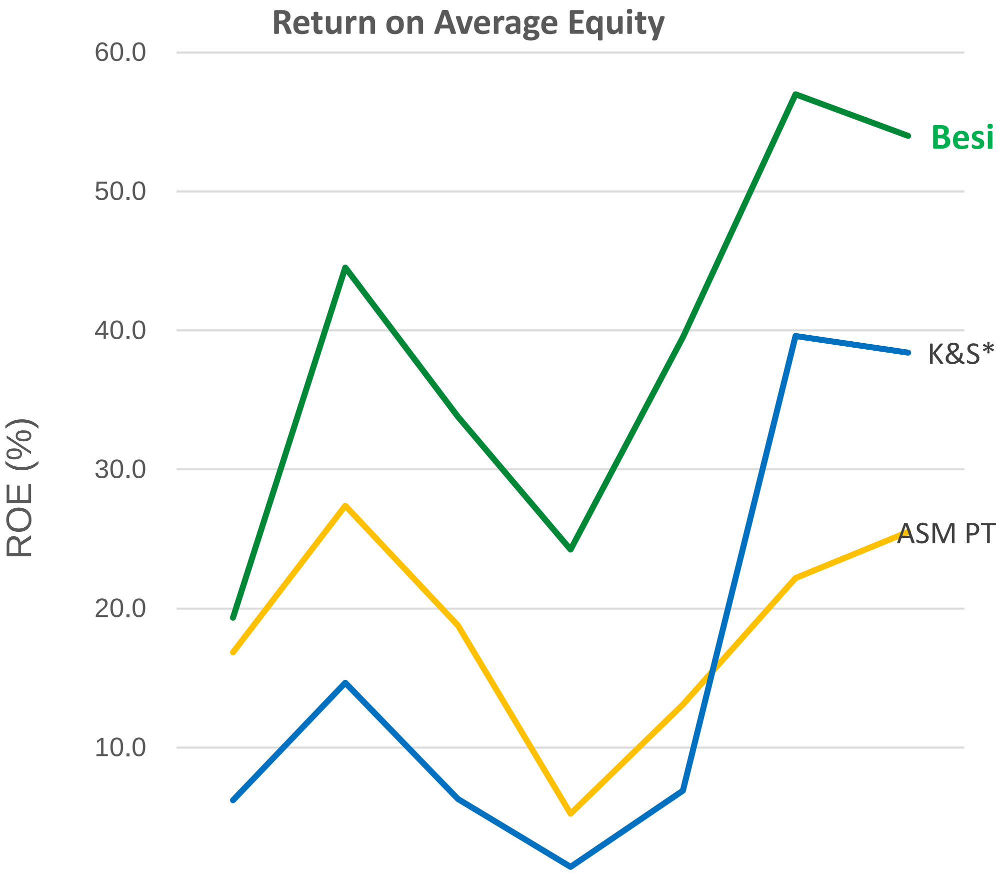


- Reducing temporary Asian production HC to align with market conditions
- Increasing European fixed headcount to support R&D and service/support for wafer level assembly expansion

Structural, Through Cycle Outperformance vs. Peers

Gross Margin			
	2016	YTD-22	Δ 2016/ YTD-22
Besi	**51.0%**	**59.7%**	**8.7pts**
ASM PT (Back end)	43.4%	44.1%	0.7pts
K&S*	44.8%	49.7%	4.9pts

Operating Margin			
	2016	YTD-22	Δ 2016/ YTD-22
Besi	**20.0%**	**42.3%**	**22.3pts**
ASM PT (Back end)	20.6%	22.2%	1.6pts
K&S*	8.6%	32.7%	24.1pts



	2016	2017	2018	2019	2020	2021	LTM-22
Besi	19.3	44.5	33.8	24.3	39.5	57.0	54.0
ASM PT	16.9	27.4	18.8	5.2	13.1	22.2	25.5
K&S*	6.2	14.7	6.3	1.4	6.9	39.6	38.4

Besi's margins and ROE have exceeded direct peers through cycles:

- Investment in business model has yielded high returns
- Structurally higher gross and operating margins over past five years
- Besi capital allocation strategy has also helped drive ROE outperformance

* K&S on fiscal year basis.
Last twelve months and year-to-date to June 30, 2022.

Significant ESG Progress Achieved

Process Pillar	2021 Progress
Environmental Impact	Reduced Scope 1 & 2 and 3 emissions intensity by 27% and 4%, respectively
	Relative reductions in fuel, energy, hazardous waste and water consumption
	Launched sustainable design initiatives for die bonding platforms
People Wellbeing	Additional COVID-19 health and safety measures implemented
	Increased female and local management % and training hours
	High level of employee engagement and motivation identified in COVID-19 Survey
Responsible Business	Increased % of Purchasing Volume signed CFSI and SAQ
	94% of Purchasing Volume compliant with RoHS directive, up from 92% in 2020

