



Onto Innovation

Investor Presentation

JANUARY 2021

Safe Harbor

- The information presented herein contains forward-looking statements that relate to anticipated future operating results and performance. These statements are only predictions based on management's current expectations and assumptions, including market size and forecasted growth, Total Available Market (or "TAM"), Served Available Market (or "SAM") and revenue estimates, and necessarily involve risks and uncertainties. We do not assume any obligation to update the information provided. Actual events or results may differ materially from those projected, including as a result of changing industry and market trends, reduced demand for our products, the timely development of our new products and their adoption by the market, increased competition in the industry, price reductions and other subsequent developments and business conditions. Additional information and considerations regarding the risks faced by Onto Innovation are available in our Form 10-K reports for the year ended December 2019 and other filings with the Securities and Exchange Commission.
- This presentation includes non-GAAP financial measures which are not intended to be considered in isolation or as a substitute for the financial information prepared and presented in accordance with GAAP. Management uses both GAAP and non-GAAP measures when evaluating the business internally and therefore believes it is important to make these non-GAAP measures available to the financial community. Reconciliations of non-GAAP measures to the most relevant GAAP amounts are included in the Company press releases.
- As the forward-looking statements are based on Onto Innovation's current expectations, the company cannot guarantee any related future results, levels of activity, performance or achievements. Onto Innovation does not assume any obligation to update the forward-looking information contained in this presentation.

Onto Innovation

~1 year since the merger of Rudolph Technologies and Nanometrics









- Double scope and scale
- Technology aligned to multiple secular growth drivers
- Significant revenue and cost synergies



Source: Company Rank Order based on 2019 Share of Total WFE Revenue, Gartner Market Share Data, May 2020

Onto Innovation Snapshot

High tech capital equipment company specializing in optical process solutions for semiconductor and related markets

 <p>COMPANY NYSE (ONTO)</p>	 <p>CASH ON BALANCE SHEET (9/26/2020) >\$340M Cash; No Debt</p>
 <p>REVENUE¹ \$551 Million</p>	 <p>GROSS MARGIN⁵ 54%</p>  <p>YOY GROSS MARGIN IMPROVEMENT³ +10%</p>
 <p>COST REDUCTION² \$24 Million</p>	 <p>OPERATING MARGIN⁴ 24%</p>  <p>YOY OPERATING MARGIN IMPROVEMENT³ > +100%</p>



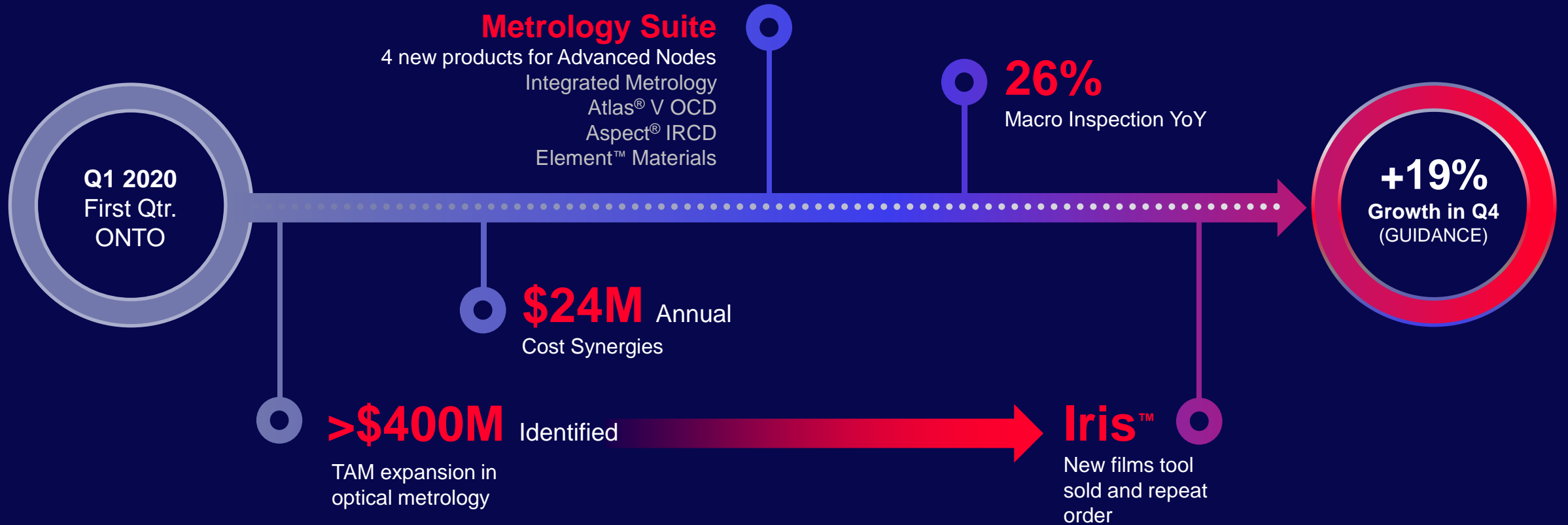
Note 1: 2020 YTD actual results plus Q4 guidance mid-point

