UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2022

or

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

For the transition period from ________ to ________

Commission file number: 001-38034

Alteryx, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**90-0673106**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**
17200 Laguna Canyon Road, Irvine, California	**92618**
(Address of principal executive offices)	**(Zip Code)**

(888) 836-4274
(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
Class A Common Stock, $0.0001 par value per share	**AYX**	**New York Stock Exchange**

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 Act. Yes ☐ No ☒

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or 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 voting and non-voting common equity held by non-affiliates of the registrant, as of June 30, 2022, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $2.6 billion based upon the closing price reported for such date on the New York Stock Exchange.

As of February 2, 2023, there were 61,637,370 shares of the registrant's Class A common stock outstanding and 7,886,450 shares of the registrant's Class B common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement for its 2023 Annual Meeting of Stockholders, or Proxy Statement, to be filed within 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, are incorporated by reference in Parts II and III. Except with respect to information specifically incorporated by reference in this Annual Report, the Proxy Statement shall not be deemed to be filed as part hereof.

Alteryx, Inc.
Annual Report on Form 10-K
For the Fiscal Year Ended December 31, 2022
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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, or Annual Report, includes "forward-looking statements" within the meaning of the federal securities laws. All statements contained in this Annual Report, other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, and our objectives for future operations, are forward-looking statements. In some cases, forward-looking statements can be identified by the use of terminology such as "believe," "may," "will," "intend," "expect," "plan," "anticipate," "estimate," "potential," "continue," "would," "target," or "project," or other comparable terminology. Forward-looking statements contained in this Annual Report include, but are not limited to, statements about our expectations regarding:

- macroeconomic conditions, including the impacts of rising inflation, interest rates, foreign currency exchange rates, and economic uncertainty;
- our ability to execute our long-term growth, go-to-market, and product strategies, including with respect to our cloud offerings;
- the capabilities, performance, and benefits associated with using our products and services, including the timing, speed of, and ability to deliver additional product innovation, including as a result of integrating acquired technology into our existing technology;
- our investments in cloud infrastructure and the cost of third-party data center hosting fees;
- trends in revenue, cost of revenue, and gross margin;
- our ability to attract and retain personnel, particularly with respect to our direct sales force and software engineers;
- trends in operating expenses, including research and development expense, sales and marketing expense, and general and administrative expense, and expectations regarding these expenses as a percentage of revenue;
- our ability to successfully integrate acquired companies, technology, and talent;
- expansion of our international operations and the impact on foreign tax expense;
- maintaining a valuation allowance for net deferred tax assets to the extent they are not expected to be recoverable;
- the timing and method of settlement of any series of our convertible senior notes;
- the global opportunity for our analytics automation software platform;
- our investments in our marketing efforts and sales organization, including indirect sales channels and headcount, and the impact of any changes to our sales organization on revenue and growth;
- the continued development and success of Alteryx Community, our online user community, distribution channels, and our partner relationships, including the ability of our partners to successfully enable and deliver specialized support to our customers;
- our expectations for Alteryx Designer Cloud, Alteryx Machine Learning, Alteryx Auto Insights, Alteryx Connect, and Alteryx Intelligence Suite and other new products;
- our ability to develop or incorporate a cloud-based business model;
- our ability to manage our product lifecycle, including the discontinuation of any of our products or any acquired technology and the migration of those customers to other products that we offer;
- expansion of and within our customer base;
- competitors and competition in our markets;
- our investments in technology and companies through Alteryx Ventures;
- legal proceedings and the impact of such proceedings;
- cash and cash equivalents and short-term investments and any positive cash flows from operations being sufficient to support our working capital and capital expenditure requirements for at least the next 12 months; and
- other statements regarding our future operations, financial condition, prospects and business strategies, or operations and talent strategies.

Although we believe that the expectations reflected in the forward-looking statements contained herein are reasonable, these expectations or any of the forward-looking statements could prove to be incorrect, and actual results could differ materially from those projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to risks and uncertainties, including, but not limited to, the factors set forth in this Annual Report under Part I, Item 1A. Risk Factors. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the forward-looking statements made in this Annual Report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

All forward-looking statements and reasons why results may differ included in this Annual Report are made as of the date of the filing of this Annual Report, and we assume no obligation to update any such forward-looking statements or reasons why actual results may differ. The following discussion should be read in conjunction with our consolidated financial statements and notes thereto appearing in Part II, Item 8 of this Annual Report.

Summary Risk Factors

The below summary of risk factors provides an overview of many of the risks we are exposed to in the normal course of our business activities. As a result, the below summary risks do not contain all of the information that may be important to you, and you should read the summary risks together with the more detailed discussion of risks set forth following this section under the heading "Risk Factors," as well as elsewhere in this Annual Report on Form 10-K. Additional risks, beyond those summarized below or discussed elsewhere in this Annual Report on Form 10-K, may apply to our activities or operations as currently conducted or as we may conduct them in the future or in the markets in which we operate or may in the future operate. Consistent with the foregoing, we are exposed to a variety of risks, including risks associated with the following:

Risks Related to Our Business and Industry

- We have incurred net losses in the past, anticipate continuing to incur significant operating expenses in the future, and may not achieve or sustain profitability.
- If we are unable to develop, release, and gain market acceptance of product and service enhancements and new products and services to respond to rapid technological change in a timely and cost-effective manner, or if we are unable to develop a successful business model to sell those products and services we have acquired or integrate them into our existing products and services, our business, operating results, and financial condition could be adversely affected.
- We derive a large portion of our revenue from our software platform, and our future growth is dependent on its success.
- Volatile and significantly weakened global economic conditions have in the past and may in the future adversely affect our industry, business, and results of operations.
- We have grown rapidly in our recent past and if we are unable to manage our growth effectively, our business, operating results, and financial condition could be adversely affected.
- Acquisitions of, or investments in, other companies, products, or technologies have required, and could continue to require, significant management attention and could disrupt our business, dilute stockholder value, and adversely affect our operating results.
- If we are unable to attract new customers, expand sales to existing customers, both domestically and internationally, or maintain the subscription amount or subscription term of renewing customers, our revenue growth could be slower than we expect or our revenue may decline and our business may be harmed.
- We use channel partners and if we are unable to establish and maintain successful relationships with them, our business, operating results, and financial condition could be adversely affected.
- We face intense and increasing competition, and we may not be able to compete effectively, which could reduce demand for our platform and adversely affect our business, revenue growth, and market share.
- If the market for analytics products and services fails to grow as we expect, or if businesses fail to adopt our platform, our business, operating results, and financial condition could be adversely affected.
- The competitive position of our software platform depends in part on its ability to operate with third-party products and services, and if we are not successful in maintaining and expanding the compatibility of our platform with such third-party products and services, our business, financial position, and operating results could be adversely impacted.
- We depend on technology and data licensed to us by third parties that may be difficult to replace or cause errors or failures that may impair or delay implementation of our products and services or force us to pay higher license fees.
- As we continue to pursue sales to large enterprises, our sales cycle, forecasting processes, and deployment processes may become more unpredictable and require greater time and expense.
- Our long-term success depends, in part, on our ability to expand the licensing of our software platform to customers located outside of the United States and our current, and any further, expansion of our international operations exposes us to risks that could have a material adverse effect on our business, operating results, and financial condition.
- If we fail to develop, maintain, and enhance our brand and reputation cost-effectively, our business and financial condition may be adversely affected.
- Our sales are generally more heavily weighted toward the end of each quarter which could cause our billings and revenue to fall below expected levels.
- Our operating results may fluctuate from quarter to quarter, which makes our future results difficult to predict.

- Over the past several years, we have undergone, and may continue to experience, changes to our senior management team and if we are unable to integrate new members of our senior management team, or if we lose the services of any of our senior management or other key personnel, our business, operating results, and financial condition could be adversely affected.

Risks Related to Information Technology, Intellectual Property, and Data Security and Privacy

- We have experienced, and may in the future experience, security breaches and if unauthorized parties obtain access to our customers' data, our data, or our platform, networks, or other systems, our platform may be perceived as not being secure, our reputation may be harmed, demand for our platform may be reduced, our operations may be disrupted, we may incur significant legal liabilities, and our business could be materially adversely affected.
- Cybersecurity risks and cyber incidents could result in the compromise of confidential data or critical data systems and give rise to potential harm to customers, remediation and other expenses under consumer protection laws or other laws or common law theories, subject us to litigation and federal and state governmental inquiries, damage our reputation, and otherwise be disruptive to our business and operations.
- Business disruptions or performance problems associated with our technology and infrastructure, including interruptions, delays, or failures in service from our third-party data center hosting facility and other third-party services, could adversely affect our operating results or result in a material weakness in our internal controls.
- Failure to protect our intellectual property could adversely affect our business.

Risks Related to Legal, Regulatory, Accounting, and Tax Matters

- Current and future litigation could have a material adverse impact on our operating results and financial condition.
- We may require additional capital to fund our business and support our growth, and any inability to generate or obtain such capital may adversely affect our operating results and financial condition.

Risks Related to Ownership of Our Class A Common Stock

- The market price of our Class A common stock has been, and will likely continue to be, volatile, and you could lose all or part of the value of your investment.
- The dual class structure of our common stock has the effect of concentrating voting control with holders of our Class B common stock, including our directors, executive officers, and 5% stockholders and their affiliates, which limits or precludes your ability to influence corporate matters, including the election of directors and the approval of any change of control transaction.

PART I

Item 1. Business.

Overview

We are a leader in analytics automation. The Alteryx Analytics Automation Platform empowers “analytics for all” by delivering easy, end-to-end automation of data engineering, analytics, reporting, machine learning, and data science processes, enabling enterprises to democratize data analytics across their organizations for a broad range of use cases. Whether working in the cloud or on-premise, data workers, regardless of technical acumen, are empowered to be curious and solve problems. With the Alteryx Analytics Automation Platform, users can automate the full range of analytics and data science processes, embed intelligent decision-making and actions, and empower their organization to enable top and bottom-line impact, efficiency gains, and rapid upskilling.

Uncovering actionable insights from data is critical to modern business success, but has become increasingly challenging as the volume, velocity, and variety of data continues to expand. Traditional data analysis tools and processes can be slow, complex, difficult to use, and resource-intensive, often requiring multiple steps by data analysts, data scientists, data engineers, information technology, or IT, employees, and other data workers to complete even the most basic analysis. As a result, these point tools and processes are often unable to keep pace with the sophistication and speed of analytics demanded by organizations today.

Our platform democratizes access to data-driven insights by making sophisticated analytics capabilities available to all users, ranging from IT administrators and business analysts to data engineers and trained data scientists. The availability of Alteryx solutions in the cloud means users can gain access to insights even faster. We unify the analytics and analytic process into one simple self-service platform by combining tasks that were previously distributed among multiple tools and parties. Our platform allows a single user or group of users to easily and quickly discover, access, and prepare data from various sources, perform a variety of analyses, and deliver analytical output to drive data-driven decisions and improve business outcomes. This is done through a no-code, low-code approach, visual workflows, and an intuitive drag-and-drop interface that can reduce tedious, time-consuming manual tasks to a few mouse-clicks while eliminating the need to write complex software code. Our Alteryx Analytics Cloud platform delivers an enterprise grade platform, deploying our cloud-based products with the scalability, built-in governance, and security that organizations demand as a part of their digital transformation. The resulting opportunity is significant, as our platform can enable and upskill millions of underserved data workers to do their jobs more effectively.

Our platform has been adopted by organizations across a wide variety of industries and sizes. As of December 31, 2022, we had over 8,300 customers in more than 90 countries, including over 930 of the Global 2000 companies. Our customers include Anheuser Busch, LLC, AutoNation, Inc., Biogen Idec Inc., Chevron Corporation, Daikin Industries, Ltd., Delta Air Lines, Inc., General Mills, Inc., JPMorgan Chase & Co., L’Oréal USA, Inc., Netflix, Inc., Pfizer Inc., salesforce.com, inc., Société Générale S.A., Royal Bank of Canada, Unilever PLC, United Parcel Service, Inc., and Visa Inc.

We believe analytics automation is an area in which companies are continuing to invest and we are seeing continued success in the analytics automation market with our enterprise-focused sales motion. For many of our customers, analytics has become a priority at the executive level and we have experienced success in identifying and involving executive sponsors to champion analytics democratization initiatives within their organizations. This has led to an increase in the adoption of enterprise license agreements, which provides our customers additional flexibility and encourages exploration of new cases with new users throughout their organizations. Our focus on selling to the enterprise has enabled us to lead with the sale of our platform rather than the sale of individual products.

We sell our platform primarily through direct and indirect sales and marketing channels. We have cultivated strong relationships with channel partners to help us extend the reach of our sales and marketing efforts internationally. Our channel partners include technology alliances, solution providers, global strategic integrators, value-added resellers, or VARs, and cloud service providers. These partners also provide solution-based selling, services, and training internationally.

Growth Strategy

Our focus on empowering users and the organizations they serve to quickly and easily access data-driven insights presents a significant opportunity. Our growth strategy aims to:

- ***Increase our overall customer base with a focus on the enterprise.*** We are accelerating the shift towards self-service analytics and engaging customers at an executive level to transform that shift into an enterprise-level strategy. As a result, we believe we have the opportunity to further increase our current customer base of over 8,300 customers. We plan to expand our marketing efforts to increase demand for our platform and awareness of our brand, particularly at the enterprise level. We intend to continue to invest in growing both our direct sales teams and indirect sales channels to support the growth of our business. In 2022, our direct sales teams continued to be aligned to certain market and customer opportunities, with a continued focus on Global 2000 companies and maximizing our sales opportunities with higher productivity activities.
- ***Expand within our current customer base.*** We plan on expanding existing customers' use of our platform by identifying additional use cases, departments, and divisions for our platform and increasing the number of users within our customers' organizations. Over time, many of our customers find that the use of our platform is more strategic and collaborative in nature and it becomes a fundamental element of their operational, analytical, and business processes. To further enable our users, we launched digital customer success in 2022, which enables us to continue scaling and supporting our current customers more efficiently.
- ***Continue to penetrate international markets.*** We have continued to increase our focus on international markets. We believe that the global opportunity for self-service data analytics solutions is significant and should continue to expand as organizations outside the United States seek to adopt self-service platforms, which we have experienced with our existing customers. We believe our key global markets include, but are not limited to, Canada, Latin America, Northern and Western Europe, Japan, Singapore, India and Australia.
- ***Extend our value proposition.*** We intend to continue to rapidly improve the capabilities of our platform and invest in innovation and our category leadership. We also plan to continue to invest in research and development, including hiring top technical talent and maintaining an agile organization that focuses on core technology innovation. For example, to drive innovation in the public sector, in May 2022, we launched Alteryx Designer-FIPS, a version of Alteryx Designer that is aligned with the data security and computer system standards outlined in the Federal Information Processing Standards, or FIPS, and, in November 2022, we announced early access to the new interface of our Designer product as part of the Alteryx Analytics Cloud platform. We intend to focus on further developing our cloud capabilities, modernizing the Alteryx Designer experience, enhancing our governance capabilities, and developing a robust extensibility framework for our customers and partners.
- ***Grow our global partner ecosystem.*** We have invested in and plan to continue investing in distribution channels and our relationships with technology alliances, solution providers, global strategic integrators, VARs, and cloud service providers to help us enter into and grow in new markets while complementing our direct sales efforts. In March 2022, we announced an updated partner program that includes incentives for joint customer success, technical expertise and new customer acquisition, and rewards partners with benefits across tiered levels of participation. For example, we entered into an alliance with Ernst & Young LLP, or EY, to help clients across various sectors leverage our platform along with EY's digital transformation capabilities. We intend to continue to collaborate with management consulting firms to drive additional business activity, particularly at the enterprise level, and to diversify our partner ecosystem by engaging new solution providers to drive demand generation and partner-initiated opportunities. In addition, we plan to increase our engagement overall with our partners worldwide, growing our partner-attached opportunities and enabling these partners to have more responsibility for sales to smaller customers.
- ***Deepen our user community.*** We benefit from a vibrant and engaged user community and continue to promote initiatives intended to further expand and energize our community. We held our Inspire event in person in May 2022 with nearly 4,500 attendees and hosted a virtual on-demand option that attracted more than 1,000 additional attendees. In addition, we hosted various in-person and virtual regional hybrid events. We will continue to utilize various forms of digital, virtual, and hybrid events to continue to create market awareness and drive business. Additionally, university courses and analytics clubs evangelize the benefits of our platform and introduce its capabilities to business analysts just starting their careers. Similarly, through our SparkED program, which provides educators and learners across all fields of study with free Alteryx software and other resources, we aim to empower a new generation of knowledge workers with the skills to advance their learning and career pathways.
- ***Acquire businesses, technology, and talent.*** We have completed, and plan to continue to leverage, acquisitions to add complementary products, technologies, and/or talent that allow us to reduce the time or costs required to develop new technologies, incorporate enhanced functionality into and complement our existing product offerings, and augment the technical capabilities of our talent. For example, in February 2022, we acquired Trifacta Inc., or Trifacta, to augment our product and go-to-market teams and acquired developed technology to advance our cloud-based functionalities.

- ***Invest in technology that furthers the Alteryx mission.*** We have invested in and intend to continue investing in companies with innovative technology and services that complement and expand our analytics and data science products and further our platform through our strategic ventures fund, Alteryx Ventures. For example, in December 2022, we invested in Manta Software Inc., a data lineage company that creates audit trails for data management and compliance, and in March 2022, we announced an investment in Vertis AI Inc., a market intelligence platform that helps organizations visualize and analyze employee and real estate data to support growth and culture decisions and furthers both organizations' shared focus on developing data-savvy workforces.

Products and Services

Our Analytics Automation Platform democratizes and automates tasks for workers across the analytics value chain. We believe it is the key for enterprises looking to gain real value out of their digital transformation initiatives, making transformational business insights available to the entire business. With subscription and consumption-based options, our platform allows organizations to easily discover, access, prepare, and analyze data from various sources and benefit from data-driven decisions, including consumption of results and insights discovered and through real-time model deployment. Our platform offers a secure collaboration environment for even the largest organizations. The ease-of-use, speed, and sophistication of the analysis that our platform enables are enhanced through highly repeatable visual workflows.

Our platform architecture allows deployment of analytics solutions on hyperscalers, including Amazon Web Services, or AWS, Microsoft Azure, and Google Cloud Platform, or GCP, and is enabling our customers to upskill millions of underserved data workers to drive better business results. Our native data connection capabilities can unlock the data housed in customer cloud data warehouses, cloud data lakes, and on-premise databases. Our platform supports native integrations with major cloud vendors, including Snowflake, AWS Redshift, Databricks, Google BigQuery, and Azure Synapse, and our Open Database Connectivity/Java Database Connectivity architecture allows customers to bring their own data provider. Our platform also supports native tools to access data through application programming interface, or API, endpoints directly or by leveraging our Python software development kit to build connectors to meet unique needs.

Our analytics platform comprises:

- ***Alteryx Designer.*** Our data profiling, preparation, blending, and analytics product used to create visual workflows or analytic processes through an intuitive drag-and-drop interface.
- ***Alteryx Server.*** Our secure and scalable server-based product for scheduling, sharing, and running analytic processes and applications in a web-based environment.
- ***Alteryx Connect.*** Our collaborative data exploration platform for discovering information assets and sharing recommendations across the enterprise.
- ***Alteryx Intelligence Suite.*** Our solution for artificial intelligence provides automated modeling, optical character recognition, and natural language processing to gain insights and produce production models.
- ***Alteryx Analytics Cloud.*** This platform includes:
    - ***Alteryx Designer Cloud.*** Our cloud-native data profiling, preparation, and data pipelining product used to create visual workflows or analytic processes through our drag-and-drop interface.
    - ***Alteryx Machine Learning.*** Our cloud-based solution for automated machine learning, or AutoML, where business analysts can quickly build, validate, iterate, and explore machine learning models with a fully guided user experience.
    - ***Alteryx Auto Insights.*** Our cloud-native analytics solution built for enterprises that utilizes artificial intelligence-driven data discovery to perform root cause analysis of business trends to automate insights for business users.

In addition, Alteryx Community allows users to gain valuable insights from one another, collaborate and share their experiences and ideas, and innovate around our platform. The Alteryx Community also provides a channel for users to share tools and workflows in a centralized repository.

We sell Alteryx Designer on a per-user basis. When customers deploy Alteryx Designer in large scale environments and want to automate their usage, Alteryx Server is sold on a per-CPU core basis. To provide customers with additional data catalog capabilities, Alteryx Connect is sold on a per-CPU core basis alongside Alteryx Server. Alteryx Intelligence Suite provides data science capabilities and is sold on a per-user basis as an add-on to Alteryx Designer.

Alteryx Designer Cloud, Alteryx Machine Learning, and Alteryx Auto Insights are sold via cloud delivery models. Alteryx Designer Cloud is sold with a combination of user-based and consumption-based pricing, available in different tiers. Alteryx Machine Learning is sold in a starter bundle that includes user-based licenses and compute resources. Alteryx Auto Insights is priced by type of user, separated into a viewer license and a creator license. All these products are available within the Alteryx Cloud Enterprise License Agreement for customers looking to leverage the cross-platform capabilities of Alteryx Analytics Cloud.

Alteryx Designer

Alteryx Designer, our self-service data profiling, preparation, blending, and analytics product, allows business analysts to perform analysis on their own in a matter of hours or even minutes. In addition to dramatically reducing the time and resources required to conduct data analysis, Alteryx Designer delivers more accurate, transparent, and sophisticated results. Key capabilities include:

- ***Data profiling.*** Empowers data workers and analysts to independently assess the health and quality of a dataset prior to building analytic models. For many analysts, assessing data quality often requires turning to statisticians or data scientists, delaying the model development and decision-making process. Automated data profiling accelerates the data preparation and insight development process and allows business analysts to maintain control of the entire analytic process.
- ***Data preparation and blending.*** Provides the ability to easily connect, clean, transform, and filter data significantly faster than traditional analytic tools. Business analysts can easily blend structured, unstructured, and semi-structured data sources without complex programming requirements. Business analysts use a simple visual workspace and straightforward drag-and-drop tools to clean and combine data and create a repeatable workflow. Once a workflow is assembled, it automates the analytic process and can be rerun in seconds. The data can also be enriched and augmented with critical location, consumer, and business insights data through the purchase of our third-party data packages.
- ***Advanced analytics.*** Enables business analysts to create analytic models ranging from basic to highly complex. Our platform supports cleansing, calculations, aggregations, and advanced analytics functions, including those used to understand data relative to spatial criteria or more advanced tools used to apply statistical algorithms for predictive analysis. Business analysts can leverage a wide range of code-free tools within the product to create a dataset optimized for a specific analysis, run a broad set of analytics, and share the results in a variety of formats. Data scientists can also incorporate R and Python models using Designer's code-friendly tools to bring more advanced analytic modeling into the repeatable workflows. Additionally, our platform embeds a suite of tutorials and pre-built analytic templates, and the expertise of thousands of analysts from Alteryx Community within the interface to help familiarize users with our platform's capabilities, enabling business analysts to adopt sophisticated analytic methodologies without significant training.
- ***Visualytics.*** Introduces visual, interactive charting and reporting into the workflow experience within Alteryx Designer to enable more insights throughout the entire analytic process. Visualytics' interactive charts and reports can be published in Alteryx Server for broader consumption and collaboration across the entire organization.
- ***Analytic application creation.*** Offers native drag-and-drop app-building capabilities for business analysts to create, publish, and share applications for any user to execute. These applications can also be configured to share the results in a variety of formats, including visualization and dashboard programs such as those offered by Microsoft Corporation, Qlik Technologies, Inc., or Tableau Software LLC, a Salesforce company, or to write back to a database. Business analysts can use workflows within other workflows as building blocks to leverage functionality that has already been built. These workflows can also be utilized as reusable blueprints for designing and deploying analytical applications to Alteryx Server.

Alteryx Server

Alteryx Server is a comprehensive and scalable server-based product that enables business analysts to share and run analytic applications and Alteryx administrators to manage their Alteryx deployment in a web-based environment. Alteryx Server offers enterprise-class data scalability, distribution, and security designed to maximize the value enterprises can achieve from their analytics. Key capabilities include:

- ***Collaboration.*** Enables business analysts to easily create, publish, share, and reference analytic workflows or applications and collaborate with others across their organizations. Business analysts can also develop analytic applications that act as front-end interfaces for their workflows and these analytic results can be shared with other users.
- ***Workload scaling.*** Allows for data-intensive workloads to be offloaded from user desktops to a server or cluster of servers, harnessing greater computing power. Business analysts can schedule and execute workflows to refresh datasets and analytic outputs automatically, without slowing down the work process.
- ***Analytic application consumption.*** Allows business analysts to access previously built macros or analytic models in a secure, custom application library. Business analysts can also extend the analytic tools they have built directly into other applications using our APIs and macros.
- ***Enterprise-compliant governance.*** Restrict, create, edit, or revoke access to appropriate data with corporate authentication, permission, and encryption protocols through a centralized data connection manager for data access control and governance. Workflows are stored centrally with version control and governance capabilities, allowing multiple users to build, run, and reference the same workflow all within the confines of existing IT governance controls. Detailed usage reporting, auditing, and standardized logging tools enable system administrators to properly control access and security and meet service level agreements.

Alteryx Connect

Alteryx Connect is a collaborative data exploration platform for the enterprise. Alteryx Connect empowers business analysts to find, manage, understand, and collaborate on the data that resides in their organization. Alteryx Connect combines data cataloging with social collaboration to accelerate insights by connecting to data, analytics, and content. Key capabilities include:

- ***Asset catalog.*** Allows business analysts to assemble information in one place by collecting metadata from information systems, business intelligence reports, visualizations, and workflows in a comprehensive and fully indexed data store.
- ***Business glossary.*** Defines standard business terms within an organization in a data dictionary and links them to assets in the catalog to ensure consistent use, as well as identify relevant sources for each item.
- ***Data discovery.*** Allows users to run a comprehensive search of content in the system and sort results by certification or user rating.
- ***Data enrichment and collaboration.*** Unlocks knowledge in an organization using social techniques to gather information about data systems. Annotates, discusses, and rates information assets to provide business context and enables the organization with relevant data.
- ***Certification and trust.*** Allows users to understand the trustworthiness of data and information assets through certification, lineage, and versioning.

Alteryx Intelligence Suite

Alteryx Intelligence Suite is a machine learning extension to our Designer product. Alteryx Intelligence Suite allows users to extract data with optical character recognition, or OCR, perform text mining with natural language processing, or NLP, and build models. Key capabilities include:

- ***Optical character recognition.*** Enables users to automate extraction of text from images and PDFs.
- ***Image recognition.*** Enables users to build detection models that can identify differences between objects in similar images.
- ***Text mining***. Extracts useful information from semi-structured and unstructured data and converts that data back to data-in-text and numbers to then analyze with the full suite of Alteryx capabilities.
- ***Natural language processing***. Allows users to perform sentiment analysis to understand if documents contain positive or negative remarks automatically and summarize key topics contained in a large body of text.
- ***Named entity recognition.*** Allows users to identify, categorize and extract named entities, including multi-word entities, such as people, organizations, and locations through the use of a text mining tool.
- ***Assisted and auto-modeling***. Guided and automated modeling deliver best practice data science techniques to deliver high performing models.

Alteryx Analytics Cloud

The Alteryx Analytics Cloud platform includes:

Alteryx Designer Cloud

Alteryx Designer Cloud is the cloud-native, browser-based version of our Alteryx Designer product. It is an easy-to-use data preparation, blending, reporting, and analytics solution that is designed to be accessible for any user in the enterprise. Designer Cloud provides a grid-like experience for preparing and blending data with frictionless deployment, scaling, and accessibility to truly democratize analytics. IT departments can easily enable users to connect to data with Designer Cloud. Designer Cloud also operates on all major web browsers allowing, for the first time, Mac users and low power PC users to directly access cloud analytics with Alteryx. Our customers can rapidly upskill their workforce, enabling new sectors of their organization to make data-driven decisions. Key capabilities of Designer Cloud include:

- ***Data profiling, preparation, and pipelining.*** An advanced platform for modern data workers to assess quality, transform data, and automate pipelines.
- ***Predictive transformation.*** Automatic format detection for both unstructured and semi-structured data sets.
- ***Integrations.*** A cloud-first solution with integrations to cloud-based and non-cloud sources.
- ***Centralized administration.*** Alteryx Analytics Platform provides the backend to centralize data connections, user management, data assets, and scheduling.
- ***Scaling.*** Frictionless consumption and scaling of Designer Cloud via cloud-native delivery.
- ***Always current.*** Provides immediate access to the latest product improvements, innovations, and use cases as new tools and features are delivered rapidly on an ongoing basis.

Alteryx Machine Learning

AutoML and feature engineering scale data science across customer businesses, empowering business domain experts to accelerate insights. Rather than relying on data science experts to code complex models, customers can quickly build, validate, iterate, and explore machine learning models with a fully guided user experience. Key capabilities of Alteryx Machine Learning include:

- ***Guided AutoML.*** Helps non-technical users explore models easily by comparing competing models, validating performance with holdout data, and testing scenarios with simulations.
- ***Automated feature engineering.*** Automatically adds data features for better models, so that users can review new features created, discover which features matter most to them, and understand how features influence outcomes.
- ***Data insights.*** Enables users to deeply understand data before embarking on the modeling journey so they can address problematic fields, discover correlations and outliers, and review the distribution of their target variables.
- ***Cloud-based model training.*** Enables users to train models without tying up personal computer memory by pushing training data from Alteryx Designer, uploading training data directly, and running model-training jobs in the cloud.
- ***Model evaluation and explainability.*** Enables users to understand how individual features contribute to their models, get insight into their models' behavior across entire datasets, and understand how the prediction for a single row is explained by its feature values.
- ***Integration with the Alteryx Platform.*** Enhances users' analytics with predictive insights by allowing users to leverage Alteryx Designer or Alteryx Designer Cloud for data preparation and blending and call models from Alteryx Designer or Alteryx Designer Cloud workflows.

Alteryx Auto Insights

Alteryx Auto Insights is a cloud-native analytics solution built for enterprises, automating insights for business users. The solution works like a human analyst by finding data stories, anomalies, and insights hidden deep in user data, summarizing and explaining them clearly, and presenting them back instantly. By automating insights and reporting, Alteryx Auto Insights bolsters business users' confidence to make data-led decisions themselves, driving data literacy across an organization. Alteryx Auto Insights allows organizations to:

- ***Focus***. Quickly surface automated insights and exceptions to focus on what matters across the organization.
- ***Uncover.*** Surface hidden signals in user data that would have gone unnoticed in traditional visualization tools.
- ***Act***. Enable anyone to derive impactful data storytelling to increase action and decision-making velocity in the business.

Our Technology

Underpinning our platform is a set of technological innovations that make robust data analytics easy through an in-memory engine, sophisticated analytic models, and an open and modular core:

Engines

Our engines are optimized to process data within random-access memory and can utilize disk, when necessary, as temporary virtual memory. This facilitates significantly faster and more secure processing of data than traditional disk-based mechanisms while ensuring that the source data remains unaltered and is not duplicated. In addition to our high-speed in-memory processing capabilities, our cloud platform enables in-database processing to take advantage of using cloud computing resources for faster processing when working with large datasets in cloud data warehouses. Key features of our engines include:

- ***Connected.*** Business analysts can rapidly connect to data in existing formats and locations, reducing the need for time-consuming data transformation processes that typically require IT personnel.
- ***Non-persisted.*** Our engine leverages non-persisted data pipelines to enable users to process large amounts of data securely while applying complex logic every time they run an analytic workflow.
- ***Scaled out.*** While most workflows can be run on any single desktop or laptop or in-browser, when greater processing capability is required, workloads can be pushed to a server or cluster of servers, including Hadoop or Spark clusters, or pushdown processing can be used to process the workload where the data is stored.

Sophisticated Analytic Models

We enable business analysts, data scientists, and citizen data scientists to produce analytics ranging from descriptive and diagnostic to highly complex, including predictive, prescriptive, and spatial. Specifically, we enable predictive analytics through utilization of R, an open-source programming language and software environment for statistical computing, and Python, a popular programming language for analytics with many publicly available packages. Our capabilities allow transparency and editing of the R and Python code without requiring prior coding experience. In addition, in-database processing enables analysts to scale predictive analytics and harness the value of large sets of data without moving the data out of a database, improving predictive model development performance over traditional approaches. Deep geospatial tools, such as a drive time engine, create the basis for performing location-based analysis.

Open and Modular Core

Our platform is built with an open and modular core that enables additional functions and programming models to interact with it. For example, our platform utilizes Alteryx-managed open-source Python libraries, such as EvalML, Featuretools, Compose and Woodwork, enabling AutoML for advanced analytics in a simple guided user interface that abstracts the complexity of the underlying code. For sophisticated business analysts, the underlying code is available for review and contribution in GitHub. The integration of our platform with Python takes advantage of advanced analytics technology and ensures seamless, fast operations. The Alteryx Platform Software Development Kit, or SDK, is also available in a similar capacity. The SDK provides customers and partners with open access to Python and JavaScript code and APIs that they can use to drive customizations to the platform.

Our Customers

Organizations of all sizes and across a wide variety of industries have adopted our platform. As of December 31, 2022, we served customers in more than 90 countries, including over 930 of the Global 2000 companies. Our customers include Anheuser Busch, LLC, AutoNation, Inc., Biogen Idec Inc., Chevron Corporation, Daikin Industries, Ltd., Delta Air Lines, Inc., General Mills, Inc., JPMorgan Chase & Co., L'Oréal USA, Inc., Netflix, Inc., Pfizer Inc., salesforce.com, inc., Société Générale S.A., Royal Bank of Canada, Unilever PLC, United Parcel Service, Inc., and Visa Inc.

Our customer base has grown from 6,087 customers as of December 31, 2019 to over 8,300 customers as of December 31, 2022 and covers a wide range of industries, including retail, food services, consumer products, telecom and cable, media and entertainment, professional services, financial services, energy and utilities, public sector, manufacturing, travel and hospitality, healthcare and insurance, and technology.

No customer represented more than 10% of our revenue in any of the years ended December 31, 2022, 2021, or 2020.

Support and Training

Although our platform is designed to operate on a self-service basis, we also provide technical support, instruction, and customer service to further our customer experience. We support our customers by offering professional services that deliver enablement, hands-on consulting, and fast start programs to ensure successful customer outcomes. In addition, our customer success team provides personalized customer success support to our customer base that includes onboarding and enablement with respect to our platform. Our customer support team is available to assist with questions about installation, licensing, workflow development, technical and functional matters, and our APIs and SDK. Additionally, we provide our customers with 24x7 global coverage across our product offerings. We also rely on our engaged user community to enhance the support experience of our customers through Alteryx Community.

In order to facilitate adoption and rapid benefits from the use of our platform, we offer free online training through our website that includes hundreds of hours of training videos and sample analytic workflows. We also provide a variety of fee-based training options ranging from instructor-led courses in a traditional classroom setting to online courses.

Our Community

We have built a strong and growing community of employees, users, customers, potential customers, and channel partners who are passionate about our platform and mission. Reaching approximately 400,000 members in 2022, the purpose of Alteryx Community is to create a support channel for all constituents to gain valuable insights from one another, collaborate and share their experiences and ideas, and innovate around our platform.

Alteryx Community offers:

- discussions and knowledge bases that help users, customers, and channel partners learn about topics of interest, ask questions, and share ideas and insights;
- users the ability to post and share tools and workflows for others in the Alteryx Community to download and use;
- user groups, which are independent volunteer organizations that provide a platform for users to meet locally and provide other users with an opportunity to network with peers and share ideas, experiences, and best practices;
- an avenue for users, customers, and channel partners to share product suggestions with us;
- interactive lessons, live trainings, weekly challenges, hands-on learning through our SparkED program, and an opportunity to become certified via Alteryx Academy; and
- blogs, news, and events portals.

We also organize events to engage and foster our user community. At such events, our users, customers, potential customers, and channel partners have the opportunity to network, learn best practices, attend training sessions and workshops, and present their questions and suggestions directly to our software developers, executives, and other employees. We also host roadshows and workshops domestically and internationally with our channel partners to teach our users how self-service data analytics simplifies and automates the analysis of data.

In 2022, there were more than 60 in-person or virtual Alteryx User Group meetings around the world, including an in-person meeting in Prague and a hybrid event in Tokyo.

Human Capital

Alteryx aims to recruit, develop, and retain a diverse, talented, motivated, and dedicated workforce. We are committed to supporting the development of our employees and to continuously building on our strong culture. Rooted in our five core values of Customer First, Accountability, Equality, Integrity, and Empowerment, our employees and our leadership team are focused on a culture of values in action across each dimension of the employee experience. Our management regularly updates our board of directors and its committees on the operation and status of overall human capital trends and the employee-focused activities and initiatives of the company.

Employees, Culture, and Social Impact

Our values-based culture is a critical component of our success. Our people are the lifeblood of our company and we strive to create an environment where they can contribute, learn, and grow in their careers in a fun and supportive work environment. Our culture focuses on fostering an environment of feedback, individual and team development through a collaborative and dynamic approach to team composition, and cross-organizational work activities. We foster opportunities for our people to grow in both formal and informal learning environments, inside and outside the company.

Our Alteryx for Good program encompasses all of our social impact efforts and reaches the community in a variety of ways through five core pillars: Health, Education, Workforce Development, Basic Needs, and Sustainability. We believe in supporting the communities where we live and work, which is why our Alteryx for Good program includes giving each employee 20 paid hours per year to volunteer with any verified nonprofit organization that is meaningful to them. In 2022, we were recognized by Civic 50 as one of the 50 most community-minded companies in both Orange County, California and Colorado. The Civic 50 sets the standard for civic engagement and highlights companies that are committed to using their time, talent, and resources to drive social impact.

We also believe that data science and analytics have the power to change the world for the better. Tech for Good is our free licensing program providing nonprofits with access to powerful, easy-to-use analytics tools. Our SparkED program provides educators and learners across all fields of study with free Alteryx software, teaching tools, and learning resources so that they can question, understand, and solve their challenges with data. Through SparkED, we hope to meet the demand for digital transformation powered by data analytics and data science in organizations of all sizes and to empower a new generation of knowledge workers with the skills they need to advance their learning and career pathways.

We are committed to further developing our environmental, social, and governance program to bring transparency and accountability to our social impact and corporate governance initiatives. In addition to driving company-wide sustainability education and awareness through workplace sustainability initiatives, we launched a greenhouse gas emissions inventory in order to understand our environmental impact.

As of December 31, 2022, we had over 2,900 full-time employees located globally in 15 countries. Of these, 2,046 (70%) were located in the United States and Canada, 556 (20%) in Europe, Middle East, and Africa, and 302 (10%) in Asia-Pacific and Japan. Of our employees, 49% support our sales and marketing function, followed by 25% in the research and development function, 15% in general and administrative, and 11% supporting cost of revenue. None of our U.S.-based employees are represented by a labor union or covered by a collective bargaining agreement. International employees in several European countries are covered by statutory collective bargaining agreements. We have not experienced any work stoppages, and we consider our relations with our employees to be good, as evidenced by our employee engagement survey results.

Diversity, Equity, Inclusion, and Belonging

We are committed to creating and maintaining a more equitable global workplace that is culturally inclusive and free from discrimination or harassment on the basis of race, color, citizenship status, religious creed, national origin, ancestry, gender identity, sexual orientation, age, marital status, veteran status, physical or mental disability, medical condition, or any other status protected by applicable law. Our management team and employees are expected to exhibit and promote honest, ethical, and respectful conduct in the workplace. All of our employees must adhere to a code of business conduct and ethics that sets standards for appropriate behavior and are required to attend annual training on the code of business conduct and ethics and biannual training to help prevent, identify, report, and stop any type of discrimination and harassment.

We recognize that each unique characteristic of our employees makes us stronger, which is why we are committed to equitable hiring practices, ongoing self-evaluation, and providing education that empowers our employees. Where allowed by law, we monitor the diverse characteristics of our new hires and existing employees, including a focus on internal promotions and employee retention. Among other things, we have conducted periodic, anonymous employee engagement surveys and assessed attendance at events geared toward diversity, equity, inclusion, and belonging topics to gauge receptivity to, and the effectiveness of, our efforts in these areas. To help our employees feel seen and supported, we have also supported multiple employee resource groups, safe places led by employees where members and their allies can connect based on shared characteristics, interests, or lived experiences. Additionally, we have conducted roundtable discussions and hosted listening circles to hear the voices of our employees and know which areas need our continued focus and commitment. In 2022, we also grew our Social Impact team to regionalize our efforts in the Europe, Middle East, and Africa region and in the Asia-Pacific and Japan region.

Employee Development and Training

We believe that investing in our talent's growth and development will directly enhance our overall company performance. Employees are encouraged to invest regularly in their own professional development and are provided opportunities to focus on longer term projects. We offer development opportunities through short-term mentoring programs, longer-term leadership development training, frequent live trainings provided by our Learning and Development team on topics such as giving and receiving feedback, change management, leading a hybrid workforce, creating a diverse and inclusive work environment, managing your career, and goal-setting, and on-demand training modules covering a variety of topics that are available at any time through our intranet. In addition, we offer our employees a tuition support program to promote ongoing learning and education at accredited programs and institutions.

Competitive Pay and Benefits

We strive to provide pay, comprehensive benefits and services that help meet the varying needs of our people. Our total rewards package includes market-competitive pay, including equity compensation, flexible (unlimited) time off for U.S. employees, competitive paid time off for non-U.S. employees, family forming fertility and adoption benefits, and other comprehensive and competitive global benefits. For example, in the United States, we provide 12 weeks of paid parental leave for all new parents (either through birth or adoption). We have a particular focus on mental health and well-being, reinforced by providing access to a leading mindfulness and meditation application and annual company-wide mental health days. And, for all of our employees, we offer competitive financial benefits and programming focused on aiding our employees with their financial wellness and retirement planning. To foster a stronger sense of ownership and align the interests of employees with our stockholders, we offer equity compensation to employees under our broad-based stock incentive programs and the opportunity for eligible employees to participate in an employee stock purchase plan.

Sales and Marketing

Our sales and marketing teams work closely together to increase market awareness, drive demand for our platform, and cultivate customer relationships to drive revenue growth.

Sales

We sell our platform through our direct sales organization and indirect channel partners both internationally and domestically. Our business model involves an enterprise sales motion, as well as a “land and expand” sales motion. Our go-to-market approach often begins with a free trial of Alteryx Designer and is followed by an initial purchase of our offerings. As organizations quickly realize the benefits derived from our platform, use frequently spreads across departments, divisions, and geographies through word-of-mouth, collaboration, and standardization and automatization of business processes. Both for an initial purchase and as part of expanding a current customer’s use of our products, we also employ an enterprise-focused sales motion that identifies and involves members of a customer’s senior management team to accelerate acceptance and adoption of our platform within their organization. We offer customers a variety of purchasing options, such as enterprise license agreements, which provides our customers additional flexibility and encourages exploration of new use cases with new users throughout their organizations. Over time, many of our customers find that the use of our platform is strategic and collaborative in nature and it becomes a fundamental element of their operational, analytical and business processes.