ESG Ambitions and Targets

Key Targets 2022

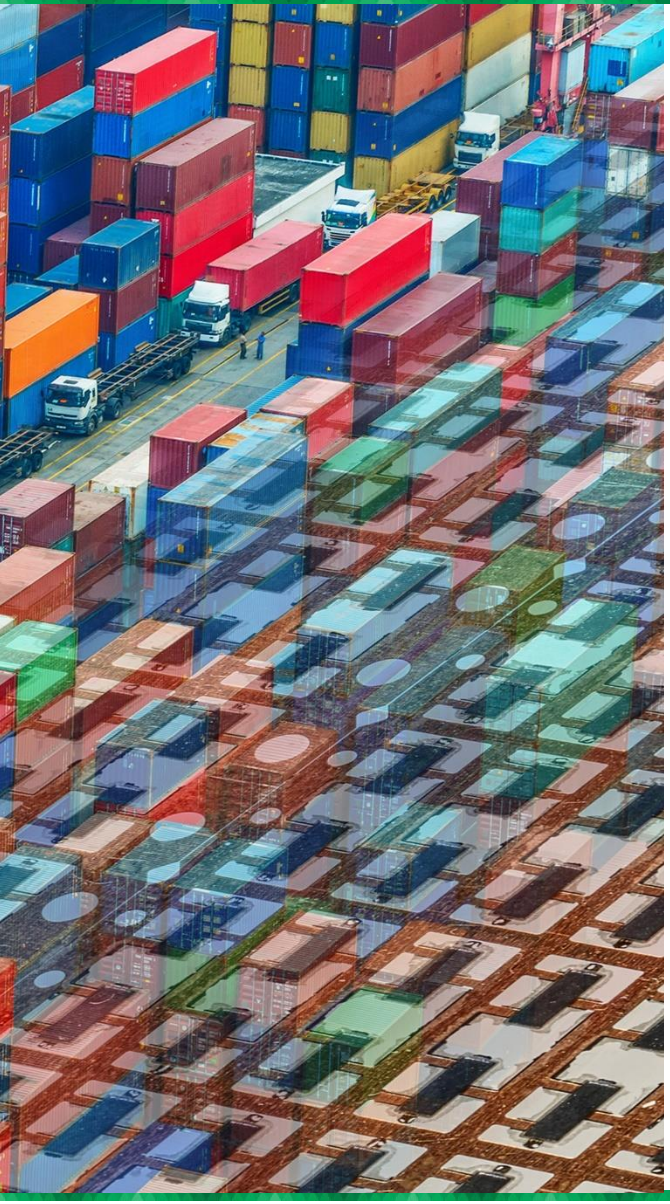
- 100% renewable sources for European energy needs
- 15% reduction in Scope 1 and 2 carbon emissions*
- Above-benchmark employee engagement
- Increase training hours per employee
- Compliance with SASB benchmark (2021)
- TCFD compliance

Key Targets 2030

- 65% renewable sources for global energy needs
- 60% reduction in Scope 1 and 2 carbon emissions*
- Reduce energy consumption
- Decouple carbon footprint from revenue growth
- 80% vendor compliance with CFSI

Carbon Neutral By 2050

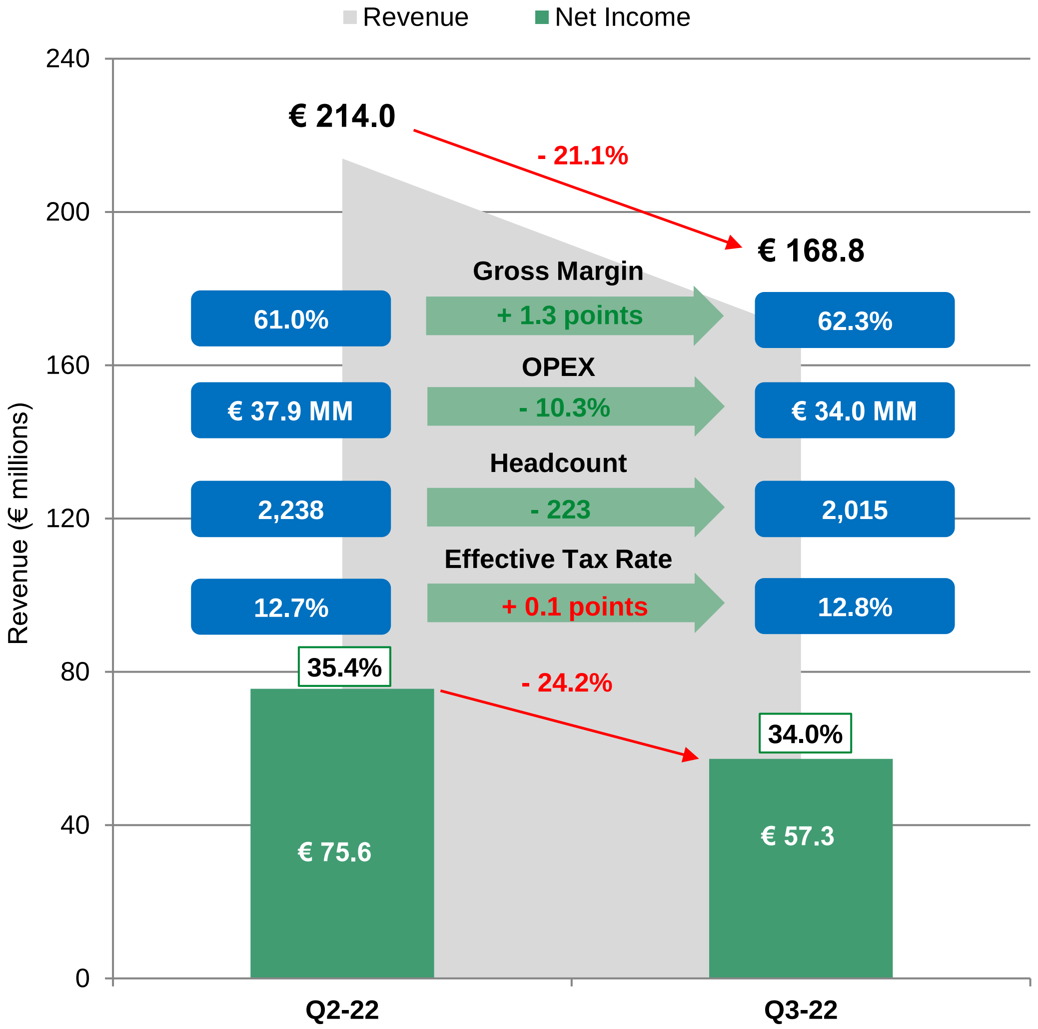
* As per Greenhouse Gas Protocol. Targets relative to 2019 baseline data



