

Onto Innovation

Investor Presentation

DECEMBER 2022

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 January 1, 2022, 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 Snapshot

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

NOVEMBER 2019: RTEC-NANO MERGER

$254M Q3 2022 REVENUE

>9,000 ACTIVE METROLOGY & INSPECTION TOOLS INSTALLED

75 Fabs FAB-WIDE YIELD/DEFECT SOFTWARE INSTALLED

Note 1: 90% of WFE awarded to companies in this tier
Note 2: Q1-2020 (ONTO's first full quarter) and Q3-2022 non-GAAP results
Note 3: Analyst consensus estimate on Oct 28, 2022 for FY 2022

Top WFE Strategic Supplier Tier[1]

Annual Revenue Growth ('20-'22)
$556M to $1.003B[3]

Q1 2020 Gross Margin[2]	Q3 2022 Gross Margin[2]
52%	**55%**

Q1 2020 Operating Margin[2]	Q3 2022 Operating Margin[2]
16%	**31%**

Q1 2020 Earnings per Share[2]	Q3 2022 Earnings per Share[2]
$0.39	**$1.35**

Positioned for Sustainable Outperformance

Why We WIN

SERVING ENTIRE SEMICONDUCTOR VALUE CHAIN



As a result of our strategic supplier status and connected thinking with our key customers, we create connected solutions that span the entire semiconductor value chain

BREADTH OF PRODUCTS



Our software technologies are connecting multiple metrology and inspection tools together to form virtual process control systems resulting in customers increasing their yields and gross margins

Our products are designed to serve high growth market segments to solve high value process challenges

FINANCIAL DISCIPLINE



We have demonstrated ongoing financial performance improvements since the Rudolph-Nanometrics merger in 2019

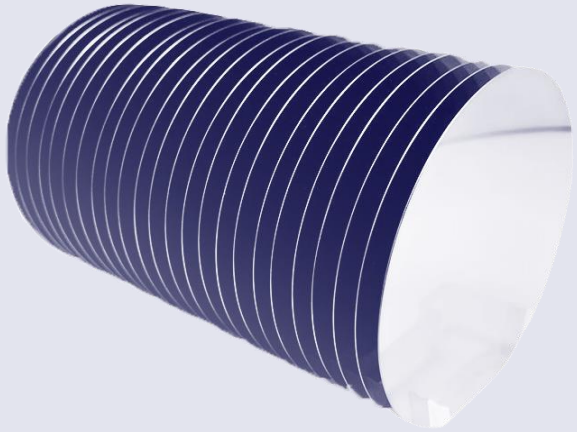
Our organic, long-term operating model provides a clear roadmap to future outperformance

Serving the Entire Semiconductor Value Chain

Three main semiconductor production facilities

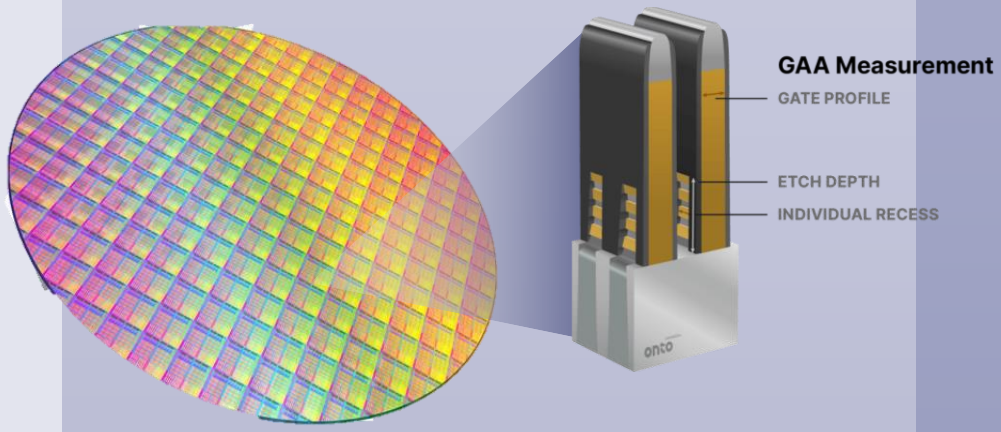
SILICON WAFER MANUFACTURING

Raw material for chips



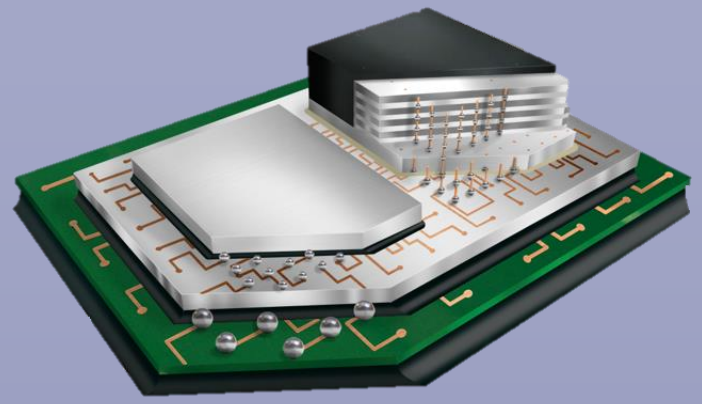
WAFER FABRICATION

Adding layers of printed circuitry



ADVANCED PACKAGING

Separating wafers to individual chips,
connecting multiple chips into a single package



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Onto Innovation’s Enabling Technologies

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

SILICON WAFER MANUFACTURING
Raw material for chips



Physical Defect Control
Cracks | Pits | Foreign material

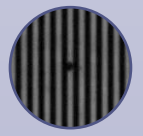


Material Analysis
Silicon purity | Unwanted elements

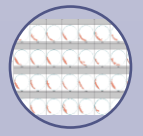
WAFER FABRICATION
Raw material for chips



3D Metrology
Nanometer measurements | Feature shape/slope/angles | Film thickness

