



2018 Analyst & Investor Day

6/19/18



Agenda

9:45 – 10:00	Registration and Breakfast	Speakers/Attendees
Executive Presentations		
10:00 – 10:20	MKS Overview: Then & Now	Jerry Colella <i>Chief Executive Officer</i>
10:20 – 10:40	Guest Speaker	Douglas Kim <i>SEMES, Chief Executive Officer and Samsung Display, EVP</i>
10:40 – 11:10	Markets & Growth Strategies	John T.C. Lee <i>President and Chief Operating Officer</i>
11:10 – 11:30	Laser Materials Processing	Dave Allen <i>Senior Vice President and General Manager, Laser Business Unit</i>
11:30 – 11:50	Semi Power Solutions	Paul Eyerman <i>Vice President and General Manager, Power Solutions Business Unit</i>
11:50 – 12:10	Strong Financial Execution & Performance	Seth Bagshaw <i>Senior Vice President, Chief Financial Officer and Treasurer</i>
12:10 – 12:25	Q&A	
12:25 – 12:30	Closing	Jerry Colella
12:30 – 1:30	Lunch	All

Safe Harbor

Statements in this presentation regarding the future financial performance of MKS, MKS' future business prospects, MKS' future growth, and any other statements about MKS management's future expectations, beliefs, goals, plans or prospects constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. 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 also be considered to be forward-looking statements. These statements are only predictions based on current assumptions and expectations. 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 we operate, including the fluctuations in capital spending in the semiconductor industry, and other advanced manufacturing markets, fluctuations in net sales to our major customers, the challenges, risks and costs involved with integrating the operations of the companies we have acquired, including our most recent acquisition of Newport Corporation, our ability to successfully grow our business, potential fluctuations in quarterly results, the terms of our term loan, 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' Annual Report on Form 10-K for the period ended December 31, 2017 filed with the SEC. MKS is under no obligation to, and expressly disclaims any obligation to, update or alter its 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”). Non-GAAP measures exclude amortization of acquired intangible assets, asset impairments, costs associated with completed and announced acquisitions, acquisition integration costs, an inventory step-up adjustment related to an acquisition, restructuring charges, certain excess and obsolete inventory charges, fees and expenses related to the repricing of MKS’ term loan, amortization of debt issuance costs, net proceeds from an insurance policy, costs associated with the sale of a business, the tax effect of the 2017 Tax Cut and Jobs Act, the tax effect of legal entity restructurings, other discrete tax benefits and charges, and the related tax effect of these adjustments. These non-GAAP measures should be viewed in addition to, and not as a substitute for, MKS’ reported 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 and the definitions of terms used in this presentation.

MKS Overview: Then & Now

Jerry Colella

Chief Executive Officer



MKS Key Messages

- Track record of **SUSTAINABLE & PROFITABLE GROWTH**
- Leveraged to attractive **HIGH GROWTH MARKETS**
- **GLOBAL TECHNOLOGY LEADER** in served markets
- **ROBUST & DISCIPLINED** business process
- Proven M&A augments **ORGANIC GROWTH**



Five Decades of Profitable Growth

STRATEGIES FOR Growth & Profit



MKS Business Process

IN ALL AREAS OF **Our Business**



ACCOUNTABILITY

- Embedded in culture
- Aligned compensation plans
- Deployed across the organization

CUSTOMER FOCUS

- Developing customer inspired solutions
- Targeting high growth opportunities

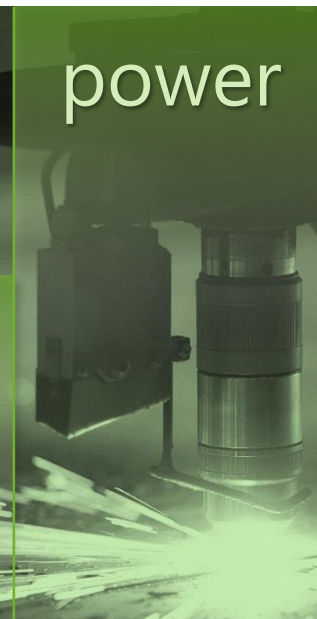
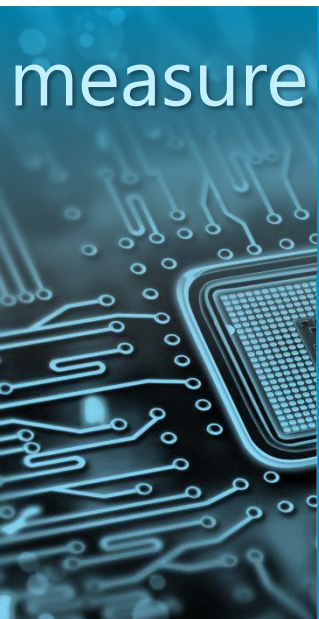
CONTINUOUS IMPROVEMENT

- Established Profit & Cash Recovery Team
- Streamlined Operations and Administrative functions
- Optimized Sales channels

STRATEGIC PLANNING

- Active portfolio management
- Executing M&A strategy
- Aligning resources to support growth

MKS is a leading global provider of process control solutions based on these critical technologies



PRECISE CONTROL

*of pressure, flow,
composition, position,
motion and automation*

GENERATION & DELIVERY

*of reactive gases, laser power
and electrical power*

INTEGRATED SOLUTIONS

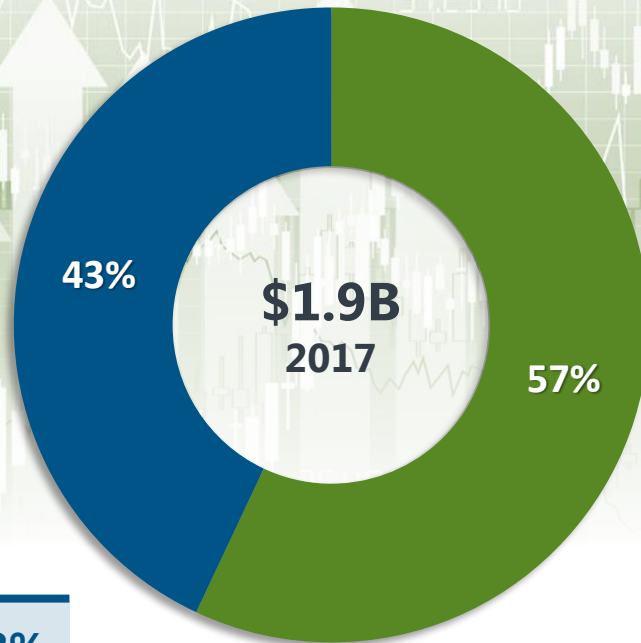
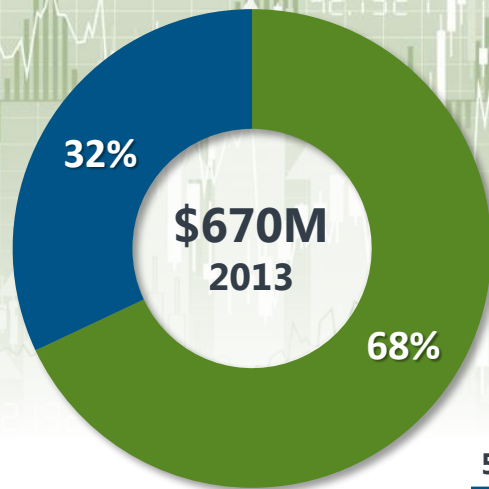
*for process, inspection
and lithography*

Market Leader with Broad Technology Portfolio


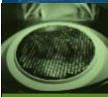
	PRESSURE/ VACUUM	VACUUM COMPONENTS		FLOW	GAS ANALYSIS		PLASMA	POWER	DIGITAL CONTROL	PHOTONICS					LASERS	OPTICS			
	Direct/ Indirect Gauging	Vacuum Comps	Control & Iso Valves	Flow & Gas Delivery	RGA	FTIR	Reactive Gas	RF	Tool, Safety Chamber, Network	Instruments	Vibration Control	Motion	Opto- Mechanics	Laser Measuremt	Lasers	Laser Optics	Gratings/ Filters	IR Optics	Integrated Solutions
	1	1	2	3	3	2	1	2	1	1-2	1-3	3	1	2	1-3	1-2	1-2	2-3	2-3
ADVANCED ENERGY							●	●											
AEROTECH												●							
BROOKS	●			●															
COHERENT														●	●	●			●
CVI MELLES GRIOT															●	●		●	●
DAIHEN							●	●											
EBARA							●												
GENTEC														●					
HORIBA				●	●	●											●		
HUTTINGER								●				●							
II-VI															●	●		●	●
INFICON	●	●			●														
IPG PHOTONICS															●				●
LUMENTUM															●				
NEWPOWER PLASMA							●	●											
PI												●							
QI/OPTIQ													●			●		●	●
SEMROCK																	●		
SIGMA KOKI												●	●	●		●	●		●
SUMITOMO							●												
THORLABS											●	●	●	●	●	●			●
ULVAC	●		●		●														
VAT			●																

Source: Company information

Leveraged to High Growth Markets



5 Year CAGR

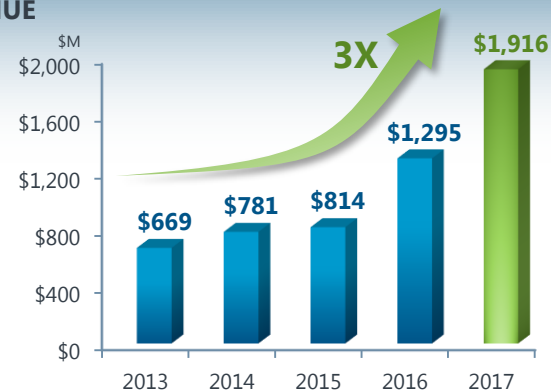
	Advanced	28%
	Semiconductor	22%

Total **24%**

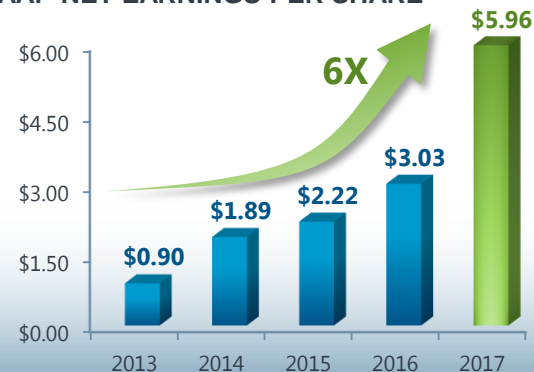
Delivering Sustainable and Profitable Growth



REVENUE

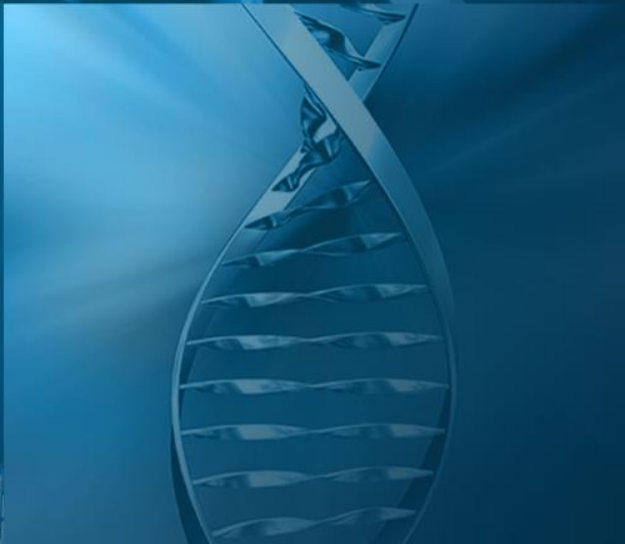


NON-GAAP NET EARNINGS PER SHARE



Markets & Growth Strategies

John T.C. Lee
*President and
Chief Operating Officer*



Our Focus: Technology-Intensive Markets



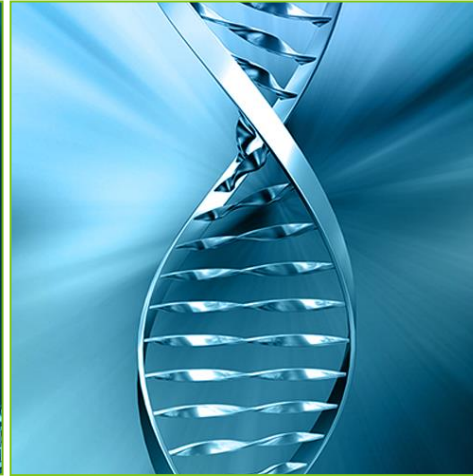
SEMICONDUCTOR

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



INDUSTRIAL TECHNOLOGIES

- Electronic Thin Film
- Industrial Manufacturing
- Electronic Component Manufacturing
- Process Industries
- Telecom/Datacom



LIFE & HEALTH SCIENCES

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



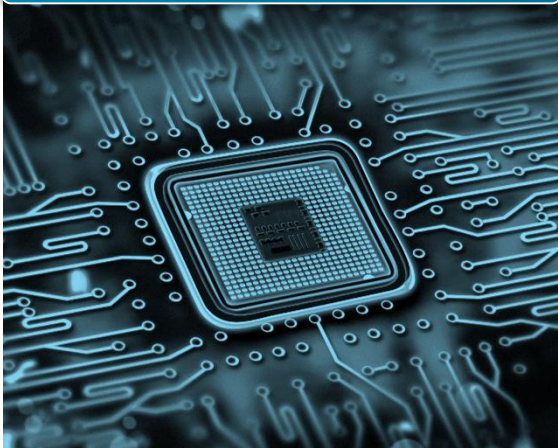
RESEARCH & DEFENSE

- Atomic & Molecular Physics
- Spectroscopy
- High Energy Physics
- Ultrafast Laser Studies

Changing Landscape of Semiconductors

1996-2006

THEN



CHIPS

EFFICIENT & FAST

- Desktop computing
- Faster chips driving PC upgrades

2007-2017

NOW



DEVICES

UNTETHERED FROM THE DESKTOP

- Ubiquitous computing
- Improved power consumption
- Greater storage density
- Increased connectivity

2018⁺

FUTURE



BIG DATA

NEW MODELS & APPLICATIONS

- Critical real-time data
- Streaming video
- Cloud storage
- AI / AR / VR

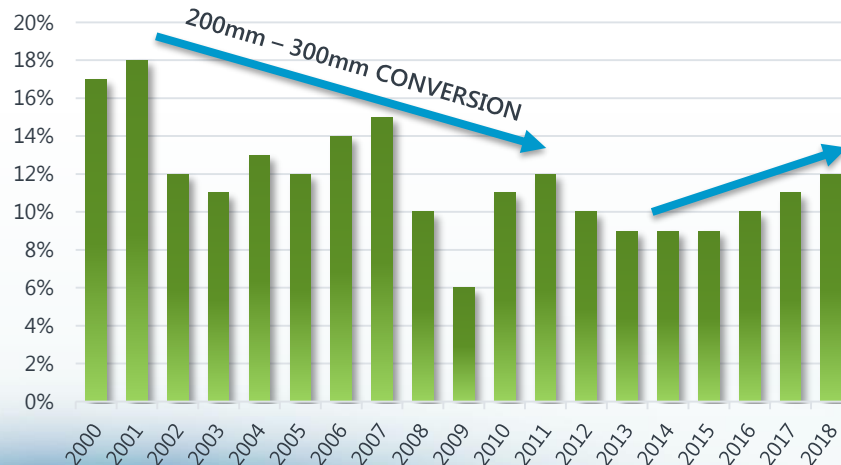
Strong Market Growth, Sustainable Capital Intensity

