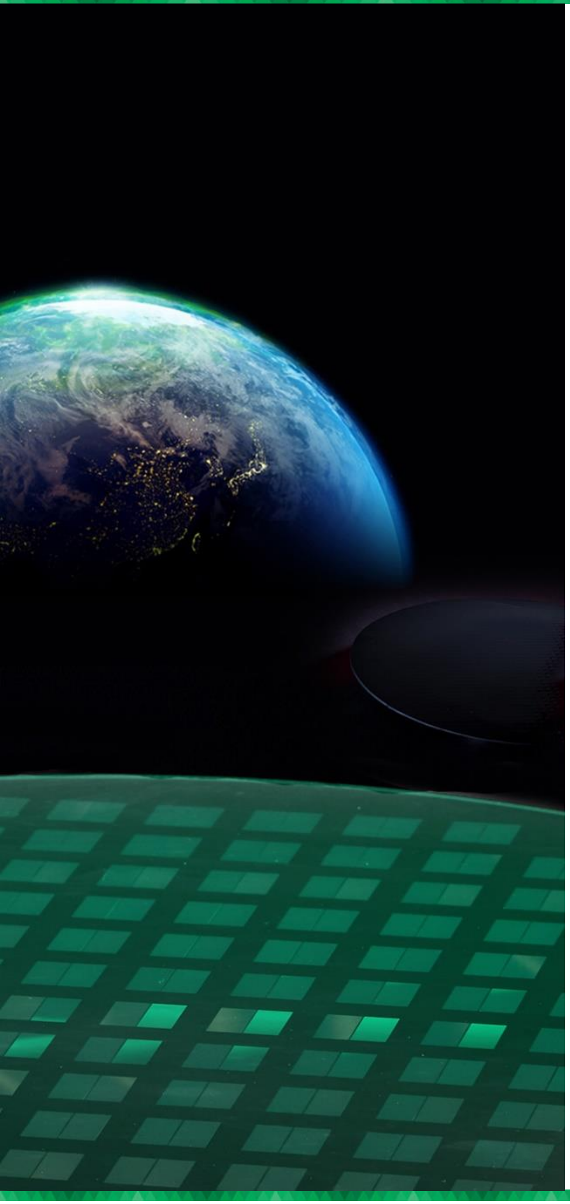


ANNUAL GENERAL MEETING

April 30, 2021

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 press release, 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, 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; 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, 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; 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, 2020 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

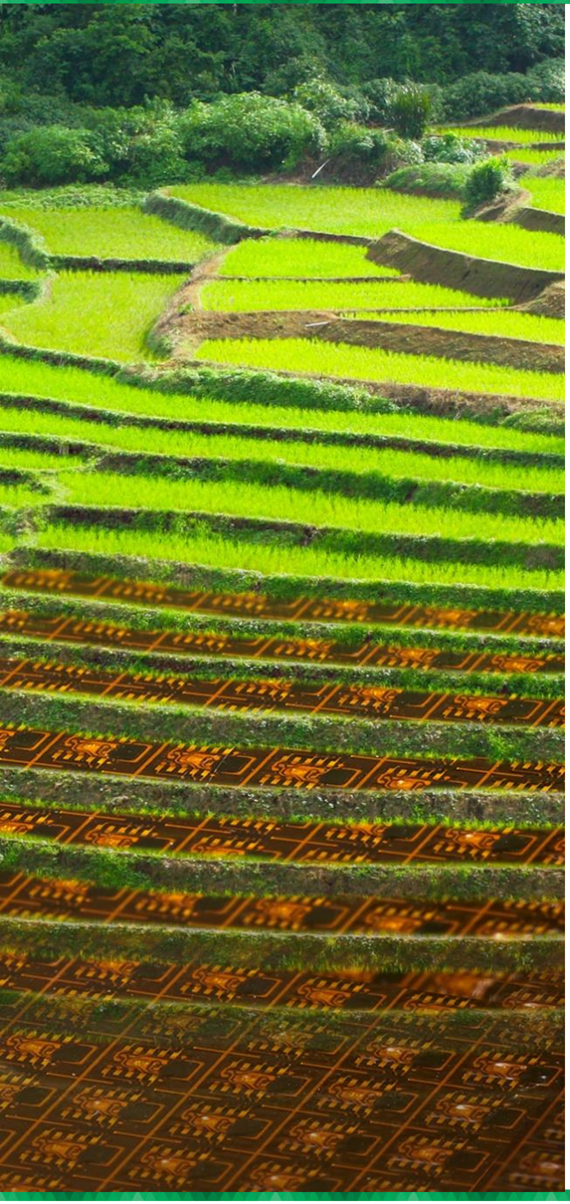
I. Company Overview

II. Market

III. Strategy

IV. Financial Review

V. Q1-21 Results, Outlook & Summary



I. COMPANY OVERVIEW

Key Highlights 2019 - 2020

€ millions except % and EPS	2019	2020	2019/20 Variance
Revenue	€ 356.2	**€ 433.6**	***+21.7%***
Orders	€ 348.7	**€ 472.1**	***+35.4%***
Gross Margin	55.8%	**59.6%**	***+3.8***
Net Income	€ 81.3	**€ 132.3**	***+62.7%***
Net Margin	22.8%	**30.5%**	***+7.7***
EPS (Basic)	€ 1.12	**€ 1.82**	***+62.5%***
Return on Average Equity	24.2%	**39.5%**	***+15.3***
Net Cash	€ 130.3	**€ 198.7**	***+52.5%***
Scope 1 and 2 Emissions (tCO_2e/€ millions revenue)	25	**20**	***-20%***

History of Superior Long-Term Value Creation

Disciplined Strategic Execution

- Leader in advanced packaging for assembly equipment
- Superior through cycle performance versus peers
- Best in class financial metrics

Capital Allocation Program

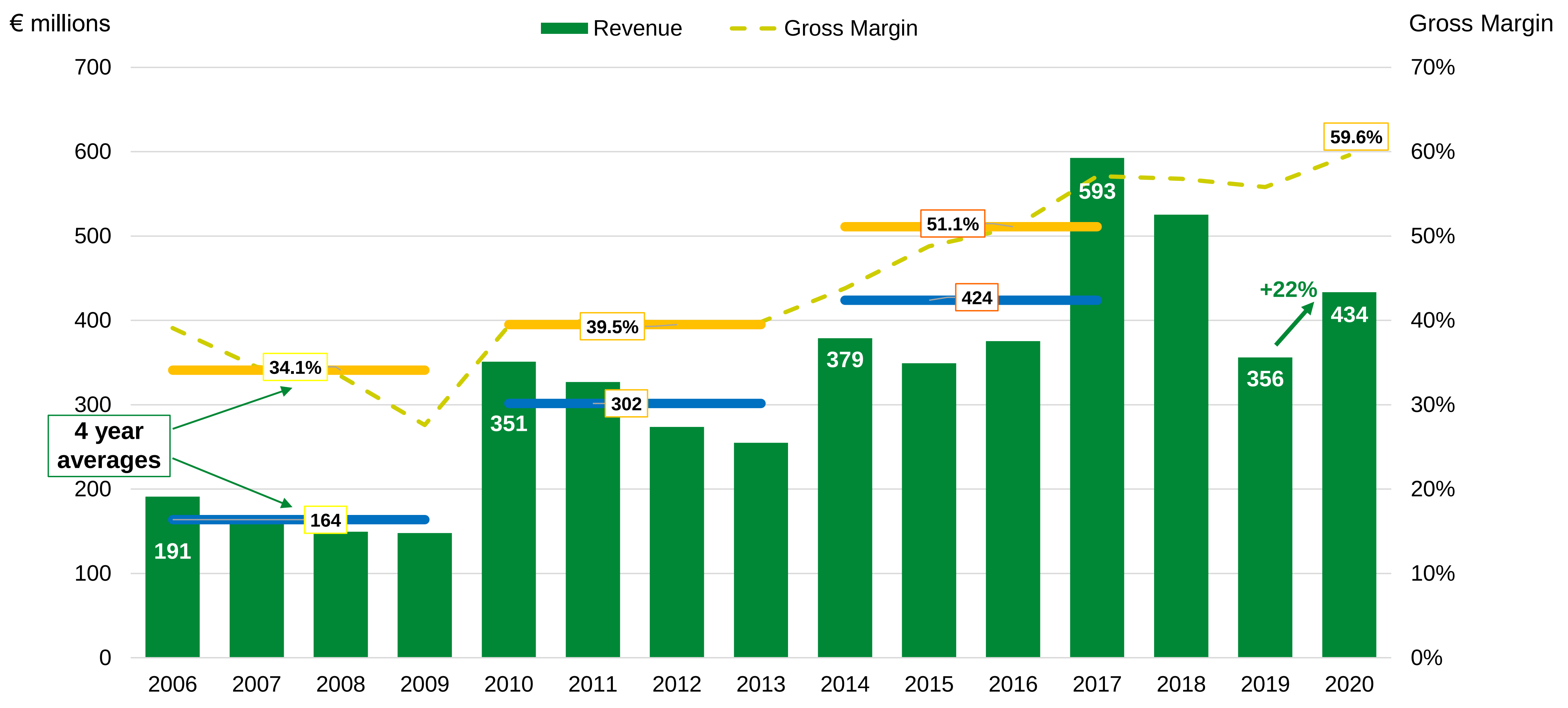
- € 866 million of dividends and share repurchases since 2011*
- Represents ~20% of total revenue during such period
- Dividend payout ratio 97% past 5 years

Total Shareholder Return

- Consistent outperformance vs. peers
- Total shareholder return
  +584% (5 year)
  +2,999% (10 year)
- Upper quartile of all SOX listed semi equipment companies

* Includes dividend of € 1.70 per share for approval at 2021 AGM.

Through Cycle Revenue and Gross Margin Trends



Coping with COVID-19

Strong liquidity position, flexible Asian production and supply chain helped Besi navigate COVID challenges

Initiatives developed in H1-20 to adjust business model

- Precautionary measures taken to protect safety and health of employees, customers and suppliers
- Increased frequency of meetings to sustain engagement among customers and employees
- Production shifted among China, Malaysia and Singapore facilities to satisfy delivery schedules
- Conducted COVID Pulse employee survey which indicated high degree of satisfaction with Besi's COVID response efforts

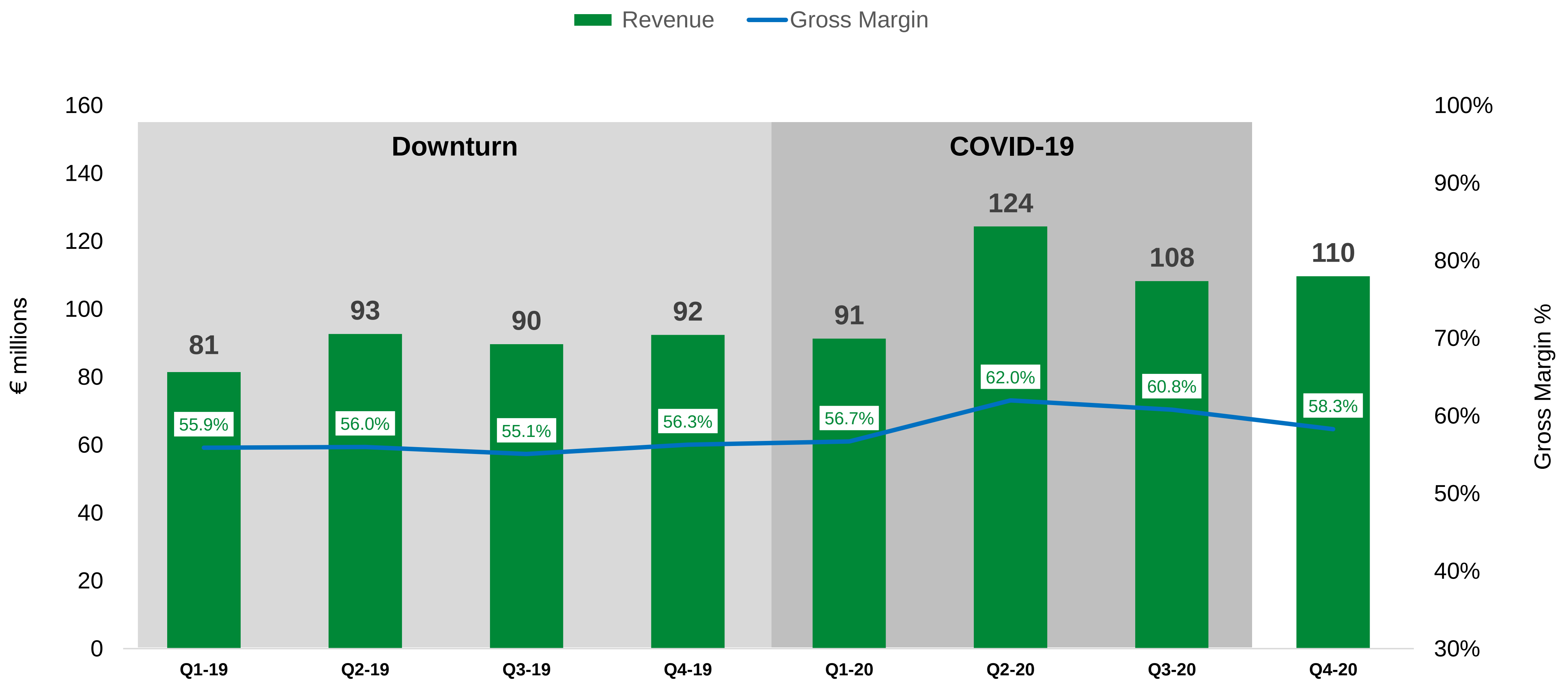
Besi operating with varying restrictions currently