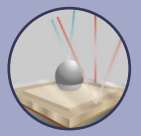


Macro Defect Inspection
Foreign material | Scratches | Residue

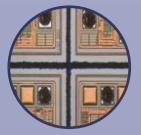


Yield Analysis Software

ADVANCED PACKAGING
Separating wafers to individual chips, connecting multiple chips into a single package



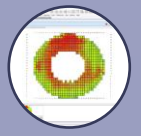
3D Metrology
Bump connections | Thru-silicon via’s



Macro Defect Inspection
Placement locations



Lithography
Printing connecting circuits



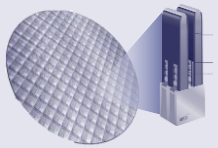
Yield Analysis Software

Revenue Distribution Across the Value Chain

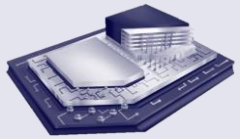
VALUE CHAIN



Silicon Wafer Manufacturing



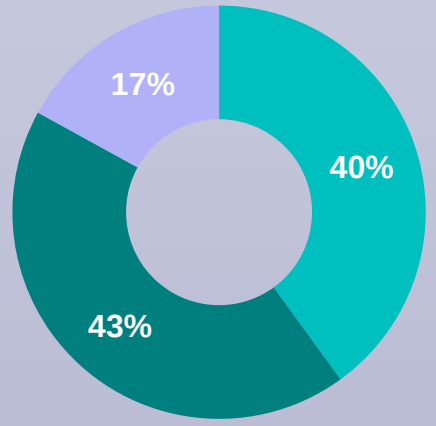
Wafer Fabrication



Specialty Devices & Advanced Packaging

ONTO SEGMENTS

BALANCED YTD 2022 REVENUE DISTRIBUTION ACROSS THE SEMICONDUCTOR VALUE CHAIN



SERVING INDUSTRY LEADERS

ShinEtsu · SUMCO · siltronic perfect silicon solutions · ASE GROUP · UMC · GLOBAL FOUNDRIES · SK siltron · Micron · KIOXIA · SK hynix · YMTC · RF360 A Qualcomm - TDK Joint Venture · GWJ Global Wafers Japan · tsmc · Infineon · BROADCOM · Powertech Technology Inc. · NXP · JCET · Amkor Technology · SAMSUNG · win SEMICONDUCTORS · BOSCH · nexes

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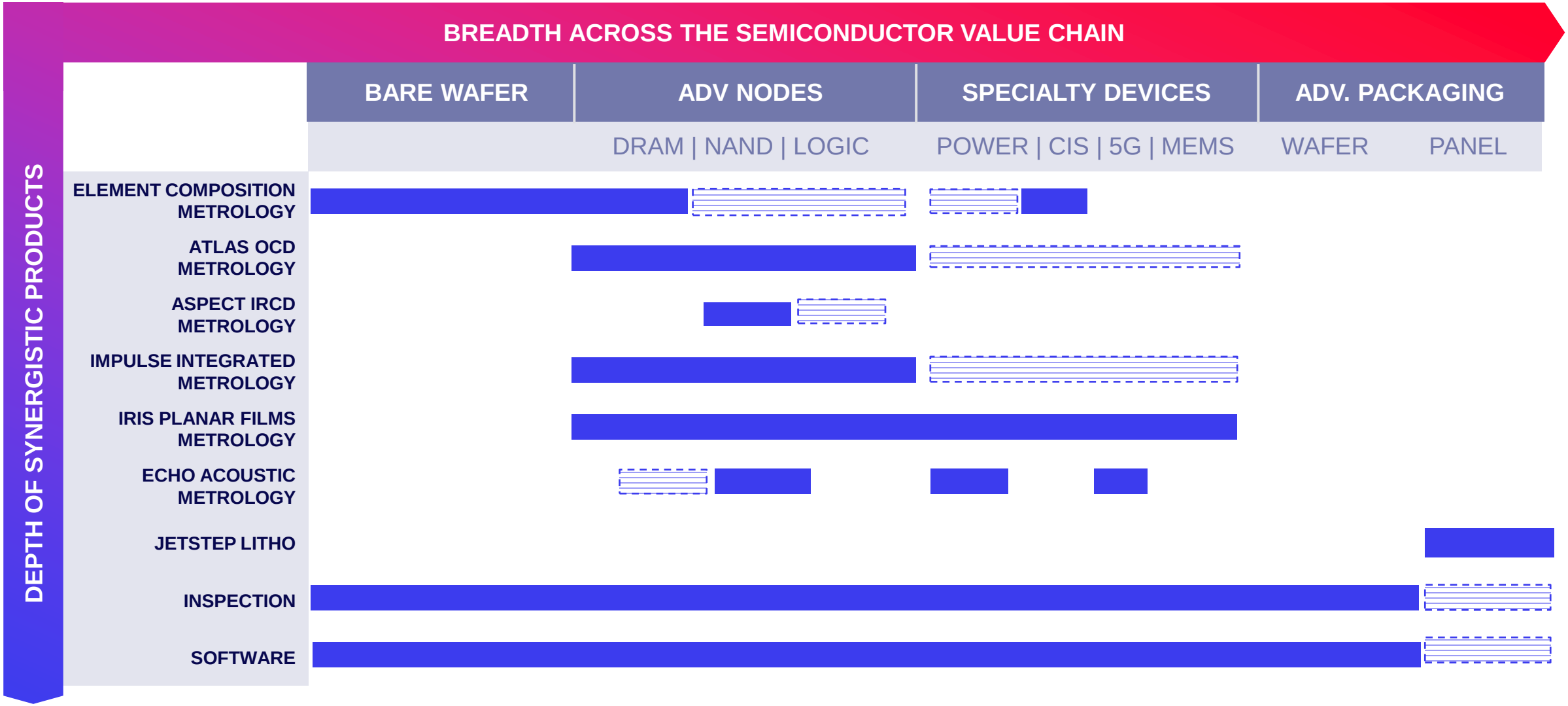
The Strength of Our Products Across the Value Chain

