

**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, 2016

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 001-37885

Apptio, Inc.

(Exact name of Registrant as specified in its Charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

11100 NE 8th Street, Suite 600
Bellevue, WA 98004
(Address of principal executive offices)

26-1175252
(I.R.S. Employer
Identification No.)

(866) 470-0320

(Registrant's telephone number, including area code)

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

Title of each class
Class A Common Stock, per value \$0.0001 per share

Name of each exchange on value registered
Nasdaq Global Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES NO

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files). YES NO

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definition of "large accelerated filer", "accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a small reporting company)

Small reporting company

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 voting and non-voting common equity held by non-affiliates of the registrant, based on the closing price of a share of the registrant's Class A common stock on December 30, 2016 as reported by the NASDAQ stock market on such date was approximately \$434.2 million. The registrant has elected to use December 30, 2016, which was the last business day of the registrant's most recently completed fiscal year, as the calculation date because on June 30, 2016 (the last business day of the registrant's most recently completed second fiscal quarter), the registrant was a privately-held company. Shares of the registrant's Class A common stock and Class B common stock held by each executive officer and director and by each other person who may be deemed to be an affiliate of the registrant, have been excluded from this computation. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of February 14, 2017, the number of shares of the registrant's Class A common stock outstanding was 6,900,000 and the number of shares of the registrant's Class B common stock outstanding was 31,484,315.

Portions of the registrant's definitive Proxy Statement for the 2017 Annual Stockholders' Meeting, which the registrant expects to file with the Securities and Exchange Commission within 120 days of December 31, 2016, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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PART I

Forward-Looking Statements

This report, including the sections entitled “Business,” “Risk Factors,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and certain information incorporated by reference into this report contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are identified by words such as “believe,” “anticipate,” “expect,” “intend,” “plan,” “will,” “may,” “seek” and other similar expressions. You should read these statements carefully because they discuss future expectations, contain projections of future results of operations or financial condition or state other “forward-looking” information. These statements relate to our future plans, objectives, expectations, intentions and financial performance and the assumptions that underlie these statements.

These forward-looking statements include, but are not limited to:

- our future financial performance, including our expectations regarding our revenue, cost of revenue, gross profit or gross margin, operating expenses, ability to generate cash flow and ability to achieve and maintain future profitability;
- the impact of competition in our industry and innovation by our competitors;
- the anticipated trends, growth rates and challenges in our business and in the TBM market;
- maintaining and expanding our customer base and our relationships with go-to-market partners;
- our liquidity and working capital requirements;
- our anticipated growth and growth strategies and our ability to effectively manage that growth and effect these strategies;
- our ability to sell our solutions and expand internationally;
- our involvement with, and the activities of, the TBM Council;
- the reliability of the third-party infrastructure on which our solutions depend;
- our ability to hire and retain necessary qualified employees to expand our operations;
- our ability to adequately protect our intellectual property;
- the effect on our business of litigation to which we are or may become a party;
- our ability to stay abreast of new or modified laws and regulations that currently apply or become applicable to our business both in the United States and internationally;
- our use of our net proceeds from our initial public offering;
- our ability to maintain an effective system of internal controls necessary to accurately report our financial results and prevent fraud; and
- the estimates and estimate methodologies used in preparing our consolidated financial statements and determining option exercise prices.

In combination with the risk factors we have identified, we cannot assure you that the forward-looking statements in this report will prove to be accurate. Further, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all, or as predictions of future events. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

Item 1. Business.

Overview

We are the leading provider of Technology Business Management, or TBM, solutions. We pioneered the TBM software category to provide the strategic business management system for the CIO because IT needed a data-driven system comparable to those leveraged by other enterprise functions such as sales, human resources and finance. Our cloud-based platform and SaaS applications enable IT leaders to analyze, optimize and plan technology investments, and to benchmark their financial and operational performance against peers. We empower IT leaders to transform IT into a service provider, to navigate the cloud transition, and to shift technology resources to drive more business innovation.

Our TBM solutions consist of a powerful, cloud-based platform and a suite of SaaS applications: Cost Transparency, IT Benchmarking, Business Insights, Bill of IT and IT Planning. Our data and analytics platform leverages proprietary modeling capabilities, powerful self-service analytics and planning workflows to enable customers to make actionable, data-driven strategic and operational decisions. Our platform automatically aggregates, cleanses and establishes relationships across large amounts of customer data from disparate sources and maps the data into our standard IT operating model. Our solutions are the business system of record for our customers' IT organizations.

Technology has become a strategic imperative for enterprises regardless of size and industry, driven by the digitalization of business processes. To gain and maintain a competitive advantage, IT leaders must focus more time and resources on transforming their IT business while optimizing their existing infrastructure and applications. IT organizations manage large budgets and are faced with a rapidly changing, vastly more complicated and increasingly diverse technology and vendor ecosystem. In the absence of a TBM solution, some IT leaders attempt to manage their investments manually using spreadsheets or general purpose business intelligence tools, while others do not even try.

Enterprise IT is undergoing a fundamental transition as cloud computing and technology-as-a-service delivery models offer compelling benefits and economics. IT organizations must transition from traditional internally delivered IT infrastructure and applications to a more hybrid and service-oriented approach. This hybrid delivery and service model allows modern IT organizations to optimize service options and deliver IT as a service to meet business needs, but evaluating, deciding and managing between alternatives is complex. IT organizations are in the early stages of a long-term transformation to delivering IT as a service through the use of public and private clouds as well as third party service providers. Our SaaS applications enable IT leaders to make data-driven decisions, such as which workloads to move into the cloud or leave on-premise.

Our growing customer base, which includes over 40% of the FORTUNE 100, spans a broad spectrum of industries, including financial services, professional services, technology, energy, consumer goods, manufacturing, healthcare, media, retail and transportation, as well as federal and state government agencies. We offer our solutions on a subscription basis, with subscription fees based on spend managed by our applications and the number of applications or capabilities for which the customer has subscribed. Our customers' annual IT spend ranges from less than \$10 million to billions of dollars.

We formed the Technology Business Management Council, or TBM Council, as a separate non-profit entity in 2012 to foster the growth of the TBM category. The TBM Council has become the leading community for CIOs, IT professionals and IT finance professionals dedicated to advancing the discipline of managing the business of IT, with over 3,200 members as of December 31, 2016. This community establishes industry-endorsed best practices for TBM and helps create a powerful network effect for TBM solutions. Our relationship with the TBM Council helps us introduce a growing body of CIOs and other leaders to the advantages of TBM and to our solutions.

We had total revenue of \$160.6 million, \$129.3 million and \$106.6 million, in 2016, 2015 and 2014, respectively, reflecting a year-over-year increase of 24% and 21% in 2016 and 2015, respectively. For 2016, 2015 and 2014, our net losses were \$31.6 million, \$41.0 million and \$32.9 million, respectively, as we focused on growing our business.

Our Opportunity

We believe the total addressable market for TBM solutions is large and largely unpenetrated. The total addressable market for our solutions is driven by global IT spend, which Gartner, an independent technology industry and market research firm, forecast in a July 2016 report to be \$2.7 trillion for 2016, which is the sum of all enterprise IT spending by vertical industry market worldwide. Subscription fees for our applications are based primarily on the customer's annual costs being managed by our applications and the number of applications or capabilities for which the customer has subscribed. We typically sell a subset of the five applications we offer so that customers can realize a rapid time to value from a targeted implementation, and seek to sell additional applications over time. Assuming full deployment of all of our current applications, subscription fees typically range from 0.1% to 0.5% of a customer's annual IT spend. With a reasonable expectation of our ability to penetrate the market, we believe that the current total addressable market for our existing TBM solutions is approximately \$6.0 billion.

We also believe that, with the development of additional capabilities and applications, our platform can be extended to other areas of customers' businesses. In fact, our solutions are currently deployed by several customers to address a variety of non-IT, enterprise business management use cases in shared services such as legal, human resources and facilities and for analyzing operational metrics such as unit costs of various offerings or transactions, and we believe that enterprise business management use cases such as these represent future market opportunities. If we are successful in our strategy of developing and selling additional applications beyond our current offerings, we believe that our market opportunity will expand.

Our Technology Business Management Solutions

We provide the business system of record for our customers' IT organizations, which enables them to analyze, optimize and plan investments, and benchmark their financial and operational performance against peers. Our TBM solutions consist of a powerful, cloud-based platform and a suite of SaaS applications that empower IT leaders to understand, communicate and transform IT to drive greater value from technology investments.

Key elements of our solutions include:

Adaptive Data Management. Our purpose-built, cloud-based data and analytics platform aggregates, cleanses and correlates large amounts of customer data from a wide variety of disparate sources. Our platform automatically establishes relationships between data from various sources and transforms the data into intuitive, dynamic and easily usable reports through our applications. Our typical customer starts with a handful of data sources and has the option to integrate data from hundreds of sources. For example, a customer may choose to aggregate and analyze general ledger data from Oracle, human resources data from Workday, billing data from Microsoft, and service management and other operational data from HP, VMware and ServiceNow, although they have the capability to capture data from significantly more sources. Our database preserves historical context of the data, and easily tracks and adapts to changing technology and policy requirements and IT complexity.

Standard IT Operating Model and Taxonomy. Our platform is underpinned by a flexible framework that provides a standard model for how IT costs are captured, categorized and allocated to IT services and business services. While we allow our customers to modify this framework, we encourage customers to adopt the Apttio TBM Unified Model, or ATUM, our standardized cost and operational model. ATUM is the first of its kind in our industry. This model was developed in conjunction with the TBM Council's efforts to establish standards for TBM, including common taxonomies, frameworks and benchmarks that organize and translate IT costs, operational data and other metrics into IT and business perspectives. We believe that ATUM is a strategic advantage and will be an important element to broaden the market for TBM solutions and accelerate market adoption.

Visual Modeling and Powerful Calculation Engine. Our visual modeling capabilities allow users to intuitively build and manage the financial and operational model of their IT organization. The powerful calculation engine in our platform then allows the models to be applied across very large data sets accessible to users through the analytics capabilities included in our applications. Our platform, modeling capabilities and calculation engine can be applied to IT business services and to non-IT enterprise business services, such as legal, human resources and facilities.