INCREASING CHIP REVENUE



Source: Chip Revenue & WFE, VLSI Dec 2017

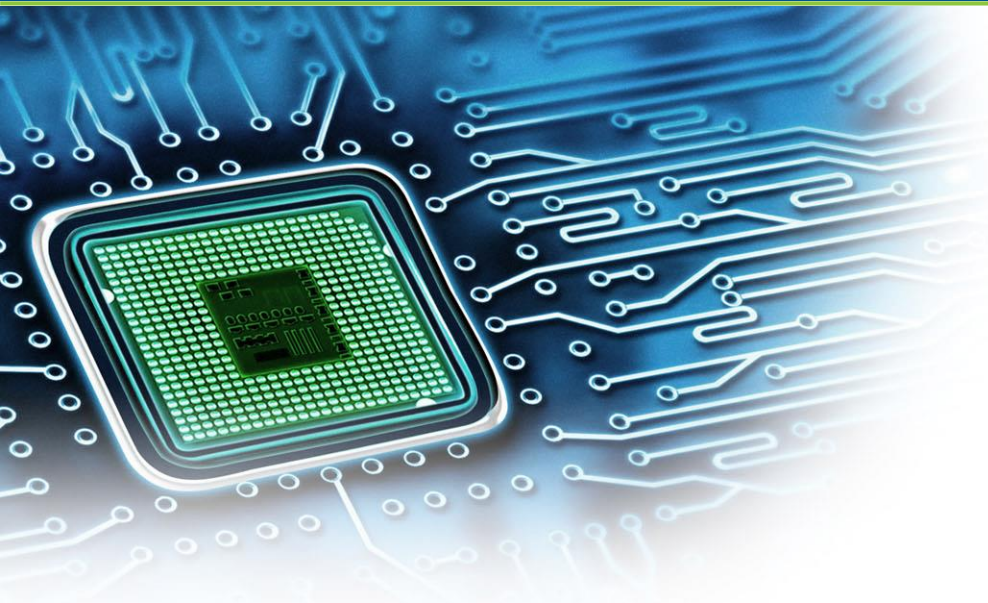
CAPITAL INTENSITY



Capital Intensity = WFE/Chip Revenue

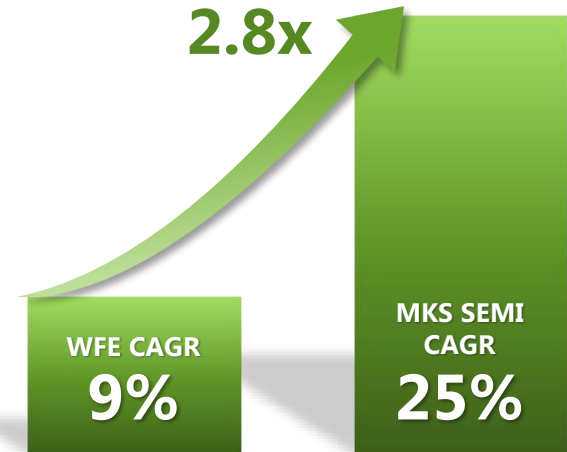


History of Outperforming Semi Market Growth



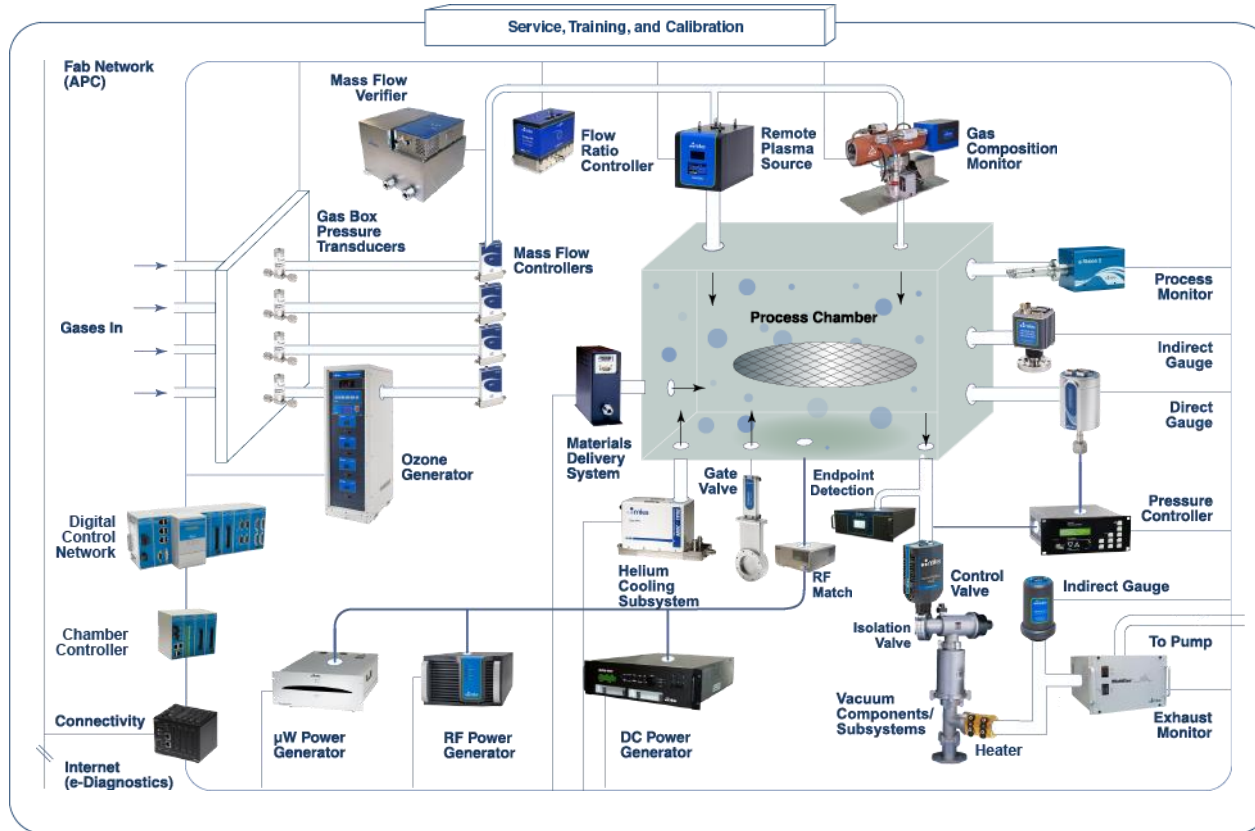
5 YEAR CAGR '12-'17

Driven by SAM expansion & share gains



Source: WFE, VLSI Dec 2017

Extended Leadership in the Semiconductor Market

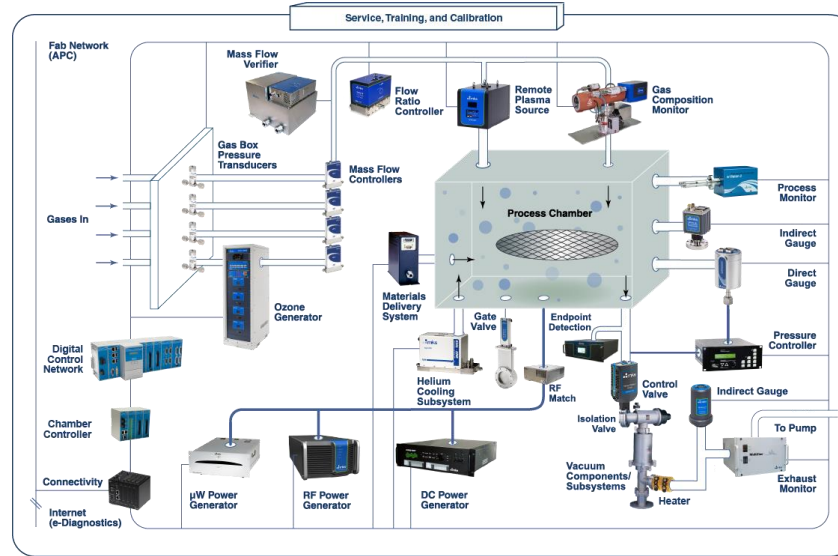


Extended Leadership in the Semiconductor Market

FRONT END

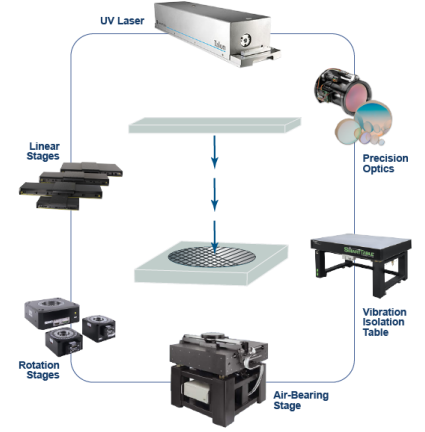


LITHOGRAPHY & INSPECTION



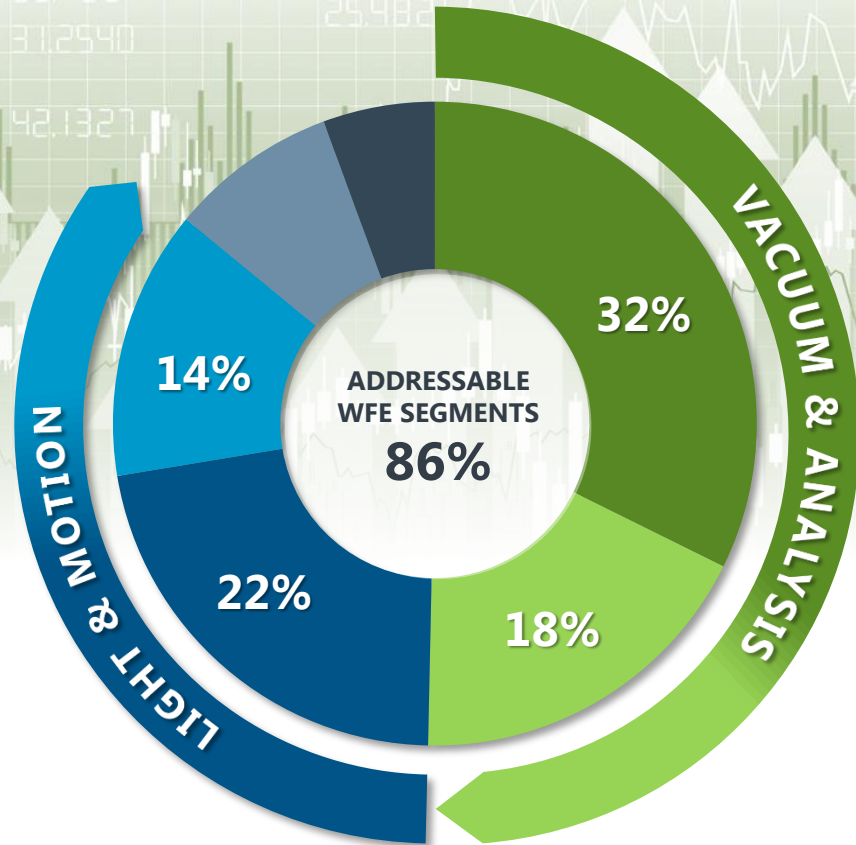
DEPOSITION, ETCH & CLEAN

BACK END



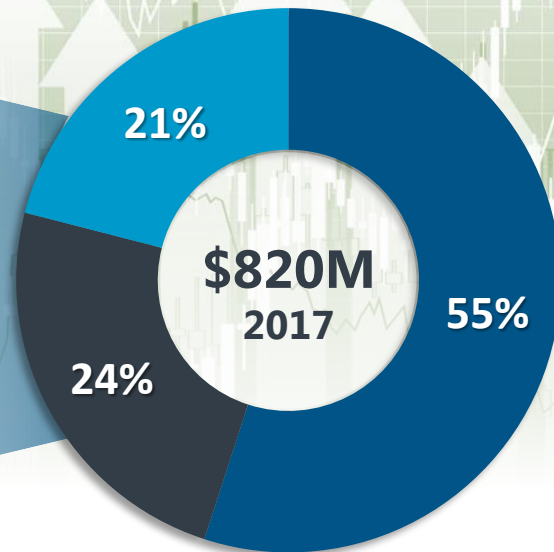
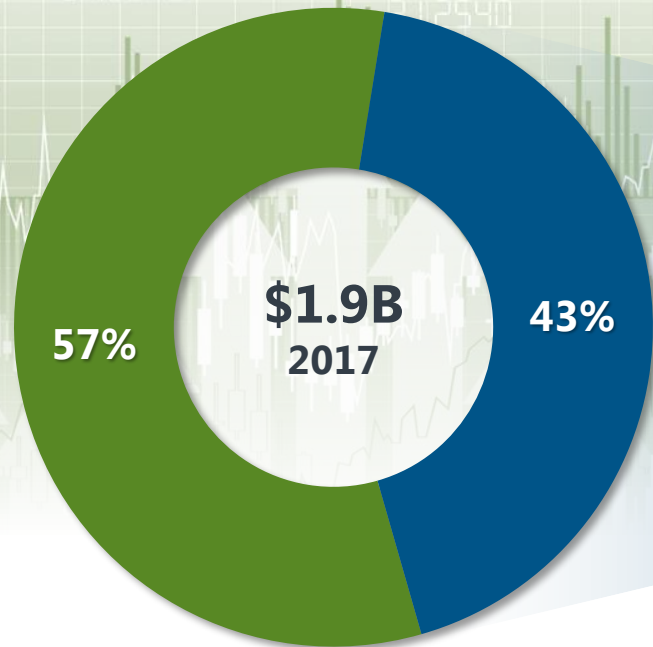
PACKAGING & INSPECTION

Expanded Participation Across WFE Segments



- Etching & Cleaning
- Deposition & Related
- Microlithography & Mask Making
- Process Diagnostic
- Other Equipment
- Wet Processing

