Innovation Through Pervasive Engineering Simulation

Investor Presentation

Q3 2020

NASDAQ: ANSS

Ansys

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. Many of these risks, uncertainties, and factors are currently amplified by, and may continue to be amplified by, the COVID-19 pandemic. 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. Forward-looking statements include those about market opportunity, including our total addressable market. Risks, uncertainties, and factors that could cause actual results to differ materially from those implied by these forward-looking statements include: current and potential future impacts of the COVID-19 pandemic on the global economy and our business, financial position, results of operations and cash flows; adverse changes in global economic and/or political conditions; declines in our customers' businesses resulting in adverse changes in customer procurement patterns; disruptions in accounts receivable and cash flow due to customers' liquidity challenges and commercial deterioration; uncertainties regarding demand for our products and services in the future and our customers' acceptance of new products, including those arising from the need of customers to utilize our products from remote locations; plans for future capital spending; delays or declines in anticipated sales due to reduced or altered sales and marketing interactions with customers; disruptions in the global economy and financial markets that may limit or delay availability of credit under existing or new credit facilities, or that may limit our ability to obtain credit or financing on acceptable terms or at all; investments in complementary companies, products, services and technologies; our ability to complete and successfully integrate our acquisitions and realize the financial and business benefits of the transactions; political, economic, regulatory and public health and safety risks and uncertainties in the countries and regions in which we operate; impacts from tariffs, trade sanctions, export license requirements or other trade barriers; the effect of changes in currency exchange rates and changes in interest rates; potential variations in our sales forecasts compared to actual sales; the volatility of our stock price; failures or errors in our products and services; our industry's rapidly changing technology; the quality of our products, including the strength of features, functionality and integrated multi-physics capabilities; lease license volatility; higher than anticipated costs for research and development or slowdown in our research and development activities; increased pricing pressure as a result of the competitive environment in which we operate; our ability to recruit and retain key personnel including any delays in recruitment caused by restrictions on travel and in person interactions and the absence of key personnel or teams due to illness or recuperation; our ability to protect our proprietary technology; cybersecurity threats or other security breaches, including in relation to an increased level of our activity that is occurring from remote global off-site locations; disclosure and misuse of employee or 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 volatility in our revenue due to the timing, duration and value of multi-year lease contracts; our reliance on high renewal rates for annual lease and maintenance contracts; operational disruptions generally or specifically in connection with transitions to and from remote work environments, or the failure of our technological infrastructure; 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; changes in accounting principles or standards; the effect of changes in tax laws and regulations in the jurisdictions in which we operate; 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.

COVID-19 Update (as of November 4, 2020)

Information from 3Q20 Earnings

Operational Impact

- The health and safety of our employees and their families, our partners and our broad Ansys community around the world continues to be our first responsibility. We are continuing to monitor the situation, but as of now remote access remains the primary means of work for a majority of our workforce. Additionally, we are operating under certain travel restrictions. These actions have disrupted how we operate the business.
- The purchasing process of our customers with lower levels of remote working sophistication has slowed.
- We hosted our inaugural IDEAS Forum, which was a two-day virtual event featuring thought leadership keynotes and presentations from industry leaders at Arm, TSMC, Ericsson and more, along with technology sessions and product updates. We also held the virtual Ansys Innovation Conference in China, with over 11,000 attendees, 180+ sessions and 17 keynote speakers.

Financial Impact

- While the COVID-19 pandemic did have an adverse financial impact on the updated guidance we provided in May and on our actual Q3 results, the resilience of our business contributed to our delivery of revenue, operating margin and earnings that either exceeded the mid-point or the high-end of our financial guidance.

Liquidity Impact

- Our cash and cash equivalents increased during the quarter, ending with a balance of $844.7 million as of September 30, 2020. We believe that this balance, together with cash generated from operations and access to our $500.0 million revolving credit facility, are in excess of the cash required for our ongoing operations over the next twelve months.
- Our cash flows from operations in the third quarter and YTD 2020 totaled $94.5 million and $373.5 million, respectively. The YTD cash flow growth was driven by the ability to delay certain income, employment and indirect tax payments. However, these positive cash flows were partially offset by delays in some customer payments on existing contracts and longer payment terms requested for new contracts, particularly related to larger contract commitments. These requests have increased the uncertainty of cash collections and resulted in an increase in our reserves for bad debt during 2020. However, our allowance for bad debt remained constant in Q3 2020.
- We have an unsecured term loan with an outstanding principal balance of $425.0 million as of September 30, 2020. We are compliant with our debt covenants. Our debt agreement currently requires no principal payments until 2024. Our only debt service requirements are interest payments in the current low-rate environment. We believe we will have adequate liquidity to service this debt over the next twelve months.
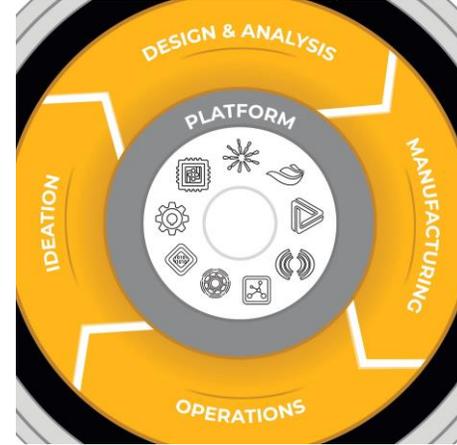
Well Positioned in a Growing Market
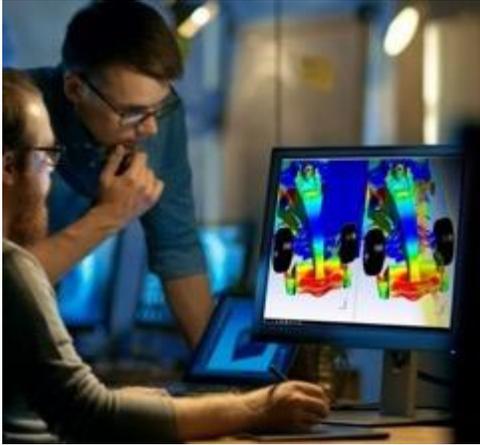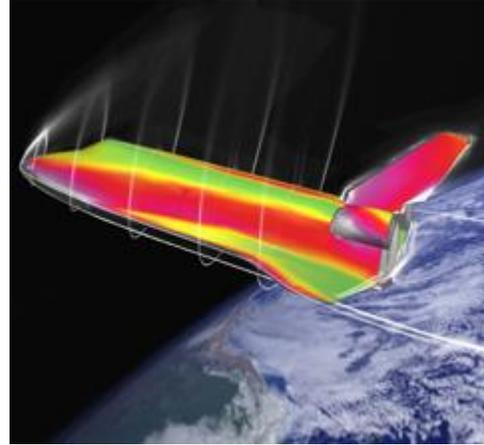
ANSYS IS THE SIMULATION MARKET LEADER

THE SIMULATION MARKET IS STRONG AND GROWING

OUR STRATEGY CAPITALIZES ON THIS GROWING MARKET

WE HAVE A PROVEN RECORD OF EXECUTION

Ansys

A Leader in the Simulation Market for 50 Years

~2X *THE SIZE OF OUR NEAREST COMPETITOR*

(CIMdata June 2020 Report)*

#1 *IN SIMULATION*

FOCUSED *SIMULATION IS ALL WE DO*

PROVEN
MEMBER OF PRESTIGIOUS

STANDARD &POOR'S   Nasdaq 100 Index

$26B market capitalization
(as of November 2, 2020)

COMMITTED
OVERALL CUSTOMER SATISFACTION GLOBALLY (2019): 85.9%

CAPABLE
4,500 EMPLOYEES GLOBALLY

85 ANSYS OFFICES
>150 CHANNEL PARTNERS GLOBALLY

ConfirmIT source of customer satisfaction results. *Excludes MathWorks due to differences in product portfolio.

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Commitment to Corporate Responsibility

People

ONE Ansys

79% Employee Engagement Score

21% Women on Senior Leadership Team

5.6% Voluntary Employee Turnover Rate

23% Women Employees

Metrics for full-year 2019

Planet

**CLEAN TECHNOLOGY CONTRIBUTIONS – OUR PRODUCT HANDPRINT**

Ansys solutions support our customers in their efforts in sustainability as well as improving the efficiency, performance and durability of products. This has the positive effect of reducing total material use, increasing energy efficiency, reducing greenhouse gas emission, supporting the circular economy and increasing operational performance.

Practice
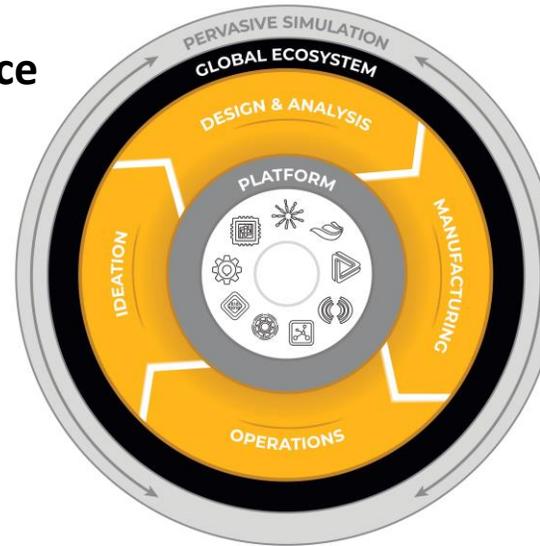
Innovation is one of our eight Ansys values. Our growth and financial strength reflect our leading technology position and commitment to innovation. This commitment to innovation ensures that we continue our progress toward our goal of enabling Pervasive Engineering Simulation™.

Enabling Our Customers' Sustainability Goals
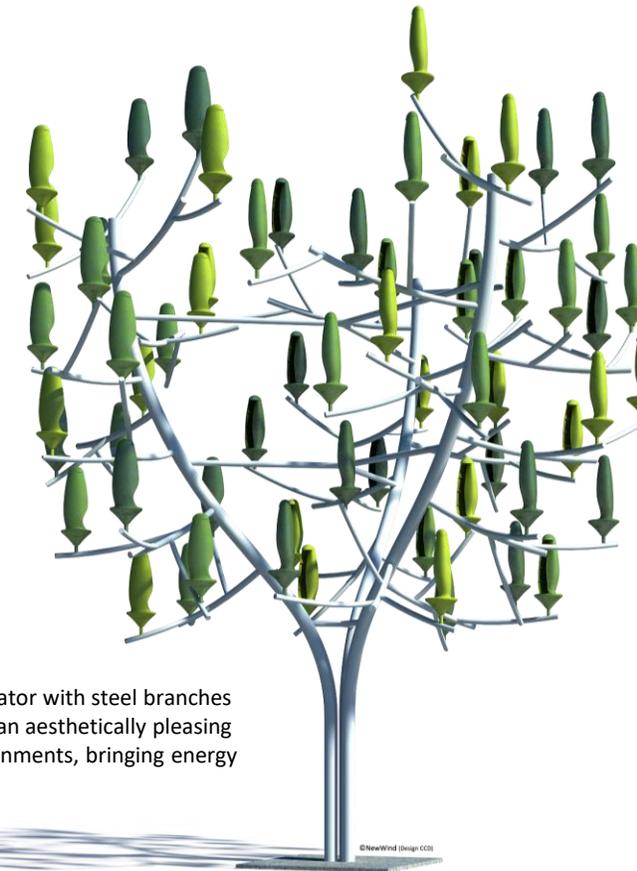
By designing a tree-like wind power generator with steel branches and plastic leaves, New Wind has created an aesthetically pleasing alternative energy source for urban environments, bringing energy generation closer to people.
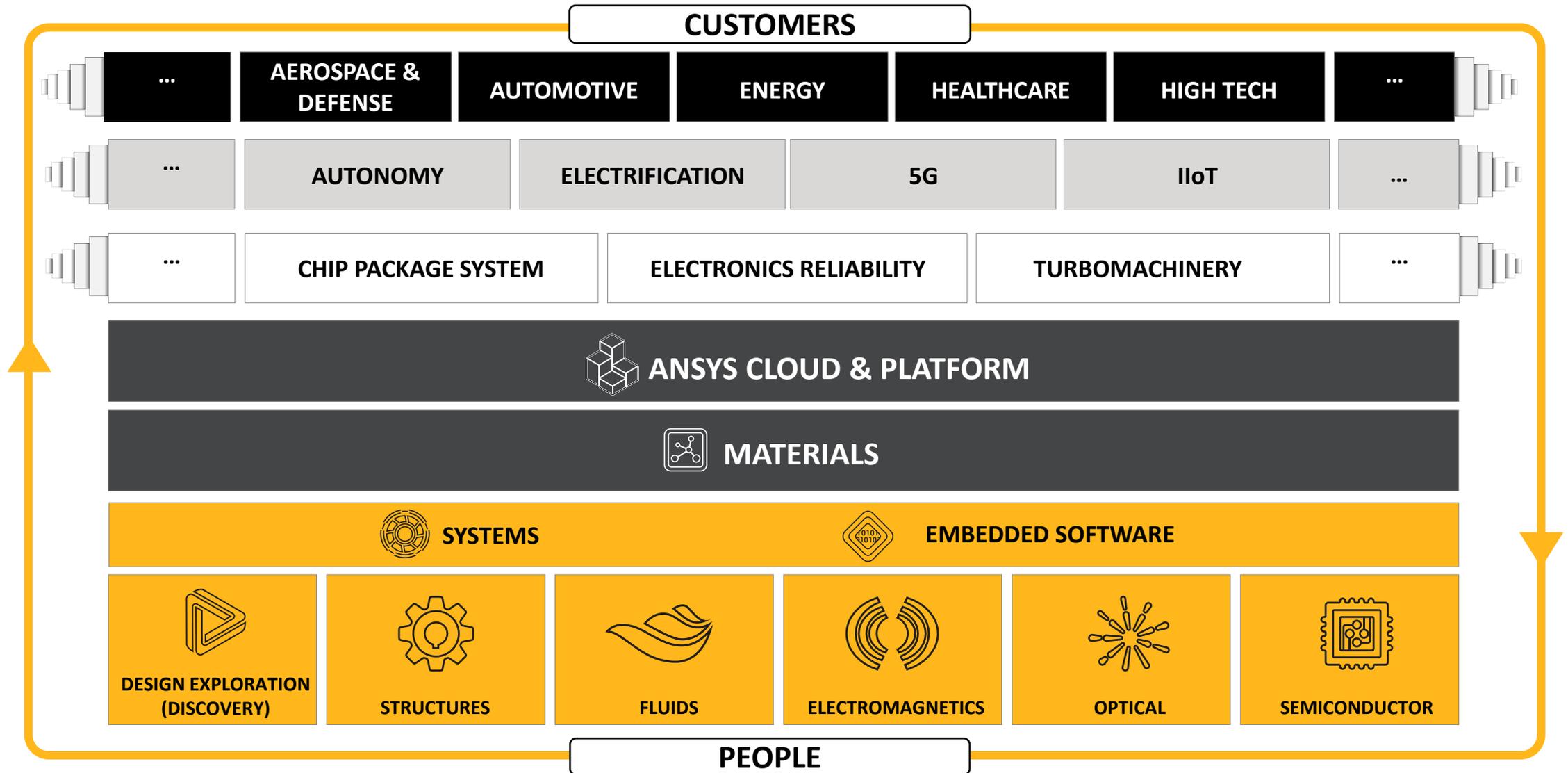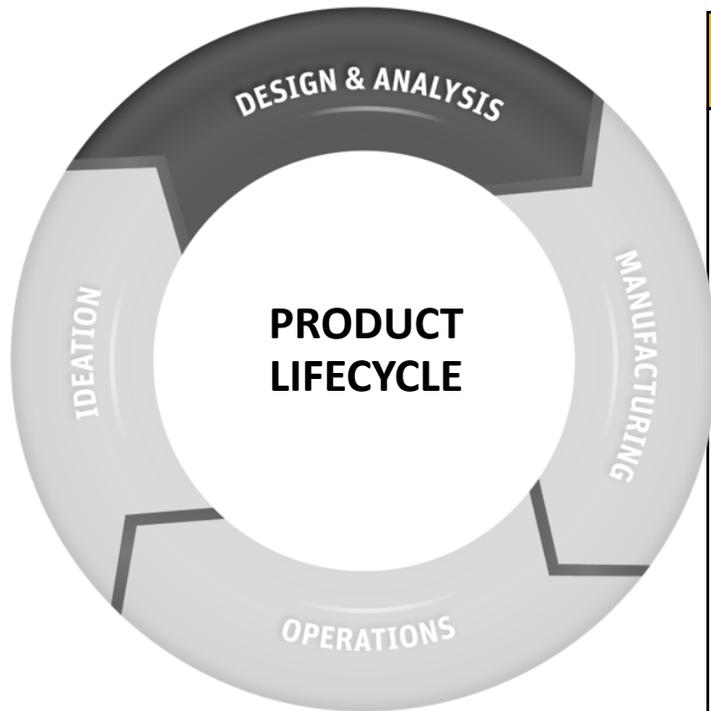
Awards & Recognition

World-class Companies Leveraging our Platform

©2020 ANSYS, Inc.

Ansys Offers the Only True Simulation Platform

©2020 ANSYS, Inc.

