Innovation Through Pervasive Engineering Simulation

Investor Presentation
Q2 2019

NASDAQ: ANSS

Cautionary Statement Regarding Forward-Looking and Non-GAAP Financial Information

This presentation contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Forward-looking statements are statements that provide current expectations or forecasts of future events based on certain assumptions. Forward-looking statements are subject to risks, uncertainties, and factors relating to our business which could cause our actual results to differ materially from the expectations expressed in or implied by such forward-looking statements. Forward-looking statements use words such as “anticipate,” “believe,” “could,” “estimate,” “expect,” “forecast,” “intend,” “likely,” “may,” “outlook,” “plan,” “predict,” “project,” “should,” “target,” or other words of similar meaning.

Risks, uncertainties, and factors that could cause actual results to differ materially from those implied by these forward-looking statements include: adverse changes in global economic and/or political conditions; declines in our customers’ businesses resulting in adverse changes in customer procurement patterns; uncertainties regarding demand for our products and services in the future and our customers’ acceptance of new products; plans for future capital spending; investments in complementary companies, products, services and technologies; political, economic, and regulatory risks and uncertainties in the countries and regions in which we operate; impacts from tariffs, trade sanctions, export license requirements or other trade barriers; potential variations in our sales forecasts compared to actual sales; failures or errors in our products and services; our industry’s rapidly changing technology; the quality of our products, including strength of features, functionality and integrated multi-physics capabilities; lease license volatility; the investment of more resources in research and development than anticipated; increased pricing pressure as a result of the competitive environment in which we operate; our ability to recruit and retain key personnel; our ability to protect our proprietary technology; cybersecurity threats or other security breaches; disclosure and misuse of customer data whether as a result of a cybersecurity incident or otherwise; implementation of our new IT systems; investments in global sales and marketing organizations and global business infrastructure; dependence on our channel partners for the distribution of our products; increased variability in our revenue due to the adoption of Accounting Standards Codification 606; our reliance on high renewal rates for annual lease and maintenance contracts; our ability to complete and successfully integrate our acquisitions; catastrophic events which may damage our facilities or otherwise disrupt our business; operational disruptions or the failure of our technological infrastructure; periodic reorganization of our sales force; the repatriation of previously taxed earnings in excess of working capital and capital expenditure requirements; a loss of revenue if contracts with the U.S. government or foreign governments are canceled; the outcome of contingencies, including legal proceedings and government or regulatory investigations and service tax audit cases; uncertainty regarding income tax estimates in the jurisdictions in which we operate; the effect of changes in tax laws and regulations in the jurisdictions in which we operate; changes in accounting principles or standards; the uncertainty of estimates relating to the impact on reported revenue related to the acquisition accounting treatment of deferred revenue; and other risks and uncertainties described in our reports filed from time to time with the Securities and Exchange Commission.

We caution readers not to place undue reliance upon any such forward-looking statements, which speak only as of the date they are made. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

We include non-GAAP financial information in this presentation. Reconciliations for such financial information may be found in our presentation, in these slides including in the Appendix, in other materials on our corporate website, and in our SEC filings. This information supplements our GAAP results and should not be viewed in isolation from, or as a substitute for, GAAP results. We believe that this information and the related reconciliations may be useful to investors, analysts and others to help understand and evaluate our financial results, and with respect to adjusted metrics, because we believe they better reflect the ongoing financial results and trends of our businesses and increase comparability of period-to-period results.

ANSYS is the simulation leader

FOCUSED

This is all we do.
Leading product technologies in all physics areas. Largest development team focused on simulation

TRUSTED

97 of the FORTUNE **100** industrials

ISO 9001-2015 CERTIFIED

PROVEN

Member of the prestigious STANDARD & POOR'S 500

$18B market capitalization

GLOBAL

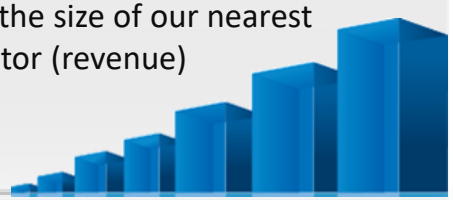
87 ANSYS offices

3,800 employees globally

>100 channel partners selling in more than 100 countries

LARGEST

3x the size of our nearest competitor (revenue)



INDEPENDENT

Long-term financial stability

CAD agnostic

COMMITTED

Overall customer satisfaction globally is at **89.1%** in 2018

DRIVEN

Helping customers address new market challenges: **digital exploration, 5G, additive manufacturing** and **digital twin**

World-class companies leveraging our platform





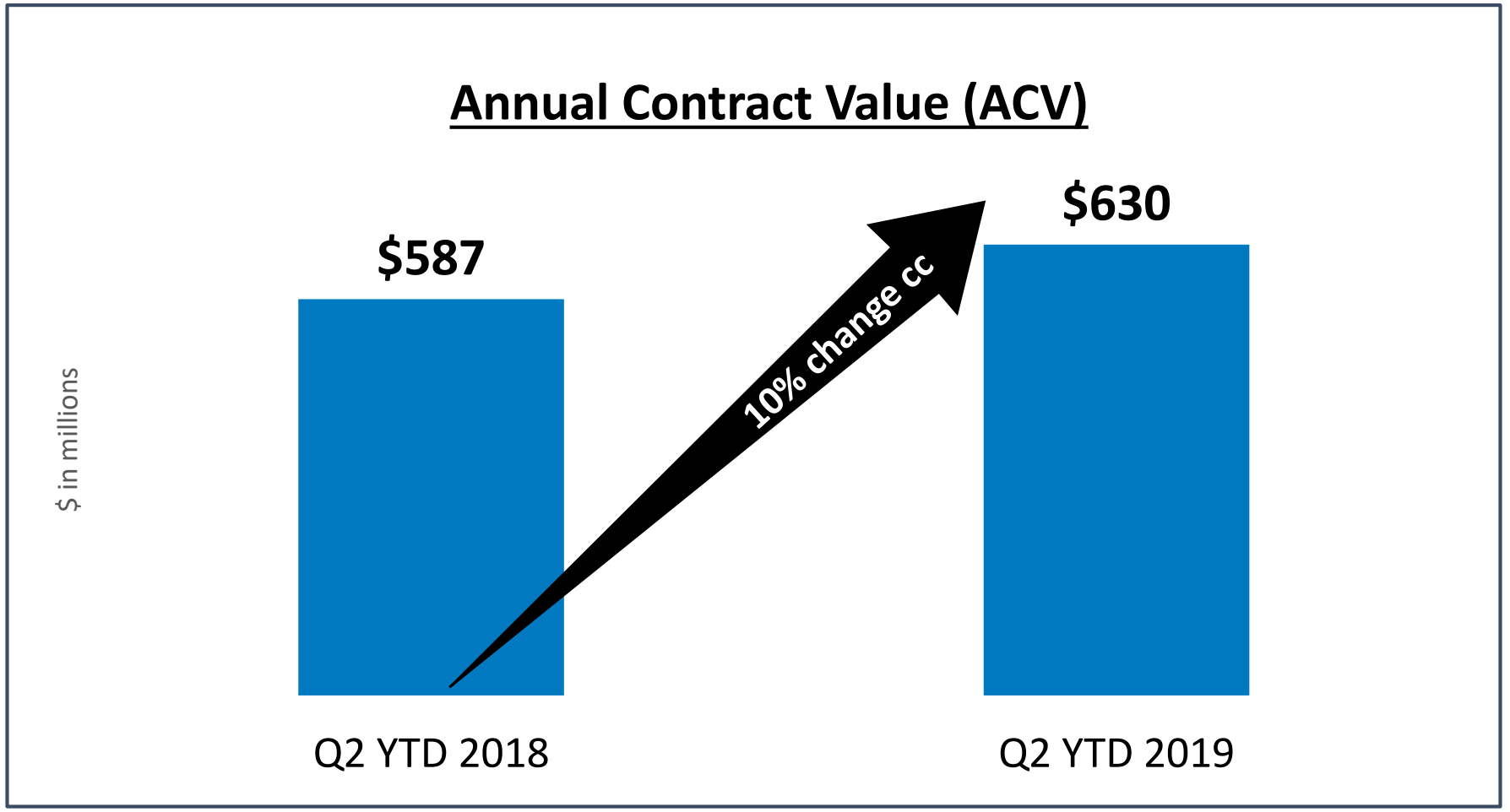




Key 2018 achievements

- Delivered on 2018 commitments
- Reported $1.3 billion in revenue (ASC 606)
- Maintained industry-leading margins for sector and software vertical
- Repurchased 1.7 million shares
- Extended technology leadership with continuous product innovation
- Broadened partner ecosystem by collaborating with Synopsys, SAP and PTC
- Ranked by Corporate Knights as one of the 100 Most Sustainable Companies

Key Performance Metric – Q2 YTD



ACV is a new performance metric introduced in 2018. See Appendix for ACV definition. CC refers to constant currency.

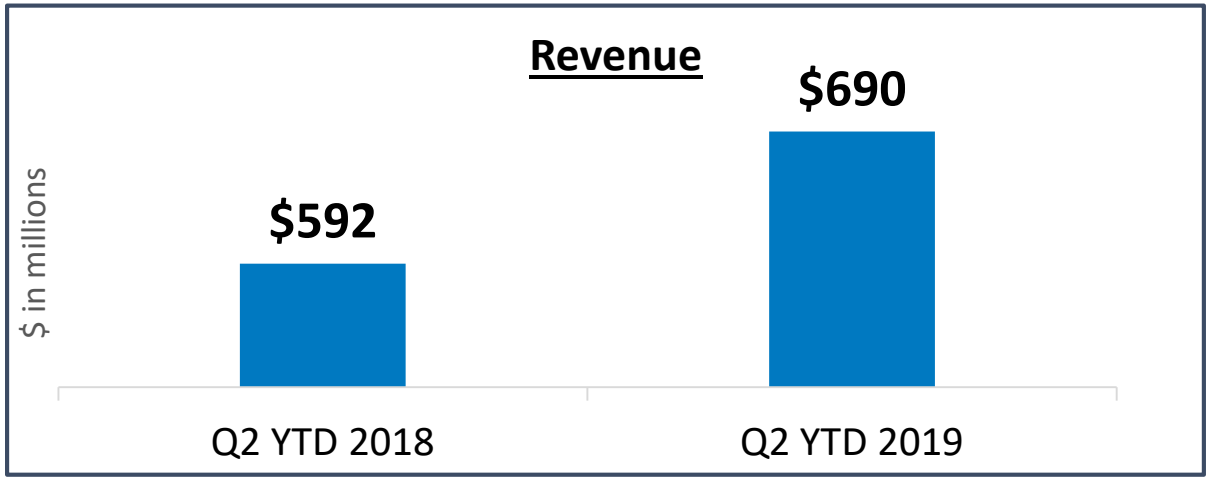
Key Highlights – Q2 2019

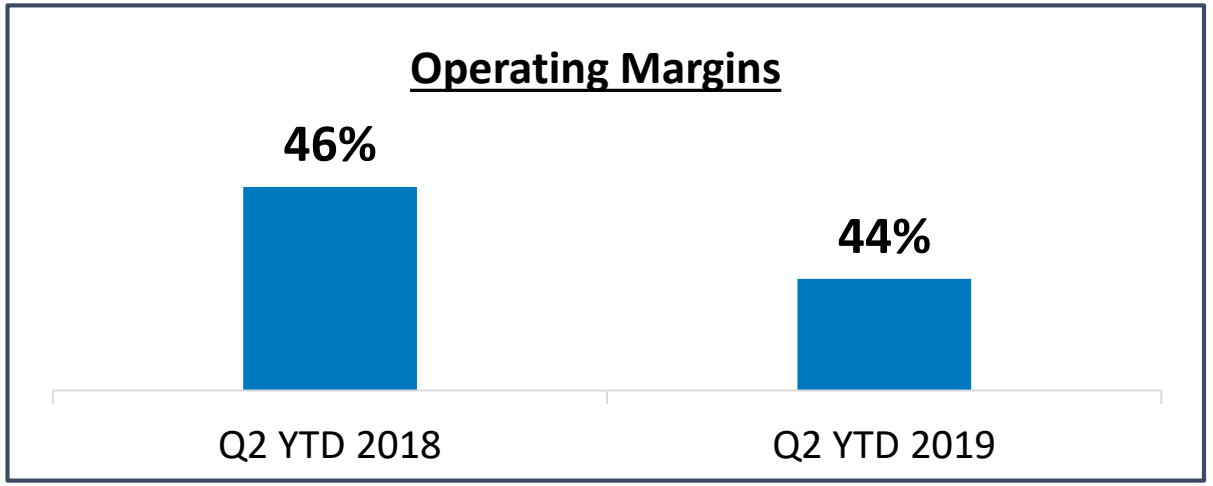
Non-GAAP Financial Highlights

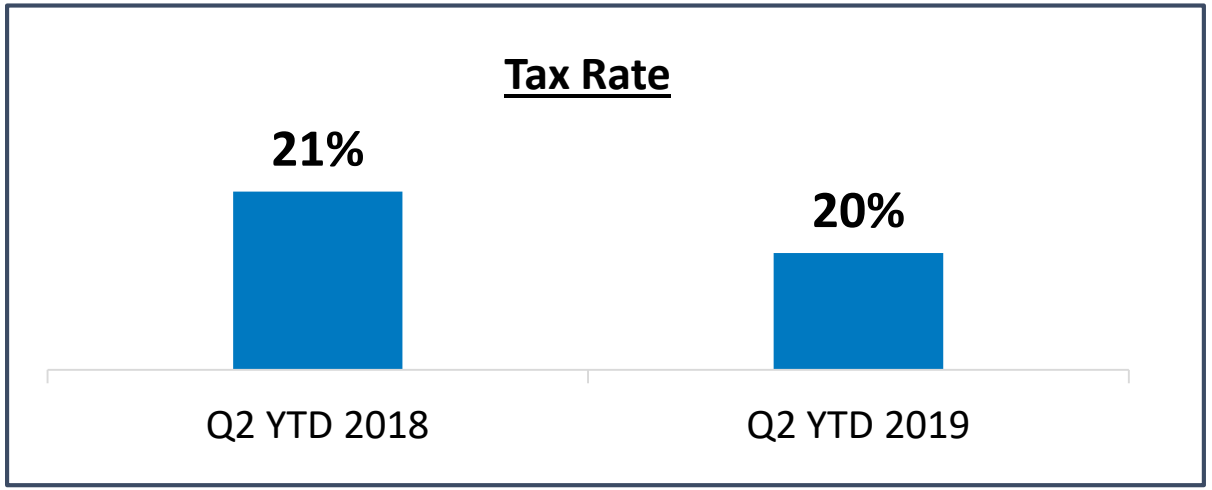
Revenue	**$371M**
Operating Margin	**45.6%**
Tax rate	**19.0%**
Diluted EPS	**$1.61**
Annual Contract Value (ACV)	**$326M**