- Malaysia/China: fully operational
- Singapore: 50-70% staff on site
- Europe: most staff working remotely

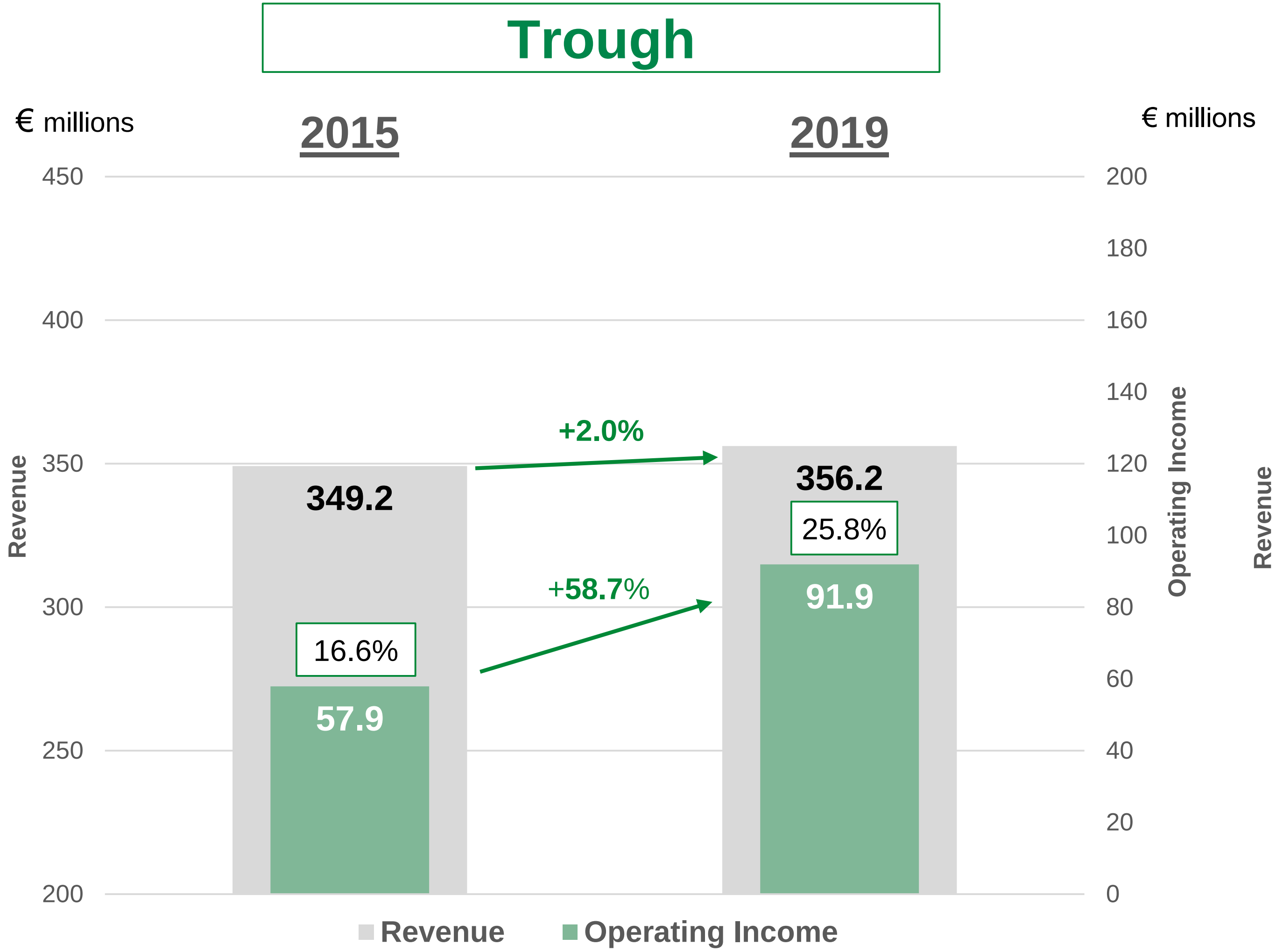
Supply chain functioning

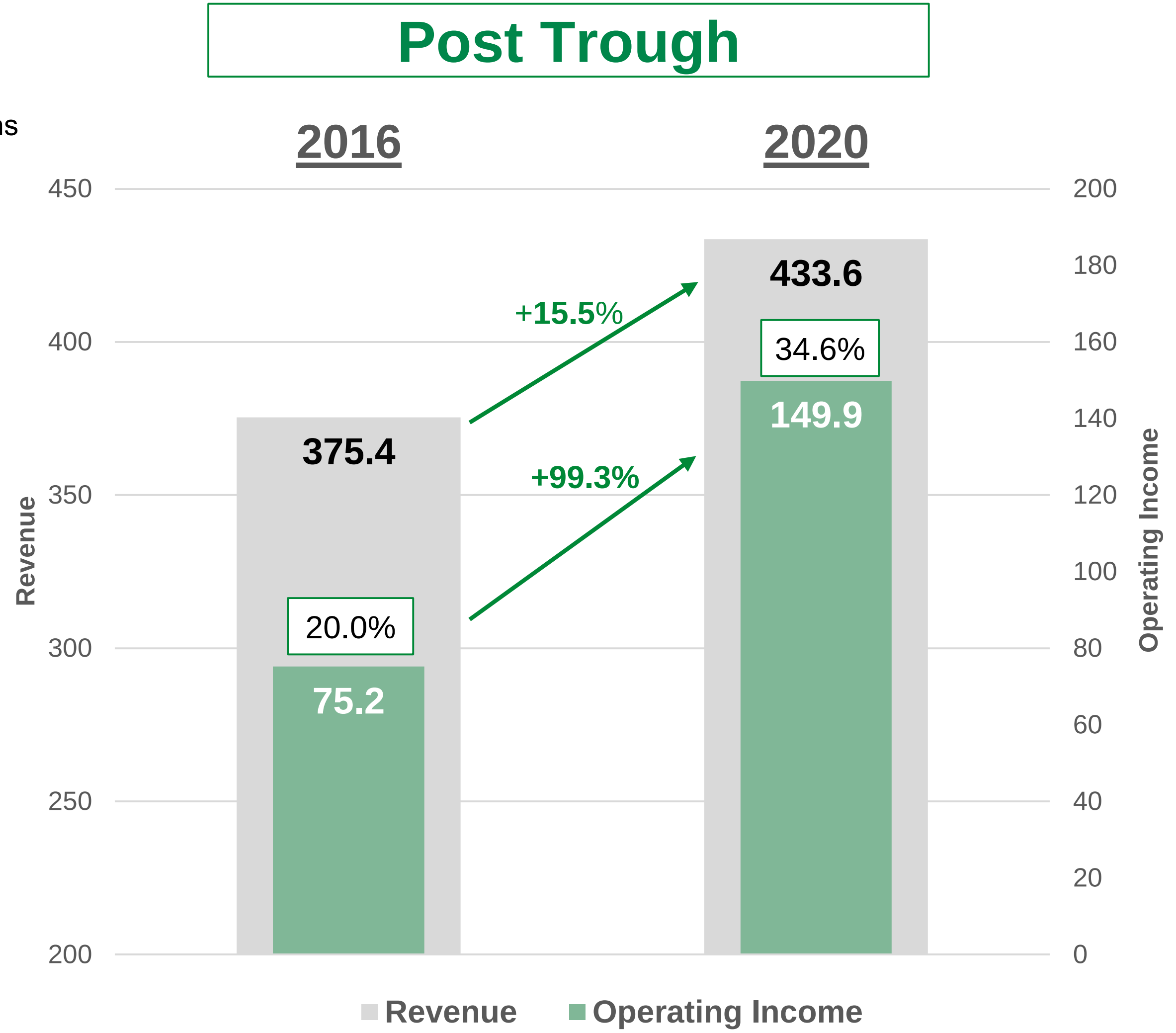
- Current delays caused by issues including basic components such as motors, PCBs and cameras, certain subassemblies and transportation/logistics
- Dual sourcing strategy and inventory stocking of critical parts have minimized potential bottlenecks

