

ANALYST DAY 2017



Safe Harbor

The company's guidance with respect to anticipated financial results for the first quarter ending March 31, 2017, potential future progress towards our new aspirational goals, expectations regarding future market trends and the company's future performance within specific markets (e.g., statements regarding anticipated semiconductor and industrial market growth) and other statements that are not historical information are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are subject to known and unknown risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. Such risks and uncertainties include, but are not limited to: (a) the effects of global macroeconomic conditions upon demand for our products and services; (b) the volatility and cyclical nature of the industries the company serves, particularly the semiconductor industry; (c) delays in capital spending by end-users in our served markets; (d) the accuracy of the company's estimates related to fulfilling solar inverter product warranty and post-warranty obligations; (e) the company's ability to realize its plan to avoid additional costs after the solar inverter wind-down; (f) the accuracy of the company's assumptions on which its financial statement projections are based; (g) the impact of price changes, which may result from a variety of factors; (h) the timing of orders received from customers; (i) the company's ability to realize benefits from cost improvement efforts including avoided costs, restructuring plans and inorganic growth; (j) the company's ability to obtain in a timely manner the materials necessary to manufacture its products; and (k) unanticipated changes to management's estimates, reserves or allowances. These and other risks are described in Advanced Energy's Form 10-K, Forms 10-Q and other reports and statements filed with the Securities and Exchange Commission (the "SEC"). These reports and statements are available on the SEC's website at www.sec.gov. Copies may also be obtained from Advanced Energy's investor relations page at <http://ir.advanced-energy.com> or by contacting Advanced Energy's investor relations at 970-407-6555. Forward-looking statements are made and based on information available to the company on the date of this presentation. Aspirational goals and targets discussed on the conference call or in the presentation materials should not be interpreted in any respect as guidance. The company assumes no obligation to update the information in this presentation.

Non-GAAP Measures

This presentation includes GAAP and non-GAAP income and per-share earnings data and other GAAP and non-GAAP financial information. Advanced Energy's non-GAAP measures exclude the impact of non-cash related charges such as stock based compensation, amortization of intangible assets and restructuring costs, as well as acquisition related costs and other non-recurring items. For the first quarter ending March 31, 2017 guidance, the company expects stock based compensation of \$2.0 million and amortization of intangibles of \$1.0 million. The non-GAAP measures included in this presentation are not in accordance with, or an alternative for, similar measures calculated under generally accepted accounting principles 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. Advanced Energy believes that these non-GAAP measures provide useful information to management and investors to evaluate business performance without the impacts of certain non-cash charges and other charges which are not part of the company's usual operations. The company uses these non-GAAP measures to assess performance against business objectives, make business decisions, develop budgets, forecast future periods, assess trends and evaluate financial impacts of various scenarios. In addition, management's incentive plans include these non-GAAP measures as criteria for achievements. Additionally, the company believes that these non-GAAP measures, in combination with its financial results calculated in accordance with GAAP, provide investors with additional perspective. While some of the excluded items may be incurred and reflected in the company's GAAP financial results in the foreseeable future, the company believes that the items excluded from certain non-GAAP measures do not accurately reflect the underlying performance of its continuing operations for the period in which they are incurred. The use of non-GAAP measures has limitations in that such measures do not reflect all of the amounts associated with the company's results of operations as determined in accordance with GAAP, and these measures should only be used to evaluate the company's results of operations in conjunction with the corresponding GAAP measures. Please refer to the Form 8-K for our latest earnings release filed with the Securities and Exchange Commission regarding this information.

Agenda

Introduction	Annie Leschin	9:00 am
Strategic Highlights and Outlook	Yuval Wasserman	9:05 am
Semiconductor	Tom Karlicek	9:25 am
Industrial Thin Films	Bruce Fries	9:45 am
Specialty Power/Industrial Sales Strategy	Greg Provenzano	10:05 am
COFFEE BREAK		10:25 am
Accelerating Innovation	Randy Heckman	10:40 am
Operations & Service	Mike McDonald	11:00 am
Financial Review	Tom Liguori	11:20 am
Q&A	All	11:40 am
LUNCH		12:00 pm

Management Team



Yuval Wasserman

PRESIDENT & CEO

30 yrs semiconductor & electronics industry experience

With Advanced Energy since 2007



Tom Liguori

EVP & CFO

30 yrs industry finance & operations experience

With Advanced Energy since 2015



Tom McGimpsey

EVP, GENERAL COUNSEL & CORP. SECRETARY

30 yrs legal & industry experience

With Advanced Energy since 2009



Randy Heckman

SVP, PRECISION POWER PRODUCTS

30 yrs industry & product development experience

With Advanced Energy since 1990

Management Team



Greg Provenzano

**SVP, GLOBAL SALES &
CORP. MARKETING**

34 yrs industry sales &
marketing experience

With Advanced Energy
since 2016



Mike McDonald

VP, GLOBAL SERVICES

29 yrs industrial and high-
tech industry experience

With Advanced Energy
since 2002



Tom Karlicek

**DIRECTOR, PRODUCT
MARKETING**

28 yrs semiconductor &
biotech industry
experience

With Advanced Energy
since 2004



Bruce Fries

**DIRECTOR, PRODUCT
MARKETING**

30 yrs of industry
management & marketing
experience

With Advanced Energy
since 1994

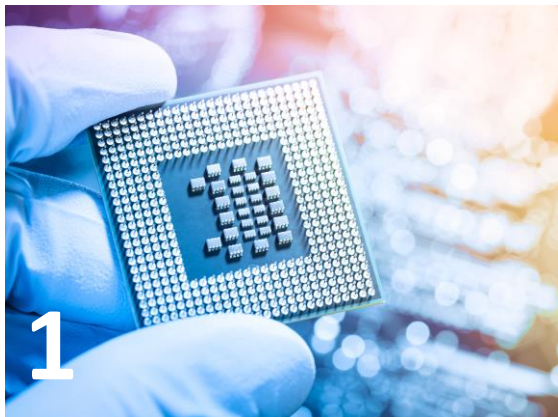
ANALYST DAY 2017

STRATEGIC HIGHLIGHTS AND OUTLOOK



Yuval Wasserman
PRESIDENT & CEO

Strategic Journey: 2015-2017 and Beyond



1 RESTRUCTURE FOR INCREASED PROFITABILITY

- Divested Inverter business
- Integrated acquisitions
- Semiconductor design wins
- Operational excellence



2 GROWTH AND DIVERSIFICATION

- Semiconductor ramp
- Industrial markets
- Service business
- Infrastructure



3 ACCELERATED PROFITABLE GROWTH

- Innovation
- Leadership
- Diversification
- Agile operation

***GOAL: Sustainable, Profitable
Growth and Value Creation***

\$1.1B Increase in Shareholder Value in 2016

- Significant YoY growth across all business parameters
 - Revenue +17%
 - Non-GAAP EPS +43%
 - Increased market share in fast growing Semiconductor market
 - Critical design wins across all products
 - Customer awards (AMAT, Samsung)
 - Geographical expansion of Specialty Power products
- Accelerated progress vs. 3-year aspirational goals:

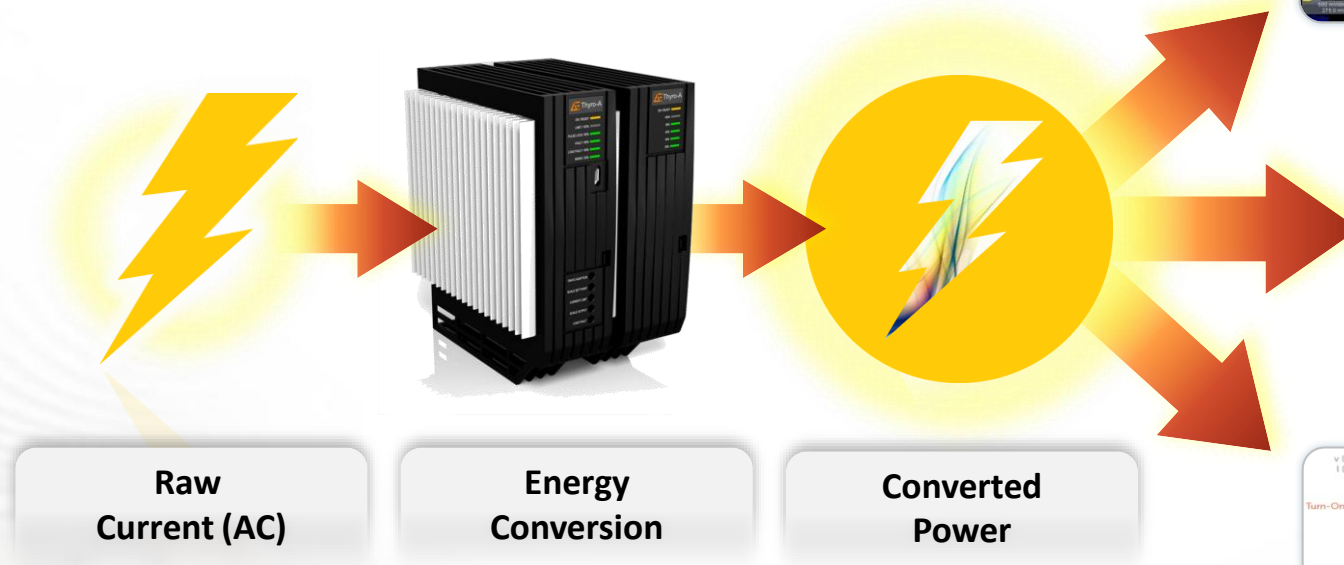
ATTRIBUTE	INITIAL 2018 GOAL	2016 ACTUAL	% ACCOMPLISHMENT
Revenue	\$700M	\$484M	69%
Cumulative Cash	\$300M	\$116M	38%
Non GAAP EPS	\$ 3.00-3.50	\$3.11	100%

Power Technology Enables Everyday Products

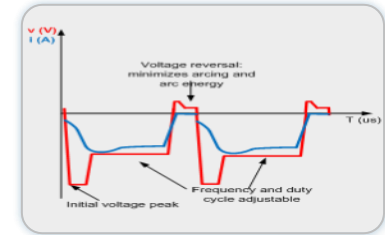


*“Breakthrough Power Technology
for Breakthrough Applications”*

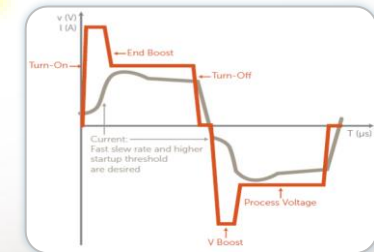
Electric Power Conversion for Precision Power Delivery



MULTI-LEVEL PULSED RF

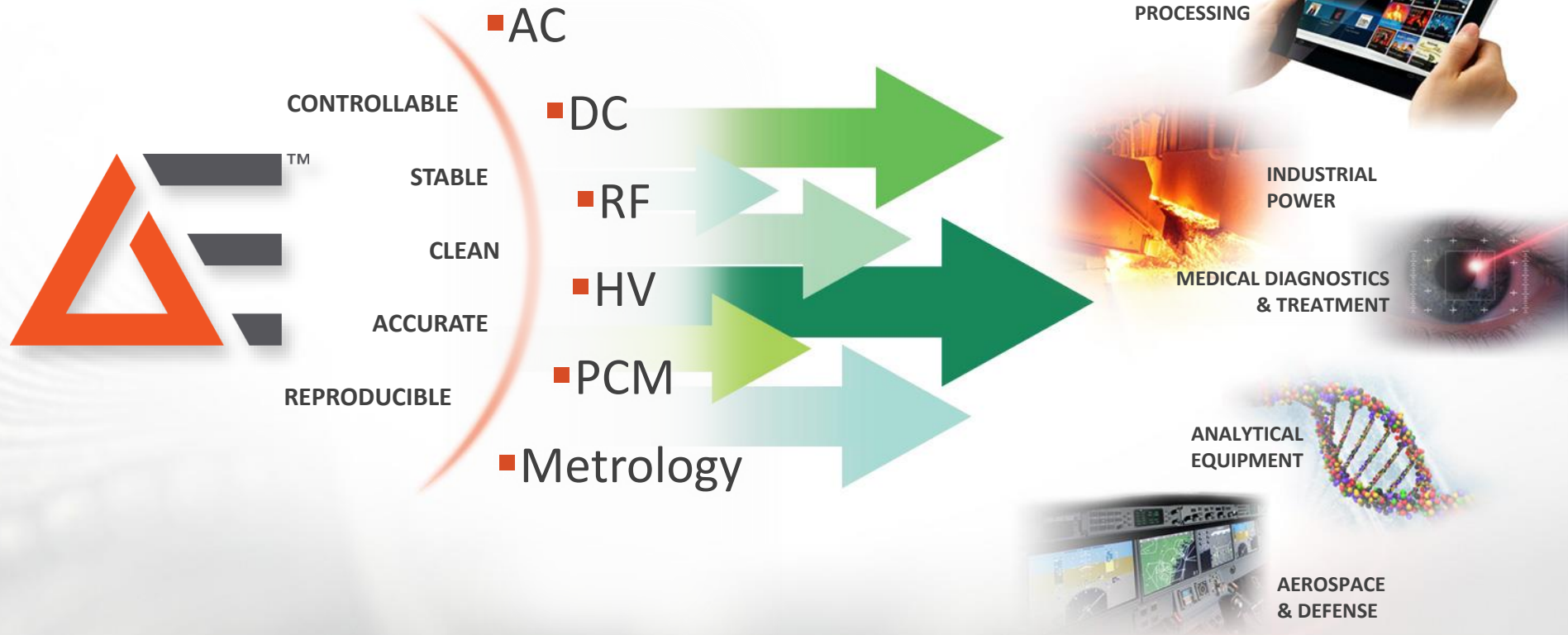


PULSED DC



AC & BIPOLAR DC

Precision Power Solutions Enable Critical Applications



Products & Applications

PROCESS POWER



Paramount® RF
Power-Delivery Systems

APPLICATION: **PLASMA ETCH**

Ascent® DMS
(advanced Dual Magnetron Sputtering)

APPLICATION: **THIN FILM DEPOSITION**



Ascent® AMS
DC Power Supplies 30, 40 & 60kW

APPLICATION: **SPUTTERING**

Solvix®
DC & Pulsed DC Power Supplies

APPLICATION: **METALLIC & REACTIVE SPUTTERING**



SPECIALTY POWER

HIGH VOLTAGE

APPLICATION: Semiconductor implantation & inspection, X-ray, mass spectrometry, scientific, industrial, and medical



UltraVolt®



HiTek Power®



Thyro® PCMs

Thyristor Power Control Modules

APPLICATION: **ELECTRICAL HEATING, SWITCHING**

Sekidenko®

Optical Temperature Measurement

APPLICATION: **NO-CONTACT TEMPERATURE MEASUREMENT (PYROMETRY)**



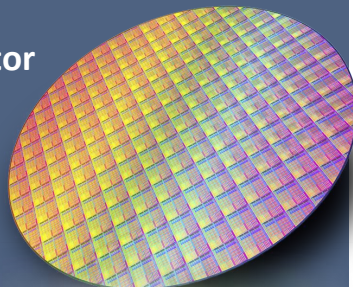
Mega Trends Driving Growth

General Power Products & Solutions



- Analytics, information, advanced controls , IoT, Industry 4.0
- \$/W, Green power
- Migration from discrete boxes to configurable systems

Semiconductor Processes



- Consumer products (mobility, connectivity, UX)
- New user applications technologies (AR/VR, AI, IoT, Robotics)
- Explosive demand for Memory (3DNAND) and advanced Logic
- New IC architectures, processes and materials
- China expansion

Industrial Thin Films Processing



- Accelerated adoption of advanced FPD products (4K/8K, OLED)
- Lower cost of vacuum/plasma based thin films processing
- Engineered precision materials – need enablement

Specialty Power Applications



- Precision power solutions in environmental, security, mfg, and medical markets
- Need for integrated and connected solutions (systems)

Sustainable Growth Model

Accelerated Profitable Growth

Technology

- Pure play power
- Focused innovation
- Accelerated TTM
- Co-development
- Core competencies

Customers

- Trusted partnering
- Engagement models
- Proximity/footprint
- Responsiveness
- Agility in operations

Organization

- Critical skill set
- Scalability
- Robust processes
- Constant learning
- Cultural attributes

