

The background is a collage of images: a person in a surgical cap and mask, a hand holding a microchip, and two telecommunications towers. The collage is overlaid with a blue and white geometric pattern.

A Best-in-Class Industrial Growth Enterprise

August 2021

SAFE HARBOR

The company's guidance with respect to anticipated financial results for future periods, potential future growth and profitability, future business mix, expectations regarding future market trends, future performance within specific markets and other statements herein or made on the conference call 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 risks and uncertainties related to the integration of Artesyn Embedded Power including the optimization and reduction of our global manufacturing sites; (e) the continuing spread of COVID-19 and its potential adverse impact on our product manufacturing, research and development, supply chain, services and administrative operations; (f) supply chain disruptions and component shortages that may impact the company's ability to obtain in a timely manner the materials necessary to manufacture its products; (g) the accuracy of the company's estimates related to fulfilling solar inverter product warranty and post-warranty obligations; (h) the company's ability to realize its plan to avoid additional costs after the solar inverter wind-down; (i) the accuracy of the company's assumptions on which its financial statement projections are based; (j) the impact of product price changes, which may result from a variety of factors; (k) the timing of orders received from customers; (l) the company's ability to realize benefits from cost improvement efforts including avoided costs, restructuring plans and inorganic growth; (m) unanticipated changes to management's estimates, reserves or allowances; (n) changes and adjustments to the tax expense and benefits related to the U.S. tax reform that was enacted in late 2017; and (o) the impact of political, economic and policy tensions and conflicts between China and the United States including, but not limited to, trade wars and export restrictions between the two countries, China's national security law for Hong Kong, and China's expansion of control over the South China Sea, any of which could negatively impact our customers' and our presence, operations, and financial results. 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 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.

POWERING THE 4TH INDUSTRIAL REVOLUTION



PURE PLAY POWER LEADER

Strategic focus on power ensures sustainable advantages and scale



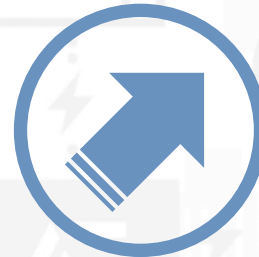
OUTPERFORMING MARKETS

Track record of growing share, content and increasing SAM



4TH INDUSTRIAL REVOLUTION

Data economy and digitization drive growth across our markets

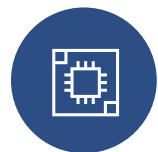


ACCELERATING EARNINGS

Target earnings growth at 3-Year CAGR of 13%, >2X faster than revenue, and ROIC of >20%

WE ARE THE PURE PLAY POWER LEADER

AE provides precision power conversion and control solutions for a wide range of technologies and applications