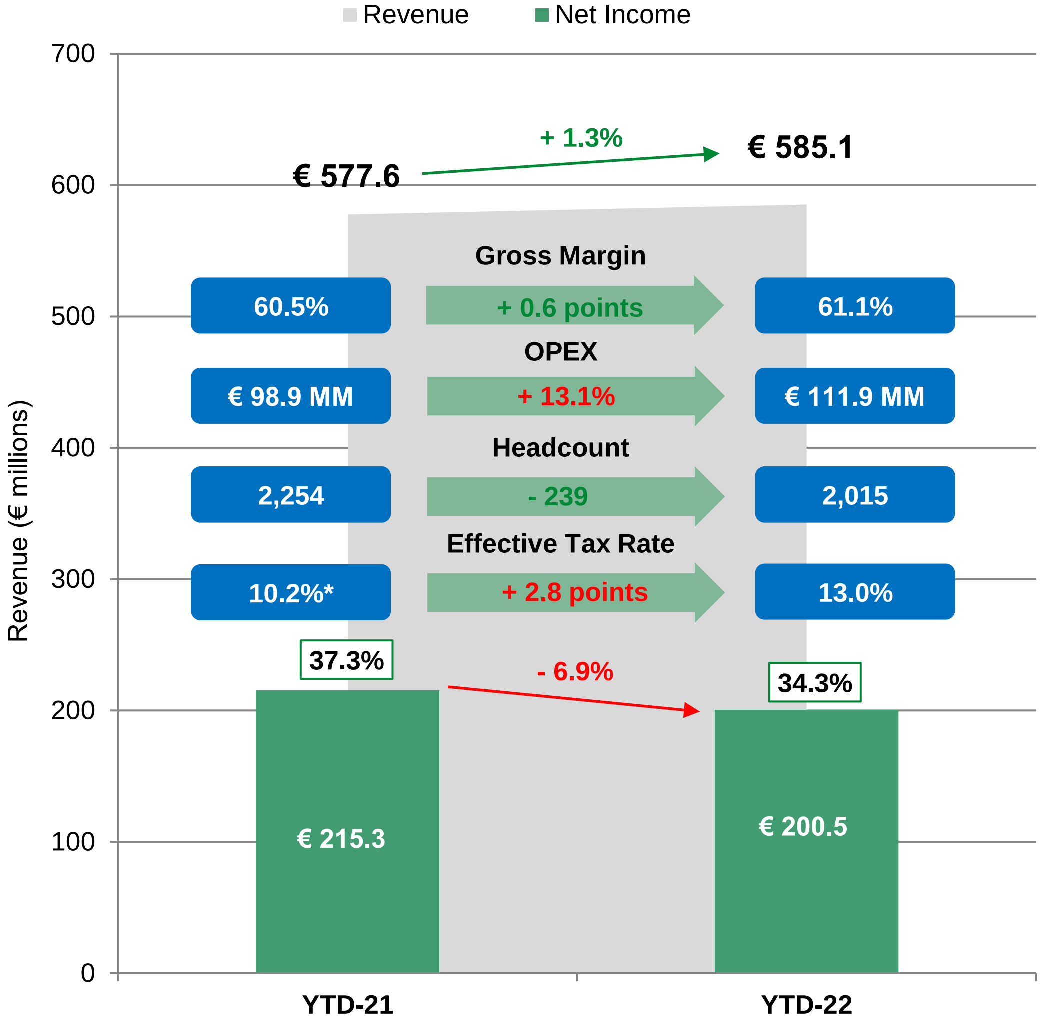
V. FINANCIAL UPDATE AND SUMMARY

YTD-22 Revenue Up 1.3%, Net Income Down 6.9%
Gross and Net Margins Remain Elevated Despite Downturn

Q2-22/Q3-22

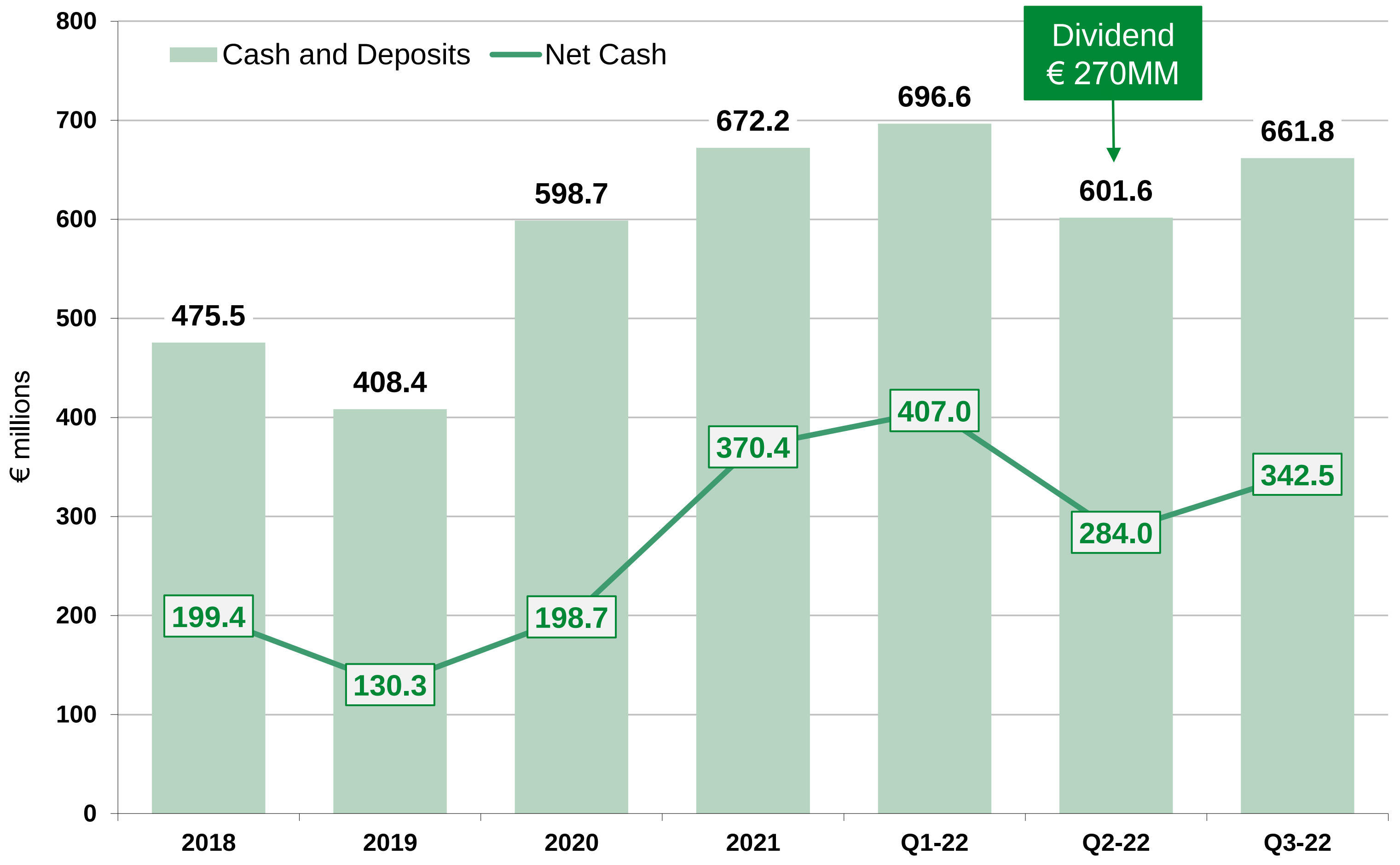


YTD-21/YTD-22



* Effective tax rate reflects € 6.1 million of tax benefits recognized in YTD-21. Ex such benefits, the effective tax rate would have been 12.7%

