



# Investor Presentation

September 2, 2020



# 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 and 21E of the Securities Exchange Act of 1934 regarding the future financial performance, business prospects and growth of MKS Instruments, Inc. ("MKS" or the "Company"). 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 are the conditions affecting the markets in which MKS operates, including the fluctuations in capital spending in the semiconductor industry and other advanced manufacturing markets, fluctuations in sales to our major customers, the impact of the COVID-19 pandemic on the global economy and financial markets, including any restrictions on MKS' operations and the operations of MKS' customers and suppliers resulting from public health requirements and government mandates, the terms of our term loan, competition from larger or more established companies in MKS' markets, MKS' ability to successfully grow our business and particularly that of Electro Scientific Industries, Inc.'s business, the challenges, risks and costs involved with integrating the operations of the companies we have acquired, potential fluctuations in quarterly results, dependence on new product development, rapid technological and market change, acquisition strategy, manufacturing and sourcing risks, volatility of stock price, international operations, financial risk management, and the other factors described in MKS' most recent Annual Report on Form 10-K for the year ended December 31, 2019 and any subsequent Quarterly Reports on Form 10-Q, as filed with the SEC. 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.

# Non-GAAP Measures

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

# MKS At A Glance



2019  
REVENUE

**\$1.9B**



2013-19  
REVENUE CAGR

**19%**



2013-19  
NON-GAAP EPS CAGR

**31%**



COUNTRIES WHERE  
WE SELL

**~100**



2019 FORTUNE 100  
FASTEST GROWING

**#21**



PATENTS  
WORLDWIDE

**~2,200**



EMPLOYEES  
WORLDWIDE

**5,400+**

# Driving Technology Enablement Across Markets



## SEMICONDUCTOR

### SEMICONDUCTOR

- Deposition Equipment
- Etch Equipment
- Lithography
- Inspection
- Packaging



## ADVANCED MARKETS

### INDUSTRIAL TECHNOLOGIES

#### Advanced Electronics Manufacturing

- Electronic Thin Film
- Electronic Component Manufacturing

#### Industrial

- Industrial Manufacturing
- Process Industries
- Telecom/Datacom

### LIFE & HEALTH SCIENCES

- Analytical & Medical Instrumentation
- Bio-Pharmaceutical
- Medical & Bioimaging
- Medical Devices
- Ophthalmic Surgery



### RESEARCH & DEFENSE

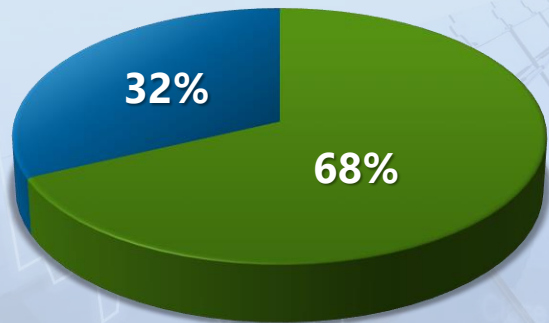
- Atomic & Molecular Physics
- Spectroscopy
- High Energy Physics
- Ultrafast Laser Studies
- Infrared Technology
- Surveillance

MKS is committed to product development and innovation, with \$164M invested in Research & Development in 2019.

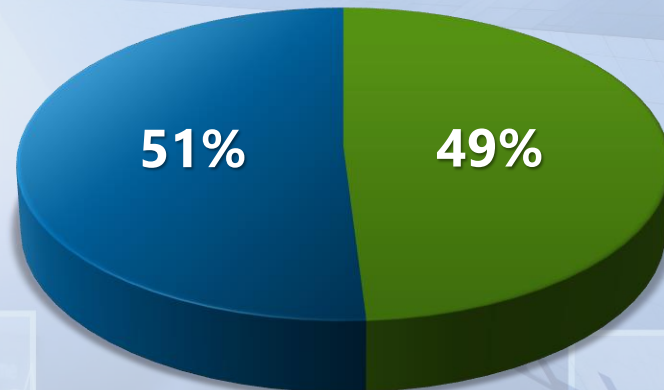


# Achieving High Growth and Transformation

2013 REVENUE  
**\$669M**



2019 REVENUE  
**\$1.9B**



6 YEAR CAGR

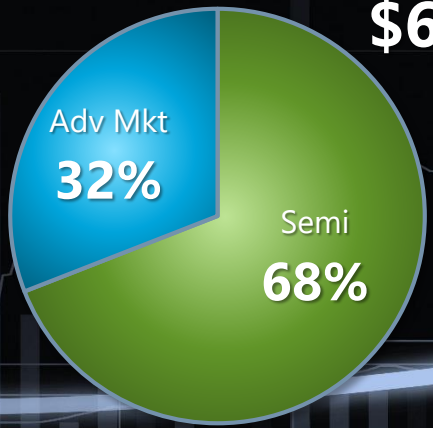
Advanced Markets **29%**

Semiconductor **13%**

TOTAL **19%**

# MKS Transformation: Technology and Market Expansion

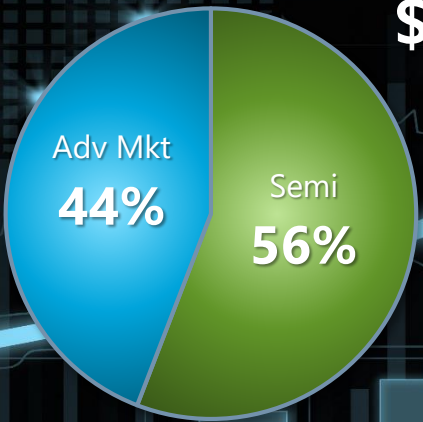
**MKS 2013**  
**\$669M**



## SINGLE MARKET FOCUS

- Technology leader: **Vacuum Measurement & Control and Plasma**
- Focused selling channel to support Semi OEMs