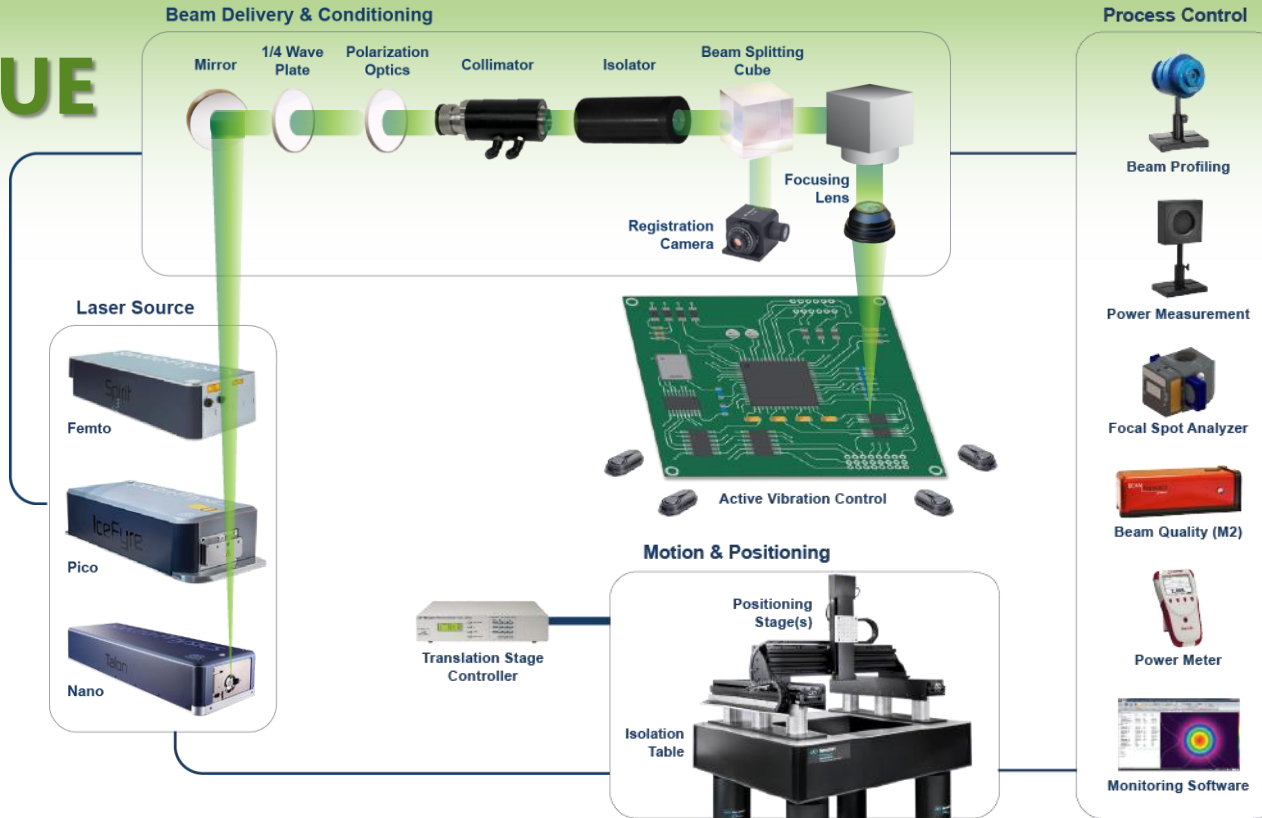
Diversified & Balanced End Markets



Surround the WorkpieceSM

REVENUE

\$450M+

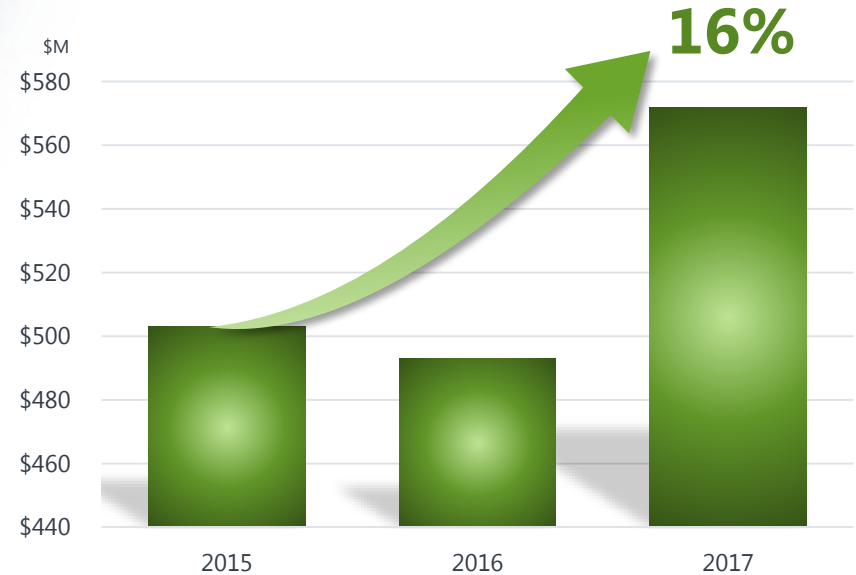


Accelerating Growth in Advanced Markets

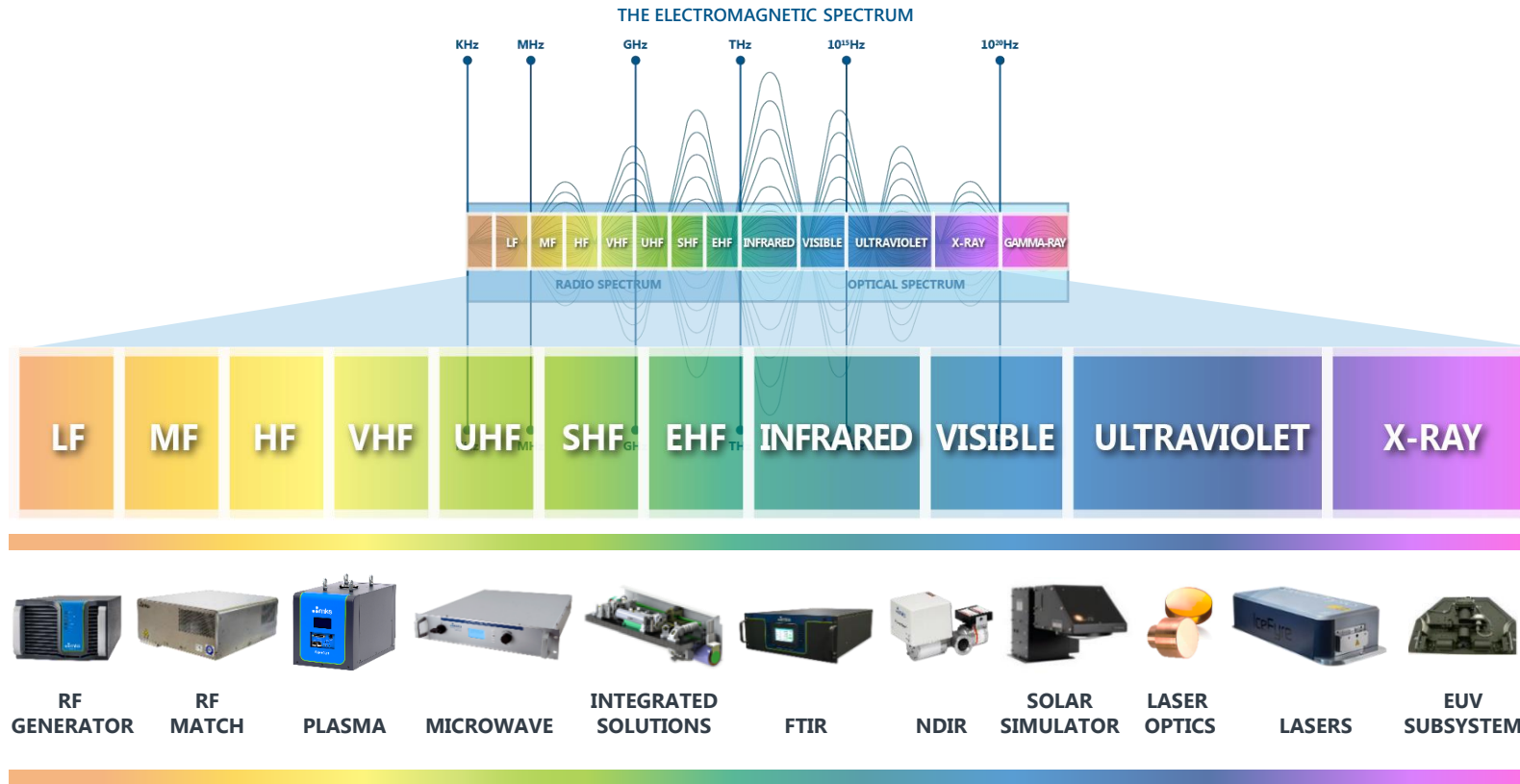


L&M ADVANCED MARKETS

2017 Growth



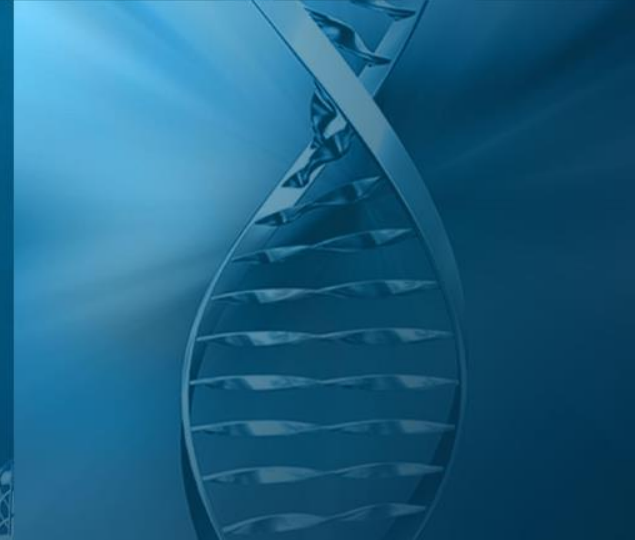
Expertise Across the Spectrum



Laser Materials Processing

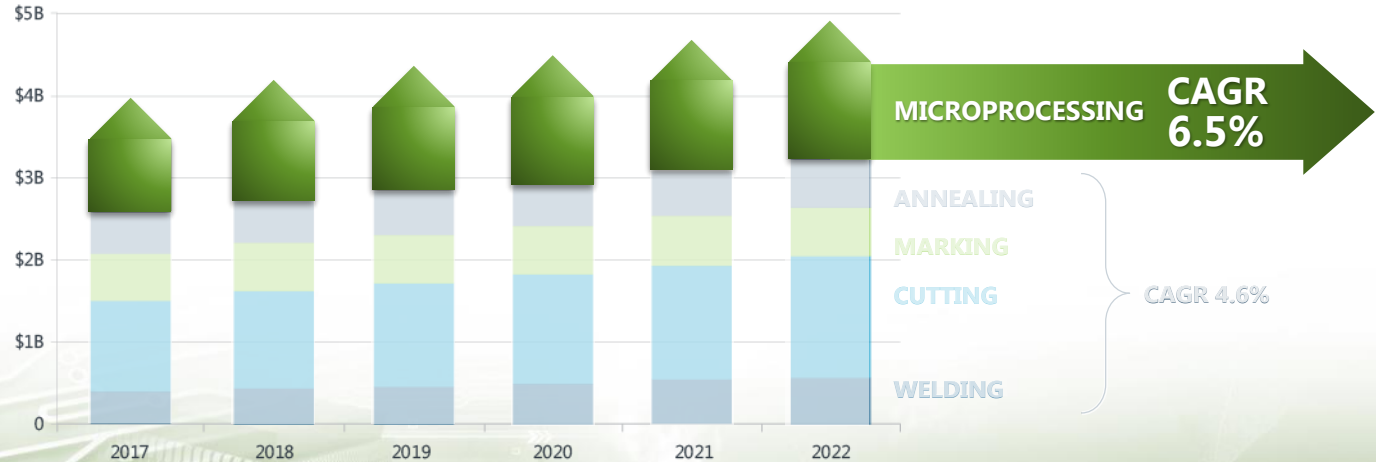
Dave Allen

*Senior Vice President and
General Manager
Laser Business Unit*



Large and Growing Laser Market

LASER MATERIALS PROCESSING



Source: Strategies Unlimited, MKS Internal analysis

PC BOARDS

ELECTRONIC COMPONENTS

DISPLAYS

CLEAN ENERGY

Laser Microprocessing: Paradigm Shift

2007-2013

THEN

TOUCHSCREEN PATTERNING

PC BOARD DEPANELING

PACKAGE CUTTING

ENCLOSURE MARKING



FLEX PCB DRILLING

CAMERA WINDOW CUTTING

CERAMIC SCRIBING

MOBILE | TOUCH DISPLAYS

2014-2018

NOW

GLASS CUTTING

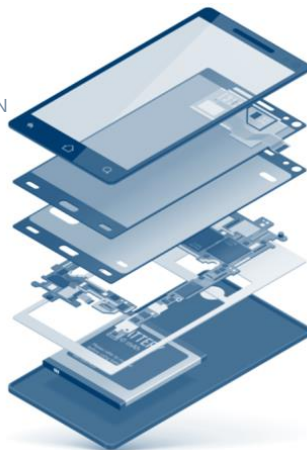
TOUCHSCREEN PATTERNING

PC BOARD DEPANELING

PACKAGE CUTTING

ENCLOSURE MARKING

ENCLOSURE DRILLING & CUTTING



FILM CUTTING

FLEX PCB DRILLING

CAMERA WINDOW CUTTING

CERAMIC SCRIBING

RESISTOR TRIMMING

MOBILE | IoT | TOUCH DISPLAYS

2020+

FUTURE

COMPOSITE MATERIALS PROCESSING

GLASS CUTTING

TOUCHSCREEN PATTERNING

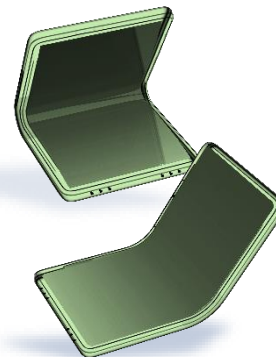
PC BOARD DEPANELING

PACKAGE CUTTING

ENCLOSURE MARKING

ENCLOSURE DRILLING & CUTTING

SURFACE FUNCTIONALIZATION



NANOMATERIAL PROCESSING

FILM CUTTING

FLEX PCB DRILLING

CAMERA WINDOW CUTTING

CERAMIC SCRIBING

RESISTOR TRIMMING

BATTERY PROCESSING DRILLING

MOBILE | IoT | AUTOMOTIVE | ENERGY
VR/AR | FLEXIBLE DISPLAYS

Laser Microprocessing: Paradigm Shift

2007-2013

THEN

TOUCHSCREEN PATTERNING

FLEX PCB DRILLING

PC BOARD DEPANELING

CAMERA WINDOW CUTTING

PACKAGE CUTTING

ENCLOSURE MARKING

CERAMIC SCRIBING

100s

COMPONENTS/DEVICE

MOBILE | TOUCH DISPLAYS

2014-2018

NOW

GLASS CUTTING

FILM CUTTING

TOUCHSCREEN PATTERNING

FLEX PCB DRILLING

PC BOARD DEPANELING

CAMERA WINDOW CUTTING

PACKAGE CUTTING

ENCLOSURE MARKING

CERAMIC SCRIBING

ENCLOSURE DRILLING & CUTTING

RESISTOR TRIMMING

1,000s

COMPONENTS/DEVICE

MOBILE | IoT | TOUCH DISPLAYS

2020+

FUTURE

COMPOSITE MATERIALS PROCESSING

NANOMATERIAL PROCESSING

GLASS CUTTING

FILM CUTTING

TOUCHSCREEN PATTERNING

FLEX PCB DRILLING

PC BOARD DEPANELING

CAMERA WINDOW CUTTING

PACKAGE CUTTING

ENCLOSURE MARKING

CERAMIC SCRIBING

ENCLOSURE DRILLING & CUTTING

RESISTOR TRIMMING

SURFACE FUNCTIONALIZATION

BATTERY PROCESSING DRILLING

10,000s

COMPONENTS/DEVICE

MOBILE | IoT | AUTOMOTIVE | ENERGY
VR/AR | FLEXIBLE DISPLAYS

Laser Materials Processing Drivers

Application Challenges

- High throughput processing
- High quality machining
- Cost of ownership

MKS Capabilities

- Proprietary optical coatings
- Advanced controls and electronics
- Deep applications expertise