Strong Cash Flow Generation Continues
Cash and Net Cash Up 12.1% and 19.0% vs. Q3-21



<u>Q3-22 vs. Q2-22</u>

- Cash and deposits € 661.8 million up € 60.2 million (+10.0%) due to:
  - + € 112.7 million cash flow from operations
  - - € 45.5 million share repurchases
  - - € 5.2 million capitalized R&D
  - - € 2.6 million capex
- Net cash up € 58.5 million (+20.6%) to reach € 342.5 million end of Q3

<u>Q3-22 vs. Q3-21</u>

- Cash and deposits up € 71.3 million (+12.1%)
- Net cash up € 54.7 million (+19.0%)

<u>Convertible Notes</u>

- € 359.9 million outstanding at Q3-22 end
  - Average conversion price € 67.28
  - Blended rate 1.29%

Guidance Q4-22 and FY 2022

€ in millions	Q3-22	Q4-22	FY 2021	FY 2022E*
Revenue	€ 168.8	-15% - -25%	€ 749.3	-4%
Gross Margin	62.3%	60% - 62%	59.6%	~61%
Operating Expenses	€ 34.0	~+5%	€ 129.2	+14%

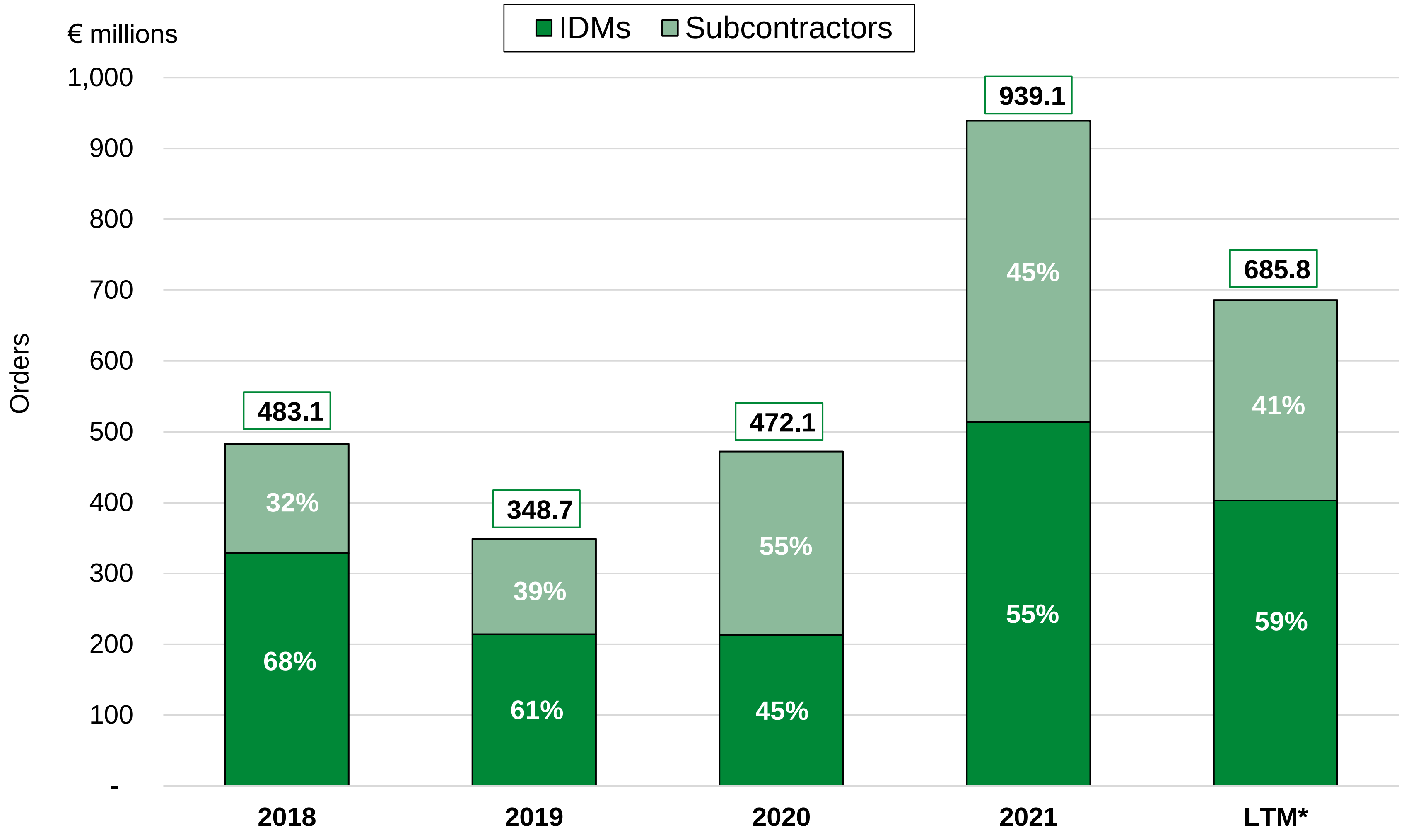
* 2022E assumes midpoint of guidance for Q4-22

Investment Considerations

- **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 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**