Attractive Gross Margins Maintained in Challenging Environment

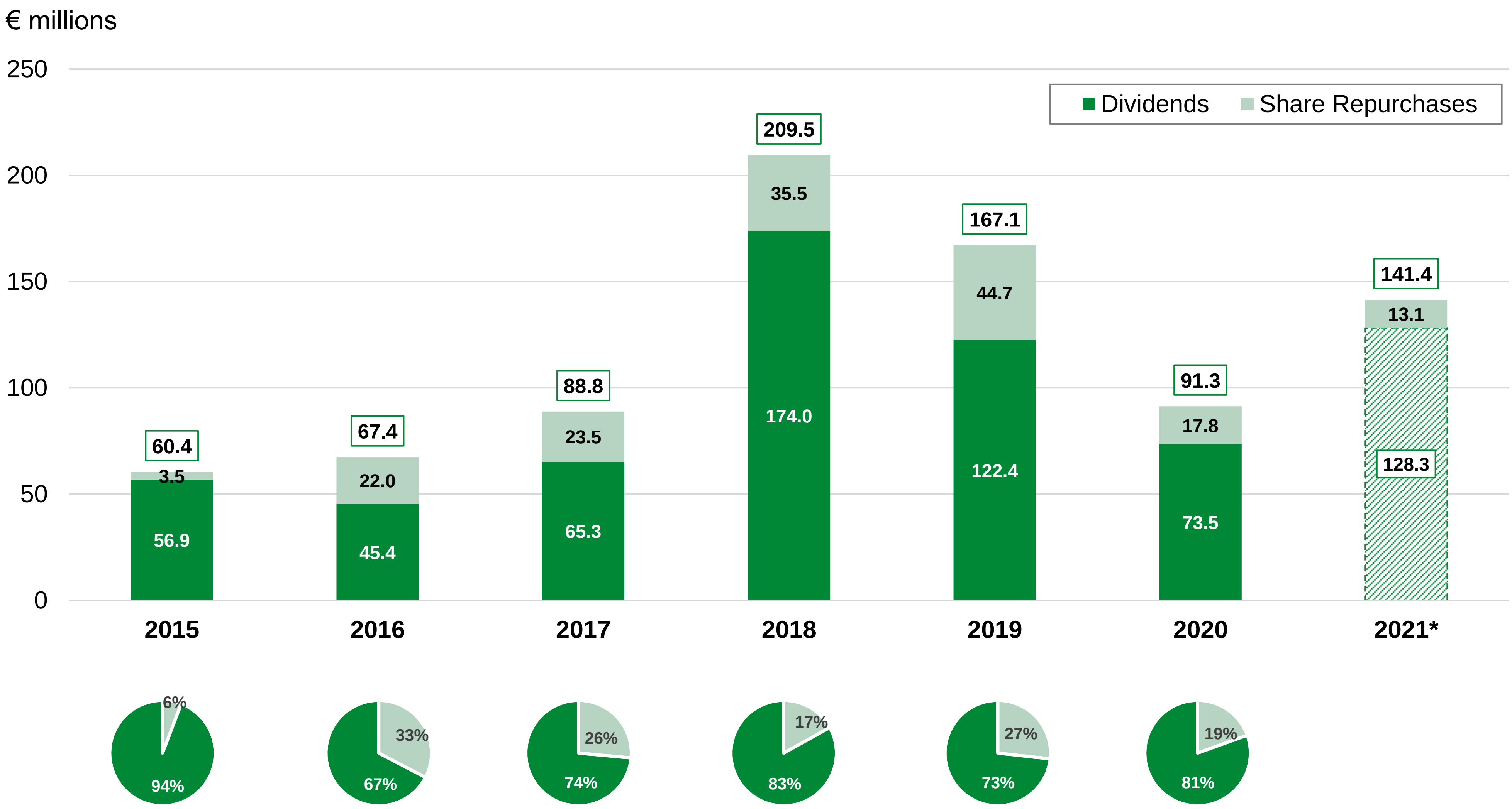


Increased Profitability vs. Last Cycle



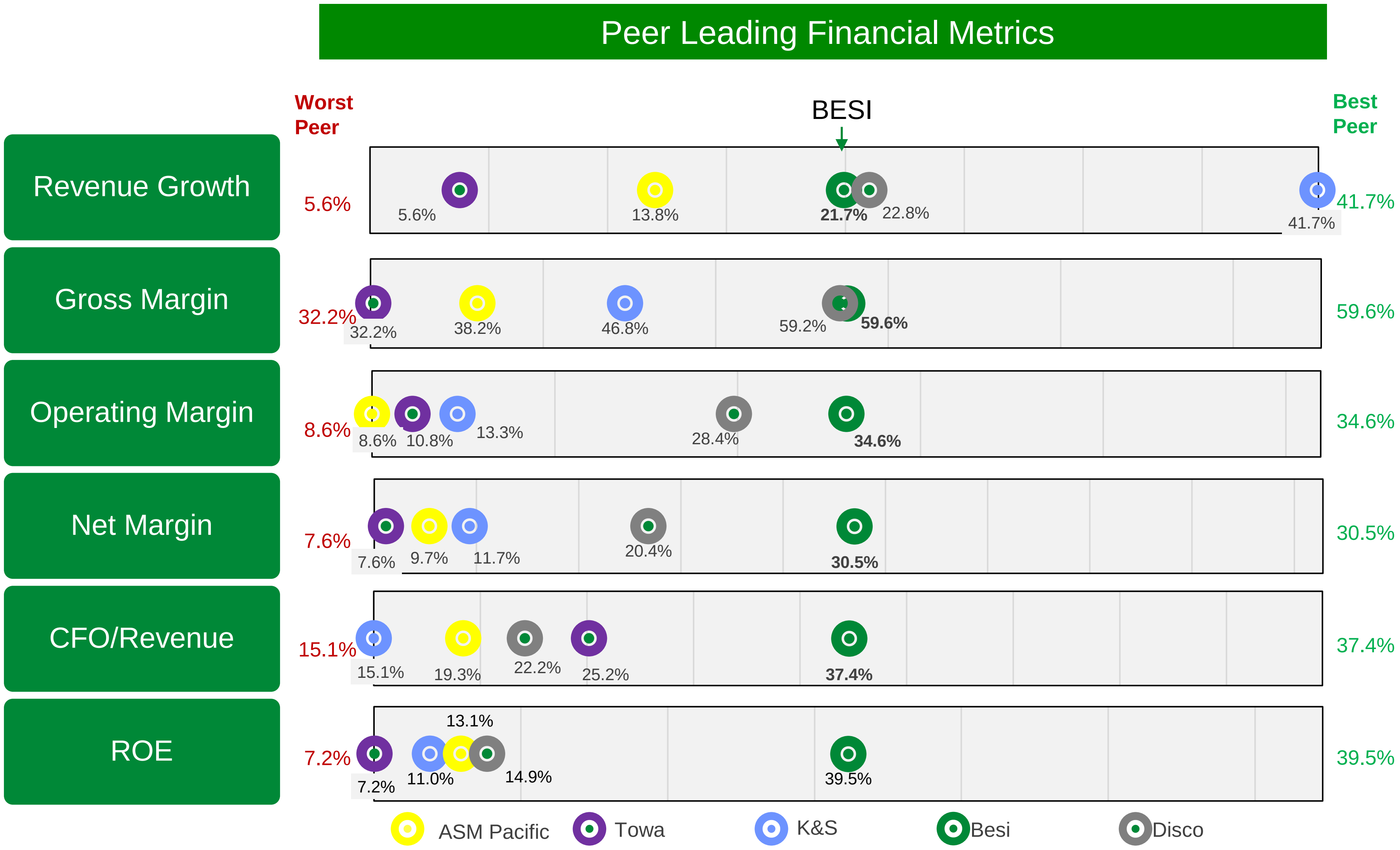


Attractive Capital Allocation. € 883.6* Million Since 2011



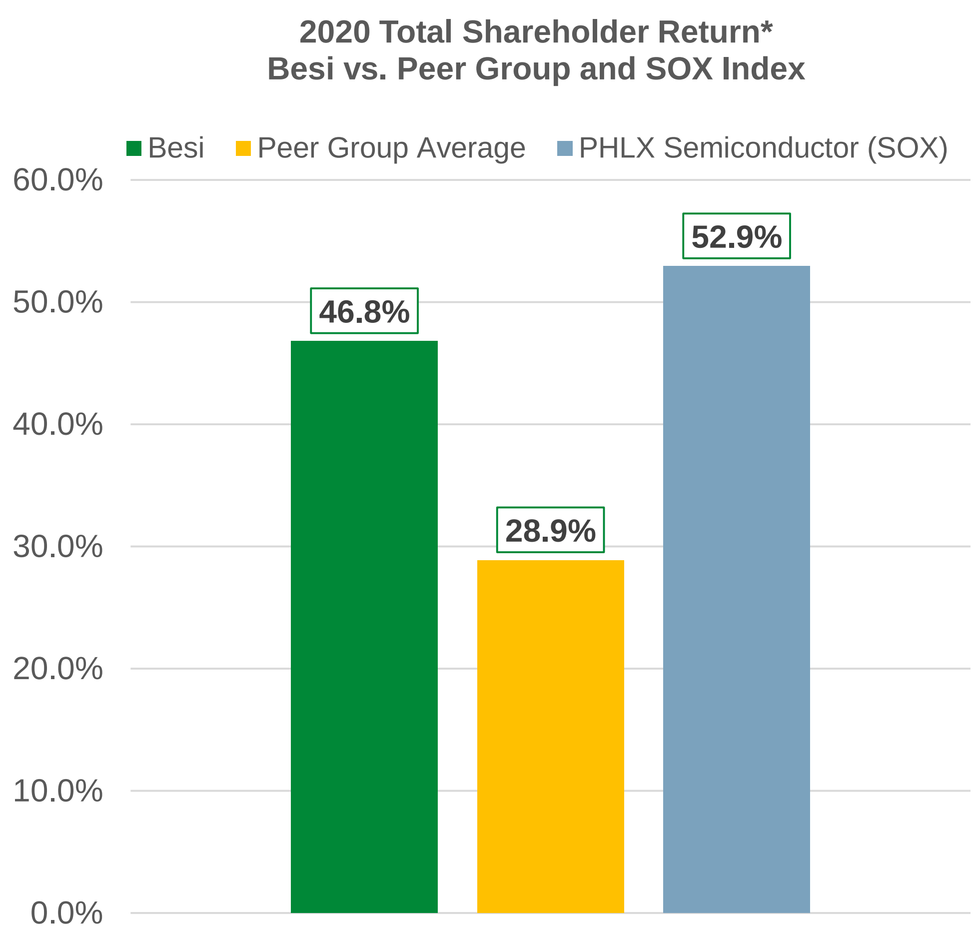
* Assumes proposed 2020 dividend payment of € 1.70 per share. Includes shares repurchases and conversions up to April 30, 2021 and 2020 dividend payable from May 7, 2021

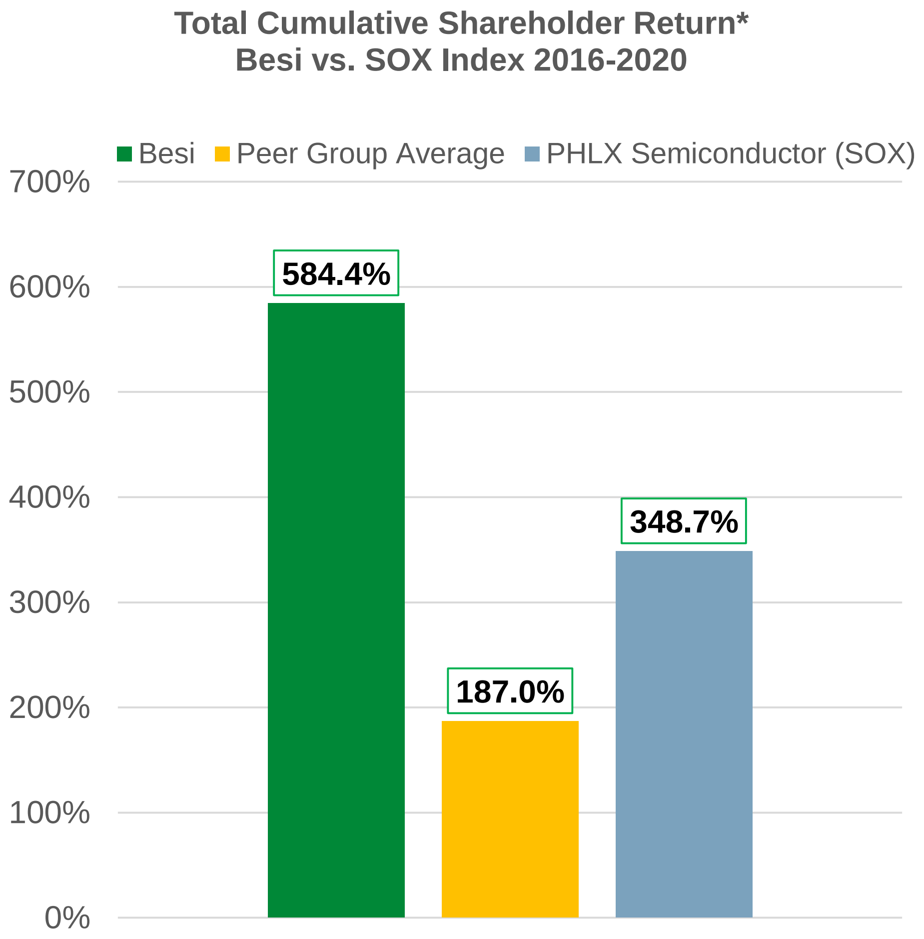
Primary Valuation Drivers (2020)



Source: Reuters, ASM PT backend segment information used for revenue, gross margin and operating margins

Besi TSR Outperforms Peers and SOX Index For Past Five Years





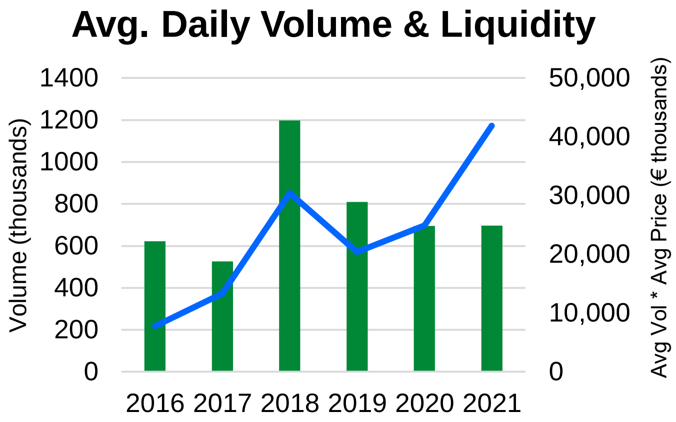
- Total shareholder return includes reinvestment of dividends.
- Besi returns calculated in euro. Philadelphia SOX returns calculated in US dollars.
- Peer group average consists of Kulicke & Soffa, ASM PT, Disco Corp, Towa, Tokyo Seimitsu.

* Source: Morningstar

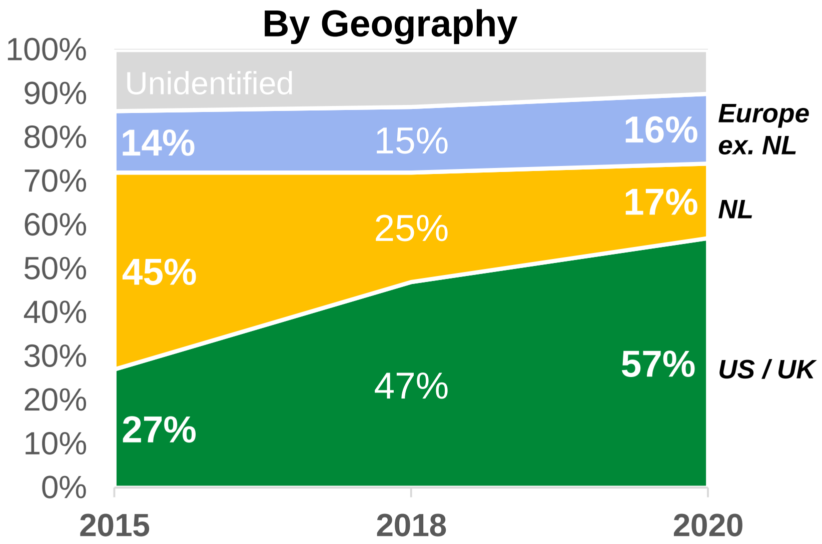
Besi Market Cap & Liquidity Significantly Expanded.
Shareholder Base Has Migrated from NL to US/UK over Past 5 Years