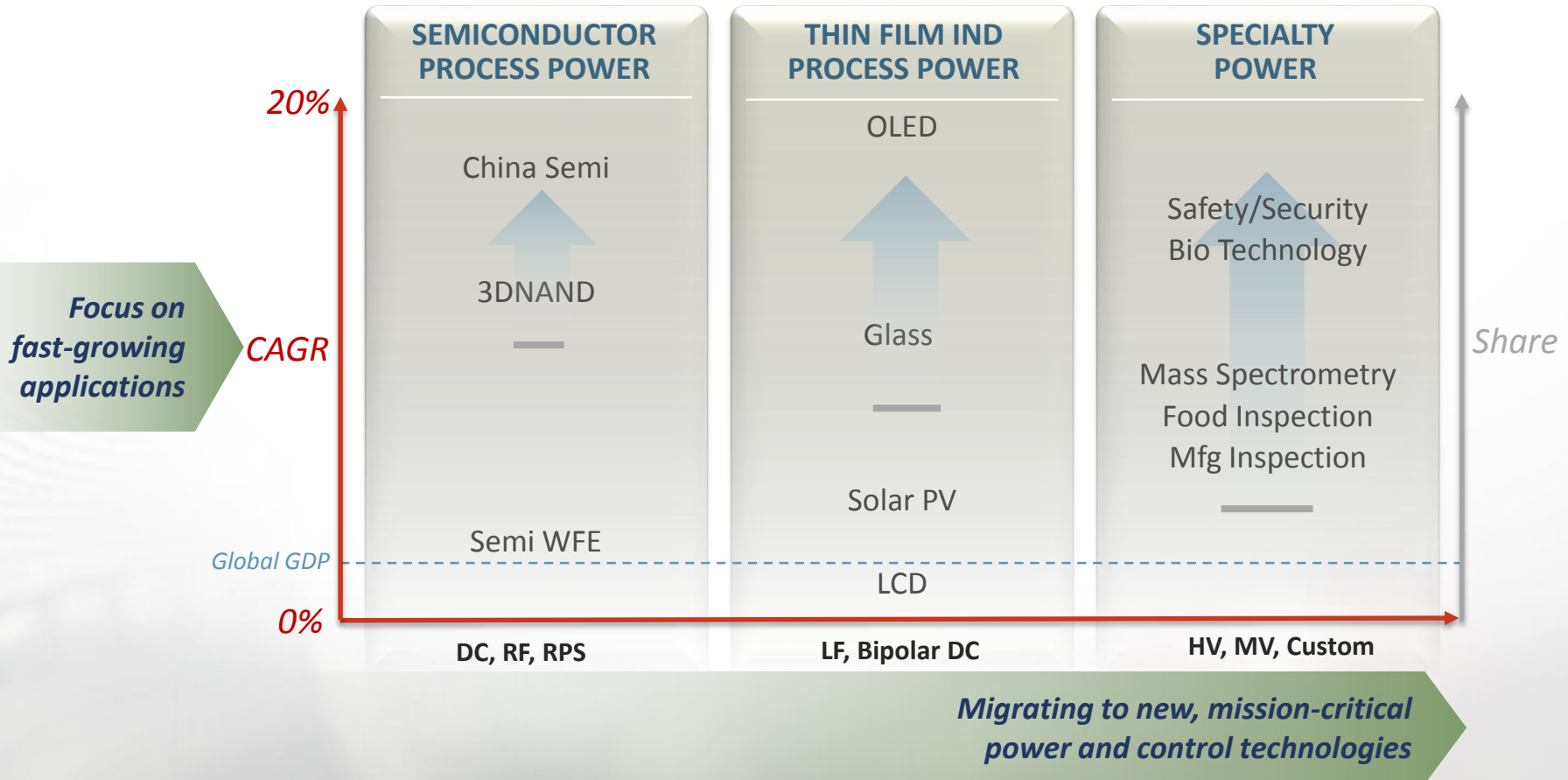
Acceleration

- Organic/inorganic
- Products
- Markets
- Applications
- Geographies

Strong Core Competencies

- Precision Power Engineering
- Operational Excellence , Global Footprint, Customer Support
- Sound Financial & Capital Deployment Strategies

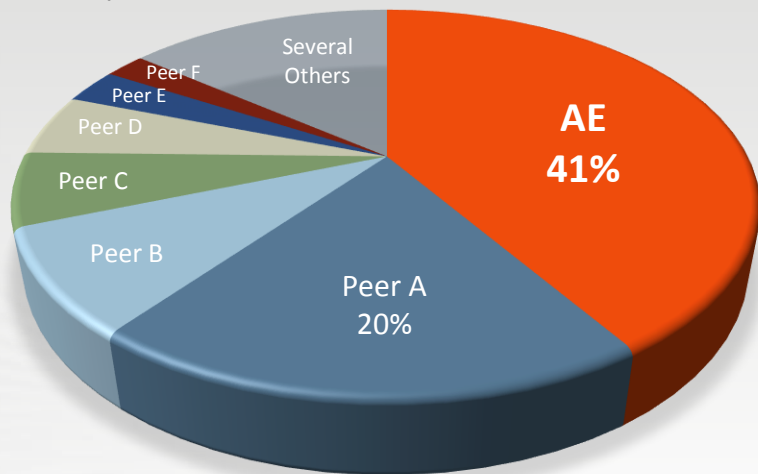
Expanding in High Growth Areas



Share Leader in Served Markets

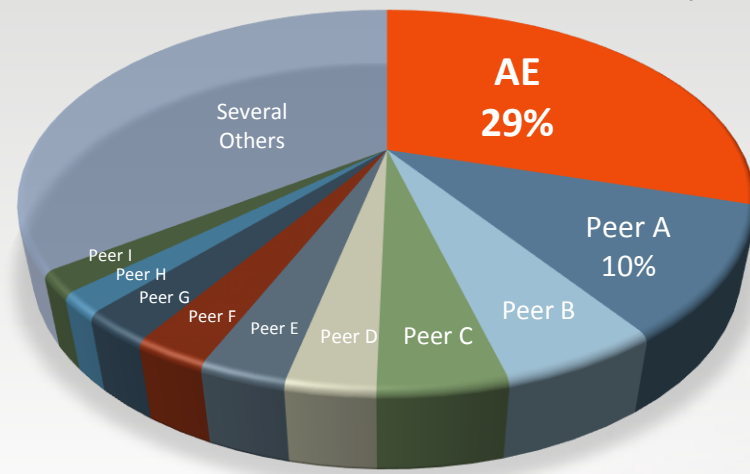
2015 VLSI PROCESS POWER
C-SUBS SHARE SEMI/FPD/DS/PV

SAM = \$0.6B



2015 AE TOTAL (Process & Specialty Power)
SHARE ESTIMATE ⁽¹⁾

SAM = \$1.2B



- AE is #1 in Process Power for C-Subs, #1 in total (new) served markets
 - C-SUBS is mature/consolidated, new markets are fragmented and open for new players
- AE wins due to leading product performance, high product quality, localized R&D, operations speed/responsiveness, and Global Service in key regions

Driving Strong Shareholder Returns



(1) Please note that hypothetical scenarios regarding revenue growth, EBITDA, EPS, cash generation, acquisitions, aspirational goals and targets and similar statements illustrate various possible outcomes of our different strategies if they are successful. These hypothetical scenarios and illustrations should not be treated as forecasts or projections or financial guidance. We cannot assure you that we will be able to accomplish any of these goals, metrics or opportunities at any point in the future (if at all), all of which are subject to significant risks and uncertainties.

(2) Refer to the non-GAAP reconciliation for additional detail.

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SEMICONDUCTOR

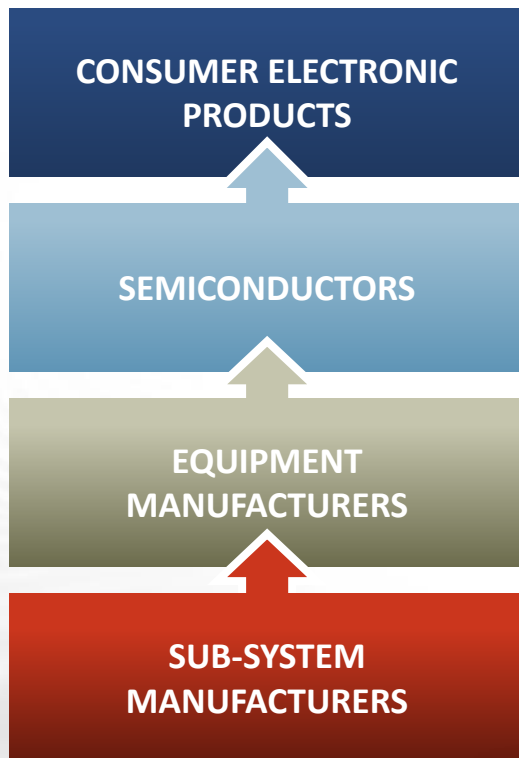


Tom Karlicek
DIRECTOR, PRODUCT MARKETING

Leading the Way Forward

- Enabling leading-edge semiconductor manufacturing
- Market dynamics accelerating memory and logic demand
- Advanced 3D devices driving etch and deposition
- Outpacing the equipment market

Critical Position in the Value Chain



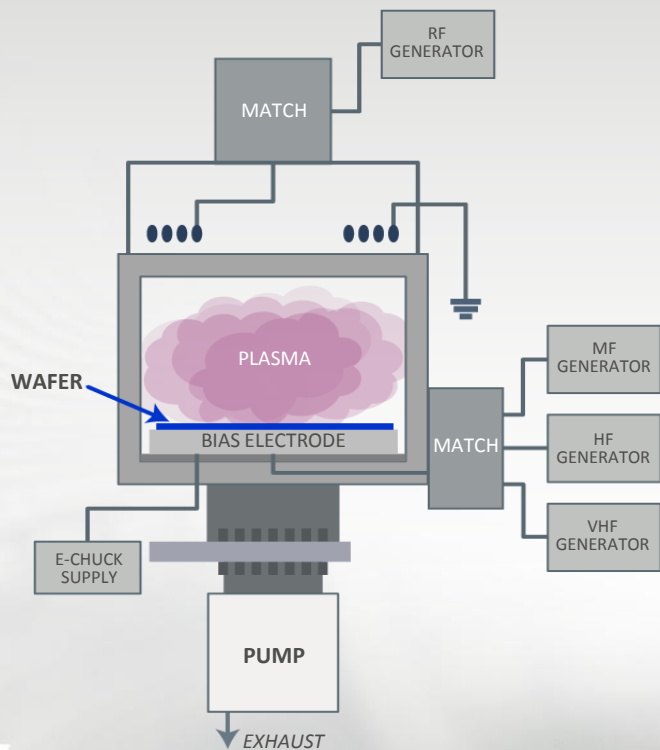
PRODUCTS	MARKET LEADERS
	
	
	
	

A Trusted Partner

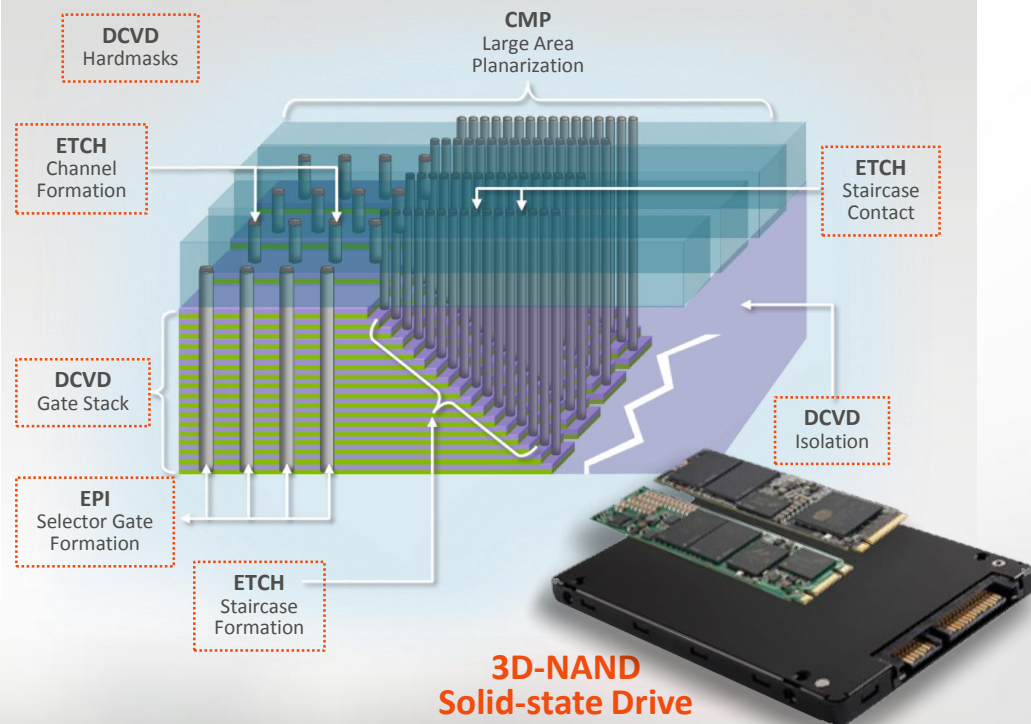
Enabling Technologies

Conductor & Dielectric Etch Plasma Enhanced CVD Plasma Enhanced ALD Electro-Chemical Deposition Epitaxial Deposition

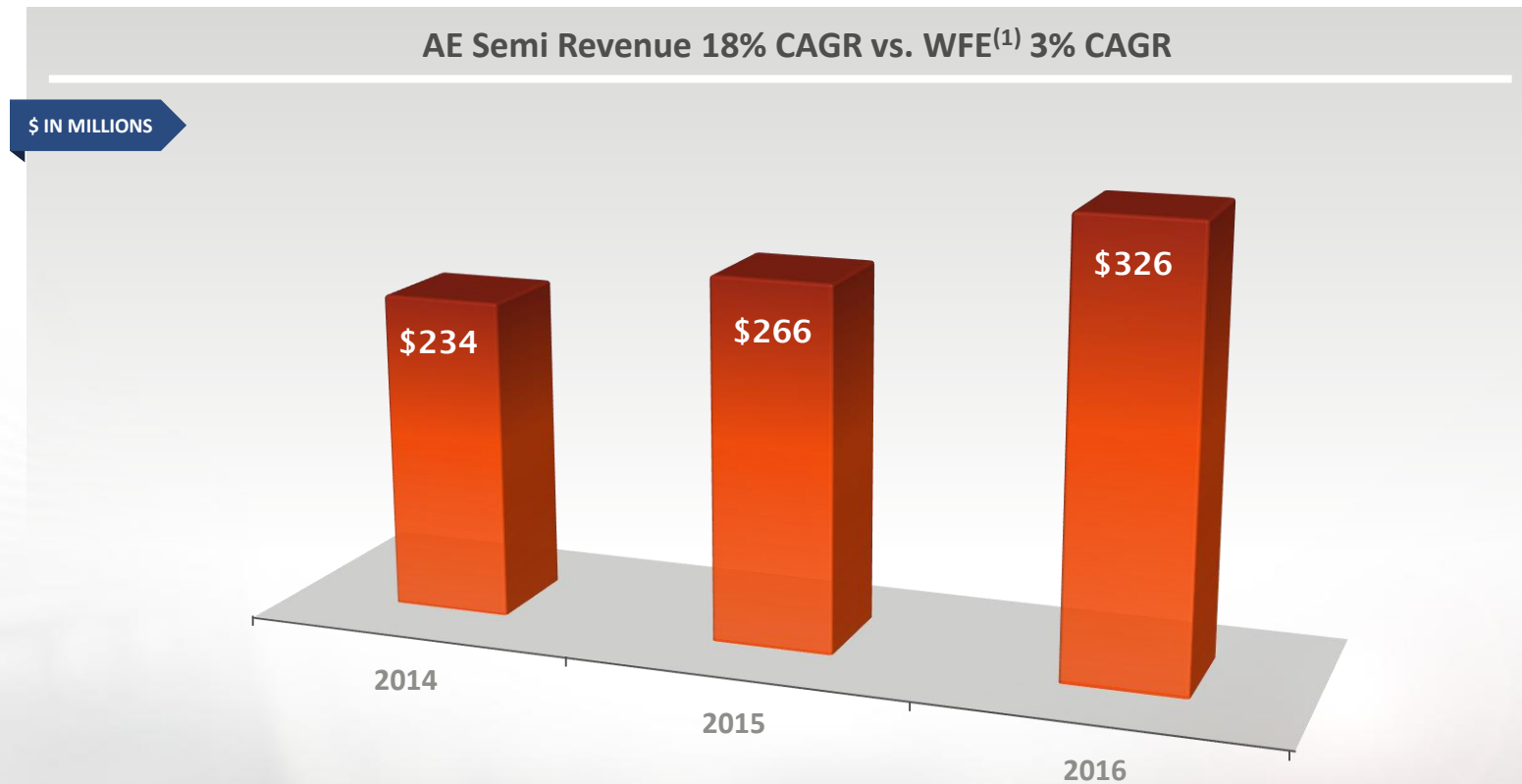
ADVANCED POWER DELIVERY / CONTROL



3D-NAND DEVICE

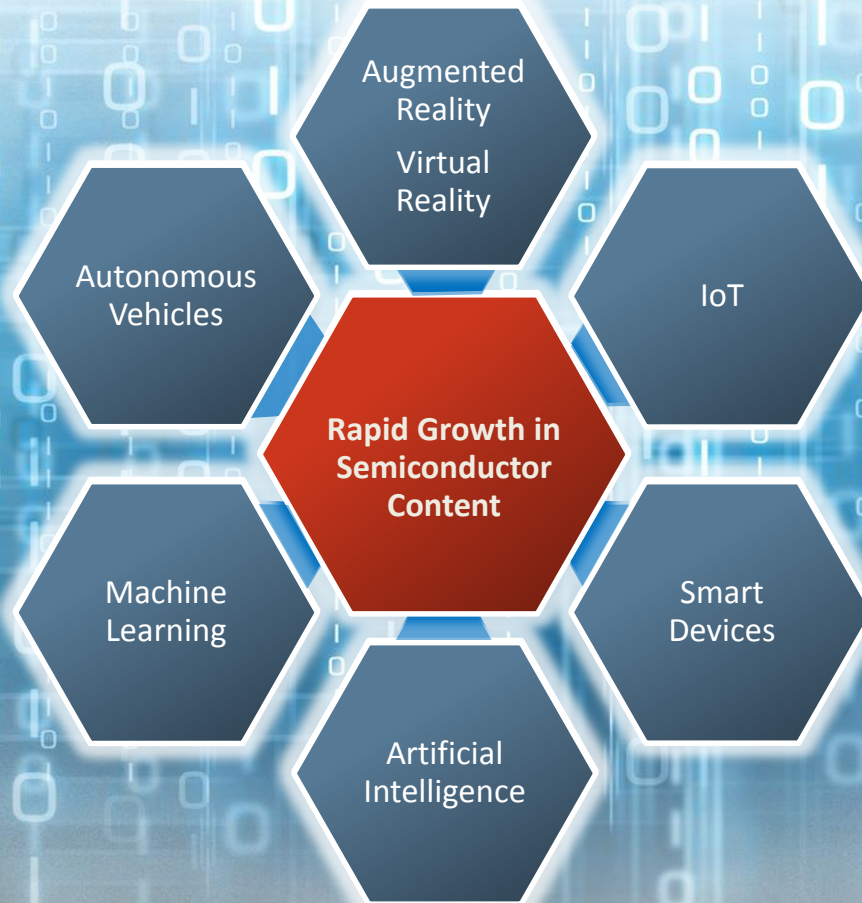


Significantly Outperforming WFE | 2014-16



(1) Source: Gartner.