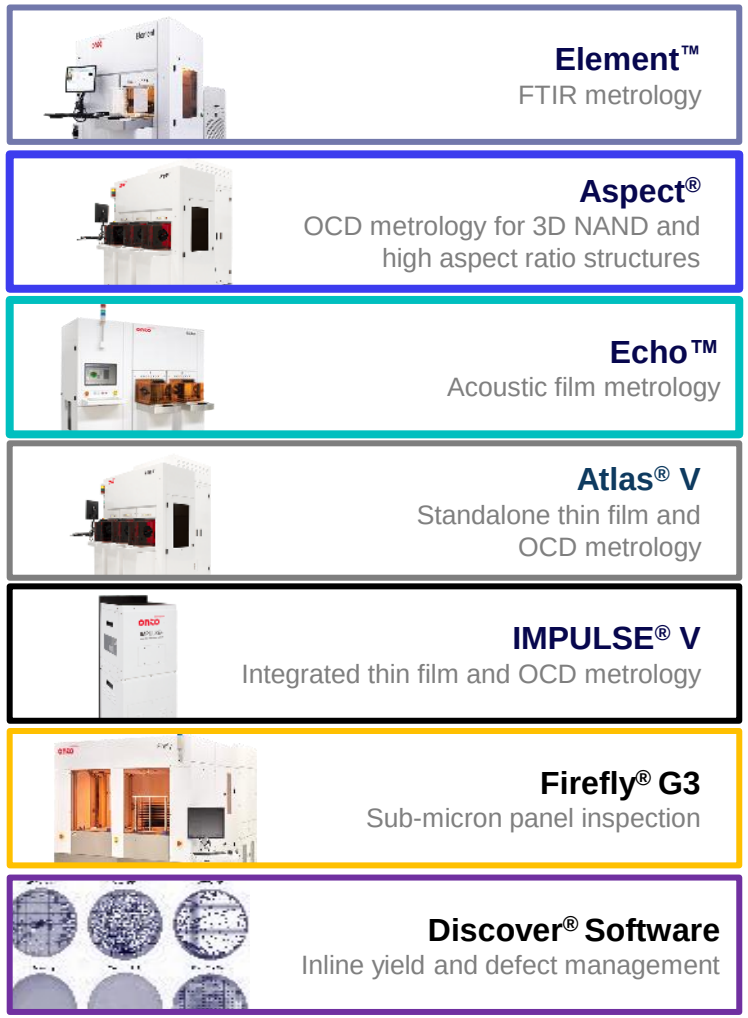


CURRENT SAM ESTIMATED $2.3 BILLION FOR 2023

NEW PRODUCT OPPORTUNITIES FOR $344 MILLION SAM EXPANSION!

