

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2023

OR

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

Commission File No. 1-11859

PEGASYSTEMS INC.

(Exact name of Registrant as specified in its charter)

Massachusetts

(State or other jurisdiction of incorporation or organization)

04-2787865

(IRS Employer Identification No.)

One Main Street, Cambridge, MA 02142

(Address of principal executive offices, including zip code)

(617) 374-9600

(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

PEGA

NASDAQ Global Select Market

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

None

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 Section 15(d) of the Exchange 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 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 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 Exchange Act). Yes No

The aggregate market value of the Registrant's common stock held by non-affiliates, based upon the closing price of the Registrant's common stock on the NASDAQ Global Select Market of \$49.30, on June 30, 2023 was approximately \$2.1 billion.

There were 83,905,034 shares of the Registrant's common stock, \$0.01 par value per share, outstanding on February 6, 2024.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement related to its 2024 annual meeting of stockholders to be filed subsequently are incorporated by reference into Part III of this report.

PEGASYSTEMS INC.

ANNUAL REPORT ON FORM 10-K

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PART I

FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K (“Annual Report”), including without limitation, “Item 1. Business,” “Item 1A. Risk Factors,” “Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities,” and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations,” along with other reports that we have filed with the Securities and Exchange Commission (“SEC”), external documents, and oral presentations, contains or incorporates forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995.

Words such as expects, anticipates, intends, plans, believes, will, could, should, estimates, may, targets, strategies, intends to, projects, forecasts, guidance, likely, and usually or variations of such words and other similar expressions, identify forward-looking statements, which represent our views only as of the date the statement was made and are based on current expectations and assumptions.

Forward-looking statements deal with future events and are subject to risks and uncertainties that are difficult to predict, including, but not limited to:

- our future financial performance and business plans;
- the adequacy of our liquidity and capital resources;
- the continued payment of our quarterly dividends;
- the timing of revenue recognition;
- variation in demand for our products and services, including among clients in the public sector;
- reliance on key personnel;
- reliance on third-party service providers, including hosting providers;
- compliance with our debt obligations and covenants;
- the potential impact of our convertible senior notes and capped call transactions;
- foreign currency exchange rates;
- the potential legal and financial liabilities and damage to our reputation due to cyber-attacks;
- security breaches and security flaws;
- our ability to protect our intellectual property rights, costs associated with defending such rights, intellectual property rights claims, and other related claims by third parties against us, including related costs, damages, and other relief that may be granted against us;
- our ongoing litigation with Appian Corp.;
- our client retention rate; and
- management of our growth.

These risks and others that may cause actual results to differ materially from those expressed in such forward-looking statements are described further in “Item 1A. Risk Factors” of this Annual Report and other filings we make with the SEC.

Investors are cautioned not to place undue reliance on such forward-looking statements, and there are no assurances that the results included in such statements will be achieved. Although subsequent events may cause our view to change, except as required by applicable law, we do not undertake and expressly disclaim any obligation to publicly update or revise these forward-looking statements, whether as the result of new information, future events, or otherwise. The forward-looking statements in this Annual Report represent our views as of February 14, 2024.

ITEM 1. BUSINESS

Our Business

We develop, market, license, host, and support enterprise software that helps organizations build agility into their business so they can adapt to change. Our powerful, low-code platform for workflow automation and artificial intelligence-powered decisioning enables the world's leading brands and government agencies to hyper-personalize customer experiences, streamline customer service, and automate mission-critical business processes and workflows. With Pega, our clients can leverage our artificial intelligence ("AI") technology and scalable architecture to accelerate their digital transformation. In addition, our client success teams, world-class partners, and clients leverage our Pega Express™ methodology to design and deploy mission-critical applications quickly and collaboratively.

To grow our business, we intend to:

- Increase market share by developing and delivering a low-code platform for workflow automation and AI-powered decisioning for buyers in marketing, sales, service, operations, and IT that can work together seamlessly with maximum competitive differentiation;
- Deepen and expand our relationships with existing clients;
- Establish relationships with new clients; and
- Continue to scale our marketing efforts to support how today's buyers discover, evaluate, and choose products and services.

Whether we are successful depends, in part, on our ability to:

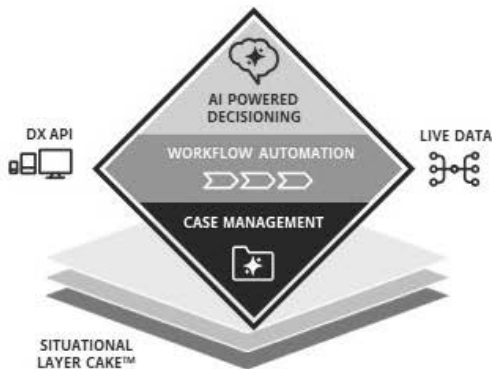
- Execute our marketing and sales strategies;
- Manage our expenses appropriately as we grow our organization;
- Develop new products and enhance our existing products; and
- Incorporate acquired technologies into our solutions and the unified Pega Platform™.

Our Products

Pega Infinity

Pega Infinity™

Software built on a Center-out™ Business Architecture



The infographic is divided into three main sections. The top section, 'Industry solutions', features a row of icons representing various industries. The middle section, 'Business solutions', contains three columns: '1:1 Customer Engagement' (Maximize top-line growth with a centralized, real-time AI-powered customer decision hub... Pega Customer Decision Hub™), 'Customer Service' (Axe cost and streamline service experiences... Pega Customer Service™, Pega Sales Automation™), and 'Intelligent Automation' (Eliminate cost and complexity by driving automation, transparency, and speed... Pega RPA™, Pega Platform™). The bottom section, 'Future-proof technology', highlights 'Pega Express™ Methodology & low-code Pega App Studio™' with a Pega Express logo.

Pega Infinity™, the latest version of our software portfolio, helps build agility into our clients' organizations so they can work smarter, unify experiences, and adapt to meet changing requirements.

Our applications and low-code platform intersect with and encompass several software markets, including:

- Customer Engagement, including Customer Relationship Management (“CRM”);
- Digital Process Automation (“DPA”), including Business Process Management (“BPM”), Workflow, and Dynamic Case Management (“DCM”);
- Low-code application development platforms (“LCAP”), including Multi-experience Development Platforms (“MXDP”);
- Robotic Process Automation (“RPA”);
- Business Rules Management Systems (“BRMS”);
- Decision Management, including predictive and adaptive analytics; and
- the Vertical-Specific Software (“VSS”) market of industry solutions and packaged applications.

1:1 Customer Engagement

Our omnichannel customer engagement applications are designed to maximize the lifetime value of customers and help reduce the costs of serving customers while ensuring a consistent, unified, and personalized customer experience. At the center of our customer engagement applications is the Pega Customer Decision Hub™, our real-time, AI-powered decision engine, which can predict a customer’s behavior and recommend the “next best action” to take across channels in real-time. It is designed to enable enterprises to improve customer acquisition and experience across inbound, outbound, and paid media channels. It incorporates artificial intelligence (“AI”) in the form of predictive and machine-learning analytics and business rules and executes these decisions in real-time to evaluate the context of each customer interaction and dynamically deliver the most relevant action, offer, content, and channel.

Customer Service

The Pega Customer Service™ application simplifies customer service. It is designed to anticipate customer needs, connect customers to the right people and systems, automate or intelligently guide customer interactions, rapidly and continuously evolve the customer service experience, and allow enterprises to deliver consistent interactions across channels and improve employee productivity. The application consists of a contact center desktop, case management for customer service, chat, knowledge management, mobile field service, omnichannel self-service, AI-powered virtual assistants, and industry-specific processes (“Microjourney®”) and data models. For clients who want to extend intelligence and automation into the early stages of the customer journey, Pega Sales Automation™ automates and manages the entire sales process, from prospecting to product fulfillment. It allows enterprises to capture best practices and leverage AI to guide sales teams through the sales and customer onboarding processes.

Intelligent Automation

Pega Platform, our software for Intelligent Automation, boosts the efficiency of our clients’ processes and workflows. This technology allows organizations to take an end-to-end approach to transformation by using intelligence and design thinking to streamline processes and create better customer and employee experiences. Intelligent automation goes beyond traditional Business Process Management (BPM) to unify technologies such as Robotic Process Automation (“RPA”) and AI and enable organization-wide digital transformation. With its Intelligent Automation capabilities, the Pega Platform allows clients to break down silos, improve customer-centricity, add agility to legacy technology, and provide end-to-end automation to support the needs of customers and employees.

Our Capabilities

We drive better business outcomes for our clients in three ways:

- *1:1 Customer Engagement*: we enable clients to hyper-personalize interactions with their customers using our AI-powered decision engine, resulting in higher customer lifetime value.
- *Customer Service*: we enable clients to streamline customer service and deliver better service experiences for their customers and employees, resulting in higher customer satisfaction and loyalty with reduced costs.
- *Intelligent Automation*: we enable clients to automate mission-critical workflows, resulting in improved operational efficiency, faster time to value, and lower cost.

We deliver our solution through our Center-out Business™ Architecture, enabling clients to transcend channels and internal data silos to achieve quick wins and long-term transformation. This approach insulates business logic from back-end and front-end complexity, delivering consistent customer experiences and agility to the business.

The key aspects of this architecture are:

Centrally-managed AI-powered decisioning

Pega’s centrally-managed AI-powered decisioning ensures AI and business rules operate across all channels. Applications built on Pega’s low-code Platform leverage predictive and adaptive analytics to deliver personalized customer experiences and maximize business objectives. For example, Pega Customer Decision Hub, a centralized, always-on “customer brain,” unleashes the power of predictive analytics, machine learning, and real-time decisioning across our clients’ data, systems, and touchpoints — orchestrating engagement across customer interaction channels and optimizing processes for better efficiency.

End-to-end workflow automation aligned with business outcomes

We combine human-assisted robotic desktop automation and unattended robotic process automation with our unified workflow automation and case management capabilities. This combination provides our platform and applications the differentiated ability to automate customer-facing and back-office operational processes from “end to end,” connecting across organizational and system silos to connect customers and employees to outcomes seamlessly and easily.

Consistent omnichannel experiences

With centrally defined business and process logic, Pega provides dynamic, open APIs to align front-end channels and business logic for consistent customer experiences. By leveraging innovative user interface (UI) technology, Pega-powered processes and decisions can be easily embedded into existing front ends or used as the basis for new employee-facing applications.

Insulation of back-end complexity

Pega’s architecture insulates case and decision logic from the complexity of back-end systems. Our data virtualization automatically pulls in needed data in a common structure, regardless of source. This capability allows clients the agility to build new experiences on existing systems, modernizing legacy systems without breaking existing processes.

A layered approach to managing variation

Pega’s Situational Layer Cake™ organizes logic into layers that map to the unique dimensions of a client’s business – customer types, lines of business, geographies, etc. This layered approach lets organizations manage variations of their businesses without duplicating logic. This capability allows initial deployments into a single department or region to seamlessly scale to manage the complexity of a global, multi-line enterprise.

In addition to our Center-out Business Architecture, Pega technology has been designed to be deployed rapidly, be easily changed, and scale across changing architecture needs.

Pega Express™ Methodology and low code

Our solutions are designed to quickly improve targeted customer outcomes with out-of-the-box functionality that connects enterprise data and systems to customer experience channels. From there, organizations can scale one customer experience at a time to realize greater value while delivering increasingly consistent and personalized customer experiences. We prescribe a “Microjourney” approach to delivery that breaks customer journeys into discrete processes that drive meaningful outcomes, such as “inquiring about a bill” or “updating an insurance policy,” allowing us to combine design-thinking and out-of-the-box functionality to deliver rapid results and ensure the ability to enhance applications in the future.

Our approach leverages low-code to improve business and IT collaboration and bypass the error-prone and time-consuming process of manually translating requirements into code. Users design software in low-code visual models that reflect the needs of the business. The software application is created and optimized automatically and directly from the model, helping to close the costly gap between vision and execution. Changes to the code are made by altering the model, and application documentation is generated directly from the model.

Cloud choice

Pega Cloud® allows clients to develop, test, and deploy, on an accelerated basis, our applications and the Pega Platform using a secure, flexible internet-based infrastructure, minimizing cost while focusing on core revenue-generating competencies.

Clients can also manage the Pega deployment themselves using the cloud architecture they prefer. This multi-cloud approach of both Pega Cloud and client-managed cloud gives our clients the ability to select and change, as needed, the best cloud architecture for the security, data access, speed-to-market, and budget requirements of each application they deploy.

Our Services and Support

We offer services and support through our Global Client Success, Global Service Assurance and Client Support, and Pega Academy groups. We also use third-party contractors to assist us in providing these services.

- *Global Client Success* – Global Client Success guides our clients to maximize their investment in our technology and realize the business outcomes they are targeting. Within Global Client Success, our Client Innovation team helps clients transform and prototype their customer journeys through our Pega Catalyst™ offering, our Success team ensures our clients receive the maximum business value from their Pega investments, and our Pega Consulting team provides planning, design, implementation, and assurance services.
- *Global Service Assurance and Client Support* – Global Service Assurance addresses risks to client success because of technical concerns. By providing technical staff dedicated to client success, we reduce the time to resolve technical issues, eliminate lengthy deliberations of technical resource logistics, and increase clients’ confidence in our technology and client service. Global Client Support provides technical support for our products and services. Support services include cloud service reliability management, online support community management, self-service knowledge, proactive problem prevention through information and knowledge sharing, problem tracking, prioritization, escalation, diagnosis, and resolution.

- *Pega Academy* – Pega Academy offers enablement content for all Pega product implementations to ensure the success of our Clients and Partners. We have increased our ability to train partners and clients to implement our technology and made it easier for individuals to stay current as it evolves. We offer many mediums, including instructor-led and online training to our employees, clients, and partners so individuals can learn in the way that best suits them. We have also partnered with universities to provide our courseware as part of the student curriculum to expand our ecosystem of enablement content. In addition, we have robust and comprehensive documentation on our documentation portal, so people have the information at their fingertips in the moment of need. Lastly, engagement is an important part of our strategy to create a broad ecosystem passionate about Pega technology to further increase our advocates across our clients and other key stakeholders.

Our Partners

We collaborate with global systems integrators and technology consulting firms that provide consulting services to our clients, as well as Independent Software Vendors (“ISVs”) and technology partners that extend clients’ investments with integrated solutions. In addition, Authorized Training Partners (“ATPs”) support Pega customers in local languages, while our Workforce Development Partners let clients outsource their recruiting. Strategic partnerships with these firms are important to our sales efforts because they influence buying decisions, identify sales opportunities, and complement our software with their domain expertise, solutions, and service capabilities. These partners may deliver strategic business planning, consulting, project management, training, and implementation services to our clients.

Our partners include well-respected major firms, such as Accenture PLC, Amazon.com, Inc., Areteans, Capgemini SA, Coforge, Cognizant Technology Solutions Corporation, EY, Google, HCL Infosys, Merkle, PwC, Tata Consultancy Services Limited, Tech Mahindra Limited, Virtusa Corporation, and Wipro Limited.

Our Markets

Target Clients

Our target clients are Global 2000 organizations and government agencies that require solutions to distinguish themselves in the markets they serve. Our solutions achieve and facilitate differentiation by increasing business agility, driving growth, improving productivity, attracting and retaining customers, and reducing risk. Along with our partners, we deliver solutions tailored to the specific industry needs of our clients.

Our clients represent many industries, including:

- *Financial services* – Pega’s software for AI-powered decisioning and workflow automation is used by financial services organizations for Customer Engagement, Onboarding and KYC, Lending, Customer Service, Payment Exceptions, Bank Operations, and Managing Financial Crime. Our platform enables clients to increase loyalty and wallet share, reduce time and effort to close loans and open accounts, address compliance more effectively while simplifying customer experiences, resolve service requests across channels more quickly with less effort, and boost the efficiency of various back-office processes with fewer human touches.
- *Government* – Pega’s software for AI-powered decisioning and workflow automation is used by government agencies for Enterprise Modernization, Licensing, Investigative Case Management, Grants and Financial Management, Acquisition and Supply Chain Modernization, and Citizen Service. Our platform enables clients to modernize legacy systems and processes to meet the growing demands for improved constituent service, lower costs, reduced fraud, and greater transparency.
- *Healthcare* – Pega’s software for AI-powered decisioning and workflow automation is used by healthcare organizations for Consumer Engagement, Onboarding and Enrollment, Customer Service, Care Management Services and Claims/Core Admin. Our platform enables clients to improve member and patient outcomes, loyalty, and retention, simplify experiences with reduced time and effort, resolve service requests faster and easier across channels, advance efficient flexible healthcare coordination, and deliver streamlined, modern experiences for members, providers, and employees.
- *Communications and media* – Pega’s software for AI-powered decisioning and workflow automation is used by communications and media organizations for Customer Engagement, Order Management, Customer Service, Service Assurance, Network Operations, and Shared Services. Our platform enables clients to increase loyalty and wallet share, simplify experiences while accelerating revenues and processes, resolve service requests across channels more quickly with less effort, drive a faster, simpler repair experience, and boost the efficiency of 5G, fiber, and cloud processes.
- *Insurance* – Pega’s software for AI-powered decisioning and workflow automation is used by insurance companies for Customer Engagement, Sales, Distribution, Underwriting, Policy Holder Service, and Claims. Our platform enables clients to nurture and grow their book of business, increase agent sales effectiveness, power better partner performance and loyalty, automate application intake and processing with intelligence, personalize seamless policy lifecycle experiences, and improve claims handling efficiencies with more modern customer and employee experiences.
- *Consumer services* – Pega’s software for AI-powered decisioning and workflow automation is used by consumer services organizations for Customer Engagement, Supplier Onboarding, Customer Service, and Enterprise Operations in industries such as transportation, utilities, internet providers, retail, hospitality, and entertainment. Our platform enables clients to enable more personalized real-time next best action, accelerate onboarding with simplified experiences, automate the resolution of customer requests across channels with increased digital self-servicing, and streamline operations to rapidly reduce cost, time, and risks while increasing customer satisfaction.

- *Manufacturing and high tech* – Pega’s software for AI-powered decisioning and workflow automation is used by manufacturers to streamline their complex global operations and create more value for their customers, dealers, distributors, and suppliers while directly managing the performance, uptime, and impact of their connected products, equipment, and experiences. Our platform enables clients to reduce the complexity of enterprise operations in domains like supply chain, order management, quality management, shared services, customer service, and aftermarket services, including warranty management and captive finance, while minimizing the constraints on digital transformation caused by legacy systems.

Competition

The markets for our offerings are intensely competitive, rapidly changing, and highly fragmented as current competitors expand their product offerings and new companies enter the market.

We compete in the CRM, including marketing, sales, and customer service, and DPA, including BPM, case management, decision management, robotic automation, co-browsing, social engagement, low-code application development, and mobile application development platform software markets, as well as in markets for the vertical applications we provide (e.g., Pega Know Your Customer™ for Financial Services, Pega Care Management™).

We also compete with clients’ internal information systems departments that seek to modify their existing systems or develop their own proprietary systems and professional service organizations that develop their own products or create custom software in conjunction with rendering consulting services.

Competitors vary in size, scope, and breadth of the products and services they offer and include some of the world’s largest companies, including International Business Machines Corporation (“IBM”), Microsoft Corporation, Oracle Corporation, Salesforce.com, SAP SE, and ServiceNow.

We have been most successful in competing for clients whose businesses are characterized by a high degree of change, complexity, and/or regulation.

We believe we are competitively differentiated because our unified Pega Platform is designed to allow client business and IT staff, using a single, intuitive user interface, to build and evolve enterprise applications in a fraction of the time it would take with disjointed architectures and tools offered by many of our competitors. In addition, our applications, built on the Pega Platform, provide the same flexibility and ability to adapt to our clients’ needs as the Pega Platform. We believe we compete favorably due to our expertise in our target industries and our long-standing client relationships. We believe we compete less favorably on some of the above factors against our larger competitors, many of which have greater sales, marketing, and financial resources, a more extensive geographical presence, and greater name recognition. In addition, we may be at a competitive disadvantage against our larger competitors with respect to our ability to provide expertise outside our target industries.

For additional information, see risk factor "The market for our offerings is intensely and increasingly competitive, rapidly changing, and fragmented" in Item 1A of this Annual Report.

Intellectual Property

We rely primarily on a combination of copyright, patent, trademark, and trade secrets laws, as well as confidentiality procedures and contractual provisions to protect our intellectual property rights and our brand. We have obtained patents relating to our system architecture and products in strategic global markets. We enter into confidentiality, intellectual property ownership, and license agreements with our employees, partners, clients, and other third parties. To protect our proprietary rights, we also control access to and ownership of software, services, documentation, and other information. We also purchase or license technology that we incorporate into our products and services.

Sales and Marketing

We encourage our direct sales force and outside partners to co-market, pursue joint sales initiatives, and drive broader adoption of our technology, helping us grow our business more efficiently and focus our resources on continued innovation and enhancement of our solutions. In addition, strategic partnerships with management consulting firms and major systems integrators are important to our sales efforts because they influence buying decisions, help us identify sales opportunities, and complement our software and services with their domain expertise and consulting capabilities. We also partner with technology providers and application developers.

To support our sales efforts, we conduct a broad range of marketing programs, including awareness advertising, client and industry-targeted solution campaigns, trade shows, including our PegaWorld® iNspire user conference, solution seminars and webinars, industry analyst and press relations, web and digital marketing, community development, social media presence, and other direct and indirect marketing efforts. In addition, our consulting employees, business partners, and other third parties also conduct joint and separate marketing campaigns that generate sales leads. Our sales and marketing efforts are premised on the strength of our products, both as they exist currently and as they will continue to develop in the future through our research and development efforts.

Research and Development

Our research and development organization is responsible for product architecture, core technology development, product testing, and quality assurance. Our product development priority is to continue expanding our technology's capabilities and ensure we deliver superior cloud-native solutions. We intend to maintain and extend the support of our existing applications, and we may choose to invest in additional strategic applications that incorporate the latest business innovations. We also intend to maintain and extend the support for popular public and private cloud platforms, and integration options to facilitate easy and rapid deployment in diverse IT infrastructures. Our goal with all products is to enhance product capabilities, implementation ease, long-term flexibility, and improve client service.

Backlog

As of December 31, 2023, we expected to recognize \$1.5 billion in revenue from backlog on existing contracts in future periods. For additional information, see "Remaining Performance Obligations ("Backlog")" in Item 7 of this Annual Report.

Our People

As of January 31, 2024, we had 5,406 employees, of which 1,998 were based in the Americas, 1,224 were based in Europe, 1,873 were based in India, and 311 were based elsewhere in Asia-Pacific.

Our people are critical to our success. We strive to be a place where people build their career in an inclusive, equitable, and diverse culture. We believe cultivating our talent is at the heart of engaging, motivating, and retaining our workforce to support our clients, partners, and business.

We evolve our corporate culture through various initiatives, including global equity, inclusion, and belonging initiatives, employee engagement, pay equity, and employee development.

Diversity, Equity, Inclusion, and Belonging ("DEIB")

We celebrate, welcome, and foster diverse perspectives at Pega because we believe this will accelerate our ability to deliver innovative products and services to our clients. It is critical for us to create an environment where all individuals are respected, valued, and supported, have access to opportunities, and feel that they belong. Our commitment to DEIB includes inclusion and allyship programs, amongst other investments. We are continuously expanding our sponsorship of formal employee resource groups and are proud to share our support for the following communities: women, veterans, Black, LGBTQIA+, Asian, LatinX, and persons with disabilities.

Employee Engagement, Health, and Well-Being

Our efforts to retain and attract employees include providing competitive reward packages and encouraging active and transparent communication throughout the Company. We regularly seek feedback to better understand and improve our employee experience, and we are committed to fostering an environment where everyone feels connected at Pega.

We share the responsibility to preserve, strengthen, and evolve our culture while continuously reviewing the way we do things to propel us forward together. In addition to our employee engagement survey and continuous feedback tools, we host regular sessions led by the executive leadership team where any employee can ask questions.

We are committed to fostering an environment that supports our employees' health and overall well-being, with an emphasis on physical, emotional, financial, and personal wellness. PegaUp!, our employee wellness program, includes awareness campaigns, fitness classes, guided meditation, and health and wellness offerings. In 2022, we also implemented global Wellness Days, where we encourage our people to take a break to recharge.

Pay Equity

We compensate our employees for what they do and how they do it, regardless of their gender, race, or other characteristics. To deliver on that commitment, we benchmark and set pay ranges based on market data and consider individual factors, such as an employee's role and experience, location, and performance. We regularly review our compensation practices, in terms of our overall workforce and individual employees, to ensure our pay is fair and equitable against local markets.

Talent Cultivation

Talent Cultivation is at the foundation of our people strategy. It is an ongoing, dynamic process that encourages our employees to focus on performance and development goals, receive continuous feedback, and drive their future path for growth. We invest in our employees' career growth and progression by providing a wide range of opportunities, including formal and informal development, mentoring, sponsorship, and coaching. Pega Academy helps employees, clients, and partners gain and rapidly advance Pega software skills. A series of leadership and management development programs equip our managers with the skills and knowledge to successfully build a culture of engagement and high performance.

Additionally, we provide educational resources and classes, career training, and education reimbursement programs.

Corporate Information

Pegasystems Inc. was incorporated in Massachusetts in 1983. Our stock is traded on the NASDAQ Global Select Market under the symbol "PEGA." Our website is at www.pegacom, and our investor relations website is at www.pegacom/about/investors.

Available Information

We make available our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to these reports, free of charge, through our website as soon as reasonably practicable after we electronically file such material with or furnish such material to the SEC. We also make available on our website reports filed by our executive officers and directors on Forms 3, 4, and 5 regarding their ownership of our securities. Our Code of Conduct is available on our website in the “Governance” section.

The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

ITEM 1A. RISK FACTORS

The risks and uncertainties described below are not the only ones we face. Events that we do not currently anticipate, or expect to be immaterial, may also materially adversely affect our results of operations, cash flows, and financial condition.

Risks Related to Our Business and Industry

If we fail to operate our subscription-based business model successfully, our results of operations and/or cash flows could be negatively impacted.

We have substantially completed our transition to a more subscription-based business model, in which clients have the right to access our software in a hosted environment or use downloaded software for a specified subscription period. The shift of our clients’ preference to subscription-based offerings requires a scalable organization and a considerable investment of technical, financial, legal, managerial, and sales resources.

Continued growth of our subscription-based offerings will depend on our ability to continue to:

- innovate and include new functionality and improve the usability of our products in a manner that addresses our clients’ needs and requirements; and
- optimally price our products considering marketplace conditions, competition, our costs, and client demand.

Our cloud-based subscription model also requires that we rely on third parties to host our software for our clients. We incur significant recurring third-party hosting expenses to deliver our Pega Cloud offering that we do not incur for our perpetual and term license products. These expenses may cause the gross margin we realize from our Pega Cloud sales to be lower than the gross margin we realize from our perpetual and term license products. If we are unable to meet these challenges effectively, our operating results and financial condition could be materially adversely affected.

We may not achieve the key elements of our strategy and grow our business as anticipated.

