



Foundational Technologies for a Connected World

MKS Instruments, Inc.
September 2023



About this Presentation

Safe Harbor for Forward-Looking Statements

This presentation contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 regarding the future financial performance, business prospects and growth of MKS Instruments, Inc. (“MKS”, the “Company”, “our”, or “we”) and the impact of the ransomware event we identified on February 3, 2023. These statements are only predictions based on current assumptions and expectations. Any statements that are not statements of historical fact (including statements containing the words “will,” “projects,” “intends,” “believes,” “plans,” “anticipates,” “expects,” “estimates,” “forecasts,” “continues” and similar expressions) should be considered to be forward-looking statements. Actual events or results may differ materially from those in the forward-looking statements set forth herein.

Among the important factors that could cause actual events to differ materially from those in the forward-looking statements that we make are the need to generate sufficient cash flows to service and repay the substantial indebtedness we incurred in connection with our acquisition of Atotech Limited (“Atotech” and such transaction, the “Atotech Acquisition”), which we completed in August 2022; the terms of our existing credit facilities under which we incurred such debt; our entry into the chemicals technology business through the Atotech Acquisition, in which we do not have experience and which may expose us to significant additional liabilities; the risk that we are unable to integrate the Atotech Acquisition successfully or realize the anticipated synergies, cost savings and other benefits of the Atotech Acquisition; the ongoing assessment of the ransomware event we identified on February 3, 2023, including legal, reputational, financial and contractual risks resulting from the incident, and other risks related to cybersecurity, data privacy and intellectual property; competition from larger, more advanced or more established companies in our markets; the ability to successfully grow our business and the businesses of Atotech and Electro Scientific Industries, Inc., which we acquired in February 2019, and financial risks associated with those and potential future acquisitions, including goodwill and intangible asset impairments; manufacturing and sourcing risks, including those associated with limited and sole source suppliers and the impact and duration of supply chain disruptions, component shortages, and price increases; changes in global demand and the impact of COVID-19 or any other pandemic, including with respect to such supply chain disruptions, component shortages and price increases; risks associated with doing business internationally, including trade compliance, regulatory restrictions on our products, components or markets, particularly the semiconductor market, and unfavorable currency exchange and tax rate fluctuations, which risks become more significant as we grow our business internationally and in China specifically; conditions affecting the markets in which we operate, including fluctuations in capital spending in the semiconductor, electronics manufacturing and automotive industries, and fluctuations in sales to our major customers or disruptions or delays from third-party service providers upon which our operations may rely; the ability to anticipate and meet customer demand; the challenges, risks and costs involved with integrating or transitioning local and international operations of the companies we have acquired; risks associated with the attraction and retention of key personnel; potential fluctuations in quarterly results; dependence on new product development; rapid technological and market change; acquisition strategy; volatility of stock price; risks associated with chemical manufacturing and environmental regulation compliance; risks related to defective products; financial and legal risk management; and the other important factors described in MKS’ Annual Report on Form 10-K for the year ended December 31, 2022 and any subsequent Quarterly Reports on Form 10-Q, as filed with the U.S. Securities and Exchange Commission. MKS is under no obligation to, and expressly disclaims any obligation to, update or alter these forward-looking statements, whether as a result of new information, future events or otherwise after the date of this presentation, even if subsequent events cause our views to change.

About this Presentation

Use of Non-GAAP Financial Measures

This presentation includes financial measures that are not in accordance with U.S. generally accepted accounting principles (“Non-GAAP financial measures”). These Non-GAAP financial measures should be viewed in addition to, and not as a substitute for, MKS' reported results under U.S. generally accepted accounting principles (“GAAP”), and may be different from Non-GAAP financial measures used by other companies. In addition, these Non-GAAP financial measures are not based on any comprehensive set of accounting rules or principles. MKS management believes the presentation of these Non-GAAP financial measures is useful to investors for comparing prior periods and analyzing ongoing business trends and operating results.

Combined Company Financial Information

All references to “combined company” financial measures reflect the combined results of MKS and Atotech, but are not calculated in accordance with Article 11 of Regulation S-X. In addition, except as otherwise indicated, Atotech financial information for periods up until MKS' acquisition of Atotech has been adjusted from International Financial Reporting Standards as issued by the International Accounting Standards Board (“IFRS”) to GAAP and includes adjustments to conform to the accounting policies of MKS.

MKS has not identified material differences in Atotech's net revenue under GAAP and Atotech's historical reported net revenue under IFRS. Net revenues by end market for Atotech are based on MKS' understanding of end market uses for Atotech products and services.

For further information regarding Non-GAAP financial measures and the calculation of certain combined company financial information, please refer to the appendix at the end of this presentation. In addition, for a breakout of reported, Atotech and combined company revenues by end market, please refer to the Net Revenues by End Market & Division presentation available under Events & Presentations on the Investor Relations section of MKS' website at investor.mks.com.

Totals presented may not sum due to rounding.

MKS: Technology-Driven Secular Growth Company

Foundational technology leader

Specializing in **precision solutions** for diverse end markets

Leveraging powerful secular trends

Miniaturization, complexity and chemistry drive the innovations that power our world

Attractive **growth** profile

Positioned for strong **EPS growth** and cash generation, with track record of execution

Topics Summary

1

**MKS
Overview**

2

**Our Markets
& Opportunity**

3

**Strategy &
Business Drivers**

4

**Financial
Profile**



MKS Overview



At a Glance



\$4.45B

2022 COMBINED
COMPANY REVENUE¹



\$295M

2022 COMBINED
COMPANY
R&D INVESTMENT¹



\$1.3B

2022 COMBINED
COMPANY
ADJUSTED EBITDA¹



28%

2022 COMBINED COMPANY
ADJUSTED EBITDA MARGIN¹



33K+

CUSTOMERS



20

LEADING POSITIONS IN
PRODUCT CATEGORIES²



~4,200

PATENTS WORLDWIDE



2,000+

ENGINEERS
& SCIENTISTS

¹ See Slide 3 for additional information regarding the calculation of combined company results. R&D investment consists of R&D expenses of \$54 million from Atotech for the pre-acquisition period and \$241 million from MKS and from Atotech for the post-acquisition period. ² Product categories where TechInsights and/or MKS estimate MKS is #1 or #2 in segment share.