Ansys' Simulation Provides Customers Top-Line Growth and Bottom-Line Savings

PRODUCT LIFECYCLE

DESIGN & ANALYSIS

IDEATION

MANUFACTURING

OPERATIONS

Simulation Impact

Rapid innovation

Lower cycle time

Reduced risks

Increased quality

Manage complexity

Revenue Growth

Offer more products

Launch right products

Faster time to market

Cost Savings

Improved R&D efficiency

Fewer physical prototypes

Lower warranty costs

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Strong Customer Trust Creating High Barriers to Entry

Our Differentiators

Degree of fidelity

Best-in-class and proven physics solutions

Advanced methods

Industry-leading platform

Delivered on-premises and in the cloud
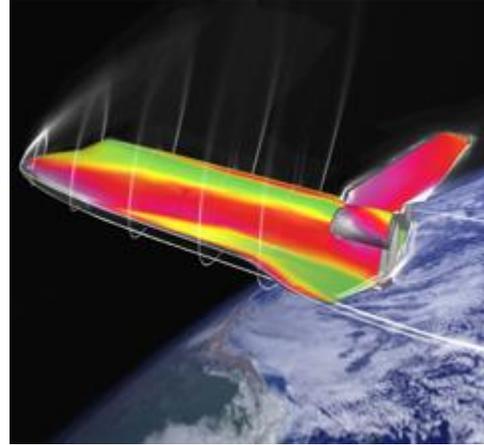
Open ecosystem

World-class customer engagement
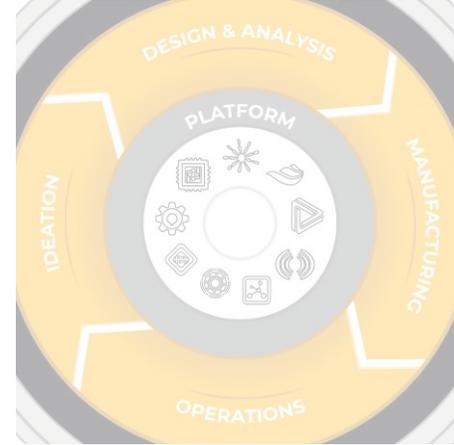
High Barriers to Entry

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Well Positioned in a Growing Market

ANSYS IS THE SIMULATION MARKET LEADER

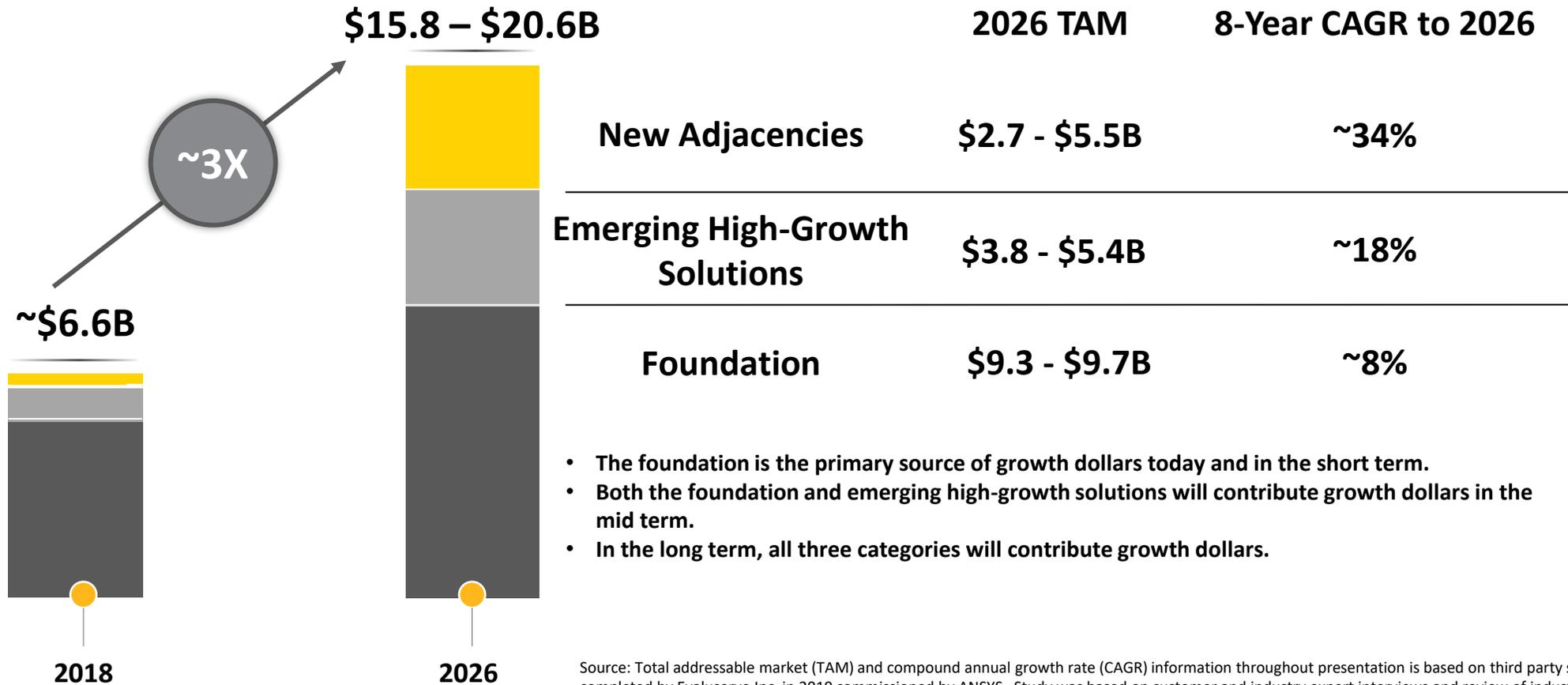**THE SIMULATION MARKET IS STRONG AND GROWING**

OUR STRATEGY CAPITALIZES ON THIS GROWING MARKET

WE HAVE A PROVEN RECORD OF EXECUTION

The Ansys Total Addressable Market for Simulation will ~Triple in the Next 7-10 Years

$15.8 – $20.6B

~3X

~$6.6B

	2026 TAM	8-Year CAGR to 2026
New Adjacencies	$2.7 - $5.5B	~34%
Emerging High-Growth Solutions	$3.8 - $5.4B	~18%
Foundation	$9.3 - $9.7B	~8%

- The foundation is the primary source of growth dollars today and in the short term.
- Both the foundation and emerging high-growth solutions will contribute growth dollars in the mid term.
- In the long term, all three categories will contribute growth dollars.

2018

2026

Source: Total addressable market (TAM) and compound annual growth rate (CAGR) information throughout presentation is based on third party study completed by Evaluserve Inc. in 2019 commissioned by ANSYS. Study was based on customer and industry expert interviews and review of industry analyst reports and commentaries. Refer to Cautionary Statement for a discussion of factors that could impact future financial results.

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Emerging High-Growth Solutions: Cross-Industry Trends will Accelerate Growth

ELECTRIFICATION

AUTONOMY

5G

INDUSTRIAL IoT
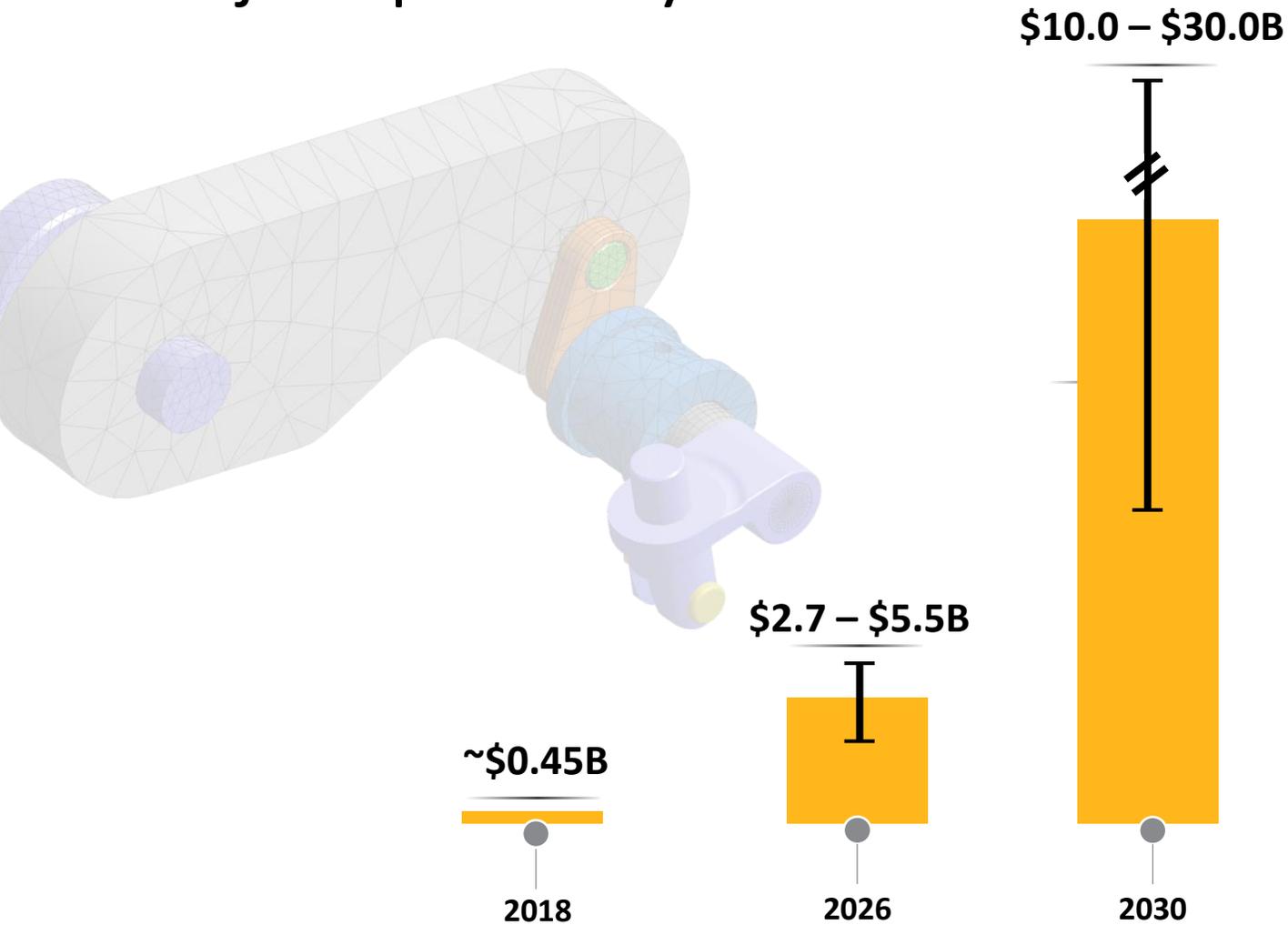
Play to our strengths

Disruptive market opportunities

Large – and growing – customer investment

Unprecedented product complexity
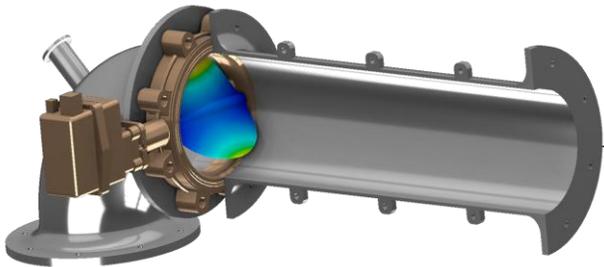
Requires extensive use of simulation

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New Adjacencies: Substantial Growth into 2026 and Major Upside Beyond

$10.0 − $30.0B

$2.7 − $5.5B

~$0.45B

2018

2026

2030

New adjacencies	
2026 TAM	**CAGR**
$2.7 − $5.5B	**~32%**
2030 TAM	**CAGR**
$10.0 − $30.0B	**~37%**

New Adjacencies: Drive Simulation across the Entire Product Lifecycle

ADDITIVE MANUFACTURING

ANSYS Additive Suite – 2018

Relativity   ROSSWAG engineering

DIGITAL EXPLORATION

ANSYS Discovery Live – 2018

Creo Simulation Live – 2019

ptc   ROSSIGNOL R   NVIDIA
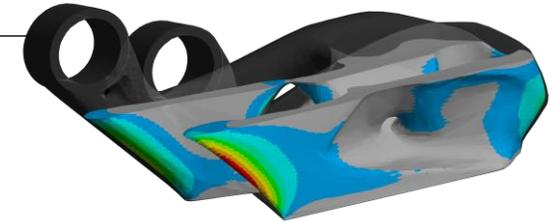
DIGITAL TWINS

ANSYS Twin Builder – 2018
SAP Predictive Engineering Insights enabled by ANSYS – 2019

SAP   Microsoft   RA Rockwell Automation

DESIGN & ANALYSIS

IDEATION

MANUFACTURING

OPERATIONS

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Providing a Solution for Future Industry leaders

| Key entry point for discounted software for early-stage, eligible startups | Product bundles organized by physics area | Partners from the beginning and then grow with the startup |

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STARTUP PROGRAM

Industry Segmentation

- *19%* High-Tech
- *15%* Aerospace & Defense
- *15%* Energy
- *11%* Healthcare
- *6%* Automotive
- *34%* Mix of smaller industries

"…Leveraging the suite of Ansys tools allows us to ensure a design works with limited test iterations, providing up to $5 million in cost savings in engine cooling design, $10 million in increasing engine thrust and up to $500,000 in mass optimizations."

—

Tom Markusic
CEO of Firefly Aerospace

FIREFLY
AEROSPACE

1,021
STARTUPS

144
GRADUATIONS

44
COUNTRIES

100% Growth
IN NEW
LOGOS IN LAST 2 YEARS
(9/30/2018 – 9/30/2020)

/Ansys

Strong & Growing Academic Program Seeding Future Users

Field Engagement

- **2,750+** Universities in 92 countries using Ansys simulation for teaching & research

- **1,500+** Universities using GRANTA EduPack

- **635+** with Multiphysics Campus-Wide Solution access

- **500+** Student teams sponsored

Multiphysics Campus Solutions Deployed Globally
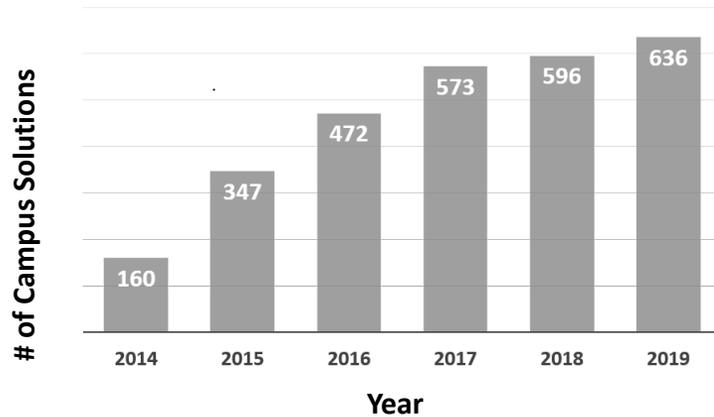
Scaling Digital Learning

- **1.3M** Free student downloads spanning 151 countries

- **150k+** Peak monthly users on Learning Forum (previously Student Community)

- **20k+** Unique users since Ansys Innovation Courses launched in mid-July

  - **50** Free courses and growing monthly

Strength in Key Partnerships

- **190k** Registered students for the Cornell's Ansys edX course*

- **1,775** Registered students for the Technical University of Madrid's Ansys Online Master's Degree

- **5** Discovery courses at the University of Michigan

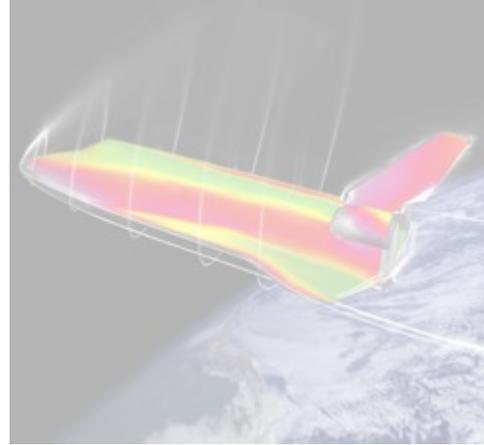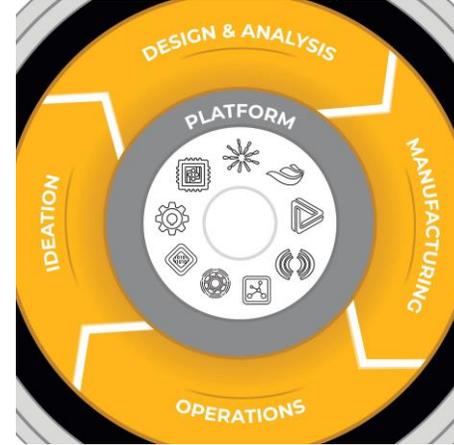- **1** New Key Partnership with the University of Texas at Arlington

Well Positioned in a Growing Market

ANSYS IS THE SIMULATION MARKET LEADER

THE SIMULATION MARKET IS STRONG AND GROWING
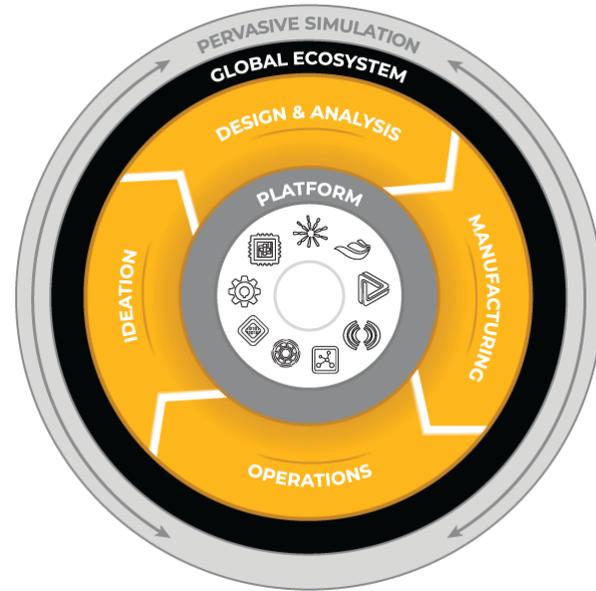
OUR STRATEGY CAPITALIZES ON THIS GROWING MARKET

WE HAVE A PROVEN RECORD OF EXECUTION

Our Product Strategy is Based on Pervasive Simulation

Pervasive Simulation is:

- Integration across all physics on a single open platform
- And the injection of simulation into partner ecosystems

Our Product Strategy:

- Continuing investment to extend leading positions in all physics
- Leveraging and expanding platform to drive deeper client relationships
- Selectively targeting highest-growth market opportunities
- Accelerating opportunities and growth through world-class ecosystem

Our Strategy is Aligned with Market Growth:

Core

- Strengthen our foundation
- Deliver offerings for emerging high-growth solutions
- Will deliver the bulk of Ansys growth for the next 3-5 years

Expansion

- Drive simulation across the entire product cycle
- Embed Ansys into partners' ecosystems
- Provides significant upside to long-term growth

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Ansys Delivers What Matters Most to Customers

Accuracy

True Multiphysics

Close Technical Partnership

Advanced Methods

We are Uniquely Positioned to Make Simulation Pervasive

	#1 STRUCTURES	#1 FLUIDS	#1 ELECTRO MAGNETICS	#1 SEMICONDUCTOR	#1 EMBEDDED SOFTWARE	#1 MATERIALS INFORMATION	#1 OPTICAL
Ansys	●	●	●	●	●	●	●
COMPETITOR #1	○	○	○				
COMPETITOR #2	○	●	○		○	○	○
COMPETITOR #3	●	○	●		○		
COMPETITOR #4	○	○	○		○		
COMPETITOR #5	○	○					
COMPETITOR #6	○					○	
COMPETITOR #7							●
COMPETITOR #8		●					
COMPETITOR #9			●	●			

● Best-of-breed offering   ○ More limited offering

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Continuously Investing to Strengthen the Core — Organically and Through Acquisitions

Organic and Inorganic R&D Investments
(in millions)
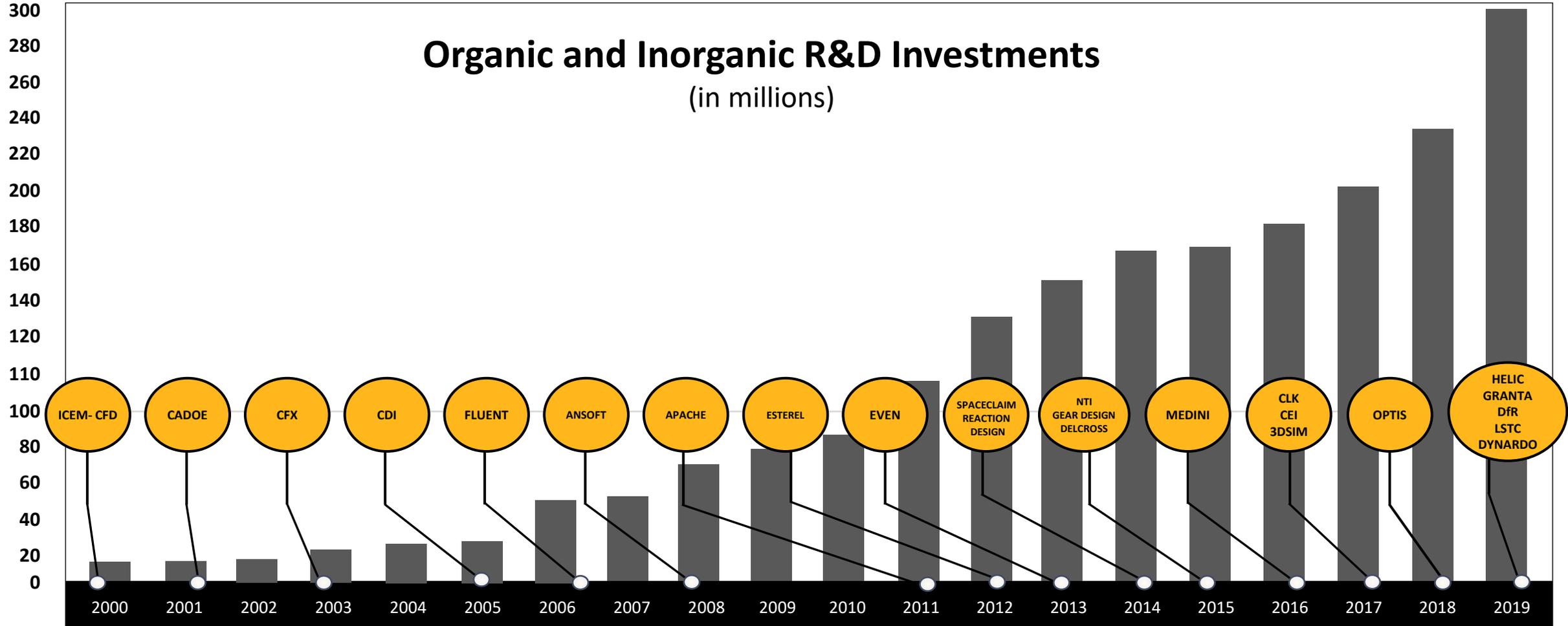
Acquisitions by year:
- 2000: ICEM-CFD
- 2001: CADOE
- 2002: CFX
- 2003: CDI
- 2004: FLUENT
- 2005: ANSOFT
- 2006: APACHE
- 2007: ESTEREL
- 2008: EVEN
- 2009: SPACECLAIM / REACTION DESIGN
- 2010: NTI / GEAR DESIGN / DELCROSS
- 2011: MEDINI
- 2012: CLK / CEI / 3DSIM
- 2013: OPTIS
- 2014: HELIC / GRANTA / DfR / LSTC / DYNARDO

Ansys 2020 R2 Key Updates – Released July 2020

STRUCTURES

INCREASED TECHNICAL BREADTH & DEPTH

- Enhanced mechanical simulation of electronics
- Improvements to speed and robustness of core solver
- Further exposure of LS-DYNA technology in Workbench

FLUIDS

IMPROVED WORKFLOWS & NEW CAPABILITIES

- Enhanced battery simulation
- New fast & accurate simulation of compressors
- Improved workflows across multiple applications

ELECTROMAGNETICS

NEW STREAMLINED ELECTRONICS WORKFLOWS

- Simulate bio-compatibility of 5G equipment
- Enhanced electro-thermal integration
- New advanced cable modeling solution

DESIGN

ALL-NEW USER EXPERIENCE

- New unified Discovery application
- Improved workflow and GTM with flagships
- Enhanced speed and accuracy

MATERIALS

ENABLING A TRUE DIGITAL TRANSFORMATION

- Significantly enhanced usability and enterprise integration
- Further integration with Ansys portfolio, including Minerva
- Updated materials datasets, including restricted substances

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Ansys 2020 R2 Key Updates – Released July 2020

EMBEDDED SOFTWARE

ENABLING EMBEDDED AUTO SOFTWARE

- ARINC661 enhancements for touch screen cockpits
- New connector to Siemens Polarion®
- Supports new Auto industry methodology for FMEA

OPTICAL

IMPROVED WORKFLOW & SENSOR HANDLING

- Accelerated prototyping with SPEOS Live Preview
- Optimized user experience speeds setup by 4X
- Enhanced LiDAR and sky model support

SYSTEMS

MAKING AV/DIGITAL TWIN VISIONS ACHIEVABLE

- Faster & easier to deploy and validate digital twins
- Listen to your simulation with VREXPERIENCE Sound
- Enhanced sensor models for AD/ADAS development

SEMICONDUCTOR

ENABLING ADVANCED 5G, HPC AND AI DESIGNS

- On-chip electromagnetics solutions for 5G
- New 3D-IC multiphysics thermal solutions for HPC & AI
- New low-power analysis capabilities for mobile & data center

PLATFORM

ACCELERATE INNOVATION IN ANY ENVIRONMENT

- Streamlined collaborative simulation and optimization workflows
- New virtual desktop infrastructure
- New Ansys LS-DYNA cloud-HPC workflow support

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# Ansys Long-Term Technology Strategy Dimensions

Artificial Intelligence and Machine Learning
- Simulation used to train AI methods
- AI used to improve simulation
- ML-based Models & data confluence

Digital and Physical Worlds
- AR/VR for simulation brings digital world to physical
- IOT and connectedness brings physical world to digital
- Smart energy, smart Cities
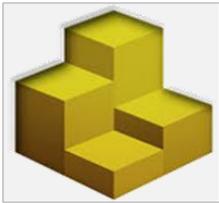
Platform for Multiphysics simulation
- Seamless simulation & visualization process
- Robust Multiphysics, Multi-disciplinary Optimization
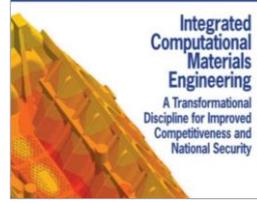- Azure/AWS microservices for simulation

Digital Transformation
- Digital threads, digital continuity, digital twins
- Model-Based Systems Engineering
- Simulation-led engineering outcome

Hyperscale Simulation, Collaboration on Cloud
- GPU, SMP, MPI, Task based
- Quantum computing
- Hyperscale Real Time Simulation

Computational Methods in New Areas
- Integrated computational materials engineering
- Computational chemistry, drug design, healthcare,
- Photonic IC, 3D IC, digital manufacturing

Predictive and Robust Design
- High accuracy, adaptive numerical methods
- Integrated Verification and Validation
- Uncertainty Quantification
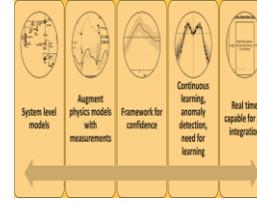
How can Simulation be Disrupted?
- ML-based flow-solver, generative design
- Integrated synthesis and verification
- Automated Mixed mode (0D-4D), MF, MS simulation

Investing in Four Key Product Initiatives to Drive Growth

1 CAPITALIZE ON RECENT ACQUISITIONS

2 GROW INDUSTRY-LEADING SIMULATION PLATFORM

3 EXPAND INTO NEXT-GENERATION USE CASES

4 GROW GLOBAL PARTNER ECOSYSTEM

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1. Capitalize on Recent Acquisitions

	STRENGTHENS CORE	ADJACENCIES			EMERGING HIGH-GROWTH SOLUTIONS			
		ADDITIVE MFG.	DESIGN ENGINEERS	DIGITAL TWIN	ELECTRIFICATION	AUTONOMOUS	5G	IIoT
GRANTA	✓	✓	✓	✓	✓	✓	✓	✓
Helic	✓					✓	✓	✓
DfR	✓		✓	✓	✓			
OPTIS	✓			✓		✓		✓
LSTC	✓	✓			✓	✓		
dynardo	✓	✓	✓	✓	✓	✓		✓
lumerical	✓		✓			✓	✓	✓

2. Ansys Comprehensive Portfolio for Digital Engineering Workflows
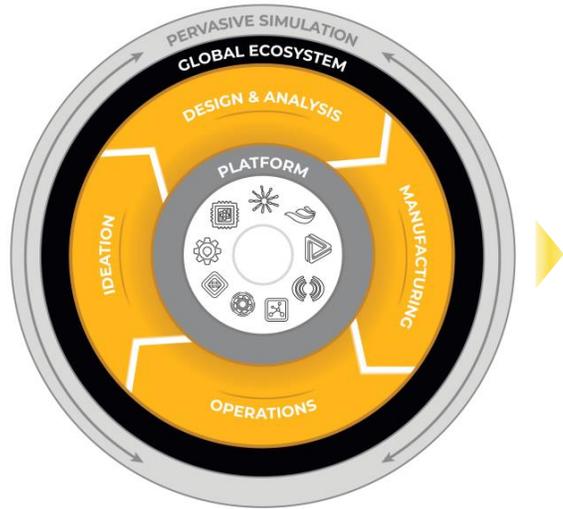
Comprehensive Multiphysics + **Collaborative Simulation and optimization** + **Materials information management**

Ansys Minerva

Multiphysics collaboration	Simulation applications	SPDM
Simulation Projects	Simulation Data Science	Hybrid HPC integration
Visualization	Simulation Analytics	Enterprise connectivity

Ansys optiSLang
- Simulation Workflow
- CAx Automation
- Robust Design Optimization

Ansys Multiphysics

Structures	Fluids
Electronics	Systems
Semiconductors	Embedded Software
Workbench	TwinBuilder

Ansys Granta MI
- Materials intelligence
- Materials exploration
- Materials data
- Materials compliance

Customer Ecosystem

PLM	ALM
ERP	Iiot
TDM	Inhouse
..	

+ **Strategic partner ecosytem**

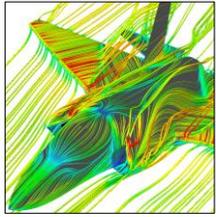AUTODESK   Microsoft   ptc   Rockwell Automation   SAP   ...

2. Ansys Cloud Overview

MECHANICAL

FLUENT
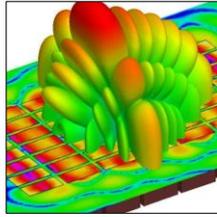
**HFSS,
SIwave, Icepak**
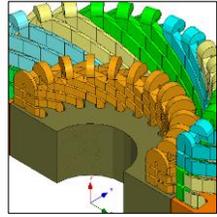
**MAXWELL,
Q3D (2D & 3D)**
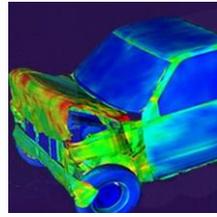
**Ansys LS-DYNA
2020 R2**

- Solve in the cloud directly from the desktop application or fully in the cloud with Virtual Desktop Infrastructure (VDI), new in 2020 R2

- Send Ansys LS-Dyna solves to Ansys Cloud, for additional compute power

- Access virtually unlimited compute power through cloud-based HPC

- Only cloud solution supported fully by and integrated with desktop software

Benefits of Cloud

Better design tradeoffs

New markets & applications

Reduced Turn-around

More accurate results
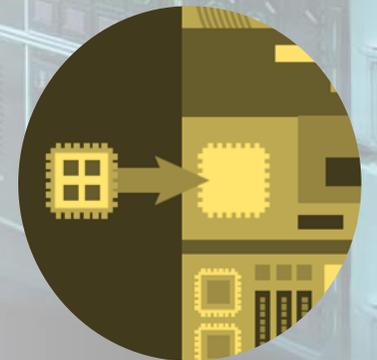
3. Expanding our Technology to Enable Emerging Solutions and Adjacencies

Ansys Addressable Market (2026)
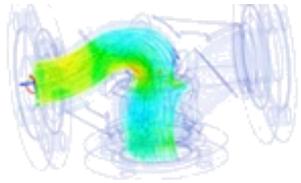
Upfront Simulation

PROJECTED MARKET SIZE	$1.4-2.0B

Digital Twin / IIoT

PROJECTED MARKET SIZE	$1.2-3.3B
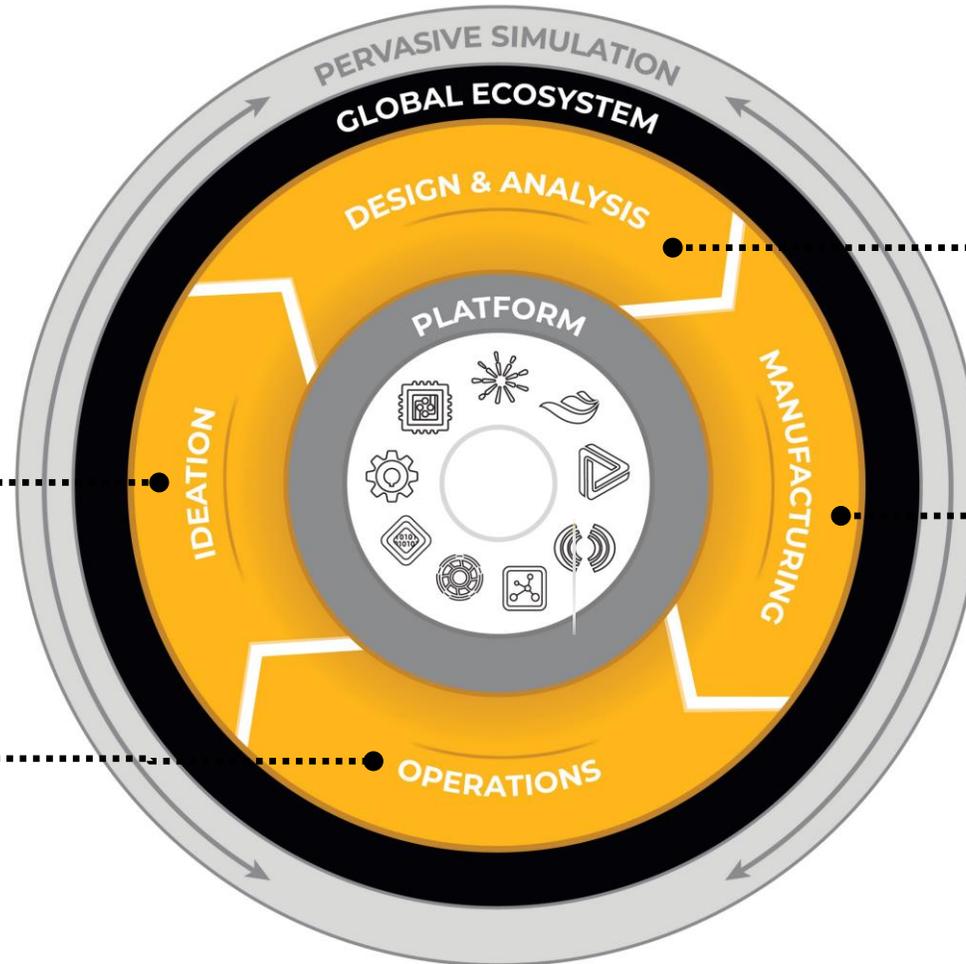
Emerging Solutions

PROJECTED MARKET SIZE	$3.8-5.4B
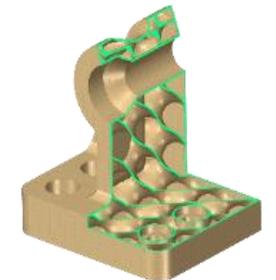
Additive Manufacturing

PROJECTED MARKET SIZE	$0.1-0.2B

PERVASIVE SIMULATION

GLOBAL ECOSYSTEM

DESIGN & ANALYSIS

PLATFORM

IDEATION

MANUFACTURING

OPERATIONS

/Ansys

5G is Everywhere

5G Network

Autonomous Vehicles
- Onboard large data processing
- Sensor development
- Wireless signal reliability
- Power design
- V2E reliability
- Interference
- Mechanical/Thermal Reliability
- SI/PI/EMI
- Human body interactions

Smart Cities
- Picocell development and network planning optimization
- Edge deployment
- SI/PI/EMI
- Power Grid capabilities/redesign
- Sub-MS latency
- Picocell and sensor reliability
- Security and Privacy
- Environmental Robustness
- Data Management
- Human body interactions

IIoT
- Sensor design and signal reliability
- Data management
- Low power design
- Environmental Robustness
- Sensor placement
- Human body interactions
- Edge deployment

Healthcare
- Data management
- Device design reliability
- Power supply
- SI/PI/EMI
- Mechanical robustness
- Human body interactions

Commercial Mobile
- Handheld signal processing capabilities
- Thermal in small packages
- Multiband antennas
- SI/PI/EMI
- Mechanical robustness
- Power supply

Power Grid Design
Power grid updates are needed to allow for cities to be able to source the equipment needed for 5G networks, including Wireless comm systems, large data handling networks such as Edge and Cloud, recharging stations for E-vehicles, etc.