Market Profile

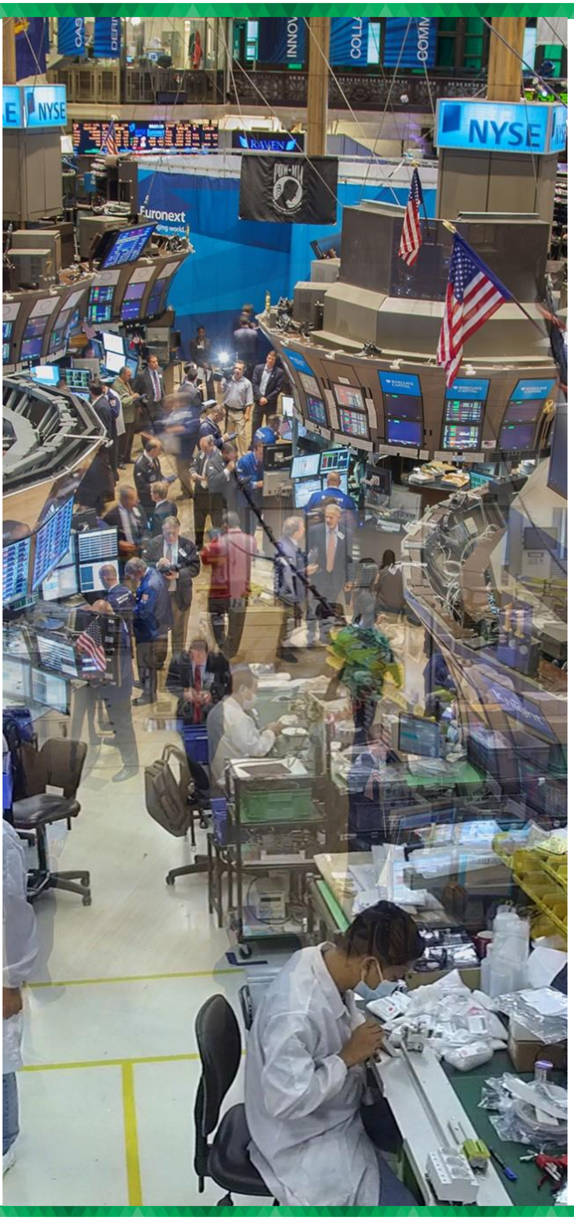
Symbol/ Index	• BESI • Euronext AEX
Market Cap*	• **€ 5.2 billion ($ 6.1 billion)**
Dividend Policy	• Pay out 40-100% of net income per annum



Share Ownership

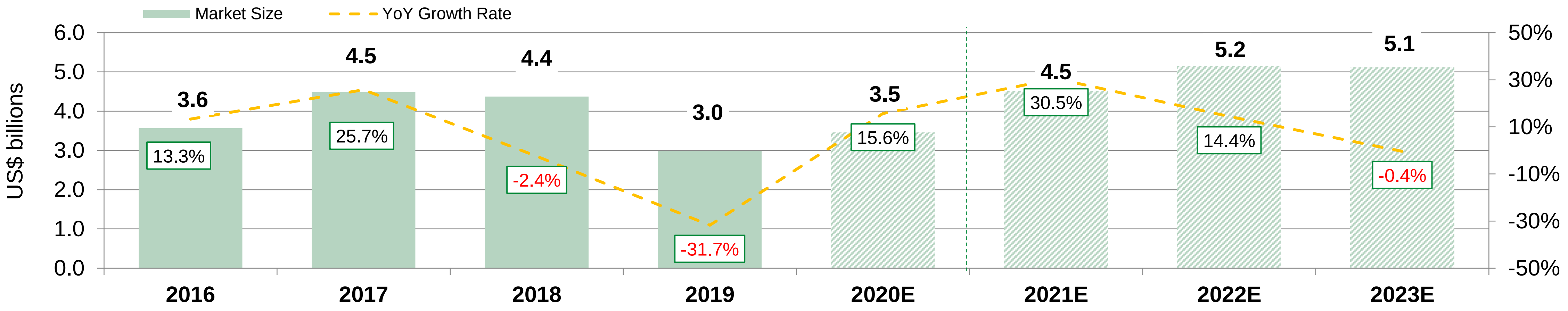


* As of March 31, 2021 ** Besi estimates

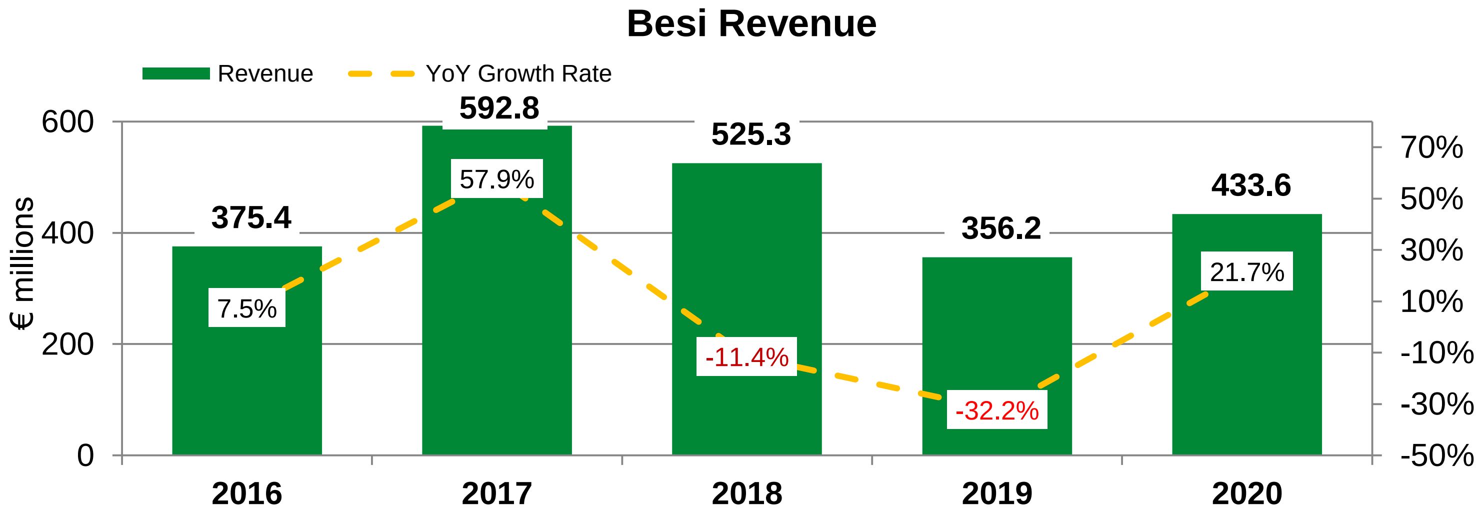


II. MARKET

Assembly Equipment Forecast Upgraded Through 2023

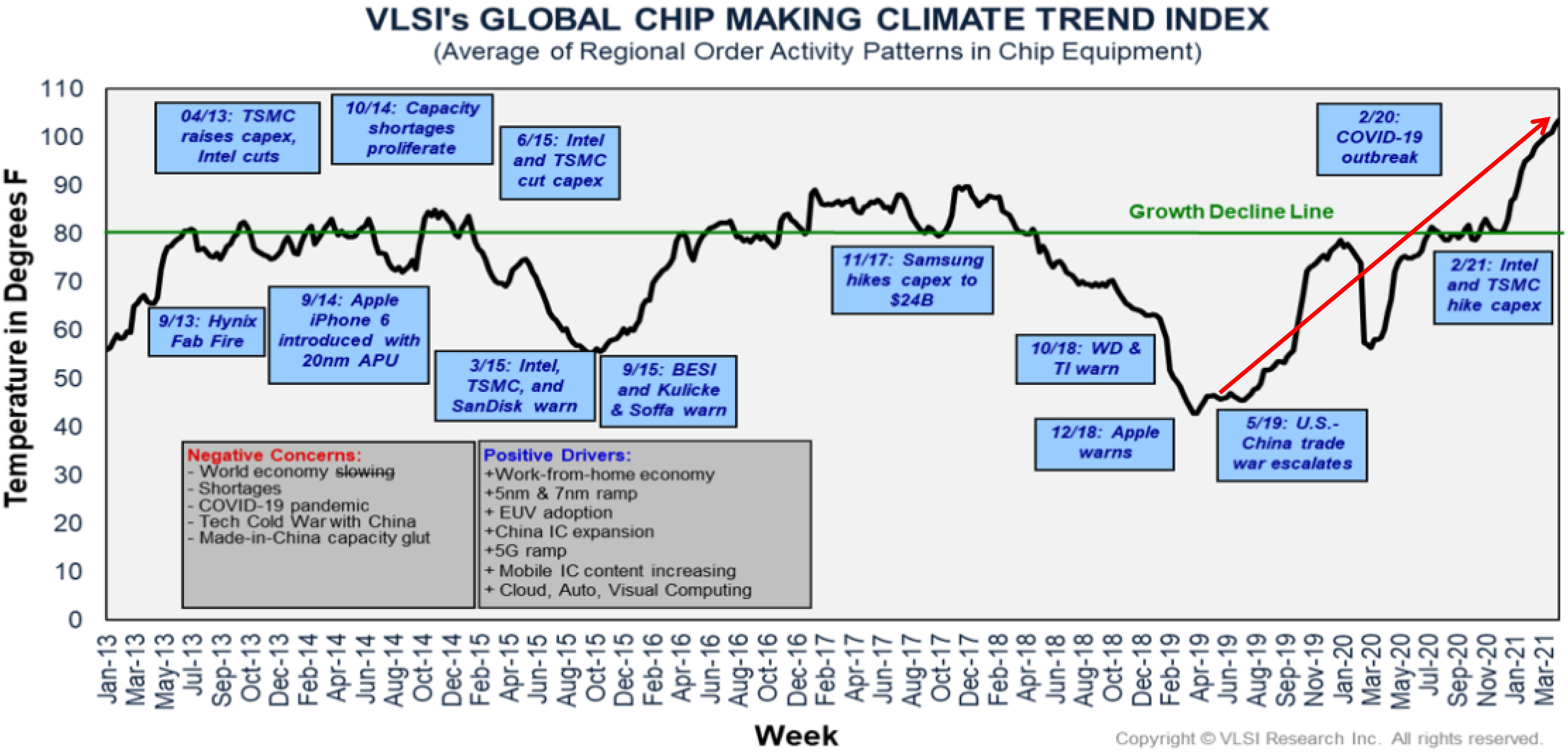


Source: VLSI, April 2021



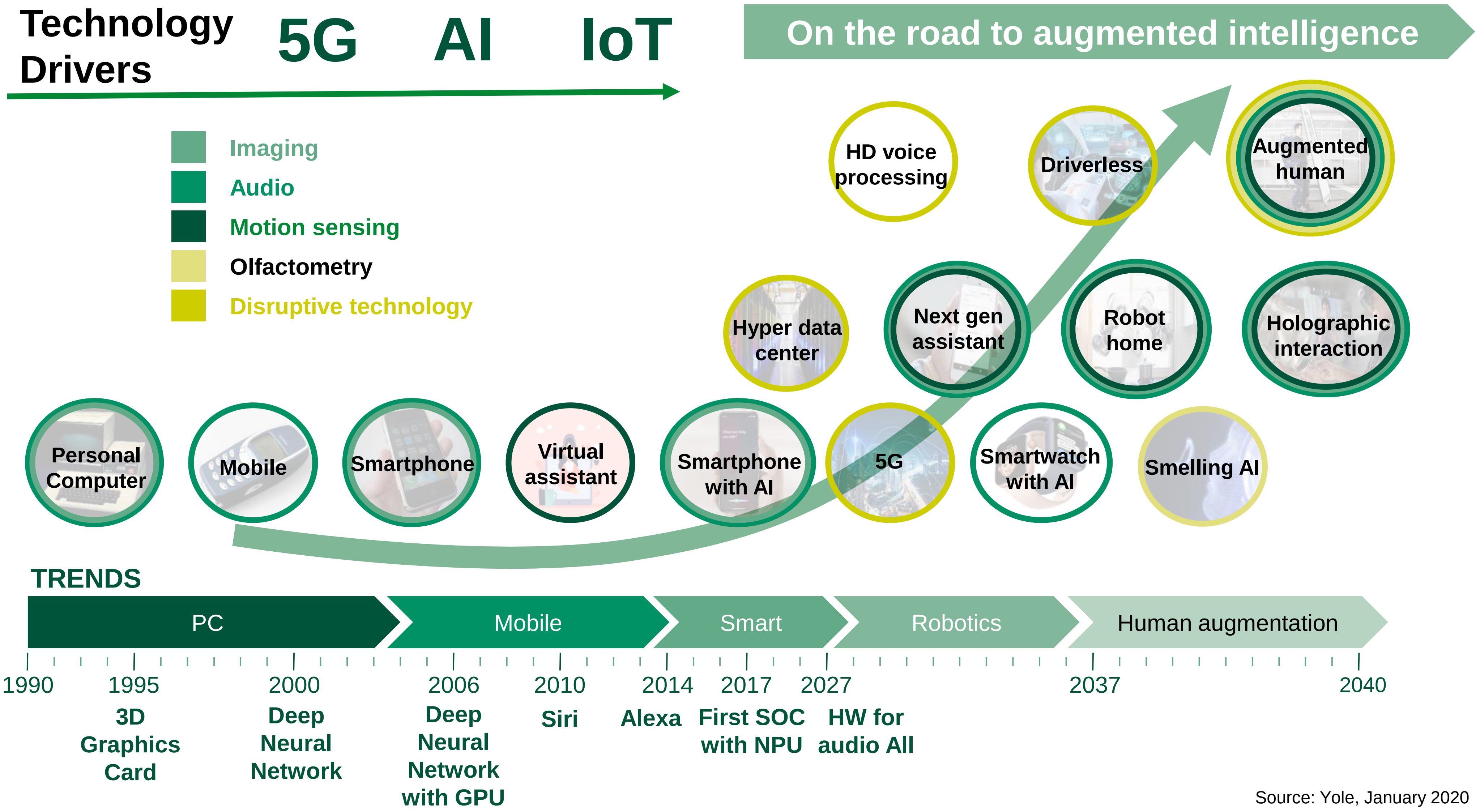
- **31% market growth now estimated for 2021**
- **49% growth forecast between 2020 to 2023E**
  - Market expected to reach $ 5.0 B+
- **Strong secular market fundamentals:**
  - 5G, Datacenter and AI are primary drivers
  - New process technologies:
    - Hybrid bonding, CSP adoption as device geometries shrink further