Our sales organization is comprised of sales teams oriented toward defined market segments. A sales team typically comprises an account executive, sales engineer and supporting resources from our partners, renewals, inside sales, business development, and customer success teams. Our customer success and support organizations are responsible for post-sales training and support, and maintaining customer relationships, which supports renewals of existing contracts.

We continue to invest in expanding our business with partners of all types globally. This will enable us to expand our geographic reach, extend to new buying centers within our customers, and integrate well with other companies in the data ecosystem. We believe the combination of our partner-centric strategy and updated partner program announced in March 2022 will continue to drive growth in business influenced by technology partners.

Marketing

Our marketing organization is responsible for increasing awareness of, and generating demand for, our platform, creating high-quality leads for our sales force through a mix of volume demand generation and account-based marketing, and fostering our community of users. A central focus of our marketing efforts is to drive awareness of our platform and increase website traffic, engagement, and sales lead conversions. These initiatives are intended to increase downloads of free trials of our platform and encourage use of our free online training, which are integral parts of our customer acquisition process. We utilize a wide range of marketing initiatives, including our website, social media, an interactive product tour, paid search, sponsorships, e-mail, webinars, partner events, and field events often with analytic leaders and data scientists. In 2022, our marketing organization launched a new initiative to engage digital “influencers,” experts in the analytics space with large and highly active audiences across social media and other digital media channels. This strategy is designed to expand brand awareness and reach into the digital-native audience where current and potential customers are engaging. Our annual user conferences play a key role in providing current and prospective customers with a better understanding of our platform through interactions with peers, training, and highlighting customer use cases and best practices.

Strategic Partnerships

We have cultivated strong relationships with channel partners to help us extend the reach of our sales and marketing efforts. Our partnerships are primarily with global strategic integrators, solution providers, which include VARs, independent software vendors, and a growing network of OEMs. In March 2022, we announced an updated partner program that includes incentives for joint customer success, technical expertise, and new customer acquisition, and rewards partners with benefits across tiered levels of participation.

Global Strategic Integrators

Our global system integrators include strategic and advisory firms that help drive business activity. Further to our strategic growth initiative to grow global partnerships, the Alteryx Europe, Middle East, and Africa region established new partnerships with PwC Ireland and KPMG UK.

Strategic Consulting Organizations

In November 2022, Alteryx entered into an alliance with EY to help clients across various sectors leverage our platform along with EY's digital transformation capabilities. Through the EY-Alteryx Alliance, clients gain access to, and counsel from, technology and consulting subject matter experts for data exploration, transformation and analysis.

Solution Providers

Our solution providers consist of system integrators, management consulting firms, VARs, and cloud service providers. Solution providers bring product expertise and implementation services and best practices to our customers globally. As of December 31, 2022, we had approximately 500 solution providers and VARs that create scale for our platform through their network of trained consultants, on-point analytic services, and deep domain expertise. They provide vertical expertise and technical advice while solving complex business challenges and generating repeatable analytic workflows and applications in addition to reselling or bundling our software. Our reseller program is designed to scale growth, help generate new opportunities, optimize customer experience and care, increase profitability, and increase sales efficiency.

Independent Software Vendors

Independent software vendors consist of cloud and data platforms and solutions and augmented technology offerings that enhance and extend our platform and solutions. We have optimized integrations and solutions for a variety of independent software vendor solutions, data platforms, and software-as-a-service, or SaaS, offerings, including Microsoft Azure Services, Amazon Web Services, Inc., Snowflake Inc., leading robotic process automation, or RPA, solutions, solutions offered by Google, LLC, International Business Machines Corporation, Oracle Corporation, salesforce.com, inc., UiPath, Blue Prism, and SAP SE, and machine learning and artificial intelligence applications. We natively support output to most visual formats such as those offered by Microsoft Corporation, Qlik Technologies, Inc., and Tableau Software, LLC, a Salesforce company.

Research and Development

Our research and development efforts focus on improving current technology, developing new technologies in current and adjacent markets, and supporting existing customer deployments. Our research and development team, which consisted of 736 employees as of December 31, 2022, was located primarily in California, Colorado, and Massachusetts in the United States as well as Australia, India, the Czech Republic, and Ukraine, and comprises dedicated research employees, software engineers, quality assurance engineers, user experience experts, site and site operations engineers, and product managers. We leverage agile development methodologies and work with the latest technologies, resulting in a dynamic, state of the art, automated software development process that has allowed us to deliver high-quality products and services and adapt to market changes and new requirements quickly.

Seasonality

Due to the budgeting cycles of our current and potential customers, historically, we enter into more agreements with new customers and more renewed agreements with existing customers in the fourth quarter of each calendar year than in any other quarter. The impact of seasonality is heightened on subscriptions that are multi-year in nature with more revenue recognized at a point in time when the platform is first made available to the customers, or the beginning of the subscription term, if later, and the remaining portion recognized ratably over the life of the contract. Our rapid growth in recent years may obscure the extent to which seasonality trends have affected our business and may continue to affect our business. Seasonality in our business can also be impacted by introductions of new or enhanced products and services, including the costs associated with such introductions, or wider macroeconomic effects.

Competition

The market for self-service data analytics solutions is new and rapidly evolving. In many cases, our primary competitors are manual, spreadsheet-driven processes and custom-built approaches in which potential customers have made significant investments. In addition, we compete with large software companies, including providers of traditional business intelligence tools that offer one or more capabilities that are competitive with our platform. These capabilities include data preparation and/or advanced analytic modeling tools from Microsoft Corporation, Oracle Corporation, SAS Institute Inc., and Amazon Web Services, Inc. Additionally, data visualization companies which already offer products and services in adjacent markets have recently introduced products and services that may become competitive with our offerings in the future.

We could also face competition from new market entrants, some of whom might be our current technology partners. In addition, some business analytics software companies offer data preparation options that are competitive with some of the features within our platform, such as Databricks, Inc., Dataiku Ltd., DataRobot, Inc., salesforce.com, inc., TIBCO Software Inc., and Qlik International AB.

Many of our current and potential competitors, particularly the large software companies named above, have longer operating histories, significantly greater financial, technical, marketing, distribution, professional services, or other resources and greater name recognition than us. We expect competition to increase as other established and emerging companies enter the self-service data analytics software market, as customer requirements evolve, and as new products and services and technologies are introduced.

We believe the principal competitive factors in our market include:

- ease of use;
- platform features, quality, functionality, reliability, performance, and effectiveness;
- ability to automate analytical tasks or processes;
- ability to integrate with other technology infrastructures;
- vision for the market and product innovation;
- software analytics expertise;
- total cost of ownership;
- adherence to industry standards and certifications;
- strength of sales and marketing efforts;
- brand awareness and reputation; and
- customer experience, including customer success, professional services, and support.

We believe we compete favorably with our competitors on the basis of the factors described above. Our ability to remain competitive will largely depend on our ongoing performance and quality of our platform.

Intellectual Property

Intellectual property is an important aspect of our business, and we seek protection for our intellectual property as appropriate. We currently rely on a combination of patents, copyrights, trademarks, trade secrets, confidentiality procedures, contractual commitments, and other legal rights to protect our intellectual property. We pursue the registration of our domain names and trademarks and service marks in the United States and in certain locations outside the United States. We enter into confidentiality and invention assignment agreements with our employees and consultants and enter into confidentiality agreements with other parties.

Intellectual property laws, procedures, and restrictions provide only limited protection and any of our intellectual property rights may be challenged, invalidated, circumvented, infringed, or misappropriated. Further, the laws of certain countries do not protect proprietary rights to the same extent as the laws of the United States and, therefore, in certain jurisdictions, we may be unable to protect our proprietary technology. Despite our efforts to protect our proprietary technology and our intellectual property rights, unauthorized parties may attempt to copy or obtain and use our technology to develop applications with the same functionality as our applications. Policing unauthorized use of our technology and intellectual property rights is difficult.

We expect that software and other applications in our industry may be subject to third-party infringement claims as the number of competitors grows and the functionality of applications in different industry segments overlaps. Any of these third parties might make a claim of infringement against us at any time.

Compliance with Government Regulations

We are subject to various U.S. federal, state, local, and foreign laws and regulations, including those relating to data privacy, security and protection, intellectual property, employment and labor, workplace safety, consumer protection, anti-bribery, import and export controls, immigration, federal securities, and tax. In addition, we may currently or in the future be subject to various laws and regulations relating to the formation, administration, and performance of contracts with our customers in heavily regulated industries and the public sector, which may affect how we and our partners do business with such customers. Additional laws and regulations relating to these areas will likely be passed in the future, and these or existing laws and regulations may be interpreted or enforced in new or expanded manners, each of which could result in significant limitations on the way we operate our business.

New and evolving laws and regulations, and changes in their enforcement and interpretation, may require changes to our platform, products, services, or business practices, and may significantly increase our compliance costs and otherwise adversely affect our business and results of operations. As our business expands to include additional products and services, and our operations continue to expand internationally, our compliance requirements and costs may increase, and we may be subject to increased regulatory scrutiny. We believe we are currently in material compliance with laws and regulations to which we are subject and do not expect continued compliance to have a material impact on our capital expenditures, earnings, or competitive position. We continue to monitor existing and pending laws and regulations and while the impact of regulatory changes cannot be predicted with certainty, we do not expect compliance to have a material adverse effect on our business or operations.

For additional information about the laws and regulations we are subject to and the risks to our business associated with such laws and regulations, see the section titled “Risk Factors--We are required to comply with export control laws and regulations. Our failure to comply with these laws and regulations could have an adverse effect on our business and operating results.”

Corporate Information

We were organized in California in March 1997 as SRC, LLC. We changed our name to Alteryx, LLC in March 2010 and converted into a Delaware corporation in March 2011 under the name Alteryx, Inc. Our principal executive offices are located at 17200 Laguna Canyon Road, Irvine, CA 92618, and our telephone number is (888) 836-4274. Our website address is www.alteryx.com. The information contained on, or that can be accessed through, our website is not incorporated by reference into, and is not a part of, this Annual Report.

Unless otherwise noted or the context indicates otherwise, the terms “Alteryx,” “the Company,” “we,” “us,” and “our” refer to Alteryx, Inc., a Delaware corporation, together with its consolidated subsidiaries.

Alteryx, the Alteryx logo, Alteryx Designer, Alteryx Server, Alteryx Connect, Alteryx Intelligence Suite, Alteryx Machine Learning, Alteryx Designer Cloud, Alteryx Analytics Cloud, Alteryx Auto Insights, Hyper Anna, Lore IO, Trifacta and other registered or common law trade names, trademarks, or service marks of Alteryx appearing in this Annual Report are the property of Alteryx. This Annual Report contains additional trade names, trademarks, and service marks of other companies that are the property of their respective owners. We do not intend our use or display of other companies’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us, by these other companies. Solely for convenience, our trademarks and tradenames referred to in this Annual Report appear without the ® and ™ symbols, but those references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights, or the right of the applicable licensor, to these trademarks and tradenames.

Available Information

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to reports filed or furnished pursuant to Sections 13(a), 14, and 15(d) of the Securities and Exchange Act of 1934, as amended, or the Exchange Act. The Securities and Exchange Commission, or SEC, maintains a website at http://www.sec.gov that contains reports, and other information regarding us and other companies that file materials with the SEC electronically. Copies of our reports on Forms 10-K, Forms 10-Q, and Forms 8-K, may be obtained, free of charge, electronically through our corporate website at www.alteryx.com as soon as reasonably practicable after we file such material electronically with, or furnish to, the SEC.

Item 1A. Risk Factors.

An investment in our Class A common stock involves a high degree of risk. You should carefully consider the risks described below and the other information in this Annual Report on Form 10-K and in our other public filings before making an investment decision. Our business, prospects, financial condition, or operating results could be harmed by any of these risks, as well as other risks not currently known to us or that we currently consider immaterial. If any of such risks and uncertainties actually occurs, our business, prospects, financial condition, cash flows, or operating results could differ materially from the plans, projections, and other forward-looking statements included in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere in this Annual Report on Form 10-K and in our other public filings. The trading price of our Class A common stock could decline due to any of these or other risks, and, as a result, you may lose all or part of your investment. For more information, see the section titled "Special Note Regarding Forward-Looking Statements" included elsewhere in this Annual Report on Form 10-K.

Risks Related to Our Business and Industry

We have incurred net losses in the past, anticipate continuing to incur significant operating expenses in the future, and may not achieve or sustain profitability.

Although we have generated net income in prior periods, we incurred a net loss in the year ended December 31, 2022, have incurred net losses in the past, and may continue to incur net losses in the future. We expect to continue to incur significant operating expenses in the foreseeable future as we leverage the investments made to our organization in prior years and continue implementing initiatives designed to grow our business in a disciplined manner, including increasing our overall customer base and expanding sales within our current customer base, continuing to penetrate international markets, investing in research and development to improve the capabilities of our platform, investing in acquisitions of businesses, technology, and talent and related integration efforts, growing our distribution channels and channel partner ecosystem, deepening our user community, hiring additional and investing in our employees, expanding our operations and infrastructure, both domestically and internationally, and in connection with legal, accounting, and other administrative expenses related to operating as a public company. These efforts may prove more expensive than we currently anticipate, and we may not succeed in increasing our revenue sufficiently, or at all, to offset these higher expenses and to achieve or, once achieved, sustain profitability. We may delay or re-evaluate these efforts due to any anticipated or actual adverse impact to our business as a result of, among other things, global economic uncertainty, rising levels of inflation, interest rates, the COVID-19 pandemic, or other similar events or circumstances. In addition, growth of our revenue may slow or revenue may decline for a number of reasons, including a decrease in our ability to attract and retain customers, a failure to increase our number of channel partners, an increase in competition, a decrease in growth of our overall market, a decrease in term length in our contracts with customers, an inability to timely and cost-effectively introduce new products and services that are favorably received by customers and partners, and as a result of global economic conditions, such as rising inflation and interest rates, that could cause our customers to reduce their spending levels with us. A shortfall in revenue could lead to operating results being below expectations because we may not be able to quickly reduce our fixed operating expenses in response to short-term business changes. If we are unable to meet these risks and challenges as we encounter them, our business and operating results may be adversely affected.

If we are unable to develop, release, and gain market acceptance of product and service enhancements and new products and services to respond to rapid technological change in a timely and cost-effective manner, or if we are unable to develop a successful business model to sell those products and services we have acquired or integrate them into our existing products and services, our business, operating results, and financial condition could be adversely affected.

The market for our platform is characterized by rapid technological change, frequent new product and service introductions and enhancements, changing customer demands, and evolving industry standards. The introduction of products and services embodying new technologies can quickly make existing products and services obsolete and unmarketable. Analytics products and services are inherently complex, and it can take a long time and require significant research and development expenditures to develop and test new or enhanced products and services. We invest heavily in the development and enhancement of new and existing products and services. The success of any enhancements or improvements to our platform or any new products and services depends on several factors, including timely completion, competitive pricing, adequate quality testing, integration with existing technologies and our platform, and overall market acceptance. Additionally, our products and services are expected to meet and keep pace with evolving security standards and requirements of our industry and customers, including those of the federal government. We cannot be sure that we will succeed in developing, marketing, and delivering on a timely and cost-effective basis enhancements or improvements to our platform or any new products and services that respond to technological change, evolving industry standards, or new customer requirements, nor can we be sure that any enhancements or improvements to our platform or any new products and services will achieve market acceptance.

Any new products that we develop may not be introduced in a timely or cost-effective manner, may contain errors or defects, or may not achieve the broad market acceptance necessary to generate sufficient revenue. The introduction or addition of new products and enhancements, including the introductions of Designer Cloud and Alteryx Machine Learning, our first cloud-based products, and the addition of Alteryx Auto Insights, has increased and could continue to increase costs associated with customer support and customer success as demand for these services increases, which could negatively impact our margins. Moreover, even if we introduce new products and services, we may experience a decline in revenue of our existing products and services that is not offset by revenue from the new products or services. For example, customers may delay making purchases of new products and services to permit them to make a more thorough evaluation of these products and services, until industry and marketplace reviews become widely available, or due to concerns regarding migration complexity and product or service infancy issues. In addition, we may lose existing customers who choose a competitor's products and services rather than migrate to our new products and services. This could result in a loss of revenue and adversely affect our business. Further, we may make changes to our platform and product strategy that customers do not find useful and we may also discontinue certain features or increase the price or price structure for our platform. As part of our product lifecycle, we have, and may in the future, discontinue products and inform customers that these products will no longer be supported or receive updates. For example, in January 2023, we discontinued the sale of Alteryx Promote. To the extent that discontinued products remain subject to a current subscription contract with the customer, we may offer to transition the customer to alternative products at no cost or significantly reduced cost for the remainder of the subscription contract. Failure to effectively manage our product lifecycles and any related transitions could lead to customer dissatisfaction and contractual liabilities, which could adversely affect our business and operating results.

Further, the emergence of new industry standards related to analytics products and services may adversely affect the demand for our platform. This could happen if new internet standards and technologies or new standards in the field of operating system support emerge that are incompatible with customer deployments of our platform. For example, if we are unable to adapt our platform on a timely basis to new database standards, the ability of our platform to access customer databases and to analyze data within such databases could be impaired. In addition, because we have begun to offer cloud-based products, including Alteryx Auto Insights, Alteryx Machine Learning, and Designer Cloud, we need to continually enhance and improve our platform to keep pace with changes in internet-related hardware, software, communications, and database technologies and standards. Any failure of our platform to operate effectively with future infrastructure platforms and technologies could reduce the demand for our platform. If we are unable to respond to these changes in a timely and cost-effective manner, our platform may become less marketable, less competitive, or obsolete, and our operating results may be adversely affected.

Moreover, cloud-based business models have become increasingly demanded by customers and adopted by other software providers, including our competitors. While most of our customers currently deploy our on-premise platform, we have recently released cloud-based products, including Designer Cloud, Alteryx Machine Learning, and Alteryx Auto Insights. The incorporation of a cloud-based business model into our operations has required and will continue to require us to make additional investments to our infrastructure, including expanding our data centers, servers, and networks, increasing our use of hosting services, and increasing our technical operations and engineering teams, any of which may negatively impact our operating results and gross margins. Further, if we are unsuccessful in making cloud-based products generally available that meet the needs and expectations of our customers, we may be unable to realize the benefits of our investments, or the resources we have committed, toward incorporating a cloud-based business model into our operations, which could materially harm our business, operating results, and gross margins.

We derive a large portion of our revenue from our software platform, and our future growth is dependent on its success.

Nearly all of our revenue has come from sales of our subscription-based software platform and because we expect these sales to account for a large portion of our revenue for the foreseeable future, the continued growth in market demand for our platform is critical to our continued success. Since 2017, we have expanded the capabilities offered by our software platform through new product offerings, such as Alteryx Connect, Alteryx Intelligence Suite, or AIS, Alteryx Auto Insights, Alteryx Machine Learning, and Alteryx Designer Cloud. Further, in May 2022 following our acquisition of Trifacta, we announced an integrated Designer Cloud product. Alteryx Designer remains our principal product and our other products have achieved varying degrees of success. We cannot be certain that any of these products or any additional products that we introduce will generate significant revenue in the future. Accordingly, our business and financial results will likely continue to be substantially dependent on our single software platform.

Volatile and significantly weakened global economic conditions have in the past and may in the future adversely affect our industry, business, and results of operations.

Our overall performance depends in part on worldwide economic and geopolitical conditions. The United States and other key international economies have experienced significant economic and market downturns in the past, and are likely to experience additional cyclical downturns from time to time in which economic activity is impacted by falling demand for a variety of goods and services, restricted credit, poor liquidity, reduced corporate profitability, volatility in credit, equity, and foreign exchange markets, inflation, bankruptcies, and overall uncertainty with respect to the economy. These economic conditions can arise suddenly, as did the conditions associated with the COVID-19 pandemic, and the full impact of such conditions can be difficult to predict. In addition, geopolitical and domestic political developments, such as existing and potential trade wars and other events beyond our control, such as Russia's invasion of Ukraine, can increase levels of political and economic unpredictability globally and increase the volatility of global financial markets. Moreover, these conditions have affected and may continue to affect the rate of IT spending, could adversely affect our customers' ability or willingness to attend our events or to purchase our products and services, have delayed and may delay customer purchasing decisions, have reduced and may reduce the value and duration of customer subscription contracts, and may adversely affect our customer attrition rates. All of these risks and conditions could materially adversely affect our future sales and operating results.

We have grown rapidly in our recent past and if we are unable to manage our growth effectively, our business, operating results, and financial condition could be adversely affected.

We have experienced rapid growth in headcount and operations in our recent past and expect to continue to grow in the future. For example, as of December 31, 2022, we had 2,904 full-time employees, compared with 1,993 as of December 31, 2021. We have also established and expanded our operations in a number of countries outside the United States in the last several years and have employees in the United States, Australia, Canada, Czech Republic, France, Germany, India, Japan, the Netherlands, Singapore, Spain, Sweden, Ukraine, the United Arab Emirates, and the United Kingdom. In addition, we license our platform to customers in more than 90 countries. This growth has placed, and may continue to place, significant demands on our management as well as on our administrative, operational, and financial resources. To manage our growth, we must continue to improve our operational, financial, and management information systems and expand, motivate, and manage our workforce. Further, we believe that our corporate culture has been vital to our success, including in attracting, developing, and retaining personnel and customers, and maintaining our culture has become more challenging as we have grown our employee base over the last several years, including through the acquisition of other companies. If we are unable to manage our growth successfully, including as a result of our inability to maintain our corporate culture, without compromising our quality of service or our profit margins, or if new systems that we implement to assist in managing our growth do not produce the expected benefits, our business, operating results, financial condition, and ability to market and sell our platform could be harmed.

Further, due to our rapid growth in recent years, we have limited experience operating at our current scale and potentially at a larger scale, and, as a result, it may be difficult for us to fully evaluate future prospects and risks. Our recent and historical growth should not be considered indicative of our future performance. We have encountered in the past, and will encounter in the future, risks and uncertainties frequently experienced by growing companies in rapidly changing industries, which may include risks related to satisfying existing customers and attracting new customers; effectively managing expenses and investments; expanding operations in the United States and internationally; geopolitical and macroeconomic conditions; innovating our offerings; effectively recruiting, integrating, training, and motivating a large number of new employees; and other risks. If our assumptions regarding these and other risks and uncertainties, which we use to plan and operate our business, are incorrect or change, or if we do not address risks successfully, our financial condition and operating results could differ materially from our expectations, our growth rates may slow, and our business would be adversely impacted.

Our continued revenue growth and ability to sustain profitability also depends on being able to expand and retain our skilled talent base and increase their productivity, particularly with respect to our direct sales force, software engineers, and other highly skilled personnel. There is substantial and continuous competition for engineers with high levels of experience in designing, developing, and managing software, as well as competition for experienced sales personnel. We have seen this demand for talent increase among our peers and competitors due to, among other things, the significant growth the technology sector has experienced. We may not be successful, and from time to time have experienced difficulty, recruiting, training, and retaining qualified personnel, including engineers and sales personnel. It may also be more challenging to entice qualified personnel to leave their current positions to join us or to retain qualified personnel during periods of heightened uncertainty and as other challenging market conditions related to macroeconomic and other factors continue. Due to our recent accelerated hiring, we have incurred and anticipate that we will continue to incur significant costs to attract, hire, and retain highly skilled personnel. In response to increased competition, rising inflation, labor shortages, or volatility or lack of performance in our stock price, we may need to provide higher levels of compensation, including equity compensation, or benefits to attract new personnel and retain existing personnel, which would further increase our costs. We may also lose new employees to our competitors or other technology companies before we realize the benefit of our investment in recruiting and training them.

New hires require significant training, and sales personnel typically take four to six months or more to sufficiently understand our business and products and achieve target productivity levels. In addition, our adoption of work-from-home policies that offer our employees flexibility to work remotely may further impact and lengthen the time period for our personnel to achieve full productivity. Our recent and future hires may not become productive as quickly as we expect and if our employees do not become productive on the timelines that we projected or at all, our revenue will not increase at anticipated levels and our ability to achieve long term projections may be negatively impacted. In addition, if our work-from-home policies or office environments do not meet the needs and expectations of our workforce, our ability to attract and retain our employees could be negatively impacted. As we continue to enter new geographies, we will need to attract, hire, and retain skilled personnel in those areas, which may involve adopting new working methodologies and require set up and upfront costs that we may not recover.

From time to time, we realign our resources and talent to implement stage-appropriate business strategies. These realignment activities have resulted in, and any additional furlough, layoff, or other reduction in force in the future may result in, the loss of long-term employees, voluntary departures of other employees, the loss of institutional knowledge and expertise, the reallocation and combination of certain roles and responsibilities across the organization, and an increased risk of related litigation and claims. Any of the foregoing could adversely affect our operations. In addition, we may not be able to effectively realize all of the cost savings or other benefits anticipated by such actions and may incur unanticipated charges or liabilities as a result of such actions that were not previously contemplated, which could result in additional adverse effects on our business or operating results.

To date, the majority of our revenue has been attributable to the efforts of our direct sales force in the United States. In order to increase our revenue from new and existing customers and sustain profitability, we must, and we intend to, increase the size of our direct sales force, both in the United States and internationally. We periodically change and make adjustments to our sales organization in response to market opportunities, competitive threats, management changes, product introductions or enhancements, acquisitions, sales performance, increases in sales headcount, cost levels and other internal and external considerations. Any future sales organization or sales strategy changes may result in reduced productivity, which could negatively affect our rate of growth. In addition, any significant change to the way we structure the compensation of our sales organization may be disruptive and may affect our revenue growth.

If we are unable to hire and train sufficient numbers of effective sales personnel, if we are unable to identify and recruit sufficient numbers of software engineers with the skills and technical knowledge that we require, if our sales personnel are not successful in obtaining new customers or renewing or increasing sales to our existing customer base, or if our software engineers are unable to timely contribute to the development of our products and services, our rate of growth and business will be adversely affected. More generally, if we do not continue to grow at the same pace that we have experienced in the last few years, if there is a significant adverse change in our business or operations, or if our stock price declines significantly, our employees may not find employment with us as attractive or may find opportunities with our competitors or other technology companies more attractive.

Acquisitions of, or investments in, other companies, products, or technologies have required, and could continue to require, significant management attention and could disrupt our business, dilute stockholder value, and adversely affect our operating results.

Our business strategy has included, and may in the future include, acquiring other complementary products, technologies, or businesses and, through Alteryx Ventures, investing in innovative companies and those that build complementary solutions to our platform. For example, we acquired Trifacta in February 2022 to accelerate the development of an integrated end-to-end, low code/no code analytics automation platform in the cloud. We also may enter into relationships with other businesses in order to expand our platform, which could involve preferred or exclusive licenses, collaborations, joint ventures, additional channels of distribution, discount pricing, or investments in other companies or products. Negotiating these transactions can be time-consuming, difficult, and expensive, and our ability to close these transactions may be subject to third-party approvals, such as government regulatory approvals, which are beyond our control. Consequently, we can make no assurance that these transactions, once undertaken and announced, will close.

These kinds of acquisitions or investments may result in unforeseen operating difficulties and expenditures. If we acquire businesses or technologies, we may not be able to integrate the acquired personnel, operations, and technologies successfully, or effectively manage the combined business following the acquisition. We also may not achieve the anticipated benefits from the acquired business due to a number of factors, including:

- inability to integrate or benefit from acquired technologies or services in a profitable manner and the potential for customer non-acceptance of multiple platforms on a temporary or permanent basis;
- unanticipated costs or liabilities associated with the acquisition, including potential liabilities due to litigation and potential identified or unknown security vulnerabilities in acquired technologies that expose us to additional security risks or delay our ability to integrate the product into our offerings or recognize the benefits of our investment;
- differences between our values and those of an acquired company, as well as potential disruptions to our workplace culture;
- incurrence of acquisition-related costs, including costs related to integration activities;
- difficulty integrating the accounting and information systems, operations, and personnel of the acquired business;
- augmenting the acquired technologies and platforms to the levels that are consistent with our brand and reputation;
- difficulties and additional expenses associated with supporting legacy products and hosting infrastructure of the acquired business;
- challenges converting the acquired company's revenue recognition policies and forecasting the related revenues, including subscription-based revenues and software license revenues;
- potential write-offs of acquired assets or investments, and potential financial and credit risks associated with acquired customers;
- difficulty converting the customers of the acquired business onto our platform and contract terms;
- diversion of management's attention from other business concerns;
- the potential entry into new markets in which we have little or no experience or where competitors may have stronger market positions;
- adverse effects to our existing business relationships with business partners and customers as a result of the acquisition;
- the potential loss of key employees;
- use of resources that are needed in other parts of our business; and
- use of substantial portions of our available cash to consummate the acquisition.

Moreover, we cannot assure you that the anticipated benefits of any acquisition or investment would be realized or that we would not be exposed to unknown liabilities or risks. For example, we anticipate that there are significant benefits from our acquisition of Trifacta, including the acceleration of our development of an integrated end-to-end, low code/no code analytics automation platform in the cloud and resulting growth opportunities. However, to realize these benefits, we have invested, and need to continue to invest, significant time, attention, and resources toward integration and product development efforts. These efforts can be challenging, complex and costly and we cannot assure you that we will be successful or that the anticipated benefits of the acquisitions that we complete will be realized or outweigh their costs. If our integration and development efforts are not successful and the anticipated benefits of the acquisitions that we complete are not achieved, our business, operating results, financial condition, and prospects could be adversely affected.

In connection with these types of transactions, we may issue additional equity securities that would dilute our stockholders, use cash that we may need in the future to operate our business, incur debt on terms unfavorable to us or that we are unable to repay, incur large charges or substantial liabilities, encounter difficulties integrating diverse business cultures and values, and become subject to adverse tax consequences, substantial depreciation, or deferred compensation charges. These challenges could adversely affect our business, operating results, financial condition, and prospects.

If we are unable to attract new customers, expand sales to existing customers, both domestically and internationally, or maintain the subscription amount or subscription term of renewing customers, our revenue growth could be slower than we expect or our revenue may decline and our business may be harmed.

Our future revenue growth depends in part upon increasing our customer base. Our ability to achieve significant growth in revenue in the future will depend, in large part, upon the effectiveness of our marketing efforts, both domestically and internationally, and our ability to attract new customers. In particular, we are dependent upon lead generation strategies to drive our sales and revenue. If these marketing strategies fail to continue to generate sufficient sales opportunities necessary to increase our revenue and to the extent that we are unable to successfully attract and expand our customer base, we may not realize the intended benefits of these marketing strategies and our ability to grow our revenue may be adversely affected.

Demand for our platform by new customers may also be affected by a number of factors, many of which are beyond our control, such as continued market acceptance of our platform for existing and new use cases, the timing of development and new releases of our software, technological change, growth or contraction in our addressable market, accessibility across operating systems, and macroeconomic conditions. Further, if competitors introduce lower cost or differentiated products or services that are perceived to compete with our products and services, our ability to sell our products and services based on factors such as pricing, technology, and functionality could be impaired. As a result, we may be unable to attract new customers at rates or on terms that would be favorable or comparable to prior periods, which could negatively affect the growth of our revenue. Attracting new customers may also be particularly challenging where an organization has already invested substantial personnel and financial resources to integrate traditional data analytics tools into its business, as such organization may be reluctant or unwilling to invest in new products and services, including during a period of economic uncertainty or downturn. If we fail to attract new customers and maintain and expand those customer relationships, our revenue will grow more slowly than expected and our business will be harmed.

Even if we continue to attract new customers, the cost of new customer acquisition may prove so high as to prevent us from sustaining profitability. Our future revenue growth also depends upon expanding sales and renewals of subscriptions to our platform with existing customers. If our customers do not purchase additional licenses or capabilities, our revenue may grow more slowly than expected, may not grow at all, or may decline. Additionally, increasing incremental sales to our customer base requires increasingly sophisticated and costly sales efforts that are targeted at senior management. We plan to continue expanding our sales efforts, both domestically and internationally, but we may be unable to hire qualified sales personnel, may be unable to successfully train those sales personnel that we are able to hire, and sales personnel may not become fully productive on the timelines that we have projected or at all. Additionally, although we dedicate significant resources to sales and marketing programs, including sponsorship opportunities and online advertising, these sales and marketing programs may not have the desired effect and may not expand sales. We have also increased, and will continue to increase, our customer enablement and upskilling efforts to promote and expand the adoption and use of our platform, including by bundling enablement and support services with certain sales of our products. Such efforts have required, and may continue to require, additional costs and resources. We cannot assure you that our efforts would result in increased sales to existing customers and additional revenue. If our efforts to expand sales to our customers are not successful, our business and operating results would be adversely affected.

Our customers generally enter into license agreements with one to three year subscription terms and generally have no obligation or contractual right to renew their subscriptions after the expiration of their initial subscription period. New customers may enter into license agreements for lower subscription amounts or for shorter subscription terms than we anticipate, which reduces our ability to forecast revenue growth accurately. Moreover, our customers may not renew their subscriptions and those customers that do renew their subscriptions may renew for lower subscription amounts or for shorter subscription terms. Customer renewal rates may decline or fluctuate as a result of a number of factors, including the breadth of deployment of our platform, reductions in our customers' spending levels, changes in customer department size and composition, our pricing or pricing structure, the pricing or capabilities of products or services offered by our competitors, our customers' satisfaction or dissatisfaction with our platform, or the effects of economic conditions. If our customers do not renew their agreements with us, or renew on terms less favorable to us, our revenue may decline or otherwise fail to grow as projected.

We use channel partners and if we are unable to establish and maintain successful relationships with them, our business, operating results, and financial condition could be adversely affected.

In addition to our direct sales force, we partner with technology alliances, solutions providers, global strategic integrators, and value-added resellers, or VARs, to sell and support our platform. Channel partners are becoming an increasingly important aspect of our business, particularly with regard to enterprise, governmental, and international sales. For example, we have established strategic alliances with global system integrators to target these and other specific market segments and technology alliances to integrate our products with the complementary products of our partners, and we intend to continue pursuing additional strategic and technology alliance relationships in the future. Our future growth in revenue and ability to sustain profitability depends in part on our continuing ability to identify, establish, and retain successful channel partner relationships in the United States and internationally, which will take significant time and resources and involve significant risk. We intend to continue making significant investments to grow our indirect sales channel. If we are unable to maintain our relationships with these channel partners, or otherwise develop and expand our indirect distribution channel, our business, operating results, financial condition, or cash flows could be adversely affected. Our business, operating results, financial condition, or cash flows could also be adversely affected if the anticipated benefits and value of our strategic alliance partnerships are not realized or are not realized in the timeframes anticipated.

We cannot be certain that we will be able to identify and maintain relationships with suitable indirect sales channel partners. To the extent we do identify such partners, we will need to negotiate the terms of a commercial agreement with them under which the partner would distribute our platform. We cannot be certain that we will be able to negotiate commercially-attractive terms with any such channel partner. Because our channel partners generally do not have an exclusive relationship with us, they may offer customers the products and services of several different companies, including products and services that compete with our platform, and we cannot be certain that they will prioritize or provide adequate resources to selling our platform. In addition, all channel partners must be trained to distribute our platform. In order to develop and expand our distribution channel, we must continue developing and improving our processes for channel partner introduction and training. The training provided to our channel partners must also be ongoing, as we continue to add new products and functionality to our portfolio. If we do not succeed in identifying or training suitable indirect sales channel partners, or if our channel partners are unsuccessful in selling our platform, our ability to sell, and our channel partners' willingness to sell, our platform and our business, operating results, and financial condition may be adversely affected.

Further, we rely on our channel partners to cooperate with us and operate in accordance with the terms of their contractual agreements with us and any actions taken or omitted to be taken by such parties may adversely affect us. For example, our agreements with our channel partners limit the terms and conditions pursuant to which they are authorized to resell or distribute our platform and offer technical support and related services. We also typically require our channel partners to represent to us the dates and details of licenses sold through to our customers. If our channel partners do not comply with their contractual obligations to us, provide inaccurate information to us regarding their sales to customers, or otherwise do not cooperate with us, our business, operating results, and financial condition may be adversely affected.

In addition, sales to federal government entities have generally been made indirectly through our channel partners. Government entities may have statutory, contractual, or other legal rights to terminate contracts with our channel partners for convenience or due to a default, and, in the future, if the portion of government contracts that are subject to renegotiation or termination at the election of the government entity are material, any such termination or renegotiation may adversely impact our future operating results. In the event of such a termination, it may be difficult for us to arrange for another channel partner to sell our platform to these government entities in a timely manner, and we could lose revenue and sales opportunities during the transition. Government entities routinely investigate and audit government contractors' administrative processes, and any unfavorable audit could result in the government entity refusing to purchase through us or a particular channel partner or renew its subscription to our platform, a reduction of revenue, or fines or civil or criminal liability if the audit uncovers noncompliant, improper, or illegal activities.

We face intense and increasing competition, and we may not be able to compete effectively, which could reduce demand for our platform and adversely affect our business, revenue growth, and market share.

The market for self-service data analytics software is new and rapidly evolving. In many cases, our primary competitors are manual, spreadsheet-driven processes and custom-built approaches in which potential customers have made significant investments. In addition, we compete with large software companies, including providers of traditional business intelligence tools that offer one or more capabilities that are competitive with our platform. These capabilities include data preparation and/or advanced analytic processing and modeling tools from Microsoft Corporation, Oracle Corporation, and SAS Institute Inc. Additionally, data visualization companies that already offer products and services in adjacent markets have introduced products and services that are increasingly competitive with our offerings. We could also face competition from new market entrants, some of whom might be our current technology partners, such as Databricks, Inc., DataRobot, Inc., Sisense Inc., and Snowflake Inc. In addition, some business analytics software companies offer data preparation and/or advanced analytic processing and modeling tools that are competitive with some of the features within our platform, such as Dataiku Ltd., salesforce.com, inc., and TIBCO Software Inc.

Many of our current and potential competitors, particularly the large software companies named above, have longer operating histories, significantly greater financial, technical, marketing, distribution, professional services, or other resources, greater experience with cloud business models, and greater name recognition than we do. Competition in the self-service data analytics software market has increased and we expect competition to become more intense as other established and emerging companies enter the self-service data analytics software market, as our competitors complete strategic acquisitions or form cooperative relationships, as customer requirements evolve, and as new products and services and technologies are introduced. In addition, many of our current and potential competitors have strong relationships with current and potential customers and extensive knowledge of the business analytics industry. As a result, our current and potential competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, or customer requirements or devote greater resources than we can to the development, promotion, and sale of their products and services. Moreover, many of these companies are bundling their analytics products and services into larger deals or subscription renewals, often at significant discounts as part of a larger sale. In addition, some current and potential competitors may offer products or services that address one or a number of functions at lower prices or at no cost, or with greater depth than our platform. Further, our current and potential competitors may develop and market new technologies with comparable functionality to our platform. As a result of the foregoing or other developments, we may experience fewer customer orders, reduced gross margins, longer sales cycles, and loss of market share. This could lead us to decrease prices, implement alternative pricing structures, or introduce products and services available for free or a nominal price in order to remain competitive. We may not be able to compete successfully against current and future competitors, and our business, operating results, and financial condition will be harmed if we fail to meet these competitive pressures.

Our ability to compete successfully in our market depends on a number of factors, both within and outside of our control. We believe the principal competitive factors in our market include: ease of use; platform features, quality, functionality, reliability, performance, and effectiveness; ability to automate analytical tasks or processes; ability to integrate with other technology infrastructures; vision for the market and product innovation; software analytics expertise; total cost of ownership; adherence to industry standards and certifications; strength of sales and marketing efforts; brand awareness and reputation; and customer experience, including support. Any failure by us to compete successfully in any one of these or other areas may reduce the demand for our platform, as well as adversely affect our business, operating results, and financial condition. Further, while we have started to release cloud-based products, most of our customers currently use our on-premise platform. The incorporation of a cloud-based business model into our operations has required and will continue to require us to make additional investments to our infrastructure, including expanding our data centers, servers, and networks, increasing our use of hosting services, and increasing our technical operations and engineering teams. If we are unable to make cloud-based products generally available as quickly as may be demanded by the market and which meet the needs and expectations of our customers, we may not be able to compete successfully against our competitors that have or may develop such products, and our business, operating results, and financial condition may be harmed.

If the market for analytics products and services fails to grow as we expect, or if businesses fail to adopt our platform, our business, operating results, and financial condition could be adversely affected.

Nearly all our revenue has come from licenses of our subscription-based software platform, including bundled maintenance and support, or PCS, included with the subscription, and we expect these sales to continue to account for a large portion of our revenue for the foreseeable future. Although demand for analytics products and services has grown in recent years, the market for analytics products and services continues to evolve and the secular shift towards self-service analytics may not be as significant as we expect. We cannot be sure that this market will continue to grow or, even if it does grow, that businesses will adopt our platform. Our future success will depend in large part on our ability to further penetrate the existing market for business analytics software, as well as the continued growth and expansion of what we believe to be an emerging market for analytics products and services that are faster, easier to adopt, easier to use, and more focused on self-service capabilities. Our ability to further penetrate the business analytics market depends on a number of factors, including the cost, performance, and perceived value associated with our platform, as well as customers' willingness to adopt a different approach to data analysis. We have spent, and intend to keep spending, considerable resources to educate potential customers about analytics products and services in general and our platform in particular. However, we cannot be sure that these expenditures will help our platform achieve any additional market acceptance. In addition, resistance from consumer and privacy groups to increased commercial collection and use of data on spending patterns and other personal behavior and governmental restrictions on the collection and use of personal data may impair the further growth of this market by reducing the value of data to organizations. If the market fails to grow or grows more slowly than we currently expect or businesses fail to adopt our platform, our business, operating results, and financial condition could be adversely affected.

The competitive position of our software platform depends in part on its ability to operate with third-party products and services, and if we are not successful in maintaining and expanding the compatibility of our platform with such third-party products and services, our business, financial position, and operating results could be adversely impacted.

The competitive position of our software platform depends in part on its ability to operate with products and services of third parties, software services, and infrastructure. We must continuously modify and enhance our platform to adapt to changes in hardware, software, networking, browser, hosting, and database technologies. In the future, one or more technology companies may choose not to support the operation of their hardware, software, or infrastructure, or our platform may not support the capabilities needed to operate with such hardware, software, or infrastructure. In addition, to the extent a third party were to develop software or services that compete with ours, that provider may choose not to support our platform. We intend to facilitate the compatibility of our software platform with various third-party hardware, software, and infrastructure by maintaining and expanding our business and technical relationships. If we are not successful in achieving this goal, our business, financial condition, and operating results could be adversely impacted.