Intuitive, Self-Service Analytics. Our analytics interface is powerful, yet easy to use by a broad range of IT and business users. Our solutions enable analysis, scenario modeling and planning with intuitive data visualization. Our analytics can be applied to infrastructure modernization, vendor consolidation, application rationalization, cloud decisions, personnel costs and business services. Our solutions enable users to start with a high level view such as costs and utilization allocated across major categories, such as compute, application, storage, network and cloud. The user may then drill through various levels of detail — such as fully burdened costs by application — all the way to a single line item cost in a monthly bill for a given application.

Modular Applications. Our platform currently includes five SaaS applications that can be deployed in a modular fashion. This approach allows customers to realize a rapid time to value and also provides us with a significant opportunity to sell additional applications. Customers gain rapid return on investment from our solutions by making data-driven decisions allowing them to shift expenses from running the business to transforming the business, or by automating processes that the IT organization is currently performing manually. Our applications are:

- ***Cost Transparency.*** The Cost Transparency application allows customers to understand their enterprise’s IT costs to drive better and faster resource investment decisions.
- ***IT Benchmarking.*** The IT Benchmarking application enables customers to see how they compare with their peers and share this information within their organization.
- ***Business Insights.*** The Business Insights application enables customers to optimize their IT investments by better understanding the value to the enterprise of such investments and what drives that value.
- ***Bill of IT.*** The Bill of IT application allows IT leaders to communicate the IT costs attributable to each business partner and to empower each business partner to be a better consumer of IT by giving the partner choices that help reduce and recover costs.
- ***IT Planning.*** The IT Planning application allows IT finance and budget owners to plan more effectively and confidently, align faster with financial plans and business priorities, and hold budget owners accountable with variance analysis.

Data Aggregation and Benchmarking. As a cloud-based solution serving many customers and industry verticals, we are uniquely positioned to capture data across our customer base, forming a new source of IT-specific business data. We also license additional data from third parties to enable our benchmarking offerings. Over time, our customers will benefit from aggregated anonymized benchmarking data providing additional performance insights based on peer groups by industry, business size and geography. We expect to offer our benchmarking data to platform customers and others to drive additional growth and advance our position as a TBM thought leader.

Benefits of Our Solutions

Our Technology Business Management solutions deliver the following benefits:

Increase the Value of IT. Our solutions deliver transparency and actionable insights to IT leaders, enabling them to manage IT in the context of the business. This allows IT professionals to strategically align with C-level executives and other business leaders to deliver positive business contributions. As a result, our solutions enable IT leaders to change their IT organizations from a reactive cost center to a proactive service provider, and increase the return on business investments through initiatives such as application rationalization and infrastructure optimization.

Understand and Communicate IT Costs. Our solutions provide IT and business leaders with a business system of record that gives a comprehensive, transparent and up-to-date view of the costs of IT services associated with specific business functions and services. With this insight, IT leaders can work with business leaders to evaluate different IT options, such as cloud versus owned infrastructure, and custom-built or purchased versus SaaS applications, and make better, data-driven decisions.

Optimize IT Investments to Drive Better Business Results. Our solutions enable IT professionals to more efficiently manage existing IT investments and focus incremental effort and spend on innovating and expanding technology investments where they can drive the most value for the business. IT professionals can also leverage

value-added insight from benchmarking in order to better understand and optimize asset and service utilization and cost. In addition, unlike initiatives based on the advice of consultants or laborious, internally developed legacy business processes held together by spreadsheets, that are too expensive or time consuming to undertake regularly, our solutions, with their dynamic analytics, key performance indicators, and benchmarking capabilities, allow professionals to optimize investments on an ongoing basis.

Plan IT Investments. IT professionals can collaborate with the business to understand their demand for IT services, and then plan efficiently and predictably to meet these demands. For example, customers can model various scenarios with various complexity, such as how costs associated with a single application priced on a per-user basis with multiple pricing bands would change if a business unit added more users, or what would the effect be if the business took multiple applications from one or more vendors and aggregated various levels of usage across the enterprise.

Transform IT into a Service Provider. Our solutions enable IT to be delivered as a service regardless of whether it is provided by internal resources, cloud providers or other external service providers. Using our solutions, IT leaders can provide transparency into total and unit costs of alternatives and are able to correlate costs to expected value. This empowers business leaders with real, data-driven choices to better align IT and business objectives.

Our Growth Strategy

We are pursuing the following strategies to grow our business:

Expand Our Customer Base. We believe the market for TBM solutions is large, growing and under-penetrated. We intend to leverage our strong brand, leadership position, high-profile customer base from a wide range of industries and experienced sales team to target customers with a wide range of IT spend and across industries. As of December 31, 2016, we had approximately 360 customers and we believe there are tens of thousands of potential customers worldwide with an annual IT spend in excess of \$10 million that could benefit from our solutions.

Further Maximize Our Existing Customer Base. Many customers initially subscribe for a subset of the applications we offer so they can realize rapid time to value by reducing costs or shifting technology investments to where they will be most productive. We seek to generate additional revenue from customers by selling subscriptions to other existing or newly developed applications, and expanding the use of our solutions to additional business units.

Continue to Foster the IT Leader Community. We will continue to support the TBM Council and leverage our leadership position in a large and growing IT leader community to increase awareness and adoption of TBM solutions. Our relationship with the TBM Council helps us introduce a growing body of CIOs and other leaders to the advantages of TBM and to our solutions, and continues to create a network effect as members exchange information, ideas and experiences with TBM.

Continue to Deliver Innovative Products. We have made, and will continue to make, significant investments in product development to enhance the capabilities of our existing applications and expand the number of applications on our extensible platform to address customers' evolving needs. For example, we launched two releases to enhance the capabilities of our IT Planning Foundation application – Project Financial Planning and Services Demand Planning – in late 2016, and we released an upgraded version of our Bill of IT application in early 2017, to further enhance the value of our suite of TBM applications.

Leverage Our Unique Position to Deliver Valuable Benchmarking Data. Over time, we believe there will be substantial opportunities to leverage our large, unique and growing aggregated data set by embedding data insights in our solutions, or by selling data to customers or third parties on a standalone basis.

Expand Internationally. We have a growing presence in Europe and Australia. We believe that there is significant opportunity for our TBM solutions outside of the United States and we intend to expand our direct sales force and third-party relationships to further penetrate these and other regions.

Expand into Enterprise Business Management. Many shared services groups, such as legal, facilities and human resources, face similar challenges to IT in making data-driven decisions and lack a software solution to help them do so. We currently have several customers utilizing our solutions in legal, facilities and other shared services functions, and to analyze unit costs of various offerings or transactions outside of shared services, and we believe a substantial market exists for enterprise business management outside of the IT organization.

Applications and Technology

Applications

We have built a suite of cloud-based TBM applications that run on our platform. We currently offer five applications that can be deployed in a modular fashion, with the following core capabilities and features:

Cost Transparency. The Cost Transparency application allows customers to understand their enterprises' IT costs to drive better and faster resource investment decisions. This understanding is accomplished by putting actionable, current, and trusted information about IT costs at the fingertips of the decision-makers. The Cost Transparency application translates raw financial and IT data into an automated sub-ledger model for IT finance, coupled with real-time and intuitive analytics. IT organizations can then use this information to leverage the best practices in the ATUM standard, or a customized model to ensure that the IT leaders' cost and key performance indicator, or KPI, categories are directly relevant to the IT business owners. By understanding IT costs, IT organizations can replace assumption and emotion with defensible facts.

IT Benchmarking. The IT Benchmarking application enables customers to see how they compare with their peers and share this information within their organization. IT Benchmarking extends the Cost Transparency application by surfacing side-by-side peer benchmarks beside the customer's actual KPIs. With IT Benchmarking, customers can evolve their costing monthly via the Cost Transparency application and iteratively improve their data quality and completeness. The data that informs our benchmarking application is global and spans 23 industries. The data is based on real engagements, and peer costs are calculated via consistent cost structures. Today, we utilize a combination of third-party data and our own aggregated data to enable our benchmarking offerings. ATUM normalizes data and enables IT leaders to make actionable apples-to-apples comparisons of their monthly actual costs against a database of current benchmarks from relevant peer organizations.

Business Insights. The Business Insights application enables customers to optimize their IT investments by better understanding the value to the enterprise of such investments and what drives that value. Business Insights does this by correlating operational IT data, such as capacity, performance and utilization, with financial data provided by the Cost Transparency application. The Business Insights application provides additional insights that enable IT organizations to automate the ongoing measurement and tracking of key metrics on the utilization, performance and quality of IT products and services delivered. It also allows IT organizations to measure the financial impact of changes in performance and utilization so IT leaders can improve and demonstrate efficiency, justify new investments and accelerate decisions. It enables customers to accelerate initiatives and business cases for investment, drive greater efficiency, facilitate better conversations between IT and the business, and improve IT consumption behavior by the business.

Bill of IT. The Bill of IT application allows IT organizations to communicate the IT costs attributable to business partners in the enterprise, and to empower business partners to be better consumers of IT by giving the partner choices that help reduce and recover costs. The Bill of IT application does this by leveraging the information rendered from the Cost Transparency application or other data sources to create and deliver an internal invoice for the IT services consumed by the recipient. The Bill of IT application enables IT cost reporting through a simple but interactive "bill" template that allows IT leaders to provide budget, cost, price-based or hybrid bills to their business partners. This then enables cost recovery and unit rate analysis. It shows IT consumption by business units, departments, and users, and provides business-controlled demand levers, such as usage, headcount, and actual or planned consumption. The application also provides "what-if" modeling to collaborate on cost reduction.

IT Planning. The IT Planning application automates planning of IT within a single source via a collaborative workflow resource for IT finance and budget owners so these teams can plan more effectively and confidently. The IT Planning application does this by automating, centralizing, and simplifying any budget, forecast and variance

tracking processes in a manner that is purpose-built for the IT finance function and budget owner. The application enables automated baseline budget creation, roll-up of budget requests, and flexible approval hierarchies. IT Planning incorporates IT specific planning capabilities, and shifts the process from that of managing spreadsheet logistics to consulting and guiding the business.