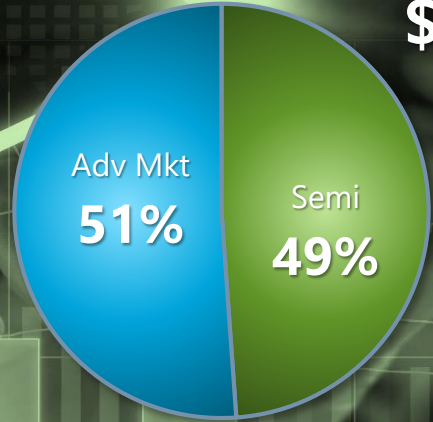
**PLUS NEWPORT 2016**  
**\$1.3B**



## TECHNOLOGY & MARKET EXPANSION

- Technology leader: Vacuum Measurement & Control, Plasma, **RF Power, Lasers & Motion**
- Hybrid sales model to support expanded offering across **multiple markets and customer types**

**PLUS ESI 2019**  
**\$1.9B**



## INTEGRATED SOLUTIONS

- Technology leader: Vacuum Measurement & Control, Plasma, RF Power, Lasers, Motion & **System Integration**
- Sales & **Service** model to support expanded offering across multiple markets and customer types

Broad Portfolio is a Key Differentiator that provides us with . . .

## INSIGHTS

into key  
technology  
inflections



Connecting discrete customer input to gain insights into emerging technology trends

## EXPERTISE

across  
products &  
applications



Collaborating across teams to solve complex challenges for our customers

## ABILITY

to address  
shifting market  
demands



Investing and operational efficiencies to respond swiftly to market and macro changes



# Achieved Significant Market Expansion With Winning Solutions

		VACUUM & ANALYSIS						LIGHT & MOTION										EQUIPMENT & SOLUTIONS		
		Pressure Measurement	Control & Iso Valves	Flow & Gas Delivery	RGA	FTIR	Plasma & Reactive Gas	RF Power	Instruments	Vibration Control	Motion	Opto-Mechanics	Laser Measurement	Lasers	Laser Optics	Gratings & Filters	IR Optics	Integrated Solutions	Flex PCB	Component Test
<b>mks SHARE *</b>		1	2	3	3	2	1	2	1-2	1-3	3	1	2	1-3	1-2	1-2	2-3	2-3	1	1-2
Semiconductor																				
INDUSTRIAL TECHNOLOGIES	Advanced Electronics Mfg																			
	Industrial																			
Life & Health Sciences																				
Research & Defense																				

SAM EXPANSION BY >12X IN THE PAST TWO DECADES

\*Reflects MKS' internal estimates of the Company's market leadership in the product categories listed above.

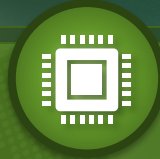
# Technology Enablement For Semiconductor Scaling

## DEPOSITION

- Power
- Plasma & Reactive Gas
- Vacuum Measurement & Control

## ETCH

- Power
- Plasma & Reactive Gas
- Vacuum Measurement & Control



EXPOSURE TO  
**>85%**  
OF WFE

## CRITICAL WET PROCESSING

- Dissolved Reactive Gas

## METROLOGY & INSPECTION

- Optics & Optical Subsystems
- Lasers
- Precision Motion

## LITHOGRAPHY

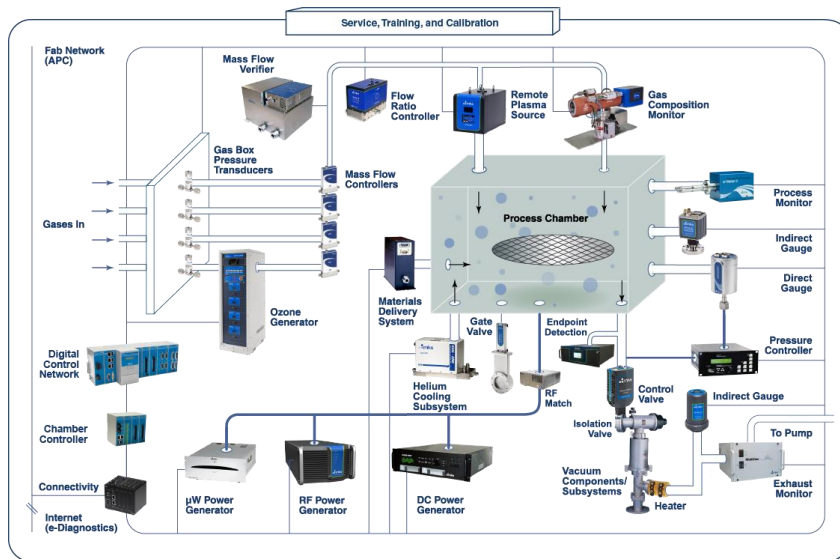
- Optics & Optical Subsystems
- Precision Motion
- Vibration Control