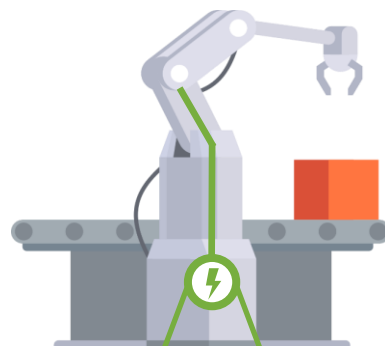
SEMICONDUCTOR EQUIPMENT



Process Power



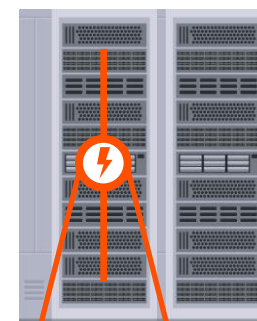
INDUSTRIAL & MEDICAL



Custom Power



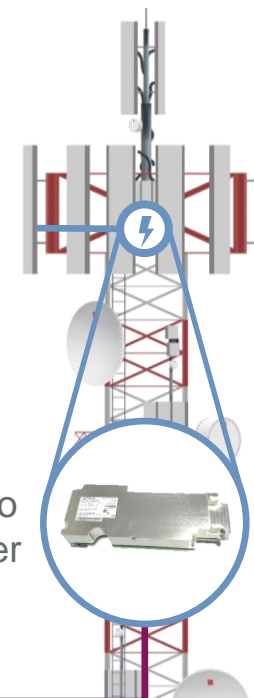
DATA CENTER COMPUTING



Server Power



TELECOM & NETWORKING



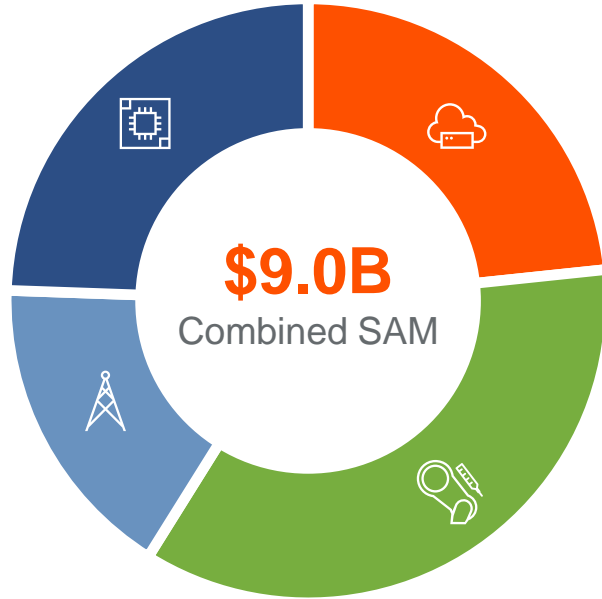
Radio Power



Grid Power

OUR LEADERSHIP ENABLES SOLID FINANCIAL PERFORMANCE

Large & Diversified Growing Market



#1 or #2 in All Four Markets

2020 Reported Results



\$1.42 billion
REVENUE
79% YoY Growth



\$244 million
NON-GAAP OP PROFIT⁽¹⁾
134% YoY Growth

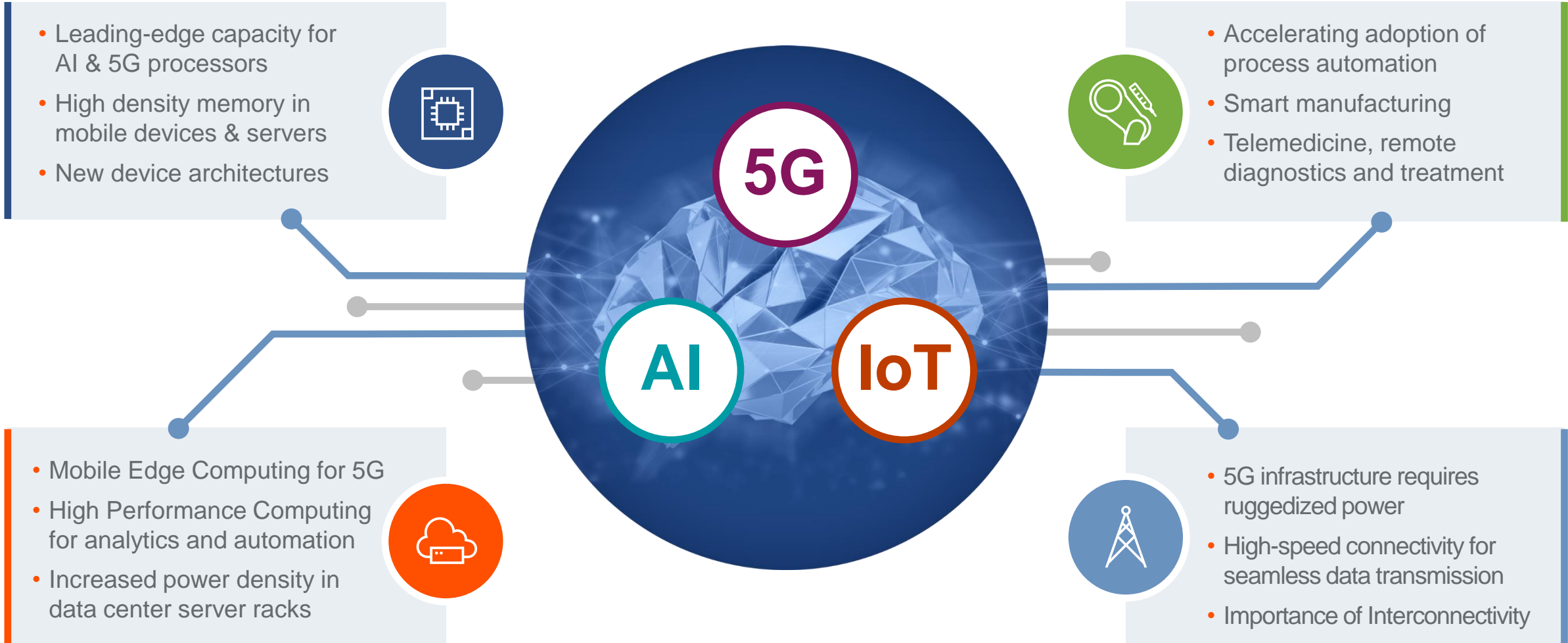


\$5.23
NON-GAAP EPS⁽¹⁾
114% YoY Growth

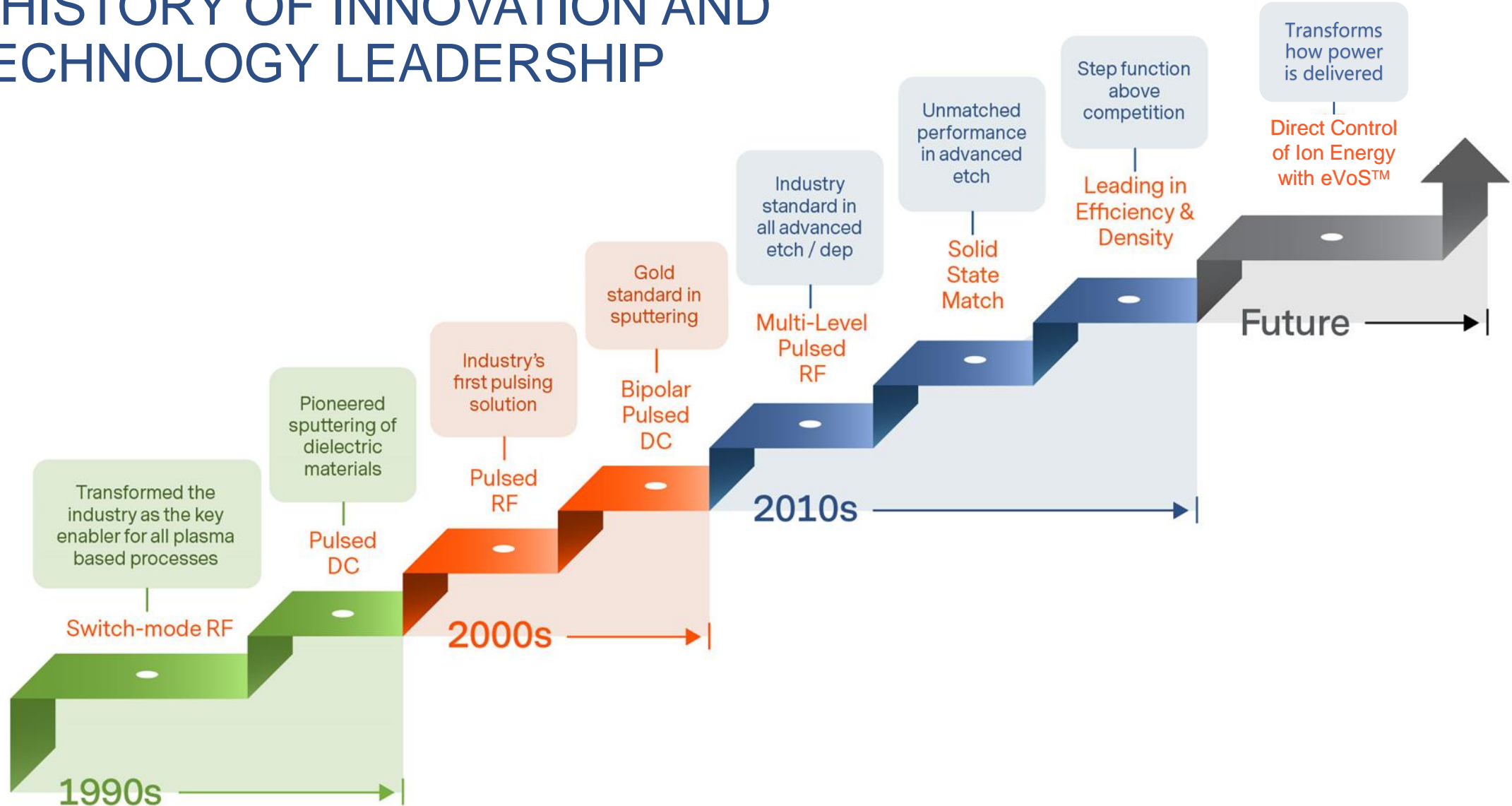


\$202 million
OPERATING CASH FLOW⁽²⁾
322% YoY Growth

4TH INDUSTRIAL REVOLUTION DRIVES GROWTH ACROSS OUR 4 VERTICALS



A HISTORY OF INNOVATION AND TECHNOLOGY LEADERSHIP



FOCUS ON PROPRIETARY DESIGNS TO ACCELERATE GROWTH

AE TARGETED GROWTH STRATEGIES



GROW SHARE

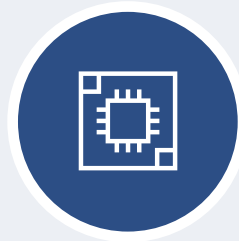
Across Mission Critical, Precision Power Verticals