We currently intend to grow our business by pursuing strategic initiatives consistent with becoming a Rule of 40 company, meaning a company with combined Annual Contract Value (“ACV”) growth rate and free cash flow margin of at least 40%. Key elements of our strategy include increasing our market share by developing and delivering robust solutions that can work together seamlessly with maximum differentiation and minimal customization, offering versatility in the Pega Platform and application deployment and licensing options to meet the specific needs of our clients, growing our network of partner alliances, and developing the talent and organizational structure capable of supporting our revenue and earnings growth targets. We may not achieve one or more of our key initiatives. Our success depends on our ability to manage our expenses as we appropriately grow our organization, successfully execute our marketing and sales strategies, successfully incorporate acquired technologies into our unified Pega Platform, and develop new products or product enhancements. If we are not able to execute these actions, our business may not grow as we anticipate, and our operating results and financial condition could be materially adversely affected.

We depend on key personnel, including our Chief Executive Officer, and must attract and retain qualified personnel in the future.

Our business is dependent on key, highly skilled technical, managerial, consulting, sales, and marketing personnel, including our Chief Executive Officer, who is also our founder and largest stockholder.

The loss of key personnel could be disruptive to our operations and materially adversely affect our financial performance. We do not carry, nor do we currently intend to obtain, significant key-person life insurance on officers or other employees. Our success will depend on attracting and retaining qualified personnel and rapidly replacing and developing new management, as needed. The number of potential employees who have the extensive knowledge needed to develop, sell, and maintain our offerings is limited, and competition for their services is intense. There can be no guarantee that we will be able to attract and retain such personnel. If we are unable to do so, our business, operating results, and financial condition could be materially adversely affected. We have from time to time in the past experienced, and we expect to continue to experience in the future, difficulty in hiring and difficulty in retaining highly skilled employees with appropriate qualifications.

In addition, we believe our corporate culture has been a key contributor to our success. If we fail to maintain and enhance our corporate culture within an environment of hybrid work, our ability to retain and recruit personnel essential to our success may be negatively affected.

The timing of our license and Pega Cloud revenue is difficult to predict, which may cause our operating results to vary considerably.

A change in the size or volume of license and Pega Cloud arrangements, or a change in the mix between perpetual licenses, subscription licenses, and Pega Cloud arrangements, can cause our revenues and cash flows to fluctuate materially between periods. Revenue from subscription service arrangements, which includes Pega Cloud and maintenance, is typically recognized over the contract term, while revenue from license sales is recognized when the license rights become effective, typically upfront. Subscription licenses and services are typically billed and collected over the contract term, while perpetual licenses are generally billed and collected upfront when the license rights become effective.

Factors that may influence the predictability of our license and Pega Cloud revenue include:

- changes in clients' budgets and decision-making processes that could affect both the timing and size of transactions;
- the timing of the execution of an agreement or our ability to deliver the products or services;
- changes in our business model; and
- our ability to execute our marketing and sales strategies.

We budget for our selling and marketing, product development, and other expenses based upon anticipated future bookings and revenue. If the timing or amount of revenue fails to meet our expectations, our financial performance is likely to be materially adversely affected because only a small portion of our expenses vary with revenue. Other factors that may cause our operating results to vary include changes in foreign currency exchange rates, income tax effects, and the impact of new accounting pronouncements.

As a result, period-to-period comparisons of our operating results are not necessarily meaningful and should not be relied upon to predict future performance. If our revenues and operating results do not meet the expectations of our investors or securities analysts or fall below guidance we may provide to the market, or due to other factors discussed elsewhere in this section, the price of our common stock may decline.

The number and value of license and Pega Cloud arrangements has been increasing, and we may not be able to sustain this growth unless our partners and we can provide sufficient high-quality consulting, training, and maintenance resources to enable our clients to realize significant business value from our software.

Our clients typically request consulting and training to assist them in implementing our license and Pega Cloud offerings. Our clients also usually purchase maintenance on our perpetual and term licenses. As a result, an increase in the number and value of license and Pega Cloud arrangements is likely to increase demand for consulting, training, and maintenance related to our offerings. Given that the number and value of our license and Pega Cloud arrangements has been growing, we will need to provide our clients with more consulting, training, and maintenance to enable them to realize significant business value from our software. We have been increasing our partner and client enablement through training to create an expanded ecosystem of people that are skilled in the implementation of our solutions. However, if our partners and we are unable to provide sufficient high-quality consulting, training, and maintenance resources, our clients may not realize sufficient business value from our offerings to justify follow-on sales, which could impact our future financial performance.

Further, some of our client engagements have high public visibility. If our partners or we encounter problems in helping these clients implement our license and Pega Cloud offerings or if there is negative publicity regarding these engagements (even if unrelated to our services or offerings), our reputation could be harmed and our future financial performance could be negatively impacted. Finally, the investments required to meet the increased demand for our consulting services could strain our ability to deliver our consulting engagements at desired profitability, thereby impacting our overall profitability and financial results.

We may not be able to maintain our retention rate for our subscription clients.

The majority of our revenue is derived from our subscription offerings. Our clients have no obligation to renew their subscriptions, although historically, most have elected to do so. If our retention rate for those clients decreases, our business, operating results, and financial condition could be materially affected.

Investments we are making to continue to grow license and Pega Cloud arrangements may result in decreased profitability or losses and reduced or negative cash flow if we do not continue to increase the value of our license and Pega Cloud arrangements to balance our growth in expenses.

We expect to provide our clients with more cloud and maintenance support as our business grows and have been investing significantly in research and development to expand and improve the Pega Platform and applications. These investments have resulted in increased fixed costs that do not vary with the level of revenue. If the increased demand for our offerings does not continue, we could experience decreased profitability or losses and reduced or negative cash flow because of these increased fixed costs. Conversely, if we are unable to achieve an appropriate balance of sales and marketing personnel to meet future demand or research and development personnel to enhance our current products or develop new products, we may not be able to achieve our sales and profitability targets.

We rely on third-party relationships.

We have a number of relationships with third parties that are significant to our sales, marketing, support, and product development efforts, including hosting facilities for our Pega Cloud offering. We rely on software and hardware vendors, large system integrators, and technology consulting firms to supply marketing and sales opportunities for our direct sales force and to strengthen our offerings using industry-standard tools and utilities. We also have relationships with third parties that distribute our products. There can be no assurance that these companies, many of which have far greater financial and marketing resources than us, will not develop or market offerings that compete with ours in the future or will not otherwise end or limit their relationships with us. Further, the use of third-party hosting facilities requires us to rely on the functionality and availability of the third parties' services, as well as their data security, which despite our due diligence, may be or become inadequate, as further discussed below under the risk factor "We rely on third-party hosting providers to deliver our offerings, and any disruption or interference with our use of these services could adversely affect our business."

We face risks from operations and clients based outside of the United States.

We market our products and services to clients based outside of the U.S., representing 43% of our revenue over the last three years. We have established offices in the Americas, Europe, Asia, and Australia. We anticipate hiring personnel to accommodate increased international demand, and we may also enter into agreements with local distributors, representatives, or resellers. If we are unable to do one or more of these things in a timely and effective manner, the growth, if any, of our international operations may be restricted, and our business, operating results, and financial condition could be materially adversely affected.

Additional risks inherent in our international business activities include:

- laws and business practices favoring local competitors;
- compliance with multiple, conflicting, and changing governmental laws and regulations, including employment, tax, privacy, and data privacy and protection;
- increased tariffs and other trade barriers;
- the costs of localizing offerings for local markets, including translation into foreign languages and associated expenses;
- longer payment cycles and credit and collectability risk on our foreign trade receivables;
- difficulties in enforcing contractual and intellectual property rights;
- heightened fraud and bribery risks;
- treatment of revenue from international sources and changes to tax codes, including being subject to foreign tax laws, being liable for paying withholding, income or other taxes in foreign jurisdictions, and other potentially adverse tax consequences (including restrictions on repatriating earnings and the threat of "double taxation");
- management of our international operations, including increased administrative and compliance expenses;
- heightened risks of political and economic instability; and
- foreign currency exchange rate fluctuations and controls.

There can be no assurance that one or more of these factors will not have a material adverse effect on our international operations and, consequently, on our business, operating results, and financial condition.

Our consulting revenue is significantly dependent upon our consulting personnel implementing new license and Pega Cloud arrangements.

We derive a substantial portion of our consulting revenue from implementations of new license and Pega Cloud arrangements managed by our consulting personnel and consulting for partner and client-led implementation efforts. Our strategy is to support and encourage partner-led and client-led implementations to increase the breadth, capability, and depth of market capacity to deliver implementation services to our clients. Accordingly, if our consulting personnel's involvement in future implementations decreases, this could materially adversely affect our consulting revenue.

We frequently enter into a series of license or Pega Cloud arrangements that each focus on a specific purpose or area of operations. If we are not successful in obtaining follow-on business from these clients, our financial performance could be materially adversely affected.

Once a client has realized the value of our software, we work with the client to identify opportunities for follow-on sales. However, we may not be successful in demonstrating this value for several reasons, including the performance of our products, the quality of the services and support provided by our partners and us, or external factors. Also, some of our smaller clients may have limited additional sales opportunities available. We may not obtain follow-on sales, or the follow-on sales may be delayed, and our future revenue could be limited.

We will need to acquire or develop new products, evolve existing ones, address defects or errors, and adapt to technology changes.

Technical developments, client requirements, programming languages, industry standards, and regulatory requirements frequently change in the markets in which we operate. The introduction of third-party solutions embodying new technologies, including generative AI and the emergence of new industry standards could make our existing and future software solutions obsolete and unmarketable. As a result, our success will depend upon our ability to enhance current products, address any product defects or errors, acquire or develop and introduce new products that meet client needs, keep pace with technology and regulatory changes, respond to competitive products, and achieve market acceptance. Product development requires substantial investments for research, refinement, and testing. We may not have sufficient resources to make the necessary product development investments. We may experience technical or other difficulties that will delay or prevent the successful development, introduction, or implementation of new or enhanced products. We may also experience technical or other challenges integrating acquired technologies into our existing platform and applications. Inability to introduce or implement new or enhanced products in a timely manner could result in loss of market share if competitors are able to provide solutions to meet client needs before we do, give rise to unanticipated expenses related to further development or modification of acquired technologies, and materially adversely affect our financial performance. We may also fail to anticipate adequately and prepare for the development of new markets and applications for our technology and the commercialization of emerging technologies such as generative AI and thereby fail to take advantage of new market opportunities or fall behind early movers in those markets.

The market for our offerings is intensely and increasingly competitive, rapidly changing, and fragmented.

We encounter significant competition from:

- customer engagement vendors, including Customer Relationship Management application vendors;
- Digital Process Automation vendors and platforms, including Business Process Management vendors, low-code application development platforms, and service-oriented architecture middleware vendors;
- case management vendors;
- decision management, data science, and Artificial Intelligence vendors, as well as vendors of solutions that leverage decision making and data science in managing customer relationships and marketing;
- robotic automation and workforce intelligence software providers;
- companies that provide application-specific software for financial services, healthcare, insurance, and other specific markets;
- mobile application platform vendors;
- co-browsing software providers;
- social listening, text analytics, and natural language processing vendors;
- commercialized open-source vendors;
- professional services organizations that develop their own products or create custom software in conjunction with rendering consulting services; and
- clients' in-house information technology departments, which may seek to modify their existing systems or develop their own proprietary systems.

Many of our competitors, such as International Business Machines Corporation ("IBM"), Microsoft Corporation, Oracle Corporation, Salesforce.com, SAP SE, and ServiceNow, have far greater resources than we do and may be able to respond more quickly and efficiently to new or emerging technologies, programming languages or standards, or changes in client requirements or preferences. Competitors may also be able to devote greater managerial and financial resources to develop, promote, and distribute products and to provide related consulting and training services.

We believe the principal competitive factors within our market include:

- product adaptability, scalability, functionality, and performance;
- proven success in delivering cost-savings and efficiency improvements;
- proven success in enabling improved customer interactions;
- ease-of-use for developers, business units, and end-users;
- timely development and introduction of new products and product enhancements;
- establishment of a significant base of reference clients;
- ability to integrate with other products and technologies;
- customer service and support;
- product price;
- vendor reputation; and
- relationships with systems integrators.

Competition for market share and pressure to reduce prices and make sales concessions is likely to increase. There can be no assurance that we will be able to compete successfully against current or future competitors or that the competitive pressures we face will not materially adversely affect our business, operating results, and financial condition.

For additional information, see "Item 1. Business" of this Annual Report.

Our Chief Executive Officer is our largest stockholder and can exert significant influence over matters submitted to our stockholders, which could materially adversely affect our other stockholders.

As of December 31, 2023, our Chief Executive Officer beneficially owned approximately 47 percent of our outstanding common stock. As a result, he has the ability to exert significant influence over all matters submitted to our stockholders for approval, including the election and removal of directors and any merger, consolidation, or sale of our assets. Under Massachusetts law and our governing documents, approval of a merger, share exchange or sale of all or substantially all of our assets requires approval of two-thirds of all shares entitled to vote. As a result, this concentration of ownership may delay or prevent a change in control, impede a merger, consolidation, takeover, or other business combination involving us, discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control of us, or result in actions that may be opposed by other stockholders.

If we are unsuccessful in the appeal of the trial court judgment in our litigation with Appian Corp., our operating results and financial condition would be adversely impacted.

We are currently party to litigation with Appian Corp. — see Part I, Item 3 “Legal Proceedings” and “Note 20. Commitments And Contingencies” in the “Notes to Consolidated Financial Statements” included in Part II, Item 8 of this Annual Report. On September 15, 2022, the circuit court of Fairfax County entered judgment for Appian in the amount of \$2,060,479,287 and awarding post-judgment interest. The Company filed a notice of appeal from the judgment the same day with the Court of Appeals of Virginia. On September 29, 2022, the circuit court approved the \$25,000,000 letter of credit obtained by the Company to secure the judgment and suspended the judgment during the pendency of the Company’s appeal. On November 15, 2023, the Court of Appeals of Virginia heard oral arguments in the appeal. After the Court issues an opinion, the non-prevailing party or, depending on the ruling of the court, parties may file a petition for rehearing with the Court of Appeals of Virginia and/or file a petition for appeal with the Supreme Court of Virginia. Although it is not possible to predict timing, this appeals process could potentially take years to complete.

We believe we have strong grounds to overturn the result in the trial court. But if we are ultimately unsuccessful in prevailing in the matter in its entirety or in substantially reducing any judgment, we may be required to incur additional debt or otherwise engage in capital markets transactions, which may include a public offering or private placement of our equity securities or a sale or license of assets. See below under the risk factor, “We may require additional capital in the future.” In addition, if we do not satisfy the judgment within 60 days following the expiration of the right to appeal, there may be an acceleration of liabilities under our Convertible Senior Notes due 2025 (the “Notes”) and our Credit Facility. We believe that we have the financial strength to pay these amounts if it ever becomes necessary, but it is possible that we may not be able to engage in financing activities on desirable terms, which could have a material adverse effect on our business, financial condition, and operating results. Further discussion of these risks is contained below under the heading “Risks Related to Our Financial Obligations and Indebtedness.”

Risks Related to Information Technology Resilience and Security

We face risks related to outages, data losses, and disruptions of our online services if we fail to maintain an adequate operations infrastructure.

The increasing user traffic for our Pega Cloud offering demands more computing power. It requires that we maintain an internet connectivity infrastructure that is robust and reliable within competitive and regulatory constraints that continue to evolve. Inefficiencies or operational failures, including temporary or permanent loss of client data, power outages, or telecommunications infrastructure outages, by our third-party service providers or us, could diminish the quality of our user experience resulting in contractual liability, claims by clients and others, damage to our reputation, loss of current and potential clients, and negatively impact our operating results and financial condition.

Security of our systems and global client data is a growing challenge. Cyber-attacks and security breaches may expose us to significant legal and financial liabilities.

High-profile security breaches at other companies have increased in recent years. Security industry experts and government officials have warned about the risks of hackers and cyber-attackers targeting information technology products and businesses. Threats to IT security can take a variety of forms. Individual hackers, groups of hackers, and sophisticated organizations, including state-sponsored organizations, or nation-states themselves, may take steps that threaten our clients, suppliers, third-party technology providers, and us.

Although we are not aware of having experienced any prior material data breaches, regulatory non-compliance incidents or cyber security incidents, we may in the future be impacted by such an event, exposing our clients and us to a risk of someone obtaining access to our information, to information of our clients or their customers, or to our intellectual property, disabling or degrading service, or sabotaging systems or information. Any such security breach could result in a loss of confidence in the security of our services, damage our reputation, disrupt our business, require us to incur significant costs of investigation, remediation and/or payment of a ransom, lead to legal liability, negatively impact our future sales, and result in a substantial financial loss. Additionally, our Pega Cloud offering provides provisioned, monitored, and maintained environments for individual clients to create and deploy Pega-based applications using an Internet-based infrastructure. These services involve storing and transmitting client data and other confidential information.

Our security measures, those of our suppliers, third-party technology providers, and our clients may be breached because of third-party actions or those of employees, consultants, clients, or others, including intentional misconduct by computer hackers, system errors, human errors, technical flaws in our products, or otherwise. Because we do not control the configuration of Pega applications by our clients, the transmissions between our clients and our third-party technology providers, the processing of data on the servers at third-party technology providers, or the internal controls maintained by our clients and third-party technology providers that could prevent unauthorized access or provide appropriate data encryption, we cannot fully ensure the complete integrity or security of such transmissions processing or controls. In addition, privacy, security, and data transmission concerns in some parts of the world may inhibit demand for our Pega Cloud offering or lead to requirements to provide our products or services in configurations that may increase the cost of serving such markets. The techniques used to obtain unauthorized access or sabotage systems change frequently and are generally only recognized once launched against a target. While we have invested in protecting our data and systems and clients' data to reduce these risks and actively monitor for risks of data breaches, regulatory non-compliance incidents and cyber security incidents, there can be no assurance that our efforts will prevent breaches. Moreover, like most software companies, we incorporate open-source code into our software products and services, which also creates a potential risk. We deal with security issues regularly and have experienced security incidents from time to time. We have a standing Compliance and Risk Governing Committee composed of senior representatives across the Company that reports to and assists the Audit Committee and the Board as a whole in the oversight of compliance and risk management programs, including cybersecurity measures. In addition, we have a standing Security Steering Group, whose members include our Chief Information Security Officer, Chief Product Officer and Chief Technical Systems Officer, and which is charged with providing strategic direction for the implementation and ongoing operation of our cyber security program. Even with the efforts the Company has undertaken, there is a risk that a security breach will be successful, and such an event will be material. We carry data breach insurance coverage to mitigate the financial impact of a security breach, though this may prove insufficient in the event of a breach.

Our Pega Cloud offering involves hosting client applications on the servers of third-party technology providers. We also rely on third-party systems and technology, including encryption, virtualized infrastructure, and support, and employ a shared security model with our clients and third-party technology providers.

To defend against security threats, we need to continuously engineer products and services with enhanced security and reliability features, improve the deployment of software updates to address security vulnerabilities, apply technologies that mitigate the risk of attacks, and maintain a digital security infrastructure that protects the integrity of our network, products, and services. The cost of these steps could negatively impact our operating results. While we actively work to improve vulnerability scanning, patching, threat intelligence, security event detection, security event alerting and forensics, it is possible that security breaches, whether due to unpatched vulnerabilities or otherwise, occur and may be undetected when they occur. Any such security breach could result in a loss of confidence in the security of our services, damage our reputation, disrupt our business, require us to incur significant costs of investigation, remediation and/or payment of a ransom, lead to legal liability, negatively impact our future sales, and result in a substantial financial loss.

We rely on third-party hosting providers to deliver our offerings, and any disruption or interference with our use of these services could adversely affect our business.

Our use of third-party hosting facilities requires us to rely on the functionality and availability of the third-party services and their data security, which, despite our due diligence, may be or become inadequate. Our continued growth depends in part on the ability of our existing and potential customers to use and access our cloud services or our website to download our software within an acceptable amount of time. We use third-party service providers for key infrastructure components, particularly when developing and delivering our cloud-based products. These service providers give us greater flexibility in efficiently delivering a more tailored, scalable customer experience and expose us to additional risks and vulnerabilities. Third-party service providers operate platforms we access and which are vulnerable to service interruptions. We may experience interruptions, delays, and outages in service and availability due to problems with our third-party service providers' infrastructure. This infrastructure's lack of availability could be due to many potential causes, including technical failures, power shortages, natural disasters, fraud, terrorism, or security attacks that we cannot predict or prevent. Such outages could trigger our service level agreements and the issuance of credits to our clients, which may impact our business and consolidated financial statements.

If we are unable to renew our agreements with our cloud service providers on commercially reasonable terms, an agreement is prematurely terminated, or we need to add new cloud services providers to increase capacity and uptime, we could experience interruptions, downtime, delays, and additional expenses related to transferring to and providing support for these new platforms. Any of the above circumstances or events may harm our reputation and brand, reduce our platforms' availability or usage, and impair our ability to attract new users, which could adversely affect our business, financial condition, and results of operations.

We may experience significant errors or security flaws in our products and services and could face privacy, product liability, and warranty claims.

Despite quality testing each release, our software frequently contains errors or security flaws, especially when first introduced or when new versions are released. Errors in our software could affect its ability to work with hardware or other software or delay the development or release of new products or new versions of our software. Additionally, detecting and correcting any security flaws, including those introduced by our use of open-source, can be time-consuming and costly. Errors or security flaws in our software could result in the inadvertent disclosure of confidential information or personal data relating to our clients, employees, or third parties. Software errors and security flaws in our products or services could expose us to privacy, product liability, or warranty claims and harm our reputation, which could impact our future sales of products and services. Typically, we enter into license agreements that contain provisions intended to limit the nature and extent of our risk of product liability and warranty claims. A court might interpret these terms in a limited way or hold part or all of them unenforceable. Also, there is a risk that these contract terms might not bind a party other than the direct client. Furthermore, some of our licenses with our clients are governed by non-U.S. law, and there is a risk that foreign law might give us less or different protection. Although we have not experienced any material product liability claims to date, a product liability suit or action claiming a breach of warranty, whether meritorious, could result in substantial costs and a diversion of management's attention and our resources.

Risks Related to Our Financial Obligations and Indebtedness

We have significant debt which may limit our business flexibility, access to capital, and/or increase our borrowing costs, which may adversely affect our operations and financial results.

As of December 31, 2023, we had \$502.27 million in aggregate principal indebtedness under our Notes and have outstanding letters of credit under our credit facility, including a \$25 million letter of credit obtained to secure the judgment in our litigation with Appian.

Our indebtedness may:

- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions, or other general business purposes;
- limit our ability to use our cash flow or obtain additional financing for future working capital, capital expenditures, acquisitions, or other general business purposes;
- require us to use a substantial portion of our cash flow from operations to make debt service payments;
- limit our flexibility to plan for, or react to, changes in our business and industry;
- place us at a competitive disadvantage compared to less leveraged competitors;
- dilute existing stockholders from the issuance of common stock if the Notes are converted; and
- increase our vulnerability to the impact of adverse economic and industry conditions.

Our ability to pay our debt when due or refinance our indebtedness, including the Notes, depends on our future performance, which is subject to economic, financial, competitive, and other factors beyond our control. Our business may not generate sufficient cash flow from operations to service our debt and make necessary investments in our business. Our ability to refinance our indebtedness will depend on the capital market conditions and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations. In turn, this could result in that and our other indebtedness becoming immediately payable in full which could materially adversely affect our financial condition, results of operation or cost of borrowing.

We may require additional capital in the future.

We may require additional capital in the future to finance our operations. If we raise funds through future issuance of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences, and privileges superior to those of holders of our common stock. Any future debt financing could involve restrictive covenants relating to our capital raising activities and other financial and operations matters, which may increase the risks related to our business and our ability to service and repay our indebtedness.

The conditional conversion feature of the Notes, if triggered, may adversely affect our financial condition and operating results.

Under certain circumstances, the noteholders may convert their Notes at their option prior to the scheduled maturity at the current conversion rate of 7.4045 shares of common stock per each \$1,000 principal amount of Notes or an effective conversion price of \$135.05 per share. Upon conversion of the Notes, unless we elect to deliver solely shares of our common stock to settle such conversion, we will be obligated to make cash payments. In addition, holders of our Notes will have the right to require us to repurchase their Notes upon the occurrence of a fundamental change (as defined in the indenture, dated as of February 24, 2020, between U.S. Bank National Association, as trustee (the “Trustee”) and us (the “Indenture”)), at a repurchase price equal to 100% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest, if any, to, but not including, the fundamental change repurchase date. Although it is our intention and we currently expect to settle the conversion value of the Notes in cash up to the principal amount and any excess in shares, there is a risk that we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of Notes surrendered therefor or Notes being converted. In addition, our ability to make payments may be limited by law, regulatory authority, or agreements governing our future indebtedness. Our failure to repurchase Notes when the Indenture requires the repurchase or to pay any cash payable on the Notes’ future conversions as required by the Indenture would constitute a default under the Indenture. A default under the Indenture or the fundamental change itself could also lead to a default under agreements governing our future indebtedness. If the repayment of the related indebtedness were to be accelerated after any applicable notice or grace periods, we may not have sufficient funds to repay the indebtedness and repurchase the Notes or make cash payments upon conversions thereof. In addition, even if holders of Notes do not elect to convert their Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

The Capped Call Transactions may affect the value of the Notes and our common stock.

In connection with the Notes’ issuance, we entered into Capped Call Transactions with certain financial institutions (“option counterparties”). The Capped Call Transactions are generally expected to reduce the potential dilution of our common stock upon any conversion of the Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted Notes, with such reduction and/or offset subject to a cap. From time to time, the option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding derivative transactions with respect to our common stock and/or purchasing or selling our common stock or other securities of ours in secondary market transactions before the maturity of the Notes. This activity could cause a decrease in the market price of our common stock.

We are exposed to counterparty risk for the Capped Call Transactions.

The option counterparties are financial institutions, and we are subject to the risk that one or more of the option counterparties may default or otherwise fail to perform, or may exercise certain rights to terminate, their obligations under the Capped Call Transactions. Our exposure to the credit risk of the option counterparties is not secured by any collateral. If an option counterparty becomes subject to insolvency proceedings, we will become an unsecured creditor with a claim equal to our exposure at the time under such transaction. Our exposure depends on many factors, but our exposure will generally increase if the market price or the volatility of our common stock increases. In addition, upon default or other failures to perform, or termination of obligations, by an option counterparty, we may suffer more dilution in our common stock than we currently anticipate. We can provide no guarantee as to the financial stability or viability of the option counterparties.

Provisions in the Notes’ Indenture may deter or prevent a business combination that may be favorable to our stockholders.

If a fundamental change occurs prior to the Notes’ maturity date, holders of the Notes will have the right, at their option, to require us to repurchase all or a portion of their Notes. In addition, if a “make-whole fundamental change” (as defined in the Indenture) occurs prior to the maturity date, we will in some cases be required to increase the conversion rate of the Notes for a holder that elects to convert its Notes in connection with such make-whole fundamental change.

Furthermore, the Indenture prohibits us from engaging in certain mergers or acquisitions unless, among other things, the surviving entity assumes our obligations under the Notes. These and other provisions in the Indenture could deter or prevent a third party from acquiring us even when the acquisition may be favorable to our stockholders.