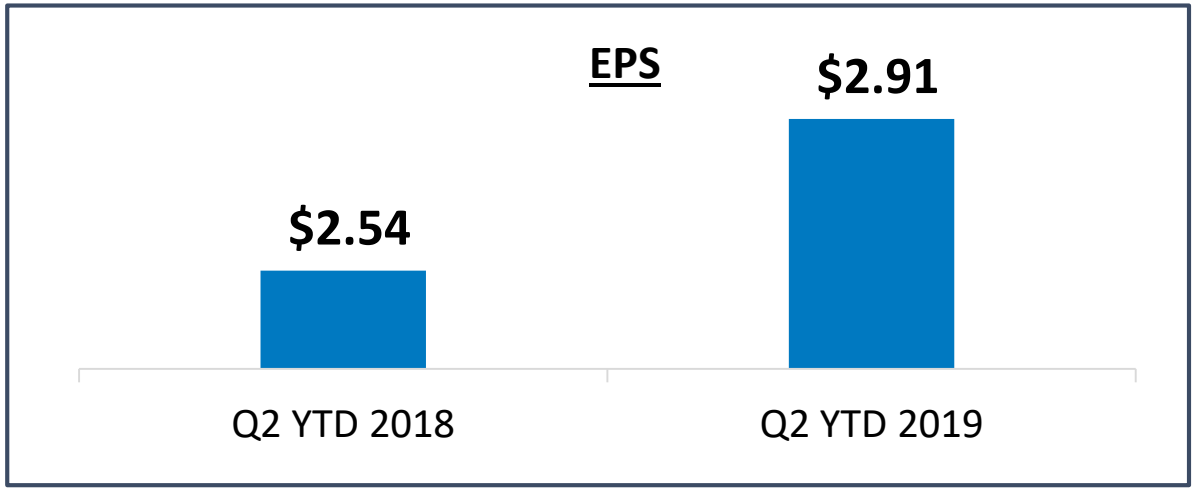
See reconciliation of Non-GAAP financial metrics in Appendix.

Non-GAAP – Q2 YTD









See reconciliation of Non-GAAP financial metrics in Appendix.

ANSYS offers the only true simulation platform with best-of-breed simulation across all major physics

Market Leader Across Individual Physics with Industry-Leading Platform

Structures

Fluids

Electromagnetics

Semiconductor
Power

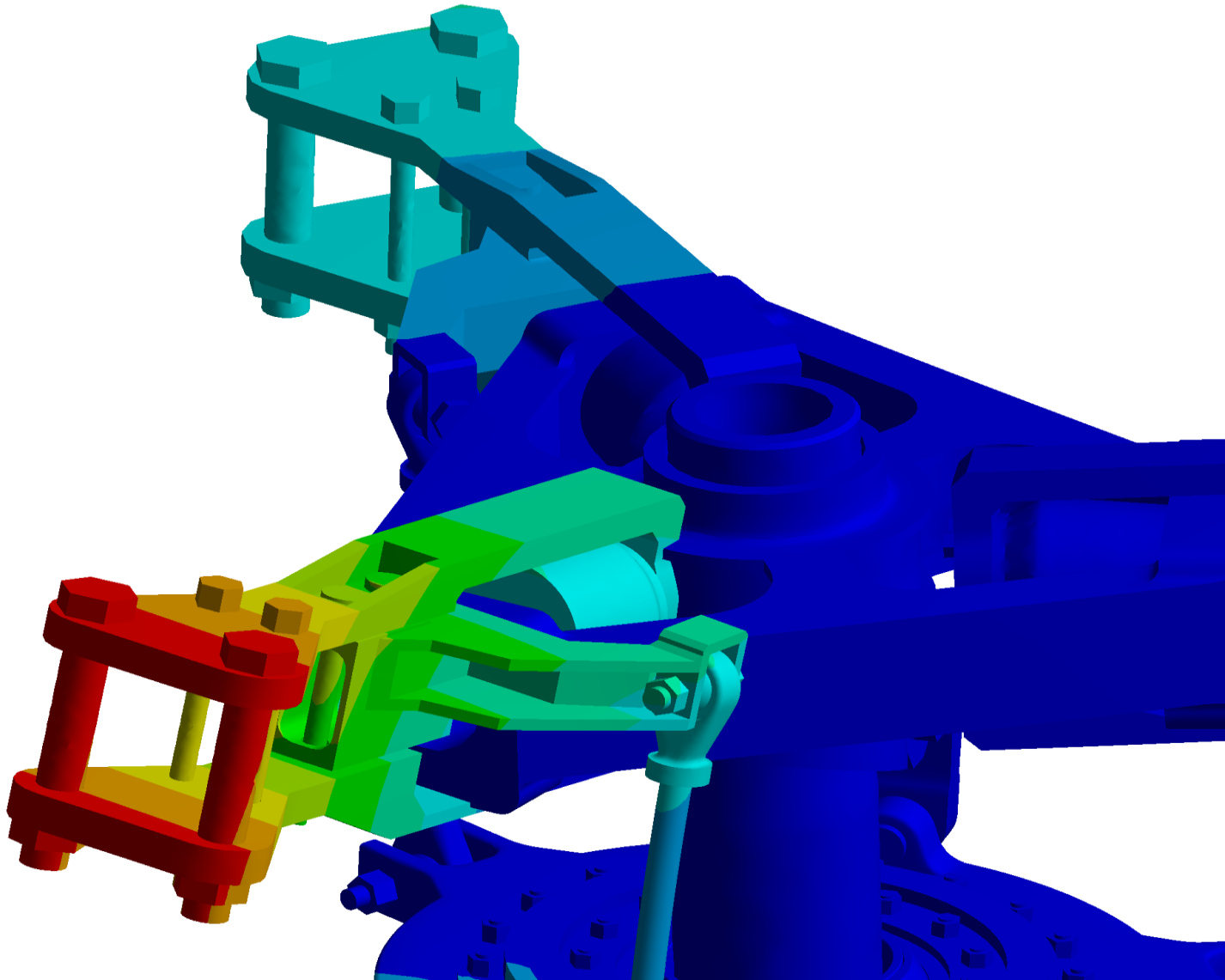
Mission-critical
Embedded Software

Optical

Platform

OUR MISSION

EMPOWER OUR CUSTOMERS TO DESIGN AND DELIVER TRANSFORMATIONAL PRODUCTS



Our long-term vision: PERVASIVE ENGINEERING SIMULATION

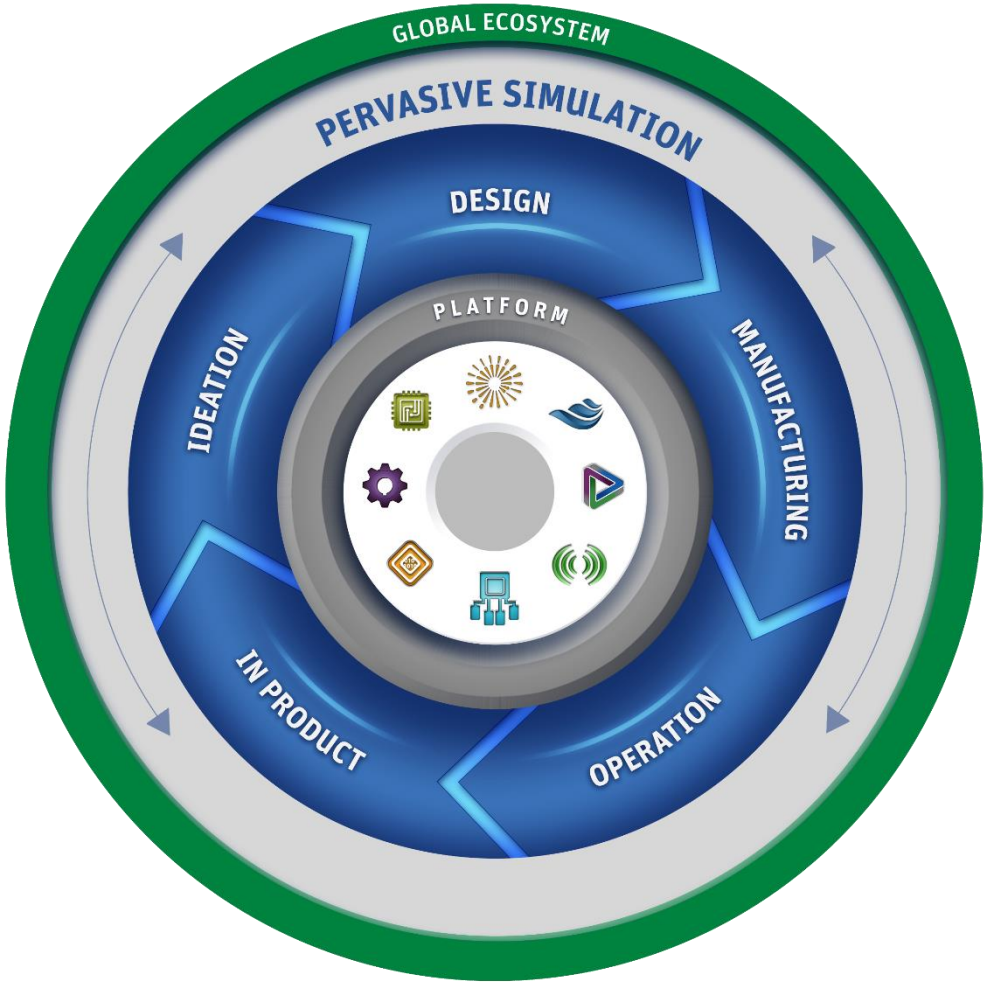
… integration across the product lifecycle on a single platform

IDEATION

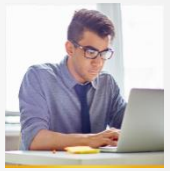
80% of costs locked in early in the design phase

IN PRODUCT

Reduce time needed to validate autonomous vehicles from 10,000 years to 2-3 years



DESIGN

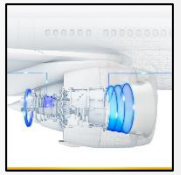


Reduce development time 9X while warranty costs 89% more likely to decrease

MANUFACTURING

Reduce weight of part by 25% through topology optimization and additive manufacturing

OPERATIONS

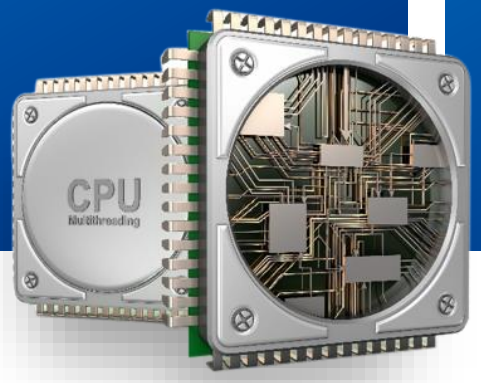


Increased performance with 10-20% reduction in maintenance costs

Our customers face increased pressure to deliver on the classic challenges

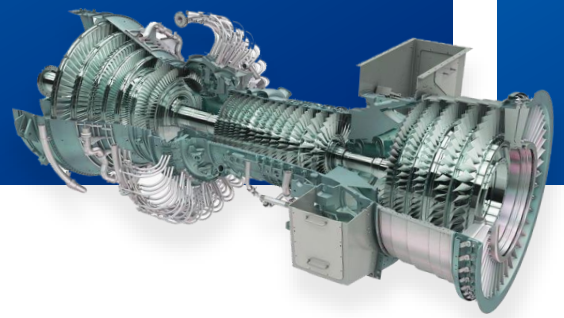
Time-to-market

↓ 30%



Cycle Times

↓ 2 years



New Product Rollouts

↑ 66%

The digital revolution is making the problem even harder

Chips are ever more complex and sophisticated

Every product will soon be connected (and smart)