Invest in **INNOVATION** and Technology Leadership



Leverage Strong Financials and Increased Scale to Capitalize on **NEW OPPORTUNITIES**



Semiconductor:
Extending Our Leadership



Industrial & Medical:
Enabling Smart Applications



Data Center Computing:
From Fast Follower to Technology Leader



Telecom & Networking:
Targeting 5G Infrastructure

SEMICONDUCTOR: EXTENDING OUR LEADERSHIP

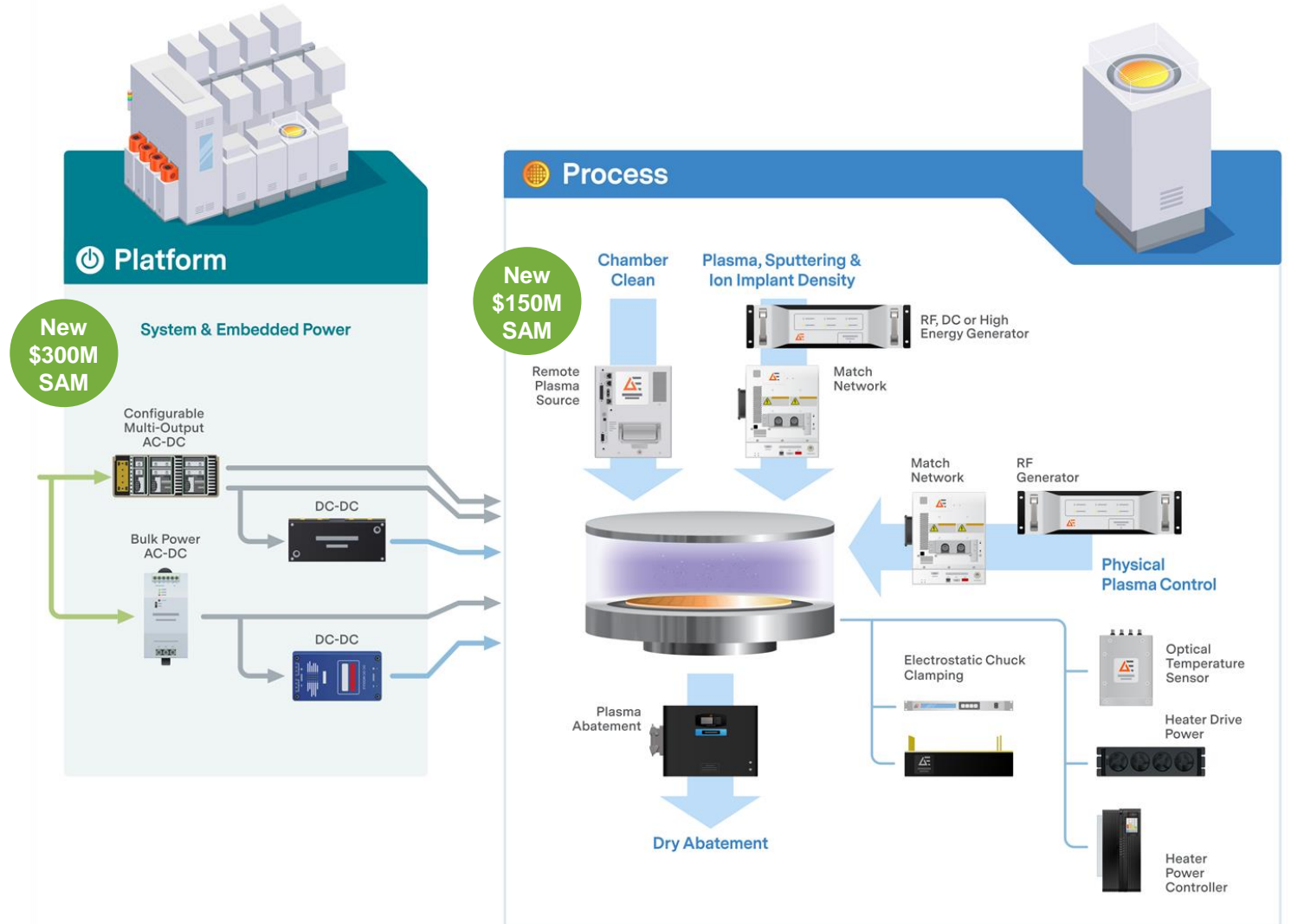
MARKET LEADER WITH PROVEN TRACK RECORD

~2X Process Power Market Share vs. Next Competitor⁽¹⁾

13% 10-year Semi Product Revenue CAGR

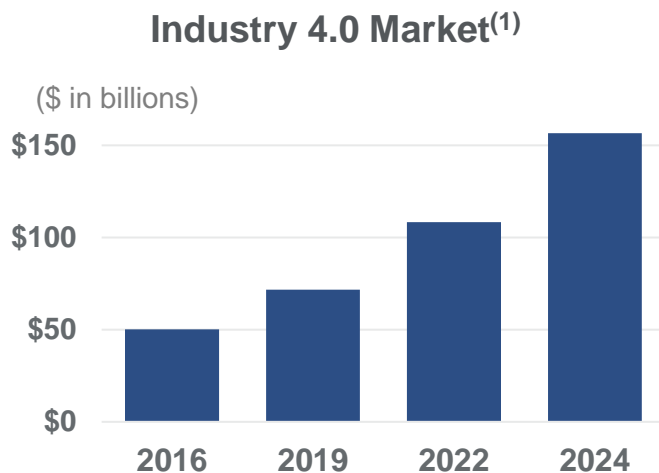
TARGET TO CONTINUE TO OUTGROW OUR MARKET

>1.2X AE Targeted Revenue CAGR over WFE CAGR



INDUSTRIAL & MEDICAL: ENABLING SMART APPLICATIONS

FAVORABLE MARKET TREND IN “SMART EVERYTHING”