Source: Internal Company estimate

# Critical Solutions Spanning Semiconductor Applications

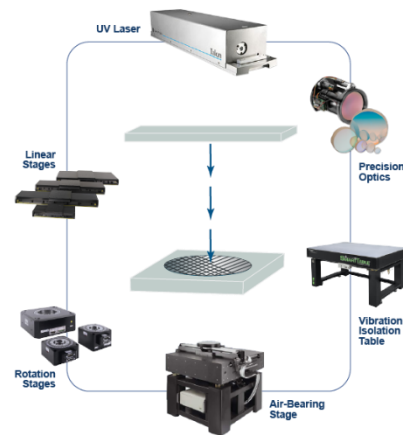
~100% of chips made with MKS products\*

## FRONT END



DEPOSITION,  
ETCH & CLEAN

## BACK END



PACKAGING &  
INSPECTION



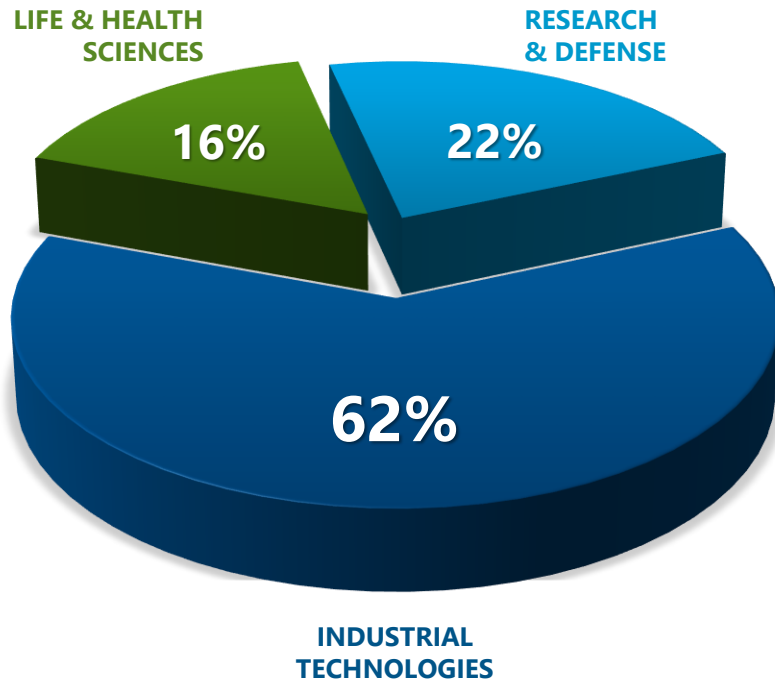
LITHOGRAPHY  
& INSPECTION

\*Internal Company estimate

# Broad Advanced Markets Exposure...With Focus on Industrial

Strategic Focus on  
Next Generation  
Electronics Manufacturing  
within Industrial  
Technologies