We depend on technology and data licensed to us by third parties that may be difficult to replace or cause errors or failures that may impair or delay implementation of our products and services or force us to pay higher license fees.

We license third-party technologies and data that we incorporate into, use to operate, or provide to be used with our platform. We cannot ensure that the licenses for such third-party technologies or data will not be terminated or that we will be able to license third-party software or data for future products and services. Third parties may terminate their licenses with us for a variety of reasons, including actual or perceived failures or breaches of security or privacy. In addition, we may be unable to renegotiate acceptable third-party replacement license terms in the event of termination, or we may be subject to infringement liability if third-party software or data that we license is found to infringe intellectual property or privacy rights of others. Further, the data that we license from third parties for potential use in our platform may contain errors or defects, which could negatively impact the analytics that our customers perform on or with such data. This may have a negative impact on how our platform is perceived by our current and potential customers and could materially damage our reputation and brand.

Changes in or the loss of third-party licenses could lead to our platform becoming inoperable or the performance of our platform being materially reduced, which may require us to incur additional research and development costs to ensure continued performance of our platform or cause a material increase in the costs of licensing, and we may experience decreased demand for our platform.

As we continue to pursue sales to large enterprises, our sales cycle, forecasting processes, and deployment processes may become more unpredictable and require greater time and expense.

Sales to large enterprises involve risks that may differ in kind or scale when compared to sales to smaller organizations and, accordingly, our sales cycle may lengthen as we continue to pursue sales to large enterprises. In addition, as a result of global economic uncertainty and rising inflation and interest rates, many large enterprises have reduced or delayed, or may consider reducing or delaying, technology or other discretionary spending. If such reductions or delays continue, our operating results, financial condition, and prospects may be materially and negatively impacted. As we seek to increase our sales to large enterprise customers, we also face more complex customer requirements, substantial upfront sales costs, and less predictability in completing some of our sales than we do with smaller customers. With larger organizations, the decision to subscribe to our platform frequently requires the approvals of multiple management personnel and more technical personnel than would be typical of a smaller organization and, accordingly, sales to larger organizations may require us to invest more time educating these potential customers. In addition, large enterprises often require extensive configuration, integration services, and pricing and contractual negotiations, which increase our upfront investment in the sales effort with no guarantee that these customers will deploy our platform widely enough across their organization to justify our substantial investment. Further, as we seek to increase sales and adoption of our newer, cloud-based products, the challenges we face selling new products may be further exacerbated with large enterprise customers. Purchases by large enterprises are also frequently subject to budget constraints and unplanned administrative, processing, and other delays, which means we may not be able to come to agreement on the terms of the sale to large enterprises on a timely basis or at all. In addition, our ability to successfully sell our platform to large enterprises is dependent on us attracting and retaining sales personnel with experience in selling to large organizations. If we are unable to increase sales of our platform to large enterprise customers while mitigating the risks associated with serving such customers, our business, financial position, and operating results may be adversely impacted. Furthermore, if we fail to realize an expected sale from a large customer in a particular quarter or at all, our business, operating results, and financial condition could be adversely affected for a particular period or in future periods.

Our long-term success depends, in part, on our ability to expand the licensing of our software platform to customers located outside of the United States and our current, and any further, expansion of our international operations exposes us to risks that could have a material adverse effect on our business, operating results, and financial condition.

We are generating a growing portion of our revenue from international licenses, and conduct our business activities in various foreign countries, including some emerging markets where we have limited experience, where the challenges of conducting our business can be significantly different from those we have faced in more developed markets and where business practices may create internal control risks. There are certain risks inherent in conducting international business, including:

- fluctuations in foreign currency exchange rates and level of interest rates and inflation, which could add volatility to our operating results;
- new, or changes in, regulatory requirements;
- continued uncertainty regarding regulation, currency, tax, and operations resulting from the United Kingdom's exit from the European Union;
- tariffs, export and import restrictions, restrictions on foreign investments, sanctions, and other trade barriers or protection measures;
- costs of localizing products and services;
- lack of acceptance of localized products and services;
- the need to make significant investments in people, solutions, and infrastructure, typically well in advance of revenue generation;
- challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, policies, benefits, and compliance programs;
- difficulties in maintaining our company culture with a dispersed and distant workforce;
- treatment of revenue from international sources, evolving domestic and international tax environments, and other potential tax issues, including with respect to our corporate operating structure and intercompany arrangements;
- different or weaker protection of our intellectual property, including increased risk of theft of our proprietary technology and other intellectual property;
- economic weakness, inflationary pressure, or currency-related crises;
- compliance with multiple, conflicting, ambiguous or evolving governmental laws and regulations, including employment, tax, privacy, anti-corruption, import/export, antitrust, data transfer, storage and protection, health and safety, and industry-specific laws and regulations, including regulations applicable to us and our third-party data providers from whom we purchase and resell syndicated data;
- our ability to identify and respond timely to compliance issues when they occur;
- vetting and monitoring our third-party resellers in new and evolving markets to confirm they maintain standards consistent with our brand and reputation;
- generally longer payment cycles and greater difficulty in collecting accounts receivable;
- our ability to adapt to sales practices and customer requirements in different cultures;
- the lack of reference customers and other marketing assets in regional markets that are new or developing for us, as well as other adaptations in our market generation efforts that we may be slow to identify and implement;
- dependence on certain third parties, including resellers with whom we do not have extensive experience;
- natural disasters, acts of war, terrorism, or pandemics;
- corporate espionage; and
- political or economic instability and security risks, including as a result of or related to the geopolitical conflict stemming from Russia's invasion of Ukraine, in the countries where we are doing business and changes in the public perception of governments in the countries where we operate or plan to operate.

We have undertaken, and might undertake additional, corporate operating restructurings that involve our group of foreign country subsidiaries through which we do business abroad. We consider various factors in evaluating these restructurings, including the alignment of our corporate legal entity structure with our organizational structure and its objectives, the operational and tax efficiency of our group structure, and the long-term cash flows and cash needs of our business. Such restructurings increase our operating costs, and if ineffectual, could increase our income tax liabilities and our global effective tax rate.

Tax laws are dynamic and subject to change as new laws are passed and new interpretations of the law are issued or applied. For example, on August 16, 2022, the Inflation Reduction Act, or IRA, was signed into law in the United States, which, among other things, imposes a 15% minimum corporate alternative tax on companies that have or have had annual financial statement income greater than $1 billion, levies an excise tax of 1% on net stock repurchases by publicly traded companies, and provides tax incentives to promote clean energy. While we have historically not repurchased shares of our common stock and are averaging less than $1 billion in adjusted net book income over a three-year period, we are continuing to evaluate the impact of the IRA on our business. Similarly, many international jurisdictions have recently proposed or recommended changes to existing tax laws or have enacted new laws that could impact our tax obligations in countries where we do business or cause us to change the way we operate our business. For example, on October 8, 2021, the Organization for Economic Co-Operation and Development, or OECD, announced that 136 countries and jurisdictions (out of the 140 members of the OECD/G20 Inclusive Framework on base erosion and profit shifting) agreed on a solution to address the tax challenges arising from the digitalization of the economy. The solution imposes additional reporting obligations and taxation on corporations that exceed certain profitability and turnover thresholds. We are continuing to evaluate the impact of these tax developments as new guidance and regulations are published. Some of these or other new rules could result in double taxation of our international earnings. Changes in tax laws could materially impact our financial condition, results of operations, and cash flows. Given these developments, tax authorities in the U.S. and other jurisdictions are likely to increase their audit efforts and might challenge some of our tax positions, which could increase the amount of taxes we incur in those jurisdictions, and in turn, increase our global effective tax rate.

International political and economic uncertainty could cause disruptions to, and create uncertainty surrounding, our business internationally, including affecting our relationships with our existing and prospective customers, partners, and employees, and could have a material impact on our operations. For example, Russia's invasion of Ukraine has negatively affected our employees and operations in the region, given our research and development center in Ukraine, and could negatively affect our business and our relationships with existing and prospective customers, partners, and employees, particularly those in Europe, given the global political and economic uncertainty resulting from the conflict.

In addition, compliance with foreign and U.S. laws and regulations that are applicable to our international operations is complex and may increase our cost of doing business in international jurisdictions, and our international operations could expose us to fines and penalties if we fail to comply with these regulations. These laws and regulations include import and export requirements and anti-bribery laws, such as the United States Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, the United Kingdom Bribery Act 2010, or the Bribery Act, and local laws prohibiting corrupt payments to governmental officials as well as commercial bribery. Although we have implemented policies and procedures designed to help ensure compliance with these laws, we cannot assure you that our employees, partners, and other persons with whom we do business will not take actions in violation of our policies or these laws. Any violations of these laws could subject us to civil or criminal penalties, including substantial fines or prohibitions on our ability to offer our platform in one or more countries, and could also materially damage our reputation and our brand. These factors may have an adverse effect on our future sales and, consequently, on our business, operating results, and financial condition.

If we fail to develop, maintain, and enhance our brand and reputation cost-effectively, our business and financial condition may be adversely affected.

We believe that developing, maintaining, and enhancing awareness and integrity of our brand and reputation in a cost-effective manner is important to achieving widespread acceptance of our platform and is an important element in attracting and maintaining customers. We believe that the importance of our brand and reputation will increase as competition in our market further intensifies. Successful promotion of our brand will depend on the effectiveness of our marketing efforts, our ability to provide a reliable and useful platform at competitive prices, the perceived value of our platform, and our ability to provide quality customer support. Brand promotion activities may not yield increased revenue, and even if they do, the increased revenue may not offset the expenses we incur in building and maintaining our brand and reputation. We also rely on our customer base and community of end-users to give us feedback on our platform and to provide user-based support to our other customers. If we fail to promote and maintain our brand successfully or to maintain loyalty among our customers, or if we incur substantial expenses in an attempt to promote and maintain our brand, we may fail to attract new or retain existing customers and partners, may not realize the benefits that we expect to receive from such relationships, and our business and financial condition may be adversely affected. Any negative publicity relating to our employees or partners, or others associated with these parties, or as a result of our sponsorships or other marketing activities, may also tarnish our own reputation simply by association and may reduce the value of our brand. Damage to our brand and reputation may result in reduced demand for our platform and increased risk of losing market share to our competitors. Any efforts to restore the value of our brand and rebuild our reputation may be costly and may not be successful.

We have limited experience with respect to determining the optimal prices and pricing structures for our products and services.

We have changed, and may in the future continue to change, our pricing model from time to time, including as a result of, among other things, competition, global economic conditions, reductions in our customers’ spending levels generally, changes in product mix, integration of acquired technology, pricing studies, or changes in how information technology infrastructure is broadly consumed. Similarly, as we introduce new products and services, or as our existing products and services evolve, we may have difficulty determining the appropriate price structure for our products and services. In addition, as new and existing competitors introduce new products or services that compete with ours, or revise their pricing structures, we may be unable to attract new customers at the same price or based on the same pricing model as we have used historically. Moreover, as we continue to target selling our products and services to larger organizations, these larger organizations may demand substantial price concessions or different product bundling that may result in significant changes to product pricing. As a result, we may be required from time to time to revise our pricing structure or reduce our prices, which could adversely affect our business, operating results, and financial condition.

Our sales are generally more heavily weighted toward the end of each quarter which could cause our billings and revenue to fall below expected levels.

As a result of customer purchasing patterns, our quarterly sales cycles are generally more heavily weighted toward the end of each quarter with an increased volume of sales in the last few weeks and days of the quarter. This impacts the timing of recognized revenue and billings, cash collections, and delivery of professional services. Furthermore, the concentration of contract negotiations in the last few weeks and days of the quarter could require us to expend more in the form of compensation for additional sales, legal, and finance employees and contractors. Compression of sales activity to the end of the quarter also greatly increases the likelihood that sales cycles will extend beyond the quarter in which they are forecasted to close for some sizable transactions, which may harm forecasting accuracy, adversely impact new customer acquisition metrics for the quarter in which they are forecasted to close, and result in a revenue shortfall that could adversely affect our business.

Our operating results may fluctuate from quarter to quarter, which makes our future results difficult to predict.

Our quarterly operating results have fluctuated in the past and may fluctuate in the future. Additionally, we have a limited operating history with the current scale of our business, which makes it difficult to forecast our future results. As a result, you should not rely upon our past operating results as indicators of future performance. You should take into account the risks and uncertainties frequently encountered by companies in rapidly evolving markets. Our operating results in any given quarter can be influenced by numerous factors, many of which are unpredictable or are outside of our control, including:

- our ability to generate significant revenue from new products and services;
- our ability to maintain and grow our customer base;
- our ability to expand our number of partners and distribution of our platform;
- the development and introduction of new products and services by us or our competitors;
- increases in and timing of operating expenses that we may incur to grow and expand our operations and to remain competitive;
- the timing of significant new purchases or renewals by our customers;
- contract term length and other purchasing patterns or selections of our customers, including as a result of seasonality or changes in product mix;
- the timing of our annual user conferences;
- costs related to the acquisition of businesses, talent, technologies, or intellectual property, including potentially significant amortization costs and possible write-downs;
- actual or perceived failures or breaches of security or privacy, and the costs associated with remediating any actual failures or breaches;
- adverse litigation, judgments, settlements, or other litigation-related costs;
- changes in the legislative or regulatory environment, such as with respect to privacy, and the imposition of any new or expanded export-related sanctions;
- the application of new or changing financial accounting standards or practices;
- level of interest rates and inflation;
- fluctuations in currency exchange rates and changes in the proportion of our revenue and expenses denominated in foreign currencies; and
- general economic conditions in either domestic or international markets, as well as economic conditions specifically affecting industries in which our customers operate, including as a result of or in connection with the global economic impact related to the geopolitical conflict stemming from Russia's invasion of Ukraine.

Our business is affected by seasonality.

Our business is affected by seasonality. Due to the budgeting cycles of our current and potential customers, historically, we enter into more agreements with new customers and more renewed agreements with existing customers in the fourth quarter of each calendar year than in any other quarter. The impact of seasonality is heightened on multi-year subscriptions where more revenue is recognized at a point in time when the platform is first made available to the customers, or the beginning of the subscription term, if later, and the remaining portion is recognized ratably over the life of the contract. Additionally, seasonal patterns may be affected by the timing of particularly large transactions. For example, we may achieve higher revenue growth in the first fiscal quarter than in the second fiscal quarter due to the effect of one or more large contracts that are entered into in the first fiscal quarter.

In addition, we generally have increased sales and marketing expenses associated with our annual sales kickoff and each of our annual user conferences in the period in which each occurs. We also generally see increased sales activity following our user conferences as a result of increased customer engagement during and after the events. Our rapid growth in recent years may obscure the extent to which seasonality trends have affected our business and may continue to affect our business. Seasonality in our business can also be impacted by introductions of new or enhanced products and services, including the costs associated with such introductions. Moreover, seasonal and other variations related to our revenue recognition or otherwise may cause significant fluctuations in our operating results and cash flows, may make it challenging for an investor to predict our performance on a quarterly or annual basis, and may prevent us from achieving our quarterly or annual forecasts or meeting or exceeding the expectations of research analysts or investors, which in turn may cause our stock price to decline. Additionally, yearly or quarterly comparisons of our operating results may not be useful and our operating results in any particular period will not necessarily be indicative of the results to be expected for any future period.

Over the past several years, we have undergone, and may continue to experience, changes to our senior management team and if we are unable to integrate new members of our senior management team, or if we lose the services of any of our senior management or other key personnel, our business, operating results, and financial condition could be adversely affected.

From time to time, there may be changes in our management team as a result of the hiring, departure or realignment of our senior management and other key personnel, and such changes may impact our business. For example, since 2021, we have added several new senior management employees, including a new Chief Revenue Officer, Chief Product Officer, Chief Marketing Officer, Chief Information Security Officer, Chief People Officer, and Chief Transformation Officer. Any significant leadership change or senior management transition involves inherent risk and any failure to ensure the timely and suitable replacement and a smooth transition could hinder our strategic planning, business execution and future performance. In particular, these or any future leadership transitions may result in a loss of personnel with deep institutional or technical knowledge and changes in business strategy or objectives and have the potential to disrupt our operations and relationships with employees and customers due to added costs, operational inefficiencies, changes in strategy, decreased employee morale and productivity, and increased turnover. We must successfully integrate our new leadership team members within our organization to achieve our operating objectives.

Our future success depends in large part on the continued service of senior management and other key personnel. In particular, we are highly dependent on the services of our senior management team, many of whom are critical to the development of our technology, platform, future vision, and strategic direction. We rely on our leadership team in the areas of operations, security, marketing, sales, support, and general and administrative functions, and on our leadership and individual contributors on our research and development team. Our senior management and other key personnel are all employed on an at-will basis, which means that they could terminate their employment with us at any time, for any reason, and without notice. From time to time, there may be changes in our senior management team resulting from the hiring or departure of executives. If we lose the services of senior management or other key personnel, or if our senior management team cannot work together effectively, our business, operating results, and financial condition could be adversely affected.

Any failure to offer high-quality technical support may harm our relationships with our customers and have a negative impact on our business and financial condition.

Once our platform is deployed, our customers depend on our customer support team to resolve technical and operational issues relating to our platform. Our ability to provide effective customer support is largely dependent on our ability to attract, train, and retain qualified personnel with experience in supporting customers on platforms such as ours. Our ability to accurately design and meet service level agreements, or SLAs, for any cloud-based product that we offer is dependent on our qualified product and customer support personnel accurately assessing the capabilities of those products and our users' experience of those products. Also, as we integrate new technology from acquisitions into our existing products and services or continue to license it on a standalone basis, we may experience challenges in accurately assessing the capabilities of and providing technical support for those integrated or standalone products. Any failure to meet our customer's expectations and our contractual requirements could negatively affect our operating results and negatively impact our customers' experience.

Our customer support team provides technical support services to our customers and, as a result of our expanding customer base and certain of our commercial offerings including technical support services, the number of customers for which we have committed to provide support has grown significantly over time. We may be unable to respond quickly enough to accommodate short-term increases in customer demand for technical support or to modify the scope and delivery of our technical support to compete with changes in the technical support provided by our competitors. Increased customer demand for or commitments to provide support, without corresponding increases in revenue, could increase costs and negatively affect our operating results. In addition, as we continue to grow our operations and expand internationally, we need to be able to provide efficient customer support that meets our customers' needs globally at scale and our customer support team will face additional challenges, including those associated with delivering support, training, and documentation in languages other than English. If we are unable to provide efficient customer support globally at scale, our ability to grow our operations may be harmed and we may need to hire additional support personnel, which could negatively impact our operating results. In addition, we provide self-service support resources to our customers. Some of these resources, such as Alteryx Community, rely on engagement and collaboration by and with other customers. If we are unable to continue to develop self-service support resources that our customers utilize to resolve their technical issues, or if our customers choose not to collaborate or engage with other customers on technical support issues, customers may continue to direct support requests to our customer support team instead of relying on our self-service support resources and our customers' experience with our platform may be negatively impacted. Any failure to maintain high-quality support, or a market perception that we do not maintain high-quality support, could harm our reputation, our ability to sell our platform to existing and prospective customers, and our business, operating results, and financial condition.

Environmental, social, and governance, or ESG, issues may result in reputational harm and liability.

Positions we may take (or choose not to take) on ESG issues may be unpopular with some of our current or potential employees, partners, or customers, which may in the future impact our ability to attract or retain employees, partners, or customers. Further, actions taken by our customers or partners, including through the use or misuse of our products, may result in reputational harm or possible liability to us.

Our disclosures on ESG matters, and any standards we may set for ourselves or a failure to meet these standards, may influence our reputation and the value of our brand. For example, we have elected to share publicly certain information about our ESG initiatives and information, and our commitment to the recruitment, engagement and retention of a diverse board and workforce. In addition, the SEC has also proposed additional disclosure requirements regarding, among other ESG topics, the impact our business has on the environment. Our business may face increased scrutiny related to these activities and our related disclosures, including from the investment community, and our failure to achieve progress in these areas on a timely basis, or at all, could adversely affect our reputation, business, and financial performance.

We are exposed to collection and credit risks, which could impact our operating results.

Our accounts receivable and contract assets are subject to collection and credit risks, which could impact our operating results. These assets may include upfront purchase commitments for multiple years of subscription-based software licenses, which may be invoiced over multiple reporting periods, increasing these risks. In addition, some of our customers may seek bankruptcy protection or other similar relief and fail to pay amounts due to us, pay those amounts more slowly, or seek to recover amounts already paid, any of which could adversely affect our operating results, financial position, and cash flow. For example, as a result of the impacts of the COVID-19 pandemic, we received requests from time to time from existing customers attempting to renegotiate contracts and obtain concessions, including, among other things, longer payment terms or modified subscription dates. We also have increased exposure to credit risk due to our use of channel partners, who are drivers of revenue through the distribution and re-sale of our products and services. Even though the channel partner is considered our customer for these purposes, a channel partner may be unable or unwilling to pay amounts due to us if a customer fails to pay the channel partner, a risk that is increased if the purchase commitment is for multiple years of subscription-based software licenses. Although we have processes in place that are designed to monitor and mitigate the foregoing risks, we cannot guarantee these processes will be effective and any actions undertaken by us to enforce the terms of our contracts could be costly. If we are unable to adequately control these risks, our business, operating results, and financial condition could be harmed. Further, our ability to collect from our customers and channel partners may depend in part on macroeconomic conditions, which due to, among other things, stock market volatility and rising interest and inflation rates, have become uncertain. These and other challenging conditions may negatively impact our customers and partners and their ability to pay for the products and services they have purchased, which may result in an increase to our allowance for doubtful accounts and write-offs of accounts receivable.

Risks Related to Information Technology, Intellectual Property, and Data Security and Privacy

The nature of our platform makes it particularly vulnerable to errors or bugs, which could cause problems with how our platform performs and which could, in turn, reduce demand for our platform, reduce our revenue, and lead to product liability claims against us.

Because our platform is complex, it may contain errors or defects, especially when new updates or enhancements are released or acquired or new third-party technologies are integrated into our platform. Our software is often installed and used in large-scale computing environments with different operating systems, system management software, and equipment and networking configurations, which may cause errors or failures of our software or other aspects of the computing environment into which it is deployed. In addition, deployment of our software into these computing environments may expose errors, compatibility issues, failures, or bugs in our software. From time to time we have identified, and in the future we may identify, other vulnerabilities in our platform, which we may not be able to timely address and remediate. These vulnerabilities could cause our platform to crash or allow an attacker to access our or our users' confidential or personal information or take control of the affected system, which could result in liability or reputational harm to us or limit our ability to conduct our business and deliver our platform to customers. We devote significant resources to address security vulnerabilities through engineering a more secure platform, extensively testing our platform, enhancing security and reliability features in our products and systems, and deploying updates to address security vulnerabilities, but security vulnerabilities cannot be eliminated. The cost of these and other steps could reduce our operating margins and we may be unable to implement these measures quickly enough to prevent cyber-attackers from gaining unauthorized access into our systems and products. Despite testing by us and by our current and potential customers, errors may be found in new updates or enhancements after deployment by our customers. Real or perceived errors, failures, vulnerabilities, or bugs in our platform could also result in negative publicity, loss of customer data, loss of or delay in market acceptance of our platform, loss of competitive position, or claims by customers for losses sustained by them, all of which could negatively impact our business and operating results and materially damage our reputation and brand. Alleviating any of these problems could divert management attention, require significant expenditures of our capital and other resources and could cause interruptions, delays, or cessation in the sale of our platform, which could cause us to lose existing or potential customers and could adversely affect our operating results and growth prospects.

Our agreements with customers typically contain provisions designed to limit our exposure to product liability, warranty, and other claims. However, these provisions do not eliminate our exposure to these claims. In addition, it is possible that these provisions may not be effective under the laws of certain domestic or international jurisdictions and we may be exposed to product liability, warranty, and other claims. A successful product liability, warranty, or other similar claim against us could have an adverse effect on our business, operating results, and financial condition.

We have experienced, and may in the future experience, security breaches and if unauthorized parties obtain access to our customers' data, our data, or our platform, networks, or other systems, our platform may be perceived as not being secure, our reputation may be harmed, demand for our platform may be reduced, our operations may be disrupted, we may incur significant legal liabilities, and our business could be materially adversely affected.

As part of our business, we process, store, and transmit certain registration and usage data of our customers as well as our own confidential and/or proprietary business information and trade secrets, including in our platform, networks, and other systems, and we rely on third parties that are not directly under our control to do so as well. As we grow our cloud-based software business, we and our third-party partners will process, store, and transmit greater amounts of customer data and information. We, and our third-party partners, have security measures and disaster response plans in place to help protect our customers' data, our own data and information, and our platform, networks, and other systems against unauthorized access or inadvertent exposure. However, we cannot assure you that these security measures and disaster response plans will be effective against all security threats and natural disasters. System failures or outages, including any potential disruptions due to significantly increased global demand on certain cloud-based systems while workforces temporarily or permanently work from home, could compromise our ability to perform our day-to-day operations in a timely manner, which could negatively impact our business or delay our financial reporting. Such failures could also materially adversely affect our operating results and financial condition. Our and our third-party partners' security measures have in the past been, and may in the future be, breached as a result of third-party action, including intentional misconduct by computer hackers, fraudulent inducement of employees, partners, or customers to disclose sensitive information such as usernames or passwords, intentional or unintentional user conduct, and the errors or malfeasance of our or our third-party partners' personnel. In addition, as many of our employees continue to work remotely part-time or full-time, we may face additional data security risks. A breach could result in someone obtaining unauthorized access to our customers' data, our own data, confidential and/or proprietary business information, trade secrets, personal data, or our platform, networks, or other systems. Although we have incurred significant costs and expect to incur additional significant costs to prevent such unauthorized access, because there are many different security threats and the security threat landscape continues to evolve, we and our third-party partners may be unable to anticipate attempted security breaches and implement adequate preventative measures. Third parties may also conduct attacks designed to temporarily deny customers access to our services. In addition, the risk of security attacks related to political and economic conditions, war, and terrorism may increase, including from retaliatory security attacks as a result of the geopolitical conflict stemming from Russia's invasion of Ukraine and related political or economic responses and counter-responses.

Any actual or perceived security breach or compromise or failure of our or our third-party partners' systems, networks, data, or confidential information could result in actual or alleged breaches of applicable laws or our contractual obligations, regulatory investigations and orders, litigation, indemnity obligations, damages, penalties, fines, costs, and other liabilities. Any such incident could also materially damage our reputation and harm our business, operating results, and financial condition, including reducing our revenue, resulting in our customers or third-party partners terminating their relationships with us, subjecting us to costly notification and remediation requirements, or harming our brand.

Cybersecurity risks and cyber incidents could result in the compromise of confidential data or critical data systems and give rise to potential harm to customers, remediation and other expenses under consumer protection laws or other laws or common law theories, subject us to litigation and federal and state governmental inquiries, damage our reputation, and otherwise be disruptive to our business and operations.

We collect and store sensitive information, including intellectual property, proprietary business information, and personal data of individuals, such as our customers, current and former employees, and employee candidates. As we grow our cloud-based software business, we and our third-party partners will process, store, and transmit greater amounts of customer data and information. We, and our third-party partners, have security measures and disaster response plans in place to help protect our customers' data, our own data and information, and our platform, networks, and other systems against unauthorized access or inadvertent exposure. However, there can be no assurance that we will not be subject to cybersecurity incidents that bypass our security measures, impact the integrity, availability, or privacy of data that may be subject to privacy laws or disrupt our information systems, devices, or business. As cyber threats continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any cybersecurity vulnerabilities.

The secure maintenance of the information we collect and store and related technology is critical to our business operations. We have implemented multiple layers of security measures designed to protect the confidentiality, integrity, availability, and privacy of this data and the systems and devices that store and transmit such data. We utilize current security technologies, and our defenses are monitored and routinely tested internally and by external parties. Despite these efforts, threats from malicious persons and groups, and evolving vulnerabilities and advanced new attacks against information systems, create risk of cybersecurity incidents. These incidents can include, but are not limited to, gaining unauthorized access to digital systems for purposes of misappropriating assets or sensitive information, corrupting data, or causing operational disruption, including by introducing malware or ransomware into an organization's environment. Additionally, system failures or outages including any potential disruptions due to significantly increased global demand on certain cloud-based systems while workforces temporarily or permanently work from home, could compromise our ability to perform our day-to-day operations in a timely manner, which could negatively impact our business or delay our financial reporting. Threat actors will continue to try to obtain unauthorized access to our customers' data, our own data, confidential and/or proprietary business information, trade secrets, personal data, or our platform, networks, or other systems. Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently and may not immediately produce signs of intrusion, we may be unable to anticipate these incidents or techniques, timely discover them, or implement adequate preventative measures.

Any actual or perceived security breach or compromise or failure of our or our third parties' systems, networks, data, or confidential information could result in actual or alleged breaches of applicable laws or our contractual obligations, regulatory investigations and orders, litigation, indemnity obligations, damages, penalties, fines, costs, and other liabilities. Any such incident could also materially damage our reputation and harm our business, operating results, and financial condition, including reducing our revenue, resulting in our customers or third-party partners terminating their relationships with us, subjecting us to costly notification and remediation requirements, or harming our brand. These incidents can include, but are not limited to, gaining unauthorized access to digital systems for purposes of misappropriating assets or sensitive information, corrupting data, or causing operational disruption, including by introducing malware or ransomware into an organization's environment. For example, in December 2021, the Apache Software Foundation, or Apache, publicly disclosed a remote code execution, or RCE, vulnerability in its Log4j 2 product, or Log4j, an open-source component widely used in Java-based software applications to log and track error messages. In subsequent weeks, Apache disclosed several additional RCE vulnerabilities, expanding the opportunities for bad actors and attackers to remotely access a target using Log4j and potentially steal data, install malware, or take control of the target's system. Certain applications in our product suite and infrastructure did utilize the affected versions of Log4j. In March 2022, Spring Core publicly disclosed an RCE vulnerability that also impacted certain applications in our product suite and infrastructure. Although we believe we identified and remediated the last known Log4j and Spring Core vulnerabilities, the risk of additional vulnerabilities and potential attacks remains.

We maintain cyber liability insurance policies covering certain security and privacy damages. However, we cannot be certain that our coverage will be adequate for liabilities actually incurred or that insurance will continue to be available to us on economically reasonable terms, or at all. Risks related to cybersecurity will increase as we continue to grow the scale and functionality of our platform and process, store, and transmit increasingly large amounts of our customers' information and data, which may include proprietary or confidential data or personal data.

Our platform may infringe the intellectual property rights of third parties, which could create liability for us or otherwise harm our business.

Third parties may claim that our current or future products and services infringe their intellectual property rights, and such claims may result in legal claims against our customers and us that may damage our brand and reputation, harm our customer relationships, and create financial and legal liability for us. We expect the number of such claims will increase as the number of products and services and the level of competition in our market grows, the functionality of our platform overlaps with that of other products and services, and the volume of issued software patents and patent applications continues to increase. We generally agree in our customer contracts to indemnify customers for expenses or liabilities they incur as a result of, among other types of claims, third-party intellectual property infringement claims associated with our platform. To the extent that any claim arises as a result of third-party technology we have licensed for use in our platform, we may be unable to recover from the appropriate third party any expenses or other liabilities that we incur. Further, any dispute with a customer with respect to such obligations could have adverse effects on our relationship with that customer or other existing or potential customers.

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 have the capability to dedicate substantially greater resources to enforce their intellectual property rights and to defend claims that may be brought against them. Furthermore, patent holding companies, non-practicing entities, and other adverse patent owners have in the past contacted, and may in the future contact, us inviting us to license their patents, and may assert patent, copyright, trademark, or other intellectual property rights against us, our channel partners, our technology partners, or our customers in the future. We have received, and may in the future receive, notices that claim 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 infringement claims, which is not uncommon with respect to the enterprise software market.

Third parties may own intellectual property rights, including issued or pending patents, that cover significant aspects of our technologies or business methods. In addition, if we acquire or license technologies from third parties, we may be exposed to increased risk of being the subject of intellectual property infringement due to, among other things, our lower level of visibility into the development process with respect to such technology and the care taken to safeguard against infringement risks. Any intellectual property claims, with or without merit, could be very time-consuming, could be expensive to settle or litigate, and could divert our management's attention and other resources. These claims could also subject us to significant liability for damages, potentially including treble damages if we are found to have willfully infringed patents or copyrights and may require us to indemnify our customers for liabilities they incur as a result of such claims. These claims could also result in our having to stop using technology found to be in violation of a third party's rights or to otherwise seek a license for the intellectual property, which may not be available on commercially reasonable terms or at all. Even if a license were available, we could be required to pay significant royalties, which would increase our operating expenses. Alternatively, we could be required to develop alternative non-infringing technology, which could require significant time, effort, and expense, and may affect the performance or features of our platform. If we cannot license or develop alternative non-infringing substitutes for infringing technology used in our business, we may be forced to limit or stop sales of our platform and may be unable to compete effectively. Any of these results would adversely affect our business, reputation, operating results, and financial condition.

Business disruptions or performance problems associated with our technology and infrastructure, including interruptions, delays, or failures in service from our third-party data center hosting facility and other third-party services, could adversely affect our operating results or result in a material weakness in our internal controls.

Continued adoption of our platform depends in part on the ability of our existing and potential customers to access our platform within a reasonable amount of time. We have experienced, and may in the future experience, disruptions, data loss, outages, and other performance problems with our infrastructure and website due to a variety of factors, including infrastructure changes, introductions of new functionality, human or software errors, capacity constraints, denial of service attacks, or other security-related incidents. If our platform is unavailable or if our users and customers are unable to access our platform within a reasonable amount of time, or at all, we may experience a decline in renewals, damage to our brand, or other harm to our business. To the extent that we do not effectively address capacity constraints, upgrade our systems as needed, and continually develop our technology and network architecture to accommodate actual and anticipated changes in technology, our business, operating results, and financial condition could be adversely affected. As we continue to develop and scale cloud-based offerings, the foregoing will become more likely and the results of any disruptions and performance problems could more significantly and negatively impact us and our customers who have subscribed to our cloud-based offerings.

A significant portion of our critical business operations are concentrated in the United States. For instance, we serve our customers and manage certain critical internal processes using a third-party data center hosting facility located in Colorado and other third-party services, including cloud services. We are a highly automated business, and a disruption or failure of our systems, or the third-party hosting facility or other third-party services that we use, could cause delays in completing sales and providing services. For example, from time to time, our data center hosting facility in Colorado has experienced outages. Such disruptions or failures could also result from a major earthquake, blizzard, hurricane, extreme temperatures, fire, cyber-attack, act of terrorism, or other catastrophic event, or a decision by one of our third-party service providers to close facilities that we use without adequate notice or other unanticipated problems with the third-party services that we use, including a failure to meet service standards.

Interruptions or performance problems with either our technology and infrastructure, our data center hosting facility, or our third-party service providers could, among other things:

- result in the destruction or disruption of any of our or our customers' critical business operations, controls, or procedures or information technology systems;
- severely affect our ability to conduct normal business operations;
- result in a material weakness in our internal control over financial reporting;
- cause us to be in breach of our contractual obligations and result in our customers terminating their subscriptions or seeking service credits for uptime violations under applicable SLAs;
- result in our issuing credits or paying penalties or fines;
- harm our brand and reputation;
- adversely affect our renewal rates or our ability to attract new customers; or
- otherwise negatively impact the performance or security of our platform and cause our platform to be perceived as unreliable or unsecure.

Any of the above could adversely affect our business operations and financial condition. Further, because nearly all of our employees were working remotely full-time as a result of the COVID-19 pandemic, and many continue to work remotely, we increased infrastructure capacity in those areas where we anticipated increased demand. Any technology supply chain disruptions could also delay our infrastructure expansion, including office expansion and employee onboarding, due to a lack of available components or products, which could adversely affect our business operations, rate of growth, and financial condition.

Failure to protect our intellectual property could adversely affect our business.

We currently rely on a combination of patents, copyrights, trademarks, trade secrets, confidentiality procedures, contractual commitments with employees, consultants, and other parties, and other legal rights to establish and protect our intellectual property. We currently have "Alteryx" and variants and other marks registered as trademarks or pending registrations in the U.S. and certain foreign countries. We also rely on copyright laws to protect computer programs related to our platform and our proprietary technologies, although to date we have not registered for statutory copyright protection. We have registered numerous internet domain names in the U.S. and certain foreign countries related to our business. Despite our efforts, the steps we take to protect our intellectual property may be inadequate and we will not be able to protect our intellectual property if we are unable to enforce our rights or if we do not detect unauthorized use of our intellectual property. Unauthorized third parties may try to copy or reverse engineer portions of our platform or otherwise obtain and use our intellectual property. In addition, we may not be able to obtain sufficient intellectual property protection for important features of our platform, in which case our competitors may discover ways to provide similar features without infringing or misappropriating our intellectual property rights.

We generally cannot rely on patent enforcement rights to protect a significant portion of our proprietary technology. Historically, we have prioritized keeping our technology architecture, trade secrets, and engineering roadmap confidential, and as a general matter, have not extensively patented our proprietary technology. As a result, our patent strategy is still in its early stages and any patents that we may own and rely on may be challenged or circumvented by others or invalidated through administrative process or litigation. Our current and future patent applications may not be issued with the scope of the claims we seek, if at all, and if issued, such patents may not provide us with competitive advantages, may not be enforceable in actions against alleged infringers, or may be successfully challenged by third parties. Further, the process of obtaining and maintaining patent protection is expensive and time-consuming and we may not be able to prosecute and maintain all necessary or desirable patent applications at a reasonable cost or in a timely manner. We may also inadvertently abandon or allow a patent or patent application to lapse, resulting in partial or complete loss of patent rights in the relevant jurisdiction. If this occurs, it could have a material adverse effect on our business operations and financial condition.

Moreover, U.S. patent law, developing jurisprudence regarding U.S. patent law, and possible future changes to U.S. or foreign patent laws and regulations may affect our ability to protect our intellectual property and defend against claims of patent infringement. In addition, the laws of some countries do not provide the same level of protection of our intellectual property as do the laws of the United States. As we expand our international activities, our exposure to unauthorized copying and use of our platform and proprietary information will likely increase, effective intellectual property protection may not be available to us in every country in which our platform is available, and mechanisms for enforcement of intellectual property rights in those countries may be inadequate. We may need to expend additional resources to defend our intellectual property rights domestically or internationally, which could impair our business or adversely affect our domestic or international expansion. If we cannot protect our intellectual property against unauthorized copying or use, we may not remain competitive and our business, operating results, and financial condition may be adversely affected.

We enter into confidentiality and invention assignment agreements with our employees and consultants and enter into confidentiality agreements with other parties. We cannot assure you that these agreements will be effective in controlling access to, use of, and distribution of our proprietary information or in effectively securing exclusive ownership of intellectual property developed by our employees and consultants. Further, these agreements may not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our platform.

In order to protect our intellectual property rights, we may be required to spend significant resources to monitor and enforce our intellectual property rights. We cannot assure you that our monitoring efforts will detect every infringement of our intellectual property rights by a third party. Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets, which could be costly, time-consuming, and distracting to management, could result in the impairment or loss of portions of our intellectual property, and may ultimately be unsuccessful. Further, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property rights. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay further sales or the implementation of our platform, impair the functionality of our platform, delay introductions of new products and services, result in our substituting inferior or more costly technologies into our platform, or damage our brand and reputation.

In addition, we contribute software source code under open source licenses. As a result of our open source contributions, we may disclose code and/or innovations that turn out to be material to our business and may also be exposed to increased litigation risk. If the protection of our proprietary rights is inadequate to prevent unauthorized use or appropriation by third parties, the value of our brand and other intangible assets may be diminished and competitors may be able to more effectively mimic our products, services, and methods of operations. Any of these events could have an adverse effect on our business and financial results.

Our software contains third-party open source software components, and failure to comply with the terms of the underlying open source software licenses could restrict our ability to sell our software.

Our software incorporates open source software code. An open source license allows the use, modification, and distribution of software in source code form. Certain kinds of open source licenses further require that any person who creates a product or service that contains, links to, or is derived from software that was subject to an open source license must also make their own product or service subject to the same open source license. Using software that is subject to this kind of open source license can lead to a requirement that our software be provided free of charge or be made available or distributed in source code form. Although we do not believe our software includes any open source software in a manner that would result in the imposition of any such requirement, the interpretation of open source licenses is legally complex and, despite our efforts, it is possible that our software could be found to contain this type of open source software.

Moreover, we cannot assure you that our processes for controlling our use of open source software in our software will be effective. If we have not complied with the terms of an applicable open source software license, we could be required to seek licenses from third parties to continue offering our software on terms that are not economically feasible, to re-engineer our software to remove or replace the open source software, to discontinue the sale of our software if re-engineering could not be accomplished on a timely basis, to pay monetary damages, or to make generally available the source code for our proprietary technology, any of which could adversely affect our business, operating results, and financial condition.

In addition to risks related to license requirements, use of open source software can involve greater risks than those associated with use of third-party commercial software, as open source licensors generally do not provide warranties or assurance of title, performance, non-infringement, or controls on origin of the software. There is typically no support available for open source software, and we cannot assure you that the authors of such open source software will not abandon further development and maintenance. Many of the risks associated with the use of open source software, such as the lack of warranties or assurances of title or performance, cannot be eliminated, and could, if not properly addressed, negatively affect our business. We have established processes to help alleviate these risks, including a review process for screening requests from our development organizations for the use of open source software, but we cannot be sure that all open source software is identified or submitted for approval prior to use in our software. Responding to any infringement claim, regardless of its validity, or discovering the use of certain types of open source software code in our software could harm our business, operating results, and financial condition.

Risks Related to Legal, Regulatory, Accounting, and Tax Matters

The nature of our business requires the application of complex revenue recognition rules and changes in financial accounting standards or practices may cause adverse, unexpected financial reporting fluctuations, and affect our reported operating results.

U.S. generally accepted accounting principles, or U.S. GAAP, is subject to interpretation by the Financial Accounting Standards Board, or FASB, the SEC, and various bodies formed to promulgate and interpret appropriate accounting principles. A change in accounting standards or practices can have a significant effect on our reported results and may even affect our reporting of transactions completed before the change is effective. New accounting pronouncements and varying interpretations of accounting pronouncements have occurred and may occur in the future. Changes to existing rules or the questioning of current practices may adversely affect our reported financial results or the way we conduct our business. For example, SEC proposals on climate-related disclosures may require us to update our accounting or operational policies, processes, or systems to reflect new or amended financial reporting standards. Such changes may adversely affect our business, financial position and operating results, or our revenue and operating profit targets.