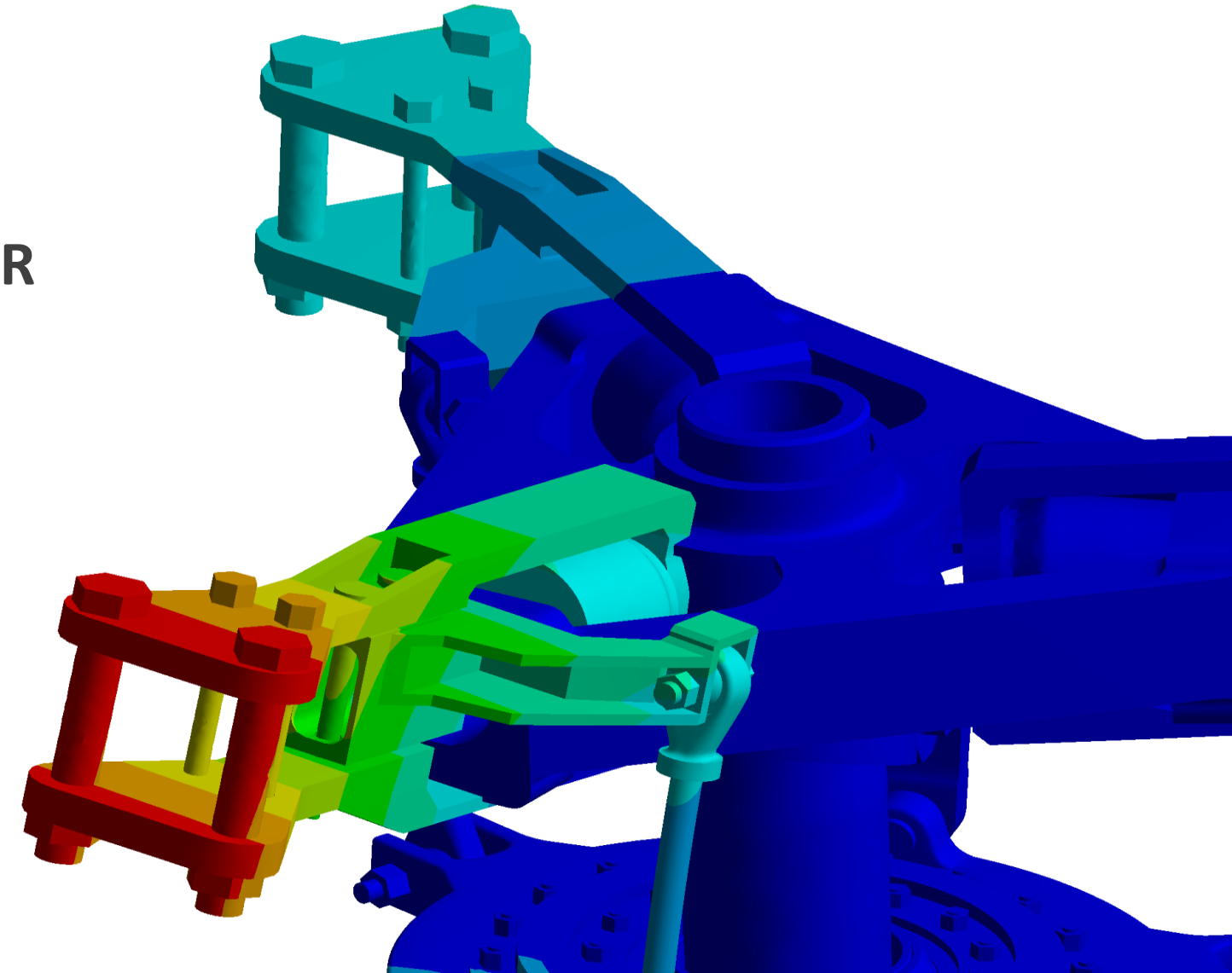
Electronics are everywhere

Additive manufacturing is transforming manufacturing

Products are made of increasingly complex composite materials

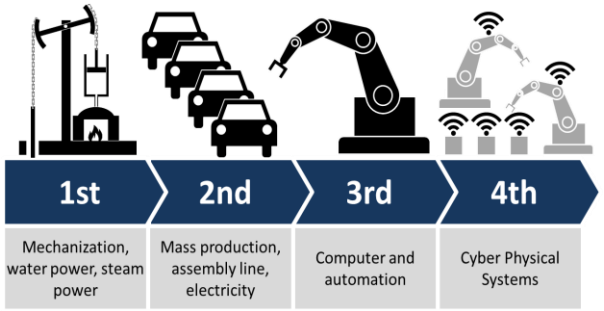
The Internet of Things is changing the way products are delivered and maintained

SIMULATION IS THE ANSWER



A time of profound industry transformation

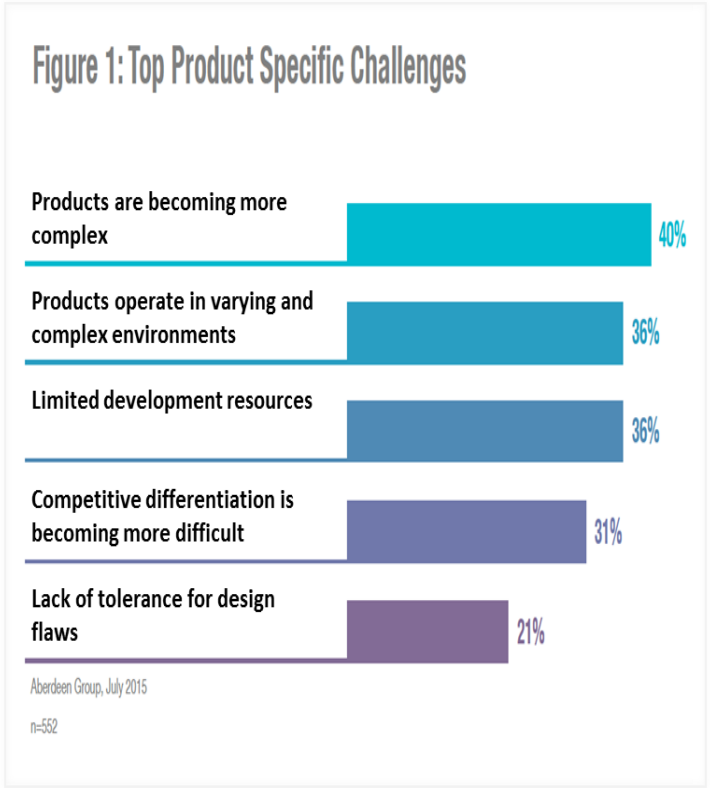
1 Greatest value creation since the industrial revolution



UBER dyson nebia GE TESLA tsmc Honeywell HYPERLOOP

+$11 trillion potential by 2025

2 Product complexity is increasing dramatically



3 Engineering simulation critical to the products of tomorrow

Top 3 technologies that will have the biggest impact on product design and development over the next 5 years?

1. Additive Manufacturing
2. Engineering Simulation
3. Advanced Materials

SIMULATION vs NO SIMULATION
Simulated Environments Experience:

Length of Development Time	▼ 9x reduction
Overall Product Cost	▼ 4x reduction

Simulation enables product managers to…

- Drive **INNOVATION**
- Manage **COMPLEXITY**

+

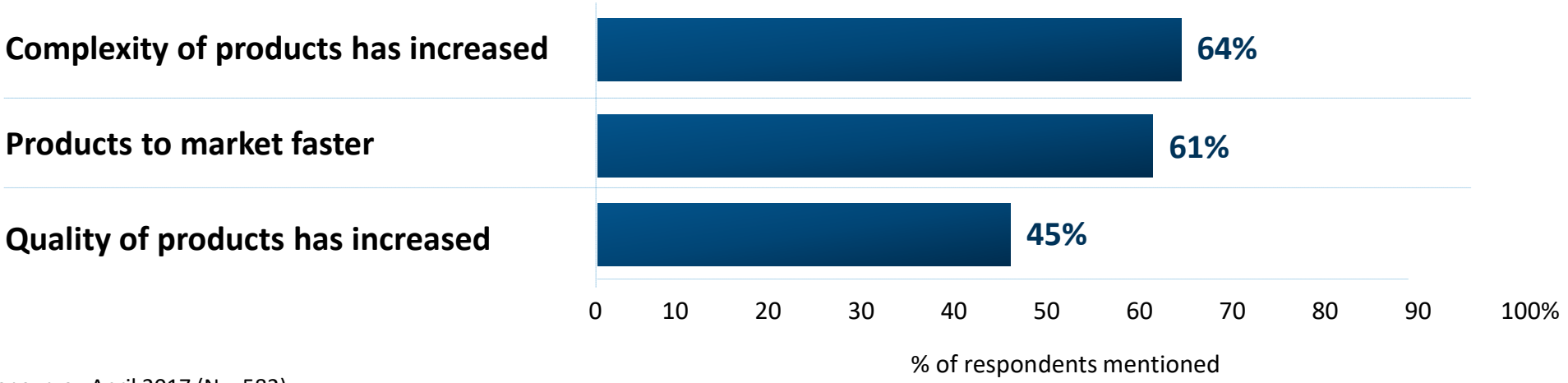
- Lower **CYCLE TIME**
- Reduce **COSTS**

+

- Increase **QUALITY**
- Eliminate **RISK**

…which is driving simulation usage

Top 3 responses to: Which of the following are driving your company to use more simulation?



Source: ANSYS customer survey April 2017 (N = 582).

Designing Fully Electric Aircraft

MagniX's goal is to enhance global prosperity through connecting communities

- Provide clean, low-cost, electric-powered air transportation
- Design electric motors to power propeller planes capable of carrying from 8 to 20 people on flights of 650 miles or less

ANSYS Solution

- Use Maxwell to analyze the electromagnetic behavior of the motor and optimize it for weight
- Share electromagnetic simulation data with ANSYS Mechanical and Fluent to perform thermal and structural multiphysics simulations

Key Results

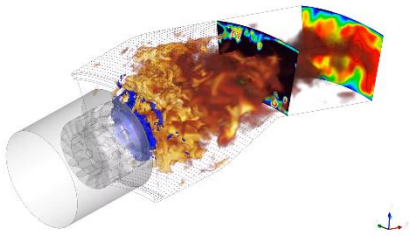
- Engineers can determine the effects of one modification to the system on the other physics involved

"Simulation allows us to try out different ideas, from fluid dynamics to stress to structural properties to electromagnetics in a multiphysics environment to take into consideration all the simultaneous forces at play when an electric motor is working. We can do this virtually, on the computer."

Roei Ganzarski
CEO
MagniX

1. **Shorten development timeline**
2. **Quickly rule out designs that will not work well**

Creating a Digital Thread in the Aerospace Industry



Need to follow designs from their earliest ideation through operation

- Must meet environmental and safety regulations, rising fuel costs and consumer price concerns
- Important to find new ways to gather, analyze and apply engineering data

ANSYS Solution

- Gather information at the earliest stages of ideation — and that data follows the design throughout its lifecycle
- Engineering simulation data plays a central role in the digital thread strategy

Key Results

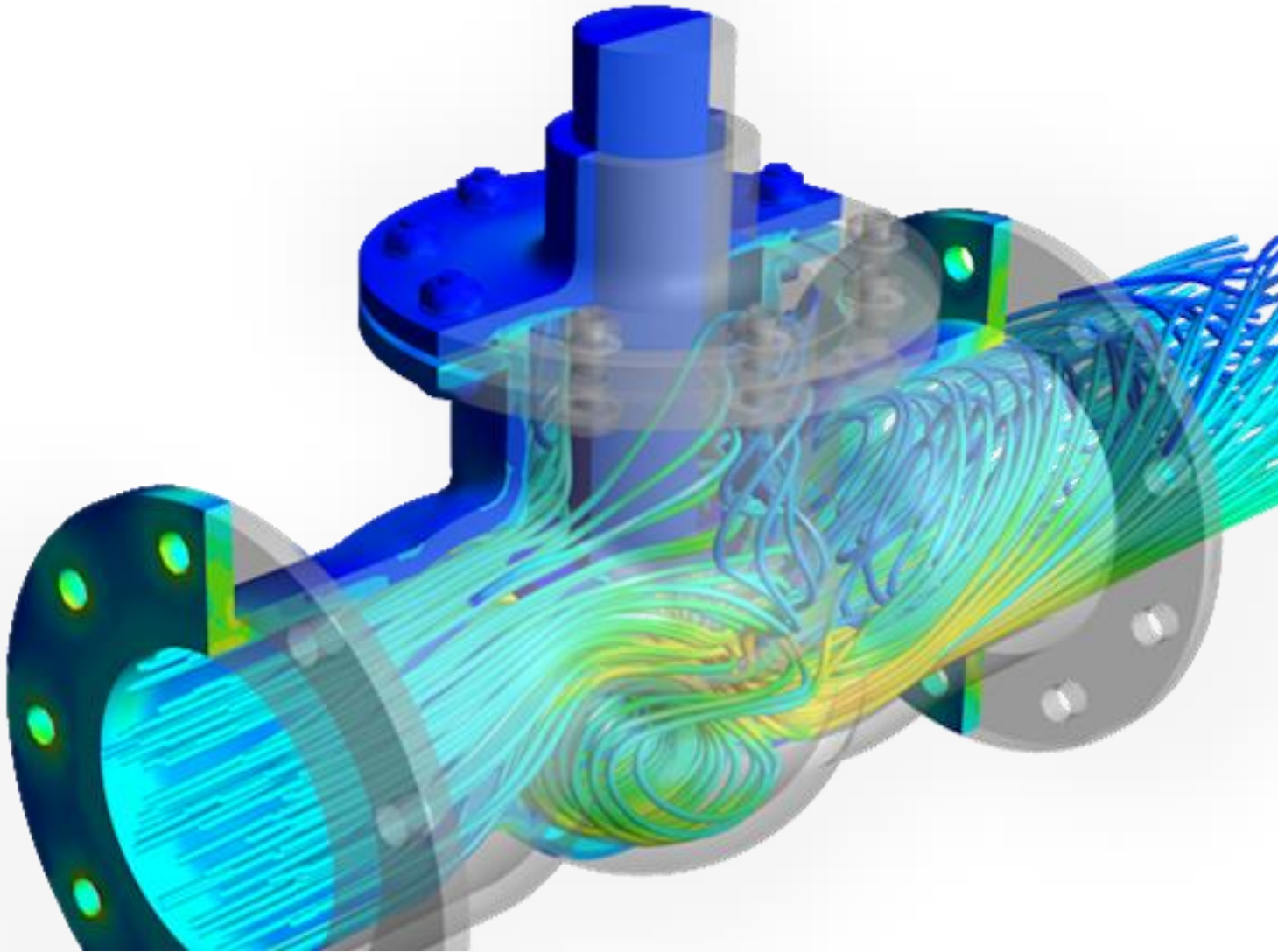
- Design rework is simplified
- Costly and time-consuming repetitive handoffs have been eliminated
- Anyone, anywhere in the business can see at a glance where each design stands

"Avio Aero defined its vision of how engineers would work together in the future, and ANSYS helped the company achieve that vision."