Conversion of the Notes may dilute the ownership interest of existing stockholders.

If the Notes were converted, there would be dilution of the ownership interests of existing stockholders to the extent we deliver shares of our common stock upon conversion of any of the Notes. Any sales in the public market of the common stock issuable upon such conversion could adversely affect our common stock’s prevailing market prices. In addition, the existence of the Notes may encourage short selling by market participants because the conversion of the Notes could be used to satisfy short positions, or anticipated conversion of the Notes into shares of our common stock could depress the price of our common stock.

We are required to comply with certain financial and operating covenants under our revolving credit facility. Failure to comply with these covenants could cause amounts borrowed to become immediately due and payable and/or prevent us from borrowing under the credit facility.

We must comply with specified financial and operating covenants under our credit facility and make payments, limiting our ability to operate our business as we otherwise might. Our failure to comply with any of these covenants or to meet any debt payment obligations could result in an event of default which, if not cured or waived, would result in any amounts outstanding, including any accrued interest and/or unpaid fees, becoming immediately due and payable. We might not have sufficient working capital or liquidity to satisfy any repayment obligations in the event of an acceleration of those obligations. In addition, if we are not in compliance with the financial and operating covenants under the credit facility at the time we wish to borrow funds, we will be unable to borrow funds. The financial and operating covenants under the credit facility may limit our ability to borrow funds or capital, including for strategic acquisitions, share repurchases, and other general corporate purposes.

Risks Related to Intellectual Property and Government Regulation

We face risks related to intellectual property claims or appropriation of our intellectual property rights.

We rely primarily on a combination of patent, copyright, trademark, and trade secrets laws, as well as intellectual property and confidentiality agreements to protect our proprietary rights. We also try to control access to and distribution of our technologies and other proprietary information. We have obtained patents in strategically important global markets relating to the architecture of our systems. We cannot be certain that such patents will not be challenged, invalidated, or circumvented, or that rights granted thereunder, or the claims contained therein will provide us with competitive advantages. Moreover, despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our software or to obtain the use of information that we regard as proprietary. Although we generally enter into intellectual property and confidentiality agreements with our employees and strategic partners, despite our efforts our former employees may seek employment with our business partners, clients, vendors, or competitors, and there can be no assurance that the confidential nature of our proprietary information will be maintained. In addition, the laws of some foreign countries do not protect our proprietary rights as effectively as they do in the U.S. There can be no assurance that our means of protecting our proprietary rights will be adequate or that our competitors will not independently develop similar technology.

Other companies or individuals have obtained proprietary rights covering a variety of designs, processes, and systems. Third parties have claimed and may in the future claim that we have infringed or otherwise violated their intellectual property. We are currently party to litigation with Appian Corp. — see Part I, Item 3 “Legal Proceedings”, “Note 20. Commitments And Contingencies” in the “Notes to Consolidated Financial Statements” included in Part II, Item 8 of this Annual Report and the preceding risk factor captioned “If we are unsuccessful in the appeal of the trial court judgment in our litigation with Appian Corp., our operating results and financial condition would be adversely impacted.”

Although we attempt to limit the amount and type of our contractual liability for infringement or other violation of the proprietary rights of third parties and assert ownership of work product and intellectual property rights as appropriate, there are often exceptions, and limitations may not be applicable and enforceable in all cases. Even if limitations are found to be applicable and enforceable, our liability to our clients for these types of claims could be material given the size of certain of our transactions. We expect that software product developers, including us, will increasingly be subject to infringement and other intellectual property violation claims as the number of products and competitors in our industry segment grows and the functionality of products in different industry segments overlaps. As evidenced by our previously mentioned litigation with Appian Corp., depending on when and how asserted, these claims, with or without merit, are often time-consuming, result in costly litigation and subject us to significant liability for damages. It is also possible that these claims result in treble damages if we are found to have willfully infringed patents or copyrights, cause product shipment and delivery delays, require us to enter into royalty or licensing agreements, or preclude us from making and selling the infringing software, if such proprietary rights are found to be valid. Royalty or licensing agreements, if required, may not be available on terms acceptable to us or at all. Even if a license were available, we could be required to pay significant royalties, which would increase our operating expenses. As a result, we may be required to develop alternative non-infringing technology, which could require substantial time, effort, and cost. If we cannot license or develop technology for any infringing aspect of our business, we would be forced to limit or stop sales of our software and may be unable to compete effectively, which could have a material effect upon our business, operating results, and financial condition.

Intellectual property rights claims by third parties are extremely costly to defend, could require us to pay significant damages, and could limit our ability to use certain technologies.

Companies in the software and technology industries, including some of our current and potential competitors, own large numbers of patents, copyrights, trademarks, and trade secrets and frequently enter into litigation based on allegations of infringement or other violations of intellectual property rights. In addition, many of these companies can dedicate greater resources to enforce their intellectual property rights and to defend claims that may be brought against them. The litigation may involve patent holding companies or other adverse patent owners that have no relevant product revenues and against which our patents may, therefore, provide little or no deterrence. Third parties have claimed and may claim in the future that we have misappropriated, misused, or infringed other parties' intellectual property rights, and, to the extent we gain greater market visibility, we face a higher risk of being the subject of intellectual property claims.

Any litigation regarding intellectual property could be costly and time-consuming and could divert the attention of our management and key personnel from our business operations. Significant judgments are required for the determination of probability and the range of the outcomes in any legal dispute, and the estimates are based only on the information available to us at the time. Due to the inherent uncertainties involved in claims, legal proceedings, and in estimating the losses that may arise, actual outcomes may differ from our estimates. Contingencies deemed not probable or for which losses were not estimable in one period may become probable, or losses may become estimable in later periods which may have a material impact on our results of operations and financial position. Intellectual property disputes could subject us to significant liabilities, require us to enter into royalty and licensing arrangements on unfavorable terms, prevent us from manufacturing or licensing certain of our products, cause severe disruptions to our operations or the markets in which we compete or require us to satisfy indemnification commitments to our customers. Any of these could seriously harm our business. We are currently party to litigation with Appian Corp. — see Part I, Item 3 “Legal Proceedings”, “Note 20. Commitments And Contingencies” in the “Notes to Consolidated Financial Statements” included in Part II, Item 8 of this Annual Report and the preceding risk factor captioned “If we are unsuccessful in the appeal of the trial court judgment in our litigation with Appian Corp., our operating results and financial condition would be adversely impacted.” While we continue to believe that we have the financial strength to pay these amounts if it ever becomes necessary, it is possible that we may not be able to engage in these activities on desirable terms, which could have a material adverse effect on our business, financial condition, and operating results.

Our success depends in part on maintaining and increasing our sales to clients in the public sector.

We derive a portion of our revenues from contracts with domestic and foreign governments and related agencies. We believe that our business’s success and growth will continue to depend on our successful procurement of government contracts. Selling to government entities can be highly competitive, expensive, and time-consuming, often requiring significant upfront time and expense without any assurance that our efforts will produce any sales.

Factors that could impede our ability to maintain or increase the revenue derived from government contracts include:

- changes in fiscal or contracting policies;
- decreases in available government funding;
- changes in government programs or applicable requirements;
- the adoption of new laws or regulations or changes to existing laws or regulations;
- potential delays or changes in the government appropriations or other funding authorization processes;
- governments and governmental agencies requiring contractual terms that are unfavorable to us, such as most-favored-nation pricing provisions; and
- delays in the payment of our invoices by government payment offices.

The occurrence of any of those factors could cause governments and governmental agencies to delay or refrain from purchasing our software in the future or otherwise harm our business, results of operations, financial condition, and cash flows.

Further, to increase our sales to clients in the public sector, we must comply with laws and regulations relating to the formation, administration, performance, and pricing of contracts with the public sector, including U.S. federal, state, and local governmental bodies, which affect how our channel partners and we do business in connection with governmental agencies. These laws and regulations may impose added costs on our business, and failure to comply with these laws and regulations or other applicable requirements, including non-compliance in the past, could lead to claims for damages from our channel partners or government clients, penalties, termination of contracts, loss of intellectual property rights, and temporary suspension or permanent debarment from government contracting. Any such damages, penalties, disruptions, or limitations in our ability to do business with the public sector could have a material adverse effect on our business, results of operations, financial condition, and cash flows.

We are subject to increasingly complex U.S. and foreign laws and regulations, requiring costly compliance measures. Any failure to comply with these laws and regulations could subject us to, among other things, penalties and legal expenses that could harm our reputation or otherwise have a material adverse effect on our business, financial condition, and results of operations.

We are subject to extensive federal, state, and foreign laws and regulations, including but not limited to the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, data privacy and security laws, and similar laws and regulations. The U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and similar foreign anti-bribery laws generally prohibit companies and their intermediaries from making improper payments to obtain or retain business. Similar laws and regulations exist in many other countries where we do or intend to do business.

Within recent years, there has been an increase in the scope and enforcement of data privacy laws in the jurisdictions in which we do business. The European Parliament adopted the General Data Protection Regulation (“GDPR”), effective May 2018, that extended the scope of European privacy laws to any entity that controls or processes personal data of European Union residents in connection with the offer of goods or services or the monitoring of behavior and imposes new compliance obligations concerning the handling of personal data. The California Consumer Privacy Act (“CCPA”), effective January 2020, requires, among other things, covered companies to provide new disclosure to consumers about such companies’ data collection, use and sharing practices, provide such consumers new ways to opt-out of certain sales or transfers of personal information, and provide consumers with additional causes of action. The CCPA was modified as of January 1, 2023 by the California Privacy Rights Act (“CPRA”) which expands California consumers’ rights with respect to sensitive personal information and which created a new state agency that is vested with authority to implement and enforce the CCPA, CPRA and associated regulations. Following the passage of the CCPA, several other U.S. states passed similar data privacy laws with variations on the CCPA/CPRA and GDPR requirements, most of which laws either went into effect in 2023 or will go into effect in 2024. Additional states are expected to pass their own versions of data privacy laws in 2024. In 2023, Europe finalized the first-ever comprehensive legal framework for governance of the use of artificial intelligence, the European Union Artificial Intelligence Act, with an anticipated effective date in 2026, and is moving forward with finalizing applicable regulations. Compliance with these varying regimes has caused and will cause us to incur additional costs, including as may result from any non-compliance or asserted non-compliance.

We have developed and implemented a compliance program based on what we believe are reasonable practices, including the background checking of our current partners and prospective clients and partners. We cannot guarantee, however, that we, our employees, our consultants, our partners, or our contractors are or will be compliant with all federal, state, and foreign regulations, particularly as we expand our operations outside of the U.S. If our representatives or we fail to comply with any of these laws or regulations, a range of fines, penalties, and/or other sanctions could be imposed on us, which could have a material adverse effect on our business, financial condition, and results of operations. Even if we are determined not to have violated these laws, government inquiries into these issues typically require the expenditure of significant resources and generate negative publicity, which could also harm our business. In addition, regulation of data privacy and security laws is increasing worldwide, including various restrictions on cross-border access or transfer of data, including personal data of our employees, our clients, and customers of our clients. Compliance with such regulations may increase our costs, and there is a risk of enforcement of such laws resulting in damage to our brand, as well as financial penalties and the potential loss of business, which could be significant.

Our tax exposures could be greater than anticipated.

The determination of our worldwide provision for income taxes and other tax liabilities requires estimation and significant judgment and there are many transactions and calculations where the ultimate tax determination is uncertain. Like many other multinational corporations, we are subject to tax in multiple U.S. and foreign jurisdictions. The determination of our tax liability is always subject to audit and review by applicable domestic and foreign tax authorities. We are undergoing inquiries, audits, and reviews by various taxing authorities. Any adverse outcome of any such audit or review could harm our business, and the ultimate tax outcome may differ from the amounts recorded in our financial statements and may materially affect our financial results in the period or periods for which such determination is made. While we have established reserves based on assumptions and estimates that we believe are reasonable to cover such eventualities, these reserves may prove insufficient.

In addition, our future income taxes could be materially adversely affected by a shift in our jurisdictional income mix, by changes in the valuation of our deferred tax assets and liabilities, because of changes in tax laws, regulations, or accounting principles, as well as by certain discrete items. In the United States, this may include any changes to the currently enacted law regarding mandatory capitalization of research and experimentation expenses, effective for tax years beginning after December 31, 2021.

Considering fiscal challenges in many jurisdictions, various levels of government are increasingly focused on tax reform and other legislative actions to increase tax revenue, including corporate income taxes. Several U.S. states have attempted to increase corporate tax revenues by taking an expansive view of corporate presence to attempt to impose corporate income taxes and other direct business taxes on companies that have no physical presence in their state, and taxing authorities in foreign jurisdictions may take similar actions. Many U.S. states are also altering their apportionment formulas to increase the amount of taxable income or loss attributable to their state from certain out-of-state businesses. Similarly, in Europe and elsewhere globally, various tax reform efforts underway are designed to increase the taxes paid by corporate entities.

On December 15, 2022, the European Union (EU) Member States formally adopted the EU’s Pillar Two Directive, which generally provides for a minimum effective tax rate of 15%, as established by the Organization for Economic Co-operation and Development (OECD) Pillar Two Framework that was supported by over 130 countries worldwide. The EU effective dates are January 1, 2024, and January 1, 2025, for different aspects of the directive. A significant number of countries are also implementing similar local legislation. The Company is continuing to evaluate the potential impact of the Pillar Two Framework on future periods, pending legislative adoption by additional individual countries.

If it becomes necessary or desirable to repatriate our foreign cash balances to the United States, we may be subject to increased taxes, other restrictions, and limitations.

As of December 31, 2023, \$159.9 million of our cash and cash equivalents were held in our foreign subsidiaries. If it becomes necessary or desirable to repatriate foreign funds, we may have to pay federal, state, and local income taxes as well as foreign withholding taxes upon repatriation. We consider the earnings of our foreign subsidiaries to be permanently reinvested. As a result, domestic and foreign taxes on such earnings have not been provided in our financial statements. It is not practical to estimate the amount of tax we would have to pay upon repatriation due to the complexity of the tax laws and other factors.

General Risk Factors

The provision in our amended and restated bylaws, requiring exclusive forum in certain courts in The Commonwealth of Massachusetts or the federal district court for the District of Massachusetts for certain types of lawsuits, may discourage lawsuits against us and our directors, officers, and employees.

Our amended and restated bylaws provide that unless we consent in writing to the selection of an alternative forum, the Business Litigation Section of the Superior Court of Suffolk County, Massachusetts (the “BLS”) or, if the BLS lacks jurisdiction, the federal district court for the District of Massachusetts, Eastern Division, shall be the exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of a fiduciary duty owed by any of our directors, officers, or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to the Massachusetts Business Corporation Act (the “MBCA”), our articles of organization, or our bylaws (as each may be amended from time to time), or (iv) any action asserting a claim governed by the internal affairs doctrine.

The choice of forum provision may increase costs to bring a claim, discourage claims, or limit a stockholder’s ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other employees, which may discourage such lawsuits against us or our directors, officers, and other employees. Alternatively, if a court were to find the choice of forum provision in our amended and restated bylaws to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions. The exclusive forum provision in our amended and restated bylaws will not preclude or contract the scope of exclusive federal or concurrent jurisdiction for actions brought under the federal securities laws, including the Securities Exchange Act of 1934, as amended, or the Securities Act of 1933, as amended, or the respective rules and regulations promulgated thereunder.

Material adverse developments in global economic conditions, or the occurrence of certain other world events, could affect demand for our products, increase our costs of operation and harm our business.

Global economic uncertainty has produced, and continues to produce, substantial stress, volatility, illiquidity and disruption of global credit and other financial markets. Various factors contribute to the uncertain economic environment, including the level and volatility of interest rates, high inflation, the conflict between Russia and Ukraine and between Israel and Gaza, an actual recession or fears of a recession, trade policies and tariffs, and geopolitical tensions. Economic uncertainty has and could continue to negatively affect the business and purchasing decisions of companies in industries in which our customers operate. As global economic conditions experience stress and negative volatility, or if there is an escalation in regional or global conflicts, the ability and willingness of our customers to make investments in technology may be impacted, which in turn may delay or reduce the purchases of our software and services and also impact the ability and willingness of our customers to pay amounts due to us or otherwise honor their contractual commitments. These clients may also become subject to increasingly restrictive regulatory requirements, which could limit or delay their ability to proceed with technology purchases and may result in longer sales cycles, increased price competition, and reductions in sales of our products and services. At the same time, factors such as inflation may increase our costs of operation. The combination of these factors could negatively impact our business, operating results, and financial condition.

We are exposed to fluctuations in foreign currency exchange rates that could negatively impact our financial results and cash flows.

Because a significant portion of our business is conducted outside of the U.S., we face exposure to movements in foreign currency exchange rates. Our international sales are usually denominated in foreign currencies. The operating expenses of our foreign operations are also primarily denominated in foreign currencies, which partially offset our foreign currency exposure on our international sales. Our results of operations and cash flows are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the U.S. dollar, the Euro, and the Australian dollar relative to the British Pound. These exposures may change over time as business practices evolve. We do not currently use foreign currency forward contracts to hedge our exposure to changes in foreign currency exchange rates. We may enter into hedging contracts again in the future if we believe it is appropriate.

Our realized gain or loss for foreign currency fluctuations will depend on the size and type of cross-currency exposures that we enter into, the currency exchange rates associated with these exposures and changes in those rates, whether we have entered forward contracts to offset these exposures, and other factors. All these factors could materially impact our operating results, financial condition, and cash flows.

The market price of our common stock has been and is likely to continue to be volatile.

The market price of our common stock may be highly volatile and fluctuate due to a variety of factors, some of which are related in complex ways.

Factors that may affect the market price of our common stock include:

- actual or anticipated fluctuations in our financial condition and operating results;
- variance in our financial performance from expectations of securities analysts;
- changes in our projected operating and financial results;
- changes in the prices of our products and professional services;
- changes in laws or regulations applicable to our products or services;
- announcements by our competitors or us of significant business developments, acquisitions, or new offerings;
- our involvement in any litigation or investigations by regulators, including litigation judgments, settlements, or other litigation-related costs;
- our sale of our common stock or other securities;
- changes in our Board of Directors, senior management, or key personnel;
- the trading volume of our common stock;
- price and volume fluctuations in the overall stock market;
- changes in the anticipated future size and growth rate of our market; and
- general economic, regulatory, political, and market conditions.

Broad market and industry fluctuations, as well as general economic, regulatory, political, and market conditions, may negatively impact the market price of our common stock. In the past, companies that have experienced volatility in the market price of their securities have been subject to securities class action litigation. We may be the target of this type of litigation in the future, which could result in substantial costs and divert our management's attention.

We may fail to meet our publicly announced guidance or other expectations about our business and future operating results, which could cause our stock price to decline.

We have provided and may continue to give guidance on our business, future operating results, and other business metrics. In developing this guidance, our management must make certain assumptions and judgments about our future performance. Furthermore, analysts and investors may develop and publish their own projections of our business, which may form a consensus about our future performance. Our business results may vary significantly from such guidance or that consensus due to a number of factors, many of which are outside of our control and which could materially adversely affect our operations and operating results. Furthermore, if we make downward revisions of our previously announced guidance, or if our publicly announced guidance of future operating results fails to meet expectations of securities analysts, investors, or other interested parties, our common stock price may decline.

If securities or industry analysts do not publish research or reports about our business, or publish negative reports about our business, our stock price and trading volume could decline.

The trading market for our common stock depends partly on the research and reports that securities and industry analysts publish about us or our business. We do not have any control over these analysts. If our financial performance fails to meet analyst estimates or one or more of the analysts who cover us downgrade our shares or change their opinion of our shares, our stock price will likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

We recognize the critical importance of maintaining the safety and security of our systems and data, and have a holistic approach for overseeing and managing cybersecurity and related risks. Our Board of Directors (the "Board"), the Audit Committee of the Board (the "Audit Committee"), and our management are actively involved in the oversight of our risk management program, of which cybersecurity represents an important component. We have established policies, standards, processes, and practices for assessing, identifying, and managing material risks from cybersecurity threats. A key component of this is our standing Security Steering Group ("SSG") whose members include, among others, our Chief Information Security Officer ("CISO"), Chief Product Officer, and Chief Technical Systems Officer. We have devoted significant financial and personnel resources to implement and maintain security measures to meet regulatory requirements and customer expectations, and we intend to continue to make significant investments to maintain the security of our data and cybersecurity infrastructure. There can be no guarantee that our policies, standards, processes, and practices will be properly followed in every instance or that they will be effective.

Although we are not aware of having experienced any prior material data breaches, regulatory non-compliance incidents, or cyber security incidents, we may in the future be impacted by such an event, exposing our clients and us to the risk of someone obtaining access to our information, to the information of our clients or their customers, or to our intellectual property, disabling or degrading service, or sabotaging systems or information. Any such security breach could result in a loss of confidence in the security of our services, damage our reputation, disrupt our business, require us to incur significant costs of investigation, remediation, and/or payment of a ransom, lead to legal liability, negatively impact our future sales, and result in a substantial financial loss. For additional information, see "Item 1A. Risk Factors" of this Annual Report.

Risk Management and Strategy

Our policies, standards, processes, and practices for assessing, identifying, and managing material risks from cybersecurity threats are integrated into our overall risk management program and are based on frameworks established by the National Institute of Standards and Technology, the International Organization for Standardization, and certain other applicable industry standards.

Our cybersecurity program focuses on the following key areas:

Collaboration

We have implemented a governance structure and processes to aggregate reported cybersecurity risks on behalf of Pega Cloud, Pega's software products, and the corporate environment. Our SSG is responsible for providing strategic direction for implementing and maintaining our cyber risk management program.

Risk Assessment

Our cyber risk management program is designed to follow the ISO 31000 and the NIST Special Publication 800-37 frameworks and is in the scope of our ISO 27001 certifications.

At least annually, we conduct cybersecurity risk assessments that consider information from internal stakeholders, known information security vulnerabilities, and information from external sources, such as reported security incidents that have impacted other companies, industry trends, and evaluations by third parties and consultants. The results of the assessments are provided to our SSG and are used to drive alignment on, and prioritization of, initiatives to enhance our security controls, make recommendations to improve processes, and inform our broader enterprise-level risk assessment. Key findings of these assessments are periodically presented to the Board and the Audit Committee.

Technical Safeguards

We regularly assess and deploy technical safeguards designed to protect our information systems from cybersecurity threats. Such safeguards are regularly evaluated and improved based on vulnerability assessments, cybersecurity threat intelligence, and incident response experience.

Incident Response and Recovery Planning

We have implemented Cyber Incident Response Programs, which are in the scope of our ISO 27001 certifications. We have also implemented Business Continuity Programs, which are in the scope of our ISO 22301 certification. We have established comprehensive incident response and recovery plans and test and evaluate the effectiveness of those plans regularly.

Third-Party Risk Management

We have implemented a Vendor Cybersecurity Risk Management Program ("VCRMP"), which is in the scope of our ISO 27001 certifications. The VCRMP controls are designed to identify and mitigate cybersecurity threats associated with our use of third-party service providers. These providers are subject to security risk assessments at the time of onboarding, contract renewal, and upon detection of an increase in risk profile. We use a variety of inputs in making these risk assessments, including information supplied by providers and third parties. In addition, we require our providers to meet appropriate security requirements, controls and responsibilities, and investigate security incidents that have impacted our third-party providers, as appropriate.

Education and Awareness

We require all employees to participate in security awareness training, including frequent phishing tests. Currently, our mandatory employee training courses include Security Awareness, Physical Security Awareness, Mobile Device Security, Business Continuity and Phishing, Work From Home, and AI Chatbot. In addition, all of our employee software developers are required to take additional security awareness training, currently including Secure Development. We periodically adjust the list of mandatory and optional courses.

Corporate Security Posture

We periodically conduct independent security assessments to assess its security posture and to inform where cyber security investments should be made. For systems in our corporate environment on which our cloud certifications have an operational dependency, we also maintain ISO/IEC 27001 certifications relating to overall IT processes and controls and ISO 22301 certification relating to business continuity.

Product Security Posture

To facilitate identification of security vulnerabilities in our products, we periodically conduct third party penetration tests and participate in the independent Verified By Veracode program, as detailed on its website (<https://www.veracode.com/verified/directory/pegasystemsInc>) which is included as an inactive reference and the content of which is not incorporated by reference into this Annual Report. We also generate a monthly software bill of materials that identifies open source included in certain of our product offerings and periodically have an independent security assessment firm evaluate the security risks linked to suppliers we use, including source code repositories, the infrastructure employed for software development, and the mechanisms used for software delivery, such as Amazon Web Services (“AWS”), Google Cloud, and Microsoft Azure. Our Chief Product Officer reviews these findings and provides updates to our SSG.

We regularly release new versions of our products to address identified security vulnerabilities, enabling clients to stay updated with the latest product releases. However, even after we make these updates available, it is possible that clients do not implement these updates or use products on extended support that do not include security updates.

Pega Cloud Security Posture

Pega Cloud undergoes several security assessments a year. Redacted versions of these reports are made available to our clients. Pega Cloud also maintains several security certifications, which are listed at <http://pega.com/trust> which is included as an inactive reference and the content of which is not incorporated by reference into this Annual Report.

Pega Cloud for Government is rated FedRAMP Moderate and undergoes several security assessments a year as part of the FedRAMP certification process.

Our Chief Technical Systems Officer reviews these assessments and provides updates to our SSG.

Governance

Board Oversight

As part of our corporate governance process, the Board, along with the Audit Committee, oversees our risk management process, which includes cybersecurity and related risks. Our CISO periodically meets with the Board and Audit Committee to inform and update them on our cybersecurity program.

SSG and Key Personnel

We have a standing SSG whose members include, among others, our CISO, Chief Product Officer, and Chief Technical Systems Officer. The SSG is charged with providing strategic direction for the implementation and ongoing operation of our cyber security program. The SSG meets at least quarterly. Our CISO chairs the SSG and decisions and recommendations are based on a consensus of the members.

Our CISO has twenty years of professional experience, with eleven years specifically in information security roles. He has been with Pega for four years and has a Master of Science degree from Northwestern University.

Our Chief Product Officer has been with Pega for thirty-one years, has extensive experience in software development, and has a Bachelor of Science from the Indiana University of Pennsylvania.

Our Chief Technical Systems Officer has been with Pega for six years and has twenty-five years of technology management experience, with thirteen years of leadership roles in cloud services and related information security issues, and served in the U.S. Navy and holds a degree in Business Administration from the College of Technology at the State University of New York – Farmingdale.

ITEM 2. PROPERTIES

Our principal administrative, sales, marketing, support, and research and development operations are in Cambridge, Massachusetts, Waltham, Massachusetts, and Hyderabad, India. We also maintain offices elsewhere in the Americas, Europe, and the Asia-Pacific regions. All of our properties are leased. We believe we will be able to obtain future space as needed on acceptable and commercially reasonable terms.

For additional information, see "Note 10. Leases" in Item 8 of this Annual Report.

ITEM 3. LEGAL PROCEEDINGS

The information set forth in "Note 20. Commitments And Contingencies" in the “Notes to Consolidated Financial Statements” included in Part II, Item 8 of this Annual Report is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

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

Market information

Our common stock is quoted on the NASDAQ Global Select Market under the symbol "PEGA."