2019 Advanced Markets Revenue Mix





# Enabling Advanced Electronics Manufacturing with Lasers

## Electronic Thin Film

SOLAR



DISPLAY

## Electronic Component Manufacturing

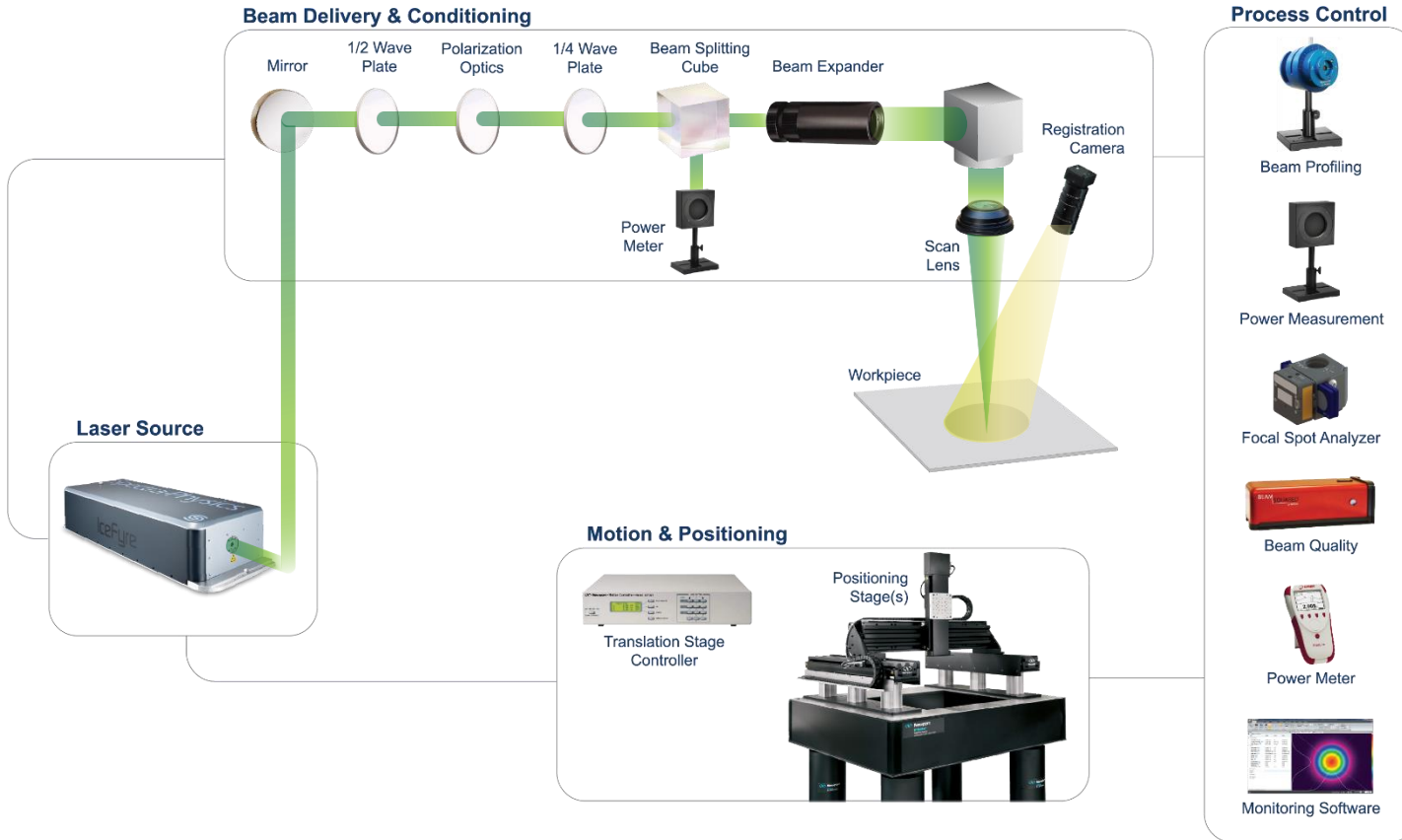
PC BOARDS



ADV PACKAGING

# Critical Solutions Spanning Microprocessing Applications

Surround the Workpiece®



# Differentiated Lasers Are Key To MKS Microprocessing Strategy

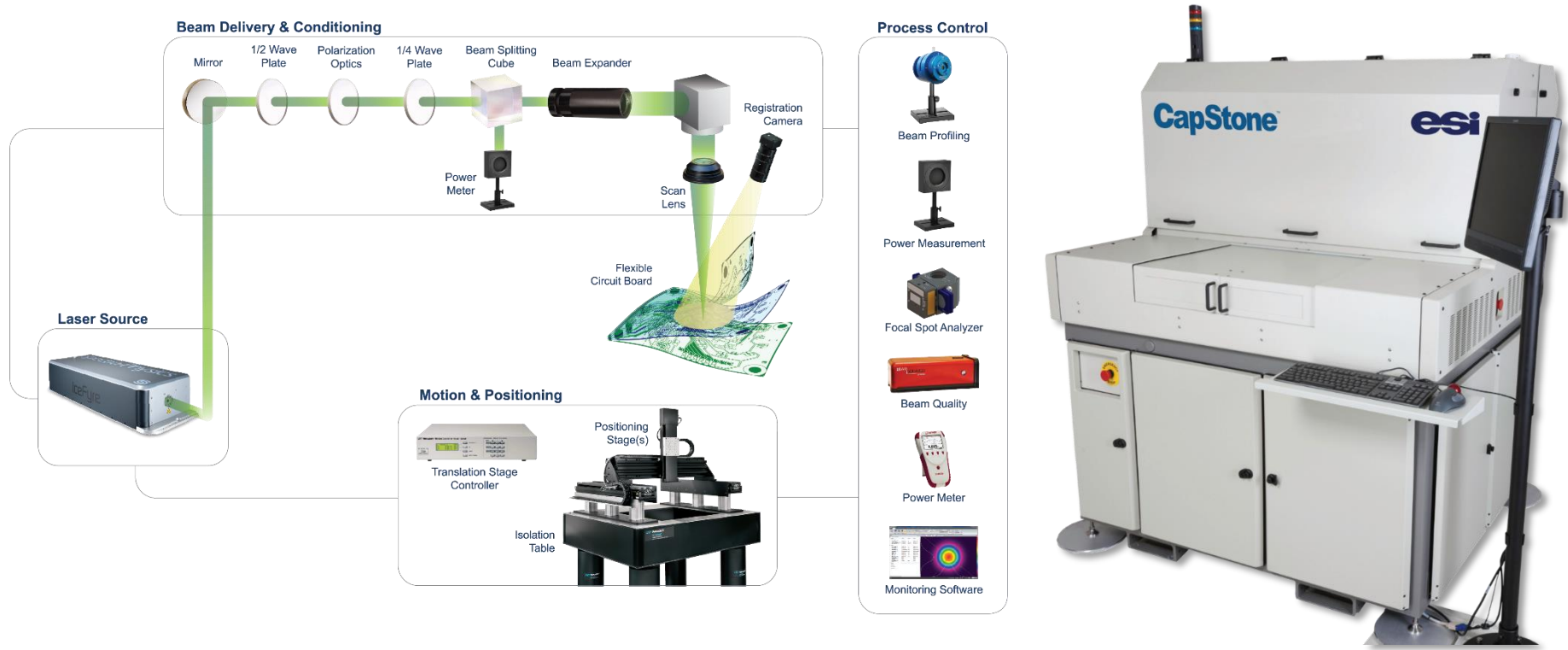
- **Microprocessing Applications**
  - Flex PCB, OLED Displays, Clean Energy, Advanced Electronics Packaging
- **Lasers**
  - Diode-pumped Solid State, Hybrid Fiber, Fiber
- **Pulse Duration / Peak Power**
  - Nanosecond / 10 Kilowatts+
  - Picosecond / 6 Megawatts+
  - Femtosecond / 1 Gigawatt+
- **Capability**
  - Machining of features as small as 1 micron at high quality

## MKS Differentiation

**Extensive Optical Coating IP**  
Enables power scaling & reliability

**Unique Wavelength Conversion IP**  
Enables efficient and reliable UV generation for industry leading cost of ownership

# Extending Microprocessing Strategy Into Systems





# PCB Laser Systems: A Key Market Expansion Opportunity

## FLEX PCB SYSTEMS

- Market size<sup>1</sup>: ~\$150M-\$200M
- #1 Market Share
- Differentiation: throughput, yield, cost of ownership