Note 2: Implemented cost synergies from the Nanometric / Rudolph merger

Note 3: Forecasted Q4-19-Q4-20 YoY change based on mid-point of Q4-20 guidance

Note 4: Forecasted based on mid-point of Q4-20 guidance.

Onto Innovation Achievements in 2020



NEW COMPANY, STRONG FOUNDATION, AND MOMENTUM FOR GROWTH!

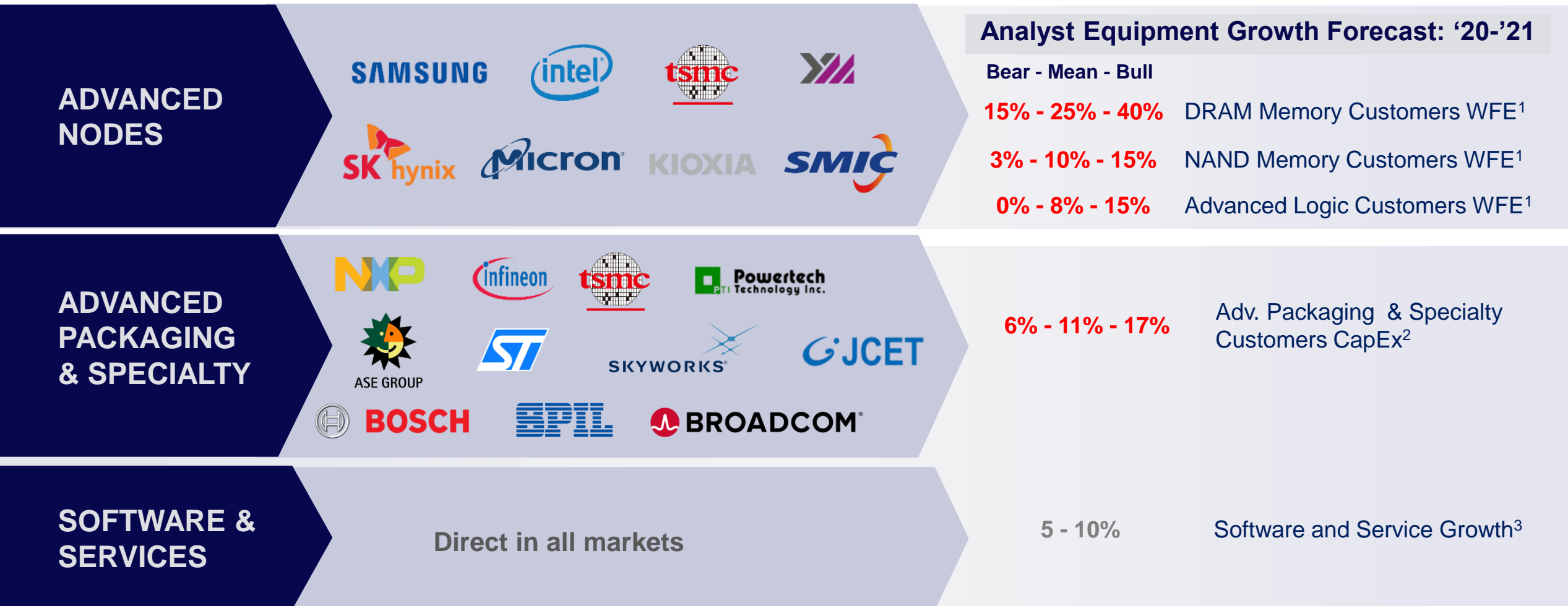
More Opportunities in 2021!