Luca Bedon
Senior Engineering Section Manager
Avio Aero – a GE Aviation business

1. **Designs move quickly and cost-effectively through development**
2. **Competitive advantage to meet tight product delivery deadlines**

WHERE DOES SIMULATION GO FROM HERE?



Focusing our investments on highest priority initiatives

FOCUSED INVESTMENT

~80% of investment on core technology

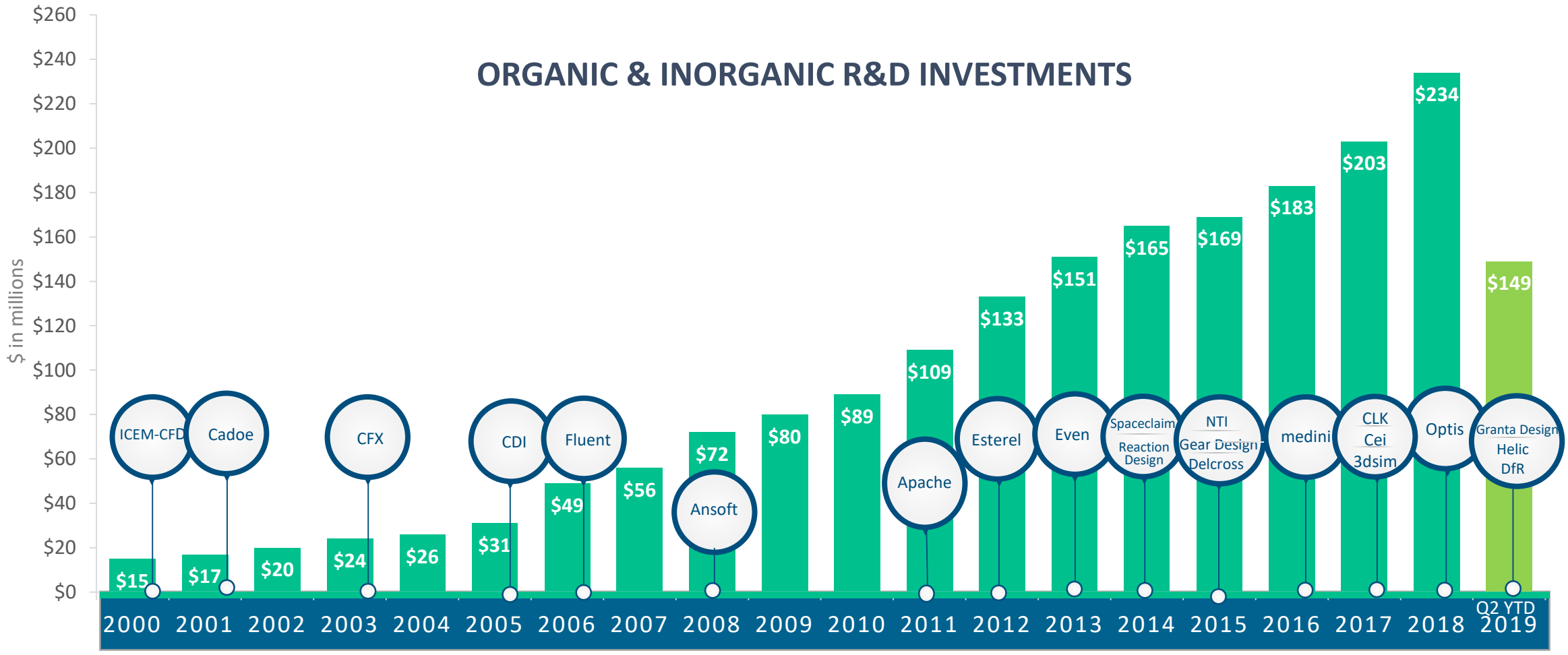
- **Unparalleled & unquestioned accuracy**
- **Usability of broadest/deepest physics**
- **Unique & powerful multiphysics**
- **Common platform from cloud to edge**

~20% of investment on next-generation technology

- **Digital exploration**
- **Additive manufacturing**
- **Digital Twin/IOT**
- **Autonomous vehicles**

ENHANCING OUR CORE TECHNOLOGY WHILE DRIVING NEXT-GENERATION INNOVATION

Our ongoing commitment to invest in R&D



Source: Form 10-K. ANSYS R&D reflect organic and inorganic investments at the acquisition close date. Refer to www.investors.ansys.com for additional details on acquisitions.

Our Ongoing Commitment to Invest in R&D

- **In Q2 2019, we acquired assets of DfR Solutions, a leader in quality, reliability and durability solutions for the electronics industry. The acquisition combined with ANSYS' comprehensive multiphysics solutions will provide a complete designer-level toolkit to analyze for electronics failure earlier in the design cycle.**
- **In Q1 2019, we acquired Granta Design and Helic for a combined purchase price of approximately $260.8 million. Both acquisitions will accelerate our technology roadmap and become a part of the ANSYS global distribution.**

ANSYS® 2019 R2 Strengthens Digital Thread Between Design, Engineering and Manufacturing

From ideation to design to manufacturing and operations, ANSYS is accelerating, streamlining and simplifying the product life cycle through new functionalities released in ANSYS 2019 R2. With a revolutionary ANSYS® Mechanical™ user experience, simplified simulation of complex electronics and a new ANSYS® Fluent™ workflow that significantly speeds meshing of dirty geometries, ANSYS' pervasive simulation engineering solutions enable digital transformation — speeding customers' innovations and reducing their time to market.

- **New User Experience and More in ANSYS Mechanical** With ANSYS 2019 R2 and the acquisition of DfR Solutions, ANSYS Mechanical cements its industry lead in usability and productivity. ANSYS 2019 R2 introduces a new user interface in ANSYS Mechanical that speeds user adoption and reduces learning times to transform engineers' productivity. The improved interface provides new capabilities around customization, ease of use features and instant search and launch tool.
- **New Materials Offerings** Following the acquisition of Granta, ANSYS 2019 R2 embeds data on more than 600 materials within ANSYS Mechanical — speeding up the process of setting up models by reducing time spent looking for material properties. The ANSYS GRANTA Materials Data for Simulation data package provides broad coverage of material types and easy access to key data needed for structural analysis.
- **Powerful New Tools for Simulating Complex Electronics** New offerings in the electronics and electromagnetics suite include important new features for engineers meeting complex design challenges. Accelerated doppler processing in ANSYS® HFSS™ SBR+ expedites the modeling of ADAS radar scenarios related to autonomous vehicles and other near-field radar sensing systems by 100X.
- **New Fluids Workflow Speeds Meshing of Dirty Geometries** In the fluids suite, ANSYS enhanced and extended its new Fluent experience that accelerates digital transformation by enabling users to do more computational fluid dynamics (CFD), in less time, with less training than ever before. The new task-based, fault tolerant workflow meshes dirty, non-watertight geometries twice as fast without scripts or popups. Complex models that previously took days or even weeks can now be meshed in hours.
- **Revolutionary ANSYS VRXPERIENCE Offerings** The new ANSYS VRXPERIENCE Sound empowers users to improve brand image and the sound quality by listening and modifying the sound coming from a recording or CAE. ANSYS VRXPERIENCE Sound is the premier software and comprehensive solution for sound analysis, sound quality measurement and 3D playback, and is now connected to ANSYS Mechanical.

ANSYS Cloud – HPC as easy as it should be

Solve on the cloud from desktop apps

Web-based 3-D postprocessing

Highly optimized for ANSYS solvers

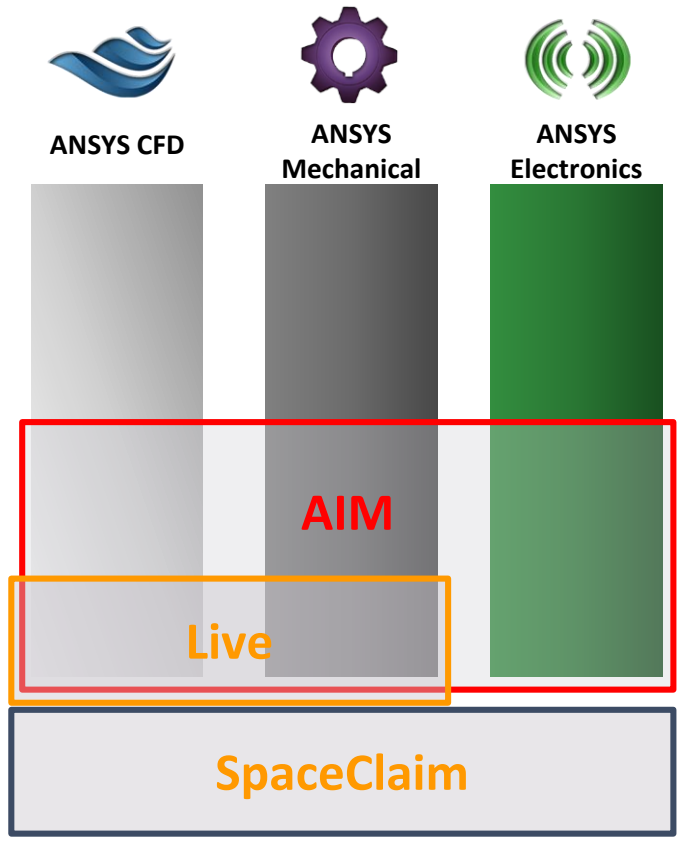
Single vendor solution for SW+HW

ANSYS Cloud Positioning

	UNIQUE VALUE PROPOSITION	TYPICAL ACCOUNT	SOLVERS REQUIRED	LICENSE PREFERENCE
ANSYS Cloud	• One click burst to cloud-HPC from ANSYS flagships - no setup or IT changes required • Highly optimized for ANSYS solvers • Free web-based post processing without having to download results • Single vendor solution with simplified usage-based pricing for HW+SW	Existing SMBs with little or no investment in HPC, and need burst capacity	Mechanical Fluent (Electronics in R2)	ON-DEMAND ANSYS Elastic Units (AEUs)
CHPs	• Support for other simulation tools besides ANSYS • Availability on private and public clouds • Custom hardware configurations and support for 3rd party tools	Existing Strategic & Enterprise	ANSYS + Other ISVs	BRING YOUR OWN LICENSE (BYOL)

Our Product Adjacencies

ANSYS Discovery family of products



Discovery AIM

- Easy to use high-fidelity simulation providing ANSYS gold-standard accuracy and speed
- Comprehensive physics

Discovery Live

- Instantaneous simulation, tightly coupled with direct geometry modeling
- Qualitative results; high accuracy is not the goal

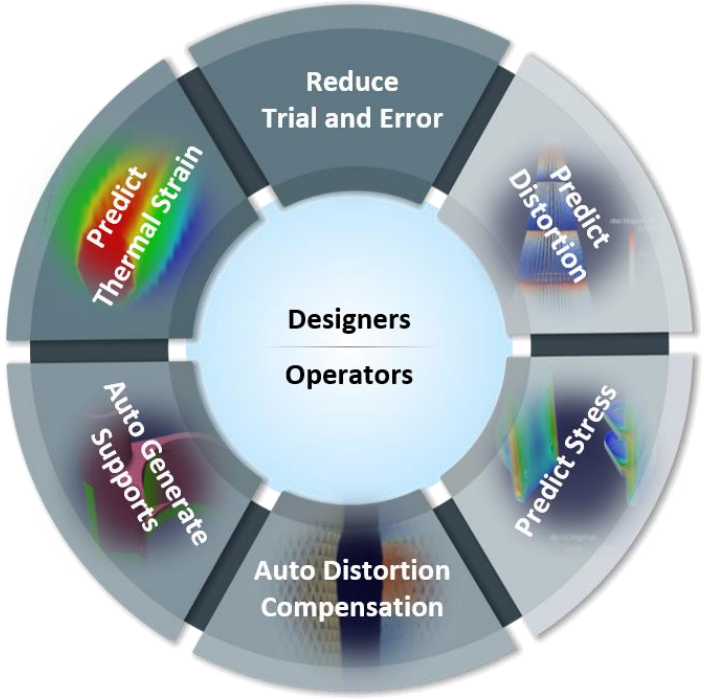
Discovery SpaceClaim

- Fast and intuitive 3D Direct Modeling to create, edit and repair geometry for concept design and simulation

Additional information located at www.ansys.com/products/3d-design/ansys-discovery-live.