<sup>1</sup> Internal Company estimate

## HDI PCB SYSTEMS

- Market size<sup>1</sup>: ~\$500M
- New Market entrant
- Differentiation: throughput, space/weight, serviceability, cost of ownership



<sup>1</sup> Internal Company estimate

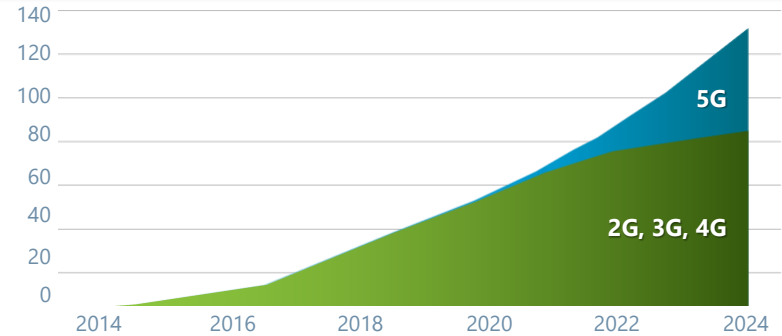
# 5G: A Key Catalyst Within Advanced Markets

- **Increased Adoption of Flex PCB in 5G Smartphones**
  - Flex PCB Systems
  - Lasers, Optics and Motion Components
- **Proliferation of Flex and HDI in 5G Base Stations**
  - Flex PCB Systems
  - Lasers, Optics and Motion Components
- **Acceleration In Connected Devices (Auto, IoT)**
  - Flex PCB & HDI Systems
  - MLCC Test Systems
  - Lasers, Optics and Motion Components

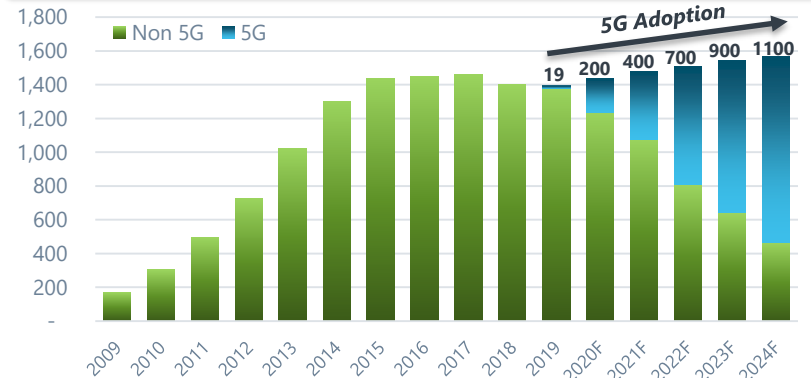
*Note: Semiconductor Market is a key beneficiary of greater chip demand and technology complexity*

Sources: IDC and internal Company estimates

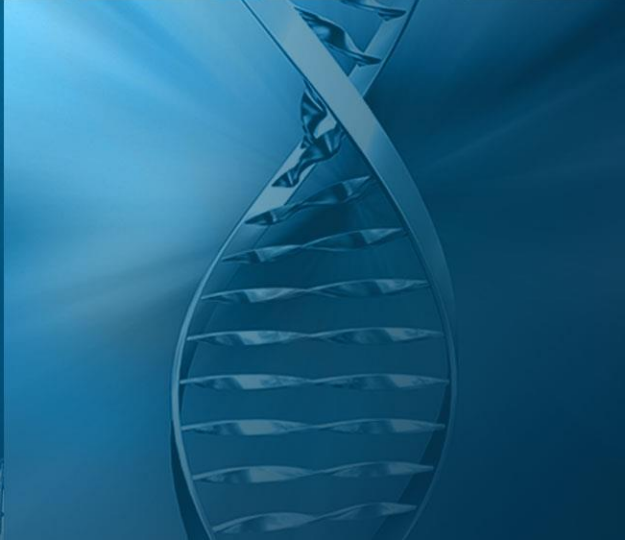
## INCREASING MOBILE DATA TRAFFIC



## ACCELERATING 5G SHIPMENTS



# Strong Financial Execution & Performance



# Focused Financial Management



## Track Record of Strong Financial Performance

- Multiyear record of strong financial performance
- Delivering on gross margin expansion and operating leverage



## Capital Deployment Focused on Value Creation

- Disciplined acquisition strategy and track record of delivering on acquisition synergies
- Steady dividend strategy, increasing 33% since inception