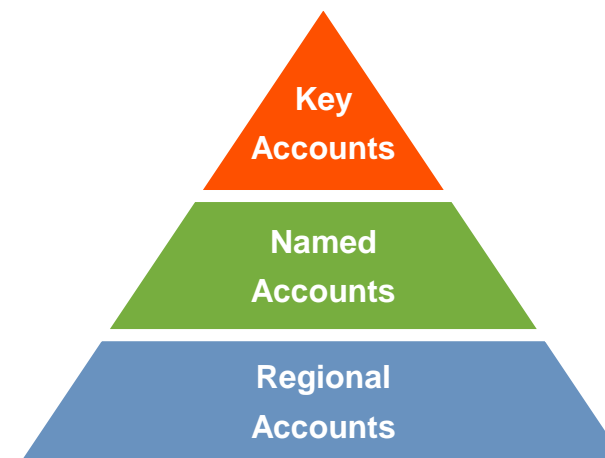
- Industry 4.0 related investments expected to grow at a 16.9% 2019-24 CAGR⁽¹⁾
- Digital transformation and smart everything
- AE leading with our highly engineered precision power solutions with digital functionalities and IoT integration

LEADERSHIP IN CONFIGURABLE



- Highly flexible platform using existing off the shelf modules to create custom solutions
- Accelerates time to market by enabling quick customization
- AE is the market leader in this SAM of \$140M with 35% share⁽²⁾

TARGET PROPRIETARY DESIGNS WITH AE'S GLOBAL CHANNEL



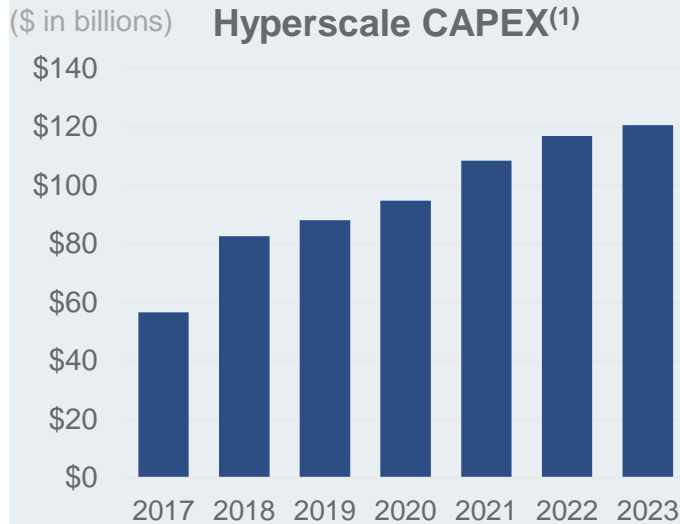
- Target leading customers with proprietary opportunities across these markets
- Optimized global channel to drive scale in coverage and increases efficiency
- Accelerate cross selling, grow design win funnel and drive profitable revenue growth

(1) Source: Markets and Markets Industry 4.0 Market Report, December 2019

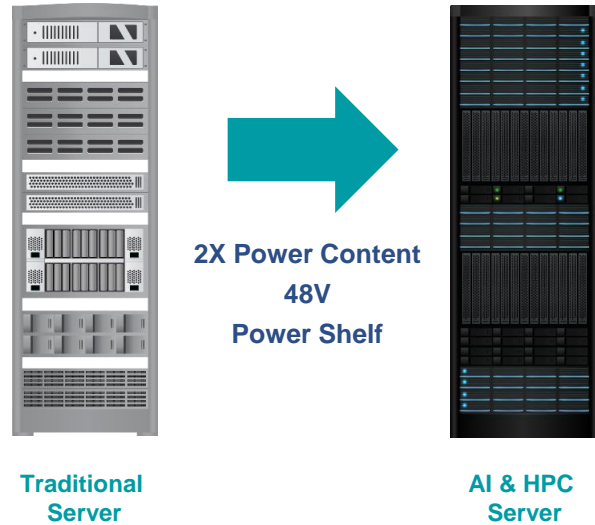
(2) Internal estimates

DATA CENTER COMPUTING: FROM FAST FOLLOWER TO TECHNOLOGY LEADER

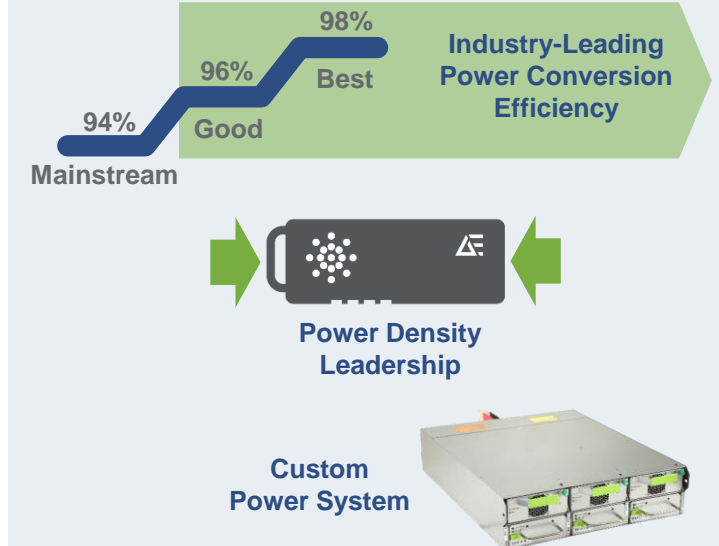
GROWING INVESTMENTS



MORE HIGH VALUE CONTENT



AE TECHNOLOGY LEADERSHIP

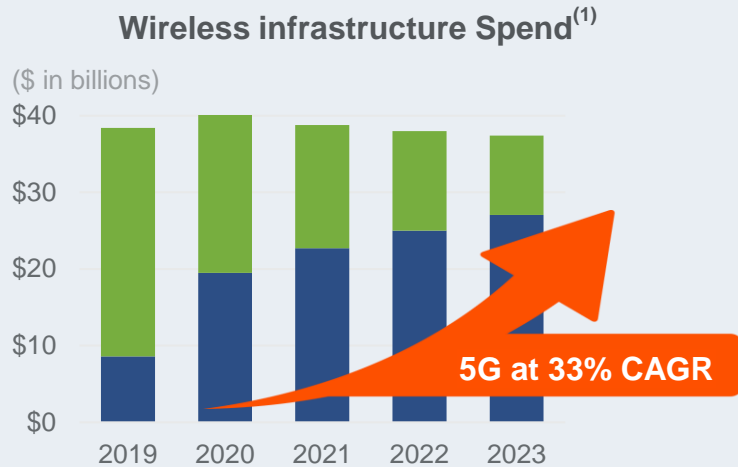


OUR WINNING STRATEGIES

- Develop Industry-leading and highly differentiated **technologies** addressing the most difficult power delivery challenges
- **Gain share** at Tier-I and Tier-II hyperscale customers
- Capture additional opportunities with **48V transition**
- Win with **system-level solutions**
- Deliver **best-in-class** quality and customer relationships