MKS is Foundational to Our Connected World...



... and We Are Deeply Engaged with the Digital Ecosystem





Our Markets & Opportunity



Levered to Attractive End Markets

Technology leadership and differentiation **position MKS for outperformance in \$25B SAM¹**

Semiconductor

Critical solutions provider for semiconductor manufacturing

- Increasing demand and manufacturing complexity drive strong customer investment
- Long-term, deep relationships with consolidated customer base

FINANCIAL PROFILE

\$ COMBINED COMPANY REVENUE² | 2022: \$2.0B

Electronics & Packaging

Foundational enabler of next-generation electronic devices

- Uniquely positioned with chemistry and photonics expertise
- Long-term, deep customer relationships
- Early innings of market penetration

FINANCIAL PROFILE

\$ COMBINED COMPANY REVENUE² | 2022: \$1.1B

Specialty Industrial

Extending MKS expertise across broad end markets

- Leadership positions
- Differentiated technology
- Exposure across diverse set of applications

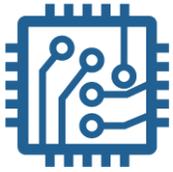
FINANCIAL PROFILE

\$ COMBINED COMPANY REVENUE² | 2022: \$1.3B

¹ Internal Company estimate. ² See Slide 3 for additional information regarding the calculation of combined company results.

MKS: Built to Capitalize on Secular Trends

Semiconductor



*Deposition, Etch,
Lithography,
Inspection / Metrology,
Wet Processing*

Smaller Geometries (nm)

Vertical Scaling

Novel Materials

← **MINIATURIZATION** →

← **COMPLEXITY** →

← **CHEMISTRY** →

Electronics & Packaging



*Laser-Based
Manufacturing,
Next-Gen Interconnect*

Finer Features (μm)

More Layers

Novel Materials

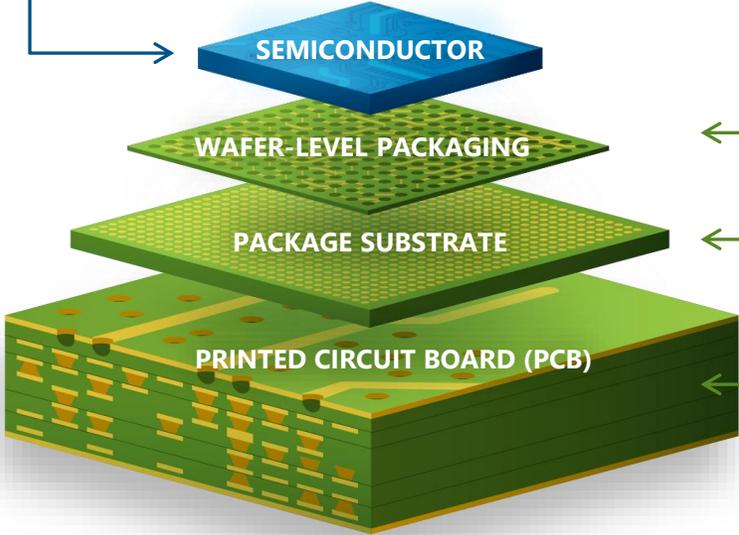
Enabling the Core Building Blocks of Advanced Electronic Devices

Semiconductor

Critical subsystems for **semiconductor** manufacturing

> *Leader in critical vacuum subsystems for deposition and etch, and emerging provider of photonics for lithography, metrology and inspection*

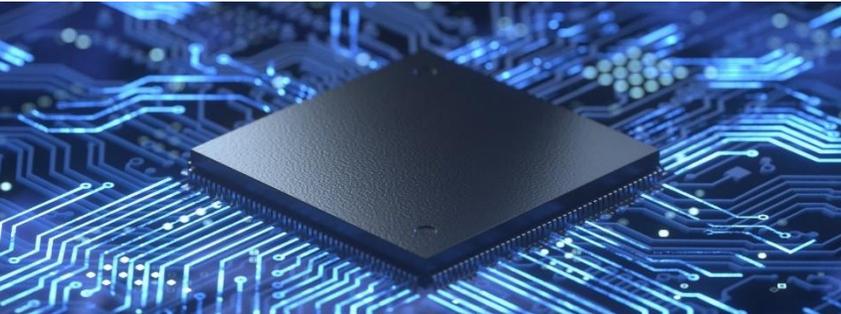
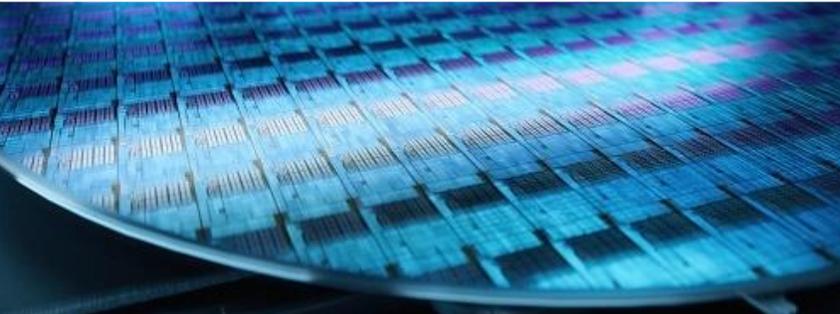
High Performance Compute Architecture