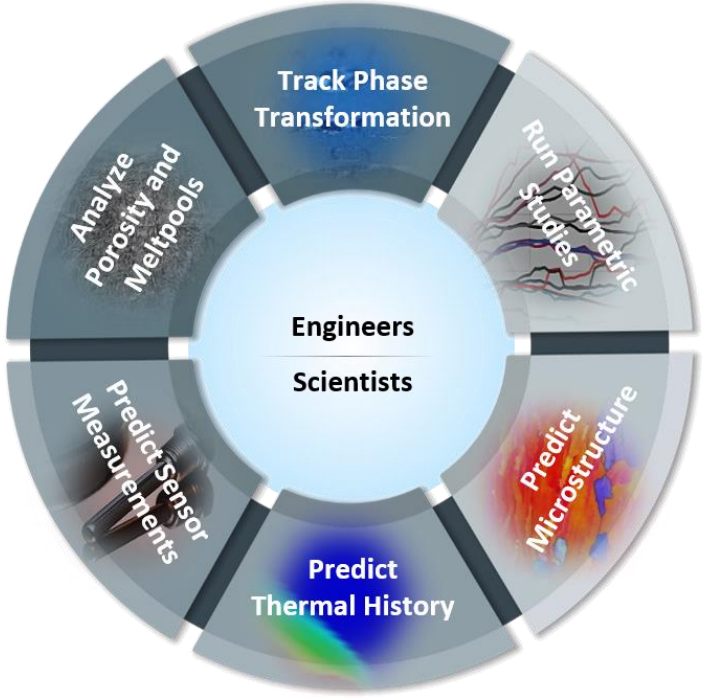
Additive - Two distinct customer groups – Two products

ANSYS Additive Print



- *Designers in aerospace, defense, auto OEMs & medical*
- *Metal AM machine operators*
- *Part manufacturing operations managers*

ANSYS Additive Suite

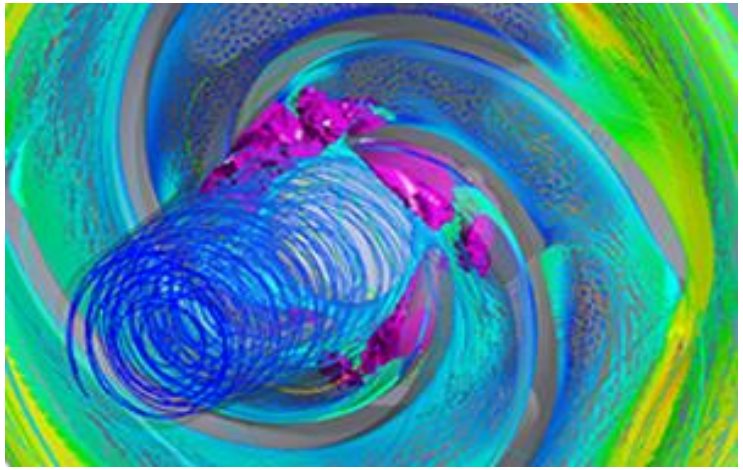


- *FEA analysts in aerospace, defense, auto OEMs & medical*
- *Owners of "part qualification" within OEMs*
- *Materials/manufacturing researchers*

Additional information located at www.ansys.com/products/structures/additive-discovery-manufacturing.

Simulation in Operations of Products: Digital Twin

- A digital twin is a real-time, virtual copy of an actual operating machine that provides insight into individual product performance and maintenance. Sensors on the machine relay data — temperature, pressure, flow rate, voltage, loading, etc. — to the digital twin, and the twin evolves in step with the machines working environment. The digital twin can predict conditions long before they happen, so you can take corrective actions during scheduled downtime, rather than making an untimely shutdown. You can also use the collected data to improve the design of next-generation products.
- A digital twin of a working product system is created when smart sensors mounted on the product are connected to a computer model of that system in near real time. The twin system reflects the current condition of the actual product and changes during operation — reflecting wear, degraded performance or shifting conditions. When simulation is added to the digital twin ecosystem, conditions that are otherwise impossible to see and assess can be revealed.
- By studying the digital twin, engineers can determine the root cause of performance problems, schedule predictive maintenance, evaluate different control strategies and otherwise work to optimize product performance — and minimize operating expenses — in near real time. Simulation is the only way to fully realize the tremendous value contained within the digital twin.



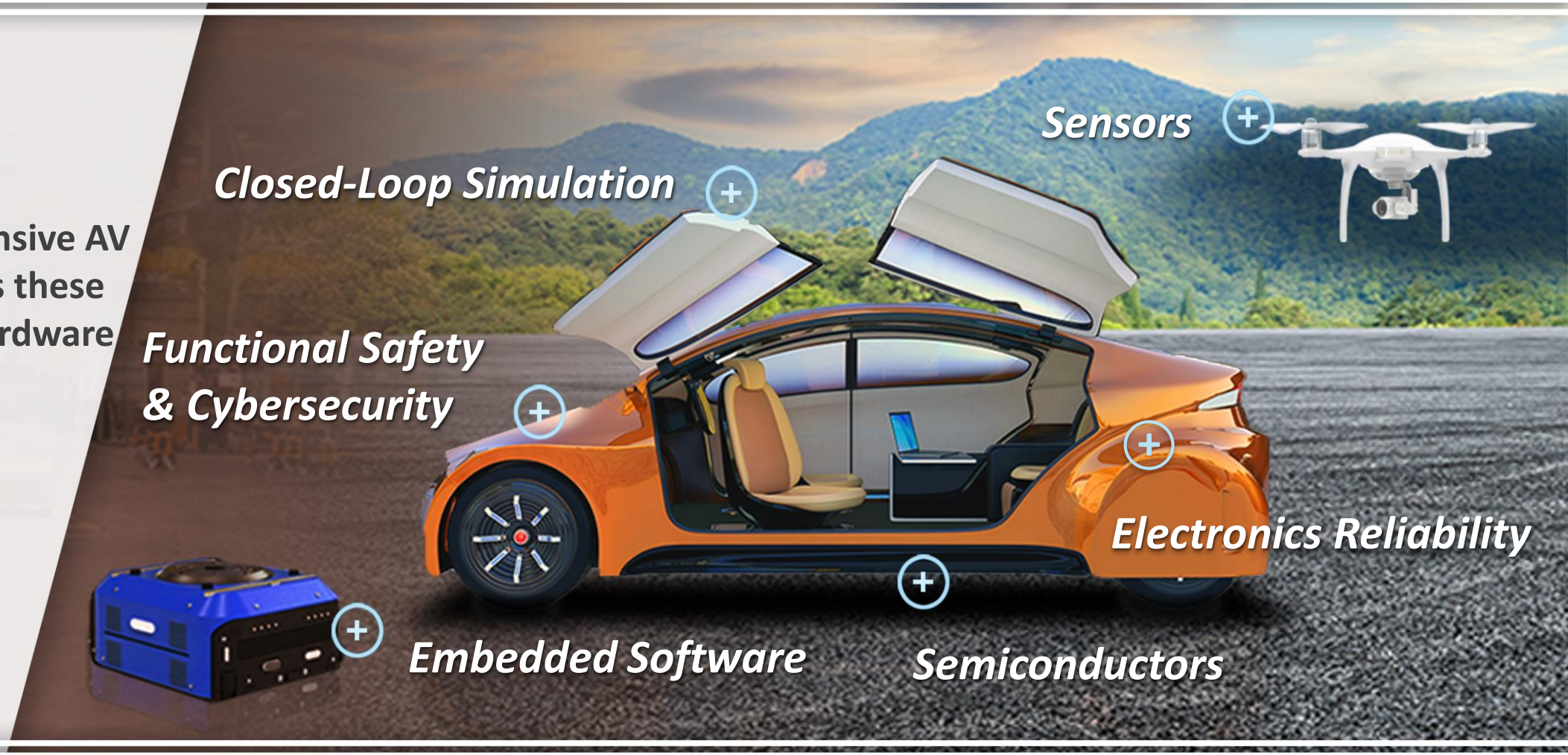
- With the emergence of the Industrial Internet of Things (IIoT), simulation is expanding into operations.
- The IIoT enables engineers to communicate with sensors and actuators on an operating product to capture data and monitor operating parameters.
- The digital twin can be used to monitor prescriptive analytics and test predictive maintenance to optimize asset performance.

Additional information located at www.ansys.com/products/systems/digital-twin.

Autonomous Vehicle Simulation

ANSYS's AV Solution

ANSYS' comprehensive AV solution addresses these 6 aspects of AV hardware and software development



Additional information located at www.ansys.com/products/systems/adas

Expanding the ANSYS ecosystem through partnerships

- SAP incorporating ANSYS Twin Builder in cloud-based Predictive Engineering Insights
- Replace time-based maintenance of industrial assets with predictive and prescriptive maintenance
- Will help sell flagship products to R&D groups

- PTC embedding ANSYS Discovery Live and AIM within Creo for CAD-embedded simulation
- Improve ideation and enable designers to develop better, lower-cost products
- Will create opportunities to sell flagship products to experts / analysts

- Synopsys integrating ANSYS RedHawk with Synopsys IC Compiler for earlier signoff accuracy
- Accelerate time to market of next generation of high-performance computing, mobile and automotive products

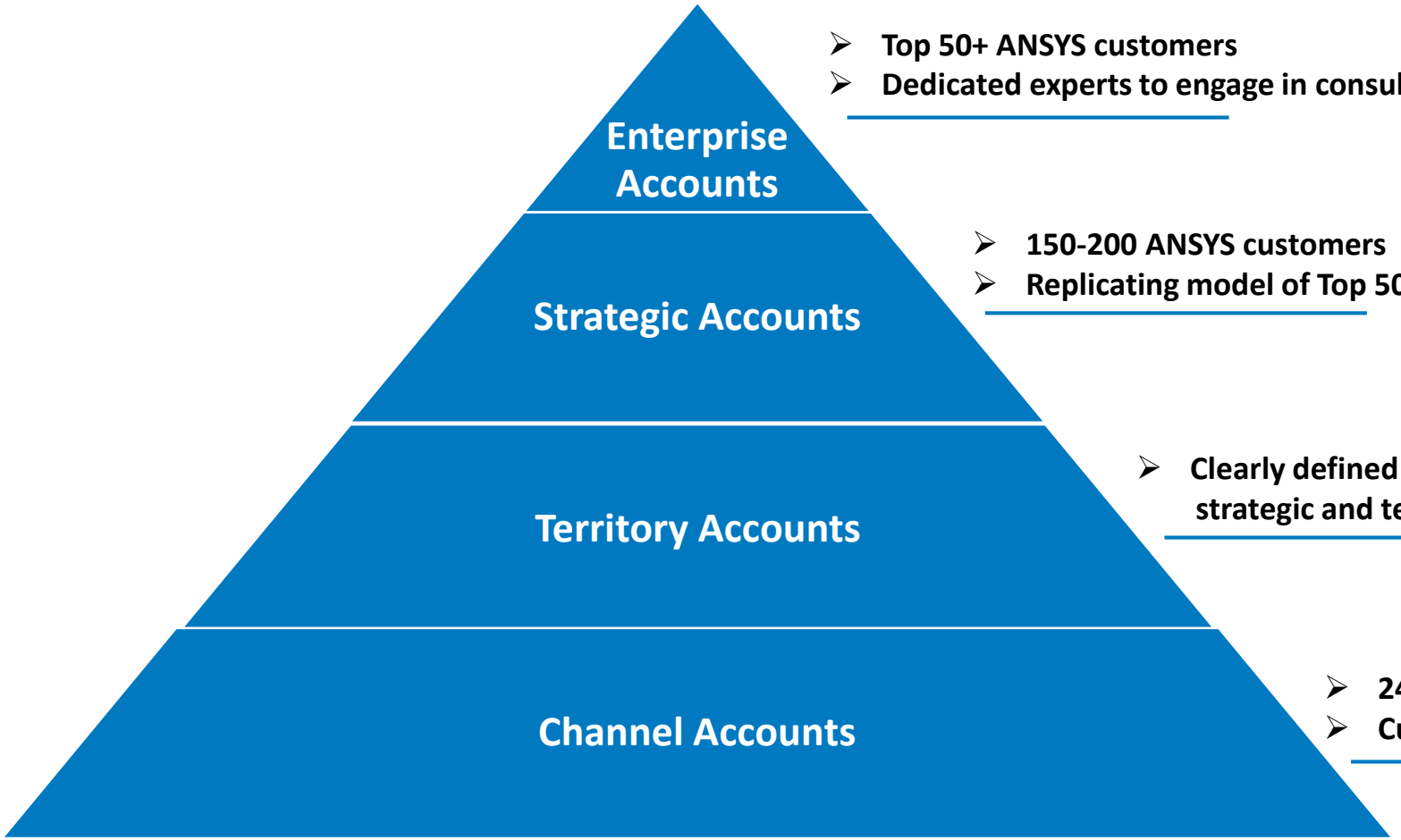
Expanding the ANSYS ecosystem through partnerships

- ANSYS and BMW Group partnered to create the automotive industry's first holistic simulation tool chain for developing autonomous vehicle technologies.
- BMW Group is leveraging ANSYS' broad pervasive engineering simulation solutions and experience to speed up the development of a safety-focused solution for the validation of Autonomous Driving systems.

- Through a new collaboration, ANSYS and Airbus plan to develop a new ANSYS solution for enabling safety-critical flight controls with sophisticated artificial intelligence (AI), aiming at autonomous flight by 2030.
- The intent is to engineer an advanced ANSYS SCADE® tool that links traditional model-based software development with new AI-based development flow. The new solution will be pivotal to reducing development time and expenses.

- ANSYS and AVSimulation are partnering to speed the development of safe autonomous driving for automobile manufacturers.
- The collaboration integrates revolutionary simulation technology from AVSimulation with ANSYS' immersive autonomous driving simulation solutions, expediting vehicle design and validation by using virtual testing.