TELECOM & NETWORKING: TARGETING 5G INFRASTRUCTURE

FAVORABLE MARKET GROWTH TREND



- Growth returning to wireless infrastructure with 5G launch
- Increased capacity demand driven by expanding use cases

GROWTH STRATEGY

- Win proprietary designs in 5G radio power for both macro and small cells
- Targeting high value opportunities in Data Center Networking

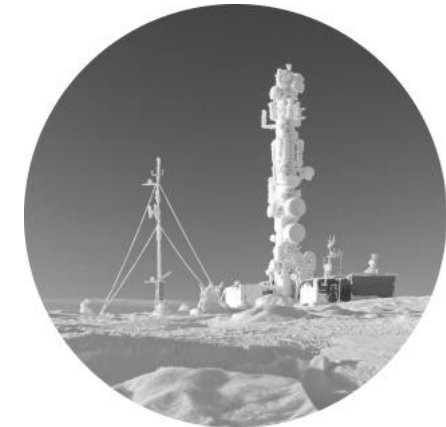
WHY WE WIN

- Leading reputation in high density, rugged power supplies for outdoor radio applications
- Deep application knowledge necessary in 5G radio design
- 20+ years of customer intimacy with leading OEMs

Powering many of the largest wireless networks across the world



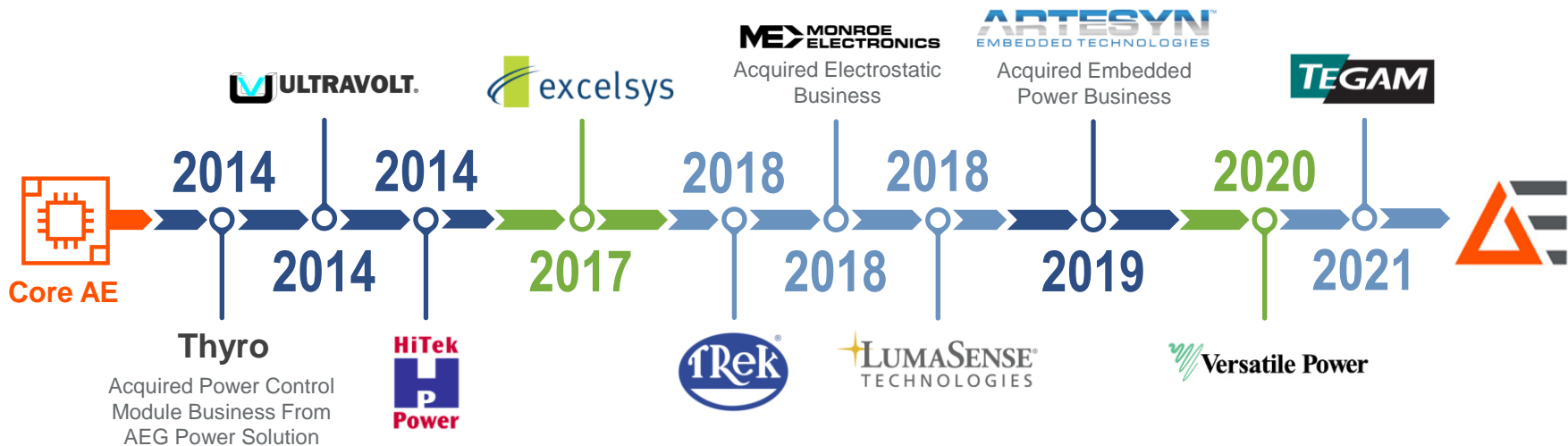
**High reliability
ruggedized power
supply for the harshest
of environments**



INORGANIC GROWTH: GROWING SCOPE AND LEVERAGING SCALE

Track Record

Deployed ~\$560M adding >\$760M of pro forma revenue⁽¹⁾



Well-Defined Acquisition Criteria

- Pure Play Power
- Expand SAM, portfolio & technology
- Synergistic with current organization

Building a Solid Funnel

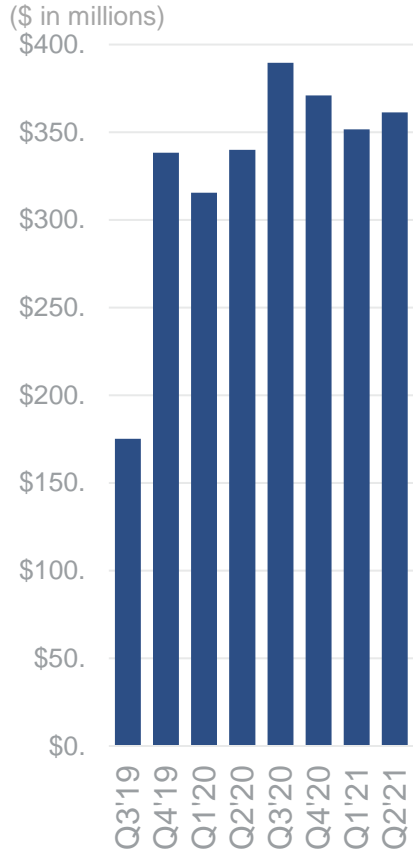
- Plenty of opportunities in the large and fragmented power market
- Extend our efforts in 4th Industrial Revolution