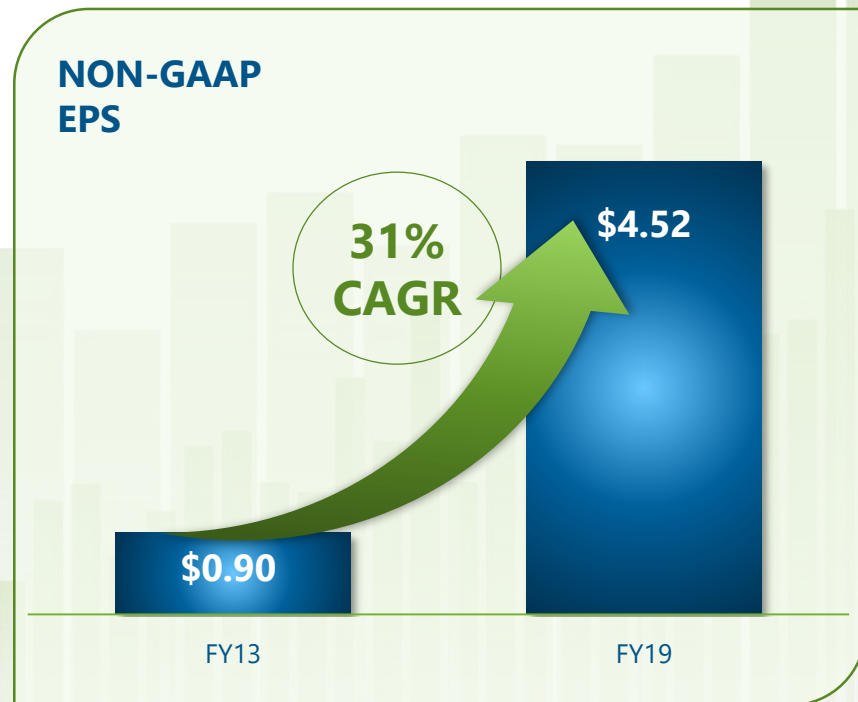
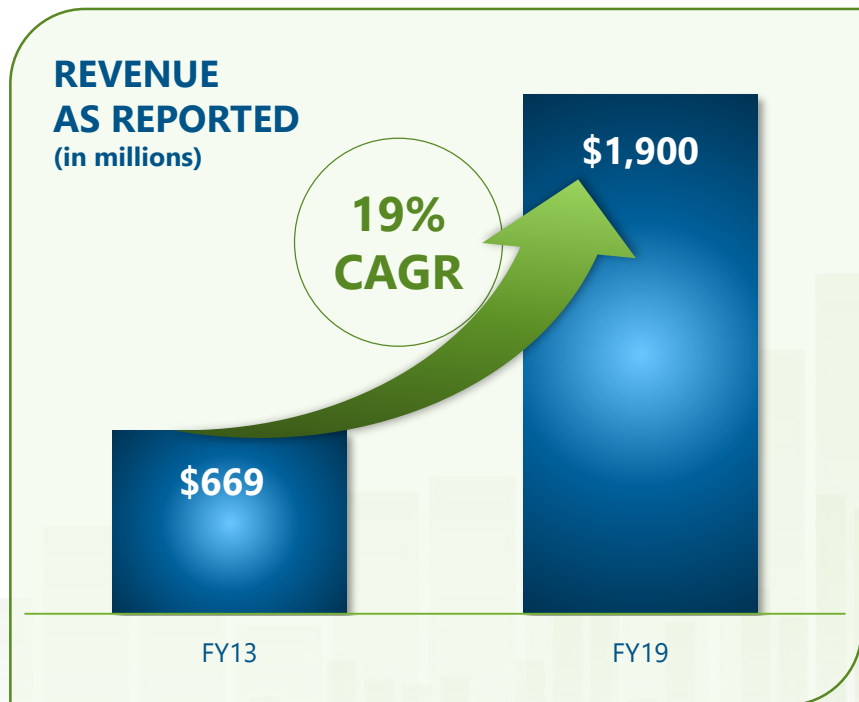


## Culture of Continuous Improvement

- Profit and cash recovery efforts engrained in MKS business process.
- Over 400% increase in Non-GAAP EPS from 2013 to 2019



# Multiyear Record of Strong Financial Performance



# Gross Margin Expansion & Operating Leverage

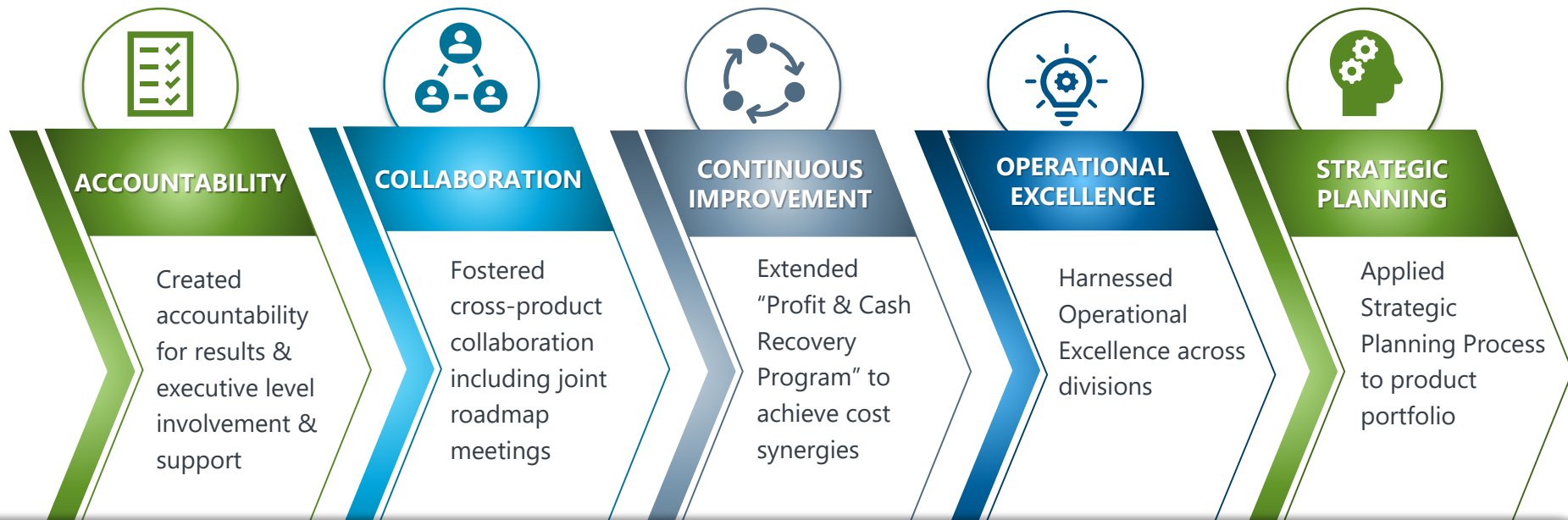
## NON-GAAP GROSS MARGIN %



## NON-GAAP OPERATING MARGIN %



# Proven Acquisition Integration Approach



## Applied to NEWPORT & ESI acquisitions

- Significant expansion of Light and Motion operating margins since Newport acquisition
- Delivered Newport synergies of \$38M within 17 months post close, ahead of the initial \$35M target within 18-36 months
  - Delivered ESI synergies of \$15M within 14 months post close, ahead of the 18-36 month target