“Big Data” Drives a New Paradigm in Semi



Device & Process Drivers

Virtual Reality/Augmented Reality

DEVICE DEMAND

3D-NAND / DRAM and
new cell architectures

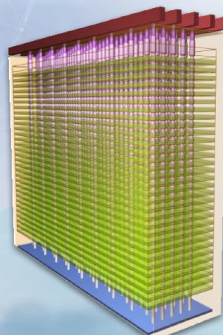


Photo courtesy of Micron

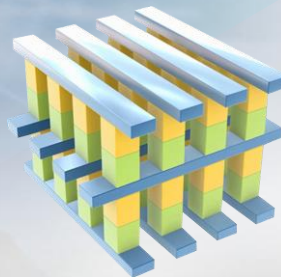


Photo courtesy of Intel

PROCESS DEMAND

High Aspect Ratio Etch
Plasma Clean

Higher Powers

Multiple Frequencies

***Increased AE Power Delivery
Content per Chamber***

Device & Process Drivers

Autonomous Connected Vehicles

DEVICE DEMAND

Advanced Node 3D Logic
Self-aligned Multi Patterning
New device architectures

PROCESS DEMAND

Atomic Layer Deposition
Atomic Layer Etch
Plasma-based Clean

FinFET
Gate-All-Around

Photo courtesy of semiwiki

Advanced Power Controls

New Remote Plasma Sources

*Increased AE Power Delivery
Content per Chamber*



Leading Process Applications

CONDUCTOR / DIELECTRIC

Plasma Etch: creating energized gas (plasma) used to etch small features for fabrication of integrated circuits

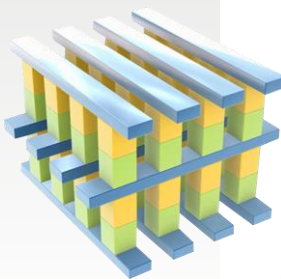
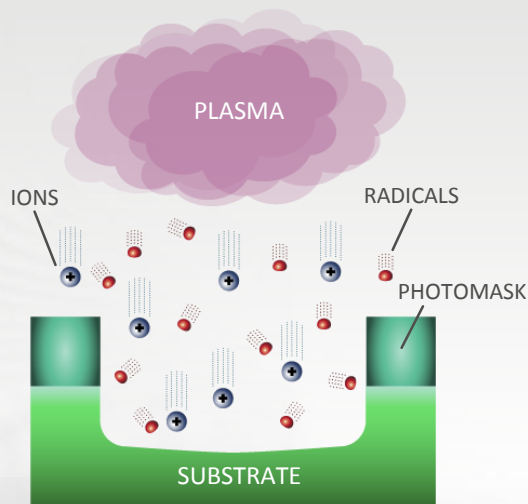


Photo courtesy of Intel

Process Demand

High Aspect Ratio

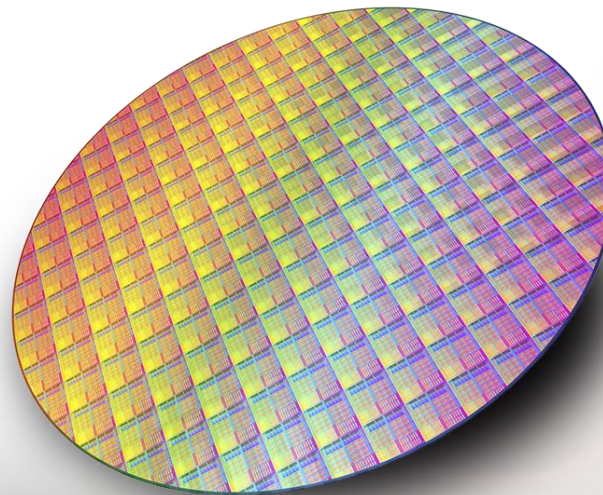
Low Ion Damage

Plasma Stability

AE's Leading Capabilities

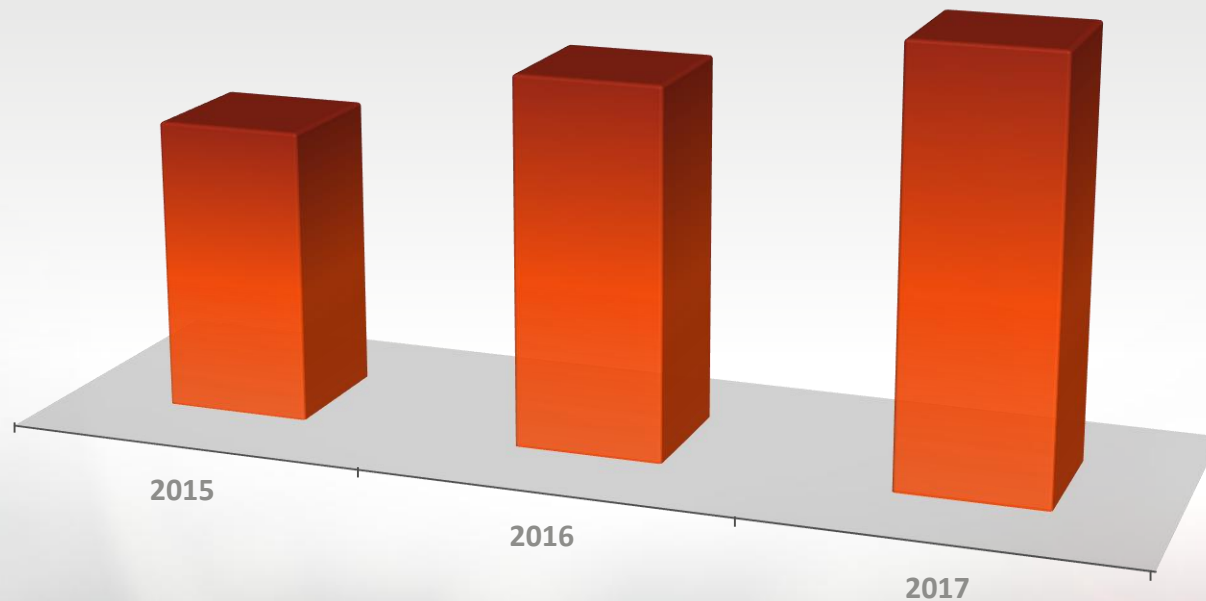
Multi-Level Pulsing

Adaptive Frequency Tuning



Consistently 2x to 3x Etch Market | 2015-17E

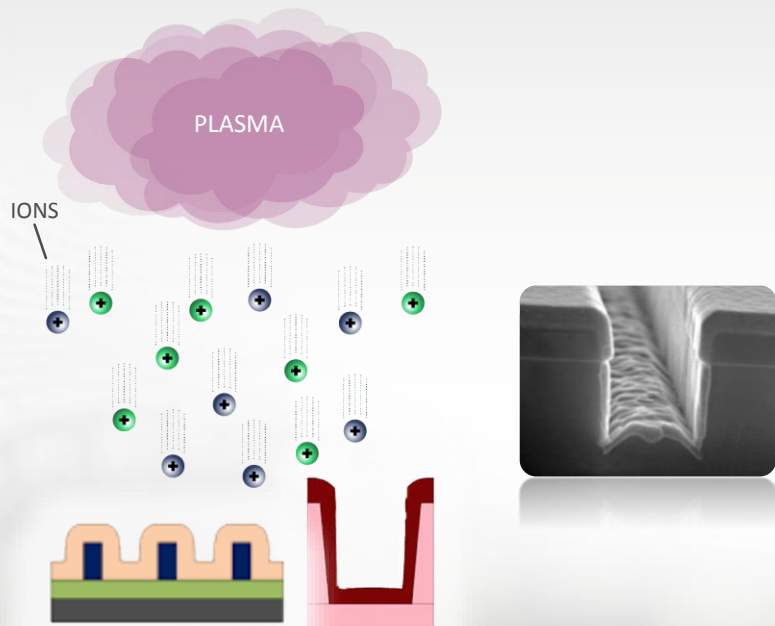
AE Etch Revenue 21% CAGR vs. Etch Market ⁽¹⁾ 8% CAGR



Leading Process Applications

CHEMICAL VAPOR DEPOSITION

Plasma CVD: an energized gas (plasma) used to etch small features for fabrication of integrated circuits



Process Demand

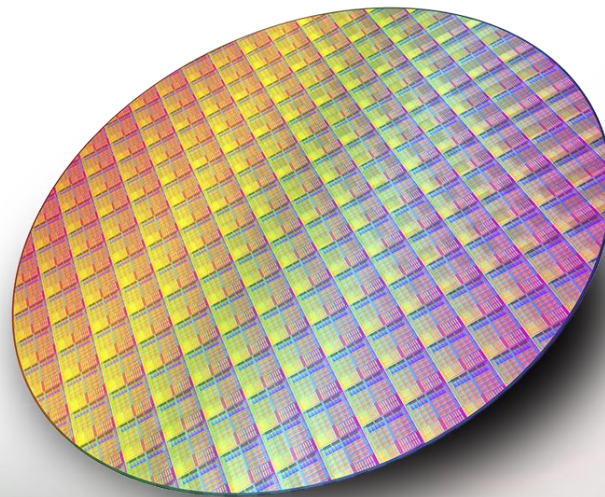
Microsecond Response

Low Power Accuracy

AE's Leading Capabilities

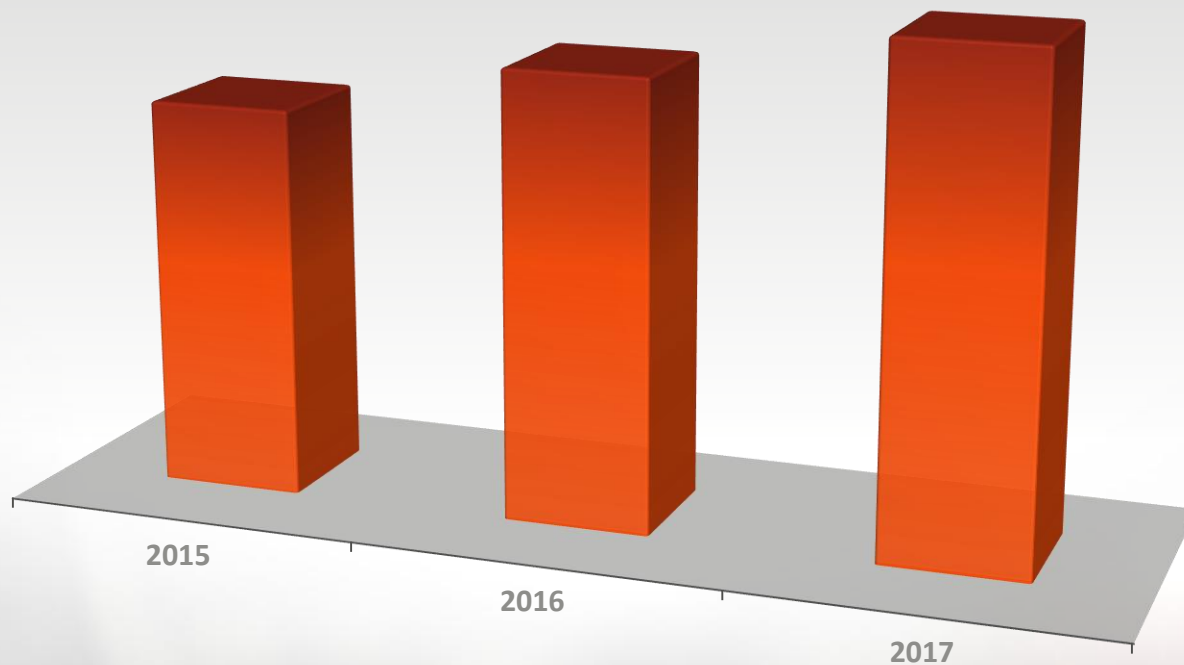
Advanced Controls

Advanced Instrumentation



Outpacing PECVD Market | 2015-17E

AE PECVD Revenue 13% CAGR vs. PECVD Market ⁽¹⁾ 10% CAGR



Leading the Way Forward

- A critical, trusted partner in the value chain
- Delivers enabling power and control technologies – today
- Well positioned to ride the “New Wave” paradigm in Semi
- Outperforming the WFE market in mission-critical applications
- Share leader in our served markets



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THIN FILM INDUSTRIAL



Bruce Fries
DIRECTOR, PRODUCT MARKETING

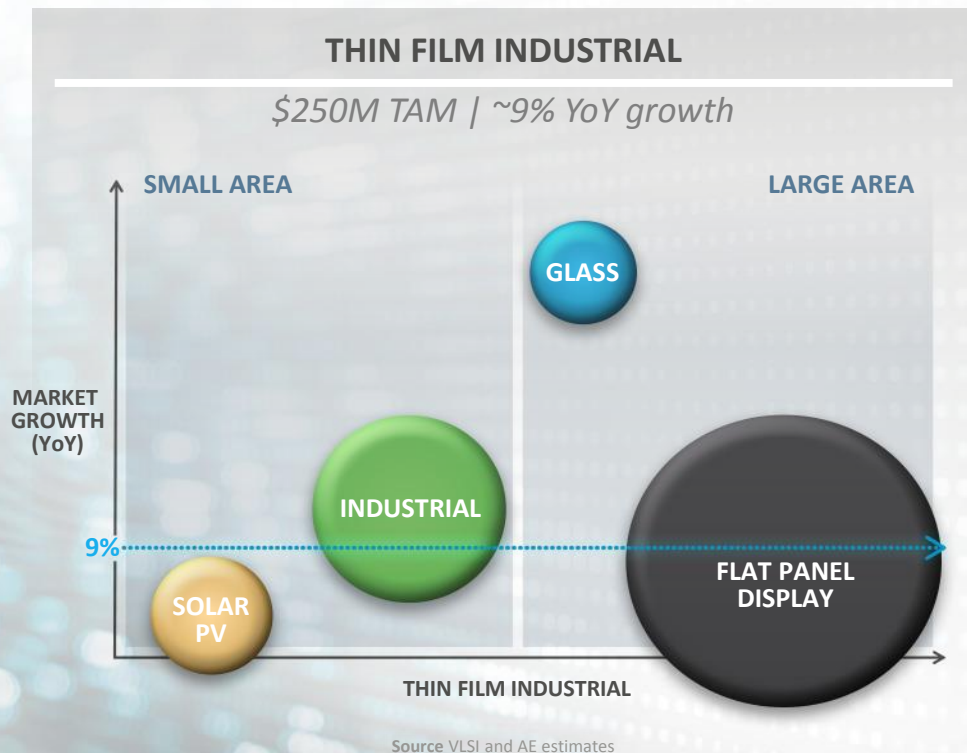
Thin Film Industrial

Major Component of Industrial Strategy

- Including process power used for thin film coating applications
- Markets
 - Flat Panel Display (including OLED)
 - Architectural glass
 - PV solar cells
 - Industrial coating
- Large and diverse customer base (300+)
 - Various sales channels
 - Global OEMs serving multiple applications



Growth Driven By Volume, Scale & Technology



- New technology inflections
 - Mobile device form factor
 - OLED volume ramp & 8K
 - Large area processing
 - Glass bi-metallic materials
- Increases in demand
 - Solar PV expansion
 - Mobile device penetration
 - Growing demand in China
 - Accelerated adoption of low-e Glass
- Emerging retrofit need
 - FPD equipment extension and re-use
 - Glass coaters facing high utilization