Holders

As of February 6, 2024, we had 49 stockholders of record.

Dividends

During 2023, 2022, and 2021, we paid a quarterly cash dividend of \$0.03 per share of common stock. We expect to pay a quarterly cash dividend of \$0.03 per share; however, the Board of Directors may terminate or modify this dividend program without prior notice.

Issuer purchases of equity securities ⁽¹⁾

Common stock repurchased in the three months ended December 31, 2023:

<i>(in thousands, except per share amounts)</i>	Total Number of Shares Purchased ⁽²⁾	Average Price Paid per Share ⁽²⁾	Total Number of Shares Purchased as Part of Publicly Announced Share Repurchase Program	Approximate Dollar Value of Shares That May Yet Be Purchased at Period End Under Publicly Announced Share Repurchased Programs
October 1, 2023 - October 31, 2023	—	\$ —	—	\$ 60,000
November 1, 2023 - November 30, 2023	3	\$ 52.39	—	\$ 60,000
December 1, 2023 - December 31, 2023	5	\$ 52.73	—	\$ 60,000
Total	<u>8</u>	\$ 52.59		

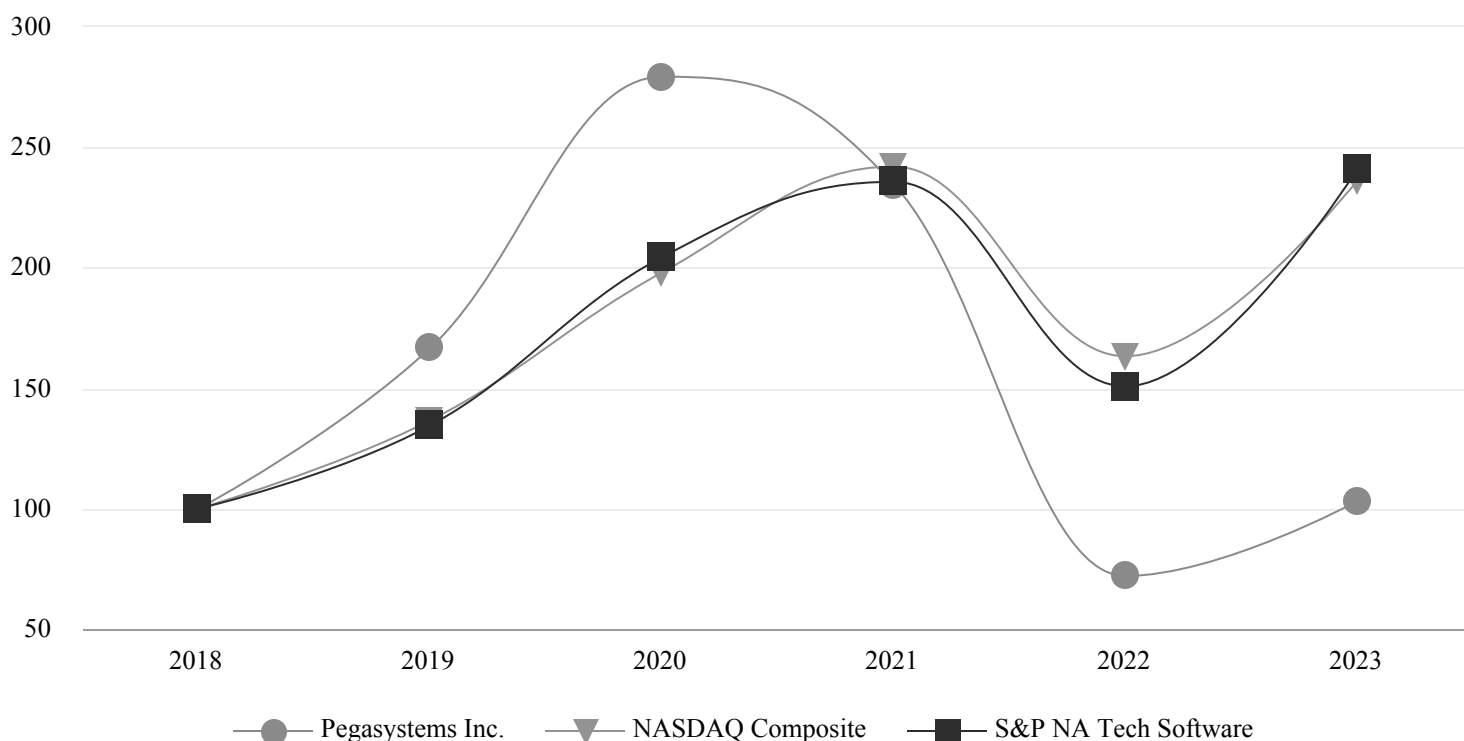
(1) For additional information, see "Stock Repurchase Program" in Item 7 of this Annual Report.

(2) Shares withheld to cover the option exercise price and tax withholding obligations under the net settlement provisions of our stock compensation awards have been included in these amounts.

Stock performance graph and cumulative total stockholder return ⁽¹⁾

The following performance graph represents a comparison of the cumulative total stockholder return, assuming the reinvestment of dividends, for a \$100 investment on December 31, 2018 in our common stock, the Total Return Index for the NASDAQ Composite, a broad market index, and the Standard & Poor's ("S&P") North American Technology Sector - Software Index™ ("S&P NA Tech Software"), a published industry index.

Comparison of 5 Year Cumulative Total Return



	December 31,					
	2018	2019	2020	2021	2022	2023
Pegasystems Inc.	\$ 100.00	\$ 166.79	\$ 279.35	\$ 234.61	\$ 72.03	\$ 103.03
NASDAQ Composite	\$ 100.00	\$ 136.69	\$ 198.10	\$ 242.03	\$ 163.28	\$ 236.17
S&P NA Tech Software	\$ 100.00	\$ 134.59	\$ 204.44	\$ 235.70	\$ 150.80	\$ 240.73

(1) The graph lines merely connect measurement dates and do not reflect fluctuations between those dates.

ITEM 6. [RESERVED]

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

NON-GAAP MEASURES

Our non-GAAP financial measures should only be read in conjunction with our consolidated financial statements prepared in accordance with GAAP. We believe that these measures help investors understand our core operating results and prospects, which is consistent with how management measures and forecasts our performance without the effect of often one-time charges and other items outside our normal operations. They are not a substitute for financial measures prepared under U.S. GAAP. A reconciliation of GAAP and non-GAAP measures is located with each non-GAAP measure.

BUSINESS OVERVIEW

We develop, market, license, host, and support enterprise software that helps organizations build agility into their business so they can adapt to change. Our powerful, low-code platform for workflow automation and artificial intelligence-powered decisioning enables the world's leading brands and government agencies to hyper-personalize customer experiences, streamline customer service, and automate mission-critical business processes and workflows. With Pega, our clients can leverage our artificial intelligence ("AI") technology and scalable architecture to accelerate their digital transformation. In addition, our client success teams, world-class partners, and clients leverage our Pega Express™ methodology to design and deploy mission-critical applications quickly and collaboratively.

Our target clients are Global 2000 organizations and government agencies that require solutions to distinguish themselves in the markets they serve. Our solutions achieve and facilitate differentiation by increasing business agility, driving growth, improving productivity, attracting and retaining customers, and reducing risk. Along with our partners, we deliver solutions tailored to the specific industry needs of our clients.

Performance metrics

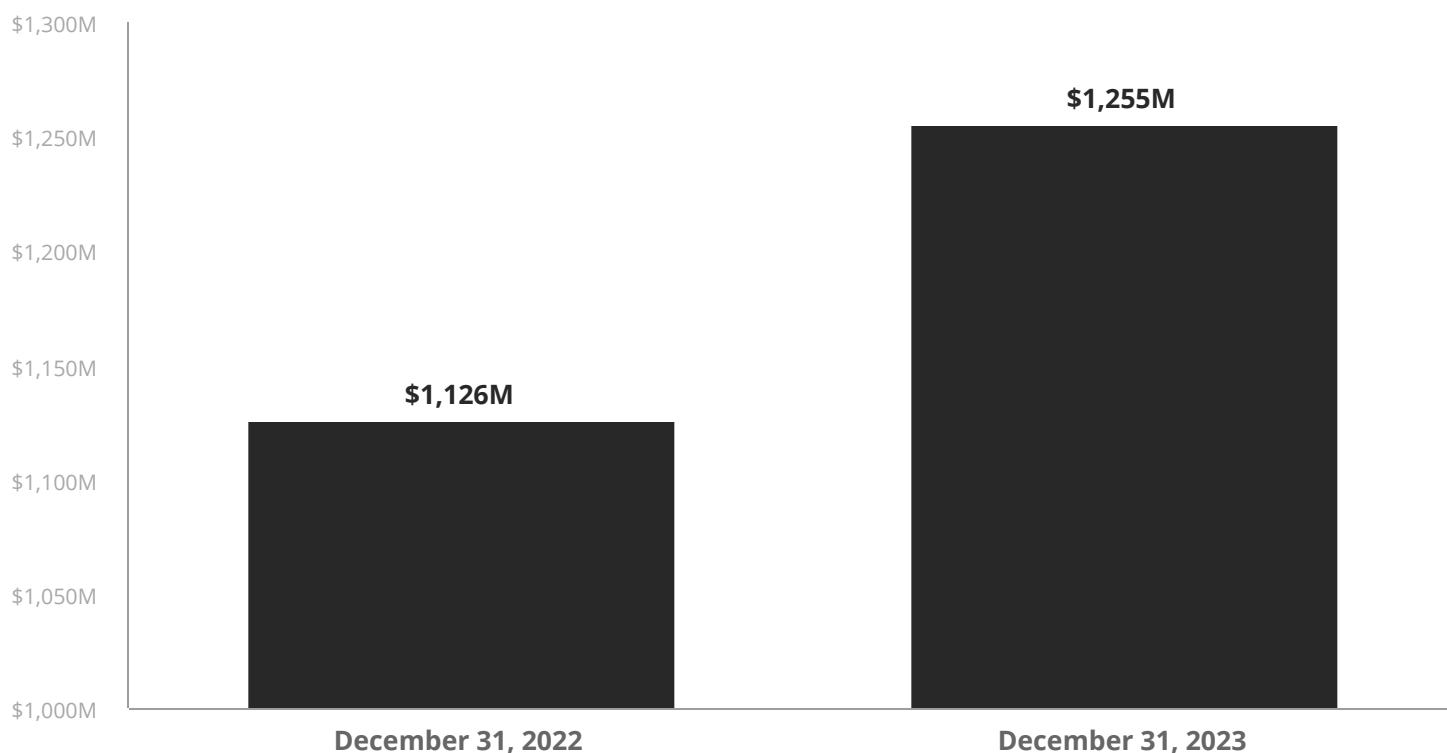
We use performance metrics to analyze and assess our overall performance, make operating decisions, and forecast and plan for future periods, including:

Annual contract value (“ACV”)

ACV represents the annualized value of our active contracts as of the measurement date. The contract's total value is divided by its duration in years to calculate ACV. ACV is a performance measure that we believe provides useful information to our management and investors.

In 2023, the Company revised its ACV methodology for maintenance and all contracts less than 12 months as its overall client renewal rate exceeds 90%. The impact of the change was \$3 million or 0.3% of Total ACV or less for all quarters in 2022. Previously disclosed ACV amounts have been updated to allow for comparability. This simplification, made possible by improvements to the Company’s financial systems, ensures that ACV for all contract types and lengths is consistently calculated as the total contract value divided by the duration in years. Previously, ACV for maintenance was calculated as the maintenance revenue for the quarter then ended, multiplied by four, and ACV for contracts less than 12 months was equal to the contract’s total value. The Company believes the simplified methodology better represents the current value of its contracts and better aligns its definition with comparable companies.

ACV Growth 11% (11% Constant Currency)



Reconciliation of ACV and ACV (constant currency)

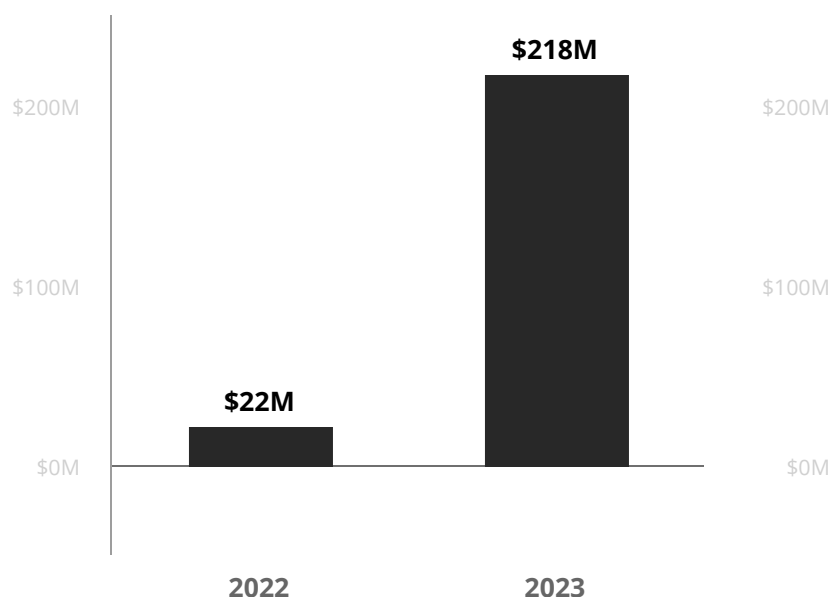
(in millions, except percentages)

	December 31, 2022	December 31, 2023	1-Year Change
ACV	\$ 1,126	\$ 1,255	11 %
Impact of changes in foreign exchange rates	—	(11)	
ACV (constant currency)	<u>\$ 1,126</u>	<u>\$ 1,244</u>	11 %

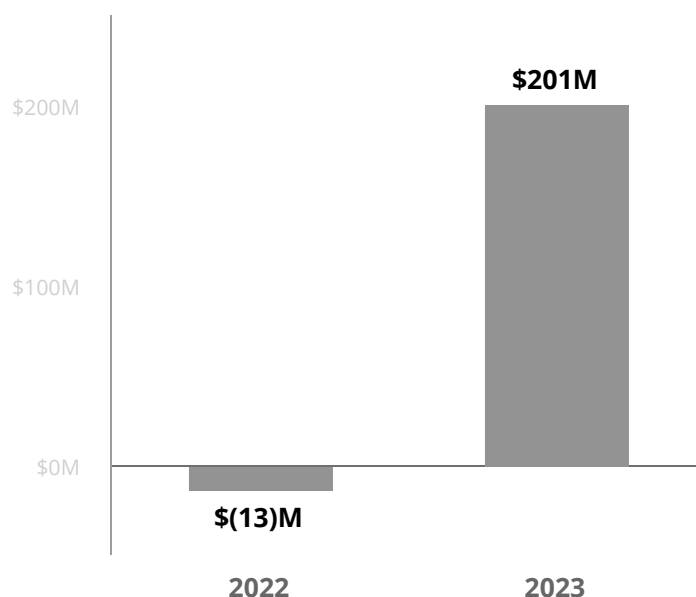
Note: ACV (constant currency) is calculated by applying the December 31, 2022 foreign exchange rates to all periods shown.

Cash flow

Operating Cash Flow



Free Cash Flow



Note: Starting in the third quarter of 2023, the Company calculated free cash flow as cash provided by operating activities less investments in property and equipment. To ensure comparability, previously disclosed amounts have been updated.

	2023		2022	
		Margin ⁽²⁾		Margin ⁽²⁾
Cash provided by operating activities	\$ 217,785	15 %	\$ 22,336	2 %
Investment in property and equipment	(16,781)		(35,379)	
Free cash flow ⁽¹⁾	<u>\$ 201,004</u>	14 %	<u>\$ (13,043)</u>	(1)%
Supplemental information ⁽³⁾				
Restructuring	\$ 29,401		\$ —	
Legal fees	14,645		41,789	
Interest on convertible senior notes	4,134		4,500	
Other	601		6,805	
Income taxes	11,664		7,645	
	<u>\$ 60,445</u>		<u>\$ 60,739</u>	
Effect of supplemental information to Rule of 40 achievement ⁽⁴⁾		4 %		5 %

(1) Our non-GAAP free cash flow is defined as cash provided by operating activities less investment in property and equipment. Investment in property and equipment fluctuates in amount and frequency and is significantly affected by the timing and size of investments in our facilities. We provide information on free cash flow to enable investors to assess our ability to generate cash without incurring additional external financings. This information is not a substitute for financial measures prepared under U.S. GAAP. Starting in the third quarter of 2023, the Company calculated free cash flow as cash provided by operating activities less investments in property and equipment. To ensure comparability, previously disclosed amounts have been updated.

(2) Operating and free cash flow margin are calculated by comparing the respective cash flow to total revenue.

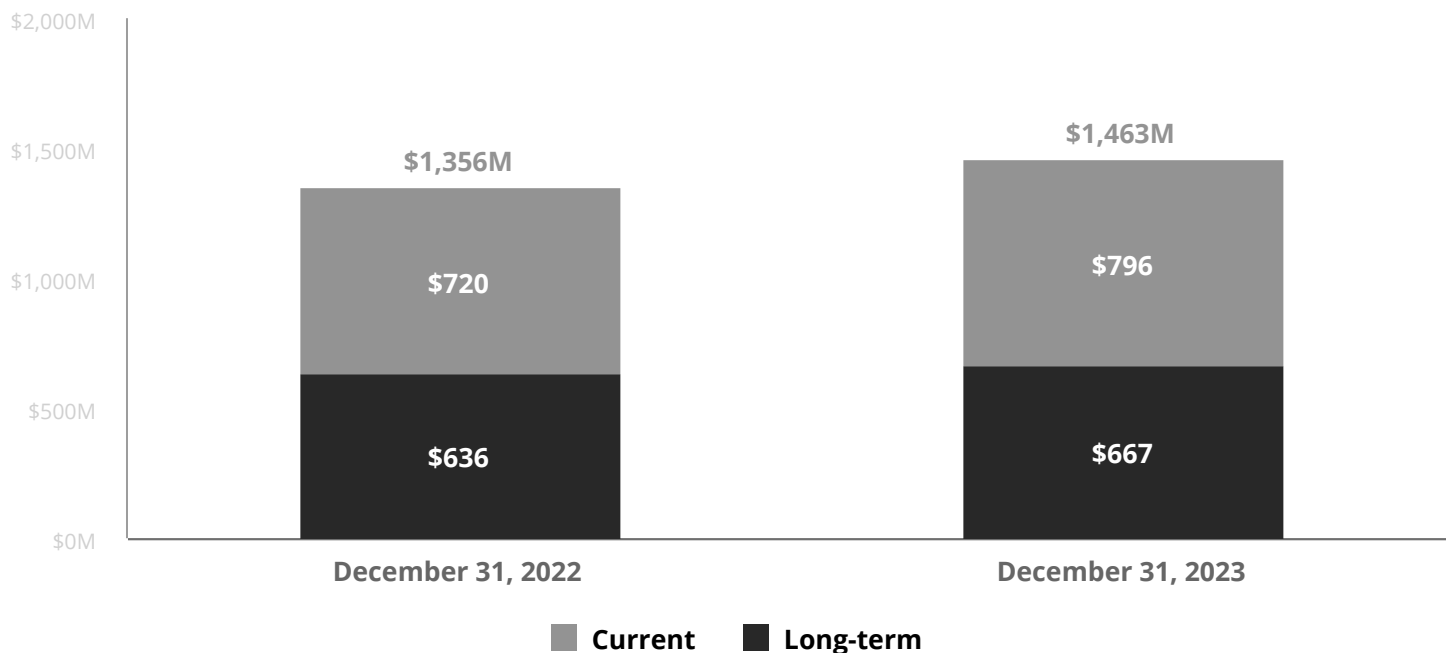
(3) The supplemental information discloses items that affect our cash flows and are considered by management not to be representative of our core business operations and ongoing operational performance.

- **Restructuring:** Restructuring fluctuates in amount and frequency and is significantly affected by the timing and size of our restructuring activities.
- **Legal fees:** Legal and related fees arising from proceedings outside the ordinary course of business.
- **Interest on convertible senior notes:** In February 2020, we issued convertible senior notes, due March 1, 2025, in a private placement. The Notes accrue interest at an annual rate of 0.75%, payable semi-annually in arrears on March 1 and September 1.
- **Other:** Fees related to capital advisory services, canceled in-person sales and marketing events, and incremental costs incurred integrating acquisitions.
- **Income taxes:** Direct income taxes paid net of refunds received.

(4) Rule of 40: A performance metric calculated by adding the annual contract value (“ACV”) growth rate and the free cash flow margin. We also provide a table of supplemental information of other items that affect our cash flows and Rule of 40 achievement.

Remaining performance obligations (“Backlog”)

Backlog Growth Current - 10% (9% Constant Currency) Total - 8% (7% Constant Currency)



Reconciliation of Backlog and Constant Currency Backlog (Non-GAAP)

	December 31, 2022	December 31, 2023	1 Year Growth Rate
Backlog - GAAP	\$ 1,356	\$ 1,463	8 %
Impact of changes in foreign exchange rates	—	(16)	
Constant currency backlog	\$ 1,356	\$ 1,447	7 %

Note: Constant currency Backlog is calculated by applying the Q4 2022 foreign exchange rates to all periods shown.

RESULTS OF OPERATIONS

Revenue

(Dollars in thousands)	2023		2022		Change	
Pega Cloud	\$ 461,328	32 %	\$ 384,271	29 %	\$ 77,057	20 %
Maintenance	331,856	24 %	317,564	24 %	14,292	5 %
Subscription services	793,184	56 %	701,835	53 %	91,349	13 %
Subscription license	407,625	28 %	366,063	28 %	41,562	11 %
Subscription	1,200,809	84 %	1,067,898	81 %	132,911	12 %
Perpetual license	10,101	1 %	19,293	1 %	(9,192)	(48)%
Consulting	221,706	15 %	230,654	18 %	(8,948)	(4)%
	\$ 1,432,616	100 %	\$ 1,317,845	100 %	\$ 114,771	9 %

- The increase in Pega Cloud revenue in 2023 was primarily due to the growth of the hosted client base as our clients continued to expand their use of Pega Cloud.
- The increase in maintenance revenue in 2023 was primarily due to continued demand for our subscription license offerings, which are sold with maintenance committed for the full term of the subscription license
- The increase in subscription license revenue in 2023 was primarily due to high renewal activity, resulting in an increase in license deliveries.
- The decrease in perpetual license revenue in 2023 reflects our strategy of promoting subscription-based arrangements.

- The decrease in consulting revenue in 2023 was primarily due to lower consultant billable hours outside of North America and lower realization rates in North America.

Gross profit

(Dollars in thousands)	2023		2022		Change	
		Gross Profit %		Gross Profit %		
Pega Cloud	\$ 342,670	74 %	\$ 267,523	70 %	\$ 75,147	28 %
Maintenance	306,264	92 %	295,576	93 %	10,688	4 %
Subscription services	648,934	82 %	563,099	80 %	85,835	15 %
Subscription license	405,019	99 %	363,421	99 %	41,598	11 %
Subscription	1,053,953	88 %	926,520	87 %	127,433	14 %
Perpetual license	10,034	99 %	19,118	99 %	(9,084)	(48)%
Consulting	(9,854)	(4)%	3,572	2 %	(13,426)	*
	<u>\$ 1,054,133</u>	<u>74 %</u>	<u>\$ 949,210</u>	<u>72 %</u>	<u>\$ 104,923</u>	<u>11 %</u>

* not meaningful

The gross profit change in 2023 was primarily due to a shift in the revenue mix. Also contributing to the change was:

- The increase in Pega Cloud gross profit percent in 2023 was primarily due to an increase in cost efficiency, particularly for hosting services, as Pega Cloud continues to grow and scale.
- The decrease in maintenance gross profit percent in 2023 was primarily due to an increase in compensation and benefits as a result of an increase in headcount.
- The decrease in consulting gross profit percent in 2023 was primarily due to lower consultant billable hours outside of North America and lower realization rates in North America.

Operating expenses

(Dollars in thousands)	2023		2022		Change	
		% of Revenue		% of Revenue		
Selling and marketing	\$ 559,177	39 %	\$ 624,789	47 %	\$ (65,612)	(11)%
Research and development	\$ 295,512	21 %	\$ 294,349	22 %	\$ 1,163	— %
General and administrative	\$ 96,743	7 %	\$ 117,734	9 %	\$ (20,991)	(18)%
Restructuring	\$ 21,747	2 %	\$ 21,743	2 %	\$ 4	— %

* not meaningful

- The decrease in selling and marketing in 2023 was primarily due to a decrease in compensation and benefits of \$59.5 million due to reduced headcount as we optimize our go-to-market strategy. For additional information, see "Note 12. Restructuring" in Item 8 of this Annual Report.
- The decrease in general and administrative in 2023 was primarily due to a decrease of \$20.7 million in legal fees and related expenses arising from proceedings outside the ordinary course of business. We expect to continue to incur additional costs for these proceedings. For additional information, see "Note 20. Commitments And Contingencies" in Item 8 of this Annual Report.
- The restructuring in 2023 and 2022 was primarily due to our efforts to optimize our go-to-market organization. For additional information, see "Note 12. Restructuring" in Item 8 of this Annual Report.

Other income and expenses

(Dollars in thousands)	2023	2022	Change	
Foreign currency transaction (loss) gain	\$ (5,242)	\$ 4,560	\$ (9,802)	*
Interest income	9,259	1,643	7,616	464 %
Interest expense	(6,876)	(7,792)	916	12 %
(Loss) on capped call transactions	(1,348)	(57,382)	56,034	98 %
Other income, net	18,693	6,579	12,114	184 %
	<u>\$ 14,486</u>	<u>\$ (52,392)</u>	<u>\$ 66,878</u>	<u>*</u>

* not meaningful

- The change in foreign currency transaction (loss) gain in 2023 was primarily due to the impact of fluctuations in foreign currency exchange rates associated with foreign currency-denominated cash and receivables held by our subsidiary in the United Kingdom.
- The increase in interest income in 2023 was primarily due to an increase in market interest rates.
- The decrease in interest expense in 2023 was due to our repurchases of convertible senior notes. For additional information, see "Note 11. Debt" in Item 8 of this Annual Report.
- The change in (loss) on capped call transactions in 2023 was due to fair value adjustments for our capped call transactions.

- The increase in other income, net in 2023, was due to a \$7.9 million gain from repurchases of our convertible senior notes and a \$10.9 million increase in the value of equity securities held in our venture investments portfolio. For additional information, see "Note 11. Debt" and "Note 13. Fair Value Measurements" in Item 8 of this Annual Report.

Provision for income taxes

(Dollars in thousands)

	<u>2023</u>	<u>2022</u>
Provision for income taxes	\$ 27,632	\$ 183,785
Effective income tax rate	29 %	114 %

The effective income tax rate in the year ended December 31, 2023 was primarily driven by the valuation allowance on our deferred tax assets in the U.S. and U.K. and the taxable income position in the U.S and the UK., partially offset by available tax credits and losses in those jurisdictions.