Discipline and Value Creation

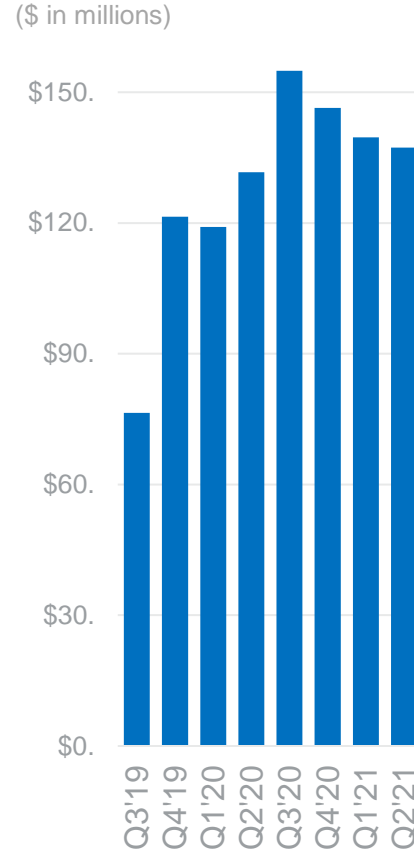
- Analytical and deliberate
- Accretive within first year
- Target ROIC > 10%

DELIVERING STRONG FINANCIAL PERFORMANCE

REVENUE



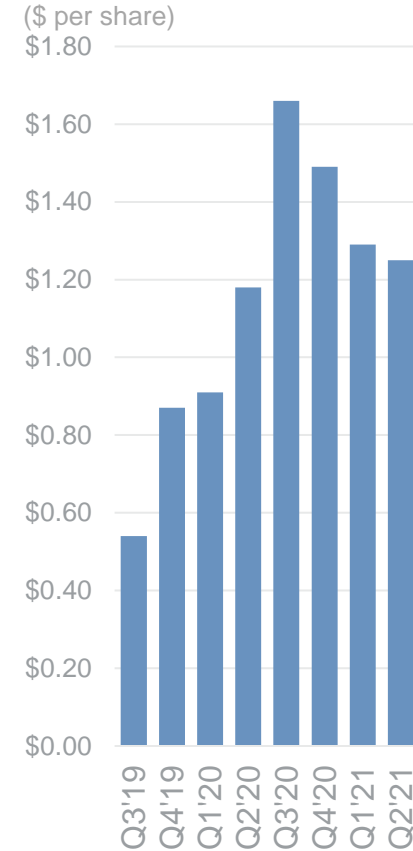
NG GROSS PROFIT



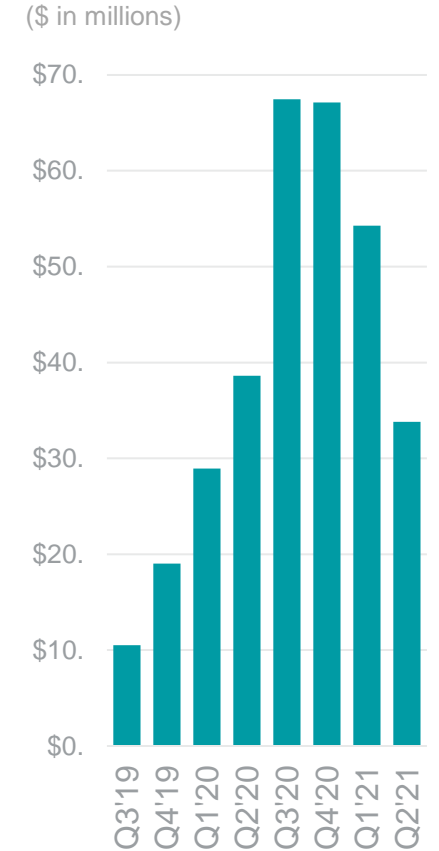
NON-GAAP OP INCOME



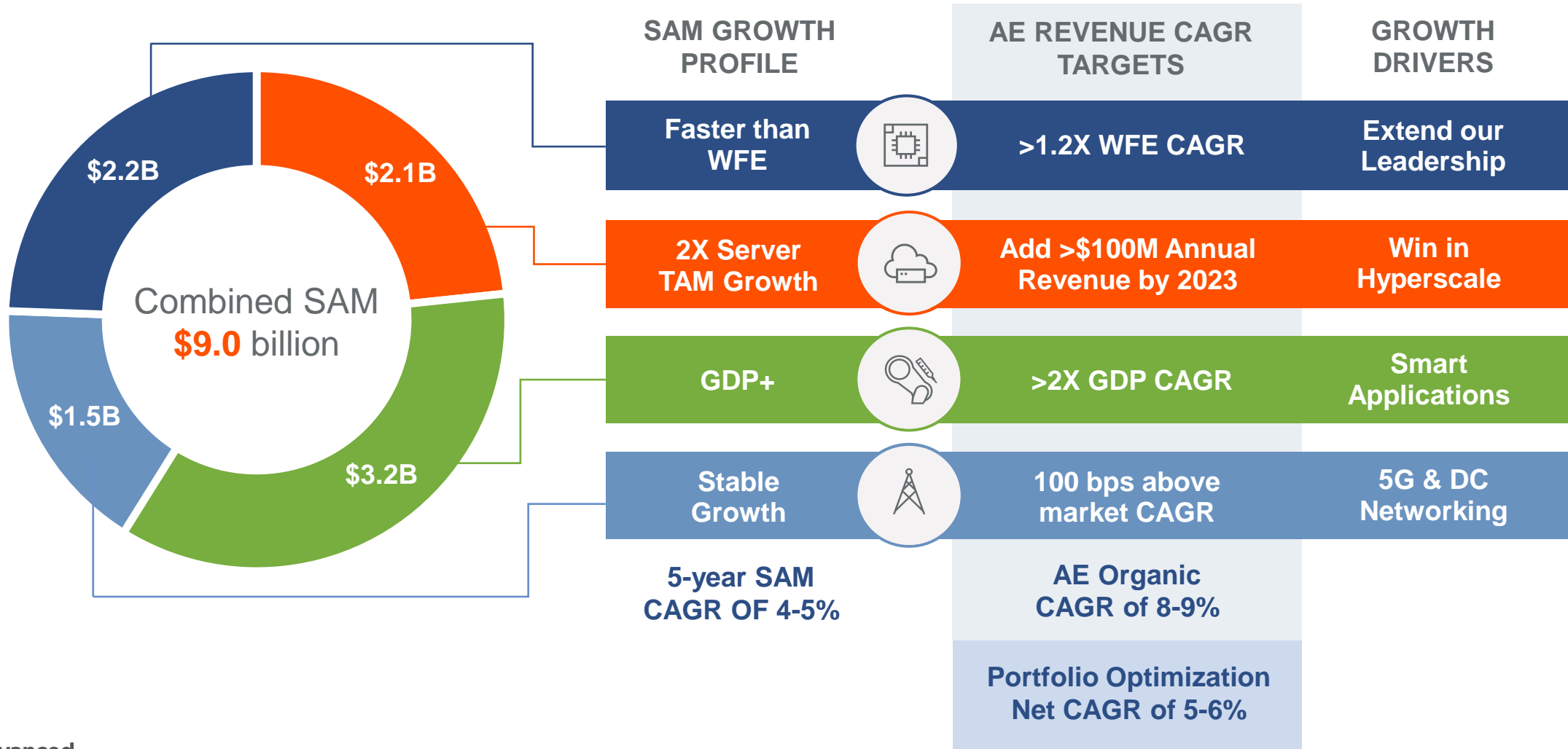
NON-GAAP EPS



CASH FLOW



TARGETING GROWTH ABOVE OUR MARKETS



ACCELERATING EARNINGS GROWTH



(1) 4 quarters combined non-GAAP EPS from Q4 2019 to Q3 2020 as presented during 2020 Investor Briefing on December 2020