Evolutions Present Multiple Growth Opportunities

- Advanced materials processing requires highly-engineered solutions
 - Precision uniformity across the part
 - Part-to-part repeatability
 - Manufacturing yield improvements
- Device complexity drives technology content multipliers
- Extending life and re-use of existing process equipment



SHARE GAIN



MORE CONTENT



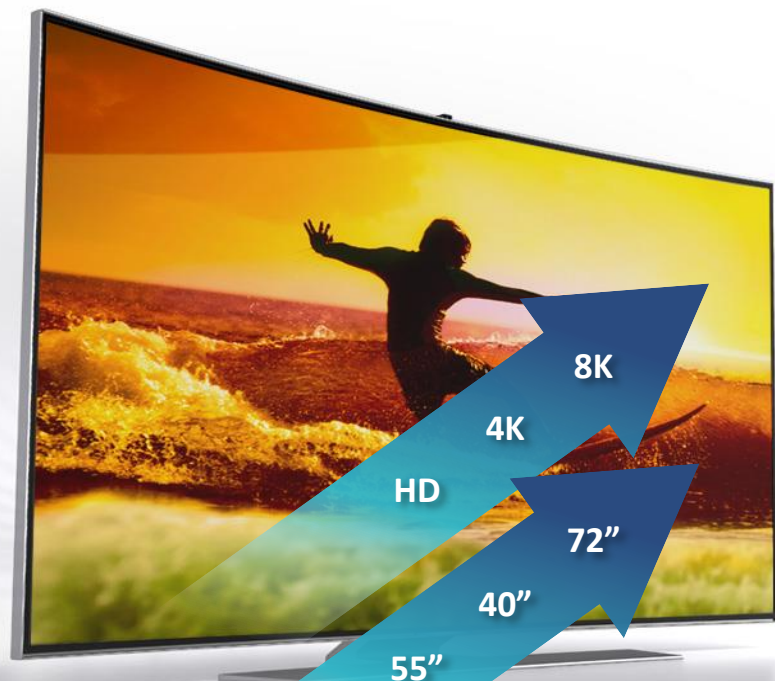
UPGRADES

Mobile Devices with Higher-Yield OLED Screens & Precision Casing

- OLED resolution/form factor leading toward flexible displays
- Non-reflective touch screens
- Hard protective coatings
- EMI shielding
- New AE Advanced Pulsing line enables innovative coatings
- Projected 43% CAGR 2016-'19⁽¹⁾ for OLED



TVs Moving to Higher Resolution & Larger Size



- OLED Technologies
 - Increasing pixel density
 - Resolving motion resolution
- Faster amorphous oxide layers
- Larger panel sizes
- **DC and new Advanced Pulsing** provides enabling bipolar and unipolar process solutions
- Projected 25% CAGR 2016-'19⁽¹⁾ for Large area 4K TV

Energy Regulations Spawn New Glass Coating Materials & Lower CoO

- New coating layers add value
 - Co-sputtering bi-metallic layers
 - Configuration flexibility
- Reduce CoO
 - Maximizing equipment production
 - Reducing tool energy use
- New **Advanced Pulsing** efficiently provides for multiple independent layers

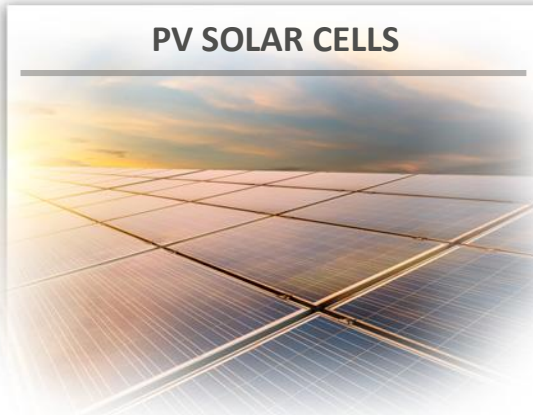


Industrial Coating Expansion is Ubiquitous

MEDICAL



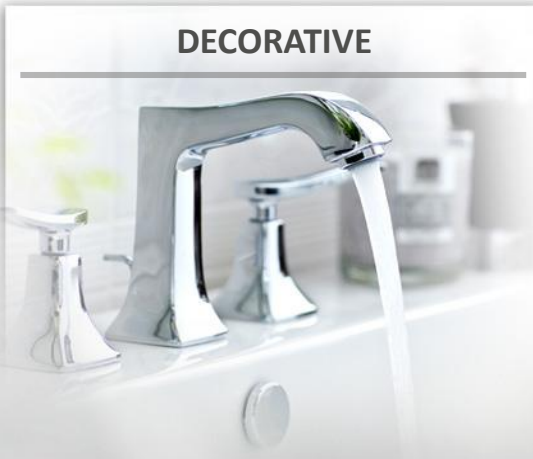
PV SOLAR CELLS



AUTOMOTIVE



DECORATIVE



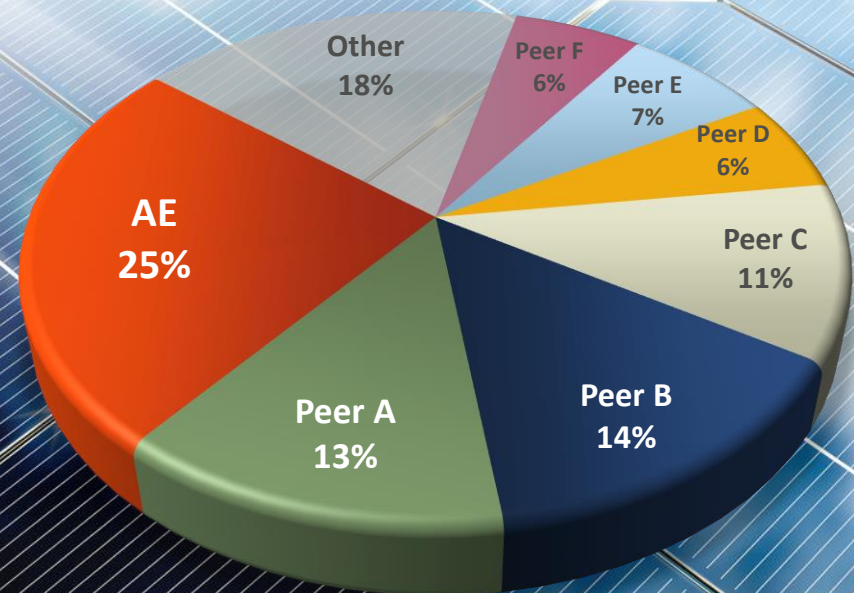
PRECISION OPTICAL



#1 Global Leader in Thin Film Industrial Markets

- Global capabilities
- Portfolio breadth
- Adjacent technology to Semiconductor

2016 TOTAL SHARE ESTIMATE



Enabling Customer Innovation

- A critical, trusted partner in the value chain
- Proven power platforms serve broad base of applications
- Extending capital investment through upgrades
- Share leader in our served markets
- Delivering enabling power and control technologies – today
- Accelerating innovation and technology – for tomorrow



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SPECIALTY POWER & INDUSTRIAL SALES



Greg Provenzano
SENIOR VICE PRESIDENT,
GLOBAL SALES & CORPORATE
MARKETING

Expanding Beyond Semi and Thin Film Process Power

- Pursuing high growth specialty power applications
- Accelerating diversification through M&A
- Leveraging our strengths in semiconductors
- Building on our expanding geographic footprint
- Investing in Industrial sales and marketing infrastructure

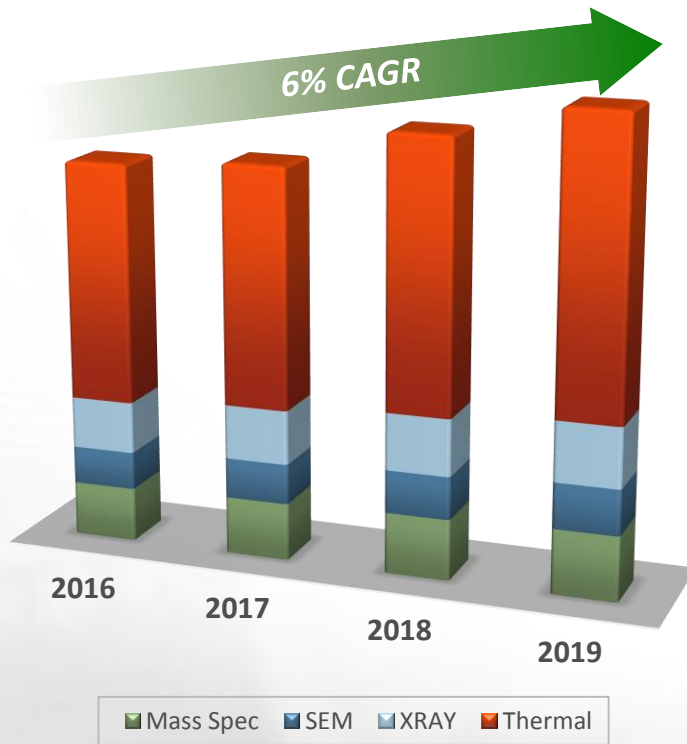


Specialty Power

- High voltage power supplies
- Thermal SCR power control modules (PCMs)
- In-situ pyrometry for real-time temperature measurement and control



Why Specialty Power?



Source AE estimates.

- SAM \$300M by 2019
- Growth rates higher than GDP
- Increased need for “designed-in” precision power
- Fragmented and in need of scale and consolidation
- Synergies with core competencies

Specialty Power Market Growth Drivers

IoT, Big Data,
Sensing & Controls
Industry 4.0



Safety & Security



Rapid Expansion of
Bio-technology



Tighter Temperature
Requirements for Critical
Alloy Casting

Semiconductor
Technology
Node <7nm



Automotive &
Aerospace Driving
Use of Al Alloys

Index ▲ 1.56

Target Customer Applications

Mass Spectrometry

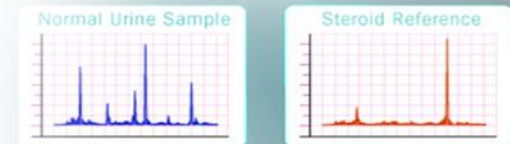
- Analysis of chemical compositions
 - High accuracy & stability of power enable performance
 - Growth driven by pharma, biotech, patient diagnostic, food safety, manufacturing quality assurance, environmental, forensics, security

TARGET MASS SPEC SAM

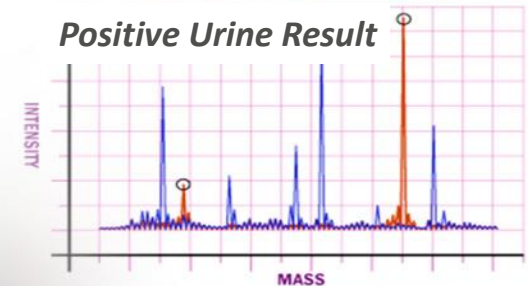


Source AE estimates.

Positive for Steroid



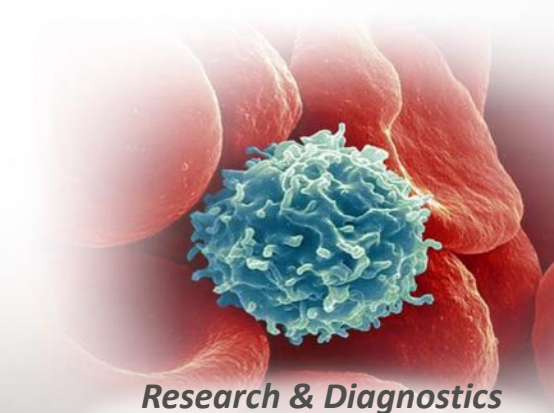
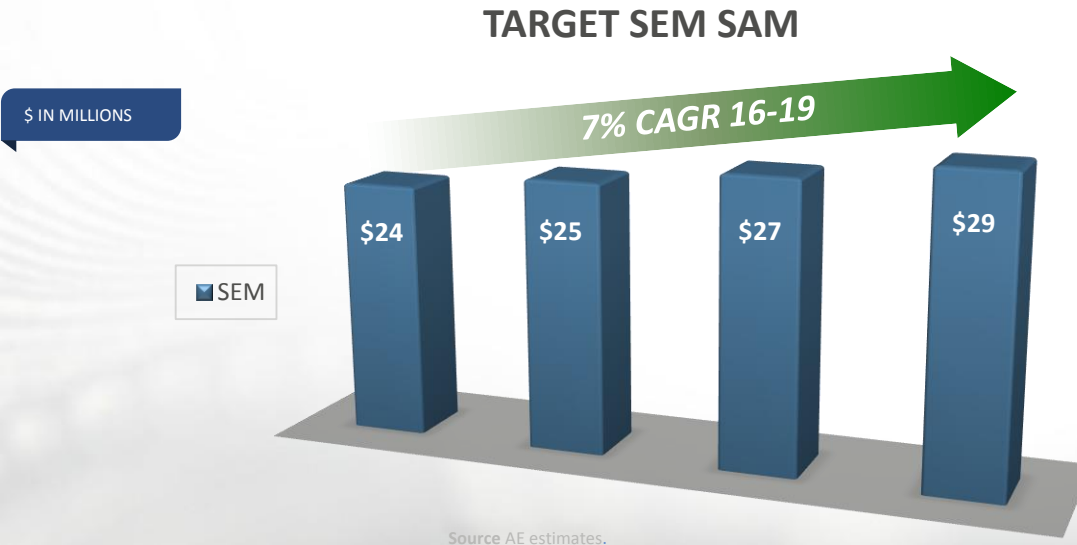
Positive Urine Result



Target Customer Applications

SEM/TEB/FIB

- Scanning electron microscope inspection
 - Clean, accurate, reproducible power enable performance
 - Growth driven by forensics, materials research, mining, quality assurance, failure analysis, biomedical

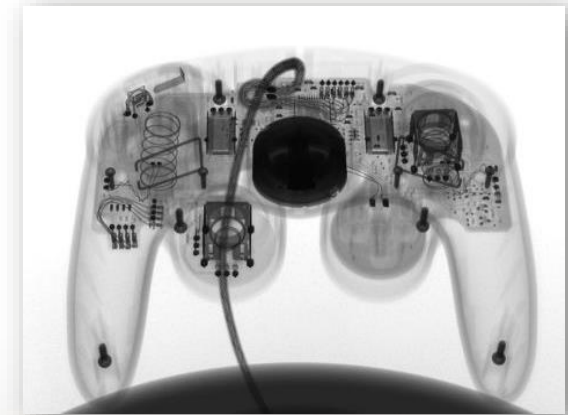
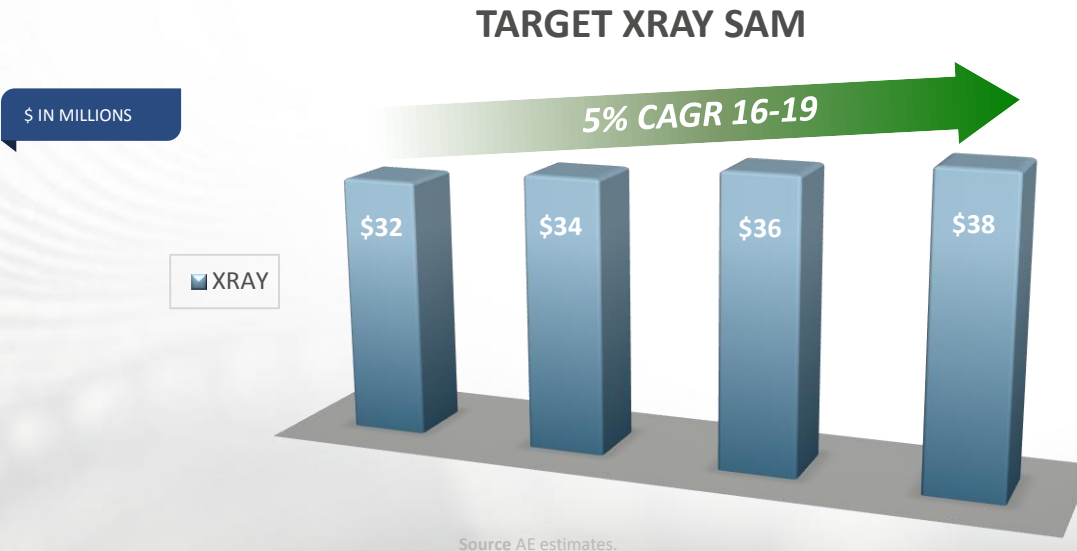


Research & Diagnostics

Target Customer Applications

Industrial XRAY

- Non-destructive testing, inspection, identification
 - Customization, applications support and service driving design wins
 - Growth driven by materials inspection, food safety, mining, security inspection & detection



Product Inspection

Target Customer Markets

Industrial Heating & Temperature Measurement

- Pyrometry in harsh environments, power control algorithms, system integration and Industry 4.0 driving competitive advantages
- Furnaces – glass, silicon, chemical, petrochemical, specialty alloys, iron and steel

TARGET THERMAL SAM



Source AE estimates.