Electronics & Packaging

Subsystems, equipment & materials for **electronics & packaging**

> *Differentiated combination of electronics chemistry and laser drilling solutions to accelerate customer roadmaps in advanced PCB design and manufacturing*



Leveraging our Domain Expertise Across End Markets

PROPRIETARY CHEMISTRY

PRESSURE & FLOW MEASUREMENT & CONTROL

PLASMA & REACTIVE GAS

OPTICS & OPTICAL SUBSYSTEMS

LASERS

...and many more



 **Specialty Industrial**

 SURFACE FINISHING / FUNCTIONAL COATINGS

 SOLAR MANUFACTURING

 SYNTHETIC DIAMOND MANUFACTURING

 MEDICAL DIAGNOSTICS

 OPHTHALMIC SURGERY

...and many more

Leadership in Broad Set of Industrial Markets Offers Attractive Margins & Cash Flow



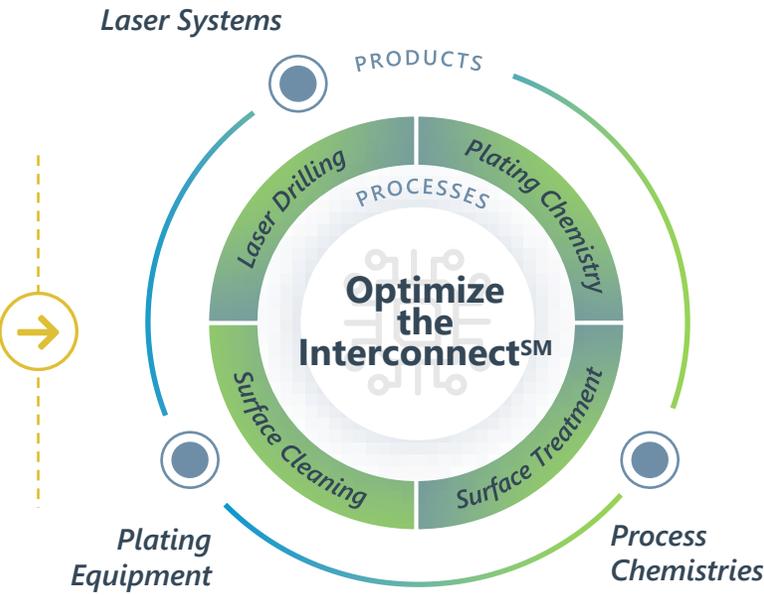
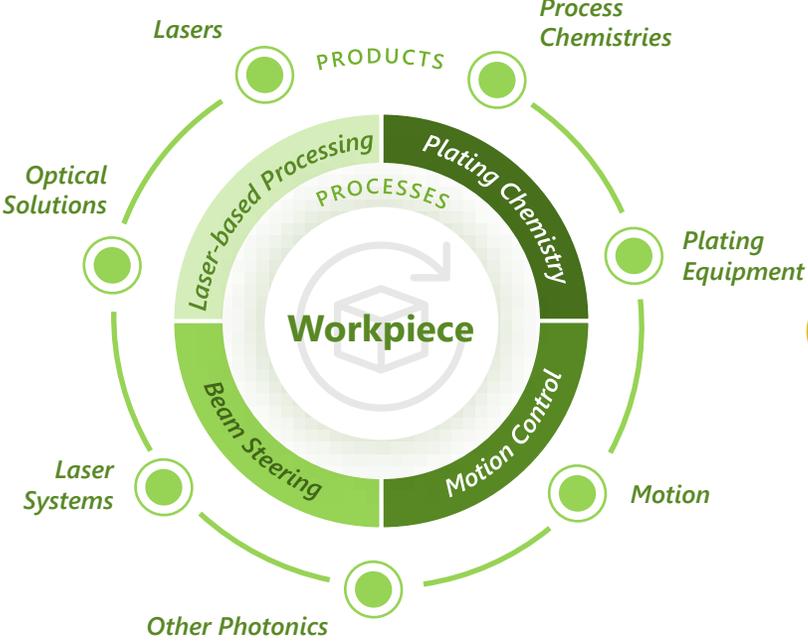
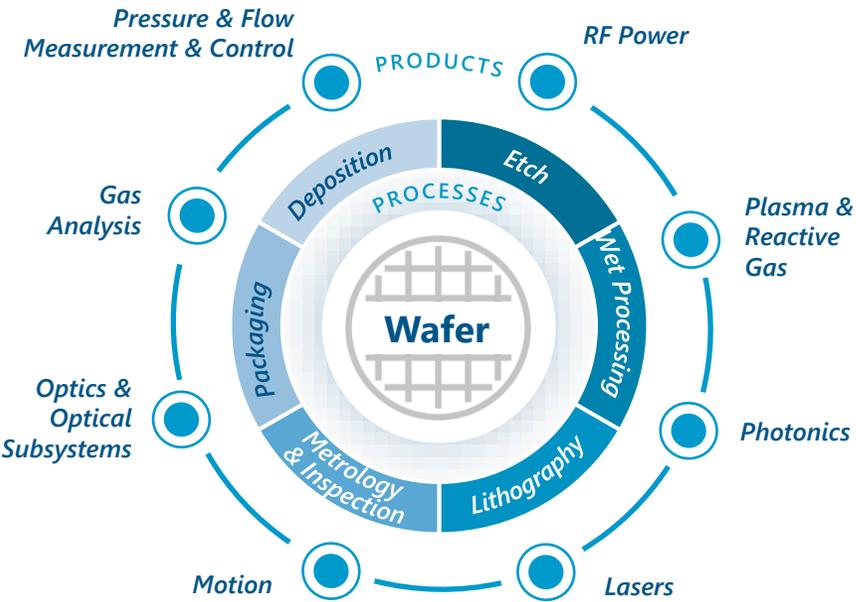
Strategy & Business Drivers