Industry Conditions Have Improved Significantly From Q2-19 Trough



Source: VLSI, April 2021

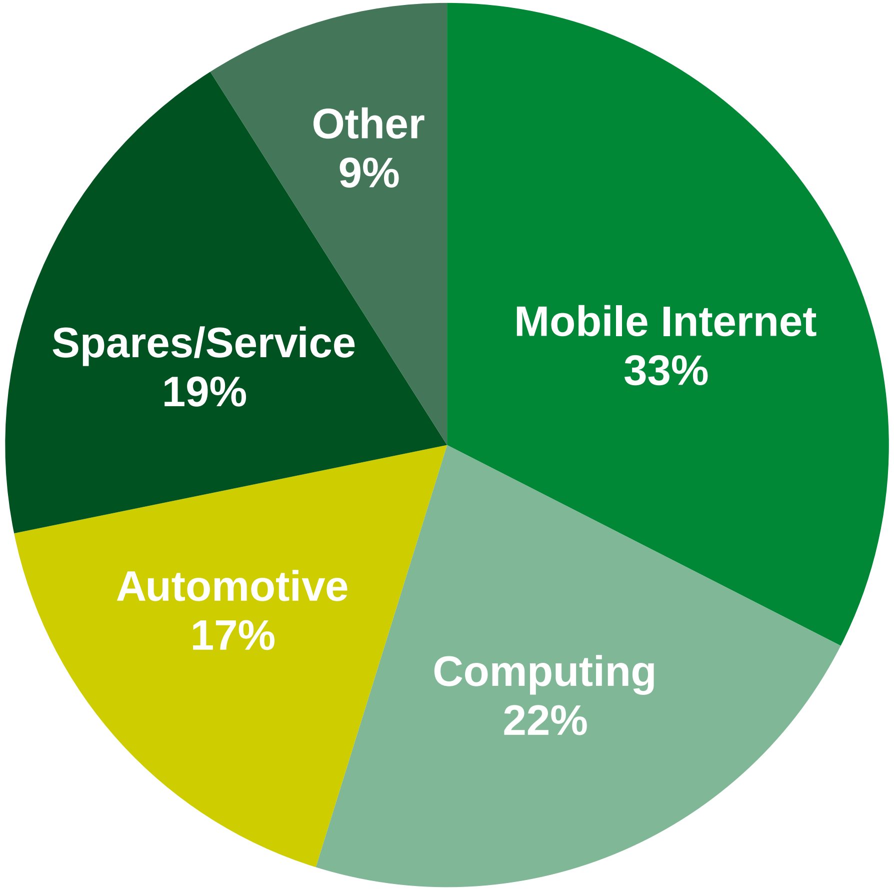
Move to Digital Society Helps Drive Advanced Packaging Growth



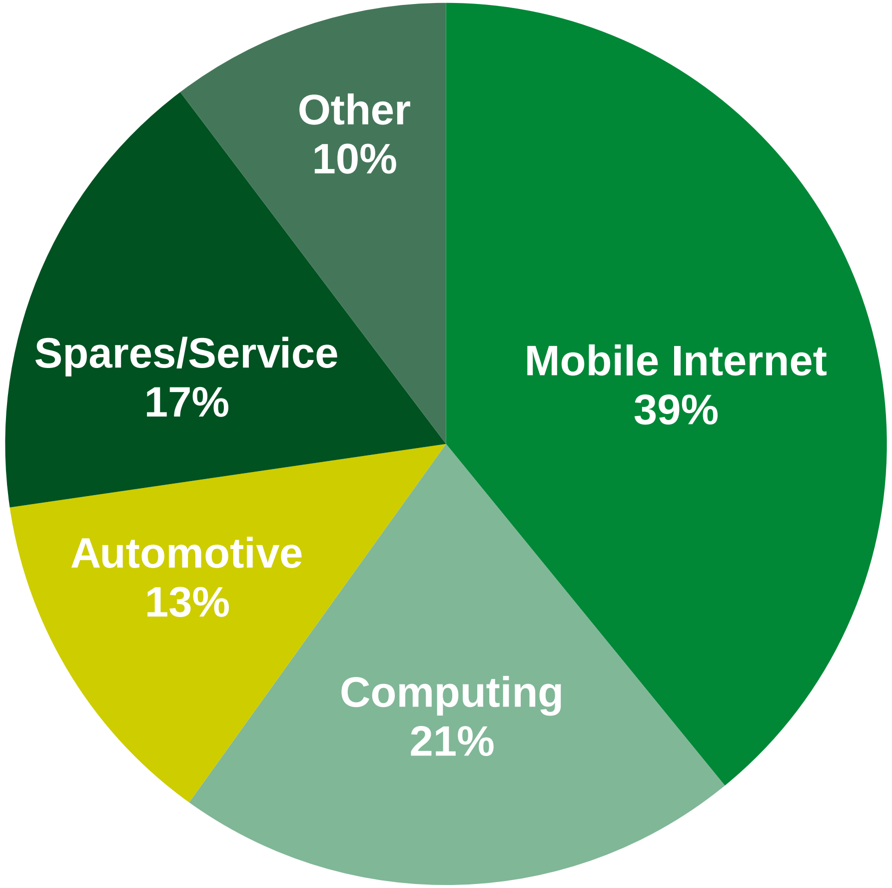
Source: Yole, January 2020

Besi End User Markets

2019 % Revenue



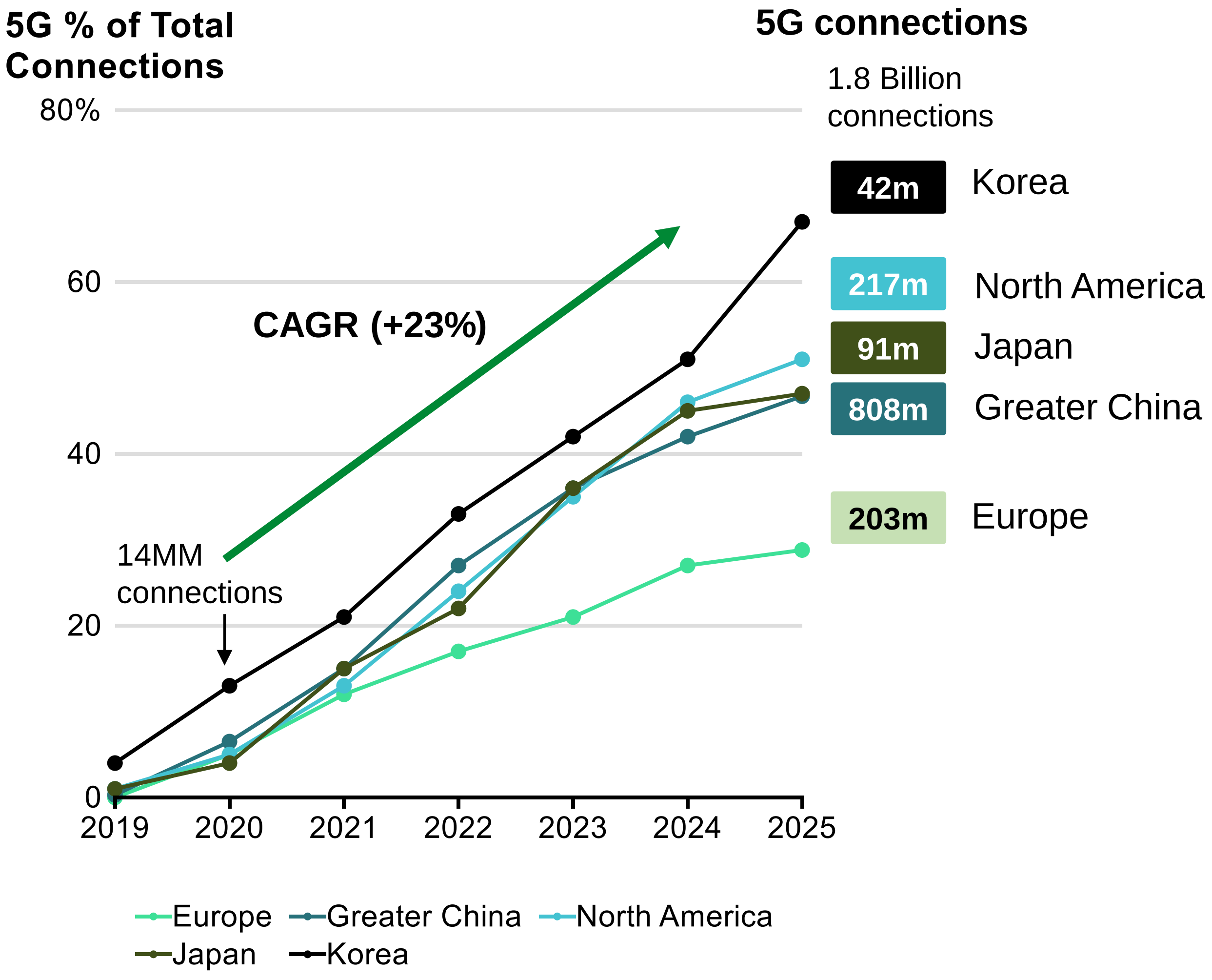
2020 % Revenue



Source: Company estimates

5G Adoption Drives Growth in Mobile Features and Functionality

5G Penetration Rates 2019-2025



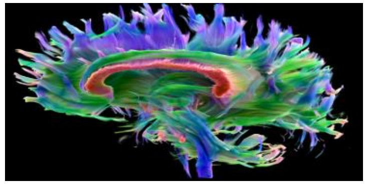
Source: GSMA Mobile Economy and Besi analysis, March 2020