On December 15, 2022, the European Union (EU) Member States formally adopted the EU's Pillar Two Directive, which generally provides for a minimum effective tax rate of 15%, as established by the Organization for Economic Co-operation and Development (OECD) Pillar Two Framework that was supported by over 130 countries worldwide. The effective dates are January 1, 2024, and January 1, 2025, for different aspects of the directive. A significant number of countries are also implementing similar local legislation. The Company is continuing to evaluate the potential impact of the Pillar Two Framework on future periods, pending legislative adoption by additional individual countries.

LIQUIDITY AND CAPITAL RESOURCES

(in thousands)

	<u>2023</u>	<u>2022</u>
Cash provided by (used in)		
Operating activities	\$ 217,785	\$ 22,336
Investing activities	(50,750)	13,075
Financing activities	(81,963)	(46,989)
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	2,701	(3,333)
Net increase (decrease) in cash, cash equivalents, and restricted cash	<u>\$ 87,773</u>	<u>\$ (14,911)</u>

(in thousands)

	<u>December 31,</u>	
	<u>2023</u>	<u>2022</u>
Held in U.S. entities	\$ 263,453	\$ 248,389
Held in foreign entities	159,885	48,832
Total cash, cash equivalents, and marketable securities	423,338	297,221
Restricted cash	2,925	—
Total cash, cash equivalents, marketable securities, and restricted cash	<u>\$ 426,263</u>	<u>\$ 297,221</u>

We believe that our current cash, marketable securities, cash flow provided by operations, borrowing capacity, and ability to engage in capital market transactions will be sufficient to fund our operations, stock repurchases, and quarterly cash dividends for at least the next 12 months and to meet our known long-term cash requirements, including our convertible senior notes due March 1, 2025. Whether these resources are adequate to meet our liquidity needs beyond that period will depend on our future growth, operating results, and the investments needed to support our operations. We may utilize available funds or seek external financing if we require additional capital resources.

If it becomes necessary or desirable to repatriate foreign funds, we may have to pay federal, state, and local income taxes as well as foreign withholding taxes upon repatriation. However, estimating the taxes we would have to pay is impracticable due to the complexity of income tax laws and regulations. For additional information, see risk factor "If it becomes necessary or desirable to repatriate our foreign cash balances to the United States, we may be subject to increased taxes, other restrictions, and limitations" in Item 1A of this Annual Report.

Operating activities

The change in cash provided by operating activities in 2023 was primarily due to growth in client collections, the impact of our cost-efficiency initiatives, and lower legal fees and related costs arising from proceedings outside the ordinary course of business. We expect to continue to incur additional costs for these proceedings. For additional information, see "Note 12. Restructuring" and "Note 20. Commitments And Contingencies" in Item 8 of this Annual Report.

Investing activities

The change in cash (used in) provided by investing activities in 2023 was primarily due to our increased investments in financial instruments and reduced investment in property and equipment as we optimize our office space.

Financing activities

Debt financing

In February 2020, we issued \$600 million in aggregate principal amount of convertible senior notes, which mature on March 1, 2025. In the year ended December 31, 2023, we paid \$89 million to repurchase \$97.7 million in aggregate principal amount of convertible senior notes. As of December 31, 2023, we had \$502 million in aggregate principal amount of convertible senior notes outstanding due on March 1, 2025. For additional information, see "Note 11. Debt" in Item 8 of this Annual Report.

In November 2019, and as since amended, we entered into a five-year \$100 million senior secured revolving credit agreement (the "Credit Facility") with PNC Bank, National Association. As of December 31, 2023 and December 31, 2022, we had \$27.3 million in outstanding letters of credit, reducing available borrowing capacity under the Credit Facility, but no outstanding cash borrowings. For additional information, see "Note 11. Debt" in Item 8 of this Annual Report.

Stock repurchase program

Changes in the remaining stock repurchase authority:

<i>(in thousands)</i>	Year Ended December 31, 2023
December 31, 2022	\$ 58,075
Authorizations ⁽¹⁾	1,925
December 31, 2023	<u>\$ 60,000</u>

(1) On April 25, 2023, our Board of Directors extended the expiration date of our current share repurchase program from June 30, 2023 to June 30, 2024, and the amount of stock we are authorized to repurchase was increased to \$60 million.

Common stock repurchases

<i>(in thousands)</i>	Year Ended December 31,			
	2023		2022	
	Shares	Amount	Shares	Amount
Stock repurchase program	—	—	280	24,508
Tax withholdings for net settlement of equity awards	44	1,916	342	20,620
	<u>44</u>	<u>\$ 1,916</u>	<u>622</u>	<u>\$ 45,128</u>

In 2023 and 2022, instead of receiving cash from the equity holders, we withheld shares with a value of \$1.2 million and \$14.3 million, respectively, for the exercise price of options. These amounts are not included in the table above.

Dividends

<i>(in thousands)</i>	2023	2022
Dividend payments to stockholders	\$ 9,964	\$ 9,834

We intend to pay a quarterly cash dividend of \$0.03 per share. However, the Board of Directors may terminate or modify the dividend program without prior notice.

Contractual obligations

As of December 31, 2023, our contractual obligations were:

<i>(in thousands)</i>	Payments due by period						
	2024	2025	2026	2027	2028 and thereafter	Other	Total
Convertible senior notes ⁽¹⁾	\$ 3,767	\$ 504,154	\$ —	\$ —	\$ —	\$ —	\$ 507,921
Purchase obligations ⁽²⁾	138,662	134,825	126,637	138,208	990	—	539,322
Operating lease obligations	17,971	15,602	11,164	10,114	39,549	—	94,400
Venture investment commitments ⁽³⁾	1,000	—	—	—	—	—	1,000
Liability for uncertain tax positions ⁽⁴⁾	—	—	—	—	—	859	859
	<u>\$ 161,400</u>	<u>\$ 654,581</u>	<u>\$ 137,801</u>	<u>\$ 148,322</u>	<u>\$ 40,539</u>	<u>\$ 859</u>	<u>\$ 1,143,502</u>

(1) Includes principal and interest.

(2) Represents the fixed amount owed for purchase obligations of software licenses, hosting services, and sales and marketing programs.

(3) Represents the maximum funding under existing venture investment agreements. Our venture investment agreements generally allow us to withhold unpaid funds at our discretion.

(4) We cannot reasonably estimate the timing of this cash outflow due to uncertainties in the timing of the effective settlement of tax positions.

A detailed discussion and analysis of the 2022 year-over-year changes can be found in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" of our Annual Report on Form 10-K for the year ended December 31, 2022.

CRITICAL ACCOUNTING ESTIMATES AND SIGNIFICANT JUDGMENTS

Management's discussion and analysis of the financial condition and results of operations is based upon our consolidated financial statements, which have been prepared following accounting principles generally accepted in the U.S. and the rules and regulations of the U.S. Securities and Exchange Commission for annual financial reporting. Preparing 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. We base our estimates and judgments on historical experience, knowledge of current conditions, and beliefs about what could occur in the future, given the available information.

We believe that of our significant accounting policies, described in "Note 2. Significant Accounting Policies" in Item 8 of this Annual Report, the following accounting policies are most important to the portrayal of our financial condition and require the most subjective judgment. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our consolidated financial condition and results of operations. If actual results differ significantly from management's estimates and projections, there could be a material effect on our financial statements.

Revenue recognition

Our client contracts typically contain promises by us to provide multiple products and services. Specifically, contracts associated with Pega Platform sales and other software applications, sold as licenses to use functional intellectual property or as a cloud-based solution, typically include consulting services. Determining whether such products and services within a client contract are considered distinct performance obligations that should be accounted for separately requires significant judgment. Accordingly, we review client contracts to identify all separate promises to transfer goods and services that would be considered performance obligations. Judgment is also required in determining whether an option to acquire additional products and services within a client contract represents a material right that the client would not receive without entering into that contract.

A contract modification is a legally binding change to an existing contract's scope, price, or both. Contract modifications are reviewed to determine whether they should be accounted for as part of the original contract or as a separate contract. This determination requires significant judgment, which could impact the timing of revenue recognition. We typically account for contract modifications prospectively as a separate contract. The additional performance obligation(s) in our contract modifications are generally distinct and priced at their stand-alone selling price.

We allocate the transaction price to the distinct performance obligations, including options in contracts determined to represent a material right, based on each performance obligation's relative stand-alone selling price. Judgment is required in estimating stand-alone selling prices. We maximize the use of observable inputs by maintaining pricing analyses that consider our pricing policies, historical stand-alone sales when they exist, and historical renewal prices charged to clients. We have concluded that the stand-alone selling prices of certain performance obligations, specifically software licenses and Pega Cloud arrangements, are highly variable. In these instances, we estimate the stand-alone selling prices using the residual approach, which is determined based on the total transaction price minus the stand-alone selling price of other performance obligations promised in the contract. We update our stand-alone selling price analysis periodically, including a re-assessment of whether the residual approach used to determine the stand-alone selling prices for software licenses and Pega Cloud arrangements remains appropriate.

Changes in the assumptions or judgments used in determining the performance obligations in client contracts and stand-alone selling prices could significantly impact the timing and amount of revenue we report in a particular period.

For additional information see "Note 2. Significant Accounting Policies", "Note 4. Receivables, Contract Assets, And Deferred Revenue", and "Note 15. Revenue" in Item 8 of this Annual Report

Goodwill and intangible assets impairment

Our goodwill and intangible assets arise from our previous business acquisitions.

- Goodwill is tested for impairment at least annually or as circumstances indicate its value may no longer be recoverable.
- We do not have any intangible assets with indefinite useful lives other than goodwill.
- We perform our annual goodwill impairment test as of November 30th. To assess if goodwill is impaired, we first perform a qualitative assessment to determine whether further impairment testing is necessary. If, based on the qualitative assessment, we consider it more-likely-than-not that our reporting unit's fair value is less than its carrying amount, we perform a quantitative impairment test. An excess of carrying value over fair value would indicate that goodwill may be impaired.
- We periodically reevaluate our business and have determined that we have one operating segment and one reporting unit. If our assumptions change in the future, we may be required to record impairment charges to reduce our goodwill's carrying value. Changes in the valuation of goodwill could materially impact our operating results and financial position.

We evaluate our intangible assets for impairment whenever events or changes in circumstances indicate that such assets' carrying amount may not be recoverable. When evaluating potential impairment of these assets, we specifically consider whether any indicators of impairment are present, including, but not limited to:

- whether there has been a significant adverse change in the business climate that affects the value of an asset;
- whether there has been a significant change in the extent or way an asset is used; and

- whether it is expected that the asset will be sold or disposed of before the end of its originally estimated useful life.

If indicators of impairment are present, we compare the estimated undiscounted cash flows that the asset is expected to generate to the carrying value. The key assumptions of the cash flow model involve significant subjectivity. If such assets are impaired, an impairment is measured by the amount the asset's carrying value exceeds its fair value.

As of December 31, 2023, we had \$81.6 million of goodwill and \$7.0 million of intangible assets. Changes in the valuation of long-lived assets could materially impact our operating results and financial position. To date, there have been no impairments of goodwill or intangible assets.

For additional information see "Note 2. Significant Accounting Policies" and "Note 7. Goodwill And Other Intangible Assets" in Item 8 of this Annual Report.

Accounting for income taxes

Significant judgment is required to determine our provision for income taxes and income tax assets and liabilities, including evaluating uncertainties in applying accounting principles and complex tax laws. Accordingly, changes in tax laws or our interpretation of tax laws and the resolution of any tax audits could significantly impact our financial statements.

We regularly assess the need for a valuation allowance against our deferred tax assets. The future realization of our deferred tax assets ultimately depends on sufficient taxable income within the available carryback or carryforward periods. Changes in our valuation allowance impact income tax expense in the period of adjustment. Our deferred tax valuation allowance requires significant judgment and uncertainties, including assumptions about future taxable income based on historical and projected information.

We recognize deferred tax assets to the extent that we believe they are more likely than not to be realized. In making such a determination, we consider all available objective and verifiable negative and positive evidence, including future reversals of existing taxable temporary differences, projected future taxable income (including the impact of enacted legislation), tax-planning strategies and results of recent operations. The Company determined that the objectively and verifiable negative evidence outweighed the positive evidence, as such maintained a valuation allowance on our U.S. and U.K. deferred tax assets.

We assess our income tax positions and record tax benefits based on management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, we record the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements.

As a global company, we use significant judgment to calculate and provide for income taxes in each of the tax jurisdictions in which we operate. In the ordinary course of our business, transactions and calculations occur whose ultimate tax outcome cannot be certain. Some of these uncertainties arise due to transfer pricing for transactions with our subsidiaries, the determination of tax nexus, and tax credit estimates. In addition, the calculation of acquired tax attributes and the associated limitations are complex. We estimate our exposure to unfavorable outcomes related to these uncertainties and the probability of such outcomes.

Although we believe our estimates are reasonable, there is no guarantee that the final tax outcome will not differ from what is reflected in our historical income tax provisions, returns, and accruals. Such differences, or changes in estimates relating to potential differences, could have a material impact on our income tax provision and operating results in the period such a determination is made.

For additional information see "Note 2. Significant Accounting Policies" and "Note 18. Income Taxes" in Item 8 of this Annual Report.

Capped call transactions

As of December 31, 2023, we had \$502.3 million in aggregate principal outstanding on our convertible senior notes. Additionally, we had Capped Call Transactions that covered 3.7 million shares of our common stock, the number of shares for which the Notes are convertible. These capped call transactions are generally expected to reduce the potential dilution of our common stock upon any conversion of the Notes.

The capped call transactions are accounted for as derivative instruments and do not qualify for the Company's own equity scope exception in ASC 815 since, in some cases of early settlement, the settlement value calculated following the governing documents may not represent a fair value measurement. Applying the accounting framework for the Capped Call Transactions requires the exercise of judgment and the determination of the fair value of the Capped Call Transactions requires us to make significant estimates and assumptions.

The fair value of the Capped Call Transactions at the end of each reporting period is determined using a Black-Scholes option-pricing model. The valuation model uses various market-based inputs, including stock price, remaining contractual term, expected volatility, risk-free interest rate, and expected dividend yield. Management applies judgment when determining expected volatility. We consider the underlying equity security's historical and implied volatility levels. As of December 31, 2023, a hypothetical 10% increase in our stock price would have increased the fair value of the capped call to \$1.6 million, while a hypothetical 10% decrease in our stock price would have decreased the fair value of the capped call to \$0.5 million.

For additional information see "Note 2. Significant Accounting Policies", "Note 11. Debt", and "Note 13. Fair Value Measurements" in Item 8 of this Annual Report.

Loss Contingencies

We are subject to various claims, including claims with customers and vendors, pending and potential legal actions for damages, investigations relating to governmental laws and regulations, and other matters arising out of the normal conduct of our business. When a loss is considered probable and reasonably estimable, we record a liability in the amount of our best estimate for the ultimate loss. However, the likelihood of a loss with respect to a particular contingency is often difficult to predict, and determining a meaningful estimate of the loss or a range of loss may not be practicable based on the information available and the potential effect of future events and decisions by third parties that will determine the ultimate resolution of the contingency. Moreover, it is common for such matters to be resolved over many years, during which time relevant developments and new information must be reevaluated at least quarterly to determine both the likelihood of potential loss and whether it is possible to reasonably estimate a range of possible loss. When a material loss is reasonably possible or probable, but a reasonable estimate cannot be made, disclosure of the proceeding is provided. Legal fees are recognized as incurred when the legal services are provided.

We review all contingencies at least quarterly to determine whether the likelihood of loss has changed and to assess whether a reasonable estimate of the potential loss or range of the loss can be made.

See "Note 2. Significant Accounting Policies" and "Note 20. Commitments And Contingencies" in Item 8 of this Annual Report for additional information.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk of loss from adverse changes in financial market prices and rates.

Foreign currency exposure

Translation risk

Our international operations' operating expenses are primarily denominated in foreign currencies. However, our international sales are also primarily denominated in foreign currencies, partially offsetting our foreign currency exposure.

A hypothetical 10% strengthening in the U.S. dollar against other currencies would have resulted in the following:

	2023	2022	2021
(Decrease) in revenue	(4)%	(3)%	(4)%
(Decrease) increase in net income	(8)%	2 %	1 %

Remeasurement risk

We incur transaction gains and losses from the remeasurement of monetary assets and liabilities denominated in currencies other than the functional currency of the entities in which they are recorded.

We are primarily exposed to changes in foreign currency exchange rates associated with the Australian dollar, Euro, and U.S. dollar-denominated cash, cash equivalents, receivables, and intercompany balances held by our U.K. subsidiary, a British pound functional entity.

A hypothetical 10% strengthening in the British pound exchange rate in comparison to the Australian dollar, Euro, and U.S. dollar would have resulted in the following impact:

<i>(in thousands)</i>	December 31, 2023	December 31, 2022	December 31, 2021
Foreign currency (loss)	\$ (11,892)	\$ (10,164)	\$ (8,352)

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the stockholders and the Board of Directors of Pegasystems Inc.
Cambridge, Massachusetts

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Pegasystems Inc. and subsidiaries (the "Company") as of December 31, 2023 and 2022, the related consolidated statements of operations, comprehensive income (loss), stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of 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 financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control — Integrated Framework (2013)* issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, 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 and changes in internal control over financial reporting. Our responsibility is to express an opinion on these financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures to 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. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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.

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 Recognition - Software License Arrangements — Refer to Note 2 to the financial statements

Critical Audit Matter Description

The Company generates revenue from multiple sources, including software license revenue primarily derived from license sales of the Company's Pega Platform and other software applications, maintenance revenue from client support, and services revenue primarily derived from cloud sales of the Company's hosted Pega Platform and other software applications and consulting services.

The Company's license and cloud contracts with clients ("arrangements") often contain multiple performance obligations. These performance obligations may be included in the same contract or negotiated separately. Additionally, the Company enters into amendments to previously executed contracts which constitute contract modifications. Certain complex arrangements require that management performs a detailed analysis of the contractual terms and the application of more complex accounting guidance. Factors with potentially significant judgements include:

- Identification of the complete client arrangement
- Accounting treatment of contract modifications
- Valuation and allocation of identified material rights
- Allocation of arrangement consideration to bundled fixed price work orders

Given the accounting complexity and the management judgment necessary to properly identify, classify, and account for performance obligations, auditing such estimates involved a high degree of auditor judgment when performing audit procedures and evaluating the license and cloud revenue arrangements.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to license and cloud revenue arrangements included the following, among others:

- We tested the effectiveness of controls over revenue recognition, including those over the identification of performance obligations included in the transaction, accounting treatment of contract modifications, valuation and allocation of identified material rights, and allocation of arrangement consideration.
- We selected a sample of client arrangements, and performed the following:
 - Evaluated whether the Company properly identified the terms of the arrangements and considered all arrangement terms that may have an impact on revenue recognition.
 - Evaluated whether the Company appropriately identified all performance obligations in the arrangement and whether the methodology to allocate the transaction price to the individual performance obligations was appropriately applied.
 - Tested the accuracy of management's calculation of revenue for each performance obligation by developing an expectation for the revenue to be recorded in the current period and comparing it to the Company's recorded balances.
 - Evaluated management's assessment of any ongoing negotiations with clients and bundling with statements of work.
 - Analyzed the proper accounting treatment for any contract modifications based on 1) whether the additional products and services are distinct from the products and services in the original arrangement, and 2) whether the amount of consideration expected for the added products and services reflects the stand-alone selling price of those products and services.
 - Evaluated management's determination of whether certain renewal clauses, additional product offers, or additional usage offers represent material rights included in the contract and whether they were properly valued based on the incremental discount provided and the probability of the right being exercised.
 - For contracts with a performance obligation of bundled fixed price services, evaluated whether management reasonably estimated the number of hours that each project will require and independently recalculated the stand-alone selling price for each bundled fixed price service.
 - Obtained evidence of delivery of the elements of the arrangement to the client.

/s/ Deloitte & Touche LLP

Boston, Massachusetts

February 14, 2024

We have served as the Company's auditor since 2000.

PEGASYSTEMS INC.
CONSOLIDATED BALANCE SHEETS
(in thousands, except per share amounts)

	<u>December 31, 2023</u>	<u>December 31, 2022</u>
Assets		
Current assets:		
Cash and cash equivalents	\$ 229,902	\$ 145,054
Marketable securities	193,436	152,167
Total cash, cash equivalents, and marketable securities	423,338	297,221
Accounts receivable, net	300,173	255,150
Unbilled receivables, net	237,379	213,719
Other current assets	68,137	80,388
Total current assets	1,029,027	846,478
Long-term unbilled receivables, net	85,402	95,806
Goodwill	81,611	81,399
Other long-term assets	314,696	333,989
Total assets	<u>\$ 1,510,736</u>	<u>\$ 1,357,672</u>
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 11,290	\$ 18,195
Accrued expenses	39,941	50,355
Accrued compensation and related expenses	126,640	127,728
Deferred revenue	377,845	325,212
Other current liabilities	21,343	17,450
Total current liabilities	577,059	538,940
Long-term convertible senior notes, net	499,368	593,609
Long-term operating lease liabilities	66,901	79,152
Other long-term liabilities	13,570	15,128
Total liabilities	<u>1,156,898</u>	<u>1,226,829</u>
Commitments and contingencies (Note 20)		
Stockholders' equity:		
Preferred stock, \$0.01 par value, 1,000 shares authorized; none issued	—	—
Common stock, \$0.01 par value, 200,000 shares authorized; 83,840 and 82,436 shares issued and outstanding as of December 31, 2023 and 2022, respectively	838	824
Additional paid-in capital	379,584	229,602
(Accumulated deficit)	(8,705)	(76,513)
Accumulated other comprehensive (loss)		
Net unrealized gain on available-for-sale securities, net of tax	669	517
Foreign currency translation adjustments	(18,548)	(23,587)
Total stockholders' equity	<u>353,838</u>	<u>130,843</u>
Total liabilities and stockholders' equity	<u>\$ 1,510,736</u>	<u>\$ 1,357,672</u>

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	Year Ended December 31,		
	2023	2022	2021
Revenue			
Subscription services	\$ 793,184	\$ 701,835	\$ 621,223
Subscription license	407,625	366,063	336,248
Consulting	221,706	230,654	222,010
Perpetual license	10,101	19,293	32,172
Total revenue	<u>1,432,616</u>	<u>1,317,845</u>	<u>1,211,653</u>
Cost of revenue			
Subscription services	144,250	138,736	120,446
Subscription license	2,606	2,642	2,389
Consulting	231,560	227,082	213,299
Perpetual license	67	175	229
Total cost of revenue	<u>378,483</u>	<u>368,635</u>	<u>336,363</u>
Gross profit	1,054,133	949,210	875,290
Operating expenses			
Selling and marketing	559,177	624,789	625,886
Research and development	295,512	294,349	260,630
General and administrative	96,743	117,734	83,506
Restructuring	21,747	21,743	—
Total operating expenses	<u>973,179</u>	<u>1,058,615</u>	<u>970,022</u>
Income (loss) from operations	80,954	(109,405)	(94,732)
Foreign currency transaction (loss) gain	(5,242)	4,560	(6,459)
Interest income	9,259	1,643	704
Interest expense	(6,876)	(7,792)	(7,956)
(Loss) on capped call transactions	(1,348)	(57,382)	(23,633)
Other income, net	18,693	6,579	89
Income (loss) before provision for (benefit from) income taxes	95,440	(161,797)	(131,987)
Provision for (benefit from) income taxes	27,632	183,785	(68,947)
Net income (loss)	<u>\$ 67,808</u>	<u>\$ (345,582)</u>	<u>\$ (63,040)</u>
Earnings (loss) per share			
Basic	\$ 0.82	\$ (4.22)	\$ (0.77)
Diluted	\$ 0.73	\$ (4.22)	\$ (0.77)
Weighted-average number of common shares outstanding			
Basic	83,162	81,947	81,387
Diluted	84,914	81,947	81,387

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	Year Ended December 31,		
	2023	2022	2021
Net income (loss)	\$ 67,808	\$ (345,582)	\$ (63,040)
Other comprehensive income (loss), net of tax			
Unrealized gain (loss) on available-for-sale securities	152	(169)	640
Foreign currency translation adjustments	5,039	(15,913)	(4,680)
Total other comprehensive income (loss), net of tax	5,191	(16,082)	(4,040)
Comprehensive income (loss)	<u>\$ 72,999</u>	<u>\$ (361,664)</u>	<u>\$ (67,080)</u>

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except per share amounts)

	Common Stock		Additional paid-in capital	Retained earnings (accumulat ed deficit)	Accumulated other comprehensive (loss)	Total stockholders' equity
	Number of shares	Amount				
January 1, 2021	80,890	\$ 809	\$ 204,432	\$ 339,879	\$ (2,948)	\$ 542,172
Cumulative-effect adjustment from adoption of ASU 2020-06, net	—	—	(61,604)	9,399	—	(52,205)
Repurchase of common stock	(432)	(5)	(53,605)	—	—	(53,610)
Issuance of common stock for stock compensation plans	1,153	12	(69,937)	—	—	(69,925)
Issuance of common stock under the employee stock purchase plan	101	1	10,553	—	—	10,554
Stock-based compensation	—	—	115,971	—	—	115,971
Cash dividends declared (\$0.12 per share)	—	—	—	(9,789)	—	(9,789)
Other comprehensive (loss)	—	—	—	—	(4,040)	(4,040)
Net (loss)	—	—	—	(63,040)	—	(63,040)
December 31, 2021	81,712	\$ 817	\$ 145,810	\$ 276,449	\$ (6,988)	\$ 416,088
Repurchase of common stock	(280)	(2)	(24,506)	—	—	(24,508)
Issuance of common stock for stock compensation plans	754	7	(20,627)	—	—	(20,620)
Issuance of common stock under the employee stock purchase plan	250	2	9,170	—	—	9,172
Stock-based compensation	—	—	122,229	—	—	122,229
Cash dividends declared (\$0.12 per share)	—	—	(2,474)	(7,380)	—	(9,854)
Other comprehensive (loss)	—	—	—	—	(16,082)	(16,082)
Net (loss)	—	—	—	(345,582)	—	(345,582)
December 31, 2022	82,436	\$ 824	\$ 229,602	\$ (76,513)	\$ (23,070)	\$ 130,843
Issuance of common stock for stock compensation plans	1,212	12	8,893	—	—	8,905
Issuance of common stock under the employee stock purchase plan	192	2	7,742	—	—	7,744
Stock-based compensation	—	—	143,352	—	—	143,352
Cash dividends declared (\$0.12 per share)	—	—	(10,005)	—	—	(10,005)
Other comprehensive income	—	—	—	—	5,191	5,191
Net income	—	—	—	67,808	—	67,808
December 31, 2023	83,840	\$ 838	\$ 379,584	\$ (8,705)	\$ (17,879)	\$ 353,838

See notes to consolidated financial statements.