Our "Surround" Strategy is How We Execute

SEMICONDUCTOR
Surround the Wafer®

ELECTRONICS & PACKAGING
Surround the Workpiece®



MKS Today: Foundational Solutions for Advanced Electronics

Broad Portfolio of Market-Leading Solutions

Surround the Wafer®

Surround the Workpiece® + Optimize the InterconnectSM

VACUUM				PHOTONICS					MATERIALS			
#1 Pressure & Flow Measurement & Control	#1 Plasma & Reactive Gas	#2 FTIR Gas Analysis	#2 RF Power Supplies	#1 Optical Fiber Thermometry	#1 Flex PCB Via Drilling Systems	#1 UV Nanosecond Pulsed Lasers	#1 Laser Measurement Instruments	#1 High Performance Gratings	#1 Vibration Control	#1 Electronic Plating Chemistries	#2 Decorative Surface Finishing	
#2 Control & Iso Valves	#1 Tool, Safety Chamber, Network	#1 Microwave Power	#3 RGA	#2 Component Test	#2 Opto-Mechanics	#2 IR Optics	#3 Integrated Optical Solutions	#3 Precision Motion	#3 UV Ultrafast Lasers	#1 Horizontal PCB Plating Equipment	#2 Functional Coatings for Corrosion & Wear Resistance	
#3 Flow & Gas Delivery												

MKS CORE PRODUCT PORTFOLIO
—
1999 (IPO)

Market-Leading Technology

Expansion into High Growth Markets

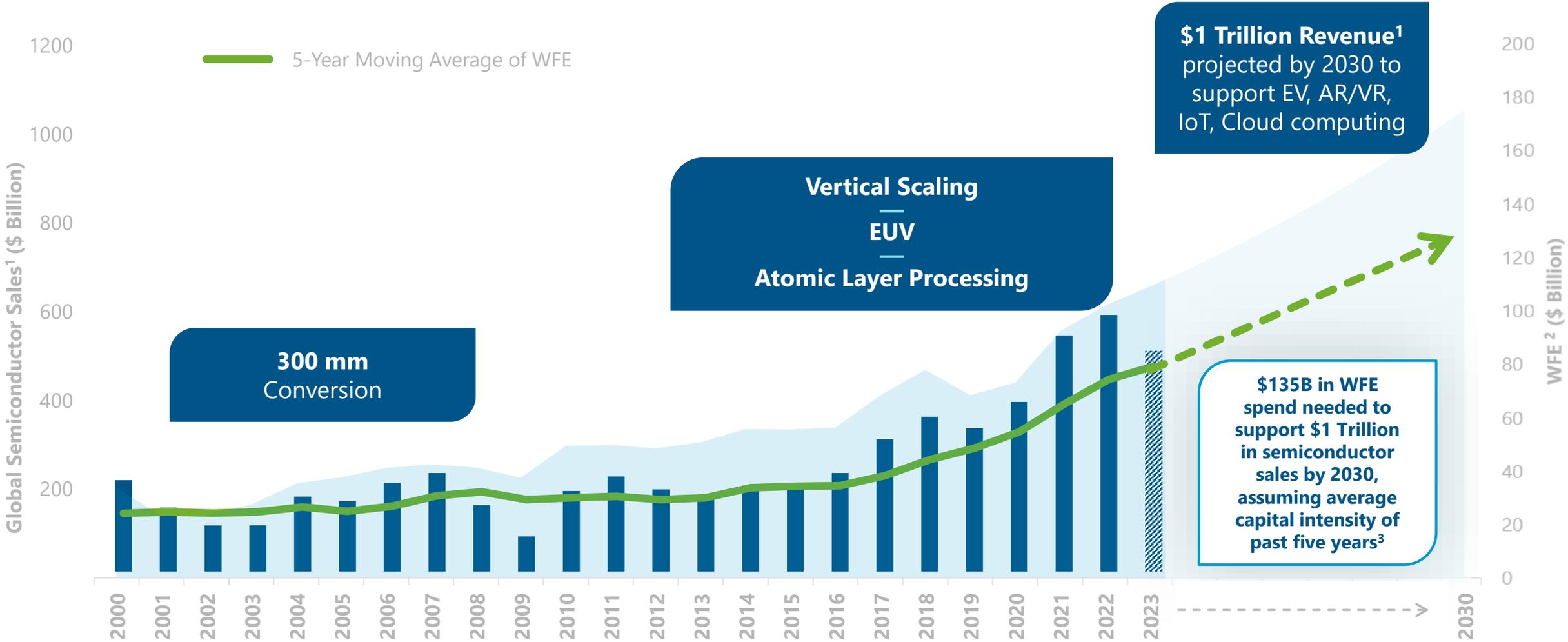
Innovative Customer Solutions

Shareholder Value Creation

24 Acquisitions since IPO | #1 or #2 Segment Share in Most Categories

Sources: TechInsights, Internal Company estimate

Secular Semi Demand Growth Drives WFE Investment

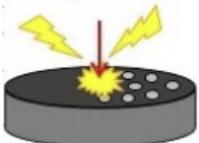


¹ Semi.org ² TechInsights ³ Internal Company Estimates

MKS Enables More Semiconductor Process Steps Than Anyone Else in the Industry¹

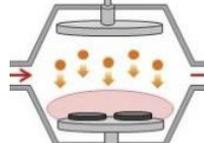
DEPOSITION

- Pressure & Vacuum Measurement
- Gas Delivery & Pressure Control
- Plasma & Reactive Gas
- RF Power
- Temperature Sensing