AR/VR
- Data management
- Device design reliability
- Power supply
- SI/PI/EMI
- Mechanical robustness

Big Data
- Algorithm design
- ML/AI applications
- Data monitoring
- Processing Hardware SI/PI/EMI
- Power design

FA&D
- Security (secure comms, encryption, etc)
- Data handling
- Autonomous systems
- Edge systems
- Update warfighter systems

DEVICES ⬌ **NETWORKS** ⬌ **DATA CENTERS**

Mobile   IoT   Automotive

Wireless

Compute / Cloud

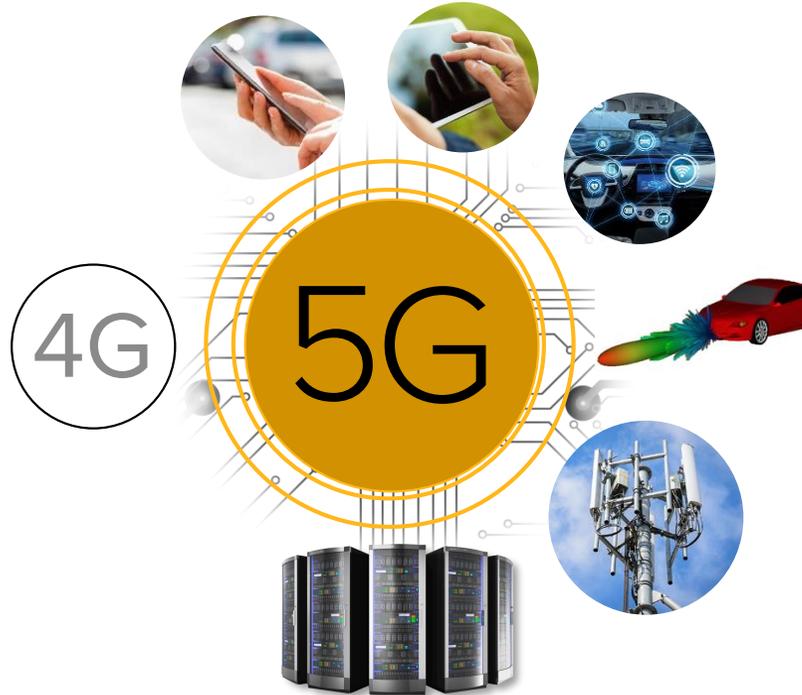EDGE DEVICES & COMPUTE

Pervasive Engineering Simulation Means Saying Hello to 5G with Ansys

ANSYS products and capabilities for Wireless and Semiconductor design from 3G to 4G and now 5G, are the trusted source for enabling customer simulation-driven solutions for the User Equipment (UE) and Devices, Network, and Data-centers

Electronics Integration Complexity	Multi-chip and multi-die power integrity, complex mixed signal, Electronics and SoC reliability, Dense RF Front-end (RFFE), Carrier Aggregation (CA)
Semiconductor SoC and 3D IC Designs	RTL Power and Sign-off in the IC Design Flow including ,low Power, SoC and IP analysis, Package and board level integrity analysis (Signal, Thermal, Power, EM), EM crosstalk, and ESD and EMC simulations for user equipment (UE) and networks
UE and Base Station (BS) Advanced Antennas	Complex Phased Array Beamforming, Advanced Channel Modeling, mmWave, Massive MIMO, Carrier-Aggregation
Base Station (BS) Performance	Physics-based simulation of large-scale Metro environments, and evaluation of system performance – Antennae Array, Site, UE received power, beam-forming, BS-BS handoffs, and interference
Data Center Electronics	Integrity analysis – Signal for fast channels (SERDES, PAM4), Power and Thermal , Board-level virtual prototypes, PCB reliability, Die-level packaging issues, Electronics reliability (EMI, Electromigration, Thermal),

Driving your Performance, Cost-Savings, and Workflow Efficiency thru Strong Partnership, Outstanding Customer Service, and Great Communication.
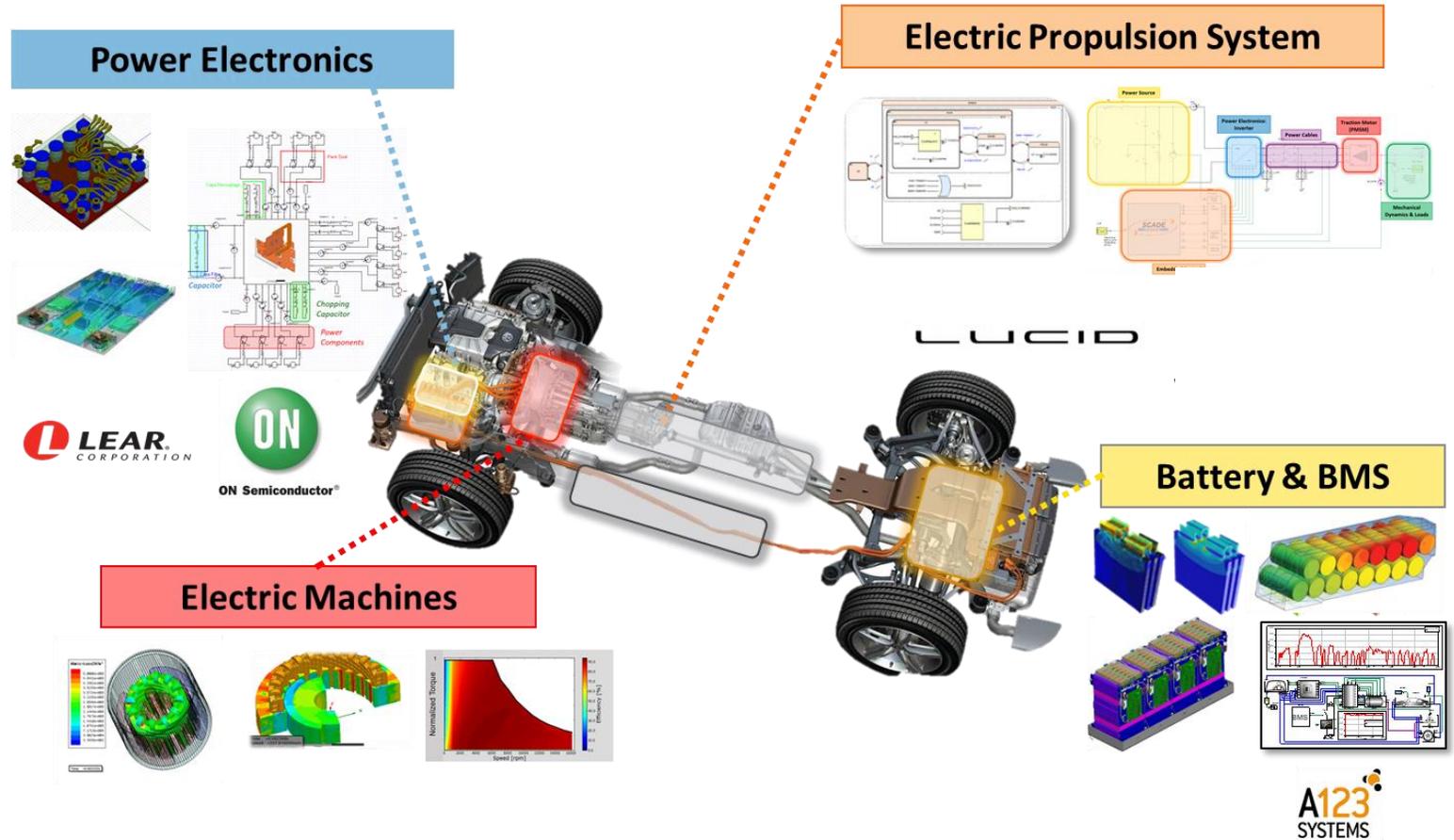
/Ansys

3. Ansys Electrification Solutions
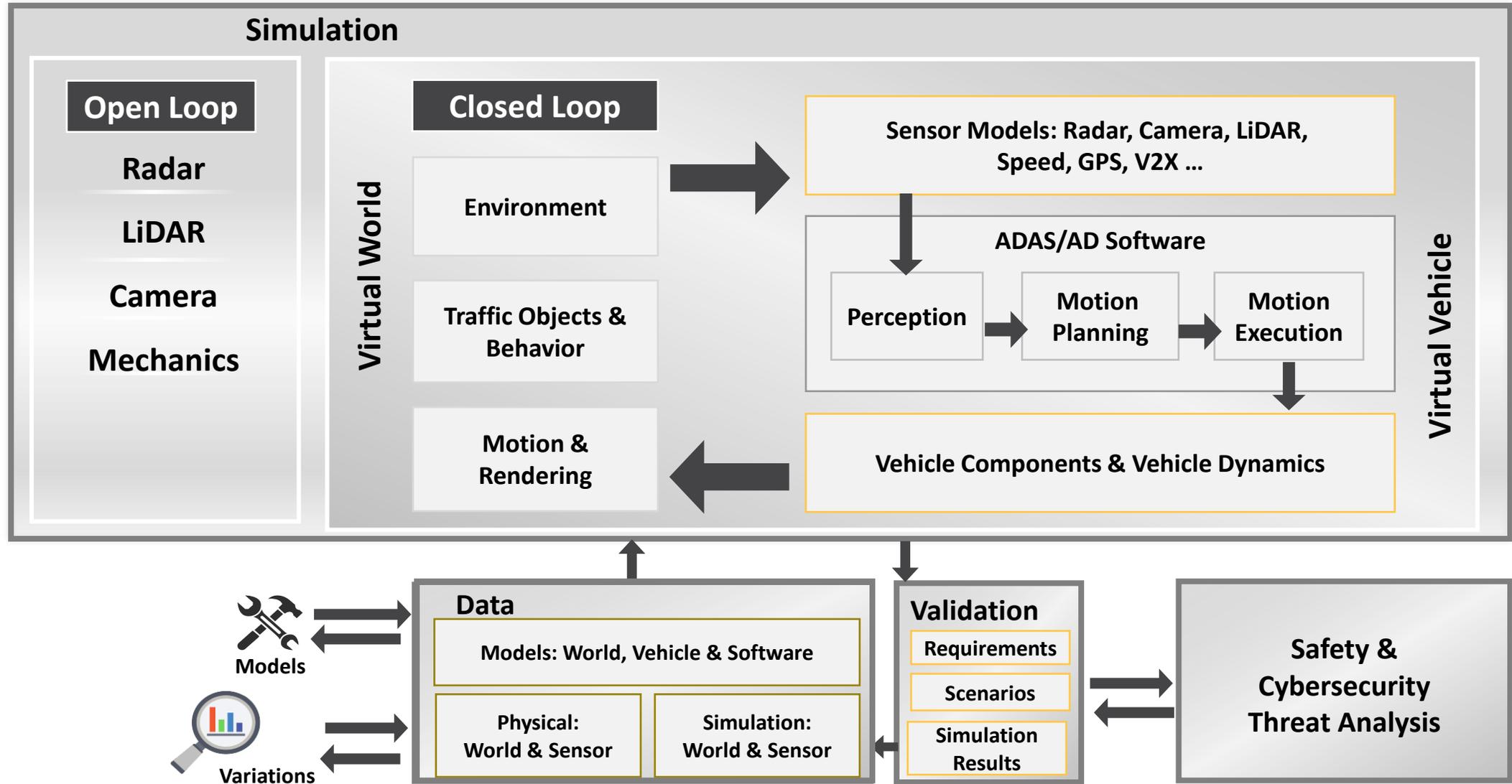
Leader in Electrification
- 50 Years Focus on Simulation
- Breadth/Depth of Multi-Domain/Multi-Technology Solutions
- Open Platform

Four Pillars
1. Battery & BMS
2. Power Electronics
3. Electric Machines
4. Electrified Propulsion System

Power Electronics

Electric Propulsion System

Electric Machines

Battery & BMS

3. Ansys Autonomy Simulation Toolchain

©2020 ANSYS, Inc.

4. Partnerships Expand Ansys Simulation into Other Ecosystems

Go-to-market expansion through partner activities

Microsoft	• Microsoft and Ansys are optimizing Ansys VRXPERIENCE on Azure for highly parallel computing for autonomous vehicle simulation. Joint go-to market activities have started with commercial availability scheduled for Q1 2021. • Digital Twin co-development with Microsoft continues, focused on predictive maintenance and IoT-enabled equipment optimization. Initial commercial pilot is underway with broader go-to-market activities ramping up. • Ansys Cloud is expanding new features and licensing options on November 15th, and Ansys is working closely with Microsoft on engineering and commercialization efforts. The first official Azure "co-sell win" was recently completed which rewards both sales teams for closing the deal.
ptc	Creo Simulation Live, Powered by Ansys - Integrates real-time simulation directly into 3D CAD modeling environment to get instant feedback for designers. • PTC recently reported another solid quarter for CSL, delivering its second highest bookings quarter, to date, across various industries. • In the upcoming Creo 7 release, selected high-fidelity solver use cases will broaden the Creo-Ansys portfolio beyond real-time simulation.
SYNOPSYS®	• Synopsys IC Compiler™ II with Ansys RedHawk™ Analysis Fusion - Delivers cohesive and integrated workflow that shortens time on challenging power requirements. • Addressing the rapidly growing 3D integrated circuit (3D-IC) market Synopsys has integrated Ansys RedHawk Family into Synopsys's 3DIC Compiler to optimize overall system solutions for power, signal, and thermal management.
Rockwell Automation	• Our strategic partnership with Rockwell provides industrial companies with the ability to deploy simulation-based digital twins to improve the design and operation of their products and manufacturing processes. • The partnership helps customers optimize factory operations, saving money by reducing unplanned downtime and enabling engineers to test virtual "what if" scenarios without disrupting physical assets.
AUTODESK.	• The partnership allows seamless interoperability between selected Ansys and Autodesk products to break down silos in the product development process, driving revolutionary design and engineering agility for our customers. • A designer-to-simulation analyst workflow connects Autodesk Fusion 360, integrated design and manufacturing software, with Ansys Mechanical and Ansys Discovery simulation solutions to expedite products to market. • A connected workflow for automotive companies combines Autodesk's VRED automotive 3D visualization and virtual prototyping software with Ansys' physics-based lighting simulation solutions.

/\\nsys

4. Partnerships Expand Ansys Simulation into Other Ecosystems

Go-to-market expansion through partner activities

|	
SAP	• Ansys and SAP have extended a multi-year agreement to support Ansys runtime twins within SAP's Enterprise Product Development (EPD) platform. • The market focus is expanding from Operators to OEMs to align with digital transformation initiatives where equipment suppliers are offering more software and services along with their products.
BMW / MINI / ROLLS ROYCE	• Ansys and BMW Group are partnering 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.
AV SIMULATION	• 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.
AIRBUS	• 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. This certified safe AI solution will be pivotal to reducing development time and expenses.