Technology

ATUM. We developed ATUM, in conjunction with the TBM Council to provide a standardized TBM model utilizing industry-endorsed best practices. Without a standard methodology, organizations face the task of how to combine finance and IT data and develop a framework that accurately represents the cost and operations of IT.

Organizations that adopt ATUM can realize better alignment between IT, finance and the rest of the business by having a common language about the IT operating structure and work with the confidence that they have embraced industry best practices. This approach offers easier, more frequent comparisons of performance with peers via ATUM-aligned benchmarking, reducing the challenge of peer comparability that is a significant impediment to historical benchmarking approaches. Importantly, our applications are built to the latest ATUM standards to enable rapid adoption within our customers and have the adaptability to evolve the model over time as IT practices change.

There are three core elements of ATUM:

- **Data:** Enables organizations to source the data elements, formats, and relationships needed by the model.
- **Taxonomy:** Provides a way to organize components of key IT operational functions into standard management categories for consistency and comparability.
- **Model:** Prescribes standard costing and allocation rules to apportion costs to IT categories to ensure alignment with industry best practices.

Proven, Scalable Technology Foundation

Our solutions are built on an innovative and highly adaptive foundation of modern technologies.

Purpose-Built Platform. Our powerful platform is built to enable TBM applications. It provides integrated data ingestion and management, cost analytics and visualization capabilities. Each element was designed and built specifically for TBM applications with end-to-end optimization providing the highest levels of scalability, while maintaining high levels of performance and reliability. Our platform includes an integrated visual design experience, which makes its modeling capabilities accessible to non-technical users. Our platform is also highly configurable and extensible, making it customizable for a variety of uses, evaluations and models, able to integrate other third-party solution providers, and enables our customers to manage the rapid pace of change in the technology market.

Data Ingestion. Our solutions can easily ingest data from wide variety of disparate sources, including financial, budget, HR, asset management, project management, service desk, monitoring and provisioning systems, as well as from vendor and cloud provider billing systems. We can ingest data through a direct connection between our solutions and the vendor's solution, through a customer's extract, transform and load infrastructure or by ingesting a file, which may be as simple as a flat file exported from the relevant system and imported into our solution. While we have relationships with many key vendors in the technology ecosystem to facilitate data ingestion, our solutions are not dependent on those relationships.

Automated Data Management. Our platform integrates innovative technologies that greatly ease the cleansing, transformation and mapping process for source data. Our platform persists all source data, intrinsically versions all data and models, and can index to any point of time. This allows our customers to effectively rewind to points in time with full fidelity. Our journal-based architecture provides both auditability and granular rollback of individual transactions and actions in the system.

Calculation Engine. Our in-memory calculation engine optimizes calculations allowing for high levels of scalability, performance and interactivity. This enables our customers to benefit from high performance for the most

complex models with large data sets updated on a regular basis. This calculation engine is designed to scale-up, by increasing resources on a given machine, and scale-out, by deploying work across multiple machines, to increase performance without impacting the customer's user experience.

Proven Scalability. Our platform has proven its capacity to scale to enterprises representing some of the largest IT budgets in the world, while being leveraged for much smaller customers. Our platform can scale calculations or components of work across multiple servers. Through this infrastructure we are able to provide a consistent and highly interactive application experience up through customer solutions at multi-terabyte scale.

Security. We employ a number of technologies, policies and procedures to protect customer data and utilize data centers and services that that have SSAE 16 or ISO 27001 attestations or equivalent attestations.

Shared and Dedicated Services. Our platform and applications combine shared and dedicated services, to provide the best performance for our applications while also optimizing our cost to deliver.

Portable. Our platform and applications are portable across hosting environments. Our solutions can run in co-located data centers and public cloud environments, which provides us with flexibility in deployment of our solutions.

Other Technology Components. We utilize industry standard development environments and programming languages. We broadly utilize Java-based environments and JavaScript. We utilize standard database technologies where applicable, including MySQL. Our software is deployed on virtual server instances running on industry standard servers, networking and storage.

TBM Council

The TBM Council is a non-profit entity that promotes interaction, learning, and the development and improvement of standards and best practices to members, many of which dovetail with our solutions. Our relationship with the TBM Council helps us introduce a growing body of CIOs and other leaders to the advantages of TBM and our solutions, creating a network effect as members exchange information, ideas and experiences with TBM. Our relationship with the TBM Council also enabled development of ATUM, our standardized cost and operational model for the business of IT, which is the first of its kind in our industry. We consider this relationship an important growth catalyst for the TBM category and our business

In an effort to further our and the industry's understanding of TBM, we formed the TBM Council in April 2012 as a nonprofit professional organization dedicated to advancing TBM. We are deeply invested in the TBM Council and committed to its future success. We are the founding member of the TBM Council, we serve as its technical advisor, our chief executive officer is a member of its board of directors and our chief marketing officer serves as its current president. Since its inception, we have invested significant financial and operational resources in the TBM Council's growth. As a result of our relationship with the TBM Council's finances and corporate governance, we consolidate the operations of the TBM Council into our financial statements.

Today, the TBM Council has become the leading community for CIOs, IT leaders and IT finance professionals dedicated to advancing the discipline of managing the business of IT, with over 3,200 members as of December 31, 2016, and a board of directors comprised of IT thought leaders from some of the world's most respected companies. The TBM Council hosts an annual TBM Conference in the U.S. plus two international conferences to explore best practices that produce greater value, align IT with business goals, and deliver TBM breakthroughs. The 2016 U.S. conference had over 1,000 attendees, over 900 of whom were customers, prospective customers or partners.

We believe that the future success of our business depends upon the development and adoption of the market for TBM. The TBM Council provides an opportunity for IT leaders to be introduced to standards and best practices of TBM and accelerates adoption of our TBM solutions in the market. In addition, we believe that the wide-spread adoption of TBM standards promulgated by the TBM Council will help to broaden the market for TBM solutions to companies with a wider range of annual IT spend, and drive customer adoption of ATUM.

Customers

As of December 31, 2016, we had approximately 360 customers, including more than 40% of the FORTUNE 100. We have customers in a wide variety of industries, including financial services, professional services, technology, energy, consumer goods, manufacturing, healthcare, media, retail and transportation. Multiple companies or divisions within a single consolidated enterprise that each have a separate paid subscription for our applications are each treated as a separate customer. Typically, our customer subscription contracts have a one- to three-year term and provide for the purchase of certain applications or capabilities being subscribed for by our customers. For 2016, 2015 and 2014, no single customer represented more than 10% of our revenue.

Since inception, we have invested heavily in our professional services organization to help ensure that customers successfully deploy and adopt our applications. We believe that the success of our customers is critical to the success of our overall business and therefore we have continued to expand our professional services and partner ecosystem. We actively engage with our existing customer base to assess whether our customers are satisfied and realizing the benefits from our solutions. While these efforts often require a substantial commitment and upfront costs, we believe our investment in professional services will create opportunities to expand our customer relationships over time. In addition, we have made substantial investments to drive increased customer adoption of our solutions and of ATUM. We believe that our efforts to develop more standardized applications will enable us to provide our TBM solutions to a broader set of organizations while reducing the per customer investment required to promote success. For 2016, 2015 and 2014, we derived 19%, 23% and 26%, respectively, of total revenue from professional services.

Sales and Marketing

We sell substantially all of our applications through our direct sales organization. Our direct sales team is comprised of inside sales and field sales personnel who are organized by geography, account size, and role. We generate customer leads, accelerate sales opportunities and build brand awareness through our marketing programs, through our strategic relationships and by our participation in the TBM Council. Our marketing programs target technology professionals and senior business leaders. Our principal marketing programs include:

- recommendations from key customers;
- field marketing events for customers and prospects;
- sales development representatives who respond to incoming leads to convert them into new sales opportunities;
- participation in, and sponsorship of, TBM Council conferences;
- integrated marketing campaigns, including direct e-mail, online web advertising, blogs and webinars;
- public relations, analyst relations and social media initiatives;
- cooperative marketing efforts with partners, including joint press announcements, joint trade show activities, channel marketing campaigns and joint seminars; and
- use of our website to provide application and company information, as well as learning opportunities for potential customers.

We have also developed go-to-market partnerships with a number of key technology, system integrator and consultant partners, both domestically and internationally, to help customers and potential customers validate our solutions and provide introductions to potential customers, and in some cases to resell our software services, or provide professional services related to our solutions. We anticipate that we will continue to develop a select number of third-party relationships to help grow our business.

Competition

The market for TBM solutions is relatively new and rapidly evolving. In many cases, our primary competition is legacy business processes held together by spreadsheets by our prospective customers. Occasionally we encounter

either custom software developed in-house or by consultants, or legacy solutions such as ERP or business intelligence solutions repurposed by in-house IT and finance departments of our potential customers to meet specific business needs. Our competitors also include larger companies, such as ServiceNow, that provide a suite of products and services, a few niche vendors that provide subsets of TBM capabilities, and several specialized companies that currently target the TBM market through solutions that are tailored to a specific TBM use case or industry. Service management software vendors and others in adjacent segments also have solutions that offer a subset of TBM capabilities, generally targeted around their core offerings. We have ongoing partnerships with many of these vendors and many customers ingest IT finance and operational data from products these vendors provide.

We believe the principal factors affecting a company's competitive advantage as a provider of TBM solutions include the following:

- platform reliability and availability;
- ease of use;
- the use of customer data to drive the information provided in TBM solutions, including benchmarking;
- breadth of applications, product features and capabilities;
- focus on, and expertise in, the TBM market;
- price of products and services;
- breadth of expertise of sales organization;
- strength of professional services organization;
- independence of the TBM vendor and trustworthiness of information being delivered;
- IT business management expertise and thought leadership;
- ability to attract customers through demonstrated customer successes; and
- company size and financial stability of operations.

We believe that we compete effectively on each of the factors listed above; however, we expect competition to intensify in the future. It is possible that the large software vendors who currently do not have an offering in the TBM category, some of which operate in adjacent product categories today, may in the future bring such a solution to market through product development, acquisitions or other means. In addition, several of our competitors have greater name recognition, much longer operating histories, more and better-established customer relationships, larger sales forces, larger marketing and software development budgets and significantly greater resources than we do. Therefore, it is possible that we may not compete favorably with competitors with respect to certain of the foregoing factors.