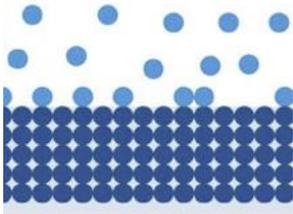
ETCH

- Pressure & Vacuum Measurement
- Gas Delivery & Pressure Control
- Plasma & Reactive Gas
- RF Power
- Temperature Sensing



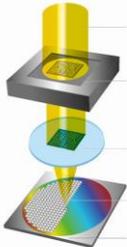
WET PROCESSING

- Reactive Gases



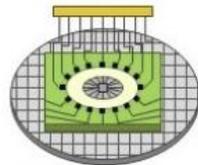
LITHOGRAPHY

- Optics & Optical Subsystems
- Precision Motion
- Vibration Control
- Light Source Assemblies



METROLOGY & INSPECTION

- Optics & Optical Subsystems
- Lasers
- Precision Motion
- High Performance DUV Thin Film Coating



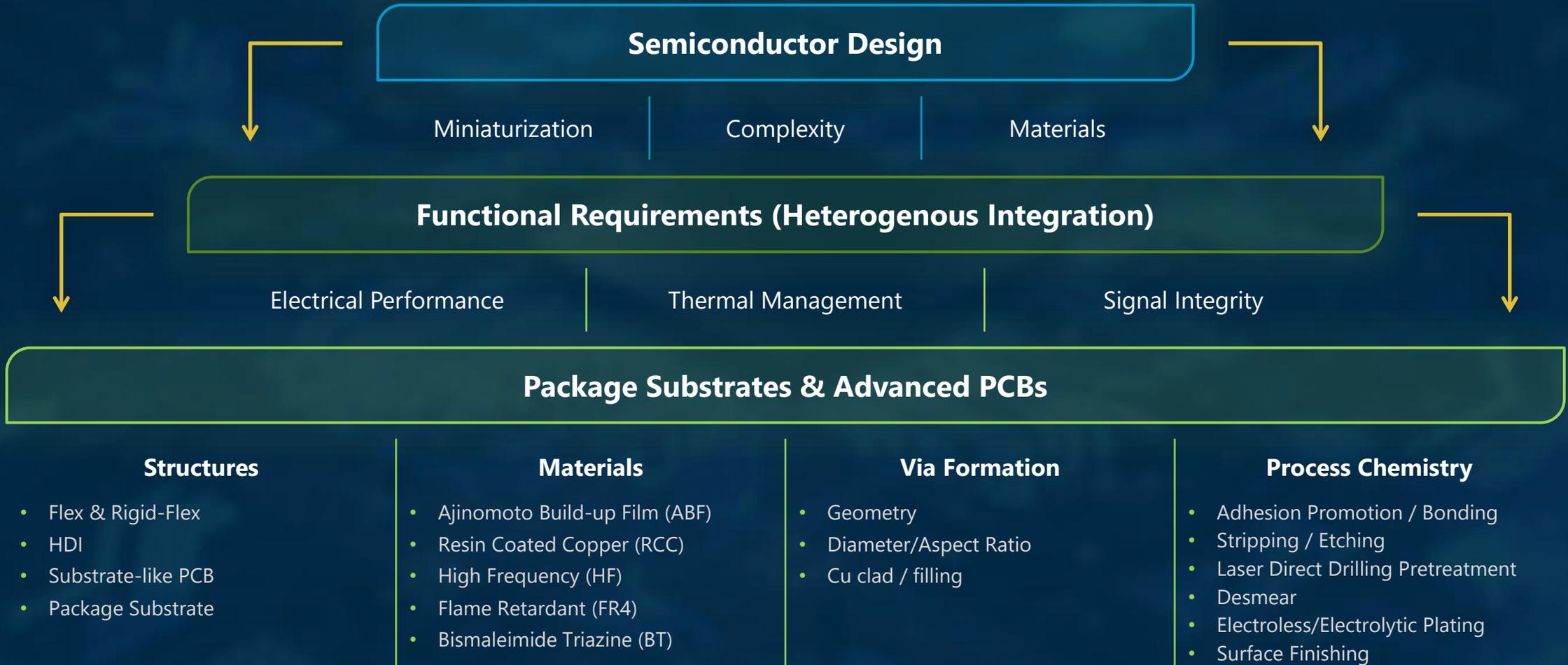
¹ Internal Company estimates

Lines Are Blurring as Complexity Increases ...



...Requiring Increasingly Integrated Semi, Substrate & PCB Design

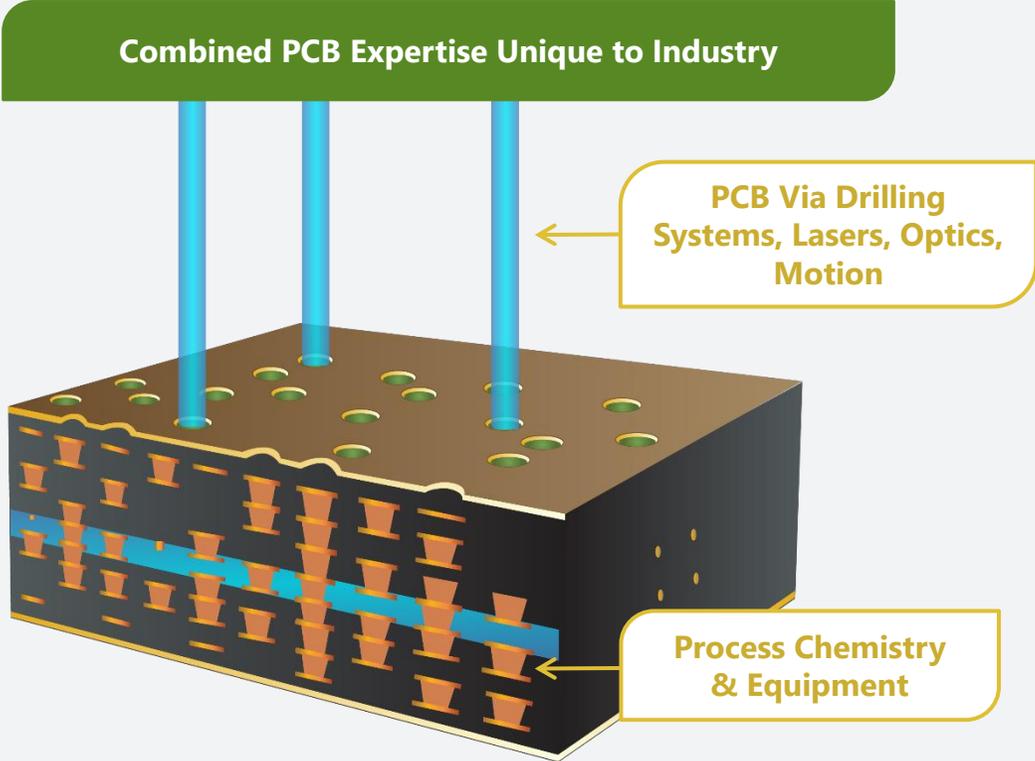
MKS creates processes and products that **optimize yields and enable faster time to market**