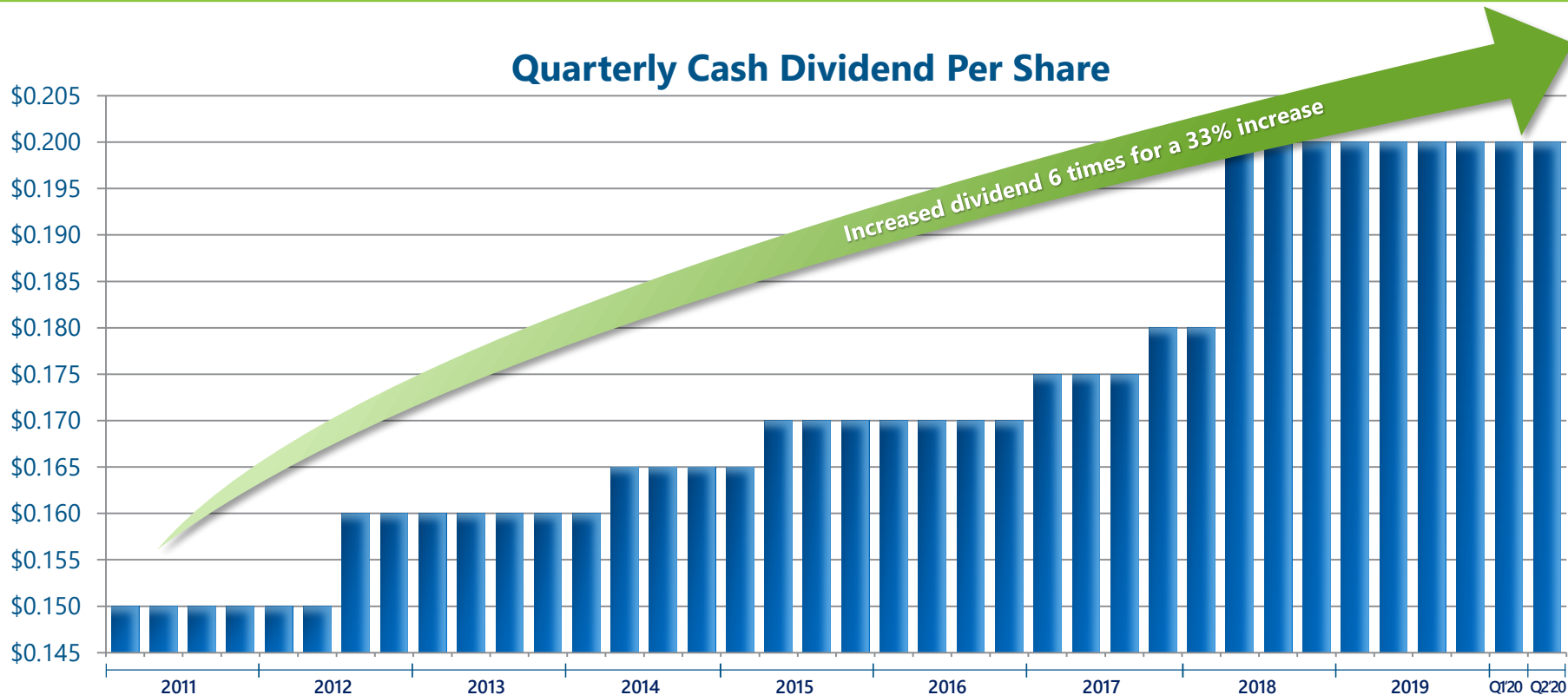
# Successful Execution of Disciplined Acquisition Strategy