Our go-to-market strategy



- Top 50+ ANSYS customers
- Dedicated experts to engage in consultative selling

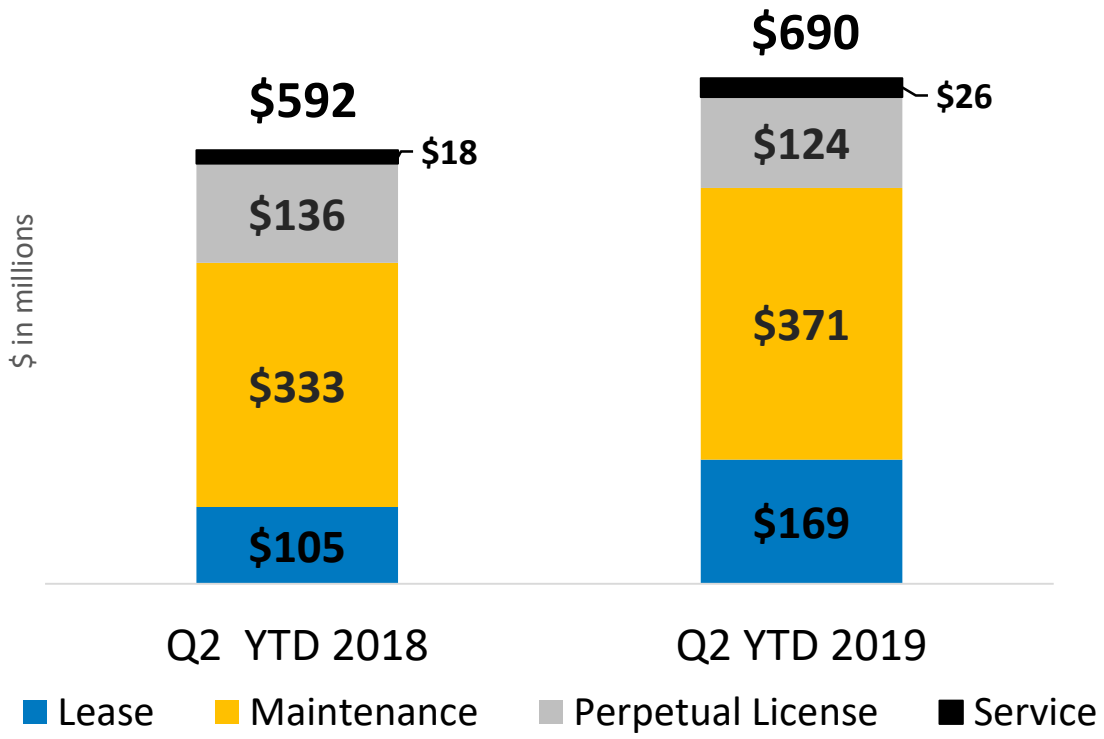
- 150-200 ANSYS customers
- Replicating model of Top 50+

- Clearly defined resources between strategic and territory accounts

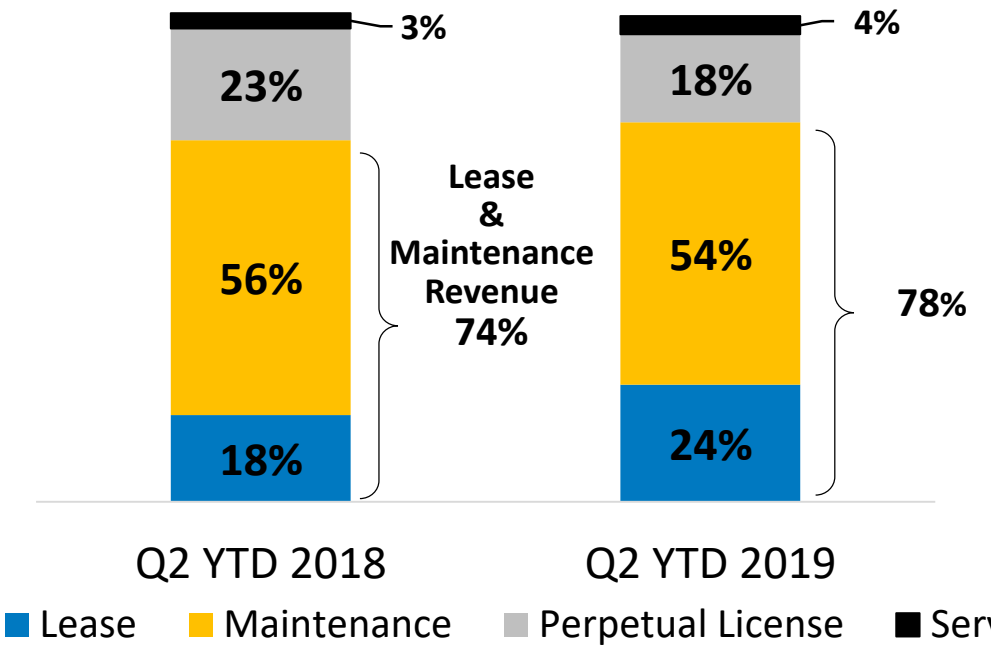
- 24% of Q2 YTD 2019 revenue
- Customers <$500m