Data Center Operations

We rely heavily on data centers and other technologies and services provided by third parties in order to operate critical functions of our business. We host our applications and serve our customers from multiple redundant data centers in the following geographies: North America, Western Europe, and Australia. While we procure and operate all infrastructure equipment delivering our applications, the data centers that we use are operated by third parties. In addition, some of our platform and applications are delivered using a Virtual Private Cloud infrastructure built on Amazon Web Services, or AWS.

Research and Development

Our ability to compete depends in large part on our continuous commitment to research and development and our ability to introduce new applications, technologies, features and capabilities in a timely manner. Our research and development organization is responsible for design, development, testing and release. Our efforts are focused on developing new products and core technologies and further enhancing the functionality, reliability, performance and

flexibility of existing solutions. We focus our efforts on anticipating customer demand in bringing new products and new versions of existing products to market in order to remain competitive in the marketplace.

Research and development expenses were \$35.5 million, \$30.6 million and \$23.1 million for 2016, 2015 and 2014, respectively.

Intellectual Property

We rely on a combination of trade secret, copyright, trademark, patent and other intellectual property laws, contractual arrangements, such as assignment, confidentiality and non-disclosure agreements, and confidentiality procedures and technical measures to gain rights to and protect the technology and intellectual property used in our business. We actively pursue registration of our trademarks and service marks in the United States, Australia, Singapore, and the European Community.

As of December 31, 2016, we owned eight issued U.S. patents and 16 pending U.S. patent applications. We also owned eight pending and granted counterpart applications worldwide, including three European Patent Office applications, one Australian patent application, three United Kingdom patent applications, and one Patent Cooperation Treaty application. The issued U.S. patents that we own are expected to expire between July 2030 and December 2035. We have sole ownership of all of our U.S. patents and pending U.S. patent applications.

Our applications use “open source” software. Open source software is made available to the general public in source code form for use, modification and redistribution on an “as-is” basis under the terms of a non-negotiable license. We also rely on other technology that we license from third parties. Though such third-party technology may not continue to be available to us on commercially reasonable terms, we believe that alternative technology would be available to us.

Our policy is to require employees and independent contractors to sign agreements assigning to us any inventions, trade secrets, works of authorship, and other technology and intellectual property created by them on our behalf and agreeing to protect our confidential information, and all of our key employees and contractors have done so. In addition, we generally enter into confidentiality agreements with our vendors and customers. We also control and monitor access to our software, source code and other proprietary information.

Regulatory Matters

The legal environment of internet-based businesses is evolving rapidly in the United States and elsewhere. The manner in which existing laws and regulations are applied in this environment, and how they will relate to our business in particular, both in the United States and internationally, is often unclear. For example, we sometimes cannot be certain which laws will be deemed applicable to us given the global nature of our business, including with respect to such topics as data privacy and security, pricing, advertising, taxation, content regulation, and intellectual property ownership and infringement.

Data Privacy and Security Laws

Data privacy and security with respect to the collection of personally identifiable information, or PII, continues to be the focus of worldwide legislation and regulation. We are subject to data privacy and security regulation by data protection authorities in the United States (including the states in which we conduct our business) and in other countries where we conduct our business. These regulations include laws requiring holders of personal information to maintain safeguards and to take certain actions in response to a data breach, and, in the European Union, the Data Protection Directive and EU member state implementations thereof, which require comprehensive information privacy and security protections for consumers with respect to PII collected about them. We post on our website our privacy policies and practices concerning the processing, use and disclosure of PII, and certify adherence to and compliance with the U.S.-EU Privacy Shield Framework. Our publication of our Privacy Shield certifications, our privacy policy, and other statements we publish regarding privacy and security may subject us to potential state and federal action if they are found to be deceptive or misrepresentative of our practices. We also may be bound from time to time by contractual obligations, including model contract provisions approved by the

European Commission, that impose additional restrictions on our handling of PII. The various privacy and data security legal obligations that apply to us may evolve in a manner that relates to our practices or the features of our applications or platform, and we may need to take additional measures to comply with such changes in legal obligations and to maintain and improve our information security posture in an effort to avoid information security incidents or breaches affecting PII or other sensitive or proprietary data.

Employees

As of December 31, 2016, we had 731 full-time employees globally, of which 612 work in the U.S. and 119 work internationally. None of our U.S. employees are represented by a labor union or are the subject of a collective bargaining agreement. We have not experienced any work stoppages, and we consider our relations with our employees to be good.

Corporate Information

We were incorporated as Apptio, Inc., a Delaware corporation, in 2007. Our principal executive offices are located at 11100 NE 8th Street, Suite 600, Bellevue, Washington 98004, and our telephone number is (866) 470-0320. Our website address is www.apptio.com. The information on, or that can be accessed through, our website is not part of this report.

Available Information

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy and information statements and amendments to reports filed or furnished pursuant to Sections 13(a), 14 and 15(d) of the Securities Exchange Act of 1934, as amended. The public may obtain these filings at the Securities and Exchange Commission Public Reference Room at 100 F Street, NE, Washington, DC 20549 or by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website at <http://www.sec.gov> that contains reports, proxy and information statements and other information regarding Apptio, Inc. and other companies that file materials with the SEC electronically. Copies of Apptio's reports on Form 10-K, Forms 10-Q and Forms 8-K, may be obtained, free of charge, electronically through our internet website, <http://investors.apptio.com> under the Financials tab.

Item 1A. Risk Factors.

Risks Related to Our Business and Industry

We have a history of losses and we expect our revenue growth rate to decline. As our costs increase, we may not be able to generate sufficient revenue to achieve or maintain profitability in the future.

We incurred net losses of \$31.6 million, \$41.0 million and \$32.9 million in 2016, 2015 and 2014, respectively. We had an accumulated deficit of \$200.3 million at December 31, 2016. We expect that our revenue growth rate will decline over time. We may not be able to generate sufficient revenue to achieve or sustain profitability. We expect to continue to incur losses for the foreseeable future and we expect our costs to increase in future periods as we expend substantial financial and other resources on, among other things:

- sales and marketing, including a continued expansion of our direct sales organization, which will require time before these investments generate sales results;
- hiring of additional employees for our research and development team to support growth, our technology and datacenter infrastructure, enhancements to our cloud architecture, improved disaster recovery protection, increasing security, compliance and operations expenses, and expenses related to required certifications and third-party attestations;
- other software development, including enhancements and modifications related to our business applications, including investments in our software development team;
- international expansion in an effort to increase our customer base and sales;

- continued growth of the customer success team; and
- general and administration, including significantly increasing expenses in accounting and legal related to the increase in the sophistication and resources required for public company compliance and other work arising from the growth and maturity of the company.

These expenditures may not result in additional revenue or the growth of our business. If we fail to continue to grow revenue or to achieve or sustain profitability, the market price of our Class A common stock could decline.

We have a limited operating history, which makes it difficult to evaluate our prospects and future operating results.

We were incorporated in 2007 and introduced our first solution in 2008. Our limited operating history makes our ability to forecast future operating results difficult and subjects us to a number of uncertainties, including our ability to plan and model future growth. Our revenue grew 24%, 21% and 45%, in 2016, 2015 and 2014, respectively, compared to the prior year; however, our historical revenue growth is not necessarily indicative of our future performance. Our revenue growth is expected to decline in future periods due to a number of reasons, which may include the maturation of our business, increase in overall revenue over time, slowing demand for our applications, increasing competition, a decrease in the growth of the markets in which we compete, or if we fail, for any reason, to continue to capitalize on growth opportunities, a decrease in our renewal rates, or a decline in available opportunities as a result of our increased market penetration in one or more of our markets.

We have encountered and will continue to encounter risks and uncertainties frequently experienced by growing companies in rapidly changing industries, such as determining appropriate investments of our limited resources, market adoption of our current and future applications, competition from other companies, acquiring and retaining customers, hiring, integrating, training and retaining skilled personnel, developing new applications, determining prices and contract terms for our applications, and unforeseen expenses and challenges in forecasting accuracy. If our assumptions regarding these risks and uncertainties, which we use to plan our business, are incorrect or change, or if we do not address these risks successfully, our prospects, operating results and business could be harmed.

If the TBM market fails to develop, or we are unable to maintain our leadership within that market category, our business, results of operations, financial condition and growth prospects could be harmed.

Our business model depends upon the development and adoption of the market for TBM solutions and our leadership within that market category. We derive and expect to continue to derive for some period of time the majority of revenue and cash flows from our core TBM solutions. The TBM market is relatively new and is evolving rapidly, and overall market acceptance of the importance of TBM and our solutions is critical to our continued success. If the market for TBM solutions does not continue to grow, or grows more slowly than we expect, or if the market for TBM solutions does not develop as we anticipate, our operating results would be harmed. In addition, successful market adoption will depend in part on our ability to correctly anticipate, identify and build the key features, functions, reports, metric selection, and packaging that is most useful and attractive to the market, all while maintaining sufficient flexibility with the platform as needed to accommodate customer-specific needs.

We derive, and expect to continue to derive, substantially all of our revenue and operating cash flows from TBM solutions and related professional services. If we fail to adapt our solutions to changing market dynamics and customer preferences or to achieve increased market acceptance of our TBM solutions, our business, results of operations, financial condition, and growth prospects would be harmed.

We derive, and expect to continue to derive, substantially all of our revenue and cash flows from TBM solutions and related professional services. As such, the market acceptance of TBM solutions is critical to our success. Demand for our TBM solutions is affected by a number of factors, many of which are beyond our control, such as continued market acceptance of our solutions by customers for existing and new use cases, the timing of development and release of new applications, features, and functionality introduced by our competitors, technological change, and growth or contraction in our addressable market. Although we may expand our efforts in

the marketplace beyond the TBM category, there can be no certainty that any such expansion will generate returns capable of offsetting the costs associated with any such expansion. You should consider our business and prospects based on our current solutions within the TBM category and, in light of the various challenges we and TBM as a category face, including those discussed in this “Risk Factors” section.