MKS Solutions

- Programmable laser pulsing
- Ultraviolet and short pulse lasers
- Advanced motion control and beam measurement

ADVANCED MATERIALS



MICRO-MACHINING



ADDITIVE MANUFACTURING



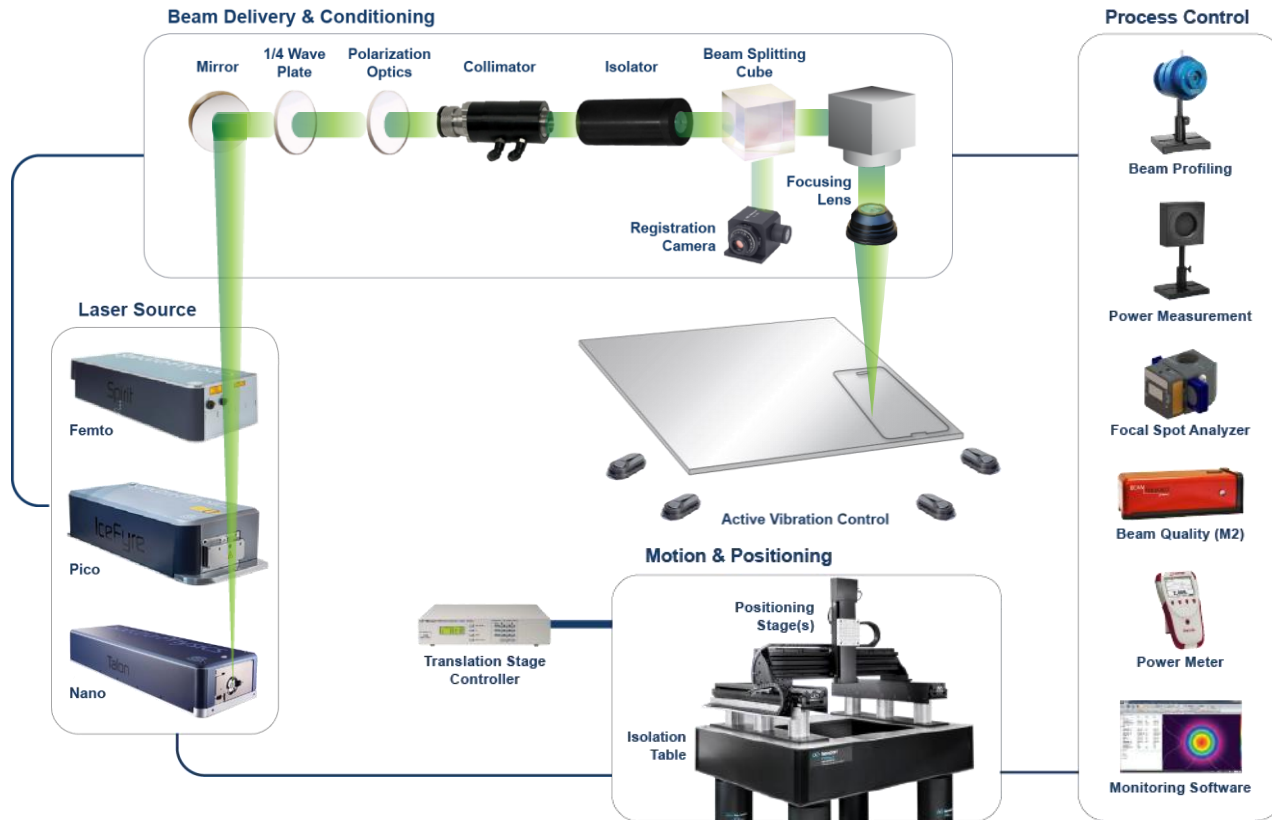
SURFACE MODIFICATION



LASER MANUFACTURING

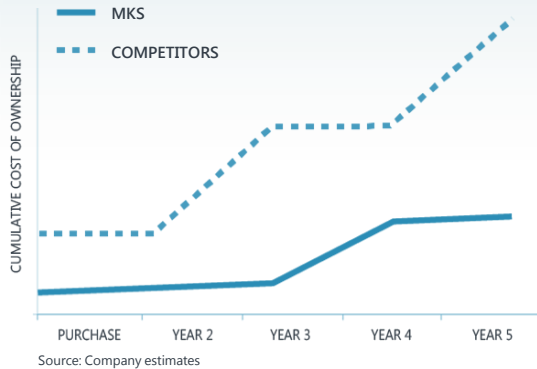


Surround the WorkpieceSM



Our Compelling Laser Advantages

Leading cost-performance



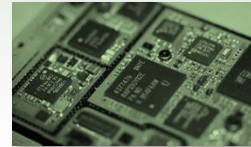
Complete portfolio solutions



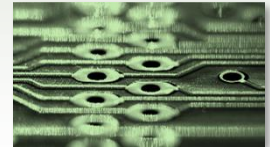
UV FROM 6W TO 45W
GREEN FROM 20W TO 40W



Broad market adoption for mainstream manufacturing



PC BOARDS



ELECTRONIC COMPONENTS



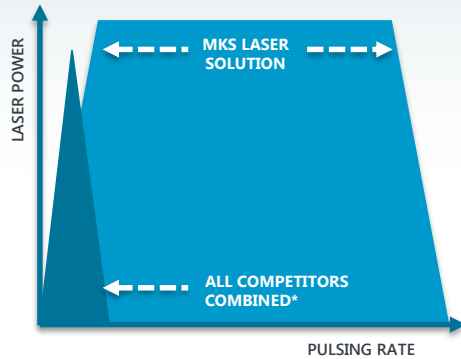
DISPLAYS



CLEAN ENERGY

Enabling Laser Innovation Drives New Potential

Expanded performance

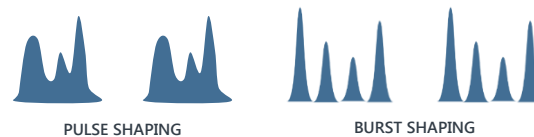


Programmable pulsing

PULSE WIDTH

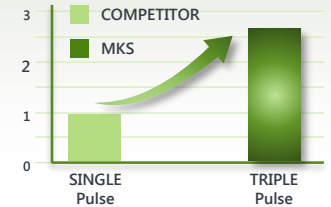


PULSE SHAPING

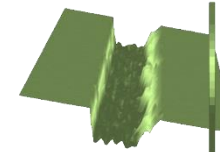


Dramatic manufacturing gains & new applications

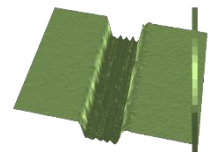
THROUGHPUT*



MACHINING QUALITY



IRREGULAR FEATURE RESOLUTION



MKS: PRECISION MICRO MACHINING

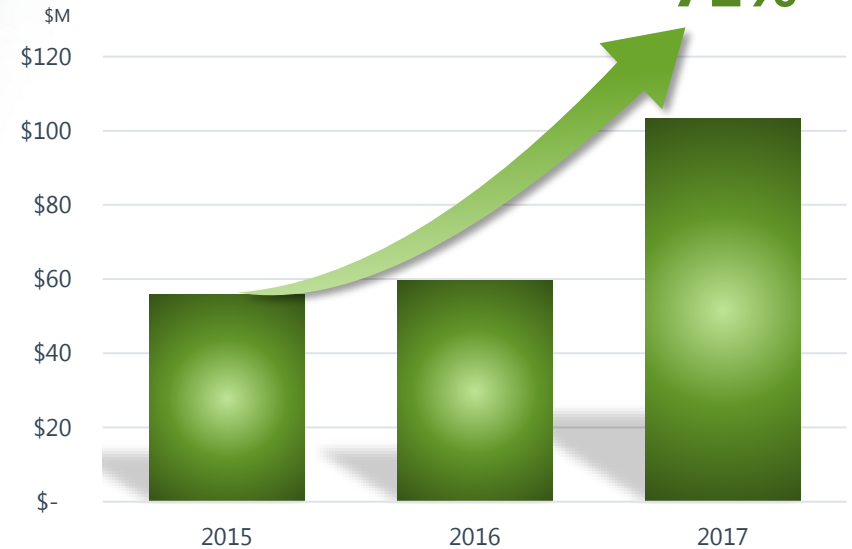
* Company estimates

Industrial Focus Accelerating Laser Growth



INDUSTRIAL LASERS

2017 Growth



Leveraging the MKS Business Process



ACCOUNTABILITY

CUSTOMER FOCUS

CONTINUOUS IMPROVEMENT

STRATEGIC PLANNING

Operational Excellence

- Lean
- Sourcing
- Quality & Reliability

OEM Relationships

- Existing key accounts
- Strategic partnership approach
- End-user champions

APAC Presence

- Technical localization
- Sales resources

Semi Power Solutions

Paul Eyerman

*Vice President and
General Manager*

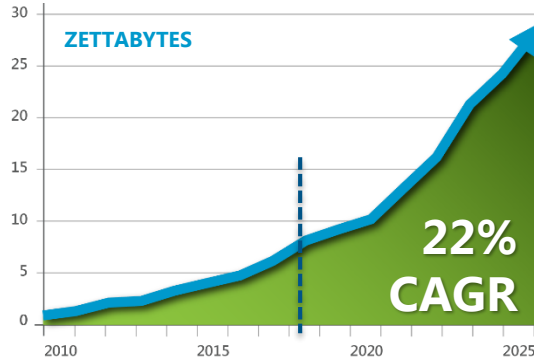
Power Solutions Business Unit



Accelerating Volume and Velocity of Data

DATA GENERATION, TRANSPORT and STORAGE

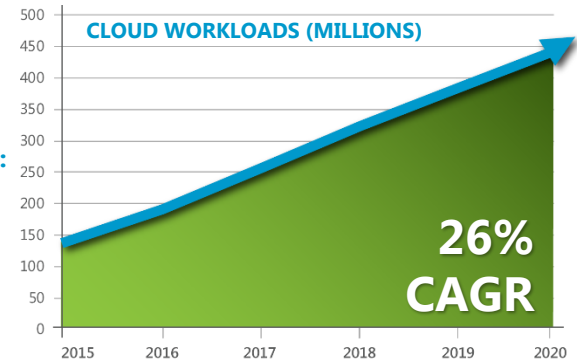
- **IoT: >20B connected** devices by 2020
- **Mobile: 7X increase** in mobile data by 2021
- **Smart Car: 4,000GB** per day/per car
- **Network: 22% CAGR** IP traffic growth



Source: Seagate Data Age 2025 March 2017

CLOUD PROCESSING

- **Artificial Intelligence: 12X** performance increase
- **Visual Computing: 30% CAGR** in mobile data by 2021
- **Servers: 26% CAGR** data center growth



Source: Cisco Global Cloud Index: Forecast and Methodology, 2015–2020

BIG DATA



SOCIAL MEDIA



MOBILE



ARTIFICIAL INTELLIGENCE



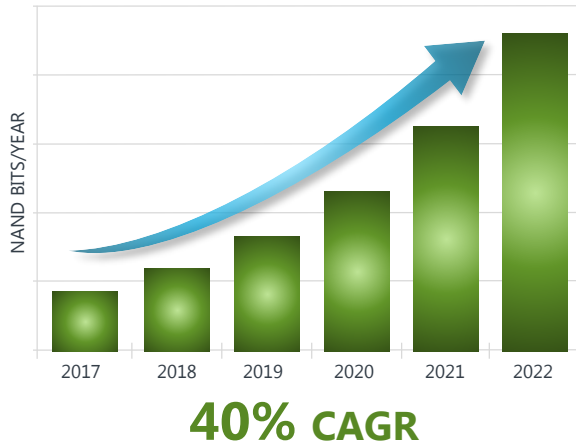
SMART EVERYTHING



Increasing Content Driven by VNAND

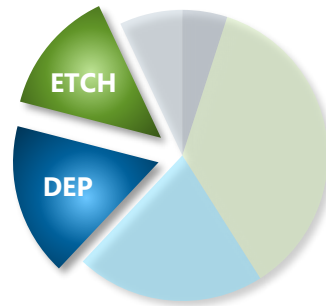
- Vertical features require increased deposition and etch steps
- High aspect ratio requires increased power and improved control
- Atomic Layer Processing and new materials drive deposition requirements

