

REFINITIV

DELTA REPORT

10-K

ANSS - ANSYS INC

10-K - DECEMBER 31, 2023 COMPARED TO 10-K - DECEMBER 31, 2022

The following comparison report has been automatically generated

TOTAL DELTAS	3559
CHANGES	414
DELETIONS	1117
ADDITIONS	2028

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended **December 31, 2022** **December 31, 2023**
OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from ____ to ____
Commission File Number: 0-20853

ANSYS, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

2600 ANSYS Drive, Canonsburg, PA
(Address of principal executive offices)

04-3219960

(I.R.S. Employer Identification No.)

15317

(Zip Code)

844-462-6797

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.01 par value per share	ANSS	Nasdaq Stock Market LLC (Nasdaq Global Select Market)

Securities registered pursuant to section 12(g) of the Act:

None

(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☒	Accelerated filer	☐
Non-accelerated filer	☐	Smaller reporting company	☐
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting stock held by non-affiliates of the registrant, based upon the closing sale price per share of the registrant's common stock on **June 30, 2022** **June 30, 2023**, as reported on the Nasdaq Global Select Market, was **\$16,309,000,000** **\$23,626,000,000**.

The number of shares of the registrant's common stock, par value \$0.01 per share, outstanding as of **February 15, 2023** **February 14, 2024** was **87,085,890** **87,017,807** shares.

Documents Incorporated By Reference:

Portions of the Proxy Statement for the registrant's 2023 2024 Annual Meeting of Stockholders are incorporated by reference into Part III.

ANSYS, Inc.
ANNUAL REPORT ON FORM 10-K FOR FISCAL YEAR 2022 2023
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Important Factors Regarding Future Results

Information provided by us in this Annual Report on Form 10-K may contain forward-looking statements concerning, among other things, such matters as projected financial performance, market and industry segment growth, product development and commercialization, acquisitions the proposed transaction with Synopsys, Inc., including the expected date of closing and the potential benefits thereof, or other aspects of future operations. Such statements, made pursuant to the safe harbor established by the securities laws, are

based on the assumptions and expectations of management at the time such statements are made. We caution investors that our performance (and, therefore, any forward-looking statement) is subject to risks and uncertainties. Various important factors including, but not limited to, those discussed in Item 1A. Risk Factors, may cause our future results to differ materially from those projected in any forward-looking statement. All information presented is as of **December 31, 2022** **December 31, 2023**, unless otherwise indicated.

Note About Forward-Looking Statements

The following discussion should be read in conjunction with the audited consolidated financial statements and notes thereto included elsewhere in this Annual Report on Form 10-K. Our discussion and analysis of our financial condition and results of operations in Part II, Item 7 of this Annual Report on Form 10-K are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to contract revenue, standalone selling prices of our products and services, allowance for doubtful accounts receivable, valuation of goodwill and other intangible assets, useful lives for depreciation and amortization, acquired deferred revenue, operating lease assets and liabilities, fair value of stock awards, deferred compensation, income taxes, uncertain tax positions, tax valuation reserves, and contingencies and litigation. We base our estimates on historical experience, market experience, estimated future cash flows and various other assumptions that management believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates.

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 (the Exchange Act). 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," "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**, **market**, **the proposed transaction with Synopsys, Inc.**, **including the expected date of closing and the potential benefits thereof, or other aspects of future operation**. 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 update forward-looking statements, whether as a result of new information, future events or otherwise.

The risks associated with the following, among others, could cause actual results to differ materially from those described in any forward-looking statements:

- **our ability to complete the proposed transaction with Synopsys on anticipated terms and timing, including obtaining stockholder and regulatory approvals, and other conditions related to the completion of the transaction;**
- **the realization of the anticipated benefits of the proposed transaction with Synopsys, including potential disruptions to our and Synopsys' businesses and commercial relationships with others resulting from the announcement or completion of the proposed transaction and uncertainty as to the long-term value of Synopsys' common stock;**
- **restrictions during the pendency of the proposed transaction with Synopsys that could impact our ability to pursue certain business opportunities or strategic transactions, including tuck-in M&A;**
- **adverse conditions in the macroeconomic environment, including **high** inflation, recessionary conditions and volatility in equity and foreign exchange markets; political, economic and regulatory uncertainties in the countries and regions in which we operate;**
- **impacts from tariffs, trade sanctions, export controls or other trade barriers, including export control restrictions and licensing requirements for exports to **China, China**;**
- **impacts resulting from the conflict between Israel and Hamas, including impacts from changes to diplomatic relations and trade policy between the United States and other countries resulting from the conflict; impacts from changes to diplomatic relations and trade policy between the United States and Russia or the United States and other countries that may support Russia or take similar actions due to the conflict between Russia and Ukraine;**
- **constrained credit and liquidity due to disruptions in the global economy and financial markets, which may limit or delay availability of credit under our existing or new credit facilities, or which may limit our ability to obtain credit or financing on acceptable terms or at all;**
- **our ability to timely recruit and retain key personnel in a highly competitive labor market, **for skilled personnel**, including potential financial impacts of wage **inflation**; **inflation** and potential impacts due to the proposed transaction with Synopsys;**
- **our ability to protect our proprietary technology; cybersecurity threats or other security breaches, including in relation to breaches occurring through our products and an increased level of our activity that is occurring from remote global off-site locations; and disclosure and misuse of employee or customer data whether as a result of a cybersecurity incident or otherwise;**

Table: **increased volatility in our revenue due to the timing, duration and value of **Contents** multi-year subscription lease contracts; and our reliance on high renewal rates for annual subscription lease and maintenance contracts;**

- declines in our customers' businesses resulting in adverse changes in 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; delays or declines in anticipated sales due to reduced or altered sales and marketing interactions with customers; and potential variations in our sales forecast compared to actual sales;
- increased volatility in our revenue due to the timing, duration and value of multi-year subscription lease contracts; and our reliance on high renewal rates for annual subscription lease and maintenance contracts;
- our ability to protect our proprietary technology; cybersecurity threats or other security breaches, including in relation to breaches occurring through our products and an increased level of our activity that is occurring from remote global off-site locations; and disclosure and misuse of employee or customer data whether as a result of a cybersecurity incident or otherwise;
- our ability and our channel partners' ability to comply with laws and regulations in relevant jurisdictions; and the outcome of contingencies, including legal proceedings, government or regulatory investigations and tax audit cases;
- uncertainty regarding income tax estimates in the jurisdictions in which we operate; and the effect of changes in tax laws and regulations in the jurisdictions in which we operate;
- the quality of our products, including the strength of features, functionality and integrated multiphysics capabilities; our ability to develop and market new products to address the industry's rapidly changing technology; failures or errors in our products and services; and increased pricing pressure as a result of the competitive environment in which we operate;
- 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; and the impact indebtedness incurred in connection with any acquisition could have on our operations;
- investments in global sales and marketing organizations and global business infrastructure; and dependence on our channel partners for the distribution of our products;
- current and potential future impacts of a global health crisis, natural disaster or catastrophe, including and the COVID-19 pandemic and actions taken to address the pandemic these events by our customers, suppliers, regulatory authorities and our business, on the global economy and consolidated financial statements, and other public health and safety risks; and government actions or mandates surrounding the COVID-19 pandemic; mandates;
- operational disruptions generally or specifically in connection with transitions to and from remote work environments; and the failure of our technological infrastructure or those of the service providers upon whom we rely including for infrastructure and cloud services;
- our intention to repatriate previously taxed earnings and to reinvest all other earnings of our non-U.S. subsidiaries;
- plans for future capital spending; the extent of corporate benefits from such spending including with respect to customer relationship management; and higher than anticipated costs for research and development or a slowdown in our research and development activities;
- our ability to execute on our strategies related to environmental, social, and governance matters, and meet evolving and varied expectations, including as a result of evolving regulatory and other standards, processes, and assumptions, the pace of scientific and technological developments, increased costs and the availability of requisite financing, and changes in carbon markets; and
- other risks and uncertainties described in our reports filed from time to time with the Securities and Exchange Commission (SEC).

Important Information and Where to Find It

This document relates to a proposed transaction between Synopsys and Ansys. Synopsys will file a registration statement on Form S-4 with the SEC, which will include a document that serves as a prospectus of Synopsys and a proxy statement of Ansys referred to as a proxy statement/prospectus. This proxy statement/prospectus will be sent to all Ansys shareholders. Synopsys and Ansys also will file other documents regarding the proposed transaction with the SEC. INVESTORS AND SECURITY HOLDERS ARE URGED TO READ THE REGISTRATION STATEMENT, PROXY STATEMENT/PROSPECTUS AND ALL OTHER RELEVANT DOCUMENTS FILED OR THAT WILL BE FILED WITH THE SEC IN CONNECTION WITH THE PROPOSED TRANSACTION, AS WELL AS ANY AMENDMENTS OR SUPPLEMENTS TO THESE DOCUMENTS, CAREFULLY AND IN THEIR ENTIRETY IF AND WHEN THEY BECOME AVAILABLE BECAUSE THEY CONTAIN OR WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED TRANSACTION.

[Table Investors and security holders will be able to obtain free copies of Contents](#) the registration statement, proxy statement/prospectus and all other relevant documents filed or that will be filed with the SEC by Synopsys or Ansys through the website maintained by the SEC at www.sec.gov.

The documents filed by Synopsys with the SEC also may be obtained free of charge at Synopsys' website at <https://investor.synopsys.com/overview/default.aspx> or upon written request to Synopsys at Synopsys, Inc., 675 Almanor Avenue, Sunnyvale, California 94085, Attention: Investor Relations Department. The documents filed by Ansys with the SEC also may be obtained free of charge at Ansys' website at <https://investors.ansys.com/> or upon written request to kelsey.debriyn@ansys.com.

Participants in Solicitation

Synopsys, Ansys and their respective directors and executive officers may be deemed to be participants in the solicitation of proxies from Ansys' shareholders in connection with the proposed transaction.

Information about Ansys' directors and executive officers and their ownership of Ansys' common stock is set forth in Ansys' proxy statement for its 2023 Annual Meeting of Shareholders on Schedule 14A filed with the SEC on March 28, 2023. To the extent that holdings of Ansys' securities have changed since the amounts printed in Ansys' proxy statement, such changes have been or will be reflected on Statements of Change in Ownership on Form 4 filed with the SEC. Information about Synopsys' directors and executive officers is set forth in Synopsys' proxy statement for its 2023 Annual Meeting of Shareholders on Schedule 14A filed with the SEC on February 17, 2023 and Synopsys' subsequent filings with the SEC. Additional information regarding the direct and indirect interests of those persons and other persons who may be deemed participants in the proposed transaction may be obtained by reading the proxy statement/prospectus regarding the proposed transaction when it becomes available. You may obtain free copies of these documents as described in the preceding paragraph.

No Offer or Solicitation

This document is for informational purposes only and is not intended to and shall not constitute an offer to buy or sell or the solicitation of an offer to buy or sell any securities, or a solicitation of any vote or approval, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made, except by means of a prospectus meeting the requirements of Section 10 of the U.S. Securities Act of 1933, as amended.

PART I

ITEM 1. BUSINESS

ANSYS, Inc. (Ansys, we, us, our), a corporation formed in 1994, develops and globally markets engineering simulation software and services widely used by engineers, designers, researchers and students across a broad spectrum of industries and academia, including high-tech, aerospace and defense, automotive, energy, industrial equipment, materials and chemicals, consumer products, healthcare and construction. Headquartered south of Pittsburgh, Pennsylvania, we employed **5,600** **6,200** and **5,100** **5,600** people as of **December 31, 2022** **December 31, 2023** and **2021, 2022**, respectively. We focus on the development of open and flexible solutions that enable users to analyze designs on-premises and/or via the cloud, providing a common platform for fast, efficient and cost-conscious product development, from design concept to final-stage testing, validation and deployment. We distribute our suite of simulation technologies through direct sales offices in strategic, global locations and a global network of independent resellers and distributors (collectively, channel partners). It is our intention to continue to maintain this hybrid sales and distribution model. We operate and report as one segment.

When visionary companies need to know how their world-changing ideas will perform, they close the gap between design and reality using Ansys simulation. For more than 50 years, Ansys software has enabled innovators across industries to push the boundaries of product design by using the predictive power of simulation. From sustainable transportation and advanced satellite systems to life-saving medical devices, Ansys powers innovation that drives human advancement.

Our strategy of Pervasive Insights seeks to deepen the use of simulation in our core market, to inject simulation throughout the product lifecycle and extend the accessibility to a broader set of users and use cases. Our business has three vectors of growth:

- More products. Our broad and deep multiphysics portfolio enables us to grow with customers as they use simulation to solve more complex problems across a broad set of industries.
- More users. Investments in simulation education and user experience simplification has made simulation more accessible to a broader user base.
- More computations. Larger and more complex simulations drive more computation, requiring customers to use more Ansys licenses to complete their simulations.

Through decades of investments in the academic community and enhanced user experiences, our solutions have become accessible and relevant beyond our core "engineering" end user, to reach more users upstream and downstream from our core, which is the product validation process. Our multiphysics solutions enable our customers to address increasingly complex research and development (R&D) challenges from the component through the system and mission level of analysis. Our products seamlessly enable access to high performance compute capacity to run simulations, on-premises or in the cloud, which means our customers' R&D teams are unencumbered by compute capacity limitations that can hinder R&D cycle times. **Our investments in artificial intelligence capabilities across our simulation portfolio and technical support services enhance the customer experience, democratize simulation and further next-generation innovation.**

The engineering software simulation market is strong and growing. The market growth is driven by customers' need for rapid, quality innovation in a cost-efficient manner, enabling faster time to market for new products and lower warranty costs. Increasing product complexity is driving sustained demand for simulations. Key industry trends fueling customers' increasing needs for simulation include:

- Electrification;
- Autonomy;
- Connectivity;

- The industrial internet of things (IIoT); and
- Sustainability, including minimizing waste and physical prototyping, and improving circularity and development time.

We have been investing and intend to continue to invest in our portfolio to broaden the range of physics and enable customers to analyze the interactions among physics at the component, system and mission level. Our strategy of **Pervasive Insights** is aligned with the near-term market growth opportunities and is laying the foundation for a future where simulation can be further democratized to broader classes of end-users and end-use cases.

To augment our organic development roadmaps, In addition, we intend to have and will continue our strategic and disciplined acquisition strategy to grow our business. Our strategy is to partner with industry leaders to extend simulation into other ecosystems and customer R&D workflows. Our business is built on a culture of high ethical standards and commitment to diversity, equity, inclusion and belonging.

[Table](#)

[Synopsisys Merger Agreement](#)

On January 15, 2024, we entered into an Agreement and Plan of Contents Merger (the "Merger Agreement") with Synopsisys, Inc., a Delaware corporation ("Synopsisys"), and ALTA Acquisition Corp., a Delaware corporation and wholly owned subsidiary of Synopsisys ("Merger Sub"). The Merger Agreement provides for the merger of Merger Sub with and into Ansys, with Ansys surviving the merger as a wholly owned subsidiary of Synopsisys (the "Merger"). Our Board of Directors has unanimously approved the Merger Agreement and, subject to certain exceptions set forth in the Merger Agreement, resolved to recommend that our stockholders adopt the Merger Agreement. If the Merger is consummated, our common stock will be delisted from the Nasdaq Global Select Market and deregistered under the Exchange Act.

Under the Merger Agreement, at the effective time of the Merger, each issued and outstanding share of our common stock (subject to certain exceptions set forth in the Merger Agreement) will be cancelled and converted into the right to receive (i) 0.3450 (the "Exchange Ratio") of a share of common stock, par value \$0.01 per share, of Synopsisys (the "Stock Consideration") and (ii) \$197.00 in cash, without interest (the "Per Share Cash Amount"), subject to applicable withholding taxes. With regard to the Stock Consideration, if the aggregate number of shares of Synopsisys common stock to be issued in connection with the Merger would exceed 19.9999% of the shares of Synopsisys common stock issued and outstanding immediately prior to the effective time of the Merger (the "Maximum Share Number"), (a) the Exchange Ratio will be reduced to the minimum extent necessary such that the aggregate number of shares of Synopsisys common stock to be issued in connection with the Merger does not exceed the Maximum Share Number and (b) the Per Share Cash Amount will be correspondingly increased to offset such adjustment.

The Merger Agreement contains customary representations, warranties and covenants made by each of Ansys, Synopsisys, and Merger Sub, including, among others, covenants regarding the conduct of our and Synopsisys' businesses during the pendency of the transactions contemplated by the Merger Agreement, the making of certain public disclosures and other matters as described in the Merger Agreement. We and Synopsisys have agreed to use reasonable best efforts to take all actions necessary to consummate the Merger, including cooperating to obtain the regulatory approvals necessary to complete the Merger. We have agreed not to, among other things, (a) solicit proposals relating to alternative transactions or (b) enter into discussions or negotiations or provide non-public information in connection with any proposal for an alternative transaction from a third party, subject to certain exceptions to permit our Board of Directors to comply with its fiduciary obligations. We have further agreed to cease and cause to be terminated any existing discussions or negotiations, if any, with regard to alternative transactions.

The Merger Agreement may be terminated under certain circumstances, including that either party may have the right to terminate if the Merger is not completed by January 15, 2025, which may be extended to January 15, 2026 as provided in the Merger Agreement. If the Merger Agreement is terminated, (A) Synopsisys, under specified circumstances, including termination following an injunction arising in connection with certain antitrust or foreign investment laws, will be required to pay us a termination fee of \$1,500.0 million; and (B) we, under specified circumstances, including our termination of the Merger Agreement to accept and enter into a definitive agreement with respect to a Superior Proposal (as defined in the Merger Agreement) or Synopsisys' termination upon the change by our Board of Directors of its recommendation in favor of the Merger, will be required to pay Synopsisys a termination fee of \$950.0 million.

The completion of the Merger is subject to customary closing conditions, including, among others, approval of the Merger under certain applicable antitrust and foreign investment regimes and the adoption of the Merger Agreement by our stockholders. We anticipate the transaction to close in the first half of 2025.

The foregoing summary of the Merger Agreement and the transactions contemplated thereby does not purport to be complete and is subject to, and qualified in its entirety by, the Merger Agreement, which was filed as Exhibit 2.1 to our Current Report on Form 8-K filed on January 16, 2024, and is incorporated herein by reference.

Ansys and any and all ANSYS, Inc. brand, product, service and feature names, logos and slogans are registered trademarks or trademarks of ANSYS, Inc. or its subsidiaries in the United States or other countries. All other brand, product, service and feature names or trademarks are the property of their respective owners.

PORTFOLIO

Our portfolio consists of the following capabilities:

Structures

Our structural analysis product suite offers simulation tools for product design and optimization designed to increase productivity, reduce physical prototyping and help deliver better and more innovative products in less time. These tools tackle real-world analysis problems by making product development less costly and more reliable. In addition, these tools have capabilities that cover

Our flagship product is the Ansys Mechanical™ product, a broad range finite element analysis software used for simulating and analyzing the behavior of mechanical and structural systems. It is commonly used for structural analysis, types, elements, contacts, allowing engineers to simulate and study the response of materials equation solvers and coupled physics capabilities, all targeted toward understanding structures to various mechanical loads, including static, dynamic, vibrational and solving complex design problems. We have thermal loads. A key attribute is the ability to perform multiphysics simulations, where multiple physical phenomena, such as structural

mechanics, heat transfer, fluid dynamics and electromagnetics, interact with each other. The software can handle nonlinear problems, including large deformations, material nonlinearity and contact interactions.

Ansys has a long history of technological innovations, including pioneering innovations like such as nonlinear adaptivity (NLAD) and Separating Morphing separating morphing and Adaptive Remeshing Technology (SMART) adaptive remeshing technology to solve the toughest structural simulation challenges. We also provide comprehensive topology optimization tools that engineers use to design structural components to meet loading requirements with reduced material and component weight. Additionally, our comprehensive and scalable additive manufacturing solutions allow customers to reduce risk and provide high quality, certifiable parts.

Our LS-DYNA® solver is the a leader in explicit dynamics multiphysics simulation and is used worldwide by leaders in automotive crash, drop tests, airbag deployment and impact analysis. Pioneering innovations Innovations like multi-scale co-simulation capability for meso-scale effects allow electronics reliability simulations to predict component failure at a tiny scale when a macro scale printed circuit board drop test is analyzed. Additionally, our comprehensive and scalable additive manufacturing solutions allow customers to reduce risk and provide high quality, certifiable parts. The additive manufacturing process uses high-power laser sintering of metal powders to print 3D parts layer-by-layer. The combination of heat, molten metal and associated processing has many multiphysics attributes that can result in residual stresses and deformations. Our additive solutions predict these effects and can work in conjunction with the 3D printer to confirm the geometry being printed is produced reliably.

Electronics

Our electronics product suite provides electromagnetic field simulation software for designing high-performance electronic and electromechanical products. The software streamlines the design process and predicts performance of mobile communication and internet-access devices, broadband networking components and systems, integrated circuits (ICs) and printed circuit boards (PCBs), as well . It is also used in low-frequency applications such as electromechanical systems, including automotive components, such as industrial electric motors and power electronics equipment, all prior to building a prototype. equipment.

The flagship Ansys High Frequency Structure Simulator Simulator™ (HFSS) product is used in all aspects of radio frequency (RF) and microwave design for 5G/6G communications, avionics, aerospace and defense (A&D) and biomedical applications. Latest technologies, It is used for advanced antenna design and integration, radar systems and electromagnetic interference analysis. Innovations have enabled the electronics industry to solve some of the most challenging design problems. Advanced automatic adaptive meshing, tangential vector finite elements and commercial implementation of domain decomposition are a few of the Ansys inventions that power finite element analysis for electromagnetics. Technologies such as Mesh Fusion allows allow virtually unlimited size and scope of system-level electromagnetic simulation by leveraging high-performance computing (HPC) and the cloud.

Fluids

Our fluids product suite enables modeling of fluid flow and other related physical phenomena. Fluid flow analysis capabilities provide tools needed to design and optimize new fluids equipment and to troubleshoot already existing installations. The suite contains general-purpose flagship Ansys Fluent® computational fluid dynamics (CFD) software package is used for simulating and specialized products analyzing the behavior of fluids (liquids and gases) and their interactions with solid structures. It is commonly employed in various industries to address specific industry applications, perform simulations that help engineers and researchers gain insights into fluid flow, heat transfer and chemical reactions and related phenomena. Innovations include its mixed-element unstructured solver and interactive architecture with pervasive HPC scaling. The latest release Recent additions to our fluids product suite substantially reduces reduce simulation solve time and total power consumption using the native multi-graphics processing unit (GPU) solver available in Fluent, with results showing six high-end that four typical GPUs provide the same have greater performance as more than 2,000 1,000 central processing units (CPUs). unit (CPU) cores. In Ansys 2023 R2, we extended multi-GPU support to sliding mesh, compressible flows and eddy dissipation model combustion simulations for applications such as internal combustion engines, centrifugal pumps and fans, turbochargers and compressors. Also, Ansys 2023 R2 expands to clusters that use ARM-based servers, which have the potential to reduce hardware cost and overall energy consumption.

Semiconductors

Advancements in semiconductor design and manufacturing enable smaller electronic architectures. Shrinking geometries, especially in the emerging 3D IC, FinFET 3D-IC, finFET and stacked-die architectures, reveal design challenges related to power and reliability. Our power analysis and optimization software suite manage manages the power budget, power delivery integrity and power-induced noise in an electronic design, from initial prototyping to system sign-off. These solutions deliver accuracy with correlation to silicon measurement; measurement and the capacity to handle an entire electronic system, including IC, package and PCB, efficiently PCB.

Ansys RedHawk-SC™ is the flagship electronic design automation (EDA) software tool, used for ease-of-debugging the analysis and fast turnaround time; sign-off of ICs, focusing on power integrity and comprehensiveness reliability issues. It is used by semiconductor designers and engineers to facilitate cross-domain communications simulate and electronic ecosystem enablement. optimize power delivery networks in ICs and heterogeneous 3D-ICs ensuring that they operate reliably and efficiently. The Ansys RedHawk-SC product is an industry trusted gold standard voltage drop and electromigration multiphysics sign-off solution for digital designs. Its powerful analytics quickly identify any weaknesses and allow what-if explorations to optimize power and performance. Redhawk-SC's cloud-based architecture gives it the speed and capacity to handle full-chip analysis. Sign-off accuracy is certified by all major foundries for all finFET nodes, down to 3 nanometer (nm).

Innovations include 'dynamic' power noise simulation technology, behavior simulation of power distribution networks under realistic, time-varying activity loading, and with the distributed, big-data data management capacity to handle full-chip analysis with many billions of electrical nodes. The Redhawk-SC product and other Ansys tools provide the industry's first foundry-validated hierarchical thermal analysis flow for multi-die 3D-IC designs and 5nm/3nm chips.

Optics, Virtual Reality (VR) and Photonics

Modeling light propagation and its impact is crucial for measuring product performance and human comfort, perception and safety. Ansys Optics™ software uniquely simulates a system's optical performance, evaluates the final illumination effect, and predicts and validates the impact of lighting and material variations on appearance and perceived quality all in real conditions. Using optical sensor and closed-loop, real-time simulation, our optics simulation capabilities now span the simulation of a wide range of sensors, including lidar, cameras and radar; the multiphysics simulation of physical and electronic components; the analysis of systems functional safety; as well as the automated development of safety-certified embedded software. This functionality can be integrated into a closed-loop simulation environment that interacts with weather and traffic simulators for automotive applications, enabling thousands of driving scenarios to be executed virtually.

Our photonic design and simulation tools enable customers to predict light's behavior within complex photonic structures and systems. Silicon photonics is an expanding market and our solutions provide a comprehensive set of tools for the design and analysis of integrated photonic components and systems, similar to the traditional EDA environment. The Ansys Lumerical™ product is a complete photonics simulation software solution that enables the design of photonics components, circuits, and systems. Device and system level tools work together to allow designers to model interacting optical, electrical and thermal effects. Flexible interoperability between products enables a variety of workflows that combine device multiphysics and photonic circuit simulation with third-party design automation and productivity tools. Python-based automation and flows for building and using compact models support the industry's leading foundries.

Digital Mission Engineering

Our mission-simulation, modeling, testing and analysis software for aerospace, defense and intelligence applications empowers our users to solve challenges by simulating from the chip level all the way to a customer's entire mission. Digital mission engineering products enable engineers, operators and analysts to connect modeling and simulation efforts across all phases of

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the engineering product life cycle. Users can model operational environments and the interrelationships of assets with accurate, dynamic, physics-based simulations to validate system designs with respect to the mission's outcome. Modeling of assets may be performed across multiple domains, including land, sea, air and space.

Our technology enables our customers to consider the entire mission engineering of a product or system. Engineered products and systems can involve thousands of components, subsystems, systems and systems of systems that must work together intricately. Our software simulates these puzzle pieces and their functional relationships to each other and, increasingly, to their environments.

Optics and Virtual Reality (VR)

Modeling light propagation and its impact is crucial for measuring product performance and human comfort, perception, and safety. Ansys Optics uniquely simulates a system's optical performance, evaluates the final illumination effect, and predicts and validates the impact of lighting and material variations on appearance and perceived quality all in real conditions. Using optical sensor and closed-loop, real-time simulation, our optics simulation capabilities now span the simulation of a wide range of sensors, including lidar, cameras and radar; the multiphysics simulation of physical and electronic components; the analysis of systems functional safety; as well as the automated development of safety-certified embedded software. This functionality can be integrated into a closed-loop simulation environment that interacts with weather and traffic simulators for automotive applications, enabling thousands of driving scenarios to be executed virtually.

3D Design

Our Discovery™ product family allows engineers to benefit from the insight of simulation in their product design. The Discovery products range from early design exploration tools powered by interactive real-time simulation and intuitive geometry editing, to detailed product validation solutions utilizing proven flagship solver technology with easy-to-use guided workflows. These tools allow for design engineers to utilize simulation across the entire product design process and to work seamlessly with simulation experts using our flagship products for even more advanced analysis.

Recent enhancements allow Our Discovery product's ease of use and speed enable more engineering use cases such as idealized sliding contact engineers to benefit from simulation. Increasingly, "shifting-left" or moving simulation up front in the design process has become a critical business initiative for live physics and porous media for high-fidelity physics, enabling fast, easy-to-use simulation of jointed assemblies and filtered flows. We also provide greater Ansys Workbench™ connectivity, empowering analysts to do geometry preparation for simulation in Discovery, including materials selections and upfront simulation, with seamless transfer to Ansys Mechanical and Ansys Fluent.

Materials

With our materials technology, our customers, benefit from access enabling more engineers, more analysts and more designers to get early insights into their product design. The Discovery application has become more integrated with the world's premier system for managing corporate material intelligence broader Ansys portfolio. This has manifested itself into many analysts starting in the Discovery product and the market-leading solution for materials sources, selection and management. Ansys Granta MI is a leading system for materials information management then moving to more detailed analyses in engineering enterprises. Ansys Granta Selector is the standard tool for materials selection and graphical analysis of materials properties. A comprehensive materials data library plus unique software tools enable engineers to use materials to innovate and evolve products, quickly identify solutions to material issues, confirm and validate choice of materials and reduce material and development costs. CES EduPack is a unique set of teaching resources that supports materials education across engineering, design, science and sustainable development. Granta Materials Data for Simulation provides easy access to materials property data from within Ansys Mechanical and the Ansys Electronics Desktop environment.

Embedded Software our other applications.

Our SCADE We continue to invest in and advance the Discovery product and Discover Live™ physics technology, improving accuracy, expanding capabilities and accelerating productivity. Recent advances include the addition of electromagnetics simulation for upfront antenna design for IIoT and 5G, breakthroughs in solver numerics to support unstructured meshes that deliver both speed and accuracy across all CFD applications, and a Microsoft 365 integration for enabling data management and collaboration among designers, analysts and stakeholders using a connected digital thread. Additionally, the Discovery application has become more tightly integrated with the broader Ansys portfolio through new Ansys optiSlang™ and ModelCenter® product suite is a comprehensive solution for embedded software simulation, code production and automated certification. It has been developed specifically for use in critical systems with high dependability requirements, including aerospace, rail transportation, nuclear, industrial and automotive applications. SCADE software supports the entire development workflow, from requirements analysis and design, through verification, implementation and deployment. SCADE solutions easily integrate with each other and the rest of our product suite, allowing for development optimization and increased communication among team members. integrations.

Platform

Our platform is the framework upon which our suite of advanced multiphysics engineering simulation technologies is built.

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Our platform It allows engineers and designers to incorporate the compounding effects of multiple physics into a virtual prototype of their design and simulate its operation under real-world conditions. As product architectures become smaller, lighter and more complex, companies must be able to accurately predict how products will behave in real-world environments where multiple types of physics and various domain disciplines interact in a coupled way. Our software enables engineers to simulate the interactions between structures, heat transfer, fluids, electronics, optical elements and embedded software all within a single, unified engineering simulation environment.

Today's engineered products are increasingly complex, demanding new solutions for optimal design. Products have integrated electronics and semiconductors, embedded software, wired and wireless connectivity and advanced sensors and displays. Product success requires our customers to consider the full system operation in a broad context. We have extended our platform to support scalable solutions that leverage new algorithms, additional physics, system solutions, embedded intelligence, HPC and integrated cloud. Our HPC product suite and cloud solutions enable enhanced insight into product performance and improve the productivity of the design process.

The following tools are part of our platform and add capability to the core of our offered products:

The Ansys HPC™ software suite leverages multicore computers to perform more simulations in less time. These simulations can be bigger, more complex and more accurate using HPC. Various Ansys HPC licensing options allow organizations to scale to whatever computational level of simulation is preferred, from single-user or small user group options for entry-level parallel processing up to virtually unlimited parallel capacity. Apart from parallel computing, Ansys also offers solutions for parametric computing, which enables users to explore the design parameters more fully (size, weight, shape, materials, mechanical properties, etc.) for products early in the development process.

Our cloud portfolio comprises **a of two marketplace offering offerings** (Ansys Gateway powered by **AWS**) **AWS** and Ansys Access on Microsoft Azure) and a managed cloud offering (Ansys Cloud **Direct** **Direct™**), providing customers scalable location-independent access to simulation. **Additionally, PyAnsys (our open-source Python API software package)** We continue to enhance our solvers and collaborate with HPC leaders such as NVIDIA and Advanced Micro Devices (AMD) to maximize scalability and speed. Ansys 2023 R2 included tuning of our Fluent and Mechanical GPU solvers for NVIDIA's latest architecture and for AMD's GPUs. Refinements include an electromagnetically coupled solution that provides a **broad development ecosystem**) provides an extensible platform-centric approach 7.5X speedup for IC applications in HFSS. We also added new features in Ansys HFSS that take advantage of high-performance computing to simulate complex antennas that advance 5G and 6G radio systems. Ansys Maxwell® has a new capability that leverages HPC to enable users to determine the **development** cause of undesired noise and **deployment of new** verticalized, or use-case-specific, applications that leverage simulation. vibrations in PCBs.

Our Ansys Minerva Minerva™ platform is a knowledge management application that secures critical simulation data, and provides simulation process and decision support to simulation teams across geographies and functional silos. Available for both on-premises and cloud deployment, **the Minerva platform** delivers **immediate** benefits by connecting simulation and optimization to customers' existing ecosystem of tools and processes. **The Minerva platform** provides integration and automation of chained data flows and design space exploration for optimal performance parameters. With **the Ansys Minerva platform**, customers can connect simulation for life cycle traceability and to enable collaboration and decision support.

PyAnsys™ is a collection of Python-based, open-source projects tailored specifically for engineers seeking to extend the capabilities of Ansys products. Developed as a collection of Python client libraries, PyAnsys offers engineers a comprehensive set of tools and utilities that seamlessly integrate with Ansys software, empowering them to enhance their simulations and analyses. PyAnsys provides an extensible platform-centric approach to the development and deployment of new verticalized, or use-case-specific, applications and workflows that leverage simulation.

The Ansys optiSlang product is **an evolving**, a leading-edge answer to the challenges posed by **CAE-based Robust Design Optimization** computer-aided engineering (CAD)-based robust design optimization (RDO). Its state-of-the-art algorithms efficiently and automatically search for the most robust design configuration, eliminating the slow, manual process that used to define RDO.

The Ansys ModelCenter platform is a Model Based Systems Engineering (MBSE) software platform for managing and automating simulation processes in engineering. It enables the automation of any simulation tool and enables the creation and automation of simulation workflows. A unique capability of **the ModelCenter platform** is rigorous MBSE enablement by connecting with system architecture modeling tools to verify system performance throughout the product design lifecycle. The software provides a centralized environment for managing simulation inputs, outputs and results, as well as for running trade studies and optimizing system designs in the conceptual design stage. It supports integration with various **of our Ansys** simulation tools, as well as with third-party software tools.

Photonics Embedded Software

Our **photonic SCADE®** product suite is a comprehensive solution for embedded software simulation, code production and automated certification. It has been developed specifically for use in critical systems with high dependability requirements, including aerospace, rail transportation, nuclear, industrial and automotive applications. SCADE software supports the entire development workflow, from requirements analysis and design, through verification, implementation and **simulation** deployment. SCADE solutions easily integrate with each other and the rest of our product suite, allowing for development optimization and increased communication among team members.

Materials

With our materials technology, our customers benefit from access to the world's premier system for managing corporate material intelligence and the market-leading solution for materials sources, selection and management. The Ansys Granta MI™ system is a leading system for materials information management in engineering enterprises. Ansys Granta Selector™ technology is the standard tool for materials selection and graphical analysis of materials properties. A comprehensive materials data library plus unique software tools enable **customers** engineers to **predict light's behavior within complex photonic structures** use materials to innovate and **systems**. **Silicon photonics** evolve products, quickly identify solutions to material issues, confirm and validate choice of materials and reduce material and development costs. The CES EduPack™ product is **an expanding market** and our solutions provide a comprehensive unique set of **tools** teaching resources that supports materials education across engineering, design, science and sustainable development. Granta Materials Data for Simulation provides easy access to materials property data from within Ansys Mechanical and the design and analysis of integrated photonic components and systems, like the traditional electronic design automation (EDA) Ansys Electronics Desktop™ environment. **Ansys Lumerical** is a complete photonics simulation software solution that enables the design of photonics components, circuits, and systems. Device and system level tools work together to allow designers to model interacting optical, electrical and thermal effects. Flexible interoperability between products enables a variety of workflows that combine

device multiphysics and photonic circuit simulation with third-party design automation and productivity tools. Python-based automation and flows for building and using compact models support the industry's leading foundries.

Safety Analysis

Our safety and cybersecurity threat analysis software facilitates model-based safety analysis, safety concept creation, safety management and cybersecurity assessment for safety-critical electrical, electronic and software-controlled systems. Using this software, engineers can deliver safer and more secure products, reduce time to market, increase profit margins and comply with industry standards. The Ansys Medini Analyze™ desktop product supports efficient application of quality, safety, reliability and cybersecurity analysis engineering methods at system, item, software, hardware and printed circuit board levels. It allows engineers to deliver safe and secure products. The Cloud-based product, Ansys Digital Safety Manager™, provides safety analysis accessible through the web so that teams may collaborate on the management of safety in product development, deployment and operation.

Autonomous Vehicle Simulation

Our autonomous vehicle simulation solutions are designed specifically to support development, testing and validation of safe automated driving and advanced driver-assistance systems (ADAS) technologies. This autonomous vehicle simulation solution saves time and costs versus traditional development and testing methods by allowing testing of drive designs on a virtual

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vehicle in a real-world environment. Ansys autonomous vehicle simulation solutions offer a set of dedicated features for sensors and headlamps for developing ADAS and autonomous systems. Designers can utilize component-level model-in-the-loop testing and can dynamically test physics-based sensor and lighting systems. Our autonomous solutions connect to popular driving simulators to recreate real-world driving conditions to test systems under variable traffic, terrain, weather and lighting conditions. The Ansys AVxcelerate™ product can generate reliable, synthetic training data enriched with ground truth information for all sensor types; this data is essential for artificial intelligence/machine learning (AI/ML) based perception algorithm training and validation.

Digital Twin

Our Twin Builder™ product allows customers to implement complete virtual prototypes of real-world systems. These can be deployed to manage the entire lifecycle of products and assets. Our digital twin simulation paradigm allows customers to increase efficiencies over time, scheduling maintenance around predictive methodologies that become more accurate with real-world testing and response. Access to this information allows engineers to unlock additional value out of existing assets, preventing unscheduled downtime and lowering operating costs, while working at optimal efficiency.

Academic

We bundle our commercial software by physics area and work with universities to utilize our software in teaching and research. We currently have more than 3,300 university customers in 95 countries. Our across 86 countries using Ansys. Additionally, our digital engagement strategy has evolved to include an "Access, Learn, Engage" model that is supported by our free student downloads, free Ansys Innovation Courses and Learning Forum available through Ansys Innovation Space that make it easy for learners to access our products, learn how to use them and ask questions to their peers and our experts. We also work to develop partnerships in areas like student team sponsorship, strategic curriculum and research opportunities and STEM. We recently released a free Electronics Desktop Product for Students that provides free online access to our industry-leading simulation solutions, including Ansys HFSS, Ansys Maxwell, Ansys Q3D Extractor and Ansys Icepak. This adds to our existing student products including Ansys Student, consisting of structures and fluids, Ansys LS-DYNA Student, Ansys Discovery Student and Ansys SCADE Student.

PRODUCT DEVELOPMENT

We make significant investments in research and development and emphasize frequent, integrated product releases. These investments are made across five technology pillars: numerics, HPC, AI/ML, Cloud and experience and digital engineering. Our investments in these pillars are applicable across our portfolio and demonstrate how we are building upon our product development strategy centers on ongoing development and innovation of new technologies technology leadership to increase productivity and further differentiate our solutions. Even more exciting is the interplay amongst those pillars, which is benefiting customers by helping them to provide engineering simulation solutions that customers can integrate into enterprise-wide product lifecycle management (PLM) systems. Our product development efforts focus on extensions of the full product line with new functional modules, further integration with CAD, electronic CAD and PLM solve more complex challenges – while driving our growth through more users, more products and the development of new products. Our products also run on the most widely-used engineering computing platforms and operating systems, including Windows, Linux and most UNIX workstations. Our customers increasingly leverage GPU computing hardware and Cloud computing to solve large and complex problems. Our machine learning applications enable customers to discover details within their designs and to unlock potential new designs.

Our total research and development expenses were \$433.7 million, \$494.9 million, \$433.7 million and \$404.9 million in 2023, 2022 and \$355.4 million in 2021, and 2020, respectively, or 21.0%, 21.8%, 21.2% and 21.1% of total revenue, respectively. As of December 31, 2023 and 2021, 2022, our product development staff consisted of 2,100, 2,400 and 1,900 employees, respectively, many of whom hold advanced degrees and have industry experience in engineering, mathematics, computer science or related disciplines. We have traditionally invested significant resources in research and development activities and intend to continue to make investments in expanding the ease of use and capabilities of our broad portfolio of simulation software products.

We recently completed the following major product development activities and releases:

- In January early February 2024, we released Ansys R1 2024, which introduces an elevated user interface that facilitates collaboration, amplifies digital engineering productivity and removes barriers caused by engineering complexity. We also recently launched Ansys SimAI™ and Ansys AI+™ technologies. Ansys SimAI is a cloud-enabled, physics-neutral platform that empowers users across industries to accelerate innovation and reduce time to market. With Ansys SimAI, users are

able to reliably predict performance of complex simulation scenarios rapidly. The tool allows users to first train an AI model using simulation results and then make predictively accurate analogous designs. With Ansys AI+, Ansys incorporates and extends AI features within its industry-leading desktop products to enhance core functionalities. The new AI+ offerings empower customers with more choice for how they access Ansys AI capabilities across our desktop products.

- In July 2023 we released Ansys 2023 R1, which enables organizations to address past complexity and integration challenges to accelerate the design of the next generation of world-changing products by taking advantage of performance improvements, cross-discipline workflow integrations and innovative capabilities. Highlights of the release include enhanced simulation performance, intelligent workflow automation and collaboration and further innovation across the product development process.

Ansys 2023 R1 empowers users to run large, high-fidelity situations more efficiently by overcoming hardware capacity limitations with HPC and enhanced solver algorithms that take advantage of GPUs. A new capability within Ansys Mechanical enables users to leverage AI/ML to determine the computational spend and time required to run a simulation. Similarly, the full release of the multi-GPU solver in Ansys Fluent computational fluid dynamics software unleashes the power of multiple GPUs for a broad spectrum of applications. Ansys 2023 R1 also builds on the capabilities of materials, simulation process and data management, optimization and model-based systems engineering to improve engineering efficiency by supporting intelligent workflow automation and collaboration.

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- In July 2022, we released Ansys 2022 R2, which brings enhanced computing power to optimize complex products, assemblies and systems across industries. It enables customers to get better products to market faster with systems engineering workflows and disciplines to help stakeholders understand subsystem interactions. Ansys 2023 R2 enables distributed engineering teams with new technologies and synergies. New AI improved performance to drive forward industry innovation. It combines an exceptional range of enhanced numerics capabilities, performance improvements and simulation technologies deliver insight-driven innovation across every dimension cross-disciplinary engineering solutions to equip organizations with advanced physics solvers, scalable GPU-based computing and seamless workflows. Ansys 2023 R2 enables users to run large jobs and help overcome hardware capacity limitations with HPC, both on-premises and in the cloud. Enhanced solver algorithms capitalized on GPUs to speed simulation. In Ansys 2023 R2, the Fluids product line enables additional industrial simulations to run natively on GPUs, substantially reducing solve time and total power consumption. For example, Ansys 2023 R2 extends multi-GPU support to sliding mesh, compressible flows and eddy dissipation model combustion simulations. That means analysis of product design internal combustion engines, centrifugal pumps and development, fans, turbochargers and compressors, stirred tanks and reactors and hydraulic machinery can now be supercharged with the Ansys 2022 R2 continues building open workflows that enhance collaboration and increase productivity across engineering disciplines. Additional innovations in computation allow GPU solver advances to deliver power savings. Fluent multi-GPU solver.

Acquired Technologies

During the year ended December 31, 2022 December 31, 2023, we completed several strategic acquisitions to expand our solution offerings and enhance our customers' experience. The effects of the acquisitions were not material to our consolidated results of operations individually or in the aggregate. For further information on our business combinations, see Note 4 to the consolidated financial statements included in Part IV, Item 15 of this Annual Report on Form 10-K.

PRODUCT QUALITY

Our employees generally perform product development tasks according to predefined quality plans, procedures and work instructions. Certain technical support tasks are also subject to a quality process. These plans define, for each project, the methods to be used, the responsibilities of project participants and the quality objectives to be met. The majority of our software products are developed under a quality system that is certified to the ISO 9001:2015 standard. We establish quality plans for our products and services, and subject product designs to multiple levels of testing and verification in accordance with processes established under our quality system.

SALES AND MARKETING

We distribute and support our products through our own direct sales offices, as well as a global network of independent channel partners. Our products are utilized by organizations ranging in size from small consulting firms to the world's largest high-tech and industrial companies.

Our direct sales organization develops an enterprise-wide, focused sales approach and implements a worldwide go-to-market account strategy. The sales management organization also functions as a focal point for requests from the channel partners and provides additional support in strategic locations through the presence of direct sales offices.

During 2022, 2023, we continued to invest in our existing domestic and international strategic sales offices. In total, our direct sales and marketing organization comprised 2,700 3,000 and 2,500 2,700 employees as of December 31, 2022 December 31, 2023 and 2021, 2022, respectively, who were responsible for the sales, technical support, consulting services, marketing initiatives and administrative activities designed to support our overall revenue growth and expansion strategies.

Our channel partner network provides us with a cost-effective, highly-specialized channel of distribution and technical support. It also enables us to draw on business and technical expertise from a global network, provides relative stability to our operations to help mitigate geography-specific economic trends and provides us with an opportunity to take advantage of new geographic markets or enhance our sales coverage in existing markets.

The channel partners, under the direction of our sales management team, market and sell our products to new customers, expand installations within the existing customer base, offer training and consulting services and often provide the first line of our technical support. Our channel partner certification process helps to confirm that each channel partner has the ongoing capability to adequately represent our expanding product lines and to provide an appropriate level of training, consultation and customer support. We derived 23.9% 26.1%, 23.7% 23.9% and 22.2% 23.7% of our total revenue through the indirect sales channel for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively.

No single customer accounted for more than 5% of our revenue in 2023, 2022, 2021 or 2020, 2021. Information with respect to foreign and domestic revenue may be found in Note 17 to the consolidated financial statements in Part IV, Item 15 of this Annual Report on Form 10-K and in the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of this Annual Report on Form 10-K.

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STRATEGIC ALLIANCES AND MARKETING RELATIONSHIPS

We Ansys has and continues to be committed to operating as an open platform, enabling our customers to easily integrate simulation into their R&D workflows. To further that vision, we have established and continue to pursue strategic alliances with advanced technology suppliers, cloud computing providers, hardware vendors, software vendors, specialized application developers and CAD, EDA and PLM providers. We believe that these relationships facilitate accelerated incorporation of advanced technology into our products, provide access to new customers, expand our sales channels, develop specialized product applications and provide direct integration with leading CAD, EDA, product data management and PLM systems.

We have technical and marketing relationships with leading CAD vendors, such as Autodesk, PTC and Siemens Digital Industries, to provide direct links between products. These links facilitate the transfer of electronic data models between the CAD systems and our products.

We maintain marketing and software development relationships work with leading EDA software companies, including Altium, Cadence Design Systems, Synopsys, Siemens EDA and Zuken. These relationships Zuken, to support the transfer of data between electronics design and layout software and our electronics simulation portfolio.

We have strategic relationships with public cloud providers to enable customers to seamlessly access HPC in the cloud. We recently executed have a partnership with Microsoft to develop Ansys Access powered by Azure, which will enable customers to launch Ansys products using their Azure enrollment and connect third-party tools. In addition to our joint initiatives in the cloud, we have a broader relationship with Microsoft focused on more market-specific endeavors in the area of Digital Twins, autonomy and use of AI in simulation.

In 2022, we launched Ansys Gateway powered by AWS We also have a strategic relationship with Amazon Web Services (AWS) to transform cloud-based engineering simulations. Ansys Gateway powered by AWS facilitates seamless access and deployment of Ansys products on AWS, making simulation workloads more user-friendly, while offering scalability and flexibility with easy access to software and storage solutions from anywhere with a web browser.

In addition to marketing relationships to promote the adoption of HPC, we maintain a technical relationship relationships with both Intel, NVIDIA and Advanced Micro Devices (AMD) AMD to optimize the solver performance and scalability of our structures, fluids and electromagnetics portfolio, to enable enabling faster simulations, better graphics and a shorter time to market for our customers. For example, we have expanded our co-development with Intel in the area of GPU computing, (both we have tuned and optimized the Fluent GPU and Mechanical solvers for acceleration "Hopper" GPUs from NVIDIA. With AMD, we have expanded support in the Ansys Mechanical product for the latest AMD Instinct MI200 Series accelerators, AMD's data-center-class GPU family. Support for these new GPUs gives customers more flexibility when choosing HPC hardware, both on-premises and visualization) which will strengthen cross-platform support of our fluids software, in the cloud. As an inaugural member, we have joined both Intel Foundry Services' (IFS) Design Ecosystem Alliance and Intel Foundry Services Cloud Alliance. We expect that our EDA tools and multiphysics solutions will help IFS to deliver industry-leading bespoke silicon to their customers, both on-premises and in the cloud. Partnering with AMD, we have added support for the latest AMD Instinct™ MI200 Series accelerators, AMD's data-center-class GPU family. Support for these new AMD GPUs gives customers more flexibility when choosing HPC hardware, both on-premises and in the cloud. In some cases, AMD GPU acceleration can provide speedups of as much as 8x or 14x, depending on the application.

Our Partner Program actively encourages developers of specialized software solutions to use our technology as a development platform for their applications and provides customers with enhanced functionality related to their use of our software. With over 350 technology partnerships, spanning a wide range of solution areas, including materials, optimization, electronics, optical, mechanical, fluid and systems simulation, our partner ecosystem extends the depth and breadth of our technology offerings.

COMPETITION

We believe that the principal there are many factors affecting sales of our software, include including ease of use, breadth and depth of functionality, flexibility, quality, ease of integration with other software systems, file compatibility across computer platforms, range of supported computer platforms, performance, price and total cost of ownership, customer service and support, company reputation and financial viability and effectiveness of sales and marketing efforts.

Our competitors include large, global, publicly traded companies; small, geographically-focused firms; startup firms; and solutions produced in-house by the end users. Some of our current and possible future competitors have greater financial, technical, marketing and other resources than us, and some have well-established relationships with current and potential customers of ours. Our current and possible future competitors also include firms that have elected, or may in the future elect, to compete by means of open source licensing. These competitive pressures may result in decreased sales volumes, price reductions and/or increased operating costs, and could result in lower revenues, margins and net income.

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PROPRIETARY RIGHTS AND LICENSES

We regard our software as proprietary and rely on a combination of trade secret, copyright, patent and trademark laws, license agreements, nondisclosure and other contractual provisions and technical measures to protect our proprietary rights in our products. We distribute our software products under software license agreements that predominantly grant customers nonexclusive licenses, which are typically nontransferable, for the use of our products. License agreements for our products are generally directly between us and end users. Use of the licensed software product is restricted to specified designated sites (LAN License) unless the customer obtains a multi-site global license (WAN License) for its use of the software product or the software product is by its nature a multi-site-use global-use product. Customers may also license our software products on a named-user basis, which is deemed to be a global WAN license. Software security measures are also employed to prevent unauthorized use of our software products and the licensed software is subject to terms and conditions prohibiting unauthorized use, distribution or reproduction. For most products, customers may lease the product on a fixed-term basis for a fee that includes the license, maintenance, technical support and upgrades or may purchase a perpetual license of the technology with the right to annually purchase ongoing maintenance, technical support and upgrades, or may lease the product on a fixed-term basis for a fee that includes

the license, maintenance, technical support and upgrades. For some products, customers purchase an annual subscription for a certain number of named users that includes the license, maintenance, technical support and upgrades or purchase elastic units, which enable the use of any supported product at any time until their licensed volume is met.

We license our software products utilizing a combination of web-based and hard-copy license terms and forms. For certain software products, we primarily rely on "click-wrapped" licenses (i.e., online agreements where the website provider posts terms and conditions, and the user clicks on the "accept" button). The enforceability of these types of agreements under the laws of some jurisdictions is uncertain.

We also seek to protect the source code of our software as a trade secret and as registered unpublished copyrighted work. We have obtained federal trademark registration protection for Ansys and other marks in the United States and foreign countries. Additionally, we were awarded numerous patents by the U.S. Patent and Trademark Office or equivalent offices in other jurisdictions and have a number of patent applications pending. To the extent we do not choose to seek patent protection for our intellectual property, we primarily rely on the protection of our source code and underlying functionality as a trade secret.

Our employees have signed agreements under which they have agreed not to disclose trade secrets or confidential information. These agreements, where legally permitted, restrict engagement in or connection with any business that is competitive with us anywhere in the world while employed by us (and, in some cases, for specified periods thereafter) thereafter in relevant geographic areas and state that any products or technology created by employees during their term of employment are our property. In addition, we require all channel partners to enter into agreements not to disclose our trade secrets and other proprietary information.

Despite these precautions, there can be no assurance that misappropriation of our technology and proprietary information (including source code) will be prevented. Further, there can be no assurance that copyright, trademark, patent and trade secret protection will be available for our products in certain jurisdictions, or that restrictions on the ability of employees and channel partners to engage in activities competitive with us will be enforceable. Costly and time-consuming litigation could be necessary in the future to enforce our rights to our trade secrets and proprietary information or to enforce our patent rights and copyrights, and it is possible that, in the future, our competitors may be able to obtain our trade secrets or to independently develop similar technology.

The software development industry is characterized by rapid technological change. Therefore, we believe that factors such as the technological and creative skills of our personnel, new product developments, frequent product enhancements, name recognition and reliable product maintenance are also important to establishing and maintaining technology leadership in addition to the various available legal protections of our technology.

We do not believe that any of our products infringe upon the proprietary rights of third parties. There can be no assurance, however, that third parties will not claim such infringement by us or our licensors or licensees with respect to current or future products. In addition, there are non-practicing entities and patent assertion entities whose business models are built on not producing any products, but rather extracting payments from revenue-generating companies through patent infringement assertions and/or litigation. We expect that software suppliers will increasingly be subject to the risk of such claims as the number of products and suppliers continues to expand and the functionality of products continues to increase. Any such claims, with or without merit, could be time consuming, result in costly litigation, cause product release delays or require us to enter into royalty or licensing agreements. Such royalty or licensing agreements, if required, may not be available on terms acceptable to us.

SEASONAL VARIATIONS

Our business has experienced seasonality, including quarterly volatility in software sales resulting from driven primarily by the timing of customer renewal cycles. It is typical to see slowdowns of customer activities during the summer months, particularly in Europe, as well as from the seasonal purchasing and budgeting patterns of

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our global customers. Subscription lease and maintenance contract renewals, as well as our revenue, are typically highest in the fourth quarter.

DEFERRED REVENUE AND BACKLOG

Deferred revenue consists of billings made or payments received in advance of revenue recognition from customer agreements. The deferred revenue on our consolidated balance sheets does not represent the total value of annual or multi-year, noncancellable agreements. Our backlog represents deferred revenue associated with installment billings for periods beyond the current quarterly billing cycle and committed contracts with start dates beyond the end of the current period. Our deferred revenue and backlog as of December 31, 2022 December 31, 2023 and 2021 2022 consisted of the following:

Balance at December 31, 2022				Balance at December 31, 2023			
		Long-Term				Long-Term	
(in thousands)	Total	Current	Long-Term	(in thousands)	Total	Current	Long-Term
Deferred revenue	\$435,783	\$13,982	\$421,799	Deferred revenue	\$435,783	\$13,982	\$421,799
Backlog	981,082	32,328	948,754	Backlog	981,082	32,328	948,754
Total	\$1,416,865	\$46,310	\$1,370,554	Total	\$1,416,865	\$46,310	\$1,370,554
Balance at December 31, 2021				Balance at December 31, 2022			

United States-based senior leadership	United States-based senior leadership	70 %	19 %	— %	2 %	— %	9 %	United States-based senior leadership	68 %	18 %	— %	2 %	— %	12 %
Board of Directors	Board of Directors	60 %	30 %	— %	10 %	— %	— %	Board of Directors	60 %	30 %	— %	10 %	— %	— %

*Other includes Native Hawaiian, American Indian, Alaskan Native, Pacific Islander, or two or more races. **aces, races or not applicable.**

We have a growing number of continue to support employee resource groups dedicated to creating create a culture of inclusion and belonging that supports our goals of increasing increases retention of valuable employees and creating creates an open culture that fuels innovation. Our employee resource groups include Women in Tech at Ansys, Ansys Pride Alliance, Black Employee Network at Ansys, Veterans at Ansys, Ansys (dis)ability Network and Ansys Latino Connection. Additionally, we create a Our inclusive culture of inclusion is further reinforced through training education on understanding and mitigating bias in people, management processes and business decisions.

Employee Recruitment, Development and Retention

Our talent strategy is focused on (i) attracting diverse high-quality talent, (ii) continually developing and engaging our employee base and (iii) retaining our people by recognizing and rewarding performance. Our commitment to recruiting diverse talent is evidenced in the United States through our dedication to increasing recruiting efforts at historically black colleges and universities and Hispanic serving institutions, as well as our involvement with minority engineering societies, women in technology groups, veterans' organizations and LGBTQ+A organizations. In addition to targeted outreach, we recruit talent through (i) attending career and networking events aimed towards recruiting diverse audiences, (ii) hiring internally through our Ansys internship/co-op programs for current students and (iii) value partnerships including professional societies that promote our programs to diverse audiences. We continue to evolve our talent acquisition efforts, as evidenced by our expanded events strategy, wherein we doubled the volume of our outreach events in the last year, as well as our priority focus on new external partnerships and recruitment tools that expand our reach to diverse audiences. Additionally, we drive a global focus on hiring emerging talent, placing an emphasis on offering full-time positions through our global internship, co-op and new college graduate programs. Our academic product suite is also widely used in research and teaching settings, which allows students to become familiar with our simulation software and creates opportunities to strengthen our university ties and recruit top talent.

The development of our employees is paramount to our success and provided through internal professional development programs and tuition assistance for external programs. We conduct annual individual assessments, encourage development planning and build a culture of feedback that drives performance. We drive a variety of focused initiatives specifically designed to support employee development. These include annual talent reviews and succession planning, leadership and executive development and company-sponsored education programs, such as management essentials to develop front-line leaders in foundational people management skills. New programs in 2022 2023 included individualized leadership coaching, high-potential assessment developing a global mindset, improved new employee orientation and custom learning paths for emerging leaders. We also expanded our Ansys digital academy to be the one-stop-shop for all Ansys developers to build the technical skills needed to support our Pervasive Insights strategy. Additional ongoing programs include mentoring and sponsorship programs and skills development for technical staff in support of our the digital transformation of our internal processes.

Developing our employees helps create an engaged workforce that is ready to embrace future business challenges. It also helps mitigate risks associated with employee loss and keeping up with rapid technological and social change. For the year ended December 31, 2022 December 31, 2023, our annual turnover rate was 10% 5%, or 8% 4% on a voluntary basis.

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Compensation and Benefits Program

Our compensation programs provide an opportunity for employees to earn higher compensation by aligning their performance, which may include contributions to our environmental, social and governance objectives, with our overall financial and operational success. The program includes three key elements: (i) competitive annual salaries, (ii) annual cash incentives and sales commission programs, with a majority of our employees eligible to earn more or less than the target opportunities based on both our and the employee's performance and (iii) long-term equity incentives with over half of employees receiving equity grants each year in the form of time-based restricted stock units and, in the case of senior leadership, time-based restricted stock units and performance stock units that vest, if at all, based on our financial performance and shareholder returns over a specified period of time, units. These grants align the long-term financial interests of our employees with those of our stockholders.

Health and welfare benefit programs include market-competitive benefits comprised of a mix of company-provided and other benefits, including those for medical, dental and vision insurance; life and disability insurance; defined contribution retirement plans; and global employee wellness programs in programs. In addition, to we offer many different employee assistance programs, such as financial, legal, emotional and social well-being employee assistance programs. Our investments in health and welfare benefits and other employee programs focus on providing choice and value to our employees so they can select market-competitive benefits that support their personal needs.

Local regulations are considered when developing our compensation and benefits packages for employees across the globe.