Foundation laid in 2020 expands both total available and served markets by over 20%



Research Points to Strong CapEx Growth Across Our Markets

CapEx growth provides tailwinds for Onto Innovation's process control growth



Note 1: 13 Analysts' Estimate Ranges, Dec 2020

Note 2: 6% Gartner Forecast – 17% TechSearch Advanced Packaging Report, August 2020

Note 3: Company Historic YoY growth (proforma)

“Data Era” Driving Multiple Secular Growth Industries

Advances in memory and transistor architectures enable growth in multiple industries



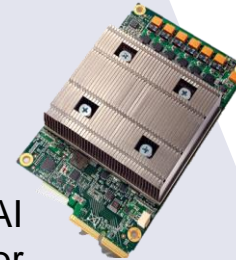
Smart City



Environment



Health



Google AI processor



Mobile

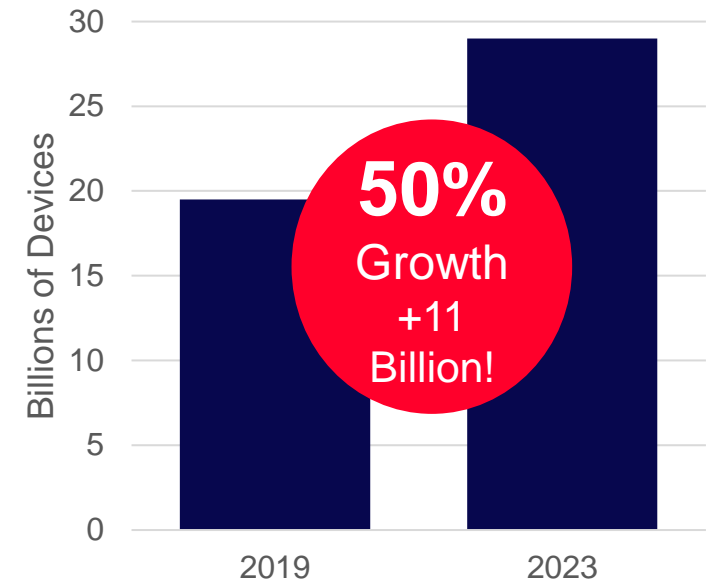


Smart Home



Data Center

Growth of Connected Devices

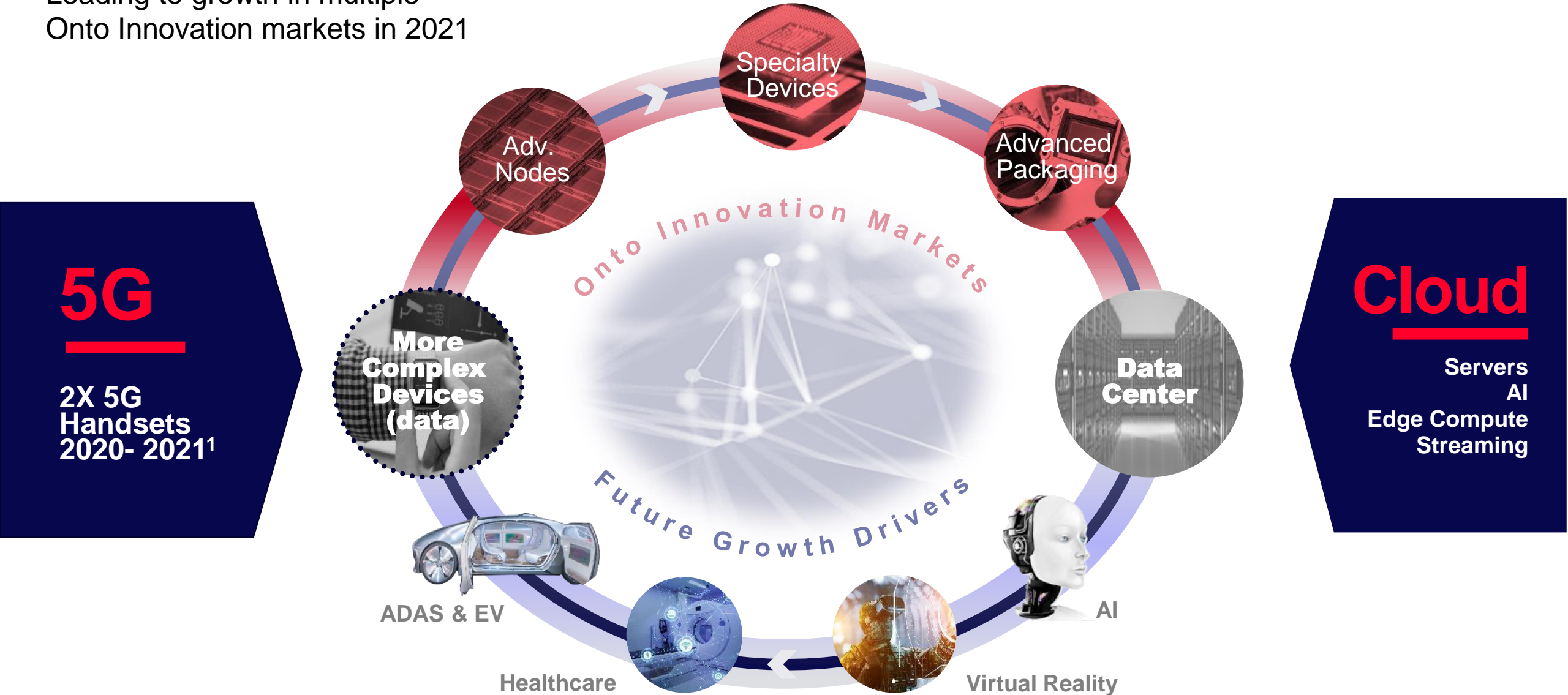


Global avg devices/connections per person grows from 2.4 to 3.6 in 2023
US Devices/Connections per person grows from 8.2 to 13.4 in 2023

Source: Cisco Annual Internet Report, 2020

5G and Cloud Contribute to Virtuous Cycle

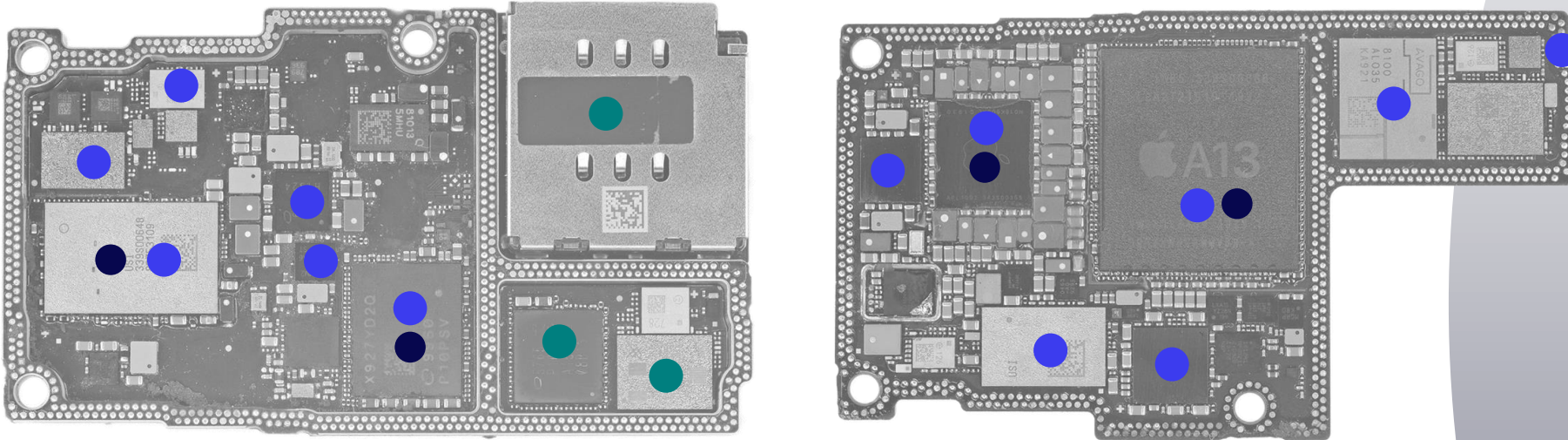
Leading to growth in multiple
Onto Innovation markets in 2021