Expanding Onto Innovation's Served Markets

Onto Innovation's Product Portfolio



Element™
FTIR metrology

Aspect®
OCD metrology for 3D NAND and high aspect ratio structures

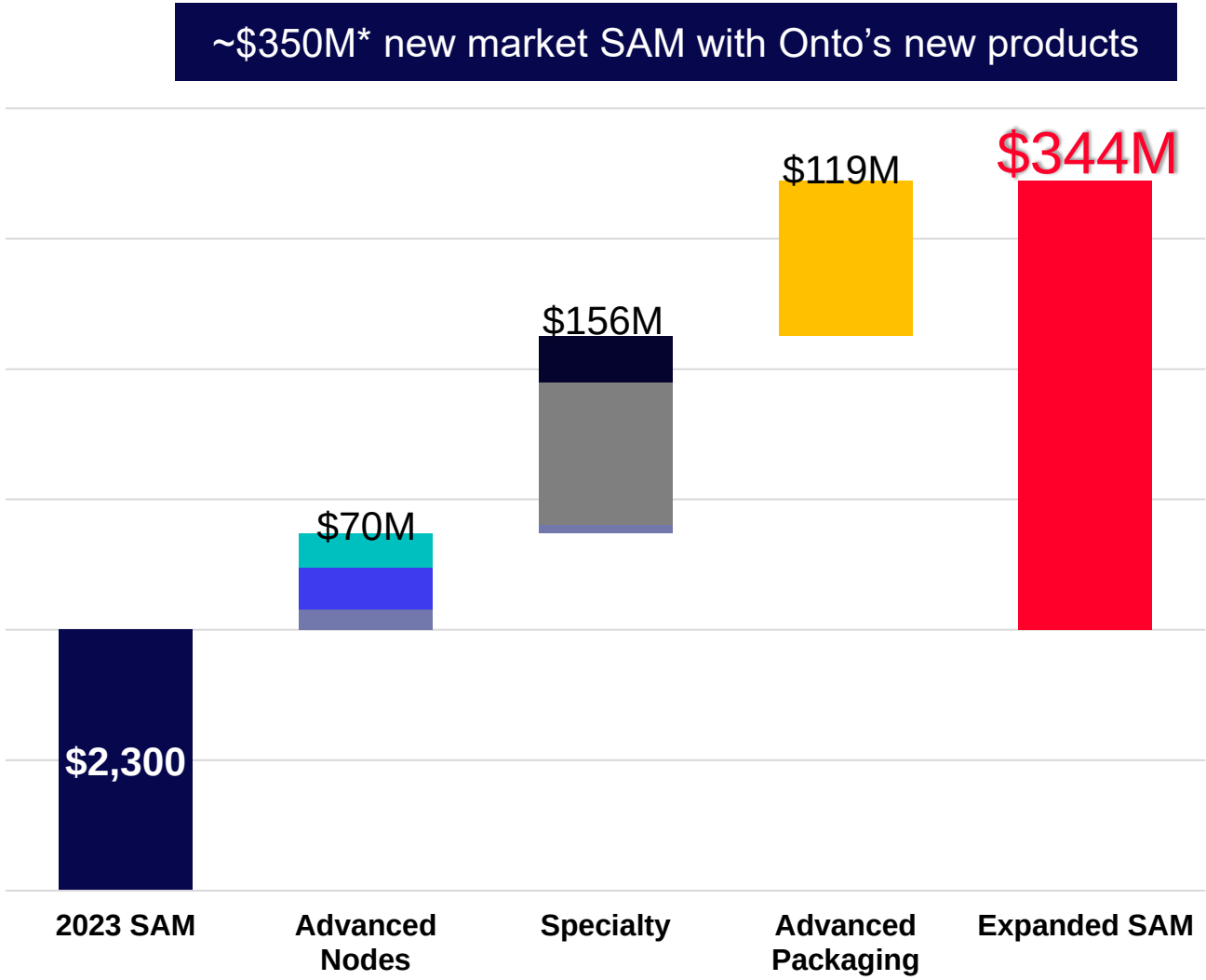
Echo™
Acoustic film metrology

Atlas® V
Standalone thin film and OCD metrology

IMPULSE® V
Integrated thin film and OCD metrology

Firefly® G3
Sub-micron panel inspection

Discover® Software
Inline yield and defect management



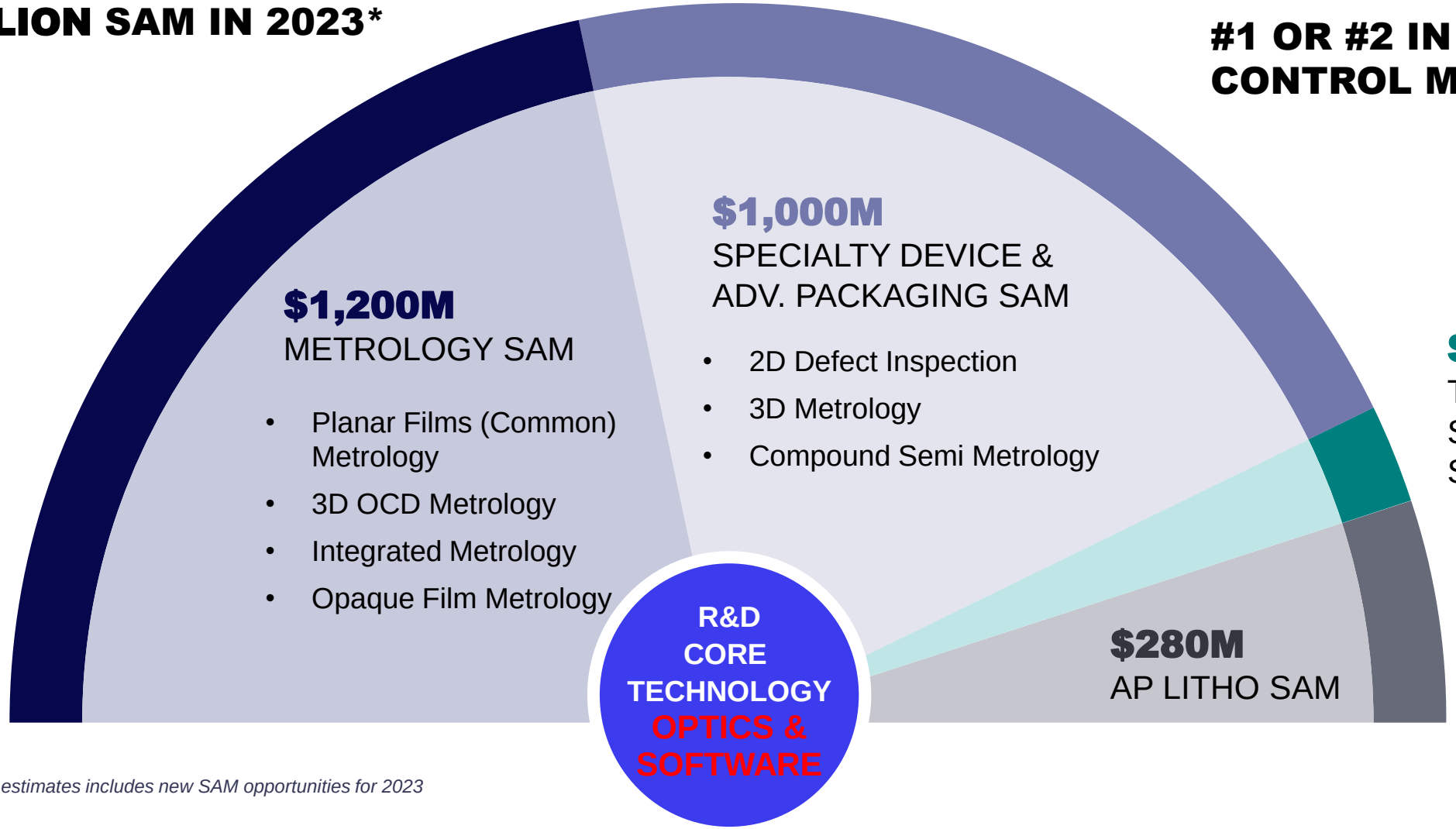
** Company estimates based on reduced analysts' WFE outlook for 2023, excludes X-ray for materials*

R&D Scale Propels Cadence of Product Introductions

IP and technology leverage to accelerate pace of innovation and new product share gains