NAND BIT GROWTH



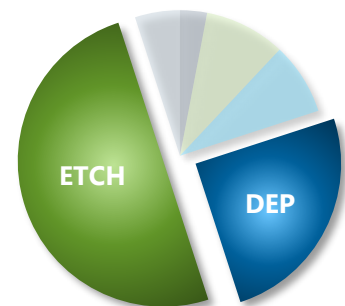
Micron estimates

PREVIOUS 2D NAND CAPEX*



<30% SHARE

3D NAND*

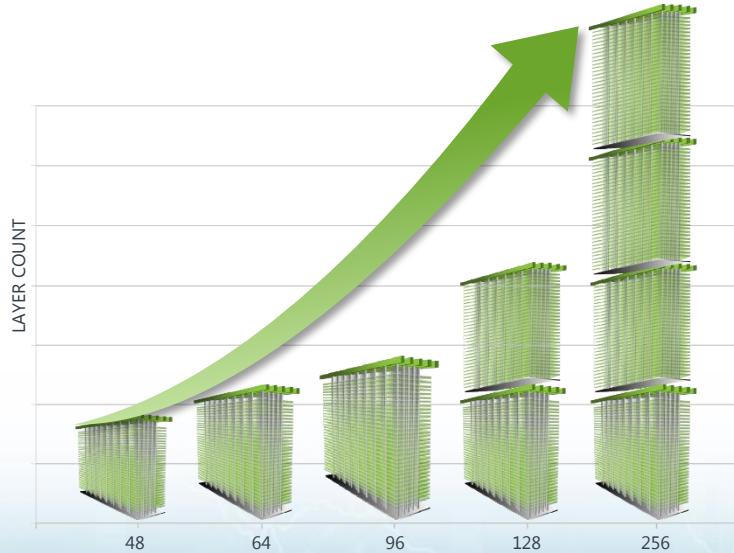


>70% SHARE

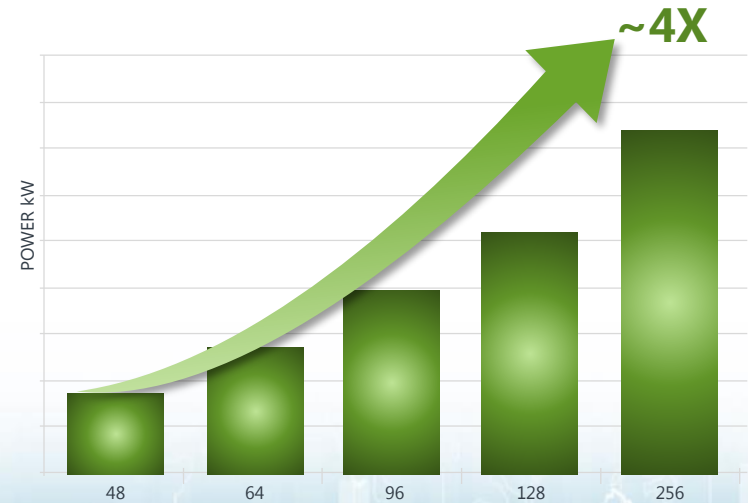
*Company estimates, TEL, AMAT, Lam Research

VNAND Growth Drivers

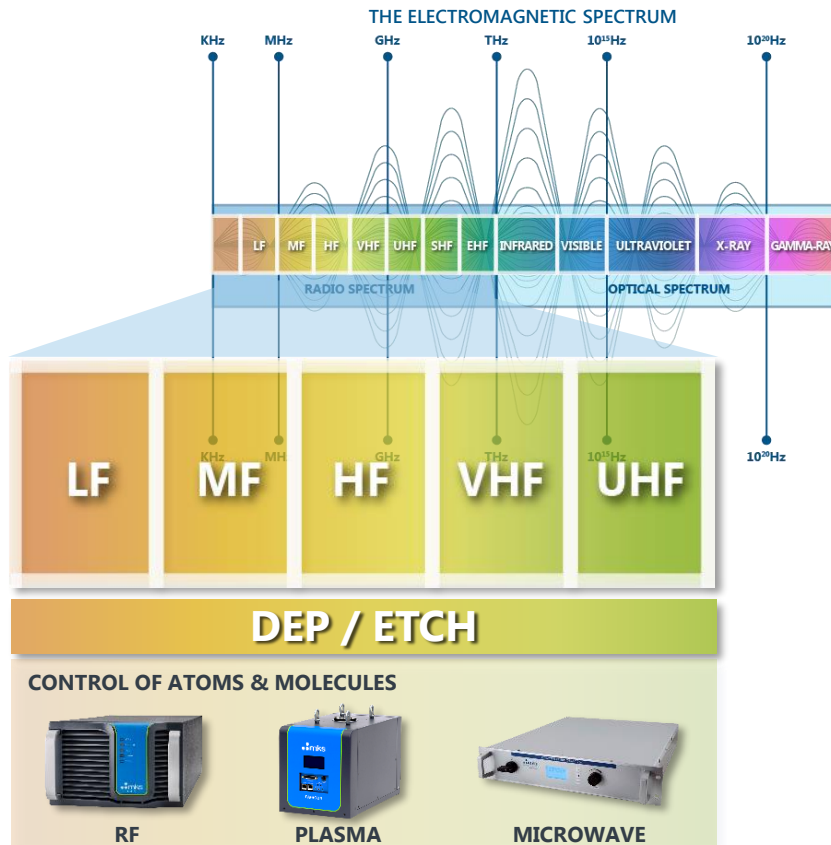
INCREASING LAYERS PER WAFER



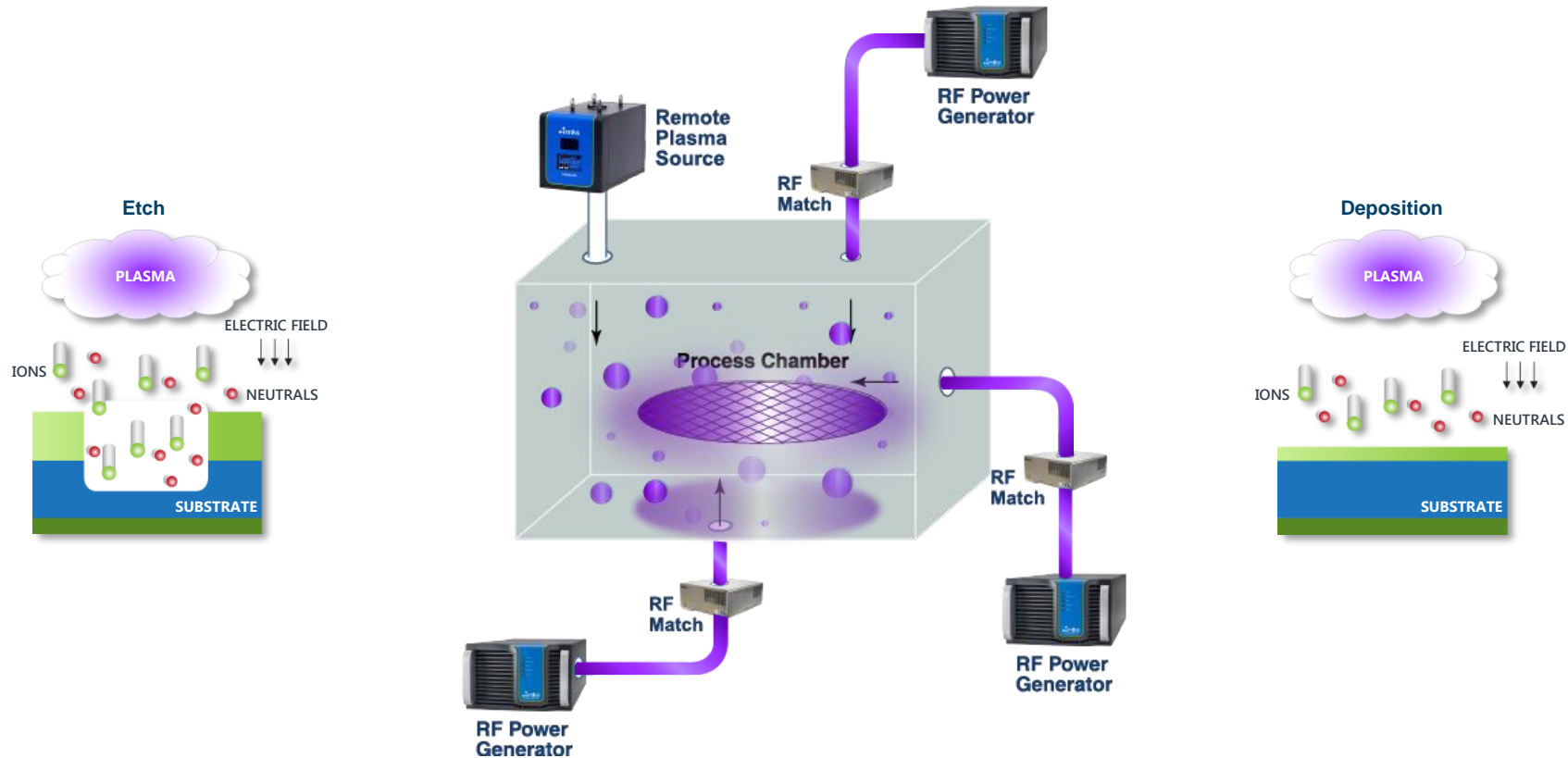
INCREASING POWER PER TOOL



Power Generation Across the Spectrum



Extended Leadership in the Semiconductor Market



Semiconductor Power Drivers

Process Needs

- Profile control
- Throughput
- Uniformity
- Selectivity

Process Challenges

- Bowing & twisting
- More layers/time
- Variation across wafer
- Thinner layers

MKS Solutions

- Advanced pulsing
- Fast development
- Smart & fast tuning
- Ion energy control

BIG DATA



SOCIAL MEDIA



MOBILE



ARTIFICIAL INTELLIGENCE



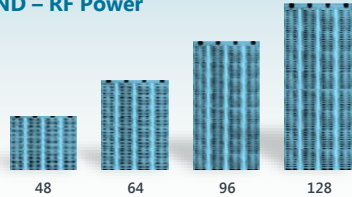
SMART EVERYTHING



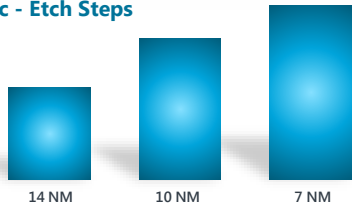
Power Innovation Enables Etch Performance

Need for increasing power and more etch steps

VNAND - RF Power



Logic - Etch Steps



Wide product range and innovative features

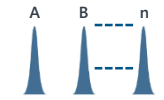
The Radio Spectrum



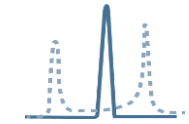
MULTILEVEL PULSING



ADAPTIVE PULSE TECHNOLOGY



DYNAMIC FREQUENCY TUNING



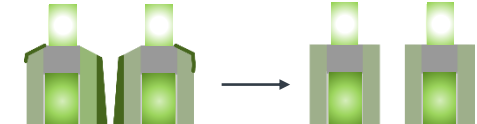
IEDF - ION ENERGY DISTRIBUTION FUNCTION

Improved process performance

VNAND - High Aspect Ratio Etch



Logic - Critical Dimension Etch



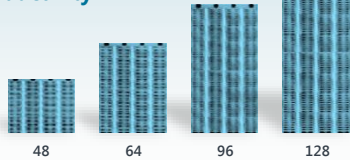
CORNER LOSS / PINCH-OFF

PROFILE CONTROL

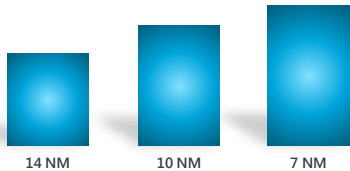
Power Innovation Enables Deposition Performance

Need for more layers and thinner layers

VNAND - Control, Uniformity & Productivity



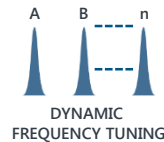
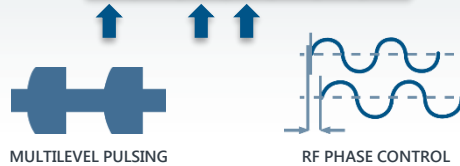
Logic - Deposition Steps



+

Wide product range and innovative features

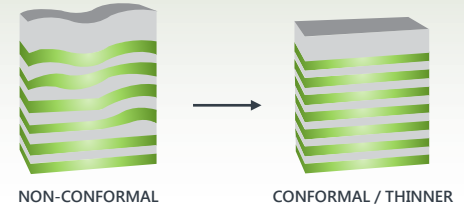
The Radio Spectrum



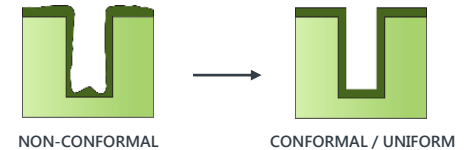
=

Improved process performance

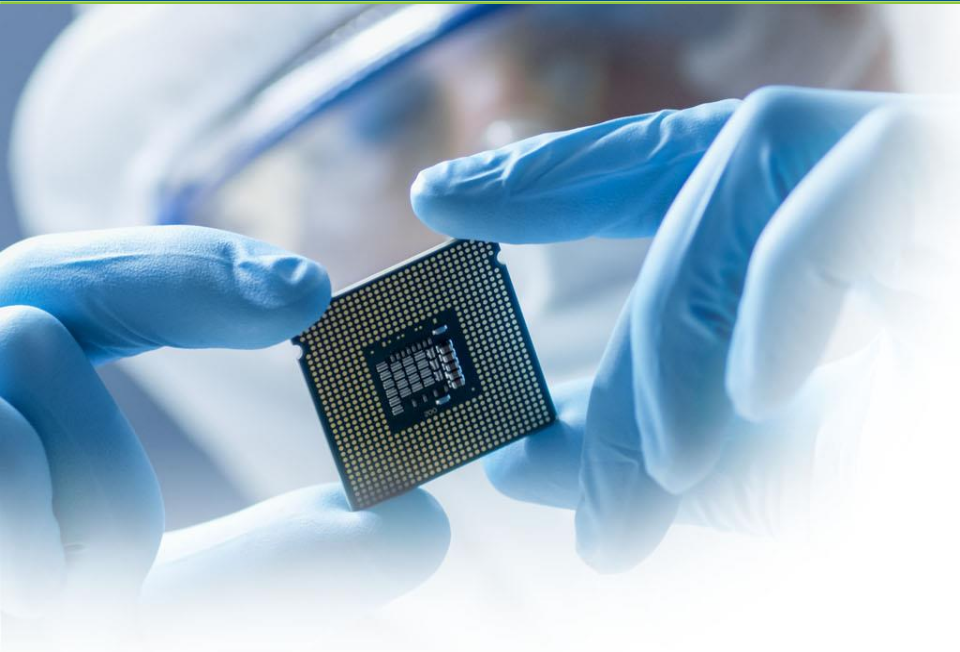
VNAND - Conformal Layers and Thinner Layers