Safety, Health, and Flexibility Flexible Work Environment

The health Hybrid ways of working continue to enable us to remain productive while meeting customer needs and safety of our staying engaged. Our employees and their families, our partners and our broad community around the world remain a high priority. We support a remote and hybrid work environment. In October 2022, we surveyed our employees and 92% responded continue to respond favorably to the statement: "I am able to manage my work responsibilities in a way that allows me flexibility." Our employees have responded favorably to how we work in a post-pandemic environment.

Employee Satisfaction and Engagement

Employee feedback and engagement are critical to our success. We conduct global employee engagement surveys with the goal of using the feedback to improve the work environment and employee satisfaction. This feedback continues to be a critical component of our listening strategy. The survey itself has become an even more important tool to stay connected with employee sentiment in our **remote and** hybrid work environments.

Our **2022 2023** engagement score remained steady compared to **2021, 2022**, confirming that our employees continue to be highly engaged. Our scores exceeded the external norm across all dimensions of engagement that were measured with themes this year, including: employees feeling valued and part of a team; employees empowered to excel; **and** trust in the future vision that leaders are **creating**. **Employees are also satisfied with continued creating; and employees feeling they have** opportunities for learning and development.

Employee feedback is also strong in other important areas including **recognition**, communication and overall leadership. **The These findings from these surveys continue to** help us **to** improve performance, manager effectiveness, culture and engagement.

AVAILABLE INFORMATION

Information about our products and services is available on the internet at www.ansys.com. We provide information for investors on our corporate website under "Why Ansys – Investor Relations".

We make available, free of charge, the following under "Why Ansys – Investor Relations" shortly before or promptly following its first use or release, or as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC, as applicable: financially-related press releases, including earnings releases, **and prepared remarks**, various SEC filings, including annual, quarterly and current reports and proxy statements and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act **presentation materials associated with earnings conference calls**, and access to live and recorded audio from **earnings and other** investor conference calls or events. **For earnings conference calls, we We** generally include in our posted materials a cautionary statement regarding forward-looking and non-GAAP financial information, and we provide GAAP reconciliations when we include non-GAAP financial information. Such GAAP reconciliations may be in materials for the applicable presentation, in materials for prior presentations or in our annual, quarterly or current reports. Other information posted on our corporate website that may not be available in our filings with the SEC includes information relating to our corporate governance. SEC filings may also be obtained on the SEC's website at www.sec.gov.

Where we have included internet addresses in this Annual Report on Form 10-K, such as our internet address and the internet address of the SEC, we have included those internet addresses as inactive textual references only. Except as specifically incorporated by reference into this Annual Report on Form 10-K, information on those websites is not part hereof.

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ITEM 1A. RISK FACTORS

The following are important factors we have identified that could affect our future results and an investment in our securities. Although the risks are organized by headings and each risk is described separately, many of the risks are interrelated.

You should not interpret the disclosure of any risk factor to imply that the risk has not already materialized. While we believe we have identified and discussed below the key risk factors affecting our business, there may be additional risks and uncertainties that are not presently known or that are not currently believed to be significant that may adversely affect our business, prospects, financial condition, results of operations or cash flows in the future. In addition, from time to time we provide information, including information contained in this Annual Report on Form 10-K, that contains forward-looking statements concerning, among other things, projected financial performance, total addressable market, market and industry sector growth, product development and commercialization or other aspects of future operations. Such statements are based on the assumptions and expectations of our management at the time such statements are made. We caution investors that our performance and any forward-looking statements are subject to risks and uncertainties, including but not limited to, the following:

Risks Associated with the Proposed Transaction with Synopsys

The proposed transaction with Synopsys may be delayed or not occur at all for a variety of reasons, including that the Merger Agreement is terminated, and the failure to complete the Merger could adversely affect our business, results of operations, financial condition, and the market price of our common stock.

On January 15, 2024, we entered into the Merger Agreement with Synopsys and Merger Sub, pursuant to which Merger Sub will merge with and into Ansys with Ansys surviving the Merger as a wholly owned subsidiary of Synopsys. Completion of the Merger is subject to customary closing conditions, including (1) the adoption of the Merger Agreement by a majority of the holders of the outstanding shares of our common stock, (2) the expiration or early termination of the applicable waiting period under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended, and the approval of the Merger under certain other antitrust and foreign investment regimes, (3) the absence of any order, injunction or law prohibiting the Merger, (4) the effectiveness of the registration statement of Synopsys pursuant to which shares of Synopsys common stock to be issued in connection with the Merger will be registered with the SEC, (5) the shares of Synopsys common stock to be issued in connection with the Merger being approved for listing on Nasdaq, (6) the accuracy of the other party's representations and warranties, subject to certain standards set forth in the Merger Agreement, (7) compliance in all material respects by the other party with its obligations under the Merger Agreement, and (8) the absence of a continuing material adverse effect with respect to each of Ansys and Synopsys. Therefore, there can be no assurance that the Merger will be completed in the expected timeframe (first half of 2025), or at all.

The Merger Agreement may be terminated under certain circumstances, including that either party may have the right to terminate if the Merger is not completed by January 15, 2025, which may be extended to January 15, 2026 as provided in the Merger Agreement. Upon termination of the Merger Agreement, (A) Synopsys, under specified circumstances, including termination following a permanent injunction arising under certain antitrust or foreign investment laws, will be required to pay us a termination fee of \$1,500.0 million; and (B) we, under specified circumstances, including our termination of the Merger Agreement to accept and enter into a definitive agreement with respect to a Superior Proposal (as defined in the Merger Agreement) or Synopsys' termination upon the change by our Board of Directors of its recommendation in favor of the Merger, will be required to pay Synopsys a termination fee of \$950.0 million.

Failure to complete the Merger within the expected timeframe or at all could adversely affect our business and the market price of our common stock in a number of ways, including:

- the market price of our common stock may decline to the extent that the current market price reflects an assumption that the Merger will be consummated;
- if the Merger Agreement is terminated under certain circumstances specified in the Merger Agreement, we would be required to pay a termination fee of \$950.0 million;
- we have incurred, and will continue to incur, significant expenses for professional services in connection with the Merger for which we will have received little or no benefit if the Merger is not consummated; and
- we may experience negative publicity and/or reactions from our investors, employees, customers, channel partners, and other business partners.

Additionally, as Synopsys common stock will be a component of the merger consideration our stockholders will receive in the Merger, our stock price may be adversely impacted by a decline in Synopsys' stock price and any adverse developments in Synopsys' business outlook. Synopsys' stock price changes may result from a variety of factors, such as changes in its business operations and outlook, changes in general market and economic conditions, and regulatory considerations. These factors are beyond our control. Also, because the number of shares of Synopsys common stock issuable in connection with the Merger Agreement in respect to one share of Ansys common stock is based on a fixed exchange ratio and the market price of Synopsys common stock may fluctuate, our stockholders cannot be sure of the market value of the stock consideration they will receive in exchange for their shares of our common stock in connection with the Merger.

Completion of the proposed Merger is subject to the satisfaction or waiver of closing conditions contained in the Merger Agreement, including certain regulatory approvals which may not be received, may take longer than expected or the receipt of which may impose conditions that are not presently anticipated or that cannot be met, and if these closing conditions are not satisfied or waived, the proposed Merger will not be completed.

Various consents, clearances, approvals, authorizations and declarations of non-objection, or expiration of waiting periods (or extensions thereof), from certain regulatory and governmental authorities in the United States, the European Union and certain other jurisdictions are included in the Merger Agreement as conditions to completing the proposed Merger. Regulatory and governmental entities may impose conditions on their respective approvals, in which case lengthy negotiations may ensue among such regulatory or governmental entities, Synopsys and Ansys. Such conditions, any such negotiations and the process of obtaining such regulatory approvals, consents or clearances could have the effect of delaying or preventing consummation of the proposed Merger.

Subject to the terms of the Merger Agreement, we have agreed to use our reasonable best efforts to take all actions necessary to consummate the Merger, including cooperating to obtain the regulatory approvals necessary to complete the Merger. Nonetheless, certain conditions to the completion of the pending Merger are not within our or Synopsys' control, and we cannot predict when or if these conditions will be satisfied (or waived, as applicable). There can be no assurance that all required approvals will be obtained or that all closing conditions will otherwise be satisfied (or waived, if applicable), and, if all required approvals are obtained and all closing conditions are satisfied (or waived, if applicable), we can provide no assurance as to the terms, conditions and timing of such approvals or that the pending Merger will be completed in a timely manner or at all. Even if regulatory approvals are obtained, it is possible conditions will be imposed that could result in a material delay in, or the abandonment of, the pending Merger or otherwise have an adverse effect on Ansys.

Efforts to complete the Merger could disrupt our relationships with third parties and employees, divert management's attention, or result in negative publicity or legal proceedings, any of which could negatively impact our operating results and ongoing business.

We have expended, and continue to expend, significant management time and resources in an effort to complete the Merger, which may have a negative impact on our ongoing business and operations. Uncertainty regarding the outcome of the Merger and our future could disrupt our business relationships with our existing and potential customers, channel partners, service providers and other business partners, who may attempt to negotiate changes in existing business relationships or consider entering into business relationships with parties other than Ansys. Uncertainty regarding the outcome of the Merger could also adversely affect our ability to recruit and retain key personnel and other employees. The pendency of the Merger may also result in negative publicity and a negative impression of us in the financial markets, and may lead to litigation against us and our directors and officers. Such litigation would be distracting to management and, may, in the future, require us to incur significant costs. Such litigation could result in the Merger being delayed and/or enjoined by a court of competent jurisdiction, which could prevent the Merger from being completed. The occurrence of any of these events individually or in combination could have a material and adverse effect on our business, financial condition and results of operations.

The Merger Agreement contains provisions that limit our ability to pursue alternative transactions to the Merger which could discourage a potential competing acquirer from making an alternative transaction proposal.

The Merger Agreement contains provisions that preclude us from soliciting proposals relating to alternative transactions or entering into discussions or negotiations or providing non-public information in connection with any proposal for an alternative transaction from a third party, subject to certain exceptions to permit our Board of Directors to comply with its fiduciary obligations. We have further agreed to cease and cause to be terminated any existing discussions or negotiations, if any, with regard to alternative transactions. These prohibitions could discourage a potential third-party acquirer or merger partner from making an alternative transaction proposal. Additionally, if the Merger Agreement is terminated and we determine to seek another business combination, we may not be able to negotiate a transaction with another party on terms comparable to, or better than, the terms of the Merger Agreement.

While the Merger Agreement is in effect, we are subject to restrictions on our business activities.

The Merger Agreement contains customary representations, warranties and covenants, including, among others, covenants regarding the conduct of our business during the pendency of the transactions contemplated by the Merger Agreement. These restrictions could prevent us from pursuing attractive business opportunities that may arise prior to the consummation of the Merger. Although we may be able to pursue such activities with Synopsys' consent, there is no guarantee that Synopsys will provide us with the necessary consent.

Global Operational Risks

Adverse economic and geopolitical conditions have **in the past impacted**, and may continue to impact, our operations and financial performance.

Our operations and performance depend significantly on global macroeconomic, specific foreign country and U.S. domestic economic conditions. **Over the past year, global inflation and interest rates have increased meaningfully, continued to be elevated throughout 2023.** A deterioration in the macroeconomic environment, including the impact of high inflation, may result in decreased demand for our products and services, constrained credit and liquidity, reduced government spending and volatility in equity and foreign exchange markets. In addition, significant downturns and volatility in the global economy expose us to impairments of certain assets if their values deteriorate. Tighter credit due to economic conditions may diminish our future borrowing ability and increase borrowing costs under our existing credit facilities. Customers' ability to pay for our products and services may also be impaired, which could lead to an increase in our allowance for doubtful accounts and write-offs of accounts receivable.

Furthermore, escalating global tensions, including due to the deterioration of the diplomatic and political relationships between the United States and other countries where we conduct business, **including such as China, and the ongoing conflict global volatility due to wars and conflicts (such as those between Russia and Ukraine and/or Israel and Hamas),** could adversely affect our future operations and lead to a decline in financial performance.

A significant portion of our business comes from outside the United States and our customers supply a wide array of goods and services to most of the world's major economic regions. International revenue represented **54.9% 53.4%, 54.5% 54.9% and 53.8% 54.5%** of our total revenue for the years ended **December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021**, respectively. In fiscal year **2022, 2023**, our largest geographic revenue bases were the United States, **Germany Japan and Japan. Germany.**

When the significant economies in which we do business deteriorate or suffer a period of uncertainty, our business and financial performance may be impacted through reduced customer and government spending, changes in purchasing cycles or timing and reduced access to credit for our customers, among other **events, factors**. Furthermore, customer spending levels in any foreign jurisdiction may be adversely impacted by changes in domestic policies, including tax and trade policies. A substantial portion of our license and maintenance revenue is derived from annual subscription lease and maintenance contracts, which typically have a high rate of customer renewal. When the rate of renewal for these contracts is adversely affected by economic or other factors, our subscription lease license and maintenance growth is adversely affected.

We are subject to trade restrictions that could impact our ability to sell to customers and result in liabilities for violations.

Due to the global nature of our business, we are subject to domestic and international trade protection laws, policies, sanctions and other regulatory requirements affecting trade and investment. For example, we are subject to import and export restrictions and regulations that prohibit the shipment or provision of certain products and services to certain countries, regions and persons targeted by the United States and certain end uses identified by the United States, including the Export Administration Regulations administered by the U.S. **Department of Commerce's** Bureau of Industry and Security (BIS), economic and trade sanctions administered by the U.S. **Treasury Department's Department of Treasury's** Office of Foreign Assets Control (OFAC) and International Traffic in Arms Regulations (ITAR) administered by the Department of State's Directorate of Defense Trade Controls (DDTC).

BIS continues to expand its export control restrictions, **including with respect to the export to China of certain technologies, impose new export licensing requirements, and set new licensing requirements. The** require enhanced denied party screening processes. These additional restrictions have limited and could continue to limit our ability to sell and deliver products and services to certain customers, including to entities performing research and development and certain controlled activities in China. Export control restrictions and enhanced screening processes have led to, and, in the future may continue to lead to, elongated transaction cycles with certain customers. In addition, export control restrictions have resulted, and may continue to result, in reduced sales and/or delays in our ability to deliver products and services to certain prospects, adversely affecting our business and consolidated financial statements. In certain cases, when an export license may be required to deliver products and services to certain customers, the receipt of licenses to export to certain countries, including China, is **dependent on many factors, not guaranteed** and, in the absence of a license or applicable license exception,

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these export control restrictions could limit our ability to **sell and** deliver products and services to certain customers **and our ability to sell products and services to customers in the future. may be negatively impacted.**

Additionally, BIS continues to add more companies, including existing customers, to its Entity List, and **Unverified List**, and OFAC continues to increase the number of companies subject to its sanctions, which **could continues to** limit the companies with which we can do business.

In addition, restrictions implemented by OFAC could limit our ability to sell to, or transact with, restricted individuals, entities or countries. Adding companies as restricted parties and subjecting companies to heightened export control restrictions may **additionally** encourage those companies to seek substitute products from competitors whose products are not subject to these restrictions or to develop their own products. **We cannot predict whether or when any changes will be made that eliminate or decrease these limitations on our ability to sell products and provide services to these customers. Additionally, other existing**

Existing and prospective customers **have been and may continue to** be added as restricted parties and/or be subjected to trade restrictions and additional end uses, **products or services have been and may continue to** be identified for further **restrictions, restrictions**. Such actions have resulted in, and **such actions** may **continue to** result in, **other indirect impacts that cannot be quantified, including the imposition of additional increases to our operating costs and time to market. Additional** trade restrictions on our business by the United States, China or other **countries, countries may also result in other indirect impacts that cannot be quantified.** Restrictions on our ability to sell and ship to customers could have a significant adverse effect on our business and consolidated financial statements.

Our products could also be delivered to restricted parties by third parties, including our channel partners. We take measures to confirm that our channel partners comply with all applicable trade restrictions, but any failure by channel partners to comply with such restrictions could have negative consequences for us.

Violators of trade restrictions or restricted end uses may be subject to significant penalties, which may include considerable monetary fines, criminal proceedings against them and their officers and employees, a denial of export privileges and suspension or debarment from selling products or services to the federal government. Any such penalties could have a significant adverse effect on our business and consolidated financial statements. In addition, the political and media scrutiny surrounding any governmental investigation could cause significant expense and reputational harm and distract senior executives from managing normal day-to-day operations.

If we are unable to attract and retain key talent, our business could be adversely affected.

Due to the highly technical nature of our products and services, our continued success depends on our ability to attract and retain particular employees with specialized skill sets. These skilled roles have been and are expected to continue to be challenging to fill given the recent job market dynamics, including wage inflation and the general labor market shortage, which has caused an increase in competition for talent within the technology industry. Additionally, our talent has been, and continues to be, the subject of recruitment by our competitors and we may incur significant cost to attract and retain our skilled employees. Remote and hybrid options remain the primary means of work. Our working environment options may adversely affect our ability to recruit and retain employees who prefer a different working environment. **Furthermore, operating in a remote and hybrid environment could have a negative impact on our corporate culture which could negatively affect the workforce and decrease retention rates.** While we have non-competition and non-solicitation agreements with many of our current employees, the enforceability of these agreements may be limited **by legislation and** by the courts.

In addition, our success depends upon the continued service of our senior executives and our key technical and sales employees. Most of these individuals could terminate their relationship with us at any time. The loss of any of them for which there has not been adequate knowledge-sharing and transfer might significantly delay or prevent the achievement of our business objectives and could materially harm our business and customer relationships.

While we have historically recruited globally for positions in the United States, in recent years our ability to do so has been curbed by more restrictive domestic immigration laws. If the immigration laws become even stricter or the processing of immigration requests becomes even more cumbersome or less efficient, or if we have less success in recruiting and retaining key personnel, our business, reputation and operating results could be materially and adversely affected.

Failure to comply with global data privacy laws could give rise to regulatory enforcement action, monetary penalties, loss of the ability to do business in certain jurisdictions or reputational harm.

We are subject to global data privacy laws and regulations addressing the processing of personal data. As the global focus on data privacy regulation continues to increase, standards governing the processing of personal data continue to become more strict, conflicting and numerous. As a result, potential risks may intensify as our global business pursues data privacy compliance.

The General Data Protection Regulation (European Union), the Data Protection Act (United Kingdom), the Personal Information Protection and Electronic Documents Act (Canada), the Personal Information Protection Law (China), the Law Concerning the Protection of Personal Information (Japan), the Personal Information Protection Act (South Korea), many state and federal privacy laws within the United States and other similar global laws in locations in which we do business

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(collectively, (collectively, "Privacy Laws") govern our global data privacy practices. Additionally, Privacy Laws impose abundant compliance obligations related to our processing of personal data arising from: (i) the delivery of our products and services to our customers; and (ii) our business operations involving employee data.

Compliance with Privacy Laws has and will continue to require the deployment of substantial resources and increased costs. As the global data privacy landscape continues to change, including: (i) new and varying restrictions on the transfer of personal data across borders; (ii) the growing list of privacy rights afforded to individuals of certain jurisdictions; (iii) data minimization requirements; and (iv) the growing number of governmental agencies dedicated to the preservation of data privacy rights, we may be required to make significant changes to our software applications or business operations. Such changes may increase the cost and complexity of delivering our products and services in some markets, require an investment in additional resources or tools to manage our data privacy compliance, give rise to operational interruption in the performance of services for customers or adversely affect the internal processing of employee information.

Failure to comply with Privacy Laws may lead to regulatory enforcement actions, loss of the ability to do business in certain jurisdictions or inquiries and investigations into our activities; all of which could result in monetary penalties, reputational damage, lawsuits, extensive and prescriptive consent decrees or judgments. Additional software resources, increased workforce or added expenses may be required to return us to a compliant data privacy status.

Failure to comply with laws and regulations could harm our business.

We develop and sell software and consulting services and maintain support operations in various countries whose laws and practices differ from one another and are subject to unexpected changes. Furthermore, our business is subject to regulation by various global governmental agencies, including agencies responsible for monitoring and enforcing employment and labor laws, workplace safety, environmental laws, consumer protection laws, anti-bribery laws, import/export controls, securities laws, laws related to compliance with U.S. government contracts and tax laws and regulations. In certain jurisdictions, these regulatory requirements may be more stringent than those in the United States. Managing these geographically diverse operations requires significant attention and resources to promote compliance.

Our global reach includes countries considered high-risk environments for public corruption. This exposes us to risks associated with violations of anti-corruption laws and regulations such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. To promote compliance, we forbid our agents, channel partners and employees from engaging in corrupt behavior and we have a compliance program to prevent and detect violations of anti-corruption laws. There remains, however, a risk that illegal conduct could occur thereby exposing us to the financial and reputational risks associated with a violation of anti-corruption laws.

Non-compliance with applicable regulations or requirements could subject us to investigations, sanctions, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties or injunctions and may result in our inability to provide certain products and services to existing or prospective customers. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation or if customers make claims against us for compensation, our business and consolidated financial statements could be harmed. In addition, responding to any action will likely result in a significant diversion of management's attention and resources and an increase in professional fees and costs. Enforcement actions and sanctions could have a significant adverse effect on our business and consolidated financial statements.

The effects of COVID-19 on our business, employees and consolidated financial statements are uncertain.

We are continuing to conduct business during the COVID-19 pandemic with modifications to our workforce locations. Remote and hybrid access remain the primary means of work for most of our workforce. Remote and hybrid work arrangements may negatively impact our corporate culture, expose us to increased risk of cyber incidents given that employees do not have access to technology as robust as in our offices, or delay work due to reduced or limited access to technologies, equipment or services.

The situation surrounding the COVID-19 pandemic remains fluid. The duration and extent of the impact from the COVID-19 pandemic depends on future developments that cannot be accurately predicted at this time, such as the development of virus mutations and variants, timing and effectiveness of vaccination efforts in the markets where we do business, the nature and scope of government economic recovery measures and the extent and effectiveness of containment actions. The impact of the COVID-19 pandemic may also have the effect of heightening many other risks and uncertainties described in this "Risk Factors" section.

A catastrophic event or infrastructure failure could result in the loss of business and adverse financial consequences.

Our personnel, source code and computer equipment is located in various regions throughout the United States and the world. A natural disaster (including significant disruptions in weather as a result of global climate change), cyberattack, terrorist act,

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pandemic or other unforeseen catastrophe in any of these areas or a breakdown in our business infrastructure, such as an interruption in power supply, telephone system or information technology systems, could cause disruptions to our sales, operations, services and product development activities. As our sales are generally greater at the end of a quarter, the potential adverse effects resulting from any of these events would be accentuated if they occurred at quarter end.

Effective business continuity, disaster recovery and crisis management plans are critical to minimizing the impact of such unplanned or unexpected events. We also face increasing customer certification requirements with respect to such systems. Failure to establish plans that effectively mitigate the impacts of these disruptions or meet customer certification requirements could have a significant adverse effect on our business and consolidated financial statements.

See "The effects of COVID-19 on our business, employees and consolidated financial statements are uncertain" portion of this "Risk Factors" section for a description of the risk associated with the pandemic.

Industry Operational Risks

Our industry is highly competitive, which could result in downward pressure on our prices.

We continue to experience competition across all markets for our products and services. Some of our current and potential competitors have greater financial, technical, marketing and other resources than we do, some could establish strategic alliances with one another, and some have well-established relationships with our current and potential customers. Our current and potential competitors also include firms that have competed, or may in the future compete, by means of open source licensing. Companies we have, or could have, strategic alliances with could reduce or discontinue technical, software development and marketing relationships with us for competitive purposes.

If our

Our competitors may offer deep discounts on certain products or services, or develop products that the marketplace considers more valuable, valuable. If we are unable to provide products or services that address our customers' needs or preferences, or we are unable to match favorable pricing offered by our competitors, we could lose customers or fail to attract new customers. Further, we may be required to lower prices or offer discounts or other favorable terms to compete successfully. Our maintenance products, which include software license updates and product support fees, are generally priced as a percentage of new software license fees. Our competitors may offer lower percentage pricing on product updates and support. Some competitors may bundle software products for promotional purposes or as a long-term pricing strategy or provide guarantees of prices, product implementations or wider geographical license usage provisions. Any of these practices could, over time, significantly constrain the prices that we can charge for certain products.

Furthermore, if we do not adapt pricing models to reflect changes in customer usage of our products or changes in customer demand, our software license revenues could decrease. Additionally, increased distribution of applications through application service providers, including software-as-a-service providers, may reduce the average price or margin of our products or adversely affect other sales of our products, reducing new software license revenues or profitability.

These competitive pressures may result in decreased sales volumes, price reductions and/or increased operating costs, and could result in lower revenues, margins and net income.

We may not be successful in integrating emerging technologies or developing and marketing new products to adequately address the rapidly changing technology industry.

We operate in an industry generally characterized by rapidly changing technology and frequent new product introductions. A major factor in our future success will be our ability to anticipate technological changes and to integrate emerging technologies (including AI) to develop and introduce, in a timely manner, new products and new ways to deliver them to meet those changes. Our ability to grow revenue will be dependent on our ability to respond to customer needs in the areas of, among others, AI/ML, next generation connectivity, autonomous vehicles, IIoT, electrification and sustainability, and to leverage cloud computing and new computing platforms. In addition, our future success may depend on our ability to continue to develop a systems integrator ecosystem able to handle integrations and process and application development to address the challenge of the increasingly complex integration of our products' different functionalities to address customers' requirements. For those customers who authorize a third-party technology partner to access their data, we do not provide any warranty related to the functionality, security and integrity of the data transmission or processing. Despite contract provisions to protect us, customers may look to us to support and provide warranties for the third-party applications, integrations, data and content, even though not developed or sold by us, which may expose us to potential claims, liabilities and obligations, all of which could harm our business.

We devote substantial resources to research and development, which could cause our operating profits to decline.

We devote substantial resources to research and development. New competitors, technological advances in the software development industry by us or our competitors, acquisitions, entry into new markets or other competitive factors may require us to invest significantly greater resources than anticipated. If we are required to invest significantly greater resources than

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anticipated without a corresponding increase in revenue, operating profits could decline. In addition, our periodic research and development expenses may be independent of our level of revenue, which could negatively impact financial results.

There can be no assurance that we will be successful in developing and marketing, on a timely basis, new products or product enhancements or that the new products will adequately address the changing needs of the marketplace or that we will successfully manage the transition from existing products. Software products as complex as those we offer may contain undetected errors, defects or vulnerabilities when first introduced or as new versions are released, and the likelihood of errors, defects or vulnerabilities is increased as a result of our commitment to the frequency of product releases.

There can be no assurance that errors, defects or vulnerabilities will not be found in any new or enhanced products after the commencement of commercial shipments. The occurrence of any defects or errors in our products could result in lost or delayed market acceptance and sales of our products, delays in payment to us by customers, loss of customers or market share, product returns, damage to our reputation, diversion of our resources, increased service and warranty expenses or financial concessions, increased insurance costs and liability for damages.

Company Operational Risks

We are dependent upon our channel partners for a significant percentage of our revenue and usage of channel partners presents certain heightened compliance risks.

We distribute our products through a global network of independent channel partners, which accounted for 23.9% 26.1%, 23.7% 23.9% and 22.2% 23.7% of our revenue during the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively. Channel partners sell our software products to new and existing customers, expand installations within the existing customer base, offer consulting services and provide the first line of technical support. In the A meaningful amount of our APAC and EMEA regions, we are highly dependent upon our revenue is from channel partners. Difficulties in ongoing relationships with channel partners, such as failure to meet performance criteria and differences in handling customer relationships, could adversely affect our performance. Additionally, the loss of any major channel partner, including a channel partner's decision to sell competing products rather than ours, could result in reduced revenue. Moreover, our future success will depend substantially on the ability and willingness of our channel partners to dedicate the resources necessary to understand and promote our expanding portfolio of products and to support a larger installed base within each of our geographic regions. If the channel partners are unable or unwilling to do so, we may be unable to sustain revenue growth.

The business Establishing relationships with many of our new channel partners are recently established and could result in additional compliance burdens for us. In addition, these new channel partners may have a less-established payment history and revenue from these channel partners could come with a higher rate of bad debt expense. Where channel partners operate on our behalf to collect and process personal data of customer contacts, failure to comply with relevant data privacy laws in the handling of such personal data could result in liability to us for any fines, civil suits or non-financial performance obligations imposed by regulatory authorities on these partners with respect to our customer data.

Certain products require a higher level of sales and support expertise. Failure of our sales channel, particularly the independent channel partners, to obtain this expertise and to sell the new product offerings effectively could have an adverse impact on our sales in future periods. Any of these problems may result in the loss of or delay in customer acceptance, diversion of development resources, damage to our reputation or increased service and warranty costs, any of which could have a significant adverse effect on our business and consolidated financial statements.

We may not be able to realize the potential benefit of our acquisitions and such acquisitions could pose risks to our business.

We acquire have a track record of acquiring businesses and technology to support our long-term strategic direction.

Each acquisition that we complete may present risks, including: difficulty in integrating the management teams, strategies, cultures and operations of the companies or businesses; failing to achieve anticipated synergies, including product synergies, revenue increases or cost savings; difficulty incorporating and integrating the acquired technologies or products with our existing product lines; difficulty with coordinating and integrating sales, distribution and marketing functions; failure to develop new products and services that utilize the technologies and resources of the companies; disruption of our ongoing business and diversion of management's attention to transition or integration issues; liabilities that were not identified during the acquisition process; the loss of our key employees, customers, partners and channel partners or those of the acquired companies or businesses; and cybersecurity and data privacy risks.

Future acquisitions may involve the expenditure of significant cash resources; the incurrence of debt, which increases our interest expense and leverage; or the issuance of equity, which could be dilutive to stockholders and may decrease earnings per

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share. We allocate a portion of the purchase price to goodwill and intangible assets. If we do not realize all the economic benefits of an acquisition, there could be an impairment of goodwill or intangible assets. Furthermore, impairment charges are generally not tax-deductible and will result in an increased effective income tax rate in the period the impairment is recorded.

If we do not achieve the anticipated benefits of our acquisitions as rapidly or to the extent anticipated by our management or financial and industry analysts, there could be a significant adverse effect on our stock price, business and consolidated financial statements.

The ongoing digital transformation of our operational processes may not achieve the benefits identified.

We are in the process normal course of implementing our business, we implement new processes, tools and technology to transform our business operations and to enable future scalability. While these transformations are anticipated intended to streamline, automate and deliver efficiencies across multiple commercial and operational processes within the business, there is a risk that the systems or processes could be more difficult to implement than anticipated, that the new processes will not be effectively or efficiently used, and that the benefits of such systems and processes could be substantially delayed. There is also a risk that we will have to write off previously capitalized expenditures if the projects are not successful or if implementation decisions regarding the project are modified. Factors that could further delay the timing or impact of benefits realization include:

- include (i) changes in leadership and project objectives;
- (ii) diversion of management's attention to different projects; (iii) additional needs for technical expertise and manpower; and
- (iv) longer than anticipated time horizon for employee adoption and mastery.

Any of the above could divert efforts of key operational management away from other aspects of the business, including the maintenance of current commercial and business platforms, and result in increased consulting and software costs. These factors could have a significant negative impact on our business and consolidated financial statements.

We may be subject to proceedings that could harm our business.

We are subject to various investigations, claims and legal proceedings that arise in the ordinary course of business, including commercial disputes, labor and employment matters, tax audits and litigation, alleged infringement of intellectual property rights and other matters. Use or distribution of our products could generate product liability, particularly with respect to new ways of going to market, including offering our products in cloud environments, selling software as a service and licensing or otherwise providing our products as part of a third-party developer ecosystem, or regulatory infraction or similar claims by our customers, end users, channel partners, government entities or other third parties. Sales and marketing activities that impact processing of personal data, as well as measures taken to promote license compliance, may also result in claims by customers and individual employees of customers. Each of these matters is subject to various uncertainties, and it is possible that an unfavorable resolution of one or more of these matters could have a significant adverse effect on our consolidated financial statements as well as cause reputational damage.

We may suffer reputational or financial harm if we have product standard or quality issues.

We have separate quality systems and registrations under the ISO 9001:2015 standard in addition to other governmental and industrial regulations. Our continued compliance with quality standards and favorable outcomes in periodic examinations is important to retain current customers and vital to procure new sales. If it was determined that we were not in compliance with various regulatory or ISO 9001 standards, our certificates of registration could be suspended, requiring remedial action and a time-consuming re-registration process. Product quality issues or failures could result in our reputation becoming diminished, resulting in a material adverse impact on our business and consolidated financial statements.

Our short-term and long-term sales forecast may not be accurate, which could result in an adverse impact on our business and consolidated financial statements.

The software business is generally characterized by long sales cycles. These long sales cycles increase the difficulty of predicting sales for any particular quarter. Many operational and strategic decisions are based upon short- and long-term sales forecasts. Our sales personnel continually monitor the status of proposals, including the estimated closing date and the value of the sale, in order to forecast quarterly sales. These forecasts are subject to significant estimation and are impacted by many external factors, including global economic conditions and the performance of our customers.

A variation in actual sales activity from that forecasted could cause us to plan or budget incorrectly and, therefore, could have a significant adverse effect on our business and consolidated financial statements. Management also forecasts macroeconomic trends and developments and integrates them through long-range planning into budgets, research and development strategies and a wide variety of general management duties. Global economic conditions, and the effect those conditions and any

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disruptions in global markets have on our customers, may have a significant impact on the accuracy of our sales forecasts. These conditions may increase the likelihood or the magnitude of variations between actual sales activity and our sales forecasts and, as a result, our performance may be hindered because of a failure to properly match corporate strategy with economic conditions. This, in turn, could have a significant adverse effect on our business and consolidated financial statements. To the extent our forecasts are incorrect and, as a result, we fail to meet analyst expectations regarding financial performance or miss or reduce the financial guidance outlook we give to investors, our share price may be adversely impacted.

We may not meet our targets and strategies relating to environmental, social and governance considerations, which could expose us to potential liabilities, increased costs, reputational harm and other adverse effects on our business.

We have established targets and strategies related to our reduction of greenhouse gas emissions. Our ability to achieve any such targets or strategies is subject to numerous factors and conditions, many of which are outside of our control. Examples of such factors include, but are not limited to, evolving legal, regulatory and other standards, processes and assumptions, the pace of scientific and technological developments, increased costs, the availability of requisite financing and changes in carbon markets. Failures or delays (whether actual or perceived) in achieving our targets or strategies related to climate change and other environmental matters could adversely affect our business, operations and reputation, and increase risk of litigation.

Furthermore, many governments, regulators, investors, employees, customers and other stakeholders are increasingly focused on environmental, social and governance considerations relating to businesses, including climate change and greenhouse gas emissions, human capital and diversity, equity and inclusion. We make statements about our

environmental, social and governance (ESG) targets and strategies through information provided on our website, press statements and other communications, including through our Corporate Responsibility Report. Responding to these environmental, social and governance considerations and implementation of these targets and strategies involves risks and uncertainties, including those described under "Note About Forward-Looking Statements". In addition, some stakeholders may disagree with our targets and strategies and the focus of stakeholders may change and evolve over time. Stakeholders also may have very different views on where environmental, social and governance focus should be placed, including differing views of regulators in various jurisdictions in which we operate. Any failure, or perceived failure, by us to achieve our targets, further our strategies, adhere to public statements, comply with federal, state or international environmental, social and governance laws and regulations or meet evolving and varied stakeholder expectations and standards could result in legal and regulatory proceedings against us and materially adversely affect our business, reputation, results of operations, financial condition and stock price.

Additionally, new laws, regulations, policies, and international accords relating to environmental, social and governance matters, including sustainability, climate change, human capital and diversity, are being developed and formalized in the United States, Europe and elsewhere, which may require specific, target-driven frameworks or disclosure requirements. For example, in the United States, the SEC has proposed rules requiring, among other things, disclosure of public companies' climate-related strategies, costs, impacts and targets. The California Legislature recently passed two bills that will impose climate-related reporting requirements for many companies doing business in the state, including Ansys. Standards for reporting ESG metrics, including ESG-related disclosures that may be required by the SEC or other regulators, are complex and evolving, and the implementation and oversight of controls to comply with applicable reporting and disclosure standards could impose significant compliance costs. In addition, such disclosure requirements could result in revisions to our previous ESG-related disclosures or challenges in meeting evolving and varied regulatory and other stakeholder expectations and standards, which could expose us to liability or harm our reputation and prospects.

Intellectual Property Risks

Our success is highly dependent upon the legal protection of our proprietary technology.

We primarily rely upon contracts, copyright, patent, trademark and trade secrets laws to protect our technology. We maintain intellectual property programs, including applying for patents, registering trademarks and copyrights, protecting trade secrets, entering into confidentiality agreements with our employees, customers and partners and limiting access to and distribution of our software, documentation and other proprietary information. However, software programs are particularly prone to piracy, which is a global phenomenon, and as a result we may lose revenue from piracy or usage and distribution of unlicensed software. Additionally, patent, copyright, trademark and trade secret protection do not provide the same coverage in every country in which we sell our products and services and some forms of contractual protections (including limited licenses, "click-wrapped" licenses and online agreement) may not be adequately enforced. Policing the unauthorized distribution and use of our products is difficult, and software piracy (including online piracy) is a persistent problem. While we continue to develop better mechanisms to detect and report or investigate unauthorized use of our software, we are also constrained by data privacy laws that restrict our ability to collect data about unlawful usage in some countries. We cannot assure that the steps we take to protect our proprietary technology are adequate to prevent misappropriation of our software by third parties, or that third parties will not copy our technology or develop similar technology independently to compete with our products. Despite our efforts to prevent such activities, we may nonetheless lose significant revenue due to illegal use of our software or technology.

In the event of an infringement or misappropriation of our intellectual property, costly and time-consuming litigation may be necessary to enforce our rights. In addition, third parties may subject us to infringement claims with respect to their intellectual property rights. Any such litigation could be costly to defend, damage our reputation and distract our employees from their daily work. Any successful infringement claims asserted against us could require us to develop technology workarounds for the impacted technologies, products or solutions, which could be costly, disrupt product development and delay go-to-market activities. Such disruption and delay could negatively impact our financial results.

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We may not be able to continue to obtain licenses to third-party software and intellectual property on reasonable terms or at all, which may disrupt our business and harm our financial results.

We license third-party software, including third-party open source software, and other intellectual property for use in product research and development and, in some instances, for inclusion in our products. We also license third-party software, including the software of our competitors, to test the interoperability of our products with other industry products and in connection with our solutions and professional services. These licenses may need to be renegotiated or renewed from time to time, or we may need to obtain new licenses in the future. Third parties may stop adequately supporting or maintaining their technology, or they or their technology may be acquired by our competitors who elect to terminate our contractual relationship. Furthermore, third parties may challenge our use of open source software and compliance with the open source software license terms, or we may inadvertently use third-party open source software in a manner that exposes us to non-compliance claims. We may, additionally, acquire companies that license third-party software from our competitors or others who may elect to terminate the contractual relationship once the acquisition is announced. If we are unable to obtain licenses to such third-party software and intellectual property on reasonable terms or at all, we may not be able to sell the affected products, our customers' usage of the products may be interrupted or our product development processes and professional services offerings may be disrupted, which could in turn harm our financial results, our customers' ability to utilize our software and our reputation.

Cybersecurity Risks

Cyberattacks and security vulnerabilities could lead to reduced revenue, increased costs, liability claims or harm to our reputation.

While we undertake commercially reasonable efforts to maintain and improve the security and integrity of our products, source code, computer systems and data with respect to the relative sensitivity of such software, systems and data, the number of computer "hackers" developing and deploying destructive software programs that attack our products and computer systems continues to increase. We have incurred and will continue to incur additional costs to enhance our cybersecurity efforts. Because the tactics and tools used to obtain unauthorized access to networks or to sabotage systems are constantly evolving, we may be unable to implement adequate preventive measures. Furthermore, employees working from remote work environments could expose us to increased security risks and attacks. Such attacks could disrupt the proper functioning of our products, cause errors in

the output of our customers' work, or allow unauthorized access to and disclosure of our sensitive, proprietary or confidential information or that of our customers and employees. In the event of a serious breach of our products or systems, or where a breach occurs due to our failure to implement reasonable and appropriate safeguards, our reputation may suffer, customers may stop buying products or may terminate current services, we could face lawsuits and potential civil liability, as well as regulatory fines and non-financial penalties for any personal data breach and our financial performance could be negatively impacted.

There is also a danger of industrial espionage, cyberattacks (including state-sponsored attacks), misuse, theft of information or assets (including source code) or damage to assets by people who have gained unauthorized access to our facilities, systems or information. We have in the past, and may in the future, experience such attacks. This includes access to systems or information through email phishing attacks on our employees, which has become a very prevalent technique used against companies, often delaying detection through increasingly complex practices. The objective of these attacks is often to acquire user account credentials in order to access other computer systems through linked accounts or where users have recycled passwords across systems. **The attack against SolarWinds in 2020, in which hackers inserted malware into a SolarWinds software update, highlights the growing risk of infection of software while it is under assembly, known as a supply chain attack.** As a software provider, **there is the risk that we could become a vector for a similar style attack or could ourselves become the subject of a significant network breach through our usage of compromised third-party software.** Similarly, **the subversion of popular open source modules such as the recently exploited Log4J vulnerability represents a widespread and ongoing risk across the software development sector.** **Increasing use of artificial intelligence may increase these risks.**

Inadequate security practices or inadvertent acts or omissions by our employees and partners may also result in unauthorized access to our data. Employees or third parties may also intentionally compromise our or our customers' security or systems. Such cybersecurity breaches, misuse of data or other disruptions could lead to loss of or unauthorized disclosure of our source code or other confidential information, unlicensed use and distribution of our products without compensation, illegal use of our products that could jeopardize the security of customer information stored in and transmitted through our computer systems and theft, manipulation and destruction of proprietary data, resulting in defective products, performance downtimes and possible violation of export laws and other regulatory compliance requirements. Although we actively employ measures to combat such activities, preventing unauthorized access to our systems and data is inherently difficult. In addition, litigation to either pursue our legal rights or defend any claims against us could be costly and time-consuming and may divert management's attention and adversely affect the market's perception of us and our products.

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We have experienced targeted and non-targeted cybersecurity attacks and incidents in the past that have resulted in unauthorized persons gaining access to our information and systems, and we could in the future experience similar attacks. To date, no cybersecurity incident or attack described herein has had a material impact on our business or consolidated financial statements.

A number of our core processes, such as software development, sales and marketing, customer service and financial transactions, rely on IT infrastructure and applications. We also rely on third-party service providers and products, which are exposed to various security vulnerabilities outside of our control. Malicious software, sabotage and other cybersecurity breaches of the types discussed above could cause an outage of our infrastructure, which could cause short-term disruption in operations or, in the event of a longer disruption, lead to a substantial denial of service to our customers and ultimately to production downtime, recovery costs and customer claims for breach of contract, as well as reputational damage and impact to employee morale and productivity.

We rely on service providers for infrastructure and cloud-based products.

We use a number of third-party service providers, which we do not control, for key components of our infrastructure, particularly with respect to development and delivery of our cloud-based products. The utilization of these service providers gives us greater flexibility in efficiently delivering a more tailored, scalable customer experience, but also exposes us to additional risks and vulnerabilities. Third-party service providers operate their own platforms that we access, and we are, therefore, vulnerable to their service interruptions. We may experience interruptions, delays and outages in service and availability from time to time as a result of problems with our third-party service providers' infrastructure. Lack of availability of this infrastructure could be due to a number of potential causes including technical failures, natural disasters (including significant disruptions in weather as a result of global climate change), fraud or security attacks that we cannot predict or prevent. Such outages could lead to the triggering of our service level agreements and the issuance of credits to our cloud-based product customers, which may impact our business and consolidated financial statements. In addition, those of our products and services that depend upon hosted components are vulnerable to security risks inherent in web-based technologies, including greater risk of unauthorized access to or use of customers' protected data. Interception of data transmission, misappropriation or modification of data, corruption of data and attacks by bad actors against our service providers may also adversely affect our products or product and service delivery. Malicious code, viruses or vulnerabilities that are undetected by our service providers may disrupt our business operations generally and may have a disproportionate effect on those of our products that are developed and delivered in the cloud environment. If our security, or that of any of our third-party service providers, is compromised, our software is unavailable or our customers are unable to use our software within a reasonable amount of time or at all, then our business and financial statements could be adversely affected.

These risks, though largely outside our control, may impact customer perception of our products, service and support, and may damage our brand. While we devote resources to maintaining the security and integrity of our products and systems, as well as ensuring adequate due diligence for our third-party service providers, cloud security and reliability is inherently challenging. In the event of a material breach of data hosted by our service providers or a serious security incident on behalf of, caused by or experienced by a service provider, we may experience significant operational and technical difficulties, loss of data including customer data, diminished competitive position or reputation and loss of customer engagement, which could result in civil liabilities and a negative impact to financial performance. It is also possible that our customers and potential customers would hold us accountable for any breach of security affecting a third-party service provider's infrastructure and we may incur significant liability from those customers and from third parties with respect to any breach affecting these systems. We may not be able to recover a material portion of our liabilities to our customers and third parties from a third-party cloud provider.

Financial Risks

Foreign exchange rate fluctuations may adversely affect our consolidated financial statements.

As a result of our significant international presence, we have revenue, expenses, cash, accounts receivable and payment obligations denominated in foreign currencies, most notably the Euro and Japanese Yen. Our operating results are adversely affected when the U.S. Dollar strengthens relative to foreign currencies and are positively affected when the U.S. Dollar weakens relative to foreign currencies. Additionally, when the U.S. Dollar strengthens relative to other currencies, certain channel partners who pay us in U.S. Dollars may have trouble paying on time or may have trouble distributing our products due to the impact of the currency exchange fluctuation on their cash flows. This may impact our ability to distribute our products into certain regions and markets.

We seek to reduce our currency exchange transaction risks primarily through our normal operating and treasury activities, including derivative instruments, but there can be no assurance that these activities will be successful in reducing these risks. In addition, we incur transaction fees in the usage of such derivative instruments. Changes in currency exchange rates may adversely affect or create considerable volatility in our consolidated financial statements.

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Changes to tax laws, variable tax estimates and tax authority audits could impact our financial results and operations.

Our operations are subject to income and transaction taxes in the United States and in multiple foreign jurisdictions. A change in the tax law in the jurisdictions in which we do business, including an increase in tax rates, an adverse change in the treatment of an item of income or expense or a decrease in tax rates in a jurisdiction in which we have significant deferred tax assets, could result in a material increase in tax expense. Furthermore, we have recorded significant deferred tax liabilities related to acquired intangible assets that are **generally** not deductible for tax purposes. These deferred tax liabilities are based on future statutory tax rates in the locations in which the intangible assets are recorded. Any future changes in statutory tax rates would be recorded as an adjustment to the deferred tax liabilities in the period the change is announced and could have a material impact on our effective tax rate during that period. Additionally, changes in tax laws could impact operating cash flow due to changes in timing of payments required as well as the overall rate we are required to pay.

The Organization for Economic Co-operation and Development ("OECD"), **in coordination with the G20**, has suggested **a number of** fundamental changes **in as part of an effort to** address the global tax issue of base erosion and profit shifting. In particular, and as a way to address the tax challenges arising from the digitalization of the economy, the OECD **has introduced a two-pillar approach which provides for the** allocation of profits among **tax taxing** jurisdictions in which companies do business, **as well as and** the implementation of **a 15 percent** global minimum tax rate (namely the "Pillar One" and "Pillar Two" proposals). **The agreement between OECD and G20 members calls for implementation of the various measures of the Pillar Two rules in 2024 and 2025.** Many countries are in the process of implementing laws based on **the Pillar Two proposals**, proposal which may adversely **impact affect** our provision for income taxes, net income, and cash **flows. flows depending on the specifics of the laws passed in each jurisdiction.** These proposals also entail significant compliance obligations and if we are unable to successfully transition our business systems, processes and internal controls, it could impact our ability to meet financial and tax reporting deadlines.

We also make significant estimates in determining our worldwide income tax provision. These estimates involve complex tax regulations in many jurisdictions and are subject to many transactions and calculations in which the ultimate tax outcome is uncertain. The outcome of tax matters could be different than the estimates reflected in the historical income tax provision and related accruals. Such differences could have a material impact on income tax expense and net income in the periods in which such determinations are made.

The amount of income tax we pay is subject to ongoing audits by federal, state and foreign tax authorities. These audits can result in additional assessments, including interest and penalties. Our estimates for liabilities associated with uncertain tax positions are highly judgmental and actual future outcomes may result in favorable or unfavorable adjustments to our estimated tax liabilities, including estimates for uncertain tax positions, in the period the assessments are made or resolved, audits are closed or when statutes of limitation on potential assessments expire. As a result, our effective tax rate may fluctuate significantly on a quarterly or annual basis.

Our indebtedness could adversely affect our business, financial condition and results of operations.

We have outstanding borrowings of \$755.0 million under a term loan facility, which matures on June 30, 2027. We also have access to a \$500.0 million revolving loan facility, which includes a \$50.0 million sublimit for the issuance of letters of credit. The credit agreement governing these loans contains customary representations and warranties, affirmative and negative covenants and events of default. The credit agreement also contains a financial covenant requiring us to maintain a consolidated net leverage ratio not in excess of 3.50 to 1.00 as of the end of any fiscal quarter (for the four-quarter period ending on such date) with an opportunity for a temporary increase in such consolidated net leverage ratio to 4.00 to 1.00 upon the consummation of certain qualified acquisitions for which the aggregate consideration is at least \$250.0 million.

Notwithstanding the limits contained in the credit agreement governing our term loan facility and revolving loan facility, we may be able to incur substantial additional debt from time to time to finance working capital, capital expenditures, share repurchases, investments or acquisitions or for other purposes. If we do so, the risks related to our level of debt could intensify. Specifically, our level of debt could:

- make it more difficult for us to satisfy our debt obligations and other ongoing business obligations, which may result in defaults;
- result in an event of default if we fail to comply with the financial and other covenants contained in the agreement governing our debt, which could result in all of our debt becoming immediately due and payable or require us to negotiate an amendment to financial or other covenants that could cause us to incur additional fees and expenses;
- limit our ability to obtain additional financing to fund future working capital, capital expenditures, acquisitions or other general corporate requirements;
- reduce the availability of our cash flow to fund working capital, capital expenditures, acquisitions and other general corporate purposes;
- increase our vulnerability to the impact of adverse economic and industry conditions;

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- expose us to the risk of increased interest rates as our borrowings are at variable rates of interest, which can adversely impact our operating cash flow;
- limit our flexibility in planning for, or reacting to, and increasing our vulnerability to, changes in our business, the industries in which we operate and the overall economy;
- place us at a competitive disadvantage compared to other, less leveraged competitors;
- increase our cost of borrowing; and
- increase our effective tax rate as interest expense could become non-deductible.

Any of the above-listed factors could have an adverse effect on our business, financial condition and results of operations and our ability to meet our payment obligations under our debt agreement.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Risk Management and Strategy

We are subject to various cybersecurity risks in connection with our business. See the section entitled "Cybersecurity Risks" in Part I, Item 1A. Risk Factors of this Annual Report on Form 10-K. Our cybersecurity program is led by an experienced team of cybersecurity professionals headed by our Vice President of Cybersecurity, reporting to our General Counsel.

Our Cybersecurity Management System (CSMS) is part of our cybersecurity program and operates under the Ansys CSMS Risk Management Methodology and Policy (Policy), which establishes a process to identify, assess and mitigate potential cybersecurity threats. The Policy provides for conducting risk assessments to identify Ansys information assets (such as software assets or data), identifying potential vulnerabilities related to those assets, assessing the potential impact should the vulnerability be exploited and working with our internal cybersecurity team to provide recommendations to eliminate or mitigate the potential risk. The risk assessments allow our management to validate threats and investigate potential vulnerabilities to more effectively make risk management decisions and assign resources to mitigate risk.

Our CSMS uses third-party software to identify and prioritize cybersecurity threats and has dedicated personnel whose core responsibilities are to document and track cybersecurity threats. We use security technology tools and methodologies to protect our information systems. We also use tools for risk and vulnerability management and perform periodic penetration testing and vulnerability scanning. Further, we provide our employees information security awareness training upon hire and annually thereafter.

We conduct an enterprise risk assessment that is updated on an annual basis and includes periodic monitoring of new and emerging risks and preparation for and progress on mitigation efforts. Cybersecurity is directly integrated into this process as an operational risk and has been classified within the enterprise risk management program based on the risk assessment. Any identified gaps are incorporated and monitored through a cybersecurity roadmap, with progress reported to management. Controls put in place to manage any identified risks are evaluated against an established risk-mitigation framework.

We engage multiple third-party consultants to advise us on our cybersecurity processes. We conduct external, third-party assessments of our cybersecurity program against specified industry frameworks, as well as annual re-assessments designed to help us understand program changes and the impact that they have had on overall program maturity. Additionally, we engage an external third-party penetration testing entity to measure the effectiveness of our cybersecurity strategy against cybersecurity threats.

Lastly, we use third-party intelligence resources to help identify cybersecurity threats via finished intelligence, alerts and consulting services that help answer requests for information. We have collaborative relationships with The Information Technology - Information Sharing and Analysis Center and several governmental agencies for identification of threats that target technology.

Ansys also has an established Third-Party Risk Management Program and Policy that is designed to identify and manage cybersecurity risks associated with third-party service providers. The program includes processes designed to identify, assess and mitigate and/or manage third-party service provider risks. Under the Third-Party Risk Management Program and Policy, we evaluate third-party service providers through five stages: planning, due diligence, contracting/onboarding, ongoing monitoring and termination/off-boarding.

We have in the past, and may in the future, experience cybersecurity incidents. Although prior incidents have not materially affected Ansys, future incidents from cybersecurity threats could have a materially adverse impact on us, including on our reputation, the results of our operations and our financial condition and could implicate lawsuits and potential civil liability, as well as regulatory fines and non-financial penalties.

Governance

Our cybersecurity program is overseen by the Audit Committee of the Ansys Board of Directors. This oversight is anchored in the Audit Committee's charter, which specifically grants the Audit Committee oversight responsibility on our risks related to cybersecurity, including a review of the state of our cybersecurity program, emerging cybersecurity developments and threats and our strategy to mitigate cybersecurity risks. The Senior Director of Internal Audit and Risk Management, with input from the Vice President of

Cybersecurity, reports on the status of the cybersecurity program to the Audit Committee and, periodically or where appropriate, to the Ansys Board of Directors. These reports generally include recent updates and improvements to the cybersecurity program, information on the cybersecurity program's status and intelligence on recent cybersecurity threats, actions we have taken to mitigate such threats and recent material incidents, or potentially material incidents, if any. In addition, the Senior Director of Internal Audit and Risk Management reports to the Audit Committee on the enterprise risk management program, which includes risks associated with cybersecurity.

Our cybersecurity program, and its associated CSMS, is led by an experienced team of cybersecurity professionals headed by the Vice President of Cybersecurity. In the event of a cybersecurity incident, we have a dedicated Cybersecurity Incident Response Team that is responsible for identifying, escalating, responding to and managing cybersecurity incidents, including interdiction and remediation, as well as conducting the initial investigation, gathering and analyzing data, mitigating damage to the informational assets and infrastructure of Ansys, restoring normal services and system integrity and implementing actions designed to prevent future cybersecurity incidents. This team reports to the Vice President of Cybersecurity. In the event of a significant cybersecurity incident, a cross-functional team comprised of cyber, legal and finance personnel work together to determine the materiality of an incident.

Our Cybersecurity Steering Committee, which includes the Vice President of Cybersecurity and several members of management, is responsible for the oversight of our cybersecurity program. The Vice President of Cybersecurity has over 20 years of experience in cybersecurity. Members of this committee include our General Counsel, Chief Financial Officer and the Senior Director of Internal Audit and Risk Management, all of whom have significant experience in managing enterprise risk, including risk from cybersecurity threats. The Cybersecurity Steering Committee meets routinely to discuss the status of the cybersecurity program, the status of responses to cybersecurity incidents or threats, any updates on certification programs and any emerging cybersecurity threats. Information received by management through the Cybersecurity Steering Committee is regularly included in the quarterly updates to the Audit Committee.

ITEM 2. PROPERTIES

Our executive offices and those related to certain domestic product development, marketing, production and administration are located in a LEED certified, 186,000 square foot office facility in Canonsburg, Pennsylvania. The lease for this facility began on October 1, 2014 and expires on December 31, 2029, excluding any renewal or termination options.

We also lease office space in various locations throughout the world. We own substantially all equipment used in our facilities. Management believes that our facilities generally allow for sufficient space to support present and future foreseeable needs, including such expansion and growth as the business may require.

Our properties and equipment are in good operating condition and are adequate for our current needs. We do not anticipate difficulty in renewing existing leases as they expire or in finding alternative facilities.

ITEM 3. LEGAL PROCEEDINGS

We are subject to various claims, investigations and legal and regulatory proceedings that arise in the ordinary course of business, including, but not limited to, commercial disputes, labor and employment matters, tax audits, alleged infringement of third parties' intellectual property rights and other matters. Use or distribution of our products could generate product liability, regulatory infraction or claims by our customers, end users, channel partners, government entities or third parties. Sales and marketing activities that impact processing of personal data, as well as measures taken to promote license compliance against pirated or unauthorized usage of our commercial products, may also result in claims by customers and individual employees of customers or by non-customers using pirated versions of our products. Each of these matters is subject to various uncertainties, and it is possible that an unfavorable resolution of one or more of these matters could have a significant adverse effect on our consolidated financial statements as well as cause reputational damage. In our opinion, the resolution of pending matters is not expected to have a material adverse effect on our financial position, results of operations or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock trades on the Nasdaq Global Select Market tier of the Nasdaq Stock Market under the symbol: "ANSS".

On February 8, 2023 February 7, 2024, there were 234 215 stockholders of record of our common stock.

We have not historically paid cash dividends on our common stock as we have retained earnings primarily for acquisitions, for future business opportunities, to make payments on outstanding debt balances and to repurchase stock when authorized by the Board of Directors and when such repurchase meets our objectives. We review our policy with respect to the payment of dividends from time to time; however, there can be no assurance that any dividends will be paid in the future. In addition, pursuant to the Merger Agreement, we may not declare, accrue, set aside, establish a record date for or pay any dividend or other distribution (whether in cash, stock or otherwise) in respect of any shares of capital stock or other securities, without obtaining Synopsys' approval (which may not be unreasonably withheld, conditioned or delayed).

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Performance Graph

Set forth below is a line graph comparing the yearly percentage change in the cumulative total stockholder return of our common stock, based on the market price per share of our common stock, with the total return of companies included within the Nasdaq NASDAQ Composite Stock Market Index, the Nasdaq NASDAQ 100 Stock Market Index, the S&P 500 Stock Index and an industry peer group of seven companies (Autodesk, (Altair Engineering Inc., PTC Aspen Technology, Inc., Autodesk, Inc., Cadence Design Systems, Inc., Synopsys, Inc., Altair Engineering Inc., Aspen Technology, Inc. and Dassault Systemes SE) SE, PTC Inc., and Synopsys, Inc.) for the period commencing December 31, 2017 December 31, 2018 and ending December 31, 2022 December 31, 2023. The calculation of total cumulative returns assumes a \$100 investment in our common stock, the Nasdaq NASDAQ Composite Stock Market Index, the Nasdaq NASDAQ 100 Stock Market Index, the S&P 500 Stock Index and the peer group on December 31, 2017 December 31, 2018, and the reinvestment of all dividends, and accounts for all stock splits. The historical information set forth below is not necessarily indicative of future performance.



ASSUMES \$100 INVESTED ON DECEMBER 31, 2017 2018

ASSUMES DIVIDENDS REINVESTED

FIVE FISCAL YEARS ENDED DECEMBER 31, 2022 2023

		As of December 31,												
		2017	2018	2019	2020	2021	2022							
		As of December 31,						As of December 31,						
		2018						2018	2019	2020	2021	2022	2023	
ANSYS, Inc.	ANSYS, Inc.	\$100	\$97	\$174	\$246	\$272	\$164	ANSYS, Inc.	\$100	\$180	\$255	\$281	\$169	\$254
Nasdaq Composite		\$100	\$97	\$133	\$192	\$235	\$159							
Nasdaq 100		\$100	\$100	\$140	\$208	\$265	\$179							
NASDAQ Composite		NASDAQ Composite						\$100	\$137	\$198	\$242	\$163	\$236	
NASDAQ 100		NASDAQ 100						\$100	\$139	\$208	\$265	\$179	\$278	
S&P 500 Stock Index		S&P 500 Stock Index						\$100	\$131	\$156	\$200	\$164	\$207	
Peer Group		Peer Group						\$100	\$142	\$223	\$275	\$210	\$311	

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Unregistered Sale of Equity Securities and Use of Proceeds

None.