Ansys Discovery: Breaking the Barriers to Upfront Simulation

Design Exploration

- Real time interactive simulation for rapid evaluation and experimentation
- Structural, thermal, fluids & multiphysics
- "Just works" simulation that is tolerant of dirty geometry and imprecise modeling
- Fast topology optimization

Design Verification

- Trusted ANSYS solvers for high-fidelity results
- MAPDL for structures & thermal
- Fluent for fluids and conjugate heat transfer
- Extended physics including non-linearities and bolt pre-tensioning
- Export to Mechanical/Fluent
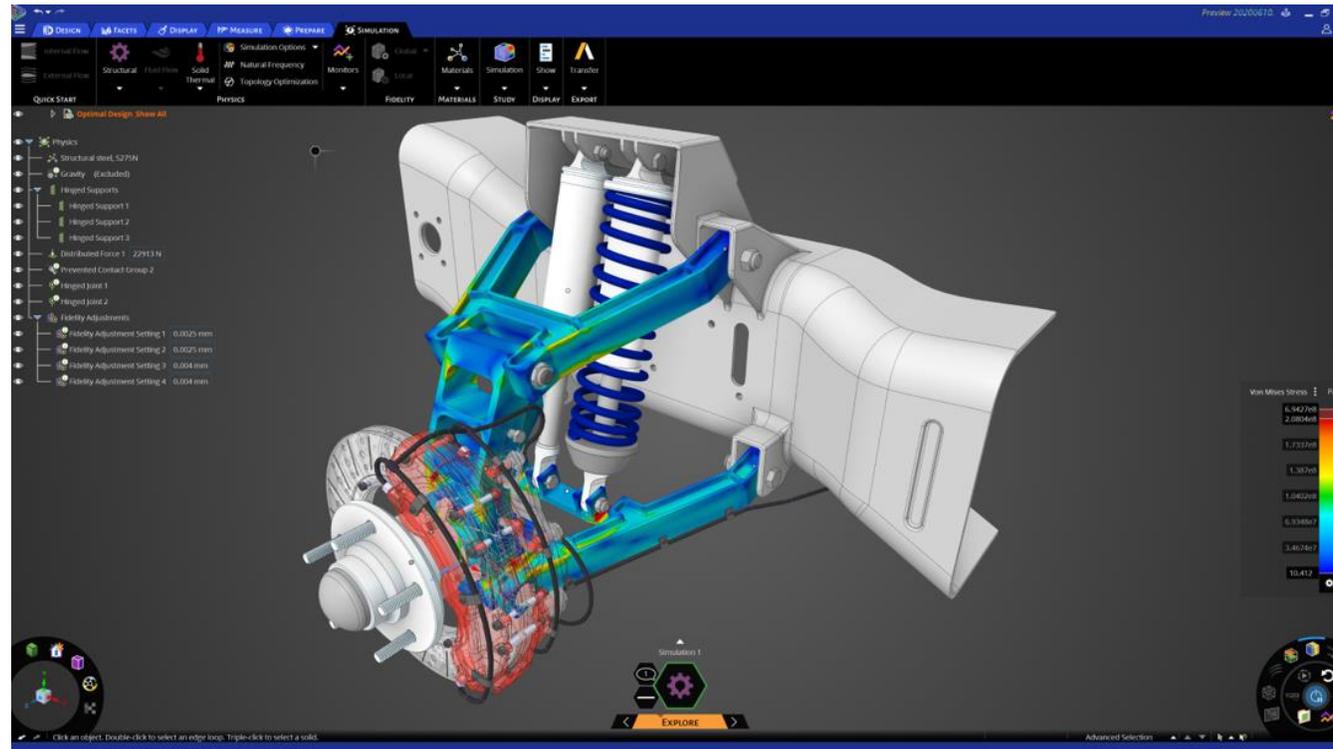
The "live" demo of Discovery can be found on the Ansys IR Home Page

Innovative User Experience

- Single environment for all physics that includes setup, solve, and post-processing
- Compressed workflows w/ sophisticated automation & intelligence
- Major focus on ease of learning and ease of reuse through guidance and feedback

Geometry Preparation

- Dedicated tools for simulation prep
- Import & edit CAD from any source
- Faceted and BREP
- Direct and history-based modeling

And More

- Granta materials
- Prep and simulation for Additive
- DoE and optimization
- Scripting & extensibility

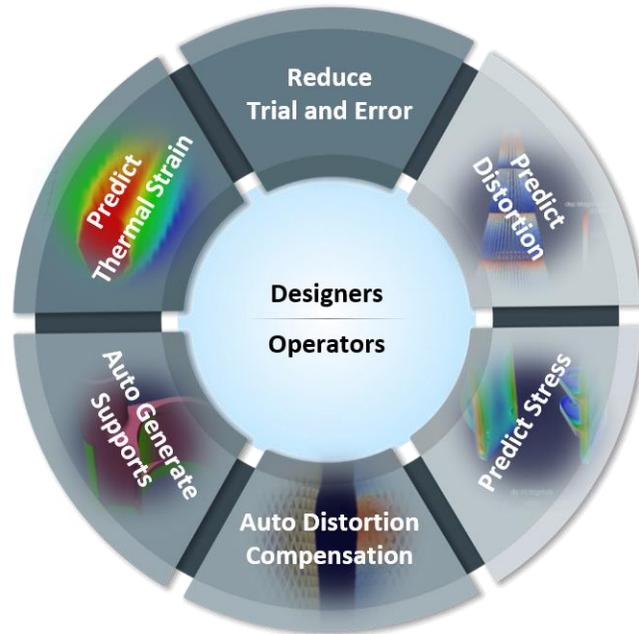# Demonstrated Return on Investment in Upfront Simulation
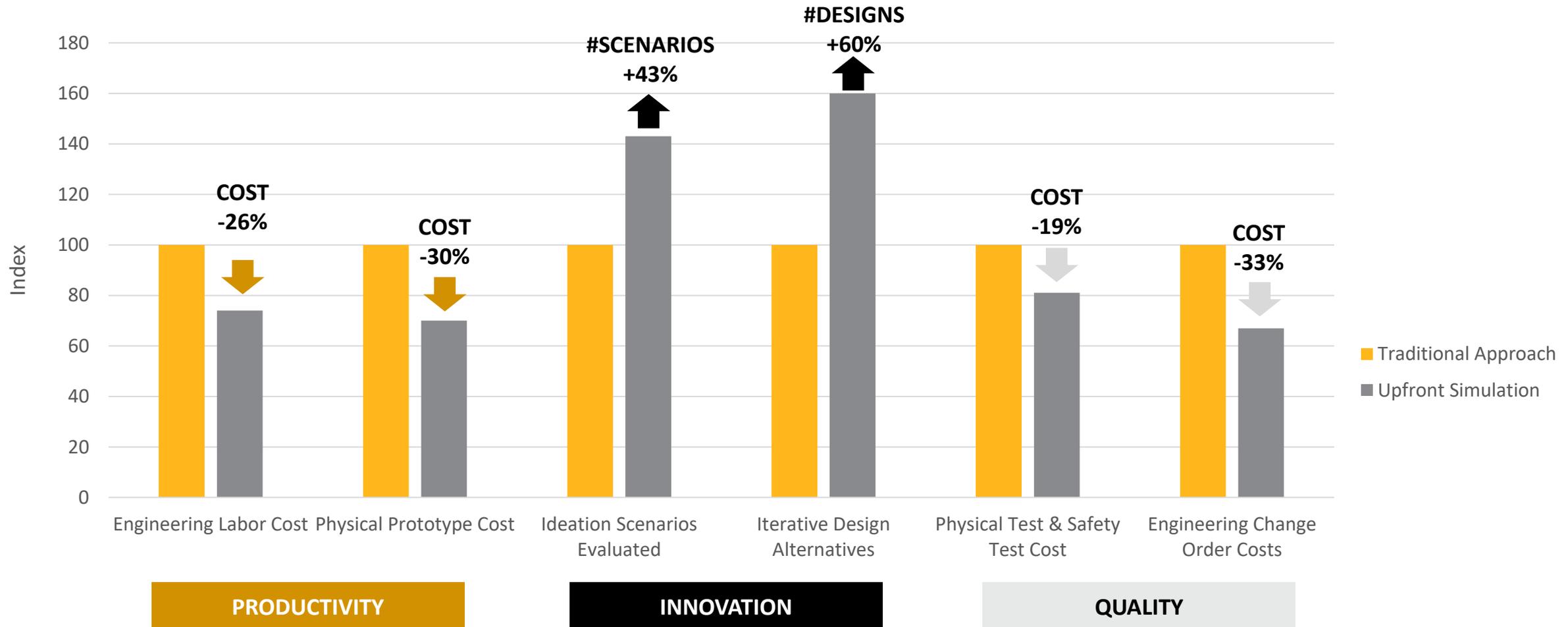
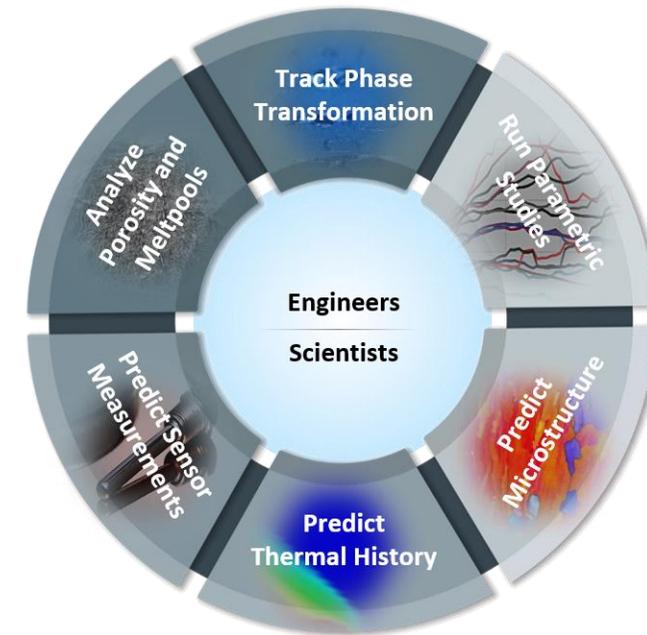# Adjacencies – Additive: Two Distinct Customer Groups – Two Products
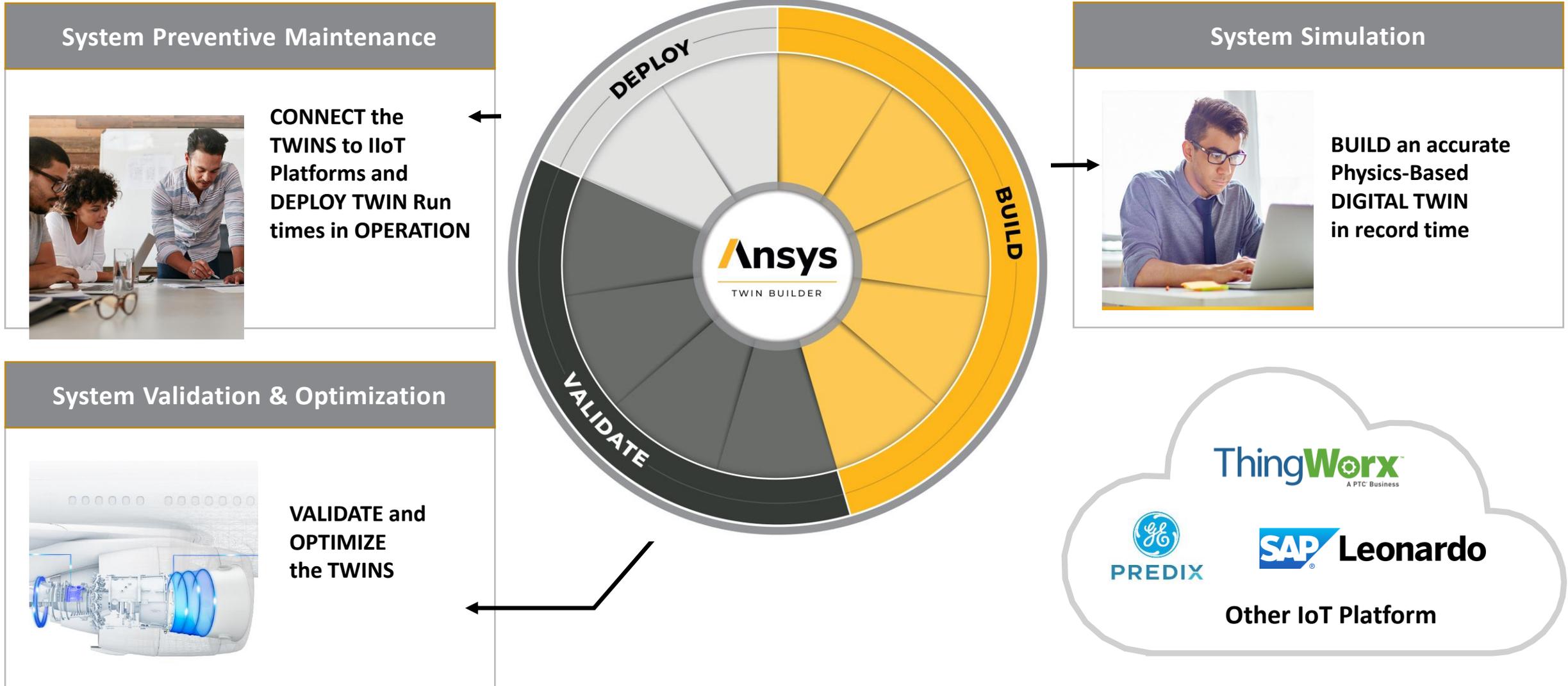
Ansys Additive Print

- Designers in aerospace, defense, auto OEMs & medical
- Metal additive manufacturing 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

Adjacencies - Ansys Digital Twin Key Capabilities

System Preventive Maintenance

CONNECT the TWINS to IIoT Platforms and DEPLOY TWIN Run times in OPERATION

System Validation & Optimization

VALIDATE and OPTIMIZE the TWINS

DEPLOY

BUILD

VALIDATE

Ansys TWIN BUILDER

System Simulation

BUILD an accurate Physics-Based DIGITAL TWIN in record time

ThingWorx
A PTC Business

GE PREDIX

SAP Leonardo

Other IoT Platform

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

40

Ansys

Well Positioned in a Growing Market

ANSYS IS THE SIMULATION MARKET LEADER
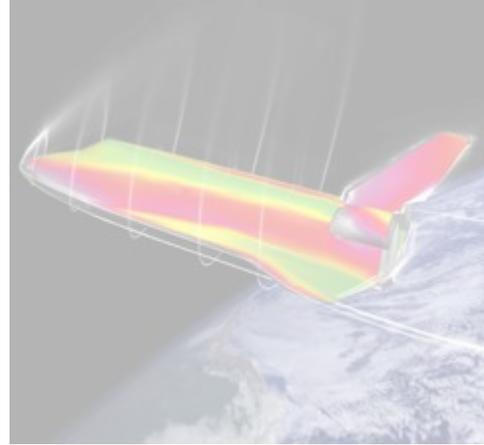
THE SIMULATION MARKET IS STRONG AND GROWING

OUR STRATEGY CAPITALIZES ON THIS GROWING MARKET

WE HAVE A PROVEN RECORD OF EXECUTION

Our Go-To-Market has Changed to Deliver Greater Customer Success

Enterprise   **80+ Accounts**

Strategic   **100s of Accounts**
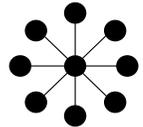
Volume   **1000s of Accounts**

Ansys

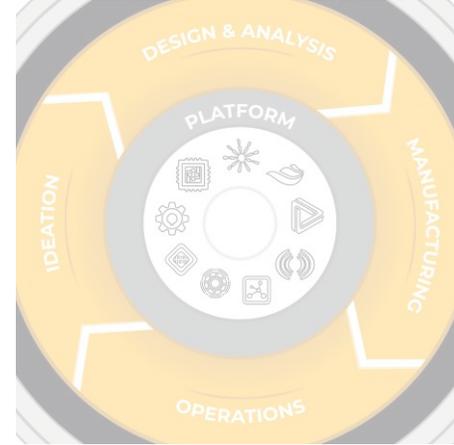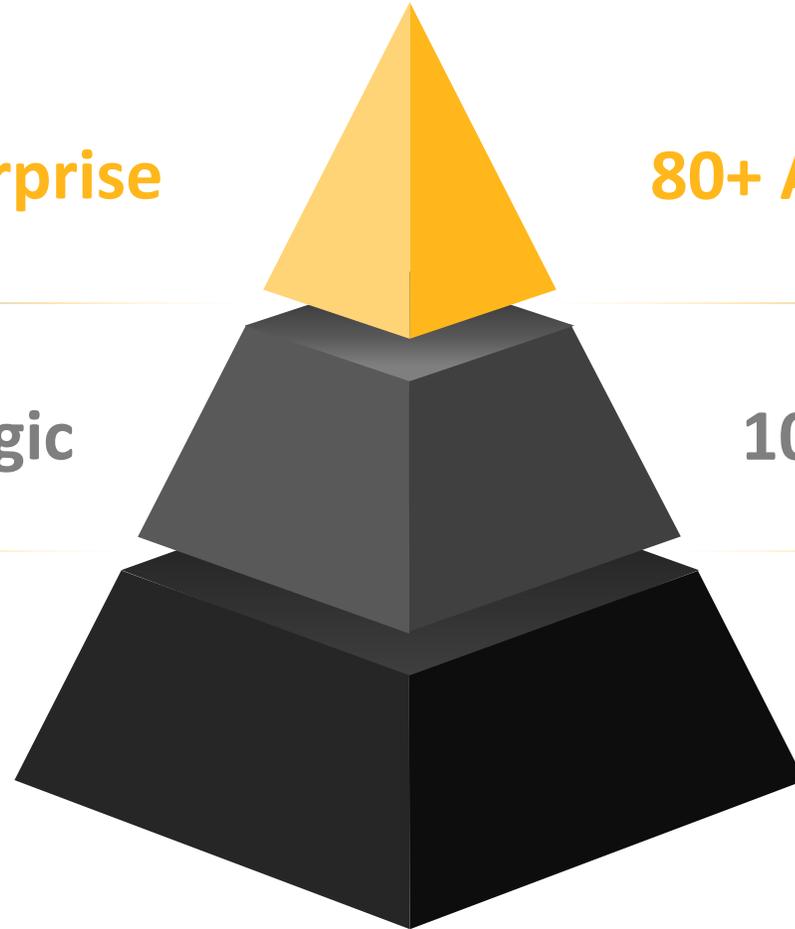# Reinforce and Extend Leadership in the Core