(2) This figure represents our aspirational goal and is not to be treated as guidance

A FRAMEWORK TO ACHIEVE OUR LONG-TERM VISION

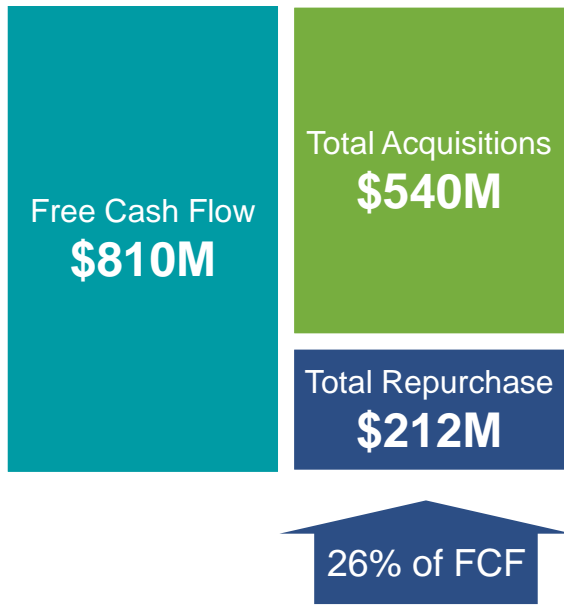
	3-YEAR ASPIRATIONAL GOALS	LONG-TERM ORGANIC FINANCIAL FRAMEWORK	INORGANIC GROWTH ASSUMPTIONS	LONG-TERM VISION (6-8 YEARS)
Revenue (\$M)	\$1,650	5-6% Net CAGR	Add ~\$500M	\$2,500
Non-GAAP Operating Margins	21%	OPEX at ½ rev. CAGR 35-45% incr. margins	>10% acquired margins	21%
Non-GAAP EPS (\$/sh)	\$7.50	>2.0X revenue CAGR	Accretive in Year 1	\$12.00
ROIC	23%	Maintain >20%	Targeted ROIC at >10%	>20%

CLEAR ROADMAP FOR CREATING LONG-TERM SHAREHOLDER VALUE

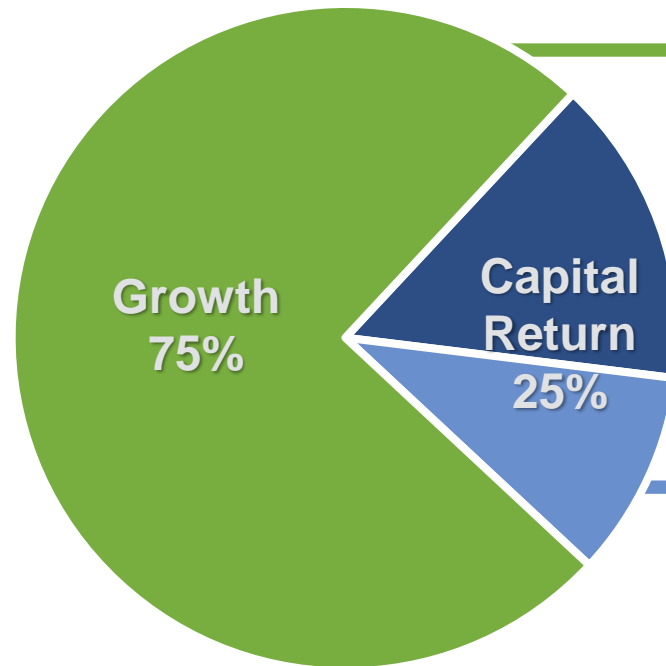
CAPITAL ALLOCATION PLAN

Capital Allocation Track Record

2014 to 2020 Total



Allocation of Free Cash Flow



GROWTH: ~75%

- M&A Engine with a disciplined process
- Building a solid funnel
- Maintain gross debt leverage at 1.0-1.5x, and comfortable raising to 2.5X
- Ample liquidity with an unused LOC of \$150M and accordion of \$250M

SHARE REPURCHASE: ~15%

- Opportunistic program to take advantage of market volatility
- Target to offset dilution over time

DIVIDEND PROGRAM: ~10%

- Initiating quarterly dividend program, starting in Q1 2021
- Supported by financial strength, scale and cash flow
- Initial yield at ~0.4% with room to increase in the future



Strong Balance Sheet
supports continued inorganic growth

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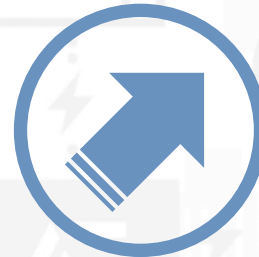
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ACCELERATING EARNINGS

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THANK YOU

NON-GAAP MEASURES

- Advanced Energy's non-GAAP measures exclude the impact of non-cash related charges such as stock-based compensation and amortization of intangible assets, as well as discontinued operations, minority interest, and non-recurring items such as acquisition-related costs and restructuring expenses. The non-GAAP measures 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 regarding this presentation furnished today to the Securities and Exchange Commission.