~$2.6 BILLION SAM IN 2023*

#1 OR #2 IN PROCESS CONTROL MARKETS



** Company estimates includes new SAM opportunities for 2023*

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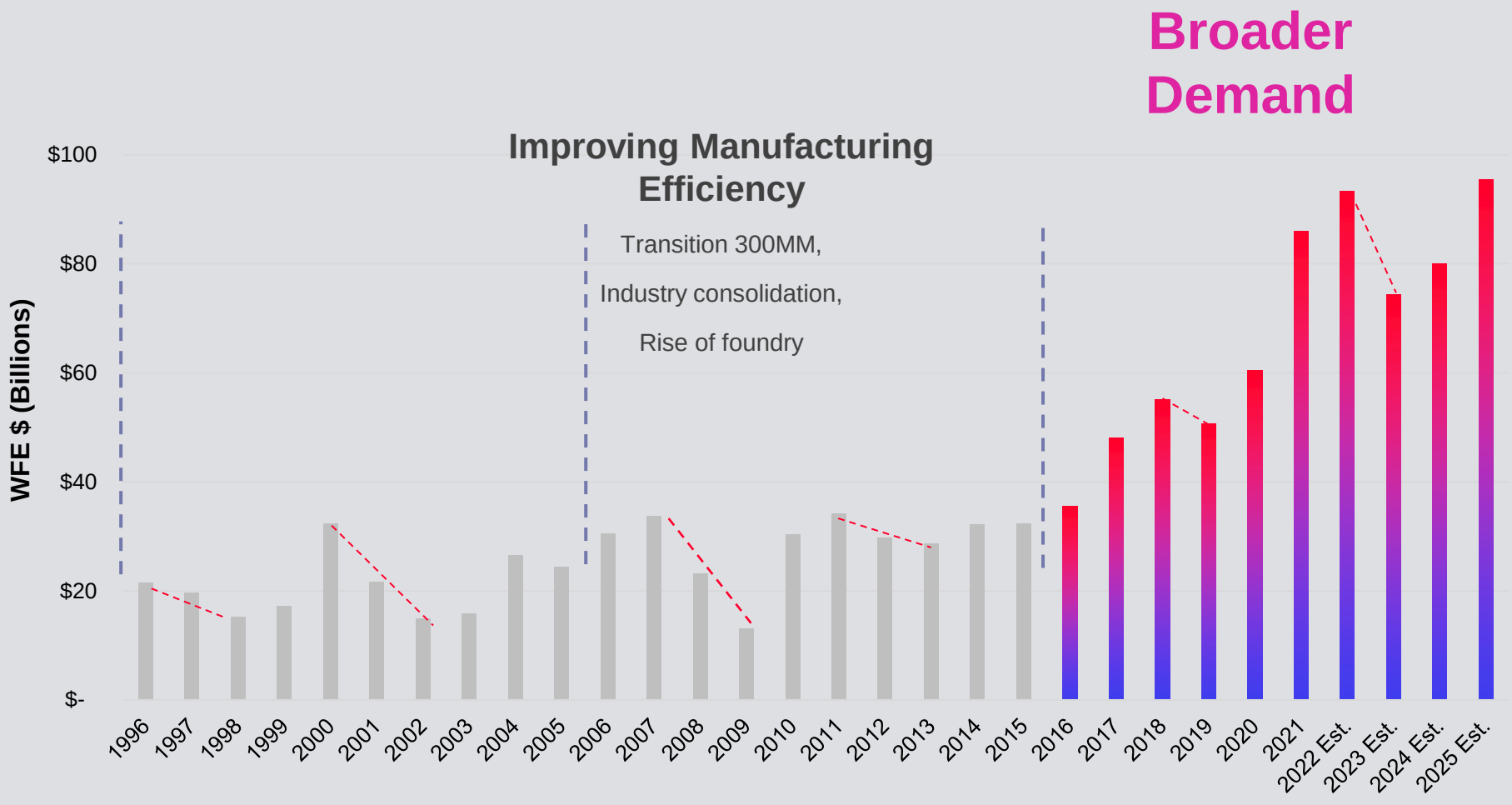
Semiconductor Market Transitioned From 20 Year Cyclical to 10 Year Growth



Source: Historic WFE: Jeffries Semiconductor Report, January 2022
and 2022-2025 Estimated WFE: 12 Sell-side Analysts Consensus, October 2022