Each of the 80+ enterprise accounts offers strong growth opportunities

U.S. Multinational Case Example

- Strong growth as enterprise account
  - Increased usage
  - Multiphysics

- Large electrification opportunity

Digital Twins

Digital Thread

Minerva

Electrification
Functional Safety

Low-Frequency
Electronics and
Systems

Materials

High-Frequency
Electronics and
Systems

Direct Modeling

Computational
Fluid Dynamics

Structures
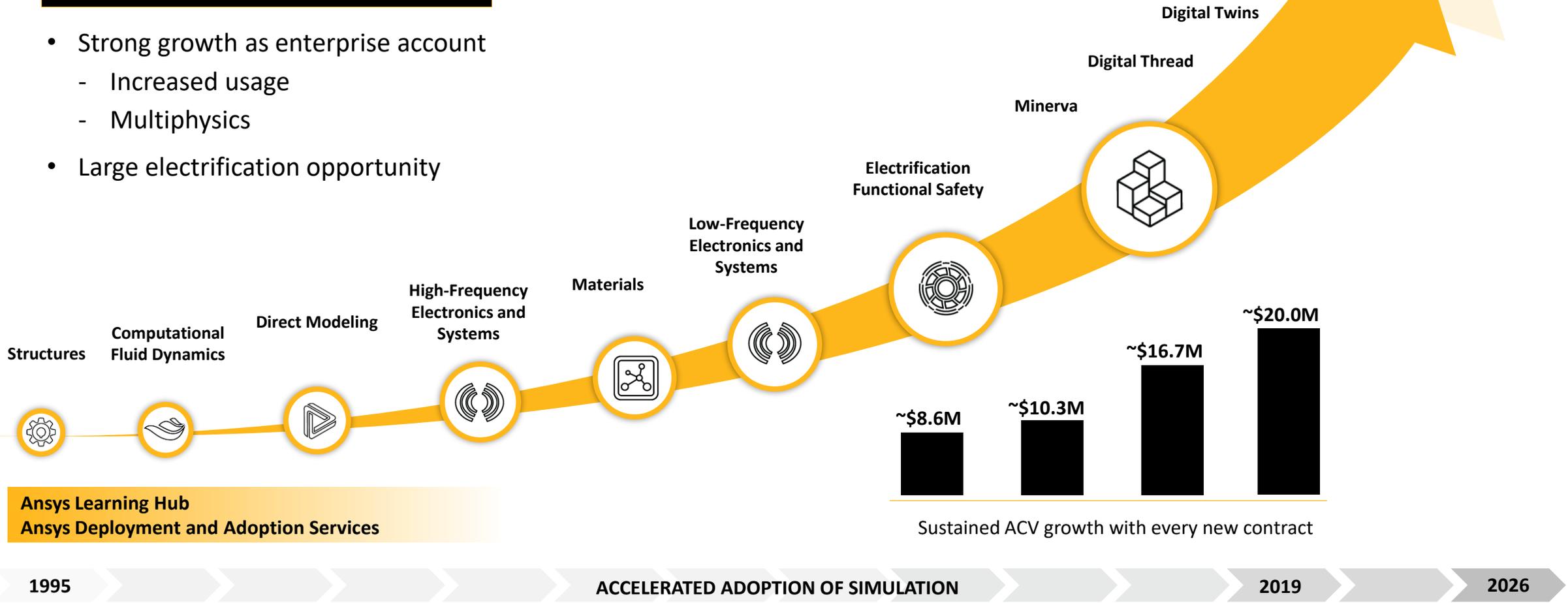
Ansys Learning Hub
Ansys Deployment and Adoption Services

~$8.6M   ~$10.3M   ~$16.7M   ~$20.0M

Sustained ACV growth with every new contract

Ansys

Ansys' Sales Go-To-Market Plays to Emerging High-Growth Solutions

High-Growth Solutions

GTM Readiness

Channel segmentation

Industry verticals

Expanded support and consulting

Electrification

Autonomy

5G

5G

IIoT

Repeatable and reusable solutions

Ansys

Future Sales Growth Drivers: Investing in Marketing to Optimize Brand Awareness

Platform Infrastructure

Global Digital Reach

Marketing Automation

Brand Awareness

/Ansys

Future Sales Growth Drivers: Leveraging Acquisitions and Ecosystem

Expand Customer Relationships With Acquisitions

Cross Sell

Upsell

Renewal

Penetrate New Markets With Strategic Ecosystem

Supply chain Enablement

Academic
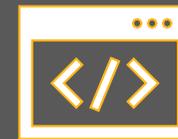
Technology OEM

Industry Experts

Continued Delivery on Strategy Through Disciplined Execution

1   **Reinforce and Extend Leadership in the Core**

2   **Capture Upside in High-Potential Adjacencies**

3   **Programmatically Pursue Strategic Acquisitions**

4   **Forge Partnerships to Embed Ansys into Other Ecosystems**

5   **Build a Winning Culture**
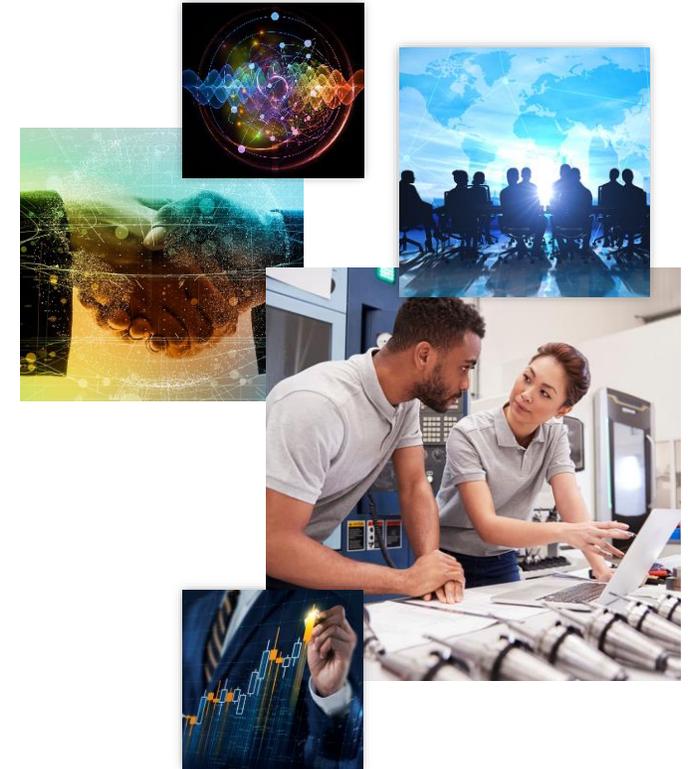
Executing on Our Growth Strategy

Performance Across Key Metrics

Diversified and Resilient Business

Capital Allocation

Financial Outlook

/Ansys

Key Highlights – Q3 QTD 2020

Non-GAAP Financial Highlights

Revenue	**$369M**
Operating Margin	**39.8%**
Tax rate	**19.5%**
Diluted EPS	**$1.36**
Annual Contract Value (ACV)	**$305M**

Strong Annual Contract Value – Q3 YTD
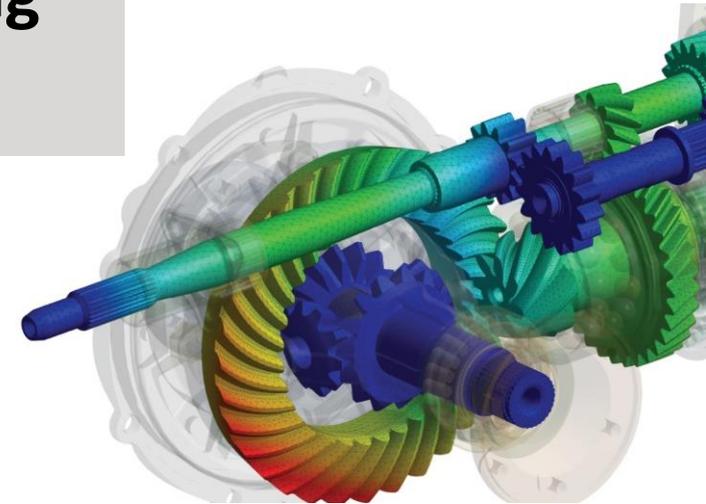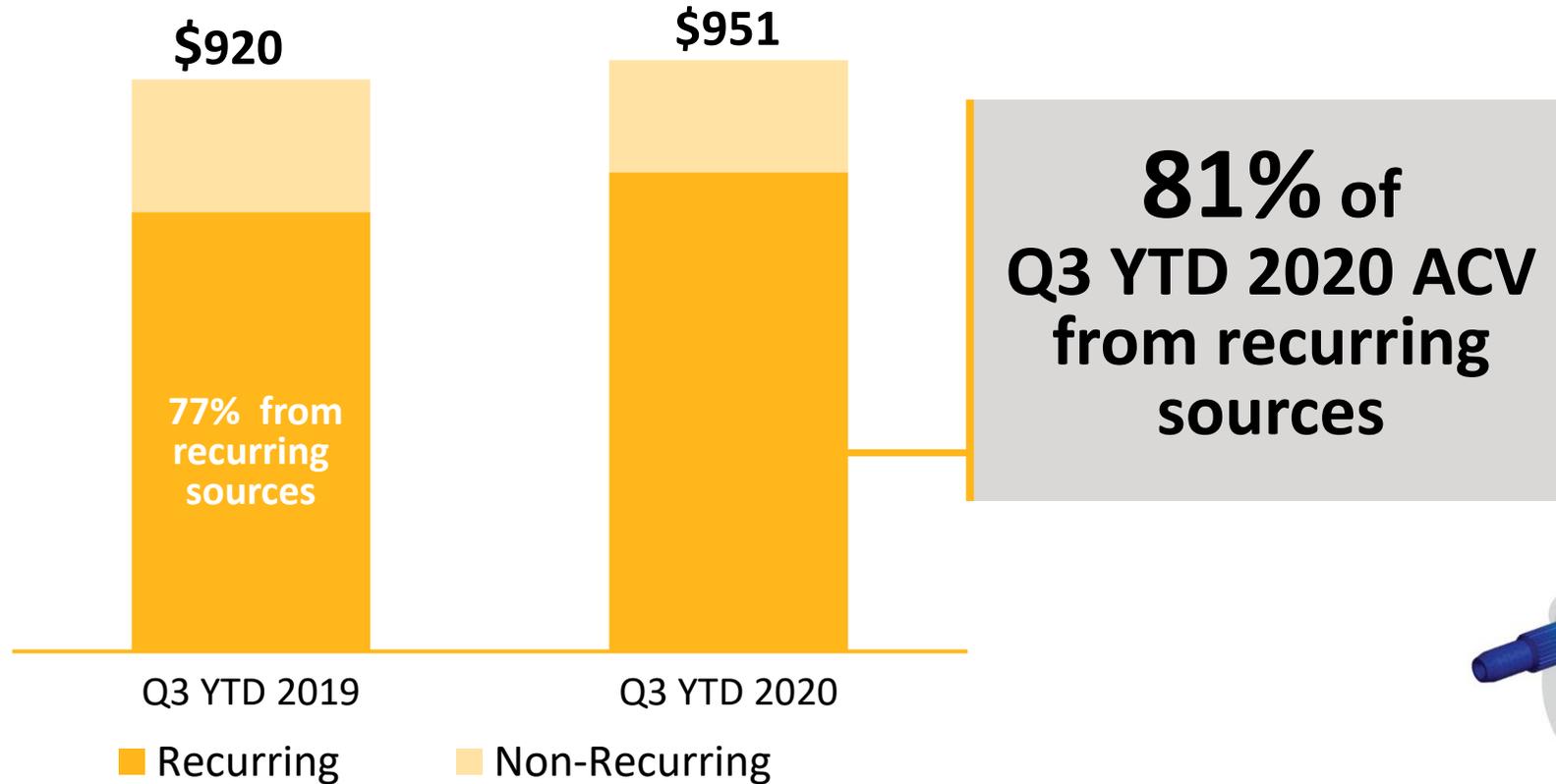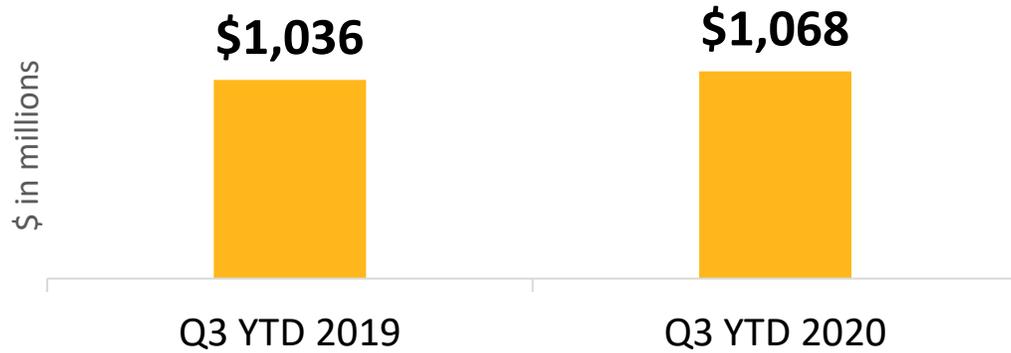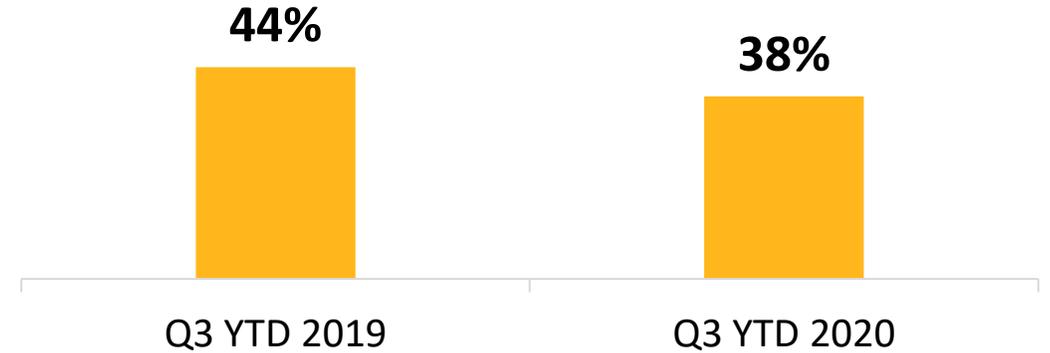
$920

$951

77% from recurring sources

81% of Q3 YTD 2020 ACV from recurring sources

Q3 YTD 2019

Q3 YTD 2020

■ Recurring   ■ Non-Recurring

Non-GAAP – Q3 YTD

Revenue

$ in millions

$1,036 (Q3 YTD 2019) $1,068 (Q3 YTD 2020)

Operating Margins

44% (Q3 YTD 2019) 38% (Q3 YTD 2020)

Tax Rate

23%
21%
19%
17%
15%

20% (Q3 YTD 2019) 20% (Q3 YTD 2020)

EPS

$4.33 (Q3 YTD 2019) $3.73 (Q3 YTD 2020)

/Ansys
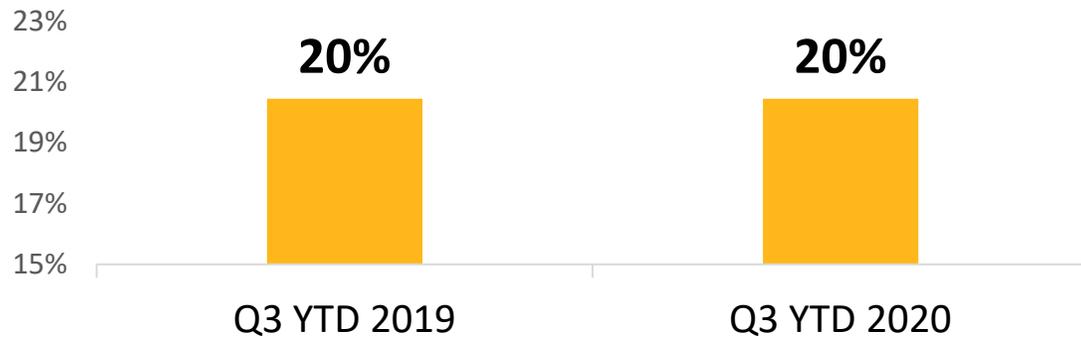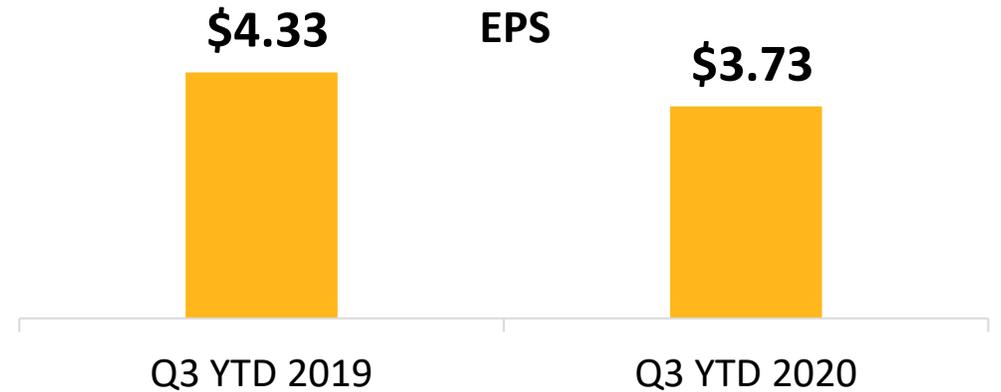
Geographic Diversity – Q3 YTD