Accounting for revenue from sales of subscriptions to software is particularly complex, is often the subject of intense scrutiny by the SEC and will evolve as FASB continues to consider applicable accounting standards in this area. ASU, 2014-09, *Revenue from Contracts with Customers* (Topic 606), or ASC 606, which governs our revenue recognition, is principles-based and interpretation of those principles may vary from company to company based on their unique circumstances. It is possible that interpretation, industry practice, and guidance may evolve. Our operating results may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our operating results to fall below the expectations of securities analysts and investors, resulting in a decline in our stock price. We have also incurred increased costs and expenses in assessing the application of ASC 606 to acquired businesses both in periods prior and subsequent to the closing of the acquisitions as we integrate such businesses into our own financial reporting.

The adoption of new accounting standards may also require us to implement changes to our accounting processes, internal controls, and disclosures. For example, the timing by which we recognize revenue from each of our products differs as a result of ASC 606. Our contracts with customers often include multiple performance obligations and we allocate the transaction price to the various performance obligations based on standalone selling price. Revenue is recognized when we satisfy each performance obligation, which can occur throughout the contract period. If we determine to add or remove any performance obligations from our products in the future, the timing and pattern of revenue recognition for our contracts with customers could materially change, resulting in either a larger or smaller portion of the total transaction price being recognized at the point in time when the platform is first made available to the customer, or the beginning of the subscription term, if later. For example, beginning January 1, 2022, as a result of a determination to cease the inclusion of a certain performance obligation previously included in subscriptions to our platform, a larger portion of the total transaction price is now recognized at the point in time when the platform is first made available to the customer, or the beginning of the subscription term, if later, than had previously been recognized for our platform. As we introduce cloud-based offerings, the pattern of revenue recognition could differ from the pattern of revenue recognition related to our legacy on-premise products, which may impact our ability to accurately forecast our financial performance. If a shift in our product mix favors the sale of one or more product(s) over our other product offerings, our revenue may be affected and may grow more slowly or inconsistently than it has in the past, or decline, and our operating results may be adversely impacted. In addition, industry and financial analysts may have difficulty understanding any shifts in our product mix, resulting in changes in financial estimates or failure to meet investor expectations. Furthermore, if we are unsuccessful in adapting our business to the requirements of any new accounting standard, or if changes to our go-to-market strategy create new risks, then we may experience greater volatility in our quarterly and annual operating results, which may have a material adverse effect on the trading price of our Class A common stock.

Changes in laws, regulations, or guidance issued by supervisory authorities relating to privacy or the protection or transfer of personal data, or any actual or perceived failure by us to comply with such laws, regulations, or guidance or our privacy policies, could adversely affect our business.

Certain of our business operations, including the delivery of our platform, involve the processing, storing, and transmitting of personal data that is subject to our privacy policies and certain federal, state, and foreign laws and regulations relating to privacy and data protection. In recent years, the collection and use of personal data by companies have come under increased regulatory and public scrutiny. Evolving definitions of personal data within the European Union, the United States, and globally, especially relating to the treatment of internet protocol addresses, machine or device identifiers, location data, and other potentially identifying information as personal data, may limit or restrict our ability to operate or expand our business, including limiting strategic partnerships that may involve the sharing of such user data. Some jurisdictions further require that certain types of data be retained on servers located within the jurisdiction, which could increase our compliance costs and slow expansion to new regions. Any actual or perceived loss, improper retention or misuse of information, or alleged violations of laws and regulations relating to privacy, data protection, and data security, and any related claims, could result in an enforcement action against us, including fines, imprisonment of company officials, public censure (with or without a consent decree finding by supervisory authorities), claims for damages by customers and other affected individuals, and damage to our reputation and loss of goodwill (both in relation to existing customers and prospective customers), any of which could have an adverse effect on our operations, financial performance, and business.

Data protection and privacy laws are becoming more rigorous, with regulators applying more scrutiny resulting in inconsistent and conflicting interpretations or supplemental regulations that may result in our not being in technical compliance from one jurisdiction to another. Despite our efforts to comply with these varying requirements, a regulator or supervisory authority may determine that we have not done so and subject us to fines, potentially costly remediation requirements, and public censure, which could harm our business. For example, the European Union and United Kingdom General Data Protection Regulation, or the GDPR, which applies extraterritorially and imposes strict requirements for controllers and processors of personal information, including higher standards for obtaining consent from individuals to process their personal information, increased requirements pertaining to the processing of special categories of information (such as health information), and pseudonymized (i.e., key-coded) data, and transfer of personal information from the European Economic Area, the United Kingdom, or Switzerland to countries not deemed to have adequate data protection laws, which includes the United States. Companies that must comply with the GDPR face increased compliance obligations and risk, including more robust regulatory enforcement of data protection requirements and potential fines for noncompliance of up to €20 million or 4 percent of the annual global revenues of the noncompliant company, whichever is greater.

In the United States, we may be subject to both federal and state laws. For example, in the event our platform or other products process protected health information uploaded by our customers, we may be obligated to comply with certain additional privacy, data security, and contractual requirements to ensure compliance with the Health Insurance Portability and Accountability Act. Certain U.S. state laws may be more stringent, broader in scope, or offer greater individual rights with respect to personal information than federal, international, or other state laws. For example, California continues to be a critical state with respect to evolving consumer privacy laws after enacting the California Consumer Privacy Act, or the CCPA, later amended by ballot measure through the California Privacy Rights Act, or the CPRA. The CPRA took effect in January 2023 and enforcement will begin on July 1, 2023, subject to regulations promulgated through the California Privacy Protection Agency, or CPPA, a newly created enforcement agency. Failure to comply with the CCPA and the CPRA may result in significant civil penalties, injunctive relief, or statutory or actual damages as determined by the CPPA and the California Attorney General through its investigative authority. Compliance with new privacy legislation enacted in various U.S. states may result in additional costs and expense of resources to maintain compliance.

We depend on third parties in relation to the operation of our business, a number of which process personal data on our behalf. With each such provider we generally attempt to mitigate the associated risks of using third parties by, among other things, performing security assessments, entering into contractual arrangements to ensure that providers only process personal data according to our instructions, and that they have sufficient technical and organizational security measures in place. There is no assurance that these contractual measures and our own privacy and security-related safeguards will protect us from the risks associated with the third-party processing, storage, and transmission of such information. Any violation of data or security laws by our third-party processors could have a material adverse effect on our business and result in the fines and penalties outlined above.

In addition to government regulation, privacy advocates and industry groups have and may in the future propose self-regulatory standards. These and other industry standards may legally or contractually apply to us, or we may elect to comply with such standards. These evolving compliance and operational requirements may impose significant costs, such as costs related to organizational changes, implementing additional protection technologies, training employees, and engaging consultants, which are likely to increase over time, or even require us to modify our data processing practices and policies, distract management, or divert resources from other initiatives or projects.

Any failure or perceived failure by us (or the third parties with whom we have contracted to process such information) to comply with applicable privacy and security laws, policies or related contractual obligations, or any compromise of security that results in unauthorized access, use, or transmission of, personal user information, could result in a variety of claims against us, including governmental enforcement actions and investigations, class action privacy litigation in certain jurisdictions, and proceedings by data protection authorities. As a result of these events, our reputation may be harmed, we may lose current and potential users, and the competitive position of our brand might be diminished, any of which could materially adversely affect our business, operating results, and financial condition. Furthermore, enforcement actions and investigations by regulatory authorities (such as the Federal Trade Commission or the states' attorneys general) related to data security incidents, alleged unfair or deceptive acts concerning privacy practices, and other privacy violations continue to increase. If our practices are not consistent or viewed as not consistent with legal and regulatory requirements, including changes in laws, regulations, and standards or new interpretations or applications of existing laws, regulations, and standards, we may become subject to audits, inquiries, whistleblower complaints, adverse media coverage, investigations, loss of export privileges, or severe criminal or civil sanctions, any of which may have a material adverse effect on our business, operating results, reputation, and financial condition.

Contractual disputes with our customers could be costly, time-consuming, and harm our reputation and indemnity provisions in various agreements may expose us to significant liability.

Our business is contract intensive and we are party to contracts with our customers all over the world. Our contracts can contain a variety of terms, including security obligations, indemnification obligations, and regulatory requirements. Contract terms may not always be standardized across our customers and can be subject to differing interpretations, which could result in disputes with our customers from time to time. If our customers notify us of an alleged contract breach or otherwise dispute any provision under our contracts, the resolution of such disputes in a manner adverse to our interests could negatively affect our operating results.

Our agreements with customers and other third parties may also include indemnification provisions under which we agree to indemnify them for losses suffered or incurred as a result of third-party claims of intellectual property infringement or other violations of intellectual property rights, damages caused by us to property or persons, or other liabilities relating to or arising from our software, services, or other contractual obligations. Large indemnity payments could harm our business, reputation, operating results, and financial condition. Any dispute with a customer with respect to such obligations could have adverse effects on our relationship with that customer and other existing or potential customers and harm our business, reputation, and operating results.

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

Our business is subject to regulation by various federal, state, local, and foreign governments. In certain jurisdictions, these regulatory requirements may be more stringent than those in the United States. Noncompliance with applicable regulations or requirements could subject us to investigations, sanctions, mandatory product recalls, enforcement actions, disgorgement of profits, fines, damages, civil and criminal penalties, injunctions, or other collateral consequences. If any governmental sanctions are imposed, or if we do not prevail in any possible civil or criminal litigation, our business, reputation, operating results, and financial condition could be materially adversely affected. In addition, responding to any action will likely result in a significant diversion of management’s attention and resources and an increase in professional fees. Enforcement actions and sanctions could harm our business, reputation, operating results, and financial condition.

Current and future litigation could have a material adverse impact on our operating results and financial condition.

From time to time, we have been subject to litigation, including class action litigation. The outcome of any litigation, regardless of its merits, is inherently uncertain. Regardless of the merits of any claims that may be brought against us, pending or future litigation could result in a diversion of management’s attention and resources and we may be required to incur significant expenses defending against these claims. If we are unable to prevail in litigation, we could incur payments of substantial monetary damages or fines, or undesirable changes to our products or business practices, and accordingly our business, financial condition, or operating results could be materially and adversely affected. Where we can make a reasonable estimate of the liability relating to pending litigation and determine that it is probable, we record a related liability. As additional information becomes available, we assess the potential liability and revise estimates as appropriate. However, because of uncertainties relating to litigation, the amount of our estimates could change. Any adverse determination related to litigation could require us to change our technology or our business practices, pay monetary damages or fines, or enter into royalty or licensing arrangements, which could adversely affect our operating results and cash flows, harm our reputation, or otherwise negatively impact our business.

Failure to comply with anti-corruption and anti-money laundering laws, including the FCPA and similar laws associated with our activities outside of the United States, could subject us to penalties and other adverse consequences.

We are subject to the FCPA, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, the Bribery Act, and possibly other anti-bribery and anti-money laundering laws in countries in which we conduct activities. We face significant risks if we fail to comply with the FCPA and other anti-corruption laws that prohibit companies and their employees and third-party intermediaries from authorizing, offering, or providing, directly or indirectly, improper payments or benefits to foreign government officials, political parties, and private-sector recipients for the purpose of obtaining or retaining business, directing business to any person, or securing any advantage. In many foreign countries, particularly in countries with developing economies, it may be a local custom that businesses engage in practices that are prohibited by the FCPA or other applicable laws and regulations. In addition, we use various third parties to sell our platform and conduct our business abroad. We or our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities and we can be held liable for the corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, partners, and agents, even if we do not explicitly authorize such activities. We have implemented an anti-corruption compliance program but cannot assure you that all our employees and agents, as well as those companies to which we outsource certain of our business operations, will not take actions in violation of our policies and applicable law, for which we may be ultimately held responsible.

Any violation of the FCPA, other applicable anti-corruption laws, or anti-money laundering laws could result in whistleblower complaints, adverse media coverage, investigations, loss of export privileges, severe criminal or civil sanctions and, in the case of the FCPA, suspension or debarment from U.S. government contracts, which could have an adverse effect on our reputation, business, operating results, and prospects. In addition, responding to any enforcement action may result in a significant diversion of management’s attention and resources and significant defense costs and other professional fees.

We are required to comply with export control laws and regulations. Our failure to comply with these laws and regulations could have an adverse effect on our business and operating results.

Our platform is subject to export control laws and regulations, including in the United States and European Union. U.S. export control laws and regulations and economic sanctions prohibit the shipment of certain products and services to U.S. embargoed or sanctioned countries, governments, and persons, and complying with export control and sanctions regulations for a particular sale may be time-consuming and may result in the delay or loss of sales opportunities. For example, in 2022, the U.S. and other countries levied additional sanctions against Russian and Belarusian entities and individuals in response to Russia's military action in Ukraine. As a result, we terminated access to our software to, and ceased pursuing active deals with, various sanctioned entities and individuals. While our commercial presence in Russia was not material, there may be other, similar events in the future where increased sanction activity results in a material adverse effect on our operating results and financial condition. Further, while we take precautions to prevent our platform from being exported in violation of these laws, if we were to fail to comply with applicable jurisdictions' import and export laws, we could be subject to substantial civil and criminal penalties, including fines for the company and incarceration for responsible employees and managers, and the possible loss of export or import privileges.

We incorporate encryption technology into certain of our products. Encryption products may be exported outside of the United States only with the required export authorizations including by license, a license exception, or other appropriate government authorization. In addition, various countries regulate the import of certain encryption technology, including import permitting and licensing requirements, and have enacted laws that could limit our ability to distribute our products or could limit our customers' ability to implement our products in those countries. Although we take precautions to prevent our products from being provided in violation of such laws, we cannot assure you that inadvertent violations of such laws have not occurred or will not occur in connection with the distribution of our products despite the precautions we take. Governmental regulation of encryption technology and regulation of imports or exports, or our failure to obtain required import or export approval for our products, could harm our international sales and adversely affect our operating results.

Further, if our channel or other partners fail to obtain appropriate import, export, or re-export licenses or permits, we may also be harmed, become the subject of government investigations or penalties, and incur reputational harm. Changes in our platform or changes in export and import regulations may create delays in the introduction of our platform in international markets, prevent our customers with international operations from deploying our platform globally or, in some cases, prevent the export or import of our platform to certain countries, governments, or persons altogether. Any change in export or import laws or regulations, economic sanctions, or related legislation, shift in the enforcement or scope of existing laws and regulations, or change in the countries, governments, persons, or technologies targeted by such laws and regulations, including as a result of economic sanctions and other geopolitical developments following Russia's invasion of Ukraine, could result in decreased use of our platform by, or in our decreased ability to export or sell our platform to, existing or potential customers with international operations. Any decreased use of our platform or limitation on our ability to export or sell our platform would likely harm our business, financial condition, and operating results.

Our financial statements are subject to change and if our estimates or judgments relating to our critical and significant accounting policies prove to be incorrect, our operating results could be adversely affected.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and related notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, as provided in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. The results of these estimates form the basis for making judgments about the carrying values of assets, liabilities, and equity, and the amount of revenue and expenses that are not readily apparent from other sources. Critical and significant accounting policies and estimates used in preparing our consolidated financial statements include those related to revenue recognition, convertible senior notes, and accounting for income taxes. Our operating results may be adversely affected if our assumptions change or if actual circumstances differ from those in our assumptions, which could cause our operating results to fall below the expectations of securities analysts and investors, resulting in a decline in the price of our Class A common stock.

If our goodwill or intangible assets become impaired, we may be required to record a significant charge to earnings.

We review our goodwill and intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable, such as declines in our stock price, market capitalization, or cash flows and slower growth rates in our industry. Goodwill is required to be tested for impairment at least annually. If we are required to record a significant charge in our financial statements during the period in which any impairment of our goodwill or intangible assets is determined, that would negatively affect our operating results.

We may have exposure to additional tax liabilities.

We are subject to complex tax laws and regulations in the United States and a variety of foreign jurisdictions. All of these jurisdictions have in the past and may in the future make changes to their corporate income tax rates and other income tax laws which could increase our future income tax provision.

Our future income tax obligations could be affected by earnings that are lower than anticipated in jurisdictions where we have lower statutory rates and by earnings that are higher than anticipated in jurisdictions where we have higher statutory rates, by changes in the valuation of our deferred tax assets and liabilities, changes in the amount of unrecognized tax benefits, or by changes in tax laws, regulations, accounting principles, or interpretations thereof.

Our determination of our tax liability is subject to review by applicable U.S. and foreign tax authorities. Any adverse outcome of such a review could harm our operating results and financial condition. As a multinational business, the determination of our worldwide provision for income taxes and other tax liabilities is often complex, requires significant judgment, and the ultimate tax determination may be uncertain. While we believe that our existing corporate structure and intercompany arrangements have been implemented in compliance with current prevailing tax laws, the taxing authorities of the jurisdictions in which we operate may challenge our methodologies for valuing developed technology or intercompany arrangements, which could impact our worldwide effective tax rate and harm our financial position and operating results.

We are also subject to non-income taxes, such as payroll, sales, use, value-added, net worth, property, and goods and services taxes in the United States and various foreign jurisdictions. We are periodically reviewed and audited by tax authorities with respect to income and non-income taxes. Tax authorities may disagree with certain positions we have taken and we may have exposure to additional income and non-income tax liabilities, which could have an adverse effect on our operating results and financial condition. In addition, our future effective tax rates could be favorably or unfavorably affected by changes in tax rates, changes in the valuation of our deferred tax assets or liabilities, the effectiveness of our tax planning strategies, or changes in tax laws or their interpretation. Such changes could have an adverse impact on our financial condition.

As a result of these and other factors, the ultimate amount of tax obligations owed may differ from the amounts recorded in our financial statements and any such difference may harm our operating results in future periods in which we change our estimates of our tax obligations or in which the ultimate tax outcome is determined.

Our ability to use our net operating losses to offset future taxable income may be subject to certain limitations which could subject our business to higher tax liability.

Our ability to use our net operating losses, or NOLs, to offset future taxable income may be subject to certain limitations which could subject our business to higher tax liability. We may be limited in the portion of NOL carryforwards that we can use in the future to offset taxable income for U.S. federal and state income tax purposes, and federal tax credits to offset federal tax liabilities. Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, limit the use of NOLs and tax credits after a cumulative change in corporate ownership of more than 50% occurs within a three-year period. The statutes place a formula limit on how much NOLs and tax credits a corporation can use in a tax year after a change in ownership. Avoiding an ownership change is generally beyond our control. Although the ownership changes we experienced in the past have not prevented us from using all NOLs and tax credits accumulated before such ownership changes, we could experience another ownership change that might limit our use of NOLs and tax credits in the future. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs, or other unforeseen reasons, our existing NOLs could expire or otherwise be unavailable to offset future income tax liabilities. Under the Coronavirus Aid, Relief, and Economic Security Act, or the CARES Act, NOLs arising in taxable years beginning after December 31, 2017 and before January 1, 2021 may be carried back to each of the five taxable years preceding the tax year of such loss, but NOLs arising in taxable years beginning after December 31, 2020 may not be carried back. Further, NOLs from tax years that began after December 31, 2017 may offset no more than 80% of current taxable income annually for taxable years beginning after December 31, 2020. Accordingly, if we generate NOLs after the tax year ended December 31, 2017, we might have to pay more federal income taxes in a subsequent year as a result of the 80% taxable income limitation than we would have had to pay under the law in effect before the CARES Act.

We may require additional capital to fund our business and support our growth, and any inability to generate or obtain such capital may adversely affect our operating results and financial condition.

In order to support our growth and respond to business challenges, such as developing new features or enhancements to our platform to stay competitive, acquiring new technologies, and improving our infrastructure, we have made significant financial investments in our business and we intend to continue to make such investments. As a result, we may need to engage in additional equity or debt financings to provide the funds required for these investments and other business endeavors. If we raise additional funds through equity or convertible debt issuances, our existing stockholders may suffer significant dilution and these securities could have rights, preferences, and privileges that are superior to that of holders of our common stock. If we obtain additional funds through debt financing, we may not be able to obtain such financing on terms favorable to us. Such terms may involve restrictive covenants making it difficult to engage in capital raising activities and pursue business opportunities, including potential acquisitions. The trading prices for our and other technology companies' common stock have been highly volatile in recent years, including during the COVID-19 pandemic and as a result of macroeconomic uncertainty, rising inflation and interest rates, and other circumstances often unrelated to the operating performance of companies, which may reduce our ability to access capital on favorable terms or at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, or if we are unable to refinance our existing debt on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired and our business may be adversely affected, requiring us to delay, reduce, or eliminate some or all of our operations.

Risks Related to Our Notes

Although our Notes are referred to as senior notes, they are effectively subordinated to any of our secured debt and any liabilities of our subsidiaries.

The Notes (as defined in Note 9, *Convertible Senior Notes*, of the notes to our consolidated financial statements included elsewhere in this Annual Report on Form 10-K) rank senior in right of payment to any of our indebtedness and other liabilities that are expressly subordinated in right of payment to the Notes; equal in right of payment among all series of Notes and to any other existing and future indebtedness and other liabilities that are not subordinated; effectively junior in right of payment to any of our secured indebtedness and other liabilities to the extent of the value of the assets securing such indebtedness and other liabilities; and structurally junior in right of payment to all of our existing and future indebtedness and other liabilities (including trade payables) of our current or future subsidiaries. In the event of our bankruptcy, liquidation, reorganization, or other winding up, our assets that secure debt ranking senior or equal in right of payment to the Notes will be available to pay obligations on the Notes only after the secured debt has been repaid in full from these assets, and the assets of our subsidiaries will be available to pay obligations on the Notes only after all claims senior to the Notes have been repaid in full. There may not be sufficient assets remaining to pay amounts due on any or all of the Notes then outstanding. The indentures governing the Notes do not prohibit us from incurring additional senior debt or secured debt, nor do they prohibit any of our current or future subsidiaries from incurring additional liabilities.

Recent and future regulatory actions and other events may adversely affect the trading price and liquidity of the Notes.

We expect that many investors in, and potential purchasers of, the Notes have employed or will employ, or seek to employ, a convertible arbitrage strategy with respect to the Notes, which may involve investors selling short and/or entering into swaps on the Class A common stock underlying the Notes and dynamically adjusting their short position while continuing to hold the Notes.

The SEC and other regulatory and self-regulatory authorities have implemented various rules and taken certain actions, and may in the future adopt additional rules and take other actions, that may impact those engaging in short selling activity involving equity securities (including our Class A common stock). Such rules and actions include Rule 201 of SEC Regulation SHO, the adoption by the Financial Industry Regulatory Authority, Inc. and the national securities exchanges of a “Limit Up-Limit Down” program, the imposition of market-wide circuit breakers that halt trading of securities for certain periods following specific market declines, and the implementation of certain regulatory reforms required by the Dodd-Frank Act. Any governmental or regulatory action that restricts the ability of investors in, or potential purchasers of, the Notes to effect short sales of our Class A common stock, borrow our Class A common stock, or enter into swaps on our Class A common stock could adversely affect the trading price and the liquidity of the Notes.

Volatility in the market price and trading volume of our Class A common stock could adversely impact the trading price of the Notes.

We expect that the trading price of the Notes will be significantly affected by the market price of our Class A common stock. The stock market in recent years, including during the COVID-19 pandemic and as a result of macroeconomic uncertainty and rising inflation and interest rates, has experienced significant price and volume fluctuations that have often been unrelated to the operating performance of companies. The market price of our Class A common stock has fluctuated, and could continue to fluctuate, significantly for many reasons, including in response to the other risks described in this Annual Report on Form 10-K or for reasons unrelated to our operations, many of which are beyond our control, such as rising inflation and interest rates, the global economic impact as a result of the geopolitical conflict stemming from Russia's invasion of Ukraine, reports by industry analysts, investor perceptions, or negative announcements by our customers or competitors regarding their own performance, as well as industry conditions and general financial, economic, and political instability. A decrease in the market price of our Class A common stock would likely adversely impact the trading price of the Notes. The market price of our Class A common stock could also be affected by possible sales of our Class A common stock by investors who view the Notes as a more attractive means of equity participation in us and by hedging or arbitrage trading activity that we expect to develop involving our Class A common stock. This trading activity could, in turn, affect the trading price of the Notes.

An increase in market interest rates could result in a decrease in the value of the Notes.

In general, as market interest rates rise, notes bearing interest at a fixed rate generally decline in value because the premium, if any, over market interest rates will decline. Consequently, if market interest rates increase, the market value of the Notes may decline. We cannot predict the future level of market interest rates.

We may incur substantially more debt or take other actions which would intensify the risks discussed above.

We and our subsidiaries may incur substantial additional debt in the future, subject to the restrictions contained in our debt instruments, some of which may be secured debt. We are not restricted under the terms of the indentures governing the Notes from incurring additional debt, securing existing or future debt, recapitalizing our debt, or taking a number of other actions that are not limited by the terms of the indentures governing the Notes that could have the effect of diminishing our ability to make payments on the Notes when due.

We may not have the ability to raise the funds necessary to settle conversions of the Notes in cash or to repurchase the Notes upon a fundamental change, and any future debt may contain limitations on our ability to pay cash upon conversion or repurchase of the Notes.

Holders of a series of Notes have the right to require us to repurchase all or a portion of their Notes of the relevant series upon the occurrence of a fundamental change before the relevant maturity date at a fundamental change repurchase price equal to 100% of the principal amount of the Notes of the relevant series to be repurchased, plus accrued and unpaid interest, if any. In addition, upon conversion of such Notes, unless we elect to deliver solely shares of our Class A common stock to settle such conversion (other than paying cash in lieu of delivering any fractional share), we are required to make cash payments in respect of the Notes being converted. However, 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 pay cash with respect to Notes being converted.

In addition, our ability to repurchase Notes or to pay cash upon conversions of Notes may be limited by law, regulatory authority, or any agreements governing our future indebtedness. Our failure to repurchase Notes at a time when the repurchase is required by the applicable indenture or to pay any cash upon conversions of Notes as required by the applicable indenture would constitute a default under such indenture. A default under an indenture or the fundamental change itself could also lead to a default under agreements governing any future indebtedness. If the payment 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 to pay cash upon conversions of Notes.

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

In the event the conditional conversion feature of the relevant series of Notes is triggered in future quarters, holders of such Notes will be entitled to convert their Notes at any time during specified periods at their option. If one or more holders elect to convert their Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our Class A common stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation in cash, which could adversely affect our liquidity. In addition, even if holders of such Notes do not elect to convert their Notes, we could in the future be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the relevant series of Notes as a current rather than long-term liability, which would result in a material reduction of our net working capital. Accordingly, as a result of the upcoming maturity date of the 2023 Notes, we have classified the 2023 Notes as current liabilities on the consolidated balance sheet as of December 31, 2022.

Our stockholders may experience dilution upon the conversion of the Notes if we elect to satisfy our conversion obligation by delivering shares of our Class A common stock.

Upon conversion by the holders of the relevant series of Notes, we may elect to satisfy our conversion obligation by delivering shares of our Class A common stock. The 2023 Notes have an initial conversion rate of 22.5572 shares of our Class A common stock per $1,000 principal amount of 2023 Notes, which is equivalent to an initial conversion price of approximately $44.33 per share of Class A common stock. The 2024 & 2026 Notes each have an initial conversion rate of 5.2809 shares of our Class A common stock per $1,000 principal amount of 2024 & 2026 Notes, as applicable, which is equivalent to an initial conversion price of approximately $189.36 per share of Class A common stock**.** If we elect to deliver shares of our Class A common stock upon a conversion, our stockholders will incur dilution.

Changes in the accounting treatment for convertible debt securities that may be settled in cash, such as the Notes, could have a material effect on our reported financial results.

In August 2020, the FASB issued ASU 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity, or ASU 2020-06, which simplifies the diluted earnings per share calculation in certain areas. Specifically, ASU 2020-06 eliminates requirements to separately account for liability and equity components of such convertible debt instruments and eliminates the ability to use the treasury stock method for calculating diluted earnings per share for convertible instruments whose principal amount may be settled using shares. Instead, ASU 2020-06 requires (i) the entire amount of the security to be presented as a liability on the balance sheet and (ii) application of the "if-converted" method for calculating diluted earnings per share. Under the "if-converted" method, diluted earnings per share will generally be calculated assuming that all the notes were converted solely into shares of common stock at the beginning of the reporting period, unless the result would be anti-dilutive, which could adversely affect our diluted earnings per share. However, if the principal amount of the convertible debt security being converted is required to be paid in cash and only the excess is permitted to be settled in shares, the if-converted method will produce a similar result as the "treasury stock" method prior to the adoption of ASU 2020-06 for such convertible debt security.

We adopted this standard effective as of January 1, 2022 using the modified retrospective method and as such we no longer bifurcate the liability and equity components of the Notes on our balance sheet. We are not required to settle the principal amount of the Notes in cash and, following the adoption of the new standard, we have utilized the if-converted method as described above, which could adversely affect our diluted earnings per share calculation when not antidilutive.

The capped call transactions may affect the value of the Notes and our Class A common stock.

In connection with the pricing of each series of Notes, we entered into capped call transactions relating to such Notes with the option counterparties. The capped call transactions relating to each series of Notes cover, subject to customary adjustments, the number of shares of our Class A common stock that initially underlie such series of Notes. The capped call transactions are expected generally to reduce the potential dilution upon any conversion of the relevant series of Notes and/or offset any cash payments we are required to make in excess of the principal amount upon any conversion of such Notes, with such reduction and/or offset subject to a cap.

The option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding various derivatives with respect to our Class A common stock and/or purchasing or selling our Class A common stock in secondary market transactions following the pricing of each series of Notes and prior to the maturity of each series of Notes (and are likely to do so during any observation period related to a conversion of such Notes or following any repurchase of such Notes by us on any fundamental change repurchase date or otherwise). This activity could also cause or avoid an increase or a decrease in the market price of our Class A common stock or the Notes, which could affect a holder's ability to convert their Notes and, to the extent the activity occurs during any observation period related to a conversion of a relevant series of Notes, it could affect the amount and value of the consideration that a holder will receive upon conversion of such Notes.

The potential effect, if any, of these transactions and activities on the market price of our Class A common stock or the Notes will depend in part on market conditions and cannot be ascertained at this time. Any of these activities could adversely affect the value of our Class A common stock and the value of the Notes (and as a result, the amount and value of the consideration that a holder would receive upon the conversion of any Notes) and, under certain circumstances, a holder's ability to convert their Notes.

We do not make any representation or prediction as to the direction or magnitude of any potential effect that the transactions described above may have on the price of the Notes or our Class A common stock. In addition, we do not make any representation that the option counterparties or their respective affiliates will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

We are subject to counterparty risk with respect to the capped call transactions.

The option counterparties to the capped call transactions are financial institutions, and we will be 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 will not be secured by any collateral. If an option counterparty to one or more capped call transactions becomes subject to insolvency proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at that time under such transaction. Our exposure will depend on many factors but, generally, our exposure will increase if the market price or the volatility of our common stock increases. In addition, upon a default or other failure to perform, or a termination of obligations, by an option counterparty, we may suffer more dilution than we currently anticipate with respect to our common stock. We can provide no assurances as to the financial stability or viability of the option counterparties.

Risks Related to Ownership of Our Class A Common Stock

The market price of our Class A common stock has been, and will likely continue to be, volatile, and you could lose all or part of the value of your investment.

The market price of our Class A common stock has been, and will likely continue to be, volatile. Since shares of our Class A common stock were sold in our initial public offering, or IPO, in March 2017 at a price of $14.00 per share, our closing stock price has ranged from $14.80 to $181.98 through December 31, 2022. In addition to the factors discussed in this Annual Report on Form 10-K, the market price of our Class A common stock may continue to fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- overall performance of the equity markets;
- actual or anticipated fluctuations in our revenue and other operating results;
- changes in the financial projections we may provide to the public or our failure to meet these projections;
- failure of securities analysts to maintain coverage of us, inaccurate or unfavorable research published by securities analysts, changes in financial estimates by any securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- recruitment or departure of key personnel;
- the economy as a whole and market conditions in our industry;
- negative publicity involving or related to our company, including with respect to the real or perceived quality of our platform, as well as the failure to timely launch new products and services that gain market acceptance;
- rumors and market speculation involving us or other companies in our industry;
- announcements by us or our competitors of significant technical innovations;
- acquisitions, strategic partnerships, joint ventures, or capital commitments;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business;
- lawsuits threatened or filed against us;
- developments or disputes concerning our intellectual property or our platform, or third-party proprietary rights;
- the inclusion of our Class A common stock on stock market indexes, including the impact of rules adopted by certain index providers, such as S&P Dow Jones Indices and FTSE Russell, that limit or preclude inclusion of companies with multi-class capital structures;
- changes in accounting standards, policies, guidelines, interpretations, or principles;
- rising inflation, rising interest rates, and our ability to control costs, including our operating expenses;
- natural disasters, acts of war, such as Russia’s invasion of Ukraine, terrorism, or pandemics;
- other events or factors or responses to these events or factors; and
- sales of shares of our Class A common stock by us or our stockholders, including sales and purchases of any Class A common stock issued upon conversion of any series of our Notes.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many companies. Stock prices of many companies, and technology companies in particular, have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. In the past, stockholders have instituted securities class action litigation following periods of market volatility. In addition, activist campaigns that contest or conflict with our strategic direction or seek changes in the composition of our board of directors could have an adverse effect on our operating results and financial condition. Securities litigation may subject us to substantial costs, divert resources and the attention of management from our business, and adversely affect our business.

Sales of substantial amounts of our Class A common stock in the public markets, or the perception that they might occur, could cause the market price of our Class A common stock to decline.

Sales of a substantial number of shares of our Class A common stock into the public market, particularly sales by our directors, executive officers, and principal stockholders, or the perception that these sales might occur, could cause the market price of our Class A common stock to decline. We had a total of 69.5 million shares of our Class A and Class B common stock outstanding as of December 31, 2022. All shares of our common stock are freely tradable, without restrictions or further registration under the Securities Act, except that any shares held by our "affiliates" as defined in Rule 144 under the Securities Act would only be able to be sold in compliance with Rule 144.

In addition, we have filed a registration statement to register shares reserved for future issuance under our equity compensation plans. Subject to the satisfaction of vesting conditions, the shares issued upon exercise of outstanding stock options or settlement of outstanding restricted stock units, or RSUs, will be available for immediate resale in the United States in the open market.

We have issued and may in the future issue our shares of common stock or securities convertible into shares of our common stock from time to time in connection with a financing, acquisition, investment, or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and cause the market price of our Class A common stock to decline.

The dual class structure of our common stock has the effect of concentrating voting control with holders of our Class B common stock, including our directors, executive officers, and 5% stockholders and their affiliates, which limits or precludes your ability to influence corporate matters, including the election of directors and the approval of any change of control transaction.

Our Class B common stock has ten votes per share and our Class A common stock has one vote per share. As of December 31, 2022, our directors, executive officers, and holders of more than 5% of our common stock, and their respective affiliates, held a substantial majority of the voting power of our capital stock. Because of the ten-to-one voting ratio between our Class B common stock and Class A common stock, the holders of our Class B common stock collectively control a majority of the combined voting power of our common stock and therefore are able to control all matters submitted to our stockholders for approval until the earliest of (i) the date specified by a vote of the holders of at least 66 2/3% of the outstanding shares of Class B common stock, (ii) March 29, 2027, or (iii) the date the shares of Class B common stock cease to represent at least 10% of the aggregate number of shares of Class A common stock and Class B common stock then outstanding. Specifically, as of December 31, 2022, Dean A. Stoecker, our co-founder, Executive Chairman, and former Chief Executive Officer directly or indirectly controlled a majority of the combined voting power of our common stock. This concentrated control limits or precludes your ability to influence corporate matters for the foreseeable future, including the election of directors, amendments of our organizational documents, and any merger, consolidation, sale of all or substantially all of our assets, or other major corporate transaction requiring stockholder approval. In addition, this may prevent or discourage unsolicited acquisition proposals or offers for our capital stock that you may feel are in your best interest as one of our stockholders.

Future transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, subject to limited exceptions, such as certain permitted transfers effected for estate planning purposes. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, the price of our Class A common stock and trading volume could decline.

The trading market for our Class A common stock depends in part on the research and reports that securities or industry analysts publish about us or our business. If one or more of the analysts who cover us downgrade our Class A common stock or publish inaccurate or unfavorable research about our business, the price of our Class A common stock would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, demand for our Class A common stock could decrease, which might cause our Class A common stock price and trading volume to decline.

We do not intend to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our common stock and do not intend to pay any cash dividends in the foreseeable future. We anticipate that for the foreseeable future we will retain all of our future earnings for use in the development of our business and for general corporate purposes. Any determination to pay dividends in the future will be at the discretion of our board of directors. Accordingly, investors must rely on sales of their common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

Provisions in our charter documents, Delaware law, and in each series of our Notes could make an acquisition of our company more difficult, limit attempts by our stockholders to replace or remove our current management, limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers, or employees, and limit the market price of our Class A common stock.

Provisions in our restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a change of control or changes in our management. Our restated certificate of incorporation and amended and restated bylaws include provisions that:

- provide that our board of directors will be classified into three classes of directors with staggered three-year terms;
- permit the board of directors to establish the number of directors and fill any vacancies and newly-created directorships;
- require super-majority voting to amend some provisions in our restated certificate of incorporation and amended and restated bylaws;
- authorize the issuance of "blank check" preferred stock that our board of directors could use to implement a stockholder rights plan;
- provide that only the chairman of our board of directors, our chief executive officer, president, lead independent director, or a majority of our board of directors will be authorized to call a special meeting of stockholders;
- provide for a dual class common stock structure in which holders of our Class B common stock have the ability to control the outcome of matters requiring stockholder approval, even if they own significantly less than a majority of the outstanding shares of our common stock, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets;
- prohibit stockholder action by written consent, which requires all stockholder actions to be taken at a meeting of our stockholders;
- provide that the board of directors is expressly authorized to make, alter, or repeal our bylaws; and
- establish advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at annual stockholder meetings.

In addition, our restated certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum for: any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, or DGCL, our restated certificate of incorporation, or our amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine.

Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all claims brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Our amended and restated bylaws also provide that the federal district courts of the United States will, to the fullest extent permitted by law, be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act, or a Federal Forum Provision. The application of the Federal Forum Provision means that suits brought by our stockholders to enforce any duty or liability created by the Securities Act must be brought in federal court and cannot be brought in state court. Neither the exclusive forum provision nor the Federal Forum Provision applies to suits brought to enforce any duty or liability created by the Exchange Act. Section 27 of the Exchange Act, however, creates exclusive federal jurisdiction over all claims brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. Accordingly, actions by our stockholders to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder must be brought in federal court.

Notwithstanding the foregoing, our stockholders will not be deemed to have waived our compliance with the federal securities laws and the regulations promulgated thereunder.

Any person or entity purchasing or otherwise acquiring or holding any interest in any of our securities shall be deemed to have notice of and consented to our exclusive forum provisions, including the Federal Forum Provision. The exclusive forum provisions may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or any of our directors, officers, or other employees, which may discourage lawsuits with respect to such claims. Alternatively, if a court were to find the choice of forum provisions contained in our restated certificate of incorporation or 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, which could harm our business, operating results, and financial condition.

Moreover, Section 203 of the DGCL may discourage, delay, or prevent a change of control of our company. Section 203 imposes certain restrictions on mergers, business combinations, and other transactions between us and holders of 15% or more of our common stock.

Further, the fundamental change provisions of each series of our Notes that are set forth in the applicable indenture may make a change in control of our company more difficult because those provisions allow note holders to require us to repurchase such series of Notes upon the occurrence of a fundamental change.

General Risks

Economic uncertainty or downturns, particularly as it impacts particular industries, could adversely affect our business and operating results.

Over the last decade, including during the COVID-19 pandemic and as a result of rising inflation and interest rates, the United States and other significant markets have experienced both acute and cyclical downturns and worldwide economic conditions remain uncertain. In addition, global financial and political developments seemingly unrelated to us or the software industry may harm us, including rising inflation and interest rates, supply chain disruptions, and the global response to Russia's invasion of Ukraine. For example, in an effort to combat rising inflation, throughout 2022, the U.S. Federal Reserve incrementally raised its federal funds benchmark rate, resulting in significant increases in market interest rates. The U.S. Federal Reserve may continue to raise its federal funds benchmark rate and implement fiscal policy interventions, any of which in turn may cause market interest rates to increase, reduce economic growth rates, create a recession, or cause other similar effects even if they are successful in lowering inflation. The United States and other significant markets have been affected from time to time by falling demand for a variety of goods and services, reduced corporate profitability, volatility in equity and foreign exchange markets and overall uncertainty with respect to the economy, including with respect to tariff and trade issues. Economic uncertainty and associated macroeconomic conditions make it extremely difficult for our customers and us to accurately forecast and plan future business activities and could cause our customers to slow spending on our platform, which could delay and lengthen sales cycles. Furthermore, during uncertain economic times our customers may face issues gaining timely access to sufficient credit, which could result in an impairment of their ability to make timely payments to us. If that were to occur, we may be required to increase our allowance for doubtful accounts and our results would be negatively impacted.

Furthermore, we have customers in a variety of different industries. A significant downturn in the economic activity attributable to any particular industry, including, but not limited to, the retail and financial industries, may cause organizations to react by reducing their capital and operating expenditures in general or by specifically reducing their spending on information technology. In addition, our customers may delay or cancel information technology projects or seek to lower their costs by renegotiating vendor contracts. To the extent purchases of our platform are perceived by customers and potential customers to be discretionary, our revenue may be disproportionately affected by delays or reductions in general information technology spending. Also, customers may choose to develop in-house software as an alternative to using our platform. Moreover, competitors may respond to challenging market conditions by lowering prices and attempting to lure away our customers.

We cannot predict the timing, strength, or duration of any economic slowdown or any subsequent recovery generally, or any industry in particular. If the conditions in the general economy and the markets in which we operate worsen from present levels, our business, financial condition, and operating results could be materially adversely affected.

We may be adversely affected by natural disasters, pandemics, including any significant resurgence of the COVID-19 pandemic, and other catastrophic events, and by man-made problems such as terrorism, that could disrupt our business operations, and our business continuity and disaster recovery plans may not adequately protect us from a serious disaster.