**Completed Over 15 Acquisitions Since 2000**

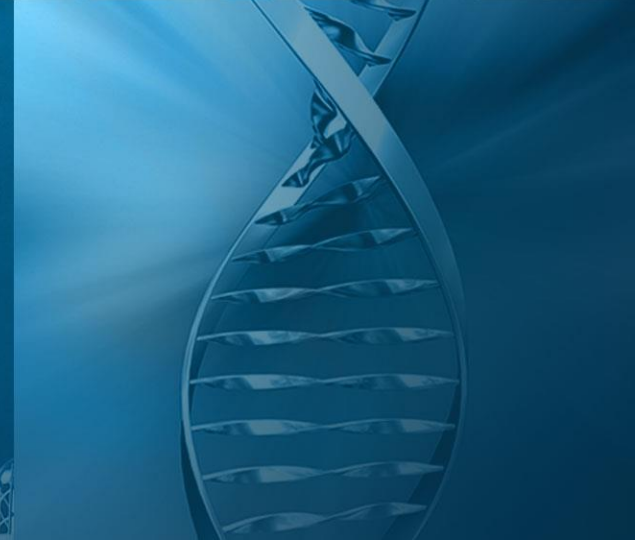


# Track Record of Increasing Dividends



**Dividend growth is a reflection of confidence in Free Cash Flow generation**

Appendix –  
GAAP to  
Non-GAAP  
Reconciliations



# Appendix – GAAP to Non-GAAP Reconciliations

	<b>2013</b>	<b>2019</b>		<b>2013</b>	<b>2019</b>
Gross profit	\$ 266.6	\$ 830.4	Net income	\$ 35.8	\$ 140.4
Acquisition inventory step-up (Note 1)	-	7.6	Acquisition inventory step-up (Note 1)	-	7.6
Excess and obsolete charge (Note 2)	6.4	-	Excess and obsolete charge (Note 2)	6.4	-
Non-GAAP gross profit	<u>\$ 273.0</u>	<u>\$ 838.0</u>	Acquisition and integration costs (Note 3)	0.2	37.3
Non-GAAP gross margin	<u>40.8%</u>	<u>44.1%</u>	Fees and expenses related to term loan (Note 4)	-	6.6
			Amortization of debt issuance costs (Note 5)	-	5.1
Income from operations	\$ 58.4	\$ 219.8	Restructuring and other (Note 6)	2.9	7.0
Acquisition inventory step-up (Note 1)	-	7.6	Amortization of intangible assets	2.1	67.4
Excess and obsolete charge (Note 2)	6.4	-	Gain on sale of long-lived assets (Note 7)	-	(6.8)
Acquisition and integration costs (Note 3)	0.2	37.3	Asset impairment (Note 8)	-	4.7
			Windfall tax expense (benefit) on stock-based compensation (Note 9)	-	(2.2)
Fees and expenses related to term loan (Note 4)	-	6.6	Tax reform adjustments (Note 10)	2.9	(0.1)
Restructuring and other (Note 6)	2.9	7.0	Tax-cost on the inter-company sale of an asset (Note 11)	-	5.4
Amortization of intangible assets	2.1	67.4	Tax effect of pro-forma adjustments (Note 12)	(1.9)	(23.4)
Gain on sale of long-lived assets (Note 7)	-	(6.8)	Non-GAAP net earnings	<u>\$ 48.4</u>	<u>\$ 249.0</u>
Asset impairment (Note 8)	-	4.7	Non-GAAP net earnings per diluted share	<u>\$ 0.90</u>	<u>\$ 4.52</u>
Non-GAAP income from operations	<u>\$ 70.0</u>	<u>\$ 343.6</u>	Weighted average shares outstanding	53.5	55.1
Non-GAAP operating margin	10.5%	18.1%			

# Appendix – GAAP to Non-GAAP Reconciliations

Non-GAAP financial measures adjust GAAP financial measures for the items listed below. These Non-GAAP measures should be viewed in addition to, and not as a substitute for, MKS' reported GAAP results, and may be different from Non-GAAP measures used by other companies. In addition, these Non-GAAP measures are not based on any comprehensive set of accounting rules or principles. MKS management believes the presentation of these Non-GAAP measures is useful to investors for comparing prior periods and analyzing ongoing business trends and operating results.

Note 1: Cost of revenues during the twelve months ended December 31, 2019 includes the amortization of the step-up of inventory to fair value as a result of the ESI acquisition.

Note 2: Cost of revenues for the twelve months ended December 31, 2013 includes \$6.4 million of special charges for obsolete inventory related to unique product in a solar application in which slowing market conditions provide uncertainty as to the net realizable value of this inventory.

Note 3: Acquisition and integration costs for the twelve months ended December 31, 2019, related to our acquisition of Electro Scientific Industries, Inc. ("ESI"). Acquisition and integration costs for the twelve months ended December 31, 2013, related to our acquisition of Alter Power Systems S.r.l.

Note 4: We recorded fees and expenses during the twelve months ended December 31, 2019 related to Amendments No. 5 and No. 6 to our Term Loan Credit Agreement dated as of April 29, 2016 (as amended, the "Term Loan Credit Agreement").

Note 5: We recorded additional interest expense during the twelve months ended December 31, 2019 related to the amortization of debt issuance costs related to our Term Loan Credit Agreement and our ABL Credit Agreement dated February 1, 2019, as amended on April 26, 2019.

Note 6: Restructuring and other costs during the twelve months ended December 31, 2019 consisted of severance costs related to an organization-wide reduction in workforce, the consolidation of service functions in Asia, and the movement of certain products to lower cost regions, costs related to the pending closure of a facility in Europe, and costs from a legal settlement from a contractual obligation we assumed as part of our acquisition of Newport Corporation. Restructuring and other costs for the twelve months ended December 31, 2013 consisted of benefits related to the retirement of the Company's chief executive officer, severance related costs related to the consolidation of certain facilities, offset by insurance proceeds related to a litigation settlement.

Note 7: During the twelve months ended December 31, 2019, we recorded a net gain on the sale of two properties in Boulder, CO and three properties in Portland, OR.

Note 8: During the twelve months ended December 31, 2019, we recorded an impairment charge related to a minority interest investment in a private company.

Note 9: We recorded windfall tax benefits on the vesting of stock-based compensation.

Note 10: We recorded tax adjustments resulting from tax election changes in response to tax reform, additional guidance provided by tax authorities and the direct effect of enactment of tax reform statutes.

Note 11: We recorded taxes on the inter-company sales of assets during the three and twelve months ended December 31, 2019.

Note 12: Non-GAAP adjustments are tax effected at applicable statutory rates resulting in a difference between the GAAP and Non-GAAP tax rates.