Revenue by Geography - Non-GAAP

Q3 YTD 2019:
- Americas, 43%
- EMEA, 28%
- APAC, 29%

Q3 YTD 2020:
- Americas, 46%
- EMEA, 27%
- APAC, 27%
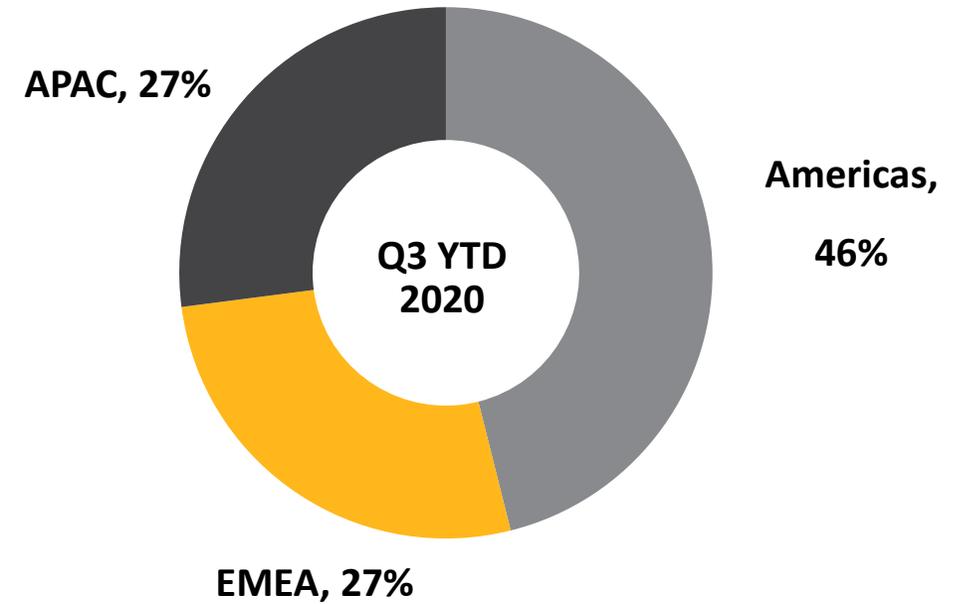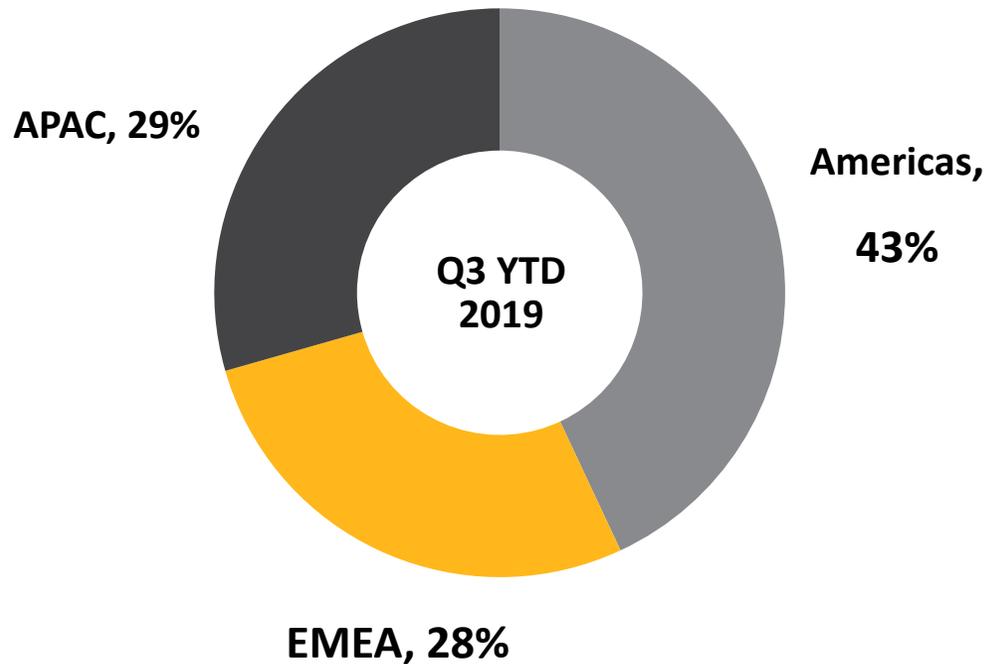
Diverse Customer Base

% Total Q3 2020 Trailing Twelve-Month ACV by Industry

Consumer, 1%

Aerospace & Defense, 18%

High-Tech, 32%

Automotive, 18%

Healthcare, 2%
Construction, 2%
Academic, 3%

Industrial Equipment, 9%

Materials &
Chemicals, 6%

Energy, 8%

Other, 1%
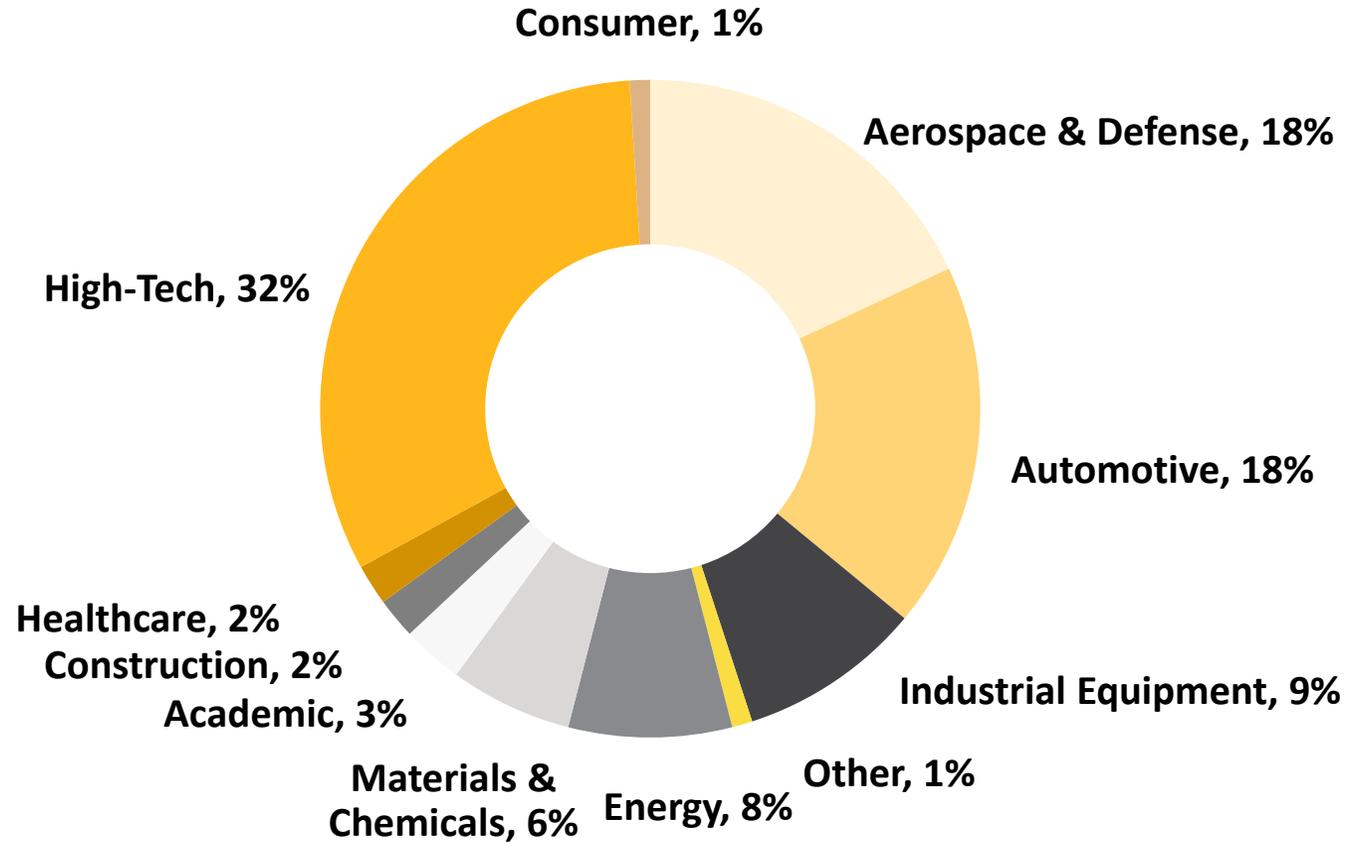
Diverse Revenue Sources – Q3 YTD

Lease & Maintenance Revenue

(Revenue by Type - Non-GAAP)
($ Million)

Q3 YTD 2019 — $1,036
- $39
- $191
- $566
- $240

Q3 YTD 2020 — $1,068
- $43
- $162
- $625
- $238
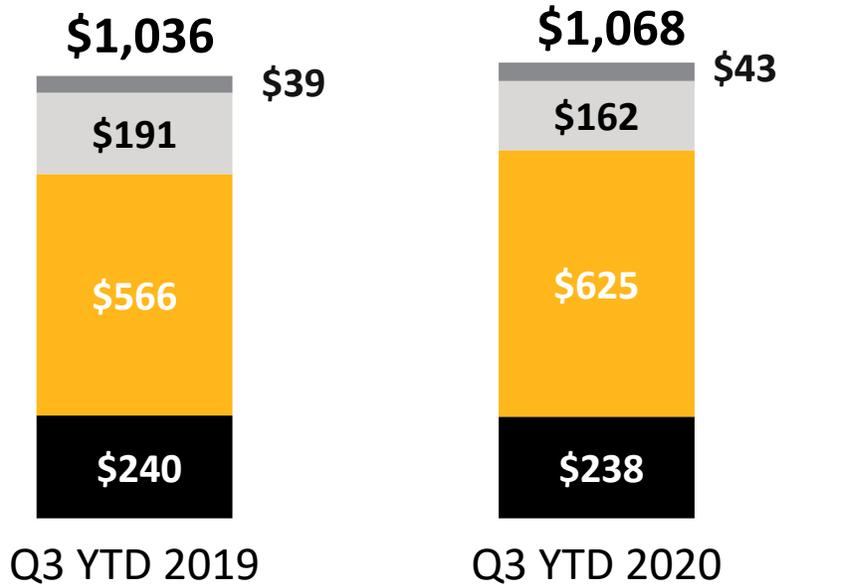
Legend: ■ Lease ■ Maintenance ▢ Perpetual ■ Service

(Revenue as a % of Total - Non-GAAP)

Q3 YTD 2019
- 4%
- 18%
- 55%
- 23%

Lease & Maintenance Revenue 78%

Q3 YTD 2020
- 4%
- 15%
- 59%
- 22%

81%

Legend: ■ Lease ■ Maintenance ▢ Perpetual ■ Service

Ansys
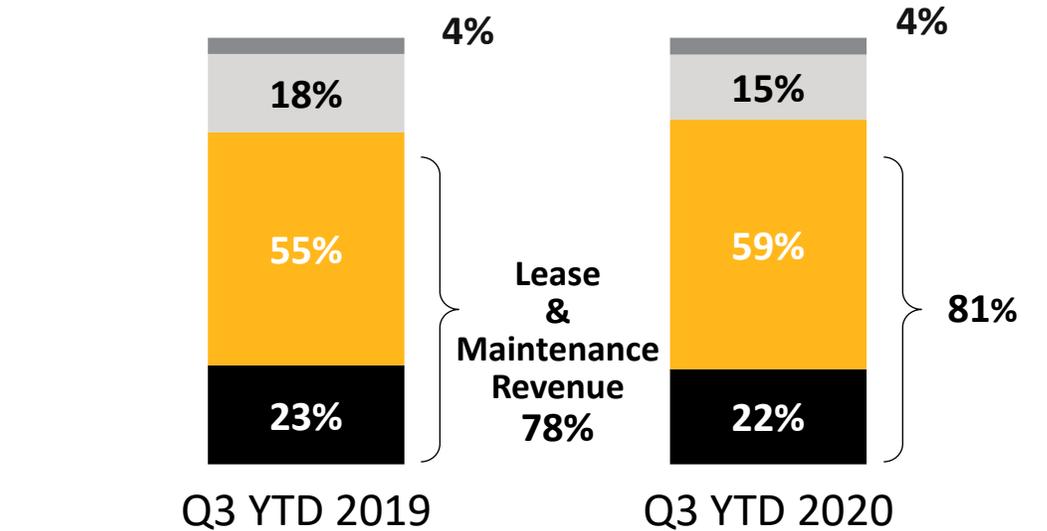
Diverse Go-to-Market Revenue – Q3 YTD

Non-GAAP Revenue by Channel
(% of Total Revenue)

Q3 YTD 2019 — Indirect 24%, Direct 76%

Q3 YTD 2020 — Indirect 24%, Direct 76%
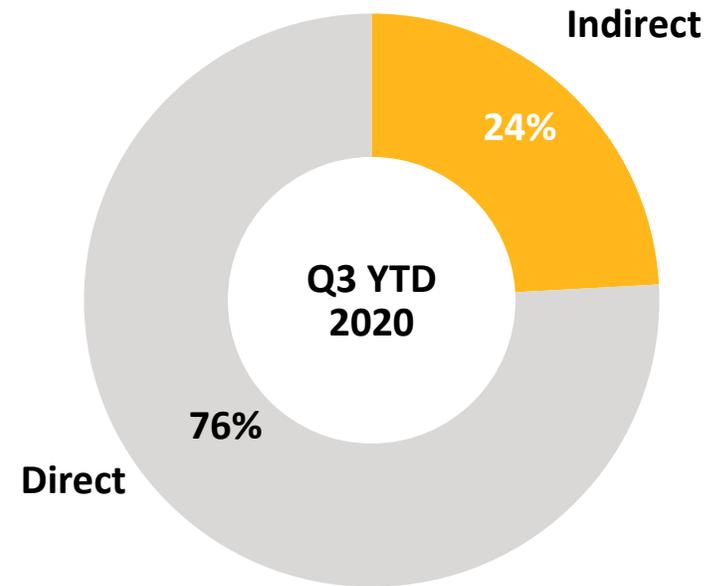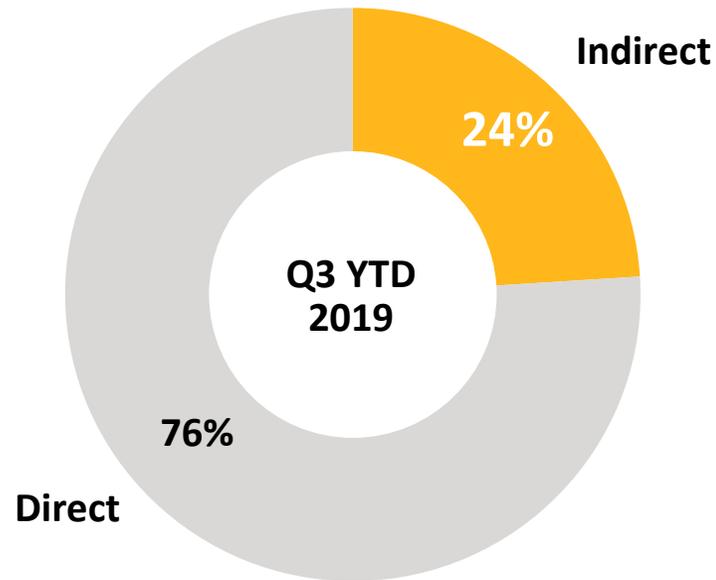
Maintaining Strong Financials

**Maintaining a Strong
Balance Sheet**

As of September 30, 2020	
Cash & short-term investments	**$845M**
Deferred revenue & backlog	**$880M**
Long-term debt	**$424M**

Delivering Strong Y-O-Y Deferred Revenue and Backlog Growth

$ Million

35%

$650 — Q3 2019

$880 — Q3 2020

/Ansys

Capital Allocation Framework

Invest in Organic Growth

- Strategic R&D investment

- Expand field engineering

- Digital transformation and infrastructure build-out

Invest in M&A to Enhance Growth

- Targeted acquisitions

- Leverage cross-selling

- Broaden simulation portfolio and expand TAM

Return Capital to Shareholders

- Maintain a focused repurchasing plan

Return of Excess Capital to Stockholders

- We repurchased 0.7 million shares during Q1 2020 at an average price of $233.48 per share. There were no repurchases in Q2 or Q3 2020.

Ansys

Targeted M&A to Broaden Simulation Portfolio and Expand TAM

Key Criteria

Strategic Alignment

- Technology alignment considerations
- Gain top talent
- Go-to-market strategy

Growth

- Expand TAM into new markets
- Access to new customers
- Leverage cross-selling

Cultural Fit

- Passion for technology
- Commitment to excellence
- Strong customer relationships

Selectively investing in value-creating opportunities

/Ansys

Financial Outlook – Q4 2020

	Q4 2020 GAAP	Q4 2020 Non-GAAP
Revenue	**$541.1 - $581.1M**	**$542.3 - $582.3M**
Operating Margin	**37.0% - 41.0%**	**47.5% - 49.5%**
Effective Tax Rate	**15.5% – 16.5%**	**19.5%**
Diluted EPS	**$1.93 - $2.29**	**$2.36 - $2.67**

Guidance as of November 4, 2020. Any usage of slide on a subsequent date does not constitute guidance re-confirmation as of such subsequent date. Refer to Cautionary Statement for a discussion of factors that could cause actual results to differ materially from outlook.

/Ansys

Financial Outlook - FY 2020

	FY 2020 GAAP	FY 2020 Non-GAAP
Revenue	$1,598.7 - $1,638.7M	$1,610.0 - $1,650.0M
Operating Margin	27.5% - 29.0%	41.0% - 42.0%
Effective Tax Rate	11.0% - 12.0%	19.5%
Diluted EPS	$4.43 - $4.79	$6.09- $6.40

	FY 2020
Annual Contract Value (ACV)	$1,555.0 - $1,590.0M
Operating Cash Flows	$435.0 - $475.0M

Guidance as of November 4, 2020. Any usage of slide on a subsequent date does not constitute guidance re-confirmation as of such subsequent date. Refer to Cautionary Statement for a discussion of factors that could cause actual results to differ materially from outlook.

/Ansys

The Growth Story Continues to 2022: Marching Towards $2B ACV and Investing Selectively

ACV

11%+ CAGR

$1.5B — FY 2019

$2.0B — FY 2022
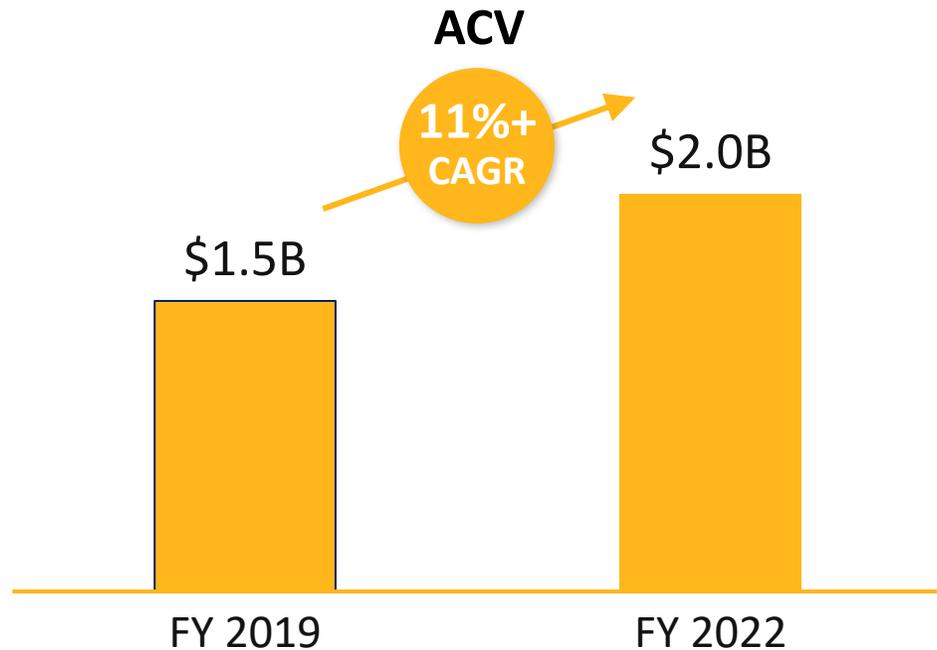
Marching Toward $2 Billion!