Natural disasters or other catastrophic events, including those resulting from the effects of climate change, may cause damage or disruption to our operations, international commerce, and the global economy, and could have an adverse effect on our business, operating results, and financial condition. Our business operations are also subject to interruption by fire, power shortages, and other events beyond our control. In addition, our global operations expose us to risks associated with public health crises, such as pandemics and epidemics, which could harm our business and cause our operating results to suffer. For example, the COVID-19 pandemic and/or the precautionary measures that we, our customers, and governmental authorities adopted resulted in operational challenges, including, among others, adapting to new work-from-home arrangements, customers not purchasing or renewing our products or services, significant delays or lengthening of our sales cycles, and reductions in average transaction sizes. More generally, a catastrophic event could adversely affect economies and financial markets globally and lead to an economic downturn, which could decrease technology spending and adversely affect demand for our products and services. Any prolonged economic downturn or a recession could materially harm our business and operating results and those of our customers, could result in business closures, layoffs, or furloughs of, or reductions in the number of hours worked by, our and our customer's employees, and a significant increase in unemployment in the United States and elsewhere. Such events may also lead to a reduction in the capital and operating budgets that we or our customers have available, which could harm our business, financial condition, and operating results. As we experienced during the COVID-19 pandemic, the trading prices for our and other technology companies' common stock may be highly volatile as a result of a catastrophic event, which may reduce our ability to access capital on favorable terms or at all. Further, acts of terrorism and other geopolitical unrest could cause disruptions in our business or the businesses of our partners or the economy as a whole. For example, given our investment in a research and development center in Ukraine, Russia's invasion of Ukraine has negatively affected our employees and operations in the region and could negatively affect our business and result in delays in development of our platform. In addition, the effects of climate change are rapidly evolving and have resulted, and may continue to result, in an increase in the frequency and magnitude of natural disasters. In the event of a natural disaster, including a major earthquake, blizzard, or hurricane, or a catastrophic event such as a fire, power loss, or telecommunications failure, we may be unable to continue our operations and may endure system interruptions, reputational harm, delays in development of our platform, lengthy interruptions in service, breaches of data security, and loss of critical data, all of which could have an adverse effect on our future operating results. For example, our corporate offices are located in California, a state that frequently experiences earthquakes and wildfires, and we have a regional office in New York that has experienced intensified hurricane activity and other extreme weather events. All the aforementioned risks may be further increased if we do not implement an effective disaster recovery plan or our partners' disaster recovery plans prove to be inadequate.

We are obligated to develop and maintain proper and effective internal control over financial reporting. If we identify material weaknesses in the future, or otherwise fail to maintain an effective system of internal control over financial reporting in the future, we may not be able to accurately or timely report our financial condition or operating results, which may adversely affect investor confidence in our company and, as a result, the value of our Class A common stock.

We are required, pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting, which has required, and will continue to require, increased costs, expenses, and management resources. Effective internal control over financial reporting is necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could cause us to fail to meet our reporting obligations. Ineffective internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our Class A common stock. This report by management will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting, as well as a statement that our independent registered public accounting firm has issued an opinion on our internal control over financial reporting. An independent assessment of the effectiveness of our internal controls could detect problems that our management's assessment might not, and any material weaknesses identified in our internal controls could lead to financial statement restatements and require us to incur remediation expenses. We are required to disclose changes made in our internal controls and procedures on a quarterly basis. To comply with the requirements of being a public company, we have undertaken, and may need to further undertake in the future, various actions, such as implementing new internal controls and procedures and hiring additional accounting or internal audit staff.

We previously identified a material weakness in our internal control over financial reporting. Although we believe the material weakness has since been remediated, we cannot assure you that the measures we have taken to date, or any measures we may take in the future, will be sufficient to identify or prevent future material weaknesses. If other material weaknesses or other deficiencies occur, our ability to accurately and timely report our financial position could be impaired, which could result in a material misstatement of our financial statements that would not be prevented or detected on a timely basis.

If we are unable to assert that our internal control over financial reporting is effective, or if our independent registered public accounting firm is unable to express an opinion on the effectiveness of our internal control, including as a result of any identified material weakness, we could lose investor confidence in the accuracy and completeness of our financial reports, which would cause the price of our Class A common stock to decline, and we may be subject to investigation or sanctions by the SEC. In addition, if we are unable to continue to meet these requirements, we may not be able to remain listed on the New York Stock Exchange, or NYSE.

If currency exchange rates fluctuate substantially in the future, the results of our operations, which are reported in U.S. dollars, could be adversely affected.

As we continue to expand our international operations, we become more exposed to the effects of fluctuations in currency exchange rates. While the majority of our sales contracts are denominated in U.S. dollars, we expect an increasing number of our sales contracts to be denominated in other currencies. Changes in the value of foreign currencies relative to the U.S. dollar could affect our revenue and operating results due to transactional and translational remeasurement that is reflected in our earnings. In addition, we incur expenses for employee compensation and other operating expenses at our non-U.S. locations in the local currency. Fluctuations in the exchange rates between the U.S. dollar and other currencies could result in the dollar equivalent of such expenses being higher. These exposures may change over time as business practices evolve and economic conditions change, including market impacts associated with the geopolitical conflict stemming from Russia's invasion of Ukraine, and could have a negative impact on our operating results, revenue, and net income (loss) as expressed in U.S. dollars. Although we may in the future decide to undertake foreign exchange hedging transactions to cover a portion of our foreign currency exchange exposure, we currently do not hedge our exposure to foreign currency exchange risks.

We are exposed to fluctuations in the market values of our investments.

Credit ratings and pricing of our investments can be negatively affected by liquidity, credit deterioration, financial results, economic risk, political risk, sovereign risk, changes in interest rates, or other factors. As a result, the value and liquidity of our cash and cash equivalents and investments may fluctuate substantially. Therefore, although we have not realized any significant losses on our cash and cash equivalents and investments, future fluctuations in their value could result in a significant realized loss, which could materially adversely affect our financial condition and operating results.

The requirements of being a public company may strain our resources, divert management's attention, and affect our ability to attract and retain executive management and qualified board members.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, or the Dodd-Frank Act, the listing requirements of the NYSE, and other applicable securities rules and regulations.

The Exchange Act requires, among other things, that we file annual, quarterly, and current reports with respect to our business and operating results. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal control over financial reporting. In order to maintain and, if required, improve our disclosure controls and procedures and internal control over financial reporting to meet this standard, significant resources and management oversight have been, and may in the future be, required. Our failure to meet our reporting obligations as a result of any changes to our disclosure controls and procedures and internal control over financial reporting could have a material adverse effect on our business and on the trading price of our Class A common stock. Our failure to maintain an effective internal control environment may, among other things, result in material misstatements in our financial statements and failure to meet our reporting obligations. Compliance with these rules and regulations have increased our legal and financial compliance costs, made some activities more difficult, time-consuming, or costly, and increased demand on our systems and resources.

In addition, changing laws, regulations, and standards relating to corporate governance and public disclosure, including those related to executive compensation, human capital, climate change, and other ESG-focused disclosures, are creating uncertainty for public companies, increasing legal and financial compliance costs, and making some activities more time consuming. These laws, regulations, and standards are subject to varying interpretations, in many cases due to their lack of specificity, and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. This could result in continuing uncertainty regarding compliance matters and higher costs necessitated by ongoing revisions to disclosure and governance practices. We intend to continue to invest resources to comply with evolving laws, regulations, and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities.

The rules and regulations applicable to public companies make it more expensive for us to obtain and maintain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

As a result of disclosure of information in filings required of a public company, our business and financial condition is visible, which has and we believe may continue to result in threatened or actual litigation, including by competitors and other third parties. If such claims are successful, our business and operating results could be adversely affected, and even if the claims do not result in litigation or are resolved in our favor, these claims, and the time and resources necessary to resolve them, could divert the resources of our management and adversely affect our business and operating results.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

Through February 13, 2022, our corporate headquarters were located in Irvine, California, where we occupied facilities totaling approximately 70,000 square feet under a lease agreement that expires in August 2025. Effective February 14, 2022, we transitioned our corporate headquarters to a new facility in Irvine, California, where we occupy facilities totaling approximately 120,000 square feet. We moved into our new headquarters and subleased our prior corporate headquarters during the first quarter of 2022. In 2022, we also maintained offices in California, Colorado, Massachusetts, New York and Texas in the United States and Australia, Canada, the Czech Republic, France, Germany, Japan, Singapore, Ukraine, the United Arab Emirates, and the United Kingdom. Due to a shift in hiring practice, which is focused on targeting the best talent rather than recruiting for office presence, we analyzed our real estate footprint during the fourth quarter of 2022 and determined that many of our offices were underutilized. Based on this analysis, we ceased use of or consolidated certain non-cancelable operating leases in California, Colorado, Massachusetts, Texas, Canada, and Germany.

We believe that our facilities are adequate to meet our needs for the immediate future, and that, should it be needed, suitable additional or substitute space will be available to accommodate any such expansion of our operations.

Item 3. Legal Proceedings.

For a description of our legal proceedings, see Note 15, *Commitments and Contingencies*, of the notes to our consolidated financial statements included elsewhere in this Annual Report, which is incorporated by reference in response to this item.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Markets for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information for Common Stock

Our Class A common stock has been traded on the New York Stock Exchange under the symbol “AYX” since March 24, 2017. Prior to that time, there was no public market for our common stock.

Our Class B common stock is not listed or traded on any stock exchange.

Holders of Record

As of February 2, 2023, there were 23 registered holders of our Class A common stock and 16 registered holders of our Class B common stock. Because many of our shares of Class A common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Dividend Policy

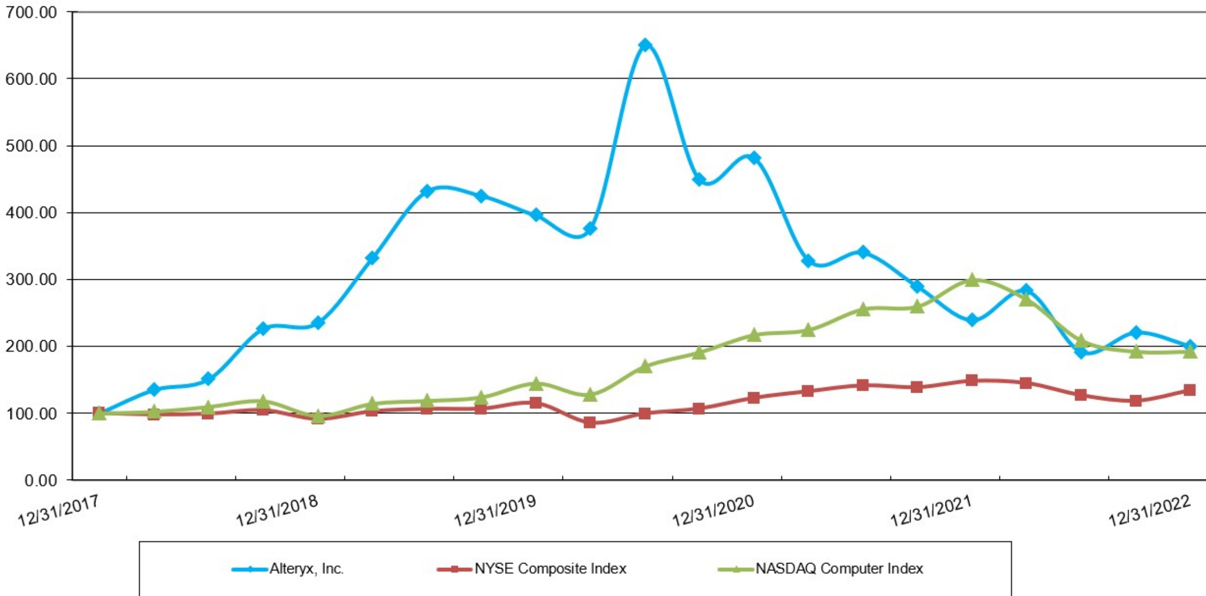
We have never declared or paid cash dividends on our capital stock. We do not expect to pay dividends on our capital stock for the foreseeable future. Instead, we anticipate that all of our earnings for the foreseeable future will be used for the operation and growth of our business. Any future determination to declare cash dividends would be subject to the discretion of our board of directors and would depend upon various factors, including our operating results, financial condition, and capital requirements, restrictions that may be imposed by applicable law, and other factors deemed relevant by our board of directors.

Securities Authorized for Issuance under Equity Compensation Plans

The information required by this item will be included in our Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2022 and is incorporated herein by reference.

Stock Performance Graph

The following performance graph and related information shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or incorporated by reference into any of our other filings under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filing.



The chart compares the cumulative return on our Class A common stock with that of the NYSE Composite Index and the NASDAQ Computer Index. The chart assumes $100 was invested at the close of market on December 31, 2017 in our Class A common stock, and in each of the previously mentioned Indexes, and assumes the reinvestment of any dividend. The stock price performance reflected in the performance graph is not necessarily indicative of future stock performance.

Recent Sales of Unregistered Securities

None.

Use of Proceeds

None.

Issuer Purchases of Equity Securities

None.

Item 6. [Reserved]

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

You should read the following discussion and analysis of our financial condition and results of operations together with the consolidated financial statements and related notes that are included elsewhere in this Annual Report. This discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Risk Factors," set forth in Part I, Item 1A of this Annual Report on Form 10-K. See "Special Note Regarding Forward-Looking Statements" above.

The following section generally discusses our financial condition and results of operations for the year ended December 31, 2022 compared to the year ended December 31, 2021. A discussion regarding our financial condition and results of operations for the year ended December 31, 2021 compared to the year ended December 31, 2020 is included in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Results of Operations for the Years Ended December 31, 2021, 2020 and 2019," included in our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on February 15, 2022.

Overview

We are a leader in analytics automation. The Alteryx Analytics Automation Platform empowers "analytics for all" by delivering easy, end-to-end automation of data engineering, analytics, reporting, machine learning, and data science processes, enabling enterprises to democratize data analytics across their organizations for a broad range of use cases. Whether working in the cloud or on-premise, data workers, regardless of technical acumen, are empowered to be curious and solve problems. With the Alteryx Analytics Automation Platform, users can automate the full range of analytics and data science processes, embed intelligent decision-making and actions, and empower their organization to enable top and bottom-line impact, efficiency gains, and rapid upskilling.

Our platform has been adopted by organizations across a wide variety of industries and sizes. We derive a large portion of our revenue from subscriptions for use of our platform. Our software can be licensed for use on a desktop or server, or it can be deployed in the cloud. Subscription periods for our platform generally range from one to three years and subscription fees are typically billed annually in advance. We also generate revenue from professional services, including training and consulting services.

Highlights from Fiscal Year 2022

- Generated total revenue of $855.4 million, a 60% increase from fiscal year 2021.
- Ended the year with cash, cash equivalents, and short-term and long-term investments of $432.0 million, compared with $1.0 billion as of December 31, 2021. Net cash used in operating activities was $(104.8) million in cash flow from operations, compared to net cash provided by operating activities of $63.2 million during the prior year.
- Ended the fourth quarter of 2022 with annual recurring revenue of $833.5 million, a 31% increase from the fourth quarter of 2021.
- Acquired Trifacta to augment our product and go-to-market teams and acquire developed technology to advance our cloud-based functionalities.
- Released Data Connection Manager for Alteryx Designer and Alteryx Server with pass-through authentication and cloud vault support.
- Announced Alteryx Designer-FIPS and Alteryx Server-FIPS, FIPS capable versions of Designer and Server, respectively, that are aligned with data security and computer system standards outlined in the FIPS.
- Introduced cloud innovations in early access, including the new experience of Alteryx Analytics Cloud, Alteryx Designer Cloud, Alteryx Location Intelligence, Metrics Store, and AppBuilder.
- Announced strategic alliances with EY as well as PwC Ireland and KPMG UK.
- Invested in Manta Software Inc. and Vertis AI Inc. through Alteryx Ventures.

Key Factors Affecting Our Performance

We believe that our current and future performance are dependent on many factors, including, but not limited to, those described below. While these areas present significant opportunity, they also present risks that we must manage to achieve successful results. For more information about these risks, see the section titled "Risk Factors" included elsewhere in this Annual Report. If we are unable to address these and other risks, our business and operating results could be adversely affected.

Expansion and Further Penetration of Our Customer Base. We have been effective at employing a top-down sales motion focused on identifying and involving executive sponsors to champion analytics democratization initiatives within their organizations. Our focus on selling to the enterprise has enabled us to lead with platform selling over the sales of individual products, which we believe has led to an increase in deal sizes through sales of enterprise license agreements. Our current and future revenue growth and our ability to become profitable and, once profitable, sustain profitability is dependent upon our ability to continue expanding our customer base and selling enterprise license agreements to new and existing large customers to accelerate adoption of our platform within organizations. We have increased our number of customers from 7,936 as of December 31, 2021 to 8,358 as of December 31, 2022. We have maintained a net expansion rate in excess of 119% in each of the periods presented. See *Dollar-Based Net Expansion Rate* in the section titled "Management's Discussion and Analysis of Financial Condition and Result of Operations" for additional information.

International Expansion. We have continued to focus on international markets. For the years ended December 31, 2022 and 2021, we derived 30% and 32% of our revenue outside of the United States, respectively. We believe that the global opportunity for self-service data analytics solutions is significant and should continue to expand as organizations outside the United States seek to adopt self-service platforms, which we have experienced with our existing customers. To capitalize on this opportunity, we intend to continue to invest in growing our presence internationally.

Investment in Growth. Operating expenses have increased from $616.6 million for the year ended December 31, 2021 to $1.0 billion for the year ended December 31, 2022 as we continued investing in our business so that we can capitalize on our market opportunity. Full-time headcount has increased over this same time period from 1,993 employees to 2,904 employees. Following the tremendous growth in our teams over this time period, we intend to leverage our increased headcount as it ramps to full productivity, shift our 2023 focus towards profitability, and drive the pace of innovation and product releases to market. We also intend to continue focusing on acquiring new customers and expanding sales within our existing customer base while targeting profitability.

Market Adoption of Our Platform. A key focus of our sales and marketing efforts is to continue creating market awareness about the benefits of our platform. 2022 marked the return of our in-person events and we engaged with nearly 4,500 attendees through in-person user conferences and thousands more through virtual event participation. While we cannot predict customer adoption rates and demand, the future growth rate and size of the self-service data analytics market, or the introduction of competitive products and services, our business and operating results will be significantly affected by the degree to and speed with which organizations adopt self-service data analytics solutions and our platform.

Acquisitions. Our business strategy has included acquiring other complementary products, technologies, and/or talent that allow us to reduce the time or costs required to develop new technologies, incorporate enhanced functionality into and complement our existing product offerings, and augment the technical capabilities of our talent. In February 2022, we acquired Trifacta to augment our product and go-to-market teams and acquire developed technology to advance our cloud-based functionalities. The consolidated financial statements include the results of operations of all our acquired companies commencing as of their respective acquisition dates. See Note 4, *Business Combinations*, of the notes to our consolidated financial statements included elsewhere in this Annual Report for additional information related to these acquisitions.

Key Business Metrics

We review the following key business metrics to evaluate our business, measure our performance, identify trends affecting our business, formulate business plans, and make strategic decisions:

Annual Recurring Revenue. We derive a large portion of our revenue from subscriptions for use of our platform. Subscription periods for our platform generally range from one to three years and subscription fees are typically billed annually in advance. A portion of revenue from our subscriptions is recognized at the point in time when the platform is first made available to the customer, or the beginning of the subscription term, if later. The remaining portion is recognized ratably over the life of the contract. This revenue recognition creates variability in the revenue we recognize period to period based on the timing of subscription start dates and the subscription term. In order to measure the underlying performance of our subscription-based contracts, we calculate annual recurring revenue, or ARR, which represents the annualized recurring value of all active subscription contracts at the end of a reporting period and excludes the value of non-recurring revenue streams, such as certain professional services. ARR is a performance metric and should be viewed independently of revenue and deferred revenue, and is not intended to be a substitute for, or combined with, any of these items. Both multi-year contracts and contracts with terms less than one year are annualized by dividing the total committed contract value by the number of months in the subscription term and then multiplying by twelve.

The following table summarizes our annual recurring revenue (in millions) for each quarter end for the periods indicated:

	As of							
	Mar. 31, 2021	Jun. 30, 2021	Sep. 30, 2021	Dec. 31, 2021	Mar. 31, 2022	Jun. 30, 2022	Sep. 30, 2022	Dec. 31, 2022
Annual recurring revenue	$ 512.7	$ 547.6	$ 578.6	$ 638.0	$ 683.6	$ 726.8	$ 757.7	$ 833.5

Dollar-Based Net Expansion Rate. Our dollar-based net expansion rate is a trailing four-quarter average of the annual contract value, or ACV, which is defined as the subscription revenue that we would contractually expect to recognize over the term of the contract divided by the term of the contract, in years, from a cohort of customers in a quarter as compared to the same quarter in the prior year. A dollar-based net expansion rate equal to 100% would generally imply that we received the same amount of ACV from our cohort of customers in the current quarter as we did in the same quarter of the prior year. A dollar-based net expansion rate less than 100% would generally imply that we received less ACV from our cohort of customers in the current quarter than we did in the same quarter of the prior year. A dollar-based net expansion rate greater than 100% would generally imply that we received more ACV from our cohort of customers in the current quarter than we did in the same quarter of the prior year.

To calculate our dollar-based net expansion rate, we first identify a cohort of customers, or the Base Customers, in a particular quarter, or the Base Quarter. A customer will not be considered a Base Customer unless such customer has an active subscription on the last day of the Base Quarter. We then divide the ACV in the same quarter of the subsequent year attributable to the Base Customers, or the Comparison Quarter, including Base Customers from which we no longer derive ACV in the Comparison Quarter, by the ACV attributable to those Base Customers in the Base Quarter. Our dollar-based net expansion rate in a particular quarter is then obtained by averaging the result from that particular quarter with the corresponding result from each of the prior three quarters. The dollar-based net expansion rate excludes contract value relating to professional services from that cohort.

The following table summarizes our dollar-based net expansion rate at the end of each quarter for the periods indicated:

	Three Months Ended							
	Mar. 31, 2021	Jun. 30, 2021	Sep. 30, 2021	Dec. 31, 2021	Mar. 31, 2022	Jun. 30, 2022	Sep. 30, 2022	Dec. 31, 2022
Dollar-based net expansion rate	120 %	120 %	119 %	119 %	119 %	120 %	121 %	121 %

Number of Customers. We believe that our ability to expand our customer base is a key indicator of our market penetration, the growth of our business, and our future potential business opportunities. We define a customer at the end of any particular period as an entity with a subscription agreement that runs through the current or future period as of the measurement date. Organizations with free trials have not entered into a subscription agreement and are not considered customers. A single organization with separate subsidiaries, segments, or divisions that use our platform may represent multiple customers, as we treat each entity that is invoiced separately as a single customer. In cases where customers subscribe to our platform through our channel partners, each end customer is counted separately.

The following table summarizes the number of our customers at each quarter end for the periods indicated:

	As of							
	Mar. 31, 2021	Jun. 30, 2021	Sep. 30, 2021	Dec. 31, 2021	Mar. 31, 2022	Jun. 30, 2022	Sep. 30, 2022	Dec. 31, 2022
Customers	7,214	7,405	7,689	7,936	8,195	8,296	8,340	8,358

Components of Our Results of Operations

Revenue

We derive our revenue primarily from the sale of software subscriptions. Revenue from subscriptions reflects the revenue recognized from sales of licenses to our platform. Subscription fees are based primarily on the number of users of our platform. Our subscription agreements generally have terms ranging from one to three years and are billed annually in advance. Subscriptions are generally non-cancelable during the subscription term and subscription fees are non-refundable. We recognize a portion of subscription revenue upfront on the date which the platform is first made available to the customer, or the beginning of the subscription term, if later, and the remaining portion of revenue ratably over the subscription term. Our cloud offerings are treated as SaaS when hosted by us, and for which revenue is recognized ratably over the contract term. Our subscription agreements generally provide for unspecified future updates, upgrades, enhancements, technical product support, and access to hosted services and support. We also generate revenue from selling subscriptions to third-party syndicated data, which we recognize ratably over the subscription period, as well as revenue from professional services fees earned for consulting engagements related to training customers and channel partners, and consulting services. Revenue from professional services relating to training results from contracts to provide educational services to customers and channel partners regarding the use of our technologies and is recognized as the services are provided. Revenue from professional services represented less than 5% of revenue for each of the years ended December 31, 2022 and 2021. In addition, due to our focus on expanding use of our platform with existing customers, a large portion of our revenue in any given period is attributable to our existing customers compared to new customers.

For a description of our revenue recognition policies, see the section titled “Critical Accounting Estimates” within this Management’s Discussion and Analysis of Financial Condition and Result of Operations.

Cost of Revenue

Cost of revenue consists primarily of employee-related costs, including salaries and bonuses, stock-based compensation expense, and employee benefit costs associated with our customer support and professional services organizations. It also includes expenses related to hosting and operating our cloud infrastructure in third-party data centers, licenses of third-party syndicated data, amortization and impairment of intangible assets, subcontractor costs for providing enablement and training services to existing customers, and related overhead expenses. The majority of our cost of revenue does not fluctuate directly with increases in revenue.

We allocate shared overhead costs such as information technology infrastructure, rent, occupancy charges and other expense categories based on the respective headcount. As such, certain general overhead expenses are reflected in cost of revenue.

We intend to continue to invest additional resources in our cloud infrastructure. We expect that the cost of third-party data center hosting fees will increase over time as we continue to expand our cloud-based offering.

Gross Profit and Gross Margin

Gross profit is revenue less cost of revenue. Gross margin is gross profit expressed as a percentage of revenue. Our gross margin has fluctuated and may fluctuate from period to period based on a number of factors, including the timing and mix of products and services we sell, the channel through which we sell our products and services, and, to a lesser degree, the utilization of customer support and professional services resources, as well as third-party hosting and syndicated data fees in any given period and the amortization of our capitalized software development costs. Our gross margin may fluctuate from period to period depending on the interplay of the factors discussed above.

Operating Expenses

Our operating expenses are classified as research and development, sales and marketing, and general and administrative. For each of these categories, the largest component is employee-related costs, which include salaries, bonuses, sales commissions, stock-based compensation expense, and employee benefit costs. We allocate shared overhead costs such as information technology infrastructure, rent, and occupancy charges to each expense category based on headcount in that category.

Research and development. Research and development expense consists primarily of employee-related costs for our research and development employees, depreciation of equipment used in research and development, third-party contractors, and related allocated overhead costs. We expect research and development expenses to continue to increase in absolute dollars for the foreseeable future as we continue to increase the functionality and otherwise enhance our platform and develop new products and services. However, we expect research and development expense to decrease as a percentage of revenue over the long term, although research and development expense may fluctuate as a percentage of revenue from period to period due to the seasonality of revenue and the timing and extent of these expenses.

Sales and marketing. Sales and marketing expense consists primarily of employee-related costs for our sales and marketing employees, marketing programs, and related allocated overhead costs. Our sales and marketing employees include quota-carrying headcount, sales operations, marketing, and management. Marketing programs consist of advertising, promotional events, such as our annual user conferences, corporate communications, brand building, and product marketing activities, such as online lead generation.

We plan to continue to invest in sales and marketing by expanding our global promotional activities, building brand awareness, attracting new customers, and sponsoring additional marketing events. The timing of these events, such as our annual sales kickoff and our annual user conferences, will affect our sales and marketing expense in the period in which each occurs. We expect sales and marketing expense to continue to increase in absolute dollars for the foreseeable future as we expand our online and offline marketing efforts to increase demand for our platform and awareness of our brand and as we continue to expand our direct sales team and indirect sales channels both in the United States and internationally and to continue to be our largest operating expense category. However, we expect sales and marketing expense to decrease as a percentage of revenue over the long term, although sales and marketing expense may fluctuate as a percentage of revenue from period to period due to the seasonality of revenue and the timing and extent of these expenses.

General and administrative. General and administrative expense consists primarily of employee-related costs for our executive officers and finance, legal, human resources, IT and security, and administrative personnel, professional fees for external legal, accounting, and other consulting services, including those incurred in connection with our business combinations, and related allocated overhead costs. We expect to continue disciplined investment in our growth, which may result in, among other expenses, increased legal, audit, and consulting fees associated with corporate transactions. We expect general and administrative expense to decrease as a percentage of revenue over the long term as we improve our processes, systems, and controls to enable our internal support functions to scale with the growth of our business, although general and administrative expense may fluctuate as a percentage of revenue from period to period due to the seasonality of revenue and the timing and extent of these expenses.

Impairment of Long-Lived Assets. Impairment of long-lived assets consists primarily of costs attributable to the ceased use of our corporate offices. The impairment was determined by comparing the fair value of the impacted asset groups to their carrying value as of the impairment measurement date.

Interest Expense

Interest expense consists primarily of amortization of the debt discount, issuance costs, and interest expense attributable to our 2023 Notes and 2024 & 2026 Notes issued during the years ended December 31, 2018 and 2019, respectively.

Other Income (Expense), Net

Other income (expense), net consists primarily of gains and losses on foreign currency remeasurement and transactions, realized gains and losses on our available-for-sale investments, and interest income from our available-for-sale investments.

Provision for (Benefit of) Income Taxes

Provision for (benefit of) income taxes consists primarily of accrued current and deferred income taxes imposed by the United States and foreign jurisdictions in which we conduct business.

Results of Operations for the Years Ended December 31, 2022, 2021 and 2020

	Year Ended December 31,					
	2022	% of Total Revenue	2021	% of Total Revenue	2020	% of Total Revenue
	(in thousands, except percentages)					
Revenue:						
Subscription-based software license	$ 447,202	52 %	$ 203,960	38 %	$ 237,035	48 %
PCS and services	408,152	48	332,175	62	258,273	52
Total revenue	855,354	100	536,135	100	495,308	100
Cost of revenue [(1)]:						
Subscription-based software license	10,994	2	4,967	1	5,125	1
PCS and services	106,790	12	50,786	9	38,714	8
Total cost of revenue	117,784	14	55,753	10	43,839	9
Gross profit	737,570	86	480,382	90	451,469	91
Operating expenses:						
Research and development [(1)]	221,453	26	132,420	25	101,117	20
Sales and marketing [(1)]	541,673	63	334,480	62	252,820	51
General and administrative [(1)]	231,717	27	149,747	28	101,439	21
Impairment of long-lived assets	43,238	5	—	—	—	—
Total operating expenses	1,038,081	121	616,647	115	455,376	92
Loss from operations	(300,511)	(35)	(136,265)	(25)	(3,907)	(1)
Interest expense	(9,741)	(1)	(39,208)	(8)	(38,119)	(8)
Other income (expense), net	(3,526)	—	(2,058)	—	14,381	3
Loss before provision for (benefit of) income taxes	(313,778)	(36)	(177,531)	(33)	(27,645)	(6)
Provision for (benefit of) income taxes	4,721	1	2,150	1	(3,271)	(1)
Net loss	$ (318,499)	(37)%	$ (179,681)	(34)%	$ (24,374)	(5)%

(1) Amounts include stock-based compensation expense as follows:

	Year Ended December 31,					
	2022	% of Total Revenue	2021	% of Total Revenue	2020	% of Total Revenue
	(in thousands, except percentages)					
Cost of revenue	$ 16,982	2 %	$ 6,421	1 %	$ 2,550	1 %
Research and development	54,667	6	28,903	5	18,388	4
Sales and marketing	79,741	9	40,519	8	28,463	6
General and administrative	75,128	9	48,222	9	25,515	5
Total	$ 226,518	26 %	$ 124,065	23 %	$ 74,916	15 %

Revenue

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Subscription-based software license	$ 447,202	$ 203,960	$ 243,242	119.3 %
PCS and services	408,152	332,175	75,977	22.9 %
Total revenue	$ 855,354	$ 536,135	$ 319,219	59.5 %

The increase in subscription-based software license revenue for the year ended December 31, 2022 as compared to the year ended December 31, 2021 was primarily due to an increase in sales to new and existing customers during the year ended December 31, 2022 as compared to the year ended December 31, 2021. In addition, as a result of a determination to cease the inclusion of a certain performance obligation previously included in subscriptions to our platform, we recognized a larger portion of the total transaction price at the point in time when the platform was first made available to the customer, or the beginning of the subscription term, if later, during the year ended December 31, 2022 as compared to the year ended December 31, 2021.

PCS and services revenue is primarily recognized ratably over the subscription term. Due to the ratable recognition, the increases in PCS and service revenue are primarily attributed to sales to customers in prior periods and growth in our customer base between December 31, 2021 and December 31, 2022. Our product pricing and changes in product mix were not significant drivers of the change in subscription-based software license or PCS and services revenue for the periods presented. Sales of our cloud-based product offerings did not represent a material amount of revenue for the year ended December 31, 2022.

The disaggregation of revenue by region was as follows (in thousands):

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
United States	$ 597,856	$ 365,050	$ 232,806	63.8 %
International	257,498	171,085	86,413	50.5 %
Total revenue	$ 855,354	$ 536,135	$ 319,219	59.5 %

Cost of Revenue and Gross Margin

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Subscription-based software license	$ 10,994	$ 4,967	$ 6,027	121.3 %
PCS and services	106,790	50,786	56,004	110.3 %
Cost of revenue	$ 117,784	$ 55,753	$ 62,031	111.3 %
Gross margin	86.2 %	89.6 %		

Cost of revenue increased for the year ended December 31, 2022 as compared to the year ended December 31, 2021 primarily due to $43.3 million in increased employee-related costs, including stock-based compensation expense, driven by incremental headcount, a broad-based wage increase to improve retention and productivity, merit increases, and additional stock awards granted to new hires and as part of our equity refresh programs. Additionally, there were increases in amortization of intangibles associated with our recent acquisitions of $7.6 million and depreciation of capitalized software development costs of $6.1 million.

As of December 31, 2022, we had 306 cost of revenue personnel compared to 160 as of December 31, 2021.

Gross margin decreased for the year ended December 31, 2022 as compared to the year ended December 31, 2021 primarily due to an increase in cost of revenue as described above as we continued to invest in, among other departments, our customer success and support teams to drive better product enablement and training with our customers.

Research and Development

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Research and development	$ 221,453	$ 132,420	$ 89,033	67.2 %

Research and development expense increased for the year ended December 31, 2022 as compared to the year ended December 31, 2021 primarily due to $85.9 million in increased employee-related costs, including stock-based compensation expense, driven by incremental headcount, a broad-based wage increase to improve retention and productivity, merit increases, and additional stock awards granted to new hires and as part of our equity refresh programs. The increase in employee-related costs, including stock-based compensation, was offset by an increase in capitalized software development costs of $8.8 million. Additionally, there was an $8.4 million increase in information technology and overhead costs due to the procurement of additional software licenses and office expansions and fit-outs.

As of December 31, 2022, we had 736 research and development personnel compared to 506 as of December 31, 2021.

Sales and Marketing

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Sales and marketing	$ 541,673	$ 334,480	$ 207,193	61.9 %

Sales and marketing expense increased for the year ended December 31, 2022 as compared to the year ended December 31, 2021 primarily due to $175.8 million in increased employee-related costs, including stock-based compensation. The overall increase in employee-related costs was a result of increased headcount, a broad-based wage increase to improve retention and productivity, merit increases, and additional stock awards granted to new hires and as part of our equity refresh programs. The increase in employee-related costs was also attributed to higher travel and entertainment expenses of $27.6 million, primarily due to increased international travel and the return to our in-person events. Furthermore, there was an increase of $15.6 million in marketing programs due in part to our brand awareness campaigns, such as our in-person user conference in May 2022, which had been fully virtual in the prior year, and other digital marketing programs, and an increase of $7.6 million in information technology and overhead costs as a result of office expansions and fit-outs.

As of December 31, 2022, we had 1,423 sales and marketing personnel compared to 970 as of December 31, 2021.

General and Administrative

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
General and administrative	$ 231,717	$ 149,747	$ 81,970	54.7 %

General and administrative expense increased for the year ended December 31, 2022 as compared to the year ended December 31, 2021 primarily due to $67.1 million in increased employee-related costs, including stock-based compensation, driven by an increase in headcount, a broad-based wage increase to improve retention and productivity, merit increases, additional stock awards granted to new hires and as part of our equity refresh programs, and performance-based restricted stock units, or PRSUs, granted to certain executives. In addition, there was an increase in consulting and outsourced labor costs of $10.4 million primarily driven by higher legal and accounting professional services fees related to our acquisition of Trifacta in February 2022.

As of December 31, 2022, we had 439 general and administrative personnel compared to 357 as of December 31, 2021.

Impairment of Long-Lived Assets

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Long-lived asset impairment	$ 43,238	$ —	$ 43,238	*

* Not meaningful

The long-lived asset impairment is primarily attributable to the impairment recorded on underutilized offices that we ceased using on December 31, 2022, resulting in non-cash impairment charges on the right-of-use assets and related fixed assets of $27.9 million and $7.1 million, respectively. In addition, we ceased using and subleased our previous corporate headquarters during the three months ended March 31, 2022, resulting in a non-cash impairment on the right-of-use asset and related fixed assets of $6.1 million and $2.1 million, respectively.

Interest Expense

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Interest expense	$ (9,741)	$ (39,208)	$ 29,467	(75.2)%

Interest expense is primarily attributable to our 2023 Notes and 2024 & 2026 Notes issued during the years ended December 31, 2018 and 2019, respectively. Interest expense decreased in the year ended December 31, 2022 as compared to the year ended December 31, 2021 due to the removal of the equity component and related amortization of the debt discount as part of the adoption of ASU 2020-06. See Note 9, *Convertible Senior Notes*, and the description under the heading "Recently Adopted Accounting Pronouncements" in Note 2, *Significant Accounting Policies*, of the notes to our consolidated financial statements.

Other Expense, Net

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Other expense, net	$ (3,526)	$ (2,058)	$ (1,468)	71.3 %

Other expense, net increased for the year ended December 31, 2022 as compared to the year ended December 31, 2021 primarily related to greater losses in foreign currency remeasurement of $1.1 million due to fluctuations in the United States dollar as compared to other major currencies in which we transact.

Provision for Income Taxes

	Year Ended December 31,		2022 vs 2021	
	2022	2021	$ Change	% Change
	(in thousands, except percentages)			
Provision for income taxes	$ 4,721	$ 2,150	$ 2,571	119.6 %

The change in the provision for income taxes for the year ended December 31, 2022 as compared to the year ended December 31, 2021 was primarily related to increased foreign withholding tax as a result of an increase in revenue in the related jurisdictions. In addition, there was an increase in foreign income taxes due to profitability in certain foreign subsidiaries in 2022.

Liquidity and Capital Resources

A discussion of our liquidity and capital resources for the year ended December 31, 2020 is included in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources," included in our Annual Report on Form 10-K for the year ended December 31, 2020, filed with the SEC on February 12, 2021.

	As of December 31,		$ Change
	2022	2021	
	(in thousands)		
Cash, cash equivalents, and investments	$ 431,975	$ 1,002,462	$ (570,487)
Working capital	$ 234,736	$ 523,979	$ (289,243)

Cash, cash equivalents, and investments decreased for the year ended December 31, 2022 as compared to the year ended December 31, 2021 primarily due to our acquisition of Trifacta and, to a lesser extent, capital expenditures. The decrease in working capital was primarily due to a decrease in short-term investments related to the sale of securities, partially offset by an increase in deferred revenue due to higher billings in the current year and an increase in accounts receivable. We had $432.0 million of cash and cash equivalents and short-term and long-term investments as of December 31, 2022 and $1.0 billion as of December 31, 2021, with approximately $397.8 million and $972.3 million, respectively, held domestically.

In the short term, we believe that our existing cash and cash equivalents, marketable securities, and cash flow from operations (in periods in which we generate cash flow from operations) will be sufficient for at least the next 12 months to meet our requirements and plans for cash, including meeting our working capital, capital expenditure, and financing requirements. In the long term, our ability to support our requirements and plans for cash, including meeting our working capital, capital expenditure, and financing requirements, will depend on many factors, including our revenue growth rate, the timing and the amount of cash received from customers, expansion of sales and marketing activities, the timing and extent of spending to support research and development efforts, the cost to develop and support our offering, the introduction of new products and services, the continuing adoption of our products by customers, any acquisitions or investments that we make in complementary businesses, products, and technologies, and our ability to obtain equity or debt financing.

Our principal uses of cash are funding our operations and other working capital requirements, including the following contractual and other obligations.

Debt

As of December 31, 2022, we had an aggregate principal amount of $884.7 million of convertible senior notes, of which $84.7 million matures on June 1, 2023 and is classified as current liabilities on our consolidated balance sheets. Interest payments of $6.2 million related to our convertible senior notes are due within the next twelve months. See Note 9, *Convertible Senior Notes*, of the notes to our consolidated financial statements included elsewhere in this Annual Report for additional information on the convertible senior notes. Assuming the 2024 & 2026 Notes are not converted into shares of our Class A common stock or repurchased prior to maturity, (i) annual interest expense relating to (A) the 2024 Notes will be $2.0 million in each fiscal year through 2024 and (B) the 2026 Notes will be $4.0 million in each fiscal year through 2026 and (ii) principal in the amount of (A) $400.0 million will be payable upon the maturity of the 2024 Notes due on August 1, 2024 and (B) $400.0 million will be payable upon the maturity of the 2026 Notes due on August 1, 2026.

Leases

We have various non-cancelable operating leases for our corporate offices in California, Colorado, Massachusetts, New York, and Texas in the United States and Australia, Canada, the Czech Republic, France, Germany, Japan, Singapore, Ukraine, the United Arab Emirates, and the United Kingdom. These leases expire at various times through 2029. As of December 31, 2022, we had fixed minimum lease payments of $89.2 million, of which $22.5 million is due in the next twelve months.

Other Obligations

In the ordinary course of business, we enter into purchase orders with vendors for the purchase of goods and services, including non-cancelable agreements for software licenses, royalty agreements, advertising, and other marketing activities. As of December 31, 2022, we had purchase obligations of $113.9 million, of which $52.4 million is due in the next twelve months.

To the extent existing cash and cash equivalents and short-term investments and cash from operations are not sufficient to fund future activities, we may need to raise additional funds. We may seek to raise additional funds through equity, equity-linked, or debt financings. If we raise additional funds through the incurrence of indebtedness, such indebtedness may have rights that are senior to holders of our equity securities and could contain covenants that restrict operations. Any additional equity or convertible debt financing may be dilutive to stockholders. If we are unable to raise additional capital or refinance our existing indebtedness when desired, our business, operating results, and financial condition could be adversely affected.

Our future capital requirements and the adequacy of available funds will depend on many factors, including the rate of our hiring, the rate of our revenue growth, the timing and extent of our spending on research and development efforts and other business initiatives, including any acquisition activity, the expansion of our sales and marketing activities, the timing of new product and service introductions, market acceptance of our platform, and overall economic conditions.

We do not have any relationships with unconsolidated entities or financial relationships that would have been established for the purpose of facilitating off-balance sheet arrangements, such as structured finance or special purpose entities.

Cash Flows

The following table sets forth cash flows for the periods indicated:

	Year Ended December 31,		
	2022	2021	2020
	(in thousands)		
Net cash provided by (used in) operating activities	$ (104,847)	$ 63,159	$ 74,782
Net cash provided by (used in) investing activities	$ 96,700	$ (66,885)	$ (311,846)
Net cash used in financing activities	$ (35,222)	$ (14,075)	$ (1,496)

Operating Activities

Our net loss and cash flow from operating activities are significantly influenced by our headcount and investments in infrastructure to support anticipated growth.

For the year ended December 31, 2022, net cash used in operating activities was $(104.8) million. Net cash used in operating activities primarily reflected net non-cash activity of $344.2 million, offset by a net loss of $318.5 million and a change in operating assets and liabilities of $130.5 million.