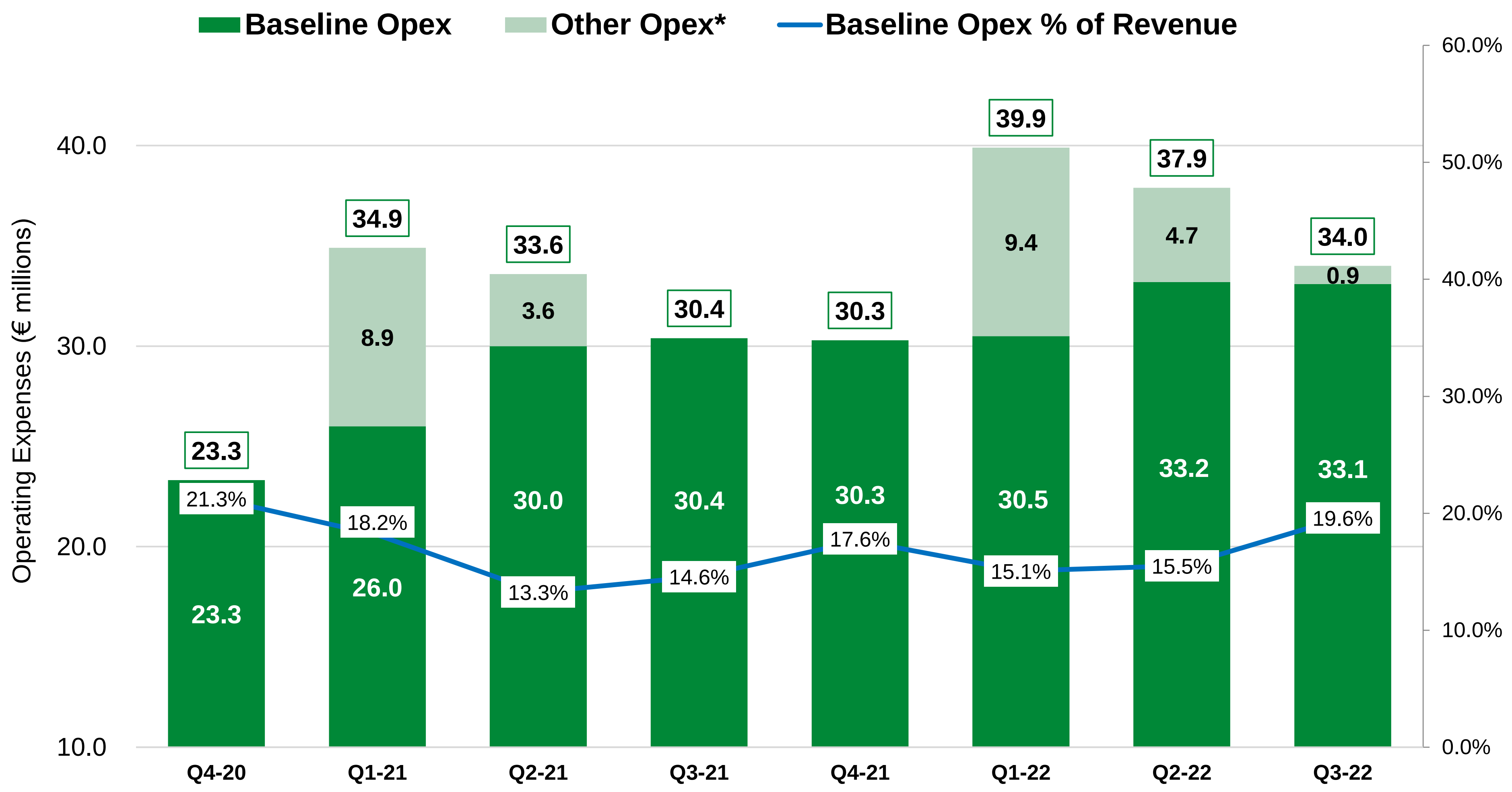
VI. APPENDIX

IDM/Subcontractor Order Trends



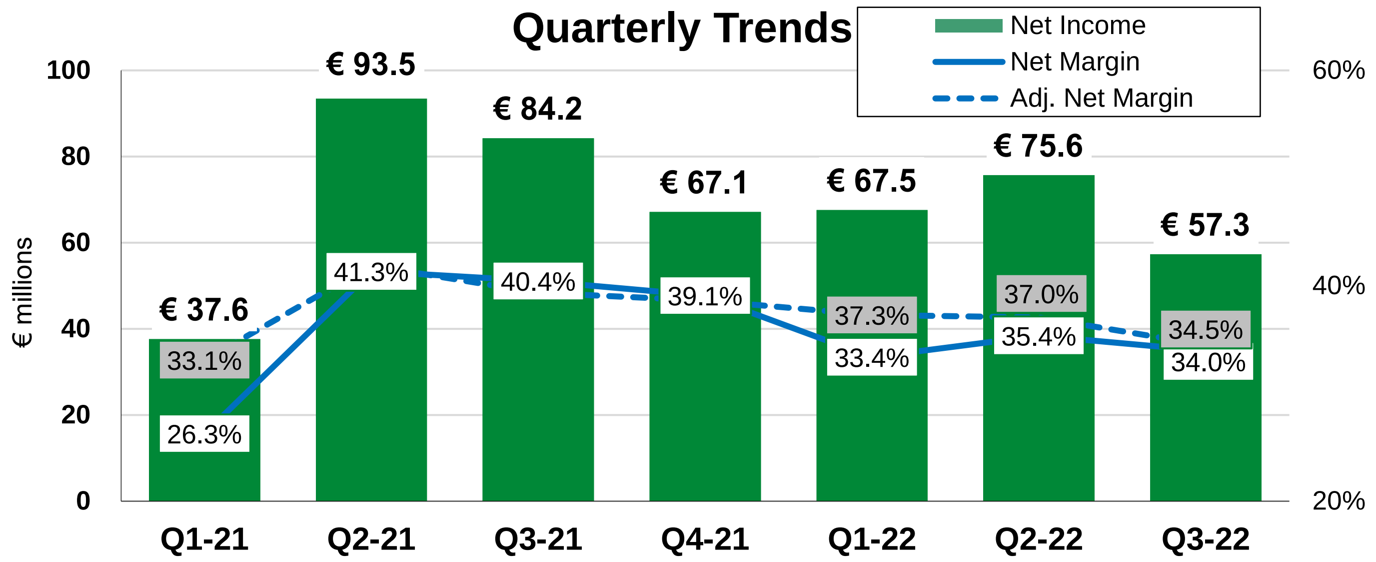
* Last twelve months ended September 30, 2022