PEGASYSTEMS INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Year Ended December 31,		
	2023	2022	2021
Operating activities			
Net income (loss)	\$ 67,808	\$ (345,582)	\$ (63,040)
Adjustments to reconcile net income (loss) to cash provided by operating activities			
Stock-based compensation	143,352	122,210	115,947
Amortization of deferred commissions	59,461	53,471	41,387
Amortization of intangible assets and depreciation	18,746	18,780	28,593
Lease expense	15,912	15,940	13,277
Foreign currency transaction (loss) gain	5,242	(4,560)	6,459
Loss on capped call transactions	1,348	57,382	23,633
Deferred income taxes	363	168,890	(75,336)
(Gain) on investments	(10,841)	(6,578)	(89)
(Gain) on repurchases of convertible senior notes	(7,855)	—	—
Other non-cash	2,255	6,735	7,819
Change in operating assets and liabilities:			
Accounts receivable, unbilled receivables, and contract assets	(57,602)	(51,157)	(11,957)
Other current assets	11,360	(9,133)	17,209
Other current liabilities	(8,777)	529	(18,726)
Deferred revenue	45,123	62,578	41,279
Deferred commissions	(44,529)	(53,857)	(71,451)
Other long-term assets and liabilities	(23,581)	(13,312)	(15,886)
Cash provided by operating activities	<u>217,785</u>	<u>22,336</u>	<u>39,118</u>
Investing activities			
Purchases of investments	(287,287)	(41,015)	(79,121)
Proceeds from maturities and called investments	242,593	66,583	105,977
Sales of investments	10,725	23,808	61,096
Payments for acquisitions, net of cash acquired	—	(922)	(4,993)
Investment in property and equipment	(16,781)	(35,379)	(10,456)
Cash (used in) provided by investing activities	<u>(50,750)</u>	<u>13,075</u>	<u>72,503</u>
Financing activities			
Repurchases of convertible senior notes	(88,989)	—	—
Dividend payments to stockholders	(9,964)	(9,834)	(9,761)
Proceeds from employee stock purchase plan	7,744	9,172	10,554
Proceeds from stock option exercises	10,821	—	—
Common stock repurchases for tax withholdings for net settlement of equity awards	(1,916)	(20,620)	(69,925)
Common stock repurchases under stock repurchase program	—	(25,707)	(52,711)
Other	341	—	—
Cash (used in) financing activities	<u>(81,963)</u>	<u>(46,989)</u>	<u>(121,843)</u>
Effect of exchange rate changes on cash, cash equivalents, and restricted cash	2,701	(3,333)	(1,712)
Net increase (decrease) in cash, cash equivalents and restricted cash	87,773	(14,911)	(11,934)
Cash, cash equivalents, and restricted cash, beginning of period	145,054	159,965	171,899
Cash, cash equivalents, and restricted cash, end of period	<u>\$ 232,827</u>	<u>\$ 145,054</u>	<u>\$ 159,965</u>
Supplemental disclosures			
Interest paid on convertible notes	\$ 4,134	\$ 4,500	\$ 4,500
Income taxes paid (refunded)	\$ 11,664	\$ 7,645	\$ (4,552)
Non-cash investing and financing activity:			
Investment in property and equipment included in accounts payable and accrued liabilities	\$ 66	\$ 9,914	\$ 2,143
Dividends payable	\$ 2,515	\$ 2,474	\$ 2,454

See notes to consolidated financial statements.

PEGASYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. BASIS OF PRESENTATION

Business

The Company develops, markets, licenses, hosts, and supports enterprise software that helps organizations build agility into their business. The Company's low-code platform for workflow automation and artificial intelligence-powered decisioning enables clients to personalize customer experiences, streamline customer service, and automate business processes and workflows. The Company provides consulting, training, support, and hosting services to facilitate the use of its software.

Management estimates and reporting

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("U.S.") requires management to make estimates and judgments that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the periods presented. Actual results could differ from those estimates. Accounts with reported amounts based on significant estimates and judgments include, but are not limited to, revenue, unbilled receivables, deferred revenue, deferred income taxes, deferred commissions, income taxes payable, convertible senior notes, capped call transactions, intangible assets, and goodwill.

Principles of consolidation

The Company's consolidated financial statements reflect Pegasystems Inc. and subsidiaries in which the Company holds a controlling financial interest. All intercompany accounts and transactions were eliminated in consolidation.

Reclassifications

Certain prior period amounts reported in our consolidated financial statements and notes thereto have been reclassified to conform to the current year presentation. Such reclassifications did not affect total revenues, income (loss) from operations, or net income (loss).

2. SIGNIFICANT ACCOUNTING POLICIES

Revenue

The Company's revenue is primarily derived from:

- Subscription services, composed of revenue from Pega Cloud and maintenance. Pega Cloud is the Company's hosted Pega Platform and software applications. Maintenance revenue is earned from providing client support, software upgrades, and bug fixes or patches.
- Subscription license, composed of revenue from term license arrangements for the Company's Pega Platform and software applications. Term licenses represent functional intellectual property and are delivered separately from maintenance and services.
- Perpetual license, composed of revenue from perpetual license arrangements for the Company's Pega Platform and software applications. Perpetual licenses represent functional intellectual property and are delivered separately from maintenance and services.
- Consulting, primarily related to new software license implementations, training, and reimbursable costs.

Performance obligations

The Company's software license and Pega Cloud arrangements often contain multiple performance obligations. If a contract contains multiple performance obligations, the Company accounts for each distinct performance obligation separately. The transaction price is allocated to the separate performance obligations on a relative stand-alone selling price basis. Any discounts or expected potential future price concessions are considered when determining the total transaction price. The Company's policy is to exclude sales and similar taxes collected from clients from the determination of transaction price.

The Company's typical performance obligations are:

Performance obligation	How stand-alone selling price is typically determined	When performance obligation is typically satisfied	When payment is typically due	Income statement line item
Perpetual license	Residual approach	Upon transfer of control to the client, defined as when the client can use and benefit from the license (point in time)	Effective date of the license	Perpetual license
Term license	Residual approach	Upon transfer of control to the client, defined as when the client can use and benefit from the license (point in time)	Annually, or more frequently, over the term of the license	Subscription license
Maintenance	Consistent pricing relationship as a percentage of the related license and observable in stand-alone renewal transactions ⁽¹⁾	Ratably over the term of the maintenance (over time)	Annually, or more frequently, over the term of the maintenance	Subscription services
Pega Cloud	Residual approach	Ratably over the term of the service (over time)	Annually, or more frequently, over the term of the service	Subscription services
Consulting - time and materials	Observable hourly rate for time and materials-based services in similar geographies	Based on hours incurred to date (over time)	Monthly	Consulting
Consulting - fixed price	Observable hourly rate for time and materials-based services in similar geographies multiplied by estimated hours for the project	Based on hours incurred as a percentage of total estimated hours (over time)	As contract milestones are achieved	Consulting

(1) Technical support and software updates are considered distinct services but accounted for as a single performance obligation, as they have the same pattern of transfer to the client.

The Company utilizes the residual approach for software license and Pega Cloud performance obligations since the selling price is highly variable and the stand-alone selling price is not discernible from past transactions or other observable evidence. Periodically, the Company reevaluates whether the residual approach remains appropriate. As required, the Company evaluates its residual approach estimate compared to all available observable data before concluding the estimate represents its stand-alone selling price.

If the contract grants the client the option to acquire additional products or services, the Company assesses whether the option represents a material right to the client that the client would not receive without entering into that contract. Discounts on options to purchase additional products and services greater than discounts available to similar clients are accounted for as an additional performance obligation.

During most of each client contract term, the amount invoiced is generally less than the amount of revenue recognized to date, primarily because we transfer control of the performance obligation related to the software license at the inception of the contract term. A significant portion of the total contract consideration is typically allocated to the license performance obligation. Therefore, the Company's contracts often result in the recording of unbilled receivables and contract assets throughout most of the contract term. The Company records an unbilled receivable or contract asset when revenue recognized on a contract exceeds the billings. The Company recognizes an impairment on receivables and contract assets if, after contract inception, it becomes probable that payment is not collectible. The Company reviews receivables and contract assets on an individual basis for impairment.

Variable consideration

The Company's arrangements can include variable fees, such as the option to purchase additional usage of a previously delivered software license. The Company may also provide pricing concessions to clients, a business practice that gives rise to variable fees. For variable fees arising from the client's acquisition of additional usage of a previously delivered software license, the Company applies the sales and usage-based royalties guidance related to a license of intellectual property and recognizes the revenue in the period the underlying sale or usage occurs. The Company includes variable fees in the determination of total transaction price if it is not probable that a significant future reversal of revenue will occur. The Company uses the expected value or most likely value amount, whichever is more appropriate for specific circumstances, to estimate variable consideration, and the estimates are based on the level of historical price concessions offered to clients. The variable consideration related to pricing concessions and other forms of variable consideration, including usage-based fees, have not been material to the Company's consolidated financial statements.

Significant financing components

The Company generally does not intend to provide financing to its clients, as financing arrangements are not contemplated as part of the negotiated terms of contracts between the Company and its clients. Although there may be an intervening period between the delivery of the license and the payment, typically in term license arrangements, the purpose of that timing difference is to align the client's payment with the timing of the use of the software license or service.

In certain circumstances, however, there are instances where revenue recognition timing differs from the timing of payment due to extended payment terms or fees that are non-proportional to the associated usage of software licenses. In these instances, the Company evaluates whether a significant financing component exists. This evaluation includes determining the difference between the consideration the client would have paid when the performance obligation was satisfied and the amount of consideration paid. Contracts that include a significant financing component are adjusted for the time value of money at the rate inherent in the contract, the client's borrowing rate, or the Company's incremental borrowing rate, depending upon the recipient of the financing.

During 2023, 2022, and 2021, significant financing components were not material.

Contract modifications

The Company assesses contract modifications to determine:

- if the additional products and services are distinct from the products and services in the original arrangement; and
- if the amount of consideration expected for the added products and services reflects the stand-alone selling price of those products and services.

A contract modification meeting both criteria is accounted for as a separate contract. If a contract modification does not meet both criteria, it is accounted for either:

- on a prospective basis as a termination of the existing contract and the creation of a new contract; or
- on a cumulative catch-up basis.

Deferred commissions

The Company recognizes an asset for the incremental costs of obtaining a client contract, primarily related to sales commissions. The Company expects to benefit from those costs for more than one year, as the Company primarily pays sales commissions on the initial contract. As a result, there are no commensurate commissions paid on contract renewals. Deferred commissions are allocated to each performance obligation within the contract and amortized according to the transfer of underlying goods and services within those contracts and expected renewals. The expected benefit period is determined based on the length of the client contracts, client attrition rates, the underlying technology lifecycle, and the competitive marketplace's influence on the products and services sold. Deferred costs allocated to maintenance and deferred costs for Pega Cloud arrangements are amortized over an average expected benefit period of 4.5 years. Deferred costs allocated to software licenses, and any expected renewals of term software licenses within the 4.5 years expected benefit period, are amortized at the point in time control of the software license is transferred. Deferred costs allocated to consulting are amortized over a period consistent with the pattern of transfer of control for the related services.

Financial instruments

The principal financial instruments held by the Company consist of cash equivalents, marketable securities, receivables, capped call transactions, and accounts payable. The Company considers debt securities readily convertible to known amounts of cash with maturities of three months or less from the purchase date to be cash equivalents. Interest is recorded when earned. The Company's investments are classified as available-for-sale and are carried at fair value. Unrealized gains and losses considered temporary are recorded as a component of accumulated other comprehensive (loss), net of related income taxes. The Company reviews all investments for reductions in fair value that are other-than-temporary. When such reductions occur, the investment cost is adjusted to fair value by recording a loss on investments in the consolidated statements of operations. Gains and losses on investments are calculated based on the specific investment.

For additional information see "Note 4. Receivables, Contract Assets, And Deferred Revenue", "Note 11. Debt", and "Note 13. Fair Value Measurements".

Property and equipment

Property and equipment are recorded at cost. Depreciation and amortization are computed using the straight-line method over the estimated useful life of each asset, which are three years for computer equipment and five years for furniture and fixtures. Leasehold improvements are amortized over the lesser of the lease's term or the useful life of the asset. Repairs and maintenance costs are expensed as incurred.

Leases

All of the Company's leases are operating leases, primarily composed of office space leases. The Company accounts for a contract as a lease when it has the right to control the asset for a period of time while obtaining substantially all of the asset's economic benefits. The Company determines the initial classification and measurement of its operating right of use assets and lease liabilities at the lease commencement date and thereafter if modified. Fixed lease costs are recognized on a straight-line basis over the lease term. Variable lease costs are recognized in the period in which the obligation for those payments is incurred. The Company combines lease and non-lease components when determining lease costs for its office space leases. The lease liability includes lease payments related to options to extend or renew the lease term if the Company is reasonably certain it will exercise those options. The Company's leases do not contain material residual value guarantees or restrictive covenants.

Loss contingencies and legal costs

The Company accrues loss contingencies when it is probable that a liability has been incurred and the amount of the loss can be reasonably estimated.

Significant judgments are required to determine the probability and the range of the outcomes, and the estimates are based only on the information available to the Company at the time. Due to the inherent uncertainties involved in claims, legal proceedings, and in estimating the losses that may arise, actual outcomes may differ from the Company's estimates. Contingencies deemed not probable, or for which losses were not estimable in one period, may become probable or losses may become estimable in later periods, which may have a material impact on the Company's results of operations and financial position. As additional information becomes available, the Company reassesses the potential liability from pending claims and litigation and may revise its estimates. Regardless of the outcome, legal disputes can have a material effect on the Company because of defense and settlement costs, diversion of management resources and other factors. Legal costs are expensed as incurred.

Internal-use software

The Company capitalizes and amortizes certain direct costs associated with computer software developed or purchased for internal use incurred during the application development stage. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. The Company amortizes capitalized software costs generally over three to five years, commencing on the date the software is placed into service.

Goodwill

Goodwill represents the residual purchase price paid in a business combination after the fair value of all identified assets and liabilities have been recorded. Goodwill is not amortized. The Company has a single reporting unit. The Company performed a qualitative assessments as of November 30, 2023, 2022, and 2021, respectively, and concluded that there was no impairment since it was not more-likely-than-not that the fair value of its reporting unit was less than its carrying value.

Intangible and long-lived assets

The Company's intangible assets are amortized using the straight-line method over their estimated useful life. The Company evaluates its long-lived tangible and intangible assets for impairment whenever events or changes in circumstances indicate that such assets' carrying amount may not be recoverable. Impairment is assessed by comparing the undiscounted cash flows expected to be generated by the long-lived tangible or intangible assets to their carrying value. If impairment exists, the Company calculates the impairment by comparing the carrying value to its fair value as determined by discounted expected cash flows.

Cash equivalents

Cash equivalents include money market funds and other investments with original maturities of three months or less.

Business combinations

The Company uses its estimates and assumptions to assign a fair value to the tangible and intangible assets acquired and liabilities assumed at the acquisition date. The Company's estimates are inherently uncertain and subject to refinement. During the measurement period, which may be up to one year from the acquisition date, the Company may record adjustments to the fair value of these tangible and intangible assets acquired and liabilities assumed, with the corresponding offset to goodwill. In addition, uncertain tax positions and tax-related valuation allowances are initially established in connection with a business combination as of the acquisition date. The Company reevaluates these estimates and assumptions quarterly as new information arises and records any adjustments to the Company's preliminary estimates to goodwill provided that the Company is within the measurement period. Upon the conclusion of the measurement period or final determination of the fair value of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the Company's consolidated statements of operations.

Research and development and software development costs

Research and development costs are expensed as incurred. Capitalization of computer software developed for resale begins upon the establishment of technological feasibility, generally demonstrated by a working model or an operative version of the computer software product. Such costs have not been material to date, as technological feasibility is established within a short time frame from the software's general availability. As a result, no costs were capitalized in 2023, 2022, or 2021.

Stock-based compensation

The Company recognizes stock-based compensation expense associated with equity awards based on the award's fair value at the grant date. Stock-based compensation is recognized over the requisite service period, which is generally the vesting period of the equity award and is adjusted each period for anticipated forfeitures. See "Note 16. Stock-Based Compensation" for a discussion of the Company's key assumptions when determining the fair value of its equity awards at the grant date.

Foreign currency translation and remeasurement

The translation of assets and liabilities for the Company's subsidiaries with functional currencies other than the U.S. dollar are made at period-end exchange rates. Revenue and expense accounts are translated at the average exchange rates during the period transactions occur. The resulting translation adjustments are reflected in accumulated other comprehensive (loss). Realized and unrealized exchange gains or losses from transactions and remeasurement adjustments are reflected in foreign currency transaction gain (loss) in the accompanying consolidated statements of operations.

Accounting for income taxes

The Company uses the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are determined based on temporary differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The Company regularly assesses the need for a valuation allowance against its deferred tax assets. Future realization of the Company's deferred tax assets ultimately depends on sufficient taxable income within the available carryback or carryforward periods. Taxable income sources include taxable income in prior carryback years, future reversals of existing taxable temporary differences, tax planning strategies, and projected future taxable income. The Company records a valuation allowance to reduce its deferred tax assets to an amount it believes is more-likely-than-not to be realized. Changes in the valuation allowance impact income tax expense in the period of adjustment. The Company recognizes excess tax benefits when realized, as a reduction of the provision for income taxes.

The Company assesses its income tax positions and records tax benefits based on management's evaluation of the facts, circumstances, and information available at the reporting date. For those tax positions where it is more-likely-than-not that a tax benefit will be sustained, the Company records the largest amount of tax benefit with a greater than 50 percent likelihood of being realized upon ultimate settlement with a taxing authority having full knowledge of all relevant information. For those income tax positions where it is not more-likely-than-not that a tax benefit will be sustained, no tax benefit is recognized in the financial statements. The Company classifies liabilities for uncertain tax positions as non-current liabilities unless the uncertainty is expected to be resolved within one year. The Company classifies interest and penalties on uncertain tax positions as income tax expense.

As a global company, significant judgment must be used to calculate and provide for income taxes in each of the tax jurisdictions in which it operates. In the ordinary course of the Company's business, there are transactions and calculations undertaken whose ultimate tax outcome cannot be certain. Some of these uncertainties arise because of transfer pricing for transactions with the Company's subsidiaries and nexus and tax credit estimates. In addition, the calculation of acquired tax attributes and the associated limitations are complex.

For additional information, see "Note 18. Income Taxes".

Advertising expense

Advertising costs are expensed as incurred. Advertising expenses were \$3.5 million, \$6.6 million, and \$11.8 million during 2023, 2022, and 2021, respectively.

3. MARKETABLE SECURITIES

(in thousands)	December 31, 2023				December 31, 2022			
	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
Government debt	\$ 11,471	\$ 33	\$ (1)	\$ 11,503	\$ 2,960	\$ —	\$ (52)	\$ 2,908
Corporate debt	181,960	200	(227)	181,933	151,906	—	(2,647)	149,259
	<u>\$ 193,431</u>	<u>\$ 233</u>	<u>\$ (228)</u>	<u>\$ 193,436</u>	<u>\$ 154,866</u>	<u>\$ —</u>	<u>\$ (2,699)</u>	<u>\$ 152,167</u>

As of December 31, 2023, marketable securities' maturities ranged from January 2024 to January 2026, with a weighted-average remaining maturity of 0.7 years.

4. RECEIVABLES, CONTRACT ASSETS, AND DEFERRED REVENUE

Receivables

(in thousands)	December 31, 2023	December 31, 2022
Accounts receivable, net	\$ 300,173	\$ 255,150
Unbilled receivables, net	237,379	213,719
Long-term unbilled receivables, net	85,402	95,806
	<u>\$ 622,954</u>	<u>\$ 564,675</u>

Unbilled receivables

Unbilled receivables are client-committed amounts for which revenue recognition precedes billing. Billing is solely subject to the passage of time.

Unbilled receivables by expected collection date:

<i>(Dollars in thousands)</i>	December 31, 2023	
1 year or less	\$ 237,379	74 %
1-2 years	62,585	19 %
2-5 years	22,817	7 %
	<u>\$ 322,781</u>	<u>100 %</u>

Unbilled receivables by contract effective date:

<i>(Dollars in thousands)</i>	December 31, 2023	
2023	\$ 208,783	65 %
2022	56,216	17 %
2021	46,473	14 %
2020	8,683	3 %
2019 and prior	2,626	1 %
	<u>\$ 322,781</u>	<u>100 %</u>

Contract assets

Contract assets are client-committed amounts for which revenue recognized exceeds the amount billed to the client, and billing is subject to conditions other than the passage of time, such as the completion of a related performance obligation.

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Contract assets ⁽¹⁾	\$ 16,238	\$ 17,546
Long-term contract assets ⁽²⁾	20,635	16,470
	<u>\$ 36,873</u>	<u>\$ 34,016</u>

(1) Included in other current assets.

(2) Included in other long-term assets.

Deferred revenue

Deferred revenue consists of billings and payments received in advance of revenue recognition.

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Deferred revenue	\$ 377,845	\$ 325,212
Long-term deferred revenue ⁽¹⁾	2,478	3,552
	<u>\$ 380,323</u>	<u>\$ 328,764</u>

(1) Included in other long-term liabilities.

The change in deferred revenue in 2023 was primarily due to new billings in advance of revenue recognition and \$319.5 million of revenue recognized during the period included in deferred revenue as of December 31, 2022.

5. DEFERRED COMMISSIONS

<i>(in thousands)</i>	December 31,	
	2023	2022
Deferred commissions ⁽¹⁾	\$ 114,119	\$ 130,195

(1) Included in other long-term assets.

<i>(in thousands)</i>	2023	2022	2021
Amortization of deferred commissions ⁽¹⁾	\$ 59,461	\$ 53,471	\$ 41,387

(1) Included in selling and marketing expenses.

6. PROPERTY AND EQUIPMENT ⁽¹⁾

<i>(in thousands)</i>	December 31,	
	2023	2022
Leasehold improvements	\$ 62,787	\$ 35,049
Computer equipment	31,144	27,292
Furniture and fixtures	6,665	5,993
Computer software purchased	10,060	9,724
Computer software developed for internal use	19,470	19,869
Fixed assets in progress	223	37,342
	<u>130,349</u>	<u>135,269</u>
Less: accumulated depreciation	(83,070)	(80,213)
	<u>\$ 47,279</u>	<u>\$ 55,056</u>

(1) Included in other long-term assets.

<i>(in thousands)</i>	2023	2022	2021
Depreciation expense	\$ 14,806	\$ 14,687	\$ 24,606

7. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill

<i>(in thousands)</i>	2023	2022
January 1,	\$ 81,399	\$ 81,923
Currency translation adjustments	212	(524)
December 31,	<u>\$ 81,611</u>	<u>\$ 81,399</u>

Intangibles

Intangible assets are recorded at cost and amortized using the straight-line method over their estimated useful lives:

<i>(in thousands)</i>	Useful Lives	December 31, 2023		
		Cost	Accumulated Amortization	Net Book Value ⁽¹⁾
Client-related	4-10 years	\$ 63,117	\$ (60,035)	\$ 3,082
Technology	2-10 years	68,138	(64,218)	3,920
Other	1-5 years	5,361	(5,361)	—
		<u>\$ 136,616</u>	<u>\$ (129,614)</u>	<u>\$ 7,002</u>

⁽¹⁾ Included in other long-term assets.

<i>(in thousands)</i>	Useful Lives	December 31, 2022		
		Cost	Accumulated Amortization	Net Book Value ⁽¹⁾
Client-related	4-10 years	\$ 63,076	\$ (58,623)	\$ 4,453
Technology	2-10 years	68,056	(61,621)	6,435
Other	1-5 years	5,361	(5,361)	—
		<u>\$ 136,493</u>	<u>\$ (125,605)</u>	<u>\$ 10,888</u>

⁽¹⁾ Included in other long-term assets.

Future estimated intangible assets amortization:

<i>(in thousands)</i>	December 31, 2023
2024	\$ 3,182
2025	2,619
2026	874
2027	327
	<u>\$ 7,002</u>

Amortization of intangible assets:

<i>(in thousands)</i>	2023	2022	2021
Cost of revenue	\$ 2,570	\$ 2,723	\$ 2,516
Selling and marketing	1,370	1,370	1,471
	<u>\$ 3,940</u>	<u>\$ 4,093</u>	<u>\$ 3,987</u>

8. OTHER ASSETS AND LIABILITIES

Other current assets

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Income tax receivables	\$ 4,804	\$ 25,354
Contract assets	16,238	17,546
Other	47,095	37,488
	<u>\$ 68,137</u>	<u>\$ 80,388</u>

Other long-term assets

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Deferred commissions	\$ 114,119	\$ 130,195
Right of use assets	64,198	76,114
Property and equipment	47,279	55,056
Venture investments	19,450	13,069
Contract assets	20,635	16,470
Intangible assets	7,002	10,888
Capped call transactions	893	2,582
Deferred income taxes	3,678	4,795
Restricted cash	2,925	—
Other	34,517	24,820
	<u>\$ 314,696</u>	<u>\$ 333,989</u>

Other current liabilities

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Operating lease liabilities	\$ 15,000	\$ 14,976
Dividends payable	2,515	2,474
Other	\$ 3,828	\$ —
	<u>\$ 21,343</u>	<u>\$ 17,450</u>

Other long-term liabilities

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Deferred revenue	\$ 2,478	\$ 3,552
Income taxes payable	859	3,207
Other	10,233	8,369
	<u>\$ 13,570</u>	<u>\$ 15,128</u>

9. SEGMENT INFORMATION

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision-maker (“CODM”) in deciding how to allocate resources and assess performance.

The Company derives substantially all of its revenue from the sale and support of one group of similar products and services – software that provides case management, business process management, and real-time decisioning solutions to improve customer engagement and operational excellence in the enterprise applications market. To assess performance, the Company’s CODM, the Chief Executive Officer, reviews financial information on a consolidated basis. Therefore, the Company determined it has one operating segment and one reporting unit.

Long-lived assets related to the Company’s U.S. and international operations were:

<i>(Dollars in thousands)</i>	December 31, 2023		December 31, 2022	
U.S.	\$ 44,414	94 %	\$ 50,445	92 %
International	2,865	6 %	4,611	8 %
	<u>\$ 47,279</u>	<u>100 %</u>	<u>\$ 55,056</u>	<u>100 %</u>

10. LEASES

Corporate headquarters

In February 2021, the Company agreed to accelerate its exit from its previous corporate headquarters to October 1, 2021, in exchange for a one-time payment from its landlord of \$18 million, which was amortized over the remaining lease term. The exit accelerated depreciation on the related leasehold improvements and reduced the Company's future lease liabilities by \$21.1 million and right of use assets by \$20.3 million. On March 31, 2021, the Company leased office space at One Main Street, Cambridge, Massachusetts, to serve as its corporate headquarters. The 4.5 year lease includes a base rent of \$2 million per year.

Waltham office

On July 6, 2021, the Company entered into an office space lease for 131 thousand square feet in Waltham, Massachusetts. The lease term of 11 years began on August 1, 2021. The annual rent equals the base rent plus a portion of building operating costs and real estate taxes. Rent first became payable on August 1, 2022. Base rent for the first year is approximately \$6 million and will increase by 3% annually. In addition, the Company received an improvement allowance from the landlord of \$11.8 million. This lease increased the Company's lease liabilities and lease-related right of use assets by \$42.1 million on August 1, 2021.

Expense

<i>(in thousands)</i>	2023	2022	2021
Fixed lease costs ⁽¹⁾	\$ 19,718	\$ 20,186	\$ (1,694)
Short-term lease costs	2,884	3,356	2,244
Variable lease costs	8,148	3,894	4,480
	<u>\$ 30,750</u>	<u>\$ 27,436</u>	<u>\$ 5,030</u>

(1) The lower fixed lease costs in 2021 was due to the modification of the corporate headquarters lease.