For the year ended December 31, 2021, net cash provided by operating activities was $63.2 million. Net cash provided by operating activities primarily reflected net non-cash activity of $195.8 million and a change in operating assets and liabilities of $47.1 million, offset in part by a net loss of $179.7 million.

The increase in non-cash activity was primarily driven by $226.5 million in stock-based compensation expense due to higher headcount and additional stock-based awards as well as impairment of long-lived assets of $43.2 million related to the ceased use of certain of our corporate offices.

The change in operating assets and liabilities was primarily driven by the following:

- an increase in accounts receivable of $65.3 million due to higher billings in the current year;
- an increase in deferred commissions of $28.2 million due to additional commissions earned in the current year as compared to commissions where the amortization period expired, principally from commissions earned in 2019;
- an increase in prepaid expenses, other current assets and other assets of $101.1 million due primarily to an increase in contract assets as a result of new multi-year deals and the recognition of a larger portion of the total transaction price at the point in time when the platform was first made available to the customer due to the determination to cease the inclusion of a certain performance obligation in 2022;
- an increase in deferred revenue of $64.4 million as a result of higher billings in the current year;
- an increase in accrued payroll and payroll-related liabilities of $9.6 million due to higher commissions and employee stock purchase plan contributions resulting from increased headcount in the current year; and
- a decrease in accrued expenses, other current liabilities, operating lease liabilities and other liabilities of $14.9 million due primarily to payments on operating lease liabilities.

Investing Activities

Our investing activities consist primarily of purchases, sales and maturities of available-for-sale securities, property and equipment purchases, including computer-related equipment, and leasehold improvements to leased office facilities, capitalized software development costs, and cash used in our business acquisitions.

Net cash provided by investing activities for the year ended December 31, 2022 was $96.7 million, consisting primarily of $519.2 million of net sales and maturities of investments, offset in part by $387.0 million of net cash paid in connection with our acquisition of Trifacta, $23.6 million of purchases of property and equipment, and $11.9 million of capitalized software development costs.

Net cash used in investing activities for the year ended December 31, 2021 was $66.9 million, consisting primarily of $23.5 million of purchases of property and equipment, $27.2 million of net cash paid in connection with our business acquisitions, $9.3 million of capitalized software development costs, and $6.9 million of net purchases of investments.

Financing Activities

Our financing activities consist primarily of proceeds from, and costs associated with, the issuances and/or payments of common stock and convertible senior notes, proceeds from the exercise of stock options, and minimum tax withholding paid on behalf of employees for RSU settlements.

Net cash used in financing activities for the year ended December 31, 2022 was $35.2 million, consisting primarily of the minimum tax withholding paid on behalf of employees for RSU settlements of $45.3 million, offset in part by proceeds from stock option exercises and purchases under our employee stock purchase plan of $10.1 million.

Net cash used in financing activities for the year ended December 31, 2021 was $14.1 million, consisting primarily of the minimum tax withholding paid on behalf of employees for RSU settlements of $24.5 million, offset in part by proceeds from stock option exercises and purchases under our employee stock purchase plan of $10.4 million.

The timing and number of stock option exercises and employee stock purchases and the amount of proceeds we receive from these equity awards is not within our control. As it is now our general practice to issue principally RSUs to our employees, cash paid on behalf of employees for minimum statutory withholding taxes on RSU settlements will likely increase.

Critical Accounting Estimates

Our consolidated financial statements and the related notes have been prepared in accordance with U.S. GAAP. The preparation of our consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and operating expenses, provision for income taxes, and related disclosures. Generally, we base our estimates on historical experience and on various other assumptions in accordance with U.S. GAAP that we believe to be reasonable under the circumstances. Actual results may differ from these estimates. To the extent that there are material differences between these estimates and our actual results, our future financial statements will be affected.

Critical accounting estimates are those that we consider the most important to the portrayal of our financial condition and operating results because they require our most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. Our critical accounting estimates are described below.

Revenue Recognition

Our revenue is derived from the licensing of subscription-based software, data subscription services, and professional services, including training and consulting services. Our subscriptions are generally licensed for terms of one to three years and generally include access to hosted services and software and PCS, which provides the customer the right to receive when-and-if-available unspecified future updates, upgrades and enhancements, and technical product support.

Our contracts with customers often include promises to transfer multiple products and services to a customer. Determining whether products and services are considered distinct performance obligations that should be accounted for separately versus together may require significant judgment. In contracts that contain multiple performance obligations we allocate the transaction price to the various performance obligations based on standalone selling price, or SSP. Certain performance obligations are not sold on a standalone basis. Therefore, significant judgment is required to determine SSP for each distinct performance obligation. We utilize several inputs when determining SSP, including sales of goods and services sold on a standalone basis, our overall pricing strategies, market conditions, including the geographic locations in which the products are sold, the useful life of our products, and market data. Typically, our contracts with customers contain multiple performance obligations. Although our SSP for these performance obligations has not changed materially since 2020, we may modify our go-to-market practices in the future, which may result in changes to SSP for one or more of our performance obligations. Any such changes to SSP could impact the pattern and timing of revenue recognition for identical arrangements executed in future periods but will not change the total revenue recognized for any given arrangement. We may also determine to exclude or include performance obligations in subscriptions to our platform that could modify the amount of revenue we recognize at various points during the subscription term. For example, in 2022, we determined to cease the inclusion of a certain performance obligation previously included in subscriptions to our platform, which resulted in recognition of a larger portion of the total transaction price at the point in time when the platform was first made available to the customer, or the beginning of the subscription term, if later.

Business Combinations

We estimate the fair value of assets acquired and liabilities assumed in a business combination. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed. While we use our best estimates and assumptions to accurately value assets acquired and liabilities assumed at the acquisition date, our estimates are inherently uncertain and subject to refinement.

Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired technology, useful lives, and discount rates. Although we believe the assumptions and estimates we have made in the past have been reasonable and appropriate, they are based in part on historical experience and information obtained from the management of the acquired companies and are inherently uncertain. During the measurement period, which may be up to one year from the acquisition date, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. On the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to our consolidated statements of operations and comprehensive income (loss).

Convertible Senior Notes

Prior to January 1, 2022, we separated each series of Notes into liability (debt) and equity components of the instrument. The carrying amount of the debt component was calculated by estimating the fair value of similar liabilities that do not have associated convertible features. The carrying amount of the equity component, representing the conversion option, was determined by deducting the fair value of the debt component from the principal amount. The difference between the principal amount of each series of our Notes and its respective fair value of the debt component was amortized to interest expense over its respective term using the effective interest method. The equity component, net of issuance costs and deferred tax effects, of each series of our Notes was presented within additional paid-in-capital. These assumptions involved inherent uncertainties and management judgment. In accounting for the issuance costs related to our Notes, the allocation of issuance costs incurred between the debt and equity components was based on their relative values.

Effective January 1, 2022, we adopted Accounting Standards Update, or ASU, 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*, or ASU 2020-06, using the modified retrospective approach. As a result, the Notes are accounted for as a single liability measured at its amortized cost, as no other embedded features require bifurcation and recognition as derivatives. Adoption of the new standard resulted in a decrease to accumulated deficit of $65.8 million, a decrease to additional paid-in capital of $177.0 million, a decrease to property and equipment, net, of $0.4 million, and an increase to current and long-term convertible senior notes, net, of $6.8 million and $104.0 million, respectively.

Income Taxes

Our provision for income taxes, deferred tax assets and liabilities, and reserves for unrecognized tax benefits reflect our best assessment of estimated future taxes to be paid. Significant judgments and estimates based on interpretations of existing tax laws or regulations in the United States and the numerous foreign jurisdictions where we are subject to income tax are required in determining our provision for income taxes. Changes in tax laws, statutory tax rates, and estimates of our future taxable income could impact the deferred tax assets and liabilities provided for in the consolidated financial statements and would require an adjustment to the provision for income taxes.

Deferred tax assets are regularly assessed to determine the likelihood they will be realized from future taxable income. A valuation allowance is established when we believe it is not more likely than not all or some of a deferred tax asset will be realized. In evaluating our ability to recover deferred tax assets within the jurisdiction in which they arise, we consider all available positive and negative evidence. Factors reviewed include the cumulative pre-tax book income for the past three years, scheduled reversals of deferred tax liabilities, our history of earnings and reliable forecasting, projections of pre-tax book income over the foreseeable future, and the impact of any feasible and prudent tax planning strategies. Due to cumulative losses over recent years and based on all available positive and negative evidence, we have determined that it is not more likely than not that our net U.S. and U.K. deferred tax assets will be realizable as of December 31, 2022. We intend to continue maintaining a full valuation allowance on our deferred tax assets until there is sufficient evidence to support the reversal of all or some portion of these allowances. A release of the valuation allowance would result in the recognition of certain deferred tax assets and a decrease to income tax expense or an income tax benefit for the period in which the release is recorded.

We recognize the impact of a tax position in our consolidated financial statements only if that position is more likely than not of being sustained upon examination by taxing authorities, based on the technical merits of the position. Tax authorities may examine our returns in the jurisdictions in which we do business and we regularly assess the tax risk of our return filing positions. Due to the complexity of some of the uncertainties, the ultimate resolution may result in payments that are materially different from our current estimate of the tax liability. These differences, as well as any interest and penalties, will be reflected in the provision for income taxes in the period in which they are determined.

Recent Accounting Pronouncements

See Note 2, *Significant Accounting Policies*, of the notes to our consolidated financial statements included elsewhere in this Annual Report for a description of recent accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk.

Foreign Currency Exchange Risk

Due to our international operations, we have foreign currency risks related to revenue and operating expenses denominated in currencies other than the U.S. dollar, primarily the British pound and euro. Our sales contracts are primarily denominated in the local currency of the customer making the purchase. In addition, a portion of our operating expenses are incurred outside the United States and are denominated in foreign currencies where our operations are located. We are also exposed to certain foreign exchange rate risks related to our foreign subsidiaries, including as a result of intercompany loans denominated in non-functional currencies. Increases in the relative value of the U.S. dollar to other currencies may negatively affect revenue and other operating results as expressed in U.S. dollars. We do not believe that an immediate 10% increase or decrease in the relative value of the U.S. dollar to other currencies would have a material effect on our operating results.

We have experienced and will continue to experience fluctuations in financial results as a result of transaction gains or losses related to remeasuring certain asset and liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. These exposures may change over time as business practices evolve and economic conditions change. To date, we have not entered into derivatives or hedging transactions, as our exposure to foreign currency exchange rates has historically been partially hedged by our U.S. dollar denominated inflows covering our U.S. dollar denominated expenses and our foreign currency denominated inflows covering our foreign currency denominated expenses. However, we may enter into derivative or hedging transactions in the future if our exposure to foreign currency should become more significant.

Interest Rate and Market Risk

We had cash and cash equivalents and short-term and long-term investments of $432.0 million as of December 31, 2022. The primary objective of our investment activities is the preservation of capital, and we do not enter into investments for trading or speculative purposes. A hypothetical 10% increase in interest rates during the year ended December 31, 2022 would not have had a material impact on our consolidated financial statements. We do not have material exposure to market risk with respect to short-term and long-term investments, as any investments we enter into are primarily highly liquid investments.

Each series of our Notes bears a fixed interest rate, and therefore, is not subject to interest rate risk. We have not utilized derivative financial instruments, derivative commodity instruments or other market risk sensitive instruments, positions, or transactions in any material fashion, except for the privately negotiated capped call transactions entered into in May and June 2018 related to the issuance of our 2023 Notes and August 2019 related to the issuance of our 2024 & 2026 Notes.

Inflation Risk

We do not believe that inflation has had a material effect on our business, financial condition, or operating results.

Item 8. Consolidated Financial Statements and Supplementary Data.

Alteryx, Inc.
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Report of Independent Registered Public Accounting Firm

To the shareholders and the Board of Directors of Alteryx, Inc.

Opinion on the Financial Statements

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

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control — *Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission* and our report, dated February 9, 2023, expressed an unqualified opinion on the Company's internal control over financial reporting.

Change in Accounting Principle

As discussed in Note 2 to the financial statements, the Company changed its method of accounting for convertible debt effective January 1, 2022, due to the adoption of Accounting Standards Update, 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equit*y, using the modified retrospective approach.

Basis for Opinion

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

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

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current-period audit of the financial statements that were communicated or required to be communicated to the audit committee and that (1) relate 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 matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Revenue Recognition – Determination of Standalone Selling Prices – Refer to Notes 2 and 3 of the Financial Statements

Critical Audit Matter Description

The Company's revenue is derived from subscription-based software, data subscription services, and professional services, including training and consulting services. The subscription-based license generally includes access to hosted services and software and post-contract support (PCS). The Company recognized subscription-based software licenses and PCS and services revenue of $447.2 million and $408.2 million, respectively, for the year ended December 31, 2022. The Company allocates the transaction price to each performance obligation based on its relative standalone selling price (SSP). However, certain performance obligations are not sold on a standalone basis; therefore, significant judgment is required to estimate SSP. Estimated SSP is determined using sales of goods and services sold on a standalone basis when available, pricing strategies, market conditions, the useful life of the Company's products and market data.

We identified the determination of SSP for performance obligations as a critical audit matter. There is significant judgement involved in the determination of SSP based on observable inputs, which in turn led to a high degree of auditor judgment, subjectivity, and effort in performing audit procedures and evaluating audit evidence related to management's determination of SSP.

How the Critical Audit Matter Was Addressed in the Audit

The primary procedures we performed to address this critical audit matter included the following, among others:

- We tested the effectiveness of certain controls over revenue recognition, including management's controls over the methodology used to determine SSP and controls over the Company's validation of the underlying data used in the SSP analysis.
- We evaluated the appropriateness of the Company's methodology used to determine SSP by comparing to historical analyses completed by the Company and practices observed in the industry.
- We tested the underlying data used by the Company to determine SSP by (a) selecting a sample of customer contracts, obtaining the related source documents and comparing that data to the historical data used to develop SSP; (b) comparing the list price of products and services to the consideration received from the customer and recalculated the discount from list price for a sample of arrangements; (c) comparing the useful life of the Company's software to the Company's historical development data; and (d) evaluating the value relationship between performance obligations not sold separately.
- We tested the mathematical accuracy of management's calculation of SSP and verified the consistent application of the methodology of establishing SSP across periods.
- We tested the allocation of transaction price among performance obligations based on relative SSP for a sample of contracts.

Business Combinations – Estimate for valuation of acquired intangible assets – Refer to Notes 2 and 4 of the Financial Statements

Critical Audit Matter Description

The Company acquired 100% of the outstanding equity of Trifacta Inc. for $398.4 million on February 7, 2022. The Company accounted for the acquisition using the acquisition method of accounting for business combinations. Accordingly, the purchase consideration was allocated to the assets acquired and liabilities assumed based on their respective estimated fair values at the date of acquisition. The Company estimated the fair value of identifiable intangible assets acquired to be $51.0 million. The excess of the purchase consideration over the fair value of other assets acquired and liabilities assumed of $341.4 million was recorded as goodwill.

We identified the fair value determination of identifiable intangible assets acquired and the resulting goodwill for the business combination as a critical audit matter due to the significant judgment required in determining significant estimates related to the acquisition. Management's estimates of fair value included significant assumptions for revenue and expense forecasts and the selection of an appropriate discount rate. There was a high degree of auditor judgment and subjectivity in applying audit procedures relating to the estimation of fair value of intangible assets acquired due to the significant amount of judgment by management when developing its estimates. Significant audit effort was required in performing procedures and evaluating the significant assumptions relating to the estimate and the audit effort involved the use of professionals with specialized skill and knowledge to assist in evaluating the audit evidence obtained from these procedures.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to management's estimates for the fair value of identifiable intangible assets acquired included the following, among others:

- We tested the effectiveness of controls over the business combination, including controls over the modeling of future expected cash flows, including revenue and expense forecasts and the selection of an appropriate discount rate, and ultimately the determination of fair value of the identifiable intangible assets acquired.
- We assessed the reasonableness of management's revenue and expense forecasts by comparing the future expected cash flows to Trifacta's historical results as well as those of certain peer companies, including testing the completeness, accuracy, and relevance of underlying historical data.
- With the assistance of our fair value specialists, we evaluated the reasonableness of the (1) valuation methodology and (2) discount rates by:
    - Testing the source information underlying the determination of the discount rate and testing the mathematical accuracy of the calculation; and
    - Developing a range of independent estimates and comparing those to the discount rates selected by management.

/s/ Deloitte & Touche LLP

Los Angeles, California
February 9, 2023

We have served as the Company's auditor since 2019.

Alteryx, Inc.
Consolidated Statements of Operations and Comprehensive Income (Loss)
(in thousands, except per share data)

	Year Ended December 31,		
	2022	2021	2020
Revenue:			
Subscription-based software license	$ 447,202	$ 203,960	$ 237,035
PCS and services	408,152	332,175	258,273
Total revenue	855,354	536,135	495,308
Cost of revenue:			
Subscription-based software license	10,994	4,967	5,125
PCS and services	106,790	50,786	38,714
Total cost of revenue	117,784	55,753	43,839
Gross profit	737,570	480,382	451,469
Operating expenses:			
Research and development	221,453	132,420	101,117
Sales and marketing	541,673	334,480	252,820
General and administrative	231,717	149,747	101,439
Impairment of long-lived assets	43,238	—	—
Total operating expenses	1,038,081	616,647	455,376
Loss from operations	(300,511)	(136,265)	(3,907)
Interest expense	(9,741)	(39,208)	(38,119)
Other income (expense), net	(3,526)	(2,058)	14,381
Loss before provision for (benefit of) income taxes	(313,778)	(177,531)	(27,645)
Provision for (benefit of) income taxes	4,721	2,150	(3,271)
Net loss	$ (318,499)	$ (179,681)	$ (24,374)
Net loss per share attributable to common stockholders, basic	$ (4.65)	$ (2.67)	$ (0.37)
Net loss per share attributable to common stockholders, diluted	$ (4.65)	$ (2.67)	$ (0.37)
Weighted-average shares used to compute net loss per share attributable to common stockholders, basic	68,510	67,191	66,058
Weighted-average shares used to compute net loss per share attributable to common stockholders, diluted	68,510	67,191	66,058
Other comprehensive income (loss), net of tax:			
Net unrealized holding gain (loss) on investments, net of tax	(1,978)	(3,374)	925
Foreign currency translation adjustments, net of tax	1,886	(667)	(892)
Other comprehensive income (loss), net of tax	$ (92)	$ (4,041)	$ 33
Total comprehensive loss	$ (318,591)	$ (183,722)	$ (24,341)

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

Alteryx, Inc.
Consolidated Balance Sheets
(in thousands, except par value)

	As of December 31,	
	2022	2021
Assets		
Current assets:		
Cash and cash equivalents	$ 104,751	$ 152,375
Short-term investments	237,040	506,874
Accounts receivable, net	259,590	192,318
Prepaid expenses and other current assets	145,767	81,360
Total current assets	747,148	932,927
Property and equipment, net	69,157	71,270
Operating lease right-of-use assets	50,997	102,681
Long-term investments	90,184	343,213
Goodwill	398,091	57,415
Intangible assets, net	60,901	21,737
Other assets	140,806	70,445
Total assets	$ 1,557,284	$ 1,599,688
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 13,883	$ 8,086
Accrued payroll and payroll related liabilities	81,206	61,391
Accrued expenses and other current liabilities	56,592	53,917
Deferred revenue	276,160	208,154
Convertible senior notes, net	84,571	77,400
Total current liabilities	512,412	408,948
Convertible senior notes, net	792,921	686,016
Operating lease liabilities	61,265	78,784
Other liabilities	17,030	23,186
Total liabilities	1,383,628	1,196,934
Commitments and contingencies (Note 15)		
Stockholders' equity:		
Preferred stock, $0.0001 par value: 10,000 shares authorized as of December 31, 2022 and December 31, 2021, respectively; no shares issued and outstanding as of December 31, 2022 and December 31, 2021, respectively	—	—
Common stock, $0.0001 par value: 500,000 Class A shares authorized, 61,616 and 59,771 shares issued and outstanding, as of December 31, 2022 and December 31, 2021, respectively; 500,000 Class B shares authorized, 7,886 and 7,763 shares issued and outstanding as of December 31, 2022 and December 31, 2021, respectively	7	7
Additional paid-in capital	622,434	598,710
Accumulated deficit	(443,159)	(190,429)
Accumulated other comprehensive loss	(5,626)	(5,534)
Total stockholders' equity	173,656	402,754
Total liabilities and stockholders' equity	$ 1,557,284	$ 1,599,688

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

Alteryx, Inc.
Consolidated Statements of Stockholders' Equity
(in thousands)

	Common Stock		Additional Paid-in Capital	Retained Earnings (Accumulated Deficit)	Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount				
Balances at December 31, 2019	65,260	$ 7	$ 412,191	$ 14,235	$ (1,526)	$ 424,907
Cumulative effect of adoption of ASC 326	—	—	—	(609)	—	(609)
Shares issued pursuant to stock awards, net of tax withholdings related to vesting of restricted stock units	340	—	(21,276)	—	—	(21,276)
Exercise of stock options and issuance of shares in connection with employee stock purchase plan	1,142	—	23,195	—	—	23,195
Conversion on 2023 Notes, net of tax	—	—	(1)	—	—	(1)
Stock-based compensation	—	—	74,916	—	—	74,916
Cumulative translation adjustment	—	—	—	—	(892)	(892)
Unrealized gain on investments	—	—	—	—	925	925
Net loss	—	—	—	(24,374)	—	(24,374)
Balances at December 31, 2020	66,742	$ 7	$ 489,025	$ (10,748)	$ (1,493)	$ 476,791
Shares issued pursuant to stock awards, net of tax withholdings related to vesting of restricted stock units	514	$ —	$ (24,474)	$ —	$ —	$ (24,474)
Exercise of stock options and issuance of shares in connection with employee stock purchase plan	278	—	10,400	—	—	10,400
Stock-based compensation	—	—	123,759	—	—	123,759
Cumulative translation adjustment	—	—	—	—	(667)	(667)
Unrealized loss on investments	—	—	—	—	(3,374)	(3,374)
Net loss	—	—	—	(179,681)	—	(179,681)
Balances at December 31, 2021	67,534	$ 7	$ 598,710	$ (190,429)	$ (5,534)	$ 402,754
Adoption of ASU 2020-06	—	$ —	$ (176,964)	$ 65,769	$ —	$ (111,195)
Shares issued pursuant to stock awards, net of tax withholdings related to vesting of restricted stock units	1,503	—	(45,333)	—	—	(45,333)
Exercise of stock options and issuance of shares in connection with employee stock purchase plan	465	—	10,111	—	—	10,111
Stock-based compensation	—	—	235,910	—	—	235,910
Cumulative translation adjustment	—	—	—	—	1,886	1,886
Unrealized loss on investments	—	—	—	—	(1,978)	(1,978)
Net loss	—	—	—	(318,499)	—	(318,499)
Balances at December 31, 2022	69,502	$ 7	$ 622,434	$ (443,159)	$ (5,626)	$ 173,656

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

Alteryx, Inc.
Consolidated Statements of Cash Flows
(in thousands)

	Year Ended December 31,		
	2022	2021	2020
Cash flows from operating activities:			
Net loss	$ (318,499)	$ (179,681)	$ (24,374)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	37,344	16,380	12,101
Non-cash operating lease cost	20,160	16,527	8,424
Stock-based compensation	226,518	124,065	74,916
Amortization of discounts and premiums on investments, net	131	4,461	1,085
Amortization of debt discount and issuance costs	3,296	32,772	31,654
Deferred income taxes	1,858	634	(4,945)
Foreign currency remeasurement (gains) losses	7,717	1,588	(3,644)
Impairment of long-lived assets	43,238	—	2,025
Other non-cash operating activities, net	3,919	(695)	2,238
Changes in operating assets and liabilities, net of effect of business acquisitions:			
Accounts receivable	(65,253)	(56,917)	(7,368)
Deferred commissions	(28,212)	(12,350)	(7,323)
Prepaid expenses, other current assets, and other assets	(101,072)	11,622	(16,502)
Accounts payable	4,980	2,584	(2,746)
Accrued payroll and payroll related liabilities	9,561	13,931	(7,547)
Accrued expenses, other current liabilities, operating lease liabilities, and other liabilities	(14,936)	(11,305)	(9,406)
Deferred revenue	64,403	99,543	26,194
Net cash provided by (used in) operating activities	(104,847)	63,159	74,782
Cash flows from investing activities:			
Capitalized software development costs	(11,890)	(9,253)	—
Purchases of property and equipment	(23,633)	(23,515)	(26,358)
Cash paid in acquisitions, net of cash acquired	(387,011)	(27,177)	—
Purchases of investments	(203,446)	(905,544)	(1,141,598)
Sales and maturities of investments	722,680	898,604	856,110
Net cash provided by (used in) investing activities	96,700	(66,885)	(311,846)
Cash flows from financing activities:			
Principal payments on 2023 Notes	—	—	(11)
Proceeds from exercise of stock options	10,111	10,400	23,125
Minimum tax withholding paid on behalf of employees for restricted stock units	(45,333)	(24,475)	(21,206)
Other financing activity	—	—	(3,404)
Net cash used in financing activities	(35,222)	(14,075)	(1,496)
Effect of exchange rate changes on cash and cash equivalents	(1,803)	(1,241)	801
Net decrease in cash, cash equivalents, and restricted cash	(45,172)	(19,042)	(237,759)
Cash, cash equivalents, and restricted cash—beginning of year	$ 154,623	$ 173,665	$ 411,424
Cash, cash equivalents, and restricted cash—end of year	$ 109,451	$ 154,623	$ 173,665

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

Alteryx, Inc.
Consolidated Statements of Cash Flows (Continued)
(in thousands)

	Year Ended December 31,		
	2022	2021	2020
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 6,424	$ 6,424	$ 6,240
Cash paid for income taxes	$ 2,088	$ 2,148	$ 2,198
Cash paid for amounts included in the measurement of operating lease liabilities	$ 24,438	$ 20,357	$ 10,310
Supplemental disclosure of noncash investing and financing activities:			
Right-of-use assets obtained in exchange for new operating lease liabilities	$ 2,727	$ 57,461	$ 43,568
Property and equipment recorded in accounts payable and accrued expenses	$ 842	$ 7,996	$ 3,983
Increase (reduction) of right-of-use assets due to remeasurement	$ 724	$ (241)	$ (5,948)
Consideration for business acquisition included in accrued expenses and other current liabilities and other liabilities	$ —	$ 4,684	$ —
Stock-based compensation included in capitalized software development costs	$ 4,289	$ 1,899	$ —
Commissions paid with Class A common stock	$ 8,455	$ —	$ —

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

Alteryx, Inc.
Notes to Consolidated Financial Statements

1. Organization and Nature of Operations

Alteryx, Inc. was initially organized in California in March 1997 as SRC, LLC, commenced principal operations in November 1997, changed its name to Alteryx, LLC in March 2010, and converted into a Delaware corporation in March 2011 under the name Alteryx, Inc. Alteryx, Inc. and its subsidiaries, or we, our, or us, are headquartered in Irvine, California.

The Alteryx Analytics Automation Platform empowers "analytics for all" by delivering easy, end-to-end automation of data engineering, analytics, reporting, machine learning, and data science processes, enabling enterprises to democratize data analytics across their organizations for a broad range of use cases. Whether working in the cloud or on-premise, data workers, regardless of technical acumen, are empowered to be curious and solve problems. With the Alteryx Analytics Automation Platform, users can automate the full range of analytics and data science processes, embed intelligent decision-making and actions, and empower their organization to enable top and bottom-line impact, efficiency gains, and rapid upskilling.

2. Significant Accounting Policies

Principles of Consolidation and Basis of Presentation

Our consolidated financial statements are presented in accordance with accounting standards generally accepted in the United States of America, or U.S. GAAP, and include the accounts of Alteryx, Inc. and its wholly owned subsidiaries after elimination of intercompany transactions and balances.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent liabilities at the date of the consolidated financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from these estimates and assumptions.

On an ongoing basis, our management evaluates these estimates and assumptions, including those related to determination of standalone selling prices of our products and services, income tax valuations, stock-based compensation, and goodwill and intangible assets valuations and recoverability. We base our estimates on historical data and experience, as well as various other factors that our management believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities.

Concentration of Risk

Financial instruments, which subject us to concentrations of credit risk, consist primarily of cash and cash equivalents, investments, and trade accounts receivable. We maintain our cash and cash equivalents and investments with three major financial institutions and a portion of such balances exceed or are not subject to Federal Deposit Insurance Corporation, or FDIC, insurance limits.

We extend differing levels of credit to customers, do not require collateral deposits, and, when necessary, maintain reserves for potential credit losses based upon the expected collectability of accounts receivable. We manage credit risk related to our customers by following credit approval processes, establishing credit limits, performing periodic evaluations of credit worthiness and applying other credit risk monitoring procedures.

Accounts receivable include amounts due from customers with principal operations primarily in the United States.

No customers accounted for 10% or more of our accounts receivable balance or 10% or more of our revenue in any years presented.

Fair Value of Financial Instruments

We utilize valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs to the extent possible. We determine fair value based on assumptions that market participants would use in pricing an asset or liability in the principal or most advantageous market. When considering market participant assumptions in fair value measurements, the following fair value hierarchy distinguishes between observable and unobservable inputs, which are categorized in one of the following levels:

Level 1	Unadjusted quoted prices in active markets for identical assets or liabilities at the measurement date.
Level 2	Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active near the measurement date; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
Level 3	Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The fair value of our money market funds was determined based on "Level 1" inputs.

The fair values of our certificates of deposit, commercial paper, U.S. Treasury and agency bonds, and corporate bonds were determined based on "Level 2" inputs. The valuation techniques used to measure the fair values of certificates of deposit and commercial paper included observable market-based inputs for similar assets, which primarily include yield curves and time-to-maturity factors. The valuation techniques used to measure the fair values of U.S. Treasury and agency bonds and corporate bonds included standard observable inputs, including reported trades, quoted market prices, matrix pricing, benchmark yields, broker/dealer quotes, issuer spreads, two-sided markets or benchmark securities and data provided by third parties as many of the bonds are not actively traded.

There were no marketable securities measured on a recurring basis in the "Level 3" category.

We have not elected the fair value option as prescribed by ASC 825, *The Fair Value Option for Financial Assets and Financial Liabilities*, for our financial assets and liabilities that are not otherwise required to be carried at fair value. Under ASC 820, *Fair Value Measurements and Disclosures,* or ASC 820, material financial assets and liabilities not carried at fair value, such as our Notes and accounts receivable and payable, are reported at their carrying values.

Cash and Cash Equivalents and Restricted Cash

We consider cash and cash equivalents to include short-term, highly liquid investments that are readily convertible to known amounts of cash and so near their maturity that they present an insignificant risk of changes in the value, including investments that mature within three months from the date of original purchase.

We had restricted cash of $4.7 million and $2.2 million as of December 31, 2022 and 2021, respectively. This balance, presented in other assets on the consolidated balance sheet, relates to amounts required to be restricted as to use by our letters of credit associated with our leases and by our credit card processor.

Investments in Marketable Securities

Our investments consist of available-for-sale marketable securities, which are composed of fixed income securities, certificates of deposit, and money market funds. Our fixed income securities are predominantly high-grade corporate bonds, U.S. Treasury bonds, and U.S. Agency bonds. The classification of investments is determined at the time of purchase and reevaluated at each balance sheet date. Investments are stated at fair value and are classified as current or non-current based on the nature of the securities as well as their stated maturities. Unrealized gains and losses that are not associated with a credit loss are recognized in other comprehensive income in our consolidated balance sheets.

At each balance sheet date, we assess available-for-sale securities in an unrealized loss position to assess whether a decline in the fair value below the amortized cost basis (i.e., impairment) of an available-for-sale debt security is due to credit-related factors or noncredit-related factors. If it is determined that the unrealized losses are credit-related, we record the credit-related impairment as an allowance on the balance sheet with a corresponding adjustment in our consolidated statement of operations and comprehensive income (loss). Credit losses are limited to the amount by which the security's amortized cost basis exceeds its fair value and both the allowance and the adjustment to net income can be reversed if conditions change. If the unrealized loss is determined not to be credit-related, the corresponding adjustment is made in accumulated other comprehensive income (loss) in our consolidated balance sheets.

Other Investments

Our other investments include equity investments in privately held companies, which do not have readily determinable fair values, and in which we do not have a controlling interest or significant influence. We apply the measurement alternative under ASU 2016-01, *Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities,* for equity securities by measuring them at cost, less any impairment, and performing adjustments resulting from observable price changes. These investments are presented within long-term investments on our consolidated balance sheets and are periodically analyzed to determine whether there are indicators of impairment. If measured at fair value in the consolidated balance sheets, these would generally be classified in Level 3 of the fair value hierarchy.

Accounts Receivable, Allowance for Doubtful Accounts, and Sales Reserves

Our accounts receivable consists of amounts due from customers and are typically unsecured. Accounts receivable are recorded at the invoiced amount and are non-interest bearing.

The allowance for doubtful accounts is estimated and established by assessing historical impairments, pooling the population by similar risk characteristics, considering historical loss rates, adjusted for asset-specific characteristics, current conditions, or forecasts, and applying a loss rate to the amortized cost of the asset. Additions to the allowance are charged to general and administrative expenses. Accounts receivables are written off against the allowance when an account balance is deemed uncollectible.

We estimate a sales reserve based upon the historical adjustments made to customer billings. Such reserve is recorded as a reduction of revenue on our consolidated statement of operations and comprehensive income (loss) and a corresponding reduction to contract assets and accounts receivable in our consolidated balance sheet.

Assets Recognized from the Costs to Obtain a Contract with a Customer

We record an asset for the incremental costs of obtaining a contract with a customer, which primarily consists of sales commissions and partner referral fees that are earned upon execution of contracts. We pay commissions for new product sales as well as for renewals of existing contracts, and partner referral fees only for new product sales. For customer contracts in which the commissions paid on new business and renewals are commensurate, we generally amortize these costs over the contractual term of the contract, consistent with the pattern of revenue recognition for each performance obligation. For customer contracts in which the commissions paid on new business and renewals are not commensurate and for partner referral fees, we amortize the costs on new business over an expected period of benefit, which we have determined to be approximately four years. The expected period of benefit was determined by taking into consideration our customer contracts, the duration of our relationships with our customers and the useful life of our technology. In capitalizing and amortizing deferred commissions and partner referral fees, we have elected to apply a portfolio approach. We include amortization of this asset in sales and marketing expense in our consolidated statements of operations and comprehensive income (loss).

Property and Equipment

Property and equipment are stated at historical cost, less accumulated depreciation and amortization. Depreciation of property and equipment is calculated using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized on a straight-line basis over the shorter of their estimated useful lives or lease terms. Useful lives by asset category are as follows:

Computer equipment and software	3 years
Furniture and fixtures	3 to 7 years
Leasehold improvements	Shorter of useful life or lease term

Repairs and maintenance costs are charged to expense as incurred. Upon the sale or retirement of property and equipment, the cost and the related accumulated depreciation or amortization are removed from the accounts, with any resulting gain or loss included in our consolidated statements of operations and comprehensive income (loss).

Intangible Assets

Intangible assets consist primarily of acquired developed technology. We determine the appropriate useful life of our intangible assets by performing an analysis of expected cash flows of the acquired assets. Intangible assets are amortized over their estimated useful lives of three to eight years, using the straight-line method, which approximates the pattern in which the economic benefits are consumed.

Impairment of Long-Lived Assets

We review our long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of such assets may not be fully recoverable. Recoverability of these assets is determined by comparing the forecasted undiscounted cash flows attributable to such assets to their carrying value. If the carrying value of the assets exceeds the forecasted undiscounted cash flows, then the assets are written down to their fair value. Fair value is determined based on discounted cash flows or appraised values, depending upon the nature of the assets.

Business Combinations

The results of businesses acquired in a business combination are included in our consolidated financial statements from the date of the acquisition. We allocate the purchase price, including the fair value of any non-cash and contingent consideration, to the identifiable assets and liabilities of the relevant acquired business at their acquisition date fair values. Any excess consideration over the fair value of assets acquired and liabilities assumed is recognized as goodwill.

Contingent consideration payable in cash or a fixed dollar amount settleable in a variable number of shares is classified as a liability and recorded at fair value, with changes in fair value recorded in general and administrative expenses each period. Transaction costs associated with business combinations are expensed as incurred, and are included in general and administrative expense in the consolidated statements of operations and comprehensive income (loss).

We perform valuations of assets acquired, liabilities assumed, and contingent consideration and allocate the purchase price to its respective assets and liabilities. Determining the fair value of assets acquired, liabilities assumed, and contingent consideration requires us to use significant judgment and estimates, including the selection of valuation methodologies, estimates of future revenue, costs and cash flows, discount rates, the probability of achievement of specified milestones, and selection of comparable companies. We engage the assistance of valuation specialists in concluding on fair value measurements in connection with determining fair values of assets acquired, liabilities assumed, and contingent consideration in a business combination.

Goodwill

Goodwill represents the excess of the purchase price over the fair value of net assets acquired in a business combination. We test goodwill for impairment in accordance with the provisions of ASC 350, *Intangibles – Goodwill and Other,* or ASC 350. Goodwill is tested for impairment at least annually at the reporting unit level or whenever events or changes in circumstances indicate that goodwill might be impaired. Events or changes in circumstances which could trigger an impairment review include a significant adverse change in legal factors or in the business climate, unanticipated competition, loss of key personnel, significant changes in the use of the acquired assets or our strategy, significant negative industry or economic trends, or significant underperformance relative to expected historical or projected future results of operations.

ASC 350 provides that an entity has the option to first assess qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after assessing the totality of events or circumstances, an entity determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then additional impairment testing is not required. However, if an entity concludes otherwise, then it is required to perform an impairment test.

The impairment test involves comparing the estimated fair value of a reporting unit with its book value, including goodwill. If the estimated fair value exceeds book value, goodwill is considered not to be impaired. If, however, the fair value of the reporting unit is less than book value, then an impairment loss is recognized in an amount equal to the amount that the book value of the reporting unit exceeds its fair value, not to exceed the total amount of goodwill allocated to the reporting unit.

We have one reporting unit, and we test for goodwill impairment annually during the fourth quarter of each calendar year using a quantitative assessment. At each of December 31, 2022 and 2021, we determined our goodwill was not impaired as our fair value significantly exceeded the carrying value of our net assets.

Revenue Recognition

Our revenue is derived from the licensing of subscription-based software, data subscription services, and professional services, including training and consulting services. The subscription-based license generally includes access to hosted services and software and post-contract support, or PCS, which provides the customer the right to receive when-and-if-available unspecified future updates, upgrades and enhancements, and technical product support. The core principle of ASC 606, *Revenue from Contracts with Customers*, or ASC 606, is to recognize revenue upon the transfer of goods or services to our customers in an amount that reflects the consideration to which we expect to be entitled. In order to adhere to this core principle, we apply the following five-step approach:

- identify the contract with a customer;
- identify the performance obligations in the contract;
- determine the transaction price;
- allocate the transaction price to the performance obligations in the contract; and
- recognize revenue when (or as) we satisfy a performance obligation.

We only apply the five-step model to contracts when it is probable that we will collect the consideration we are entitled to in exchange for goods or services we transfer to the customer.

Revenue is measured based on consideration specified in a contract with a customer, and excludes any taxes we collect concurrent with revenue-producing activities. Most of our contracts contain a fixed transaction price. Our subscription agreements typically range from one to three years and are billed annually in advance with net payment terms of 60 days or less. The primary purpose of our payment and invoicing terms is to provide customers with predictable ways to purchase our software and services, and not to provide customers with financing.

Our contracts with customers typically contain multiple performance obligations. A performance obligation is a promise in a contract to transfer a distinct good or service to the customer. Substantially all of our licenses are sold as subscription-based, on-premise licenses and are bundled with maintenance and support, or PCS. In addition to our on-premise licenses, we sell subscriptions to third-party syndicated data and provide professional service offerings primarily related to trainings for our customers. Our cloud-based products are typically hosted by us in the cloud and accessible to users via a web browser. We allocate the transaction price of the contract to each performance obligation using the relative standalone selling price, or SSP, of each distinct good or service in the contract. We determine estimates of SSP based on sales of goods and services sold on a standalone basis, our overall pricing strategies, market conditions, including the geographic locations in which the products are sold, the useful life of our products, and market data. We review the SSP for each of our performance obligations at least annually and update it when appropriate to ensure that the practices employed reflect our recent pricing experience and maximize the use of observable data.

We recognize revenue when we satisfy a performance obligation by transferring control of a good or service to a customer. Revenue related to our subscription-based on-premise licenses is recognized at a point in time when the platform is first made available to the customer, or the beginning of the subscription term, if later. Revenue related to PCS and data subscriptions is recognized ratably over the subscription terms. Professional services revenue is recognized when the services are provided to the customer, or when they expire. Our cloud offerings are treated as SaaS when hosted by us, with revenue recognized ratably over the contract term. Revenue related to cloud-based offerings was not material in 2022.

Contract Assets and Contract Liabilities

Timing may differ between the satisfaction of performance obligations and the invoicing and collection of amounts related to our contracts with customers. Contract assets primarily relate to unbilled amounts for contracts with customers for which the amount of revenue recognized exceeds the amount billed to the customer. Contract assets are transferred to accounts receivable when the right to invoice becomes unconditional. Contract assets are recorded as current if the invoice will be delivered to the customer within the succeeding 12-month period with the remaining recorded as long-term. Current contract assets are included in prepaid expenses and other current assets and long-term contract assets are included in other assets on our consolidated balance sheets.

Contract liabilities, or deferred revenue, are recorded for amounts that are collected in advance of the satisfaction of performance obligations. These liabilities are classified as current if the performance obligation will be satisfied during the succeeding 12-month period and the remaining portion is recorded as non-current deferred revenue in our consolidated balance sheet.

Cost of Revenue

Cost of revenue is accounted for in accordance with ASC 705, *Cost of Sales and Services*, and consists of employee-related costs, including salaries and bonuses, stock-based compensation expense, and employee benefit costs associated with our customer support and professional services organizations, expenses related to hosting and operating our cloud infrastructure in third-party data centers, licenses of third-party syndicated data, amortization and impairment of acquired completed technology intangible assets, the amortization of capitalized software development costs, and related overhead expenses. Out-of-pocket travel costs related to the delivery of professional services are typically reimbursed by the customers and are accounted for as both revenue and cost of revenue in the period in which the cost is incurred.

Royalties

We pay royalties associated with licensed third-party syndicated data sold with our platform and we recognize royalty expense to cost of revenue in our consolidated statements of operations and comprehensive income (loss) when incurred. For the years ended December 31, 2022, 2021, and 2020, we recognized royalty expense of approximately $13.6 million, $12.5 million, and $12.4 million respectively.