Note 1: Needham Industry Forecast (MU) 1/8/21

5G Enabled Handsets Drive Outsized Growth

~90% of devices measured / inspected by Onto Innovation



5G Handset Multiplier Effect

2X More Memory

2X More RF Content

>100 Advanced Packages

● Advanced Nodes

Atlas, IMPULSE, Aspect

- Processors
- DRAM
- 3D-NAND

● Advanced Packaging

Dragonfly, Firefly, JetStep

- Processors
- System-in-Package (Chiplets)
- 3D Packages

● Specialty Devices

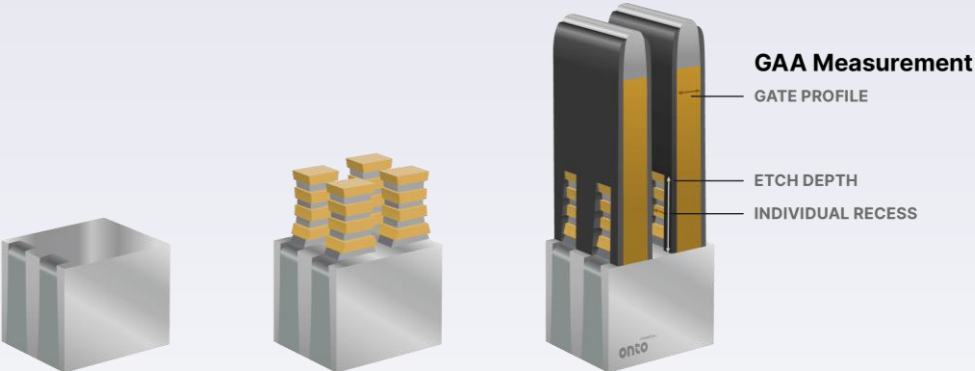
Dragonfly, MetaPULSE

- RF Modules
- Cameras
- Sensors

New Product Suite Measures the Most Challenging Dimensions

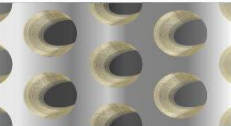
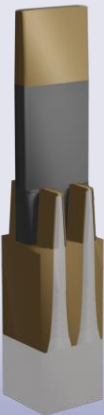
Advanced logic and memory driven by high-performance computing, AI, IoT, autonomous driving

3nm GAA FET

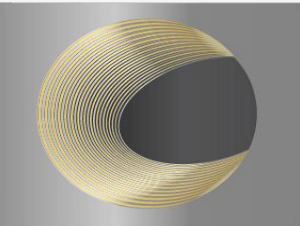


GAA FET: Gate All Around Field Effect Transistor

FinFET



Channel Hole Etch



Deposition repeating layer thickness

3D-NAND

ADVANCED NODES PRODUCT SUITE

Atlas® Metrology

Aspect® Metrology

IMPULSE® Integrated Metrology

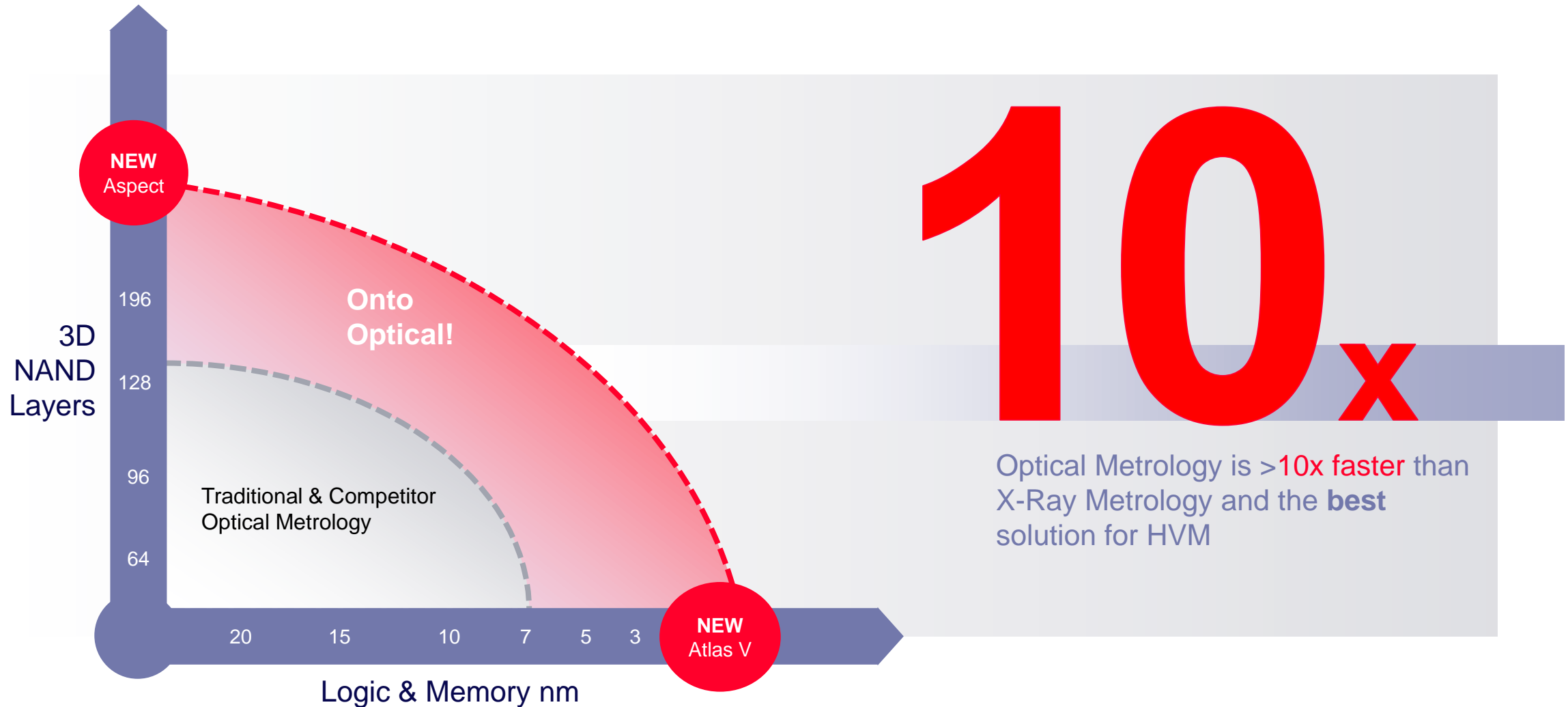
Element™ FTIR

Proven Metrology.
At Speed.
All Devices.