The Next Frontier: Optimize the InterconnectSM



The Interconnect Has Become the Focal Point for Integrating Semiconductor & PCB Design



Combination of Optimized Laser Drilling & Process Chemistries Expertise Positions MKS to Deliver Better Yields, Faster for Customers

Leveraging Domain Expertise: General Metal Finishing



REPLACEMENT OF HARMFUL SUBSTANCES

- Driven by strict environmental regulations
- Cr(VI)-free decorative and functional chrome plating



REDUCED RESOURCE CONSUMPTION

- Tighter global operating requirements
- Demand for reduced resource consumption (water, energy, chemistry)



RENEWABLE ENERGY

- Cost-efficient solutions for solar cell production
- Demand for highest corrosion protection for offshore and onshore wind turbines



ELECTRIFICATION, BATTERIES & LIGHTWEIGHTING

- Enhanced plating of new plastics and lightweight metals
- New material combinations requiring advanced corrosion protection
- Electric vehicle (EV) battery applications



PREMIUMIZATION

- Increasing quality and durability requirements
- Demand for new chrome colors



MOBILITY

- Plating of new plastics for 5G antennas
- Non-magnetic coatings for camera housings

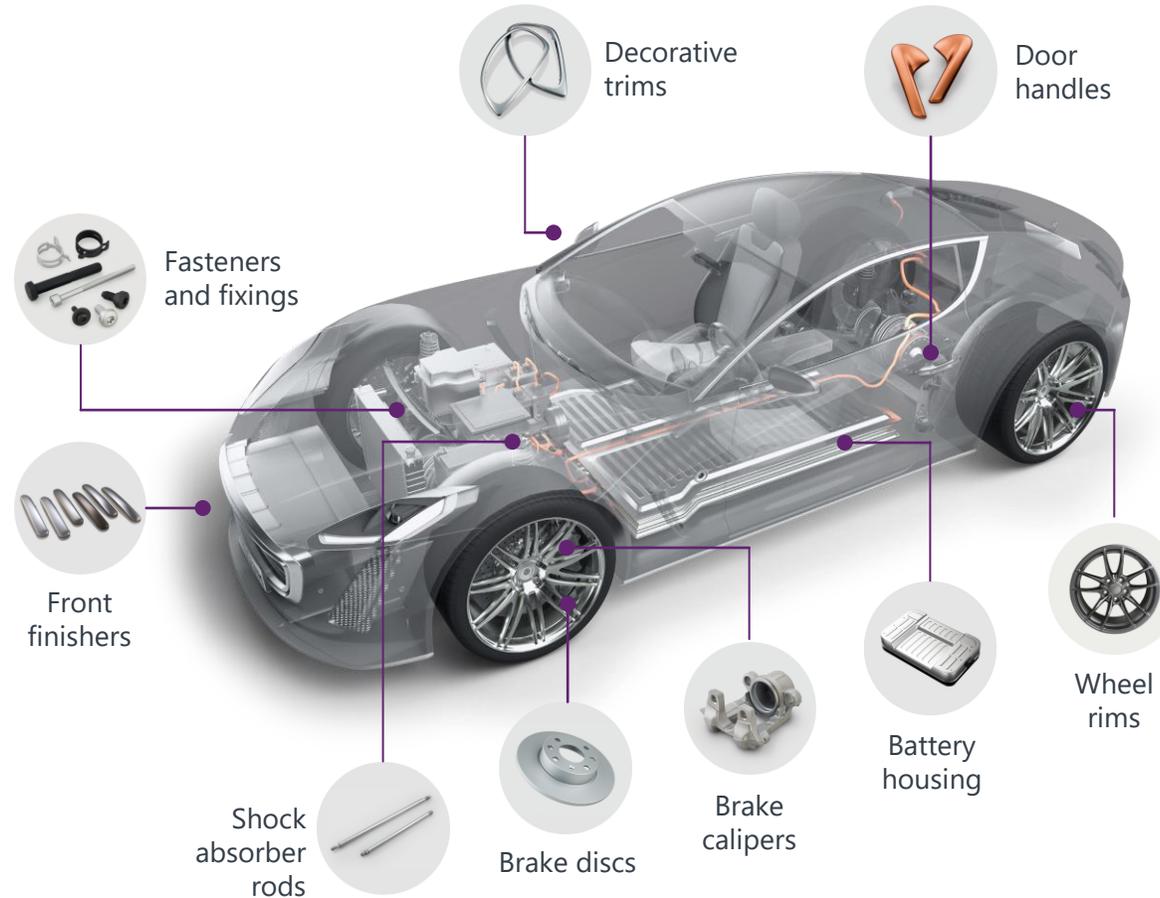
Auto Market Comprises >50% of our GMF business