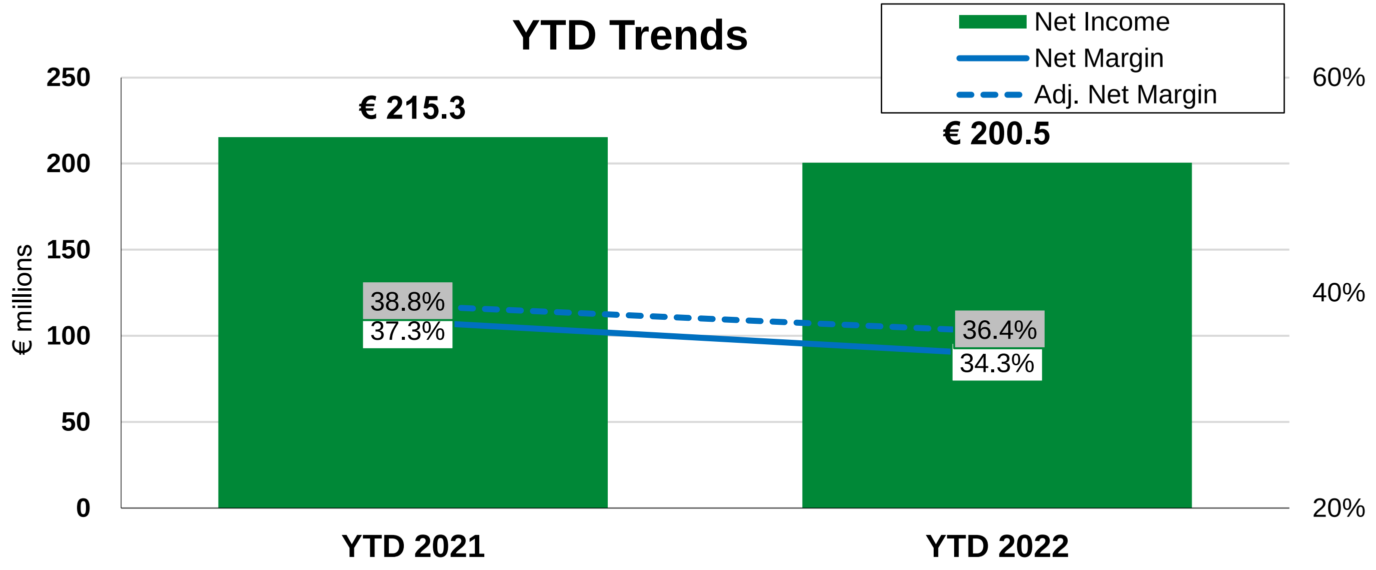
Baseline Operating Expense Trends



* Other Opex includes both short-term and long-term incentive compensation, seasonal effects, restructuring costs, net R&D capitalization/amortization and certain one-time items.

Net Income Trends





Q3-22 vs. Q2-22

- **€ 57.3 million (-€ 18.3 million)**
  - -21.1% revenue
  - +1.3 points gross margin
  - - € 2.7 million share-based compensation
  - Lower sales related expenses
- Adjusted net margin 34.5% vs. 37.0%

Q3-22 vs. Q3-21

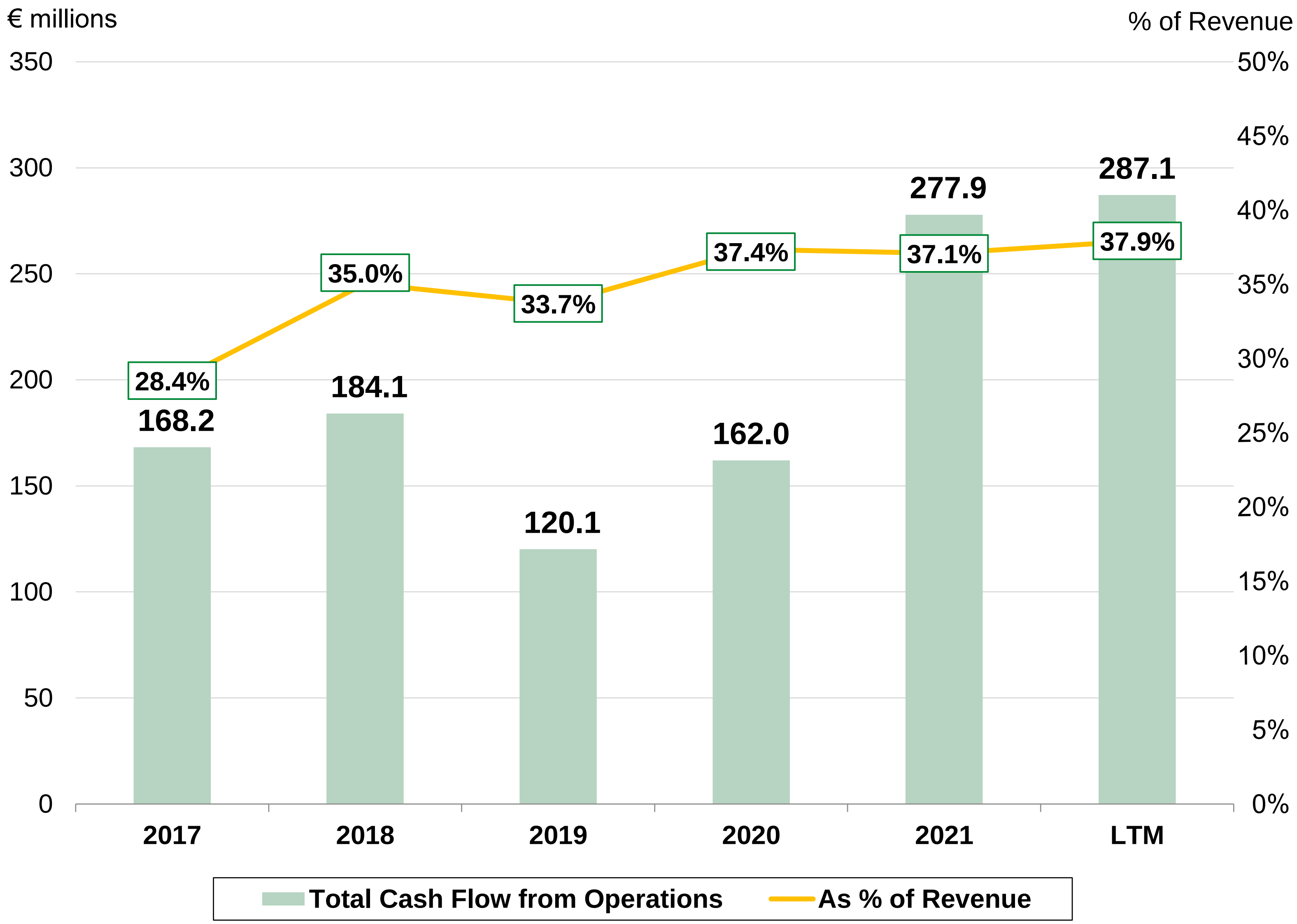
- **-€ 26.9 million**
  - -19.0% lower revenue
  - +1.9 points gross margin
  - Increased R&D spending
  - Higher effective tax rate