Research and Development

Research and development expense consists primarily of employee-related costs, including salaries and bonuses, stock-based compensation expense, and employee benefits costs, depreciation of equipment used in research and development for our research and development employees, third-party contractor costs, and related allocated overhead costs. Product development expenses, other than software development costs qualifying for capitalization, are expensed as incurred.

Software Development Costs

Costs incurred in the development and enhancement of our software products to be sold, leased, or marketed are accounted for in accordance with ASC 985-20, *Costs of Software to be Sold, Leased, or Marketed*, or ASC 985-20. These costs, consisting primarily of salaries, related payroll costs, and stock-based compensation, are expensed as incurred until technological feasibility has been established. After technological feasibility is established, costs are capitalized in accordance with ASC 985-20. For our on-premise products, our process for developing software is completed concurrently with the establishment of technological feasibility, and no internally generated software development costs had been capitalized as of December 31, 2021 or December 31, 2020.

We account for costs to develop or obtain internal-use software and implementation costs incurred in hosting arrangements in accordance with ASC 350-40, *Internal-Use Software,* or ASC 350-40. We also account for costs of significant upgrades and enhancements resulting in additional functionality under ASC 350-40. These costs are primarily development costs related to our hosted products, which are accessed by customers on a subscription basis, software purchased for internal use, purchased software licenses, and implementation costs. Costs incurred for maintenance, training, and minor modifications or enhancements are expensed as incurred.

Capitalized software development costs are recorded as part of property and equipment, net on our consolidated balance sheets. These costs are recognized on a straight-line basis to cost of revenue over the estimated useful life of the software, which is generally between three to four years. Management evaluates the useful lives of these assets on an annual basis and tests for impairment whenever events or changes in circumstances occur that could impact the recoverability of these assets.

Convertible Senior Notes

Our Notes (as defined in Note 9, *Convertible Senior Notes*, of these notes to our consolidated financial statements) are accounted for in accordance with ASC 470‑20, *Debt with Conversion and Other Options*, or ASC 470-20. Prior to January 1, 2022, pursuant to ASC 470‑20, we accounted for the Notes using the separate liability (debt) and equity (conversion option) components of the instrument. The carrying amount of the debt component for each series of our Notes was calculated by estimating the fair value of similar liabilities that do not have associated convertible features. The carrying amount of the equity component for each series of our Notes was determined by deducting the fair value of the debt component from their respective principal amounts. The difference between the principal amount of each series of our Notes and its respective fair value of debt component are amortized to interest expense over its respective terms using the effective interest method. The equity component, net of issuance costs and deferred tax effects, of each series of our Notes is presented within additional paid-in-capital in our consolidated balance sheet. In accounting for the issuance costs related to our Notes, the allocation of issuance costs incurred between the debt and equity components was based on their relative values.

Effective January 1, 2022, we adopted ASU 2020-06 using the modified retrospective approach. As a result, the Notes are accounted for as a single liability measured at its amortized cost, as no other embedded features require bifurcation and recognition as derivatives. Interest expense recognized in future periods will be reduced as a result of accounting for the convertible debt instruments as a single liability measured at their amortized cost.

Leases

Under ASC 842, we determine if an arrangement is a lease at contract inception. Operating leases are included in operating lease right-of-use assets, accrued expenses and other current liabilities and operating lease liabilities in our consolidated balance sheets. Operating lease charges are recorded in cost of revenue and operating expenses in our consolidated statements of operations and comprehensive income (loss).

Operating lease right-of-use assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. We do not separate lease and non-lease components for all underlying asset classes. As most of our leases do not provide a readily determinable implicit rate, we estimate our incremental borrowing rate to discount the lease payments based on information available at lease commencement. We determine our incremental borrowing rate for each lease based primarily on the lease term and the economic environment of the applicable country or region. The operating lease right-of-use asset also includes any lease payments made and excludes lease incentives. The lease term includes options to extend or terminate when we are reasonably certain the option will be exercised. In general, we are not reasonably certain to exercise such options. We recognize lease expense for minimum lease payments on a straight-line basis over the lease term, while variable lease payments, such as common area maintenance, are recognized as incurred. We elected the practical expedient to not recognize operating lease right-of-use assets and operating lease liabilities that arise from short-term leases (i.e., leases with a term of 12 months or less).

We review our operating leases for impairment on an ongoing basis. For right-of-use assets, circumstances that indicate that the carrying amount of such assets may not be fully recoverable may include the decision to leave a leased corporate office prior to the end of the minimum lease term or subleases from which estimated cash flows do not fully cover the costs of the associated lease. Impairments are recognized as a reduction of the carrying value of the right-of-use lease asset and related fixed assets. Lease impairment charges are recorded in operating expenses in the consolidated statements of operating and comprehensive income (loss).

Advertising Costs

Advertising costs are expensed as incurred. We incurred advertising costs of approximately $38.2 million, $29.6 million, and $16.3 million for the years ended December 31, 2022, 2021, and 2020, respectively. Such costs primarily relate to our annual user conferences, online, television, and print advertising, as well as sponsorship of public marketing and sporting events, and are reflected in sales and marketing expense in our consolidated statements of operations and comprehensive income (loss).

Stock-Based Compensation

We recognize stock-based compensation expense in accordance with the provisions of ASC 718, *Compensation—Stock Compensation,* or ASC 718. ASC 718 requires the measurement and recognition of compensation expense for all stock-based payment awards made to employees and directors based on the grant date fair values of the awards. We use the Black-Scholes option-pricing method for valuing stock options and shares granted under the employee stock purchase plan. RSUs are valued based on the fair value of our common stock on the date of grant, less our expected dividend yield. For awards that vest solely based on continued service, the fair value of an award is recognized as an expense over the requisite service period on a straight-line basis. For awards that contain performance conditions, the fair value of an award is recognized based on the probability of the performance condition being met using the graded vesting method. For awards that contain market conditions, the fair value and derived service period of an award are determined using a Monte Carlo simulation valuation model. The fair value of an award with a market condition is recognized over the requisite service period using the graded vesting method. Stock-based compensation expense is included in cost of revenue and operating expenses within our consolidated statements of operations and comprehensive income (loss) based on the classification of the individual earning the award.

The determination of the grant date fair value of stock-based awards is affected by the estimated fair value per share of our common stock as well as other highly subjective assumptions, including, but not limited to, the expected term of the stock-based awards, expected stock price volatility, risk-free interest rates, and expected dividends yields, which are estimated as follows:

- *Expected term*. We determine the expected term of the awards using the simplified method, which estimates the expected term based on the average of the vesting period and contractual term of the stock option.
- *Expected volatility*. We determine expected volatility based on historical volatility of the share price of our Class A common stock.
- *Risk-free interest rate*. The risk-free interest rate used to value our stock-based awards is based on the U.S. Treasury yield in effect at the time of grant for a period consistent with the expected term of the award.
- *Estimated dividend yield*. The expected dividend is assumed to be zero as we have never declared or paid any cash dividends and do not currently intend to declare dividends in the foreseeable future.

The assumptions used in calculating the fair value of stock-based awards represent our best estimates, but these estimates involve inherent uncertainties and the application of judgment. As a result, if factors change or we use different assumptions, stock-based compensation expense could be materially different in the future.

Foreign Currency Remeasurement, Translation, and Transactions

The functional currency of our wholly owned subsidiaries is the currency of the primary economic environment in which the entity operates. Assets and liabilities denominated in currencies other than the functional currency are remeasured using the current exchange rate for monetary accounts and historical exchange rates for nonmonetary accounts, with exchange differences on remeasurement included in other income (expense), net in our consolidated statements of operations and comprehensive income (loss). Our foreign subsidiaries that utilize foreign currency as their functional currency translate such currency into U.S. dollars using (i) the exchange rate on the balance sheet dates for assets and liabilities, (ii) the average exchange rates prevailing during the period for revenues and expenses, and (iii) historical exchange rates for equity. Any translation adjustments resulting from this process are shown separately as a component of accumulated other comprehensive income (loss) within stockholder's equity in the consolidated balance sheets.

Gains (losses) associated with fluctuations in foreign exchange rates were $(6.3) million, $(5.2) million, and $3.0 million for the years ended December 31, 2022, 2021, and 2020, respectively, and are included in other income (expense) in our consolidated statements of operations and comprehensive income (loss).

Income Taxes

We apply the provisions of ASC 740, *Income Taxes,* or ASC 740. Under ASC 740, we account for our income taxes using the asset and liability method whereby deferred tax assets and liabilities are determined based on temporary differences between the bases used for financial reporting and income tax reporting purposes. Deferred income taxes are provided based on the enacted tax rates and laws that will be in effect at the time such temporary differences are expected to reverse. A valuation allowance is provided for deferred tax assets if it is more likely than not that we will not realize those tax assets through future operations.

We also utilize the guidance in ASC 740 to account for uncertain tax positions. ASC 740 contains a two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount which is more likely than not to be realized and effectively settled. We consider many factors when evaluating and estimating our tax positions and tax benefits, which may require periodic adjustments and which may not accurately reflect actual outcomes. We recognize interest and penalties on unrecognized tax benefits as a component of benefit of income taxes in our consolidated statements of operations and comprehensive income (loss).

Net Income (Loss) Per Share Attributable to Common Stockholders

In periods in which we have net income, and a contingent event has been met, we apply the two-class method for calculating earnings per share. Under the two-class method, net income is attributed to common stockholders and participating securities based on their participation rights. Participating securities include our Notes. In periods in which we have net losses, we do not attribute losses to participating securities as they are not contractually obligated to share our losses.

Under the two-class method, basic net income (loss) per share attributable to common stockholders is computed by dividing the net income (loss) attributable to common stockholders by the weighted-average number of shares of common stock outstanding during the period.

Diluted earnings per share attributable to common stockholders adjusts basic earnings per share for the potentially dilutive impact of stock-based awards as computed under the treasury stock method and convertible notes as computed under the if-converted method. In periods in which we incurred a net loss, all potentially dilutive securities are antidilutive and accordingly, basic net loss per share equals diluted net loss per share.

Recently Adopted Accounting Pronouncements

In August 2020, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity*, or ASU 2020-06, which simplifies the accounting for convertible instruments by removing certain separation models required under current U.S. GAAP, including the beneficial conversion feature and cash conversion models. ASU 2020-06 removes certain settlement conditions that are required for equity contracts to qualify for the derivative scope exception, and it requires the use of the if-converted method when calculating diluted earnings per share. This guidance became effective for us for annual reporting periods beginning after December 15, 2021 and for interim periods within those annual periods, and can be applied utilizing either a modified or full retrospective transition method. Before January 1, 2022, we historically accounted for our Notes (as defined and described in Note 9*, Convertible Senior Notes)* utilizing the cash conversion model. Effective January 1, 2022, we adopted ASU 2020-06 using the modified retrospective approach, which resulted in a decrease to accumulated deficit of $65.8 million, a decrease to additional paid-in capital of $177.0 million, a decrease to property and equipment, net, of $0.4 million, and an increase to current and long-term convertible senior notes, net, of $6.8 million and $104.0 million, respectively. Interest expense recognized in future periods will be reduced as a result of accounting for the convertible debt instruments as a single liability measured at their amortized cost.

In October 2021, the FASB issued ASU 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers*, or ASU 2021-08, which requires an acquirer in a business combination to recognize and measure contract assets and contract liabilities in accordance with Accounting Standards Codification, or ASC, Topic 606. ASU 2021-08 is effective for fiscal years beginning after December 15, 2022 and early adoption is permitted. Effective January 1, 2022, we early adopted this standard on a prospective basis. The impact of adoption of this standard on our consolidated financial statements was not material.

3. Revenue

Disaggregation of Revenue

The disaggregation of revenue by region was as follows (in thousands):

	Year Ended December 31,		
Revenue by region:	**2022**	**2021**	**2020**
United States	$ 597,856	$ 365,050	$ 338,190
International	257,498	171,085	157,118
Total revenue	$ 855,354	$ 536,135	$ 495,308

Revenue attributable to the United Kingdom comprised 10.2% of the total revenue in each of the years ended December 31, 2022 and 2021. Other than the United Kingdom for the years ended December 31, 2022 and 2021, no other country outside the United States comprised more than 10% of revenue for any of the periods presented. Our operations outside the United States include sales offices in Australia, France, Germany, Japan, Singapore, the United Arab Emirates and the United Kingdom, and research and development centers in Australia, the Czech Republic, India, and Ukraine. Revenue by location is determined by the billing address of the customer.

Contract Assets and Contract Liabilities

As of December 31, 2022 and 2021, we had contract assets of $59.7 million and $22.0 million, respectively, included in prepaid expenses and other current assets, and $71.4 million and $20.5 million, respectively, included in other assets on our consolidated balance sheet. There were no impairments of contract assets during each of the years ended December 31, 2022 and 2021.

As of December 31, 2022 and 2021, we had deferred revenue of $276.2 million and $208.2 million, respectively, included in current deferred revenue and $4.0 million and $2.7 million, respectively, included in other liabilities on our consolidated balance sheet. During the years ended December 31, 2022 and 2021, we recognized $206.0 million and $108.7 million, respectively, of revenue related to amounts that were included in deferred revenue as of January 1, 2022 and 2021, respectively.

Assets Recognized from the Costs to Obtain our Contracts with Customers

We recognize an asset for the incremental costs of obtaining a contract with a customer if we expect the benefit of those costs to be longer than one year. This primarily consists of sales commissions and partner referral fees that are earned upon execution of the related contracts. We amortize these deferred commissions, which include partner referral fees, proportionate with related revenues over the benefit period.

A summary of the activity impacting our deferred commissions during the years ended December 31, 2022 and 2021 is presented below (in thousands):

	Year Ended December 31,	
	2022	2021
Beginning balance [1]	$ 69,817	$ 51,186
Additional deferred commissions [2]	105,623	66,738
Amortization of deferred commissions [3]	(77,904)	(47,604)
Effects of foreign currency translation	(1,297)	(503)
Ending balance	$ 96,239	$ 69,817

[1] Of the total amount of commissions deferred as of January 1, 2022, $6.3 million was paid in shares of the Company’s Class A common stock during the year ended December 31, 2022.

[2] Of the amount of additional commissions earned during the year ended December 31, 2022, $2.7 million is anticipated to be paid in shares of the Company's Class A common stock in the three months ended March 31, 2023.

[3] Of the total amounts amortized from deferred commissions during the year ended December 31, 2022, $1.5 million was paid in shares of the Company’s Class A common stock and is included in stock-based compensation. Additionally, of the total amounts amortized from deferred commissions during the year ended December 31, 2022, $1.1 million is anticipated to be paid in shares of the Company's Class A common stock during the three months ended March 31, 2023 and is included in stock-based compensation.

As of December 31, 2022 and 2021, $41.1 million and $31.3 million, respectively, of our deferred commissions were expected to be amortized within the next 12 months, and therefore were included in prepaid expenses and other current assets. The remaining amount of our deferred commissions is included in other assets. There were no impairments of assets related to deferred commissions during each of the years ended December 31, 2022 and 2021. There were no assets recognized related to the costs to fulfill contracts during each of the years ended December 31, 2022 and 2021 as these costs were not material.

Remaining Performance Obligations

Transaction price allocated to the remaining performance obligations represents contracted revenue that has not yet been recognized, which includes deferred revenue on our consolidated balance sheets and unbilled amounts that will be recognized as revenue in future periods. As of December 31, 2022 and 2021, we had an aggregate transaction price of $592.1 million and $476.3 million, respectively, allocated to unsatisfied performance obligations related primarily to PCS, cloud-based offerings, and subscriptions to third-party syndicated data. As of December 31, 2022 and 2021, we expect to recognize $546.8 million and $443.6 million, respectively, as revenue over the next 24 months with the remaining amount expected to be recognized thereafter.

4. Business Combinations

Goodwill represents the excess of the purchase price consideration over the fair value of the underlying intangible assets and net liabilities assumed. We believe the amount of goodwill resulting from acquisitions during the years ended December 31, 2022 and 2021 are primarily attributable to expected synergies from an assembled workforce, increased development capabilities, offerings to customers, and enhanced opportunities for growth and innovation. There were no acquisitions in 2020.

Pro forma information and revenue and operating results of the companies acquired during the years ended December 31, 2022 and 2021 have not been presented as the impacts are not significant to our consolidated financial statements.

The consolidated financial statements include the results of operations of each acquisition commencing as of the acquisition date of the respective acquisition. Acquisition-related costs associated with the below acquisitions were $11.3 million in 2022, $5.5 million in 2021, and immaterial in 2020 and are recorded in general and administrative expense in the consolidated statements of operations and comprehensive income (loss).

2022 Acquisitions

Trifacta Inc.

On February 7, 2022, we acquired 100% of the outstanding equity of Trifacta Inc., or Trifacta, pursuant to an Agreement and Plan of Merger, dated January 6, 2022, or the Trifacta Merger Agreement. The acquisition was made to augment our product and go-to-market teams and acquire developed technology to advance our cloud-based functionalities. The aggregate consideration payable in exchange for all of the outstanding equity interests in Trifacta, inclusive of customary adjustments set forth in the Trifacta Merger Agreement, was $398.4 million.

In connection with the acquisition, we entered into employment and share-based compensation agreements with certain employees of Trifacta, which include up to $75.0 million in equity-based incentive awards, subject to continued employment over a period of 36 months. We additionally held back $9.2 million of the purchase price that has begun to vest and will continue to vest and become payable to certain key employees in three annual installments based on each such employee's continued service. As both the awards and hold back arrangements are subject to the continued employment of the employees, they were excluded from the purchase consideration and will be recognized as post-acquisition compensation. The transaction costs associated with the acquisition were approximately $11.3 million, of which $7.8 million was incurred during the year ended December 31, 2022 and was recorded in general and administrative expense.

We accounted for the acquisition using the acquisition method of accounting, which requires the assets acquired and liabilities assumed to be recorded at the date of acquisition at their respective estimated fair values. The allocation of purchase consideration to the estimated fair values of the assets acquired and liabilities assumed as of the date of acquisition is as follows (in thousands):

		Fair Value
Cash and cash equivalents	$	13,360
Accounts receivable, net		6,702
Other current and non-current assets		11,017
Goodwill		341,412
Intangible assets, net		51,000
Accounts payable, accrued expenses and other current and non-current liabilities		(15,807)
Deferred revenue		(9,313)
Net assets acquired	$	398,371

The excess of the purchase consideration over the fair value of other assets acquired and liabilities assumed was recorded as goodwill. The resulting goodwill is primarily attributed to the assembled workforce and expanded market opportunities, including integrating the Trifacta product offering with our existing product offerings. The goodwill has no basis for U.S. income tax purposes. The following table sets forth the fair values of the components of identifiable intangible assets acquired (in thousands) and their estimated useful lives (in years) as of the date of acquisition:

	Fair Value	Useful Life
Completed technology	$ 48,500	7
Customer relationships	1,000	3
Trade names	1,500	3
Total intangible assets subject to amortization	$ 51,000	

We determined the fair value of the developed technology acquired using the multi-period excess earnings model, which is a variation of the income approach that estimates the value of the assets based on the present value of the incremental after-tax cash flow attributable only to the intangible assets. This model utilizes certain unobservable inputs classified as Level 3 measurements as defined by ASC 820, *Fair Value Measurements and Disclosures*, or ASC 820. Key inputs utilized in the models include a discount rate of 16.5% and estimated revenue and expense forecasts.

The operations of Trifacta are included in our operating results from the date of acquisition. We have not separately disclosed the amount of revenue or earnings related to the Trifacta acquisition as the operations of Trifacta were integrated into the operations of our company from the date of acquisition, and thus it would be immaterial and impractical to do so. In addition, the unaudited pro forma results of operations assuming the Trifacta acquisition had taken place at the beginning of each period are not provided as the historical operating results of Trifacta were not material.

2021 Acquisitions

Hyper Anna Pty. Ltd.

On October 6, 2021, we acquired 100% of the outstanding equity of Hyper Anna Pty. Ltd., or Hyper Anna, pursuant to an Agreement for the Sale and Purchase of Shares, dated as of October 6, 2021, or the Hyper Anna Purchase Agreement. The acquisition was made to augment our research and development team and acquire certain developed technology.

The aggregate consideration payable in exchange for all of the outstanding equity interests in Hyper Anna, net of customary adjustments set forth in the Hyper Anna Purchase Agreement, was $24.9 million in cash. This includes $3.0 million and $2.0 million of cash consideration held back for customary indemnification matters for a period of 24 months and 36 months, respectively, following the acquisition date.

In connection with the acquisition, we entered into employment agreements with certain employees from Hyper Anna, which include up to $16.8 million in equity incentive awards based on continued employment over a period of 36 months. As the awards are subject to the continued employment of the employees, they were excluded from the purchase consideration, and will be recognized as post-acquisition compensation.

The purchase consideration for the acquisition of $24.9 million consisted of $10.6 million in developed technology, which is tax deductible; $10.5 million of goodwill; and $3.8 million of net assets assumed.

We determined the fair value of the developed technology acquired using the multi-period excess earnings model, which is a variation of the income approach that estimates the value of the assets based on the present value of the incremental after-tax cash flow attributable only to the intangible assets. This model utilizes certain unobservable inputs classified as Level 3 measurements as defined by ASC 820. Key inputs utilized in the models include a discount rate of 29% and estimated revenue and expense forecasts. Based on the valuation model, we determined the fair value of the developed technology to be $10.6 million with an amortization period of 7 years.

Lore IO, Inc.

On October 21, 2021, we acquired 100% of the outstanding equity of Lore IO, Inc., or Lore IO, pursuant to an Agreement and Plan of Merger, dated as of October 18, 2021, or the Lore IO Merger Agreement. The acquisition was made to augment our research and development team. The aggregate consideration payable in exchange for all of the outstanding equity interests of Lore IO was $10.0 million in cash, subject to customary adjustments set forth in the Lore IO Merger Agreement.

In connection with the acquisition, we entered into employment agreements with certain employees from Lore IO, which include up to $11.1 million in equity incentive awards based on continued employment over a period of 36 months. As the awards are subject to the continued employment of the employees, they were excluded from the purchase consideration, and will be recognized as post-acquisition compensation.

The purchase consideration for the acquisition of $10.0 million consisted of $10.0 million of goodwill, which is not tax deductible, and immaterial net assets assumed.

5. Fair Value Measurements

Instruments Measured at Fair Value on a Recurring Basis. The following tables present our cash and cash equivalents' and investments' costs, net unrealized gains (losses), and fair value by major security type recorded as cash and cash equivalents or short-term or long-term investments as of December 31, 2022 and 2021 (in thousands):

	As of December 31, 2022					
	Cost	Net Unrealized Gains (Losses)	Fair Value	Cash and Cash Equivalents	Short-term Investments	Long-term Investments
Cash	$ 62,880	$ —	$ 62,880	$ 62,880	$ —	$ —
Level 1:						
Money market funds	20,210	—	20,210	20,210	—	—
Subtotal	20,210	—	20,210	20,210	—	—
Level 2:						
Commercial paper	60,197	(115)	60,082	21,064	39,018	—
Certificates of deposit	6,000	(3)	5,997	—	5,997	—
U.S. Treasury and agency bonds	236,559	(3,065)	233,494	597	156,090	76,807
Corporate bonds	46,171	(609)	45,562	—	35,935	9,627
Subtotal	348,927	(3,792)	345,135	21,661	237,040	86,434
Level 3	—	—	—	—	—	—
Total	$ 432,017	$ (3,792)	$ 428,225	$ 104,751	$ 237,040	$ 86,434

	As of December 31, 2021					
	Cost	Net Unrealized Gains (Losses)	Fair Value	Cash and Cash Equivalents	Short-term Investments	Long-term Investments
Cash	$ 68,579	$ —	$ 68,579	$ 68,579	$ —	$ —
Level 1:						
Money market funds	15,382	—	15,382	15,382	—	—
Subtotal	15,382	—	15,382	15,382	—	—
Level 2:						
Commercial paper	308,250	(97)	308,153	68,414	239,739	—
Certificates of deposit	3,500	(3)	3,497	—	—	3,497
U.S. Treasury and agency bonds	459,960	(1,264)	458,696	—	189,243	269,453
Corporate bonds	148,605	(450)	148,155	—	77,892	70,263
Subtotal	920,315	(1,814)	918,501	68,414	506,874	343,213
Level 3	—	—	—	—	—	—
Total	$ 1,004,276	$ (1,814)	$ 1,002,462	$ 152,375	$ 506,874	$ 343,213

There were no transfers between Level 1, Level 2, or Level 3 securities during each of the years ended December 31, 2022 and 2021.

All long-term investments had maturities between one and two years in duration as of December 31, 2022 and 2021.

We review our marketable securities on a regular basis to evaluate whether or not any security has experienced an impairment resulting from credit losses. We consider factors such as the financial condition and near-term prospects of the issuer and our intent to sell, as well as whether it is more likely than not we will be required to sell the investment before recovery of the investment's amortized cost basis. We have determined that the gross unrealized losses of approximately $3.8 million and $1.8 million with respect to our available-for-sale securities as of both December 31, 2022 and 2021, respectively, were due to changes in market rates, and we have determined the losses were not related to credit losses. These gross unrealized losses were classified in accumulated other comprehensive income (loss) in our consolidated balance sheets as of December 31, 2022 and 2021.

Interest income from our marketable securities was $3.9 million, $2.4 million, and $10.5 million for the years ended December 31, 2022, 2021, and 2020, respectively.

Instruments Not Recorded at Fair Value on a Recurring Basis. We estimate the fair value of our Notes carried at face value, less unamortized discount and issuance costs, quarterly for disclosure purposes. The estimated fair value of our Notes is determined by Level 2 inputs and is based on observable market data including prices for similar instruments. As of December 31, 2022 and 2021, the fair value of our Notes was $805.8 million and $857.3 million, respectively. The carrying amounts of our cash, accounts receivable, prepaid expenses and other current assets, accounts payable, and accrued liabilities approximate their current fair value because of their nature and relatively short maturity dates or durations.

Assets and Liabilities Recorded at Fair Value on a Non-Recurring Basis. See Note 4, *Business Combinations*, and Note 8, *Goodwill and Intangible Assets*, of these notes to our consolidated financial statements for fair value measurements of certain assets and liabilities recorded at fair value on a non-recurring basis. These include the fair value of assets acquired and liabilities assumed in a business acquisition, and goodwill and other long-lived assets when they are held for sale or determined to be impaired.

Other Investments. As of December 31, 2022, the balance of our equity investments in which we do not have a controlling interest or significant influence was $3.8 million. Since our initial investments, there have been no impairments or adjustments to the carrying amount of our equity investments during the year ended December 31, 2022. We did not have any equity investments as of December 31, 2021.

6. Allowance for Doubtful Accounts and Sales Reserves

The following table summarizes the changes in the allowance for doubtful accounts and sales reserve included in accounts receivable in our consolidated balance sheets (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Beginning balance	$ 3,546	$ 3,114	$ 2,662
Provision	1,238	2,198	2,544
Recoveries	(686)	(709)	(1,225)
Charge-offs	(2,297)	(1,057)	(867)
Ending balance	$ 1,801	$ 3,546	$ 3,114

The following table summarizes the changes in the allowance applied to our contract assets in our consolidated balance sheets (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Beginning balance	$ 1,479	$ 2,438	$ 205
Adoption of new accounting standard - ASC 326	—	—	609
Provision	317	(817)	1,818
Recoveries	(23)	(53)	(110)
Charge-offs	(97)	(89)	(84)
Ending balance	$ 1,676	$ 1,479	$ 2,438

7. Property and Equipment

Property and equipment, net consisted of the following (in thousands):

	Year Ended December 31,	
	2022	2021
Computer equipment & software	$ 25,351	$ 23,127
Furniture and fixtures	10,404	10,923
Leasehold improvements	32,424	25,353
Capitalized software development costs	19,279	—
Construction in process	13,509	37,289
	$ 100,967	$ 96,692
Less: Accumulated depreciation and amortization	(31,810)	(25,422)
Total property and equipment, net	$ 69,157	$ 71,270

Depreciation and amortization expense for the years ended December 31, 2022, 2021, and 2020 was approximately $24.1 million, $11.4 million, and $8.1 million, respectively. During the year ended December 31, 2022, we recorded non-cash impairment charges of $9.2 million to fixed assets associated with the ceased use of certain of our corporate offices in California, Colorado, Massachusetts, Texas, Canada and Germany as discussed in Note 14, *Leases*. No impairment charges were incurred during the years ended December 31, 2021 or December 31, 2020.

8. Goodwill and Intangible Assets

The change in carrying amount of goodwill was as follows (in thousands):

Goodwill as of December 31, 2020	$ 37,070
Goodwill recorded in connection with acquisition	20,452
Effects of foreign currency translation	(107)
Goodwill as of December 31, 2021	$ 57,415
Goodwill recorded in connection with acquisitions	341,412
Effects of foreign currency translation	(736)
Goodwill as of December 31, 2022	$ 398,091

Intangible assets consisted of the following (in thousands, except years):

	As of December 31, 2022			
	Remaining Weighted-Average Useful Life in Years	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Customer relationships	2.1	$ 2,466	$ (1,320)	$ 1,146
Completed technology	5.6	82,209	(23,506)	58,703
Trade names	2.1	$ 1,500	$ (448)	$ 1,052
		$ 86,175	$ (25,274)	$ 60,901

	As of December 31, 2021			
	Remaining Weighted-Average Useful Life in Years	Gross Carrying Value	Accumulated Amortization	Net Carrying Value
Customer relationships	3.1	$ 1,557	$ (862)	$ 695
Completed technology	5.1	32,337	(11,295)	21,042
		$ 33,894	$ (12,157)	$ 21,737

During the twelve months ended December 31, 2020, we recorded an impairment charge of $2.0 million related to certain developed technology assets due to our strategic decision to discontinue further investment and enhancements in the standalone existing technology. The impairment charge is recorded in cost of revenue in the consolidated statements of operating and comprehensive income (loss).

We classified intangible asset amortization expense in the accompanying consolidated statements of operations and comprehensive income (loss) as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Cost of revenue	$ 12,320	$ 4,742	$ 3,758
Sales and marketing	960	229	212
Total	$ 13,280	$ 4,971	$ 3,970

The following table presents our estimates of remaining amortization expense for each of the five succeeding fiscal years and thereafter for intangible assets at December 31, 2022 (in thousands):

2023	$ 12,459
2024	11,810
2025	10,211
2026	9,328
2027	8,341
Thereafter	8,752
Total amortization expense	$ 60,901

9. Convertible Senior Notes

The following table presents details of our convertible senior notes, which are further discussed below (original principal in thousands):

	Month Issued	Maturity Date	Original Principal (including over-allotment)	Coupon Interest Rate	Effective Interest Rate [1]	Conversion Rate	Initial Conversion Price
2023 Notes	May and June 2018	June 1, 2023	$ 230,000	0.5 %	1.01 %	$ 22.5572	$ 44.33
2024 Notes	August 2019	August 1, 2024	$ 400,000	0.5 %	0.93 %	$ 5.2809	$ 189.36
2026 Notes	August 2019	August 1, 2026	$ 400,000	1.0 %	1.32 %	$ 5.2809	$ 189.36

[1] Prior to the adoption of ASU 2020-06, our effective interest rates were 7.00% for the 2023 Notes, 4.96% for the 2024 Notes, and 5.41% for the 2026 Notes due to the discount on the Notes related to the component previously allocated to equity.

As further defined and described below, the 2024 Notes and the 2026 Notes are together referred to as the 2024 & 2026 Notes, and the 2023 Notes and the 2024 & 2026 Notes are collectively referred to as the Notes.

In May and June 2018, we sold $230.0 million aggregate principal amount of our 0.50% Convertible Senior Notes due 2023, or the 2023 Notes, including the initial purchasers' exercise in full of their option to purchase an additional $30.0 million of the 2023 Notes, in a private offering to qualified institutional buyers pursuant to Rule 144A promulgated under the Securities Act of 1933, as amended, or the Securities Act. The 2023 Notes are our senior, unsecured obligations and interest is payable semi-annually in arrears on June 1 and December 1 of each year beginning December 1, 2018.

In August 2019, we sold $400.0 million aggregate principal amount of our 0.50% Convertible Senior Notes due 2024, or the 2024 Notes, and $400.0 million aggregate principal amount of our 1.00% Convertible Senior Notes due 2026, or the 2026 Notes, including the initial purchasers' exercise in full of their options to purchase an additional $50.0 million of the 2024 Notes and an additional $50.0 million of the 2026 Notes, in a private offering to qualified institutional buyers pursuant to Rule 144A promulgated under the Securities Act. The 2024 & 2026 Notes are our senior, unsecured obligations and interest is payable semi-annually in arrears on February 1 and August 1 of each year beginning February 1, 2020.

Prior to the close of business on the business day immediately preceding March 1, 2023, or the 2023 Conversion Date, in the case of the 2023 Notes, or May 1, 2024, or the 2024 Conversion Date, in the case of the 2024 Notes, or May 1, 2026, or the 2026 Conversion Date, in the case of the 2026 Notes, the respective Notes are convertible at the option of holders only upon satisfaction of certain conditions and during certain periods, and thereafter, at any time until the close of business on the second scheduled trading day immediately preceding the relevant maturity date. The applicable conversion rate is subject to customary adjustments for certain events as described in the applicable indenture between us and U.S. Bank National Association, as trustee, or, collectively, the Indentures. Upon conversion, the Notes may be settled in shares of our Class A common stock, cash, or a combination of cash and shares of our Class A common stock, at our election. During the years ended December 31, 2019 and 2020, a portion of the 2023 Notes were exchanged, as further discussed below.

Prior to the close of business on the business day immediately preceding the applicable Conversion Date, the applicable series of Notes is convertible at the option of the holders under the following circumstances:

- during any calendar quarter commencing after the calendar quarter subsequent to the calendar quarter in which the applicable series of Notes was issued (and only during such calendar quarter), if the last reported sale price of our Class A common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the applicable conversion price of the applicable series of Notes on each applicable trading day;
- during the five-business day period after any five consecutive trading day period in which the trading price per $1,000 principal amount of the applicable series of Notes for each day of that five day consecutive trading day period was less than 98% of the product of the last reported sale price of our Class A common stock and the applicable conversion rate of the applicable series of Notes on such applicable trading day; or
- upon the occurrence of specified corporate events described in the applicable Indenture.

While the 2023 Notes have, from time to time, been convertible at the option of the holders as a result of meeting one or more of the triggers described above, as of December 31, 2022, none of the above triggers were met for any series of Notes. Accordingly, no Notes are convertible at the option of the holders until the 2023 Conversion Date with respect to the 2023 Notes as described above. Because the 2023 Notes mature on June 1, 2023, they were classified as current liabilities on the consolidated balance sheet as of December 31, 2022. As of December 31, 2022, the aggregate if-converted value of the 2023 Notes exceeded their aggregate principal amount by $12.1 million and the aggregate if-converted values of the 2024 & 2026 Notes did not exceed their respective principal amounts.

We may not redeem any series of Notes prior to the relevant maturity date. Holders of any series of Notes have the right to require us to repurchase for cash all or a portion of their applicable series of Notes, at 100% of its respective principal amount, plus any accrued and unpaid interest, upon the occurrence of a fundamental change as defined in the applicable Indenture for such series of Notes. We are also required to increase the conversion rate for holders who convert their Notes in connection with certain corporate events occurring prior to the relevant maturity date.

The Notes are our senior unsecured obligations and rank senior in right of payment to any of our indebtedness and other liabilities that are expressly subordinated in right of payment to the Notes, equal in right of payment among all series of Notes and to any other existing and future indebtedness and other liabilities that are not subordinated, effectively junior in right of payment to any of our secured indebtedness and other liabilities to the extent of the value of the assets securing such indebtedness and other liabilities, and structurally junior in right of payment to all of our existing and future indebtedness and other liabilities (including trade payables) of our current or future subsidiaries.

Capped Call Transactions

In connection with the pricing of the 2023 Notes, we entered into privately negotiated capped call transactions with an affiliate of one of the initial purchasers of the 2023 Notes and other financial institutions. In connection with the pricing of the 2024 & 2026 Notes, we entered into privately negotiated capped call transactions with other financial institutions. The capped call transactions are expected generally to reduce or offset potential dilution to holders of our common stock and/or offset the potential cash payments that we could be required to make in excess of the principal amount upon any conversion of the applicable series of Notes under certain circumstances, with such reduction and/or offset subject to a cap based on the cap price. Under the capped call transactions, we purchased capped call options that in the aggregate relate to the total number of shares of our Class A common stock underlying the applicable series of Notes, with an initial strike price of approximately $44.33 per share in the case of the 2023 Notes, which corresponds to the initial conversion price of the 2023 Notes, and approximately $189.36 per share in the case of the 2024 & 2026 Notes, which corresponds to the initial conversion price of each of the 2024 & 2026 Notes. Further, the capped call options are subject to anti-dilution adjustments substantially similar to those applicable to the conversion rate of the applicable series of Notes, and have a cap price of $62.22 per share in the case of the 2023 Notes, and $315.60 per share in the case of the 2024 & 2026 Notes. The cost of the purchased capped calls of $19.1 million in the case of the 2023 Notes and $87.4 million in the case of the 2024 & 2026 Notes was recorded as a reduction to additional paid-in-capital.

We elected to integrate the applicable capped call options with the applicable series of Notes for federal income tax purposes pursuant to applicable U.S. Treasury Regulations. Accordingly, the $19.1 million gross cost of the purchased capped calls in the case of the 2023 Notes and the $87.4 million gross cost of the purchased capped calls in the case of the 2024 & 2026 Notes will be deductible for income tax purposes as original discount interest over the term of the 2023 Notes and the applicable series of the 2024 & 2026 Notes, respectively. We recorded deferred tax assets of $4.6 million with respect to the 2023 Notes and $20.9 million with respect to the 2024 & 2026 Notes, which represent the tax benefit of these deductions with an offsetting entry to additional paid-in capital. These deferred tax assets, as adjusted for activity through December 31, 2021, were written off as part of the ASU 2020-06 implementation.

In connection with the exchange agreements discussed below, we terminated a corresponding portion of the existing capped call transactions that we entered into in connection with the issuance of the 2023 Notes, which resulted in the net share settlement and our receipt and retirement of 285,466 shares of Class A common stock.

Exchange of 2023 Notes

In connection with the issuance of the 2024 & 2026 Notes discussed above, during the year ended December 31, 2019, we entered into exchange agreements with certain holders of our outstanding 2023 Notes and, using a portion of the net proceeds from the issuance of the 2024 & 2026 Notes, we exchanged $145.2 million principal amount, together with accrued and unpaid interest thereon, of the 2023 Notes for aggregate consideration of $145.4 million in cash, representing the principal and accrued interest of the exchanged 2023 Notes, and 2.2 million shares of Class A common stock.

The exchange agreements were accounted for as an induced conversion, resulting from the issuance of shares of Class A common stock in excess of the shares that would have been issuable under the terms of the original 2023 Notes.

This exchange resulted in a loss on induced conversion and debt extinguishment of $20.5 million, consisting of (i) a $8.2 million market premium representing the excess of the fair value of the total consideration delivered over the fair value of the Class A common stock issuable for the principal amount exchanged pursuant to the original conversion terms and (ii) $12.3 million representing the difference between the fair value and the carrying value, net of unamortized issuance costs, of the liability component of the exchanged 2023 Notes.

Other than this exchange, we have received immaterial requests for conversion since the 2023 Notes initially became convertible, including a request to convert $2.0 million of principal amount of 2023 Notes during the twelve months ended December 31, 2022. We expect this request will be settled in February 2023 upon the completion of the observation period.

The Notes consisted of the following (in thousands):

	As of December 31, 2022			As of December 31, 2021		
	2023 Notes	2024 Notes	2026 Notes	2023 Notes	2024 Notes	2026 Notes
Liability:						
Principal	$ 84,748	$ 400,000	$ 400,000	$ 84,748	$ 400,000	$ 400,000
Less: debt discount and issuance costs, net of amortization [1]	(177)	(2,700)	(4,379)	(7,348)	(42,941)	(71,043)
Net carrying amount	$ 84,571	$ 397,300	$ 395,621	$ 77,400	$ 357,059	$ 328,957
Equity, net of issuance costs [2]	$ —	$ —	$ —	$ 46,473	$ 69,749	$ 93,380

[1] As of December 31, 2021, the debt discount component, net of amortization, which is not applicable under ASU 2020-06, was $6.7 million for the 2023 Notes, $38.6 million for the 2024 Notes, and $65.5 million for the 2026 Notes. See Note 2, *Significant Accounting Policies*, for additional information related to the adoption of this accounting standard.

[2] Not applicable under ASU 2020-06. See Note 2, *Significant Accounting Policies*, for additional information related to the adoption of this accounting standard.

The following table sets forth interest expense recognized related to the Notes (in thousands):

	Year Ended December 31,	
	2022	2021
Contractual interest expense	$ 6,424	$ 6,424
Amortization of debt issuance costs and discount [1]	3,296	32,772
Total	$ 9,720	$ 39,196

) The aggregate amortization expense related to the equity component of our Notes, which is not applicable under ASU 2020-06, for the twelve months ended December 31, 2021 was $29.6 million.

The following table sets forth future contractual obligations of contractual interest and principal related to the Notes (in thousands):

	Payments Due by Period				
	Total	Less Than 1 Year	1 to 3 Years	3 to 5 Years	More Than 5 Years
Notes and related interest	$ 904,960	$ 90,960	$ 410,000	$ 404,000	$ —

10. Accrued Payroll and Payroll-Related Liabilities

Accrued payroll and payroll-related liabilities included accrued commissions and bonuses as follows (in thousands):

	As of December 31,	
	2022	2021
Accrued commissions	$ 30,907	$ 16,827
Accrued bonuses	$ 20,903	$ 20,729

11. Stockholders' Equity

Dual Class Common Stock Structure

In February 2017, we implemented a dual class common stock structure in which each then existing share of common stock converted into a share of Class B common stock and we also authorized a new class of common stock, the Class A common stock. The Class A common stock is entitled to one vote per share and the Class B common stock is entitled to ten votes per share. The Class A common stock and Class B common stock have the same dividend and liquidation rights, and the Class B common stock converts to Class A common stock at any time at the option of the holder, or automatically upon the date that is the earliest of (i) the date specified by a vote of the holders of at least 66 2/3% of the outstanding shares of Class B common stock, (ii) March 29, 2027, and (iii) the date that the total number of shares of Class B common stock outstanding cease to represent at least 10% of the aggregate number of shares of Class A common stock and Class B common stock then outstanding. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, except for certain permitted transfers described in our restated certificate of incorporation, or the Restated Certificate. Upon the creation of the dual class common stock structure all outstanding options to purchase common stock became options to purchase an equivalent number of shares of Class B common stock, and all RSUs became RSUs for an equivalent number of shares of Class B common stock.