Logic - Conformal Layers and Uniformity

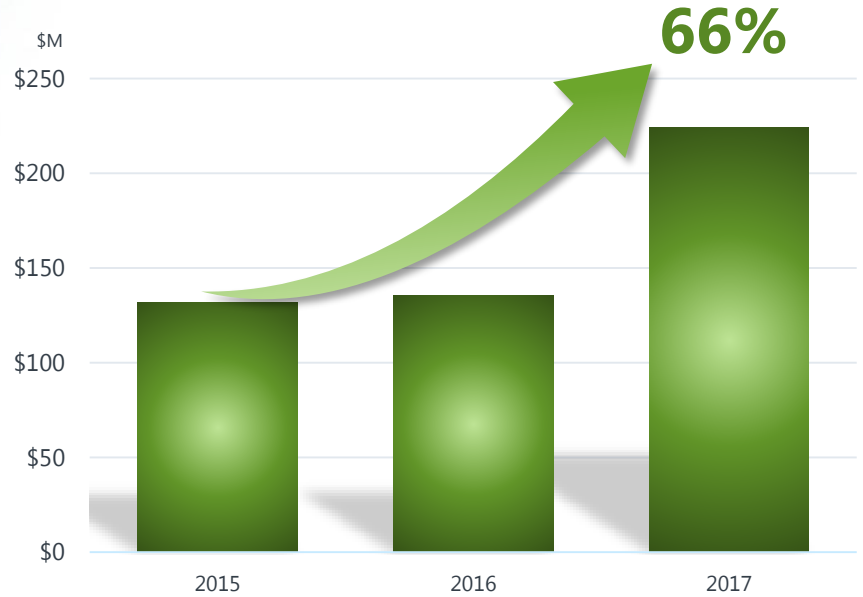


Power Business Driving Strong Growth



POWER SOLUTIONS

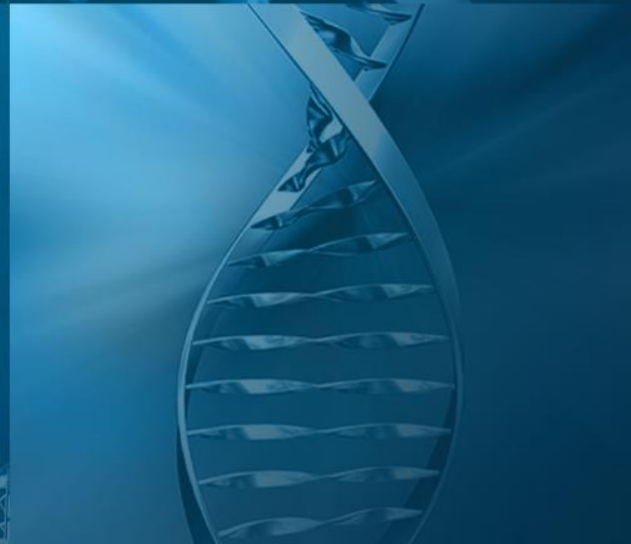
2017 Growth



Strong Financial Execution & Performance

Seth Bagshaw

*Senior Vice President, Chief
Financial Officer and Treasurer*



Focused Financial Management

TRACK RECORD OF STRONG PERFORMANCE

- **Multiyear record of strong financial performance and operating leverage**
- **Generate above average shareholder returns**

CAPITAL DEPLOYMENT FOCUSED ON VALUE CREATION

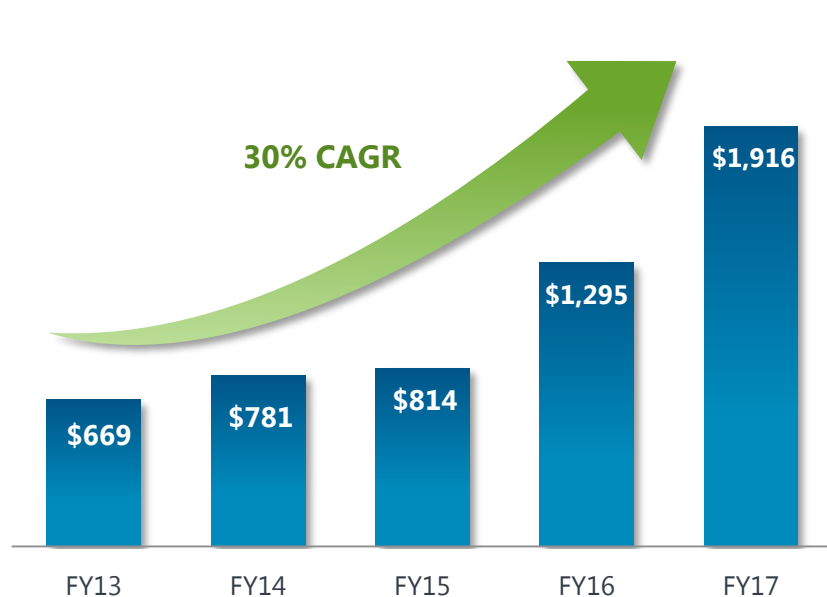
- **Strong emphasis toward generating organic growth and funding M&A strategy**
- **Successful execution of disciplined acquisition strategy**
- **Track record of increasing dividends**

CULTURE OF CONTINUOUS IMPROVEMENTS

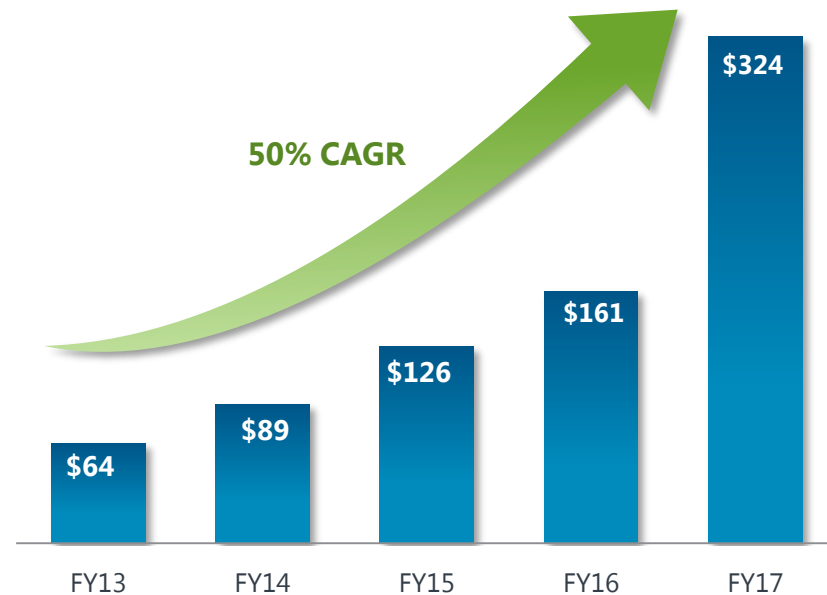
- **Deep culture of continuous profitability improvement**
- **Resulting in a 482% Operating Model increase in Non-GAAP EPS since 2013**

Multiyear Record of Strong Financial Performance

REVENUE AS REPORTED (in millions)



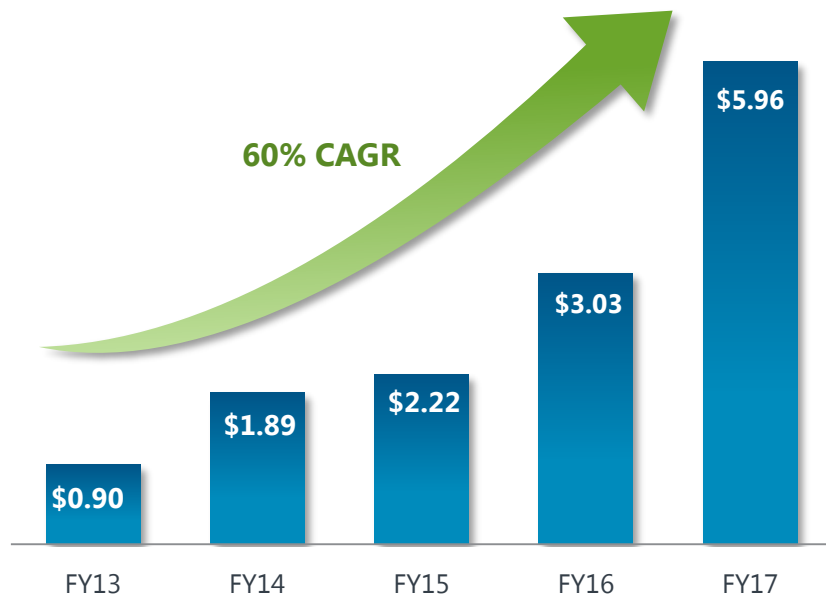
FREE CASH FLOW⁽¹⁾ (in millions)



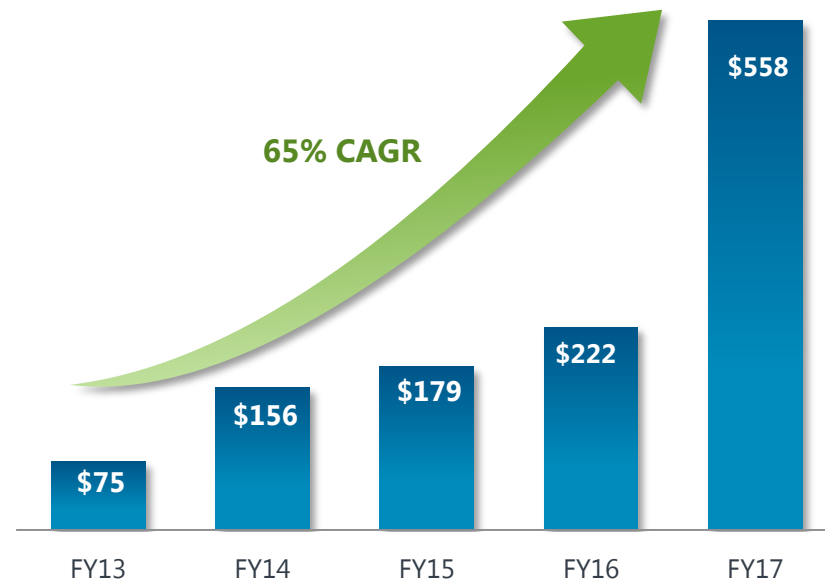
(1) Free Cash Flow equals cash from operations less capital expenditures

Significant Operating Leverage

NON-GAAP EPS



EBITDA (in millions)



Above Average Shareholder Returns

	Total Shareholder Returns			2017 ROIC ⁽¹⁾	P/E Ex. Cash 2019E ⁽²⁾
	1 Year	3 Year	5 Year		
MKSI	38.2%	209.0%	331.3%	17.4%	11.1x
Peer Group:⁽³⁾					
Median	11.3%	49.9%	100.4%	11.5%	15.0x
75 th Percentile	30.2%	119.1%	164.1%	15.4%	15.4x

MKS Exceeds Peer Group Shareholder Returns / ROIC

Source: Company filings, Wall Street Research (financials represent median consensus estimates) and Fact Set as of May 31, 2018.

(1) Return on Invested Capital defined as Calendar Year 2017 EBIT x (1 - Tax Rate) / December 31, 2016 Assets - Current Liabilities + Short Term Debt.

(2) P/E Ex. Cash 2019E is calculated as (Stock Price - Cash / Diluted Shares Outstanding) / (EPS - Interest Income) / Weighted Average Diluted Shares Outstanding.

(3) MKSI March 28, 2018 Proxy Statement Peer Group: Amkor Technology, Brooks Automation, Coherent, Cypress Semiconductor, Entegris, Finisar, FLIR Systems, National Instruments, Plantronics, Teradyne, Viavi Solutions.

Capital Deployment Focused on Value Creation

\$2.2 Billion Allocated Over Last 5 Years



(1) Includes Q1 2018 voluntary principal repayment, fourth repricing completed April 11, 2018 and dividends through Q2 2018. See also Footnote 2 on slide 55.

Successful Execution of Disciplined Acquisition Strategy



Completed Over 15 Acquisitions Since 2000

Proven Acquisition Integration Approach

APPLIED TO **Newport Acquisition**

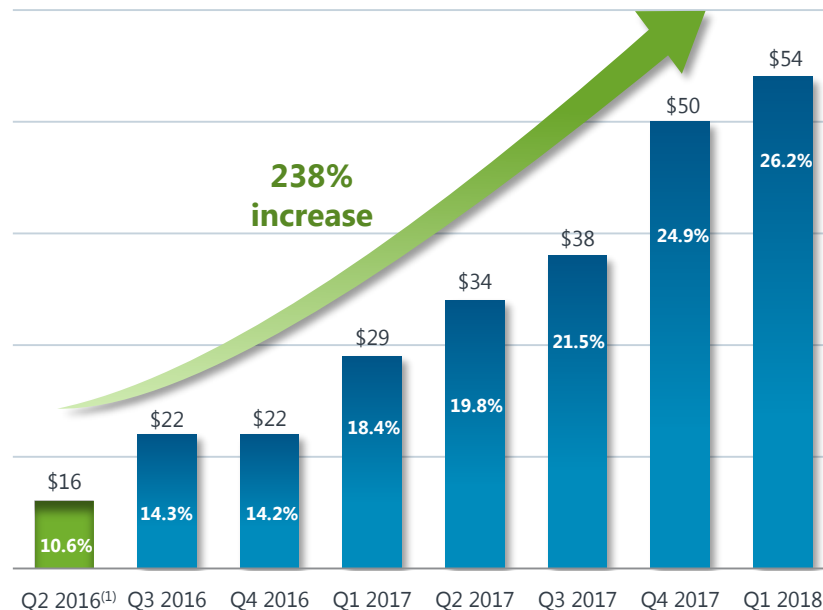


Post-Acquisition Performance of Light & Motion Division

REVENUE (in millions)



NON-GAAP OPERATING INCOME (in millions and % of revenue)

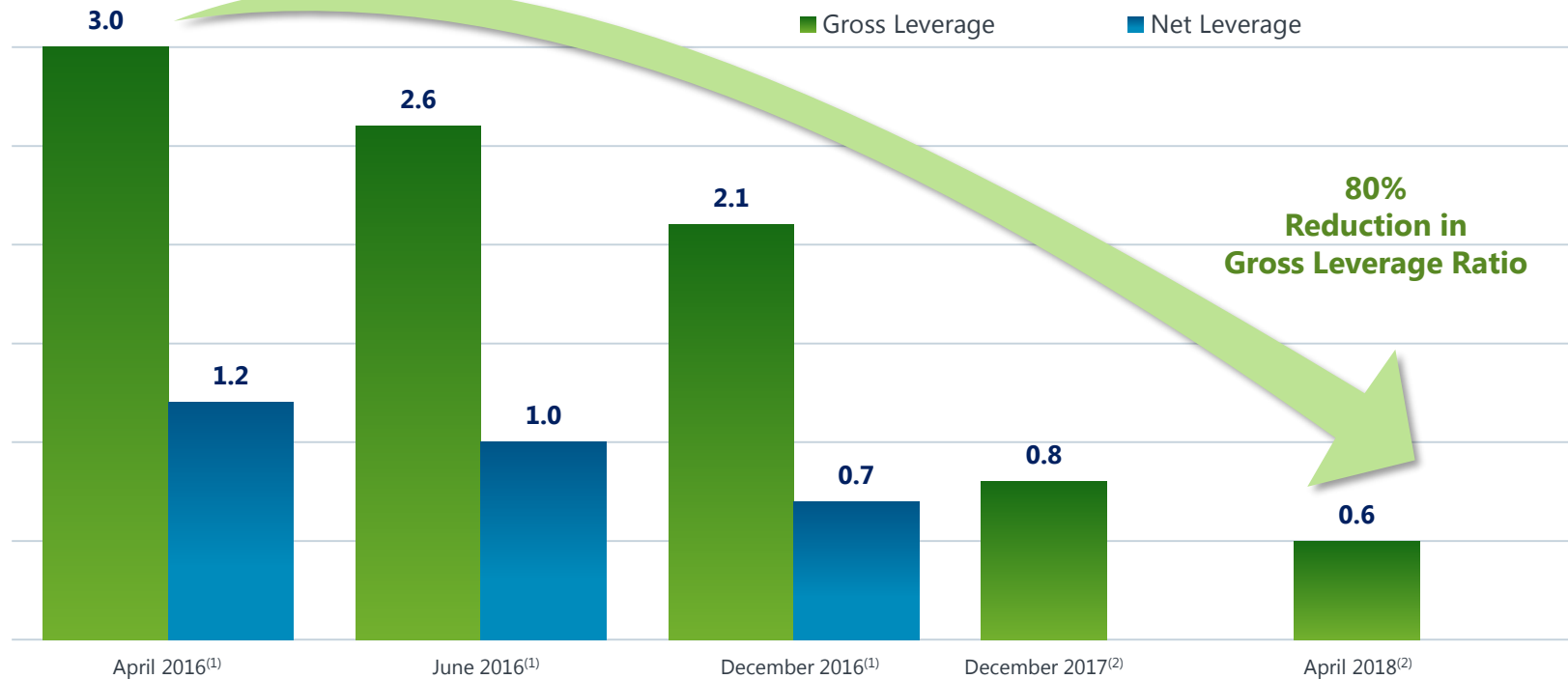


(1) Acquisition of Newport Corporation closed on April 29, 2016. The Q2 2016 amounts assume the acquisition closed on April 1, 2016.