YTD-22 vs. YTD-21

- **€ 200.5 million (-€14.8 million)**
  - +1.3% revenue increase
  - +0.6 points gross margin
  - Increased R&D spending for wafer lever assembly
  - Increased hedging costs and effective tax rate
  - Adjusted net margin 36.4% vs. 38.8%

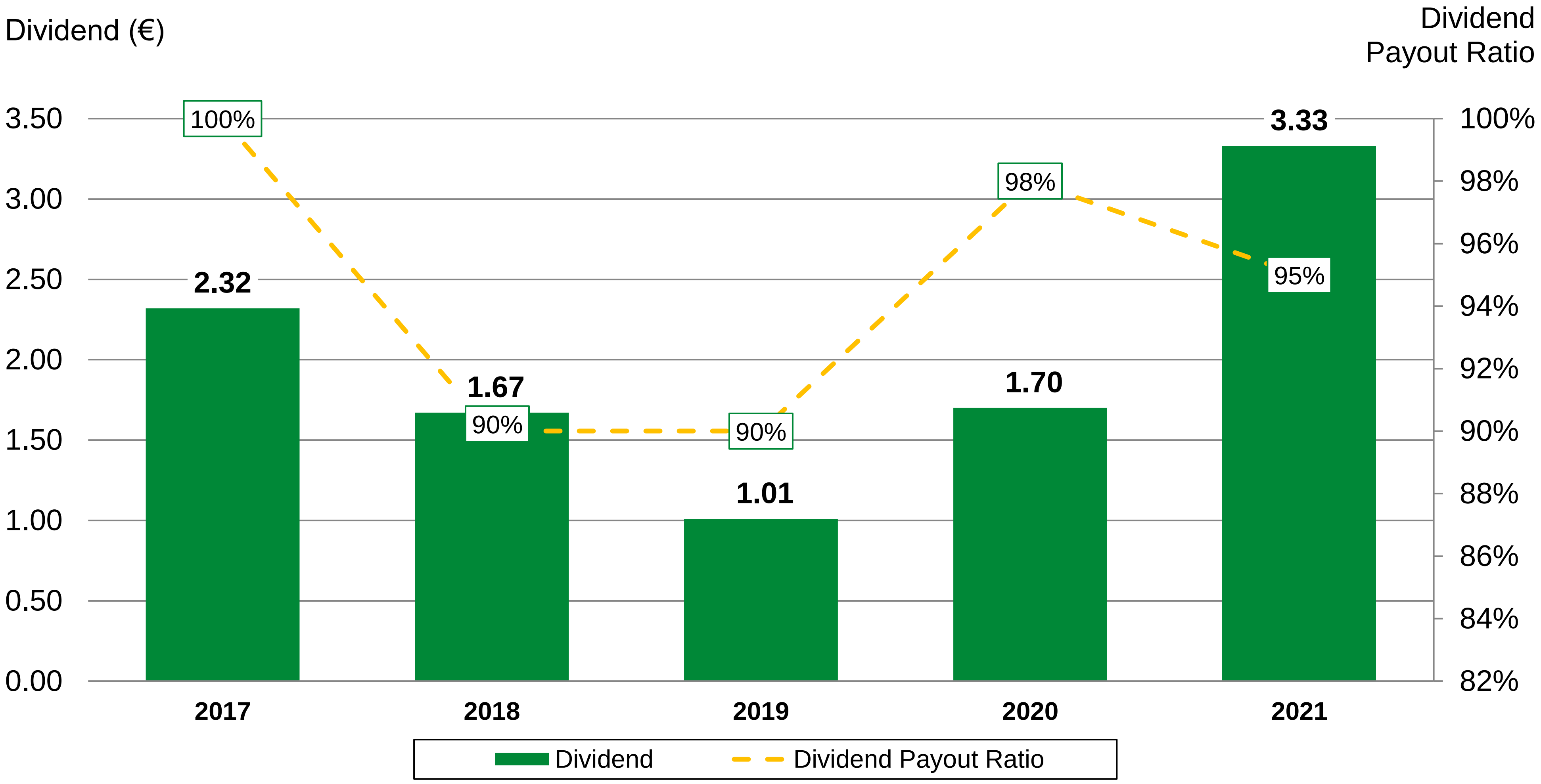
* Adjusted Net Margin excludes one-time flood related inventory impairment charge in Q4-21, tax benefits realized and share-based compensation expense in each of the respective periods.