EV Growth Creates Value-Add Opportunities for GMF

TRANSITIONING PARTS

⊗ Internal Combustion Engine (ICE) Powertrain Related Components

- Engine valves
- Fuel injector lines
- Fuel injection pump
- Turbo wheels
- Front grills



EMERGING PARTS

✓ Electric Drivetrain Components

- Battery housings
- Lead tabs
- Bus bars
- Battery terminals
- Fasteners — electrical conductivity
- IGBT heat sinks
- Chargers

✓ More and Higher Value Surface Finishing

- More surface area (thicker shock rods, more scrolls)
- Eco-friendly surface finishing solutions
- New materials requirements

> 1.5x GMF Chemistry Content¹ in EV than ICE

¹ Internal Company estimate; does not include incremental Electronics and Semiconductor content

MKS Portfolio Positioned Well for Global Sustainability Needs



END MARKET SUSTAINABILITY



Gas analyzers for **air monitoring and automotive emissions**



Vacuum solutions for **synthetic diamond manufacturing**
(CarbonNeutral® product certified)



Pulsed lasers and gas controllers used in **solar cell fabrication**



Chemistries for **metallization of solar modules**



PRODUCT SUSTAINABILITY



Dissolved ozone delivery system, with **water recycling solution**



Chemistries to **enhance corrosion protection for wind turbines**



Environmentally sustainable chemistry alternatives (**Cr VI-free, Pb-free, Ni-free, CN-free**)



Auxiliary equipment for the **reduction and treatment of wastewater**



Financial Profile

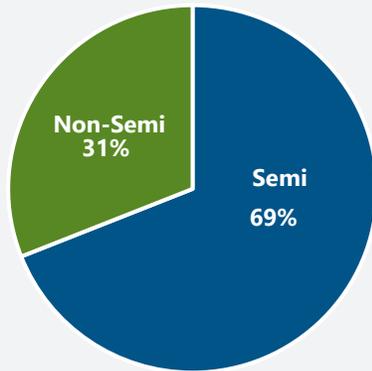


Evolution into Broad Foundational Technology Provider

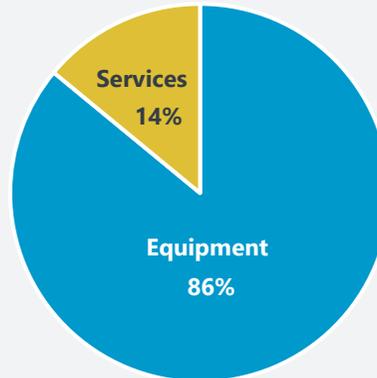
Significantly expanded financial and operational scale to **drive growth across a broader array of end markets**

2015

REVENUE MIX



REVENUE STREAM



\$0.2B

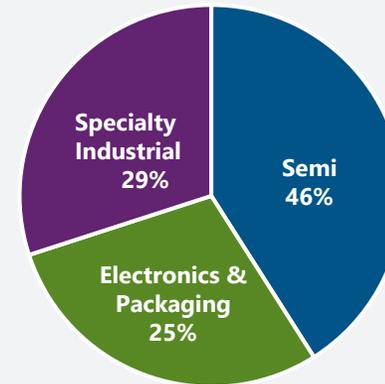
ADJUSTED EBITDA

42%

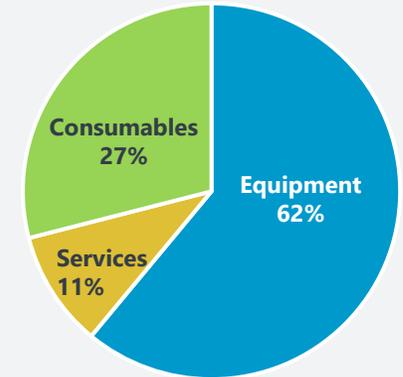
TOP 5 CUSTOMER
CONCENTRATION

2022 COMBINED COMPANY¹

REVENUE MIX



REVENUE STREAM



\$1.3B

ADJUSTED EBITDA

28%

TOP 5 CUSTOMER
CONCENTRATION

¹ See Slide 3 for additional information regarding the calculation of combined company results

Financial Discipline is Core to MKS' DNA

Experienced leadership with **proven execution track record**

Profitability Management

- Monthly profit and cash optimization program
- Centers of excellence
- Targeted R&D investment approach

Operating Flexibility

- Highly variable cost structure
- Asset-light capacity model
- Leverage multiple low-cost regions

M&A Execution

- Track record of delivering on synergies and deleveraging
- Comprehensive approach to technology and market synergies
- Expansion into 20 segment-leading categories

28%

2022 Combined Company Adjusted EBITDA Margin¹

> 80%

of 2022 Combined Company COGS was variable¹

> 2x

increase in Non-GAAP OM% of Newport business²

> 1.3x

increase in Non-GAAP OM% of Photon Control business³

¹ See Slide 3 for additional information regarding the calculation of combined company results. ² Compares Non-GAAP operating margin of the Newport business for the twelve-months ended December 31, 2022 with the twelve-months ended December 31, 2016. ³ Compares Non-GAAP operating margin of the Photon Control business for the twelve-months ended December 31, 2022 with the twelve-months ended December 31, 2021.