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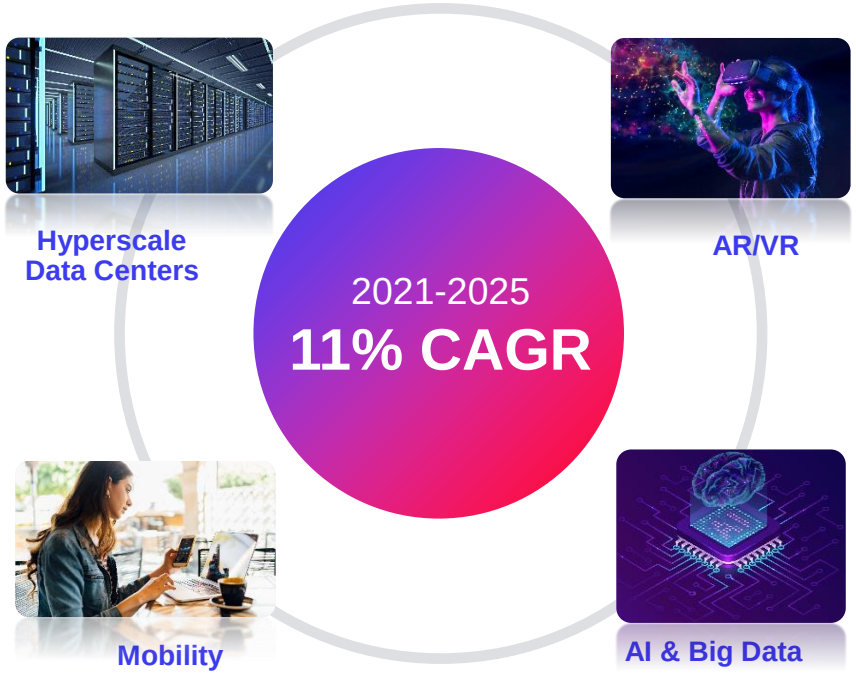
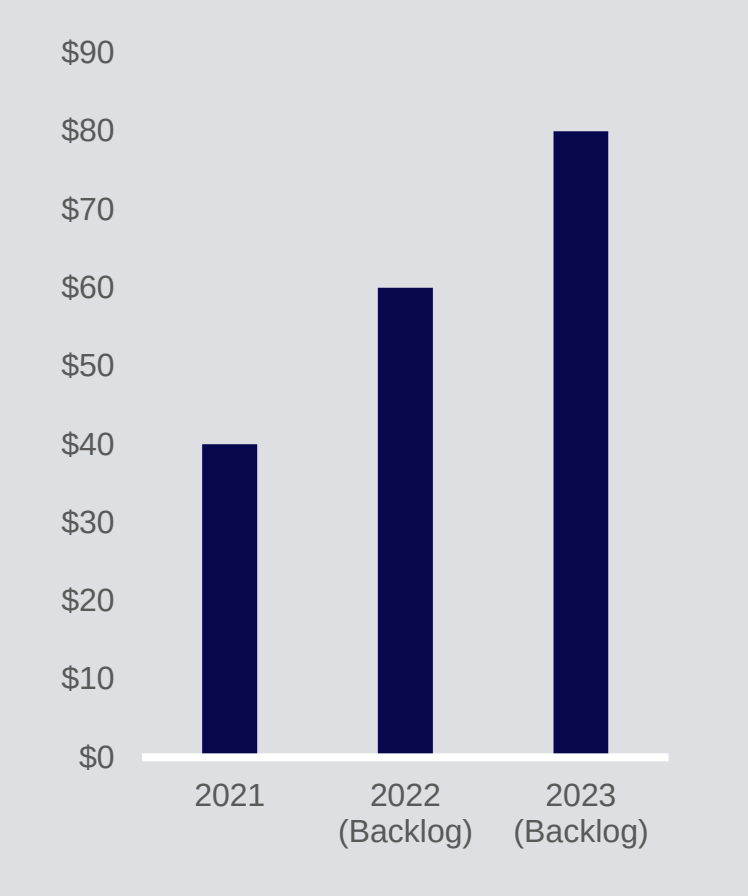
Onto Growth Driver: Panel / Substrate Packaging