Issuer Purchases of Equity Securities

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares	
			Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under Plans or Programs ⁽¹⁾
October 1 - October 31, 2022	—	\$ —	—	1,959,495
November 1 - November 30, 2022	225,437	\$ 221.79	225,437	1,734,058
December 1 - December 31, 2022	—	\$ —	—	1,734,058
Total	225,437	\$ 221.79	225,437	1,734,058

⁽¹⁾ We initially announced our stock repurchase program in February 2000 and subsequently announced various amendments to the program. On February 21, 2018, we announced that our Board of Directors had authorized the replenishment of our stock repurchase program to an aggregate total of 5.0 million shares. There is no expiration date for the stock repurchase program.

ITEM 6. [RESERVED]

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with our consolidated financial statements and notes thereto. This section generally discusses our results of operations for the year ended **December 31, 2022** **December 31, 2023** compared to the year ended **December 31, 2021** **December 31, 2022**. For discussion and analysis of our results for the year ended **December 31, 2021** **December 31, 2022** compared to the year ended **December 31, 2020** **December 31, 2021**, refer to "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of our **2021** **2022** Form 10-K, filed with the SEC on **February 23, 2022** **February 22, 2023**.

Business

Ansys, a corporation formed in 1994, develops and globally markets engineering simulation software and services widely used by engineers, designers, researchers and students across a broad spectrum of industries and academia, including high-tech, aerospace and defense, automotive, energy, industrial equipment, materials and chemicals, consumer products, healthcare and construction. Headquartered south of Pittsburgh, Pennsylvania, we employed **6,200 and 5,600** people as of **December 31, 2022**, **December 31, 2023 and 2022**, respectively. We focus on the development of open and flexible solutions that enable users to analyze designs on-premises and/or via the cloud, providing a common platform for fast, efficient and cost-conscious product development, from design concept to final-stage testing, validation and deployment. We distribute our suite of simulation technologies through direct sales offices in strategic, global locations and a global network of independent resellers and distributors (collectively, channel partners). It is our intention to continue to maintain this hybrid sales and distribution model. We operate and report as one segment.

When visionary companies need to know how their world-changing ideas will perform, they close the gap between design and reality using Ansys simulation. For more than 50 years, Ansys software has enabled innovators across industries to push the boundaries of product design by using the predictive power of simulation. From sustainable transportation and advanced satellite systems to life-saving medical devices, Ansys powers innovation that drives human advancement.

Our strategy of Pervasive Insights seeks to deepen the use of simulation in our core market, to inject simulation throughout the product lifecycle and extend the accessibility to a broader set of users and use cases. Our business has three vectors of growth:

- More products. Our broad and deep multiphysics portfolio enables us to grow with customers as they use simulation to solve more complex problems across a broad set of industries.
- More users. Investments in simulation education and user experience simplification has made simulation more accessible to a broader user base.
- More computations. Larger and more complex simulations drive more computation, requiring customers to use more Ansys licenses to complete their simulations.

Through decades of investments in the academic community and enhanced user experiences, our solutions have become accessible and relevant beyond our core "engineering" end user, to reach more users upstream and downstream from our core, which is the product validation process. Our multiphysics solutions enable our customers to address increasingly complex R&D challenges from the component through the system and mission level of analysis. Our products seamlessly enable access to high performance compute capacity to run simulations, on-premises or in the cloud, which means our customers' R&D teams are unencumbered by compute capacity limitations that can hinder R&D cycle times. **Our investments in artificial intelligence capabilities across our simulation portfolio and technical support services enhance the customer experience, democratize simulation and further next-generation innovation.**

The engineering software simulation market is strong and growing. The market growth is driven by customers' need for rapid, quality innovation in a cost-efficient manner, enabling faster time to market for new products and lower warranty costs. Increasing product complexity is driving sustained demand for simulations. Key industry trends fueling customers' increasing needs for simulation include:

- Electrification;
- Autonomy;
- Connectivity;
- IIoT; and
- Sustainability, including minimizing waste and physical prototyping, and improving circularity and development time.

We have been investing and intend to continue to invest in our portfolio to broaden the range of physics and enable customers to analyze the interactions among physics at the component, system and mission level. Our strategy of **Pervasive Insights** is aligned with the near-term market growth opportunities and is laying the foundation for a future where simulation can be further democratized to broader classes of end-users and end-use cases.

To augment our organic development roadmaps, In addition, we intend to have and will continue our strategic and disciplined acquisition strategy to grow our business. Our strategy is to partner with industry leaders to extend simulation into other ecosystems and customer R&D workflows.

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workflows. Our business is built on a culture of high ethical standards and commitment to diversity, equity, inclusion and belonging.

We license our technology to businesses in a diverse set of industries, educational institutions and governmental agencies. We believe that the features, functionality and integrated multiphysics capabilities of our software products are as strong as they have ever been. The software business is generally characterized by long sales cycles which increase the difficulty of predicting sales for any particular quarter. We make many operational and strategic decisions based upon short- and long-term sales forecasts that are impacted not only by these long sales cycles, but also by current global economic conditions. As a result, we believe that our overall performance is best measured by fiscal year results rather than by

quarterly results. Please see the sub-section entitled "Company Operational Risks" under Part I, Item 1A. of this Annual Report on Form 10-K for additional discussion of the potential impact of our sales forecasts on our financial condition, cash flows and operating results.

We address the competition and price pressure that we face in the short- and long-term by focusing on expanding the breadth, depth, ease of use and quality of the technologies, features, functionality and integrated multiphysics capabilities of our software products as compared to our competitors; investing in research and development to develop new and innovative products and increasing the capabilities of our existing products; maintaining a diverse industry footprint and focusing on customer needs, training, consulting and support; and enhancing our distribution channels. We also evaluate and execute strategic acquisitions to supplement our global engineering talent, product offerings and distribution channels.

Synopsys Merger Agreement

On January 15, 2024, we entered into the Merger Agreement with Synopsys and Merger Sub, pursuant to which Merger Sub will merge with and into Ansys, with Ansys surviving the Merger as a wholly owned subsidiary of Synopsys. Our Board of Directors has unanimously approved the Merger Agreement and, subject to certain exceptions set forth in the Merger Agreement, resolved to recommend that our stockholders adopt the Merger Agreement. If the Merger is consummated, our common stock will be delisted from the Nasdaq Global Select Market and deregistered under the Exchange Act.

Under the Merger Agreement, at the effective time of the Merger, each issued and outstanding share of our common stock (subject to certain exceptions set forth in the Merger Agreement) will be cancelled and converted into the right to receive (i) 0.3450 of a share of common stock, par value \$0.01 per share, of Synopsys and (ii) \$197.00 in cash, without interest, subject to applicable withholding taxes. With regard to the Stock Consideration, if the aggregate number of shares of Synopsys common stock to be issued in connection with the Merger would exceed the Maximum Share Number, (a) the Exchange Ratio will be reduced to the minimum extent necessary such that the aggregate number of shares of Synopsys common stock to be issued in connection with the Merger does not exceed the Maximum Share Number and (b) the Per Share Cash Amount will be correspondingly increased to offset such adjustment.

The Merger Agreement contains customary representations, warranties and covenants made by each of Ansys, Synopsys, and Merger Sub, including, among others, covenants regarding the conduct of our and Synopsys' businesses during the pendency of the transactions contemplated by the Merger Agreement, the making of certain public disclosures and other matters as described in the Merger Agreement. We and Synopsys have agreed to use reasonable best efforts to take all actions necessary to consummate the Merger, including cooperating to obtain the regulatory approvals necessary to complete the Merger. We have agreed not to, among other things, (a) solicit proposals relating to alternative transactions or (b) enter into discussions or negotiations or provide non-public information in connection with any proposal for an alternative transaction from a third party, subject to certain exceptions to permit our Board of Directors to comply with its fiduciary obligations. We have further agreed to cease and cause to be terminated any existing discussions or negotiations, if any, with regard to alternative transactions.

The Merger Agreement may be terminated under certain circumstances, including that either party may have the right to terminate if the Merger is not completed by January 15, 2025, which may be extended to January 15, 2026 as provided in the Merger Agreement. If the Merger Agreement is terminated, (A) Synopsys, under specified circumstances, including termination following an injunction arising in connection with certain antitrust or foreign investment laws, will be required to pay us a termination fee of \$1,500.0 million; and (B) we, under specified circumstances, including our termination of the Merger Agreement to accept and enter into a definitive agreement with respect to a Superior Proposal (as defined in the Merger Agreement) or Synopsys' termination upon the change by our Board of Directors of its recommendation in favor of the Merger, will be required to pay Synopsys a termination fee of \$950.0 million.

The completion of the Merger is subject to customary closing conditions, including, among others, approval of the Merger under certain applicable antitrust and foreign investment regimes and the adoption of the Merger Agreement by our stockholders. We anticipate the transaction to close in the first half of 2025.

Overview

Overall GAAP and Non-GAAP Results

This section includes a discussion of GAAP and Non-GAAP results. For reconciliations of Non-GAAP results to GAAP results, see the section titled "Non-GAAP Results" herein. The 2023 period non-GAAP results exclude the income statement effects of the acquisition accounting adjustments to deferred revenue from business combinations closed prior to 2022, stock-based compensation, excess payroll taxes related to stock-based compensation, amortization of acquired intangible assets, expenses related to business combinations and adjustments for the income tax effect of the excluded items. The 2022 period non-GAAP results also exclude the income statement effects of acquisition accounting adjustments to deferred revenue from business combinations closed prior to 2022. This adjustment is not material in 2023.

Our GAAP and non-GAAP results for the year ended December 31, 2022 December 31, 2023 as compared to the year ended December 31, 2021 December 31, 2022 reflected the following variances:

	Year Ended December 31, 2022		
	GAAP	Non-GAAP	
	Year Ended December 31, 2023	Year Ended December 31, 2023	Year Ended December 31, 2023
GAAP		GAAP	Non-GAAP

Revenue	Revenue	8.3 %	7.3 %	Revenue	9.9 %	9.5	%
Operating income	Operating income	15.5 %	8.8 %	Operating income	5.6 %	11.1	%
Diluted earnings per share	Diluted earnings per share	16.1 %	8.4 %	Diluted earnings per share	(4.3) %	10.1	%

Our results reflect an increase in revenue during the year ended **December 31, 2022** **December 31, 2023** due to growth in **maintenance**, subscription lease license, **maintenance** and service **revenue**, partially offset by a reduction in perpetual license revenue. We also experienced increased operating expenses during the year ended **December 31, 2022** **December 31, 2023**, primarily due to increased personnel costs. The actual U.S. Dollar reported results were **significantly** impacted by a stronger U.S. Dollar.

This section also includes a discussion of constant currency results, which we use for financial and operational decision-making and as a means to evaluate period-to-period comparisons by excluding the effects of foreign currency fluctuations on the reported results. Constant currency is a non-GAAP measure. All constant currency results presented in this Item 7 exclude the effects of foreign currency fluctuations on the reported results. To present this information, the **2022 2023** results for entities whose functional currency is a currency other than the U.S. Dollar were converted to U.S. Dollars at rates that were in effect for the **2021 2022** comparable period, rather than the actual exchange rates in effect for **2022, 2023**. Constant currency growth rates are calculated by adjusting the **2022 2023** reported amounts by the **2022 2023** currency fluctuation impacts and comparing to the **2021 2022** comparable period reported amounts.

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Impact of Foreign Currency

Our comparative financial results were impacted by fluctuations in the U.S. Dollar during the year ended **December 31, 2022** **December 31, 2023** as compared to the year ended **December 31, 2021** **December 31, 2022**. The impacts on our **GAAP and non-GAAP** revenue and operating income as a result of the fluctuations of the U.S. Dollar when measured against our foreign currencies based on **2021 2022** exchange rates are reflected in the table below. Amounts in brackets indicate an adverse impact from currency fluctuations.

Year Ended December 31, 2022		Year Ended December 31, 2023		Year Ended December 31, 2023	
(in thousands)	(in thousands)	GAAP	Non-GAAP	(in thousands)	GAAP
Revenue	Revenue	\$(112,742)	\$(112,980)		Non-GAAP
Operating income	Operating income	\$ (63,748)	\$ (66,583)		

In constant currency, our variances were as follows:

Year Ended December 31, 2022		Non-GAAP		Year Ended December 31, 2023	
GAAP		GAAP		Non-GAAP	
Revenue	Revenue	14.2 %	13.2 %	Revenue	10.2 %
Operating income	Operating income	27.9 %	17.1 %	Operating income	5.9 %

Other Key Business Metric

Annual Contract Value (ACV) is a key performance metric and is useful to investors in assessing the strength and trajectory of our business. ACV is a supplemental metric to help evaluate the annual performance of the business. Over the life of the contract, ACV equals the total value realized from a customer. ACV is not impacted by the timing of license revenue recognition. ACV is used by management in financial and operational decision-making and in setting sales targets used for compensation. ACV is not a replacement for, and should be viewed independently of, GAAP revenue and deferred revenue as ACV is a performance metric and is not intended to be combined with any of these items. There is no GAAP measure comparable to ACV. ACV is composed of the following:

- the annualized value of maintenance and subscription lease contracts with start dates or anniversary dates during the period, plus

- When we refer to the anniversary dates in the definition of ACV above, we are referencing the date of the beginning of the next twelve-month period in a contractually committed multi-year contract. If a contract is three years in duration, with a start date of July 1, 2022, the anniversary dates would be July 1, 2023, July 1, 2024, and July 1, 2025. We label these anniversary dates as they are contractually committed. While this contract would be up for renewal on July 1, 2025, our ACV performance metric does not assume any contract renewals.

Example 2: For purposes of calculating ACV, a \$300,000 subscription lease contract or a \$300,000 maintenance contract with a term of **July 1, 2022** **July 1, 2023 – June 30, 2025** **June 30, 2026**, would each contribute \$100,000 to ACV in each of fiscal years **2022**, **2023**, **2024** and **2024**, **2025**. There would be no contribution to ACV for fiscal year **2025** **2026** as each period captures the full annual value upon the anniversary date.

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Recurring ACV includes both subscription lease license and maintenance ACV and excludes perpetual license and service ACV.

Industry Commentary

For 2022, In 2023, ACV growth was broad based across all industries. Our core industries of high-tech, aerospace and defense (A&D) and automotive experienced strong growth as demand from we continue to see trends, such as generative AI, pervasive connectivity and electrification, transform industry landscapes. Our technology remains a vital component to our customers' success as the need for innovation and agility reaches new heights. In the high-tech industry, the proliferation of connected devices is driving more applications for analog chips across industries, including automotive and healthcare. In tandem, our customers for more continue to invest in our solutions to develop advanced packaging technologies, such as 3D-IC, to overcome integration density constraints and meet the needs of compute-intensive applications, such as AI/ML. Within the automotive industry, our simulation products, users solutions remain vital components in the development and computations continued to drive the need to accelerate innovation validation of safe, reliable ADAS features, electrified powertrains and overcome engineering challenges stemming from increasingly complex products. In high-tech, customers continued to push the boundaries of electronics and semiconductor performance. The breadth, depth and accuracy of our portfolio remained a key factor in winning new accounts and growing existing accounts. Digital transformation remains a key initiative software-defined vehicles. Additionally, in the A&D industry. The integration industry, our modeling and simulation capabilities remain central to the development and deployment of our core solvers into our digital mission engineering solutions, as well as our model-based system engineering tool, allowed us to further entrench ourselves within key customers. The automotive industry's initiatives around electrification, connectivity more efficient aircraft, the advanced air mobility segment and driver-assist technology continued to support investments in our solutions. The industrial equipment and energy industries also had strong performance as companies use our solutions for their sustainability and digital transformation initiatives. Additionally, the healthcare industry had strong growth as we continued to see companies mature digital engineering efforts as they expand engineering staff and Digital Twin/Digital Engineering initiatives in areas such as surgery and implantable devices. increasingly complex defense technology.

Geographic Trends

The following table presents our GAAP and non-GAAP geographic revenue variances using actual and constant currency rates during the year ended December 31, 2022 December 31, 2023 as compared to the year ended December 31, 2021 December 31, 2022:

		Year Ended December 31, 2022													
		GAAP		Non-GAAP											
		Actual	Constant Currency	Actual	Constant Currency										
		Year Ended December 31, 2023													
		Year Ended December 31, 2023													
		Year Ended December 31, 2023													
		GAAP				GAAP						Non-GAAP			
		Actual						Actual		Constant Currency		Actual		Constant Currency	
Americas	Americas	7.4 %	7.6 %	5.5 %	5.7 %	Americas	14.1 %	14.2 %		13.8 %		13.8 %			
EMEA	EMEA	5.8 %	16.1 %	5.6 %	15.9 %	EMEA	10.6 %	8.3 %		10.2 %		7.9 %			

Asia-Pacific	Asia-Pacific	12.8 %	24.6 %	12.5 %	24.3 %	Asia-Pacific	1.7 %	5.0 %	1.3 %	4.6 %
Total	Total	8.3 %	14.2 %	7.3 %	13.2 %	Total	9.9 %	10.2 %	9.5 %	9.8 %

Revenue results from region to region can fluctuate due to the timing, duration and size of multi-year lease subscriptions subscription contracts in any particular period and are not necessarily indicative of the underlying operational performance. To drive growth, we continue to focus on a number of sales improvement activities across the geographic regions, including sales hiring, pipeline building, productivity initiatives and customer engagement activities.

During the year ended December 31, 2022 December 31, 2023, trade restrictions limited our ability to deliver the sale of certain Ansys products and services to customers in Russia and Belarus entities performing research & development and certain entities controlled activities in China. For context, the combined 2021 revenue for all customers in Russia and Belarus was \$15.1 million, less than 1% of our total 2021 revenue.

On October 7, 2022, the U.S. Department of Commerce, Bureau of Industry and Security announced new restrictions targeting the sales of semiconductor products into China. We expect the impact of those restrictions to be immaterial on our business. As a reference, our semiconductor business in China over the last twelve months represented less than 1% of our consolidated revenue and China's total contribution to revenue for the same period was 4.7%.

Additional restrictions or a further deterioration in the global trade environment could have a material adverse impact on our business, results of operations or financial condition. Refer to additional details in Part I, Item 1A, 1A herein for a discussion of additional business risks, including those associated with the conflict between Russia and Ukraine.

[Table export of Contentscertain technologies to China.](#)

Acquisitions

We make targeted acquisitions in order to support our long-term strategic direction, accelerate innovation, provide increased capabilities to our existing products, supply new products and services, expand our customer base and enhance our distribution channels.

During On January 3, 2023, we completed the acquisition of DYNAmore for a purchase price of \$139.2 million, or \$126.4 million net of cash acquired. The acquisition expands our position as a simulation solution provider within the automotive industry. The effects of the acquisition were not material to our consolidated results of operations.

Additionally, during the year ended December 31, 2022, December 31, 2023 and 2022, we completed several strategic other acquisitions to expand our solution offerings and enhance our customers' experience. The effects of the acquisitions were not material to our consolidated results of operations individually or in the aggregate. The combined purchase price of the these acquisitions completed during the year years ended December 31, 2022 December 31, 2023 and 2022 was approximately \$401.8 \$94.4 million, or \$391.6 million net of cash acquired.

During the year ended December 31, 2021, we closed various acquisitions, including the acquisition of Zemax, which we completed on October 1, 2021 for a purchase price of \$411.5 million, paid in cash, or \$399.1 \$88.3 million net of cash acquired, from Zemax. Zemax, a leader in high-performance optical imaging system simulation, expands the scope and \$401.7 million, or \$390.8 million net of our optical and photonics simulation portfolio by giving users comprehensive solutions to drive innovation in healthcare, autonomy, consumer electronics and the IIoT. cash acquired, respectively.

For further information on our business combinations during the years ended December 31, 2022 December 31, 2023 and 2021, 2022, see Note 4 to the consolidated financial statements included in Part IV, Item 15 of this Annual Report on Form 10-K.

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Results of Operations

The results of operations discussed below are on a GAAP basis unless otherwise stated.

For purposes of the following discussion and analysis, the table below sets forth certain consolidated financial data for the years 2022 2023 and 2021, 2022. The operating results of our acquisitions have been included in the results of operations since their respective acquisition dates.

(in thousands)	(in thousands)	Year Ended December 31,		Year Ended December 31,
		2022	2021	
Revenue:	Revenue:			
Revenue:				
Revenue:				
Software licenses				
Software licenses				
Software licenses	Software licenses	\$ 988,978	\$ 945,797	
Maintenance and service	Maintenance and service	1,076,575	960,918	
Maintenance and service				
Maintenance and service				
Total revenue				

Total revenue			
Total revenue	Total revenue	2,065,553	1,906,715
Cost of sales:	Cost of sales:		
Cost of sales:			
Cost of sales:			
Software licenses			
Software licenses			
Software licenses	Software licenses	33,081	38,156
Amortization	Amortization	69,372	60,762
Amortization			
Amortization			
Maintenance and service			
Maintenance and service			
Maintenance and service	Maintenance and service	148,188	159,066
Total cost of sales	Total cost of sales	250,641	257,984
Total cost of sales			
Total cost of sales			
Gross profit			
Gross profit			
Gross profit	Gross profit	1,814,912	1,648,731
Operating expenses:	Operating expenses:		
Operating expenses:			
Operating expenses:			
Selling, general and administrative			
Selling, general and administrative			
Selling, general and administrative	Selling, general and administrative	772,871	715,377
Research and development	Research and development	433,661	404,870
Research and development			
Research and development			
Amortization			
Amortization			
Amortization	Amortization	15,722	15,213
Total operating expenses	Total operating expenses	1,222,254	1,135,460
Total operating expenses			
Total operating expenses			
Operating income			
Operating income			
Operating income	Operating income	592,658	513,271
Interest income	Interest income	5,717	2,078
Interest income			

Interest income			
Interest expense	Interest expense	(22,726)	(12,405)
Other (expense) income, net		(334)	12,410
Interest expense			
Interest expense			
Other expense, net			
Other expense, net			
Other expense, net			
Income before income tax provision			
Income before income tax provision			
Income before income tax provision	Income before income tax provision	575,315	515,354
Income tax provision	Income tax provision	51,605	60,727
Income tax provision			
Income tax provision			
Net income	Net income	\$ 523,710	\$ 454,627
Net income			
Net income			

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Year Ended December 31, 2022 December 31, 2023 Compared to Year Ended December 31, 2021 December 31, 2022

Revenue:

(in thousands, except percentages)	(in thousands, except percentages)	Year Ended December 31,							
		2022		2021		Change			
		Constant		GAAP	GAAP				
		GAAP	Currency		GAAP	Constant	Currency		
		Amount			Amount	%	Amount	%	
(in thousands, except percentages)									
(in thousands, except percentages)									
		GAAP							
		Amount							

Revenue for the year ended **December 31, 2022** **December 31, 2023** increased **8.3%** 9.9% compared to the year ended **December 31, 2021** **December 31, 2022**, or **14.2%** 10.2% in constant currency. Maintenance revenue growth of **12.1%** 9.9%, or **18.3%** 10.3% in constant currency, is correlated with the license sales discussed later in this paragraph and is driven substantially by our existing customer base. The reported **\$108.2 million** **\$99.3 million** growth in maintenance revenue was attributable to a **\$98.1** **\$95.8** million increase in maintenance associated with lease licenses and a **\$10.1** **\$3.5** million increase in maintenance associated with perpetual sales. Subscription lease license revenue increased **11.3%** 14.3%, or **17.9%** 14.4% in constant currency, as compared to the year ended **December 31, 2021** **December 31, 2022**, with substantially all of the increase attributable to additional sales to our existing customers. The reported **\$70.0 million** **\$98.4 million** increase in lease license revenue was attributable to a **\$53.5** **\$83.8** million increase in value from multi-year licenses and a **\$16.5** **\$14.6** million increase in value from annual licenses. **Perpetual**

We continue to experience increased demand from our customers for contracts that often include longer-term, subscription leases involving a larger number of our software products. These arrangements typically involve a higher overall transaction price. The upfront recognition of license revenue related to these larger transactions can result in significant subscription lease revenue volatility. Software products, across a large variety of applications and industries, are increasingly distributed in software-as-a-service, cloud and other subscription environments in which the licensing approach is **derived** time-based rather than perpetual. This preference could result in a shift from **new sales** during perpetual licenses to time-based licenses, such as subscription leases, over the **year ended December 31, 2022**, decreased 8.2%, or 4.1% in constant currency, as compared to the year ended December 31, 2021. Driving the decrease in perpetual license revenue was a 9.2% decrease in volume of deals, partially offset by a 5.7% increase in average deal size. **long term.**

With respect to revenue, on average for the year ended **December 31, 2022** **December 31, 2023**, the U.S. Dollar was **11.4%** 0.6% stronger, when measured against our foreign currencies, than for the year ended **December 31, 2021** **December 31, 2022**. The table below presents the net impacts of currency fluctuations on revenue for the year ended **December 31, 2022** **December 31, 2023**. Amounts in brackets indicate a net adverse impact from currency fluctuations.

(in thousands)	Year Ended December 31,	
	2022	December 31, 2023
Euro	\$	(47,963)
Japanese Yen	(35,027) \$	(13,457)
Indian Rupee		(1,988)
Taiwan Dollar		(1,666)
South Korean Won		(17,473) (1,010)
British Pound Euro		(5,811) 13,179
Taiwan Dollar		(2,719)
Indian Rupee		(2,296)
Canadian Dollar		(699)
Israeli New Shekel		(577)
Other		(177) (811)
Total	\$	(112,742) (5,753)

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As a percentage of revenue, our international and domestic revenues, and our direct and indirect revenues, were as follows:

	Year Ended December 31,	
	2022	2021
International	54.9 %	54.5 %
Domestic	45.1 %	45.5 %
Direct	76.1 %	76.3 %
Indirect	23.9 %	23.7 %

In valuing deferred revenue on the balance sheets of our acquisitions that closed prior to 2022 as of their respective acquisition dates, we applied the fair value provisions applicable to the accounting for business combinations, resulting in a reduction of deferred revenue as compared to the historical carrying amount. As a result, our post-acquisition revenue will be less than the sum of what would have otherwise been reported by us and each acquiree absent the acquisitions. The impacts on reported revenue were \$7.3 million and \$24.8 million for the years ended December 31, 2022 and 2021, respectively.

	Year Ended December 31,	
	2023	2022
International	53.4 %	54.9 %
Domestic	46.6 %	45.1 %
Direct	73.9 %	76.1 %
Indirect	26.1 %	23.9 %

Cost of Sales and Operating Expenses:

The tables below reflect our operating results on both a GAAP and constant currency basis. Amounts included in the discussions that follow each table are provided in constant currency and are inclusive of costs related to our acquisitions. The impact of foreign exchange translation is discussed separately, where material.

		Year Ended December 31,													
		2022					2021					Change			
		GAAP		Constant Currency			GAAP		GAAP			Constant Currency			
2023															
2023															
GAAP															
												GAAP		Constant Currency	
(in thousands, except percentages)	(in thousands, except percentages)	Amount	% of Revenue	Amount	% of Revenue	Amount	% of Revenue	Amount	%	Amount	%	(in thousands, except percentages) Amount	% of Revenue	Amount	% of Revenue
Cost of sales:	Cost of sales:														
Software licenses	Software licenses														
Software licenses	Software licenses	\$ 33,081	1.6	\$ 33,410	1.5	\$ 38,156	2.0	\$ (5,075)	(13.3)	\$ (4,746)	(12.4)				
Amortization	Amortization	69,372	3.4	70,800	3.3	60,762	3.2	8,610	14.2	10,038	16.5				
Maintenance and service	Maintenance and service	148,188	7.2	155,506	7.1	159,066	8.3	(10,878)	(6.8)	(3,560)	(2.2)				
Total cost of sales	Total cost of sales	250,641	12.1	259,716	11.9	257,984	13.5	(7,343)	(2.8)	1,732	0.7				
Gross profit	Gross profit	\$1,814,912	87.9	\$1,918,579	88.1	\$1,648,731	86.5	\$166,181	10.1	\$269,848	16.4				

Software Licenses: The decrease increase in the cost of software licenses was primarily due to decreased increased third-party royalties of \$4.7 million \$7.1 million.

Amortization: The increase in amortization expense was primarily due to the amortization of newly acquired intangible assets.

Maintenance and Service: The net decrease increase in maintenance and service costs was primarily due to the following:

- Decreased costs related to foreign exchange translation Increased stock-based compensation of \$7.3 million due to a stronger U.S. Dollar; \$3.3 million.
- Decreased salaries incentive compensation and other headcount-related costs of \$3.0 million.
- Decreased stock-based compensation of \$2.3 million.
- Increased consulting and professional fees of \$1.8 million.
- Increased third-party technical support of \$1.4 million \$1.2 million.

The improvement in gross profit was a result of the increase in revenue.

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		Year Ended December 31,																	
		2022					2021					Change							
		GAAP		Constant Currency			GAAP		GAAP			Constant Currency							
2023																2022			
2023																2022			
GAAP																GAAP		Constant Currency	
(in thousands, except percentages)	(in thousands, except percentages)	Amount	% of Revenue	Amount	% of Revenue	Amount	% of Revenue	Amount	%	Amount	%	(in thousands, except percentages)	Amount	% of Revenue	Amount	% of Revenue	Amount		

Operating expenses:	Operating expenses:											
Selling, general and administrative	Selling, general and administrative											
Selling, general and administrative	Selling, general and administrative											
Selling, general and administrative	Selling, general and administrative	\$ 772,871	37.4	800,318	36.7	\$ 715,377	37.5	\$57,494	8.0	\$ 84,941	11.9	
Research and development	Research and development	433,661	21.0	445,275	20.4	404,870	21.2	28,791	7.1	40,405	10.0	
Amortization	Amortization	15,722	0.8	16,580	0.8	15,213	0.8	509	3.3	1,367	9.0	
Total operating expenses	Total operating expenses	1,222,254	59.2	1,262,173	57.9	1,135,460	59.6	86,794	7.6	126,713	11.2	
Operating income	Operating income	\$ 592,658	28.7	\$ 656,406	30.1	\$ 513,271	26.9	\$79,387	15.5	\$143,135	27.9	

Selling, General and Administrative: The net increase in selling, general and administrative costs was primarily due to the following:

- Increased salaries, incentive compensation and other headcount-related costs of \$44.6 million \$50.2 million.
- Increased stock-based compensation of \$33.1 million.
- Increased business travel of \$11.7 million \$8.1 million as in-person meetings and live attendance at trade events have continued to expand.
- Increased bad debt expense of \$5.2 million due to the write-off of receivables due from Russian customers as a result of sanctions imposed related to Russia's invasion of Ukraine and increased risk associated with receivables from specific customers in China.
- Increased marketing expenses of \$5.1 million.
- Increased IT maintenance and software hosting costs of \$4.6 million \$3.0 million.
- Increased Decreased third-party commissions of \$4.5 million \$6.3 million.
- Decreased costs related to foreign exchange translation of \$27.4 million \$3.5 million due to a stronger U.S. Dollar.
- Decreased bad debt expense of \$3.5 million.

We anticipate that we will continue to make targeted investments in our global sales and marketing organizations and our global business infrastructure to enhance and support our revenue-generating activities.

Research and Development: The net increase in research and development costs was primarily due to the following:

- Increased salaries, and incentive compensation and other headcount-related expenses of \$25.3 million \$41.0 million.
- Increased stock-based compensation of \$17.4 million.
- Increased IT maintenance and software hosting costs of \$3.6 million \$2.9 million.

Amortization: Increased business travel of \$3.6 million as in-person meetings and live attendance at trade events have continued to expand.

- Increased stock-based compensation of \$2.8 million.
- Decreased costs related to foreign exchange translation of \$11.6 million The increase in amortization expense was primarily due to a stronger U.S. Dollar, the amortization of newly acquired intangible assets.

We have traditionally invested significant resources in research and development activities and intend to continue to make investments in expanding the ease of use and capabilities of our broad portfolio of simulation software products.

Overall, the impacts from currency fluctuations resulted in decreased operating income of \$63.7 million \$1.4 million for the year ended December 31, 2022 December 31, 2023 as compared to the year ended December 31, 2021 December 31, 2022.

Interest Income: Interest income for the year ended December 31, 2022 December 31, 2023 was \$5.7 million \$19.6 million as compared to \$2.1 million \$5.7 million for the year ended December 31, 2021 December 31, 2022. The higher interest rate environment and the related increase in the average rate of return on invested cash balances was partially offset by a lower invested cash balance as a result of investments in acquisitions and share repurchases.

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Interest Expense: Interest expense for the year ended December 31, 2022 December 31, 2023 was \$22.7 million \$47.1 million as compared to \$12.4 million \$22.7 million for the year ended December 31, 2021 December 31, 2022 due to a higher interest rate environment.

Other (Expense) Income, Expense, net: Our other (expense) income expense consisted of the following:

(in thousands)	Year Ended December 31,	
	2022	2021
Investment (loss) gain, net	\$ (1,628)	\$ 14,778
Foreign currency gain (loss), net	1,568	(1,833)
Other	(274)	(535)
Total other (expense) income, net	\$ (334)	\$ 12,410

(in thousands)	Year Ended December 31,	
	2023	2022
Investment loss, net	\$ (2,233)	\$ (1,628)
Foreign currency (loss) gain, net	(3,981)	1,568
Other	(226)	(274)
Total other expense, net	\$ (6,440)	\$ (334)

Income Tax Provision: Our income before income tax provision, income tax provision and effective tax rate were as follows:

Year Ended December 31,				Year Ended December 31,	
(in thousands, except percentages)	(in thousands, except percentages)	Year Ended December 31,		(in thousands, except percentages)	2022
		2022	2021		
Income before income tax provision	Income before income tax provision	\$575,315	\$515,354		
Income tax provision	Income tax provision	\$ 51,605	\$ 60,727		
Effective tax rate	Effective tax rate	9.0 %	11.8 %	Effective tax rate	15.5 %

The decrease increase in the effective tax rate from the prior year was primarily due to a non-recurring benefit in 2022 of \$22.8 million related to U.S. tax benefits on foreign earnings due to from entity structuring activities, a decrease in benefits related to stock-based compensation of \$9.0 million, a non-recurring benefit in 2022 of \$8.7 million related to Extraterritorial Income Exclusions from prior periods and an \$11.8 million increase \$8.3 million decrease in the benefit related to foreign-derived intangible income (FDII) and \$8.7 million of. These increases were offset by a \$10.6 million decrease in tax benefits related to Extraterritorial Income Exclusions global intangible low-taxed income as a result of a change in estimate from the prior periods. These benefits were partially offset by decreased deductions of \$18.8 million related to stock-based compensation. year.

When compared to the federal and state combined statutory rate for each respective period, the effective tax rates for the years ended December 31, 2022 December 31, 2023 and 2021 2022 were favorably impacted by tax benefits from stock-based compensation, the FDII deduction and research and development credits, partially offset by the impact of non-deductible compensation.

Net Income: Our net income, diluted earnings per share and weighted average shares used in computing diluted earnings per share were as follows:

Year Ended December 31,				Year Ended December 31,	
(in thousands, except per share data)	(in thousands, except per share data)	Year Ended December 31,		(in thousands, except per share data)	2022
		2022	2021		
Net income	Net income	\$523,710	\$454,627		

Diluted earnings per share	Diluted earnings per share	\$ 5.99	\$ 5.16
Weighted average shares outstanding	Weighted average shares outstanding		
- diluted	- diluted	87,490	88,102

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Non-GAAP Results

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 and a reconciliation of each non-GAAP financial measure to its most comparable GAAP financial measure are included [below](#), [below](#), as applicable.

ANSYS, INC. AND SUBSIDIARIES										Reconciliations of GAAP to Non-GAAP Measures (Unaudited)						
Year Ended December 31, 2022										Year Ended December 31, 2023						
Year Ended December 31, 2022										Year Ended December 31, 2023						
(in thousands, except percentages and per share data)	(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted	(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted
Total GAAP	Total GAAP	\$2,065,553	\$1,814,912	87.9 %	\$592,658	28.7 %	\$523,710	\$ 5.99								
Acquisition accounting for deferred revenue		7,333	7,333	— %	7,333	0.2 %	7,333	0.08								
Stock-based compensation expense																
Stock-based compensation expense																
Stock-based compensation expense	Stock-based compensation expense	—	10,073	0.5 %	168,128	8.2 %	168,128	1.92								
Excess payroll taxes related to stock-based awards	Excess payroll taxes related to stock-based awards	—	510	— %	6,118	0.3 %	6,118	0.07								
Amortization of intangible assets from acquisitions	Amortization of intangible assets from acquisitions	—	69,372	3.4 %	85,094	4.1 %	85,094	0.97								
Transaction expenses related to business combinations		—	—	— %	10,335	0.5 %	10,335	0.12								
Expenses related to business combinations																

Adjustment for income tax effect	Adjustment for income tax effect	—	—	— %	—	— %	(101,813)	(1.16)
Total non-GAAP	Total non-GAAP	\$2,072,886	\$1,902,200	91.8 %	\$869,666	42.0 %	\$698,905	\$ 7.99

¹ Diluted weighted average shares were 87,386.

Year Ended December 31, 2022							
(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted:
Total GAAP	\$ 2,065,553	\$ 1,814,912	87.9 %	\$ 592,658	28.7 %	\$ 523,710	\$ 5.99
Acquisition accounting for deferred revenue	7,333	7,333	— %	7,333	0.2 %	7,333	0.08
Stock-based compensation expense	—	10,073	0.5 %	168,128	8.2 %	168,128	1.92
Excess payroll taxes related to stock-based awards	—	510	— %	6,118	0.3 %	6,118	0.07
Amortization of intangible assets from acquisitions	—	69,372	3.4 %	85,094	4.1 %	85,094	0.97
Expenses related to business combinations	—	—	— %	10,335	0.5 %	10,335	0.12
Adjustment for income tax effect	—	—	— %	—	— %	(101,813)	(1.16)
Total non-GAAP	\$ 2,072,886	\$ 1,902,200	91.8 %	\$ 869,666	42.0 %	\$ 698,905	\$ 7.99

¹ Diluted weighted average shares were 87,490.

Year Ended December 31, 2021							
(in thousands, except percentages and per share data)	Revenue	Gross Profit	%	Operating Income	%	Net Income	EPS - Diluted:
Total GAAP	\$ 1,906,715	\$ 1,648,731	86.5 %	\$ 513,271	26.9 %	\$ 454,627	\$ 5.16
Acquisition accounting for deferred revenue	24,772	24,772	0.1 %	24,772	1.0 %	24,772	0.28
Stock-based compensation expense	—	12,390	0.6 %	166,338	8.6 %	166,338	1.89
Excess payroll taxes related to stock-based awards	—	1,197	— %	13,183	0.7 %	13,183	0.15
Amortization of intangible assets from acquisitions	—	60,762	3.3 %	75,975	3.9 %	75,975	0.86
Transaction expenses related to business combinations	—	—	— %	6,041	0.3 %	6,041	0.07
Adjustment for income tax effect	—	—	— %	—	— %	(91,589)	(1.04)
Total non-GAAP	\$ 1,931,487	\$ 1,747,852	90.5 %	\$ 799,580	41.4 %	\$ 649,347	\$ 7.37

¹ Diluted weighted average shares were 88,102.

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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. Under prior accounting guidance, a fair value provision resulted in acquired deferred revenue that was often recorded on the opening balance sheet at an amount that was lower than the historical carrying value. Although this fair value provision has no impact on our business or cash flow, it adversely impacts our reported GAAP revenue in the reporting periods following an acquisition. In 2022, we adopted accounting guidance which eliminates the fair value provision that resulted in the deferred revenue adjustment on a prospective basis. In order to provide investors with financial information that facilitates comparison of both historical and future results, we **provide have historically provided** non-GAAP financial measures which exclude the impact of the acquisition accounting adjustment for acquisitions prior to the adoption of the new guidance in 2022. **We believe that this** The 2022 non-GAAP financial **measures presented in this document include the adjustment to exclude the income statement effects of acquisition accounting adjustments to deferred revenue**

from business combinations closed prior to 2022. There 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 no adjustment included for 2023 as the revenue reduction related to acquired deferred revenue will impact is not recur when related subscription leases and software maintenance contracts are renewed in future periods, material.

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.

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. 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. Specifically, we exclude stock-based compensation 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 Board of directors 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 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

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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' competitors' operating results.

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. Beginning in the second quarter of 2022, we have updated this non-GAAP measure to include, in addition to professional services rendered in connection with business combinations, We also incur other expenses directly related to business combinations, including compensation expenses and concurrent restructuring activities, such as employee severances and other exit costs. These costs are included in our GAAP presentation of selling, general and administrative and research and development expenses. The additional expenses were not material in the current or prior year period. We exclude these acquisition-related expenses 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' competitors' operating results.

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 re-evaluate and update 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

Revenue
Gross Profit
Gross Profit Margin
Operating Income
Operating Profit Margin
Net Income
Diluted Earnings Per Share

Non-GAAP Reporting Measure

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
Non-GAAP Diluted Earnings Per Share

Constant currency. In addition to the non-GAAP financial measures detailed above, we use constant currency results for financial and operational decision-making and as a means to evaluate period-to-period comparisons by excluding the effects of foreign currency fluctuations on the reported results. To present this information, the 2022 2023 results for entities whose functional currency is a currency other than the U.S. Dollar were converted to U.S. Dollars at rates that were in effect for the 2021 2022 comparable period, rather than the actual exchange rates in effect for 2022 2023. Constant currency growth rates are calculated by adjusting the 2022 2023 reported amounts by the 2022 2023 currency fluctuation impacts and comparing the adjusted amounts to the 2021 2022 comparable period reported amounts. 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 reported results to our past reports of financial results without the effects of foreign currency fluctuations.

[Table of Contents](#)**Liquidity and Capital Resources**

		As of December 31,				Change				
		As of								
		December 31,								
(in thousands, except percentages)	(in thousands, except percentages)	2022	2021	Amount	%	(in thousands, except percentages)	2023	2022	Amount	%
Cash, cash equivalents and short-term investments	Cash, cash equivalents and short-term investments	\$614,574	\$668,028	\$(53,454)	(8.0)					
Working capital	Working capital	\$869,286	\$860,082	\$ 9,204	1.1					

Cash, Cash Equivalents and Short-Term Investments

Cash and cash equivalents consist primarily of highly liquid investments such as money market funds and deposits held at major banks. Short-term investments consist primarily of deposits held by certain of our foreign subsidiaries with original maturities of three months to one year. year. The following table presents our foreign and domestic holdings of cash, cash equivalents and short-term investments as of December 31, 2023 and 2022:

	As of December 31,					As of December 31,				
(in thousands, except percentages)	(in thousands, except percentages)					(in thousands, except percentages)	2023	% of Total	2022	% of Total
		2022	% of Total	2021	% of Total					
Domestic	Domestic	\$326,784	53.2	\$365,390	54.7					
Foreign	Foreign	287,790	46.8	302,638	45.3					
Total	Total	\$614,574		\$668,028						

In general, it is our intention to permanently reinvest all earnings in excess of previously taxed amounts. Substantially all of the pre-2018 earnings of our non-U.S. subsidiaries were taxed through the transition tax and post-2018 current earnings are taxed as part of global intangible low-taxed income tax expense. These taxes increase our previously taxed earnings and allow for the repatriation of the majority of our foreign earnings without any residual U.S. federal tax. Unrecognized provisions for taxes on indefinitely reinvested undistributed earnings of foreign subsidiaries would not be significant.

The amount of cash, cash equivalents and short-term investments held by foreign subsidiaries is subject to translation adjustments caused by changes in foreign currency exchange rates as of the end of each respective reporting period, the offset to which is recorded in accumulated other comprehensive loss on our consolidated balance sheet.

Cash Flows from Operating Activities

		Year Ended December 31,		Change				
(in thousands)		2022	2021					
		Year Ended December 31,					Year Ended December 31,	Change
(in thousands, except percentages)					2023	2022	Amount	%
Net cash provided by operating activities	Net cash provided by operating activities	\$631,003	\$549,482	\$81,521				

Net cash provided by operating activities increased during the current fiscal year due to increased net cash flows from operating assets and liabilities of \$76.3 million and increased net income (net of non-cash operating adjustments) of \$5.2 million. The growth in net cash provided by operating activities was a result of increased customer receipts driven primarily by ACV growth, and lower income tax partially offset by payments related to higher operating expenses, interest payments due to timing, partially offset by additional cash outflows related to increased operating expenses the higher interest rate environment as compared to the year ended December 31, 2021. December 31, 2022 and increased income tax payments associated with higher taxable income.

Cash Flows from Investing Activities

		Year Ended December 31,		Change				
(in thousands)		2022	2021					
		Year Ended December 31,					Year Ended December 31,	Change
(in thousands, except percentages)					2023	2022	Amount	%
Net cash used in investing activities	Net cash used in investing activities	\$(411,368)	\$(536,813)	\$125,445				

Net cash used in investing activities decreased during the current fiscal year due primarily to decreased acquisition-related net cash outlays for acquisitions of \$124.5 million, partially offset by increased capital expenditures of \$1.4 million \$177.4 million. We currently plan capital spending of \$28.0 million \$40.0 million to \$38.0 million \$50.0 million during fiscal year 2023 2024 as compared to the \$24.4 million \$25.3 million that was spent in fiscal year 2022 2023. The level of spending will depend on various factors, including the growth of the business and general economic conditions.

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Cash Flows from Financing Activities

		Year Ended December 31,		Change				
(in thousands)		2022	2021					
		Year Ended December 31,					Year Ended December 31,	Change
(in thousands, except percentages)					2023	2022	Amount	%
Net cash used in financing activities	Net cash used in financing activities	\$(245,508)	\$(245,852)	\$ 344				

Net cash used in financing activities decreased slightly during the current fiscal year primarily due to decreased principal payments on long-term debt of \$45.0 million and decreased restricted stock withholding taxes paid in lieu of issuing shares of \$32.8 million, offset by increased stock repurchases of \$70.9 million \$9.1 million and increased proceeds from shares issued for stock-based compensation of \$4.5 million.

Other Cash Flow Information

On June 30, 2022, we entered into a credit agreement (the 2022 Credit Agreement) with PNC Bank, National Association as administrative agent, swing line lender, and an L/C issuer, the lenders party thereto, and the other L/C issuers party thereto. The 2022 Credit Agreement refinanced our previous credit agreements in their entirety. The 2022 Credit Agreement provides for a \$755.0 million unsecured term loan facility and a \$500.0 million unsecured revolving loan facility, which includes a \$50.0 million sublimit for the issuance of letters of credit. Terms used in this description of the 2022 Credit Agreement with initial capital letters that are not otherwise defined herein are as defined in the 2022 Credit Agreement.

The term loan facility was advanced by the lenders thereunder to refinance and replace our prior credit agreements.

As of December 31, 2022 December 31, 2023, the carrying value of our term loans loan was \$753.6 \$753.9 million, with no principal payments due in the next twelve months. Borrowings under the term loan and revolving loan facilities accrue interest at a rate that is based on the Term SOFR plus an applicable margin or at the base rate plus an applicable margin, at our election. The base rate is the highest of (i) the Overnight Bank Funding Rate, plus 0.500%, (ii) the PNC Bank, National Association prime rate, and (iii) Daily Simple SOFR plus an adjustment for SOFR plus 1.00%. The applicable margin for the borrowings is a percentage per annum based on the lower of (1) a pricing level determined by our then-current consolidated net leverage ratio and (2) a pricing level determined by our public debt rating (if available).

On September 29, 2023, the 2022 Credit Agreement was amended to provide for an interest rate adjustment (Sustainability Rate Adjustment) based upon the achievement of certain environmental, social and governance key performance indicators (KPIs). The Sustainability Rate Adjustment range is +/- 0.05% and will go into effect in the first quarter of 2024 based on the 2023 KPIs and will be adjusted annually based on the KPIs of the preceding year.

The rate in effect for the first quarter of 2023 2024 under the 2022 Credit Agreement is 5.56% 6.32%.

We previously entered into operating lease commitments, primarily for our domestic and international offices. The commitments related to these operating leases is \$151.2 million \$137.6 million, of which \$26.6 million \$27.0 million is due in the next twelve months.

Under our stock repurchase program, we repurchased shares as follows:

Year Ended December 31,					
Year Ended December 31,				Year Ended December 31,	
(in thousands, except per share data)	(in thousands, except per share data)	2022	2021	(in thousands, except per share data)	2023
Number of shares repurchased	Number of shares repurchased	725	347		
Average price paid per share	Average price paid per share	\$ 283.38	\$ 388.35		
Total cost	Total cost	\$205,571	\$134,679		

As of December 31, 2022 December 31, 2023, 1.7 million 1.1 million shares remained available for repurchase under the program.

Average price paid per share excludes excise tax. As of January 1, 2023, our share repurchases in excess of issuances are subject to a 1% excise tax enacted by the Inflation Reduction Act. As of December 31, 2023, we had \$0.1 million of accrued excise tax. Any excise tax incurred is recognized and reflected as part of the cost basis of the shares acquired in the Consolidated Statements of Stockholders' Equity. The authorized repurchase program does not have an expiration date and the pace of the repurchase activity will depend on factors such as working capital needs, cash requirements for acquisitions, our stock price and economic and market conditions. Our stock repurchases may be effected from time to time through open market purchases or pursuant to a Rule 10b5-1 plan. date.

We continue to generate positive cash flows from operating activities and believe that the best uses of our excess cash are to invest in the business; acquire or make investments in complementary companies, products, services and technologies; and make payments on our outstanding debt balances. Any future acquisitions may be funded by available cash and investments, cash generated from operations, debt financing or the issuance of additional securities. Additionally, we have in the past, and expect in the future, to repurchase stock in order to both offset dilution and return capital, in excess of our requirements, to stockholders with the goal of increasing stockholder value.

In January 2023, we had a \$120.7 million cash outflow (net of cash acquired) associated with a strategic acquisition.

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We believe that existing cash and cash equivalent balances, together with cash generated from operations and access to the \$500.0 million revolving loan facility, will be sufficient to meet our working capital, capital expenditure requirements and contractual obligations through at least the next twelve months and the foreseeable future thereafter. Our cash requirements in the future may also be financed through additional equity or debt financings. However, future disruptions in the capital markets could make financing more challenging and there can be no assurance that such financing can be obtained on commercially reasonable terms, or at all.

Contractual and Other Obligations

Our significant contractual and other obligations as of **December 31, 2022** **December 31, 2023** are summarized below:

<i>(in thousands)</i>	Total	Current	Long-Term
Long-term debt:			
Principal payments	\$ 755,000	\$ —	\$ 755,000
Interest payments ⁽¹⁾	191,186	42,525	148,661
Global headquarters operating lease ⁽²⁾	31,807	4,464	27,343
Other operating leases ⁽³⁾	119,431	22,095	97,336
Unconditional purchase obligations ⁽⁴⁾	84,258	54,775	29,483
Obligations related to uncertain tax positions, including interest and penalties ⁽⁵⁾	—	—	—
Total contractual obligations	\$ 1,181,682	\$ 123,859	\$ 1,057,823

<i>(in thousands)</i>	Total	Current	Long-Term
Long-term debt:			
Principal payments	\$ 755,000	\$ —	\$ 755,000
Interest payments ⁽¹⁾	169,211	48,403	120,808
Global headquarters operating lease ⁽²⁾	27,343	4,480	22,863
Other operating leases ⁽³⁾	110,235	22,550	87,685
Unconditional purchase obligations ⁽⁴⁾	111,770	66,421	45,349
Obligations related to uncertain tax positions, including interest and penalties ⁽⁵⁾	—	—	—
Equity investment ⁽⁶⁾	300,000	300,000	—
Total contractual obligations	\$ 1,473,559	\$ 441,854	\$ 1,031,705

- (1) Borrowings under long-term debt accrue interest at a rate that is based on the Term SOFR plus an applicable margin or at the base rate plus an applicable margin, at our election. The base rate is the highest of (i) the Overnight Bank Funding Rate, plus 0.500%, (ii) the PNC Bank, National Association prime rate, and (iii) Daily Simple SOFR plus an adjustment for SOFR plus 1.00%. The applicable margin for the borrowings is a percentage per annum based on the lower of (1) a pricing level determined by our then-current consolidated net leverage ratio and (2) a pricing level determined by our public debt rating (if available). As the interest rate is variable, interest on the long-term debt is estimated using the interest rate as of **December 31, 2022** **December 31, 2023**. For additional information, see Note 10 to the consolidated financial statements included in Part IV, Item 15 of this Annual Report on Form 10-K.
- (2) We previously entered into a lease agreement for 186,000 square feet of rentable space located in an office facility in Canonsburg, Pennsylvania, which serves as our headquarters. The term of the lease is 183 months, beginning on October 1, 2014 and expiring on December 31, 2029. We have a one-time right to terminate the lease on December 31, 2025 by providing the landlord with at least 18 months' prior written notice of such termination.
- (3) Other operating leases primarily include lease commitments for our other domestic and international offices as well as certain operating equipment.
- (4) Unconditional purchase obligations primarily include minimum royalty contracts, software licenses and support, and network services, which are unrecorded as of **December 31, 2022** **December 31, 2023**. The unconditional purchase obligations are in addition to the current and long-term liabilities recorded on our **December 31, 2022** **December 31, 2023** consolidated balance sheet.
- (5) We have **\$54.4 million** **\$54.9 million** of unrecognized tax benefits, including estimated interest and penalties, that have been recorded as liabilities in accordance with income tax accounting guidance for which we are uncertain as to if or when such amounts may be settled. As a result, such amounts are excluded from the table above.
- (6) On December 5, 2023, we entered into an agreement to make a strategic equity investment. The investment is subject to regulatory approvals and customary closing conditions and is expected to close in the first half of 2024.

If the Merger Agreement is terminated under certain circumstances specified in the Merger Agreement, we would be required to pay a termination fee of \$950.0 million.

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Critical Accounting Estimates

We have prepared our consolidated financial statements in accordance with GAAP. In preparing our consolidated financial statements, we make assumptions, judgments and estimates that can have a significant impact on our financial position and results of operations. These estimates, assumptions and judgments are made based on our historical experience and on other assumptions that we believe to be reasonable under the circumstances. Actual results could materially differ from any of our estimates under different assumptions or conditions.

The accounting policies, methods and estimates used to prepare our consolidated financial statements are described in Note 2 to the consolidated financial statements included in Part IV, Item 15 of this Annual Report on Form 10-K. The most critical accounting judgments and estimates that we made in preparing our consolidated financial statements involved:

- Revenue recognition;
- Valuation of assets acquired and liabilities assumed in business combinations; and
- Income taxes.

Revenue Recognition

Description

Our revenue is derived principally from the licensing of computer software products and from related maintenance contracts. We enter into contracts that include combinations of products, maintenance and services, which are accounted for as separate performance obligations with differing revenue recognition patterns.

Judgments and Estimates

Our contracts with customers typically include promises to transfer licenses and services to a customer. Judgment is required to determine if the promises are separate performance obligations, and if so, to allocate the transaction price to each performance obligation. We use the estimated standalone selling price method to allocate the transaction price for each performance obligation. The estimated standalone selling price is determined using all information reasonably available to us, including market conditions and other observable inputs. The corresponding revenues are recognized as the related performance obligations are satisfied.

Our time-based subscription lease license contracts with customers are sold as a bundled arrangement that includes the rights to a term software license as well as post-contract support (PCS), which includes unspecified technical enhancements and customer support. Revenue is recognized up front at the commencement of the lease for the term software lease license and recognized ratably over the term of the contract for the PCS in the arrangement. Utilizing observable inputs, we determined that 50% of the estimated standalone selling price of the subscription lease license is attributable to the term software license, while 50% is attributable to PCS. This determination involved judgment, particularly as it relates to the value relationship between our PCS and subscription lease licenses, the value relationship between PCS and our perpetual licenses and its linkage to the shortened term of a subscription lease license, the average economic life of our software, renewal rates of our customers and the price of the bundled arrangement in relation to the perpetual licensing approach.

Changes in these estimates could significantly impact the recognition of revenue in a given period.

Valuation of Assets Acquired and Liabilities Assumed in Business Combinations

Description

In accordance with business combination accounting, we allocate the purchase price of an acquired business to its identifiable assets acquired and liabilities assumed at the acquisition date based upon their estimated fair values. The excess of the fair value of consideration transferred over the fair value of net identifiable assets acquired, if any, is recorded as goodwill. Intangible assets are recognized apart from goodwill whenever an acquired intangible asset arises from contractual or other legal rights, or whenever it is capable of being separated or divided from the acquired entity and sold, transferred, licensed, rented or exchanged, either individually or in combination with a related contract, asset or liability.

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Judgments and Estimates

Determining these fair values requires us to make significant estimates and assumptions, particularly with respect to acquired intangible assets. We determined the fair value of our intangible assets using various valuation techniques, including the relief-from-royalty method and the multi-period excess earnings method. These models utilize certain unobservable inputs classified as Level 3 measurements as defined by ASC 820, *Fair Value Measurements and Disclosures*. The determination of fair value requires considerable judgment and is sensitive to changes in underlying assumptions, estimates and market factors. Estimating fair value requires us to make assumptions and estimates regarding our future plans, as well as industry and economic conditions. These assumptions and estimates include, but are not limited to: royalty rate, discount rate, and customer attrition rate and obsolescence rate. The fair values of the intangible assets will be amortized over their useful lives.

If actual results are materially different than the assumptions we used to determine fair value of the assets acquired and liabilities assumed through a business combination, it is possible that adjustments to the carrying values of such assets and liabilities will have a material impact on our financial position and results of operations. See Note 4 to the consolidated financial statements included in Part IV, Item 15 of this Annual Report on Form 10-K for information regarding our business acquisitions.

Income Taxes

Description

Our income tax expense reflects management's best estimate of current and future taxes to be paid. We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period of the enactment date.

Additionally, as part of our accounting for income taxes, tax benefits related to uncertain tax positions taken or expected to be taken on a tax return are recorded when such benefits meet a more-likely-than-not threshold. Otherwise, these tax benefits are recorded when a tax position has been effectively settled, which means that the statute of limitations has expired or the appropriate taxing authority has completed its examination even though the statute of limitations remains open.

Judgments and Estimates

We are subject to tax in the United States and numerous foreign jurisdictions. Significant judgements and estimates are required in the determination of consolidated income tax expense. We record net deferred tax assets to the extent we believe these assets will more likely than not be realized. In making such determination, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies and recent financial operations. The assumptions about future taxable income require the use of significant judgement and are consistent with the plans and estimates we are using to manage the underlying business. In the event we determine that we will be able to realize deferred tax assets for which a valuation allowance was used to reduce their carrying value, the adjustment to the valuation allowance will be recorded as a reduction to the provision for income taxes in the period such determination is made.

The calculation of our tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in a multitude of jurisdictions across our global operations. Significant judgment is required in the identification and measurement of uncertain tax positions. Our liability for unrecognized tax benefits contains uncertainties because we are required to make assumptions and to apply judgment to estimate the exposures associated with our various filing positions. We adjust the liabilities when our judgement changes as a result of new information not previously available.

Although we believe that the judgments and estimates discussed herein are reasonable, actual results could differ and we may be exposed to losses or gains that could be material. To the extent actual results differ from estimated amounts recorded, such differences will impact the income tax provision in the period in which the determination is made.

Recent Accounting Guidance

For information regarding recent accounting guidance and its impact on our consolidated financial statements, see Note 2 to the consolidated financial statements in Part IV, Item 15 of this Annual Report on Form 10-K.

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Foreign Currency Exchange Risk. As we operate in international regions, a portion of our revenue, expenses, cash, accounts receivable and payment obligations are denominated in foreign currencies. As a result, changes in currency exchange rates will affect our financial position, results of operations and cash flows. We seek to reduce our currency exchange transaction risks primarily through our normal operating and treasury activities, including the use of derivative instruments.

With respect to revenue, on average for the year ended **December 31, 2022** **December 31, 2023**, the U.S. Dollar was **11.4%** **0.6%** stronger, when measured against our foreign currencies, than for the year ended **December 31, 2021** **December 31, 2022**. The table below presents the net impacts of currency fluctuations on revenue for the year ended **December 31, 2022** **December 31, 2023**. Amounts in brackets indicate a net adverse impact from currency fluctuations.

(in thousands)	Year Ended December 31	
	2022	December 31, 2023
Euro	\$	(47,963)
Japanese Yen	(35,027)	\$ (13,457)
Indian Rupee		(1,988)
Taiwan Dollar		(1,666)
South Korean Won	(17,473)	(1,010)
British Pound	(5,811)	13,179
Euro		
Taiwan Dollar		(2,719)
Indian Rupee		(2,296)
Canadian Dollar		(699)
Israeli New Shekel		(577)
Other		(177)
Total	\$	(112,742) (5,753)

The impacts from currency fluctuations resulted in decreased operating income of **\$63.7 million** **\$1.4 million** for the year ended **December 31, 2022** **December 31, 2023** as compared to the year ended **December 31, 2021** **December 31, 2022**.