Our business model heavily depends on the acquisition of new customers, adoption by current customers of our solutions, renewals of their subscriptions and the purchase of additional subscriptions from us.

In order to maintain or improve our operating results, we depend on the acquisition of new customers, the adoption of additional applications by existing customers and the decision by existing and new customers to renew their subscriptions upon the expiration of their current contract term. Our contracts typically vary in length between one and three years and our customers have no obligation to renew their subscriptions after the expiration of their initial subscription periods. Our customers may elect not to renew, may seek to renew for lower subscription amounts or for shorter contract lengths, and may choose to renew for the same or fewer applications over time. Our renewal rates may decline or fluctuate as a result of a number of factors, including leadership changes within our customers resulting in loss of sponsorship, limited customer resources, pricing changes by us or our competitors, adoption and utilization of our solutions by our customers, customer satisfaction with our applications, the acquisition of our customers by other companies, procurement or budgetary decisions from legislative or other regulatory bodies, and deteriorating general economic conditions. To the extent our customer base continues to grow, renewals and the subscriptions to additional applications by renewing customers will become an increasingly important part of our results. If our customers do not renew their subscriptions for our applications, or decrease the amount they spend with us, revenue will decline and our business will be harmed.

Because our recent growth has resulted in the rapid expansion of our business, we do not have a long history upon which to base forecasts of customer renewal rates, customer upgrade rates or future revenue. As a result, our future operating results may be significantly below the expectations of investors, which could harm the market price of our Class A common stock.

If we fail to effectively develop and expand our sales and marketing capabilities, our ability to increase our customer base and increase acceptance of our TBM solutions could be harmed.

To increase the number of customers and increase the market acceptance of our solutions, we will need to expand our sales and marketing operations, including our domestic and international sales force. We will continue to dedicate significant resources to sales and marketing programs. We believe that there is significant competition for direct sales personnel with the sales skills and technical knowledge that we require. Our ability to achieve significant revenue growth in the future will depend, in large part, on our success in recruiting, training and retaining a sufficient number of direct sales personnel. New hires require significant training and time before they achieve full productivity, particularly in new sales territories. Our recent hires and planned hires may not become as productive as quickly as we would like, and we may be unable to hire or retain sufficient numbers of qualified individuals in the future in the markets where we do business. The effectiveness of our sales and marketing has also varied over time and, together with the effectiveness of any partners or resellers we may engage, may vary in the future. Our business will be harmed if our efforts do not generate a correspondingly significant increase in revenue. We may not achieve anticipated revenue growth from expanding our sales force if we are unable to hire, develop and retain talented sales personnel, if our new sales personnel are unable to achieve desired productivity levels in a reasonable period of time, or if our sales and marketing programs are not effective.

We may experience quarterly fluctuations in our operating results due to a number of factors, which makes our future results difficult to predict and could cause our operating results to fall below expectations.

Our quarterly operating results have fluctuated in the past and we expect them to fluctuate in the future due to a variety of factors, many of which are outside of our control. As a result, our past results may not be indicative of our future performance, and comparing our operating results on a period-to-period basis may not be meaningful. In addition to the other risks described in this report, factors that may affect our quarterly operating results include:

- changes in spending on TBM solutions by our current or prospective customers;
- pricing our applications effectively so that we are able to attract and retain customers without compromising our operating results;
- attracting new customers and increasing existing customers' use of our solutions;
- unexpected sales and transaction execution delays;
- customer renewal rates and the amounts for which agreements are renewed;
- awareness of our brand;
- changes in the competitive dynamics of our market, including consolidation among competitors or customers and the introduction of new applications or capabilities;
- changes to the commission plans, quotas and other compensation-related metrics for our sales representatives;
- the amount and timing of payment for operating expenses, particularly research and development, sales and marketing expenses and employee benefit expenses;
- our ability to manage our existing business and future growth, including increases in the number of customers for our solutions and the introduction and adoption of our solutions in the United States and globally;
- unforeseen costs and expenses related to the expansion of our business, operations and infrastructure, including disruptions in our hosting network infrastructure and privacy and data security;
- the level of international sales and the pricing of sales;
- foreign currency exchange rate fluctuations; and
- general economic and political conditions in our domestic and international markets.

We may not be able to accurately forecast the amount and mix of future subscriptions, size or duration of contracts, revenue and expenses and, as a result, our operating results may fall below our estimates or the expectations of public market analysts and investors. If our revenue or operating results fall below the expectations of investors, or below any estimates we may provide, the market price of our Class A common stock could decline.

We target sales efforts at enterprise customers and the length, cost and uncertainty associated with sales cycles may result in fluctuations in our operating results and our failure to achieve the expectations of investors.

We target sales efforts at enterprises and face long sales cycles, complex customer requirements, substantial upfront sales costs, and a relatively low and difficult to predict volume of sales on a quarter-by-quarter basis. This makes it difficult to predict with certainty our sales and related operating performance in any given period. Our typical sales cycle is approximately six months, but is variable and difficult to predict and can be longer. Customers often undertake a prolonged evaluation of our solutions, including assessing their own readiness, scoping the professional services involved, and comparing our solutions to products offered by our competitors and their ability to solve the problem internally. Moreover, our customers often begin to deploy our solutions on a limited basis, but nevertheless demand extensive configuration, integration services and pricing concessions, which increase our upfront investment in the sales effort with no guarantee that these customers will deploy our solutions widely enough across their organization to justify our substantial upfront investment. Adherence to our financial plan in part depends on a predictable growth rate in the acquisition of new customers that represent high annual contract value,

while additional growth and enhanced predictability in part depends on an increased volume of new customers with a relatively lower annual contract value. Our financial performance and the predictability of our quarterly financial results may be harmed by intermittent failures to secure the higher value enterprise agreements, or increase the volume of transactions overall, according to our forecasts, and depends in large part on the successful execution of our direct sales team. In addition, because of the relatively small and tightly knit nature of the community of IT leaders within the enterprises that we sell into, our business is vulnerable to negative feedback or opinions even if held by a few influential leaders within this community.

Additionally, our quarterly sales cycles are generally more heavily weighted toward the end of the quarter with an increased volume of sales in the last few weeks of the quarter. This could negatively impact the timing of recognized revenue and billings, cash collections and delivery of professional services in subsequent periods. Furthermore, the concentration of contract negotiations in the last few weeks 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 sizeable transactions, which will harm forecasting accuracy and adversely impact billings and new customer acquisition metrics for the quarter in which they are forecasted to close.

Because we recognize revenue from subscriptions ratably over the term of the agreement, near-term changes in sales may not be reflected immediately in our operating results.

We offer our applications primarily through multi-year subscription agreements, which typically vary in length between one and three years. All subscription fees that are billed in advance of service are recorded in deferred revenue. Subscription revenue is recognized ratably over the subscription term. As a result, most of the revenue that we report in each period is derived from the recognition of deferred revenue relating to subscriptions entered into during previous periods. A decline in new or renewed subscriptions in any one quarter is not likely to have a material impact on results for that quarter. However, declines would negatively affect revenue and deferred revenue balances in future periods, and the effect of significant downturns in sales and market acceptance of our applications, and potential changes in our rate of renewals, may not be fully reflected in our results of operations until future periods. Our subscription model also makes it difficult for us to rapidly increase our total revenue through additional sales in any period, as revenue from new customers is recognized over the applicable subscription term.

Because we expense commissions associated with subscriptions to our applications immediately upon the execution of a subscription agreement with a customer, our operating income in any period may not be indicative of our financial health and future performance.

We expense commissions paid to sales personnel in the period in which we enter into an agreement for the subscription to our applications. In contrast, we recognize the revenue associated with a subscription to our applications ratably over the related subscription period. Although we believe higher sales is a positive indicator of the long-term health of our business, higher sales increases our operating expenses and could decrease earnings in any particular period. Thus, we may report poor operating results due to higher sales commissions in a period in which we experience strong sales of our applications. Alternatively, we may report better operating results due to the reduction of sales commissions in a period in which we experience a slowdown in sales. Therefore, you should not necessarily rely on our operating income during any one quarter as an indication of our financial health and potential future performance.

If we fail to attract and retain additional qualified personnel we may be unable to execute our business strategy.

To execute our business strategy, we must attract and retain highly qualified personnel. In particular, we compete with many other companies for software developers with high levels of experience in designing, developing and managing cloud-based software, as well as for skilled product development, marketing, sales and operations professionals, and we may not be successful in attracting and retaining the professionals we need, in particular in the Seattle, Washington area where we are headquartered. We have experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate qualifications

which may, among other things, impede our ability to execute our software development and sales strategies. Many of the companies with which we compete for experienced personnel are more well-known and have greater resources than we do. In addition, in making employment decisions, particularly in the software industry, job candidates often consider the value of the stock options or other equity incentives they are to receive in connection with their employment. If the price of our stock declines, or experiences significant volatility, our ability to attract or retain qualified employees will be adversely affected. If we fail to attract new personnel or fail to retain and motivate our current personnel, our growth prospects could be harmed.

The market in which we participate is increasingly competitive, and if we do not compete effectively, our operating results could be harmed.

The market for TBM solutions is relatively new and rapidly evolving. In many cases, our primary competition is the use of legacy spreadsheet-based business processes, or occasionally we encounter either custom software developed, or general purpose business intelligence solutions repurposed, by in-house IT and finance departments of our potential customers to meet specific business needs. As we look to sell our solutions to potential customers with existing internal solutions, we must convince internal stakeholders that our TBM solutions are superior to the legacy solutions that the organization has previously adopted. If we are unable to effectively convince internal stakeholders at our prospective customers to abandon their legacy solutions, our business, results of operations, financial condition and cash flows could be materially and adversely affected.

Larger companies, such as ServiceNow, provide a suite of products and services that includes TBM capabilities. These competitors have greater name recognition, much longer operating histories, more and better-established customer relationships, larger sales forces, larger marketing and software development budgets and significantly greater resources than we do. These large vendors commonly have an enterprise-wide license agreement in place with the Fortune 2000 enterprise company customer base and are able to leverage that license to easily transact for their services. In some cases, these large vendors may be willing to provide their competing software for free as part of enterprise-wide agreements that include other products or services, which has resulted in pricing pressures and lost sales. Further, such large vendors frequently benefit from existing system integrator and other go-to-market relationships that facilitate their sales and marketing efforts, and that can be easily redirected to competition with us in the TBM market. In addition, certain of our competitors may be able to respond more quickly and effectively than we can to new or changing opportunities, technologies, standards, or customer requirements, or simply accelerate product development and improvements at greater velocity.