Cash Flow Efficiency Trends

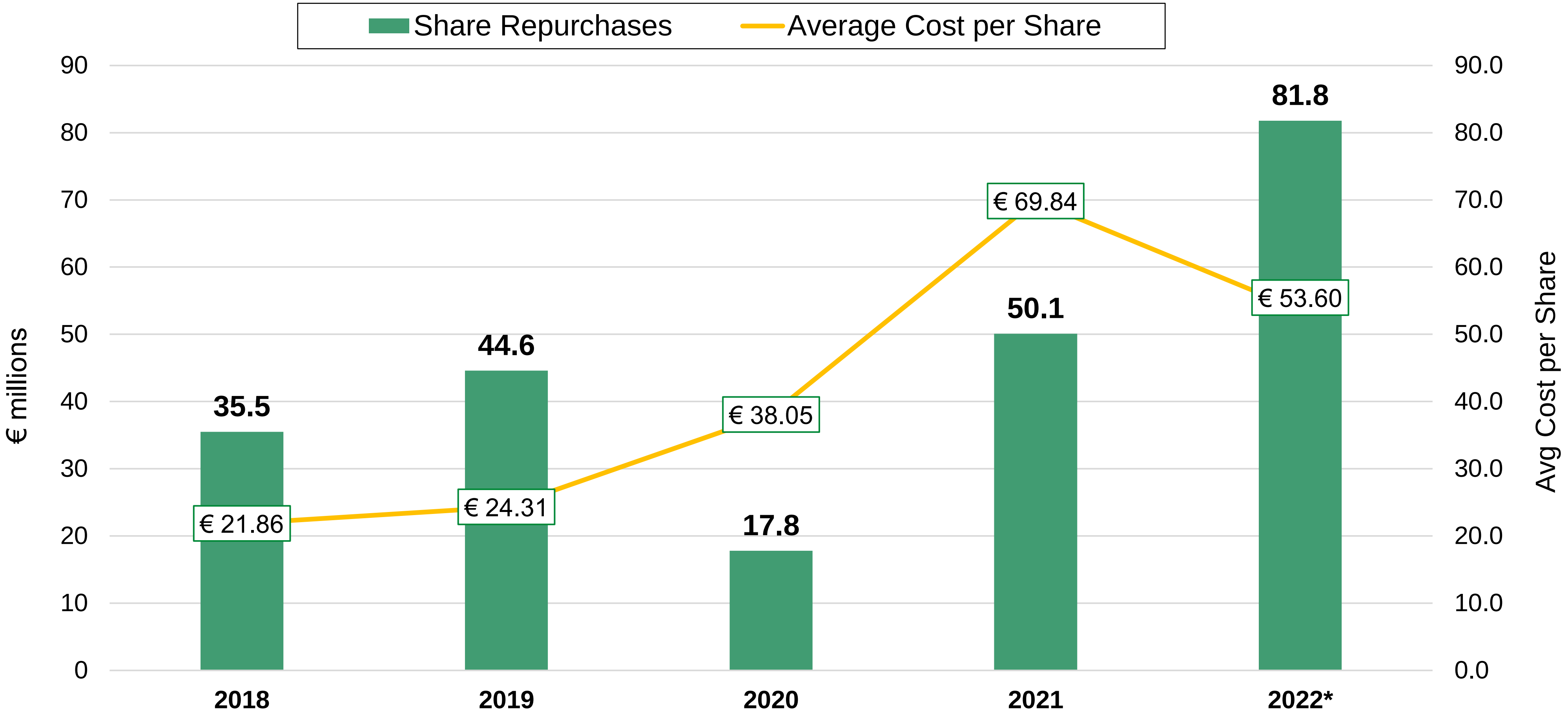


Dividend Trends

Cumulative dividends of € 975.1 million since 2011, or € 12.78 per share



Share Repurchase Activity



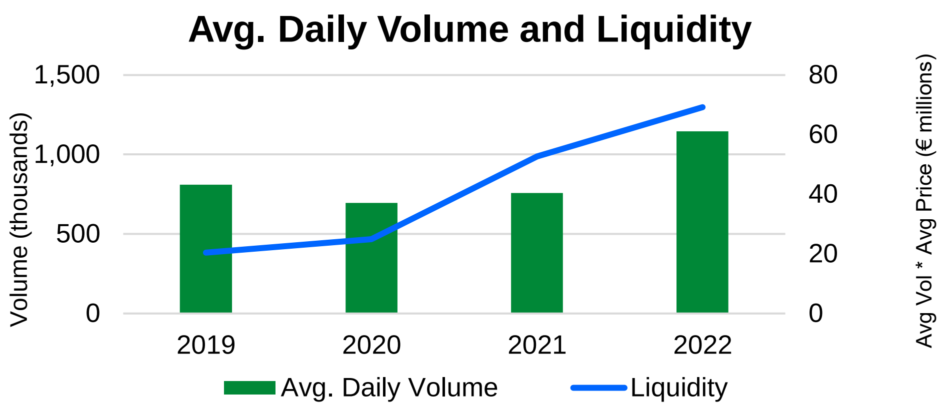
- Approximately 1.5 million treasury shares at September 30, 2022, representing 1.8% of shares outstanding
- 79.7 million shares outstanding at September 30, 2022, net of treasury

* Share repurchases included up to September 30, 2022.

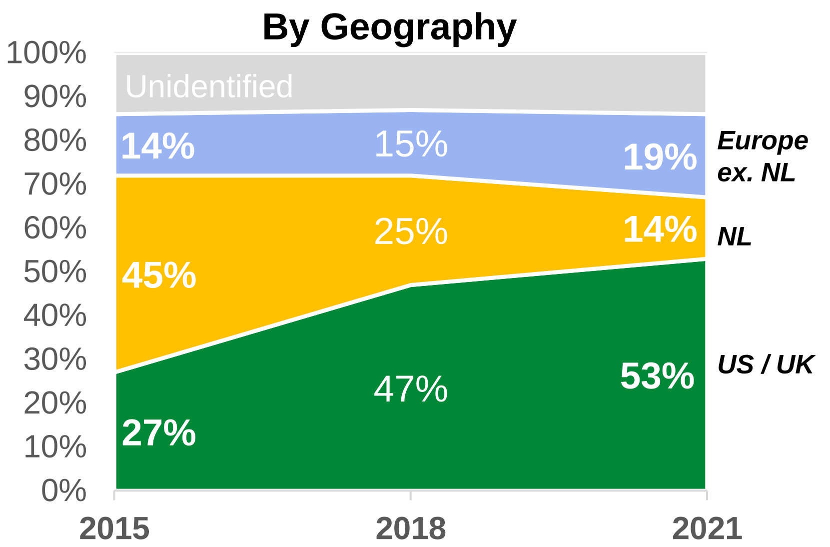
Besi Market Cap & Liquidity Has Expanded
Shareholdings Migrated from NL to US/UK over Past 5 Years

Market Profile

Symbol/ Index	• BESI • Euronext AEX
Market Cap*	• € 4.1 billion ($ 4.1 billion)
Dividend Policy	• Pay out 40-100% of net income per annum



Share Ownership



* As of October 28, 2022 ** Besi estimates