A hypothetical 10% strengthening in the U.S. Dollar against other currencies would have decreased our revenue by **\$99.2 million** **\$97.2 million** and decreased our operating income by **\$47.9 million** **\$41.2 million** for the year ended **December 31, 2022** **December 31, 2023**.

The most meaningful currency impacts on revenue and operating income are typically attributable to U.S. Dollar exchange rate changes against the Euro and Japanese Yen. Historical exchange rates for these currency pairs are reflected in the charts below:

As of	Period End Exchange Rates		Period End Exchange Rates
	As of	EUR/USD USD/JPY	
December 31, 2023			
December 31, 2023			

December 31, 2023			
December 31, 2022			
December 31, 2022			
December 31, 2022	December 31, 2022	1.07	131
December 31, 2021	December 31, 2021	1.14	115
December 31, 2021			
December 31, 2021			
December 31, 2020	December 31, 2020	1.22	103
December 31, 2019		1.12	109
December 31, 2020			
December 31, 2020			

Evaluation of Disclosure Controls and Procedures. As required by Rules 13a-15 and 15d-15 of the Exchange Act, we have evaluated, with the participation of management, including the Chief Executive Officer and the Chief Financial Officer, the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based on such evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that such disclosure controls and procedures are effective, as defined in Rule 13a-15(e) or Rule 15d-15(e) of the Exchange Act.

We believe, based on our knowledge, that the financial statements and other financial information included in this report fairly present, in all material respects, our financial condition, results of operations and cash flows as of and for the periods presented in this report. We are committed to both a sound internal control environment and to good corporate governance.

From time to time, we review the disclosure controls and procedures and may periodically make changes to enhance their effectiveness and to confirm that our systems evolve with our business.

Management's Annual Report on Internal Control over Financial Reporting. Management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f) or Rule 15d-15(f). Under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer, we have conducted an evaluation of the effectiveness of our internal control over financial reporting based upon the *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with policies or procedures may deteriorate. Our system of internal control over financial reporting is designed to provide reasonable assurance to management and the Board of Directors regarding the reliability of financial records used in preparation of our published financial statements. As all internal control systems have inherent limitations, even systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our internal control over financial reporting was effective at **December 31, 2022** **December 31, 2023**.

Additionally, Deloitte & Touche LLP, an independent registered public accounting firm, has audited the financial statements included in this Annual Report on Form 10-K and has issued an attestation report on our internal control over financial reporting. This report is included in Item 15 of this Annual Report on Form 10-K.

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Changes in Internal Controls. There were no changes in our internal control over financial reporting that occurred during the three months ended **December 31, 2022** **December 31, 2023** that materially affected, or that are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None. *Trading Arrangements*

None of the directors or "officers" of ANSYS, Inc. (as defined in Rule 16a-1(f) promulgated under the Exchange Act of 1934) adopted, modified or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement," as each term is defined in Item 408 of Regulation S-K, during the fiscal quarter ended December 31, 2023.

Transition Agreement

As previously disclosed, on November 29, 2023, Nicole Anasenes notified the Company that, after three years as the Company's Chief Financial Officer and Senior Vice President of Finance, she intended to resign. On February 15, 2024, the Company and Ms. Anasenes entered into a Transition Agreement (the Transition Agreement). Pursuant to the Transition Agreement, Ms. Anasenes will resign as Chief Financial Officer and Senior Vice President of Finance effective February 22, 2024 (the Transition Date) and will remain an employee of the Company until June 7, 2024, following which she will transition to providing consulting services to the Company until August 8, 2024 pursuant to the Consulting Agreement (as defined below). Under the Transition Agreement, Ms. Anasenes provided a customary general release to the Company, and the parties also agreed to certain confidentiality, non-disclosure, non-solicitation and non-disparagement covenants.

The Transition Agreement provides that the Company and Ms. Anasenes will enter into a Consulting Services Agreement (the Consulting Agreement) with an effective date of June 8, 2024, pursuant to which Ms. Anasenes will provide consulting services to the Company beginning on June 8, 2024 and continuing through August 8, 2024. In consideration for her provision of consulting services, the Company will pay to Ms. Anasenes a total fee of \$50,000. A form of Consulting Agreement is attached as an exhibit to the Transition Agreement.

The foregoing descriptions of the Transition Agreement and form of Consulting Agreement attached as an exhibit thereto do not purport to be complete and are subject to and qualified in their entirety by reference to the full text of such agreements, which are attached hereto as Exhibit 10.27 to this Annual Report on Form 10-K and incorporated herein by reference.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item is incorporated by reference to our 2023 2024 Proxy Statement and is set forth under "Corporate Governance at Ansys," "Director Nominees," "Continuing Directors Following the 2023 2024 Annual Meeting" and "Our Executive Officers" therein.

We adopted have a Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer and principal accounting officer, and all of our directors and employees. Our Code of Business Conduct and Ethics is posted under the Governance tab of the Investor Relations section of our website at <https://investors.ansys.com>. We will post any amendments to, or waiver of, our Code of Business Conduct and Ethics that apply to our principal executive officer, principal financial officer and principal accounting officer on our website.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated by reference to our 2023 2024 Proxy Statement and is set forth under "Compensation Discussion and Analysis," "Compensation Policies and Practices Related to Risk Management," "Fiscal 2022 2023 Compensation Tables," "2022 2023 CEO Pay Ratio," "Compensation Committee Report," "Corporate Governance at Ansys--Compensation Committee Interlocks and Insider Participation," "Non-Employee Director Compensation" and "Director Compensation Table Fiscal Year 2022 2023" therein.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this Item is incorporated by reference to our 2023 2024 Proxy Statement and is set forth under "Equity Compensation Plans" and "Ownership of Our Common Stock" therein.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated by reference to our 2023 2024 Proxy Statement and is set forth under "Corporate Governance at Ansys--Director Independence" and "Corporate Governance at Ansys--Related-Party Transactions" therein.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item is incorporated by reference to our 2023 2024 Proxy Statement and is set forth under "Independent Registered Accounting Firm Services and Fees" therein.

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PART IV

ITEM 15. EXHIBIT AND FINANCIAL STATEMENT SCHEDULES

(a) Documents Filed as Part of this Annual Report on Form 10-K:

i. Financial Statements: The following consolidated financial statements and reports are filed as part of this report:

- Reports of Independent Registered Public Accounting Firm (PCAOB ID: 34)	53 63
- Consolidated Balance Sheets as of December 31, 2022 3 and 2022 201 22	56 66
- Consolidated Statements of Income for the years ended December 31, 2022 3, 2021 2 and 2020 21	57 67
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2022 3, 2021 2 and 2020 20 1	58 68
- Consolidated Statements of Cash Flows for the years ended December 31, 2022 3, 2021 2 and 2020 20 1	59 69
- Consolidated Statements of Stockholders' Equity for the years ended December 31, 2022 3, 2021 2 and 2020 20 1	60 70
- Notes to Consolidated Financial Statements	61 71

ii. Financial Statement Schedules: Schedules have been omitted because they are not applicable, are not required or the information required to be set forth therein is included in the consolidated financial statements or notes thereto.

iii. Exhibits: The exhibits listed in the accompanying Exhibit Index immediately following the financial statement schedule are filed as part of, or incorporated by reference into, this Annual Report on Form 10-K.

(b) Exhibits:

We hereby file as part of this Annual Report on Form 10-K the exhibits listed in the Exhibit Index immediately following the financial statement schedule of this Annual Report on Form 10-K.

(c) *Financial Statement Schedules:*

None.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of ANSYS, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of ANSYS, Inc. and subsidiaries (the "Company") as of **December 31, 2022**, **December 31, 2023** and **2021, 2022**, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended **December 31, 2022**, **December 31, 2023**, and the related notes **listed** in the Index at Item 15 (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of **December 31, 2022**, **December 31, 2023** and **2021, 2022**, and the results of its operations and its cash flows for each of the three years in the period ended **December 31, 2022**, **December 31, 2023**, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of **December 31, 2022**, **December 31, 2023**, based on criteria established in *Internal Control—Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated **February 22, 2023**, **February 21, 2024**, expressed an unqualified opinion on the Company's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Revenue—Time-Based Subscription Lease Licenses—Refer to Notes 2 and 3 to the financial statements

Critical Audit Matter Description

The Company sells time-based subscription lease license contracts with customers that are sold as a bundled arrangement that include the rights to a term software license as well as post-contract support (PCS). Revenue is recognized up front at the commencement of the lease for the term software license and recognized ratably over the term of the contract for the PCS in the arrangement. Utilizing observable inputs, the Company determined that 50% of the estimated standalone selling price of the subscription lease license is attributable to the term license, while 50% is attributable to PCS. This determination involved judgment, particularly as it relates to the value relationship between the Company's PCS to subscription lease licenses, the value relationship between PCS and the Company's perpetual licenses and its linkage to the shortened term of a subscription lease license, the average economic life of the Company's software, renewal rates of its customers, and the price of the bundled arrangement in relation to the perpetual licensing approach.

Given the judgments necessary to determine the allocation between the term software license and PCS, auditing this estimate involved a high degree of auditor judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to management's estimate of the allocation between the term software license and PCS in a subscription lease license included the following, among others:

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- We tested the effectiveness of controls over subscription lease license revenue, including those over the determination of the estimated standalone selling price of the Company's licenses and services, as well as the allocation of this standalone selling price within the arrangement.

- We evaluated the pricing relationship between PCS and perpetual licenses on the net licensing fee of the arrangement, as well as the Company's renewal rate of PCS sales on perpetual licenses through those arrangements selected for testing that contained both elements as a consideration point of the value relationship between the term software license and PCS when a customer purchases a bundled subscription lease license.
- We evaluated the estimated economic life of the Company's software through observable data points.
- Through our current and historical audit procedures, we confirmed that the term software license portion and PCS portion of an arrangement are not sold separately from one another.
- We selected a sample of arrangements and performed the following:
 - Compared the list price of the subscription lease license to the consideration received from the customer and recalculated the discount from list price for each arrangement.
 - Evaluated whether management appropriately calculated the estimated standalone selling price for the subscription lease license.
 - Tested management's identification of distinct performance obligations.
 - Tested the mathematical accuracy of revenue recognized at a point in time or over time based upon the identification of subscription lease licenses within the arrangement.

/s/ Deloitte & Touche LLP
Pittsburgh, Pennsylvania
February 22, 2023 21, 2024

We have served as the Company's auditor since 2002.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of ANSYS, Inc.

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of ANSYS, Inc. and subsidiaries (the "Company") as of December 31, 2022 December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022 December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022 December 31, 2023, of the Company and our report dated February 22, 2023, 21, 2024, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

(2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP
Pittsburgh, Pennsylvania
February 22, 2023 21, 2024

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ANSYS, INC. AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS						
December 31,						
December 31,				December 31,		
(in thousands, except share and per share data)	(in thousands, except share and per share data)	2022	2021	(in thousands, except share and per share data)	2023	2022
ASSETS	ASSETS					
Current assets:	Current assets:					
Current assets:						
Cash and cash equivalents						
Cash and cash equivalents						
Cash and cash equivalents	Cash and cash equivalents	\$ 614,391	\$ 667,667			
Short-term investments	Short-term investments	183	361			
Accounts receivable, less allowance for doubtful accounts of \$18,300 and \$14,600, respectively		760,287	645,891			
Accounts receivable, less allowance for doubtful accounts of \$20,700 and \$18,300, respectively						
Other receivables and current assets	Other receivables and current assets	289,261	324,655			
Total current assets	Total current assets	1,664,122	1,638,574			
Long-term assets:	Long-term assets:					
Property and equipment, net						
Property and equipment, net						
Property and equipment, net	Property and equipment, net	80,838	87,914			
Operating lease right-of-use assets	Operating lease right-of-use assets	129,140	120,881			
Goodwill	Goodwill	3,658,267	3,409,271			
Other intangible assets, net	Other intangible assets, net	809,183	763,119			
Other long-term assets	Other long-term assets	261,880	279,676			
Deferred income taxes	Deferred income taxes	84,515	24,879			
Total long-term assets	Total long-term assets	5,023,823	4,685,740			

Total assets	Total assets	\$6,687,945	\$6,324,314
LIABILITIES AND STOCKHOLDERS' EQUITY	LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:	Current liabilities:		
Current liabilities:			
Accounts payable			
Accounts payable			
Accounts payable	Accounts payable	\$ 14,021	\$ 10,863
Accrued bonuses and commissions	Accrued bonuses and commissions	160,908	163,182
Accrued income taxes	Accrued income taxes	7,698	8,410
Other accrued expenses and liabilities	Other accrued expenses and liabilities	198,220	204,509
Other accrued expenses and liabilities			
Other accrued expenses and liabilities			
Deferred revenue	Deferred revenue	413,989	391,528
Total current liabilities	Total current liabilities	794,836	778,492
Long-term liabilities:	Long-term liabilities:		
Deferred income taxes			
Deferred income taxes			
Deferred income taxes	Deferred income taxes	58,126	105,548
Long-term operating lease liabilities	Long-term operating lease liabilities	112,802	104,378
Long-term debt	Long-term debt	753,574	753,576
Other long-term liabilities	Other long-term liabilities	102,756	98,272
Total long-term liabilities	Total long-term liabilities	1,027,258	1,061,774
Commitments and contingencies	Commitments and contingencies		
Commitments and contingencies			
Stockholders' equity:	Stockholders' equity:		
Preferred stock, \$0.01 par value; 2,000,000 shares authorized; zero shares issued or outstanding	Preferred stock, \$0.01 par value; 2,000,000 shares authorized; zero shares issued or outstanding	—	—
Preferred stock, \$0.01 par value; 2,000,000 shares authorized; zero shares issued or outstanding			
Preferred stock, \$0.01 par value; 2,000,000 shares authorized; zero shares issued or outstanding			
Common stock, \$0.01 par value; 300,000,000 shares authorized; 95,267,307 shares issued	Common stock, \$0.01 par value; 300,000,000 shares authorized; 95,267,307 shares issued	953	953
Additional paid-in capital	Additional paid-in capital	1,540,317	1,465,694
Retained earnings	Retained earnings	4,782,930	4,259,220
Treasury stock, at cost: 8,317,389 and 8,188,331 shares, respectively		(1,335,627)	(1,185,707)

Treasury stock, at cost: 8,361,447 and 8,317,389 shares, respectively			
Accumulated other comprehensive loss	Accumulated other comprehensive loss	(122,722)	(56,112)
Total stockholders' equity	Total stockholders' equity	4,865,851	4,484,048
Total liabilities and stockholders' equity	Total liabilities and stockholders' equity	\$6,687,945	\$6,324,314

The accompanying notes are an integral part of the consolidated financial statements.

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ANSYS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME

(in thousands, except per share data)	(in thousands, except per share data)	Year Ended December 31,			(in thousands, except per share data)	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
Revenue:	Revenue:							
Software licenses	Software licenses	\$ 988,978	\$ 945,797	\$ 780,850				
Software licenses								
Maintenance and service	Maintenance and service	1,076,575	960,918	900,447				
Total revenue	Total revenue	2,065,553	1,906,715	1,681,297				
Cost of sales:	Cost of sales:							
Software licenses								
Software licenses	Software licenses	33,081	38,156	30,618				
Amortization	Amortization	69,372	60,762	40,642				
Maintenance and service	Maintenance and service	148,188	159,066	154,004				
Total cost of sales	Total cost of sales	250,641	257,984	225,264				
Gross profit	Gross profit	1,814,912	1,648,731	1,456,033				
Operating expenses:	Operating expenses:							
Selling, general and administrative								
Selling, general and administrative	Selling, general and administrative	772,871	715,377	587,707				
Research and development	Research and development	433,661	404,870	355,371				
Amortization	Amortization	15,722	15,213	16,599				

Total operating expenses	Total operating expenses	1,222,254	1,135,460	959,677
Operating income	Operating income	592,658	513,271	496,356
Interest income	Interest income	5,717	2,078	5,073
Interest expense	Interest expense	(22,726)	(12,405)	(10,988)
Other (expense) income, net	Other (expense) income, net	(334)	12,410	3,484
Income before income tax provision	Income before income tax provision	575,315	515,354	493,925
Income tax provision	Income tax provision	51,605	60,727	60,038
Net income	Net income	\$ 523,710	\$ 454,627	\$ 433,887
Earnings per share – basic:	Earnings per share – basic:			
Earnings per share	Earnings per share	\$ 6.02	\$ 5.22	\$ 5.05
Earnings per share				
Earnings per share				
Weighted average shares	Weighted average shares	87,051	87,100	85,840
Earnings per share – diluted:	Earnings per share – diluted:			
Earnings per share	Earnings per share	\$ 5.99	\$ 5.16	\$ 4.97
Earnings per share				
Earnings per share				
Weighted average shares	Weighted average shares	87,490	88,102	87,288

The accompanying notes are an integral part of the consolidated financial statements.

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ANSYS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(in thousands)	(in thousands)	Year Ended December 31,			(in thousands)	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
Net income	Net income	\$523,710	\$454,627	\$433,887				
Other comprehensive (loss) income:								
Other comprehensive income (loss):								
Foreign currency translation adjustments								
Foreign currency translation adjustments								
Foreign currency translation adjustments	Foreign currency translation adjustments	(66,610)	(38,337)	47,606				

Comprehensive income	Comprehensive income	\$457,100	\$416,290	\$481,493
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The accompanying notes are an integral part of the consolidated financial statements.

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ANSYS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)	(in thousands)	Year Ended December 31,			(in thousands)	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
Cash flows from operating activities:	Cash flows from operating activities:							
Net income	Net income	\$523,710	\$454,627	\$433,887				
Net income	Net income							
Net income	Net income							
Adjustments to reconcile net income to net cash provided by operating activities:	Adjustments to reconcile net income to net cash provided by operating activities:							
Depreciation and amortization	Depreciation and amortization							
Depreciation and amortization	Depreciation and amortization	114,563	106,867	85,275				
Operating lease right-of-use assets expense	Operating lease right-of-use assets expense	22,721	22,193	20,971				
Deferred income tax benefit	Deferred income tax benefit	(130,716)	(34,490)	(30,932)				
Provision for bad debts	Provision for bad debts	6,222	1,006	6,438				
Stock-based compensation expense	Stock-based compensation expense	168,128	166,338	145,615				
Gain on equity investment	Gain on equity investment	—	(15,139)	—				
Other	Other	4,680	2,708	2,180				
Changes in operating assets and liabilities:	Changes in operating assets and liabilities:							
Accounts receivable	Accounts receivable							
Accounts receivable	Accounts receivable	(114,986)	(149,017)	(160,319)				
Other receivables and current assets	Other receivables and current assets	30,259	(64,316)	(2,312)				
Other long-term assets	Other long-term assets	(3,613)	(3,217)	(14,818)				
Accounts payable, accrued expenses and current liabilities	Accounts payable, accrued expenses and current liabilities	(8,250)	53,846	21,362				

Accrued income taxes	Accrued income taxes	99	(18,429)	19,713
Deferred revenue	Deferred revenue	33,003	26,547	5,448
Other long-term liabilities	Other long-term liabilities	(14,817)	(42)	14,802
Net cash provided by operating activities	Net cash provided by operating activities	631,003	549,482	547,310
Cash flows from investing activities:	Cash flows from investing activities:			
Acquisitions, net of cash acquired	Acquisitions, net of cash acquired	(386,264)	(510,805)	(572,328)
Acquisitions, net of cash acquired				
Acquisitions, net of cash acquired				
Capital expenditures	Capital expenditures	(24,370)	(23,018)	(35,370)
Other investing activities	Other investing activities	(734)	(2,990)	(6,555)
Net cash used in investing activities	Net cash used in investing activities	(411,368)	(536,813)	(614,253)
Cash flows from financing activities:	Cash flows from financing activities:			
Proceeds from long-term debt		—	—	375,000
Principal payments on long-term debt				
Principal payments on long-term debt				
Principal payments on long-term debt	Principal payments on long-term debt	—	(45,000)	(75,000)
Purchase of treasury stock	Purchase of treasury stock	(205,571)	(134,679)	(161,029)
Restricted stock withholding taxes paid in lieu of issued shares	Restricted stock withholding taxes paid in lieu of issued shares	(64,242)	(97,037)	(71,019)
Proceeds from shares issued for stock-based compensation	Proceeds from shares issued for stock-based compensation	25,595	31,377	29,560
Other financing activities	Other financing activities	(1,290)	(513)	(915)
Net cash (used in) provided by financing activities		(245,508)	(245,852)	96,597
Net cash used in financing activities				
Effect of exchange rate fluctuations on cash and cash equivalents	Effect of exchange rate fluctuations on cash and cash equivalents	(27,403)	(11,822)	10,924
Net (decrease) increase in cash and cash equivalents		(53,276)	(245,005)	40,578
Net increase (decrease) in cash and cash equivalents				

Cash and cash equivalents, beginning of period	Cash and cash equivalents, beginning of period	667,667	912,672	872,094
Cash and cash equivalents, end of period	Cash and cash equivalents, end of period	\$614,391	\$667,667	\$912,672
Supplemental disclosures of cash flow information:	Supplemental disclosures of cash flow information:			
Income taxes paid	Income taxes paid	\$115,339	\$130,426	\$ 54,174
Income taxes paid				
Income taxes paid				
Interest paid	Interest paid	\$ 20,844	\$ 11,146	\$ 11,941
Fair value of unpaid consideration and common stock issued in connection with acquisitions		\$ 5,391	\$ —	\$232,690
Non-cash and unpaid consideration in connection with acquisitions				

The accompanying notes are an integral part of the consolidated financial statements.

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ANSYS, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands)	(in thousands)	Common Stock		Additional	Retained	Treasury Stock		Accumulated	Total	Common	Additional		Treasury	Accumulated
		Shares	Amount	Paid-In	Earnings	Shares	Amount	Other Comprehensive	Stockholders'	Stock	Paid-In	Retained	Stock	Other Comprehensive
				Capital				(Loss)/Income	Equity		Capital	Earnings		(Loss)/Income
Balance, January 1, 2020		94,628	\$ 946	\$1,188,939	\$3,370,706	8,893	\$(1,041,831)	\$ (65,381)	\$ 3,453,379					
Acquisition of Livermore Software Technology, LLC				1,030		(6)	501		1,531					
Balance, January 1, 2021														
Balance, January 1, 2021														
Balance, January 1, 2021														
Acquisition of Analytical Graphics Inc.	Acquisition of Analytical Graphics Inc.	638	7	218,108		(3)	233		218,348					
Treasury shares acquired						690	(161,029)		(161,029)					
Stock-based compensation activity				26,126		(880)	78,024		104,150					
Other comprehensive income								47,606	47,606					
Net income for the year					433,887				433,887					
Balance, December 31, 2020		95,266	953	1,434,203	3,804,593	8,694	(1,124,102)	(17,775)	4,097,872					
Acquisition of Analytical Graphics Inc.														
Acquisition of Analytical Graphics Inc.	Acquisition of Analytical Graphics Inc.	1		3,069		(10)	819		3,888					
Treasury shares acquired	Treasury shares acquired					347	(134,679)		(134,679)					
Stock-based compensation activity	Stock-based compensation activity			28,422		(843)	72,255		100,677					
Other comprehensive loss	Other comprehensive loss							(38,337)	(38,337)					

Net income for the year	Net income for the year				454,627				454,627
Balance, December 31, 2021	Balance, December 31, 2021	95,267	953	1,465,694	4,259,220	8,188	(1,185,707)	(56,112)	4,484,048
Acquisition of Analytical Graphics Inc.	Acquisition of Analytical Graphics Inc.			511		(3)	300		811
Treasury shares acquired	Treasury shares acquired					725	(205,571)		(205,571)
Stock-based compensation activity	Stock-based compensation activity			74,112		(593)	55,351		129,463
Other comprehensive loss	Other comprehensive loss							(66,610)	(66,610)
Net income for the year	Net income for the year				523,710				523,710
Balance, December 31, 2022	Balance, December 31, 2022	95,267	\$ 953	\$1,540,317	\$4,782,930	8,317	\$(1,335,627)	\$ (122,722)	\$ 4,865,851
Treasury shares acquired, including excise tax									
Treasury shares acquired, including excise tax									
Treasury shares acquired, including excise tax									
Stock-based compensation activity									
Other comprehensive income									
Net income for the year									
Balance, December 31, 2023									

The accompanying notes are an integral part of the consolidated financial statements.

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ANSYS, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
December 31, **2022** **2023**

1. Organization

We develop and globally market engineering simulation software and services widely used by engineers, designers, researchers and students across a broad spectrum of industries and academia, including high-tech, aerospace and defense, automotive, energy, industrial equipment, materials and chemicals, consumer products, healthcare and construction.

As defined by the accounting guidance for segment reporting, we operate as one segment.

Given the integrated approach to the multi-discipline problem-solving needs of our customers, a single sale of software may contain components from multiple product areas and include combined technologies. We also have a multi-year product and integration strategy that will result in new, combined products or changes to the historical product offerings. As a result, it is impracticable for us to provide accurate historical or current reporting among our various product lines.

Pending Acquisition

On January 15, 2024, we entered into a definitive agreement with Synopsys, Inc. (Synopsys) under which Synopsys will acquire Ansys. Under the terms of the agreement, Ansys stockholders will receive \$197.00 in cash and 0.3450 of a share of Synopsys common stock for each Ansys share, representing an enterprise value of approximately \$35.0 billion based on the closing price of Synopsys common stock on December 21, 2023. The transaction is anticipated to close in the first half of 2025, subject to approval by Ansys stockholders, the receipt of required regulatory approvals and other customary closing conditions. See Note 20 "Subsequent Event" for additional details.

2. Accounting Policies

Accounting Principles

The consolidated financial statements and accompanying notes are prepared in accordance with accounting principles generally accepted in the United States. Certain items in the notes to the consolidated financial statements of prior years have been reclassified to conform to the current year's presentation. These reclassifications had no effect on reported net income, comprehensive income, cash flows, total assets or total liabilities and stockholders' equity.

Principles of Consolidation

The accompanying consolidated financial statements include our accounts and those of our wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated.

Recently Adopted Accounting Guidance

Business combinations: In October 2021, the Financial Accounting Standards Board (FASB) issued ASU No. 2021-08, *Business Combinations* (Topic 805): *Accounting for Contract Assets and Contract Liabilities from Contracts with Customers* (ASU 2021-08). ASU 2021-08 requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with Accounting Standards Codification (ASC) 606, *Revenue from Contracts with Customers*, as if the acquirer had originated the contracts. We adopted the standard effective January 1, 2022. Under the prior guidance, such assets and liabilities were recognized by the acquirer at fair value on the acquisition date. The adoption of the new standard does not impact acquired contract assets or liabilities from business combinations that occurred prior to the effective date of adoption, have a material effect on our consolidated financial statements and the impact in current and future periods will depend on the contract assets and contract liabilities acquired in business combinations after the effective date of adoption, accompanying notes.

Accounting Guidance Issued and Not Yet Adopted

Segment reporting: In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting* (Topic 280): *Improvements to Reportable Segment Disclosures* (ASU 2023-07). ASU 2023-07 requires enhanced disclosures related to segment information, including for entities with one reportable segment. It does not change the determination of reportable segments. The enhanced disclosures in accordance with the new guidance are required to be reported in the annual period beginning after December 15, 2023. Early adoption is permitted. The standard only impacts footnote disclosures and will not be expected to impact our consolidated financial statements.

Income tax disclosures: In December 2023, the FASB issued ASU No. 2023-09, *Income Taxes* (Topic 740): *Improvements to Income Tax Disclosures* (ASU 2023-09). ASU 2023-09 requires disclosure of greater disaggregation of information in the rate reconciliation and income taxes paid disaggregated by jurisdiction. It also includes certain other amendments to improve the effectiveness of income tax disclosures. The standard is effective for annual periods beginning after December 15, 2024. Early adoption of any recently issued accounting pronouncements is permitted. The standard only impacts footnote disclosures and will not have a material impact on our consolidated financial position, results of operations or cash flows, statements.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Estimates also affect the amounts of revenue and expenses during the reported periods. Significant estimates included in or impacting these consolidated financial statements include:

- Contract revenue
- Standalone selling prices of our products and services
- Allowance for doubtful accounts receivable
- Valuation of goodwill and other intangible assets
- Useful lives for depreciation and amortization
- Acquired deferred revenue

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- Operating lease assets and liabilities
- Fair values of stock awards
- **Deferred compensation**
- Income taxes
- Uncertain tax positions

- Tax valuation reserves
- Contingencies and litigation

Actual results could differ from these estimates. Changes in estimates are recorded in the results of operations in the period that the changes occur.

Revenue Recognition

Our revenue is derived principally from the licensing of computer software products and from related maintenance contracts. We enter into contracts that include combinations of products, maintenance and services, which are accounted for as separate performance obligations with differing revenue recognition patterns.

Revenue from perpetual licenses is classified as software license revenue. Software license revenue is recognized up front upon delivery of the licensed product and/or the utility that enables the customer to access authorization keys, provided that an enforceable contract has been received. Typically, our perpetual licenses are sold with post-contract support (PCS), which includes unspecified technical enhancements and customer support. We allocate value in bundled perpetual and PCS arrangements based on the standalone selling prices of the perpetual license and PCS. Revenue from PCS is classified as maintenance revenue and is recognized ratably over the term of the contract, as we satisfy the PCS performance obligation.

In addition to perpetual licenses, we sell time-based subscription lease licenses. Subscription lease licenses are sold only as a bundled arrangement that includes the rights to a term software license and PCS. Utilizing observable inputs, we determined that 50% of the estimated standalone selling price of the subscription lease license is attributable to the term license and 50% is attributable to the PCS. This determination considered the value relationship for our products between PCS and time-based subscription lease licenses, the value relationship between PCS and perpetual licenses, the average economic life of our products, software renewal rates and the price of the bundled arrangement in relation to the perpetual licensing approach. Consistent with the perpetual sales, the license component is classified as software license revenue and recognized as revenue up front at the commencement of the lease upon delivery of the licensed product and/or utility that enables the customer to access authorization keys. The PCS is classified as maintenance revenue and is recognized ratably over the term of the contract, as we satisfy the PCS performance obligation.

Revenue from training, consulting and other services is recognized as the services are performed. For contracts in which the service consists of a single performance obligation, such as providing a training class to a customer, we recognize revenue upon completion of the performance obligation. For service contracts that are longer in duration and often include multiple performance obligations (for example, both training and consulting), we measure the progress toward completion of the obligations and recognize revenue accordingly. In measuring progress towards the completion of performance obligations, we typically utilize output-based estimates for services with contractual billing arrangements that are not based on time and materials, and estimate output based on the total tasks completed as compared to the total tasks required for each work contract. Input-based estimates are utilized for services that involve general consultations with contractual billing arrangements based on time and materials, utilizing direct labor as the input measure.

We also execute arrangements through independent channel partners in which the channel partners are authorized to market and distribute our software products to end users of our products and services in specified territories. In sales facilitated by channel partners, the channel partner is the principal to the transaction with the **end-user, end user**. We recognize revenue from transactions with channel partners in a manner consistent with the direct sales described above for both perpetual and time-based licenses. Revenue from channel partner transactions is the amount remitted to us by the channel partners. This amount includes a fee for PCS that is compensation for providing technical enhancements and the second level of technical support to the end user, which is recognized over the period that PCS is to be provided.

Non-income related taxes collected from customers and remitted to governmental authorities are recorded on the consolidated balance sheet as accounts receivable and accrued expenses. The collection and payment of these amounts are reported on a net basis in the consolidated statements of income and do not impact reported revenues or expenses.

We do not offer right of return. We warrant to our customers that our software will perform substantially as specified in our current user manuals. We have not experienced significant claims related to software warranties beyond the scope of maintenance support, which we are already obligated to provide. The warranty is not sold, and cannot be purchased, separately.

The warranty does not provide any type of additional service to the customer or performance obligation for us.

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Our agreements with our customers generally require us to indemnify the customer against claims that our software infringes third-party patent, copyright, trademark or other proprietary rights. Such indemnification obligations are generally limited in a variety of industry-standard respects, including our right to replace an infringing product.

Significant Judgments

Our contracts with customers typically include promises to transfer licenses and services to a customer. Judgment is required to determine if the promises are separate performance obligations, and if so, to allocate the transaction price to each performance obligation. We use the estimated standalone selling price method to allocate the transaction price for each performance obligation. The estimated standalone selling price is determined using all information reasonably available to us, including market conditions and other observable inputs. The corresponding revenues are recognized as the related performance obligations are satisfied.

We apply a practical expedient to expense sales commissions as incurred when the amortization period would have been one year or less. Sales commissions associated with the initial year of multi-year contracts are expensed as incurred due to their immateriality. Sales commissions associated with multi-year contracts beyond the initial year are subject to an employee service requirement and are expensed as incurred as they are not considered incremental costs to obtain a contract.

We are required to adjust promised amounts of consideration for the effects of the time value of money if the timing of the payments provides the customer or us with a significant financing benefit. We consider various factors in assessing whether a financing component exists, including the duration of the contract, market interest rates and the timing of payments. Our contracts do not include a significant financing component requiring adjustment to the transaction price.

Cash and Cash Equivalents

Cash and cash equivalents consist primarily of highly liquid investments such as deposits held at major banks and money market funds. Cash equivalents are carried at cost, which approximates fair value. Our cash and cash equivalents balances comprise the following:

(in thousands, except percentages)	(in thousands, except percentages)	December 31, 2022		December 31, 2021		December 31, 2023		December 31, 2022		
		Amount	% of Total	Amount	% of Total	(in thousands, except percentages)	Amount	% of Total	Amount	% of Total
Cash accounts	Cash accounts	\$503,733	82.0	\$580,047	86.9					
Money market funds	Money market funds	110,658	18.0	87,620	13.1					
Total	Total	\$614,391		\$667,667						

Our money market fund balances are were held in various funds of two issuers, a single issuer at December 31, 2023.

Property and Equipment

Property and equipment is stated at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the various classes of assets, which range from one year to forty years. Repairs and maintenance are charged to expense as incurred. Gains or losses from the sale or retirement of property and equipment are included in operating income.

Research and Development

Research and development costs are expensed as incurred. Internally developed software costs required to be capitalized as defined by the accounting guidance are not material to our consolidated financial statements.

Business Combinations

When we consummate an acquisition, the assets acquired and the liabilities assumed are recognized separately from goodwill at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of the fair value of consideration transferred over the acquisition date fair value of the net identifiable assets acquired. While best estimates and assumptions are used to accurately value assets acquired and liabilities assumed at the acquisition date as well as contingent consideration, where applicable, our estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill as we obtain new information about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date. Upon the earlier of the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, any subsequent adjustments are recorded in the consolidated statements of income.

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Goodwill and Other Intangible Assets

Goodwill represents the excess of the fair value of consideration transferred over the fair value of net identifiable assets acquired. Other intangible assets consist of acquired software and technology, customer lists and trade names. Intangible assets that are not considered to have an indefinite useful life are amortized over their useful lives, which range from two years to seventeen years. Amortization expense for intangible assets was \$85.1 million \$103.5 million, \$76.0 million \$85.1 million and \$57.2 million \$76.0 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively.

We test goodwill and indefinite-lived intangible assets for impairment at least annually by performing a quantitative assessment of whether the fair value of each reporting unit or asset exceeds its carrying amount. We have one reporting unit. Goodwill is tested at this reporting unit level and indefinite-lived intangible assets are tested at the individual asset level. This requires us to assess and make judgments regarding a variety of factors which impact the fair value of the reporting unit or asset being tested, including business plans, anticipated future cash flows, economic projections and other market data.

During the first quarter of 2022, 2023, we completed the annual impairment test for goodwill and the indefinite-lived intangible asset and determined that these assets had not been impaired as of the test date, January 1, 2022 January 1, 2023. Given the adverse economic and market conditions during the year, we considered a variety of qualitative factors to determine if an additional quantitative impairment test was required subsequent to our annual impairment test. Based on a variety of factors, including the excess of the fair value over the carrying amounts in the most recent impairment test, we determined it was not more likely than not that an impairment existed during the year. No other events or circumstances changed during the year ended December 31, 2022 December 31, 2023 that would indicate that the fair values of our reporting unit and indefinite-lived intangible asset are below their carrying amounts.

Concentrations of Credit Risk

We have a concentration of credit risk with respect to revenue and trade receivables due to the use of channel partners to market and sell our products. We perform periodic credit evaluations of our customers' financial condition and generally do not require collateral. The following table outlines concentrations of risk with respect to our revenue:

(as a % of revenue)	(as a % of revenue)	Year Ended December 31,			(as a % of revenue)	Year Ended December 31,					
		2022	2021	2020		2023		2022		2021	
Revenue from channel partners	Revenue from channel partners	24 %	24 %	22 %	Revenue from channel partners	26	%	24	%	24	%

No single customer or channel partner accounted for more than 5% of our revenue in 2023, 2022, 2021 or 2020, 2021.

In addition to the concentration of credit risk with respect to trade receivables, our cash and cash equivalents are also exposed to concentration risk. Our cash and cash equivalent accounts are insured through various public and private bank deposit insurance programs, foreign and domestic; however, a significant portion of our funds are not insured. The following table outlines concentrations of risk with respect to our cash and cash equivalents:

(in thousands)	As of December 31,	
	2022	2021
Cash and cash equivalents held domestically	\$ 326,784	\$ 365,390
Cash and cash equivalents held by foreign subsidiaries	287,607	302,277
Cash and cash equivalents held in excess of deposit insurance, foreign and domestic	597,471	652,830
Largest balance of cash and cash equivalents held with one financial institution, foreign and domestic	238,058	201,524

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(in thousands)	As of December 31,	
	2023	2022
Cash and cash equivalents held domestically	\$ 529,092	\$ 326,784
Cash and cash equivalents held by foreign subsidiaries	331,109	287,607
Cash and cash equivalents held in excess of deposit insurance, foreign and domestic	846,723	597,471
Largest balance of cash and cash equivalents held with one financial institution, foreign and domestic	359,362	238,058

Allowance for Doubtful Accounts

ASU No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* requires us to use the current expected credit loss methodology to make judgments as to our ability to collect outstanding receivables and provide allowances for a portion of receivables over the lifetime of the receivables. Provisions are made based upon a specific review of all significant outstanding invoices from both value and delinquency perspectives. For those invoices not specifically reviewed, provisions are estimated at differing rates based upon the age of the receivable. In determining these percentages, we consider our historical loss experience, current economic trends and future conditions.

The changes in the allowance for doubtful accounts during the years ended December 31, 2022, December 31, 2023, 2021, 2022 and 2020, 2021 were as follows:

(in thousands)	2022	2021	2020
Beginning balance – January 1	\$ 14,600	\$ 14,000	\$ 8,700
Additions: Charges to costs and expenses	6,222	1,006	6,438
Deductions: Write-offs	(2,522)	(406)	(1,138)
Ending balance – December 31	\$ 18,300	\$ 14,600	\$ 14,000

We recorded provisions for bad debts of \$6.2 million, \$1.0 million and \$6.4 million for the years ended December 31, 2022, 2021 and 2020, respectively.

(in thousands)	2023	2022	2021
Beginning balance – January 1	\$ 18,300	\$ 14,600	\$ 14,000
Additions: Charges to expense	2,704	\$ 6,222	1,006
Deductions: Write-offs	(304)	(2,522)	(406)
Ending balance – December 31	\$ 20,700	\$ 18,300	\$ 14,600

Income Taxes

We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial

statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period of the enactment date.

We record net deferred tax assets to the extent we believe these assets will more likely than not be realized. In making such determination, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies and recent financial operations. In the event we determine that we will be able to realize deferred tax assets for which a valuation allowance was used to reduce their carrying value, the adjustment to the valuation allowance will be recorded as a reduction to the provision for income taxes.

Tax benefits related to uncertain tax positions taken or expected to be taken on a tax return are recorded when such benefits meet a more-likely-than-not threshold. Otherwise, these tax benefits are recorded when a tax position has been effectively settled, which means that the statute of limitations has expired or the appropriate taxing authority has completed its examination even though the statute of limitations remains open.

We recognize interest and penalties related to income taxes within the income tax expense line in the consolidated statements of income. Accrued interest and penalties are included within the related tax liability line in the consolidated balance sheets.

Foreign Currencies

Certain of our sales and intercompany transactions are denominated in foreign currencies. These transactions are converted to the functional currency in the period in which they occur. Assets and liabilities denominated in a currency other than our functional currency or our subsidiaries' functional currencies are translated at the effective exchange rate on the balance sheet date. Gains and losses resulting from foreign exchange transactions are included in other (expense) income, net. We recorded net foreign exchange losses of \$4.0 million for the year ended December 31, 2023, net foreign exchange gains of \$1.6 million for the year ended December 31, 2022 and net foreign exchange losses of \$1.8 million and \$0.2 million for the years year ended December 31, 2021 and 2020, respectively. .

The financial statements of our foreign subsidiaries are translated from the functional (local) currency to U.S. Dollars. Assets and liabilities are translated at the exchange rates on the balance sheet date. Results of operations are translated at average exchange rates, which approximate rates in effect when the underlying transactions occurred.

Accumulated Other Comprehensive Loss

Accumulated other comprehensive loss is composed entirely of foreign currency translation adjustments.

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Earnings Per Share

Basic earnings per share (EPS) amounts are computed by dividing earnings by the weighted average number of common shares outstanding during the period. Diluted EPS amounts assume the issuance of common stock for all potentially dilutive equivalents outstanding. To the extent stock awards are anti-dilutive, they are excluded from the calculation of diluted EPS.

The details of basic and diluted EPS are as follows:

		Year Ended December 31,							Year Ended December 31,		
(in thousands, except per share data)	(in thousands, except per share data)	2022	2021	2020	(in thousands, except per share data)	2023			2022		2021
Net income	Net income	\$523,710	\$454,627	\$433,887							
Weighted average shares outstanding	Weighted average shares outstanding										
– basic	– basic	87,051	87,100	85,840							
Dilutive effect of stock plans	Dilutive effect of stock plans	439	1,002	1,448							
Weighted average shares outstanding – diluted	Weighted average shares outstanding – diluted	87,490	88,102	87,288							
Basic earnings per share	Basic earnings per share	\$ 6.02	\$ 5.22	\$ 5.05							

Diluted earnings per share	Diluted earnings per share	\$ 5.99	\$ 5.16	\$ 4.97
Anti-dilutive shares	Anti-dilutive shares	300	23	23

Stock-Based Compensation

We account for stock-based compensation in accordance with share-based payment accounting guidance. The guidance requires an entity to measure the cost of employee services received in exchange for an award of equity instruments based on the grant-date fair value of the award. The cost is recognized over the period during which an employee is required to provide services in exchange for the award, typically the vesting period.

Fair Value of Financial Instruments

We account for certain assets and liabilities at fair value in accordance with the accounting guidance applicable to fair value measurements and disclosures. The carrying values of cash, cash equivalents, short-term investments, accounts receivable, accounts payable, accrued expenses, other accrued liabilities, **fixed forward contracts** and short-term obligations are deemed to be reasonable estimates of their fair values because of their short-term nature. Our term loans are variable rate debt obligations and, therefore, the carrying amounts approximate the fair values.

3. Revenue from Contracts with Customers

Disaggregation of Revenue

The following table summarizes revenue:

		Year Ended December 31,						
(in thousands)		2022	2021	2020				
		Year Ended December 31,			Year Ended December 31,			
(in thousands, except percentages)					(in thousands, except percentages)	2023	2022	2021
Revenue:	Revenue:							
Subscription lease licenses	Subscription lease licenses							
Subscription lease licenses	Subscription lease licenses	\$ 687,665	\$ 617,643	\$ 500,105				
Perpetual licenses	Perpetual licenses	301,313	328,154	280,745				
Software licenses	Software licenses	988,978	945,797	780,850				
Maintenance	Maintenance	1,004,245	896,037	840,597				
Service	Service	72,330	64,881	59,850				
Maintenance and service	Maintenance and service	1,076,575	960,918	900,447				
Total revenue	Total revenue	\$2,065,553	\$1,906,715	\$1,681,297				
Direct revenue, as a percentage of total revenue	Direct revenue, as a percentage of total revenue	76.1 %	76.3 %	77.8 %				
Direct revenue, as a percentage of total revenue	Direct revenue, as a percentage of total revenue							
Direct revenue, as a percentage of total revenue	Direct revenue, as a percentage of total revenue				73.9 %	76.1 %	76.3 %	
Indirect revenue, as a percentage of total revenue	Indirect revenue, as a percentage of total revenue	23.9 %	23.7 %	22.2 %	26.1 %	23.9 %	23.7 %	

Our software licenses revenue is recognized up front, while maintenance and service revenue is **generally** recognized over the term of the contract.

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Deferred Revenue

Deferred revenue consists of billings made or payments received in advance of revenue recognition from customer agreements. The timing of revenue recognition may differ from the timing of billings to customers. Payment terms vary by the type and location of customer and the products or services offered. The time between invoicing and when payment is due is not significant.

The changes in deferred revenue, inclusive of both current and long-term deferred revenue, during the years ended December 31, 2022, December 31, 2023 and 2021 2022 were as follows:

(in thousands)	(in thousands)	2022	2021	(in thousands)	2023	2022
Beginning balance – January 1	Beginning balance – January 1	\$ 412,781	\$ 388,810			
Acquired deferred revenue	Acquired deferred revenue	5,818	3,831			
Deferral of revenue	Deferral of revenue	2,099,550	1,937,974			
Recognition of deferred revenue	Recognition of deferred revenue	(2,065,553)	(1,906,715)			
Currency translation	Currency translation	(16,838)	(11,119)			
Ending balance – December 31	Ending balance – December 31	\$ 435,758	\$ 412,781			

Total revenue allocated to remaining performance obligations as of December 31, 2022, December 31, 2023 will be recognized as revenue as follows:

(in thousands)		
Next 12 months	\$ 846,312	897,393
Months 13-24	356,075	371,957
Months 25-36	170,977	150,744
Thereafter	43,482	52,490
Total revenue allocated to remaining performance obligations	\$ 1,416,846	1,472,584

Revenue allocated to remaining performance obligations represents contracted revenue that has not yet been recognized, which includes both deferred revenue and backlog. Our backlog represents deferred revenue associated with installment billings for periods beyond the current quarterly billing cycle and committed contracts with start dates beyond the end of the current period. Revenue recognized during the years ended December 31, 2022, December 31, 2023 and 2021 2022 included amounts in deferred revenue and backlog at the beginning of the period of \$846.3 million, of which \$414.0 million was in deferred revenue, and \$764.9 million, of which \$391.5 million was in deferred revenue, and \$606.8 million, of which \$372.1 million was in deferred revenue, respectively.

4. Acquisitions

During On January 3, 2023, we completed the acquisition of DYNAmore for a purchase price of \$139.2 million, or \$126.4 million net of cash acquired. The acquisition expands our position as a simulation solution provider within the automotive industry. The effects of the acquisition were not material to our consolidated results of operations.

Additionally, during the year ended December 31, 2022, December 31, 2023, we completed several strategic other acquisitions to expand our solution offerings and enhance our customers' experience. The effects of the These acquisitions were not material to our consolidated results of operations significant, individually or in the aggregate. The combined purchase price of the these acquisitions completed during the year ended December 31, 2022, December 31, 2023 was approximately \$401.8 \$94.4 million, or \$391.6 \$88.3 million net of cash acquired.

During the year ended December 31, 2022, December 31, 2023, we incurred acquisition-related expenses of \$10.3 \$9.4 million. Acquisition-related expenses are recognized as selling, general and administrative and research and development expenses on the consolidated statements of income.

The assets acquired and liabilities assumed in connection with the acquisitions have been recorded based upon management's estimates of their fair market values as of each respective date of acquisition. The following tables summarize the fair value of consideration and the fair values of identified assets acquired and liabilities assumed for the combined 2022 acquisitions at each respective date of acquisition:

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Fair Value of Consideration:
(in thousands)

Cash	\$	396,455	228,520
Consideration not yet paid		5,391	5,056
Total consideration	\$	401,846	233,576

Recognized Amounts of Identifiable Assets Acquired and Liabilities Assumed:
Recognized Amounts of Identifiable Assets Acquired and Liabilities Assumed:
(in thousands)

Cash	\$	10,242	18,870
Accounts receivable and other tangible assets		4,821	18,524
Developed software and core technologies (9 year weighted-average life)		127,830	28,110
Customer lists (14 year weighted-average life)		7,926	83,790
Trade names (10 year weighted-average life)		5,304	2,910
Accounts payable and other liabilities		(6,276)	(9,176)
Deferred revenue		(5,818)	(8,030)
Net deferred tax liabilities		(28,060)	(31,597)
Total identifiable net assets	\$	115,969	103,401
Goodwill	\$	285,877	130,175

The goodwill, which is generally not tax-deductible, is attributed to intangible assets that do not qualify for separate recognition, including the assembled workforces of the acquired businesses and the synergies expected to arise as a result of the acquisitions.

The fair values of the assets acquired and liabilities assumed are based on preliminary calculations. The estimates and assumptions for these items are subject to change as additional information about what was known and knowable at each respective acquisition date is obtained during the measurement period (up to one year from the acquisition date).

We determined the fair value of our intangible assets using various valuation techniques, including the relief-from-royalty method and the multi-period excess earnings method. These models utilize certain unobservable inputs classified as Level 3 measurements as defined by ASC 820, *Fair Value Measurements and Disclosures*. The determination of fair value requires considerable judgment and is sensitive to changes in underlying assumptions, estimates and market factors. Estimating fair value requires us to make assumptions and estimates regarding our future plans, as well as industry and economic conditions. These assumptions and estimates include, but are not limited to: selection of a valuation methodology, royalty rate, discount rate, attrition rate and attrition obsolescence rate.

The weighted-average useful life, valuation method and assumptions used to determine the fair value of the intangible assets related to the 2023 acquisitions are as follows:

Intangible Asset	Weighted-Average Useful		Valuation Method	Assumptions
	Life			
Developed software and core technologies	5 years		Relief-from-royalty or multi-period excess earnings	Royalty rate: 20.0% Obsolescence rate: 15.0% - 20.0% Discount rate: 12.5% - 22.0%
Trade names	5 years		Relief-from-royalty	Royalty rate: 1.0% - 2.0% Discount rate: 15.5% - 22.0%
Customer lists	13 years		Multi-period excess earnings	Attrition rate: 5.0% Discount rate: 15.5% - 22.0%

The operating results of each acquisition have been included in our consolidated financial statements since each respective date of acquisition. The effects of the business combinations were not material to our consolidated results of operations individually or in the aggregate during 2023.

2022 Acquisitions

During the year ended December 31, 2022, we completed several strategic acquisitions to enhance our customers' experience. The effects of the acquisitions were not material to our consolidated results of operations individually or in the aggregate. The combined purchase price of the acquisitions completed during the year ended December 31, 2022 was \$401.7 million, or \$390.8 million net of cash acquired.

During the year ended December 31, 2022, we incurred acquisition-related expenses of \$10.3 million. Acquisition-related expenses are recognized as selling, general and administrative and research and development expenses on the consolidated statements of income.

The assets and liabilities of the acquisitions have been recorded based upon management's estimates of their fair market values as of each respective date of acquisition. The following tables summarize the fair values of consideration transferred and the fair values of identified assets acquired and liabilities assumed at each respective date of acquisition:

Fair Value of Consideration:

(in thousands)

Cash	\$	397,629
Consideration not yet paid		4,035
Total Consideration	\$	401,664

Recognized Amounts of Identifiable Assets Acquired and Liabilities Assumed:

(in thousands)

Cash	\$	10,862
Accounts receivable and other tangible assets		4,914
Developed software and core technologies		127,830
Customer lists		7,926
Trade names		5,304
Accounts payable and other liabilities		(7,247)
Deferred revenue		(6,408)
Net deferred tax liabilities		(19,854)
Total identifiable net assets	\$	123,327
Goodwill	\$	278,337

The goodwill, which is generally not tax-deductible, is attributed to intangible assets that do not qualify for separate recognition, including the assembled workforces of the acquired businesses and the synergies expected to arise as a result of the acquisitions.

The weighted-average useful life, valuation method and assumptions used to determine the fair value of the intangible assets acquired in 2022 are as follows:

Intangible Asset	Weighted-Average Useful Life	Valuation Method	Assumptions
Developed software and core technologies	9 years	Multi-period excess earnings	Discount rate: 9.5% - 18.0%
Trade names	10 years	Relief-from-royalty	Royalty rate: 1.0% - 2.0% Discount rate: 10.0% - 18.0%
Customer lists	14 years	Multi-period excess earnings	Attrition rate: 5.0% - 30.0% Discount rate: 9.5% - 15.0%

The operating results of each acquisition have been included in our consolidated financial statements since each respective date of acquisition. The effects of the business combinations were not material to our consolidated results of operations individually or in the aggregate during 2022.

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2021 Acquisitions

On October 1, 2021, we acquired 100% of the shares of Zemax, a leader in high-performance optical imaging system simulation, for a purchase price of \$411.5 million, paid in cash, or \$399.1 million net of cash acquired from Zemax. The acquisition expands the scope of our optical and photonics simulation portfolio by giving users comprehensive solutions that could drive innovation in healthcare, autonomy, consumer electronics and the IIoT.

Additionally, during the year ended December 31, 2021 we completed several other acquisitions to expand our solution offerings and enhance our customers' experience. These acquisitions were not individually significant. The combined purchase price of these acquisitions during the year ended December 31, 2021 was \$110.7 million which was paid in cash, or \$106.4 million net of cash acquired.

During the year ended December 31, 2021, we incurred \$6.0 million in acquisition-related expenses, recognized as selling, general and administrative expense on the consolidated statements of income.

The assets and liabilities of the acquisitions have been recorded based upon management's estimates of their fair market values as of each respective date of acquisition. The following tables summarize the fair values of consideration transferred and the fair values of identified assets acquired and liabilities assumed at each respective date of acquisition:

Fair Value of Consideration Transferred:

<i>(in thousands)</i>	Zemax	Other Acquisitions	Total
Cash	\$ 411,501	\$ 110,739	\$ 522,240

Recognized Amounts of Identifiable Assets Acquired and Liabilities Assumed:

<i>(in thousands)</i>	Zemax	Other Acquisitions	Total
Cash	\$ 12,353	\$ 4,320	\$ 16,673
Accounts receivable and other tangible assets	6,831	2,978	9,809
Developed software and core technologies (11 year weighted-average life)	96,000	32,200	128,200
Customer lists (8 year weighted-average life)	10,000	2,300	12,300
Trade names (10 year weighted-average life)	7,000	1,000	8,000
Accounts payable and other liabilities	(4,915)	(2,942)	(7,857)
Deferred revenue	(3,085)	(746)	(3,831)
Net deferred tax liabilities	(24,171)	(6,056)	(30,227)
Total identifiable net assets	<u>\$ 100,013</u>	<u>\$ 33,054</u>	<u>\$ 133,067</u>
Goodwill	<u>\$ 311,488</u>	<u>\$ 77,685</u>	<u>\$ 389,173</u>

The goodwill, which is generally not tax-deductible, is attributed to intangible assets that do not qualify for separate recognition, including the assembled workforce of the acquired businesses and the synergies expected to arise as a result of the acquisitions.

The weighted-average useful life, valuation method and assumptions used to determine the fair value of the intangible assets acquired with the Zemax acquisition are as follows:

Intangible Asset	Weighted-Average Useful Life	Valuation Method	Assumptions
Developed software and core technologies	11 years	Multi-period excess earnings	Discount rate: 7.5%
Trade names	10 years	Relief-from-royalty	Royalty rate: 2.0% Discount rate: 8.0%
Customer lists	8 years	Multi-period excess earnings	Attrition rate: 10.0% Discount rate: 7.5%

The operating results of each acquisition have been included in our consolidated financial statements since each respective date of acquisition. The effects of the business combinations were not material to our consolidated results of operations individually or in the aggregate during 2021.

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5. Other Receivables and Current Assets and Other Accrued Expenses and Liabilities

Our other receivables and current assets, and other accrued expenses and liabilities, comprise the following balances:

December 31,		December 31,		December 31,	
<i>(in thousands)</i>	<i>(in thousands)</i>	2022	2021	<i>(in thousands)</i>	2023
Receivables related to unrecognized revenue	Receivables related to unrecognized revenue	\$209,139	\$200,888		
Income taxes receivable, including overpayments and refunds	Income taxes receivable, including overpayments and refunds	28,963	71,332		
Prepaid expenses and other current assets	Prepaid expenses and other current assets	51,159	52,435		
Total other receivables and current assets	Total other receivables and current assets	\$289,261	\$324,655		

Consumption, sales and VAT tax liabilities	Consumption, sales and VAT tax liabilities	41,812	\$ 52,630
Consumption, sales and VAT tax liabilities			
Consumption, sales and VAT tax liabilities			
Accrued expenses and other current liabilities	Accrued expenses and other current liabilities	156,408	151,879
Total other accrued expenses and liabilities	Total other accrued expenses and liabilities	\$198,220	\$204,509

Receivables related to unrecognized revenue represent the current portion of billings made for customer contracts that have not yet been recognized as revenue.

6. Property and Equipment

Property and equipment consists of the following:

(in thousands)	(in thousands)	Estimated Useful Lives	December 31,		(in thousands)	Estimated Useful Lives	December 31,	
			2022	2021			2023	2022
Equipment	Equipment	1-15 years	\$127,672	\$127,093				
Computer software	Computer software	1-5 years	27,030	35,134				
Buildings and improvements	Buildings and improvements	2-40 years	38,991	38,391				
Leasehold improvements	Leasehold improvements	1-17 years	27,560	25,948				
Furniture	Furniture	1-12 years	15,196	14,773				
Land	Land		2,696	2,696				
Property and equipment, gross	Property and equipment, gross		239,145	244,035				
Less: Accumulated depreciation	Less: Accumulated depreciation		(158,307)	(156,121)				
Property and equipment, net	Property and equipment, net		\$ 80,838	\$ 87,914				

Depreciation expense related to property and equipment was \$29.5 million \$29.0 million, \$30.9 million \$29.5 million and \$28.0 million \$30.9 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively.

7. Goodwill and Intangible Assets

Goodwill represents the excess of the fair value of consideration over the fair value of net identifiable assets acquired. Identifiable intangible assets acquired in business combinations are recorded based on their fair values on the date of acquisition.

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Intangible assets are classified as follows:

(in thousands)	(in thousands)	December 31, 2022		December 31, 2021		December 31, 2023		December 31, 2022	
		Gross		Gross		Gross		Gross	
		Carrying Amount	Accumulated Amortization	Carrying Amount	Accumulated Amortization	Carrying Amount	Accumulated Amortization	Carrying Amount	Accumulated Amortization
Finite-lived intangible assets:	Finite-lived intangible assets:								
	Developed software and core technologies								
	Developed software and core technologies								
	Developed software and core technologies	\$1,106,789	\$(483,033)	\$ 985,685	\$(422,797)				
Customer lists	Customer lists	205,484	(71,618)	203,072	(57,175)				
Trade names	Trade names	186,424	(135,220)	182,554	(128,577)				
Total	Total	<u>\$1,498,697</u>	<u>\$(689,871)</u>	<u>\$1,371,311</u>	<u>\$(608,549)</u>				
Indefinite-lived intangible asset:	Indefinite-lived intangible asset:								
Trade name	Trade name	<u>\$ 357</u>		<u>\$ 357</u>					
Trade name	Trade name								
Trade name	Trade name								

Finite-lived intangible assets are amortized over their estimated useful lives of two years to seventeen years.

As of December 31, 2022 December 31, 2023, estimated future amortization expense for the intangible assets reflected above is as follows:

(in thousands)	(in thousands)	(in thousands)
2023		\$ 94,544
2024	2024	99,348
2025	2025	100,509
2026	2026	102,172
2027	2027	104,205
2028		
Thereafter	Thereafter	<u>308,048</u>
Total intangible assets subject to amortization, net	Total intangible assets subject to amortization, net	<u>808,826</u>
Indefinite-lived trade name	Indefinite-lived trade name	<u>357</u>
Other intangible assets, net	Other intangible assets, net	<u>\$809,183</u>

The changes in goodwill during the years ended December 31, 2022 December 31, 2023 and 2021 2022 were as follows:

(in thousands)	(in thousands)	2022	2021	(in thousands)	2023	2022
Beginning balance - January 1	Beginning balance - January 1	\$3,409,271	\$3,038,306			
Acquisitions and adjustments ⁽¹⁾	Acquisitions and adjustments ⁽¹⁾	284,503	391,534			

Currency translation	Currency translation	(35,507)	(20,569)
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Currency translation

Currency translation

Ending balance - December 31	Ending balance - December 31	\$3,658,267	\$3,409,271
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(1) In addition to goodwill from acquisitions completed within the period, in accordance with the accounting for business combinations, we recorded adjustments to goodwill for the effect of changes in the provisional fair values of the assets acquired and liabilities assumed during the measurement period (up to one year from the acquisition date) as we obtained new information about facts and circumstances that existed as of the acquisition date that, if known, would have affected the measurement of the amounts recognized as of that date. Such adjustments are not material to our consolidated financial statements.