High performance compute, intelligent edge, AI, mobility

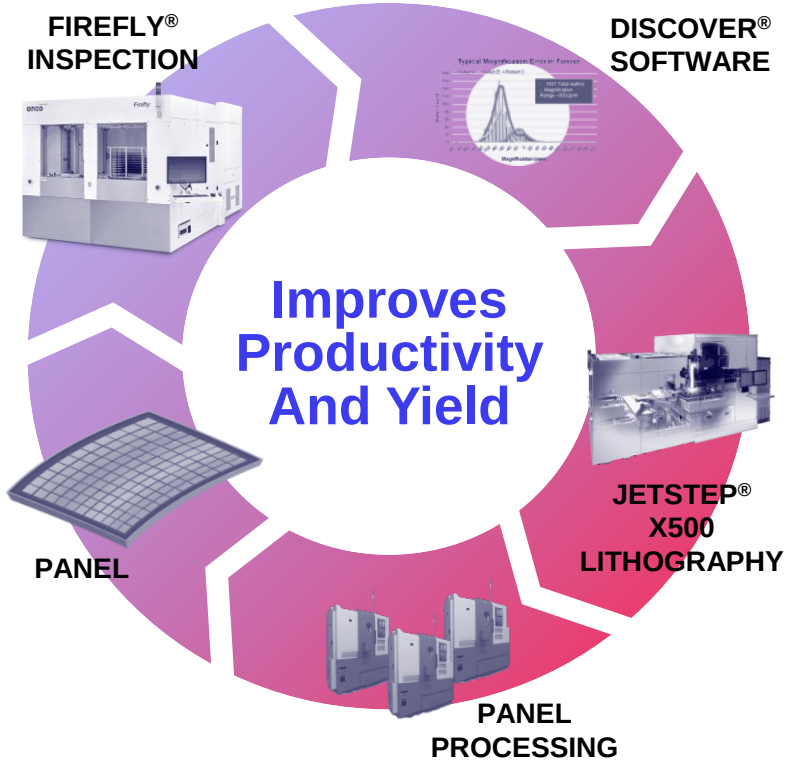
GROWING DEMAND



ONTO REVENUE GROWTH IN PANEL



STEPFAST PROPRIETARY SOLUTION FOR PANELS



Source: TechSearch International, December 2021

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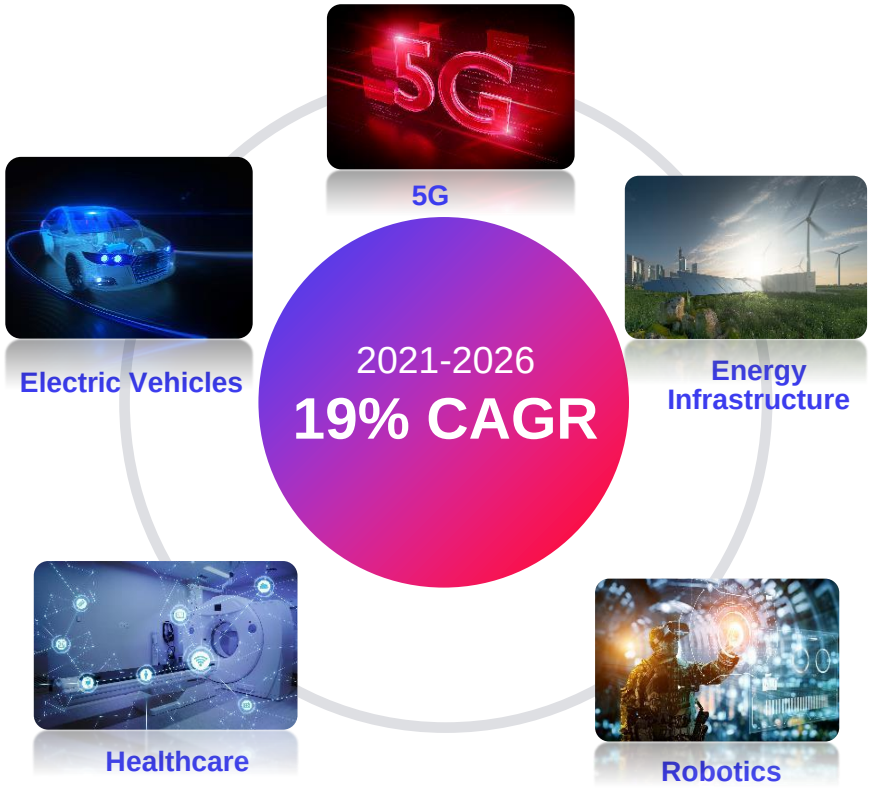
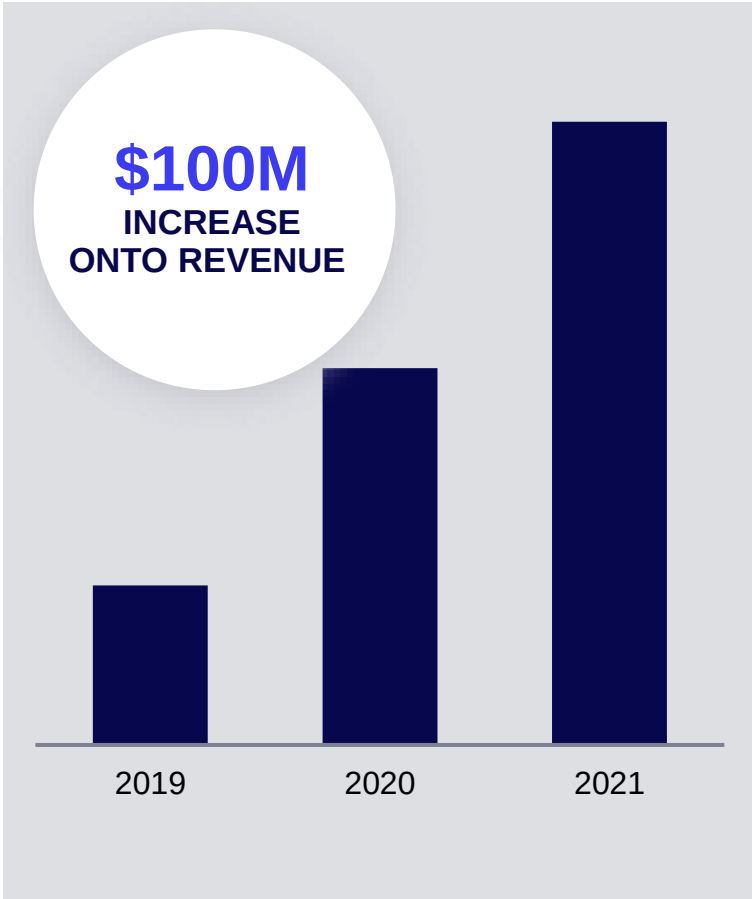
Onto Growth Driver: Compound Semiconductors

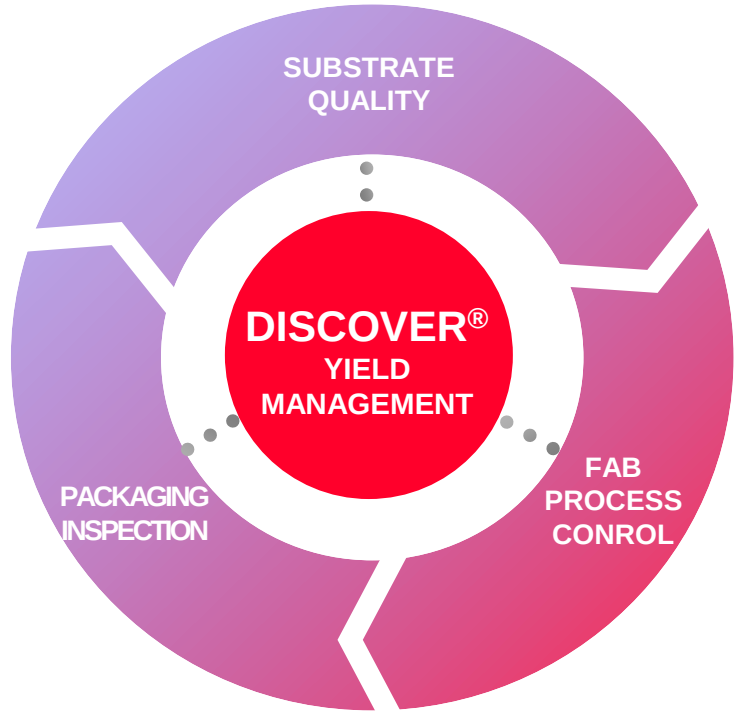
GROWING DEMAND



ONTO REVENUE GROWTH IN COMPOUND SEMICONDUCTORS



COMPREHENSIVE SOLUTION TO HIGHER YIELD, FASTER RAMP



DRAGONFLY® INSPECTION, IVISION™ CD OVERLAY ECHO™ METAL FILM METROLOGY, NSX® 330 2D/3D INSPECTION

Source: Yole Developpement, Quarterly Market Monitors- Compound Semiconductors, December 2021