Leveraging Semi Strengths for Growth in Specialty Power



Industrial / Specialty Power

Process Power

SEMICONDUCTOR CORE EXPERTISE

- Application driven innovation
- High standards of support
- Customer intimacy
- Scale and global footprint
- Agile and nimble operation

Global Go-to-Market for Industrial

- Dedicated management for Semiconductor and Industrial sales
- Strong, tenured talent from the Industrial market
- Multi-tiered GTM strategy of direct coverage, distribution and partner engagements
- Investment in automation, digital marketing and content management to increase customer reach



Expanding Beyond Semi and Thin Film Process Power

- Pursuing high growth specialty power applications
- M&A to accelerate diversification
- Leveraging our strengths in semi
- Building on our expanding geographic footprint
- Investing in Industrial sales and marketing infrastructure



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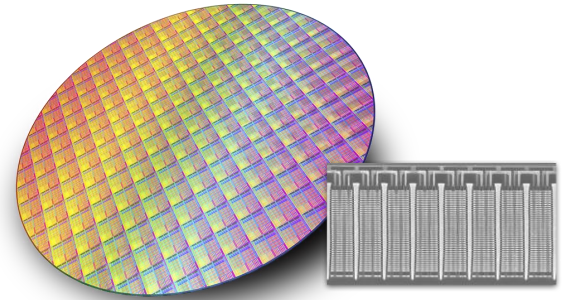
ACCELERATING INNOVATION & TECHNOLOGY



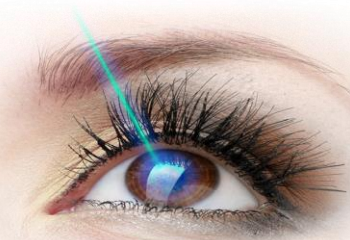
Randy Heckman
SENIOR VICE PRESIDENT,
PRECISION POWER PRODUCTS

Driving Continuous Innovation

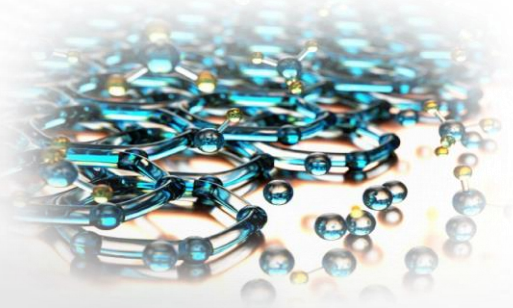
- Enabling customers' needs for advanced performance
- Enabling solutions and new capabilities for the future



HIGHER DENSITY SEMICONDUCTORS



MEDICAL TREATMENT



ADVANCED MATERIALS

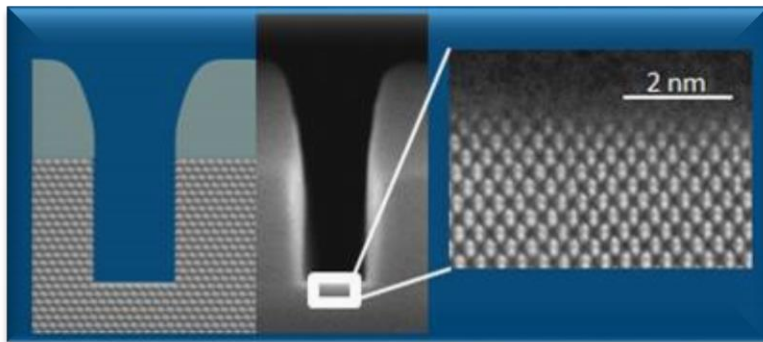


HIGHER RESOLUTIONS DISPLAYS



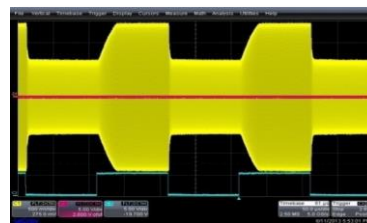
SHARPER IMAGES

Innovation for Semiconductor Markets

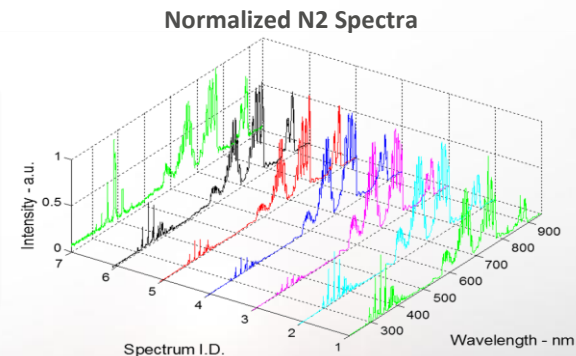


ATOMIC LEVEL PROCESSING

- AE technology enablers
 - Advanced RF multi-level pulsing
 - Fast tracking/matching the process
 - Adaptive measurement and controls
 - Radical/metastable generation



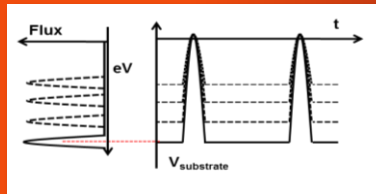
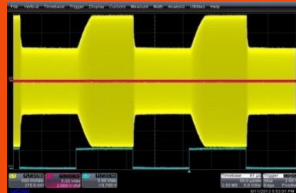
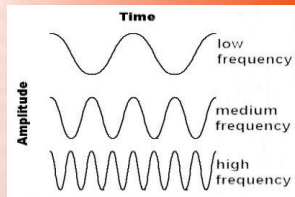
ADVANCED PULSED RF



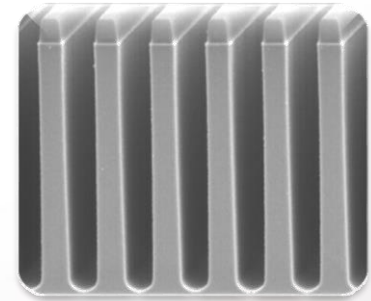
GENERATING RADICALS

Augmenting RF Power

- Differentiating solutions to improve selectivity and reduce damage during anisotropic etch by direct control of the energy driving atomic particles
- Decreasing hardware complexity while increasing throughput and yield

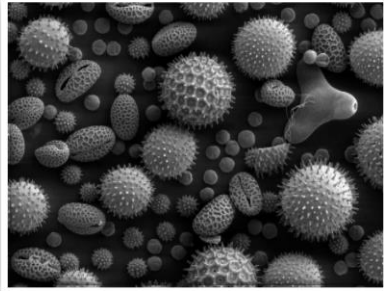


Multi-frequency RF to Advanced Pulse to Wafer Voltage

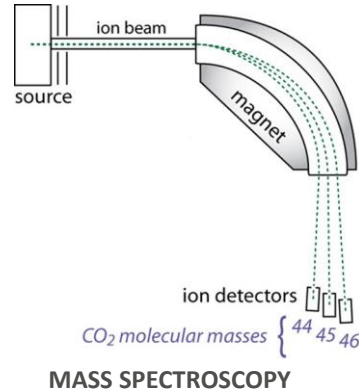


HIGH ASPECT-RATIO ETCH FEATURES

Innovation for Industrial Markets



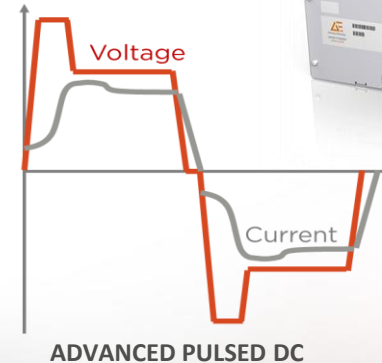
SCANNING ELECTRONIC MICROSCOPE



MASS SPECTROSCOPY

- Key industry drivers
 - Low cost, green technology, high efficiency
 - Processing highly engineered materials
 - High resolution for analytical equipment

- AE technology enablers
 - Advanced power devices for speed, efficiency
 - Dynamic waveform controls to shape power
 - Extremely low ripple, noise, and drift for HV
 - Industry 4.0 ready solutions



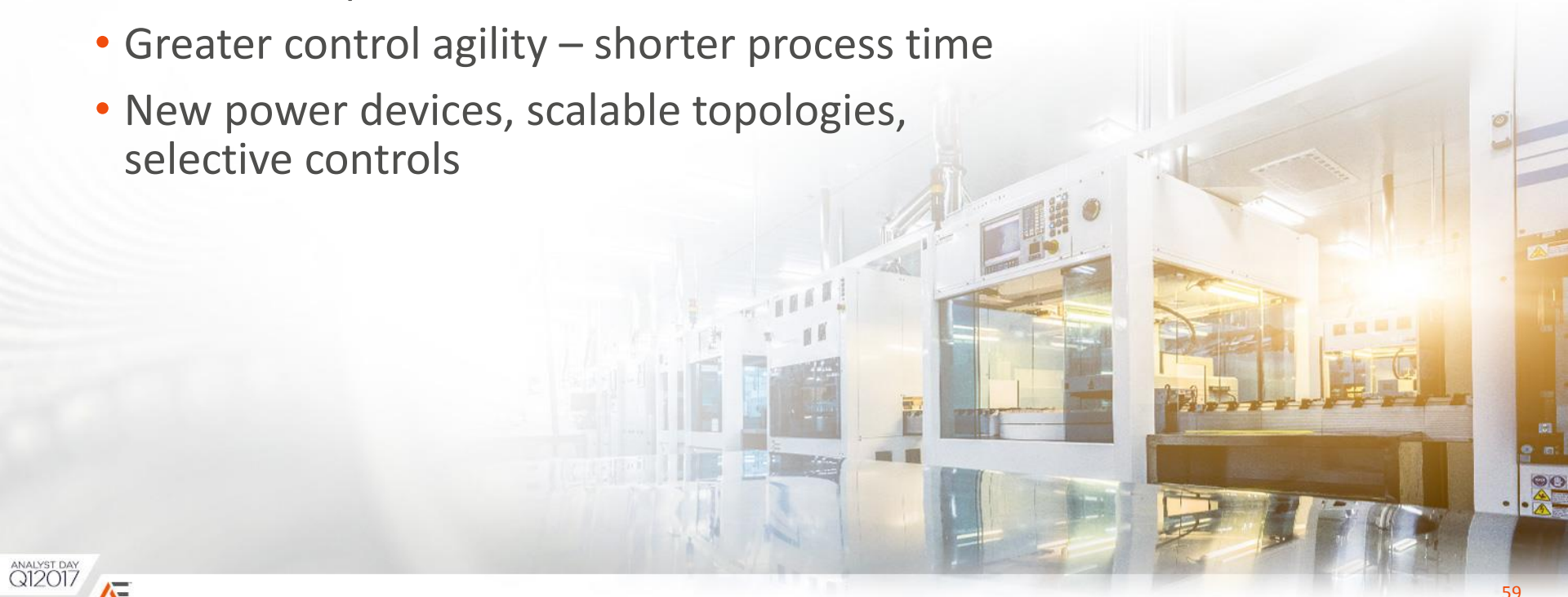
ADVANCED PULSED DC



HV POWER SUPPLY

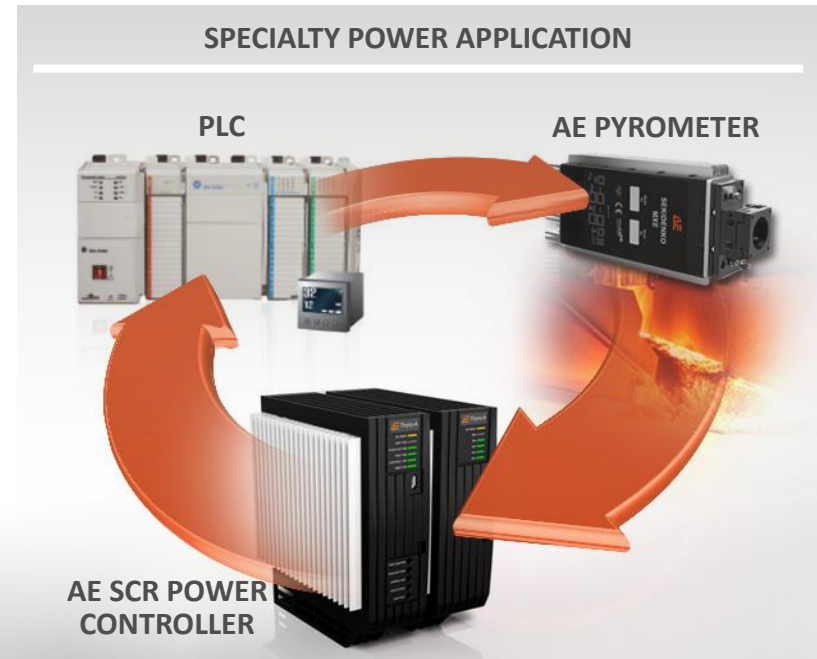
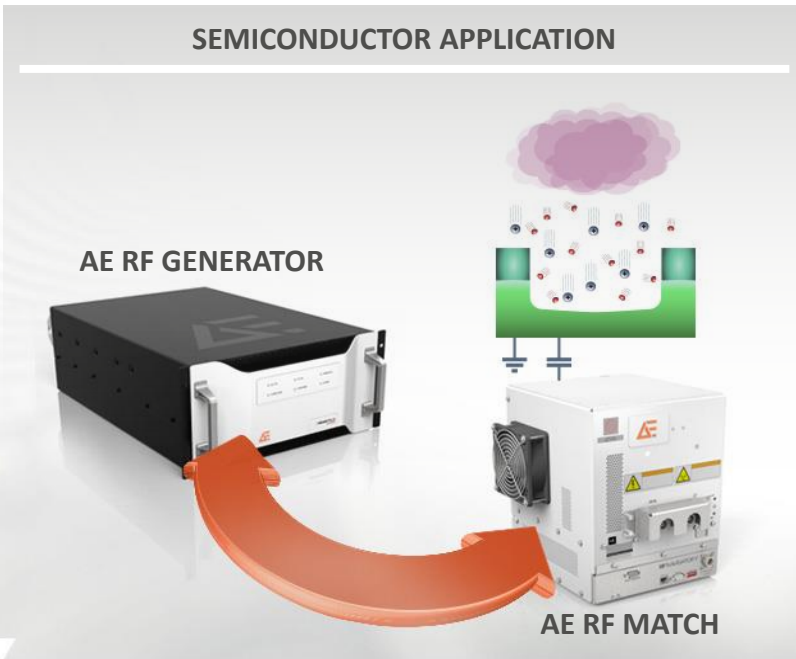
Future Industrial Power Technology

- Higher efficiency – minimizing waste
- Higher power density – reducing size/volume
- Lower cost per watt – more for less
- Greater control agility – shorter process time
- New power devices, scalable topologies, selective controls



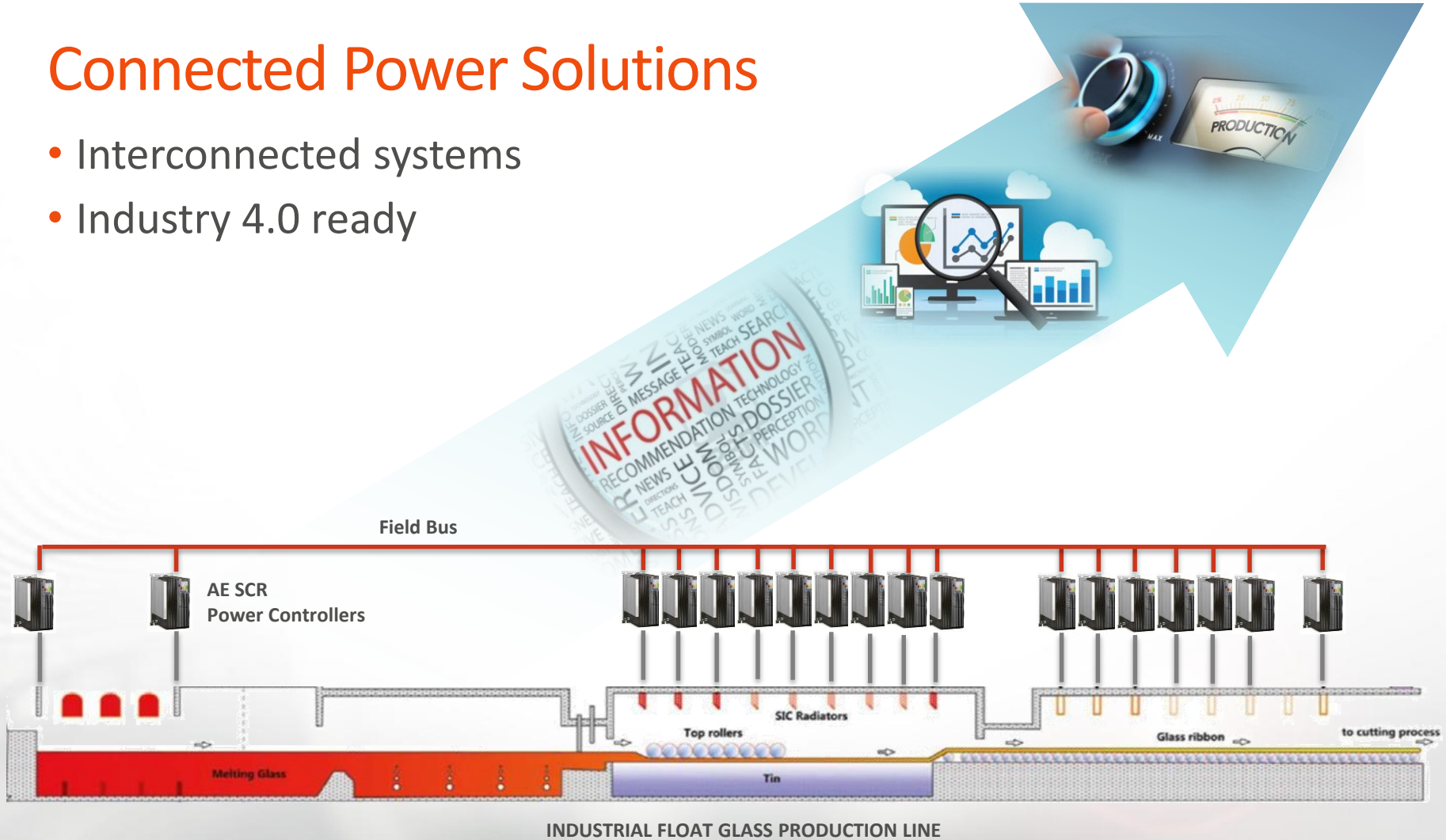
From Boxes to Systems

- Unit-to-unit controls to optimize performance
- Diagnostic parameters to improve quality and cost of ownership
- Optimization of physical, power and cooling footprint