Significant Deleveraging Achieved



Gross and Net Leverage Ratios

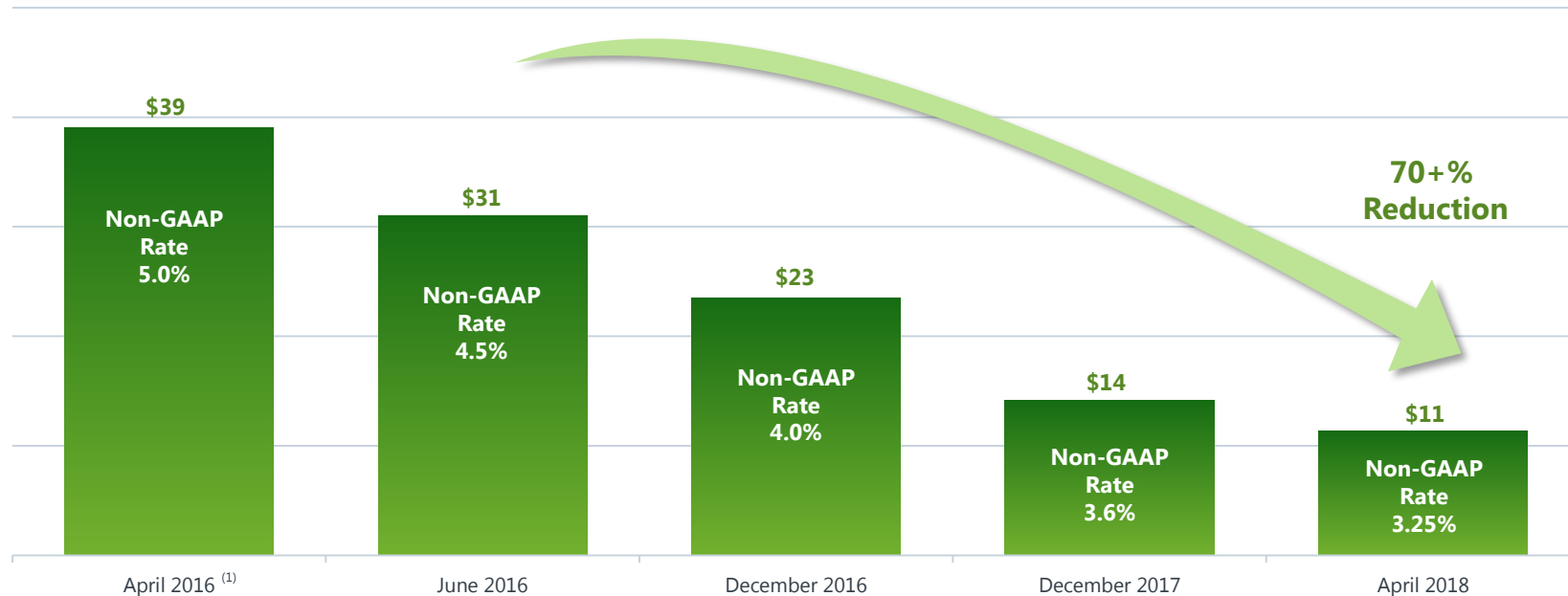


(1) Acquisition of Newport Corporation closed on April 29, 2016. April, June and December 2016 periods are pro forma as if the acquisition of Newport Corporation closed on January 1, 2016.

(2) Net leverage metric not meaningful, Company achieved net cash position in September 2017.

Significant Interest Expense Savings Achieved

Annualized Non-GAAP Interest Expense⁽²⁾ and Rate (in millions)

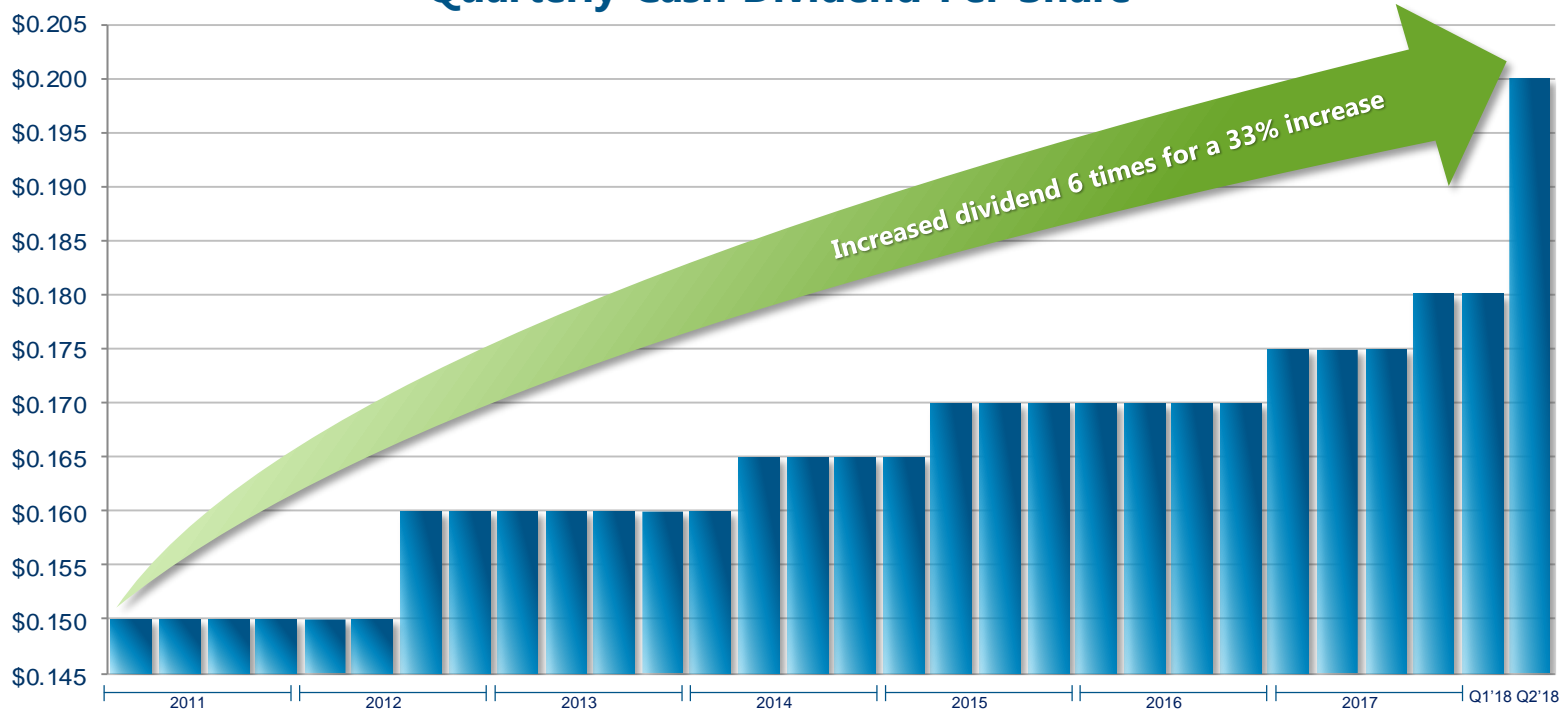


(1) As of closing of acquisition of Newport Corporation on April 29, 2016.

(2) Non-GAAP interest expense excludes amortization of debt issuance costs. Annualized GAAP interest expense, based upon \$780 million principal outstanding and using the LIBOR based interest rate spread in effect on April 29, 2016, was \$44 million and included \$5 million in debt issuance costs. Annualized GAAP interest expense as of April 2018 based upon \$348 million in principal currently outstanding and LIBOR plus 175 basis points would be \$14.5 million and includes \$3.1 million in debt issuance costs.

Track Record of Increasing Dividends

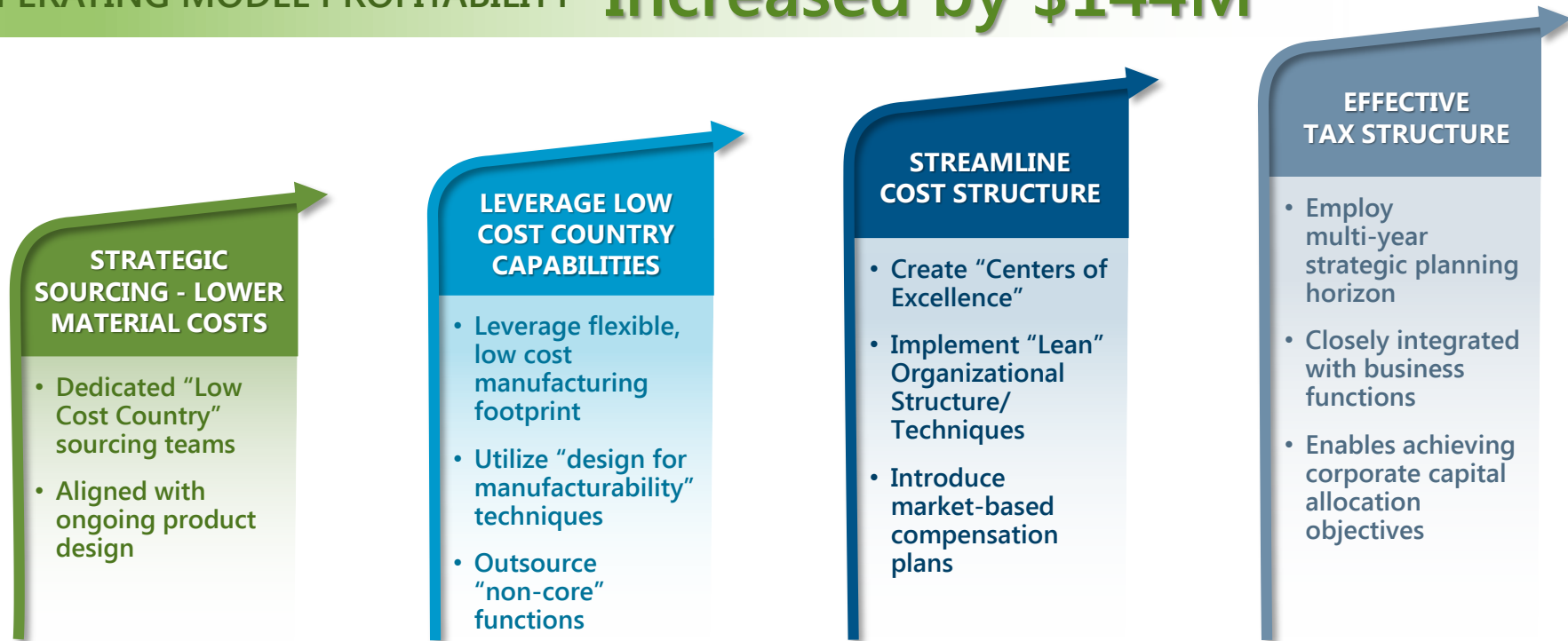
Quarterly Cash Dividend Per Share



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

Deep Culture of Continuous Profitability Improvement

OPERATING MODEL PROFITABILITY **Increased by \$144M⁽¹⁾**



(1) Based on a comparison of 2013 and April 2018 Operating Models

Substantially Improving Operating Model

	2013 MODEL ⁽²⁾		April 2018 MODEL ⁽²⁾	
ILLUSTRATIVE REVENUE LEVELS ⁽¹⁾	\$800M	IMPROVED OPERATING MODEL 13X OVER 5 YEAR PERIOD	\$2,300M	
NON-GAAP GROSS MARGIN	42% - 44%		47% - 49%	
NON-GAAP OPERATING MARGIN	15% - 17%		27% - 29%	
NON-GAAP TAX RATE	33%		19%	
NON-GAAP EPS	\$1.60		482%	\$9.31
EBITDA	\$140M		389%	\$685M

Additional revenue assumes incremental gross margin of 50%

(1) Annual revenue for illustrative purposes only.

(2) At midpoint of model range. Non-GAAP measures may exclude any of the adjustments listed in Non-GAAP Measures on slide 4.

2021 Target Model Assumptions



	4 YEAR CAGR (2013 – 2017)
Wafer Fab Equipment⁽¹⁾	13.3%
Pro forma MKS Revenue:	
Semiconductor ⁽²⁾	18.7%
Advanced Markets ⁽²⁾	4.9%

	4 YEAR CAGR (2017 – 2021)
Market Growth Assumptions:	
Wafer Fab Equipment ⁽¹⁾	4% - 5%
SAM Advanced Markets ⁽¹⁾	4% - 5%
MKS Growth Goals:	
Semiconductor	6% - 7%
Advanced Markets	8% - 10%

(1) VLSI and Company estimates.

(2) Revenue amounts assume acquisition of Newport Corporation closed on January 1, 2013.