During the first quarter of 2022, 2023, we completed the annual impairment test for goodwill and the indefinite-lived intangible asset and determined that these assets had not been impaired as of the test date, January 1, 2022 January 1, 2023. Given the adverse economic and market conditions during the year, we considered a variety of qualitative factors to determine if an additional quantitative impairment test was required subsequent to our annual impairment test. Based on a variety of factors, including the excess of the fair value over the carrying amounts in the most recent impairment test, we determined it was not more likely than not that an impairment existed during the year. No other events or circumstances changed during the year ended December 31, 2022 December 31, 2023 that would indicate that the fair values of our reporting unit and indefinite-lived intangible asset are below their carrying amounts.

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8. Fair Value Measurement

The valuation hierarchy for disclosure of assets and liabilities reported at fair value prioritizes the inputs for such valuations into three broad levels:

- Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- Level 2: quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument; or
- Level 3: unobservable inputs based on our own assumptions used to measure assets and liabilities at fair value.

A financial asset's or liability's classification within the hierarchy is determined based on the lowest level input that is significant to the fair value measurement.

Our debt is classified within Level 2 of the fair value hierarchy because these borrowings are not actively traded and have a variable interest rate structure based upon market rates. The carrying amount of our debt approximates the estimated fair value. See Note 10, "Debt", for additional information on these borrowings.

The following tables provide the assets carried at fair value and measured on a recurring basis:

(in thousands)	(in thousands)	Fair Value Measurements at Reporting Date Using:				(in thousands)	December 31, 2023	Fair Value Measurements at Reporting Date Using:		
		December 31, 2022	Quoted Prices in Active Markets (Level 1)					Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	
			Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)					
<u>Assets</u>										
<u>Assets</u>										
<u>(Liabilities)</u>										
Cash equivalents										
Cash equivalents										
Cash equivalents	Cash equivalents	\$110,658	\$ 110,658	\$ —	\$ —					
Short-term investments	Short-term investments	\$ 183	\$ —	\$ 183	\$ —					
Deferred compensation plan investments	Deferred compensation plan investments	\$ 1,618	\$ 1,618	\$ —	\$ —					
Equity securities	Equity securities	\$ 892	\$ 892	\$ —	\$ —					
Forward contracts										

		Fair Value Measurements at Reporting Date Using:				Fair Value Measurements at Reporting Date Using:		
		Date Using:						
		Significant Other Significant						
		Quoted Prices in Observable Unobservable						
		Active Markets Inputs Inputs						
(in thousands)	(in thousands)	December 31, 2021	(Level 1)	(Level 2)	(Level 3)	(in thousands)	December 31, 2022	(Level 1) (Level 2) (Level 3)
Assets	Assets							
Cash equivalents	Cash equivalents	\$87,620	\$ 87,620	\$ —	\$ —			
Cash equivalents	Cash equivalents							
Cash equivalents	Cash equivalents							
Short-term investments	Short-term investments	\$ 361	\$ —	\$ 361	\$ —			
Deferred compensation plan investments	Deferred compensation plan investments	\$ 1,602	\$ 1,602	\$ —	\$ —			
Equity securities	Equity securities	\$ 2,500	\$ 2,500	\$ —	\$ —			

The cash equivalents in the preceding tables represent money market funds, valued at net asset value, with carrying values which approximate their fair values because of their short-term nature.

The short-term investments in the preceding tables represent deposits held by certain foreign subsidiaries. The deposits have fixed interest rates with original maturities ranging from three months to one year.

The deferred compensation plan investments in the preceding tables represent trading securities held in a rabbi trust for the benefit of non-employee directors. These securities consist of mutual funds traded in an active market with quoted prices. As a result, the plan assets are classified as Level 1 in the fair value hierarchy. The plan assets are recorded within other long-term assets on our consolidated balance sheets.

The equity securities represent our investment in a publicly traded company. These securities are traded in an active market with quoted prices. As a result, the securities are classified as Level 1 in the fair value hierarchy. The securities are recorded within other long-term assets on our consolidated balance sheets.

The forward contracts represent currency hedges to mitigate exchange rate exposure. These contracts are classified within Level 2 because these contracts are not actively traded and the valuation inputs are based on quoted prices and market observable data of similar instruments. The liabilities associated with the forward contracts are recorded at fair value in other accrued expenses and liabilities in the consolidated balance sheets.

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9. Leases

Our right-of-use (ROU) assets and lease liabilities primarily include operating leases for office space. Our executive offices and those related to certain domestic product development, marketing, production and administration are located in a 186,000 square foot office facility in Canonsburg, Pennsylvania. The term of the lease is 183 months, which began on October 1, 2014 and expires on December 31, 2029. The lease agreement includes options to renew the contract through August 2044, an option to lease additional space in January 2025 and an option to terminate the lease in December 2025. No options are included in the lease liability as renewal is not reasonably certain. In addition, we are reasonably certain we will not terminate the lease agreement. liability. Absent the exercise of options in the lease, our remaining base rent (inclusive of property taxes and certain operating costs) is \$4.5 million per annum through 2024 and \$4.7 million per annum for 2025 - 2029.

The components of our global lease cost reflected in the consolidated statements of income for the years ended December 31, 2022, December 31, 2023, 2021, 2022 and 2020, 2021 are as follows:

(in thousands)	(in thousands)	2022	2021	2020	(in thousands)	2023	2022	2021
Lease liability cost	Lease liability cost	\$27,543	\$28,357	\$24,818				

Total lease cost					
Total lease cost					

Other information related to operating leases for the years ended December 31, 2022, December 31, 2023, 2021, 2022 and 2020, 2021 is as follows:

(in thousands)

Operating cash flows from operating leases

Operating cash flows from operating leases

	As of	
	December 31,	
	<u>2022</u>	<u>2021</u>

Weighted-average remaining lease term of operating leases	Weighted-average remaining lease term of operating leases	6.9 years	7.2 years	Weighted-average remaining lease term of operating leases	6.4 years	6.9 years
Weighted-average discount rate of operating leases	Weighted-average discount rate of operating leases	3.1 %	3.0 %	Weighted-average discount rate of operating leases	3.4 %	3.1 %

The maturity schedule of the operating lease liabilities as of **December 31, 2022** **December 31, 2023** is as follows:

(in thousands)	(in thousands)	(in thousands)
2023	\$ 26,559	
2024	24,092	
2025	20,434	
2026	18,655	
2027	18,071	
2028		
Thereafter	43,427	
Total future lease payments	151,238	
Less: Present value adjustment	(15,633)	
Present value of future lease payments ⁽¹⁾	\$135,605	

⁽¹⁾Includes the current portion of operating lease liabilities of **\$22.8 million** **\$23.3 million**, which is reflected in other accrued expenses and liabilities in the consolidated balance sheets.

There were no material leases that have been signed but not yet commenced as of **December 31, 2022** **December 31, 2023**.

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10. Debt

On June 30, 2022, we entered into a credit agreement (**2022** **(as amended, the 2022 Credit Agreement)**) with PNC Bank, National Association, as administrative agent, swing line lender, and an L/C issuer, the lenders party thereto, and the other L/C issuers party thereto. The 2022 Credit Agreement refinanced our previous credit agreements in their entirety. Terms used in this description of the 2022 Credit Agreement with initial capital letters that are not otherwise defined herein are as defined in the 2022 Credit Agreement.

The 2022 Credit Agreement provides for a \$755.0 million unsecured term loan facility and a \$500.0 million unsecured revolving loan facility, which includes a \$50.0 million sublimit for the issuance of letters of credit. The revolving loan facility is available for working capital and general corporate purposes. Each of the term loan facility and the revolving loan facility matures on June 30, 2027.

The term loan facility was advanced by the lenders thereunder to refinance and replace our (i) Credit Agreement, dated as of February 22, 2019, as amended, among us, as borrower, Bank of America, N.A., as administrative agent, swing line lender and an L/C issuer, the lenders party thereto, and the other L/C issuers party thereto and (ii) Credit Agreement, dated as of November 9, 2020, among us, as borrower, Bank of America, N.A., as administrative agent, and the lenders party thereto (together, the "Prior Credit Agreements").

Borrowings under the term loan and revolving loan facilities accrue interest at a rate that is based on the Term SOFR plus an applicable margin or at the base rate plus an applicable margin, at our election. The base rate is the highest of (i) the Overnight Bank Funding Rate, plus 0.500%, (ii) the PNC Bank, National Association prime rate, and (iii) Daily Simple

SOFR plus an adjustment for SOFR plus 1.00%. The applicable margin for the borrowings is a percentage per annum based on the lower of (1) a pricing level determined by our then-current consolidated net leverage ratio and (2) a pricing level determined by our public debt rating (if available).

On September 29, 2023, the 2022 Credit Agreement was amended to provide for an interest rate adjustment (Sustainability Rate Adjustment) based upon the achievement of certain environmental, social and governance key performance indicators (KPIs). The Sustainability Rate Adjustment range is +/- 0.05% and will go into effect in the first quarter of 2024 based on the 2023 KPIs and will be adjusted annually based on the KPIs of the preceding year.

The 2022 Credit Agreement also provides for the option to add certain foreign subsidiaries as borrowers and to borrow in Euros, Sterling, Yen and Swiss Francs under the revolving loan facility, up to a sublimit of \$150.0 million. Borrowings under the revolving loan facility denominated in these currencies will accrue interest at a rate that is based on (a) for Euros, €STR, (b) for Sterling, SONIA, (c) for Yen, TONAR and (d) for Swiss Francs, SARON, plus an applicable margin calculated as described above.

Under the 2022 Credit Agreement, and Prior Credit Agreements, the weighted average interest rates rate in effect for the years year ended December 31, 2023 was 6.01%. Under the 2022 Credit Agreement and prior credit agreements, the weighted average interest rate in effect for the year ended December 31, 2022 and 2021 were was 2.72% and 1.37%, respectively. The rate in effect as of December 31, 2022 December 31, 2023 and for the first quarter of 2023 2024 under the 2022 Credit Agreement is 5.56% 6.32%.

The 2022 Credit Agreement contains customary representations and warranties, affirmative and negative covenants and events of default. The 2022 Credit Agreement also contains a financial covenant requiring us and our subsidiaries to maintain a consolidated net leverage ratio not in excess of 3.50 to 1.00 as of the end of any fiscal quarter (for the four-quarter period ending on such date) with an opportunity for a temporary increase in such consolidated net leverage ratio to 4.00 to 1.00 upon the consummation of certain qualified acquisitions for which the aggregate consideration is at least \$250.0 million.

As of December 31, 2022 December 31, 2023, we had \$755.0 million of borrowings outstanding under the term loan, with a carrying value of \$753.6 million \$753.9 million, which is net of \$1.4 \$1.1 million of unamortized debt discounts and issuance costs. The total amount was included in long-term debt. As of December 31, 2022 December 31, 2023, no borrowings were outstanding under the revolving loan facility.

As of December 31, 2021 December 31, 2022, we had \$755.0 million of borrowings outstanding under the term loans under the Prior Credit Agreements, loan, with a carrying value of \$753.6 million, which is net of \$1.4 million of unamortized debt discounts and issuance costs. The total amount was included in long-term debt. As of December 31, 2021 December 31, 2022, no borrowings were outstanding under the revolving loan facility under the Prior Credit Agreements.

We were in compliance with all covenants under the 2022 Credit Agreement and the Prior Credit Agreements as of December 31, 2022 December 31, 2023 and December 31, 2021 December 31, 2022, respectively.

As of December 31, 2022 December 31, 2023, all debt is scheduled to mature in 2027 with no principal payments required prior to the maturity date.

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11. Income Taxes

Income before income tax provision included the following components:

(in thousands)	(in thousands)	Year Ended December 31,			(in thousands)	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
Domestic	Domestic	\$504,797	\$460,395	\$465,382				
Foreign	Foreign	70,518	54,959	28,543				
Total	Total	\$575,315	\$515,354	\$493,925				

The provision for income taxes was composed of the following:

(in thousands)	(in thousands)	Year Ended December 31,			(in thousands)	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
Current:	Current:							
Federal	Federal	\$103,007	\$44,805	\$26,855				
Federal								
Federal								
State	State	11,286	6,626	12,738				
Foreign	Foreign	68,028	43,786	51,377				
Deferred:	Deferred:							
Federal	Federal	(94,398)	(32,449)	(12,203)				
Federal								
Federal								
State	State	(9,647)	(1,691)	(2,119)				
Foreign	Foreign	(26,671)	(350)	(16,610)				

Total	Total	\$ 51,605	\$60,727	\$60,038
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The reconciliation of the U.S. federal statutory tax rate to the consolidated effective tax rate was as follows:

		Year Ended December 31,			Year Ended December 31,					
		2022	2021	2020	2023		2022		2021	
Federal statutory tax rate	Federal statutory tax rate	21.0 %	21.0 %	21.0 %	21.0	%	21.0	%	21.0	%
Nondeductible expenses	Nondeductible expenses	2.3	2.8	0.7						
State income taxes, net of federal benefit	State income taxes, net of federal benefit	0.9	0.6	1.6						
Foreign rate differential	Foreign rate differential	—	(0.1)	0.4						
Stock-based compensation	Stock-based compensation	(1.5)	(5.4)	(3.6)						
Stock-based compensation										
Stock-based compensation										
Benefit from tax planning and entity structuring activities										
U.S. federal tax (benefit) expense on foreign earnings										
U.S. federal tax (benefit) expense on foreign earnings	U.S. federal tax (benefit) expense on foreign earnings	(2.4)	0.4	(1.7)						
Benefit from tax planning and entity structuring activities	Benefit from tax planning and entity structuring activities	(2.5)	(0.8)	(1.5)						
Research and development credits										
Research and development credits										
Research and development credits	Research and development credits	(3.2)	(3.1)	(3.2)						
Foreign-derived intangible income deduction	Foreign-derived intangible income deduction	(5.7)	(4.0)	(2.8)						
Other	Other	0.1	0.4	1.3						
		9.0 %	11.8 %	12.2 %						
		15.5			15.5	%	9.0	%	11.8	%

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The components of deferred tax assets and liabilities are as follows:

		December 31,		December 31,	
(in thousands)	(in thousands)	2022	2021	(in thousands)	2022

Deferred tax assets:	Deferred tax assets:		
Research and experimentation capitalization	Research and experimentation capitalization	\$ 85,677	\$ —
Research and experimentation capitalization	Research and experimentation capitalization		
Research and experimentation capitalization	Research and experimentation capitalization		
Uncertain tax positions	Uncertain tax positions	41,569	35,574
Net operating loss carryforwards	Net operating loss carryforwards	39,034	47,235
Stock-based compensation	Stock-based compensation		
Debt obligation basis difference	Debt obligation basis difference		
Operating lease liabilities	Operating lease liabilities	31,726	30,634
Debt obligation basis difference	Debt obligation basis difference	28,758	—
Stock-based compensation	Stock-based compensation	27,548	25,578
Employee benefits	Employee benefits	13,343	12,902
Research and development credits	Research and development credits	5,390	5,393
Allowance for doubtful accounts	Allowance for doubtful accounts	4,376	3,522
Other	Other	2,638	1,926
Valuation allowance	Valuation allowance	(17,336)	(14,936)
Total deferred tax assets	Total deferred tax assets	262,723	147,828
Deferred tax liabilities:	Deferred tax liabilities:		
Other intangible assets	Other intangible assets	(192,018)	(173,895)
Other intangible assets	Other intangible assets		
Operating lease right-of-use assets	Operating lease right-of-use assets	(30,308)	(29,296)
Deferred revenue	Deferred revenue	(8,979)	(19,521)
Property and equipment	Property and equipment	(5,029)	(5,785)
Other	Other		
Total deferred tax liabilities	Total deferred tax liabilities	(236,334)	(228,497)
Net deferred tax assets (liabilities)	Net deferred tax assets (liabilities)	\$ 26,389	\$(80,669)
Net deferred tax assets	Net deferred tax assets		

The net increase in the valuation allowance was primarily due to \$3.2 million net increases in unrealizable tax assets, partially offset by \$0.8 \$0.5 million of currency fluctuations on balances relating to foreign jurisdictions, jurisdictions, partially offset by a \$0.2 million decrease in unrealizable tax assets. As of each reporting date, management considers new evidence, both positive and negative, that could affect the future realization of deferred tax assets. If management determines it is more likely than not that an asset, or a portion of an asset, will not be realized, a valuation allowance is recorded.

As of December 31, 2022 December 31, 2023, we had federal net operating loss carryforwards of \$15.9 million \$7.2 million, which are subject to limitations of their utilization. Losses totaling \$15.1 \$6.5 million are not currently subject to expiration dates, while the remaining \$0.8 \$0.7 million of losses expire between 2028 - 2037. Deferred tax assets of \$1.9 million \$2.3 million have been recorded for state operating loss carryforwards. These losses expire between 2031 - 2043, 2042, and are subject to limitations on their utilization. We had total foreign net operating loss carryforwards of \$144.4 million \$128.3 million, of which \$104.6 million \$88.7 million are not currently subject to expiration dates. The remainder, \$39.8 million \$39.6 million, expires between 2025 - 2038. We had tax credit carryforwards of \$7.1 million \$7.5 million, of which \$0.5 million are not currently subject to expiration dates and \$6.6 \$7.0 million expire in various years between 2023 2025 - 2042, 2043. Of these tax credit carryforwards, \$1.0 million \$0.9 million are subject to limitations on their utilization.

In general, it is our intention to permanently reinvest all earnings in excess of previously taxed amounts. Substantially all of the pre-2018 earnings of our non-U.S. subsidiaries were taxed through the transition tax and post-2018 current earnings are taxed as part of global intangible low-taxed income tax expense. These taxes increase our previously taxed earnings and allow for the repatriation of the majority of our foreign earnings without any residual U.S. federal tax. Unrecognized provisions for taxes on indefinitely reinvested undistributed earnings of foreign subsidiaries would not be significant.

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The following is a reconciliation of the total amounts of unrecognized tax benefits:

(in thousands)	(in thousands)	Year Ended December 31,			(in thousands)	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
Unrecognized tax benefit as of January 1	Unrecognized tax benefit as of January 1	\$39,641	\$24,075	\$49,085				
Gross changes— acquisitions	Gross changes— acquisitions	—	—	(24,963)				
Gross increases— tax positions in prior period	Gross increases— tax positions in prior period	403	10,183	1,572				
Gross decreases— tax positions in prior period	Gross decreases— tax positions in prior period	(2,780)	(2,281)	—				
Gross increases— tax positions in current period	Gross increases— tax positions in current period	13,905	13,223	1,281				
Reductions due to a lapse of the applicable statute of limitations	Reductions due to a lapse of the applicable statute of limitations	(3,743)	(3,226)	(3,502)				
Changes due to currency fluctuation	Changes due to currency fluctuation	(1,654)	(912)	994				
Settlements	Settlements	—	(1,421)	(392)				
Unrecognized tax benefit as of December 31	Unrecognized tax benefit as of December 31	\$45,772	\$39,641	\$24,075				

We believe that it is reasonably possible that \$3.5 million \$3.2 million of uncertain tax positions included in the table above may be resolved within the next twelve months as a result of settlement with a taxing authority or a lapse of the statute of limitations. If the unrecognized tax benefit as of December 31, 2022 December 31, 2023 were to be recognized, a benefit of \$15.1 million of \$13.5 million would impact the effective tax rate.

We recognize interest and penalties related to income taxes as income tax expense. We recorded penalty expense of \$0.7 million, \$1.8 million \$0.7 million and \$0.2 million \$1.8 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively. We recorded interest expense of \$0.1 million for the year ended December 31, 2022, interest income of \$0.2 million for the year ended December 31, 2021 and interest expense of \$0.3 million for the year ended December 31, 2020 December 31, 2023, interest expense of \$0.1 million for the year ended December 31, 2022 and interest income of \$0.2 million for the year ended December 31, 2021. As of December 31, 2023, we accrued a liability for penalties of \$8.7 million and interest of \$2.6 million. As of December 31, 2022, we accrued a liability for penalties of \$7.9 million and interest of \$3.0 million. As of December 31, 2021, we accrued a liability for penalties of \$7.2 million and interest of \$5.2 million.

We are subject to taxation in the United States and various states and foreign jurisdictions. In the United States, our only major tax jurisdiction, the 2017 - 2022 2023 tax years are open to examination by the Internal Revenue Service.

12. Pension and Profit-Sharing Plans

We have a 401(k) plan for all qualifying domestic employees that permits participants to defer a portion of their pay pursuant to Section 401(k) of the Internal Revenue Code. We make matching contributions on behalf of each eligible participant in an amount equal to 100% of the first 3% and an additional 25% of the next 5%, for a maximum total of 4.25% of the employee's eligible compensation. We may make discretionary matching contributions. We may also make discretionary nonelective contributions in an amount to be determined by the Board of Directors for each plan year, provided the employee is employed at the end of the year and has worked at least 1,000 hours. Domestic employees of acquired businesses may participate in the 401(k) plan when their benefits are transitioned, they become eligible. We also maintain and contribute to various defined contribution and defined benefit pension arrangements for our international employees. We meet the minimum statutory funding requirements for our foreign plans. As of December 31, 2022 December 31, 2023 and 2021, 2022, the total unfunded portions of the benefit obligations were \$9.4 million \$11.8 million and \$9.2 \$9.4 million, respectively.

Expenses related to our retirement programs were \$25.9 million in 2023, \$21.9 million in 2022 and \$20.0 million in 2021 and \$18.7 million in 2020, 2021.

13. Non-Compete and Employment Agreements

Our employees have signed agreements under which they have agreed not to disclose trade secrets or confidential information that, where legally permitted, restrict engagement in or connection with any business that is competitive with us anywhere in the world while employed by us (and, in some cases, for specified periods thereafter in relevant geographic areas), and that any products or technology created by them during their term of employment are our property. In addition, we require all channel partners to enter into agreements not to disclose our trade secrets and other proprietary information.

We have an employment agreement with our Chief Executive Officer. Under the terms of the employment agreement, in the event that the Chief Executive Officer's employment with us is terminated by us without "Cause" or as a result of his resignation with "Good Reason," (each as defined in the agreement) the Chief Executive Officer will be entitled to (i) receive an amount equal to two times the sum of his then effective base salary plus his target bonus, payable over 24 months in equal

[Table Installments, \(ii\) receive payment of Contents](#)

installments, (ii) the prior year's earned annual cash incentive, to the extent unpaid, (iii) receive payment of a pro-rated target annual cash incentive for the year of termination, (iv) in certain circumstances, receive a monthly payment would be made by us of an lump sum amount equal to 24 months of the employer COBRA premium applicable to the health, insurance contribution amount that would have been paid to dental and vision plans in which the Chief Executive Officer for at most 24 months following such was participating prior to termination, (v) have any outstanding performance-based and time-based equity awards receive accelerated vesting treatment equal to an additional two years after termination, and (iii) (vi) have the period of time during which the Chief Executive Officer may exercise his vested stock options shall be extended to the longer of (x) three six months after his date of termination or (y) seven days after the commencement of our first open trading window that occurs after the date of termination, but in no event later than the 10-year expiration date of such options. During his employment with us and for two years thereafter, following termination of employment under certain circumstances described in the contract, he will be subject to non-competition and non-solicitation obligations.

If a termination under the circumstances described above occurs during the period beginning 60 days prior to the effective date of a definitive agreement that will result in a change in control and ending 18 months after the consummation (closing) of a change in control, then, in lieu of the benefits described in the foregoing paragraph, the Chief Executive Officer will be entitled to (a) the amounts described in the paragraph above, except that (a) the amount described in clause (i) above, which will be paid in a lump sum in certain circumstances rather than over 24 months, and (b) instead of the two-year acceleration and vesting of period described in clause (v), all outstanding stock-based performance-based and time-based equity awards held by the Chief Executive Officer shall immediately become fully exercisable, vested and/or non-forfeitable on an accelerated basis, subject to any performance or metric-based requirements set forth therein which shall be separately determined as set forth in the applicable award agreement and (c) in certain circumstances, a monthly payment by us of an amount equal to the employer health insurance contribution amount that would have been paid to the Chief Executive Officer for at most 24 months following such termination. agreement.

We also have employment agreements with several other employees, primarily in foreign jurisdictions. The terms of these employment agreements generally include annual compensation and non-compete clauses.

14. Stock-Based Compensation

On May 14, 2021, our stockholders approved the ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (the 2021 Plan). The 2021 Plan is a long-term incentive plan pursuant to which awards may be granted to directors, officers, other employees and certain consultants of Ansys and its subsidiaries. These awards include stock option rights, stock

appreciation rights, restricted stock, restricted stock units, cash incentives, performance shares, performance units and other awards. The 2021 Plan authorizes 4.4 million shares of common stock for issuance, plus 1.6 million shares that remained available for issuance under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (the Predecessor Plan) as of the effective date of the 2021 Plan plus any shares relating to the outstanding awards under the Predecessor Plan or the 2021 Plan that are subsequently forfeited. As of the effective date of the 2021 Plan, grants were no longer made under the Predecessor Plan.

The 2021 Plan requires a minimum vesting period or performance period of one year for most award types and a maximum period for options to be exercisable as ten years from the grant date. Upon the death or disability of a participant, performance awards are vested pro-rata, subject to any performance target requirements, and all other awards become fully vested. The Compensation Committee of the Board of Directors may, at its sole discretion, accelerate the date or dates on which an award granted under the 2021 Plan may vest in the event of a change in control or an employee's termination of employment. A change in control will result in awards either being assumed by the acquirer or the pre-existing awards becoming immediately vested and earned at target award levels. In the event an employee is terminated without cause within 18 months after the change in control, any assumed awards will become immediately vested.

We currently issue shares related to exercised stock options or vested awards from our existing pool of treasury shares and have no specific policy to repurchase treasury shares as stock options are exercised or as awards vest. If the treasury pool is depleted, we will issue new shares.

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Total stock-based compensation expense recognized for the years ended **December 31, 2022** **December 31, 2023**, **2021** **2022** and **2020** **2021** is as follows:

(in thousands, except per share amounts)	(in thousands, except per share amounts)	Year Ended December 31,			(in thousands, except per share amounts)	Year Ended December 31,		
		2022	2021	2020		2023	2022	2021
Cost of sales:	Cost of sales:							
Maintenance and service	Maintenance and service	10,073	12,390	13,626				
Maintenance and service	Maintenance and service							
Maintenance and service	Maintenance and service							
Operating expenses:	Operating expenses:							
Selling, general and administrative	Selling, general and administrative							
Selling, general and administrative	Selling, general and administrative	93,117	91,772	73,491				
Research and development	Research and development	64,938	62,176	58,498				
Stock-based compensation expense before taxes	Stock-based compensation expense before taxes	168,128	166,338	145,615				
Related income tax benefits	Related income tax benefits	(50,209)	(75,241)	(56,485)				
Stock-based compensation expense, net of taxes	Stock-based compensation expense, net of taxes	\$117,919	\$91,097	\$89,130				
Net impact on earnings per share:	Net impact on earnings per share:							
Basic earnings per share	Basic earnings per share	\$ (1.35)	\$ (1.05)	\$ (1.04)				
Basic earnings per share	Basic earnings per share							
Diluted earnings per share	Diluted earnings per share	\$ (1.35)	\$ (1.03)	\$ (1.02)				

As of **December 31, 2022** **December 31, 2023**, total unrecognized estimated compensation expense related to awards granted prior to that date was **\$241.6** **\$306.2** million, which is expected to be recognized over a weighted average period of 1.5 years. Forfeitures of awards are accounted for as they occur.

Stock Options

Prior to 2017, we granted stock option awards. The value of each stock option award was estimated on the date of grant, or date of acquisition for options issued in a business combination, using the Black-Scholes option pricing model (Black-Scholes model). The determination of the fair value of stock-based payment awards using an option pricing model was affected by our stock price as well as assumptions regarding a number of complex and subjective variables. These variables included our stock volatility during the preceding six years, actual and projected employee stock option exercise behaviors, interest rate assumptions using the five-year U.S. Treasury Note yield on the date of grant or acquisition date and expected dividends. The stock-based compensation expense for options was recorded ratably over the requisite service period.

As of **December 31, 2022** **December 31, 2023**, there is no unrecognized estimated compensation cost related to unvested stock options.

Information regarding stock option transactions is summarized below:

(options in thousands)	(options in thousands)	Year Ended December 31,						(options in thousands)	Year Ended December 31,					
		2022		2021		2020			2023	Weighted-Average Exercise	2022	Weighted-Average Exercise	2021	Weighted-Average Exercise
		Weighted-Average Exercise		Weighted-Average Exercise		Weighted-Average Exercise								
		Options	Price	Options	Price	Options	Price							
Outstanding, beginning of year	Outstanding, beginning of year	375	\$ 83.67	648	\$ 74.26	984	\$ 67.49							
Granted	Granted	—	\$ —	—	\$ —	—	\$ —							
Exercised	Exercised	(148)	\$ 67.56	(270)	\$ 61.42	(336)	\$ 54.43							
Forfeited	Forfeited	(1)	\$ 67.44	(3)	\$ 55.46	—	\$ —							
Outstanding, end of year	Outstanding, end of year	226	\$ 94.24	375	\$ 83.67	648	\$ 74.26							
Vested and Exercisable, end of year	Vested and Exercisable, end of year	226	\$ 94.24	375	\$ 83.67	648	\$ 74.26							
Nonvested	Nonvested	—	\$ —	—	\$ —	—	\$ —							

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		2022	2021	2020										
		2023												
Weighted Average Remaining Contractual Term (in years)	Weighted Average Remaining Contractual Term (in years)													
Outstanding	Outstanding	3.53	3.09	2.93										
Outstanding	Outstanding													
Vested and Exercisable	Vested and Exercisable	3.53	3.09	2.93										
Nonvested	Nonvested	0.00	0.00	0.00										
Aggregate Intrinsic Value (in thousands)	Aggregate Intrinsic Value (in thousands)													
Exercised	Exercised													
Exercised	Exercised	\$ 30,358	\$ 82,790	\$ 78,269										
Outstanding	Outstanding	\$ 33,361	\$ 118,995	\$ 187,679										
Vested and Exercisable	Vested and Exercisable	\$ 33,361	\$ 118,995	\$ 187,679										
Nonvested	Nonvested	\$ —	\$ —	\$ —										

Compensation	Compensation
Expense -	Expense -
Stock Options	Stock Options
(in thousands)	(in thousands)
	\$ — \$ — \$ 1,030

Information regarding stock options outstanding as of December 31, 2022 December 31, 2023 is summarized below:

(options in thousands)	(options in thousands)	Options Outstanding & Exercisable		
		Weighted-Average Remaining Contractual	Weighted-Average Exercise	
Range of Exercise Prices		Options	Life (years)	Price
\$12.26 - \$86.01		9	1.02	\$ 80.88
(options in thousands)				
(options in thousands)				Options Outstanding & Exercisable
Exercise Price				
\$86.01				
\$86.01				
\$86.01				
\$86.57				
\$86.57				
\$86.57	\$86.57	8	2.67	\$ 86.57
\$94.15	\$94.15	1	2.58	\$ 94.15
\$94.15				
\$94.15				
\$95.09	\$95.09	208	3.67	\$ 95.09
\$95.09				
\$95.09				

There were no unvested stock options as of December 31, 2022 December 31, 2023.

Restricted Stock Units

Under the terms of the 2021 Plan, we issue have issued various restricted stock unit awards (RSUs). The following table summarizes the types of awards and vesting conditions:

Award	Vesting Period	Vesting Condition
Restricted stock units with a service condition only	Three years	Continued employment through Prior to March 2023, one third of the vesting period . One awards vested annually. Commencing in March 2023, one third vests annually. in the first year and then one eighth quarterly thereafter.
Restricted stock units with an operating performance and service condition	Three years	Operating performance metrics as defined at the beginning of each sub-performance period and subject to continued employment through the vesting period.
Restricted stock units with a market and service condition	Three years	Our performance measured by total stockholder return relative to the Nasdaq Composite Index for the performance period and subject to continued employment through the vesting period.
Board of Director restricted stock unit awards	The earlier of one year or the next regular meeting of stockholders	Continued service on the Board of Directors through the vesting period. Directors that retire prior to the vest date receive a pro-rata portion of the RSUs.

The fair value of RSUs with only a service condition is based on the fair market value of our stock on the date of the grant and is recognized straight-line over the vesting period.

The fair value of RSUs with operating performance metrics is based on the fair market value of our stock on the date of the grant and is recognized from the grant date through the vesting period based on management's estimates concerning the probability of operating performance metric achievement.

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The fair values of RSUs with a market condition were estimated using a Monte Carlo simulation model and are recognized over the vesting period. The determination of the fair values of the awards was affected by the grant date and several variables, each of which has been identified in the chart below:

Year Ended December 31,					Year Ended December 31,			
Assumptions used in Monte Carlo lattice pricing model	Assumptions used in Monte Carlo lattice pricing model	2022	2021	2020	Assumptions used in Monte Carlo lattice pricing model	2023	2022	2021
Risk-free interest rate	Risk-free interest rate	1.8%	0.3%	0.7%	Risk-free interest rate	4.6%	1.8%	0.3%
Expected dividend yield	Expected dividend yield	—%	—%	—%	Expected dividend yield	—%	—%	—%
Expected volatility—Ansys stock price	Expected volatility—Ansys stock price	37%	36%	25%	Expected volatility—Ansys stock price	36%	37%	36%
Expected volatility—Nasdaq Composite Index	Expected volatility—Nasdaq Composite Index	26%	26%	18%	Expected volatility—Nasdaq Composite Index	25%	26%	26%
Expected term	Expected term	2.8 years	2.8 years	2.8 years	Expected term	2.8 years	2.8 years	2.8 years
Correlation factor	Correlation factor	0.84	0.84	0.77	Correlation factor	0.83	0.84	0.84
Weighted average fair value per share	Weighted average fair value per share	\$290.65	\$238.87	\$245.08	Weighted average fair value per share	\$452.14	\$290.65	\$238.87

Total compensation expense for employee RSU awards recorded for the years ended December 31, 2022, December 31, 2023, 2022 and 2021 was \$213.5 million, \$164.0 million and 2020 was \$161.7 million, \$160.2 million and \$138.3 million \$162.3 million, respectively.

Information regarding all employee and non-employee director RSU transactions is summarized below:

Year Ended December 31,								Year Ended December 31,					
		2022		2021		2020		2023		2022		2021	
(RSUs in thousands)	(RSUs in thousands)	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value	Weighted-Average Grant Date Fair Value
Nonvested, beginning of year	Nonvested, beginning of year	1,068	\$277.71	1,323	\$201.98	1,618	\$165.26						
Granted ⁽¹⁾	Granted ⁽¹⁾	851	\$299.58	501	\$333.50	501	\$256.47						
Performance adjustment - awards with market condition ⁽²⁾	Performance adjustment - awards with market condition ⁽²⁾	(8)	\$276.73	17	\$238.99	18	\$191.76						
Performance adjustment - awards with performance condition ⁽²⁾	Performance adjustment - awards with performance condition ⁽²⁾	73	\$300.28	63	\$376.48	(10)	\$279.08						

Vested	Vested	(592) \$256.72	(793) \$194.50	(742) \$158.13
Forfeited	Forfeited	(182) \$295.13	(43) \$263.13	(62) \$193.28
Nonvested, end of year	Nonvested, end of year	1,210 \$302.09	1,068 \$277.71	1,323 \$201.98

(1) Includes all RSUs granted during the year. RSUs with operating performance conditions are issued annually and have one performance cycle or three sub-performance cycles. Performance conditions are assigned near the beginning of each performance cycle or sub-performance cycle, as applicable, and awards are reflected as grants at the target number of units at that time.

(2) RSUs with a market or performance condition are granted at target and vest based on achievement of the market or operating performance and service conditions. The actual number of RSUs issued may be more or less than the target RSUs depending on the achievement of the market or operating performance conditions.

Board of Directors

Prior to 2016, we granted deferred stock awards to non-employee Directors, which are rights to receive shares of common stock upon termination of service as a Director. Associated with these awards, we established a non-qualified 409(a) deferred compensation plan with assets held under a rabbi trust to provide Directors an opportunity to diversify their vested awards. During open trading windows and at their elective option, the Directors may convert their Ansys shares into a variety of non-Ansys-stock investment options in order to diversify a portion of their holdings, subject to meeting ownership guidelines.

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Information regarding deferred stock awards to non-employee Directors is summarized below:

	Year Ended December 31, 2022		
	Diversified	Undiversified	Total
Deferred Awards Outstanding, beginning of year	6,998	56,824	63,822
Shares Diversified	—	—	—
Deferred Awards Outstanding, end of year	6,998	56,824	63,822

	Year Ended December 31, 2021		
	Diversified	Undiversified	Total
Deferred Awards Outstanding, beginning of year	6,998	58,681	65,679
Shares Diversified	—	—	—
Shares Issued Upon Retirement	—	(1,857)	(1,857)
Deferred Awards Outstanding, end of year	6,998	56,824	63,822

	Year Ended December 31, 2020		
	Diversified	Undiversified	Total
Deferred Awards Outstanding, beginning of year	5,598	60,081	65,679
Shares Diversified	1,400	(1,400)	—
Deferred Awards Outstanding, end of year	6,998	58,681	65,679

Information regarding RSU awards to non-employee Directors is summarized below:

	Year Ended December 31,					
	2022		2021		2020	
	Weighted-Average		Weighted-Average		Weighted-Average	
	BOD RSUs	Grant Date Fair Value	BOD RSUs	Grant Date Fair Value	BOD RSUs	Grant Date Fair Value
Nonvested, beginning of year	6,428	\$ 330.08	8,071	\$ 253.93	9,688	\$ 187.53
Granted	9,515	\$ 254.23	6,576	\$ 329.78	9,664	\$ 253.40
Vested	(6,428)	\$ 330.08	(8,219)	\$ 255.06	(10,704)	\$ 193.35
Forfeited	—	\$ —	—	\$ —	(577)	\$ 253.93
Nonvested, end of year	9,515	\$ 254.23	6,428	\$ 330.08	8,071	\$ 253.93

The RSUs to non-employee Directors vest in full upon the earlier of one year from the date of grant or the date of the next regular meeting of stockholders. If a non-employee Director retires prior to the vest date, the non-employee Director receives a pro-rata portion of the RSUs. Total compensation expense associated with the awards recorded for the years ended December 31, 2022, 2021 and 2020 was \$2.3 million, \$2.1 million and \$2.2 million, respectively.

Employee Stock Purchase Plan

On May 12, 2022, our stockholders approved the ANSYS, Inc. 2022 Employee Stock Purchase Plan (2022 ESPP) and the reservation by our Board of Directors of 750,000 shares of common stock for issuance under the 2022 ESPP. On October 27, 2022 our Board of Directors approved the amendment and restatement of the 2022 ESPP. The 2022 ESPP replaced the 1996 Employee Stock Purchase Plan (1996 Plan) in its entirety. The shares issued in both January and July 2022 were under the 1996 Plan. Shares issued in 2023 and beyond will be were issued under the 2022 ESPP. The 2022 ESPP and 1996 Plan (Purchase Plans) allow our employees and employees of our designated subsidiaries to purchase shares of our common stock at a discount to fair market value. There were 750,000 671,653 shares available for future purchases as of December 31, 2022 December 31, 2023.

The Purchase Plans are administered by the Compensation Committee. Offerings under the Purchase Plans commence on the first business day occurring on or before each February 1 and August 1, and end on the last business day occurring on or before the following July 31 and January 31, respectively. An employee who owns or is deemed to own shares of stock representing in excess of 5% of the combined voting power of all classes of our stock may not participate in the Purchase Plans.

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During each offering, an eligible employee may purchase shares by authorizing payroll deductions of up to 10% of his or her cash compensation during the offering period. The maximum number of shares that may be purchased by any participating employee during any offering period is limited to 3,840 shares. Subject to limitations within the Purchase Plans, each employee's accumulated payroll deductions will be used to purchase common stock on the last day of the applicable offering period at a price equal to 90% (or 85% for offering periods after January 31, 2023) of the fair market value of the common stock on the first or last day of the applicable offering period, whichever is less. Under applicable tax rules, an employee may not accrue at a rate that exceeds \$25,000 of the fair market value of our stock (determined on the option grant date or dates) for each calendar year in which the option to purchase shares is outstanding at any time. As of December 31, 2022 December 31, 2023, no 78,347 shares of common stock had been issued under the 2022 ESPP. There were 0.1 million shares issued during the year ended December 31, 2022 under the 1996 Plan. The total compensation expense recorded under the 1996 Plan Purchase Plans during the years ended December 31, 2021 December 31, 2023, 2022 and 2020 2021 was \$4.0 million \$8.3 million, \$4.2 million and \$4.1 million \$4.0 million, respectively. The total compensation expense recorded under the 1996 Plan and 2022 ESPP during the year ended December 31, 2022 was \$4.2 million.

15. Stock Repurchase Program

Under our stock repurchase program, we repurchased shares as follows:

Year Ended December 31,					Year Ended December 31,		
(in thousands, except per share data)	(in thousands, except per share data)	2022	2021	2020	(in thousands, except per share data)	2023	2022
Number of shares repurchased	Number of shares repurchased	725	347	690			2021
Average price paid per share	Average price paid per share	\$ 283.38	\$ 388.35	\$ 233.48			
Total cost	Total cost	\$205,571	\$134,679	\$161,029			

All of the shares repurchased during the year ended December 31, 2023 were repurchased during the first quarter. As of December 31, 2022 December 31, 2023, 1.7 million 1.1 million shares remained available for repurchase under the program. Average price paid per share excludes excise tax. As of January 1, 2023, our share repurchases in excess of issuances are subject to a 1% excise tax enacted by the Inflation Reduction Act. As of December 31, 2023, we had \$0.1 million of accrued excise tax. Any excise tax incurred is recognized and reflected as part of the cost basis of the shares acquired in the Consolidated Statements of Stockholders' Equity.

16. Royalty Agreements

We have entered into various renewable license agreements under which we have been granted access to the licensor's technology and the right to sell the technology in our product line. Royalties are payable to developers of the software at various rates and amounts, which generally are based upon unit sales, revenue or flat fees. Royalty fees are reported in cost of software licenses and were \$32.0 million \$39.0 million, \$36.9 million \$32.0 million and \$29.6 million \$36.9 million for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively.

17. Geographic Information

Revenue to external customers is attributed to individual countries based upon the location of the customer. Revenue by geographic area was as follows:

Year Ended December 31,					Year Ended December 31,		
(in thousands)	(in thousands)	2022	2021	2020	(in thousands)	2023	2022
							2021

United States	United States	\$ 932,587	\$ 867,125	\$ 776,716
Japan				
Germany	Germany	198,612	158,541	160,771
Japan		186,199	193,096	183,117
China and Hong Kong				
South Korea	South Korea	127,948	105,853	74,953
Other EMEA				
Other EMEA				
Other EMEA	Other EMEA	349,159	359,074	307,933
Other international	Other international	271,048	223,026	177,807
Total revenue	Total revenue	\$2,065,553	\$1,906,715	\$1,681,297

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Property and equipment by geographic area was as follows:

December 31,				
December 31,				December 31,
(in thousands)	(in thousands)	2022	2021	(in thousands)
United States	United States	\$58,258	\$62,880	2023
India	India	5,978	6,144	2022
Germany		2,533	4,434	
France				
France				
France				
Other EMEA				
Other EMEA				
Other EMEA	Other EMEA	8,510	9,215	
Other international	Other international	5,559	5,241	
Total property and equipment, net	Total property and equipment, net	\$80,838	\$87,914	

18. Unconditional Purchase Obligations

We have entered into various unconditional purchase obligations which primarily include minimum royalty contracts, software licenses and support, and network services. We expended \$54.8 million, \$44.9 million \$54.8 million and \$37.2 million \$44.9 million related to unconditional purchase obligations that existed as of the beginning of each year for the years ended December 31, 2022 December 31, 2023, 2021 2022 and 2020, 2021, respectively. Future expenditures under unconditional purchase obligations in effect as of December 31, 2022 December 31, 2023 are as follows:

(in thousands)	(in thousands)	
2023		\$ 54,775
2024		
2024		
2024	2024	18,832
2025	2025	4,446

2026	2026	3,542
2027	2027	2,663
2028		
Total	Total	\$ 84,258

19. Contingencies and Commitments

We are subject to various claims, investigations, and legal and regulatory proceedings that arise in the ordinary course of business, including, but not limited to, commercial disputes, labor and employment matters, tax audits, alleged infringement of third parties' intellectual property rights and other matters. In our opinion, the resolution of pending matters is not expected to have a material adverse effect on our consolidated results of operations, cash flows or financial position. However, each of these matters is subject to various uncertainties and it is possible that an unfavorable resolution of one or more of these proceedings could materially affect our consolidated results of operations, cash flows or financial position.

Our Indian subsidiary has several service tax audits pending that have resulted in formal inquiries being received on transactions through mid-2012. We could incur tax charges and related liabilities of \$6.9 \$7.1 million. As such charges are not probable at this time, a reserve has not been recorded on the consolidated balance sheet as of December 31, 2022 December 31, 2023. The service tax issues raised in our notices and inquiries are very similar to the case, M/s Microsoft Corporation (I) (P) Ltd. Vs. Commissioner of Service Tax, New Delhi, wherein the Delhi Customs, Excise and Service Tax Appellate Tribunal (CESTAT) issued a favorable ruling to Microsoft. The Microsoft ruling was subsequently challenged in the Supreme Court of India by the Indian tax authority and a decision is still pending. We can provide no assurances on the impact that the present Microsoft case's decision will have on our cases, however, an unfavorable ruling in the Microsoft case may impact our assessment of probability and result in the recording of a \$6.9 \$7.1 million reserve. We are uncertain as to when these service tax matters will be concluded.

We sell software licenses and services to our customers under contractual agreements. Such agreements generally include certain provisions indemnifying the customer against claims, by third parties, of infringement or misappropriation of their intellectual property rights arising from such customer's usage of our products or services. To date, payments related to these indemnification provisions have been immaterial. For several reasons, including the lack of prior material indemnification claims, we cannot determine the maximum amount of potential future payments, if any, related to such indemnification provisions.

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20. Subsequent Event

In January 2023, Synopsys Merger Agreement

On January 15, 2024, we had entered into the Merger Agreement with Synopsys and Merger Sub, pursuant to which Merger Sub will merge with and into Ansys, with Ansys surviving the Merger as a \$120.7 million wholly owned subsidiary of Synopsys. Our Board of Directors has unanimously approved the Merger Agreement and, subject to certain exceptions set forth in the Merger Agreement, resolved to recommend that our stockholders adopt the Merger Agreement. If the Merger is consummated, our common stock will be delisted from the Nasdaq Global Select Market and deregistered under the Exchange Act.

Under the Merger Agreement, at the effective time of the Merger, each issued and outstanding share of our common stock (subject to certain exceptions set forth in the Merger Agreement) will be cancelled and converted into the right to receive (i) 0.3450 of a share of common stock, par value \$0.01 per share, of Synopsys and (ii) \$197.00 in cash, outflow (net of cash acquired) associated with a strategic acquisition. The acquisition was funded with our existing cash balance. Due without interest, subject to applicable withholding taxes. With regard to the limited time since Stock Consideration, if the acquisition date, aggregate number of shares of Synopsys common stock to be issued in connection with the initial accounting Merger would exceed the Maximum Share Number, (a) the Exchange Ratio will be reduced to the minimum extent necessary such that the aggregate number of shares of Synopsys common stock to be issued in connection with the Merger does not exceed the Maximum Share Number and (b) the Per Share Cash Amount will be correspondingly increased to offset such adjustment.

for The Merger Agreement contains customary representations, warranties and covenants made by each of Ansys, Synopsys, and Merger Sub, including, among others, covenants regarding the business combination is incomplete. As a result, we are unable to provide conduct of our and Synopsys' businesses during the amount recognized as pendency of the acquisition transactions contemplated by the Merger Agreement, the making of certain public disclosures and other matters as described in the Merger Agreement. We and Synopsys have agreed to use reasonable best efforts to take all actions necessary to consummate the Merger, including cooperating to obtain the regulatory approvals necessary to complete the Merger. We have agreed not to, among other things, (a) solicit proposals relating to alternative transactions or (b) enter into discussions or negotiations or provide non-public information in connection with any proposal for an alternative transaction from a third party, subject to certain exceptions to permit our Board of Directors to comply with its fiduciary obligations. We have further agreed to cease and cause to be terminated any existing discussions or negotiations, if any, with regard to alternative transactions.

date for The Merger Agreement may be terminated under certain circumstances, including that either party may have the major classes of assets acquired and liabilities assumed. The preliminary allocation of purchase price right to terminate if the Merger is not completed by January 15, 2025, which may be extended to January 15, 2026 as provided in the Merger Agreement. If the Merger Agreement is terminated, (A) Synopsys, under specified circumstances, including termination following an injunction arising in connection with certain antitrust or foreign investment laws, will be required to pay us a termination fee of \$1,500.0 million; and (B) we, under specified circumstances, including our termination of the Merger Agreement to accept and enter into a definitive agreement with respect to a Superior Proposal (as defined in the Merger Agreement) or Synopsys' termination upon the change by our Board of Directors of its recommendation in favor of the Merger, will be required to pay Synopsys a termination fee of \$950.0 million.

included The completion of the Merger is subject to customary closing conditions, including, among others, approval of the Merger under certain applicable antitrust and foreign investment regimes and the adoption of the Merger Agreement by our stockholders. We anticipate the transaction to close in our Quarterly Report on Form 10-Q for the three months ended March 31, 2023. We do not expect the operation to be material to our financial results, first half of 2025.

EXHIBIT INDEX

Exhibit No.	Exhibit
2.1	Agreement and Plan of Merger, dated as of January 15, 2024, by and among Synopsys, Inc., ANSYS, Inc. and ALTA Acquisition Corp., (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K, filed January 16, 2024, and incorporated herein by reference).
3.1	Restated Certificate of Incorporation of ANSYS, Inc., dated May 25, 2022 May 31, 2023 (filed as Exhibit 4.1 3.1 to the Company's Registration Statement Quarterly Report on Form S-8, 10-Q, filed June 13, 2022 August 2, 2023, and incorporated herein by reference).
3.2	Fourth Fifth Amended and Restated By-Laws of ANSYS, Inc., adopted and effective May 16, 2022 May 12, 2023 (filed as Exhibit 3.2 to the Company's Company's Current Report on Form 8-K, filed May 17, 2022 May 16, 2023, and incorporated herein by reference).
4.1	Description of Securities Securities.
10.1	Form of Indemnification Agreement between ANSYS, Inc. and Non-Employee Directors (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed March 20, 2013, and incorporated herein by reference).*
10.2	Non-Employee Director Deferred Compensation Plan (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed November 7, 2019, and incorporated herein by reference).*
10.3	Executive Severance Plan, as amended and restated, dated July 29, 2014 (filed as Exhibit 10.3 to the Company's Annual Report on Form 10-K, filed February 27, 2020, and incorporated herein by reference).*
10.4	Fourth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed May 17, 2011, and incorporated herein by reference).*
10.5	Form of Deferred Stock Unit Agreement under the Fourth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.5 to the Company's Annual Report on Form 10-K, filed February 27, 2020, and incorporated herein by reference).*
10.6	Form of Employee Non-Qualified Stock Option Agreement under the Fourth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed May 2, 2013, and incorporated herein by reference).*
10.7	Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Appendix 1 to the Company's Definitive Proxy Statement on Schedule 14A filed March 31, 2016 and incorporated herein by reference).*
10.8	Form of Employee Non-Qualified Stock Option Agreement under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.36 to the Company's Annual Report on Form 10-K, filed February 23, 2017, and incorporated herein by reference).*
10.9	2019 Form of Special Performance Stock Unit Agreement under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.18 to the Company's Annual Report on Form 10-K, filed February 27, 2020, and incorporated herein by reference).*
10.10	2020 Form of Award Notice (Total Shareholder Return) under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.24 to the Company's Quarterly Report on Form 10-Q, filed May 6, 2020, and incorporated herein by reference).*
10.11	2020 Form of Award Notice (Annual Contract Value) under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.17 to the Company's Annual Report on Form 10-K, filed February 24, 2021, and incorporated herein by reference).*
10.12	2021 Form of Award Notice (Annual Contract Value) under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.24 to the Company's Quarterly Report on Form 10-Q, filed May 5, 2021, and incorporated herein by reference).*
10.13	2021 Form of Award Notice (Total Shareholder Return) under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.25 to the Company's Quarterly Report on Form 10-Q, filed May 5, 2021, and incorporated herein by reference).*
10.14	2021 Form of Restricted Stock Unit Agreement under the Fifth Amended and Restated ANSYS, Inc. 1996 Stock Option and Grant Plan (filed as Exhibit 10.26 to the Company's Quarterly Report on Form 10-Q, filed May 5, 2021, and incorporated herein by reference).*
10.15	Amended and Restated Employment Agreement between ANSYS, Inc. and Ajei S. Gopal, dated August 29, 2016 (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed August 29, 2016, and incorporated herein by reference). November 1, 2023.*
10.16	Form of Non-Qualified Stock Option Agreement with Ajei S. Gopal (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K, filed August 29, 2016, and incorporated herein by reference).*

10.17	Lease by and between ANSYS, Inc. and Quattro Investment Group, L.P., dated as of September 14, 2012 (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed September 18, 2012, and incorporated herein by reference).
10.18	ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (filed as Exhibit 99.1 to the Company's Current Report on Form 8-K, filed May 18, 2021, and incorporated herein by reference).*
10.19	Form of Notice of Grant of Performance-Based Restricted Stock Units and Agreement (Total Shareholder Return) under the ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (filed as Exhibit 10.28 to the Company's Quarterly Report on Form 10-Q, filed August 4, 2021, and incorporated herein by reference).*
10.20	Form of Notice of Grant of Performance-Based Restricted Stock Units and Agreement (Operating Metrics) under the ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (filed as Exhibit 10.29 to the Company's Quarterly Report on Form 10-Q, filed August 4, 2021, and incorporated herein by reference).*
10.21	Form of Notice of Grant of Restricted Stock Units and Agreement (Non-Employee Director) under the ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (filed as Exhibit 10.30 to the Company's Quarterly Report on Form 10-Q, filed August 4, 2021, and incorporated herein by reference).*
10.22	Form of Notice of Grant of Restricted Stock Units and Award Notice and Agreement (Employee) under the ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (filed as Exhibit 10.31 to the Company's Quarterly Report on Form 10-Q, filed August 4, 2021, and incorporated herein by reference).*
10.23	ANSYS, Inc. 2022 Employee Stock Purchase Plan (as amended and restated effective February 1, 2023), and filed as Exhibit 10.23 to the Company's Annual Report on Form 10-K, filed February 23, 2023, and incorporated herein by reference).*
10.24	Credit Agreement, dated as of June 30, 2022, among ANSYS, Inc., as Borrower, PNC Bank, National Association, as Administrative Agent, Swing Line Lender and an L/C Issuer, the lenders party thereto, and the other L/C Issuers party thereto (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K, filed July 6, 2022, and incorporated herein by reference).
10.25	Amendment No. 1 to Credit Agreement, dated as of September 29, 2023, among ANSYS, Inc., as Borrower, PNC Bank, National Association, as Administrative Agent, and the lenders party thereto (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed November 1, 2023, and incorporated herein by reference).†
10.26	ANSYS, Inc. Tier Two Executive Severance Plan, dated January 1, 2024.*
10.27	Transition Agreement between ANSYS, Inc. and Nicole Anasenes, dated February 15, 2024.*
21.1	Subsidiaries of the Registrant.
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
24.1	Powers of Attorney. Contained on the Signatures page of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2022²³ and incorporated herein by reference.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
97.1	Policy Relating to Recovery of Erroneously Awarded Compensation, dated November 30, 2023.
101.INS	Inline XBRL Instance Document (the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document)
101.SCH	Inline XBRL Taxonomy Extension Schema
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Indicates management contract or compensatory plan, contract or arrangement.

† Certain schedules, exhibits, and appendices have been omitted pursuant to Item 601(a)(5) of Regulation S-K. The Company hereby undertakes to furnish copies of any omitted schedule, exhibit, or appendix to the SEC upon request.

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ITEM 16. FORM 10-K SUMMARY

None.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ANSYS, Inc.

Date: February 22, 2023 21, 2024

By: /s/ Ajei S. Gopal

Ajei S. Gopal
President and Chief Executive Officer
(Principal Executive Officer)

Date: February 22, 2023 21, 2024

By: /s/ Nicole Anasenes

Nicole Anasenes
Chief Financial Officer and Senior Vice President, Finance
(Principal Financial Officer and Principal Accounting Officer)

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POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Ajei S. Gopal, his or her attorney-in-fact, with the power of substitution, for such person in any and all capacities, to sign any amendments to this Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that said attorney-in-fact, or substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated below.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ AJEI S. GOPAL Ajei S. Gopal	President, Chief Executive Officer and Director (Principal Executive Officer)	February 22, 2023 21, 2024
/s/ NICOLE. ANASENES Nicole Anasenes	Chief Financial Officer and Senior Vice President, Finance (Principal Financial Officer and Principal Accounting Officer)	February 22, 2023 21, 2024
/s/ GLENDA M. DORCHAK Glenda M. Dorchak	Director	February 22, 2023 21, 2024
/s/ DR. ANIL CHAKRAVARTHY Dr. Anil Chakravarthi	Director	February 22, 2023 21, 2024
/s/ DR. ALEC D. GALLIMORE Dr. Alec D. Gallimore	Director	February 22, 2023 21, 2024
/s/ RONALD W. HOVSEPIAN Ronald W. Hovsepian	Chairman of the Board of Directors	February 22, 2023 21, 2024
/s/ BARBARA V. SCHERER Barbara V. Scherer	Director	February 22, 2023 21, 2024
/s/ ROBERT M. CALDERONI Robert M. Calderoni	Director	February 22, 2023 21, 2024
/s/ RAVI K. VIJAYARAGHAVAN Ravi K. Vijayaraghavan	Director	February 22, 2023 21, 2024
/s/ JIM FRANKOLA Jim Frankola	Director	February 22, 2023 21, 2024
/s/ CLAIRE BRAMLEY Claire Bramley	Director	February 22, 2023 21, 2024

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Exhibit EXHIBIT 4.1

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

The following description sets forth certain material terms and provisions of the securities of ANSYS, Inc. (the “Company”) that are registered under Section 12 of the Securities Exchange Act of 1934, as amended, and relevant provisions of the Delaware General Corporation Law (the “DGCL”). This description does not purport to be complete. It is subject to, and qualified in its entirety by reference to, the applicable provisions of the DGCL and our Restated Certificate of Incorporation (the “Certificate of Incorporation”) and our Fourth Amended and Restated By-Laws (the “By-Laws”), each of which is incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.1 is a part. We encourage you to read our Certificate of Incorporation, our By-Laws, and the applicable provisions of the DGCL for additional information.

Authorized Capital Stock

We are authorized to issue a total of three hundred two million (302,000,000) shares of capital stock consisting of (i) two million (2,000,000) shares of undesignated Preferred Stock, par value \$.01 per share (the “Preferred Stock”) and (ii) three hundred million (300,000,000) shares designated as Common Stock, par value \$.01 per share (the “Common Stock”).

Common Stock

Holders of Common Stock will be entitled to one vote per share on all matters submitted to a vote of stockholders, unless otherwise provided by law or the Certificate of Incorporation. Our By-Laws provide that, except as otherwise provided in our Certificate of Incorporation, in our By-Laws, or by law, any matter before any meeting of stockholders **shall will** be decided by a majority of the votes properly cast for and against such matter; provided, however, that directors will be elected by a plurality of votes cast at any meeting of stockholders at which there is a contested election of directors. Our Common Stock does not have cumulative voting rights.

Subject to the rights of holders of any outstanding Preferred Stock, holders of Common Stock are entitled to receive dividends as may be declared and paid or set apart for payment from time to time by our Board of Directors, or any authorized committee thereof, out of any assets or funds of the Company legally available for the payment of dividends. Holders of Common Stock will be entitled to receive, upon any voluntary or involuntary liquidation, dissolution or winding up of the Company, the net assets of the Company available for distribution to stockholders after satisfaction of our liabilities and the preferential rights of any Preferred Stock that may then be issued and outstanding.