Q3 2021 GUIDANCE

	Q3 2021
Revenue	\$340M +/- \$15M
GAAP EPS from continuing operations	\$0.52 +/- \$0.20
Non-GAAP* EPS	\$0.80 +/- \$0.20

NON-GAAP RECONCILIATION

	Twelve months ended December 31,			
	2017	2018	2019	2020
Revenue	\$ 671.0	\$ 718.9	\$ 788.9	\$ 1,415.8
GAAP Operating Income	\$ 200.8	\$ 171.6	\$ 54.4	\$ 176.0
Add back:				
Restructuring Charges	-	4.2	5.0	13.2
Acquisition-related Costs	0.2	2.3	20.3	15.6
Stock-based Compensation	12.5	9.7	7.3	12.3
Amortization of Intangible Assets	4.4	5.8	12.2	20.1
Facility Transition and Relocation Costs	-	1.8	4.8	6.6
Non-GAAP Operating Income	\$ 217.8	\$ 195.4	\$ 104.1	\$ 243.7
<i>Non-GAAP Operating Margin % of Revenue</i>	<i>32.5%</i>	<i>27.2%</i>	<i>13.2%</i>	<i>17.2%</i>

	Twelve months ended December 31,			
	2017	2018	2019	2020
GAAP Income from Continuing Operations	\$ 136.1	\$ 147.1	\$ 56.5	\$ 135.2
Add back:				
Restructuring Charges	-	4.2	5.0	13.2
Acquisition-related Costs	0.2	2.3	20.3	16.3
Stock-based Compensation	12.5	9.7	7.3	12.3
Amortization of Intangible Assets	4.4	5.8	12.2	20.1
Foreign Exchange Losses	3.5	-	-	8.4
Facility Transition and Relocation Costs	-	1.8	4.8	6.6
Incremental Expense Associated with Start-up of the Asia Regional Headquarters	1.1	-	-	-
Central Inverter Services Business Sale	-	-	(13.7)	-
Nonrecurring Tax (Benefit) Expense Associated with Inverter Business Sale	(33.8)	-	-	-
Tax Cuts and Jobs Act Impact	72.9	5.7	-	-
Tax Effect of Non-GAAP Adjustments	(5.3)	(4.6)	1.5	(10.5)
Non-GAAP Net Income	\$ 191.5	\$ 172.0	\$ 93.9	\$ 201.5
Share Outstanding (Millions)	40.2	39.4	38.5	38.5
Non-GAAP EPS	\$ 4.77	\$ 4.37	\$ 2.44	\$ 5.23

NON-GAAP RECONCILIATION

Reconciliation of Non-GAAP measure - operating expenses and operating income, excluding certain items

	Three Months Ended			Six Months Ended	
	June 30,		March 31,	June 30,	
	2021	2020	2021	2021	2020
Gross profit from continuing operations, as reported	\$ 135,033	\$ 130,304	\$ 137,503	\$ 272,536	\$ 242,535
Adjustments to gross profit:					
Stock-based compensation	215	156	350	565	378
Facility expansion, relocation costs and other	1,997	970	1,838	3,835	2,513
Acquisition-related costs	84	215	8	92	5,356
Non-GAAP gross profit	<u>\$ 137,329</u>	<u>\$ 131,645</u>	<u>\$ 139,699</u>	<u>277,028</u>	<u>250,782</u>
Non-GAAP gross margin	38.0%	38.7%	39.7%	38.9%	38.3%
Operating expenses from continuing operations, as reported	\$ 93,953	\$ 94,828	\$ 93,321	187,274	181,251
Adjustments:					
Amortization of intangible assets	(5,513)	(5,009)	(5,384)	(10,897)	(10,015)
Stock-based compensation	(3,229)	(2,681)	(5,351)	(8,580)	(5,507)
Acquisition-related costs	(2,328)	(2,978)	(2,028)	(4,356)	(5,383)
Facility expansion, relocation costs and other	(63)	(539)	(51)	(114)	(1,355)
Restructuring charges	(211)	(5,790)	(1,038)	(1,249)	(6,446)
Non-GAAP operating expenses	<u>82,609</u>	<u>77,831</u>	<u>79,469</u>	<u>162,078</u>	<u>152,545</u>
Non-GAAP operating income	<u>\$ 54,720</u>	<u>\$ 53,814</u>	<u>\$ 60,230</u>	<u>\$ 114,950</u>	<u>\$ 98,237</u>
Non-GAAP operating margin	15.1%	15.8%	17.1%	16.1%	15.0%

Reconciliation of Non-GAAP measure - income excluding certain items

	Three Months Ended			Six Months Ended	
	June 30,		March 31,	June 30,	
	2021	2020	2021	2021	2020
Income from continuing operations, less non-controlling interest, net of income taxes	\$ 35,511	\$ 29,295	\$ 38,358	\$ 73,869	\$ 47,678
Adjustments:					
Amortization of intangible assets	5,513	5,009	5,384	10,897	10,015
Acquisition-related costs	2,412	3,193	2,036	4,448	10,739
Facility expansion, relocation costs and other	2,060	1,509	1,889	3,949	3,868
Restructuring charges	211	5,790	1,038	1,249	6,446
Unrealized foreign currency (gain) loss	885	1,058	(2,202)	(1,317)	1,058
Acquisition-related and other costs included in Other income (expense), net	899	—	87	986	—
Tax effect of Non-GAAP adjustments	(2,043)	(2,595)	(1,284)	(3,327)	(3,965)
Non-GAAP income, net of income taxes, excluding stock-based compensation	45,448	43,259	45,306	90,754	75,839
Stock-based compensation, net of taxes	2,636	2,170	4,362	6,998	4,533
Non-GAAP income, net of income taxes	<u>\$ 48,084</u>	<u>\$ 45,429</u>	<u>\$ 49,668</u>	<u>\$ 97,752</u>	<u>\$ 80,372</u>

Reconciliation of Non-GAAP measure - per share earnings excluding certain items

	Three Months Ended			Six Months Ended	
	June 30,		March 31,	June 30,	
	2021	2020	2021	2021	2020
Diluted earnings per share from continuing operations, as reported	\$ 0.92	\$ 0.76	\$ 0.99	\$ 1.91	\$ 1.24
Add back (subtract):					
Per share impact of Non-GAAP adjustments, net of tax	0.33	0.42	0.30	0.62	0.85
Non-GAAP per share earnings	<u>\$ 1.25</u>	<u>\$ 1.18</u>	<u>\$ 1.29</u>	<u>\$ 2.53</u>	<u>\$ 2.09</u>

RECONCILIATION OF Q3 2021 GUIDANCE

	Low End		High End
Revenue	\$325M	-	\$355M
Reconciliation of non-GAAP* earnings per share			
GAAP earnings per share	\$0.32	-	\$0.72
Stock-based compensation	\$0.11	-	\$0.11
Amortization of intangible assets	\$0.13	-	\$0.13
Restructuring and other	\$0.08	-	\$0.08
Tax effects of excluded items	-\$0.04	-	-\$0.04
Non-GAAP* earnings per share	\$0.60	-	\$1.00