Diverse revenue sources – Q2 YTD

Non-GAAP Revenue By Type

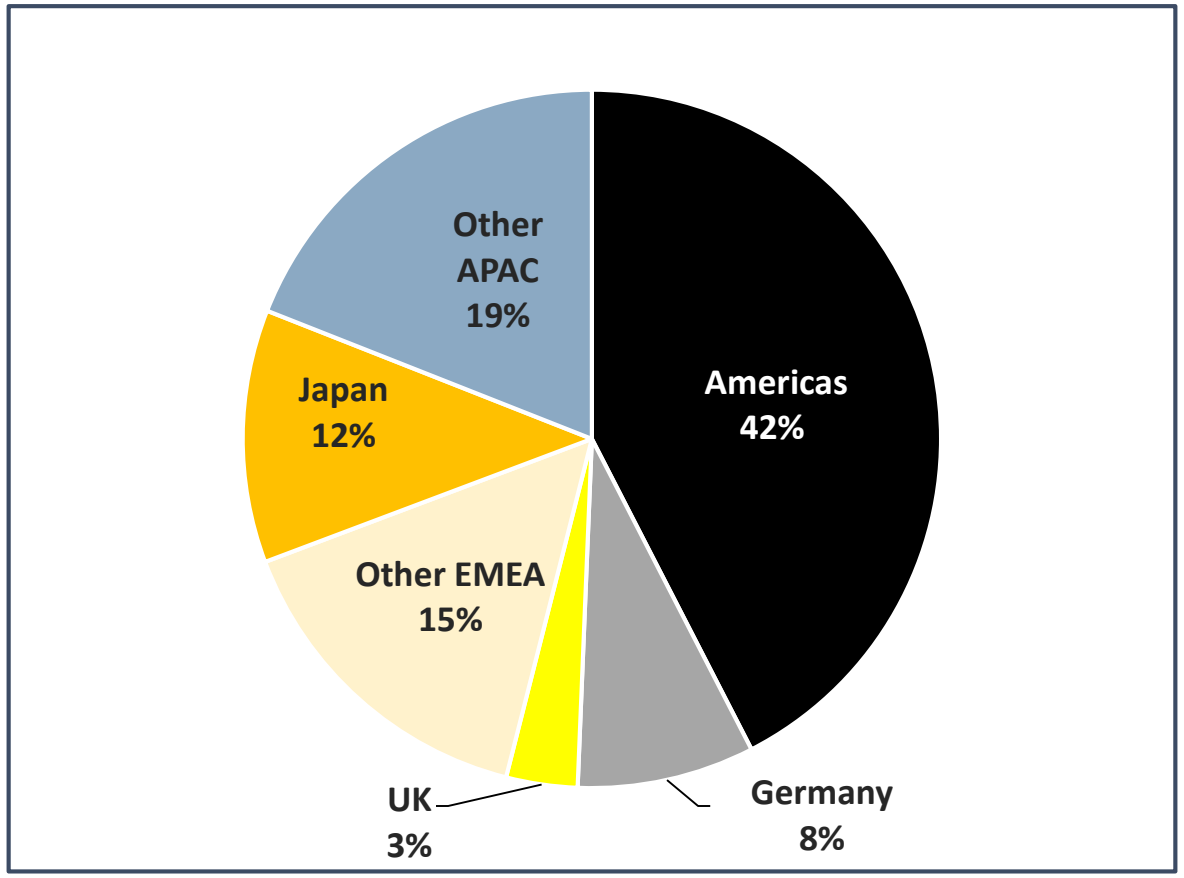


Non-GAAP Revenue as a % of Total

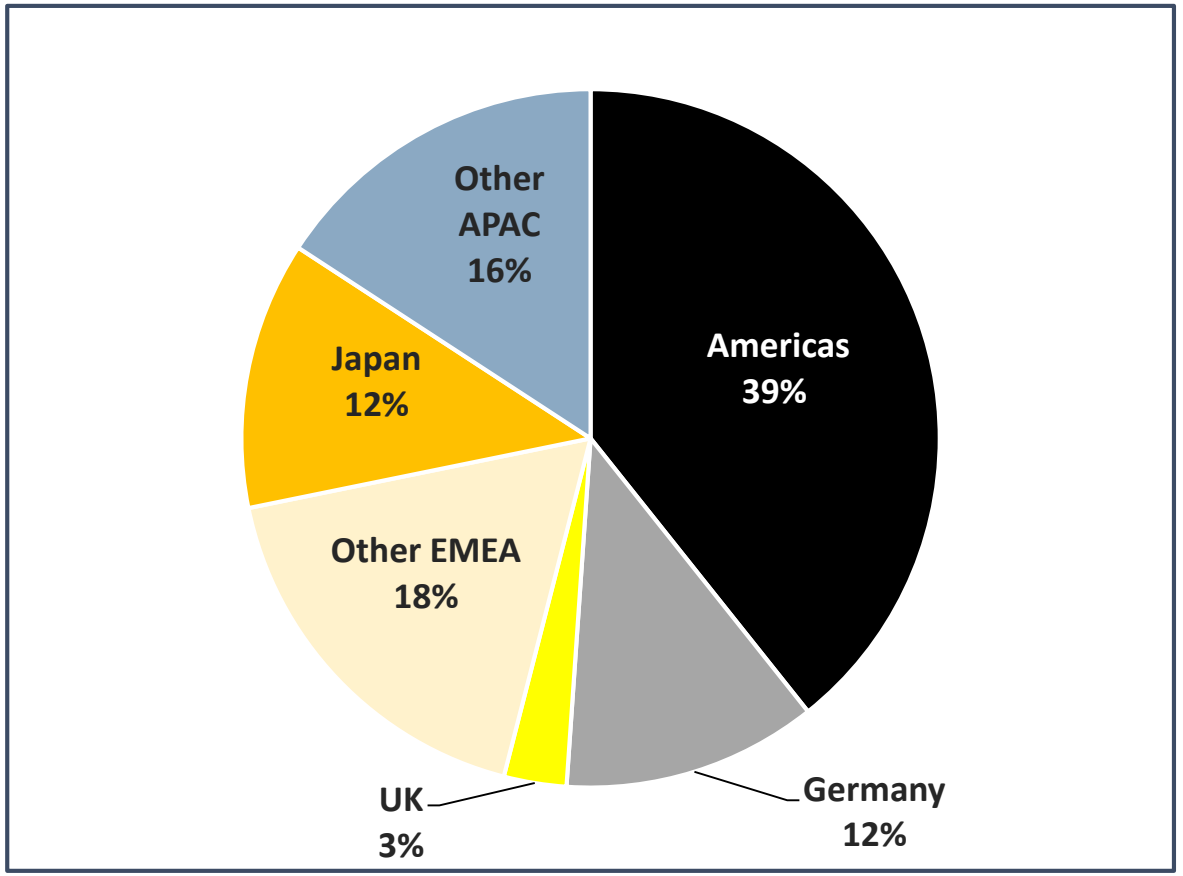


Diverse geography mix

Q2 YTD 2019 Non-GAAP Revenue By Geography

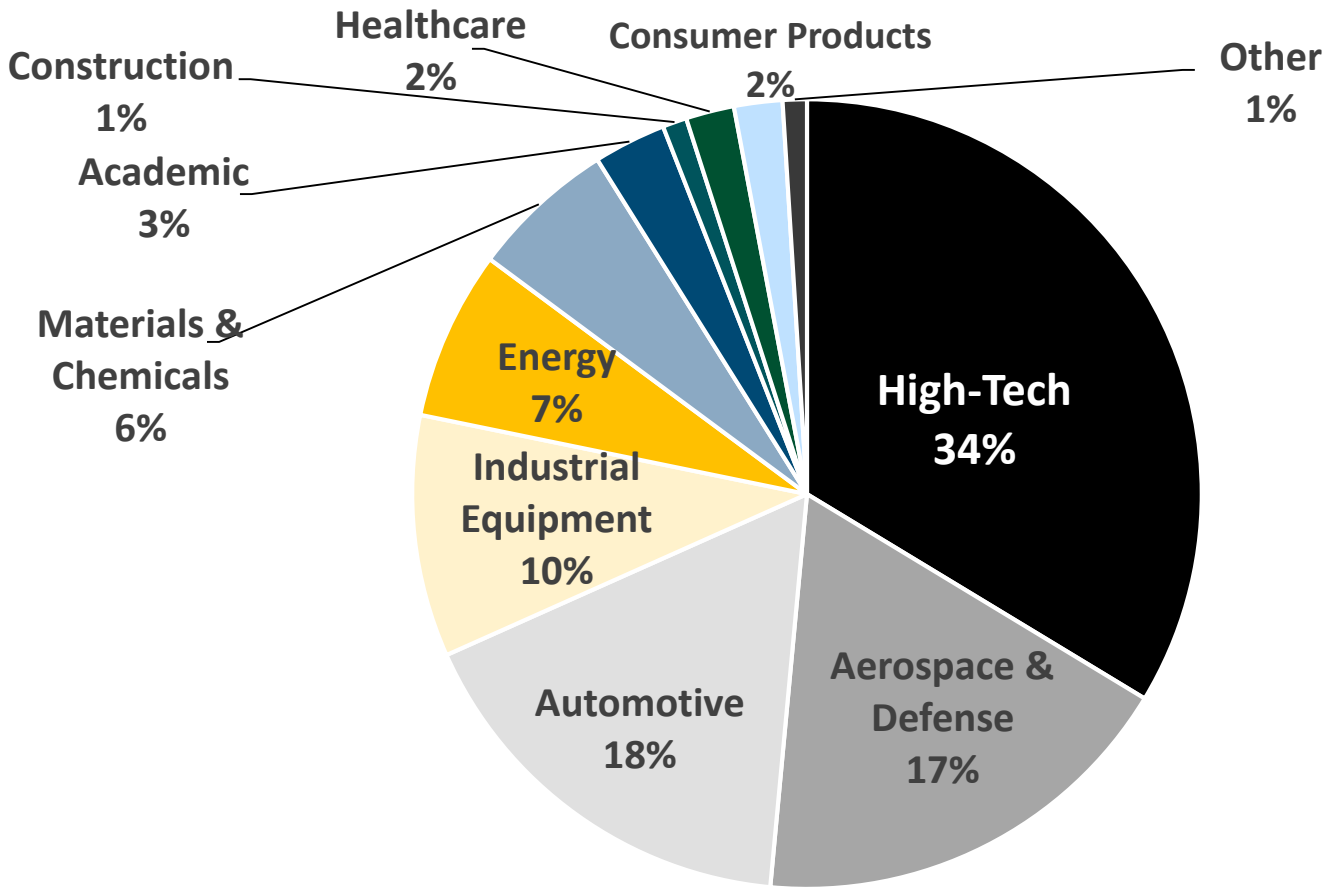


Q2 YTD 2018 Non-GAAP Revenue By Geography



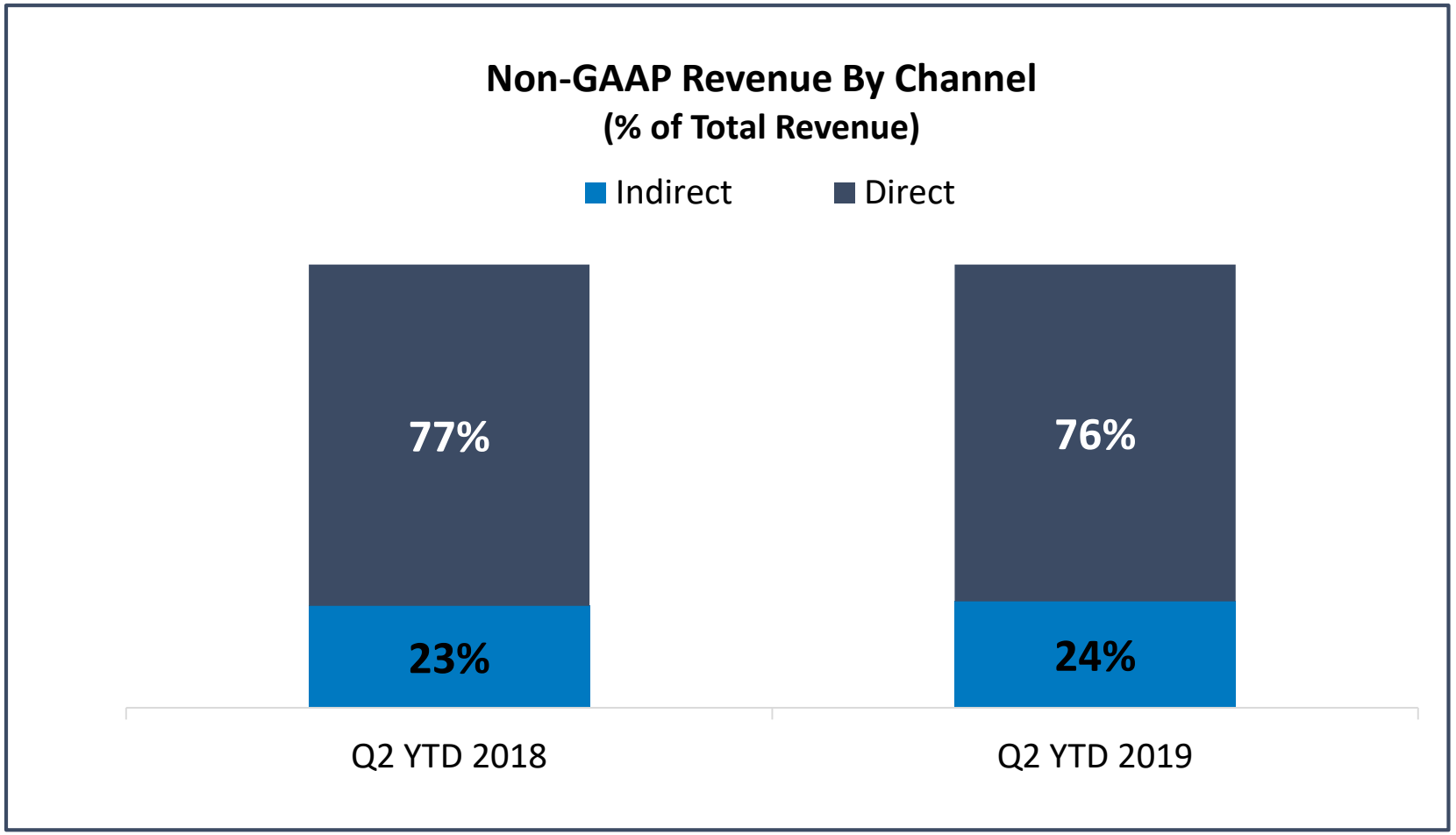
Diverse industry mix

Trailing Twelve Month ACV By Industry – Q2 2019

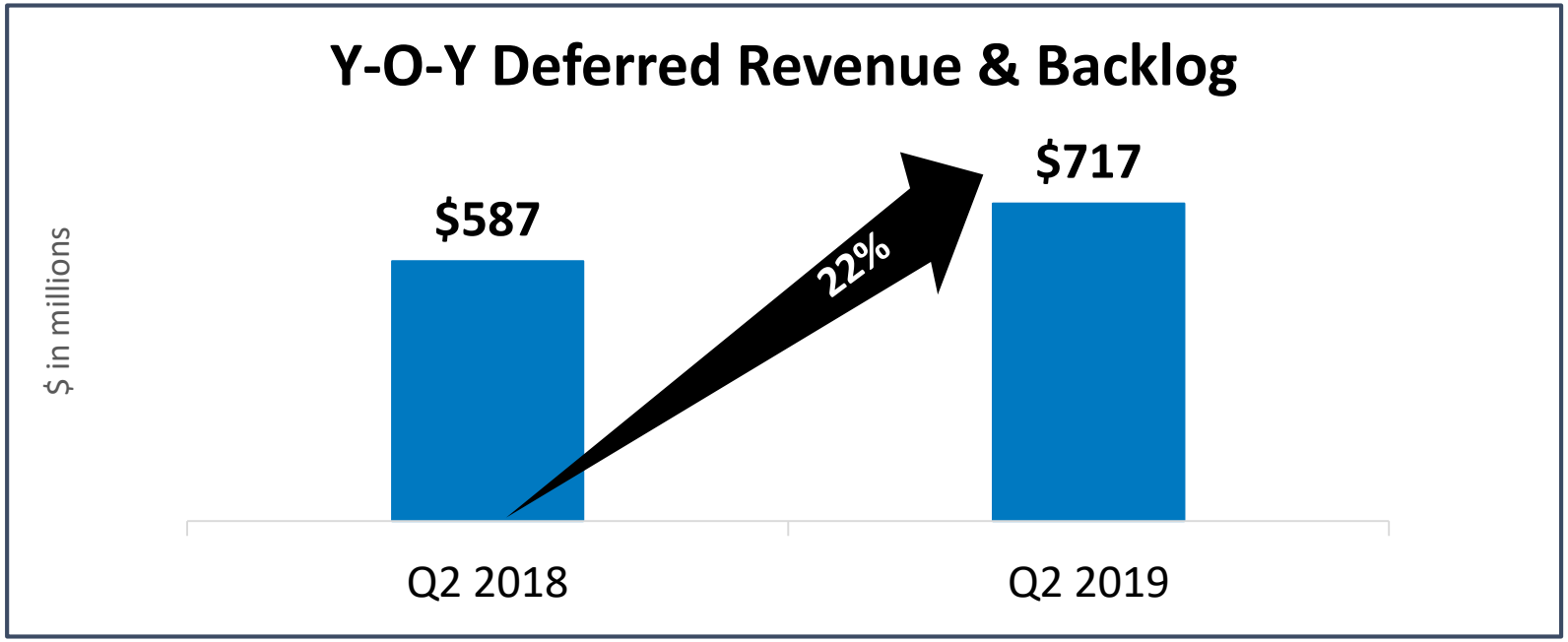


Revenue percentages do not tie to 100% due to rounding.

Diverse go-to-market revenue – Q2 YTD



Continuing to build deferred revenue and backlog



Includes both current and long-term deferred revenue and backlog.

Strong Balance Sheet and Consistent Cash Flow Generation

Our long-term targets

Our 2020 target is sustained double-digit revenue growth…

…while maintaining financial discipline and best-in-class operating margins

Target 2020 Growth & Operating Margin Target (non-GAAP)
10%+
43-45%

ASC 605. Refer to the Cautionary Statement for a discussion of factors that could cause actual results to differ materially from these targets.

Further opportunity to drive growth will require incremental investment

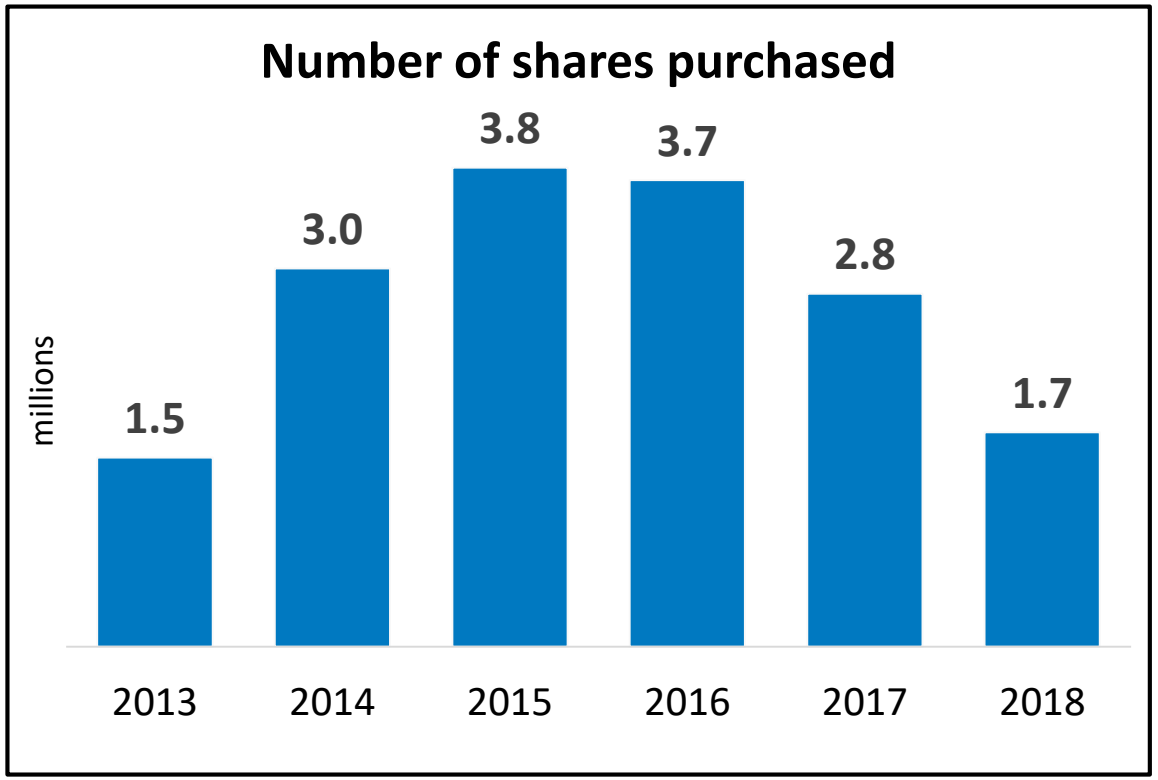
Go-to-market	• People (increased ratio of field engineers to sales reps, channel expansion and remote sales capability) • Tools/systems (quote-to-cash, low touch renewals) • Processes (customer advisory councils, data-driven planning)
Product	• Extending core technology leadership (physics, platform) • Investing in next-generation innovation (digital exploration, additive manufacturing, digital twin, IoT)
Scale Infrastructure	• Tools and systems (CRM, HRIS) • Expand competencies (FP&A, pricing, M&A) • New talent acquisition