Holders of Common Stock have no conversion rights, or any redemption, sinking fund or preemptive rights with respect to the Common Stock. Our Common Stock is not liable to further call or assessment by the Company or subject to any restriction on alienability, except as required by law.

Preferred Stock

The rights of holders of Common Stock may be materially limited or qualified by the rights of holders of Preferred Stock that we may issue in the future. Set forth below is a description of the Company's authority to issue Preferred Stock and the possible terms of that stock.

No shares of Preferred Stock are currently outstanding. Pursuant to our Certificate of Incorporation and subject to any limitation prescribed by law, our Board of Directors or any authorized committee thereof has the authority, without further action by our stockholders, to issue Preferred Stock from time to time in one or more series. Our Board of Directors or any authorized committee thereof **shall will** have the right to determine or fix the rights, preferences, and restrictions of the Preferred Stock, including:

- the title or designation of the series;
- the number of shares in the series;
- the dividend rate and whether dividends will be cumulative;
- the voting rights, if any, of the holders of the series;
- the terms, if any, on which the series may or will be redeemed;
- the preference, if any, to which holders of the series will be entitled upon our liquidation, dissolution or winding up;
- any sinking or retirement fund provisions of the shares;

- the right, if any, of holders of the shares to convert or exchange them into, or for, another class of our stock or securities;
- the purchase price of the shares;
- the status of shares upon redemption or conversion; and
- any other powers, preferences, rights, qualifications, limitations and restrictions as the Board of Directors or any authorized committee thereof may deem advisable.

Certain Anti-Takeover Effects of Provisions of Our Certificate of Incorporation, Our By-Laws and the DGCL

Certain provisions of our Certificate of Incorporation, our By-Laws, and the DGCL could have anti-takeover effects and may delay, deter or prevent a tender offer or takeover attempt that a stockholder might consider to be in its best interests, as discussed below:

DGCL Section 203 – Business Combinations with Interested Stockholders

We are subject to the provisions of Section 203 of the DGCL, regulating corporate takeovers. In general, those provisions prohibit a Delaware corporation from engaging in any “business combination” with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder, unless:

- prior to the time that the person became an interested stockholder, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for the purpose of determining the number of shares outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (i) the corporation’s officers and directors and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the time the business combination is approved by the corporation’s board of directors and authorized at an annual or special meeting of its stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of its outstanding voting stock that is not owned by the interested stockholder.

The term “business combination” is broadly defined to include mergers, consolidations, and sales and other dispositions of assets having an aggregate market value equal to 10% or more of the consolidated assets of the corporation, and other specified transactions resulting in financial benefits to the interested stockholder. An “interested stockholder” is a person who, together with affiliates and associates, owns (or within three years did own) 15% or more of the corporation’s voting stock.

The restrictions on business combinations with interested stockholders contained in Section 203 of the DGCL do not apply to a corporation whose certificate of incorporation or bylaws contains a provision expressly electing not to be governed by the statute. Neither our Certificate of Incorporation nor our By-Laws contains a provision electing to “opt-out” of Section 203. Section 203 of the DGCL could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire us.

Undesignated Preferred Stock

As discussed above under “Preferred Stock,” our Board of Directors has the authority to designate and issue Preferred Stock with voting or other rights or preferences that could delay, defer or prevent any attempt to acquire or control us.

Classified Board of Directors

The number of directors is fixed by resolution duly adopted from time to time by our Board of Directors. **Until the election of directors at the 2026 annual meeting of stockholders, the** directors, other than those directors who may be elected by the holders of Preferred Stock, are **in classes classified**, with respect to the term for which they severally hold office. Our Certificate of Incorporation provides that our Board of Directors is **divided into** three classes, **with the number of directors in each class to be** as nearly equal in number as possible. Our classified Board Any director elected prior to the 2024 annual meeting of Directors staggers stockholders will hold office for a term expiring at the **three-year terms** annual meeting of stockholders held in the third year following the year of their election. Each director elected at the 2024 annual meeting of stockholders will be elected for a term expiring at the 2025 annual meeting of stockholders. Each director elected at the 2025 annual meeting of stockholders will be elected for a term expiring at the 2026 annual meeting of stockholders. At the 2026 annual meeting of stockholders and at each annual meeting of stockholders thereafter, all directors will be elected for a term expiring at the next annual meeting of stockholders. Each director will hold office until the annual meeting of stockholders at which such director's term expires and serve until such director's successor has been duly elected and qualified or until such director's earlier death, resignation, disqualification or removal. These provisions may tend to discourage a third party from making a tender offer or otherwise attempting to obtain control of the **three classes**. With this structure, **only approximately one-third of the members of our Board of Directors is elected each year**. This classification of directors has the effect of making Company because they generally make it more difficult for stockholders to **change** replace a majority of the **composition of our Board of Directors**.

directors.

Vacancies; Removal

Subject to any rights of any holders of Preferred Stock to elect directors and fill vacancies on the Board of Directors, all vacancies created in our Board of Directors resulting from any increase in the authorized number of directors or the death, resignation, disqualification, removal from office or other cause will be filled solely by the affirmative vote of a majority of the remaining directors on our Board of Directors then in office, even if less than a quorum is present. **Any** Prior to the election of directors at the 2026 annual meeting of stockholders, any director appointed to fill a vacancy on our Board of Directors will be appointed for the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor will have been duly elected and qualified or until his or her earlier death, resignation, disqualification or removal. From and after the election of directors at the 2026 annual meeting of stockholders, any director appointed in accordance with the first sentence of this section will hold office until the next annual meeting of stockholders and until such director's successor will have been duly elected and qualified or until his or her earlier death, resignation, disqualification or removal. Subject to any rights of any holders of Preferred Stock to elect directors, when the number of directors is increased or decreased, **for as long as the Board of Directors continues to be classified**, the Board of Directors will determine the class or classes to which the increased or decreased number of directors will be apportioned; provided, however, that no decrease in the number of directors will shorten the term of any incumbent director.

Subject to the rights of any holders of Preferred Stock to elect or remove any director, any director may be removed from office **only** (i) with **or without** "cause" (as defined in the Certificate of Incorporation) **(except that any director who is serving a three-year term prior to the 2026 annual meeting of stockholders may be removed only for cause)** and (ii) by the affirmative vote of a majority of the total votes which would be eligible to be cast by stockholders in the election of such director.

Proxy Access

Our By-Laws also include provisions permitting, subject to certain terms and conditions, stockholders who have maintained continuous qualifying ownership of at least 3% of our outstanding Common Stock for at least three years to use our annual meeting proxy statement to nominate a number of director candidates, not to exceed the greater of two candidates or 20% of the number of directors in office.

Advance Notice Requirements

Our By-Laws establish advance notice procedures for stockholders seeking to nominate candidates for election to the Board of Directors or for proposing matters which can be acted upon at stockholders' meetings.

No Stockholder Action by Written Consent

Our Certificate of Incorporation prohibits stockholder action by written consent in lieu of a meeting.

Special Meetings of Stockholders

Our By-Laws provide that special meetings of stockholders may be called only by our Board of Directors.

Amendments/Repeal of Provisions in the Certificate of Incorporation or By-Laws

Our Certificate of Incorporation provides that no amendment or repeal of the Certificate of Incorporation will be made unless the same is first approved by the Board of Directors pursuant to a resolution adopted by the Board of Directors in accordance with Section 242 of the DGCL, and, except as otherwise provided by law, thereafter approved by the stockholders. Whenever any vote of the holders of voting stock is required, and in addition to any other vote of holders of voting stock that is required by the Certificate of Incorporation or by law, the affirmative vote of a majority of the total votes eligible to be cast by holders of voting stock with respect to such amendment or repeal, voting together as a single class, at a duly constituted meeting of stockholders called expressly for such purpose **shall will** be required to amend or repeal any provisions of the Certificate of Incorporation.

Our By-Laws provide that the By-laws may be amended or repealed (i) by the Board of Directors (except as provided otherwise by law) or (ii) at any annual meeting of stockholders, or special meeting of stockholders called for such purpose, by the affirmative vote of a majority of the total votes eligible to be cast on such amendment or repeal by holders of voting stock, voting together as a single class.

Certain Effects of Authorized but Unissued Stock

We may issue additional shares of Common Stock or Preferred Stock without stockholder approval, subject to applicable rules of the Nasdaq Stock Market and the DGCL, for a variety of corporate purposes, including future public or private offerings to raise additional capital, corporate acquisitions, and employee benefit plans and equity grants. The existence of unissued and unreserved Common Stock and Preferred Stock may enable us to issue shares to persons who are friendly to current management, which could discourage an attempt to obtain control of the Company by means of a proxy contest, tender offer, merger or otherwise. We will not solicit approval of our

stockholders for issuance of Common Stock or Preferred Stock unless our Board of Directors believes that approval is advisable or is required by applicable stock exchange rules or the DGCL.

EXHIBIT 10.23 10.15

ANSYS, INC.

2022 EMPLOYEE STOCK PURCHASE PLAN AMENDED AND RESTATED EMPLOYMENT AGREEMENT

(as amended This Amended and restated effective February 1, 2023 Restated Employment Agreement ("Agreement")

The purpose is made as of the 1 day of November, 2023, between ANSYS, Inc. 2022 Employee Stock Purchase Plan, a Delaware corporation (together with its subsidiaries as amended the context requires, the "Company"), and restated Ajei S. Gopal (the "Executive").

WHEREAS, the Company and the Executive are parties to an Employment Agreement, dated as of August 29, 2016 (the "Commencement Date"), pursuant to which the Executive has been serving the Company most recently as the Company's President and Chief Executive Officer (the "Original Employment Agreement");

WHEREAS, the Company desires to continue to employ the Executive and the Executive desires to continue to be employed by the Company continuing on and after the date first written above (the "Effective Date") on the terms contained in this Agreement; and

WHEREAS, this Agreement is a modification and continuation of the Original Employment Agreement, intended to operate on the terms and conditions contained in this Agreement on and after the Commencement Date or on and after the Effective Date, as applicable, as provided for in this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Employment.

(a) **Term.** The Company hereby employs the Executive, and hereby has employed the Executive for an initial term commencing as of the Commencement Date and continuing for a one-year period (the "Initial Term"), with such employment automatically continuing following the Initial Term for additional one-year periods in accordance with the terms of this Agreement (subject to Section 3) (the Initial Term, together with any such extensions of employment hereunder, shall hereinafter be referred to as the "Term") unless either party notifies the other party in writing of its intention not to renew this Agreement at least 60 days prior to the expiration of the then Term. Notice by the Company of non-renewal shall be treated as a termination without Cause at the end of the then Term.

(b) RESERVED.

(c) **Position and Duties On and After January 1, 2017.** Beginning on January 1, 2017 and thereafter during the Term, the Executive shall serve as the President and Chief Executive Officer of the Company, shall have the duties, responsibilities and authority commensurate with such positions and as in effect as of the Effective Date and shall have such additional executive responsibilities consistent with his positions as the Board of Directors of the Company (the "Board") shall from time to time designate. As President and Chief Executive Officer of the Plan Company, the Executive will report directly to the Board. The Company shall use its reasonable best efforts to have the Executive nominated to serve as a director on the Board throughout the Term while the Executive is serving as the President and Chief Executive Officer of the Company. The Executive's services as a member of the Board will be subject to any required stockholder approval.

(d) Other General Employment Terms. The Executive shall devote his full working time and efforts to the business and affairs of the Company and shall be based in the Company's offices in Canonsburg, PA, subject to required travel in connection with performance of his duties. Notwithstanding the foregoing, the Executive may serve on other for-profit boards of directors with the approval of the Board, engage in religious, charitable or other community activities (including serving on their boards) and manage his and his family's personal investments as long as, in each case, such services and activities do not violate the Company's Corporate Governance Guidelines. The Executive shall abide by all Company policies, including without limitation, the Corporate Governance Guidelines, Code of Ethics, Insider Trading Policy, and Employee Handbook; provided, however, that such policies and guidelines will not be deemed to amend the definition of "Cause" in this Agreement.

2. Compensation and Related Matters.

(a) Base Salary. The Executive's annual base salary rate as of the Effective Date is \$850,000, subject to withholding under applicable law. The Executive's base salary rate shall be determined annually by the Compensation Committee of the Board, but may not be decreased. The base salary in effect at any given time is referred to herein as "Base Salary." The Base Salary shall be payable in a manner that is consistent with the Company's usual payroll practices for senior executives.

(b) Incentive Compensation. During the Term, the Executive shall be eligible to receive cash incentive compensation as determined by the Compensation Committee from time to time. The Executive's target annual cash incentive compensation shall be 150% percent of his Base Salary rate. Subject to the terms of this Agreement, to earn such cash incentive compensation, the Executive must be employed by the Company on the day such cash incentive compensation is paid.

(c) Expenses. The Executive shall be entitled to receive prompt reimbursement for all reasonable expenses incurred by him during the Term in performing services hereunder, in accordance with the policies and procedures then in effect and established by the Company. In addition, the Company shall reimburse the Executive for any reasonable attorneys' fees (not to exceed total reimbursement of \$25,000) incurred in connection with the consideration and negotiation of this Agreement.

(d) RESERVED.

(e) Other Benefits. During the Term, the Executive shall be eligible to participate in or receive benefits under the Company's employee benefit plans in effect from time to time, subject to the terms of such plans.

(f) Vacations. During the Term, the Executive shall be entitled to paid vacation annually in accordance with the Company's practices for executive officers, as in effect from time to time. The Executive shall also be entitled to all paid holidays given by the Company to its executives.

3. Termination. During the Term, the Executive's employment hereunder may be terminated without any breach of this Agreement under the following circumstances:

(a) Death. The Executive's employment hereunder shall terminate upon his death.

(b) Disability. The Company may terminate the Executive's employment if he has been unable to perform the essential functions of the Executive's then existing position or positions under this Agreement with or without reasonable accommodation for a period of 180 days (which need not be consecutive) in any 12-month period as a result of physical or mental incapacity or illness ("disabled"). If any question shall arise as to whether

during any period the Executive is disabled so as to be unable to perform the essential functions of the Executive's then existing position or positions with or without reasonable accommodation, the Executive may, and at the request of the Company shall, submit to the Company a certification in reasonable detail by a physician selected by the Company to whom the Executive or the Executive's guardian has no reasonable objection as to whether the Executive is or was so disabled, and such certification shall for the purposes of this Agreement be conclusive of the issue. The Executive shall cooperate with any reasonable request of the physician in connection with such certification. Nothing in this Section 3(b) shall be construed to waive the Executive's rights, if any, under existing law including, without limitation, the Family and Medical Leave Act of 1993, 29 U.S.C. §2601 *et seq.* and the Americans with Disabilities Act, 42 U.S.C. §12101 *et seq.*

(c) Termination by Company for Cause. The Company may terminate the Executive's employment hereunder for Cause. For purposes of this Agreement, "Cause" shall mean: (i) a material breach by the Executive of this Agreement or any material Company policy actually known to the Executive, in each case, that has a material adverse effect on the business of the Company; (ii) the conviction or indictment for or plea of nolo contendere by the Executive regarding a felony or a crime involving moral turpitude; (iii) any material misconduct or willful and deliberate nonperformance (other than by reason of disability) by Executive of his duties to the Company; or (iv) the Executive's willful failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities (other than such an investigation in which the Executive is the target), after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be relevant to such investigation or the willful inducement of others to fail to cooperate or to produce documents or other materials in connection with such investigation. In the event of (i), (iii), or (iv) above, Cause will not be deemed to have occurred until the Executive fails to cure such event to the reasonable satisfaction of the Company within 30 days after receiving written notice thereof from the Company.

(d) Termination Without Cause. The Company may terminate the Executive's employment hereunder at any time without Cause. Any termination by the Company of the Executive's employment under this Agreement which does not constitute a termination for Cause under Section 3(c) and does not result from the death or disability of the Executive under Section 3(a) or (b), including a termination as a result of a notice of nonrenewal from the Company pursuant to Section 1(a), shall be deemed a termination without Cause.

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(e) Termination by the Executive. The Executive may terminate his employment hereunder at any time for any reason, including but not limited to Good Reason. For purposes of this Agreement, "Good Reason" shall mean the occurrence of any of the following conditions without the Executive's prior written consent provided that the Executive has given the Company notice of its occurrence within sixty (60) days after the occurrence, the Company fails to remedy the condition within 30 days following such notice (the "Cure Period"), and the Executive terminates his employment within 60 days after the end of the Cure Period: (i) a material diminution of the Executive's duties, responsibilities or authority; (ii) a material diminution of Executive's Base Salary rate or target annual cash incentive compensation; (iii) a material change in the geographic location at which the Executive provides services to the Company; (iv) a material breach of this Agreement by the Company; (v) a material adverse change in Executive's reporting relationship; or (vi) if, after a Change in Control, the Executive is no longer Chief Executive Officer of a public company or the most senior executive in the Company's controlled group. The Executive shall not be considered to provide eligible employees have terminated his employment for Good Reason if (x) Cause exists (or continues to exist) at the time of ANSYS, Inc. (the "Company" either such Good Reason condition or such termination of the Executive's employment ("Cause Condition Existence"), and each Designated Subsidiary (as defined (y) the Company has notified the Executive of the Cause Condition Existence by the time of such termination of the Executive's employment.

(f) Notice of Termination. Except for termination as specified in Section 12) with opportunities to purchase shares 3(a), any termination of the Company's common stock, par value \$.01 per share (the "Common Stock") Executive's employment by the Company or any such termination by the Executive shall be communicated by written Notice of Termination to the other party hereto. For purposes of this Agreement, a "Notice of Termination" shall mean a notice which shall indicate the specific termination provision in this Agreement relied upon.

(g) Date of Termination. Seven Hundred, Fifty Thousand (750,000) shares "Date of Common Stock Termination" shall mean: (i) if the Executive's employment is terminated by his death, the date of his death; (ii) if the Executive's employment is terminated on account of disability under Section 3(b) or by the Company for Cause under Section 3(c), the date on which Notice of Termination is given; (iii) if the Executive's employment is terminated by the Company under Section 3(d), the date on which a Notice of Termination is given; (iv) if the Executive's employment is terminated by the Executive under Section 3(e) without Good Reason, 30 days after the date on which a Notice of Termination is given; and (v) if the Executive's employment is terminated by the Executive under Section 3(e) with Good Reason, the date on which a Notice of Termination is given after the end of

the Cure Period. Notwithstanding the foregoing, in the aggregate have been approved event that the Executive gives a Notice of Termination to the Company other than for Good Reason, the Company may by written notice to Executive unilaterally accelerate the Date of Termination and reserved such acceleration shall not result in a termination by the Company for purposes of this purpose. The Plan Agreement.

4. Compensation Upon Termination.

(a) Termination Generally. If the Executive's employment with the Company is intended terminated for any reason, the Company shall pay or provide to constitute the Executive (or to his authorized representative or estate) (i) any Base Salary earned through the Date of Termination, unpaid expense reimbursements (subject to, and in accordance with, Section 2(c) of this Agreement) and unused vacation that accrued through the Date of Termination on or before the time required by law but in no event more than 30 days after the Executive's Date of Termination; and (ii) any vested benefits or amounts due the Executive under any employee benefit or equity plan, program or practice of the Company, which benefits or amount shall be paid and/or provided in accordance with the terms of such employee benefit or equity plans, program or practice (collectively, the "Accrued Benefits"). Executive shall also retain all rights to indemnification and coverage under directors and officer liability insurance policies to the same extent provided to the Company's other directors and officers in accordance with the terms of such policies.

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(b) Termination by the Company Without Cause or by the Executive with Good Reason. During the Term, if the Executive's employment is terminated by the Company without Cause as provided in Section 3(d), or the Executive terminates his employment for Good Reason as provided in Section 3(e), then the Company shall pay the Executive his Accrued Benefits. In addition, subject to the Executive signing a release substantially in the form of Exhibit A hereto (with such edits or updates as the Company may reasonably request) (the "Release"), and the Release becoming irrevocable, all within 60 days after the Date of Termination:

(i) to the extent unpaid as of the Date of Termination, the Company shall pay to the Executive an "employee amount in cash equal to any annual cash incentive earned by the Executive for the Company's fiscal year prior to the fiscal year in which the Date of Termination occurs, as determined based on the Executive's and the Company's actual performance for such year, as applicable (the "Prior-Year Bonus");

(ii) the Company shall pay to the Executive a pro-rated portion of the Executive's target annual cash incentive for the year in which the Date of Termination occurs determined by multiplying the Executive's target annual cash incentive for such year (calculated without regard to such material reduction in Base Salary or target annual cash incentive compensation which (if applicable) gave rise to the Executive's claim of Good Reason pursuant to Section 3(e)(ii) of this Agreement) by a fraction, the numerator of which is the number of days during such year that the Executive was employed by the Company and the denominator of which is the number of days in such year (the "Pro-Rata Bonus");

(iii) the Company shall pay the Executive an amount equal to 2.0 times the sum of (A) the Executive's Base Salary rate plus (B) the Executive's target annual cash incentive for the current fiscal year (each of clause (A) and (B), determined without regard to such material reduction in Base Salary or target annual cash incentive compensation which (if applicable) gave rise to the Executive's claim of Good Reason pursuant to Section 3(e)(ii) of this Agreement) (the "Severance Amount"); provided that, if the Executive breaches Sections 7(d)(i) or 7(d)(ii)(A) of this Agreement or materially breaches any other provisions in Section 7 of this Agreement, all payments of the Severance Amount shall immediately cease;

(iv) notwithstanding anything to the contrary in any applicable option agreement or stock-based award agreement, all stock purchase plan within options and other stock-based awards held by the meaning Executive (to the extent not already vested or forfeited) shall immediately become exercisable, vested and/or nonforfeitable on an accelerated basis as if the Executive had continued his employment with the Company for an additional two years following such Date of Termination (with (A) for such performance-based awards that may be paid on an accelerated basis under Section 423(b) 409A of the Internal Revenue Code of 1986, as amended (the "Code"), any applicable performance objectives that have not yet been scored and deemed achieved to be deemed to have been achieved at a target level as of the date of such vesting and nonforfeitable, and (B) for such performance-based awards that may not be paid on an accelerated basis under Section 409A of the Code, any applicable performance objectives that have not yet been scored and deemed achieved remaining subject to the applicable performance or metric-based requirements set forth therein, which shall be separately determined as set forth in the applicable award

agreement)), with such awards remaining exercisable and being paid in accordance with their terms and conditions and the requirements of Section 409A of the Code;

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(v) the period of time during which the Executive may exercise his vested stock options shall be extended to the longer of (A) six months after his Date of Termination or (B) seven days after the commencement of the Company's first open trading window that occurs after the Date of Termination, subject to any longer exercise period in the event of the Executive's death or disability as may be provided in the applicable option agreement, but in no event later than the original ten year (or shorter) expiration date applicable to such stock options; and

(vi) if the Executive was participating in the Company's health, dental and vision plans immediately prior to the Date of Termination, then the Company shall pay to the Executive an amount equal to the product of (A) the monthly COBRA premium applicable to the Company's health, dental, and vision plans in which the Covered Executive was participating immediately prior to the Terminating Event, multiplied by (B) 24 (the "COBRA Benefit").

The Severance Amount shall be paid out in substantially equal installments in accordance with the Company's payroll practice over 24 months commencing promptly after the Release becomes effective (but within 60 days after the Date of Termination); provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, the Severance Amount shall begin to be paid in the second calendar year by the last day of such 60-day period; provided, further, that the initial payment shall include a catch-up payment to cover amounts retroactive to the day immediately following the Date of Termination. The Prior-Year Bonus shall be paid on the same date that the annual cash incentive for the applicable year would have been paid if the Executive's employment had not been terminated. The COBRA Benefit and the Pro-Rata Bonus shall be paid in a single lump sum cash payment within 60 days after the Date of Termination, but if such 60-day period spans two calendar years, such amount shall be paid in the second calendar year.

(c) No Mitigation. No Offset. The amounts due under this Section 4 and under Section 5 shall not be subject to an obligation to mitigate and shall not be offset by other amounts earned by the Executive.

(d) Expiration/Non-Renewal of the Agreement by the Company. For the avoidance of doubt, a non-renewal of this Agreement by the Company (in accordance with Section 1(a) above) will constitute a termination of employment by the Company without Cause.

5. Change in Control Benefits. The provisions of this Section 5 set forth certain terms of an agreement reached between the Executive and the Company regarding the Executive's rights and obligations upon the occurrence of a Change in Control of the Company. These provisions are intended to assure and encourage in advance the Executive's continued attention and dedication to his assigned duties and his objectivity during the pendency and after the occurrence of any such event. These provisions shall apply in lieu of, and expressly supersede, the provisions of Section 4(b) regarding severance pay and benefits upon a termination of employment to the extent provided in this Section 5, if such termination of employment occurs during the period beginning 60 days prior to the effective date of a definitive agreement that results in a Change in Control and ending 18 months after the consummation (closing) of a Change in Control (such period, the "CIC Protection Period") and such termination is by the Company without Cause as provided in Section 3(d) or by the Executive for Good Reason as provided in Section 3(e) (such a termination that so occurs during the 60-day period prior to the effective date of a definitive agreement that results in a Change in Control, an "Anticipatory CIC Termination.") The provisions of this Section 5 shall terminate and be of no further force or effect beginning 18 months after the consummation (closing) of a Change in Control to the extent a termination covered by this Section had not occurred prior thereto.

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(a) Termination During CIC Protection Period. During the Term, if during the CIC Protection Period, the Executive's employment is terminated by the Company without Cause as provided in Section 3(d) or the Executive terminates his employment for Good Reason as provided in Section 3(e), then, in addition to the Accrued Benefits, subject to the signing of the Release by the Executive and the Release becoming irrevocable, all within 60 days after the Date of Termination:

(i) the Company shall pay the Executive the Prior-Year Bonus;

(ii) the Company shall pay the Executive the Pro-Rata Bonus;

(iii) the Company shall pay the Executive a lump sum in cash in an amount equal to 2.0 times the sum of (A) the Executive's current Base Salary rate (or the Executive's Base Salary rate in effect immediately prior to the Change in Control, if higher) plus (B) the Executive's target annual cash incentive for the then-current fiscal year, provided that, if the Change in Control does not satisfy the requirements of Treas. Reg. 1.409A-3(i)(5) or the termination occurs prior to the Change in Control, the amounts shall not be paid in a lump sum and shall instead be paid in the same manner as the Severance Amount under Section 4(b);

(iv) notwithstanding anything to the contrary in any applicable option agreement or stock-based award agreement, all stock options and other stock-based awards held by the Executive (to the extent not already vested or forfeited) shall immediately become fully exercisable, vested and/or nonforfeitable on an accelerated basis (with any applicable performance objectives that have not yet been scored and deemed earned to be deemed to have been achieved at a target level as of the date of such vesting and nonforfeitability) as of the Date of Termination or date of the Change in Control, if later, with such awards remaining exercisable and being paid in accordance with Section 4(b) (iv) and otherwise with their terms and conditions and the requirements of Section 409A of the Code (provided, however, that in the event of an Anticipatory CIC Termination, the Executive's stock options and other stock-based awards to which this Section 5(a)(iv) would otherwise apply shall be deemed to have continued to remain outstanding (to the extent not otherwise vested and paid under Section 4(b)(iv)), but only pursuant to their other terms and conditions, until the date of such Change in Control); and

(v) if the Executive was participating in the Company's health, dental and vision plans immediately prior to the Date of Termination, then the Company shall pay to the Executive a lump sum cash payment in an amount equal to the product of (A) the monthly COBRA premium applicable to the Company's health, dental, and vision plans in which the Covered Executive was participating immediately prior to the Terminating Event, multiplied by (B) 24.

(vi) The amount payable under this Section 5(a)(i) shall be paid on the same date that the annual cash incentive for the applicable year would have been paid if the Executive's employment had not been terminated. The amounts payable under this Section 5(a)(ii), (iii) and (v) shall be paid or commence to be paid within 60 days after the Date of Termination; provided, however, that if the 60-day period begins in one calendar year and ends in a second calendar year, such payment shall be paid or commence to be paid in the second calendar year by the last day of such 60-day period; provided, further, that, with respect to the amount payable under Section 5(a)(iii), such amount to the extent necessary to comply with Section 409A of the Code shall be paid in the time and form specified in Section 4(b) with respect to the Severance Amount.

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In the event of a termination under Section 5(a) that is not an Anticipatory CIC Termination, the amounts under this Section 5(a) will be paid in lieu of the amounts payable under Section 4(b). In the event of an Anticipatory CIC Termination, the amounts under this Section 5(a) will be paid only to the extent they are in excess of amounts payable under Section 4(b), and the date of the Change in Control will be treated as the date of such termination under Section 5(a) for purposes of payment timing for such excess amounts.

(b) Additional Limitation.

(i) Anything in this Agreement to the contrary notwithstanding, in the event that the amount of any compensation, payment or distribution by the Company to or for the benefit of the Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Agreement or otherwise, calculated in a manner consistent with Section 280G of the Code and the applicable regulations thereunder (the "Aggregate Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, then the Aggregate Payments shall be reduced (but not below zero) so that the sum of all of the Aggregate Payments shall be \$1.00 less than the amount at which the Executive

becomes subject to the excise tax imposed by Section 4999 of the Code; provided that such reduction shall only occur if it would result in the Executive receiving a higher After Tax Amount (as defined below) than the Executive would receive if the Aggregate Payments were not subject to such reduction. In such event, the Aggregate Payments shall be reduced in the following order, in each case, in reverse chronological order beginning with the Aggregate Payments that are to be paid the furthest in time from consummation of the transaction that is subject to Section 280G of the Code: (A) cash payments not subject to Section 409A of the Code; (B) cash payments subject to Section 409A of the Code; (C) equity-based payments and acceleration; and (D) non-cash forms of benefits; provided that in the case of all the foregoing Aggregate Payments all amounts or payments that are not subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c) shall be reduced before any amounts that are subject to calculation under Treas. Reg. §1.280G-1, Q&A-24(b) or (c). Notwithstanding the foregoing, to the extent permitted under Internal Revenue Code Sections 280G, 409A and 4999, the Executive may designate an alternative method of reduction.

(ii) For purposes of this Section 5(b), the "After Tax Amount" means the amount of the Aggregate Payments less all federal, state, and local income, excise and employment taxes imposed on the Executive as a result of the Executive's receipt of the Aggregate Payments. For purposes of determining the After Tax Amount, the Executive's actual effective federal, state and local income tax rates shall be used.

(iii) The determination as to whether a reduction in the Aggregate Payments shall be made pursuant to Section 5(b)(i) shall be made by a nationally recognized accounting firm, compensation consultant or legal counsel selected by, and paid by, the Company (the "Advisory Firm"), which shall provide detailed supporting calculations both to the Company and the Executive within 15 business days of the Date of Termination (or, if later, the date of the Change in Control), if applicable, or at such earlier time as is reasonably requested by the Company or the Executive. Any determination by the Advisory Firm shall be binding upon the Company and the Executive. The costs of obtaining such determination and all related fees and expenses (including related fees and expenses incurred in any later audit) shall be borne by the Company.

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(c) Payment of Fees. The Company shall pay to the Executive all reasonable legal fees and expenses incurred by the Executive in reasonably disputing in good faith any issue hereunder relating to the termination of the Executive's employment during the CIC Protection Period, in reasonably seeking in good faith to obtain or enforce any benefit or right provided by this Agreement or in connection with any tax audit or proceeding to the extent substantially and reasonably attributable to the application of Section 4999 of the Code to any payment or benefit provided hereunder. Such payments shall be made within thirty (30) business days after delivery of the Executive's written requests for payment accompanied with such evidence of fees and expenses incurred as the Company reasonably may require.

(d) Definition of Change in Control. For purposes of this Section 5, "Change in Control" shall mean any of the following:

(i) any "person," as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Act") (other than the Company, any of its subsidiaries, or any trustee, fiduciary or other person or entity holding securities under any employee benefit plan or trust of the Company or any of its subsidiaries), together with all "affiliates" and "associates" (as such terms are defined in Rule 12b-3 under the Act) of such person, shall become the "beneficial owner" (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, of securities of the Company representing 50 percent or more of the combined voting power of the Company's then-outstanding securities entitled to vote generally in the election of members of the Board ("Voting Securities") (in such case other than as a result of an acquisition of securities directly from the Company); or

(ii) the date a majority of the members of the Board is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of the Board before the date of the appointment or election (including through the use of proxy access procedures set forth in the Company's organizational documents); or

(iii) the consummation of (A) any consolidation or merger of the Company where the stockholders of the Company, immediately prior to the consolidation or merger, would not, immediately after the consolidation or merger, beneficially own (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, shares representing in the aggregate more than 50 percent of the combined voting power of the then-outstanding securities entitled to vote generally in the election of members of the board of directors (or similar body) of the company issuing cash or securities in the consolidation or merger (or of its ultimate parent corporation, if any), or (B) any sale or other transfer (in one

transaction or a series of transactions contemplated or arranged by any party as a single plan) of all or substantially all of the assets of the Company.

Notwithstanding the foregoing, a "Change in Control" shall not be deemed to have occurred for purposes of the foregoing clause (i) solely as the result of an acquisition of securities by the Company which, by reducing the number of shares of Voting Securities outstanding, increases the proportionate number of Voting Securities beneficially owned by any person to 50 percent or more of the combined voting power of the Company's Voting Securities; provided, however, that if any person referred to in this sentence shall thereafter become the beneficial owner of any additional shares of Voting Securities (other than pursuant to a stock split, stock dividend, or similar transaction or as a result of an acquisition of securities directly from the Company) and immediately thereafter beneficially owns 50 percent or more of the combined voting power of the Company's Voting Securities, then a "Change in Control" shall be deemed to have occurred for purposes of the foregoing clause (i).

6. Section 409A.

(a) Anything in this Agreement to the contrary notwithstanding, if at the time of the Executive's separation from service within the meaning of Section 409A of the Code, the Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Executive becomes entitled to under this Agreement on account of the Executive's separation from service would be considered deferred compensation otherwise subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (i) six months and one day after the Executive's separation from service, or (ii) the Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule. For purposes of application of Section 409A of the Code, to the extent applicable, each payment made under this Agreement shall be treated as a separate payment and not one of a series of payments for purposes of Section 409A.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Agreement shall be provided by the Company or incurred by the Executive during the time periods set forth in this Agreement. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year (except for any lifetime or other aggregate limitation applicable to medical expenses). Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Agreement constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Executive's termination of employment, then such payments or benefits shall be payable only upon the Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-1(h).

(d) The parties intend that this Agreement will be administered in accordance with Section 409A of the Code. To the extent that any provision of this Agreement is ambiguous as to its compliance with Section 409A of the Code, the provision shall be read in such a manner so that all payments hereunder comply with, or are exempt from, Section 409A of the Code. Each payment pursuant to this Agreement is intended to constitute a separate payment for purposes of Treasury Regulation Section 1.409A-2(b)(2). The parties agree that this Agreement may be amended, as reasonably requested by either party, and as may be necessary to fully comply with, or be exempt from, Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Executive or any other person if any provisions of this Agreement are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

7. Confidential Information, Noncompetition and Cooperation.

(a) Confidential Information. As used in this Agreement, "Confidential Information" means information belonging to the Company which is of value to the Company in the course of conducting its business and the disclosure of which could result in a competitive or other disadvantage to the Company. Confidential Information includes, without limitation, financial information, reports, and forecasts; inventions, improvements and other intellectual property; trade secrets; know-how; designs, processes or formulae; software; market or sales information or plans; customer lists; and business plans, prospects and opportunities (such as possible acquisitions or dispositions of businesses or facilities) which have been discussed or considered by the management of the Company. Confidential Information includes information developed by the Executive in the course of the Executive's employment by the Company, as well as other information to which the Executive may have access in connection with the Executive's employment. Confidential Information also includes the confidential information of others with which the Company has a business relationship. Notwithstanding the foregoing, Confidential Information does not include information in the public domain, unless due to breach of the Executive's duties under Section 7(b). For the avoidance of doubt, "Company" as used in Section 7 includes the Company and any of its subsidiaries.

(b) Confidentiality. The Executive understands and agrees that the Executive's employment creates a relationship of confidence and trust between the Executive and the Company with respect to all Confidential Information. At all times, both during the Executive's employment with the Company and after its termination, the Executive will keep in confidence and trust all such Confidential Information, and will not use or disclose any such Confidential Information without the written consent of the Company, except in the good faith performance of the Executive's duties to the Company or in compliance with legal process. Pursuant to the federal Defend Trade Secrets Act of 2016, the parties agree that nothing in this Agreement shall cause Executive to be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (i) is made (A) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney, and (B) solely for the purpose of reporting or investigating a suspected violation of law, or (ii) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

(c) Documents, Records, etc. All documents, records, data, apparatus, equipment and other physical property, whether or not pertaining to Confidential Information, which are furnished to the Executive by the Company or are produced by the Executive in connection with the Executive's employment will be and remain the sole property of the Company. The Executive will return to the Company all such materials and property as and when requested by the Company. In any event, the Executive will return all such materials and property immediately upon termination of the Executive's employment for any reason. The Executive will not retain with the Executive any such material or property or any copies thereof after such termination. Notwithstanding the foregoing, the Executive may retain his address books to the extent they only contain contact information and the Company shall cooperate with Executive in transferring any and all cell phone numbers used by Executive to Executive.

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(d) Noncompetition and Nonsolicitation.

(i) During the Executive's employment with the Company and for 24 months thereafter, regardless of the reason for the termination, Executive hereby agrees that Executive will not, without the express written consent of the Company, directly or indirectly, whether as employee, owner, partner, shareholder, co-venturer, consultant, agent or otherwise, work, engage, participate or invest in, or consult with, any business activity anywhere in the world which develops, manufactures or markets products or performs services that are competitive with the products and/or services of the Company, or products and/or services that the Company has under development or that are subject to active planning at any time during Executive's employment, including without limitation, business activities which compete with the Company's core business of Engineering Simulation Software ("Competitor"). Executive acknowledges that the Company's business is worldwide in scope. Executive acknowledges that the foregoing provision therefore applies to activities at any locations in the world and that such scope is necessary to protect the valid business interests of the Company during the Term and for the 24-month period following the termination of his

employment with the Company. Notwithstanding the foregoing, after the Executive's employment with the Company ends (A) the Executive may work for a private equity fund (or similar investment fund) (an "Investment Fund"), provided that for the first 24 months after the Executive's employment with the Company ends the Executive may not (y) invest in any such Investment Fund's investments in any Competitor (a "Competitive Investment") unless such investment is entirely passive, or (z) in any way (other than as a passive investor) be involved with any Competitive Investment, or otherwise provide services with respect to any Competitive Investment or to any Investment Fund portfolio company that is a Competitor; (B) the Executive may be an employee of a company that derives less than two percent (2%) of its revenue from a business line that is a Competitor; provided that for the first 24 months after the Executive's employment with the Company ends (y) the Executive may not be employed by, consult with, or otherwise be involved in any way, in such company's business line that is a Competitor (including, in any case, as CEO, COO, any other executive management role or director of the Competitor or its ultimate parent entity, or consultant of such Competitor (provided, that, for the avoidance of doubt, serving as a head of, or providing services to, a non-competitive unit of a company that derives less than 2% of its revenue from a business line that is a Competitor shall be permissible)) and (z) if such company becomes a Competitor, including without limitation, by growing the business line that is a Competitor so that it constitutes 2% or more of such company's revenue, the Executive shall cease to provide such services; and (C) the Executive may make passive investments in any enterprise the shares of which are publicly traded; provided that Executive owns less than 2% of any publicly traded company that is a Competitor. Notwithstanding anything else herein, Executive may serve as a director of any company that is a Competitor where either (x) the competitive overlap is with less than two percent (2%) of the revenues of the Company or (y) the competitive overlap is less than two percent (2%) of the revenues of the other company (and does not exceed \$100M of such other company's revenues), and, in the case of (y) the Executive recuses himself from discussions as to the competitive products. The Executive may request from the Company's Nomination and Governance Committee a waiver of the foregoing limitations in order to serve as a director, the chief executive of a Competitor (whether below or above the 2% limitation) and such waiver request will be promptly considered in good faith based on whether or not a waiver would present a significant competitive issue.

(ii) In addition to the foregoing covenant, during the Executive's employment with the Company other than in the good faith performance of his duties and for 24 months thereafter, regardless of the reason for the termination, Executive hereby agrees that Executive will not, without the express written consent of the Company, directly or indirectly (A) hire or engage for or on behalf of Executive or any other person, entity or organization any officer or employee of the Company or any of its direct and/or indirect subsidiaries or affiliates, or any former employee of the Company or any of its direct and/or indirect subsidiaries or affiliates who was employed during the six (6) month period immediately preceding the date of such hiring or engagement, (B) attempt to hire or engage for or on behalf of Executive or any other person, entity or organization any officer or employee of the Company or any of its direct and/or indirect subsidiaries or affiliates, or any former employee of the Company or any of its direct and/or indirect subsidiaries or affiliates who was employed during the six (6) month period immediately preceding the date of such attempt to hire or engage, (C) encourage for or on behalf of Executive or any other person, entity or organization any such officer or employee to terminate his or her relationship or employment with the Company or any of its direct or indirect subsidiaries or affiliates, (D) solicit for or on behalf of a Competitor any client of the Company or any of its direct or indirect subsidiaries or affiliates, or any former client of the Company or any of its direct or indirect subsidiaries or affiliates who was a client during the six (6) month period immediately preceding the date of such solicitation or (E) divert to any other person, entity or organization any client or business opportunity of the Company or any of its direct or indirect subsidiaries or affiliates provided that the foregoing shall not be violated by general advertising not targeted at the foregoing or serving as a reference upon request.

(e) Third-Party Agreements and Rights. The Executive hereby confirms that the Executive is not bound by the terms of any agreement with any previous employer or other party which restricts in any way the Executive's use or disclosure of information or the Executive's engagement in any business, except as previously disclosed to the Company in writing. The Executive represents to the Company that the Executive's execution of this Agreement, the Executive's employment with the Company and the general performance of the Executive's proposed duties for the Company will not violate any obligations the Executive may have to any such previous employer or other party. In the Executive's work for the Company, the Executive will not disclose or make use of any information in violation of any agreements with or rights of any such previous employer or other party, and the Executive will not bring to the premises of the Company any copies or other tangible embodiments of non-public information belonging to or obtained from any such previous employment or other party.

(f) Litigation and Regulatory Cooperation. During and after the Executive's employment, the Executive shall reasonably cooperate with the Company in the defense or prosecution of any claims or actions now in existence or which may be brought in the future against or on behalf of the Company which relate to events or occurrences that transpired while the Executive was employed by the Company. The Executive's reasonable cooperation in connection with such claims or actions shall include, but not be limited to, meeting with counsel to prepare for discovery or trial and to act as a witness on behalf of the Company at mutually convenient times (with due regard for Executive's other commitments). During and after the Executive's employment, the Executive also reasonably cooperate with the Company in connection with any investigation or review of any federal, state or local regulatory authority as any such investigation or review relates to events or occurrences that transpired while the Executive was employed by the Company. The Company shall reimburse the Executive for any reasonable out-of-pocket expenses incurred in connection with the Executive's performance of obligations pursuant to this Section 7(f).

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(g) Protected Disclosures. Nothing contained in this Agreement limits Executive's ability to file a charge or complaint with any governmental agency or other governmental or regulatory entity concerning any act or omission that Executive reasonably believes constitutes a possible violation of federal or state law or making other disclosures that are protected under the anti-retaliation or whistleblower provisions of applicable federal or state law or regulation. Executive further understands that this Agreement does not limit Executive's ability to communicate with or participate in any investigation or proceeding that may be conducted by any governmental agency or other governmental or regulatory entity, including providing documents or other information, without notice to the Company.

(h) Injunction. The Executive agrees that it would be difficult to measure any damages caused to the Company which might result from any breach by the Executive of the promises set forth in this Section 7, and that in any event money damages would be an inadequate remedy for any such breach. Accordingly, subject to Section 9 of this Agreement, the Executive agrees that if the Executive breaches, or proposes to breach, any portion of Section 7 of this Agreement, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company.

(i) Limitation. No future restrictive covenant or forfeiture provision with regard to a restrictive covenant shall apply to the extent it is broader than those provided herein except to the extent that such future restrictive covenant or forfeiture provision with regard to a restrictive covenant is applied to a new line of business entered into, or developed, by the Company after the date hereof, subject to the terms of Section 7(d)(i) hereof.

8. Indemnification. Subject to applicable law and Company policy, the Executive shall continue during the Term and through the sixth anniversary of the Date of Termination to be entitled to indemnification related to services provided pursuant to this Agreement to the full extent as provided by law or as otherwise provided for by any agreement or by-law provision of the Company as in effect as of the Effective Date. Any such existing indemnity agreements to which the Executive and the Company are party, and any applicable by-law provision, shall not be modified in any manner adverse to the Executive, except to the extent required under applicable law. During the Term and through the sixth anniversary of the Date of Termination, the Company shall maintain, for the benefit of the Executive, D&O insurance coverage at no less than the level provided for other executive officers of the Company and that covers all services provided pursuant to this Agreement.

9. Arbitration of Disputes. Any controversy or claim arising out of or relating to this Agreement or the breach thereof or otherwise arising out of the Executive's employment or the termination of that employment (including, without limitation, any claims of unlawful employment discrimination whether based on age or otherwise) shall, to the fullest extent permitted by law, be settled by arbitration in any forum and form agreed upon by the parties or, in the absence of such an agreement, under the auspices of the American Arbitration Association ("AAA") in Pittsburgh, Pennsylvania in accordance with the Employment Dispute Resolution Rules of the AAA, including, but not limited to, the rules and procedures applicable to the selection of arbitrators. In the event that any person or entity other than the Executive or the Company may be a party with regard to any such controversy or claim, such controversy or claim shall be submitted to arbitration subject to such other person or entity's agreement. Judgment upon the award rendered by the arbitrator may be entered in any court having jurisdiction thereof. This Section 9 shall be specifically enforceable. Notwithstanding the foregoing, this Section 9 shall not preclude either party from pursuing a court action for the sole purpose of obtaining a temporary restraining order or a preliminary injunction in circumstances in which such relief is appropriate; provided that any other relief shall be pursued through an arbitration proceeding pursuant to this Section 9.

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10. **Consent to Jurisdiction.** To the extent that any court action is permitted consistent with or to enforce Section 9 of this Agreement, the parties hereby consent to the jurisdiction of the Superior Court of the Commonwealth of Pennsylvania and the United States District Court for the Western District of Pennsylvania. Accordingly, with respect to any such court action, the parties (a) submit to the personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

11. **Integration; Effect on Other Plans.** The Original Employment Agreement, as amended and restated by and in the form of this Agreement, constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior agreements between the parties concerning such subject matter. Further, as clarification, the treatment of stock options and other equity-based awards described in this Agreement shall represent an alternative determination regarding such awards regarding termination of employment or service or a Change in Control for purposes of Section 12 of the ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (or its successors).

12. **Withholding.** All payments made by the Company to the Executive under this Agreement shall be net of any tax or other amounts required to be withheld by the Company under applicable law.

13. **Successor to the Executive.** This Agreement shall inure to the benefit of and be enforceable by the Executive's personal representatives, executors, administrators, heirs, distributees, devisees and legatees. In the event of the Executive's death after his termination of employment but prior to the completion by the Company of all payments due him under this Agreement, the Company shall continue such payments to the Executive's beneficiary designated in writing to the Company prior to his death (or to his estate, if the Executive fails to make such designation).

14. **Enforceability.** If any portion or provision of this Agreement (including, without limitation, any portion or provision of any section of this Agreement) shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Agreement, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

15. **Survival.** The provisions of this Agreement shall survive the termination of this Agreement and/or the termination of the Executive's employment to the extent necessary to effectuate the terms contained herein.

16. **Waiver.** No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Agreement, or the waiver by any party of any breach of this Agreement, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

17. **Notices.** Any notices, requests, demands and other communications provided for by this Agreement shall be sufficient if in writing and delivered in person or sent by a nationally recognized overnight courier service or by registered or certified mail, postage prepaid, return receipt requested, to the Executive at the last address for the Executive on file with the Company or, in the case of the Company, at its main offices, to the attention of the General Counsel.

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18. **Amendment.** This Agreement may be amended or modified only by a written instrument signed by the Executive and by a duly authorized representative of the Company.

19. **Governing Law.** This is a Pennsylvania contract and shall be interpreted construed under and be governed in all respects by the laws of the Commonwealth of Pennsylvania, without giving effect to the conflict of laws principles of such Commonwealth. With respect to any disputes

concerning federal law, such disputes shall be determined in accordance with the law as it would be interpreted and applied by the United States Court of Appeals for the Third Circuit.

20. **Counterparts.** This Agreement may be executed in any number of counterparts, each of which when so executed and delivered shall be taken to be an original; but such counterparts shall together constitute one and the same document.

21. **Successor to Company.** The Company may not assign this Agreement or its obligations hereunder except to a successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company and shall require such successor expressly to assume and agree to perform this Agreement to the same extent that **intent**, the Company would be required to perform it if no succession had taken place. Failure of the Company to obtain an assumption of this Agreement at or prior to the effectiveness of any succession shall be a material breach of this Agreement.

22. **Gender Neutral.** Wherever used herein, a pronoun in the masculine gender shall be considered as including the feminine gender unless the context clearly indicates otherwise.

23. **Clawback.** Notwithstanding anything in this Agreement to the contrary, the Executive acknowledges and agrees that this Agreement and any compensation or other benefits or amounts described herein are subject to the terms and conditions of the Company's clawback policy or policies (if any) as may be in effect from time to time and, subject to applicable law, as applicable to other similarly situated senior executives (or former senior executives) of the Company, including specifically to implement Section 10D of the Act and any applicable rules or regulations promulgated thereunder (including applicable rules and regulations of any national securities exchange on which the Company's securities may be traded) (collectively, the "Compensation Recovery Policy"), and that applicable sections of this Agreement and/or any related documents shall be deemed superseded by and subject to the terms and conditions of the Compensation Recovery Policy from and after the effective date thereof. Further, by signing this Agreement, the Executive acknowledges and agrees that he consents to be bound by the terms of the Agreement, including its clawback provisions (and consents to fully cooperate with the Company in connection with any of the undersigned's obligations pursuant to the Agreement and its clawback provisions).

24. **Mutual Drafting.** Each of the Parties to this Agreement recognizes that this is a legally binding contract and acknowledges and agrees that each of the Parties has had the opportunity to consult with legal counsel of their choice. Each party has cooperated in the drafting, negotiation, and preparation of this Agreement. Hence, in any construction to be made of this Agreement, the same shall not be construed against either party on the basis of that party being the drafter of such language.

[signatures on following page]

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IN WITNESS WHEREOF, the parties have executed this Agreement effective on the date and year first above written.

ANSYS, INC.

By: /s/ Nicole Anasenes

Name: Nicole Anasenes

Its: Chief Financial Officer

EXECUTIVE

By: /s/ Ajei S. Gopal

Name: Ajei S. Gopal

EXHIBIT A**FORM OF RELEASE**

This Agreement and General Release ("Agreement") is entered into by ANSYS, Inc., a Delaware corporation with a principal office at 2600 ANSYS Drive, Canonsburg, PA 15317 ("ANSYS"), and _____, an individual ("Employee") (collectively the "Parties"). This is the Release defined in Section 4(b) of the Amended and Restated Employment Agreement between Employee and ANSYS (the "Amended and Restated Employment Agreement"). In consideration of the mutual promises contained herein and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:

(i) **Termination of Employment.** Employee's last day of employment is _____, ("Date of Termination").

(ii) **Consideration to Employee.** [Insert description and reference to applicable provisions detailing the termination compensation and benefits in the Amended and Restated Employment Agreement.]

(iii) **No Consideration Absent Execution of this Agreement.** As stated in the Amended and Restated Employment Agreement, Employee would not receive the consideration set forth in Paragraph (ii) of this Agreement but for his execution of this Agreement, failure to revoke this Agreement during the Revocation Period (as defined below), and the fulfillment of the promises contained herein.

(iv) **General Release of Claims.** Employee, on behalf of himself, his heirs, executors, administrators, devisees, spouses, and assigns, knowingly and voluntarily releases and forever discharges to the fullest extent permitted by law ANSYS and its affiliates, subsidiaries, and in such capacities, insurers, associates, predecessors, successors and assigns (including, without limitation, any of their respective current and former employees, officers, directors, agents, trustees, attorneys, representatives and stockholders) (collectively "Releasees") from any and all claims, known and unknown, asserted and unasserted, Employee has or may have against Releasees as of the date of his execution of this Agreement, including, but not limited to, any alleged violation of: the Age Discrimination in Employment Act ("ADEA"); Title VII of the Civil Rights Act of 1964; the Civil Rights Act of 1991; Sections 1981 through 1988 of Title 42 of the United States Code; the Employee Retirement Income Security Act; the Americans with Disabilities Act; the Occupational Safety and Health Act; the Family and Medical Leave Act; any federal, state or local civil rights or discrimination law; any other federal, state, or local law, regulation or ordinance (including the Pennsylvania Human Relations Act); any public policy, contract, tort, or common law claim; or any claim for costs, fees, or other expenses including attorneys' fees incurred in these matters. Despite any language in this Agreement to the contrary, Employee does not release claims that by law cannot be released by private agreement including, but not limited to, claims for worker's compensation and unemployment compensation, rights to indemnification, rights to directors and officers liability insurance, rights to vested benefits or rights to owned or vested equity.

(v) **Indemnification.** ANSYS has made no representations to Employee regarding the tax consequences of any consideration received by him under this Agreement and that he is solely responsible for all applicable taxes, if any, owed by him to any taxing authority as a result of the consideration given to him by ANSYS under Paragraph (ii) of this Agreement.

(vi) **Warranties.** Employee warrants that he has no known workplace injuries and that he has been paid and/or has received all leave (paid or unpaid), compensation, wages, bonuses, commissions, and/or benefits to which he may be entitled and that no other leave (paid or unpaid), compensation, wages, bonuses, commissions and/or benefits are due to him, except as provided in Paragraph (ii) of this Agreement, and Employee

warrants that he is not entitled to any payments under the [List applicable ANSYS executive severance plan(s)], as may be amended from time to time.

(vii) **Confidentiality.** Except to the extent this Agreement has been publicly filed, Employee will not disclose any information regarding the substance of this Agreement, except to his financial advisor, his accountant, his spouse, and any attorney with whom Employee consults regarding this Agreement, all of whom (prior to disclosure) are either ethically bound not to disclose or will likewise agree to maintain the confidentiality of such information, and Employee warrants that he has not made any such disclosures since this Agreement was presented to him. Pursuant to the federal Defend Trade Secrets Act of 2016, the Parties agree that nothing in this Paragraph, Paragraph (ix) of the Agreement, or any other provision of this Agreement shall cause employee to be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that (a) is made (I) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (II) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

(viii) **Mutual Non-Disparagement.** Subject to Paragraph (x) of this Agreement, the Company agrees that its directors and executive officers, and the Employee agrees he, will not make any negative statements or criticisms, express or implied, about the Employee, ANSYS or its employees, directors, officers, products or services, which might reasonably become known to current ANSYS employees or customers, the software development industry, the computer-aided engineering industry, or the public at large. This includes, but is not limited to, making such comments on internet sites anonymously or under assumed names. Employee and the Company warrant that they have not made any such disclosures or disparaging statements since this Agreement was presented to the Employee. This mutual non-disparagement shall expire 24 months after the Date of Termination.

(ix) **Continuing Obligations.** Employee agrees that he will comply with his existing legal obligations under the Employee's ANSYS Intellectual Property Protection Agreement (the "IPP Agreement"), the terms of which are incorporated by reference herein, including the obligation to maintain the confidentiality of all "ANSYS Intellectual Property" and "Confidential Information" (as defined in the IPP Agreement) and to disclose a copy of the IPP Agreement to Executive's future prospective employers. Employee confirms that he has returned all tangible versions of all documents containing ANSYS business information, other than information pertaining to his own employment terms, and that he has not retained any ANSYS business information in any form. Employee may retain his address books to the extent they only contain contact information. Similarly, Employee hereby reaffirms and agrees that he will comply with all of his existing legal obligations under Section 7 of his Amended and Restated Employment Agreement, the terms of which are incorporated by reference herein. The Plan provides Parties agree that nothing in this Paragraph is intended to alter the terms of these obligations which are more fully detailed in the Amended and Restated Employment Agreement.

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(x) **Protected Disclosures.** Nothing contained in this Agreement limits Employee's ability to file a charge or complaint with any governmental agency or other governmental or regulatory entity concerning any act or omission that Employee reasonably believes constitutes a possible violation of federal or state law or making other disclosures that are protected under the anti-retaliation or whistleblower provisions of applicable federal or state law or regulation. Employee further understands that this Agreement does not limit Employee's ability to communicate with or participate in any investigation or proceeding that may be conducted by any governmental agency or other governmental or regulatory entity, including providing documents or other information, without notice to the Company. Further, nothing in this Agreement prevents Employee from: (a) filing an action in court alleging that his release of claims under the ADEA was not knowing or voluntary; (b) filing an action in court for both ADEA claims that may arise after the date this Agreement is signed by Employee; (c) exercising Employee's right under Section 423 7 of the National Labor Relations Act to engage in joint activity with other employees; or (d) disclosing information in response to legal process. With respect to any such charges or complaints that Executive may bring with any governmental agencies, Executive waives any right to individualized relief should any governmental agency or other third party pursue any claims on Executive's behalf (either individually, or as part of any collective or class action), provided that Executive may be entitled to receive a whistleblower award or bounty for information provided to the Securities and non-Section 423 components, Exchange Commission.

(xi) **Injunctive Relief.** Nothing in this Agreement is intended to impair or alter the rights of ANSYS to additional relief as detailed in Section 7(h) of the Amended and Restated Employment Agreement and Section 7 of the IPP Agreement.

(xii) **Amendment.** This Agreement may not be modified, altered or changed except upon express written consent of all Parties wherein specific reference is made to this Agreement.

(xiii) **Governing Law and Forum.** This Agreement will be governed by and performed in accordance with the laws of the Commonwealth of Pennsylvania without regard to its conflicts of laws provisions. Employee consents to the personal jurisdiction and venue of the state and federal courts having jurisdiction over Washington County, Pennsylvania.

(xiv) **Severability.** If a court of competent jurisdiction determines that any provision of this Agreement is illegal or unenforceable and such provision or provisions cannot be modified to be enforceable, then such provision will immediately become null and void, leaving the remainder of this Agreement in full force and effect.

(xv) **Revocation and Effective Date.** Employee may revoke only the release of claims under the ADEA for a period of seven (7) calendar days following the day he executes this Agreement ("Revocation Period"). Any revocation must be submitted, in writing, by either hand delivery or certified U.S. Mail, return receipt requested, to [Insert applicable name and titles], ANSYS, Inc., 2600 Ansys Drive, Canonsburg, Pennsylvania, 15317. The revocation must be delivered or postmarked within the Revocation Period. This Agreement will become effective on the day after the expiration of the applicable Revocation Period ("Effective Date").

(xvi) **Entire Agreement.** This Agreement constitutes the entire agreement relating to the matters stated herein, and it cancels and supersedes any prior agreements or understandings that may have existed between Employee and ANSYS with respect to all matters covered by this Agreement except that nothing in this Agreement releases Employee from any previous obligations Employee has under any agreements with ANSYS or its affiliates or subsidiaries including without limitation, the IPP Agreement, the Amended and Restated Employment Agreement, or any other agreements protecting ANSYS intellectual property, and all stock option or other equity agreements executed by the Employee or equivalent documentation. No other promise or inducement has been offered to either Party except as set forth herein.

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(xvii) **Acknowledgement of Previous Agreements.** Nothing in this Agreement releases Employee from any previous obligations Employee has under any agreements with ANSYS or its affiliates or subsidiaries including without limitation, the ANSYS Intellectual Property Protection Agreement, agreements protecting company intellectual property, and all stock option or other equity agreements executed by the Employee or equivalent documentation. For avoidance of doubt, the previous agreements referred to in this Paragraph are separate and distinct from the matters covered by this Agreement.

(xviii) **Copies Effective as Originals.** This Agreement may be executed in counterparts and each counterpart, when executed, will have the efficacy of an original. Photographic or faxed copies of signed counterparts may be used in lieu of the original for any purpose.