Right of use assets and lease liabilities

<i>(in thousands)</i>	December 31, 2023	December 31, 2022
Right of use assets ⁽¹⁾	\$ 64,198	\$ 76,114
Operating lease liabilities ⁽²⁾	\$ 15,000	\$ 14,976
Long-term operating lease liabilities	\$ 66,901	\$ 79,152

(1) Represents the Company's right to use the leased asset during the lease term. Included in other long-term assets.

(2) Included in other current liabilities.

The weighted-average remaining lease term and discount rate for the Company's leases were:

	December 31, 2023	December 31, 2022
Weighted-average remaining lease term	6.8 years	7.5 years
Weighted-average discount rate ⁽¹⁾	4.0 %	4.1 %

(1) The rates implicit in most of the Company's leases are not readily determinable. Therefore, the Company uses its incremental borrowing rate as the discount rate when measuring operating lease liabilities. The incremental borrowing rate represents an estimate of the interest rate the Company would incur to borrow an amount equal to the lease payments on a collateralized basis over the lease term in a similar economic environment.

Maturities of lease liabilities:

<i>(in thousands)</i>	December 31, 2023
2024	\$ 17,971
2025	15,602
2026	11,164
2027	10,114
2028	9,372
Thereafter	30,177
Total lease payments	<u>94,400</u>
Less: imputed interest ⁽¹⁾	<u>(12,499)</u>
	<u>\$ 81,901</u>

(1) Lease liabilities are measured at the present value of the remaining lease payments using a discount rate determined at lease commencement unless the discount rate is updated due to a lease reassessment event.

Cash flow information ⁽¹⁾

(in thousands)

	2023	2022
Cash paid for operating leases, net of tenant improvement allowances	\$ 20,045	\$ 7,690
Right of use assets recognized for new leases and amendments (non-cash)	\$ 1,460	\$ 4,733

(1) In 2022, the Company received a tenant improvement allowances of \$8.8 million as part of the lease of the Company's new corporate headquarters in Waltham, Massachusetts.

11. DEBT

Convertible senior notes and capped calls

Convertible senior notes

In February 2020, the Company issued convertible senior notes (the "Notes") with an aggregate principal of \$600 million, due March 1, 2025, in a private placement. No principal payments are due before maturity. The Notes accrue interest at an annual rate of 0.75%, payable semi-annually in arrears on March 1 and September 1, beginning September 1, 2020.

In 2023, the Company recognized a gain of \$7.9 million in other income, net from repurchases of Notes representing \$97.7 million in aggregate principal amount.

Conversion rights

The conversion rate is 7.4045 shares of common stock per \$1,000 principal amount of the Notes, representing an initial conversion price of \$135.05 per share of common stock. The conversion rate will be adjusted upon certain events, including spin-offs, tender offers, exchange offers, and certain stockholder distributions. The Company will settle conversions by paying or delivering cash, shares of its common stock, or a combination of cash and shares of its common stock, at the Company's election, based on the applicable conversion rate.

Beginning on September 1, 2024, noteholders may convert their Notes at any time at their election.

Before September 1, 2024, noteholders may convert their Notes in the following circumstances:

- During any calendar quarter beginning after June 30, 2020 (and only during such calendar quarter), if the last reported sale price per share of the Company's common stock exceeds 130% of the conversion price for each of at least 20 trading days (whether or not consecutive) during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter.
- During the five consecutive business days immediately after any five consecutive trading day period (the "Measurement Period"), if the trading price per \$1,000 principal amount of Notes for each trading day of the Measurement Period was less than 98% of the product of the last reported sale price per share of common stock on such trading day and the conversion rate on such trading day.
- Upon certain corporate events or distributions or if the Company calls any Notes for redemption, noteholders may convert before the close of business on the business day immediately before the related redemption date (or, if the Company fails to pay the redemption price in full on the redemption date until the Company pays the redemption price).

As of December 31, 2023, the Notes were not eligible for conversion.

Repurchase rights

On or after March 1, 2023 and on or before the 40th scheduled trading day immediately before the maturity date, the Company may redeem for cash all or part of the Notes at a repurchase price equal to 100% of the principal amount, plus accrued and unpaid interest, if the last reported sale price of the Company's common stock exceeded 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period ending on, and including, the trading day immediately preceding the date on which the Company provides a redemption notice.

If certain corporate events that constitute a "Fundamental Change" occur, each noteholder will have the right to require the Company to repurchase for cash all of such noteholder's Notes, or any portion of the principal thereof that is equal to \$1,000 or a multiple of \$1,000, at a repurchase price equal to 100% of the principal amount thereof, plus accrued and unpaid interest. A Fundamental Change relates to mergers, changes in control of the Company, liquidation/dissolution of the Company, or the delisting of the Company's common stock.

Carrying value of the Notes:

(in thousands)

	December 31, 2023	December 31, 2022
Principal	\$ 502,270	\$ 600,000
Unamortized issuance costs	(2,902)	(6,391)
Convertible senior notes, net	\$ 499,368	\$ 593,609

Interest expense related to the Notes:

<i>(in thousands)</i>	2023	2022
Contractual interest expense (0.75% coupon)	\$ 3,891	\$ 4,500
Amortization of issuance costs	2,603	2,888
	<u>\$ 6,494</u>	<u>\$ 7,388</u>

The average interest rate on the Notes in 2023 and 2022 was 1.2%.

Future payments of principal and contractual interest:

<i>(in thousands)</i>	December 31, 2023		
	Principal	Interest	Total
2024	\$ —	\$ 3,767	\$ 3,767
2025	502,270	1,884	504,154
	<u>\$ 502,270</u>	<u>\$ 5,651</u>	<u>\$ 507,921</u>

Capped call transactions

In February 2020, the Company entered into privately negotiated capped call transactions (the “Capped Call Transactions”) with certain financial institutions. The Capped Call Transactions initially covered approximately 4.4 million shares (representing the number of shares for which the Notes were initially convertible) of the Company’s common stock. In 2023, Capped Call Transactions covering approximately 0.7 million shares were settled for proceeds of \$0.3 million. As of December 31, 2023, Capped Call Transactions covering approximately 3.7 million shares were outstanding.

The Capped Call Transactions are expected to reduce common stock dilution and/or offset any potential cash payments the Company must make, other than for principal and interest, upon conversion of the Notes, with such reduction and/or offset subject to a cap of \$196.44. The cap price of the Capped Call Transactions is subject to adjustment upon specified extraordinary events affecting the Company, including mergers and tender offers.

The capped call transactions are accounted for as derivative instruments and do not qualify for the Company’s own equity scope exception in ASC 815 since, in some cases of early settlement, the settlement value calculated following the governing documents may not represent a fair value measurement. The Capped Call Transactions are classified as other long-term assets and remeasured to fair value each reporting period, resulting in a non-operating gain or loss.

Change in capped call transactions:

<i>(in thousands)</i>	2023	2022
January 1,	\$ 2,582	\$ 59,964
Settlements	(341)	—
Fair value adjustment	(1,348)	(57,382)
December 31,	<u>\$ 893</u>	<u>\$ 2,582</u>

Credit facility

In November 2019, and as since amended, the Company entered into a five-year \$100 million senior secured revolving credit agreement (the “Credit Facility”) with PNC Bank, National Association. The Company may use borrowings for general corporate purposes and to finance working capital needs. Subject to specific conditions and the agreement of the financial institutions lending the additional amount, the aggregate commitment may be increased to \$200 million. The commitments expire on November 4, 2024, and any outstanding loans will be payable on such date. The Credit Facility, as amended, contains customary covenants, including, but not limited to, those relating to additional indebtedness, liens, asset divestitures, and affiliate transactions.

The Company is required to comply with financial covenants, including:

- Through December 31, 2023, Pegasystems Inc. must maintain at least \$200 million in cash, investments, and availability under the Credit Facility and the Company must maintain:

<i>(in thousands)</i>	Year to Date			
	March 31, 2023	June 30, 2023	September 30, 2023	December 31, 2023
Minimum Consolidated EBITDA (as defined in the Credit Facility)	\$ 38,862	\$ 59,894	\$ 95,597	\$ 214,590

- Beginning with the fiscal quarter ended March 31, 2024, a maximum net consolidated leverage ratio of 3.5 to 1.0 (with a step-up for certain acquisitions) and a minimum consolidated interest coverage ratio of 3.5 to 1.0.

As of December 31, 2023 and December 31, 2022, the Company had \$27.3 million in outstanding letters of credit, reducing available borrowing capacity under the Credit Facility, but no outstanding cash borrowings.

12. RESTRUCTURING

The Company has undertaken the following restructuring activities as it optimizes its go-to-market strategy and reassesses its office space needs:

<i>(in thousands)</i>	Three months ended	Expense
Employee severance and related benefits and office space reduction	December 31, 2022	\$ 21,743
Office space reduction	March 31, 2023	\$ 1,241
Employee severance and related benefits	June 30, 2023	\$ 1,581
Employee severance and related benefits and office space reduction	September 30, 2023	\$ 17,236
Office space reduction	December 31, 2023	\$ 1,497

Restructuring activity:

Accrued employee severance and related benefits:

<i>(in thousands)</i>	2023
January 1,	\$ 18,573
Costs incurred	18,721
Cash disbursements	(29,401)
Currency translation adjustments	202
December 31,	<u>\$ 8,095</u>

Note: Included in accrued compensation and related expenses.

Office Space reductions

In 2023 and 2022, the Company incurred restructuring costs of \$3.0 million and \$3.2 million due to office space reductions.

13. FAIR VALUE MEASUREMENTS

Assets and liabilities measured at fair value on a recurring basis

The Company records its cash equivalents, marketable securities, capped call transactions, and venture investments at fair value on a recurring basis. Fair value is an exit price, representing the amount that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants based on assumptions that market participants would use in pricing an asset or liability.

As a basis for classifying the fair value measurements, a three-tier fair value hierarchy, which classifies the fair value measurements based on the inputs used in measuring fair value, was established as follows:

- Level 1 - observable inputs, such as quoted prices in active markets for identical assets or liabilities;
- Level 2 - significant other inputs that are observable either directly or indirectly; and
- Level 3 - significant unobservable inputs with little or no market data, which require the Company to develop its own assumptions.

This hierarchy requires the Company to use observable market data when available and minimize unobservable inputs when determining fair value.

The fair value of the Capped Call Transactions at the end of each reporting period is determined using a Black-Scholes option-pricing model. The valuation model uses various market-based inputs, including stock price, remaining contractual term, expected volatility, risk-free interest rate, and expected dividend yield. The Company applies judgment when determining expected volatility. The Company considers the underlying equity security's historical and implied volatility levels. The Company's venture investments are recorded at fair value based on multiple valuation methods, including observable public companies and transaction prices and unobservable inputs, including the volatility, rights, and obligations of the securities the Company holds.

Assets and liabilities measured at fair value on a recurring basis:

<i>(in thousands)</i>	December 31, 2023				December 31, 2022			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Cash equivalents	\$ 54,357	\$ —	\$ —	\$ 54,357	\$ 2,526	\$ —	\$ —	\$ 2,526
Marketable securities	\$ —	\$ 193,436	\$ —	\$ 193,436	\$ —	\$ 152,167	\$ —	\$ 152,167
Capped Call Transactions ⁽¹⁾	\$ —	\$ 893	\$ —	\$ 893	\$ —	\$ 2,582	\$ —	\$ 2,582
Venture investments ⁽¹⁾⁽²⁾	\$ —	\$ —	\$ 19,450	\$ 19,450	\$ —	\$ —	\$ 13,069	\$ 13,069

(1) Included in other long-term assets.

(2) Investments in privately-held companies.

Changes in venture investments:

<i>(in thousands)</i>	Year Ended December 31,	
	2023	2022
January 1,	\$ 13,069	\$ 7,648
New investments	400	1,400
Sales of investments	(2,773)	(4,020)
Changes in foreign exchange rates	129	(450)
Changes in fair value:		
included in other income, net	10,886	5,989
included in other comprehensive income (loss)	(2,261)	2,502
December 31,	\$ 19,450	\$ 13,069

The carrying value of certain financial instruments, including receivables and accounts payable, approximates fair value due to their short maturities.

Fair value of the Notes

The fair value of the Notes outstanding (including the embedded conversion feature) was \$466.5 million as of December 31, 2023 and \$521.1 million as of December 31, 2022. In the year ended December 31, 2023 the Company repurchased Notes representing \$97.7 million in aggregate principal amount.

The fair value was determined based on the Notes' quoted price in an over-the-counter market on the last trading day of the reporting period and classified within Level 2 in the fair value hierarchy.

Credit risk

In addition to receivables, the Company is potentially subject to concentrations of credit risk from the Company's cash, cash equivalents, and marketable securities. The Company's cash and cash equivalents are generally held with large, diverse financial institutions worldwide to reduce the Company's credit risk exposure. Investment policies have been implemented that limit purchases of marketable debt securities to investment-grade securities.

14. STOCKHOLDERS' EQUITY

Preferred stock

The Company has 1 million authorized shares of preferred stock, \$0.01 par value per share, of which none were issued and outstanding as of December 31, 2023.

The Board of Directors has the authority to issue the shares of preferred stock in one or more series, to establish the number of shares to be included in each series, and to determine the designation, powers, preferences, and rights of the shares of each series and the qualifications, limitations, or restrictions thereof, without any further vote or action by the stockholders. The issuance of preferred stock could decrease the earnings and assets available for distribution to holders of common stock and may have the effect of delaying, deferring, or defeating a change in control of the Company.

Common stock

The Company has 200 million authorized shares of common stock, \$0.01 par value per share, of which 83.8 million were issued and outstanding as of December 31, 2023.

Dividends declared

	2023	2022	2021
Dividends declared (per share)	\$ 0.12	\$ 0.12	\$ 0.12
Dividend payments to stockholders (in thousands)	\$ 9,964	\$ 9,834	\$ 9,761

The Company paid a quarterly cash dividend of \$0.03 per share in 2023, 2022, and 2021. In the future, the Board of Directors may terminate or modify the dividend program without prior notice.

Stock repurchases

<i>(in thousands)</i>	2023		2022		2021	
	Shares	Amount	Shares	Amount	Shares	Amount
January 1,		\$ 58,075		\$ 22,583		\$ 37,726
Authorizations ⁽¹⁾		1,925		60,000		38,467
Repurchases ⁽²⁾	—	—	(280)	(24,508)	(432)	(53,610)
December 31,		<u>\$ 60,000</u>		<u>\$ 58,075</u>		<u>\$ 22,583</u>

(1) On April 25, 2023, the Company announced that the Board of Directors extended the current stock repurchase program's expiration date to June 30, 2024 and increased the remaining stock repurchase authority to \$60 million.

(2) Purchases under this program have been made on the open market.

15. REVENUE

Geographic revenue

<i>(Dollars in thousands)</i>	2023		2022		2021	
U.S.	\$ 785,029	55 %	\$ 763,558	57 %	\$ 690,133	57 %
Other Americas	85,149	6 %	102,980	8 %	61,339	5 %
United Kingdom ("U.K.")	158,014	11 %	115,793	9 %	117,580	10 %
Europe (excluding U.K.), Middle East, and Africa	242,303	17 %	194,563	15 %	198,080	16 %
Asia-Pacific	162,121	11 %	140,951	11 %	144,521	12 %
	<u>\$ 1,432,616</u>	<u>100 %</u>	<u>\$ 1,317,845</u>	<u>100 %</u>	<u>\$ 1,211,653</u>	<u>100 %</u>

Revenue streams

<i>(in thousands)</i>	2023		2022		2021	
Subscription license	\$ 407,625		\$ 366,063		\$ 336,248	
Perpetual license	10,101		19,293		32,172	
Revenue recognized at a point in time	417,726		385,356		368,420	
Pega Cloud	461,328		384,271		300,966	
Maintenance	331,856		317,564		320,257	
Consulting	221,706		230,654		222,010	
Revenue recognized over time	1,014,890		932,489		843,233	
	<u>\$ 1,432,616</u>		<u>\$ 1,317,845</u>		<u>\$ 1,211,653</u>	

<i>(in thousands)</i>	2023		2022		2021	
Pega Cloud	\$ 461,328		\$ 384,271		\$ 300,966	
Maintenance	331,856		317,564		320,257	
Subscription services	793,184		701,835		621,223	
Subscription license	407,625		366,063		336,248	
Subscription	1,200,809		1,067,898		957,471	
Consulting	221,706		230,654		222,010	
Perpetual license	10,101		19,293		32,172	
	<u>\$ 1,432,616</u>		<u>\$ 1,317,845</u>		<u>\$ 1,211,653</u>	

Remaining performance obligations ("Backlog")

Expected future revenue from existing non-cancellable contracts:

As of December 31, 2023:

(Dollars in thousands)	Subscription services		Subscription license	Perpetual license	Consulting	Total	
	Maintenance	Pega Cloud					
1 year or less	\$ 245,271	\$ 446,160	\$ 62,070	\$ 2,284	\$ 39,810	\$ 795,595	54 %
1-2 years	67,720	279,474	9,138	443	2,020	358,795	25 %
2-3 years	37,142	144,453	9,789	—	2,896	194,280	13 %
Greater than 3 years	24,421	90,177	100	—	—	114,698	8 %
	<u>\$ 374,554</u>	<u>\$ 960,264</u>	<u>\$ 81,097</u>	<u>\$ 2,727</u>	<u>\$ 44,726</u>	<u>\$ 1,463,368</u>	<u>100 %</u>

As of December 31, 2022:

(Dollars in thousands)	Subscription services		Subscription license	Perpetual license	Consulting	Total	
	Maintenance	Pega Cloud					
1 year or less	\$ 242,073	\$ 379,648	\$ 60,668	\$ 5,310	\$ 32,374	\$ 720,073	53 %
1-2 years	66,207	246,195	3,803	2,253	6,371	324,829	24 %
2-3 years	26,746	143,901	1,707	—	1,647	174,001	13 %
Greater than 3 years	15,602	115,944	5,283	—	—	136,829	10 %
	<u>\$ 350,628</u>	<u>\$ 885,688</u>	<u>\$ 71,461</u>	<u>\$ 7,563</u>	<u>\$ 40,392</u>	<u>\$ 1,355,732</u>	<u>100 %</u>

16. STOCK-BASED COMPENSATION

(in thousands)	2023	2022	2021
Cost of revenue	\$ 28,994	\$ 26,400	\$ 21,822
Selling and marketing	57,675	46,769	54,182
Research and development	31,039	29,266	25,413
General and administrative	25,644	19,775	14,530
	<u>\$ 143,352</u>	<u>\$ 122,210</u>	<u>\$ 115,947</u>
Income tax benefit	\$ (2,187)	\$ (1,881)	\$ (23,410)

The Company periodically grants employees stock options and restricted stock units ("RSUs") and non-employee Directors common stock and stock options.

In 2021 and 2022, most of the Company's stock based compensation arrangements vest over five years, with 20% vesting after one year and the remaining 80% vesting quarterly over the remaining four years. Beginning in 2023, most of the Company's stock based compensation arrangements vest over four years, with 25% vesting after one year and the remaining 75% vesting quarterly over the remaining three years. The Company's stock options have a term of ten years. In 2023, the Company also granted 0.9 million performance stock options with a total grant date fair value of \$18.3 million, which vest over 2 years based on the Company's achievement of certain financial performance targets.

The Company recognizes stock-based compensation using the accelerated attribution method, treating each vesting tranche as an individual grant. The stock-based compensation expense recognized during a period is based on the value of the awards that are expected to vest. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Ultimately, the Company recognizes the actual expense over the vesting period only for the shares that vest.

Employees may elect to receive 50% of the employee's target incentive compensation under the Company's Corporate Incentive Compensation Plan (the "CICP") in the form of RSUs instead of cash. If elected by an employee, the equity amount is equal in value on the grant date to 50% of the employee's target incentive opportunity, based on the employee's base salary. The number of RSUs granted is determined by dividing 50% of the employee's target incentive opportunity by 85% of the closing price of the Company's common stock on the grant date, less the present value of expected dividends during the vesting period. If elected, the award vests 100% on the following year's CICP payout date. Vesting is conditioned upon the performance conditions of the CICP and on continued employment; if threshold funding does not occur, the RSUs will not vest. The Company considers vesting probable on the grant date and recognizes the associated stock-based compensation expense over the requisite service period beginning on the grant date and ending on the vesting date.

Historically, the Company has granted awards that allow for the settlement of vested stock options and RSUs on a net share basis (“net settled awards”). With net settled awards, the Company withholds shares to cover the exercise price (for stock options) and the minimum statutory tax withholding obligations (for stock options and RSUs) from the shares that would otherwise be issued upon exercise or settlement. In 2023, the Company moved to cashless settlement for most of its awards. Under cashless settlement, shares are automatically sold in the market at exercise (for stock options) or vest (for RSUs) to cover the exercise price (for stock options) and the minimum statutory tax withholding obligations (for stock options and RSUs).

Stock-based compensation plans

2004 Long-Term Incentive Plan (as amended and restated)

In 2004, the Company adopted the 2004 Long-Term Incentive Plan (as amended and restated, the “2004 Plan”) to provide employees, non-employee Directors, and consultants with opportunities to purchase stock through incentive and non-qualified stock options. Subsequent amendments to the plan increased the number of shares authorized for issuance under the plan to 42 million, extended the term of the plan to 2030, and limited annual compensation to any non-employee Director to \$0.5 million.

As of December 31, 2023, 17.4 million shares were subject to outstanding options and stock-based awards under the 2004 Plan.

2006 Employee Stock Purchase Plan

In 2006, the Company adopted the 2006 Employee Stock Purchase Plan (the “2006 ESPP”) under which employees may purchase common stock, at a price equal to at least 85% of the fair market value of the Company’s common stock on the lesser of the commencement date or completion date for offerings under the plan, or such higher price as the Company’s Board of Directors may establish from time to time. In October 2012, the Company’s Board of Directors amended the 2006 ESPP to continue until no shares remain. In 2023, the number of shares authorized for purchase under the 2006 ESPP was increased to 2 million. For 2023, 2022, and 2021, the Company’s Board of Directors set the purchase price at 85% of the fair market value on the completion date of the offering period.

<i>(in thousands)</i>	2023	2022	2021
Compensation expense from 2006 ESPP	\$ 1,367	\$ 1,614	\$ 1,860

As of December 31, 2023, 1.0 million shares had been issued under the plan.

Shares issued and available for issuance

In 2023, the Company issued 1.4 million shares to its employees and directors under the Company’s stock-based compensation plans.

As of December 31, 2023, there were 6.9 million shares available for issuance for future equity grants under the Company’s stock plans, consisting of 5.9 million shares under the 2004 Plan and 1.0 million shares under the 2006 ESPP.

Grant activity

Stock options

The Company estimates the fair value of stock options using a Black-Scholes option-pricing model. Key inputs used to estimate the fair value of stock options include the exercise price of the award, expected term of the option, expected volatility of the Company’s common stock over the option’s expected term, risk-free interest rate over the option’s expected term, and the Company’s expected annual dividend yield. The exercise price for stock options is greater than or equal to the shares’ fair market value at the grant date.

The following table summarizes the Company’s fair value assumptions for stock options:

	2023	2022	2021
Weighted-average grant-date fair value	\$ 20.55	\$ 17.49	\$ 37.74
Assumptions used in the Black-Scholes option-pricing model:			
Expected annual volatility ⁽¹⁾	48 %	42 %	35 %
Expected term in years ⁽²⁾	3.5	3.9	4.4
Risk-free interest rate ⁽³⁾	4.2 %	3.4 %	0.6 %
Expected annual dividend yield ⁽⁴⁾	0.1 %	0.1 %	0.2 %

(1) The expected annual volatility for each grant is determined based on the average of historic daily price changes of the Company’s common stock over a period, which approximates the expected option term.

(2) The expected option term for each grant is determined based on the historical exercise behavior of employees and post-vesting employment termination behavior.

(3) The risk-free interest rate is based on the yield of U.S. Treasury securities with a commensurate maturity with the expected option term at the time of grant.

(4) The expected annual dividend yield is based on the weighted-average dividend yield assumptions used for options granted during the applicable period.

The following table summarizes the combined stock option activity under the Company's stock option plans for 2023:

	Shares (in thousands)	Weighted-average Exercise Price	Weighted-average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands) ⁽¹⁾
Options outstanding as of January 1, 2023	14,911	\$ 59.67		
Granted	1,847	46.97		
Exercised	(380)	31.56		
Forfeited	(1,289)	55.90		
Expired	(350)	81.62		
Options outstanding as of December 31, 2023	14,739	\$ 58.60		
Vested and expected to vest as of December 31, 2023	12,786	\$ 58.58	7.3	\$ 73,407
Exercisable as of December 31, 2023	6,761	\$ 63.54	6.1	\$ 32,594

(1) The aggregate intrinsic value of stock options as of December 31, 2023 is based on the difference between the closing price of the Company's stock of \$48.86 and the exercise price of the applicable stock options.

The aggregate intrinsic value of stock options exercised (i.e., the difference between the market price at exercise and the price paid by the employee at exercise) in 2023, 2022, and 2021 was \$6.2 million, \$15.6 million, and \$94.3 million, respectively. As of December 31, 2023, the Company had unrecognized stock-based compensation expense related to the unvested portion of stock options of \$57.8 million that is expected to be recognized as expense over a weighted-average period of 1.6 years.

RSUs

RSUs provide the recipient a right to receive a specified number of shares of the Company's common stock upon vesting. The Company values its RSUs at the fair value of its common stock on the grant date, which is the closing price of its common stock on the grant date less the present value of expected dividends during the vesting period, as the recipient is not entitled to dividends during the requisite service period.

The weighted-average grant-date fair value for RSUs granted in 2023, 2022, and 2021 was \$46.57, \$74.50, and \$129.03, respectively.

The following table summarizes the combined RSU activity for all grants, including the CICP, under the 2004 Plan for 2023:

	Shares (in thousands)	Weighted- Average Grant-Date Fair Value	Aggregate Intrinsic Value (in thousands)
Nonvested as of January 1, 2023	2,351	\$ 85.52	
Granted	1,545	46.57	
Vested	(890)	84.74	
Forfeited	(390)	71.56	
Nonvested as of December 31, 2023	2,616	\$ 64.85	\$ 127,805
Expected to vest as of December 31, 2023	1,968	\$ 62.86	\$ 96,168

The fair value of RSUs vested in 2023, 2022, and 2021 was \$42.8 million, \$50.3 million, and \$122.5 million, respectively. The aggregate intrinsic value of RSUs outstanding and expected to vest as of December 31, 2023 is based on the closing price of the Company's stock of \$48.86 as of December 31, 2023.

As of December 31, 2023, the Company had \$48.6 million of unrecognized stock-based compensation expense related to all unvested RSUs that is expected to be recognized as expense over a weighted-average period of 1.7 years.

Common stock

In 2023, the Company granted 0.01 million shares of common stock to Directors with a weighted-average grant-date fair value of \$47.25 per share.

17. EMPLOYEE BENEFIT PLANS

The Company sponsors defined contribution plans for qualifying employees, including a 401(k) plan in the United States to which the Company makes discretionary matching contributions.