Computing Demand Expanding Rapidly

Digital society accelerating

Data Mining

Artificial Intelligence



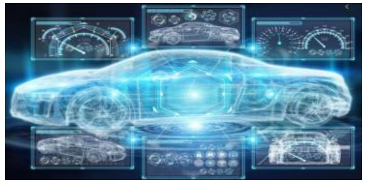
Medical

Cloud Infrastructure

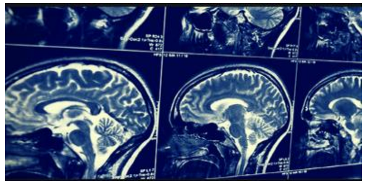
Work at Home Economy

Advanced computing expanding in largest sections of economy

Manufacturing
$ 14T



Automotive
$ 10T

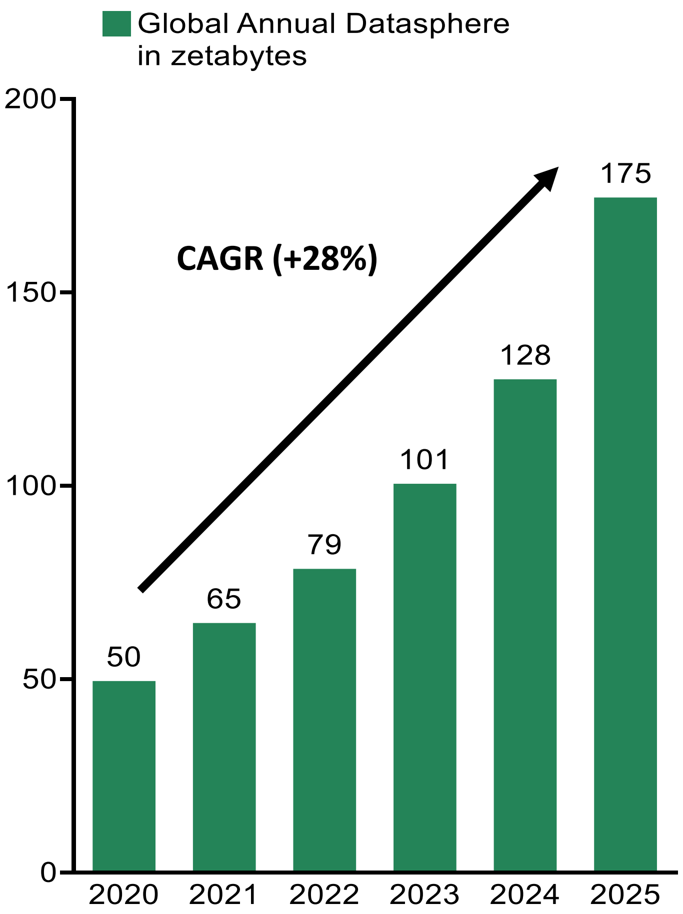


Healthcare
$ 7T

Cloud Computing
$ 230B

Gaming
$ 150B

Data volumes growing exponentially

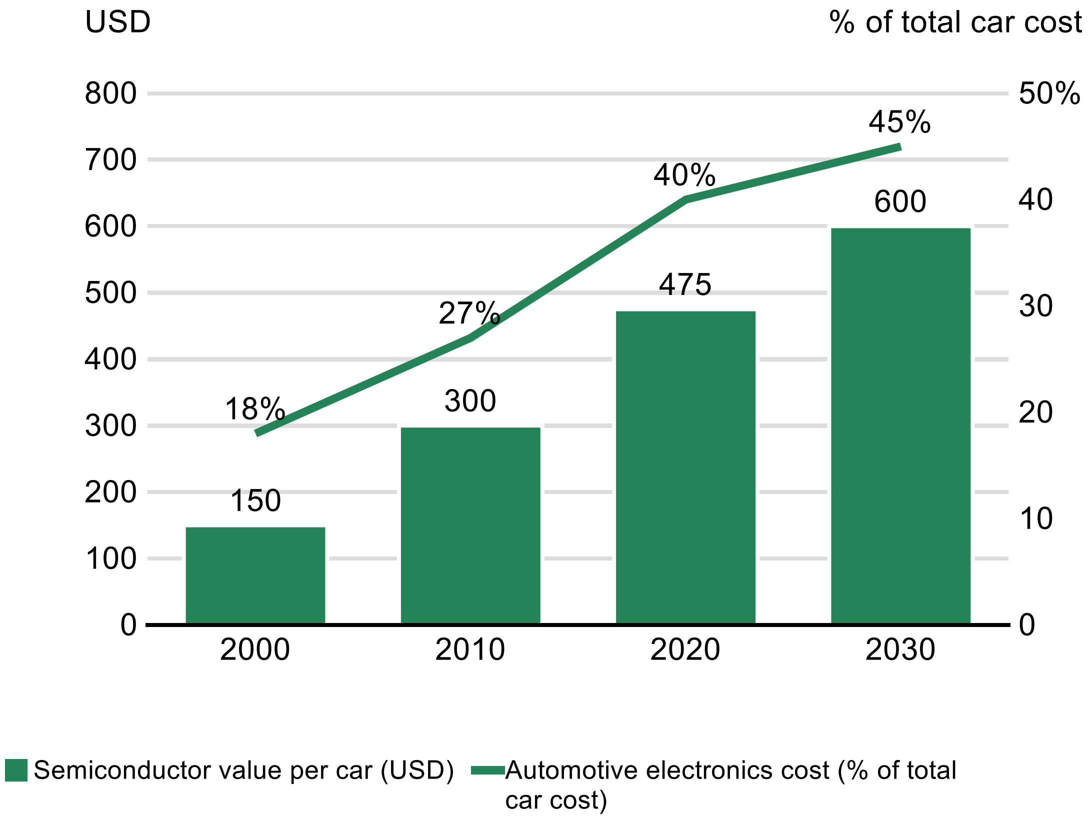


Automotive Growth Rebounding Post COVID Downturn

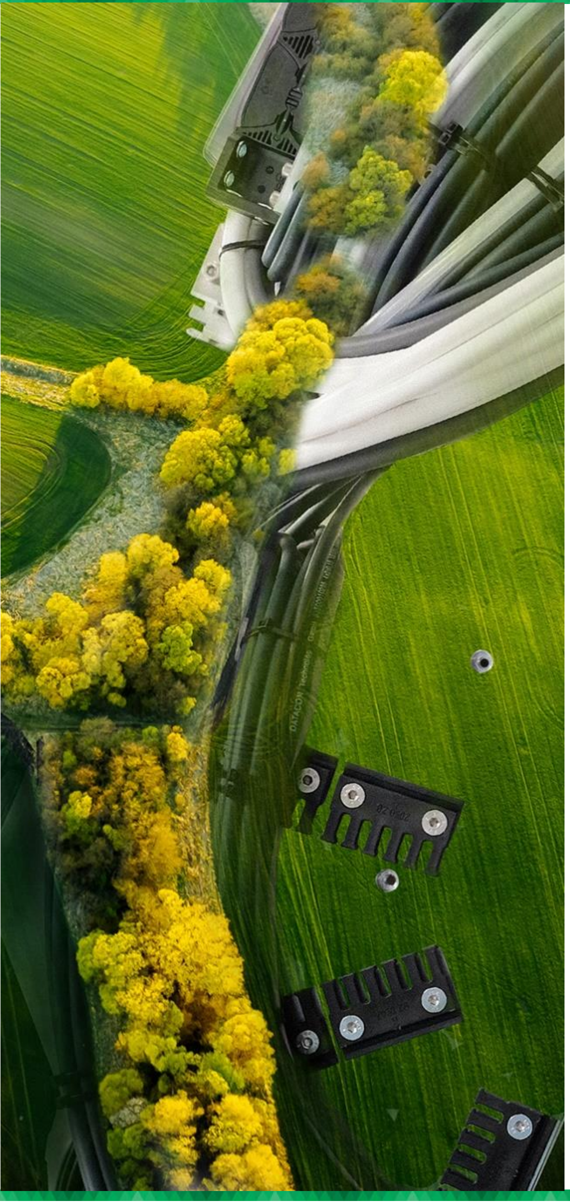
Electric vehicles	Autonomous vehicles	Connected vehicles	Mobility as a service
New powertrain	Sensors	Vehicle	Ridesharing
Charging infrastructure	HPC	Infrastructure	Car sharing
Better technology	Big data / Analytics	Cloud	Flexible bus
Modularization	AI/ Deep learning	Wearables and personal devices	Micro mobility
	Navigation and guidance		Delivery

Source: KPMG Automotive Semiconductors: New ICE age, November 2019

Semiconductor Cost Content Per Car Is Increasing



Source: IHS Markit and Deloitte Insights, July 2020



III. STRATEGY

Besi Strategy

Strategic Update

2020

- Adjusted business model to cope with COVID-19 pandemic
- Continued consolidation and reduction of European footprint
- Reorganized R&D to better align with customer roadmaps
- Joint development agreement with Applied Materials
- Developed new ESG framework and short, medium and LT targets

2021

- Scaling production to align with rapidly growing order book
- Working with supply chains to overcome component shortages and logistical bottlenecks
- Complete development of hybrid bonding cluster tools
- Expand on ESG progress

Strategic Revenue Initiatives

Besi

Revenue Growth Initiatives

- **"Pick the winners"**
- **Expand high quality mainstream product offerings**
- **Wire bonding/flip chip conversion**
- **Hybrid bonding market expansion**
- **New 5G and AI applications**
- **Increased penetration of Korean and Chinese android markets**
- **Expand presence in Chinese market**
- **Expand Japanese automotive market share**
- **High-end solar and battery plating**

Joint Development Agreement With Applied Materials

APPLIED MATERIALS

Industry's first complete, one-stop solution creates best hybrid bonding process suite

Besi

Front and back-end process expertise

- Etch
- Planarization
- Deposition
- Wafer cleaning
- Metrology
- Inspection and particle defect control
- Manufacturing platform design, integration and validation

Harness leadership positions in front-/back-end

Process synergies

Overlapping customer opportunities

Dedicated center of excellence

Assembly equipment process expertise

- Die placement
- Interconnect
- Advanced packaging

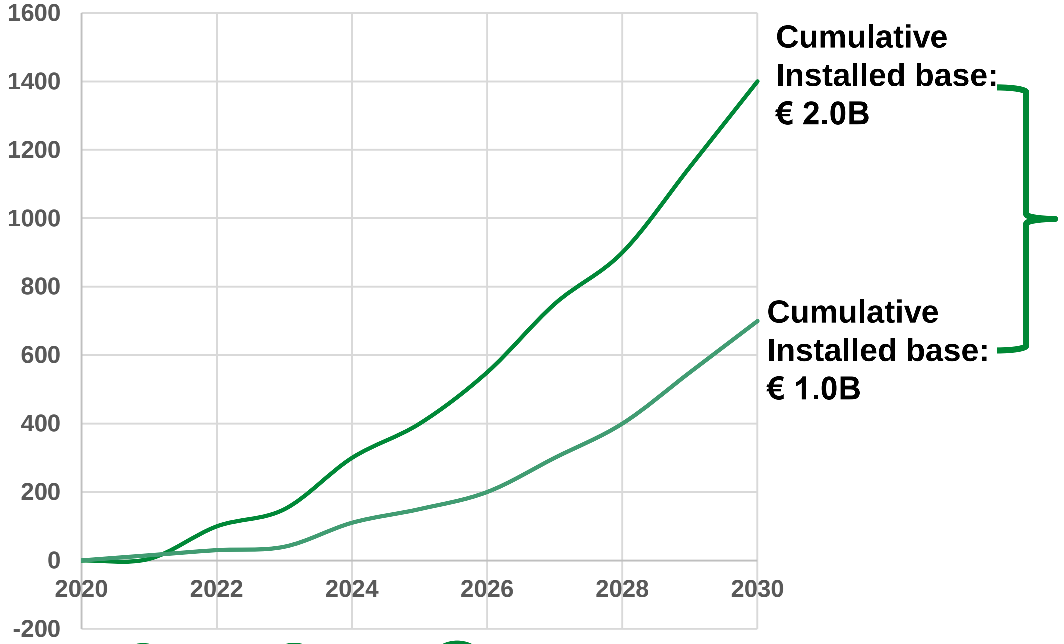
Leader in hybrid bonding assembly technology

Industry shift to smaller, integrated, heterogeneous chip designs for leading-edge 5g, AI, HPC, data storage and auto applications

Hybrid Die Bonding: Significant Total Market Potential
Besi Has Leading Position

Hybrid Bonding / Bonding Equipment Market
Die to Wafer / Die to Die

Estimated installed base of 700-1,400 systems by 2030



1 Pre-maturity

2 First entry

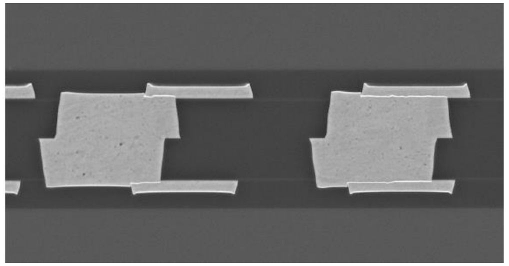
3 Confirmation

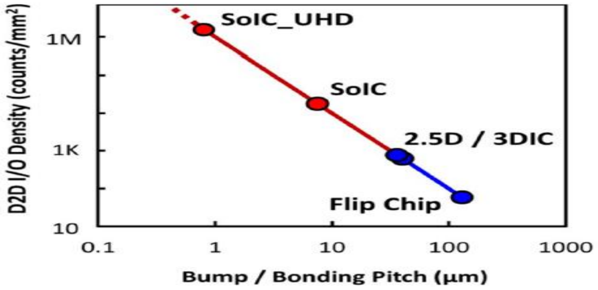
4 Mass volume/ efficiency

Source: Besi estimates

Key Advantages Hybrid Bonding

- Very high density contacts possible > 1 mio/Sq Mm with no solder process (no solder bidging)
- Very high contact density permits very high bandwith
- No distance between stacked dies gives faster response times, better heat transfer and allows for more compact design
- Room temperature bonding process reduces areas of stress and warpage
- Attractive for high end logic as well as memory for high stacks





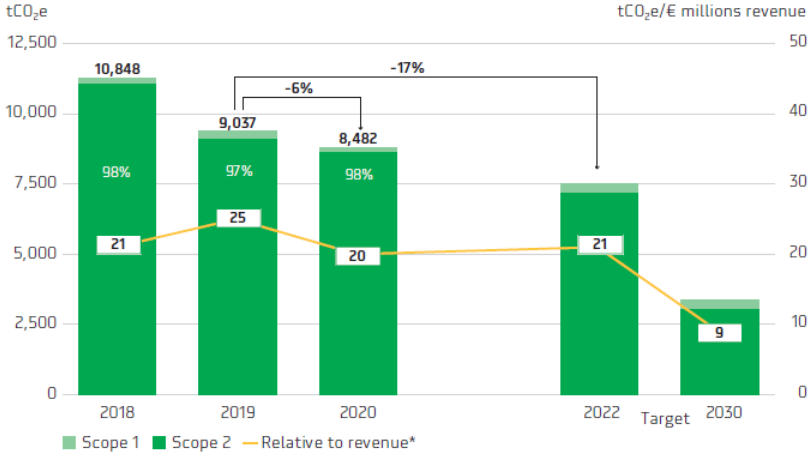
Bonding Equipment Requirements

- Very high precision (< 200 Nm) for very dense contacts
- High throughput (< 2000 Dies/Hr) for low cost of ownership
- Extremely low particle count