Capital Deployment Focused on Long-Term Value Creation

1

ORGANIC GROWTH & DIVIDENDS

Strong organic investments

Grow dividend over time

Capex 3% - 5% of revenue

2

DEBT MANAGEMENT

Accelerated debt paydown

Opportunistic re-pricings

Maintain strong liquidity

3

M&A / BUYBACK

Disciplined M&A is a component
of our growth strategy

Opportunistic share buybacks

Maximize long-term
shareholder value

MKS: Technology-Driven Secular Growth Company

Foundational technology leader

Specializing in **precision solutions** for diverse end markets

Leveraging powerful secular trends

Miniaturization, complexity and chemistry drive the innovations that power our world

Attractive **growth** profile

Positioned for strong **EPS growth** and cash generation, with track record of execution

Appendix

Reconciliations

2015 Revenue by End Market and Market Stream

	MKS
Semiconductor	\$ 562
Non-Semiconductor	<u>252</u>
	\$ 814
Semiconductor	69%
Non-Semiconductor	31%
Equipment	\$ 697
Services	<u>116</u>
	\$ 814
Equipment	86%
Services	14%

2022 Revenue by End Market and Market Stream

	MKS	ATOTECH	COMBINED COMPANY
Semiconductor	\$ 2,041	\$ -	\$ 2,041
Electronics & Packaging	541	590	1,131
Specialty Industrial	<u>964</u>	<u>313</u>	<u>1,277</u>
	\$ 3,547	\$ 903	\$ 4,450
Semiconductor	58%	0%	46%
Electronics & Packaging	15%	65%	25%
Specialty Industrial	27%	35%	29%
Equipment	\$ 2,683	\$ 91	\$ 2,774
Services	428	37	465
Consumables	<u>436</u>	<u>775</u>	<u>1,211</u>
	\$ 3,547	\$ 903	\$ 4,450
Equipment	76%	10%	62%
Services	12%	4%	11%
Consumables	12%	86%	27%

See Slide 3 for additional information regarding the calculation of combined company results of MKS and Atotech
In millions

Reconciliations

2015 Non-GAAP Gross Margin, Adjusted EBITDA and Adjusted EBITDA Margin

Revenue	\$ 814
Gross profit	363
Sale of previously written down inventory	<u>(2)</u>
Non-GAAP gross profit	<u>\$ 361</u>
Non-GAAP gross margin	44%
Net income	\$ 122
Interest expense, net	(3)
Provision for income taxes	37
Depreciation	15
Amortization of intangible assets	7
Stock-based compensation	13
Sale of previously written down inventory	(2)
Restructuring and other	<u>2</u>
Adjusted EBITDA	<u>\$ 192</u>
Adjusted EBITDA margin	24%

In millions

Reconciliations

2022 Adjusted EBITDA and Adjusted EBITDA Margin

Combined Company	Q4'22	Q3'22	Q2'22	Q1'22	Total	MKS	Q3'22	Q2'22	Q1'22
Net income	\$ 54	\$ (12)	\$ 150	\$ 187	\$ 379	Net income	\$ 54	\$ 130	\$ 143
Interest expense, net	83	105	21	20	229	Interest expense, net	79	6	6
Provision for income taxes	11	33	51	46	141	Provision for income taxes	44	26	28
Depreciation and amortization	96	73	65	67	301	Depreciation and amortization	28	28	28
Stock-based compensation	13	13	17	11	54	Stock-based compensation	10	13	8
Acquisition and integration costs	11	71	2	9	93	Acquisition and integration costs	30	2	8
Acquisition inventory step-up	13	39	—	—	52	Restructuring and other	—	3	2
Restructuring and other	1	5	3	3	12	Gain on sale of long-lived assets	—	—	(7)
Gain on sale of long-lived assets	—	—	—	(7)	(7)	Currency hedge gain	—	—	(5)
Currency hedge gain	—	—	—	(5)	(5)	Adjusted EBITDA	<u>\$ 245</u>	<u>\$ 208</u>	<u>\$ 211</u>
Management fee	—	—	1	1	2				
Adjusted EBITDA	<u>\$ 282</u>	<u>\$ 327</u>	<u>\$ 310</u>	<u>\$ 332</u>	<u>\$ 1,251</u>	Atotech			
						Net income	\$ (66)	\$ 20	\$ 44
Revenue					\$ 4,450	Interest expense, net	26	15	14
Adjusted EBITDA					<u>\$ 1,251</u>	Provision for income taxes	(11)	25	18
Adjusted EBITDA margin					<u>28%</u>	Depreciation and amortization	45	37	39
						Stock-based compensation	3	4	3
						Acquisition and integration costs	41	—	1
						Acquisition inventory step-up	39	—	—
						Restructuring and other	5	—	1
						Management fee	—	1	1
						Adjusted EBITDA	<u>\$ 82</u>	<u>\$ 102</u>	<u>\$ 121</u>

Combined Company combines the results of MKS (excluding Atotech/MSD for Q3'22) and the results of Atotech/MSD (including full quarter results for Q3'22) in millions

Reconciliations

Non-GAAP Operating Margin Newport Business¹

	2016	2022
Revenue	\$602	\$862
Income (loss) from operations	(1)	196
Acquisition and integration costs	27	–
Restructuring and other	–	1
Acquisition inventory step-up	15	–
Amortization of intangible assets	32	15
Non-GAAP income from operations	<u>\$73</u>	<u>\$212</u>
Non-GAAP operating margin	12.1%	24.6%

Non-GAAP Operating Margin Photon Control Business²

	2021	2022
Revenue	\$64	\$71
Income from operations	7	16
Acquisition and integration costs	7	–
Restructuring and other	–	–
Amortization of intangible assets	8	14
Non-GAAP income from operations	<u>\$21</u>	<u>\$31</u>
Non-GAAP operating margin	32.8%	43.9%

¹ Reconciliation of Non-GAAP operating margin of the Newport business for the year ended December 31, 2022 and the year ended December 31, 2016

² Reconciliation of Non-GAAP operating margin of the Photon Control business for the year ended December 31, 2022 and the year ended December 31, 2021

In millions