Several specialized companies target the TBM market through solutions that are tailored to a specific TBM use case or industry. Some of our principal competitors in these situations offer their products or services at a lower price, which has resulted in pricing pressures and lost sales. Potential customers with discrete and immediate needs that may be addressed by these niche solutions may choose to deploy these solutions instead of an offering from our integrated suite of TBM solutions. If we fail to compete effectively against these more specific, niche providers of TBM solutions, our business will be harmed.

We expect competition to intensify in the future. We expect that the large software vendors who currently do not have an offering in the TBM category, some of which operate in adjacent product categories today, may in the future bring such a solution to market through product development, acquisitions or other means. Such vendors would potentially benefit from the same advantages described above regarding our existing larger competitors, but perhaps on an even greater scale. Also, a simpler solution could gain traction in the market and acceptance by medium sized businesses, which may result in downward pressure on our pricing and potentially a decrease in market share and market opportunity for us.

If we fail to adapt and respond effectively to rapidly changing technology, evolving industry standards and changing customer needs or requirements, our solutions may become less competitive.

Our success depends on our ability to adapt and enhance our solutions. To attract new customers and increase revenue from existing customers, we need to continue to enhance and improve our solutions, capabilities and enhancements to meet customer needs at prices that our customers are willing to pay. Such efforts will require adding new functionality and responding to technological advancements, which will increase our research and development costs. If we are unable to develop solutions that address customers' needs, or enhance and improve our

offerings in a timely manner, we may not be able to maintain or increase market acceptance of our solutions. Further, many of our existing and potential future competitors expend a considerably greater amount of funds on their research and development programs, and those that do not may be acquired by larger companies that would allocate greater resources to competitors' research and development programs. If we fail to maintain adequate research and development resources or compete effectively with the research and development programs of our competitors our business could be harmed. Our ability to grow is also subject to the risk of future disruptive technologies. If new technologies emerge that are able to deliver TBM solutions at lower prices, more efficiently, more conveniently or more securely, such technologies could adversely affect our ability to compete.

We may not receive significant revenue from our current development efforts for several years, if at all.

Developing software applications is expensive and the investment in product development often involves a long return on investment cycle. We have made and expect to continue to make significant investments in development and related product opportunities. Accelerated product introductions and short product life cycles require high levels of expenditures that could adversely affect our operating results if not offset by revenue increases. We believe that we must continue to dedicate a significant amount of resources to our development efforts to maintain our competitive position. However, we may not receive significant revenue from these investments for several years, if at all.

Our planned further expansion of our business outside the United States exposes us to risks associated with international operations.

Our growth strategy involves the further expansion of our operations and customers located outside of the United States. For the years ended December 31, 2016, 2015 and 2014, 25%, 22% and 19%, respectively, of our revenue was derived from customers located outside North America, primarily from customers in Europe. A key element of our growth strategy is to expand our international operations and develop a worldwide customer base. While we have initiated efforts to expand our business into Asia-Pacific through a limited presence in Australia and Singapore, our investment may never be recouped. Our current international operations and future initiatives will involve a variety of risks, including:

- the need to make significant investments in people, solutions and infrastructure, typically well in advance of revenue generation;
- the need to localize and adapt our application for specific countries, including translation into foreign languages and associated expenses;
- potential changes in public or customer sentiment regarding cloud-based services or the ability of non-local enterprises to provide adequate data protection, particularly in the European Union;
- technical or latency issues in delivering our applications;
- dependence on certain third parties, including resellers with whom we do not have extensive experience;
- 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;
- unexpected changes in regulatory requirements, taxes or trade laws;
- differing labor regulations, especially in the European Union, where labor laws are generally more advantageous to employees as compared to the United States, including deemed hourly wage and overtime regulations in these locations;
- 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;

- difficulties in managing a business in new markets with diverse cultures, languages, customs, legal systems, alternative dispute systems and regulatory systems;
- currency exchange rate fluctuations and the resulting effect on our revenue and expenses, and the cost and risk of entering into hedging transactions if we choose to do so in the future;
- limitations on our ability to reinvest earnings from operations in one country to fund the capital needs of our operations in other countries;
- limited or insufficient intellectual property protection;
- political instability or terrorist activities;
- requirements to comply with foreign privacy and information security laws and regulations and the risks and costs of non-compliance;
- likelihood of potential or actual violations of domestic and international anticorruption laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, or of U.S. and international export control and sanctions regulations, which likelihood may increase with an increase of sales or operations in foreign jurisdictions and operations in certain industries;
- requirements to comply with U.S. export control and economic sanctions laws and regulations and other restrictions on international trade;
- likelihood that the United States and other governments and their agencies impose sanctions and embargoes on certain countries, their governments and designated parties, which may prohibit the export of certain technology, products, and services to such persons; and
- adverse tax burdens and foreign exchange controls that could make it difficult to repatriate earnings and cash should we desire to do so.

Our limited experience in operating our business internationally increases the risk that any potential future expansion efforts that we may undertake will not be successful. If we invest substantial time and resources to expand our international operations and are unable to do so successfully and in a timely manner, our business and operating results will be harmed.

Increased sales to customers outside the United States and/or paid for in currency other than the U.S. dollar exposes us to potential currency exchange losses.

As our international sales and operations increase, so too will the number and significance of transactions, including intercompany transactions, occurring in currencies other than the U.S. dollar. In addition, our international subsidiaries may begin to maintain or accumulate assets that are denominated in currencies other than the functional operating currencies of these entities. Accordingly, changes in the value of foreign currencies relative to the U.S. dollar can affect our revenue and operating results due to transactional and translational remeasurement that is reflected in our earnings. We do not currently maintain a program to hedge transactional exposures in foreign currencies. However, in the future, we may use derivative instruments, such as foreign currency forward and option contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not offset any or more than a portion of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place. Moreover, the use of hedging instruments may introduce additional risks if we are unable to structure effective hedges with such instruments. Additionally, our license fees are largely based on our customers' anticipated spend managed by our solutions expressed in U.S. dollars, which fee construct may increase the exposure of our revenue to currency fluctuations.

If we fail to manage our rapid growth effectively, or our business does not grow as we expect, our operating results may suffer.

Our employee base and operations have grown substantially in a relatively short period of time. Our full-time employee base grew from 636 employees as of December 31, 2015 to 731 employees as of December 31, 2016. Our growth has placed, and will continue to place, a significant strain on our operational, financial and management

infrastructure. We anticipate further increases in headcount will be required to support increases in our application offerings and continued expansion. To manage this growth effectively, we must continue to improve operational, financial and management systems and controls by, among other things:

- effectively attracting, training and integrating a large number of new employees, particularly technical personnel and members of our management and sales teams;
- further improving key business systems, processes and IT infrastructure to support our business needs;
- enhancing information and communication systems to ensure that employees are well-coordinated and can effectively communicate with each other and customers; and
- improving internal control over financial reporting and disclosure controls and procedures to ensure timely and accurate reporting of operational and financial results.

If we fail to effectively manage expansion or implement new systems, or if we fail to implement improvements or maintain effective internal controls and procedures, costs and expenses may increase more than expected and we may not expand our customer base, increase renewal rates, enhance existing applications, develop new applications, satisfy customers, respond to competitive pressures, or otherwise execute our business plan. If we are unable to effectively manage our growth, our operating results will be harmed.

Our growth strategy depends in part on the success of our strategic relationships with third parties and their continued performance and alignment.

To continue our growth we will need to continue to develop various third-party relationships. In particular, our growth strategy depends on continuing to develop successful go-to-market partnerships with key technology, system integrator and consultant partners both domestically and internationally to help validate our solutions and provide introductions to certain potential customers, and in some cases to resell our solutions, or provide professional services related to them. Failure to successfully develop and implement strategic third-party relationships with resellers, technology providers and service providers could significantly harm our operating results. For example, results may suffer if efforts towards developing our go-to-market relationships consume resources and incur costs, but do not result in a commensurate increase in revenue for us. We also may enter into relationships with other businesses to expand our solutions or our ability to provide our solutions in international locations, which could involve preferred or exclusive licenses, additional channels of distribution, discount pricing or investments in other companies. The cost of developing and maintaining such relationships may go unrecovered or unrewarded.

If we fail to offer high-quality professional services and support, our business and reputation may suffer. If we fail to reduce the cost of those services, our operating results may be harmed.

High-quality professional services and support, including training, implementation and consulting services, are important for the successful marketing, sale and use of our solutions and for the renewal of subscriptions by existing customers. The importance of high-quality professional services and support will increase as we expand our business and pursue new customers. If we do not provide effective ongoing support, our ability to retain and sell additional functionality and applications to existing customers may suffer, and our reputation with existing or potential customers may be harmed.

At the same time, these services are provided at relatively high cost to us with resulting fees to the customer. These factors may negatively impact the future revenue growth for our solutions or lengthen the sales cycle, either of which would be detrimental to our business. We continue to pursue strategies to reduce the amount of professional services required for a customer to begin to use and gain value from our solutions, lower the overall costs of professional service fees to our customers, and improve the gross margin of our professional services business. If we are unable to successfully accomplish these objectives, our operating results, including our profit margins, may be harmed.

We rely on our management team and other key employees, and the loss of one or more key employees could harm our business.

Our success and future growth depend upon the continued services of our management team, including Sunny Gupta, one of our founders and our chief executive officer, and other key employees in the areas of engineering, marketing, sales, services and general and administrative functions. From time to time, there may be changes in our management team resulting from the hiring or departure of executives, which could disrupt our business. We also are dependent on the continued service of our existing software engineers and information technology personnel because of the complexity of our software, technologies and infrastructure. We may terminate any employee's employment at any time, with or without cause, and any employee may resign at any time, with or without cause. We do not maintain any "key man" insurance for any employee. The loss of one or more of our management team members or key employees could harm our business.