Connected Power Solutions

- Interconnected systems
- Industry 4.0 ready



Going Faster

- Advanced labs to test products on real process equipment
- New controls, advanced diagnostics and analytics
- Co-development with OEMs and end-users
- Early stage engagement with customers



Global R&D Presence: Closer to Customers



Accelerating Innovation

- Driving to enable customers' performance and differentiation
- Generating and controlling precision power delivery
- Providing critical information and analytics to customers
- Investing to maintain technical leadership worldwide

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OPERATIONS AND SERVICE

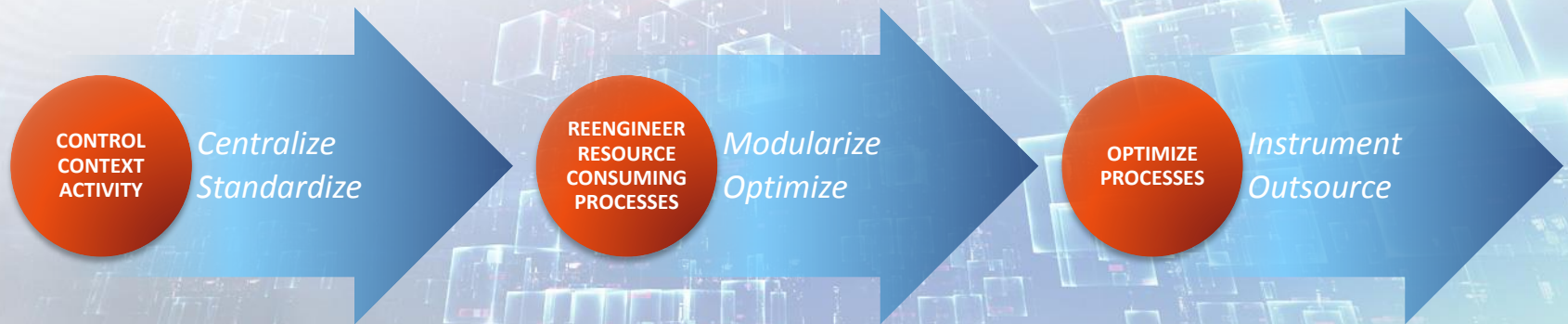


Mike McDonald
VICE PRESIDENT, GLOBAL SERVICES

Operational Excellence Strategy

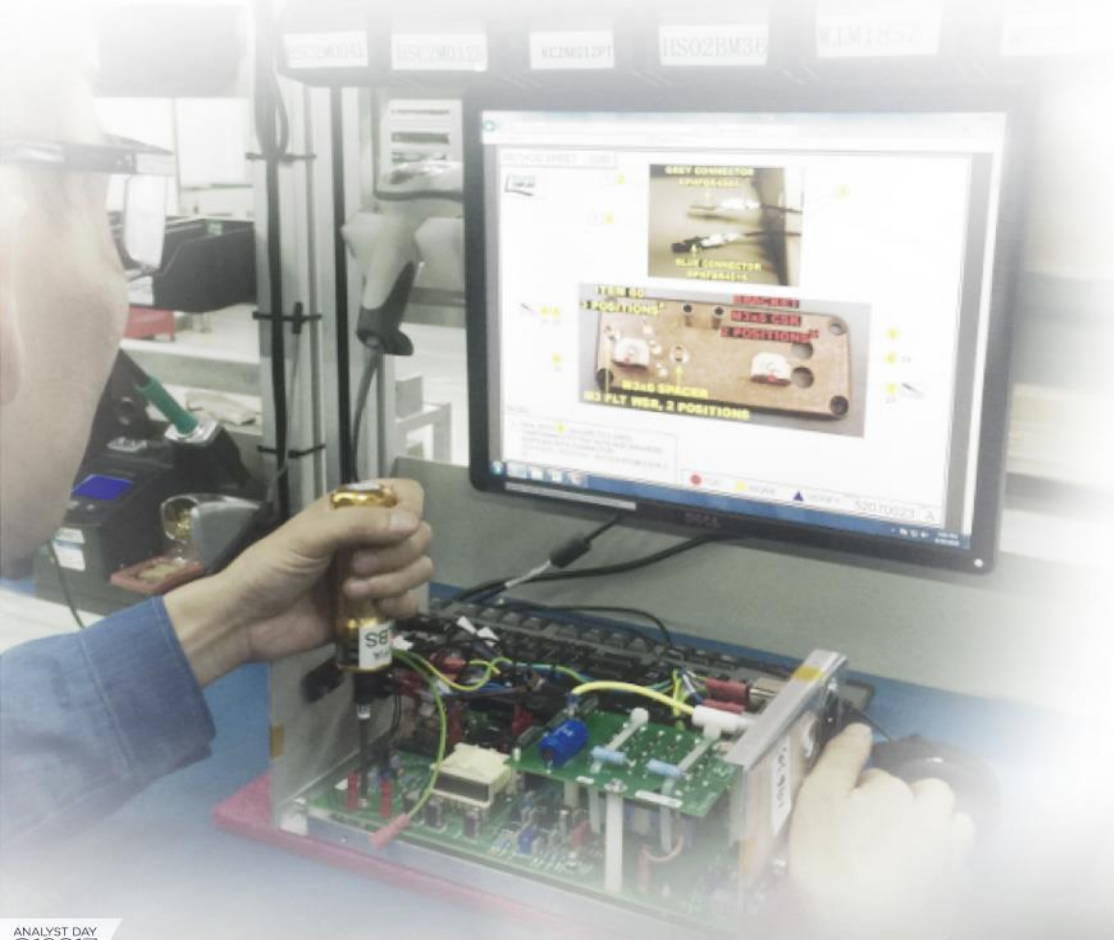
- Driving profitability, liquidity and growth
- Continuous improvement
 - Cost, quality, delivery, inventory levels
 - Lean Six Sigma
- Effective integration of acquisitions
- Optimizing global footprint
- Intelligent factory – integrated and instrumented supply chain and manufacturing

Operations' scaling playbook:



Operational Excellence

Demand Flow



- High-mix, low-volume custom products
- Highly integrated supply chain
- Final assembly and test at AE factory
- Unprecedented flexibility and agility

Operational Excellence

Automated Testing



- Highly automated testing
- Driving quality and reliability
- Delivering highly consistent repeatability and reproducibility

Industry 4.0 – Ops & Service

Factory of the Future is Today

ANALYTICS

- Multi-echelon inventory optimization
- Factory SPC
- Field performance trends

AUGMENTED REALITY

- Remote troubleshooting
- Global distribution of BKM

THE CLOUD/CYBERSECURITY

- IP security
- Remote monitoring

SIMULATION

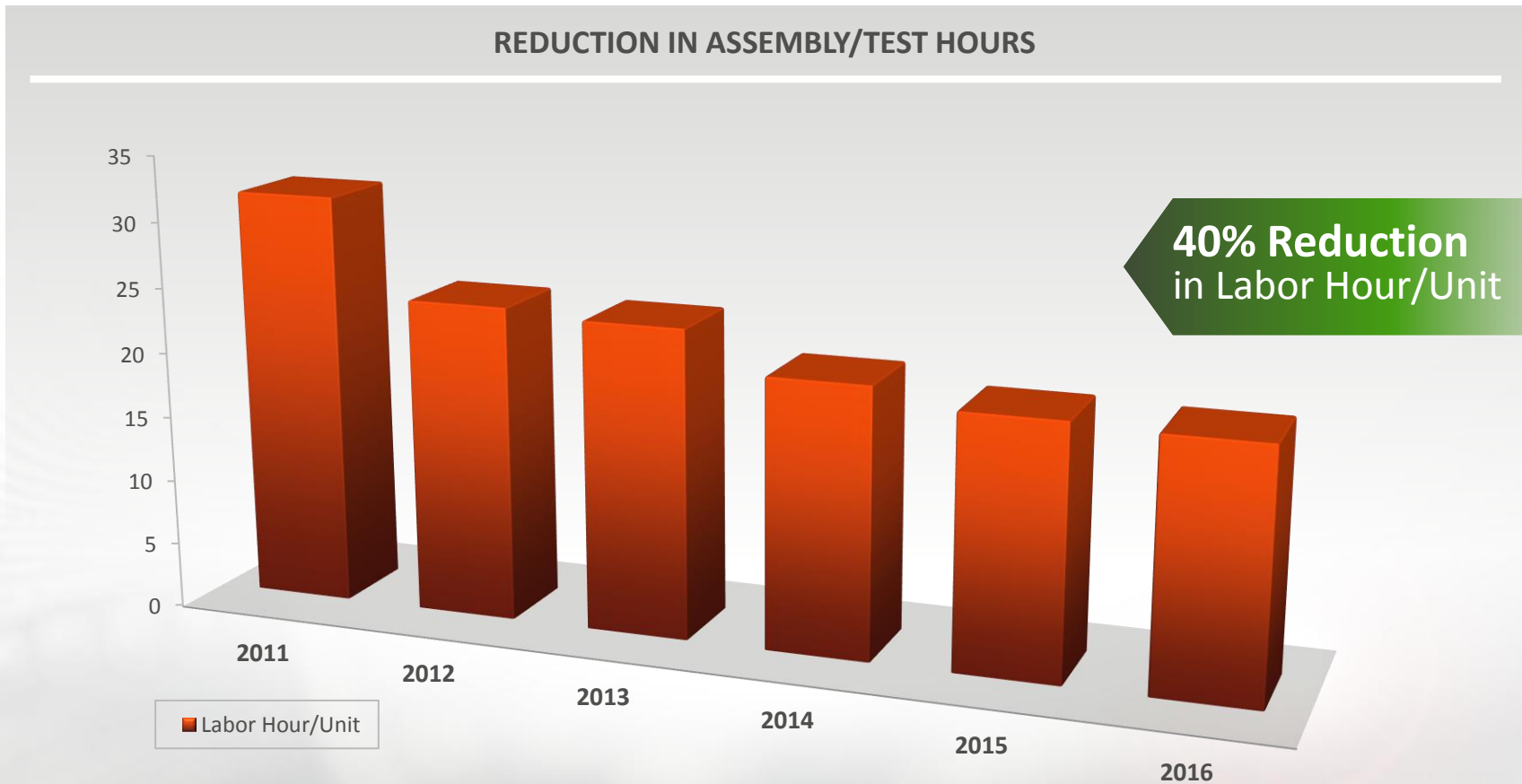
- Capacity planning
- Optimization scenarios

VERTICAL SYSTEMS INTEGRATION

- Supplier network collaboration
- Customer transparency



Operational Efficiency Gains



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GLOBAL SERVICES



Clear, Compelling Competitive Advantage

RELIABILITY / QUALITY



- Best in class lifecycle services - reduce variability
- Full OEM diagnostics and testing
- Original OEM parts

RESPONSIVENESS



- Flexible service programs to fit unique customer needs
- Quick turnaround time

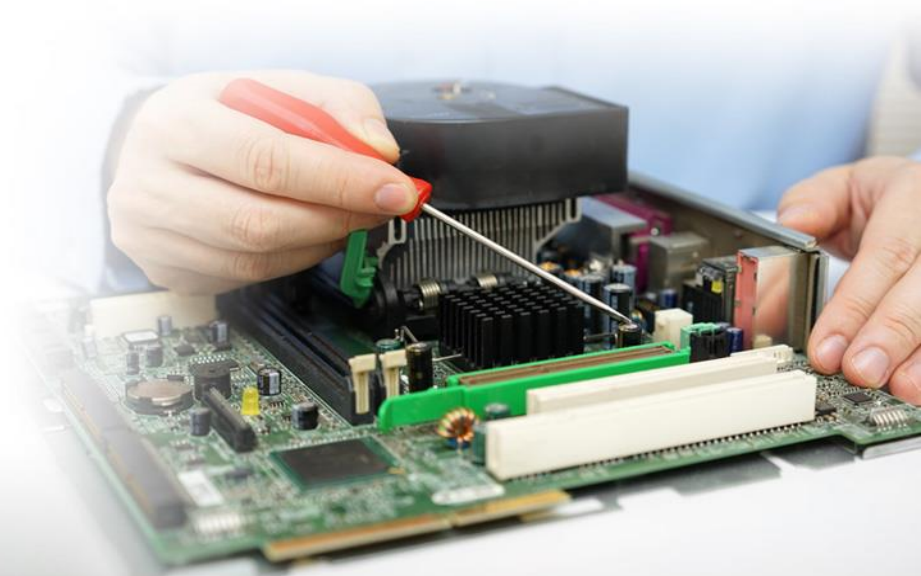
GLOBAL FOOTPRINT



- World class repair centers around the globe
- Uniformly trained staff
- Consistent repair quality in all locations

Clear, Compelling Competitive Advantage

- Comprehensive, high value
 - Low Total Cost of Ownership
 - Recent customer awards
- Highly responsive to aftermarket needs
 - New repair center in Xian, China
 - Continuous stream of new aftermarket products
 - Resurgence of 200mm production
 - Extending product life through refurbishment programs
 - Remote monitoring for industrial products/applications



Growth Strategy



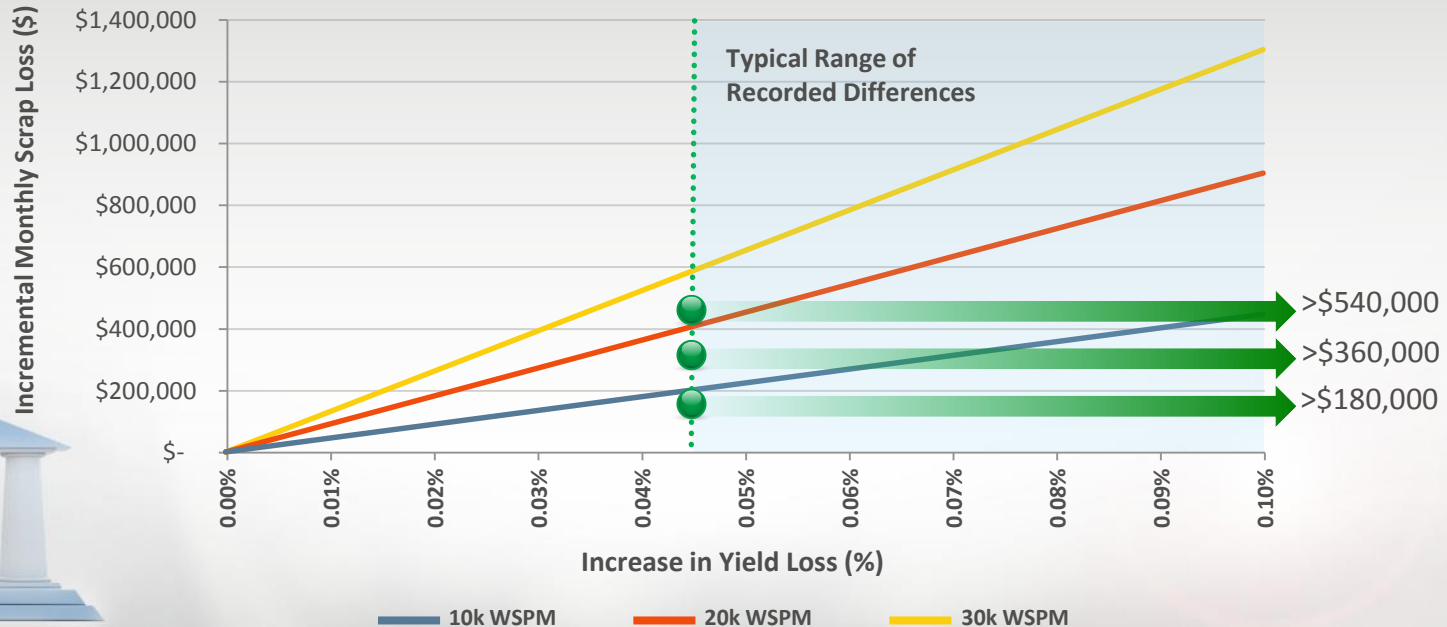
Total Cost of Ownership

Gain Share from 3rd Party Competitors

- Variability is the number one profit killer in semiconductor thin films applications
- Quantifying the correlation between repair quality and die yield