Note: All images generated from Onto Innovation's AI-Diffract Software

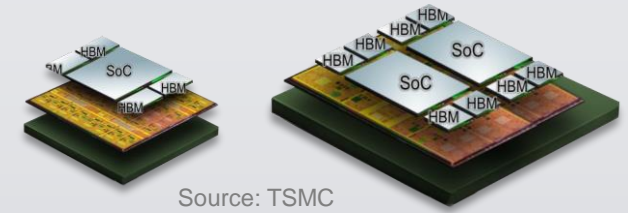
Our Advantage? We Take Optical Metrology Beyond our Peers!

Achieve better results, faster, with optical vs X-ray



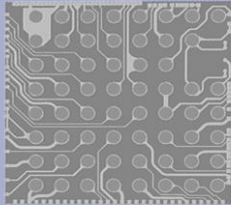
Top 5 Semiconductor Manufacturers are Accelerating the Advanced Packaging Roadmaps

Onto Innovation's inspection platforms lead the way

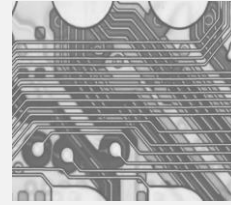


Source: TSMC

RDL Lines Reduction 90%

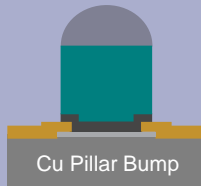


10µm Line Width



~1µm Line Width

Bump Size Reduction 86%



35µm height

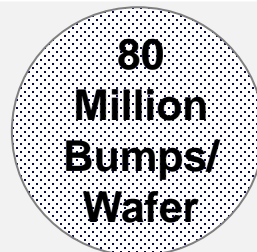


5µm height

Bump Density increasing 8X



10 Million Bumps/Wafer



80 Million Bumps/Wafer

2017

2021+

~22%

Increase in Onto Innovation Share

2018-2020¹

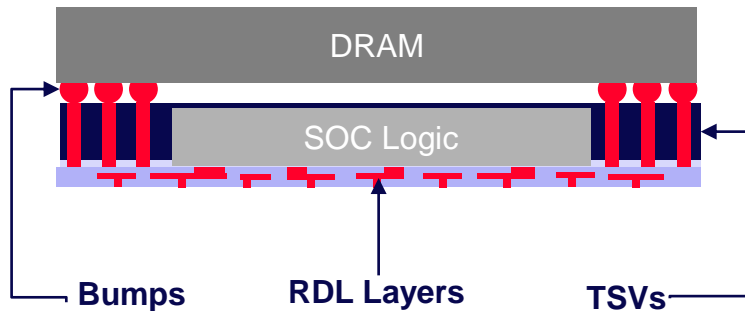
Note 1: Company Estimate share of packaging process control at the top 5 largest semiconductor manufacturers

Complete Suite of Technology for Packaging and Specialty Devices

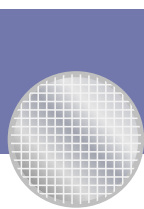
We print, measure, and inspect the most advanced process technologies in packaging