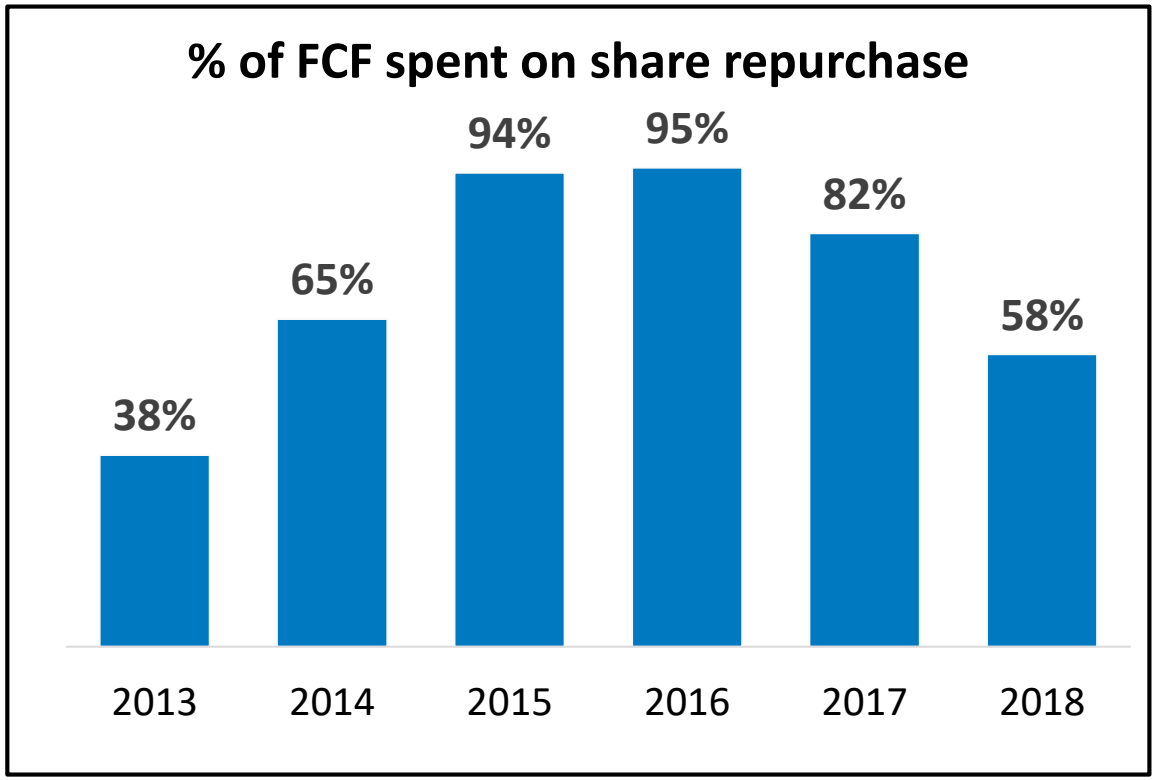
Partnerships and Acquisitions	• Investing to build strategic partnerships
	  • Customers: GE, Flowserve
	  • Peers: PTC, Synopsys

Capital allocation priorities

- **Investment in organic growth of the core business**
- **M&A to enhance growth**
  - **Size not determining factor – proven technology is key**
  - **Experienced talent**
  - **Synergy with customer base and global channel**
  - **Financially accretive within a reasonable timeframe**
- **Stock repurchase**
  - **Commitment to return excess cash to stockholders**

Returned excess capital to stockholders





Note: Free Cash Flow (FCF) defined as Operating Cash Flow – Capital Expenditures.

Return of excess capital to stockholders

- **We repurchased 0.1 million shares in Q2 at an average price of $179.36 per share and 0.3 million shares YTD at an average price of $179.41 per share**
- **We spent 18% of free cash flow on share repurchases in Q2 and 26% Q2 YTD 2019**

Financial Outlook – Q3 2019 ($ *in millions, except EPS*)

	GAAP	Non-GAAP
Revenue	**$318.4 - $338.4**	**$320.0 - $340.0**
Operating Margin	**25.0% - 28.0%**	**39.0% - 40.0%**
Tax rate	**15.0% - 17.0%**	**20.0% - 21.0%**
Diluted EPS	**$0.77 - $0.96**	**$1.15 - $1.28**

Financial outlook speaks only as of August 5, 2019. Refer to Cautionary Statement for a discussion of factors that could cause actual results to differ materially from outlook.

Financial Outlook – FY 2019 ($ *in millions, except EPS*)

	GAAP	Non-GAAP
Revenue	$1,452.7 - $1,492.7	$1,460.0- $1,500.0
Operating Margin	32.0% - 34.0%	43.5% - 44.5%
Tax rate	15.0% - 17.0%	20.0% - 20.5%
Diluted EPS	$4.61- $5.06	$5.98 - $6.28

Projected Annual Contract Value (ACV)	$1,440.0 - $1,475.0
Operating Cash Flows	$470.0 - $510.0

Financial outlook speaks only as of August 5, 2019. Refer to Cautionary Statement for a discussion of factors that could cause actual results to differ materially from outlook.

Why invest?

1. Market Leader in Engineering Simulation Positioned For Growth

- We have a 49-year history of technology innovation and commitment to engineering simulation
- ANSYS' competitive strength is based on our technology leadership and reputation for simulating products across multiple physics with the highest accuracy
- Building on our technology and market leadership, we are extending our leadership well into the future by investing in our long-term secular growth initiatives

2. Long-Term Secular Growth Prospects

ANSYS is positioned to benefit from multiple growth dimensions:

- Our pervasive engineering simulation strategy is designed to expand our footprint and drive broader adoption
  - ✓New applications; Additional users; Higher consumption of simulation
- Significant industry trends driving long-term secular growth opportunities
  - ✓Digital revolution making product design and delivery harder
  - ✓Faster, cheaper computing power

3. Continued Financial Discipline

- Track record of industry-leading margins for sector and software vertical

4. Incredible Financial Strength

- High percentage of growing recurring revenue and deferred revenue
- Diverse revenue sources
- Strong balance sheet

5. Strong Cash Generation

- Ability to invest in the core business
- Acquisition of best-in-class technologies extends leadership and supports future growth initiatives
- Returning excess capital to shareholders through share repurchases

Appendix

Appendix

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Non-GAAP Measures
(Unaudited)

(in thousands, except percentages and per share data)	Three Months Ended June 30, 2019 GAAP Results	Adjustments		Non-GAAP Results	Three Months Ended June 30, 2018 GAAP Results	Adjustments		Non-GAAP Results
Total revenue	**$ 368,635**	**$ 1,873**	**(1)**	**$ 370,508**	$ 305,913	$ 2,948	(4)	$ 308,861
Operating income	**128,628**	**40,385**	**(2)**	**169,013**	108,553	37,556	(5)	146,109
Operating profit margin	**34.9%**			**45.6%**	35.5%			47.3%
Net income	**$ 109,750**	**$ 28,156**	**(3)**	**$ 137,906**	$ 92,596	$ 23,250	(6)	$ 115,846
Earnings per share – diluted:								
Earnings per share	**$ 1.28**			**$ 1.61**	$ 1.08			$ 1.35
Weighted average shares	**85,483**			**85,483**	85,986			85,986

(1) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(2) Amount represents $29.1 million of stock-based compensation expense, $0.4 million of excess payroll taxes related to stock-based awards, $8.6 million of amortization expense associated with intangible assets acquired in business combinations, $0.5 million of transaction expenses related to business combinations and the $1.9 million adjustment to revenue as reflected in (1) above.

(3) Amount represents the impact of the adjustments to operating income referred to in (2) above, decreased for the related income tax impact of $11.7 million, adjustments related to the transition tax associated with the Tax Cuts and Jobs Act of $0.5 million, and rabbi trust income of $0.1 million.

(4) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(5) Amount represents $20.6 million of stock-based compensation expense, $0.4 million of excess payroll taxes related to stock-based awards, $12.6 million of amortization expense associated with intangible assets acquired in business combinations, $1.0 million of transaction expenses related to business combinations and the $2.9 million adjustment to revenue as reflected in (4) above.

(6) Amount represents the impact of the adjustments to operating income referred to in (5) above, decreased for the related income tax impact of $14.2 million and rabbi trust income of $0.1 million.

Appendix

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Non-GAAP Measures
(Unaudited)

(in thousands, except percentages and per share data)	Six Months Ended June 30, 2019 GAAP Results	Adjustments		Non-GAAP Results	Six Months Ended June 30, 2018 GAAP Results	Adjustments		Non-GAAP Results
Total revenue	**$ 685,765**	**$ 4,653**	**(1)**	**$ 690,418**	$ 588,786	$ 3,349	(4)	$ 592,135
Operating income	**224,277**	**81,922**	**(2)**	**306,199**	203,614	69,907	(5)	273,521
Operating profit margin	**32.7%**			**44.3%**	34.6%			46.2%
Net income	**$ 195,980**	**$ 52,596**	**(3)**	**$ 248,576**	$ 176,876	$ 42,034	(6)	$ 218,910
Earnings per share – diluted:								
Earnings per share	**$ 2.29**			**$ 2.91**	$ 2.06			$ 2.54
Weighted average shares	**85,488**			**85,488**	86,069			86,069

(1) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(2) Amount represents $52.9 million of stock-based compensation expense, $4.4 million of excess payroll taxes related to stock-based awards, $16.9 million of amortization expense associated with intangible assets acquired in business combinations, $3.1 million of transaction expenses related to business combinations and the $4.7 million adjustment to revenue as reflected in (1) above.

(3) Amount represents the impact of the adjustments to operating income referred to in (2) above, decreased for the related income tax impact of $27.3 million, adjustments related to the transition tax associated with the Tax Cuts and Jobs Act of $1.8 million, and rabbi trust income of $0.2 million.

(4) Amount represents the revenue not reported during the period as a result of the acquisition accounting adjustment associated with the accounting for deferred revenue in business combinations.

(5) Amount represents $35.9 million of stock-based compensation expense, $3.5 million of excess payroll taxes related to stock-based awards, $24.8 million of amortization expense associated with intangible assets acquired in business combinations, $2.3 million of transaction expenses related to business combinations and the $3.3 million adjustment to revenue as reflected in (4) above.

(6) Amount represents the impact of the adjustments to operating income referred to in (5) above, decreased for the related income tax impact of $29.3 million and rabbi trust income of $0.1 million, and increased for adjustments related to the transition tax associated with the Tax Cuts and Jobs Act of $1.4 million.

Appendix

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Forward-Looking Guidance
Quarter Ending September 30, 2019

	Operating Margin	Earnings Per Share Range - Diluted
U.S. GAAP expectation	25.0% - 28.0%	$0.77 - $0.96
Adjustment to exclude acquisition adjustments to deferred revenue	0.5%	$0.02
Adjustment to exclude acquisition-related amortization	2.5% - 2.7%	$0.07
Adjustment to exclude stock-based compensation	9.0% - 10.8%	$0.23 -$0.29
Non-GAAP expectation	39.0% - 40.0%	$1.15 - $1.28

ANSYS, INC. AND SUBSIDIARIES
Reconciliation of Forward-Looking Guidance
Year Ending December 31, 2019

	Operating Margin	Earnings Per Share Range - Diluted
U.S. GAAP expectation	32.0% - 34.0%	$4.61 - $5.06
Adjustment to exclude acquisition adjustments to deferred revenue	0.5%	$0.07
Adjustment to exclude acquisition-related amortization	2.3%	$0.29
Adjustment to exclude stock-based compensation	7.5% - 8.5%	$0.85 - $1.00
Adjustment to exclude acquisition-related transaction expenses	0.2%	$0.03
Adjustment to exclude transition tax adjustments related to the Tax Cuts and Jobs Act	-	($0.02)
Non-GAAP expectation	43.5% - 44.5%	$5.98 - $6.28

Use of Non-GAAP Measures

The Company provides non-GAAP revenue, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share as supplemental measures to GAAP regarding the Company's operational performance. These financial measures exclude the impact of certain items and, therefore, have not been calculated in accordance with GAAP. A detailed explanation of each of the adjustments to such financial measures is described below. This press release also contains a reconciliation of each of these non-GAAP financial measures to its most comparable GAAP financial measure.

Management uses non-GAAP financial measures (a) to evaluate the Company's historical and prospective financial performance as well as its performance relative to its competitors, (b) to set internal sales targets and spending budgets, (c) to allocate resources, (d) to measure operational profitability and the accuracy of forecasting, (e) to assess financial discipline over operational expenditures and (f) as an important factor in determining variable compensation for management and its employees. In addition, many financial analysts that follow the Company focus on and publish both historical results and future projections based on non-GAAP financial measures. The Company believes that it is in the best interest of its investors to provide this information to analysts so that they accurately report the non-GAAP financial information. Moreover, investors have historically requested, and the Company has historically reported, these non-GAAP financial measures as a means of providing consistent and comparable information with past reports of financial results.

While management believes that these non-GAAP financial measures provide useful supplemental information to investors, there are limitations associated with the use of these non-GAAP financial measures. These non-GAAP financial measures are not prepared in accordance with GAAP, are not reported by all the Company's competitors and may not be directly comparable to similarly titled measures of the Company's competitors due to potential differences in the exact method of calculation. The Company compensates for these limitations by using these non-GAAP financial measures as supplements to GAAP financial measures and by reviewing the reconciliations of the non-GAAP financial measures to their most comparable GAAP financial measures.

ASC 606 requires three primary changes relative to previous practice

Immediate license revenue recognition (including the license portion embedded in a lease)

1

Revenue allocation based on estimated selling price rather than Vendor-Specific Objective Evidence (VSOE)

2

Increased financial statement disclosures (including unbilled receivables, and the expected rollout of deferred revenue and backlog)

3

Overview of ASC 606 impact (starting January 1, 2018)

INITIAL IMPACT

- Revenue recognition change will accelerate revenue
- Large, multi-year deals will create some volatility depending on timing (minority of the business)
- Modified retrospective implementation approach will provide disclosure of results under current rules for the first year
- Cash-flow impact for tax consequences of accelerated revenue
- No material change in accounting for sales commissions

GO-FORWARD IMPACT

- Minimal impact on future comparability for the vast majority of business volume
- Large, multi-year deals will create some volatility depending on timing (minority of the business)
- Impact likely to decrease over time as predictability increases
- ACV metric will provide clarity into business health
- No material change in accounting for sales commissions unless plan structure changes

New ACV metric will provide increased clarity into business health

NEW ANNUALIZED CONTRACT VALUE (ACV) METRIC

= **Bookings that occur during the quarter** + **Bookings in previous quarters with current period start date** - **Bookings in current quarter with a future start date** +/- **Adjustment to annualize time-based license and maintenance contracts greater than 1 year**

- We will continue to report and provide guidance on the same key financial metrics as we do today (revenue, operating margin, EPS, tax rate, etc.)
- We will begin disclosing fiscal year guidance on operating cash flow, free cash flow and ACV

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