DOCUMENTED SCRAP COSTS(\$) SENSITIVITY TO PARAMETRIC YIELD LOSS(%)



Highly Engineered Service Solutions

Continually Expanding Service Portfolio

- Asset monitoring/connectivity
 - Remote monitoring/decision support
 - IoT technology upgrades
- Customized information/analytics
 - Site specific failure trends
 - Tailored maintenance/refurbishment
- Dedicated aftermarket engineering
 - New features/technologies to upgrade legacy products
 - Enhanced reliability, repeatability and reproducibility



Leveraging the Service Network

Extended Existing Infrastructure to Create New Value

- Partner with broader OEM base
- Increase utilization of infrastructure in adjacent markets
- Drive efficiency of service operations
 - Materials/manpower management
 - Knowledge retention
 - Data analytics



Accelerated Growth

SERVICE REVENUE

\$ IN MILLIONS



Global Operations & Services

Key Strategic Advantages

- Optimized and highly responsive global networks
- Positioned well to deliver sustained, high customer value
- Enabling growth objectives
 - Highly scalable
 - Flexible model to efficiently absorb potential acquisitions
- Continuous innovation to improve performance and reduce costs

*...A clear and
compelling difference!*



ANALYST DAY 2017

FINANCE



Tom Liguori
EXECUTIVE VICE PRESIDENT & CHIEF
FINANCIAL OFFICER

Path to Shareholder Value

RECENT PAST | 2015 - 2016

- Rebuilt Company
 - Closed Solar
 - Capitalized on Semi 3D
 - Built infrastructure
 - SAP
 - Regional admin centers
 - S&M global capabilities
 - Global service centers
 - Efficient working capital model
 - Developed M&A process

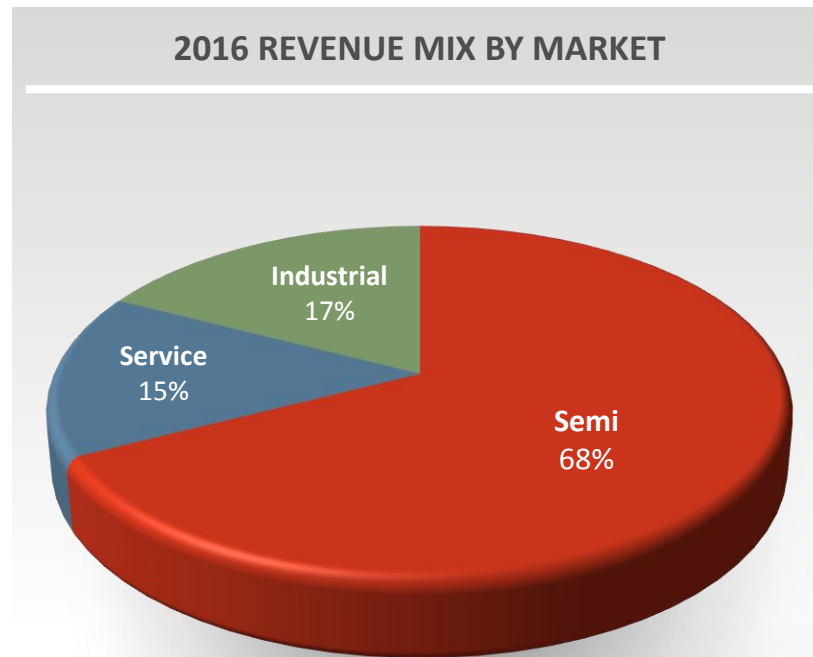
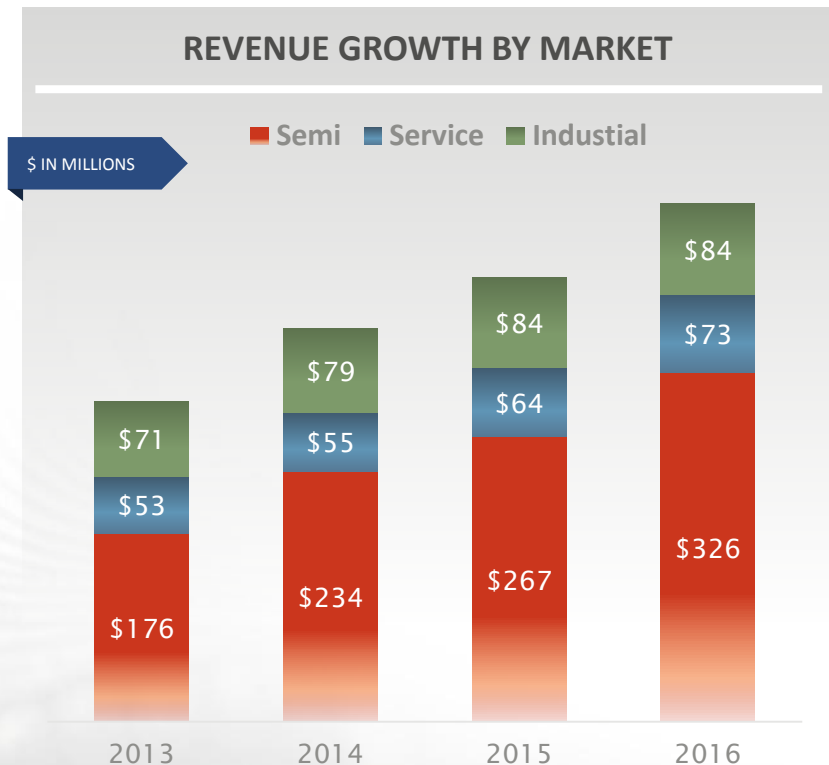
NEAR-TERM | 2017 - 2019

- Grow and reap benefits
 - 10% CAGR
 - Semi
 - Industrial
 - Service
 - Leverage infrastructure
 - New technologies
 - New service offerings
 - Accelerate EPS growth
 - Use cash for M&A

LONG-TERM

- Innovative growth
- Diversified markets and customers
- Steadily growing earnings
- Cash flow generation fueling growth and shareholder distribution

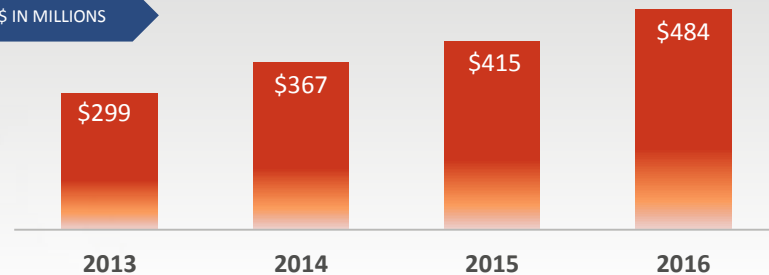
Grew Revenues 17% CAGR Driven by Semi 3D



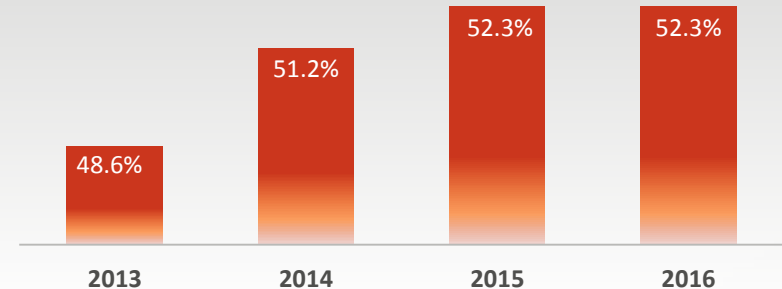
Expanded Margins to 25-30% with Lower Cost Structure and Leveraging Resources

REVENUE GROWTH

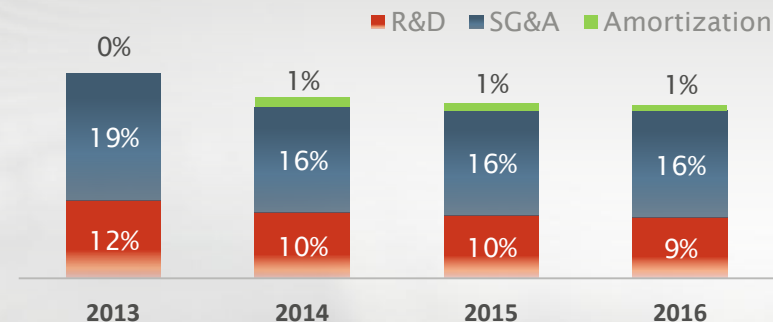
\$ IN MILLIONS



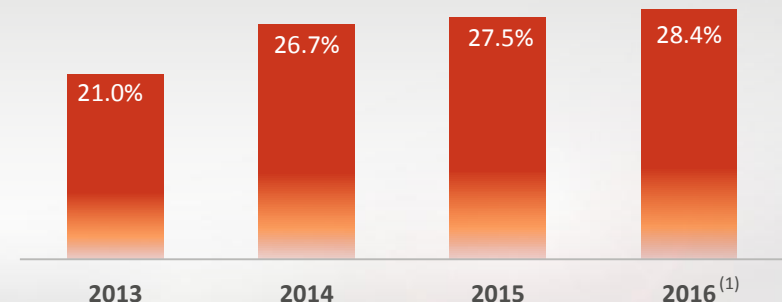
GROSS MARGIN



OPERATING EXPENSES % OF REVENUE

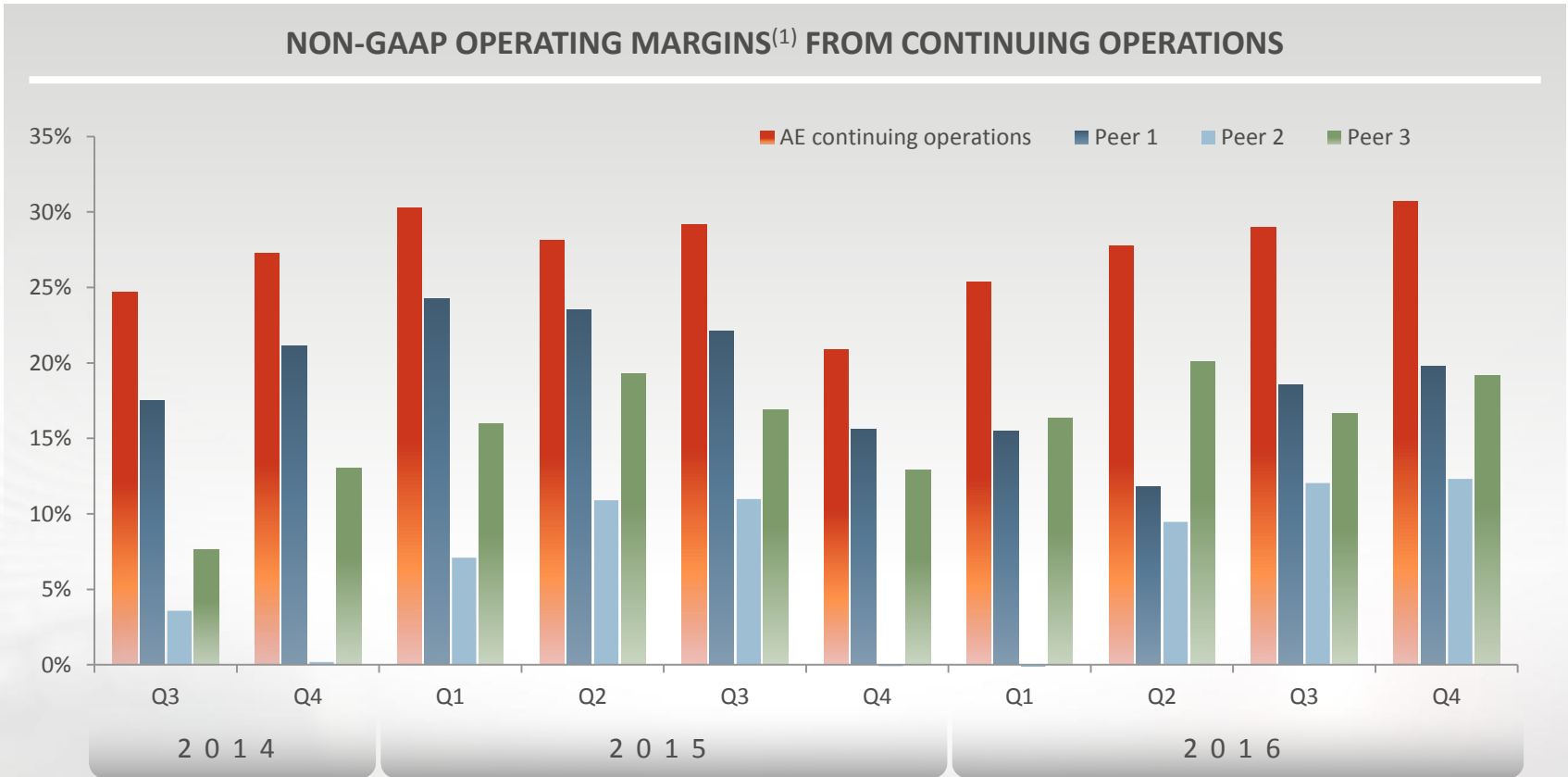


NON-GAAP⁽¹⁾ OPERATING MARGIN



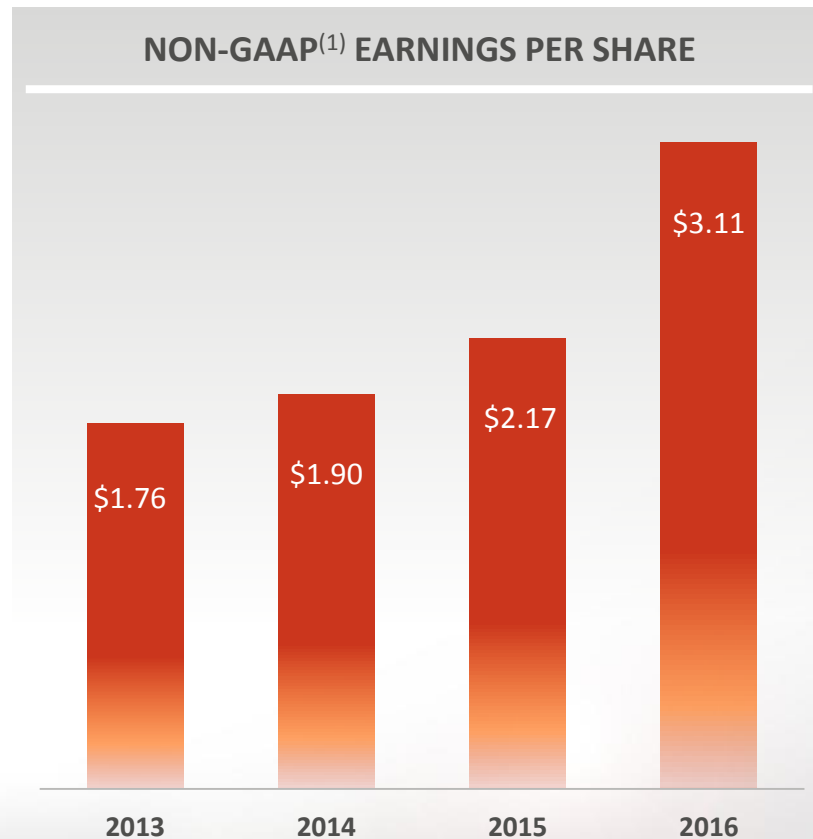
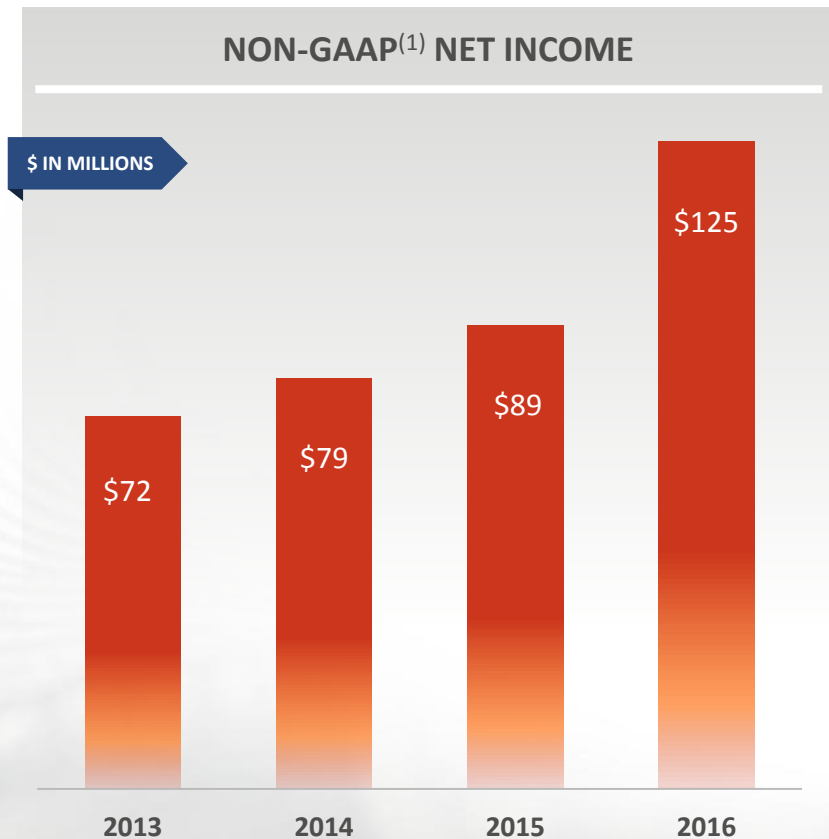
(1) Refer to the non-GAAP reconciliation slide

Outperformed Peers by Focusing on Power and Efficient Operations



(1) These results have been adjusted from GAAP measures to exclude stock based compensation and amortization of intangible assets.