(xix) **Review of Agreement and Consultation with Attorney.** EMPLOYEE IS HEREBY ADVISED THAT HE HAS UP TO [TWENTY-ONE (21) / FORTY-FIVE (45)] CALENDAR DAYS TO REVIEW THIS AGREEMENT AND TO CONSULT WITH AN ATTORNEY PRIOR TO EXECUTING THIS AGREEMENT. EMPLOYEE SHOULD CONSULT WITH AN ATTORNEY OF HIS CHOICE. EMPLOYEE AGREES THAT ANY MODIFICATIONS, MATERIAL OR OTHERWISE, MADE TO THIS AGREEMENT DO NOT RESTART OR AFFECT IN ANY MANNER THE ORIGINAL [TWENTY-ONE (21) / FORTY-FIVE (45)] CALENDAR DAY CONSIDERATION PERIOD.

IN WITNESS WHEREOF, the parties hereto knowingly and voluntarily executed this Agreement and General Release as of the dates set forth below:

EMPLOYEE

ANSYS, Inc.

Date

Date

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ANSYS, INC. TIER TWO EXECUTIVE SEVERANCE PLAN

1. Administration Purpose.

(a) ANSYS, Inc. (the "Company") considers it essential to the best interests of its stockholders to foster the continuous employment of key management personnel. The Board of Directors of the Company (the "Board") recognizes, however, that, as is the case with many publicly held corporations, the possibility of an involuntary termination of employment, either before or after a Change in Control (as defined in Section 2 hereof), exists and that such possibility, and the uncertainty and questions which it may raise among management, may result in the departure or distraction of management personnel to the detriment of the Company and its stockholders. Therefore, the Board has determined that the ANSYS, Inc. Tier Two Executive Severance Plan will (the "Plan") should be administered adopted, effective as of the Effective Date written below (the "Effective Date"), to reinforce and encourage the continued attention and dedication, regarding each of the Company's Covered Executives that participates in the Plan and has executed an acknowledgement in the form of the attached Exhibit A, to his or her assigned duties without distraction. Nothing in this Plan shall be construed as creating an express or implied contract of employment and, except as otherwise agreed in writing between the Covered Executive and the Company, the Covered Executive shall not have any right to be retained in the employ of the Company.

(b) For purposes of this Plan, a "Covered Executive" means (except as otherwise explicitly determined by the Compensation Committee of the Board) an officer of the Company who is selected for participation in the Plan by the Company's Chief Executive Officer or the Compensation Committee of the Board, and who has executed the acknowledgment described in Section 1(a) above (collectively, the "Covered Executives"). Notwithstanding the definition of Directors (the "Board") "Covered Executive" above: (i) the Company's Chief Executive Officer or the Compensation Committee of the Board may, at his, her or its discretion, determine at any time that a Covered Executive will no longer be a qualifying participant under the Plan; and (ii) any Covered Executive whose participation in the Plan requires approval by the Compensation Committee of the Board or other committee appointed by the Board for such purpose. The Board or committee that administers will not be considered a qualifying participant under the Plan is referred to herein as the "Administrator." The Administrator until such approval has authority to make rules and regulations for the administration of the Plan, and its interpretations and decisions with regard thereto shall be final and conclusive. No member of the Board, any such committee or any other individual exercising administrative authority with respect to the Plan shall be liable for any action or determination with respect to the Plan or any option granted hereunder. been so received.

2. Offerings Definitions. The Company will make one following terms shall be defined as set forth below:

(a) "Base Salary" shall mean the annual base salary rate in effect immediately prior to the termination of employment constituting the Terminating Event or more offerings Change in Control Terminating Event.

(b) "Cause" shall mean, and shall be limited to eligible employees to purchase Common Stock under the Plan ("Offerings"). In addition, a determination by the Company may make separate Offerings which vary in terms (provided that subject to Section 14, such terms are not inconsistent with the provisions Covered Executive's employment shall be terminated as a result of the Plan or the requirements for an "employee stock purchase plan" within the meaning of Section 423(b) of the Code), and the Administrator will designate which Designated Subsidiary is participating in each separate Offering. The initial Offering began on August 1, 2022 and will end on January 31, 2023. Unless otherwise determined by the Administrator, each subsequent offering will begin the first business day occurring on or before each February 1 and August 1 and will end on the last business day occurring on or before the following July 31 and January 31, respectively. The Administrator may, in its discretion, choose an Offering period of six months or less for each of the Offerings and choose a different Offering period for each Offering. An Offering period in no event may exceed six months.

3. Eligibility. All individuals who are employees of the Company and each Designated Subsidiary (including employees who are also directors of the Company or a Designated Subsidiary) for purposes of Section 423 are eligible to participate in any one or more of the Offerings under following events:

(i) any material breach by the Plan, provided that as Covered Executive of any material agreement between the first day of the applicable Offering (the "Offering Date") (a) they have been employed by Covered Executive and the Company or a Designated Subsidiary material Company policy; or

(ii) the conviction of, indictment for a period or plea of more than three (3) months and (b) they are customarily employed nolo contendere by the Company Covered Executive regarding a felony or a Designated Subsidiary for more crime involving moral turpitude; or

(iii) any material misconduct or willful and deliberate non-performance (other than twenty (20) hours per week, or any lesser number by reason of hours per week established disability) by the Administrator in its discretion (on a uniform and nondiscriminatory basis or as otherwise permitted by Treasury Regulation Section 1.423-2).

4. **Participation.** An employee eligible on any Offering Date may participate in such Offering by submitting an enrollment form to his or her appropriate payroll location at least fifteen (15) business days before the Offering Date (or by such other deadline as shall be established by the Administrator for the Offering). The form will (a) state a whole percentage to be deducted from such employee's Compensation (as defined in Section 12) per pay period, (b) authorize the purchase of Common Stock for such employee in each Offering in accordance with the terms Covered Executive of the Plan and (c) specify Covered Executive's duties to the exact name Company; or names in which shares of Common Stock

purchased for such employee are (iv) willful failure to cooperate with a bona fide internal investigation or an investigation by regulatory or law enforcement authorities, after being instructed by the Company to cooperate, or the willful destruction or failure to preserve documents or other materials known to be issued pursuant relevant to Section 10. An employee who does not enroll such investigation, or the willful inducement of others to fail to cooperate or to produce documents or other materials in accordance connection with these procedures will such investigation.

(c) "Change in Control" shall be deemed to have waived occurred upon the right occurrence (after the Effective Date) of any one of the following events:

(i) any "person," as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Act") (other than the Company, any of its subsidiaries, or any trustee, fiduciary or other person or entity holding securities under any employee benefit plan or trust of the Company or any of its subsidiaries), together with all "affiliates" and "associates" (as such terms are defined in Rule 12b-2 under the Act) of such person, shall become the "beneficial owner" (as such term is defined in Rule 13d-3 under the Act), directly or indirectly, of securities of the Company representing 50 percent or more of the combined voting power of the Company's then-outstanding securities entitled to participate. Unless vote generally in the election of members of the Board ("Voting Securities") (in such case other than as a result of an employee files a new enrollment form or withdraws acquisition of securities directly from the Plan, Company); or

(ii) the date a majority of the members of the Board is replaced during any 12-month period by directors whose appointment or election is not endorsed by a majority of the members of the Board before the date of the appointment or election (including through the use of proxy access procedures set forth in the Company's organizational documents); or

(iii) the consummation of (A) any consolidation or merger of the Company where the stockholders of the Company, immediately prior to the consolidation or merger, would not, immediately after the consolidation or merger, beneficially own (as such employee's deductions and purchases will continue at term is defined in Rule 13d-3 under the same percentage Act), directly or indirectly, shares representing in the aggregate more than 50 percent of Compensation for future Offerings, provided such employee remains eligible. the combined voting power of the then-outstanding securities entitled to vote generally in the election of members of the board of directors (or similar body) of the company issuing cash or securities in the consolidation or merger (or of its ultimate parent corporation, if any), or (B) any sale or other transfer (in one transaction or a series of transactions contemplated or arranged by any party as a single plan) of all or substantially all of the assets of the Company.

Notwithstanding the foregoing, participation a "Change in the Plan will neither Control" shall not be permitted nor be denied contrary deemed to the requirements have occurred for purposes of the Code.

5. **Employee Contributions.** Each eligible employee may authorize payroll deductions at a minimum foregoing clause (i) solely as the result of one an acquisition of securities by the Company which, by reducing the number of shares of Voting Securities outstanding, increases the proportionate number of Voting Securities beneficially owned by any person to 50 percent (1%) up or more of the combined voting power of the Company's Voting Securities; provided, however, that if any person referred to in this sentence shall thereafter become the beneficial owner of any additional shares of Voting Securities (other than pursuant to a maximum stock split, stock dividend, or similar transaction or as a result of ten an

acquisition of securities directly from the Company) and immediately thereafter beneficially owns 50 percent (10%) or more of the combined voting power of the Company's Voting Securities, then a "Change in Control" shall be deemed to have occurred for purposes of the foregoing clause (i).

(d) "Change in Control Terminating Event" shall mean, during the period beginning 90 days prior to, and ending 18 months after, the consummation (closing) of a Change in Control, any of the following events: (i) termination by the Company of the Covered Executive's employment for any reason other than for Cause, death or disability; or (ii) the termination by the Covered Executive of his or her employment with the Company for Good Reason. Notwithstanding the foregoing, a Change in Control Terminating Event shall not be deemed to have occurred hereunder solely as a result of the Covered Executive being an employee of any direct or indirect successor to the business or assets of the Company. A Change in Control Terminating Event that occurs under this Section 2(d) during the 90-day period prior to the consummation (closing) of a Change in Control shall be referred to as an "Anticipatory CIC Terminating Event."

(e) "Code" shall mean the Internal Revenue Code of 1986, as amended from time to time, and the regulations thereunder, as such law and regulations may be amended from time to time.

(f) "Good Reason" shall mean that the Covered Executive has complied with the "Good Reason Process" (hereinafter defined) following the occurrence of any of the following conditions:

- (i) a material diminution in the Covered Executive's responsibilities, authority or duties; or
- (ii) a material reduction in the Covered Executive's Base Salary except for across-the-board salary reductions similarly affecting all or substantially all management employees; or
- (iii) a material change in the geographic location at which the Covered Executive is principally employed.

For purposes of this Section 2(f)(i), a change in the reporting relationship, or a change in a title will not, by itself, be sufficient to constitute a material diminution of responsibilities, authority or duties.

(g) "Good Reason Process" shall mean:

- (i) the Covered Executive reasonably determines in good faith that a "Good Reason" condition has occurred;
- (ii) the Covered Executive notifies the Company in writing of the occurrence of the Good Reason condition within 60 days of the first occurrence of such condition;
- (iii) the Covered Executive cooperates in good faith with the Company's efforts, for a period not less than 30 days following such notice (the "Cure Period"), to remedy the condition;
- (iv) notwithstanding such efforts, the Good Reason condition continues to exist following the Cure Period; and
- (v) the Covered Executive terminates his or her employment within 30 days after the end of the Cure Period.

If the Company cures the Good Reason condition during the Cure Period, Good Reason shall be deemed not to have occurred as a result of such cured condition. Also, the Covered Executive will not be considered to have complied with the Good Reason Process if Cause exists (or continues to exist) at the time of either such Good Reason condition or such termination of the Covered Executive's employment.

(h) "Prior-Year Bonus" shall mean an amount in cash equal to any annual cash incentive earned for the Company's fiscal year prior to the fiscal year in which the date of termination occurs, as determined based on the Covered Executive's and the Company's actual performance for such year, as applicable, and only to the extent unpaid as of the date of termination.

(i) "Pro-Rata Bonus" shall mean, as of the date of termination, an amount equal to the earned, if any, but unpaid portion of the target bonus award, as determined in the absolute discretion of the Company.

(j) "Target Bonus" shall mean, as of the date of termination, an amount equal to the annual target bonus for the year in which the termination of employment occurs.

(k) "Terminating Event" shall mean a termination by the Company of the Covered Executive's employment for any reason other than for Cause, death or disability.

3. **Termination Benefits.** In the event a Terminating Event or a Change in Control Terminating Event occurs with respect to a Covered Executive, the Company shall pay or provide to the Covered Executive any earned but unpaid Base Salary, unpaid expense reimbursements, accrued

but unused vacation and any vested benefits the Covered Executive may be entitled to, as of the date of termination, under any employee benefit plan of the Company.

(a) **Terminating Event.** In the event a Terminating Event occurs with respect to a Covered Executive, subject to the execution and effectiveness (without revocation) of a general release of claims in a form and manner satisfactory to the Company (the "Release") by the Covered Executive within 45 days of the Terminating Event, the Company shall:

- (i) pay the Covered Executive an amount equal to the sum of the following:
 - (A) one times the amount of the Base Salary of the Covered Executive;
 - (B) one times the amount of the Target Bonus of the Covered Executive;
 - (C) the Prior-Year Bonus;
 - (D) the Pro-Rata Bonus; and
 - (E) the product of (1) the monthly COBRA premium applicable to the Company's health, dental, and vision plans in which the Covered Executive was participating immediately prior to the Terminating Event, multiplied by (2) 12.

Such amount shall be paid in a single lump sum cash payment within 60 days after the date of the Terminating Event, but if such 60-day period spans two calendar years, such amount shall be paid in the second calendar year; and

(ii) cause all outstanding stock options and other stock-based awards held by the Covered Executive (to the extent not already vested or forfeited) to immediately become exercisable, vested and/or nonforfeitable on an accelerated basis as if the Covered Executive had continued his or her employment with the Company for an additional year following such Terminating Event (with (A) for such performance-based awards that may be paid on an accelerated basis under Section 409A of the Code, any applicable performance objectives that have not yet been scored and deemed achieved to be deemed to have been achieved at a target level as of the date of such vesting and nonforfeatability, and (B) for such performance-based awards that may not be paid on an accelerated basis under Section 409A of the Code, any applicable performance objectives that have not yet been scored and deemed achieved remaining subject to the applicable performance or metric-based requirements set forth therein, which shall be separately determined as set forth in the applicable award agreement)), with such awards remaining exercisable and being paid in accordance with their terms and conditions and the requirements of Section 409A of the Code.

(b) **Change in Control Terminating Event.** In the event a Change in Control Terminating Event occurs with respect to a Covered Executive, subject to the execution and effectiveness (without revocation) of a Release by the Covered Executive within 45 days of the Change in Control Terminating Event, the Company shall:

- (i) pay the Covered Executive an amount equal to the sum of the following:
 - (A) one and a half times the amount of the Base Salary of the Covered Executive;
 - (B) one times the amount of the Target Bonus of the Covered Executive;
 - (C) the Prior-Year Bonus;
 - (D) the Pro-Rata Bonus; and
 - (E) the product of (1) the monthly COBRA premium applicable to the Company's health, dental, and vision plans in which the Covered Executive was participating immediately prior to the Terminating Event, multiplied by (2) 12.

Such amount shall be paid in a single lump sum cash payment within 60 days of the Change in Control Terminating Event, but if such 60-day period spans two calendar years, such amount shall be paid in the second calendar year; and

(ii) cause all outstanding stock options and other stock-based awards held by the Covered Executive (to the extent not already vested or forfeited) to immediately become fully exercisable, vested and/or nonforfeitable on an accelerated basis (with any applicable performance objectives that have not yet been scored and deemed earned to be deemed to have been achieved at a target level as of the date of such vesting and nonforfeatability) as of the Covered Executive's Change in Control Terminating Event, with such awards remaining exercisable and being paid in accordance with their terms and conditions and the requirements of Section 409A of the Code (provided, however, that in the event of an Anticipatory CIC Terminating Event, the Covered Executive's stock options and other stock-based awards to

which this Section 3(b)(ii) would otherwise apply shall be deemed to have continued to remain outstanding (to the extent not otherwise vested and paid under Section 3(a)(ii)), but only pursuant to their other terms and conditions, until the date of such Change in Control).

In the event of a Change in Control Terminating Event that is not an Anticipatory CIC Terminating Event, the amounts under this Section 3(b) will be paid in lieu of the amounts payable under Section 3(a). In the event of an Anticipatory CIC Terminating Event the amounts under this Section 3(b) will be paid only to the extent they are in excess of amounts payable under Section 3(a), and the date of the Change in Control will be treated as the date of the Change in Control Terminating Event for purposes of payment timing for such excess amounts.

4. Additional Limitation.

(a) Anything in this Plan to the contrary notwithstanding, in the event that any compensation, payment or distribution by the Company to or for the benefit of the Covered Executive, whether paid or payable or distributed or distributable pursuant to the terms of this Plan or otherwise (the "Severance Payments"), would be subject to the excise tax imposed by Section 4999 of the Code, the following provisions shall apply:

(i) If the Severance Payments, reduced by the sum of (A) the Excise Tax and (B) the total of the Federal, state, and local income and employment taxes payable by the Covered Executive on the amount of the Severance Payments which are in excess of the Threshold Amount (as defined below), are greater than or equal to the Threshold Amount, the Covered Executive shall be entitled to the full benefits payable under this Plan.

(ii) If the Threshold Amount is less than (A) the Severance Payments, but greater than (B) the Severance Payments reduced by the sum of (1) the Excise Tax and (2) the total of the Federal, state, and local income and employment taxes on the amount of the Severance Payments which are in excess of the Threshold Amount, then the benefits payable under this Plan shall be reduced (but not below zero) to the extent necessary so that the sum of all Severance Payments shall not exceed the Threshold Amount. In such event, the Severance Payments shall be reduced in the following order: (1) cash payments not subject to Section 409A of the Code; (2) cash payments subject to Section 409A of the Code; (3) equity-based payments and acceleration; and (4) non-cash forms of benefits. To the extent any payment is to be made over time (e.g., in installments, etc.), then the payments shall be reduced in reverse chronological order.

(b) For the purposes of this Section 4, "Threshold Amount" shall mean three times the Covered Executive's "base amount" within the meaning of Section 280G(b)(3) of the Code and the regulations promulgated thereunder less one dollar (\$1.00); and "Excise Tax" shall mean the excise tax imposed by Section 4999 of the Code, and any interest or penalties incurred by the Covered Executive with respect to such excise tax.

(c) The determination as to which of the alternative provisions of Section 4(a) shall apply to the Covered Executive shall be made by a nationally recognized accounting firm, compensation consultant or legal counsel selected by the Company (the "Advisory Firm"), which shall provide detailed supporting calculations both to the Company and the Covered Executive within 15 business days of the Change in Control Terminating Event (or, if later, the date of the Change in Control), if applicable, or at such earlier time as is reasonably requested by the Company or the Covered Executive. For purposes of determining which of the alternative provisions of Section 4(a) shall apply, the Covered Executive shall be deemed to pay federal income taxes at the highest marginal rate of federal income taxation applicable to individuals for the calendar year in which the determination is to be made, and state and local income taxes at the highest marginal rates of individual taxation in the state and locality of the Covered Executive's residence on the date of the termination of employment constituting the Change in Control Terminating Event, net of the maximum reduction in federal income taxes which could be obtained from deduction of such state and local taxes. Any determination by the Advisory Firm shall be binding upon the Company and the Covered Executive.

5. Consent to Jurisdiction. To the extent that any court action is permitted consistent with or to enforce this Plan, the parties hereby consent to the jurisdiction of the state and federal courts of western Pennsylvania. Accordingly, with respect to any such court action, the Covered Executive (a) submits to the personal jurisdiction of such courts; (b) consents to service of process; and (c) waives any other requirement (whether imposed by statute, rule of court, or otherwise) with respect to personal jurisdiction or service of process.

6. Withholding. All payments made by the Company under this Plan shall be net of any tax or other amounts required to be withheld by the Company under applicable law.

7. Section 409A.

(a) Anything in this Plan to the contrary notwithstanding, if at the time of the Covered Executive's separation from service within the meaning of Section 409A of the Code, the Covered Executive is a "specified employee" within the meaning of Section 409A(a)(2)(B)(i) of the Code, then to the extent any payment or benefit that the Covered Executive becomes entitled to under this Plan on account of the Covered Executive's separation from service would be considered deferred compensation subject to the 20 percent additional tax imposed pursuant to Section 409A(a) of the Code as a result of the application of Section 409A(a)(2)(B)(i) of the Code, such payment shall not be payable and such benefit shall not be provided until the date that is the earlier of (A) six months and one day after the Covered Executive's separation from service, or (B) the Covered

Executive's death. If any such delayed cash payment is otherwise payable on an installment basis, the first payment shall include a catch-up payment covering amounts that would otherwise have been paid during the six-month period but for the application of this provision, and the balance of the installments shall be payable in accordance with their original schedule. For purposes of application of Section 409A of the Code, to the extent applicable, each payment made under this Plan shall be treated as a separate payment and not one of a series of payments for purposes of Section 409A.

(b) All in-kind benefits provided and expenses eligible for reimbursement under this Plan shall be provided by the Company or incurred by the Covered Executive during the time periods set forth in this Plan. All reimbursements shall be paid as soon as administratively practicable, but in no event shall any reimbursement be paid after the last day of the taxable year following the taxable year in which the expense was incurred. The amount of in-kind benefits provided or reimbursable expenses incurred in one taxable year shall not affect the in-kind benefits to be provided or the expenses eligible for reimbursement in any other taxable year. Such right to reimbursement or in-kind benefits is not subject to liquidation or exchange for another benefit.

(c) To the extent that any payment or benefit described in this Plan constitutes "non-qualified deferred compensation" under Section 409A of the Code, and to the extent that such payment or benefit is payable upon the Covered Executive's termination of employment, then such payments or benefits shall be payable only upon the Covered Executive's "separation from service." The determination of whether and when a separation from service has occurred shall be made in accordance with the presumptions set forth in Treasury Regulation Section 1.409A-I(h).

(d) The parties intend that all payments made pursuant to this Plan shall be exempt from Section 409A of the Code or otherwise comply with Section 409A of the Code and this Plan shall be interpreted accordingly. The parties agree that this Plan may be amended, as reasonably requested by either party, and as may be necessary to fully comply with Section 409A of the Code and all related rules and regulations in order to preserve the payments and benefits provided hereunder without additional cost to either party.

(e) The Company makes no representation or warranty and shall have no liability to the Covered Executive or any other person if any provisions of this Plan are determined to constitute deferred compensation subject to Section 409A of the Code but do not satisfy an exemption from, or the conditions of, such Section.

8. No Mitigation. The Covered Executive is not required to seek other employment or to attempt in any way to reduce any amounts payable to the Covered Executive by the Company under this Plan. Further, the amount of any payment provided for in this Plan shall not be reduced by any compensation earned by the Covered Executive as the result of employment by another employer, by retirement benefits, by offset against any amount claimed to be owed by the Covered Executive to the Company, or otherwise.

9. Benefits and Burdens. This Plan shall inure to the benefit of and be binding upon the Company and the Covered Executives, their respective successors, executors, administrators, heirs and permitted assigns. In the event of a Covered Executive's death after a Terminating Event but prior to the completion by the Company of all payments due him or her under this Plan, the Company shall continue such payments to the Covered Executive's beneficiary designated in writing to the Company prior to his or her death (or to his or her estate, if the Covered Executive fails to make such designation).

10. Enforceability. If any portion or provision of this Plan shall to any extent be declared illegal or unenforceable by a court of competent jurisdiction, then the remainder of this Plan, or the application of such portion or provision in circumstances other than those as to which it is so declared illegal or unenforceable, shall not be affected thereby, and each portion and provision of this Plan shall be valid and enforceable to the fullest extent permitted by law.

11. Waiver. No waiver of any provision hereof shall be effective unless made in writing and signed by the waiving party. The failure of any party to require the performance of any term or obligation of this Plan, or the waiver by any party of any breach of this Plan, shall not prevent any subsequent enforcement of such term or obligation or be deemed a waiver of any subsequent breach.

12. Notices. Any notices, requests, demands, and other communications provided for by this Plan shall be sufficient if in writing and delivered in person or sent by registered or certified mail, postage prepaid, to a Covered Executive at the last address for the Covered Executive on file with the Company, or to the Company at its main office, to the attention of the General Counsel. Notwithstanding anything in this Plan or otherwise to the contrary, nothing in this Plan or otherwise prevents a Covered Executive from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity, no Covered Executive is prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Securities Exchange Act of 1934, as amended.

13. Effect on Other Plans. Nothing in this Plan shall be construed to limit the rights of the Covered Executives under the Company benefit plans, programs or policies. Further, as clarification, the treatment of stock options and other equity-based awards described in this Plan shall

represent an alternative determination regarding such awards regarding termination of employment or service or a Change in Control for purposes of Section 12 of the ANSYS, Inc. 2021 Equity and Incentive Compensation Plan (or its successors).

14. Amendment or Termination of Plan. The Company may amend or terminate this Plan at any time or from time to time, provided, however, that the Plan may not be amended or terminated after a Change in Control.

15. Governing Law. This Plan shall be construed under and be governed in all respects by the laws of The Commonwealth of Pennsylvania.

16. Clawback. Notwithstanding anything in this Plan to the contrary, the Covered Executive acknowledges and agrees that this Plan and any compensation or other benefits or amounts described herein are subject to the terms and conditions of the Company's clawback policy or policies (if any) as may be in effect from time to time, including specifically to implement Section 10D of the Act and any applicable rules or regulations promulgated thereunder (including applicable rules and regulations of any national securities exchange on which the Company's securities may be traded) (collectively, the "Compensation Recovery Policy"), and that applicable sections of this Plan and/or any related documents shall be deemed superseded by and subject to the terms and conditions of the Compensation Recovery Policy from and after the effective date thereof.

17. Obligations of Successors. In addition to any obligations imposed by law upon any successor to the Company, the Company will use its reasonable efforts to require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of the Company to expressly assume and agree to perform this Plan in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place.

Adopted / Effective Date: As of January 1, 2024

Amended: N/A

EXHIBIT A

Acknowledgement

The undersigned acknowledges and agrees that: (i) he or she has been designated as a Covered Executive under the ANSYS, Inc. Tier Two Executive Severance Plan (the "Plan"), (ii) any payment, rights or benefits to which the undersigned may become eligible for under such Plan are subject to all of the terms and conditions of the Plan, (iii) he or she consents to be bound by the terms of the Plan, including its clawback provisions (and consents to fully cooperate with ANSYS, Inc. in connection with any of the undersigned's obligations pursuant to the Plan), and (iv) this acknowledgement and the Plan constitute the entire agreement between ANSYS, Inc. and the undersigned regarding the subject matter hereof and thereof.

Covered Executive:

By: _____

Name: _____

Title: _____

TRANSITION AGREEMENT

This Transition Agreement ("Agreement") is entered into by ANSYS, Inc., a Delaware corporation with a principal office at 2600 Ansys Drive, Canonsburg, PA 15317 ("Ansys" or "Company"), and Nicole Anasenes, an individual residing at the address set forth in the Company's books and records ("Employee") (collectively, the "Parties"). The purpose of this Agreement is to establish an amicable arrangement for ending the employment relationship on a date certain ("Resignation Date," as further defined in Section 1, below) and memorialize Employee's commitment to work for the

Company through and including the Resignation Date. In consideration of the mutual promises contained herein and other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties agree as follows:

1. **Termination of Employment.** Employee has given notice of her intent to voluntarily resign as an employee of Ansys of her position with Ansys during the second quarter of 2024. Pursuant to this Agreement, the Parties agree that, effective as of February 22, 2024 (the "Transition Date"), Employee will no longer serve as the Company's Chief Financial Officer and Senior Vice President of Finance (and that this transition is voluntary, consented to and requested by Employee). Further, the Parties agree that Employee will remain a non-executive employee of Ansys with the title of Special Advisor until June 7, 2024 (the "Resignation Date"), on which Resignation Date Employee shall resign from Ansys and Employee's employment with the Company and all of its subsidiaries will terminate. Employee's termination of employment on the Resignation Date shall be treated as a voluntary termination of employment. Employee also agrees that, as of the Resignation Date, Employee will terminate from all other positions Employee holds (if any) as an officer, employee or director of the Company and the Company's subsidiaries and affiliates, and that Employee will promptly execute any documents and take any actions as may be necessary or reasonably requested by the Company to effectuate or memorialize Employee's termination from all positions with the Company and its subsidiaries and affiliates. Through the Resignation Date, Employee will continue to receive her current compensation and her current benefits, and Employee will continue to vest in the Restricted Stock Units previously granted to her in accordance with the terms of the applicable award agreements and plan.

2. **Consideration to Employee.** In exchange for Employee's execution of (and non-revocation of) this Agreement, her commitment to work through and including her Resignation Date, her Non-Compete and Non-Solicitation promises set forth herein, and the Release (as defined below), Ansys is entering into the Consulting Services Agreement attached hereto as Exhibit A (the "Consulting Services Agreement"), with Employee's consulting services thereunder commencing on the Resignation Date.

3. **Express Condition Precedent: No Company Obligations Triggered Absent Execution (and Non-Revocation) of a General Release and Waiver of Claims.** The Company's obligations set forth in Section 2 are expressly conditioned upon, and shall not be triggered unless and until, Employee executes, contemporaneous with her Resignation Date (and subsequently does not revoke) a general release and waiver of claims substantially in the form attached hereto as Exhibit B (the "Release").

In the Release, Employee also shall warrant, unless facts known to her at that time prevent her from doing so, that as of the Resignation Date she has no known workplace injuries and that she has been paid and/or has received all leave (paid or unpaid), compensation, wages, bonuses, commissions, benefits and/or other amounts earned and accrued, less applicable deductions, to which she may be entitled and that no other leave (paid or unpaid), compensation, wages, bonuses, commissions, benefits and/or other amounts are due to her, except as provided in Section 2.

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4. **Non-Compete and Non-Solicitation.**

(a) The Company's business is focused on developing and globally marketing engineering simulation software and technologies ("Engineering Simulation Software").

(b) **Non-Competition.** While Employee remains employed by the Company and for one (1) year after her Resignation Date, Employee will not, directly or indirectly, whether as employee, owner, partner, shareholder, co-venturer, consultant, agent or otherwise, work, engage, participate, consult or invest in any business activity anywhere in the world which develops, manufactures or markets products or performs services that are competitive with the products and/or services of the Company, or products and/or services that the Company has under development or that are subject to active planning at any time during Employee's employment, including without limitation, business activities which compete with the Company's core business of Engineering Simulation Software ("Competitor"). Notwithstanding the foregoing, (i) Employee may hold publicly traded stock in a Competitor if the amount of stock Employee holds is less than 1% of the Competitor's outstanding capital stock, and (ii) Employee may serve as a non-executive board member of another business so long as any such business(es) is not a Competitor. The restrictions set forth in this Section 4(b) are intended to protect the Company's interest in Ansys's Proprietary Information (as defined below) and established customer relationships and goodwill, and Employee agrees that such restrictions are reasonable and appropriate for this purpose. Employee acknowledges that the restrictions set forth in this Section 4(b) do not preclude Employee from finding employment or other gainful economic opportunities in the fields of professional engineering, or non-engineering software. If Employee violates this Section 4(b), the non-compete period will be extended by the amount of time during which Employee engages in such violation(s).

(c) **Non-Solicitation.** While Employee is employed by the Company and for one (1) year after Employee's Resignation Date, Employee will not: (a) offer to provide engineering simulation software or other products or services that the Company offers to any current or prospective customer of the Company with whom Employee dealt or about whom Employee received Confidential Information or (b) hire, solicit to hire or otherwise retain any employee of the Company for employment, independent contractor or other consulting work. If Employee violates this Section 4(c), the non-solicitation period will be extended by the amount of time during which Employee engages in such violation(s).

(d) **Injunction.** The restrictions contained in this Agreement are necessary for the protection of the business and goodwill of the Company, and Employee considers them to be reasonable. Employee agrees that the Company will be irreparably damaged if these restrictions are not specifically enforced. It would be difficult to measure any damages caused to the Company, which might result from Employee's breach of this Agreement, and money damages would be an inadequate remedy for any such breach. Accordingly, Employee agrees that if Employee breaches, or threatens to breach, any portion of this Section 4, the Company shall be entitled, in addition to all other remedies that it may have, to an injunction or other appropriate equitable relief to restrain any such breach without showing or proving any actual damage to the Company, and no bond or other securities will be required in connection with it. Employee understands that if she breaches any of the promises set forth in this Agreement, and the Company proves Employee's breach in court and/or is awarded a permanent or temporary injunction against Employee's continuing breach or damages arising from said breach, Employee shall be liable to pay all of the Company's reasonable costs and attorney's fees incurred in enforcing this Agreement, proving said breach, obtaining said injunction and/or damages, and/or collecting on any judgment.

5. **Tax Indemnification.** Company has made no representations to Employee regarding the tax consequences of any consideration received under this Agreement, and Employee is solely responsible for all applicable taxes, if any, owed to any taxing authority as a result of the consideration given by Ansys under Section 2. Employee will indemnify Ansys, and hold Ansys harmless, for all taxes, penalties and interest, withholding or otherwise, for which Ansys may be found liable as a consequence of Employee not paying all applicable taxes, if any, owed to any taxing authority as a result of the consideration to Employee pursuant to Section 2. For purposes of this Section 5, Ansys is defined to include its affiliates, subsidiaries, insurers, associates, predecessors, successors and assigns (including, without limitation, any of their respective current and former employees, officers, directors, agents, trustees, attorneys, representatives and stockholders).

6. **Insider Trading Policy.** Employee agrees that she will continue to be subject to the ANSYS, Inc. Insider Trading Policy and Procedures and will be prohibited from trading securities of the Company until such time that she is no longer in possession of material non-public information regarding Ansys and its subsidiaries.

7. **Confidentiality**

(a) **Protecting the Company's Proprietary Information.** Employee understands that in the course of her employment, she received Ansys's Proprietary Information. Employee agrees:

1. to treat all Proprietary Information as strictly confidential;
2. not to directly or indirectly disclose, publish, communicate or make available Proprietary Information, or allow it to be disclosed, published, communicated or made available, in whole or part, to any entity or person whatsoever not having a need to know and authority to know and use the Proprietary Information in connection with the business of Ansys and, in any event, not to anyone outside of the direct employ of Ansys without prior written consent of an authorized officer acting on behalf of Ansys;
3. not to access or use any Proprietary Information, and not to copy any documents, records, files, media or other resources containing any Proprietary Information, or remove any such documents, records, files, media or other resources from the premises or control of Ansys without the prior written consent of an authorized officer acting on behalf of Ansys.

Employee can disclose Proprietary Information as required by applicable law or regulation, or pursuant to the valid order of a court of competent jurisdiction or an authorized government agency, such as the Securities and Exchange Commission ("SEC"), provided that the disclosure does not exceed the extent of disclosure required by such law, regulation or order. After her Resignation Date, Employee agrees that she will promptly (within 30 days) provide Ansys with written notice of such an order but understands that she does not need permission from Ansys to respond.

Employee understands and acknowledges that her obligations under this Agreement with regard to any particular Proprietary Information starts now and continues during and after her separation from employment with Ansys until the Proprietary Information has become public knowledge through no fault of her own.

Employee understands and acknowledges that this Proprietary Information and Ansys's ability to reserve it for the exclusive knowledge and use of Ansys is of great competitive importance and commercial value to Ansys, and that if Employee improperly uses or discloses the Proprietary Information, Employee can cause Ansys to incur financial costs, loss of business advantage, liability under confidentiality agreements with third parties, civil damages and criminal penalties.

The term "Proprietary Information" means any and all confidential and/or proprietary knowledge, data or information of Ansys. By way of illustration, but not limitation, "Proprietary Information" includes (i) trade secrets, inventions, mask works, ideas, processes, formulas, source and object codes, data, programs, marketing innovations (including brand names, taglines and logos), other works of authorship, know-how, improvements, discoveries, developments, designs and techniques (collectively referred to as "Inventions"); (ii) client lists and information, including the terms of contracts and arrangements with and proposals to Ansys's clients and prospective clients (collectively, "Clients"); (iii) customer lists and personal, financial and other information obtained from consumers of Ansys's services; (iv) non-public pricing information, vendor prices and lists, buying and pricing strategies and merchandise plans, including the terms of contracts and arrangements with vendors; (v) promotional, marketing and advertising strategies and plans, including information about projects in development and the terms of contracts and arrangements relating to promotions, marketing and advertising (including arrangements with athletes); (vi) non-public financial and statistical information relating to Ansys, its business and the businesses of its Clients, including budgets, financial and business forecasts, expansion plans and business strategies; and (vii) information regarding the skills, performance and compensation of other employees, contractors and consultants of Ansys. Employee's obligations with respect to Proprietary Information shall not apply to any portion of the Proprietary Information which is presently or becomes publicly available or a matter of public knowledge or domain through no act or omission by Employee; which is rightfully received by Employee from a third party who is or was not bound in any confidential relationship to ANSYS; or which is required to be disclosed by a judicial or governmental order, in which case Employee shall promptly notify ANSYS, but in no event to exceed 10 business days, of Employee's receipt of such judicial or governmental order and take reasonable steps to assist in contesting such order or in protecting ANSYS' rights prior to disclosure.

Subject to Section 7(c), Employee agrees that Employee shall direct all questions regarding the transactions contemplated by the Agreement and Plan of Merger, dated as of January 15, 2024, by and among the Company, Synopsys, Inc., a Delaware corporation ("Synopsys"), and ALTA Acquisition Corp., a Delaware corporation and wholly owned subsidiary of Synopsys (the "Merger Agreement"), to the Company.

(b) **Return of Property.** On or before her Resignation Date, Employee will return to the Company all property and information that belongs to the Company, including, but not limited to the following (where applicable): automobile; computers (desktop and laptop); phone; tablet; iPad; devices (including USB and external hard drives); handheld devices; keys, access cards, passwords, and/or ID cards; all electronically stored and paper copies of all financial data, customer information, business plans and reports, and Company files; and all records, customer lists, written information, forms, plans, and other documents, including electronically stored information. Employee shall search Employee's electronic devices, device back-ups, residence, and automobile and certify in the waiver of claims executed contemporaneous with her Resignation Date that Employee has disclosed all Company property in Employee's possession or control and returned such property as directed by Company.

(c) **Reports to Government Entities.** Nothing in this Agreement, including the Protecting the Company's Proprietary Information clause, restricts or prohibits Employee from initiating communications directly with, responding to any inquiries from, providing testimony before, providing Proprietary Information to, reporting possible violations of law or regulation to, or from filing a claim or assisting with an investigation directly with a self-regulatory authority or a government agency or entity, including the EEOC, the Department of Labor, the NLRB, the Department of Justice, the SEC, the Congress, and any agency Inspector General (collectively, "Regulators"), or from making other disclosures that are protected under the whistleblower provisions of state or federal law or regulation. However, to the maximum extent permitted by law, Employee is waiving her right to receive any individual monetary relief from Ansys or any others covered by this Agreement and General Release resulting from such claims or conduct, regardless of whether she or another party has filed them. This Agreement does not limit Employee's right to receive an award from any Regulator that provides awards for providing information relating to a potential violation of law. Employee does not need the prior authorization of Ansys to engage in conduct protected by this Section, and Employee does not need to notify Ansys that she has engaged in such conduct.

8. **Future Cooperation.** After her Resignation Date, Employee agrees to cooperate reasonably with Ansys and all of its affiliates (including its and their outside counsel) in connection with (i) the contemplation, prosecution and defense of all phases of existing, past and future litigation about which Ansys believes Employee may have knowledge or information; (ii) responding to requests for information from regulatory agencies or other governmental authorities; and (iii) the reasonable enforcement of any compensation clawback policy maintained by Ansys from time to time (together "Cooperation Services"). Employee further agrees to make herself available to provide Cooperation Services at mutually convenient times during and outside of regular business hours as reasonably deemed necessary by Ansys's counsel. Ansys shall not utilize this section to require Employee to make herself available to an extent that would unreasonably interfere with full-time employment responsibilities that she may have. Cooperation Services include, without limitation, appearing without the necessity of a subpoena to testify truthfully in any legal proceedings in which the Company or an affiliate calls her as a witness. Ansys shall reimburse Employee for any reasonable travel expenses that she incurs due to her performance of Cooperation Services, after receipt of appropriate documentation consistent with Ansys's business expense reimbursement policy. In addition, in the event Employee's cooperation obligations exceed 5 hours after expiration of the Consulting Services Agreement, the Company will consider in good faith a mutually agreed upon market rate fee for time spent by Employee providing cooperation under this Section 8.

9. **Breach of Agreement.** Employee agrees and recognizes that should Employee materially breach any of the obligations or covenants set forth in Section 4, 6, 7, or 8 of this Agreement, and if such breach is not cured to the satisfaction of the Company's Board of Directors within 15 days of written notice thereof from Ansys to Employee, Ansys will have no further obligation to provide Employee with the consideration set forth in Section 2

of this Agreement and will have the right to seek repayment of all consideration paid up to the time of any such breach. Notwithstanding the foregoing, Employee acknowledges that in any such event, any release executed contemporaneous with her Resignation Date shall remain valid and enforceable.

10. Indemnification Matters. The Company agrees to indemnify Employee for matters arising out of or relating to her Corporate Status (as defined below) with the Company or any of its subsidiaries or affiliates (collectively, the "Company Group") as provided in, and subject to the conditions of, this Section 10.

(a) Agreement to Indemnify; Exceptions.

(i) Subject to Section 10(c), the Company shall indemnify Employee, to the fullest extent permitted by the laws of the State of Delaware, as such may be amended by time to time (but, in the case of any such amendment, only to the extent that such amendment permits the Company to provide broader rights than said law permitted the Company to provide prior to such amendment), in connection with any threatened, pending or completed action, claim, suit, arbitration, mediation, alternative resolution mechanism, hearing or proceeding, whether civil, criminal, administrative, arbitrative or investigative (collectively, an "Action"), any appeal of such an Action, and any inquiry or investigation which could lead to such an Action to which Employee is, was, or at any time becomes a party to or a participant in, or is threatened to be made a party to or participant in, by reason of the fact that Employee is serving or was serving as (A) a director, officer, employee, agent, fiduciary or other service provider of any member of the Company Group, or (B) in any capacity with any other corporation, organization, partnership, joint venture, trust or other entity at the written request or direction of any member of the Company Group, including service with respect to employee or other benefit plans (collectively, a "Proceeding"; Employee's status described in the foregoing clauses (A) and (B) is referred to as Employee's "Corporate Status"), against any fees and other expenses and disbursements reasonably incurred in connection with a Proceeding or in settlement of a Proceeding incurred by Employee, or on Employee's behalf ("Expenses"), any amount reasonably paid in settlement, and any liability fixed by a judgment, order, decree or award (including civil fines and penalties to the extent permitted by applicable law or regulation or covered and paid under a D&O Policy as defined below) (collectively, with Expenses, "Indemnifiable Losses") if Employee acted in good faith and in a manner Employee reasonably believed to be in or not opposed to the best interests of the Company, and, in the case of any criminal proceeding, that Employee had no reasonable cause to believe Employee's conduct was unlawful.

(ii) No Indemnifiable Losses pursuant to Section 10(a)(i) hereof shall be paid by the Company:

(A) with respect to any Proceeding in which Employee is finally adjudicated (1) not to have acted in good faith and in a manner she reasonably believed to be in, or not opposed to, the best interests of the Company, and (2) with respect to any criminal Proceeding, to have had reasonable cause to believe his or her conduct was unlawful;

(B) with respect to any claim in which final judgment is rendered against Employee or in which Employee enters into a settlement, in each case for an accounting of profits made from the purchase or sale by Employee of securities of the Company pursuant to the provisions of Section 16(b) of the Securities Exchange Act of 1934 and the rules promulgated thereunder, in each case as amended, or similar provisions of any federal, state or local laws, or on account of any payment by Employee to the Company in respect of any claim for such an accounting;

(C) in connection with a Proceeding by or in the right of the Company, except for Expenses actually and reasonably incurred by Employee in connection with such a Proceeding;

(D) except for compulsory counterclaims or cross claims, with respect to any Proceeding initiated by Employee unless (1) the Company's Board of Directors (each, a "Director" and, collectively, the "Board") consented to the initiation of such Proceeding prior to its initiation, (2) the Board authorized the Company to join in such Proceeding, or (3) such Proceeding is initiated solely to enforce Employee's rights under this Section 10; or

(E) if a final decision by a court having jurisdiction in the matter shall determine that such indemnification is not lawful.

(iii) If Employee is entitled under any provision of this Agreement to indemnification by the Company for some or a portion of Indemnifiable Losses, but not, however, for the total amount thereof, the Company shall nevertheless indemnify Employee for the portion thereof to which Employee is entitled to the extent permitted by applicable law or regulation or covered and paid under a D&O Policy as defined below.

(iv) To the extent that Employee is, by reason of her Corporate Status, a witness, or is made (or asked) to respond to discovery requests, in any Proceeding to which Employee is not a party, she shall be indemnified against all reasonable Expenses actually and reasonably incurred by her, or on her behalf, in connection therewith.

(b) **Procedure for Notification.** To obtain indemnification under this Section 10, Employee shall reasonably promptly (within 45 days) submit to the Company a written request, including a description of any Proceeding or Indemnifiable Losses. After making such a request, Employee shall, at the request of the Company, promptly (within 30 days) furnish all documentation and information necessary to facilitate the Company's reimbursement of Indemnifiable Losses under its applicable insurance policies. The failure by Employee to timely notify the Company of any Proceeding or Indemnifiable Losses shall not relieve the Company from any liability under this Section 10 unless, and only to the extent that, such failure actually and materially prejudices the interests of the Company. For the avoidance of doubt, any noncompliance by Employee with respect to Employee's obligations under this Section 10(b) that for any reason materially diminishes or materially impairs the ability of the Company to obtain reimbursement under or otherwise access applicable insurance policies shall be deemed to have actually and materially prejudiced the interests of the Company.

(c) **Determination of Right to Indemnification.**

(i) In the event Employee shall have been successful on the merits or otherwise in defense of any Proceeding, including dismissal without prejudice, Employee shall be indemnified against Indemnifiable Losses relating to, arising out of or resulting from such Proceeding in accordance with Section 10(a) and no Standard of Conduct Determination (as defined in Section 10(c)(iii)) shall be required with respect to such Proceeding. If Employee is not wholly successful in such Proceeding but is successful, on the merits or otherwise, as to one (1) or more but less than all claims, issues or matters in such Proceeding, the Company shall indemnify Employee against all Indemnifiable Losses actually and reasonably incurred by her, or on her behalf, in connection with each successfully resolved claim, issue or matter to the extent permitted by applicable law or regulation or covered and paid under a D&O Policy as defined below.

(ii) In the event Employee shall have been finally adjudicated in any Proceeding (A) not to have acted in good faith and in a manner she reasonably believed to be in, or not opposed to, the best interests of the Company, and (B) with respect to any criminal Proceeding, to have had reasonable cause to believe his or her conduct was unlawful, Employee shall not be indemnified against Indemnifiable Losses relating to, arising out of or resulting from such Proceeding.

(iii) In the event a Proceeding is compromised or settled prior to final adjudication so as to impose any liability or obligation upon Employee, Employee shall not be indemnified against Indemnifiable Losses relating to, arising out of or resulting from such Proceeding if there be a determination that Employee did not act in good faith and in a manner she reasonably believed to be in, or not opposed to, the best interests of the Company, and, with respect to any criminal Proceeding, had no reasonable cause to believe her conduct was unlawful. Subject to Section 10(c)(v), a determination contemplated by the preceding sentence (a "Standard of Conduct Determination") shall be made in good faith and on a reasonable basis: (A) by a majority vote of those Directors who are not involved in such Proceeding (the "Disinterested Directors"); (B) by the stockholders; or (C) if directed by a majority of Disinterested Directors, by independent legal counsel in a written opinion, with a summary of the determination to be provided to Employee. However, if more than half of the Directors are not Disinterested Directors, the determination shall be made by (X) a majority vote of a committee of one or more Disinterested Director(s) chosen by the Disinterested Director(s) at a regular or special meeting; (Y) the stockholders; or (Z) independent legal counsel chosen by the Board in a written opinion, with a summary of the determination to be provided to Employee. Employee will reasonably cooperate (at the Company's expense) with the person or persons making such Standard of Conduct Determination, including providing to such person or persons, upon reasonable advance request, any documentation or information which is not privileged or otherwise protected from disclosure and which is reasonably available to Employee and reasonably necessary to such determination.

(iv) The Company shall use its reasonable efforts to cause any Standard of Conduct Determination required under Section 10(c)(iii) to be made as promptly as practicable. If (x) a Standard of Conduct Determination shall not have been made within 60 days after a written claim for indemnification has been received by the Company or (y)(1) a Standard of Conduct Determination shall have been made that Employee is entitled to indemnification under this Agreement and (2) such applicable indemnification payment is not made within 30 days after such Standard of Conduct Determination, then, Employee may at any time thereafter bring suit against the Company to recover the unpaid amount of the claim; *provided*, that, in the case of clause (x), such 60-day period may be extended for a reasonable time, not to exceed an additional 60 days, if the person or persons making such determination in good faith requires such additional time for obtaining or evaluating any documentation or information relating thereto. In the event of such a suit: (A) Employee shall be entitled to be paid the expenses of prosecuting such claim; and (B) the failure of the Company (including its Board or any committee thereof, independent legal counsel, or stockholders) to make a Standard of Conduct Determination shall not be a defense to the action and shall not create a presumption that indemnification is not permissible nor shall it create a presumption that indemnification is permissible. In the event that a Standard of Conduct Determination is made that Employee is not entitled to indemnification under this Agreement, Employee shall be entitled to an adjudication in a court of competent jurisdiction of Employee's entitlement to such indemnification or, if requested in writing by Employee or the Company, in arbitration to be conducted by a panel of three arbitrators pursuant to the American Arbitration Association's Commercial Arbitration Rules. The Company shall not oppose Employee's right to seek any such adjudication.

(v) In making any Standard of Conduct Determination as required under Section 10(c)(iii), the person or persons or entity making such determination shall presume that Employee is entitled to indemnification under this Agreement.

(d) **Advancement of Interim Expenses; Conditions; Procedure for Payment of Interim Expenses.** Upon written request therefor, accompanied by (i) reasonably itemized evidence of Expenses incurred or reasonably expected to be incurred; (ii) a written affirmation that (A) Employee believes in good faith that her conduct conformed with the standard set forth in Section 10(a)(i) hereof and did not constitute conduct of the kind described in Section 10(a)(ii)(A) hereof and (B) Employee is entitled to indemnification hereunder; and (iii) Employee's executed undertaking, in the form attached hereto as Exhibit C, providing that Employee undertakes to (A) repay the amounts advanced to the extent it is ultimately determined that Employee is not entitled to be indemnified by the Company and (B) subject to Section 8, cooperate with the Company and its insurers (as applicable), the Company shall promptly advance to Employee all reasonable Expenses incurred, or reasonably expected to be incurred, by Employee in connection with any Proceeding for which Employee is entitled to indemnification pursuant to this Section 10. Where the Company is required to make a determination as to the reasonableness of any Expenses under this Section 10, such determination shall be made in good faith and on a reasonable basis by (X) the Board, (Y) if more than half of the Directors are involved in the Proceeding, then by a majority vote of a committee of one or more Disinterested Director(s) chosen in accordance with the procedures specified in Section 10(c) of this Agreement or (Z) if directed by the Board, by independent legal counsel in a written opinion, with a summary of the determination to be provided to Employee.

(e) **Defense of Underlying Proceeding**

(i) Employee agrees to notify the Company in writing not later than 30 days after Employee receives notice of the commencement of or is served with any summons, citation, subpoena, complaint, indictment, information or other document relating to, any Proceeding. The failure by Employee to so notify the Company shall not relieve the Company from any liability hereunder unless, and only to the extent that, such failure actually and materially prejudices the interests of the Company. For the avoidance of doubt, any noncompliance by Employee with respect to Employee's obligations under this Section 10(e) that for any reason materially diminishes or materially impairs the ability of the Company to obtain reimbursement under or otherwise access applicable insurance policies shall be deemed to have actually and materially prejudiced the interests of the Company. The Company agrees to notify Employee in writing not later than 30 days after any member of the Company Group receives notice that Employee has been named as a party in a Proceeding.

(ii) With respect to any Proceeding, the Company shall be entitled to participate in the defense at its sole expense or may assume the defense thereof, except for any such Proceeding asserted by or in the right of the Company (as to which Employee shall be entitled to exclusively control the defense with counsel of her choosing). The Company's participation in the defense of any Proceeding of which the Company has not assumed the defense will not in any manner affect the rights of Employee under this Section 10, including Employee's right to control the defense of such Proceeding and select counsel of her choosing.

(iii) After notice from the Company to Employee of its election to assume the defense of any Proceeding, the Company (x) shall directly pay period. all Expenses relating to or arising out of such Proceeding and (y) subject to the terms of this Section 10(e)(iii) and so long as the Company actually pays all such Expenses directly, will not be liable to Employee under this Section 10 for any Expenses subsequently incurred by Employee in connection with the defense thereof, other than such Expenses actually and reasonably paid or incurred by Employee in connection with any cooperation in the Company's defense of such Proceeding or other action undertaken by Employee at the request of the Company or with the consent of the Company (which consent shall not be unreasonably withheld, conditioned or delayed). Employee shall have the right to retain separate counsel in such Proceeding, but the fees and expenses of such counsel incurred after notice from the Company of its assumption of the defense thereof shall be at the sole expense of Employee unless (A) the employment of counsel by Employee has been authorized by the Company, (B) Employee shall have been advised by counsel that the use of counsel chosen by the Company to represent Employee (or assumption of the defense by the Company) would present an actual or potential conflict that is likely to materially and adversely affect Employee's interest or would not be permissible under applicable canons of legal ethics, or (C) the Company shall not have employed counsel to assume the defense of such action, in each of which cases the Expenses of separate counsel (but not more than one law firm plus, if applicable, local counsel in respect of any particular Proceeding) shall be at the sole expense of the Company. In all events Employee shall not unreasonably interfere with the conduct of the defense by the Company of any Proceeding that the Company shall have elected to assume the defense of and as to which the Company shall be using its reasonable best efforts to provide an effective defense.

(iv) The Company shall not be liable to indemnify Employee under this Section 10 for any amounts paid in settlement of any Proceeding effected without the Company's written consent. No member of the Company Group may settle any Proceeding without the consent of Employee unless (A) such settlement solely involves the payment of money and (B) includes a complete and unconditional release of Employee from all liability on any claims that are the subject matter of such Proceeding and for which the Employee is a named party. Neither the Company nor Employee will unreasonably withhold consent to any proposed settlement; *provided*, that Employee may withhold consent to any settlement of a Proceeding for which the Employee is a named party that does not provide a complete and unconditional release of Employee.

(f) **No Duplication of Payments.** The Company shall not be liable under this Section 10 to make payment of any amounts otherwise indemnifiable hereunder if and to the extent Employee has actually received such payment under any insurance policy, the Company's Sixth Restated Certificate of Incorporation, Fifth Amended and Restated By-Laws, applicable law or any other source.

(g) **Subrogation.** In the event of any payment pursuant to Section 10 of this Agreement, the Company shall be subrogated to the extent of such payment to all of Employee's related rights of recovery, including any such right to indemnification from any other insurer or other source. Employee shall take all actions necessary to evidence such rights.

(h) **Non-Exclusivity.** The rights of indemnification as provided by this Agreement shall not be deemed exclusive of any other rights to which Employee may at any time be entitled under applicable law, the Company's certificate of incorporation, the Company's by-laws, any agreement, a vote of stockholders, a resolution of directors of the Company, or otherwise. To the extent that a change in applicable law (including the Delaware General Corporation Law), whether by statute or judicial decision, permits greater indemnification than would be afforded currently under the Company's certificate of incorporation, the Company's by-laws and this Agreement, it is the intent of the parties hereto that Employee shall enjoy by this Agreement the greater benefits so afforded by such change.

(i) **D&O Insurance.** To the extent that any Company Group member maintains an insurance policy or policies providing liability insurance for directors, officers, employees, or agents or fiduciaries of the Company Group or of any other corporation, partnership, joint venture, trust, employee benefit plan or other enterprise that such person serves at the request of the Company Group (a "D&O Policy"), Employee shall (and shall continue to be) be covered by such D&O Policy in accordance with its or their terms to the maximum extent of the coverage available for any director, officer, employee, agent or fiduciary under such D&O Policy. The Company shall give prompt notice of the commencement of any Proceeding that may give rise to indemnification to Employee under this Agreement to the insurer(s) of its D&O Policy in accordance with the procedures set forth in the D&O Policy. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Employee, all amounts payable as a result of such proceeding in accordance with the terms of the D&O Policy.

(j) **Miscellaneous.** This Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors and assigns (including any successors by way of asset or equity acquisition, merger or consolidation).

11. **Mutual Non-Disparagement.** Subject to Section 7(c), Employee will not make (and will not cause any other Person to) any defamatory or intentionally disparaging statements to any third parties regarding the Company, its subsidiaries or any of their affiliates or their respective successors, assigns, officers, directors, employees, businesses, products, services, customers or investors. The Company will maintain book accounts showing instruct Ajei Gopal, Renee DeMay, Shane Emswiler, Walt Hearn, Janet Lee, Kathleen Weslock, and Andy Kincheloe to not make, or cause to be made, any defamatory or intentionally disparaging statements to any third parties regarding Employee and will advise such individuals that violation of this instruction shall constitute a violation of the amount Ansys Code of payroll deductions made by each participating employee for each Offering. No interest will accrue Business Conduct and Ethics. For purposes of the foregoing, "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, association or be paid on payroll deductions. other entity or a governmental entity.

6.12. **Deduction Changes Amendment.** Unless This Agreement may not be modified, altered or changed except upon express written consent of all Parties signed in ink wherein specific reference is made to this Agreement.

13. **Governing Law and Forum.**

(a) Except with respect to Section 10, this Agreement will be governed by, and performed in accordance with, the Administrator provides otherwise, an employee may increase laws of the Commonwealth of Pennsylvania without regard to its conflicts of laws provisions. Employee consents to the personal jurisdiction and venue of the state and federal courts having jurisdiction over Washington County, Pennsylvania.

(b) Section 10 of this Agreement will be governed by, and performed in accordance with, the laws of the State of Delaware without regard to its conflicts of laws provisions. The Company and Employee each hereby irrevocably consent to the jurisdiction of the Chancery Court of the State of Delaware for all purposes in connection with any action or decrease his proceeding which arises out of or her payroll deduction during relates to Section 10 of this Agreement and agree that any Offering. An employee may also terminate his action instituted under Section 10 of this Agreement shall be brought only in the Chancery Court of the State of Delaware.

14. **Severability.** If a court of competent jurisdiction determines that any provision of this Agreement is illegal or her payroll deduction for unenforceable and such provision or provisions cannot be modified to be enforceable, then such provision will immediately become null and void, leaving the remainder of this Agreement in full force and effect.

15. **Effective Date.** This Agreement will become effective on the Offering, day Employee executes it ("Effective Date").

16. **Entire Agreement.** Except as otherwise provided herein, or in documents specifically referenced by this Agreement, this Agreement constitutes the entire agreement relating to the matters stated herein, and it cancels and supersedes any prior agreements or understandings that may have existed between Employee and Ansys with respect to all matters covered by this Agreement. No other promise or inducement has been offered to either party except as set forth herein. Notwithstanding the foregoing, all equity award agreements executed by the Employee or equivalent documentation shall remain in full force and effect in accordance with the terms thereof. Employee confirms that on Resignation Date or **without withdrawing** any date after as determined by the Company she will have returned all tangible versions of all documents containing Ansys business information, other than information pertaining to her own employment terms, and that she will not have not retained any Ansys business information in any form. For avoidance of doubt, the previous agreements referred to in this Section are separate and distinct from the **Offering** matters covered by this Agreement.

Employee acknowledges that pursuant to 18 U.S.C. §§ 1833(b)(1) and 1833(b)(2) and/or any applicable state law: (a) an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney solely for the purpose of reporting or investigating a suspected violation of law; (b) an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal; and, (c) an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

17. **Copies Effective as Originals.** This Agreement may be executed in counterparts and each counterpart, when executed, will have the efficacy of an original. Photographic or faxed copies of signed counterparts may be used in lieu of the original for any purpose.

18. **Review of Agreement and Consultation with Attorney.** EMPLOYEE IS HEREBY ADVISED THAT SHE HAS BEEN GIVEN REASONABLE TIME TO REVIEW THIS AGREEMENT AND TO CONSULT WITH AN ATTORNEY PRIOR TO EXECUTING THIS AGREEMENT. EMPLOYEE SHOULD CONSULT WITH AN ATTORNEY OF HER CHOICE.

IN WITNESS WHEREOF, the parties hereto knowingly and voluntarily executed this Agreement as of the dates set forth below:

/s/ Nicole Anasenes 2/19/2024
Nicole Anasenes Date

/s/ Kathleen Weslock 2/19/2024
ANSYS, Inc. Date

EXHIBIT A

CONSULTING SERVICES AGREEMENT

THIS CONSULTING SERVICES AGREEMENT (this "Agreement"), is hereby made and entered into this 8th day of June 2024, by and between **ANSYS, Inc.**, a Delaware corporation, having offices at 2600 ANSYS Drive, Canonsburg, Pennsylvania 15317 U.S.A. (hereinafter "ANSYS" or the "Company"), and Nicole Anasenes, an individual residing at the address set forth in ANSYS's books and records (hereinafter "Consultant").