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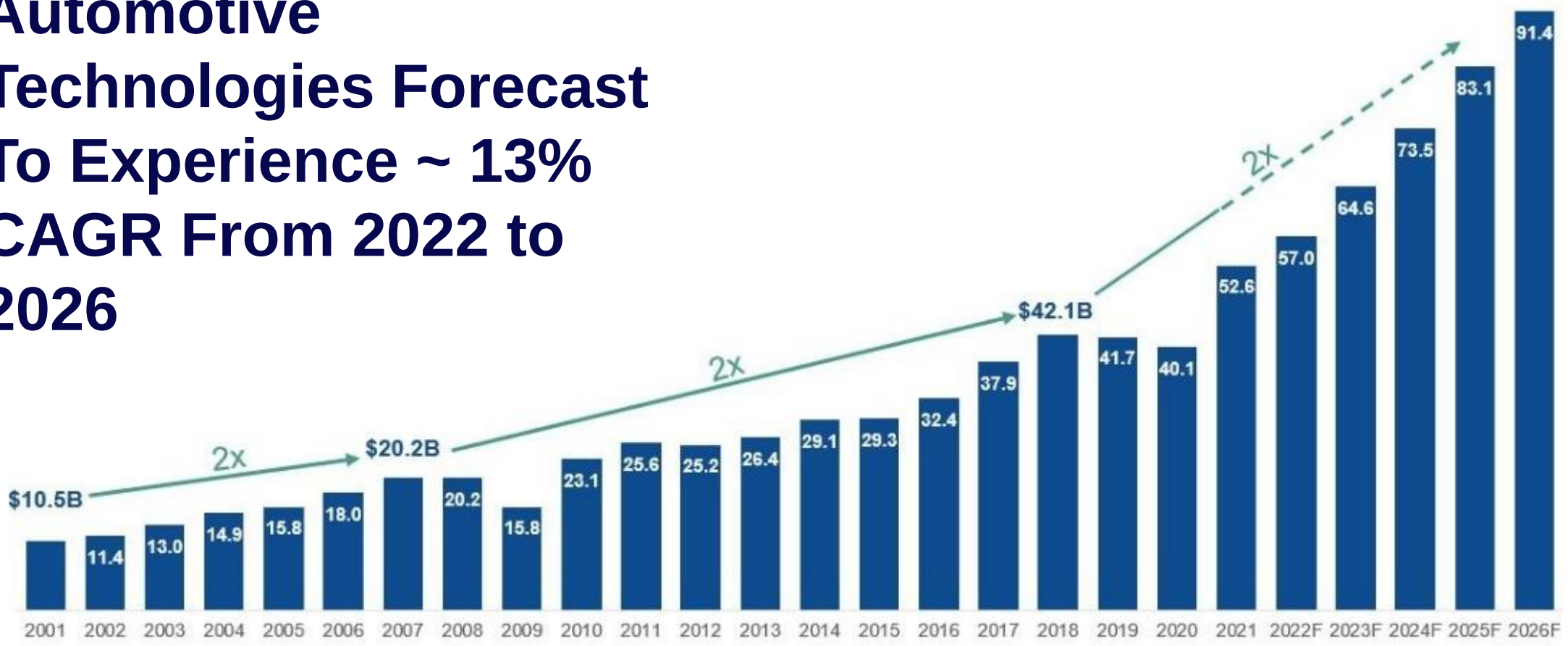
Growth of Semiconductors in Automotive

Transition from ICE to EV and Adoption of ADAS Technologies

Automotive Technologies Forecast To Experience ~ 13% CAGR From 2022 to 2026



Source: Omdia, March 2022

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Q4-2022 Quarter Guidance Recap*

Published October 27, 2022

REVENUE	$244M to $256M
GROSS MARGIN	54% to 55%
OPERATING MARGIN	29% to 31%
DILUTED EPS	$1.25 to $1.40

Model Assumptions

- Non-GAAP Operating Expenses: **$60M -$62M**
- Effective Tax Rate: **12% - 13%**
- Diluted Share Count: **49.3 Million**

** Non-GAAP Gross Margin, Operating Margin, EPS Guidance*

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Long-term Operating Model*

Organic Growth Resulting from Share Gains & Potential to Enter New Addressable Markets			
Annual Revenue	**$1B Model**	**$1.2B Model**	**$1.4B Model**
Gross Margin	56% - 57%	57% - 58%	58% - 59%
Operating Profit	31% - 32%	33% - 34%	35% - 36%
Earnings per Share	$5.20 - $5.35	$6.08 - $7.00	$8.10 - $8.35

Reduce Comprehensive Carbon Footprint 30% by 2025	
Reduce Freshwater Usage	30% by 2025
Increase Renewable Energy Usage	30% by 2025
Reduce Landfill Hazardous Waste	30% by 2025

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

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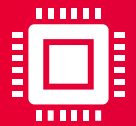
Why Invest in Onto Innovation?

TEAM		Culture of innovation and collaboration
TECHNOLOGY		Outperforming in multiple high growth segments
FINANCIAL PERFORMANCE		Long term financial model with >$8 per share earnings power
BALANCE SHEET		>$550M cash, no debt, provides fuel for strategic M&A

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Thank You

Onto Higher Yields

Onto Higher Margins

Onto Higher Productivity

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Appendix

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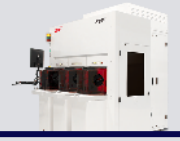
Onto Innovation's Major Products



Atlas® V
Standalone thin film and OCD metrology



Aspect®
OCD metrology for 3D NAND and high aspect ratio structures



IMPULSE® V
Integrated thin film and OCD metrology



Echo™
Acoustic film metrology



Iris™
Thin film and common OCD metrology



IVS
Overlay and CD metrology



Element™
FTIR metrology



AWX™ FSI
Unpatterned frontside inspection



NovusEdge®
Automated all-surface defect inspection for unpatterned wafers



Dragonfly® G3
2D/3D inspection and metrology



Firefly®
Sub-micron panel inspection



NSX® and F30®
2D inspection, CD, RDL/TSV, 2D bump, 2D/3D metrology, all-surface ready



JetStep®
Litho for Advanced Packaging and FPD



Discover® Software
Inline yield and defect management



Control Software
Fabwide control software



Ai Diffract™ Software
AI-guided OCD modeling and analysis software

METROLOGY
INSPECTION
LITHOGRAPHY
SOFTWARE