If our network or computer systems are breached or unauthorized access to customer data is otherwise obtained, our applications may be perceived as insecure and we may lose existing customers or fail to attract new customers, our reputation may be damaged and we may incur significant liabilities.

Our operations involve the storage and transmission of our customers' sensitive and proprietary information. Cyber-attacks and other malicious internet-based activity continue to increase generally, and cloud-based platform providers of software and services have been targeted. If any unauthorized access to or security breaches of our platform, or those of our service providers, occurs, or is believed to have occurred, such an event or perceived event could result in the loss of data, loss of intellectual property, loss of business, severe reputational or brand damage adversely affecting customer or investor confidence, regulatory investigations and orders, litigation, indemnity obligations, damages for contract breach, penalties for violation of applicable laws, regulations, or contractual obligations, and significant costs for remediation that may include liability for stolen assets or information and repair of system damage that may have been caused, incentives offered to customers or other business partners in an effort to maintain business relationships after a breach, and other liabilities. Additionally, any such event or perceived event could impact our reputation, harm customer confidence, hurt our sales and expansion into existing and new markets, or cause us to lose existing customers. We could be required to expend significant capital and other resources to alleviate problems caused by such actual or perceived breaches and to remediate our systems, we could be exposed to a risk of loss, litigation or regulatory action and possible liability, and our ability to operate our business may be impaired. Additionally, actual, potential or anticipated attacks may cause us to incur increasing costs, including costs to deploy additional personnel and protection technologies, train employees and engage third-party experts and consultants.

In addition, if the security measures of our customers are compromised, even without any actual compromise of our own systems, we may face negative publicity or reputational harm if customers or anyone else incorrectly attributes the blame for such security breaches to us or our systems. If customers believe that our applications do not provide adequate security for the storage of personal or other sensitive information or its transmission over the internet, our business will be harmed. Customers' concerns about security or privacy may deter them from using our platform for activities that involve personal or other sensitive information.

Our errors and omissions insurance covering certain security and privacy damages and claim expenses may not be sufficient to compensate for all liability. Although we maintain insurance for liabilities incurred as a result of some security and privacy damages, 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. Because the techniques used and vulnerabilities exploited to obtain unauthorized access or to sabotage systems change frequently and generally are not identified until they are launched against a target, we may be unable to anticipate these techniques or vulnerabilities or implement adequate preventative measures. We may also experience security breaches that may remain undetected for an extended period.

Because data security is a critical competitive factor in our industry, we make public statements in our privacy policies, on our website, and elsewhere describing the security of our platform. Should any of these statements be untrue, become untrue, or be perceived to be untrue, even if through circumstances beyond our reasonable control, we may face claims, including claims of unfair or deceptive trade practices, brought by the U.S. Federal Trade Commission, state, local, or foreign regulators, and private litigants.

Interruptions or performance problems associated with our technology and infrastructure may adversely affect our business and operating results.

Our continued growth depends in part on the ability of our existing and potential customers to access our applications at any time. We have experienced, and may in the future experience, disruptions, outages, and other performance problems due to a variety of factors, including infrastructure changes, introductions of new capabilities, human or technology errors, distributed denial of service attacks, or other security related incidents. In some instances, we may not be able to identify the cause or causes of these performance problems within an acceptable period of time. It may become increasingly difficult to maintain and improve our performance, especially during peak usage times and as our platform becomes more complex and our user traffic increases. If our applications are unavailable or if our users are unable to access our applications within a reasonable amount of time, or at all, our business will be harmed.

Moreover, our customer agreements often include performance guarantees and service level standards that may obligate us to provide credits or termination rights in the event of a significant disruption in our platform. To the extent that our third-party service providers experience outages, or to the extent 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 and operating results may be adversely affected.

Our use of “open source” software could negatively affect our ability to offer our applications and subject us to possible litigation.

Our applications use “open source” software that we, in some cases, have obtained from third parties. Open source software is generally freely accessible, usable and modifiable, and is made available to the general public on an “as-is” basis under the terms of a non-negotiable license. Use and distribution of open source software may entail greater risks than use of third-party commercial software. Open source licensors generally do not provide warranties or other contractual protections regarding infringement claims or the quality of the software. In addition, certain open source licenses, like the GNU Affero General Public License, or AGPL, may require us to offer for no cost the components of our software that incorporate the open source software, to make available source code for modifications or derivative works we create by incorporating or using the open source software, or to license our modifications or derivative works under the terms of the particular open source license. If we are required, under the terms of an open source license, to release the source code of our proprietary software to the public, our competitors could create similar applications with lower development effort and time, which ultimately could result in a loss of sales for us.

We may also face claims alleging noncompliance with open source license terms or infringement or misappropriation of proprietary software. These claims could result in litigation, require us to purchase a costly license or require us to devote additional research and development resources to re-engineer our applications, any of which would have a negative effect on our business and operating results, including being enjoined from the offering of the components of our software that contained the open source software. We could also be subject to suits by parties claiming ownership of what we believe to be open source software. Litigation could be costly for us to defend, have a negative effect on our operating results and financial condition and require us to devote additional research and development resources to re-engineer our applications.

Although we monitor our use of open source software to avoid subjecting our applications to unintended conditions, few courts have interpreted open source licenses, and there is a risk that these licenses could be construed in a way that could impose unanticipated conditions or restrictions on our ability to commercialize our applications. We cannot guarantee that we have incorporated open source software in our software in a manner that will not subject us to liability, or in a manner that is consistent with our current policies and procedures.

Our business is dependent upon our brand recognition and reputation, and if we fail to maintain or enhance our brand recognition or reputation, our business could be harmed.

We believe that maintaining and enhancing our brand and our reputation are critical to our relationships with our customers and to our ability to attract new customers. We also believe that our brand and reputation will be

increasingly important as competition in our market continues to develop. Our success in this area will depend on a wide range of factors, some of which are beyond our control, including the following:

- the efficacy of our marketing efforts;
- our ability to continue to offer high-quality, innovative and error- and bug-free applications;
- our ability to maintain the security and privacy of our customer's sensitive and proprietary information;
- our ability to retain existing customers and obtain new customers;
- our ability to maintain high customer satisfaction;
- the quality and perceived value of our applications;
- our ability to successfully differentiate our applications from those of our competitors;
- actions of competitors and other third parties;
- our ability to provide high quality customer support and professional services;
- any data breach or data loss or misuse or perceived misuse of our applications;
- positive or negative publicity;
- interruptions, delays or attacks on our platform or applications; and
- litigation, legislative or regulatory-related developments.

If our brand promotion activities are not successful, our operating results and growth may be harmed.

Furthermore, negative publicity, whether or not justified, relating to events or activities attributed to us, employees, partners or others associated with any of these parties, may tarnish our reputation and reduce the value of our brand. Damage to our reputation and loss of brand equity may reduce demand for our applications and have an adverse effect on our business, operating results and financial condition. Moreover, any attempts to rebuild our reputation and restore the value of our brands may be costly and time consuming, and such efforts may not ultimately be successful.

We are materially invested in the formation and growth of the TBM Council, and our efforts in that area may fail to have a positive effect on our overall growth.

We have invested a significant amount of our money and time into the formation and growth of the TBM Council. Our ability to help build that organization, maintain strong relationships with the individuals involved, and build a positive public profile of the TBM Council and our association with the council, may have an effect on our overall success. It is possible that our efforts in this area will not yield the results that we are anticipating or the benefits of such efforts will not offset the costs.

We rely upon data centers and other systems and technologies provided by third parties, and technology systems and electronic networks supplied and managed by third parties, to operate our business and interruptions or performance problems with these systems, technologies and networks may adversely affect our business and operating results.

We rely on data centers and other technologies and services provided by third parties in order to operate our business. If any of these services becomes unavailable or otherwise is unable to serve our requirements due to extended outages, interruptions, facility closure, or because it is no longer available on commercially reasonable terms, expenses could increase, our ability to manage finances could be interrupted and our operations otherwise could be disrupted or otherwise impacted until appropriate substitute services, if available, are identified, obtained, and implemented.

We do not control, or in some cases have limited control over, the operation of the data center facilities we use, and they are vulnerable to damage or interruption from earthquakes, floods, fires, power loss,

telecommunications failures and similar events. They may also be subject to break-ins, sabotage, intentional acts of vandalism and similar misconduct, and to adverse events caused by operator error. We may not be able to rapidly switch to new data centers or move customers from one data center to another in the event of any adverse event. Despite precautions taken at these facilities, the occurrence of a natural disaster, an act of terrorism or other act of malfeasance, a decision to close the facilities without adequate notice or other unanticipated problems at these facilities could result in lengthy interruptions in our service and the loss of customer data.

Our ability to provide services and solutions to our subscribers also depends on our ability to communicate with our subscribers through the public internet and electronic networks that are owned and operated by third parties. In addition, in order to provide services on-demand and promptly, our computer equipment and network servers must be functional 24 hours per day, which requires access to telecommunications facilities managed by third parties and the availability of electricity, which we do not control. A severe disruption of one or more of these networks or facilities, including as a result of utility or third-party system interruptions, could impair our ability to process information and provide services to our customers.

Any unavailability of, or failure to meet our requirements by, third-party data centers or other third-party technologies or services, or any disruption of the internet or the third-party networks or facilities that we rely upon, could impede our ability to provide services to our subscribers, harm our reputation, result in a loss of subscribers, cause us to issue refunds or service credits to customers, subject us to potential liabilities, result in contract terminations, and adversely affect our renewal rates. Any of these circumstances could adversely affect our business and operating results.

Catastrophic events may disrupt our business and impair our ability to provide our solutions to our customers, resulting in costs for remediation, customer dissatisfaction, and other business or financial losses.

Our operations depend, in part, on our ability to protect our facilities against damage or interruption from natural disasters, power or telecommunications failures, criminal acts and similar events. Despite precautions taken at our facilities, the occurrence of a natural disaster, an act of terrorism, vandalism or sabotage, spikes in usage volume or other unanticipated problems at a facility could result in lengthy interruptions in the availability of our applications. Our headquarters are located in Bellevue, Washington, which is situated near active earthquake fault lines. Even with current and planned disaster recovery arrangements, our business could be harmed. Also, in the event of damage or interruption, our insurance policies may not adequately compensate us for any losses that we may incur. These factors in turn could further reduce revenue, subject us to liability and cause us to issue credits or cause customers to fail to renew their subscriptions, any of which could harm our business.