2021 Target Model

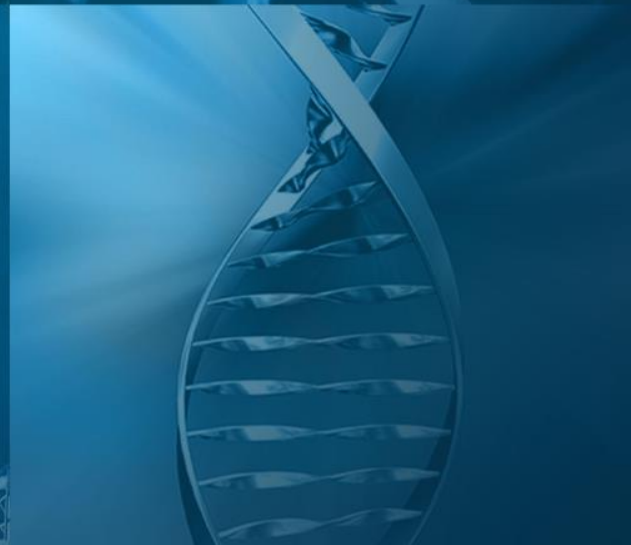
	2017 ACTUAL		2021 MODEL ⁽¹⁾⁽²⁾
REVENUE LEVELS	\$1,916M	36% GROWTH	\$2,600M
NON-GAAP GROSS MARGIN	46.6%		47.5% - 49.5%
NON-GAAP OPERATING MARGIN	24.6%		30% - 32%
NON-GAAP TAX RATE	26.5%		19%
NON-GAAP EPS	\$5.96	94%	\$11.56
EBITDA	\$558M	57%	\$875M

Revenue Growth of ~8% CAGR, 18% CAGR in Non-GAAP EPS

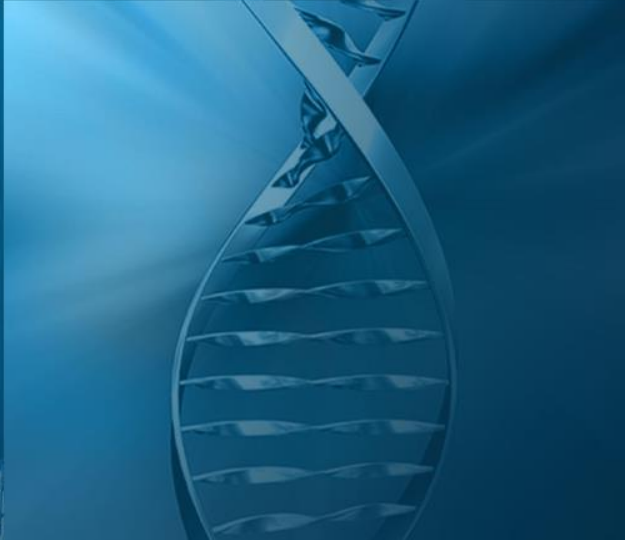
(1) Annual revenue for illustrative purposes only.

(2) At midpoint of model range. Non-GAAP measures may exclude any of the adjustments listed in Non-GAAP Measures on slide 4.

Q&A



Closing

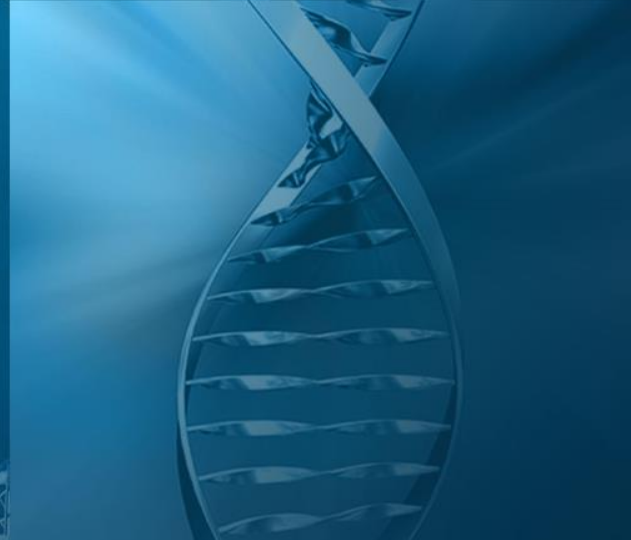


MKS Key Messages

- Track record of **SUSTAINABLE & PROFITABLE GROWTH**
- Leveraged to attractive **HIGH GROWTH MARKETS**
- **GLOBAL TECHNOLOGY LEADER** in served markets
- **ROBUST & DISCIPLINED** business process
- Proven M&A augments **ORGANIC GROWTH**



Executive Bios



MKS Management Team



Gerald G. Colella, *CEO*

- CEO since 2014
- President from 2014 to 2018
- Over 35 years at MKS
- B.A. Secondary Education, University of MA
- M.B.A. Southern New Hampshire University



John T.C. Lee, *President & COO*

- President since 2018
- COO since 2016 and Sr. VP of Business Units since 2014
- 10 years at MKS and 25 years in the industry
- B.S. Princeton University
- M.S.C.E.P and Ph.D. MIT



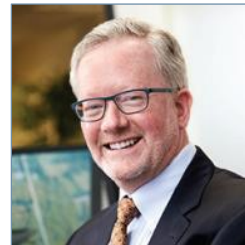
Dave Allen, *Sr. VP & GM, Lasers*

- Sr. VP since 2007
- 11 years at Newport/MKS and 40 years in the industry
- B.S. North Carolina State



Paul Eyerman, *VP & GM, Power Solutions*

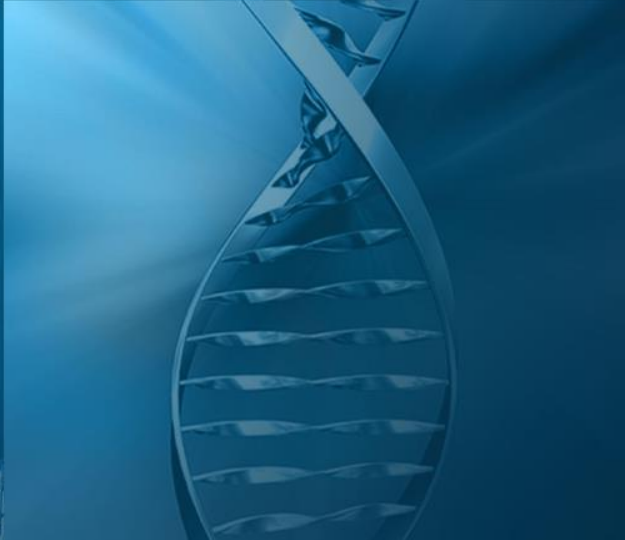
- VP since 2004
- 16 years at MKS and 35 years in the industry
- B.S. University of Illinois Champaign/Urbana
- M.S. Illinois Institute of Technology
- M.B.A. Northwestern University



Seth Bagshaw, *Sr. VP, CFO & Treasurer*

- VP and CFO since 2010, Treasurer since 2011
- 12 years at MKS and over 20 years in the industry
- B.S.B.A. Boston University, Summa Cum Laude
- M.B.A. Cornell University, Certified Public Accountant

GAAP to Non-GAAP Reconciliations



GAAP Net Income Per Share to Non-GAAP Earnings Per Share Reconciliations

(in thousands, except per share data) Year Ended December 31,

	2017	2016	2015	2014	2013
Net income per share	\$ 6.16	\$ 1.94	\$ 2.28	\$ 2.16	\$ 0.67
Adjustments (net of tax, if applicable)					
Acquisition and integration costs	0.10	0.50	-	0.01	-
Acquisition inventory step-up	-	0.28	-	0.04	-
Expenses related to sale of a business	0.02	-	-	-	-
Excess and obsolete inventory charge	0.02	-	-	-	0.12
Sale of previously written down inventory	-	-	(0.04)	-	-
Fees and expenses related to repricing of term loan	0.01	0.02	-	-	-
Amortization of debt issuance costs	0.17	0.13	-	-	-
Restructuring	0.07	0.01	0.04	0.05	0.03
Executive retirement costs	-	-	-	-	0.05
Asset impairment	0.12	0.09	-	-	-
Gain on sale of business	(1.36)	-	-	-	-
Net proceeds from an insurance policy	-	(0.02)	-	-	(0.02)
Amortization of intangible assets	0.83	0.66	0.13	0.09	0.04
Windfall tax benefit on stock-based compensation	(0.20)	-	-	-	-
Withholding tax on dividends	0.25	0.02	-	-	-
Special tax (benefit)/expense	-	-	(0.14)	(0.39)	0.05
Tax benefit from legal entity restructuring	-	(0.09)	-	-	-
Effect of US tax reform	0.08	-	-	-	-
Pro forma tax adjustments	(0.31)	(0.51)	(0.05)	(0.07)	(0.04)
Non-GAAP net earnings per share	<u>\$ 5.96</u>	<u>\$ 3.03</u>	<u>\$ 2.22</u>	<u>\$ 1.89</u>	<u>\$ 0.90</u>
Weighted average shares outstanding	55,074	54,051	53,560	53,515	53,481

Light & Motion Division GAAP Operating Income to Non-GAAP Operating Income Reconciliation

	Q2 '16	Q3 '16	Q4 '16	Q1 '17	Q2 '17	Q3 '17	Q4 '17	Q1 '18
Income (loss) from operations	(\$23.7)	\$5.1	\$11.0	\$18.2	\$13.9	\$28.9	\$40.4	\$43.4
Adjustments:								
Acquisition and integration costs (Note 1)	21.7	0.7	(0.3)	0.4	0.2	-	(0.3)	-
Acquisition inventory step-up (Note 2)	10.1	5.0	-	-	-	-	-	-
Excess and obsolete inventory charge (Note 3)	-	-	-	-	1.2	-	-	-
Restructuring (Note 4)	-	-	-	(0.1)	2.0	-	0.8	0.2
Asset impairment (Note 5)	-	-	-	-	6.7	-	-	-
Environmental costs (Note 6)	-	-	-	-	-	-	-	1.0
Amortization of intangible assets	7.9	10.8	11.0	10.9	9.8	9.3	9.1	9.5
Non-GAAP income from operations	<u>\$16.0</u>	<u>\$21.6</u>	<u>\$21.7</u>	<u>\$29.3</u>	<u>\$33.8</u>	<u>\$38.3</u>	<u>\$50.0</u>	<u>\$54.1</u>
Sales	\$151.1	\$151.5	\$153.1	\$159.2	\$170.9	\$178.1	\$200.6	\$206.0
% of Sales	10.6%	14.3%	14.2%	18.4%	19.8%	21.5%	24.9%	26.2%

Note 1: Acquisition and integration costs related to the acquisition of Newport Corporation by MKS Instruments, Inc. (the "Newport Merger"), which closed during the second quarter of 2016.

Note 2: Adjustments in cost of sales related to the step-up of inventory to fair value as a result of the Newport Merger.

Note 3: Excess and obsolete inventory charges related to the discontinuation of a product line in connection with the consolidation of two manufacturing sites.

Note 4: Restructuring costs during fiscal year 2017 primarily related to the consolidation of two manufacturing plants.

Note 5: Impairment charge primarily related to the write-off of goodwill and intangible assets in conjunction with the consolidation of two manufacturing plants.

Note 6: Environmental costs related to an EPA-designated Superfund site, which was acquired as part of the Newport Merger.

2017 GAAP to Non-GAAP Reconciliations

	Twelve Months Ended December 31, 2017
Income from operations	\$ 406.6
Adjustments:	
Acquisition and integration costs (Note 1)	5.3
Expenses related to the sale of a business (Note 2)	0.9
Excess and obsolete inventory charge (Note 3)	1.2
Fees and expenses relating to repricing of term loan (Note 4)	0.5
Restructuring (Note 5)	3.9
Asset impairment (Note 6)	6.7
Amortization of intangible assets	45.7
Non-GAAP income from operations	<u>\$ 470.9</u>
Non-GAAP operating margin percentage	<u>24.6%</u>
Gross profit	\$ 891.5
Excess and obsolete inventory charge (Note 3)	1.2
Non-GAAP gross profit	<u>\$ 892.6</u>
Non-GAAP gross margin percentage	<u>46.6%</u>

2017 GAAP to Non-GAAP Footnote Disclosures



Note 1: Acquisition and integration costs related to the Newport Corporation acquisition, which closed during the second quarter of 2016.

Note 2: Legal, consulting and compensation related expenses related to the sale of a business.

Note 3: Excess and obsolete inventory charges in cost of sales related to the discontinuation of a product line in connection with the consolidation of two manufacturing plants.

Note 4: Fees and expenses related to the repricings of our Term Loan Credit Agreement.

Note 5: Restructuring costs related to the consolidation of two manufacturing plants, a restructuring of one of our international facilities and the consolidation of certain sales offices.

Note 6: Asset impairment charge primarily related to the write-off of goodwill and intangible assets in conjunction with the consolidation of two manufacturing plants.

GAAP to Non-GAAP Tax Rate Reconciliation

	Twelve Months Ended December 31, 2017		
	Income Before Income Taxes	Provision (benefit) for Income Taxes	Effective Tax Rate
GAAP	\$ 447.6	\$ 108.5	24.2%
Adjustments:			
Acquisition and integration costs (Note 1)	5.3	-	
Expenses related to the sale of a business (Note 2)	0.9	-	
Excess and obsolete inventory charge (Note 3)	1.2	-	
Fees and expenses relating to repricing of term loan (Note 4)	0.5	-	
Amortization of debt issuance costs (Note 5)	9.4	-	
Restructuring (Note 6)	3.9	-	
Asset impairment (Note 7)	6.7	-	
Gain on sale of business (Note 8)	(74.9)	-	
Amortization of intangible assets	45.7	-	
Windfall tax benefit on stock-based compensation (Note 9)	-	11.1	
Taxes related to the sale of a business (Note 10)	-	(2.9)	
Deferred tax adjustment (Note 11)	-	24.5	
Transition tax on accumulated foreign earnings (Note 12)	-	(28.7)	
Accrued tax on MKS subsidiary distribution (Note 13)	-	(14.0)	
Tax effect of pro forma adjustments	-	19.6	
Non-GAAP	<u>\$ 446.4</u>	<u>\$ 118.2</u>	26.5%

GAAP to Non-GAAP Tax Rate Footnote Disclosures

Note 1: Acquisition and integration costs related to the Newport Corporation acquisition, which closed during the second quarter of 2016.

Note 2: Expenses related to the sale of a business.

Note 3: Excess and obsolete inventory charges in cost of sales related to the discontinuation of a product line in connection with the consolidation of two manufacturing plants.

Note 4: Fees and expenses related to the repricing of our Term Loan Credit Agreement.

Note 5: Amortization of debt issuance costs related to our Term Loan Credit Agreement and ABL Facility.

Note 6: Restructuring costs primarily related to the consolidation of two manufacturing plants, and costs related to a restructuring of one of our international facilities and the consolidation of certain sales offices.

Note 7: Asset impairment charge primarily related to the write-off of goodwill and intangible assets in conjunction with the consolidation of two manufacturing plants.

Note 8: Gain on the sale of our Data Analytics Solutions business.

Note 9: Windfall tax benefit on the vesting of stock-based compensation relating to the implementation of a new accounting standard issued by the Financial Statement Accounting Standards Board (Accounting Standards Update 2016-09).

Note 10: Taxes related to the sale of our Data Analytics Solutions business.

Note 11*: Deferred tax adjustment, which also includes the reversal of a tax accrual on a French dividend, related to the 2017 Tax Cut and Jobs Act.

Note 12*: Transition tax on accumulated foreign earnings related to the 2017 Tax Cut and Jobs Act.

Note 13*: Accrual for tax expense on a potential distribution to a subsidiary related to the 2017 Tax Cut and Jobs Act.

*The computation of the one-time tax on our offshore earnings pursuant to the 2017 Tax Cut and Jobs Act (the "Tax Act") as well as our net deferred tax liability is based on our current understanding and assumptions regarding the impact of the Tax Act, and may change as additional clarification and implementation guidance is issued and as the interpretation of the Tax Act evolves over time.