Upon the effectiveness of the Restated Certificate in March 2017, the number of shares of capital stock that were authorized to be issued consisted of 500,000,000 shares of Class A common stock, $0.0001 par value per share, 500,000,000 shares of Class B common stock, $0.0001 par value per share, and 10,000,000 shares of undesignated preferred stock, $0.0001 par value per share.

Preferred Stock

Our board of directors is authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series, and to fix the designation, powers, preferences, and rights of the shares of each series and any of its qualifications, limitations, or restrictions, in each case without further vote or action by our stockholders. As of December 31, 2022, no shares of preferred stock were outstanding.

12. Equity Awards

Amended and Restated 2013 Stock Plan

We granted options and RSUs under our Amended and Restated 2013 Stock Plan, or 2013 Plan, until March 22, 2017, when the plan was terminated in connection with our IPO. Accordingly, no shares are available for future issuance under the 2013 Plan following the IPO. The 2013 Plan continues to govern outstanding equity awards granted thereunder.

2017 Equity Incentive Plan

In February 2017, our board of directors adopted, and our stockholders approved, the 2017 Equity Incentive Plan, which was subsequently amended in May 2022 following approval by our stockholders at our 2022 annual meeting of stockholders, or the 2017 Plan. The 2017 Plan initially became effective on March 22, 2017, and as amended became effective on May 25, 2022, and is the successor plan to the 2013 Plan. Under the 2017 Plan, we initially reserved (i) 5.1 million shares of Class A common stock for future issuance and (ii) 0.5 million shares of Class A common stock equal to the number of Class B shares reserved but not issued under the 2013 Plan as of the effective date of the 2017 Plan. The number of shares of Class A common stock reserved for issuance under our 2017 Plan will increase automatically on the first day of January of each of 2018 through 2027 by the lesser of (a) 5% of the total outstanding shares of our Class A and Class B common stock as of the immediately preceding December 31 and (b) the number of shares determined by our board of directors. The share reserve may also increase to the extent that outstanding awards under our 2013 Plan expire or terminate. As of December 31, 2022, an aggregate of 8.6 million shares of Class A common stock were reserved for issuance under the 2017 Plan.

2017 Employee Stock Purchase Plan

In February 2017, our board of directors adopted, and our stockholders approved, the 2017 Employee Stock Purchase Plan, or 2017 ESPP. The 2017 ESPP became effective on March 23, 2017. Under the 2017 ESPP, we reserved 1.1 million shares of Class A common stock for future issuance. The number of shares of Class A common stock reserved for issuance under our 2017 ESPP will increase automatically on the first day of January of each of 2018 through 2027 by the lesser of (a) 1% of the total outstanding shares of our Class A and Class B common stock as of the immediately preceding December 31 and (b) the number of shares determined by our board of directors. The aggregate number of shares issued over the term of the 2017 ESPP may not exceed 11,000,000 shares of Class A common stock.

Under the 2017 ESPP, eligible employees are allowed to purchase shares of our Class A common stock at a discount through payroll deductions of up to 15% of their eligible compensation, subject to plan limitations. Except for the first offering period, which began on the date our Registration Statement on Form S-1 covering the initial public offering of our shares of Class A common stock was declared effective by the SEC, purchase periods are approximately six months in duration starting on the first trading date on or after February 15th and August 15th of each year. Participants are able to purchase shares of our Class A common stock at 85% of the lower of its fair market value on (i) the first day of the purchase period or on (ii) the purchase date, which is the last day of the purchase period.

In 2022, employees purchased 0.2 million shares of Class A common stock at an average price per share of $44.09. As of December 31, 2022, 3.6 million shares of Class A common stock were available for future issuance under the 2017 ESPP.

Stock Options

Stock options generally vest over a period of three to four years and expire ten years from the date of grant. Unvested stock options will generally be forfeited in case of a termination of employment or service before the satisfaction of the vesting schedule. Vested stock options generally expire three months after termination of employment.

Stock option activity, excluding activity related to the ESPP, during the year ended December 31, 2022 consisted of the following (in thousands, except weighted-average information):

	Options Outstanding		Weighted-Average Exercise Price		Aggregate Intrinsic Value	Weighted-Average Remaining Contractual Term (Years)
Options outstanding at December 31, 2021	2,008	$	65.05	$	45,785	6.5
Granted	—		—			
Exercised	(265)		5.08	$	12,222	
Canceled/forfeited	(637)		131.04			
Options outstanding at December 31, 2022	1,106	$	41.43	$	24,191	5.2
Exercisable	1,009	$	37.68	$	24,191	4.9
Vested and expected to vest December 31, 2022	1,106	$	41.43	$	24,191	5.2

In September 2022, we extended an offer to certain executives to participate in a value-for-value exchange of certain outstanding out-of-the-money stock options for unvested restricted stock units. These replacement RSUs will vest over a period of two years, subject to continuous service by the grantee through each applicable vesting date, and settle in shares of our Class A common stock upon vesting.

The non-cash incremental stock-based compensation cost associated with the option exchange was $1.1 million. The incremental cost was measured as the excess of the fair value of the replacement RSUs over the fair value of the stock options surrendered, measured immediately prior to the modification using a Black-Scholes option pricing model. For fully vested options, incremental cost was recognized as of the modification date. For unvested options, total remaining unrecognized compensation cost of the canceled options as of the modification date and incremental cost resulting from the modification will be recognized over the new service period.

The total intrinsic value of options exercised in the years ended December 31, 2022, 2021 and 2020 was $12.2 million, $14.0 million and $118.6 million, respectively. The weighted-average exercise price of options granted in the years ended December 31, 2021 and 2020 was $87.52 and $139.88, respectively.

There were no options granted during the year ended December 31, 2022. As of December 31, 2022, there was $3.0 million of unrecognized compensation cost related to unvested stock options, which is expected to be recognized over a weighted-average period of 1.3 years.

Valuation Assumptions

The following table presents the weighted-average assumptions used for stock options granted under our 2017 Plan during the years ended December 31, 2021 and 2020 and for shares of our Class A common stock issued under our ESPP for each of the years indicated:

	Stock Options [(1)]		Employee Stock Purchase Plan		
	2021	2020	2022	2021	2020
Expected term (in years)	5.8	5.8	0.5	0.5	0.5
Estimated volatility	56 %	48 %	62 %	55 %	78 %
Risk-free interest rate	1 %	1 %	2 %	— %	1 %
Estimated dividend yield	—	—	—	—	—
Weighted average fair value	$ 45.20	$ 62.37	$ 20.72	$ 27.42	$ 48.07

) There were no options granted during the year ended December 31, 2022.

Restricted Stock Units

RSUs granted under the 2017 Plan generally vest over a period of three to four years. RSUs will generally be forfeited in case of a termination of employment or service before the satisfaction of the vesting schedule. From time to time, we also grant performance-based RSUs, or PRSUs. PRSUs have the same characteristics as our RSUs, but contain one or more performance-based metrics that must be met prior to vesting. The following disclosures related to RSU activity include the impact of PRSUs. RSU activity during the year ended December 31, 2022 consisted of the following (in thousands, except weighted-average information):

	Awards Outstanding [(1)]	Weighted-Average Grant Date Fair Value
RSUs outstanding at December 31, 2021	3,693	$ 85.64
Granted	9,588	50.64
Vested	(2,278)	75.09
Canceled/forfeited	(1,075)	72.32
RSUs outstanding at December 31, 2022	9,928	$ 55.70

(1) Includes restricted stock units with market, performance, and/or service conditions.

In February 2022, we also granted PRSUs to certain executives with a grant date fair value of $5.3 million. These PRSUs are subject to vesting based on performance and service conditions and, assuming such conditions are met, will vest quarterly beginning in 2023 based upon the percentage achievement of certain annual recurring revenue targets.

In March 2022, we granted 3.0 million market-based PRSUs to certain executives. These awards have an explicit service period of two years and a market performance period of seven years. The awards have six tranches, each representing a separate stock price hurdle. Provided the relevant stock price hurdle is met, each tranche will vest on the later of the (i) second anniversary of the grant date and (ii) certification date once the performance goal is achieved. The performance goal is defined as when the 60-trading day volume-weighted average price, or VWAP, equals or exceeds the relevant stock price hurdle.

Awards subject to market conditions are valued on the date of grant using a Monte Carlo simulation valuation model. The grant date fair value of the market-based PRSUs, measured using a Monte Carlo simulation valuation model, was $109.7 million. The derived service period was also determined through use of the simulation model. Compensation cost associated with awards granted with market-based vesting conditions is recognized over the requisite service period for each tranche using the graded vesting method. The fair values of the market-based PRSUs granted have been estimated utilizing the following assumptions:

Underlying stock price at valuation date	$ 54.24
Estimated volatility	53 %
Risk-free interest rate	2 %
Simulation term (in years)	7

The total intrinsic value of RSUs and PRSUs vested in the years ended December 31, 2022, 2021 and 2020 was $131.5 million, $70.4 million and $62.5 million, respectively. The weighted-average grant date fair value of RSUs and PRSUs granted in the years ended December 31, 2022, 2021 and 2020 was $50.64, $79.62 and $132.89, respectively.

As of December 31, 2022, total unrecognized compensation expense related to unvested RSUs and PRSUs, including the market-based PRSUs described above, was approximately $429.5 million, which is expected to be recognized over a weighted-average period of 2.1 years.

We classified stock-based compensation expense in the accompanying consolidated statements of operations and comprehensive income (loss) as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Cost of revenue	$ 16,982	$ 6,421	$ 2,550
Research and development	54,667	28,903	18,388
Sales and marketing	79,741	40,519	28,463
General and administrative	75,128	48,222	25,515
Total	$ 226,518	$ 124,065	$ 74,916

13. Retirement Plan

We established a savings plan that qualifies as a defined contribution plan under Section 401(k) of the Internal Revenue Code of 1986, as amended, or the Code, for the benefit of our employees. Our contributions to the savings plan are discretionary and vest immediately. We contributed approximately $12.7 million, $7.7 million and $6.2 million to the savings plan for the years ended December 31, 2022, 2021, and 2020, respectively.

14. Leases

We have various non-cancelable operating leases for our corporate offices in California, Colorado, Massachusetts, New York, and Texas in the United States and Australia, Canada, the Czech Republic, France, Germany, Japan, Singapore, Ukraine, the United Arab Emirates and the United Kingdom. These leases expire at various times through 2029. Certain lease agreements contain renewal options, rent abatement, and escalation clauses that are factored into our determination of lease payments when appropriate.

In March 2022, we ceased using our previous corporate headquarters in Irvine, California and entered into a new sublease agreement for the remaining term of the underlying lease. As a result, we performed a recoverability test by comparing the future cash flows attributable to the asset group to the carrying value of the long-lived assets, including the right-of-use asset and fixed assets utilized by this facility. Based on this evaluation, we determined that long-lived assets with a carrying value of $11.6 million were no longer recoverable and recorded a right-of-use asset and fixed asset impairment of $6.1 million and $2.1 million, respectively.

On December 31, 2022, we ceased using certain of our corporate offices in California, Colorado, Massachusetts, Texas, Canada and Germany as part of our real estate rationalization efforts. As a result, we performed a recoverability test by comparing the future undiscounted cash flows to the carrying value of each asset group which included the right-of-use asset and fixed assets utilized by the facilities for each affected property and determined that the carrying values were not recoverable. The fair value of each asset group was based on the estimated sublease income for the affected facilities, taking into consideration the time it will take to obtain a sublease tenant and the applicable discount rates. Based on this evaluation, we determined that long-lived assets with a carrying value of $43.4 million were no longer recoverable. We recorded non-cash impairment charges of $27.9 million and $7.1 million to the right-of-use assets and fixed assets respectively. The impairment was determined by comparing the fair value of the impacted asset groups to their carrying value as of the impairment measurement date, as required under ASC 360, *Property, Plant, and Equipment*. The impairment is presented in impairment of long-lived assets on the consolidated statements of operations and comprehensive loss.

The table below presents lease-related assets and liabilities recorded on the consolidated balance sheet (in thousands):

		As of December 31,	
	Classification	**2022**	**2021**
Assets			
Operating lease right-of-use assets	Operating lease right-of-use assets	$ 50,997	$ 102,681
Liabilities			
Operating lease liabilities (current)	Accrued expenses and other current liabilities	$ 19,211	$ 19,954
Operating lease liabilities (noncurrent)	Operating lease liabilities	61,265	78,784
Total lease liabilities		$ 80,476	$ 98,738

Lease Costs

The following lease costs were included in our consolidated statements of operations and comprehensive income (loss) (in thousands):

	Year Ended December 31,	
	2022	**2021**
Operating lease cost	$ 23,743	$ 20,575
Short-term lease cost	1,151	118
Variable lease cost	5,687	4,820
Total lease cost	$ 30,581	$ 25,513

Supplemental Information

The table below presents supplemental balance sheet information related to operating leases:

	Year Ended December 31,	
	2022	**2021**
Weighted-average remaining lease term (in years)	4.4	5.3
Weighted-average discount rate	4.55 %	4.57 %

Undiscounted Cash Flows

The table below reconciles the undiscounted cash flows for each of the first five years, and total of the remaining years, to the operating lease liabilities recorded on the consolidated balance sheet as of December 31, 2022 (in thousands):

	Operating Leases [1]
2023	$ 22,480
2024	19,869
2025	19,035
2026	15,867
2027	7,825
Thereafter	4,093
Total minimum lease payments	$ 89,169
Less imputed interest	(8,693)
Present value of future minimum lease payments	$ 80,476
Less current obligations under leases	(19,211)
Long-term lease obligations	$ 61,265

[1] Excludes expected sublease income of approximately $4.5 million over the next five years.

15. Commitments and Contingencies

In the ordinary course of business, we enter into purchase orders with vendors for the purchase of goods and services including non-cancelable agreements for software licenses, royalty agreements, advertising and other marketing activities. Our minimum purchase obligations as of December 31, 2022 were as follows (in thousands):

2023	$	52,424
2024		35,978
2025		17,090
2026		8,416
2027		—
Thereafter		—
Total minimum payments	$	113,908

Indemnification

In the ordinary course of business, we enter into agreements in which we may agree to indemnify other parties with respect to certain matters, including losses resulting from claims of intellectual property infringement, damages to property or persons, business losses, or other liabilities. In addition, we have entered into indemnification agreements with our directors, executive officers, and certain other employees that will require us to indemnify them against liabilities that may arise by reason of their status or service as directors, officers, or employees. The terms of these indemnification agreements with our directors, executive officers, and other employees are generally perpetual after execution of the agreement. The maximum potential amount of future payments we could be required to make under certain of these indemnification provisions is unlimited; however, we maintain insurance that reduces our exposure and enables us to recover a portion of any future amounts paid.

As of December 31, 2022 and December 31, 2021, we have not accrued a liability for indemnification provisions we agree to in the ordinary course of business or with our directors, executive officers, and certain other employees pursuant to indemnification agreements because the likelihood of incurring a payment obligation, if any, in connection with these arrangements is not probable or reasonably estimable.

Litigation

From time to time, we may be involved in lawsuits, claims, investigations, and proceedings, consisting of intellectual property, commercial, employment, and other matters, which arise in the ordinary course of business. We are not currently party to any material legal proceedings or claims, nor are we aware of any pending or threatened legal proceedings or claims that could have a material adverse effect on our business, operating results, cash flows, or financial condition should such legal proceedings or claims be resolved unfavorably.

Warranty

We provide an assurance-type warranty to customers that our platform will operate substantially in accordance with its specifications. Historically, no significant costs have been incurred related to product warranties and none are expected in the future and, as such, no accruals for product warranty costs have been made.

16. Income Taxes

The components of loss before provision for (benefit of) income taxes were as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Domestic	$ (208,596)	$ (152,252)	$ (32,569)
Foreign	(105,182)	(25,279)	4,924
Total	$ (313,778)	$ (177,531)	$ (27,645)

The components of the provision for (benefit of) income taxes were as follows (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Current:			
Federal	$ —	$ —	$ —
State	249	348	248
Foreign	2,126	229	327
Total current income tax expense	$ 2,375	$ 577	$ 575
Deferred:			
Federal	$ 2,398	$ 1,472	$ (2,617)
State	—	—	(958)
Foreign	(52)	101	(271)
Total deferred income tax benefit:	$ 2,346	$ 1,573	$ (3,846)
Total	$ 4,721	$ 2,150	$ (3,271)

The following table reconciles our provision for (benefit of) income taxes at the statutory rate to that at the effective tax rate, using a U.S. federal statutory tax rate of 21% for each of 2022, 2021, and 2020 (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Income tax at federal statutory rate	$ (65,893)	$ (37,281)	$ (5,806)
Increase/(decrease) in tax resulting from:			
State income tax expense, net of federal	(3,579)	(4,574)	(3,105)
Foreign rate differential	12,660	847	47
Stock-based compensation	20,877	5,563	(16,852)
Change in valuation allowance	46,626	42,246	24,363
Meals and entertainment	809	464	764
Research credits	(6,242)	(5,070)	(4,677)
Other	(537)	(45)	1,995
Total provision for (benefit of) income taxes	$ 4,721	$ 2,150	$ (3,271)

The following table shows the significant components of deferred income tax assets (liabilities) (in thousands):

	As of December 31,	
	2022	2021
Deferred tax assets:		
Net operating losses	$ 97,200	$ 55,763
Accruals and reserves	639	5,070
Research & other credits	40,105	25,209
Intangibles	9,784	12,559
Operating lease liabilities	18,417	22,011
Effect of Section 163(j) on interest expense	11,763	11,550
Stock-based compensation	20,869	21,322
Section 174 expenses	34,067	—
Convertible senior notes	9,799	—
Other	—	167
Total deferred tax assets	242,643	153,651
Less valuation allowance	(195,958)	(89,298)
Net deferred tax assets	46,685	64,353
Deferred tax liabilities:		
Operating lease right-of-use assets	(11,103)	(22,810)
Deferred commissions	(15,885)	(12,789)
Convertible senior notes	—	(14,121)
Other	(331)	—
Capitalized software development costs	(4,691)	(2,176)
Deferred revenue	(13,416)	(11,211)
Total deferred tax liabilities	(45,426)	(63,107)
Net deferred tax assets	$ 1,259	$ 1,246

We record a valuation allowance against our deferred tax assets if and to the extent it is more likely than not that we will not recover our deferred tax assets. In evaluating the need for a valuation allowance, we weight all relevant positive and negative evidence, including among other factors, historical financial performance, forecasts of income over the applicable carryforward periods, and our market environment, with each piece weighted based on its reliability. As of December 31, 2022, we had insufficient objective positive evidence that we will generate sufficient future pre-tax income to overcome the negative evidence of cumulative losses. Accordingly, we continue to record a full valuation allowance against our net U.S. and U.K. deferred tax assets as of December 31, 2022.

The following table shows the changes in our valuation allowance (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Beginning balance	$ 89,298	$ 44,046	$ 19,683
Increase in valuation allowance due to Lore IO acquisition	—	3,006	—
Increase in valuation allowance due to Trifacta acquisition	33,119	—	—
Increase in valuation allowance due to adoption of ASC 2020-06	26,915	—	—
Other increase in valuation allowance	46,626	42,246	24,363
Ending balance	$ 195,958	$ 89,298	$ 44,046

On October 6, 2021, we acquired all of the outstanding shares of Hyper Anna. We did not record a valuation allowance with respect to this acquisition as Hyper Anna consolidates into our Australian entity, Alteryx ANZ Holdings Pty. Ltd., which operates as a cost-plus entity whose future income will most likely absorb net operating losses, which do not expire in Australia.

On October 21, 2021, we acquired all of the outstanding shares of Lore IO. At the time of acquisition, Lore IO had tax attributes related to net operating losses and research and development credits, which resulted in the increase in our valuation allowance as shown in the table above.

On February 7, 2022, we acquired all of the outstanding shares of Trifacta, Inc. At the time of acquisition, Trifacta, Inc. had tax attributes related to net operating losses and research and development credits, which resulted in the increase in our valuation allowance as shown in the table above.

As of December 31, 2022, we had U.S. federal, U.S. state, U.K., and Australia income tax net operating loss carryforwards of approximately $201.0 million, $147.8 million, $207.9 million, and $4.0 million, respectively. The U.S. federal and state net operating losses will begin to expire in 2035 and 2024, respectively, unless previously utilized. The U.K. and Australia net operating losses can be carried forward indefinitely.

Under Sections 382 and 383 of the Code, annual use of our net operating loss carryforwards and tax credits may be limited if a cumulative change in ownership of more than 50% occurs within a three-year period. We determined that ownership changes occurred in 2015 and 2019, which limit the future annual use of our net operating loss carryforwards and tax credits, but neither of which permanently disallows any of those tax attributes.

We have not accrued U.S. state income taxes or foreign withholding taxes on the earnings of our foreign subsidiaries, as these amounts are intended to be indefinitely reinvested in operations outside the United States. As of December 31, 2022, there were immaterial cumulative amounts of undistributed earnings at our foreign subsidiaries.

We are subject to taxation in the United States and various states and international jurisdictions. Our U.S. federal tax returns are open for examination for tax years 2018 and forward, and our state tax returns are open for examination for tax years 2015 and forward. Our tax returns for international jurisdictions are open for examination for tax years 2017 and forward. However, net operating loss and other tax attribute carryforwards utilized in subsequent years continue to be subject to examination by the tax authorities until the year to which the net operating loss and/or other tax attributes are carried forward is no longer subject to examination. Neither we nor any of our subsidiaries are currently under examination from tax authorities in the jurisdictions in which we do business.

At December 31, 2022, we had approximately $14.3 million of unrecognized tax benefits. If fully recognized, $9.1 million of the unrecognized tax benefits would reduce our net operating losses. In the next 12 months, we do not expect our unrecognized tax benefits to decrease. Accrued interest related to our uncertain tax positions was not material at December 31, 2022.

The following table shows the activity in gross unrecognized tax benefits (in thousands):

	Year Ended December 31,		
	2022	**2021**	**2020**
Balance at beginning of year	$ 8,864	$ 8,520	$ 7,556
Additions based on tax position related to the current year	5,291	344	652
Additions for tax positions of prior years	117	—	312
Balance at end of year	$ 14,272	$ 8,864	$ 8,520

17. Basic and Diluted Net Loss Per Share

The following table presents the computation of net loss per share (in thousands, except per share amounts):

	Year Ended December 31,		
	2022	2021	2020
Numerator:			
Net loss attributable to common stockholders	$ (318,499)	$ (179,681)	$ (24,374)
Denominator:			
Weighted-average shares used to compute net loss per share attributable to common stockholders, basic and diluted	68,510	67,191	66,058
Net loss per share attributable to common stockholders, basic and diluted	$ (4.65)	$ (2.67)	$ (0.37)

Since we were in a loss position for all periods presented, basic net loss is the same as diluted net loss per share for all periods as the inclusion of all potential shares of common stock outstanding would have been anti-dilutive. The following weighted-average equivalent shares of common stock were excluded from the diluted net loss per share calculation because their inclusion would have been anti-dilutive (in thousands):

	Year Ended December 31,		
	2022	2021	2020
Stock awards	8,278	4,876	4,053
Convertible senior notes	6,136	6,137	6,137
Total shares excluded from net loss per share	14,414	11,013	10,190

18. Segment and Geographic Information

Operating segments are defined as components of an enterprise for which separate financial information is evaluated regularly by the chief operating decision maker, or CODM, who is our Chief Executive Officer, in deciding how to allocate resources and assess our financial and operational performance. Our CODM evaluates our financial information and resources and assesses the performance of these resources on a consolidated and aggregated basis. As a result, we have determined that our business operates in a single operating segment.

Long-lived assets classified by geographic location were as follows (in thousands):

	As of December 31,	
Long-lived assets:	2022	2021
United States	$ 106,338	$ 151,514
Other countries	13,816	22,437
Total	$ 120,154	$ 173,951

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Reporting.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, 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 of 1934, as amended, or the Exchange Act, as of December 31, 2022. Our disclosure controls and procedures are designed to provide reasonable assurance that information we are required to disclose in the reports we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures, and is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Based on this evaluation, our Chief Executive Officer and Chief Financial Officer concluded as of December 31, 2022 that our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Report on 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 Exchange Act Rules 13a-15(f) and 15d-15(f). Our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2022 based on the criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on the results of its evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2022. The effectiveness of our internal control over financial reporting as of December 31, 2022 has been audited by Deloitte and Touche LLP, an independent registered public accounting firm, as stated in its report which is included herein.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Disclosure Controls and Procedures

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or internal control over financial reporting will prevent all errors and all fraud. A control system, no matter how well designed and implemented, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues within a company are detected. The inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple errors or mistakes. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and may not be detected. 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.

Report of Independent Registered Public Accounting Firm

To the shareholders and the Board of Directors of Alteryx, Inc.

Opinion on Internal Control over Financial Reporting

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

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated financial statements as of and for the year ended December 31, 2022, of the Company and our report, dated February 9, 2023, expressed an unqualified opinion on those financial statements and included an explanatory paragraph regarding the Company's adoption of Accounting Standards Update No. 2020-06, *Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity.*

Basis for Opinion

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

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

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Deloitte & Touche LLP

Los Angeles, California
February 9, 2023

Item 9B. Other Information.

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections.

None.

PART III

Item 10. Directors, Executive Officers, and Corporate Governance.

The information required by this item, including information relating to compliance with Section 16(a) of the Exchange Act, will be included in our Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the SEC, within 120 days of the fiscal year ended December 31, 2022, and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this item will be included in our Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2022, 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 will be included in our Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2022, and is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item will be included in our Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2022, and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services.

The information required by this item will be included in our Definitive Proxy Statement for the 2023 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2022, and is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

The following documents are filed as part of this Annual Report:

1 Financial Statements

Our consolidated financial statements are listed in the "Index to Consolidated Financial Statements" under Part II, Item 8, of this Annual Report.

2 Financial Statement Schedules

All financial statement schedules have been omitted because they are not required or are not applicable, or the required information is shown in our consolidated financial statements or the notes thereto.

3 Exhibits

Exhibit Number	Exhibit Title	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Restated Certificate of Incorporation.	10-Q	001-38034	3.1	May 11, 2017	
3.2	Amended and Restated Bylaws.	8-K	001-38034	3.1	February 6, 2023	
4.1	Form of Class A common stock certificate.	S-1/A	333-216237	4.1	March 13, 2017	
4.2	Indenture dated May 18, 2018 between Alteryx, Inc. and U.S. Bank National Association.	8-K	001-38034	4.1	May 18, 2018	
4.3	Indenture, with respect to the 2024 Notes, dated August 12, 2019 between Alteryx, Inc. and U.S. Bank National Association.	8-K	001-38034	4.1	August 12, 2019	
4.4	Indenture, with respect to the 2026 Notes, dated August 12, 2019 between Alteryx, Inc. and U.S. Bank National Association.	8-K	001-38034	4.2	August 12, 2019	
4.5	Description of Class A Common Stock Registered Under Section 12 of the Securities Exchange Act of 1934, as amended.	10-K	001-38034	4.6	February 15, 2022	
10.1*	Form of Indemnity Agreement.	S-1	333-216237	10.1	February 24, 2017	
10.2*	Amended and Restated 2013 Stock Plan and forms of award agreements.	S-1	333-216237	10.2	February 24, 2017	
10.3*	Amended and Restated 2017 Equity Incentive Plan.	8-K	001-38034	10.1	May 27, 2022	
10.4*	Amended and Restated 2017 Equity Incentive Plan forms of award agreements.	S-1	333-216237	10.3	February 24, 2017	
10.5*	2017 Employee Stock Purchase Plan and form of subscription agreement.	S-1	333-216237	10.4	February 24, 2017	
10.6*	Alteryx, Inc. Omnibus Bonus Plan	8-K	001-38034	10.1	February 6, 2023	
10.7*	Alteryx 2022 Discretionary Bonus Plan.					X
10.8*	Offer Letter by and between the Registrant and Mark Anderson.	10-K	001-38034	10.18	February 12, 2021	
10.9*	Amended and Restated Offer Letter by and between the Registrant and Kevin Rubin.	10-K	001-38034	10.10	March 1, 2019	
10.10*	Offer Letter by and between the Registrant and Paula Hansen.	10-K	001-38034	10.8	February 15, 2022	

Exhibit Number	Exhibit Title	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.11*	Offer Letter by and between the Registrant and Suresh Vittal.	10-K	001-38034	10.9	February 15, 2022	
10.12	Lease between the Registrant and Irvine Spectrum Terrace I LLC, dated October 14, 2019.	10-K	001-38034	10.17	February 14, 2020	
10.13*	Form of Severance and Change in Control Agreement.	10-Q	001-38034	10.1	May 4, 2022	
10.14*	Executive Chairman Agreement by and between the Registrant and Dean A. Stoecker.	10-K	001-38034	10.19	February 12, 2021	
10.15*	Amended and Restated Offer Letter by and between the Registrant and Christopher M. Lal.	10-K	001-38034	10.9	March 1, 2019	
21.1	List of Subsidiaries.					X
23.1	Consent of Deloitte & Touche, LLP, independent registered public accounting firm.					X
24.1	Power of Attorney (included on signature pages to Annual Report).					
31.1	Certification of Mark Anderson, Chief Executive Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
31.2	Certification of Kevin Rubin, Chief Financial Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.					X
32.1#	Certification of Mark Anderson, Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					X
32.2#	Certification of Kevin Rubin, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.					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 Extension Calculation Linkbase Document.					X
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.					X
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document.					X
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.					X
104	Cover Page Interactive Data File - the cover page from the Registrant’s Annual Report on Form 10-K for the year ended December 31, 2022 is formatted in Inline XBRL.					X

* Indicates a management contract or compensatory plan.

\# This certification is deemed not filed for purposes of section 18 of the Exchange Act, or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act or the Exchange Act.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned thereunto duly authorized.

		Alteryx, Inc.	
Date:	February 9, 2023	By:	/s/ Mark Anderson
			Mark Anderson Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Mark Anderson and Kevin Rubin, and each of them, as his or her true and lawful attorneys-in-fact, proxies, and agents, each with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact, proxies, and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, proxies, and agents, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Title	Date
/s/ Mark Anderson Mark Anderson	Chief Executive Officer and Director (Principal Executive Officer)	February 9, 2023
/s/ Kevin Rubin Kevin Rubin	Chief Financial Officer (Principal Financial Officer)	February 9, 2023
/s/ Chris Natali Chris Natali	Chief Accounting Officer (Principal Accounting Officer)	February 9, 2023
/s/ Dean A. Stoecker Dean A. Stoecker	Executive Chairman and Chairman of the Board of Directors	February 9, 2023
/s/ Charles R. Cory Charles R. Cory	Director	February 9, 2023
/s/ Jeffrey L. Horing Jeffrey L. Horing	Director	February 9, 2023
/s/ Anjali Joshi Anjali Joshi	Director	February 9, 2023
/s/ Timothy I. Maudlin Timothy I. Maudlin	Director	February 9, 2023
/s/ CeCelia Morken CeCelia Morken	Director	February 9, 2023
/s/ Eileen M. Schloss Eileen M. Schloss	Director	February 9, 2023
/s/ Dan Warmenhoven Dan Warmenhoven	Director	February 9, 2023

Alteryx 2022 Discretionary Bonus Plan
(as amended February 1, 2023)

1. Purpose

The Alteryx Discretionary Bonus Plan (the "Plan") is a performance-based incentive bonus plan designed to align the interests of our company, our employees, and our investors, enable Alteryx to achieve and exceed specified financial goals, attract and retain employees to enhance our leadership position within the industry, and recognize and reward employees for their individual contributions to our success. This Plan document outlines the program overall, including timing, eligibility, and administration.

2. Performance Period

There are two performance periods:

- January 1, 2022 through June 30, 2022 (the "First Period"); and
- January 1, 2022 through December 31, 2022 (the "Second Period").

3. Eligibility

Eligible participants are Alteryx employees and employees of its wholly owned subsidiaries who:

- Are employed prior to April 1, 2022 for the First Period payment, if any, and prior to October 1, 2022 for the Second Period payment, if any,
- Are in positions deemed as bonus eligible,
- Are actively employed and in good standing on the date that bonus payments are made,
- Are not eligible for another incentive, commission, or variable compensation plan (e.g., sales/services commission plans), and
- Are not temporary employees, leased employees, interns or contractors.

Eligibility for Rehires:

- Employees who terminate during the First Period, are rehired prior to April 1, 2022, and whose rehire date is less than 30 days from the date of termination will be eligible for the First Period payment, and no proration will be made for such period. All other criteria will apply (e.g., other prorations, performance, etc.).
- Employees who terminate during the Second Period (but after June 30, 2022), are rehired prior to October 1, 2022, and whose rehire date is less than 30 days from the date of termination will be eligible for the Second Period payment and no proration will be made for such period. All other criteria will apply (e.g., other prorations, performance, etc.).

4. Payments

First Period bonus payments will be paid through the normal local country payroll.

Second Period bonus payments will be paid through the normal local country payroll schedule on or before March 31, 2023.

Eligible employees on qualified Leave of Absence ("LOA") at the time of payment will receive payment upon return from LOA.

5. Bonus Calculation and Proration

First Period Bonus Calculation.

Base salary and target bonus percentage, each as of June 30, 2022, are used to determine the bonus target amount for the First Period, subject to adjustment based on company performance and individual performance.

The maximum First Period bonus payment is 50% of the employee’s annual target award amount (prorated for any partial period of employment during the First Period).

Employees who start employment with Alteryx during the First Period and before April 1, 2022 will be eligible for a prorated First Period bonus amount based on their employment start date (or, if applicable, based on their time in a bonus plan-eligible role); provided, however, that employees who started or transferred to a bonus plan-eligible role, on or after April 1, 2022 will not be eligible for a First Period bonus payment. For example, an employee whose start date was February 15, 2022 would have a prorated bonus eligibility for the First Period of 75% (or 136/181 days).

For employees on a qualified Leave of Absence during the First Period, the eligible target bonus will be calculated with no proration. Bonus eligibility will be prorated for employees who are on personal leave (*i.e.,* voluntary and unpaid leave) during the First Period.

Second Period Bonus Calculation.

Base salary and target bonus percentage, each as of December 31, 2022, are used to determine the bonus target amount for the Second Period, subject to adjustment based on company performance and individual performance.

The maximum Second Period bonus payment is 100% of the employee’s annual target award amount multiplied by the applicable bonus pool funding percentage and individual performance percentage, as described below, up to a maximum of 200% of the employee’s annual target amount. If an employee received a First Period payment, such payment will be deducted from the Second Period payment.

Employees who start employment with Alteryx during the Second Period and before October 1, 2022 will be eligible for a prorated Second Period bonus amount based on their employment start date (or, if applicable, based on their time in a bonus plan-eligible role); provided, however, that employees who started or transferred to a bonus plan-eligible role, on or after October 1, 2022 will not be eligible for a Second Period bonus payment. For example, an employee whose start date was February 15, 2022 would have a prorated bonus eligibility of 88% (or 320/365 days).

For employees on a qualified Leave of Absence during the Second Period, the eligible target bonus will be calculated with no proration. Bonus eligibility will be prorated for employees who are on personal leave (*i.e.,* voluntary and unpaid leave) during the Second Period.

6. Company Performance Metrics

Company performance will be determined by achievement of a specific Annual Recurring Revenue (“ARR”) target.

ARR represents the annualized recurring value of all active subscription contracts at the end of the First Period and Second Period, as applicable, including or excluding certain adjustments as determined by the Chief Financial Officer.

The ARR target for the First Period is $729 million.

The ARR target for the Second Period is $840 million.

An employee’s bonus award calculated on the above performance metric may be increased or decreased at the discretion of management to reflect individual performance or extraordinary events.

7. Bonus Pool Funding

The Company must achieve a minimum performance threshold of ARR for the bonus pool to be funded and paid for the First Period and the Second Period.

At 100% achievement of the ARR performance target, the bonus pool will be funded at 100% of target. If ARR is above or below the target (as applicable), the bonus pool funding amount will be interpolated between pool funding amounts as exemplified on the charts shown below.

Measurement: ARR Target for First Period (January – June)		
Target Achievement (%)	**Target Achievement ($)**	**Pool Funding**
< 80%	< $583M	$0
80%	$583M	80%
100%	$729M	100%

Measurement: ARR Target for Second Period (Full Year)		
Target Achievement (%)	**Target Achievement ($)**	**Pool Funding**
< 80%	< $672M	$0
80%	$672M	80%
100%	$840M	100%
110%	$924M	150%
115%+	$966M+	200%

ARR achievement of less than 80% of target will not result in pool funding, achievement of 80% to 100% of target will result in pool funding at a percent-for-percent rate, achievement of greater than 100% through 110% of target will result in pool funding at an incremental 5% for every incremental percent achievement between 100% and 110% (for example, 105% achievement will yield 125% pool funding), achievement of greater than 110% of target will result in pool funding of an incremental 10% for every incremental percent achievement over 110% up to a maximum pool funding of 200% (for example, 112% achievement will yield 170% pool funding and 135% achievement will yield 200% pool funding).

8. Individual Performance

Based on performance and the achievement of individual goals (for example, in Objectives and Key Results [OKR]) as determined by the employee's manager and/or leadership chain, modification to a participant's target award can range from 0% to 150% (but in no event will such individual modification result in a participant receiving more than 100% of participant's target award for the First Period or 150% of the participant's target award for the Second Period). The total of all bonus awards for any Department cannot exceed 100% of the available pool unless approved by the Chief Financial Officer.

9. Payment Calculation

Bonus payment calculation will be made using the formula below for the First Period:

Eligible Compensation	x	Bonus Pool Funding %	x	Individual Performance %	=	Individual Bonus Award (up to a maximum of 50% of the employee's annual target award amount)

Bonus payment calculation will be made using the formula below for the Second Period:

Eligible Compensation	x	Bonus Pool Funding %	x	Individual Performance %	=	Individual Bonus Award (less any First Period payment)

For example:

For the First Period: An employee joined Alteryx on February 15, 2022 with an annual salary of $50,000 USD and an 8% annual bonus target (or $4,000, subject to 75% proration for the partial period of employment during the First Period). If the company were to achieve 89% of the ARR performance target for the First Period, the bonus payment would be calculated as follows:

- First Period Bonus Opportunity (“Eligible Compensation” above): $1,500 (50% of $4,000 [$50,000 x 8%] x 75%)
- Bonus pool funding: 89%
- Bonus Award paid for First Period: $1,335 ($1,500 x 89%)

For the Second Period: An employee joined Alteryx on February 15, 2022 with an annual salary of $50,000 USD and an 8% annual bonus target (or $4,000, subject to 88% proration for partial year of employment). If the company were to achieve 110% of the ARR performance target for the Second Period and the employee’s manager decided to award the employee 105% of their bonus due to high performance on their OKRs, the bonus payment would be calculated as follows:

- Second Period Bonus Opportunity (“Eligible Compensation” above): $3,520 ($4,000 [$50,000 x 8%] x 88%)
- Bonus pool funding: 150%
- Individual performance %: 105%
- Bonus Award before reduction for First Period payment: $5,544 ($3,520 x 150% x 105%)
- Bonus Award paid for Second Period: $4,209 ($5,544 - $1,335)

10. Administration

The Plan will be administered by Alteryx’s Compensation Committee, with day-to-day management to be conducted by the Chief People Officer (CPO), the Chief Financial Officer (CFO) and their respective organizations.

The CPO, CFO and Compensation Committee are responsible for:

- Determining eligibility for participation in the Plan,
- Determining performance measures, performance targets, award opportunities and earned awards, and
- Interpreting the Plan and prescribing, amending, suspending or rescinding the terms of the Plan as needed.

11. General Provisions

Alteryx may deduct any taxes required by law to be withheld upon payment of any bonus under this Plan.

Bonus awards granted under the Plan will not be transferrable other than by will or laws of descent and distribution.

Nothing in the Plan or in any bonus award granted will confer on an individual any right to an award, or to continue in the employ of the company or any of its subsidiaries or deter in any way the right of the company or any subsidiary to terminate any employment.

Exhibit 21.1

Subsidiaries of Alteryx, Inc.

Name of Subsidiary	Jurisdiction
Alteryx Analytics Spain, S.L.	Spain
Alteryx ANZ Holdings Pty Limited	Australia
Alteryx ANZ Pty Limited	Australia
Alteryx Canada Inc.	Canada
Alteryx Czech Republic s.r.o.	Czech Republic
Alteryx France SARL	France
Alteryx GmbH	Germany
Alteryx Hong Kong Limited	Hong Kong
Alteryx Japan GK	Japan
Alteryx MEA FZ-LLC	United Arab Emirates
Alteryx Netherlands B.V.	Netherlands
Alteryx Singapore Pte. Ltd.	Singapore
Alteryx Sweden AB	Sweden
Alteryx UK Ltd	England and Wales
Alteryx Ukraine LLC	Ukraine
AYX India Private Limited	India
ClearStory Data Inc.	Delaware
Feature Labs, Inc.	Delaware
Hyper Anna Overseas Pty Ltd	Australia
Hyper Anna Pty. Ltd.	Australia
Lore IO, Inc.	Delaware
Trifacta Inc.	Delaware
Trifacta APJ Pte. Ltd.	Singapore
Trifacta GmbH	Germany
Trifacta Software India LLP	India
Trifacta UK Limited	England and Wales
Yhat, LLC	Delaware

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-266489, 333-262759, 333-253080, 333-236473, 333-230024, 333-223511 and No. 333-216931 on Form S-8, of our reports dated February 9, 2023, relating to the financial statements of Alteryx, Inc. and the effectiveness of Alteryx, Inc.'s internal control over financial reporting appearing in this Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ DELOITTE & TOUCHE LLP

Los Angeles, California
February 9, 2023

Exhibit 31.1

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark Anderson, certify that:

1. I have reviewed this Annual Report on Form 10-K of Alteryx, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting, which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 9, 2023

/s/ Mark Anderson

Mark Anderson
Chief Executive Officer
(*Principal Executive Officer*)

Exhibit 31.2

CERTIFICATION PURSUANT TO RULE 13a-14(a) OR 15d-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934, AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kevin Rubin, certify that:

1. I have reviewed this Annual Report on Form 10-K of Alteryx, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting, which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 9, 2023

/s/ Kevin Rubin

Kevin Rubin
Chief Financial Officer
(*Principal Financial Officer*)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Mark Anderson, Chief Executive Officer of Alteryx, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the fiscal year ended December 31, 2022 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 9, 2023

/s/ Mark Anderson

Mark Anderson
Chief Executive Officer
(*Principal Executive Officer*)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Kevin Rubin, Chief Financial Officer of Alteryx, Inc. (the "Company"), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the fiscal year ended December 31, 2022 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 9, 2023

/s/ Kevin Rubin

Kevin Rubin
Chief Financial Officer
(*Principal Financial Officer*)