- Continued execution on Pervasive Simulation strategy
- Capitalize on emerging high-growth solutions
- Invest in world-class customer-facing expertise
- Includes impact of "tuck-in" acquisitions

Operating Margins
(Non-GAAP)

Investment

45% — FY 2019

42-44% — FY 2022
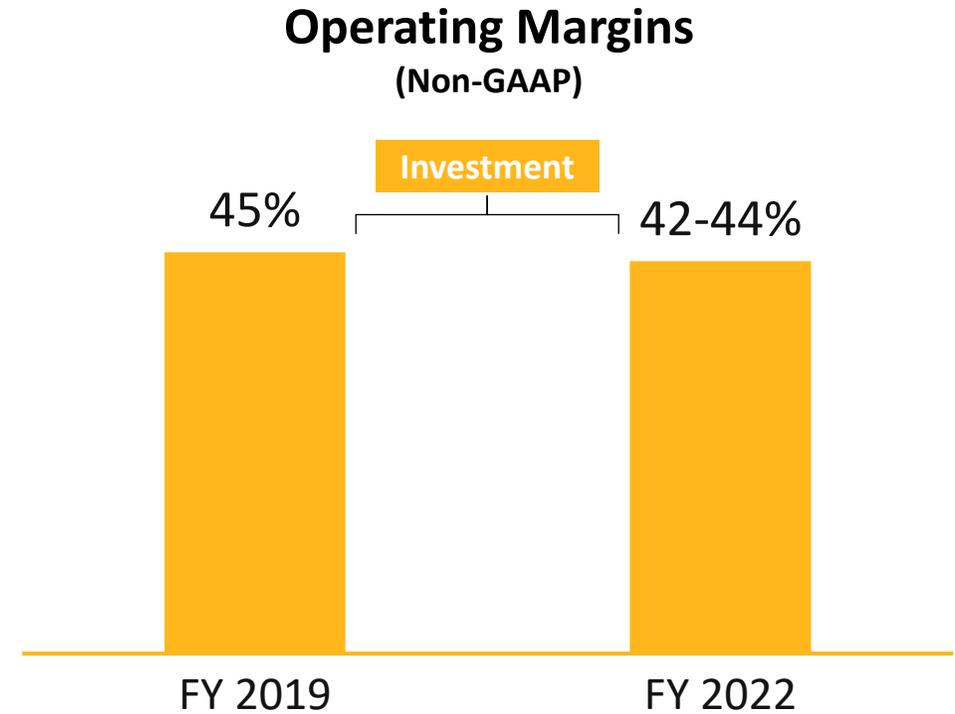
Investing in the Business

- Slight dilution from M&A
- Ongoing infrastructure and digital transformation investments

/Ansys

Appendix

Non-GAAP Measures

We provide non-GAAP revenue, non-GAAP gross profit, non-GAAP gross profit margin, 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 our 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. These prepared remarks also contain a reconciliation of each of these non-GAAP financial measures to its most comparable GAAP financial measure.

We use non-GAAP financial measures (a) to evaluate our historical and prospective financial performance as well as our performance relative to our 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 employees. In addition, many financial analysts that follow us focus on and publish both historical results and future projections based on non-GAAP financial measures. We believe that it is in the best interest of our investors to provide this information to analysts so that they accurately report the non-GAAP financial information. Moreover, investors have historically requested, and we have historically reported, these non-GAAP financial measures as a means of providing consistent and comparable information with past reports of financial results.

While we believe 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 our competitors and may not be directly comparable to similarly titled measures of our competitors due to potential differences in the exact method of calculation. We compensate 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.

The adjustments to these non-GAAP financial measures, and the basis for such adjustments, are outlined below:

Acquisition accounting for deferred revenue. Historically, we have consummated acquisitions in order to support our strategic and other business objectives. In accordance with the fair value provisions applicable to the accounting for business combinations, acquired deferred revenue is often recorded on the opening balance sheet at an amount that is lower than the historical carrying value. Although this acquisition accounting requirement has no impact on our business or cash flow, it adversely impacts our reported GAAP revenue in the reporting periods following an acquisition. In order to provide investors with financial information that facilitates comparison of both historical and future results, we provide non-GAAP financial measures which exclude the impact of the acquisition accounting adjustment. We believe that this non-GAAP financial adjustment is useful to investors because it allows investors to (a) evaluate the effectiveness of the methodology and information used by us in our financial and operational decision-making, and (b) compare our past and future reports of financial results as the revenue reduction related to acquired deferred revenue will not recur when related lease licenses and software maintenance contracts are renewed in future periods.

Amortization of intangible assets from acquisitions. We incur amortization of intangible assets, included in our GAAP presentation of amortization expense, related to various acquisitions we have made. We exclude these expenses for the purpose of calculating non-GAAP gross profit, non-GAAP gross profit margin, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance because these costs are fixed at the time of an acquisition, are then amortized over a period of several years after the acquisition and generally cannot be changed or influenced by us after the acquisition. Accordingly, we do not consider these expenses for purposes of evaluating our performance during the applicable time period after the acquisition, and we exclude such expenses when making decisions to allocate resources. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate the effectiveness of the methodology and information used by us in our financial and operational decision-making, and (b) compare our past reports of financial results as we have historically reported these non-GAAP financial measures.

/Ansys

Non-GAAP Measures

Stock-based compensation expense. We incur expense related to stock-based compensation included in our GAAP presentation of cost of maintenance and service; research and development expense; and selling, general and administrative expense. This non-GAAP adjustment also includes excess payroll tax expense related to stock-based compensation. Stock-based compensation expense (benefit) incurred in connection with our deferred compensation plan held in a rabbi trust includes an offsetting benefit (charge) recorded in other income (expense). Although stock-based compensation is an expense and viewed as a form of compensation, we exclude these expenses for the purpose of calculating non-GAAP gross profit, non-GAAP gross profit margin, non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance. We similarly exclude income (expense) related to assets held in a rabbi trust in connection with our deferred compensation plan. Specifically, we exclude stock-based compensation and income (expense) related to assets held in the deferred compensation plan rabbi trust during our annual budgeting process and our quarterly and annual assessments of our performance. The annual budgeting process is the primary mechanism whereby we allocate resources to various initiatives and operational requirements. Additionally, the annual review by our board of directors during which it compares our historical business model and profitability to the planned business model and profitability for the forthcoming year excludes the impact of stock-based compensation. In evaluating the performance of our senior management and department managers, charges related to stock-based compensation are excluded from expenditure and profitability results. In fact, we record stock-based compensation expense into a stand-alone cost center for which no single operational manager is responsible or accountable. In this way, we can review, on a period-to-period basis, each manager's performance and assess financial discipline over operational expenditures without the effect of stock-based compensation. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting as well as comparability with competitors' operating results.

Transaction expenses related to business combinations. We incur expenses for professional services rendered in connection with business combinations, which are included in our GAAP presentation of selling, general and administrative expense. These expenses are generally not tax-deductible. We exclude these acquisition-related transaction expenses, derived from announced acquisitions, for the purpose of calculating non-GAAP operating income, non-GAAP operating profit margin, non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance, as we generally would not have otherwise incurred these expenses in the periods presented as a part of our operations. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting as well as comparability with competitors' operating results.

Tax Cuts and Jobs Act. We recorded impacts to our income tax provision related to the enactment of the Tax Cuts and Jobs Act of 2017, specifically for the transition tax related to unrepatriated cash and the impacts of the tax rate change on net deferred tax assets. We exclude these impacts for the purpose of calculating non-GAAP net income and non-GAAP diluted earnings per share when we evaluate our continuing operational performance, as (i) the charges are not expected to recur as part of our normal operations and (ii) the charges resulted from the extremely infrequent event of major U.S. tax reform, the last such reform having occurred in 1986. We believe that these non-GAAP financial measures are useful to investors because they allow investors to (a) evaluate our operating results and the effectiveness of the methodology used by us to review our operating results, and (b) review historical comparability in our financial reporting.

Non-GAAP tax provision. We utilize a normalized non-GAAP annual effective tax rate (AETR) to calculate non-GAAP measures. This methodology provides better consistency across interim reporting periods by eliminating the effects of non-recurring items and aligning the non-GAAP tax rate with our expected geographic earnings mix. To project this rate, we analyzed our historic and projected non-GAAP earnings mix by geography along with other factors such as our current tax structure, recurring tax credits and incentives, and expected tax positions. On an annual basis we will re-evaluate this rate for significant items that may materially affect our projections.

Non-GAAP financial measures are not in accordance with, or an alternative for, GAAP. Our non-GAAP financial measures are not meant to be considered in isolation or as a substitute for comparable GAAP financial measures and should be read only in conjunction with our consolidated financial statements prepared in accordance with GAAP.

We have provided a reconciliation of the non-GAAP financial measures to the most directly comparable GAAP financial measures as listed below:

GAAP Reporting Measure	**Non-GAAP Reporting Measure**
Revenue	Non-GAAP Revenue
Gross Profit	Non-GAAP Gross Profit
Gross Profit Margin	Non-GAAP Gross Profit Margin
Operating Income	
	Non-GAAP Operating Income
Operating Profit Margin	Non-GAAP Operating Profit Margin
Net Income	
	Non-GAAP Net Income
Diluted Earnings Per Share	Non-GAAP Diluted Earnings Per Share

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Appendix

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

(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS – Diluted[1]
			Three Months Ended September 30, 2020				
Total GAAP	$ 366,965	$ 313,580	85.5 %	$ 90,085	24.5 %	$ 75,627	$ 0.87
Acquisition accounting for deferred revenue	2,164	2,164	– %	2,164	0.5 %	2,164	0.02
Stock-based compensation expense	–	3,626	0.9 %	38,185	10.4 %	38,185	0.44
Excess payroll taxes related to stock-based awards	–	85	– %	732	0.2 %	732	0.01
Amortization of intangible assets from acquisitions	–	9,911	2.8 %	14,148	3.8 %	14,148	0.16
Transaction expenses related to business combinations	–	–	– %	1,549	0.4 %	1,549	0.02
Adjustment for income tax effect	–	–	– %	–	– %	(14,133)	(0.16)
Total non-GAAP	$ 369,129	$ 329,366	89.2 %	$ 146,863	39.8 %	$ 118,272	$ 1.36

[1] Diluted weighted average shares were 87,224.

Appendix

	Three Months Ended						
	September 30, 2019						
(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS – Diluted[1]
Total GAAP	$ 343,899	$ 302,534	88.0 %	$ 105,047	30.5 %	$ 89,463	$ 1.04
Acquisition accounting for deferred revenue	1,596	1,596	— %	1,596	0.4 %	1,596	0.02
Stock-based compensation expense	—	2,422	0.7 %	31,862	9.2 %	31,862	0.37
Excess payroll taxes related to stock-based awards	—	—	— %	137	0.1 %	137	—
Amortization of intangible assets from acquisitions	—	4,762	1.4 %	8,549	2.4 %	8,549	0.10
Transaction expenses related to business combinations	—	—	— %	2,531	0.7 %	2,531	0.03
Rabbi trust (income) / expense	—	—	— %	—	— %	(45)	—
Adjustment for income tax effect	—	—	— %	—	— %	(12,385)	(0.14)
Total non-GAAP	$ 345,495	$ 311,314	90.1 %	$ 149,722	43.3 %	$ 121,708	$ 1.42

[1] Diluted weighted average shares were 85,733.

Appendix

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

(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS – Diluted[1]
			Nine Months Ended September 30, 2020				
Total GAAP	$ 1,057,611	$ 900,250	85.1 %	$ 236,965	22.4 %	$ 218,255	$ 2.50
Acquisition accounting for deferred revenue	10,116	10,116	0.2 %	10,116	0.7 %	10,116	0.12
Stock-based compensation expense	—	9,956	0.9 %	103,256	9.7 %	103,256	1.19
Excess payroll taxes related to stock-based awards	—	774	0.1 %	9,591	0.9 %	9,591	0.11
Amortization of intangible assets from acquisitions	—	29,227	2.7 %	41,789	3.9 %	41,789	0.48
Transaction expenses related to business combinations	—	—	— %	2,808	0.3 %	2,808	0.03
Rabbi trust (income) / expense	—	—	— %	—	— %	(5)	—
Adjustment for income tax effect	—	—	— %	—	— %	(60,906)	(0.70)
Total non-GAAP	$ 1,067,727	$ 950,323	89.0 %	$ 404,525	37.9 %	$ 324,904	$ 3.73

[1] Diluted weighted average shares were 87,176.

Appendix

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

(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS – Diluted[1]
			Nine Months Ended				
			September 30, 2019				
Total GAAP	$ 1,029,664	$ 912,987	88.7 %	$ 329,324	32.0 %	$ 285,443	$ 3.34
Acquisition accounting for deferred revenue	6,249	6,249	— %	6,249	0.4 %	6,249	0.07
Stock-based compensation expense	—	6,024	0.6 %	84,784	8.2 %	84,784	0.98
Excess payroll taxes related to stock-based awards	—	476	— %	4,516	0.4 %	4,516	0.05
Amortization of intangible assets from acquisitions	—	14,064	1.4 %	25,406	2.5 %	25,406	0.30
Transaction expenses related to business combinations	—	—	— %	5,642	0.5 %	5,642	0.07
Rabbi trust (income) / expense	—	—	— %	—	— %	(268)	—
Adjustment related to the Tax Cuts and Jobs Act	—	—	— %	—	— %	(1,834)	(0.02)
Adjustment for income tax effect	—	—	— %	—	— %	(39,654)	(0.46)
Total non-GAAP	$ 1,035,913	$ 939,800	90.7 %	$ 455,921	44.0 %	$ 370,284	$ 4.33

[1] Diluted weighted average shares were 85,570.

Appendix

ANSYS, INC. AND SUBSIDIARIES

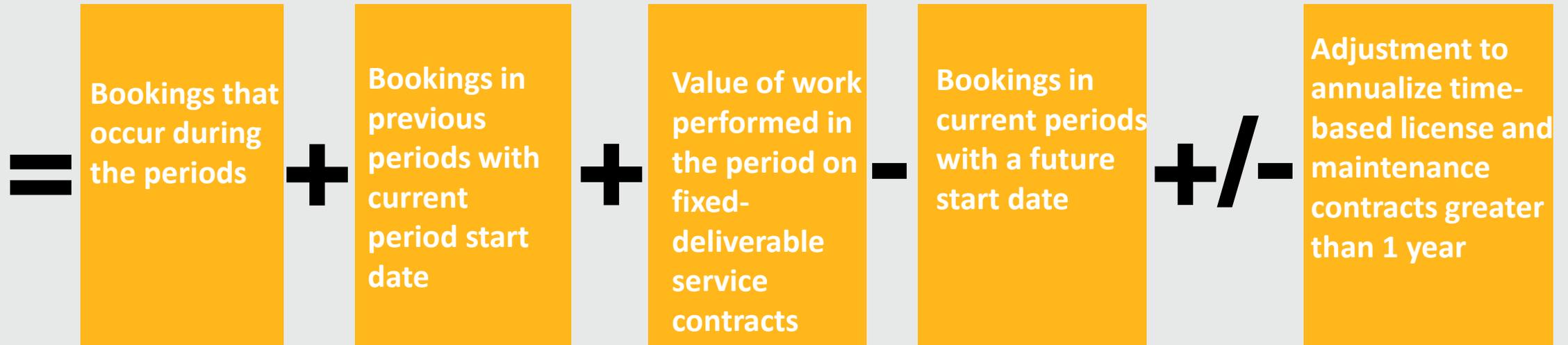**Reconciliation of Forward-Looking Guidance**

Quarter Ending December 31, 2020

	Earnings Per Share - Diluted
U.S. GAAP expectation	$1.93 - $2.29
Exclusions before tax:	
Acquisition adjustments to deferred revenue	$0.01
Acquisition-related amortization	$0.15 - $0.17
Stock-based compensation and related excess payroll tax	$0.39 - $0.45
Transaction expenses related to business combinations	$0.02
Adjustment for income tax effect	($0.19) - ($0.22)
Non-GAAP expectation	$2.36 - $2.67

ANSYS, INC. AND SUBSIDIARIES

Reconciliation of Forward-Looking Guidance

Year Ending December 31, 2020

	Earnings Per Share - Diluted
U.S. GAAP expectation	$4.43 - $4.79
Exclusions before tax:	
Acquisition adjustments to deferred revenue	$0.13
Acquisition-related amortization	$0.63 - $0.65
Stock-based compensation and related excess payroll tax	$1.69 - $1.75
Transaction expenses related to business combinations	$0.05
Adjustment for income tax effect	($0.89) - ($0.92)
Non-GAAP expectation	$6.09 - $6.40

Annualized Contract Value (ACV)

ANNUALIZED CONTRACT VALUE (ACV) METRIC

= | **Bookings that occur during the periods** | **+** | **Bookings in previous periods with current period start date** | **+** | **Value of work performed in the period on fixed-deliverable service contracts** | **-** | **Bookings in current periods 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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