Accelerated Earnings as Initiatives Gained Traction



(1) Refer to the non-GAAP reconciliation slide

Path to Shareholder Value

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NEAR-TERM | 2017 - 2019

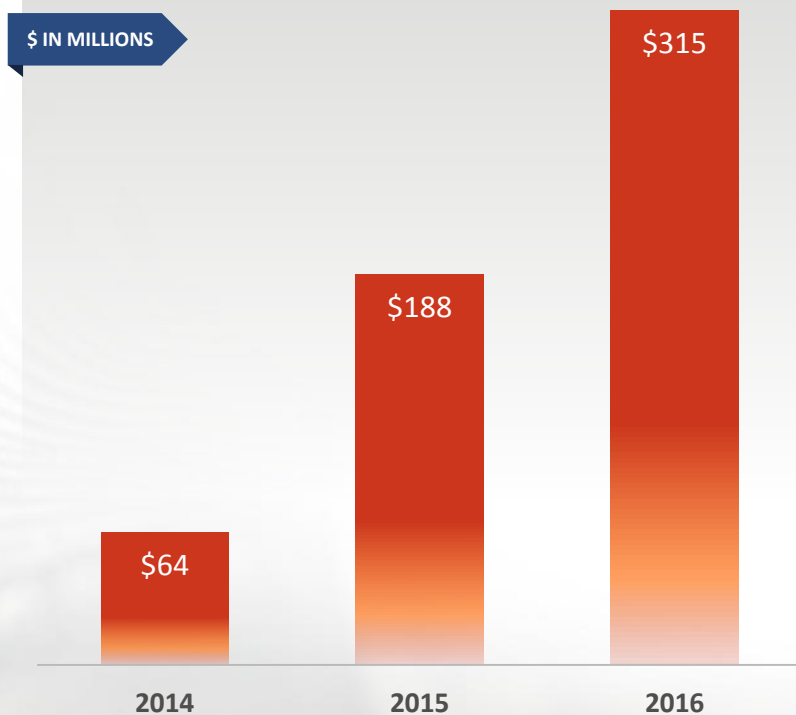
- Grow and reap benefits
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LONG-TERM

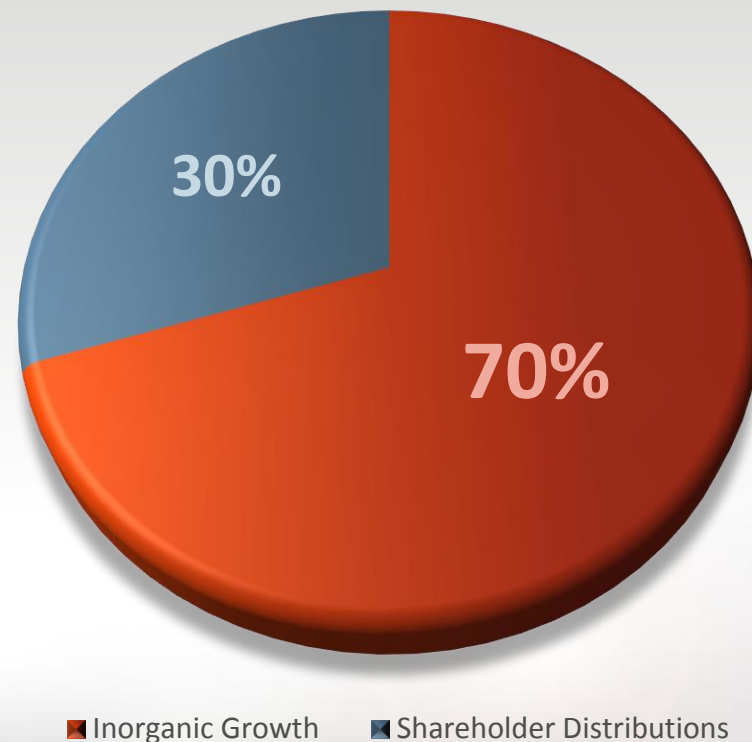
- Innovative growth
- Diversified markets and customers
- Steadily growing earnings
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Near-Term Capital Deployment Strategy

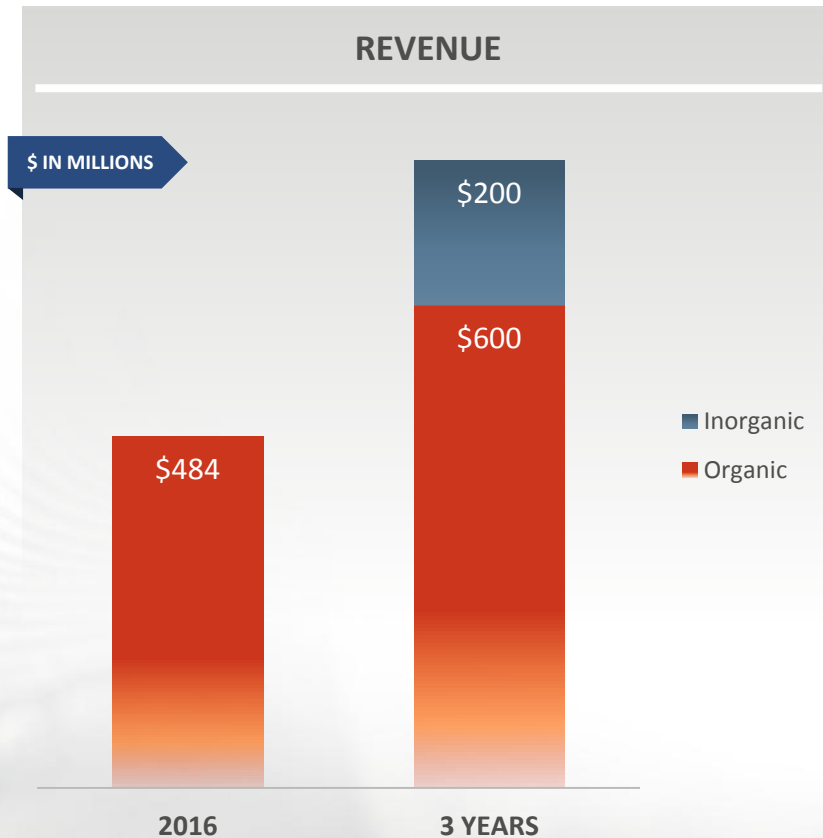
CASH FROM OPERATIONS - CUMULATIVE



CAPITAL DEPLOYMENT



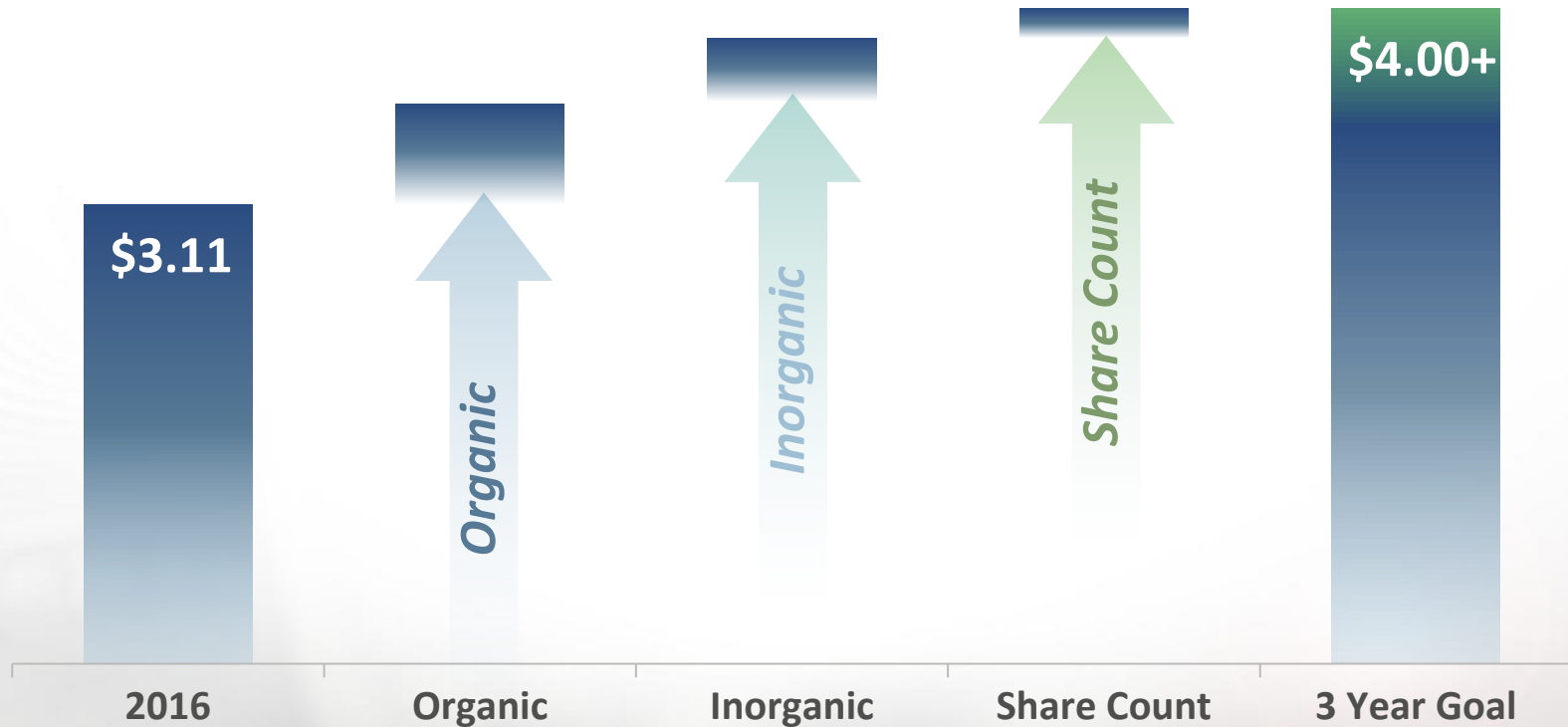
Acquisition Requirements



- Acquisition criteria
 - Significant synergies
 - Adjacent products and markets
 - Expanding geographies and capabilities
 - Similar/familiar core competencies
 - Industrial focus
 - Grow annual revenues \$150M-\$200M
- Financial returns
 - Accretive
 - Equal to or better than a buyback
 - IRR exceeds WACC
- Debt is part of capital structure
 - For “right acquisition” – 2.0x to 2.5x EBITDA leverage
 - With ability to de-lever to 1.0x in near term
 - Long-term leverage of 1.0x

EPS Growth

~50% Organic/40% Inorganic, 10% Shares



Path to Shareholder Value

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 - Global service centers
 - Efficient working capital model
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NEAR-TERM | 2017 - 2019

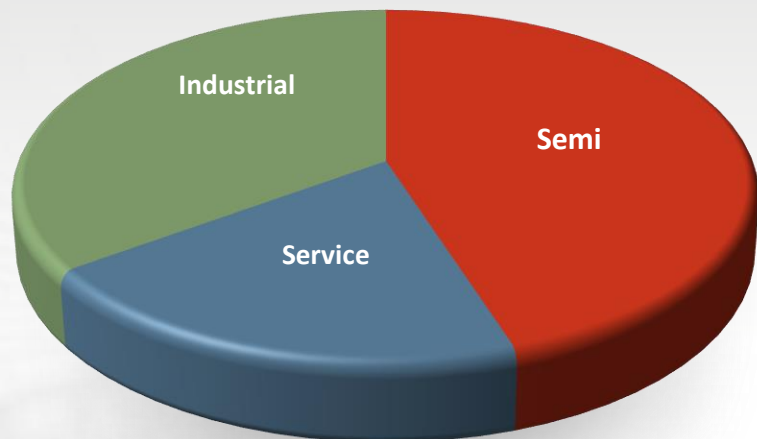
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LONG-TERM

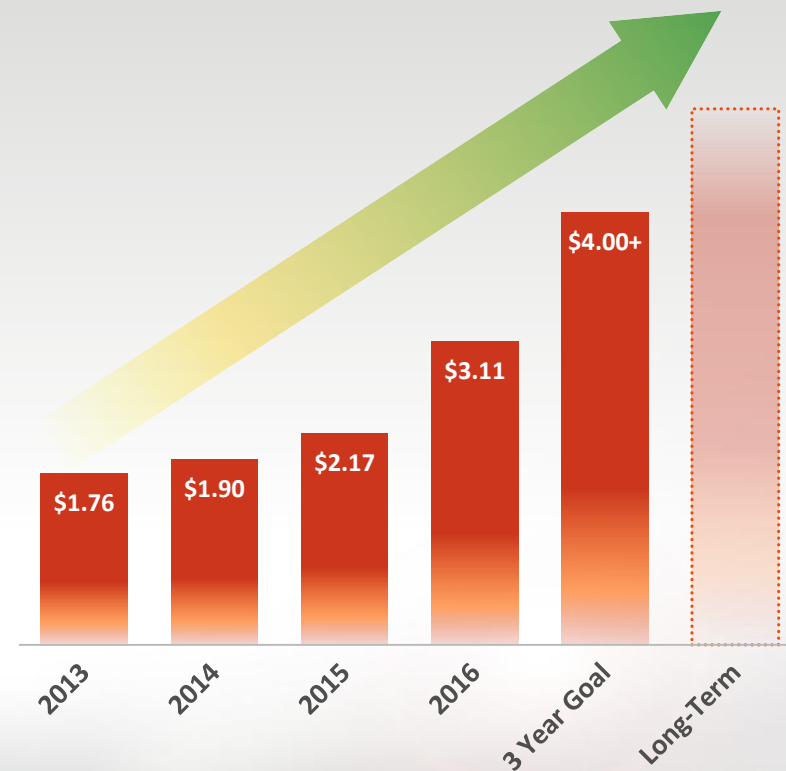
- Innovative growth
- Diversified markets and customers
- Steadily growing earnings
- Cash flow generation fueling growth and shareholder distribution

Long-Term Trajectory

REVENUE COMPOSITION



NON-GAAP⁽¹⁾ EARNINGS PER SHARE



(1) Refer to the non-GAAP reconciliation slide

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Q&A



Reconciliation of Non-GAAP Measures

	Twelve months ended December 31,			
	2013	2014	2015	2016
Revenue	\$ 299.4	\$ 367.3	\$ 414.8	\$ 483.7
GAAP Operating Income	\$ 47.8	\$ 86.1	\$ 106.7	\$ 126.9
Add back:				
Restructuring Charges	4.2	1.5	0.2	-
Acquisition-related Costs	-	0.7	-	-
Stock-based Compensation	9.8	3.7	2.8	6.3
Amortization of Intangible Assets	0.9	5.0	4.4	4.2
Non-recurring Executive Severance	-	0.9	-	-
Non-GAAP Operating Income	\$ 62.7	\$ 97.9	\$ 114.0	\$ 137.4
<i>Non-GAAP Operating Margin % of Revenue</i>	<i>21.0%</i>	<i>26.7%</i>	<i>27.5%</i>	<i>28.4%</i>

	Twelve months ended December 31,			
	2013	2014	2015	2016
GAAP Income from Continuing Operations	\$ 59.7	\$ 69.5	\$ 83.5	\$ 116.9
Add back:				
Restructuring Charges	4.2	1.5	0.2	-
Acquisition-related Costs	-	0.7	-	-
Stock-based Compensation	9.8	3.7	2.8	6.3
Amortization of Intangible Assets	0.9	5.0	4.4	4.2
Non-recurring Executive Severance	-	0.9	-	-
Tax Effect of Non-GAAP Adjustments	(2.9)	(3.2)	(1.6)	(2.9)
Non-GAAP Operating Income	\$ 71.7	\$ 78.1	\$ 89.3	\$ 124.6
Share Outstanding (Millions)	40.7	41.0	41.1	40.0
Non-GAAP EPS	\$ 1.76	\$ 1.90	\$ 2.17	\$ 3.11

NOTE: 2013, 2014, and 2015 as presented in the 10-K for December, 31 2015.