ESG Progress and Highlights 2020

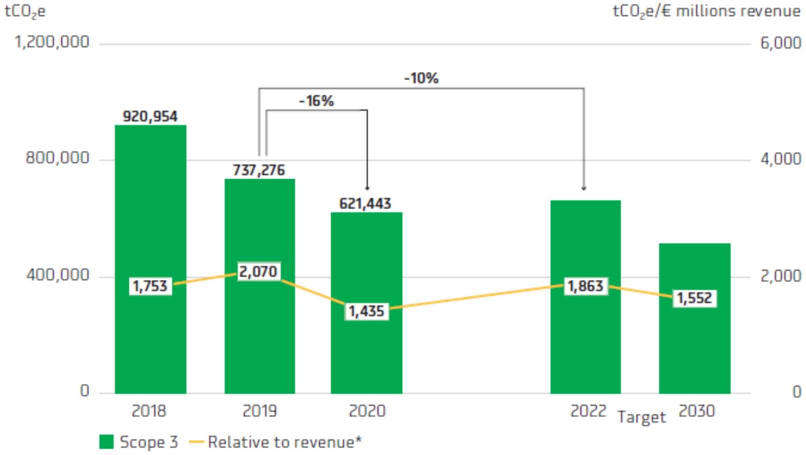
- ✓ Additional safety, health and organizational measures implemented due to COVID-19
- ✓ Near and long-term ESG ambitions, targets and KPIs set
- ✓ 100% renewable energy achieved across three operating locations
- ✓ Reduction of Scope 1 and 2 carbon emissions by 6% on absolute basis and 20% on relative basis
- ✓ Relative reductions in fuel, energy and water consumption, and hazardous waste
- ✓ Remote service and installation begun using augmented reality
- ✓ Increased employee engagement and improved sentiment identified in corporate COVID-19 Pulse Survey
- ✓ Proposed increase of female representation at Besi's Supervisory Board level from 20%-40%

Direct Emissions – Scope 1 & 2



* Targets for 2022 and 2030 based on 2019 revenue.

Indirect Emissions – Scope 3



* Targets for 2022 and 2030 based on 2019 revenue.

Enhanced ESG Strategy. Strategic Pillars, Material Topics and Key Targets Established

Strategic Pillars:

Environmental Impact

- Impact at Besi:
  - Energy use and renewable energy
    - Carbon emissions
    - Waste and hazardous materials
    - Water use
- Impact at suppliers/customers:
  - Sustainable design

People Wellbeing

- Diversity and inclusion
- Employee health and safety
- Employee engagement and career development

Responsible Business

- Ethics and compliance
- Responsible supply chain
- Community impact
- Tax practices

Material Topics:

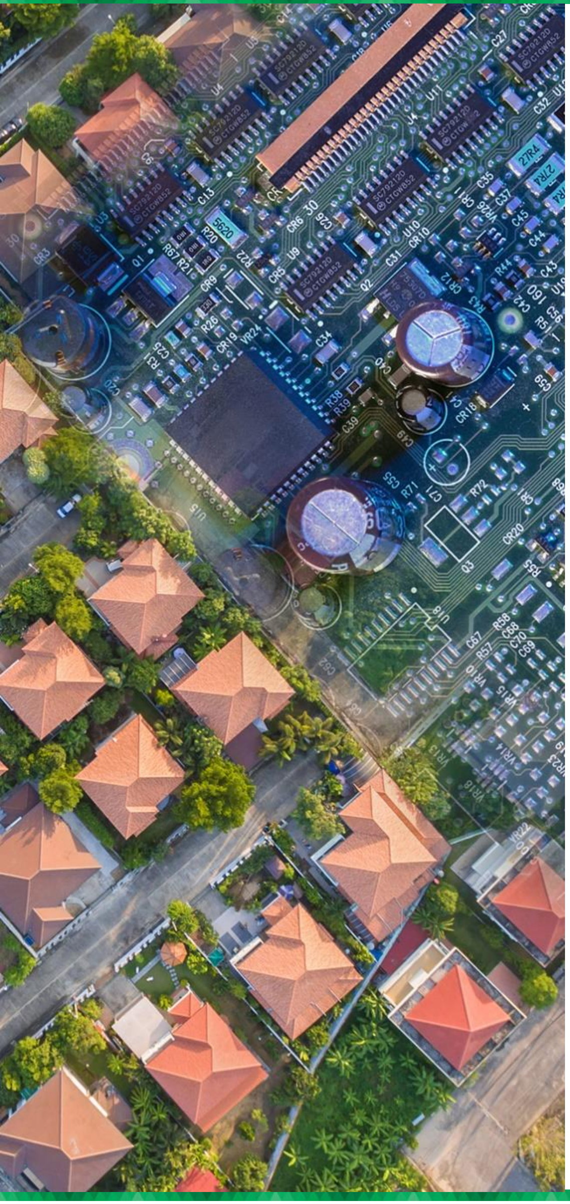
Key Targets 2022

- 100% renewable sources for European energy needs
- 15% reduction in Scope 1 and 2 carbon emissions*
- Above-benchmark employee engagement score
- Increase training hours per employee

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
- Target 80% vendor compliance with CFSI

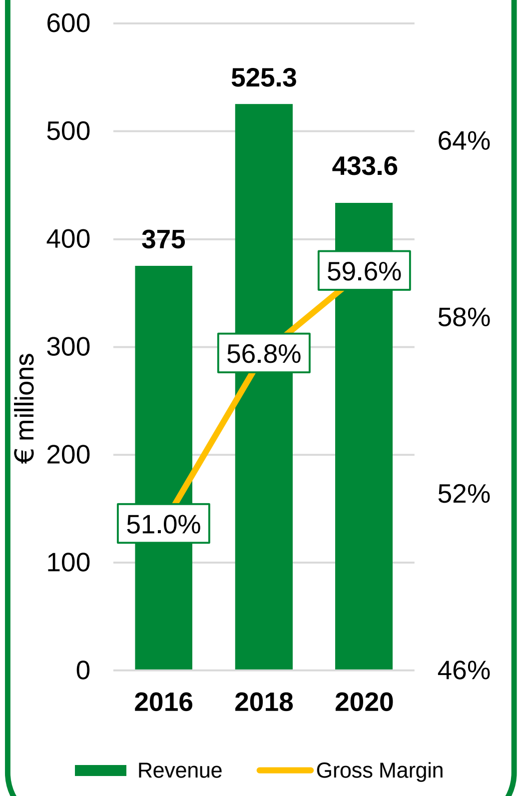
* As per Greenhouse Gas Protocol. Targets relative to 2019 baseline data.



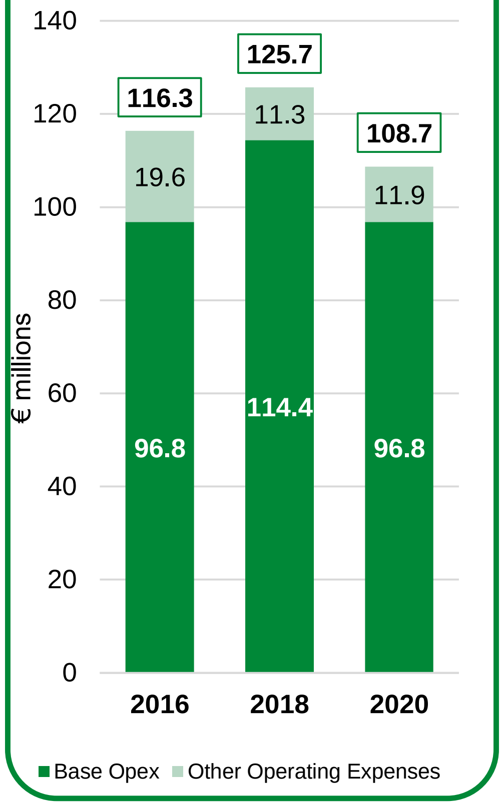
IV. FINANCIAL REVIEW

Key Metrics 2016 – 2020

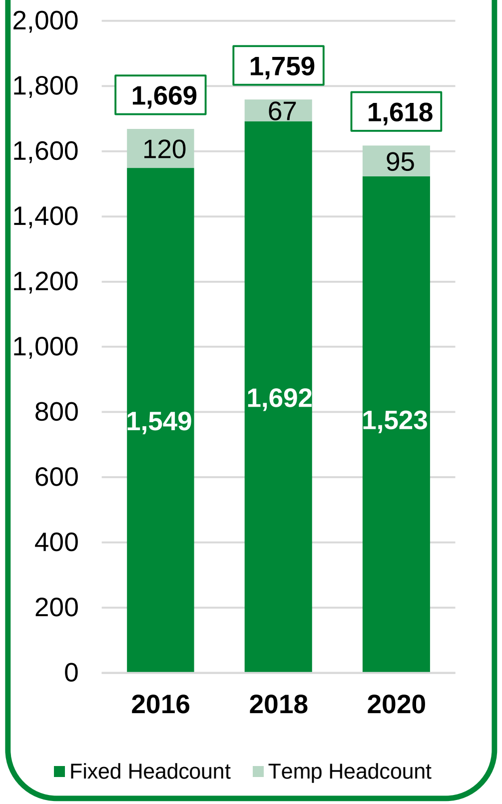
Revenue & Gross Margin



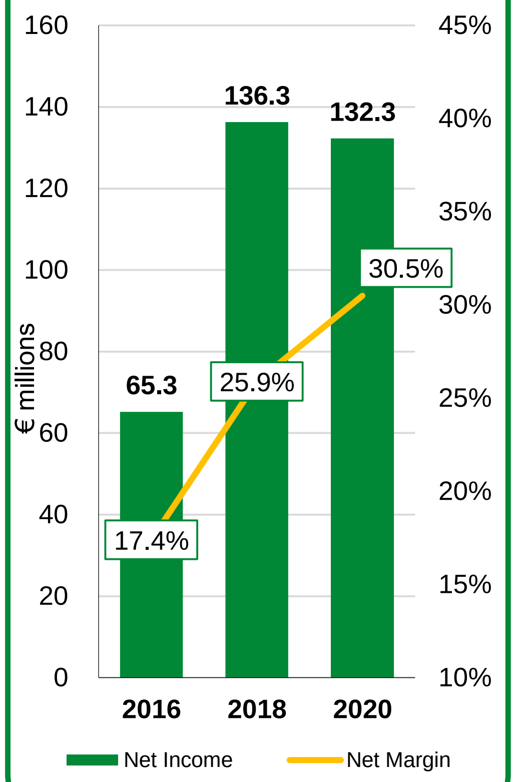
Baseline Opex



Headcount



Net Income



Solid 2020 Performance In Challenging Market

Structural, Through Cycle Outperformance Achieved vs. Peers

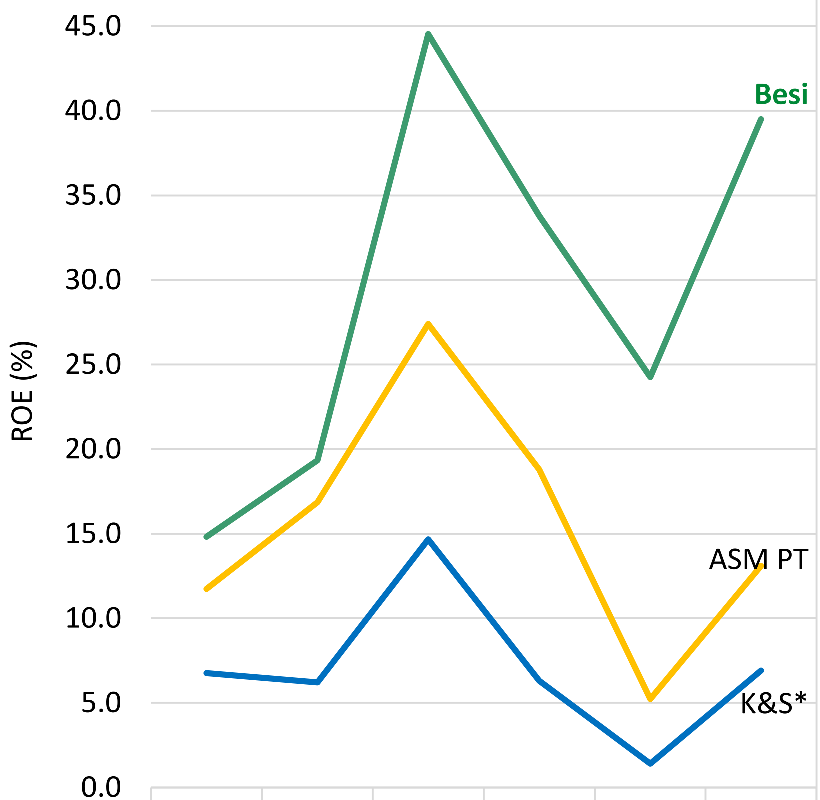
Gross Margin

	2016	2017	2018	2019	2020	Δ 2016/ 2020
Besi	**51.0%**	**57.1%**	**56.8%**	**55.8%**	**59.6%**	**+8.6%**
ASM PT (Back-end)	43.4%	47.9%	45.9%	41.1%	38.2%	-5.2%
K&S*	44.8%	47.2%	46.1%	47.1%	47.8%	+3.0%

Operating Margin

	2016	2017	2018	2019	2020	Δ 2016/ 2020
Besi	**20.0%**	**35.3%**	**32.9%**	**25.8%**	**34.6%**	**+14.6%**
ASM PT (Back-end)	20.6%	25.1%	21.7%	6.8%	8.6%	-12.0%
K&S*	6.2%	14.7%	6.3%	1.4%	9.4%	+3.2%

* K&S on fiscal year basis.