WHEREAS, Consultant represents that she has expertise in the area of administration and finance and is ready, willing, and able to provide consulting services to ANSYS on the terms and conditions set forth herein; and

WHEREAS, ANSYS, in reliance on Consultant's representations, is willing to engage Consultant as an independent contractor, and not as an employee, on the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the obligations herein made and undertaken, the parties, intending to be legally bound, covenant and agree as follows:

SECTION 1 **SCOPE OF SERVICES**

1.1 Consultant shall provide the consulting services described in the attached Work Statement, which is incorporated herein by reference as if set forth herein in full. ANSYS and Consultant agree that it is reasonably anticipated that Consultant's services hereunder will require the Consultant to render services at a level that will not exceed 20 % of the average level of Consultant's services as an employee of the Company over the thirty-six

(36)-month period preceding the effective date of Consultant commencing services under this Agreement on June 8, 2024 (the "Consulting Start Date"). The parties acknowledge that, for purposes of Section 7. To increase, reduce or terminate his or her payroll deduction (without withdrawing 409A of the Internal Revenue Code of 1986, as amended ("Section 409A"), the Consultant will have undergone a "separation from service," within the meaning of Section 409A, from the Offering), an employee must submit a new enrollment form at least fifteen (15) business days (or such shorter period as Company upon the date of Consultant's termination of employment with the Company on June 7, 2024.

1.2 All work shall be established by performed at the Administrator) before the payroll date on which the change becomes effective. Subject Consultant's facilities unless otherwise mutually agreed in writing and shall be performed in a workmanlike and professional manner.

1.3 Anything herein to the requirements of Sections 4 contrary notwithstanding, the parties hereby acknowledge and 5, an employee may either increase agree that ANSYS shall have no right to control the manner, means or decrease his or her payroll deduction method by which Consultant performs the services called for by this Agreement. Rather, ANSYS shall be entitled only to direct Consultant with respect to the next Offering elements of services to be performed by Consultant and the Work Product (as defined below) to be delivered to ANSYS, to inform Consultant as to where and when such services shall be performed, and to review and assess the performance of such services by Consultant for the limited purposes of assuring that such services have been performed and confirming that the Work Product is satisfactory.

1.4 During the consulting term provided in Section 2 hereof, Consultant will at all times be and remain an independent contractor. Consultant agrees and acknowledges that, during such consulting term, Consultant will not be treated as an employee of ANSYS or any of its affiliates for purposes of federal, state, local, or foreign income tax withholding, nor unless otherwise specifically provided by law, for purposes of the Federal Insurance Contributions Act, the Social Security Act, the Federal Unemployment Tax Act, or any worker's compensation law of any state or country and for the purposes of benefits provided to employees of ANSYS or any of its affiliates under any employee benefit plan. Consultant acknowledges and agrees that as an independent contractor, Consultant will be required during the consulting term, to pay any taxes on amounts paid to Consultant by ANSYS and its affiliates.

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SECTION 2 TERM OF AGREEMENT

2.1 The effectiveness of this Agreement is expressly conditioned upon the execution by and effectiveness of the General Release and Waiver of Claims expected to be entered into by ANSYS and the Consultant on June 7, 2024 (the "Release"). If the Release is revoked by Consultant and therefore does not become effective, then this Consulting Services Agreement will not go into effect and will be null and void.

2.2 This Agreement shall commence on the Consulting Start Date so long as the condition set forth in Section 2.1 is satisfied and, unless modified by mutual written agreement of the parties or terminated earlier pursuant to the terms of this Agreement, shall continue until August 8, 2024.

2.3 Within ten (10) days of the expiration of this Agreement, Consultant shall comply with Section 5.2 hereof regarding return of documents and data, and shall also furnish to ANSYS all work in progress or portions thereof, including all incomplete work.

2.4 The provisions of this Agreement pertaining to licenses, indemnification, limitation of liability, warranty disclaimers, confidentiality and any other sections which by reasonable interpretation are intended to survive the expiration or termination of this Agreement shall survive the expiration or termination.

SECTION 3 FEES, EXPENSES, AND PAYMENT

3.1 In consideration of the services to be performed by Consultant, ANSYS shall pay Consultant fees and expenses in accordance with the terms of the applicable Work Statement.

3.2 ANSYS, upon payment of such amounts identified in the Work Statement, shall have no further liability or obligation to Consultant whatsoever for any further fees, expenses, or other payment.

SECTION 4 OWNERSHIP AND RIGHTS

4.1 As used in this Agreement, the term "Intellectual Property" shall mean any rights under patent, mask work and other semiconductor chip protection, copyright, trade secret, trademark, or similar laws throughout the world; and the term "Invention" shall mean any idea, design, concept, method, development, process, formula, know-how, technique, invention, discovery, improvement or work of authorship, regardless of patentability, made, created, invented, developed and/or reduced to practice by Consultant, or jointly by Consultant with one or more employees or agents of ANSYS, during the term of this Agreement and in performance of any work under any Work Statement issued hereunder, provided that either (or both) the conception or reduction to practice thereof occurs during the term of this Agreement and in the performance of work under a Work Statement issued hereunder.

4.2 All right, title, and interest in and to all Work Product, including all Intellectual Property rights embodied therein, shall be held by ANSYS, and all Work Product shall, to the extent possible, be considered works made by Consultant for hire for the benefit of ANSYS (collectively, "Work Product"). Consultant shall mark all Work Product with ANSYS' copyright or other proprietary notice as directed by ANSYS and shall take all actions and offer all assistance deemed necessary by ANSYS to perfect ANSYS' rights (including Intellectual Property rights) therein. In the event that the Work Product cannot constitute work made by Consultant for hire for the benefit of ANSYS under applicable law or in the event that Consultant should otherwise retain any rights to any Work Product, Consultant agrees to and hereby does assign all right, title, and interest in and to such Work Product to ANSYS, without further consideration, and shall take all actions and offer all assistance deemed necessary by ANSYS to perfect ANSYS' rights, including, without limitation, execution of any documents of assignment or registration (e.g., of copyright or patent) requested by ANSYS respecting any and all Work Product.

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4.3 Consultant agrees to and hereby does assign to ANSYS, its successors, and assigns, all right, title and interest in and to all Inventions, including, without limitation, the right to seek protection by obtaining Intellectual Property (including, without limitation, patent) rights therefor and to claim all rights or priorities thereunder, and the same shall become and remain ANSYS' property regardless of whether such protection is sought. Consultant shall promptly make a complete written disclosure to ANSYS of each Invention not otherwise clearly disclosed to ANSYS in the pertinent Work Product, specifically pointing out features or concepts that Consultant believes to be new or different. Consultant shall, upon ANSYS' request and at ANSYS' expense, cause to be filed or assist ANSYS with the filing of patent applications thereon, through attorneys or agents designated by ANSYS, and shall forthwith sign all such applications over to ANSYS, its successors, and assigns. Consultant shall give ANSYS all reasonable assistance in connection with the preparation and prosecution of any such patent applications and shall cause to be executed all such declarations, assignments and/or other instruments or documents as ANSYS may consider necessary or appropriate to carry out the intent of this Agreement.

4.4 All right, title, and interest in and to any programs, systems, data, and materials furnished to Consultant by ANSYS are and shall remain the property of ANSYS.

4.5 Consultant agrees to grant and hereby does grant to ANSYS, its successors, and assigns, the royalty-free, fully paid-up worldwide, nonexclusive right and license under any Intellectual Property rights owned by Consultant or with respect to which Consultant has a right to grant such rights and licenses, to the extent required by ANSYS to exploit the Work Product and to exercise its full rights in the Work Product, including, without limitation, the rights to make, have made, sell, offer for sale, have sold, import, have imported, copy, create derivative works, modify and distribute products and services based on or incorporating such Work Product.

4.6 ANSYS hereby grants to Consultant a limited, nonexclusive right and license to copy, create derivative works, modify and otherwise use any ANSYS Intellectual Property provided to Consultant hereunder, solely for the purpose of rendering the services set forth in a Work Statement. Such

limited right and license shall extend to no other materials or for any other purpose and shall terminate automatically upon expiration or termination of this Agreement or any applicable Work Statement.

SECTION 5 CONFIDENTIAL INFORMATION

5.1 Consultant acknowledges that in order to perform the services called for in this Agreement, a relationship of confidence and trust will exist between Consultant and ANSYS, and that ANSYS possesses and will continue to possess information that has been created, discovered, developed, or otherwise become known to ANSYS (including, without limitation, information created, discovered and/or developed by Consultant or arising out of the relationship contemplated hereby or in the course of work performed hereunder) or in which property rights have arisen in, been assigned to or otherwise conveyed to ANSYS, which information has commercial value in the business in which ANSYS is engaged or which relates to ANSYS' actual or anticipated research and development activities. All such information is hereinafter referred to as "Proprietary Information." By way of illustration, but not limitation, Proprietary Information includes trade secrets, processes, computer programs (whether in source or object code form), formulae, data (such as scientific, sales or technical data), information, designs, processes, procedures, know-how, improvements, inventions, techniques, designs, developments, discoveries, marketing plans, strategies, forecasts, customer and supplier lists, and compilations of such information.

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5.2 Consultant agrees that all Proprietary Information shall be the sole property of ANSYS and its assigns, and ANSYS and its assigns shall be the sole owner thereof. At all times, both during the term of this Agreement and thereafter, Consultant will keep in strict confidence and trust all Proprietary Information or anything relating to such information, will not allow any unauthorized person access to Proprietary Information, either before or after the termination of this Agreement, and will take all action reasonably necessary to protect the confidentiality of Proprietary Information, including, without limitation, implementing and enforcing operating procedures to minimize the possibility of unauthorized use or copying of Proprietary Information. Consultant agrees to segregate all Proprietary Information from information of other companies and agrees not to reproduce Proprietary Information without ANSYS' prior written consent. In the event of the expiration or termination of this Agreement for any reason or no reason, with or without cause, Consultant will deliver to ANSYS all documents and data of any nature pertaining to work performed hereunder and Consultant will not, without the prior written consent of ANSYS, retain any documents or data of any description, or any reproduction containing or pertaining to any Proprietary Information.

5.3 Consultant's obligations with respect to Proprietary Information shall not apply to any portion of the Proprietary Information which is presently or becomes publicly available or a matter of public knowledge or domain through no act or omission by Consultant; which is rightfully received by Consultant from a third party who is or was not bound in any confidential relationship to ANSYS; or which is required to be disclosed by a judicial or governmental order, in which case Consultant shall promptly notify ANSYS and take reasonable steps to assist in contesting such order or in protecting ANSYS' rights prior to disclosure.

5.4 Consultant's obligations of confidentiality under this Agreement shall not apply to the general skills and experience gained during the course of the services that Consultant could reasonably have been expected to acquire in similar work with another company.

5.5 Consultant acknowledges the following: (a) an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney solely for the purpose of reporting or investigating a suspected violation of law; (b) an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal; and, (c) an individual who files a lawsuit for retaliation against ANSYS for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order.

5.6 Notwithstanding the foregoing, nothing in this Agreement restricts or prohibits Consultant from initiating communications directly with, responding to any inquiries from, providing testimony before, providing Proprietary Information to, reporting possible violations of law or regulation to, or from filing a **new enrollment form** claim or assisting with an investigation directly with a self-regulatory authority or a government agency or entity, including the Equal Employment Opportunity Commission, the Department of Labor, the National Labor Relations Board, the Department of Justice, the Securities and Exchange Commission, the Congress, and any agency Inspector General (collectively, the "Regulators"), or from making other disclosures that are protected under the whistleblower provisions of state or federal law or regulation. However, to the maximum extent permitted by law, Consultant is waiving her right to receive any individual monetary relief from ANSYS or any ANSYS subsidiary or affiliate resulting from such claims or conduct, regardless of whether she or another party has filed them. This Agreement does not limit Consultant's right to receive an award from any Regulator that provides awards for providing information relating to a potential violation of law. Consultant does not need the prior authorization of ANSYS to engage in conduct protected by this Section 5, and Consultant does not need to notify ANSYS that she has engaged in such conduct.

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SECTION 6 CONFIDENTIALITY OF AGREEMENT; PUBLICITY

6.1 Both during the term of this Agreement and thereafter, Consultant shall not, without ANSYS' express written permission, disclose the nature of the effort undertaken for ANSYS to any other person or entity, except as may be necessary to fulfill Consultant's obligations hereunder.

SECTION 7 REPRESENTATIONS AND WARRANTIES

Consultant makes the following representations and warranties for the benefit of ANSYS, as a present and ongoing affirmation of facts in existence at **least fifteen (15) business days before** all times when this Agreement is in effect:

7.1 Consultant represents and warrants that she is under no obligation or restriction, nor will she assume any such obligation or restriction, that does or would in any way interfere or conflict with, or that does or would present a conflict of interest concerning, the **next Offering Date** work to be performed by Consultant under this Agreement and any Work Statements hereunder, or the Work Product to be provided to ANSYS. Consultant is the lawful owner or licensee of any software programs or other materials used by Consultant in the performance of the services called for in this Agreement and has all rights necessary to convey to ANSYS the unencumbered ownership of all Work Product. Consultant represents and warrants that no Work Product will constitute a derivative work of any preexisting work to which Consultant does not own full right and title or which Consultant lacks authority to transfer to ANSYS.

7.2 Consultant represents and warrants that she is and will be the sole author of, or have adequate rights to use, all works employed by Consultant in preparing any and all Work Product; that she has and will have full and sufficient right to assign or grant the rights in the Work Product contemplated hereunder; that all Work Product do not and will not infringe or otherwise violate any Intellectual Property rights, privacy or similar rights of any third party, nor has any claim (whether or not embodied in an action, past or present) of such infringement been threatened or asserted, nor is such a claim pending, against Consultant (or, **by** insofar as Consultant is aware, any entity from which Consultant has obtained such **other deadline as rights**).

7.3 Consultant represents and warrants that all Work Product shall be **established** prepared in a workmanlike manner and with professional diligence and skill; that all Work Product will function on the machines and with operating systems for which they are designed; that all Work Product will conform to the **Offering** specifications and functions set forth in any Work Statement relating thereto; and that Consultant will perform all work called for by each Work Statement issued hereunder in compliance with applicable law.

7. Withdrawal. An employee

7.4 Consultant's performance of the services called for by this Agreement do not and shall not violate any applicable law, rule or regulation; any contracts with third parties; or any third-party rights, including, without limitation, Intellectual Property rights.

SECTION 8 CONFLICTS OF INTEREST

8.1 During the term of this Agreement, Consultant shall not engage in work or render services that will conflict with the relationship of trust and cooperation created hereby or that may **withdraw** otherwise conflict with Consultant's obligations under this Agreement.

8.2 Consultant will promptly notify ANSYS in writing of and at such time(s) as any such conflict arises or is discovered.

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SECTION 9 INDEMNIFICATION

9.1 Consultant hereby indemnifies and agrees to hold harmless ANSYS, and all subsidiaries and affiliates of ANSYS, and their respective officers, directors, employees, stockholders and agents, from **participation** and against any and all claims, demands and actions and any liabilities, damages or expenses resulting therefrom, including court costs and reasonable attorney fees, arising out of or relating to (i) the services performed by Consultant hereunder or any breach of the representations and warranties made by Consultant pursuant to Section 7 hereof, or (ii) a claim of infringement and/or misappropriation of Intellectual Property rights arising in connection with the **Plan** Work Product or by **delivering a written** virtue of the performance of Consultant's obligations hereunder. Consultant's obligations under this Section 9.1 shall survive the expiration or termination of this Agreement. ANSYS agrees to give Consultant prompt notice of **withdrawal** any such claim, demand or action.

SECTION 10 LIMITATION OF LIABILITY

10.1 ANSYS shall be liable to his or her appropriate payroll location. The employee's withdrawal will be effective as of the next business day. Following an employee's withdrawal, the Company will promptly refund such employee's entire account balance under the Plan (after payment Consultant only for any Common Stock purchased before invoiced charges for work actually performed by Consultant up to the effective date of withdrawal). Partial withdrawals are expiration or termination of this Agreement or applicable Work Statement and that meet the Acceptance Criteria set forth in the applicable Work Statement as well as for any charges preapproved by ANSYS that Consultant has already incurred and not **permitted**. The employee been reimbursed for in connection with the applicable Work Statement.

10.2 IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY THIRD PARTY CLAIM OR FOR ANY INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOST PROFITS, IN CONNECTION WITH OR ARISING OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION SHALL NOT APPLY TO CONSULTANT'S POTENTIAL LIABILITY UNDER SECTION 9 OR ARISING FROM BREACHES OF HER OBLIGATIONS UNDER SECTIONS 5 AND 6.

10.3 ANSYS makes no representations or guarantees, expressed or implied, regarding the total number of hours that Consultant may **not begin participation again during** work or the **remainder** total amount of revenue that may ultimately be derived by Consultant from ANSYS pursuant to this Agreement.

SECTION 11 ANSYS STANDARD Business Practices

11.1 Consultant has read and agrees to comply with the ANSYS Standard Business Practices, a copy of which is attached. Consultant will obey all pertinent ANSYS rules and security regulations while on ANSYS premises, including those relating to safeguarding of proprietary and competitively sensitive information.

SECTION 12
MISCELLANEOUS

12.1 Neither party shall assign, transfer or subcontract this Agreement or any of its obligations hereunder without the prior written consent of the Offering, but may enroll other.

12.2 This Agreement shall be governed and construed in a subsequent Offering all respects in accordance with Section 4.

8. Grant the laws of Options. On each Offering Date, the Company will grant Commonwealth of Pennsylvania as they apply to each eligible employee who is then a participant contract executed, delivered and performed solely in such Commonwealth, excluding its choice of law provisions and excluding the United Nations Convention on the International Sale of Goods. The parties agree to submit to the jurisdiction and venue of the state and federal courts located in the Plan Commonwealth of Pennsylvania.

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12.3 The parties are and shall be independent contractors to one another and nothing herein shall be deemed to cause this Agreement to create an option ("Option") agency, partnership or joint venture between the parties. Nothing in this Agreement shall be interpreted or construed as creating or establishing the relationship of employer and employee between ANSYS and either Consultant or any employee or agent of Consultant.

12.4 All remedies available to purchase on either party for one or more breaches by the last day other party are and shall be deemed cumulative and may be exercised separately or concurrently without waiver of any other remedies. The failure of either party to act in the event of a breach of this Agreement by the other shall not be deemed a waiver of such Offering (the "Exercise Date"), at the Option Price hereinafter provided for, (a) breach or a number waiver of shares of Common Stock determined by dividing future breaches unless such employee's accumulated payroll deductions on such Exercise Date waiver shall be in writing and signed by the Option Price, party against whom enforcement is sought.

12.5 All notices required or (b) 3,840 shares of Common Stock, whichever is less. Subject permitted hereunder shall be in writing addressed to the limitations respective parties as set forth herein, each employee's Option unless another address shall have been designated in writing, and shall be exercisable delivered by hand or by registered or certified mail, postage prepaid.

12.6 This Agreement is enforceable only by Consultant and ANSYS and its successors and assigns.

12.7 Consultant understands that the materials and/or information being transmitted under the performance of this Agreement may be subject to U.S. Government laws and regulations regarding export or re-export. It is solely Consultant's obligation to obtain all appropriate export licenses, keep required records, and comply fully with all applicable export control statutes and regulations.

12.8 If any provision of this Agreement or any Work Statement shall be ruled invalid, such provision shall be ineffective only to the extent of such employee's accumulated payroll deductions on invalidity and the Exercise Date. The purchase price for remainder of this contract shall remain in full force and effect.

12.9 This Agreement and each share purchased under such Option (the "Option Price") will be, with respect Work Statement pursuant to this Agreement set forth the entire understanding of the parties as to the Offering commencing on August 1, 2022, 90% subject matter therein and may not be modified except in a writing executed by both parties in ink. In the event of a conflict between this Agreement and any Work Statement, the Fair Market Value terms of the Common Stock on the Offering Date or the Exercise Date, whichever is less, and, with respect to each subsequent offering, 85% of the Fair Market Value of the Common Stock on the Offering Date or the Exercise Date, whichever is less.

Notwithstanding the foregoing, no employee may be granted an option hereunder if such employee, immediately after the option was granted, would be treated as owning stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company or any Parent or Subsidiary (as defined in Section 12). For purposes of the preceding sentence, the attribution rules of Section 424(d) of the Code this Agreement shall apply in determining the stock ownership of an employee, and all stock which the employee has a control.

contractual right

IN WITNESS WHEREOF, the parties have caused this Agreement to purchase be executed by their duly authorized representatives, on the date and year first above written.

ANSYS, Inc.

By:

Signature

Printed Name

Date

Consultant

By:

Signature

Printed Name

Date

Address for correspondence: Address for correspondence:

In ANSYS' books and records

2600 ANSYS Drive

Canonsburg, PA 15317

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WORK STATEMENT

This Work Statement is pursuant to and governed by the Consulting Services Agreement entered into by the parties on June 8, 2024 (the "Agreement").

I. SCOPE OF WORK

A. PROJECT DESCRIPTION

Consultant will be responsible for providing to ANSYS upon request consulting and support for ongoing matters that are being transitioned and for general knowledge transfer necessary due to Consultant's resignation.

B. TERM OF SERVICES

It is contemplated that all work to be performed by Consultant under this Work Statement shall be treated completed by Consultant by August 8, 2024.

II. PAYMENT TERMS

A. PAYMENT

The consulting fee will be \$50,000 paid as stock owned follows.

ANSYS will make a single lump sum payment of \$25,000 by check sent via regular U.S. mail to the employee. In addition, Consultant at her address of record within fourteen days of the Consulting Start Date.

ANSYS will make 1 additional payment of \$25,000 by check sent via regular U.S. mail to the Consultant at her address of record on the following date: August 8, 2024.

The above-referenced payments will be made via wire transfer if Consultant prefers by providing the following information: Bank Name, Bank Routing and Transit Number, Account Number, and Name on Account.

B. TRAVEL EXPENSES

Only reasonable travel expenses approved in advance by ANSYS will be reimbursed. Travel expenses shall be separately listed by Consultant on her invoices. Travel expense invoices shall enumerate the date each travel expense was incurred, by whom it was incurred, the nature of the travel expense, and the provider of the service. Each invoice will be accompanied by all supporting receipts, bills, statements, or other similar documents. To be reimbursed, travel expenses must also comply with the following conditions:

Airfare: ANSYS will only reimburse coach class airfare.

Lodging: ANSYS will only reimburse single or double occupancy lodging in standard hotel rooms.

Food: ANSYS will not reimburse expenses for alcohol or expenses for guests of Consultant, unless approved by an authorized ANSYS representative in advance.

Car: ANSYS will only reimburse economy-class rental cars.

Other than the above, no employee travel expenses of Consultant incurred or arising out of the work performed under this Work Statement will be reimbursed.

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If any reimbursement would constitute deferred compensation for purposes of Section 409A, such reimbursement will be subject to the following rules: (a) the amount to be reimbursed will be determined pursuant to the terms of the applicable benefit plan or policy and shall be limited to Consultant's lifetime; (b) the amount eligible for reimbursement during any calendar year may be granted an Option which permits his or her rights to purchase stock under not affect the Plan, and expenses eligible for reimbursement in any other employee stock purchase plan calendar year; (c) any reimbursement of an eligible executive shall be made on or before the last day of the Company and its Parents and Subsidiaries, to accrue at a rate which exceeds \$25,000 in fair market value of such stock (determined on calendar year following the option grant date or dates) for each calendar year in which the Option expense was incurred; and (d) Consultant's right to reimbursement is outstanding at any time. The purpose not subject to liquidation or exchange for cash or another benefit.

IN WITNESS WHEREOF, the persons signing below warrant that they are duly authorized to sign for and on behalf of, the limitation in the preceding sentence is to comply with Section 423(b)(8) of the Code and shall be applied taking Options into account in the order in which they were granted, respective parties.

9. **Exercise of Option and Purchase of Shares.** Each employee who continues to be a participant in the Plan on the Exercise Date shall be deemed to have exercised his or her Option on such date and shall acquire from the Company such number of whole shares of Common Stock reserved for the purpose of the Plan as his or her accumulated payroll deductions on such date will purchase at the Option Price, subject to any other limitations contained in the Plan. Any amount remaining in an employee's account at the end of an Offering solely by reason of the inability to purchase a fractional share will be carried forward to the next Offering; any other balance remaining in an employee's account at the end of an Offering will be refunded to the employee promptly.

10. **Issuance of Certificates.** Certificates or book entries representing shares of Common Stock purchased under the Plan may be issued only in the name of the employee, in the name of the employee and another person of legal age as joint tenants with rights of survivorship to the extent permitted under Section 423 of the Code, or in the name of a broker authorized by the employee to be his or her nominee for such purpose.

11. **Holding Period.** Unless the Administrator provides otherwise, an employee may not sell, exchange, assign, encumber, alienate, transfer, pledge or otherwise dispose of any shares of Common Stock acquired on the Exercise Date at the end of an Offering until the one-year anniversary of such

Exercise Date.

ANSYS, Inc.:

By:

Signature

Printed Name & Title

Date

Consultant:

By:

Signature

Printed Name

Date

12. Definitions.

The term "Compensation" means the amount of total cash compensation, prior to salary reduction pursuant to either Section 125 or 401(k) of the Code, including base pay, overtime, commissions and bonuses, but excluding allowances and reimbursements for expenses such as relocation allowances or travel expenses, income or gains on the exercise of Company stock options, and similar items.

The term "Designated Subsidiary" means any present or future Subsidiary (as defined below) that has been designated by the Administrator to participate in the Plan. The Administrator may so designate any Subsidiary, or revoke any such designation, at any time and from time to time, either before or after the Plan is approved by the stockholders.

The term "Fair Market Value of the Common Stock" means, as of a particular date, the closing price of a share of Common Stock as reported for that date on the Nasdaq Stock Market or, if the Common Stock is not then listed on the Nasdaq Stock Market, on any other national securities exchange on which the Common Stock is listed, or if there are no sales on such date, on the next trading date after which a sale has occurred. If there is no regular public trading market for the Common Stock, then Fair Market Value of the Common Stock shall be the fair market value as determined in good faith by the Administrator.

The term "Parent" means a "parent corporation" with respect to the Company, as defined in Section 424(e) of the Code.

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The term "Subsidiary" means APPENDIX B

ANSYS STANDARD BUSINESS PRACTICES

At Ansys, we are committed to conducting business with the highest standards of ethical conduct and in compliance with applicable laws, rules and regulations. We believe that our business partners play a "subsidiary corporation" with respect key role in our continued growth and success.

Our global reach is a testament to the Company, trust our customers have in us. We value our customer relationships and work diligently to continuously improve them, which is why ethical conduct, honesty and transparency are the principles underlying our customer interactions.

Please review these business practices carefully and give a copy of this document to any of your associates with a need to know.

If you believe that an Ansys employee or business partner has engaged in some type of unethical behavior, you should immediately report the concern to the Ansys Ethics Line.

The Ansys Ethics Line is a 24/7, toll-free ethics hotline that is hosted by an independent third-party service provider and is available to all Ansys employees, customers, suppliers, contractors, and other business associates.

The Ansys Ethics Line is available anywhere in the world:

- By telephone using a special toll-free number based on the country from which you are calling. In the United States and Canada, call 1.855.729.0134. International phone numbers are listed on <http://www.ansys.ethicspoint.com>.
- By web available at <http://www.ansys.ethicspoint.com>.

In addition to the resources listed above, you may also ask questions, raise concerns, or make reports of suspected compliance violations by contacting the Ethics & Compliance team within the Ansys Legal Department as defined in Section 424(f) follows:

- **Mail:** ANSYS, Inc., Attn: Compliance Manager, 2600 Ansys Drive, Canonsburg, PA 15317
- **Email:** compliance@ansys.com

Because we value our relationships with our business partners, Ansys also believes that our business relationships should be based upon clear written agreements. Ansys does not do business based upon verbal agreements, side letters, or email exchanges. We use formal written agreements:

- so that each party has a clear understanding of its rights and obligations;
- to ensure that the objectives of the **Code** relationship are fulfilled;
- to avoid conflicts with our business partners; and
- to keep business relationships on a professional basis.

Ansys abides by the terms of the written agreements it enters into and requires that its business partners do the same. Consequently, only an authorized employee at Ansys may enter into an agreement or modify or amend existing agreements. If you have any questions regarding our business practices, please contact the Ansys Legal Department.

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EXHIBIT B

GENERAL RELEASE AND WAIVER OF CLAIMS

13. This General Release and Waiver of Claims ("Waiver Agreement") is entered into by ANSYS, Inc., a Delaware corporation with a principal office at 2600 Ansys Drive, Canonsburg, PA 15317 ("Ansys" or "Company"), and Nicole Anasenes, an individual residing at the address set forth in the Company's books and records ("Employee") (collectively, the "Parties"). By executing this Waiver Agreement and not revoking it, Employee satisfies an express condition precedent to which Employee agreed in the Transition Agreement that Employee and Company executed on February 15, 2024 (the "Transition Agreement").

1. Rights on Termination of Employment. If Employee has given notice of her intent to voluntarily resign as an employee of Ansys of her position with Ansys during the second quarter of 2024. Pursuant to the Transition Agreement, effective February 22, 2024 (the "Transition Date"), Employee will no longer serve as the Company's Chief Financial Officer and Senior Vice President of Finance (with such transition being voluntary and consented to by Employee). Further, Employee will remain a participating employee's non-executive employee of Ansys until June 7, 2024 (the "Resignation Date"), on which Resignation Date Employee resigns from Ansys and Employee's employment terminates for any reason before the Exercise Date for any Offering, no payroll deduction will be taken from any pay due and owing to such employee and the balance in such employee's account will be paid to such employee or, in the case of death, to such employee's designated beneficiary as if such employee had withdrawn from the Plan under Section 7. An employee will be deemed to have terminated employment, for this purpose, if the corporation that employs such employee, having been a Designated Subsidiary, ceases to be a Subsidiary, or if such employee is transferred to any corporation other than with the Company or a Designated Subsidiary. An employee and all of its subsidiaries will not be deemed to have terminated employment for this purpose if the employee is on military leave, sick leave, or other bona fide leave of absence if the period of leave does not exceed three (3) months, or if longer, so long as the employee's right to reemployment is provided either by statute or otherwise, terminate.

14.2. Special Rules Consideration to Employee. The Administrator shall have In exchange for Employee's execution of (and non-revocation of) the power, in its discretion, Transition Agreement, her commitment to adopt one or more sub-plans of the Plan as the Administrator deems necessary or desirable to comply with the laws or regulations, tax policies, accounting principles or customs of foreign jurisdictions applicable to employees of a subsidiary business entity of the Company, provided that any such sub-plan shall not be within the scope of an "employee stock purchase plan" within the meaning of Section 423. Any of the provisions of any such sub-plan may supersede the provisions of this Plan, other than the aggregate limit on shares work through and including her Resignation Date, her Non-Compete and Non-Solicitation promises set forth in the preamble Transition Agreement, and this Waiver Agreement, Ansys is entering into the Consulting Services Agreement, with Employee's consulting services thereunder commencing on the Resignation Date.

3. **General Release of Claims.** Employee, on behalf of herself, her heirs, executors, administrators, devisees, spouses, and assigns, knowingly and voluntarily releases and forever discharges, to the fullest extent permitted by law, Ansys and its affiliates, subsidiaries, insurers, associates, predecessors, successors and assigns (including, without limitation, any of their respective current and former employees, officers, directors, agents, trustees, attorneys, representatives and stockholders) (collectively "Releasees") from any and all actions, suits, debts, claims and demands, known and unknown, asserted and unasserted, Employee has or may have against Releasees from the beginning of time to the date of the execution of this Waiver Agreement, including, but not limited to, any alleged violation of: the Age Discrimination in Employment Act ("ADEA"); Title VII of the Civil Rights Act of 1964; the Civil Rights Act of 1991; Sections 1981 through 1988 of Title 42 of the United States Code; the Employee Retirement Income Security Act of 1974 ("ERISA"); the Americans with Disabilities Act; the Occupational Safety and Health Act; the Family and Medical Leave Act; the Sarbanes-Oxley Act; the Older Workers Benefit Protection Act; the Workers Readjustment and Retraining Notification Act; and the Consolidated Omnibus Reconciliation Act. Employee also hereby waives her rights under the following statutes to the fullest extent permissible under applicable state and local laws including, but not limited to, the Pennsylvania Human Relations Act, the Pennsylvania Equal Pay Law, the Pennsylvania Pregnancy, Childbirth and Childrearing Law, the Pennsylvania Whistleblower Law, and any other federal, state, local, or foreign law (statutory, regulatory, or otherwise) that may be legally waived and released; however, the identification of specific statutes is for purposes of example only, and the omission of any specific statute or law shall not limit the scope of this general release in any manner. Employee also releases any and all claims of wrongful discharge, emotional distress, defamation, misrepresentation, fraud, detrimental reliance, breach of contractual obligations, promissory estoppel, negligence, assault and battery, violation of public policy; unlawful discrimination, harassment and retaliation (including related to status as a whistleblower, perceived or actual) under applicable federal, state

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and local laws and regulations; violation of any federal, state and local law relating to recruitment, hiring, terms and conditions of employment, and termination of employment; claims under the ANSYS, Inc. Executive Severance Plan; and claims for monetary damages, costs, fees, expenses, attorneys' fees and any other form of personal relief.

Despite any language in this Waiver Agreement to the contrary, Employee does not release claims that by law cannot be released by private agreement including, but not limited to, claims for workers' compensation, unemployment compensation, state disability and/or paid family leave insurance benefits pursuant to the terms of applicable state law; any benefit entitlements that are vested as of the Resignation Date pursuant to the terms of an Ansys-sponsored benefit plan governed by ERISA; violation of any federal, state or local statutory and/or public policy right or entitlement that, by applicable law, is not waivable; and any wrongful act or omission occurring after the date Employee signs this Waiver Agreement. Employee acknowledges that she has not made any claims or allegations related to sexual harassment or sexual abuse and none of the payments set forth in this Waiver Agreement are related to sexual harassment or sexual abuse.

Nothing in this Waiver Agreement prevents Employee from: (a) filing a charge or complaint with any governmental agencies (including, but not limited to, the Equal Employment Opportunity Commission ("EEOC"), the Securities and Exchange Commission ("SEC"), or National Labor Relations Board ("NLRB")); (b) participating or cooperating in any matters before such governmental agencies or providing information or documents to them including the SEC; (c) filing an action in court alleging that the release of claims under the ADEA was not knowing or voluntary; (d) filing an action in court for ADEA claims that may arise after the date this Waiver Agreement is signed by Employee; (e) filing an action in court for ADEA claims that may arise after the date this Waiver Agreement is signed by Employee; or (f) exercising Employee's right under Section 7 of the National Labor Relations Act to engage in joint activity with other employees.

4. **Indemnification.** As originally set forth in the Transition Agreement, Company and Releasees have made no representations to Employee regarding the tax consequences of any consideration received under this Waiver Agreement, and Employee is solely responsible for all applicable taxes, if any, owed to any taxing authority as a result of the consideration given by Ansys under Section 2. Employee will indemnify Ansys and Releasees, and hold Ansys and Releasees harmless, for all taxes, penalties and interest, withholding or otherwise, for which Ansys and/or Releasees may be found liable as a consequence of having given the consideration to Employee pursuant to Section 2.

5. **Warranties.** Employee warrants that she has no known workplace injuries and that she has been paid and/or has received all leave (paid or unpaid), compensation, wages, bonuses, commissions, benefits and/or other amounts earned and accrued, less applicable deductions, to which she may be entitled and that no other leave (paid or unpaid), compensation, wages, bonuses, commissions, benefits and/or other amounts are due to her, except as provided in Section 2.

6. **Return of Property.** Employee warrants that she has returned to the Company all property and information that belongs to the Company, including, but not limited to the following (where applicable): automobile; computers (desktop and laptop); phone; tablet; iPad; devices (including USB and external hard drives); handheld devices; keys, access cards, passwords, and/or ID cards; all electronically stored and paper copies of all financial data, customer information, business plans and reports, and Company files; and all records, customer lists, written information, forms, plans, and other documents, including electronically stored information. Employee shall search Employee's electronic devices, device back-ups, residence, and automobile and certify in the waiver of claims executed contemporaneous with her Resignation Date that Employee has disclosed all Company property in Employee's possession or control and returned such property as directed by Company.

7. **Reports to Government Entities.** Nothing in this Waiver Agreement, restricts or prohibits Employee from initiating communications directly with, responding to any inquiries from, providing testimony before, providing Proprietary Information to, reporting possible violations of law or regulation to, or from filing a claim or assisting with an investigation directly with a self-regulatory authority or a government agency or entity, including the EEOC, the Department of Labor, the NLRB, the Department of Justice, the SEC, the Congress, and any agency Inspector General (collectively, the "Regulators"), or from making other disclosures that are protected under the whistleblower provisions of state or federal law or regulation. However, to the maximum extent permitted by law, Employee is waiving her right to receive any individual monetary relief from Ansys or any others covered by this Waiver Agreement resulting from such claims or conduct, regardless of whether she or another party has filed them. This Waiver Agreement does not limit Employee's right to receive an award from any Regulator that provides awards for providing information relating to a potential violation of law. Employee does not need the prior authorization of Ansys to engage in conduct protected by this Section, and Employee does not need to notify Ansys that she has engaged in such conduct.

8. **Amendment.** This Waiver Agreement may not be modified, altered or changed except upon express written consent of all Parties signed in ink wherein specific reference is made to this Plan Waiver Agreement.

9. **Governing Law and Section 18. Except as superseded Forum.** This Waiver Agreement will be governed by, the provisions of a sub-plan, the provisions of this Plan shall govern any such sub-plan. Alternatively and performed in order to comply accordance with, the laws of a foreign jurisdiction, the Administrator shall have the power, in its discretion, to grant Options in an Offering to citizens or residents Commonwealth of a non-U.S. jurisdiction (without Pennsylvania without regard to whether they are also citizens its conflicts of laws provisions. Employee consents to the personal jurisdiction and venue of the United States state and federal courts having jurisdiction over Washington County, Pennsylvania.

10. **Severability.** Except for the release of claims in Section 3, if a court of competent jurisdiction determines that any provision of this Waiver Agreement is illegal or resident aliens) that provide terms which are less favorable than unenforceable and such provision or provisions cannot be modified to be enforceable, then such provision will immediately become null and void, leaving the remainder of this Waiver Agreement in full force and effect.

11. **Revocation and Effective Date.** Employee may revoke her acceptance of the terms of Options granted this Waiver Agreement during a period of seven (7) calendar days following the day she executes this Waiver Agreement ("Revocation Period"). Any revocation must be submitted, in writing, by email to janet.lee@ansys.com or by either hand delivery or certified U.S. Mail, return receipt requested, to Janet Lee, Vice President and General Counsel, Ansys, Inc., 2600 Ansys Drive, Canonsburg, Pennsylvania, 15317. The revocation must be delivered or postmarked within the Revocation Period. This Agreement will become effective on the day after the expiration of the applicable Revocation Period ("Effective Date").

12. **Entire Agreement.** Except as otherwise provided herein, this Waiver Agreement (in addition to the Transition Agreement) constitutes the entire agreement relating to the matters stated herein, and it cancels and supersedes any prior agreements or understandings that may have existed between Employee and Ansys with respect to all matters covered by this Waiver Agreement. No other promise or inducement has been offered to either party except as set forth herein.

13. **Acknowledgement of Previous Agreements.** Nothing in this Waiver Agreement releases Employee from any previous obligations she has under any agreements with Ansys or its affiliates or subsidiaries including, without limitation, all equity award agreements executed by the Employee or equivalent documentation. Employee remains aware of and will comply with her existing legal obligations under the same plan Transition Agreement, including the obligation to maintain the confidentiality of all confidential business information which she learned or offering to employees resident which she had access during her employment with Ansys, and the non-compete and non-solicitation provisions set forth therein. Employee confirms that she has returned all tangible versions of all documents containing Ansys business information, other than information pertaining to her own employment terms, and that she has not retained any Ansys business information in any form. For avoidance of doubt, the previous agreements referred to in this Section are separate and distinct from the matters covered by this Waiver Agreement.

Employee acknowledges that pursuant to 18 U.S.C. §§ 1833(b)(1) and 1833(b)(2) and/or any applicable state law: (a) an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney solely for the purpose of reporting or investigating a suspected violation of law; (b) an individual shall not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that is made in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal; and, (c) an individual who files a lawsuit for retaliation by an employer for reporting a suspected violation of law may disclose the trade secret to the attorney of the individual and use the trade secret information in the United States (as court proceeding, if the individual files any document containing the trade secret under seal and does not disclose the trade secret, except pursuant to court order).

14. **Copies Effective as Originals.** This Waiver Agreement may be executed in counterparts and each counterpart, when executed, will have the efficacy of an original. Photographic or faxed copies of signed counterparts may be used in lieu of the original for any purpose.

15. **Review of Waiver Agreement and Consultation with Attorney.** EMPLOYEE IS HEREBY ADVISED THAT SHE HAS UP TO TWENTY-ONE (21) CALENDAR DAYS TO REVIEW THIS WAIVER AGREEMENT AND TO CONSULT WITH AN ATTORNEY PRIOR TO EXECUTING THIS WAIVER AGREEMENT. EMPLOYEE SHOULD CONSULT WITH AN ATTORNEY OF HER CHOICE. EMPLOYEE AGREES THAT ANY MODIFICATIONS, MATERIAL OR OTHERWISE, MADE TO THIS WAIVER AGREEMENT DO NOT RESTART OR AFFECT IN ANY MANNER THE ORIGINAL TWENTY-ONE (21) CALENDAR DAY CONSIDERATION PERIOD.

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IN WITNESS WHEREOF, the parties hereto knowingly and voluntarily executed this Waiver Agreement as of the dates set forth below:

EMPLOYEE

Nicole Anasenes Date

ANSYS, Inc. Date

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EXHIBIT C

UNDERTAKING

This Undertaking is submitted pursuant to the Transition Agreement, dated as of _____, ____ (the "Transition Agreement"), between ANSYS, Inc., a Delaware corporation (the "Company"), and Nicole Anasenes, an individual residing at the address set forth in the Company's books and records ("Employee"). Capitalized terms used and not otherwise defined herein have the meanings ascribed to such terms in the Transition Agreement.

Employee hereby requests that the Company advance the reasonable Expenses which the undersigned has incurred or will incur in connection with _____ (the "Proceeding").

Employee hereby undertakes to: (a) repay (without interest) the expenses paid or advanced by the Company to the extent it is determined, following the final disposition of the Proceeding and in accordance with Section 423 of the Code).

15. *Optionees Not Stockholders.* Neither Transition Agreement, that the granting of an Option undersigned is not entitled to an employee nor the deductions from his or her pay shall constitute such employee a holder of the shares of Common Stock covered by an Option under the Plan until such shares have been purchased by and issued to such employee.

16. *Rights Not Transferable.* Rights under the Plan are not transferable by a participating employee other than by will or the laws of descent and distribution, and are exercisable during the employee's lifetime only by the employee.

17. *Application of Funds.* All funds received or held indemnification by the Company under the Plan may be combined Transition Agreement with other corporate funds respect to the Proceeding; and may be used for any corporate purpose.

18. *Adjustment in Case of Changes Affecting Common Stock.* In (b) cooperate with the event of a subdivision of outstanding shares of Common Stock, the payment of a dividend in Common Stock, or any other similar change affecting the Common Stock, the number of shares approved for the Plan, the share limitation set forth in Section 8 Company and any other relevant limit under the Plan shall be proportionately adjusted to give proper effect to such event.

19. *Amendment of the Plan.* Except as provided herein, the Administrator may at any time, and from time to time, amend the Plan in any respect; provided, however, that no amendment shall be made that (a) increases the number of shares approved for issuance under the Plan or (b) makes any other change that would require stockholder approval in order for the Plan, as amended, to meet the requirements of an "employee stock purchase plan" under Section

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423(b) of the Code unless, within twelve (12) months of the Administrator's action, such amendment is approved by a majority of the votes cast by its insurers (as applicable) (at the Company's stockholders on such amendment.

20. *Insufficient Shares.* If the total number of shares of Common Stock that would otherwise be purchased on any Exercise Date plus the number of shares purchased under previous Offerings under the Plan exceeds the maximum number of shares issuable under the Plan, the shares then available shall be apportioned among participants in proportion to the amount of payroll deductions accumulated on behalf of each participant that would otherwise be used to purchase Common Stock on such Exercise Date.

21. *Termination of the Plan.* The Plan may be terminated at any time by the Board. Upon termination of the Plan, all amounts in the accounts of participating employees shall be promptly refunded.

22. *Governmental Regulations.* The Company's obligation to sell and deliver Common Stock under the Plan is subject to obtaining all governmental approvals required expense) in connection with the authorization, issuance, or sale Proceeding and any related matters.

IN WITNESS WHEREOF, Employee has executed this Undertaking as of such stock.this _____ day of _____, ____.

23. *Governing Law.* The Plan shall be governed by Delaware law except to the extent that such law is preempted by federal law.

24. *Issuance of Shares.* Shares may be issued upon exercise of an Option from authorized but unissued Common Stock, from shares held in the treasury of the Company, or from any other proper source.
25. *Tax Withholding.* Participation in the Plan is subject to any required tax withholding on income of the participant in connection with the Plan. Each employee agrees, by entering the Plan, that the Company and its Subsidiaries shall have the right to deduct any such taxes from any payment of any kind otherwise due to the employee, including shares issuable under the Plan.
26. *Notification Upon Sale of Shares.* Each employee agrees, by entering the Plan, to give the Company prompt notice of any disposition of shares purchased under the Plan where such disposition occurs within two years after the date of grant of the Option pursuant to which such shares were purchased.
27. *Effective Date and Approval.* The Plan was initially approved by the Board on March 14, 2022 and became effective upon approval by the Company's stockholders on May 12, 2022. The Plan was amended and restated and approved by the Board on October 27, 2022, effective February 1, 2023. Nicole Anasenes

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EXHIBIT 21.1

Subsidiaries of the Registrant as of December 31, 2022 December 31, 2023

ANSYS Austria GmbH

Fluent China Holdings Limited

ANSYS Belgium S.A.

Engineering Simulation and Scientific Software Rocky DEM ANSYS do Brasil LTDA

Diakopto Inc.

ANSYS Canada Limited

ANSYS Lumerical Software ULC

2011767 Ontario, Inc.

ANSYS Technology (Shanghai) Co., Ltd.

OPTIS CN Limited

Zemax Optical Technology Consulting (Shanghai) Co., Ltd

Motor Design Software Technology (Shanghai) Company Limited

Cullimore and Ring Technologies, Inc.

Ansys International LLC

OnScale, Inc. LLC

Grove Financing Sub 3, LLC

Zemax Taiwan, LLC

Zemax, LLC

ANSYS France SAS

Axellience Extrality SAS

ANSYS Germany GmbH

DYNARDO (Dynamic Software and Engineering) DYNAmore Gesellschaft fur FEM Ingenieurdienstleistungen GmbH

ANSYS Hellas Single Member S.A.

OPTIS Hong Kong Limited

ANSYS Software Private Limited

ANSYS Ireland Ltd.

ANSYS Software, Ltd.

ANSYS Italia, S.r.l

ANSYS Japan K.K.

OnScale Japan GK

ANSYS Luxembourg Holding Company S.à.r.l.

ANSYS Luxembourg S.à.r.l.

Computational Engineering International, Inc.

Ansys Government Initiatives, Inc. AGI.

ANSYS Poland s p.z.o.o

ANSYS OOO

ANSYS Rwanda Limited

ANSYS Singapore Pte. Ltd.

ANSYS Korea LLC

ANSYS Iberia, S.L.

Engineering Simulation and Scientific Software Rocky DEM S.L.U.

Jurisdiction of Incorporation

Austria

Barbados

Belgium

Brazil

California

Canada

Canada

Canada

China

China

China

China

Colorado

Delaware

Delaware

Delaware

Delaware

Delaware

France

France

Germany

Germany

Greece

Hong Kong

India

Ireland

Israel

Italy

Japan

Japan

Luxembourg

Luxembourg

North Carolina

Pennsylvania

Poland

Russia

Rwanda

Singapore

South Korea

Spain

Spain

Engineering Simulation and Scientific Software Rocky DEM S.L.U. ANSYS Sweden AB
 ANSYS Sweden DYNAmore Nordic AB
 ANSYS Switzerland GmbH
 desktop.studio GmbH
 Matterhorn Merger Sub GmbH
 Taiwan ANSYS Technologies Co.
 ANSYS MEA FZ-LLC
 ANSYS UK Limited
 Granta Design Limited
 Zemax Europe Limited
 Grove Acquisition Sub Limited
 Grove Financing Sub Limited
 Grove Financing Sub 2 Limited Partnership
 Grove Financing Sub Partner LLP
 Grove Financing Sub 4 Limited
 Concept Systems Engineering Ltd
 Motor Design Limited
 OnScale Limited
 Phoenix Integration, Inc.

Spain Sweden
 Sweden
 Switzerland
 Switzerland
 Switzerland
 Taiwan
 United Arab Emirates
 United Kingdom
 United Kingdom
 United Kingdom
 United Kingdom
 United Kingdom
 United Kingdom
 United Kingdom
 United Kingdom
 United Kingdom
 United Kingdom
 Virginia

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-152765, 333-174670, 333-177030, 333-196393, 333-206111, 333-212412, 333-256252 and 333-265553 on Form S-8 and Registration Statement No. 333-253472 on Form S-3 of our reports dated February 22, 2023 February 21, 2024, relating to the financial statements of ANSYS, Inc., and the effectiveness of ANSYS, Inc. and subsidiaries' internal control over financial reporting appearing in this Annual Report on Form 10-K of ANSYS, Inc. for the year ended December 31, 2022 December 31, 2023.

/s/ Deloitte & Touche LLP
 Pittsburgh, Pennsylvania

February 22, 2023 21, 2024

EXHIBIT 31.1

CHIEF EXECUTIVE OFFICER CERTIFICATION

I, Ajei S. Gopal, certify that:

1. I have reviewed this annual report on Form 10-K of ANSYS, Inc. ("Ansys");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of Ansys as of, and for, the periods presented in this report;
4. Ansys' other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for Ansys and have:

- a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to Ansys, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of Ansys' disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in Ansys' internal control over financial reporting that occurred during Ansys' most recent fiscal quarter (Ansys' fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, Ansys' internal control over financial reporting; and
5. Ansys' other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to Ansys' auditors and the audit committee of Ansys' board of directors (or persons performing the equivalent functions):
- a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect Ansys' ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in Ansys' internal control over financial reporting.

Date: February 22, 2023 21, 2024

/s/ Ajei S. Gopal

Ajei S. Gopal

President and Chief Executive Officer

(Principal Executive Officer)

EXHIBIT 31.2

CHIEF FINANCIAL OFFICER CERTIFICATION

I, Nicole Anasenes, certify that:

1. I have reviewed this annual report on Form 10-K of ANSYS, Inc. ("Ansys");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of Ansys as of, and for, the periods presented in this report;
4. Ansys' other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for Ansys and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to Ansys, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of Ansys' disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in Ansys' internal control over financial reporting that occurred during Ansys' most recent fiscal quarter (Ansys' fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, Ansys' internal control over financial reporting; and
5. Ansys' other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to Ansys' auditors and the audit committee of Ansys' board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect Ansys' ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in Ansys' internal control over financial reporting.

Date: February 22, 2023 21, 2024

/s/ Nicole Anasenes

Nicole Anasenes

Chief Financial Officer and Senior Vice President, Finance
(Principal Financial Officer and Principal Accounting Officer)

EXHIBIT 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of ANSYS, Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Ajei S. Gopal, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is provided solely pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be part of the Report or filed for any purpose whatsoever.

/s/ Ajei S. Gopal

Ajei S. Gopal

President and Chief Executive Officer

(Principal Executive Officer)

February 22, 2023 21, 2024

EXHIBIT 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of ANSYS, Inc. (the "Company") on Form 10-K for the year ended December 31, 2022 December 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Nicole Anasenes, Chief Financial Officer and Senior Vice President, Finance of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

This certification is provided solely pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed to be part of the Report or filed for any purpose whatsoever.

/s/ Nicole Anasenes

Nicole Anasenes

Chief Financial Officer and Senior Vice President, Finance

(Principal Financial Officer and Principal Accounting Officer)

February 22, 2023 21, 2024

EXHIBIT 97.1

CLAWBACK POLICY

Effective November 30, 2023

Purpose

As required pursuant to the listing standards of the Nasdaq Stock Market LLC (the “**Stock Exchange**”), Section 10D of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), and Rule 10D-1 under the Exchange Act, the Compensation Committee (the “**Committee**”) of the Board of Directors (the “**Board**”) of ANSYS, Inc. (the “**Company**”) has adopted this Clawback Policy (the “**Policy**”) to empower the Company to recover Covered Compensation (as defined below) erroneously awarded to a Covered Officer (as defined below) in the event of an Accounting Restatement (as defined below).

Notwithstanding anything in this Policy to the contrary, at all times, this Policy remains subject to interpretation and operation in accordance with the final rules and regulations promulgated by the U.S. Securities and Exchange Commission (the “**SEC**”), the final listing standards adopted by the Stock Exchange, and any applicable SEC or Stock Exchange guidance or interpretations issued from time to time regarding such Covered Compensation recovery requirements (collectively, the “**Final Guidance**”). Questions regarding this Policy should be directed to the General Counsel.

Policy Statement

Unless a Clawback Exception (as defined below) applies, the Company will recover reasonably promptly from each Covered Officer the Covered Compensation Received (as defined below) by such Covered Officer in the event that the Company is required to prepare an accounting restatement due to the material noncompliance of the Company with any financial reporting requirement under the securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (each, an “**Accounting Restatement**”). If a Clawback Exception applies with respect to a Covered Officer, the Company may forgo such recovery under this Policy from such Covered Officer.

Covered Officers

For purposes of this Policy, “**Covered Officer**” is defined as any current or former “Section 16 officer” of the Company within the meaning of Rule 16a-1(f) under the Exchange Act, as determined by the Board. Covered Officers include, at a minimum, “executive officers” as defined in Rule 3b-7 under the Exchange Act and identified under Item 401(b) of Regulation S-K.

Covered Compensation

For purposes of this Policy:

- “**Covered Compensation**” is defined as the amount of Incentive-Based Compensation (as defined below) Received during the applicable Recovery Period (as defined below) that exceeds the amount of Incentive-Based Compensation that otherwise would have been Received during such Recovery Period had it been determined based on the relevant restated amounts, and computed without regard to any taxes paid.

Incentive-Based Compensation Received by a Covered Officer will only qualify as Covered Compensation if: (i) it is Received on or after October 2, 2023; (ii) it is Received after such Covered Officer begins service as a Covered Officer; (iii) such Covered Officer served as a Covered Officer at any time during the performance period for such Incentive-Based Compensation; and (iv) it is Received while the Company has a class of securities listed on a national securities exchange or a national securities association.

For Incentive-Based Compensation based on stock price or total shareholder return, where the amount of erroneously awarded Covered Compensation is not subject to mathematical recalculation directly from the information in an Accounting Restatement, the amount of such Incentive-Based Compensation that is deemed to be Covered Compensation will be based on a reasonable estimate of the effect of the Accounting Restatement on the

stock price or total shareholder return upon which the Incentive-Based Compensation was Received, and the Company will maintain and provide to the Stock Exchange documentation of the determination of such reasonable estimate.

- **"Incentive-Based Compensation"** is defined as any compensation that is granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure (as defined below). For purposes of clarity, Incentive-Based Compensation includes compensation that is in any plan, other than tax-qualified retirement plans, including long term disability, life insurance, and supplemental executive retirement plans, and any other compensation that is based on such Incentive-Based Compensation, such as earnings accrued on notional amounts of Incentive-Based Compensation contributed to such plans.
- **"Financial Reporting Measure"** is defined as a measure that is determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived wholly or in part from such measures. Stock price and total shareholder return are also Financial Reporting Measures.
- Incentive-Based Compensation is deemed **"Received"** in the Company's fiscal period during which the Financial Reporting Measure specified in the Incentive-Based Compensation award is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that period.

Recovery Period

For purposes of this Policy, the applicable **"Recovery Period"** is defined as the three completed fiscal years immediately preceding the Trigger Date (as defined below) and, if applicable, any transition period resulting from a change in the Company's fiscal year within or immediately following those three completed fiscal years (provided, however, that if a transition period between the last day of the Company's previous fiscal year end and the first day of its new fiscal year comprises a period of nine to 12 months, such period would be deemed to be a completed fiscal year).

For purposes of this Policy, the **"Trigger Date"** as of which the Company is required to prepare an Accounting Restatement is the earlier to occur of: (i) the date that the Board, applicable Board committee, or officers authorized to take action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare the Accounting Restatement or (ii) the date a court, regulator, or other legally authorized body directs the Company to prepare the Accounting Restatement.

Clawback Exceptions

The Company is required to recover all Covered Compensation Received by a Covered Officer in the event of an Accounting Restatement unless (i) one of the following conditions are met and (ii) the Committee has made a determination that recovery would be impracticable in accordance with Rule 10D-1 under the Exchange Act (under such circumstances, a **"Clawback Exception"** applies):

- the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered (and the Company has already made a reasonable attempt to recover such erroneously awarded Covered Compensation from such Covered Officer, has documented such reasonable attempt(s) to recover, and has provided such documentation to the Stock Exchange);
- recovery would violate home country law that was adopted prior to November 28, 2022 (and the Company has already obtained an opinion of home country counsel, acceptable to the Stock Exchange, that recovery would result in such a violation, and provided such opinion to the Stock Exchange); or
- recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the requirements of Section 401(a)(13) or Section 411(a) of the Internal Revenue Code of 1986, as amended, and regulations thereunder. For purposes of clarity, this Clawback Exception only applies to tax-qualified retirement plans and does not apply to other plans, including long term disability, life insurance, and supplemental executive retirement plans, or any other compensation that is based on Incentive-Based Compensation in such plans, such as earnings accrued on notional amounts of Incentive-Based Compensation contributed to such plans.

Prohibitions

The Company is prohibited from paying or reimbursing the cost of insurance for, or indemnifying, any Covered Officer against the loss of erroneously awarded Covered Compensation.

Administration and Interpretation

The Committee will administer this Policy in accordance with the Final Guidance, and will have full and exclusive authority and discretion to supplement, amend, repeal, interpret, terminate, construe, modify, replace and/or enforce (in whole or in part) this Policy, including the authority to correct any defect, supply any omission or reconcile any ambiguity, inconsistency or conflict in the Policy, subject to the Final Guidance. The Committee will review the Policy from time to time and will have full and exclusive authority to take any action it deems appropriate.

The Committee will have the authority to offset any compensation or benefit amounts that become due to the applicable Covered Officers to the extent permissible under Section 409A of the Internal Revenue Code of 1986, as amended, and as it deems necessary or desirable to recover any Covered Compensation.

Each Covered Officer, upon being so designated or assuming such position, is required to execute and deliver to the General Counsel the Acknowledgment and Consent attached as Appendix A.

Disclosure

This Policy, and any recovery of Covered Compensation by the Company pursuant to this Policy that is required to be disclosed in the Company's filings with the SEC, will be disclosed as required by the Securities Act of 1933, as amended, the Exchange Act, and related rules and regulations, including the Final Guidance.

ANSYS, Inc.

Clawback Policy Acknowledgment and Consent

The undersigned hereby acknowledges that he or she has received and reviewed a copy of the Clawback Policy (the "**Policy**") of ANSYS, Inc. (the "**Company**"), effective as of November 30, 2023, as adopted by the Compensation Committee of the Company's Board of Directors.

Pursuant to such Policy, the undersigned hereby:

- acknowledges that he or she has been designated as (or assumed the position of) a Covered Officer (as defined in the Policy);
- acknowledges and consents to the Policy;
- acknowledges and consents to be bound by the terms of the Policy;
- agrees to fully cooperate with the Company in connection with any of the undersigned's obligations to the Company pursuant to the Policy, including, without limitation, the repayment by or recovery from the undersigned of Covered Compensation (as defined in the Policy); and

- agrees that the Company may enforce its rights under the Policy through any and all reasonable means permitted under applicable law as the Company deems necessary or desirable under the Policy.

ACKNOWLEDGED AND AGREED:

Name:

Date:

[ANSYS, Inc. Clawback Policy Acknowledgement and Consent]

DISCLAIMER

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