Employee benefit plan expenses:

(in thousands)	2023	2022	2021
U.S. 401(k) Plan	\$ 8,169	\$ 8,994	\$ 8,879
International plans	21,256	21,141	20,780
	\$ 29,425	\$ 30,135	\$ 29,659

18. INCOME TAXES

The components of income (loss) before provision for (benefit from) income taxes are:

<i>(in thousands)</i>	2023	2022	2021
Domestic	\$ 14,016	\$ (185,820)	\$ (125,947)
Foreign	81,424	24,023	(6,040)
	<u>\$ 95,440</u>	<u>\$ (161,797)</u>	<u>\$ (131,987)</u>

The components of provision for (benefit from) income taxes are:

<i>(in thousands)</i>	2023	2022	2021
Current:			
Federal	\$ 7,827	\$ 3,920	\$ 1,921
State	4,480	775	363
Foreign	14,962	10,200	4,105
Total current provision	<u>27,269</u>	<u>14,895</u>	<u>6,389</u>
Deferred:			
Federal	—	149,028	(42,214)
State	—	20,704	(9,413)
Foreign	363	(842)	(23,709)
Total deferred provision (benefit)	<u>363</u>	<u>168,890</u>	<u>(75,336)</u>
	<u>\$ 27,632</u>	<u>\$ 183,785</u>	<u>\$ (68,947)</u>

A reconciliation of the U.S federal statutory tax rate and the Company's effective tax rate:

<i>(in thousands)</i>	<u>2023</u>	<u>2022</u>	<u>2021</u>
U.S. federal income taxes at statutory rates	\$ 20,042	\$ (33,977)	\$ (27,717)
Valuation allowance	(19,272)	188,258	(469)
State income taxes, net of federal benefit and tax credits	4,117	(2,433)	(7,217)
Permanent differences	435	11,561	541
Federal research and experimentation credits	(3,709)	(5,012)	(6,380)
Tax effects of foreign activities	658	3,770	3,599
GILTI, FDII, and BEAT	14,022	16,390	—
Provision to return adjustments	(3,728)	(6,317)	(2,016)
Non-deductible compensation	6,818	4,769	5,464
Tax Reserves	1,850	5,673	(2,250)
Excess tax detriments / (benefits) related to share-based compensation	4,666	1,563	(20,697)
Impact of change in tax law	1,726	(793)	(11,811)
Other	7	333	6
	<u>\$ 27,632</u>	<u>\$ 183,785</u>	<u>\$ (68,947)</u>

Deferred income taxes

Significant components of net deferred tax assets and liabilities are:

<i>(in thousands)</i>	<u>December 31,</u>	
	<u>2023</u>	<u>2022</u>
Deferred tax assets:		
Net operating loss carryforwards	\$ 84,656	\$ 109,286
Accruals and reserves	41,323	32,467
Interest expense carryforward	—	208
Software revenue	3,186	1,828
Convertible senior notes	2,645	5,794
Depreciation	—	3,698
Tax credit carryforwards	28,456	39,122
Research and development capitalization	58,866	38,425
Other	—	622
Total deferred tax assets	<u>219,132</u>	<u>231,450</u>
Valuation allowances	(196,901)	(212,808)
Total net deferred tax assets	<u>22,231</u>	<u>18,642</u>
Deferred tax liabilities:		
Capped call transactions	(223)	(644)
Depreciation	(4,428)	—
Intangibles	(11,979)	(14,280)
Other, net	(2,782)	—
Total deferred tax liabilities	<u>(19,412)</u>	<u>(14,924)</u>
	<u>\$ 2,819</u>	<u>\$ 3,718</u>

The Company recognizes deferred tax assets to the extent that it believes that these assets are more likely than not to be realized. Future realization of deferred tax assets ultimately depends on sufficient taxable income within the available carryback or carryforward periods. The Company's deferred tax valuation allowance requires significant judgment and has uncertainties, including assumptions about future taxable income based on historical and projected information. On a quarterly basis, the Company reassesses the need for a valuation allowance on its existing net deferred tax assets by tax-paying jurisdiction, weighing positive and negative evidence to assess its recoverability. In making such a determination, the Company considers all available and objectively verifiable negative and positive evidence, including future reversals of existing taxable temporary differences, projected future taxable income inclusive of the impact of enacted legislation, tax-planning strategies, and results of recent operations. The weight given to the potential effect of negative and positive evidence is commensurate with the extent to which it can be objectively verified.

The Company determined that the objectively and verifiable negative evidence outweighed the positive evidence and as such intends to maintain a full valuation allowance on its U.S and U.K deferred tax assets until there is sufficient evidence to support the realization of these deferred tax assets. Accordingly, the Company recorded a valuation allowance of \$196.9 million at December 31, 2023.

As of December 31, 2023, the Company's U.S. net operating losses and credit carryforwards are:

<i>(in thousands)</i>	Federal		State	
Net operating losses ⁽¹⁾	\$	20,624	\$	8,766
Net operating losses due to acquisitions ⁽¹⁾	\$	20,624	\$	2,195
Credit carryforwards ⁽²⁾	\$	26,464	\$	3,435
Credit carryforwards due to acquisitions	\$	640	\$	60

(1) Excludes federal and state net operating losses of \$16.1 million and \$0.8 million, respectively, from prior acquisitions that the Company expects will expire unutilized.

(2) Excludes federal and state tax credits of \$0.1 million and \$10.7 million, respectively, that the Company expects will expire unutilized.

The Company's federal carryforward losses and credits expire between 2024 and 2041, except for \$1.4 million of state credits, which has an unlimited carryforward period. The Company's U.K. net operating loss carryforwards were \$183.1 million and \$217.3 million at December 31, 2023 and 2022, respectively, which have indefinite carryforward periods.

Uncertain tax benefits

A rollforward of the Company's gross unrecognized tax benefits is:

<i>(in thousands)</i>	2023		2022		2021	
Balance as of January 1,	\$	19,746	\$	17,584	\$	23,801
Additions for tax positions related to the current year		4,859		1,706		653
Additions for tax positions of prior years		7,921		728		—
Reductions for tax positions of prior years		(1,871)		(272)		(6,870)
Balance as of December 31,	\$	30,655	\$	19,746	\$	17,584

Due to the valuation allowance on the U.S. and U.K. deferred tax assets, the Company does not expect the unrecognized tax benefits to materially impact the Company's effective tax rate if recognized.

Tax examinations

The Company files federal and state income tax returns in the U.S. and various foreign jurisdictions. In the ordinary course of business, the Company and its subsidiaries are examined by various tax authorities, including the Internal Revenue Service in the U.S. As of December 31, 2023, the Company's U.S. federal tax returns for the years 2014 through 2019 were under examination by the Internal Revenue Service. In addition, certain foreign jurisdictions are auditing the Company's income tax returns for periods ranging from 2013 through 2021. The Company does not expect the results of these audits to have a material effect on the Company's financial condition, results of operations, or cash flows. With few exceptions, the statute of limitations remains open in all jurisdictions for all tax years since 2017.

19. EARNINGS (LOSS) PER SHARE

Basic earnings (loss) per share is calculated using the weighted-average number of common shares outstanding during the period. Diluted earnings (loss) per share is calculated using the weighted-average number of common shares outstanding during the period, plus the dilutive effect of outstanding stock options, RSUs, and convertible senior notes.

Calculation of earnings (loss) per share:

(in thousands, except per share amounts)

	2023	2022	2021
Net income (loss)	\$ 67,808	\$ (345,582)	\$ (63,040)
Weighted-average common shares outstanding	83,162	81,947	81,387
Earnings (loss) per share, basic	\$ 0.82	\$ (4.22)	\$ (0.77)
Net income (loss)	\$ 67,808	\$ (345,582)	\$ (63,040)
Convertible senior notes - interest expense and settlement gains, net of tax	(5,528)	—	—
Numerator for diluted EPS	\$ 62,280	\$ (345,582)	\$ (63,040)
Weighted-average effect of dilutive securities:			
Convertible senior notes	235	—	—
Stock options	794	—	—
RSUs	723	—	—
Effect of dilutive securities	1,752	—	—
Weighted-average common shares outstanding, assuming dilution ⁽¹⁾⁽²⁾⁽³⁾	84,914	81,947	81,387
Earnings (loss) per share, diluted	\$ 0.73	\$ (4.22)	\$ (0.77)
Outstanding anti-dilutive stock options and RSUs ⁽⁴⁾	250	3,367	5,862

(1) All dilutive securities are excluded in periods of loss as their inclusion would be anti-dilutive.

(2) The shares underlying the conversion options in the Company's Notes are included using the if-converted method, if dilutive in the period. If the outstanding conversion options were fully exercised, the Company would issue approximately 3.7 million shares as of December 31, 2023.

(3) The Company's Capped Call Transactions represent the equivalent of approximately 3.7 million shares of the Company's common stock (representing the number of shares for which the Notes are convertible) as of December 31, 2023. The Capped Call Transactions are expected to reduce common stock dilution and/or offset any potential cash payments the Company must make, other than for principal and interest, upon conversion of the Notes, with such reduction and/or offset subject to a cap of \$196.44. The Capped Call Transactions are excluded from weighted-average common shares outstanding, assuming dilution, in all periods as their effect would be anti-dilutive.

(4) Outstanding stock options and RSUs that were anti-dilutive under the treasury stock method in the period were excluded from the computation of diluted earnings (loss) per share. These awards may be dilutive in the future.

20. COMMITMENTS AND CONTINGENCIES

Commitments

For additional information, see "Note 10. Leases".

Legal Proceedings

In addition to the matters below, the Company is or may become involved in a variety of claims, demands, suits, investigations, and proceedings that arise from time to time relating to matters incidental to the ordinary course of the Company's business, including actions concerning contracts, intellectual property, employment, benefits, and securities matters. Regardless of the outcome, legal disputes can have a material effect on the Company because of defense and settlement costs, diversion of management resources, and other factors.

In addition, as the Company is a party to ongoing litigation, it is at least reasonably possible that the Company's estimates will change in the near term, and the effect may be material.

The Company had no accrued losses for litigation as of December 31, 2023 and December 31, 2022.

Appian Corp. v. Pegasystems Inc. & Youyong Zou

As previously reported, the Company is a defendant in litigation brought by Appian in the Circuit Court of Fairfax County, Virginia (the “Court”) titled *Appian Corp. v. Pegasystems Inc. & Youyong Zou*, No. 2020-07216 (Fairfax Cty. Ct.). On May 9, 2022, the jury rendered its verdict finding that the Company had misappropriated one or more of Appian’s trade secrets, that the Company had violated the Virginia Computer Crimes Act, and that the trade secret misappropriation was willful and malicious. The jury awarded damages of \$2,036,860,045 for trade secret misappropriation and \$1.00 for violating the Virginia Computer Crimes Act. On September 15, 2022, the circuit court of Fairfax County entered judgment of \$2,060,479,287, consisting of the damages previously awarded by the jury plus attorneys’ fees and costs, and stating that the judgment is subject to post-judgment interest at a rate of 6.0% per annum, from the date of the jury verdict (May 9, 2022) as to the amount of the jury verdict and from September 15, 2022 as to the amount of the award of attorneys’ fees and costs. On September 15, 2022, the Company filed a notice of appeal from the judgment. On September 29, 2022, the circuit court of Fairfax County approved a \$25,000,000 letter of credit obtained by the Company to secure the judgment and entered an order suspending the judgment during the pendency of the Company’s appeal. Appellate briefing in the Court of Appeals of Virginia is completed. A panel of the Court of Appeals of Virginia heard oral arguments on November 15, 2023, and will issue a written opinion in the future. Although it is not possible to predict timing, the entirety of the appeals process could potentially take years to complete. The Company continues to believe that it did not misappropriate any alleged trade secrets and that its sales of the Company’s products at issue were not caused by, or the result of, any alleged misappropriation of trade secrets. The Company is unable to reasonably estimate possible damages because of, among other things, uncertainty as to the outcome of appellate proceedings and/or any potential new trial resulting from the appellate proceedings.

City of Fort Lauderdale Police and Firefighters’ Retirement System, Individually and on Behalf of All Others Similarly Situated v. Pegasystems Inc., Alan Trefler, and Kenneth Stillwell

On May 19, 2022, a lawsuit was filed against the Company, the Company’s chief executive officer and the Company’s chief operating and financial officer in the United States District Court for the Eastern District of Virginia Alexandria Division, captioned *City of Fort Lauderdale Police and Firefighters’ Retirement System, Individually and on Behalf of All Others Similarly Situated v. Pegasystems Inc., Alan Trefler, and Kenneth Stillwell* (Case 1:22-cv-00578-LMB-IDD). The complaint generally alleges, among other things, that the defendants violated Section 10(b) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and Rule 10b-5 promulgated thereunder and that the individual defendants violated Section 20(a) of the Exchange Act, in each case by allegedly making materially false and/or misleading statements, as well as allegedly failing to disclose material adverse facts about the Company’s business, operations, and prospects, which caused the Company’s securities to trade at artificially inflated prices. The complaint seeks unspecified damages on behalf of a class of purchasers of the Company’s securities between May 29, 2020 and May 9, 2022. The litigation has since been transferred to the United States District Court for the District of Massachusetts (Case 1:22-cv-11220-WGY), and lead plaintiff class representatives—Central Pennsylvania Teamsters Pension Fund - Defined Benefit Plan, Central Pennsylvania Teamsters Pension Fund - Retirement Income Plan 1987, and Construction Industry Laborers Pension Fund—have been appointed. On October 18, 2022, a consolidated amended complaint was filed that does not add any new parties or legal claims, is based upon the same general factual allegations as the original complaint, and now seeks unspecified damages on behalf of a class of purchasers of the Company’s securities between June 16, 2020 and May 9, 2022. The Company moved to dismiss the consolidated amended complaint on December 19, 2022. The hearing on the Company’s motion to dismiss took place on May 17, 2023. After hearing argument from both sides, the Court denied the Company’s motion from the bench and stated that a written opinion would follow. On June 30, 2023, the Company filed its Answer to the complaint. On July 24, 2023, the Court issued its written opinion denying the motion to dismiss as to the Company and Defendant Trefler but granting the motion without prejudice as to Mr. Stillwell. The Company believes it has strong defenses to the claims brought against the defendants and intends to defend against these claims vigorously. The Company is unable to reasonably estimate possible damages or a range of possible damages in this matter given the stage of the lawsuit, the Company’s belief that it has strong defenses to the claims asserted, its intent to defend against these claims, and there being no specified quantum of damages sought in the complaint.

In re Pegasystems Inc., Derivative Litigation

On November 21, 2022, a lawsuit was filed against the members of the Company’s board of directors, the Company’s chief operating and financial officer and the Company in the United States District Court for the District of Massachusetts, captioned *Mary Larkin, derivatively on behalf of nominal defendant Pegasystems Inc. v. Peter Gyenes, Richard Jones, Christopher Lafond, Dianne Ledingham, Sharon Rowlands, Alan Trefler, Larry Weber, and Kenneth Stillwell, defendants, and Pegasystems Inc., nominal defendant* (Case 1:22-cv-11985). The complaint generally alleges the defendants sold shares of the Company while in possession of material nonpublic information relating to (i) the litigation brought by Appian in the Circuit Court of Fairfax County, Virginia, described above, and (ii) alleged misconduct by Company employees alleged in that litigation. On April 28, 2023, a lawsuit was filed in the United States District Court for the District of Massachusetts by Dag Sagfors, derivatively on behalf of nominal defendant Pegasystems Inc., asserting breach of fiduciary duty and related claims relating to the Virginia Appian litigation against the same defendants as the Larkin lawsuit. On May 17, 2023, the Larkin and Sagfors cases were consolidated and a joint motion to stay the consolidated case is pending before the Court. The Company also has received confidential demand letters raising substantially the same allegations set forth in the foregoing derivative complaints. On April 12, 2023, the Company’s board of directors (other than Mr. Trefler, who recused himself), formed a committee consisting solely of independent directors, to review, analyze, and investigate the matters raised in the demands and to determine in good faith what actions (if any) are reasonably believed to be appropriate under similar circumstances and reasonably believed to be in the best interests of the Company in response to the demand letters. The Company is unable to reasonably estimate possible damages or a range of possible damages in this matter given the stage of the lawsuit and there being no specified quantum of damages sought in the complaint.

SEC Inquiry

Beginning in March 2023, the U.S. Securities and Exchange Commission (“SEC”) has requested certain information relating to, among other things, the accounting treatment of the Company’s above-described litigation with Appian Corporation. The Company is fully cooperating with the SEC’s requests.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures

Our management, with the participation of our Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act) as of December 31, 2023. In designing and evaluating our disclosure controls and procedures, our management recognized that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and our management necessarily applied its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on this evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective as of December 31, 2023.

Management’s report on and changes in internal control over financial reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act. Under the supervision and with the participation of our management, including our CEO and CFO, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2023 based on the framework in the updated *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) on May 14, 2013.

Based on this evaluation, management has concluded that (i) our internal control over financial reporting was effective as of December 31, 2023 and (ii) no change in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act) occurred during the quarter ended December 31, 2023 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Deloitte & Touche LLP, our independent registered public accounting firm which also audited our consolidated financial statements, has issued an attestation report on our internal control over financial reporting, which is included in Item 8 “Financial Statements and Supplementary Data”.

ITEM 9B. OTHER INFORMATION

Rule 10b5-1 and non-rule 10b5-1 trading arrangements

On November 17, 2023, Leon Trefler, our Chief of Clients and Markets, entered into a trading plan that provides for the sale of an aggregate of 9,024 shares of our common stock and the net shares received during the duration of the plan pursuant to Mr. Trefler’s outstanding options to purchase 59,677 shares of our common stock at varying exercise prices. The plan will terminate on December 31, 2024, subject to early termination for certain specified events set forth in the plan.

On November 9, 2023, Rifat Kerim Akgonul, our Chief Product Officer, entered into a trading plan that provides for the sale of 15,000 shares of our common stock. The plan will terminate on February 28, 2025, subject to early termination for certain specified events set forth in the plan.

On November 8, 2023, Kenneth Stillwell, our Chief Financial Officer and Chief Operating Officer, entered into a trading plan that provides for the sale of 18,000 shares of our common stock. The plan will terminate on February 28, 2025, subject to early termination for certain specified events set forth in the plan.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Except as set forth below, information required by this item is incorporated herein by reference from the information contained in our proxy statement for our 2024 annual stockholders meeting (the “2024 proxy statement”) under the headings Executive Compensation, Election of Directors, Corporate Governance, Executive Officers, and Delinquent Section 16(a) Reports, which will be filed with the Securities and Exchange Commission within 120 days after the close of the fiscal year.

We have adopted a written code of conduct that applies to our Board of Directors and employees, including our principal executive officer, principal financial officer, principal accounting officer, and persons performing similar functions. A copy of our code of conduct can be found on our website, www.pega.com. We intend to satisfy the disclosure requirements under Item 5.05 of Form 8-K and the applicable NASDAQ Global Select Market rules by posting such information on our website.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference from the information contained in the 2024 proxy statement under the headings “Director Compensation”, “Compensation Discussion and Analysis”, and “Executive Compensation” and is incorporated herein by reference.

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

The information required by this item is incorporated herein by reference from the information contained in the 2024 proxy statement under the headings “Executive Compensation”, “Equity Compensation Plan Information”, and “Security Ownership of Certain Beneficial Owners and Management”, and is incorporated herein by reference.

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

The information required by this item is incorporated herein by reference from the information contained in the 2024 proxy statement under the headings “Certain Relationships and Related Transactions” and “Determination of Independence” and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated herein by reference from the information contained in the 2024 proxy statement under the heading “Independent Registered Public Accounting Firm Fees and Services” and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following are filed as part of this Annual Report:

(1) Financial Statements

The following consolidated financial statements are included in Item 8:

	Page
Report of Independent Registered Public Accounting Firm	37
Consolidated Balance Sheets as of December 31, 2023 and 2022	39
Consolidated Statements of Operations for the years ended December 31, 2023, 2022, and 2021	40
Consolidated Statements of Comprehensive Income (Loss) for the years ended December 31, 2023, 2022, and 2021	41
Consolidated Statements of Stockholders' Equity for the years ended December 31, 2023, 2022, and 2021	42
Consolidated Statements of Cash Flows for the years ended December 31, 2023, 2022, and 2021	43

(b) Exhibits

Exhibit No.	Description	Incorporation by Reference			Filed Herewith
		Form	Location	Filing Date	
3.1	Restated Articles of Organization of the Registrant and Amendments thereto	10-Q	3.1	11/4/14	
3.2	Amended and Restated Bylaws of Pegasystems Inc	8-K	3.2	6/15/20	
4.1	Specimen Certificate Representing the Common Stock	S-1	4.1	6/19/96	
4.2	Indenture, dated as of February 24, 2020, between Pegasystems Inc. and U.S. Bank National Association, as trustee	8-K	4.1	2/24/20	
4.3	Form of certificate representing the 0.75% Convertible Senior Notes due 2025	8-K	Exhibit A to 4.1	2/24/20	
4.4	Description of Common Stock	10-K	4.2	2/12/20	
10.1	2004 Long-Term Incentive Plan (as amended and restated)++	DEF 14A	Appendix A to 2023 Proxy Statement	4/28/23	
10.2	Restricted Stock Unit Sub-Plan of the Registrant's 2004 Long-Term Incentive Plan for French Participants++	DEF 14A	Appendix B to 2016 Proxy Statement	4/18/16	
10.3	2006 Employee Stock Purchase Plan, as amended on June 20, 2023++	DEF 14A	Appendix B to 2023 Proxy Statement	4/28/23	
10.4	Form of Employee Stock Option Agreement, as amended++	10-Q	10.3	5/10/17	
10.5	Form of Global Stock Option Agreement++	10-K	10.5	2/17/21	
10.6	Form of Restricted Stock Unit Agreement, as amended++	10-Q	10.4	5/10/17	
10.7	Form of Global Restricted Stock Unit Agreement++	10-K	10.7	2/17/21	
10.8	Form of Non-Employee Director Stock Option Agreement++	10-Q	10.2	10/29/04	
10.9	Form of Director Indemnification Agreement++	8-K	99.1	4/11/05	
10.10	Offer Letter between the Registrant and Kenneth Stillwell dated June 1, 2016++	8-K	99.1	6/14/16	
10.11	Offer Letter between the Registrant and John Higgins executed December 13, 2020++	10-Q	10.3	4/26/23	
10.12	Compensation program for non-employee members of the Registrant's Board of Directors, effective August 5, 2019++	8-K	Item 1.01	8/9/19	
10.13	2022 Section 16 Officers/FLT Member Corporate Incentive Compensation Plan++	8-K	99.1	2/7/22	
10.14	2023 Section 16 Officers/FLT Member Corporate Incentive Compensation Plan++	8-K	99.1	2/13/23	
10.15	Credit Agreement dated as of November 5, 2019 with PNC Bank, National Association	10-Q	10.1	11/7/19	
10.16	Amendment to Loan Documents, dated February 18, 2020, between Pegasystems Inc. and PNC Bank, National Association	8-K	10.3	2/24/20	
10.17	Amendment 2 to Loan Documents, dated July 22, 2020, between Pegasystems Inc. and PNC Bank, National Association	10-Q	10.2	7/28/20	

Exhibit No.	Description	Incorporation by Reference			Filed Herewith
		Form	Location	Filing Date	
10.18**	Amendment to Loan Documents, dated as of September 30, 2020, between Pegasystems Inc. and PNC Bank, National Association	10-Q	10.3	10/28/20	
10.19	Fourth Amendment to Loan Documents, dated as of March 31, 2022, between Pegasystems Inc. and PNC Bank, National Association	10-Q	10.1	3/31/22	
10.20	Fifth Amendment to Loan Documents, dated as of July 25, 2022, between Pegasystems Inc. and PNC Bank, National Association	10-Q	10.1	7/27/22	
10.21	Sixth Amendment to Loan Documents, dated as of March 31, 2023, between Pegasystems Inc. and PNC Bank, National Association	10-Q	10.1	4/26/23	
10.22	Fee Letter, dated as of March 31, 2023, for Senior Credit Facility	10-Q	10.2	4/26/23	
10.23	Form of Side Letter to Base Call Option Transaction	10-Q	10.1	10/28/20	
10.24	Form of Side Letter to Additional Call Option Transaction	10-Q	10.2	10/28/20	
10.25	Form of Confirmation of Base Call Option Transaction	8-K	10.1	2/24/20	
10.26	Form of Confirmation of Additional Call Option Transaction	8-K	10.2	2/24/20	
10.27	Sublease, dated March 31, 2021 for Office Space at One Main Street, Cambridge, MA	10-Q	10.1	7/28/21	
10.28	Lease between Pegasystems Inc. and 275 Wyman LLC**	8-K	10.1	7/9/21	
21.1	Subsidiaries of the Registrant.				X
23.1	Consent of Independent Registered Public Accounting Firm—Deloitte & Touche LLP.				X
31.1	Certification pursuant to Exchange Act Rules 13a-14 and 15d-14 of the Chief Executive Officer.				X
31.2	Certification pursuant to Exchange Act Rules 13a-14 and 15d-14 of the Chief Financial Officer.				X
32	Certification pursuant to 18 U.S.C. Section 1350 of the Chief Executive Officer and the Chief Financial Officer.				+
97.1	Pegasystems Inc. Compensation Recovery Policy				X
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.				X
101.SCH	Inline XBRL Taxonomy Extension Schema Document.				X
101.CAL	Inline XBRL Taxonomy Calculation Linkbase Document.				X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.				X
101.LAB	Inline XBRL Taxonomy Label Linkbase Document.				X
101.PRE	Inline XBRL Taxonomy Presentation Linkbase Document.				X
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)				X

+ Indicates that the exhibit is being furnished with this report and is not filed as a part of it.

++ Management contracts and compensatory plans or arrangements required to be filed pursuant to Item 15(b) of Form 10-K.

** Certain portions of this exhibit are considered confidential and have been omitted as allowed under SEC rules and regulations

(c) Financial Statement Schedules

All financial statement schedules are omitted because the required information is not present or not present in sufficient amounts to require submission of the schedule or because the information is reflected in the consolidated financial statements or notes thereto.

ITEM 16. FORM 10-K SUMMARY

Omitted at Registrant's option.

COMPANY INFORMATION

Board of Directors

Alan Trefler

*Chairman of the Board and
Chief Executive Officer*

Peter Gyenes

*Trustee Emeritus,
Massachusetts Technology
Leadership Council*

Richard Jones

Director

Christopher Lafond

*Chief Executive Officer,
Insurity, Inc.*

Dianne Ledingham

*Advisory Partner,
Bain & Company*

Sharon Rowlands

*Chief Executive Officer,
Newfold Digital, Inc.*

Larry Weber

*Chief Executive Officer and
Chairman of the Board,
Racepoint Global, Inc.*

Executive Officers

Alan Trefler

*Chairman of the Board and
Chief Executive Officer*

Kerim Akgonul

Chief Product Officer

Efstathios Kouninis

*Chief Accounting Officer,
Senior Vice President of Finance,
and Treasurer*

John Higgins

Chief of Client & Partner Success

Kenneth Stillwell

*Chief Operating Officer and
Chief Financial Officer*

Leon Trefler

Chief of Clients and Markets