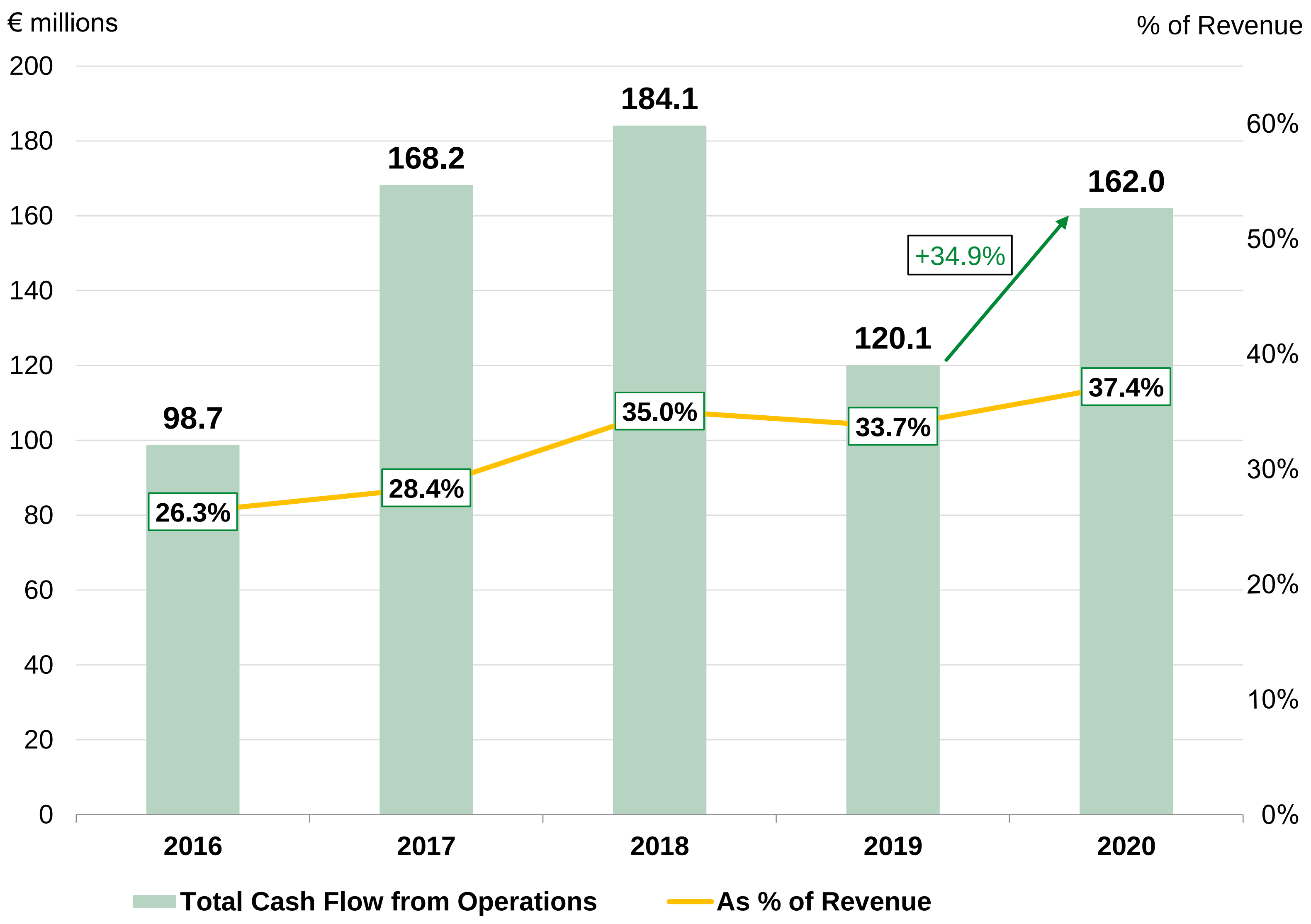
	2015	2016	2017	2018	2019	2020
Besi	14.8	19.3	44.5	33.8	24.3	39.5
ASM PT	11.7	16.9	27.4	18.8	5.2	13.1
K&S*	6.8	6.2	14.7	6.3	1.4	6.9

* K&S on fiscal year basis.

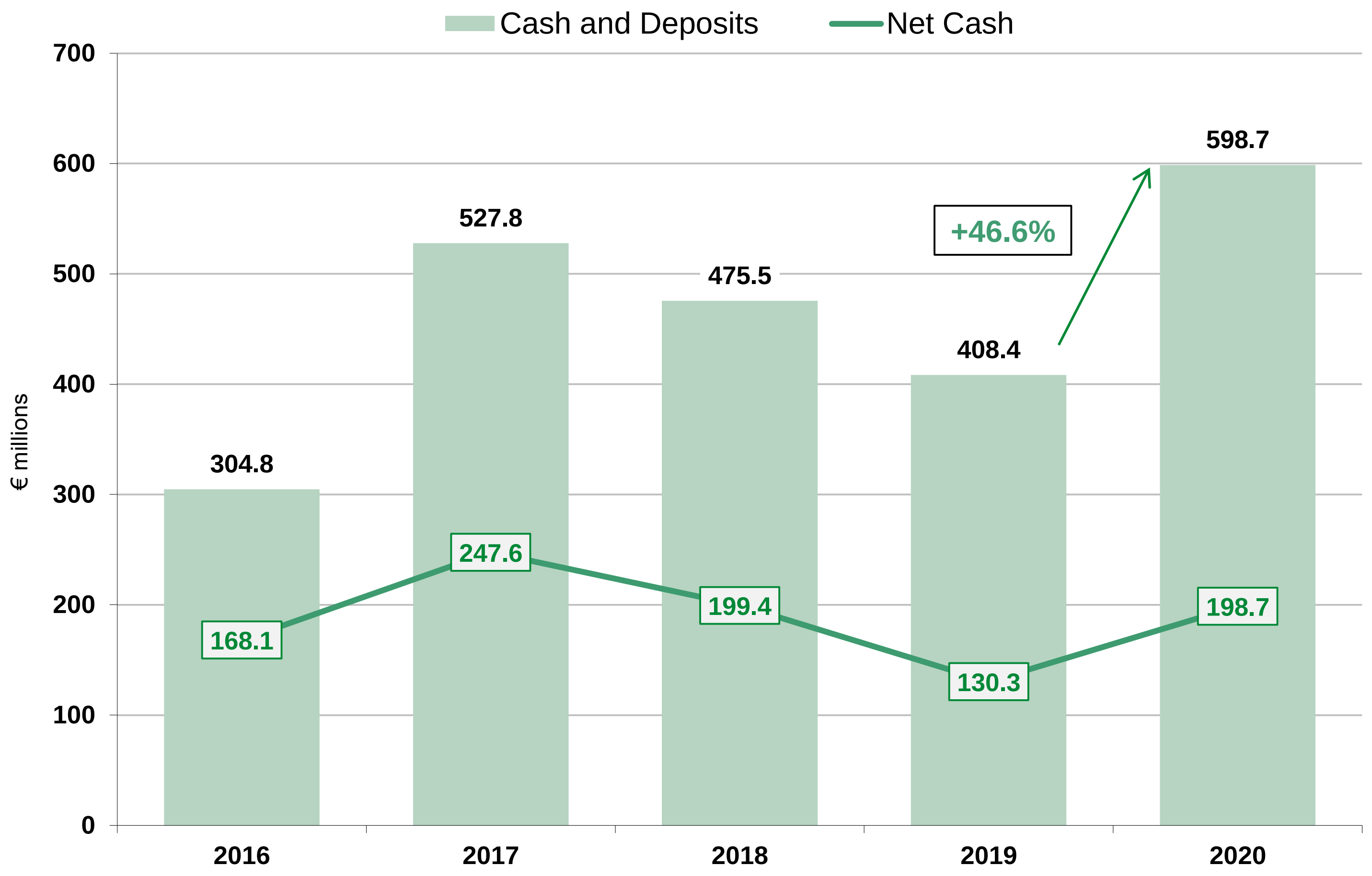
Besi's margins and ROE have exceeded direct peers through cycles:

- Investment in business model has yielded high returns
- Structurally higher gross and operating margins over past 5 years
- Gap vs. peers growing, particularly during last downcycle
- Besi capital allocation strategy has also helped drive ROE outperformance

Cash Flow Efficiency Increasing

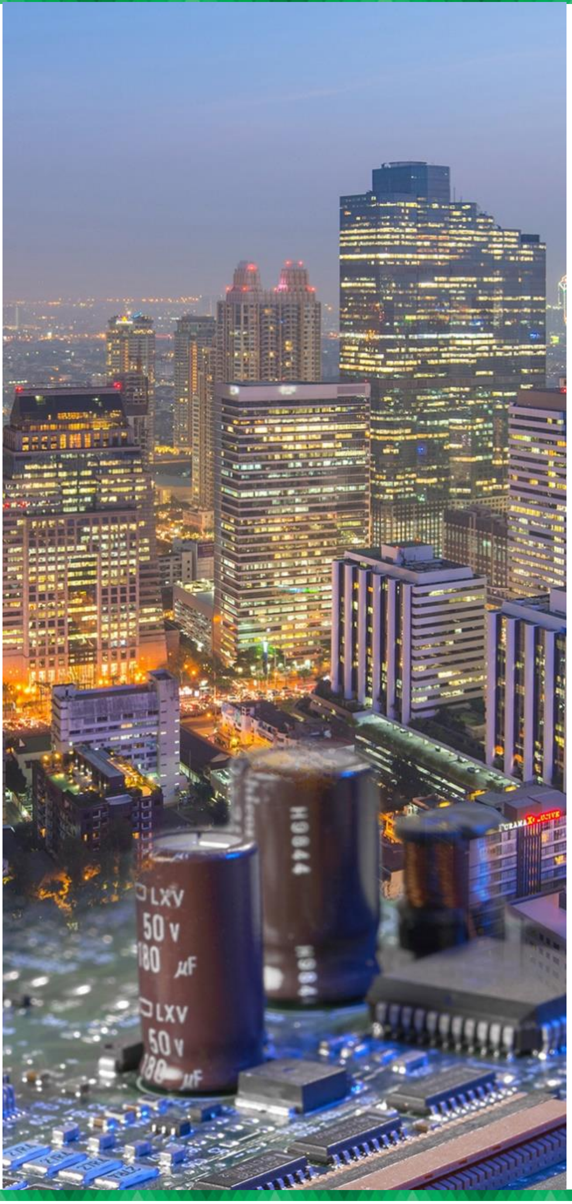


Liquidity Position Enhanced



- **Strong cash flow generation:**
  - Net cash of € 198.7 million at year end (+52.5%)
    - Includes outflows of € 91.3 million for dividends and share repurchases
  - Aided by increased profits and improved working capital management

- **Attractive funding to help finance growth:**
  - ***Convertible debt:***
    - € 435 million outstanding
      - Blended interest rate 1.1%
    - € 150 million 0.75% Convertible notes issued in August
    - Balance reduced to € 372.6 million at April 30, 2021 due to conversions of 2023 Convertibles
  - **Revolving credit facility**
    - € 80 million expandable to € 136 million



V. Q1-21 RESULTS, OUTLOOK AND SUMMARY

Q1-21 Revenue & Net Profit Up 56.8% and 170.5% vs Q1-20. Record Q1-21 Order Intake. € 484 Million Orders Past Six Months

Besi

€ millions	Guidance Q1-21*	Q1-21	∆ *Q4-20*	∆ *Q1-20*
Revenue	+30% - +40%	**143.2**	+30.5%	+56.8%
Orders	n/a	**327.1**	+107.9%	+175.8%
Gross Margin	58-60%	**58.2%**	-0.1	+1.5
Opex	+ 50% - +55%	**34.9**	+49.8%	+5.8%
Net Income		**37.6**	-15.7%**	+170.5%
EPS Basic		**0.51**	-17.7%**	+168.4%
Net Cash		**216.2**	+8.8%	+45.8%

* As compared to Q4-20

** Q4-20 included a € 11.2 million deferred tax benefit

Guidance Q2-21

	Q1-21	Q2-21
Revenue	€ 143.2	+30% - +40%
Gross Margin	58.2%	58%-60%
Operating Expenses	€ 34.9	0% - -5%

€ in millions

Investment Considerations

- Assembly market ever more critical in semiconductor value chain
- Long term secular trends drive advanced packaging growth
- Disciplined strategic focus has created an industry leader
- 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