DIE LEVEL

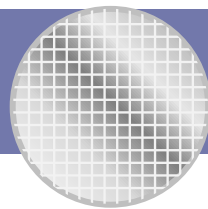
Interconnect reliability



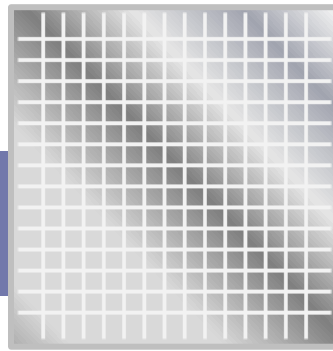
SERVING A VARIETY OF SUBSTRATES



200mm

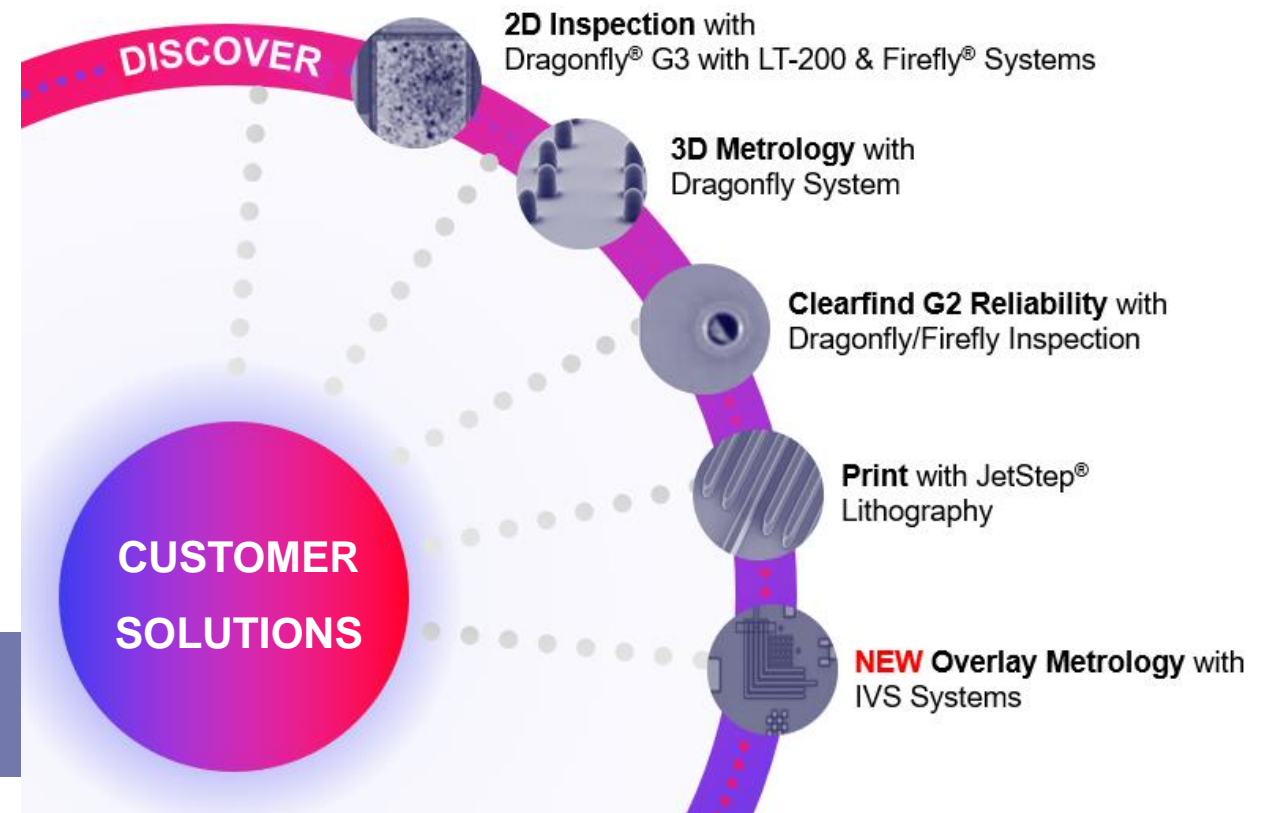


300mm



500x500mm

COMPREHENSIVE PROCESS SOLUTIONS



Expanding our Solution Suite with Overlay Metrology

Leading technology in a nascent but rapidly expanding market

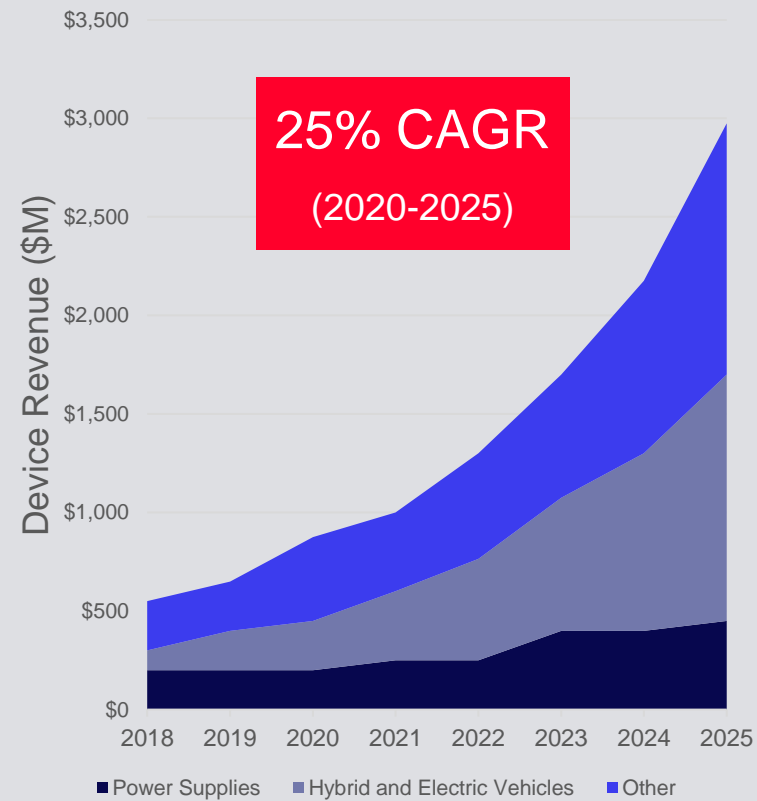


>300 systems in use worldwide

Estimated 80% share in compound semi overlay market

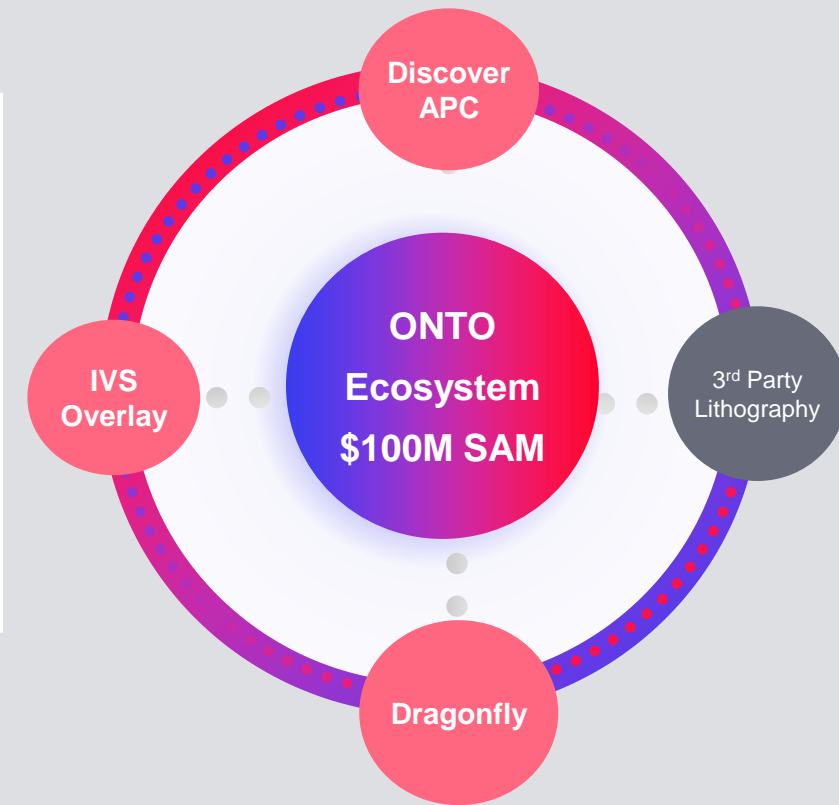
Custom optics and software for transparent substrates

Compound Semi Revenue Growth¹



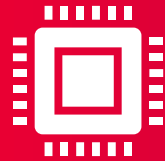
Note 1: Omdia SiC + GaN Revenue, Compound Semi Report 2020

2021 REVENUE SYNERGIES



Why Invest in Onto Innovation?

TECHNOLOGY



Strong adoption of new products expanding our markets. Further supported by projected across our markets.

OPERATIONS



Global operations supporting diverse ~150 customer base. Long term financial model with \$5 per share earnings power

BALANCE SHEET



\$340M Cash, No Debt, FCF 24% of revenue
Fuel for strategic M&A

Thank You

Onto Higher Yields

Onto Higher Margins

Onto Higher Productivity

Onto Innovation

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www.ontoinnovation.com

Operating Model (Appendix)

Long-term Operating Model*

Organic Growth Resulting from Share Gains & Potential to Enter New Addressable Markets

Annual Revenue	\$600M Model	\$800M Model	\$1B Model
Gross Margin	54% - 55%	55% - 56%	56% - 57%
Operating Profit	24% - 25%	29% - 30%	32% - 33%
Earnings per Share	\$2.40 - \$2.50	\$3.85 - \$4.00	\$5.05 - \$5.25

*Non-GAAP Long Term Financial Model: excludes amortization and merger costs; includes stock-based compensation