We may not timely and effectively scale our existing technology, including our computing architecture, to meet the performance and other requirements placed on our systems, which could increase expenditures unexpectedly and create risk of outages and other performance and quality of service issues for our customers.

Our future growth and renewal rates depend on our ability to meet our customers' expectations with respect to the speed and other performance attributes of our solutions, and to meet the expanding needs of our customers as their use of our solutions grows. The number of users, the amount and complexity of data ingested, created, transferred, processed and stored by us, the number of locations where our applications are being accessed, and the number of processes and systems managed by us on behalf of these customers, among other factors, separately and combined, can have an effect on the performance of our applications. In order to ensure that we meet the performance and other requirements of our customers, we continue to make significant investments to develop and implement new technologies in our software and infrastructure operations. These technologies, which include database, application and server advancements, revised network and hosting strategies, and automation, are often advanced, complex, and sometimes broad in scope and untested via industry-wide usage. We may not be successful in developing or implementing these technologies. To the extent that we do not develop offerings and scale our operations in a manner that maintains performance as our customers expand their use, our business and operating results may be harmed.

We may not accurately assess the capital and operational expenditures required to successfully fulfill our objectives and our financial performance may be harmed as a result. Further, we may make mistakes in the technical

execution of these efforts to improve our solutions, which may affect our customers. Issues that may arise include performance (speed), data loss, and outages as well as other issues that could give rise to customer satisfaction issues, loss of business, and harm to our reputation. If any of these were to occur there would be a negative and potentially significant impact to our financial performance. Lastly, our ability to generate new applications, and improve our current solutions may be limited if and to the extent resources are necessarily allocated to address issues related to the performance of existing solutions.

Real or perceived errors, failures, or bugs in our applications could adversely affect our operating results and growth prospects.

We update our applications on a frequent basis. Despite efforts to test our updates, errors, failures or bugs may not be found in our applications until after they are deployed to our customers. We have discovered and expect we will continue to discover errors, failures and bugs in our applications and anticipate that certain of these errors, failures and bugs will only be discovered and remediated after deployment to customers. Real or perceived errors, failures or bugs in our applications could result in negative publicity, government inquiries, loss of or delay in market acceptance of our applications, loss of competitive position, or claims by customers for losses sustained by them. In such an event, we may be required, or may choose, for customer relations or other reasons, to expend additional resources in order to help correct the problem.

We implement bug fixes and upgrades as part of our regular system maintenance, which may lead to system downtime. Even if we are able to implement the bug fixes and upgrades in a timely manner, any history of inaccuracies in the data we collect for our customers, or the loss, damage or inadvertent release or exposure of confidential or other sensitive data could cause our reputation to be harmed and result in claims against us, and customers may elect not to purchase or renew their agreements with us or we may incur increased insurance costs. The costs associated with any material defects or errors in our applications or other performance problems may be substantial and could harm our operating results.

Because many of our customers use our applications to store and retrieve critical information, we may be subject to liability claims if our applications do not work properly. We cannot be certain that the limitations of liability set forth in our licenses and agreements would be enforceable or would otherwise protect us from liability for damages. A material liability claim against us, regardless of its merit or its outcome, could result in substantial costs, significantly harm our business reputation and divert management's attention from our operations.

We are subject to governmental laws, regulation and other legal obligations, particularly related to privacy, data protection and information security, and any actual or perceived failure to comply with such obligations could harm our business.

Personal privacy and information security are significant issues in the United States and the other jurisdictions where we offer our applications. The legislative and regulatory framework for privacy and security issues worldwide is rapidly evolving and is likely to remain uncertain for the foreseeable future. We collect PII and other data from our customers and users. Our handling of data is subject to a variety of laws and regulations, including regulation by various government agencies, including the U.S. Federal Trade Commission, or FTC, and various state, local and foreign agencies.

In the United States, the FTC and many state attorneys general are applying federal and state consumer protection laws to impose standards for the online collection, use and dissemination of data. Many foreign countries and governmental bodies, including the European Union, or EU, Canada, and other relevant jurisdictions where we conduct business, have laws and regulations concerning the collection and use of PII obtained from their residents or by businesses operating within their jurisdiction. These laws and regulations often are more restrictive than those in the United States. Laws and regulations in these jurisdictions apply broadly to the collection, use, storage, disclosure and security of data that identifies or may be used to identify or locate an individual, such as names, email addresses and, in some jurisdictions, Internet Protocol addresses. In the EU, where companies must meet specified privacy and security standards, Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data, commonly referenced as the Data Protection Directive, and EU member state implementations of the Data Protection Directive, require comprehensive information privacy and security protections for consumers with respect

to PII collected about them. The EU has adopted a General Data Protection Regulation, to supersede the Data Protection Directive. This regulation, which will become effective in 2018, would cause EU data protection requirements to be more stringent and to provide for greater penalties for noncompliance.

An October 2015 ruling of the Court of Justice of the EU, the EU's highest court, invalidated the U.S.-EU Safe Harbor Framework as a method of compliance with restrictions set forth in the Data Protection Directive (and member states' implementations thereof) regarding the transfer of data outside of the European Economic Area, or EEA. As a result of this ruling, we have entered into contractual provisions with certain European customers that impose additional obligations on us with respect to our handling of PII from the EEA. Additionally, U.S. and EU authorities reached a political agreement in February 2016 regarding a new potential means for legitimizing personal data transfers from the EEA to the U.S., the EU-U.S. Privacy Shield Framework, and we have joined the Privacy Shield Framework. We publicly post our privacy policies and practices concerning our processing, use and disclosure of PII. Our publication of our Privacy Shield filing, our privacy policy, and other statements we publish that provide promises and assurances about privacy and security can subject us to potential state and federal action if they are found to be deceptive or misrepresentative of our practices. Additionally, we may find it necessary or desirable to join industry or other self-regulatory bodies or other privacy-or data protection-related organizations that require compliance with their rules pertaining to privacy and data protection. We also may be bound by additional, more stringent contractual obligations relating to our collection, use and disclosure of PII and other data.

On June 23, 2016, the United Kingdom held a referendum and voted in favor of leaving the European Union, which has created uncertainty with regard to the regulation of data protection in the United Kingdom. In particular, it is unclear whether the United Kingdom will enact the pending European General Data Protection Regulation, or other data protection laws or regulations, and how data transfers to and from the United Kingdom will be regulated.

Although we are working to comply with those federal, state, and foreign laws and regulations, industry standards, contractual obligations and other legal obligations that apply to us, those laws, regulations, standards and obligations are evolving and may be modified, interpreted and applied in an inconsistent manner from one jurisdiction to another, and may conflict with one another, other requirements or legal obligations, our practices or the features of our applications or platform. Any failure or perceived failure by us to comply with federal, state or foreign laws or regulations, industry standards, contractual obligations or other legal obligations, or any actual or suspected security incident, whether or not resulting in unauthorized access to, or acquisition, release or transfer of PII or other data, may result in governmental enforcement actions and prosecutions, private litigation, fines and penalties or adverse publicity and could cause our customers to lose trust in us, which could have an adverse effect on our reputation and business. Any inability to adequately address privacy and security concerns, even if unfounded, or comply with applicable laws, regulations, policies, industry standards, contractual obligations, or other legal obligations could result in additional cost and liability to us, damage our reputation, inhibit sales, and adversely affect our business.

We also expect that there will continue to be new proposed laws, regulations and industry standards concerning privacy, data protection and information security in the United States, the European Union and other jurisdictions, and we cannot yet determine the impact such future laws, regulations and standards may have on our business. Future laws, regulations, standards and other obligations, and changes in the interpretation of existing laws, regulations, standards and other obligations could impair our or our customers' ability to collect, use or disclose information relating to consumers, which could decrease demand for our applications, increase our costs and impair our ability to maintain and grow our customer base and increase revenue. New laws, amendments to or re-interpretations of existing laws and regulations, industry standards, contractual obligations and other obligations may require us to incur additional costs and restrict our business operations. Such laws and regulations may require companies to implement privacy and security policies, permit users to access, correct and delete personal information stored or maintained by such companies, inform individuals of security breaches that affect their personal information, and, in some cases, obtain individuals' consent to use PII for certain purposes. In addition, a foreign government could require that any PII collected in a country not be disseminated outside of that country, and we may face difficulty in complying with any such requirement for certain geographic regions. If we fail to comply with federal, state and international data privacy laws and regulations our ability to successfully operate our business and pursue our business goals could be harmed.

Third-party claims that we are infringing the intellectual property rights of others, whether successful or not, could subject us to costly and time-consuming litigation or require us to obtain expensive licenses, and our business could be harmed.

The technology industry is characterized by the existence of a large number of patents, copyrights, trademarks, trade secrets and other intellectual property rights. Companies in the technology industry must often defend against litigation claims based on allegations of infringement or other violations of intellectual property rights. Third parties, including our competitors, may own patents or other intellectual property rights that cover aspects of our technology or business methods and may assert patent or other intellectual property rights against us and others in the industry. Moreover, in recent years, individuals and groups that are non-practicing entities, commonly referred to as “patent trolls,” have purchased patents and other intellectual property assets for the purpose of making claims of infringement in order to extract settlements. From time to time, we may receive threatening letters, notices or “invitations to license,” or may be the subject of claims that our applications and business operations infringe or violate the intellectual property rights of others. Responding to such claims, regardless of their merit, can be time consuming, costly to defend in litigation, divert management’s attention and resources, damage our reputation and brand and cause us to incur significant expenses. Claims of intellectual property infringement might require us to stop using technology found to infringe a third party’s rights, redesign our application, which could require significant effort and expense and cause delays of releases, enter into costly settlement or license agreements or pay costly damage awards, or face a temporary or permanent injunction prohibiting us from marketing or selling our applications. If we cannot or do not license the infringed technology on reasonable terms or at all, or substitute similar technology from another source, we could be forced to limit or stop selling our applications, we may not be able to meet our obligations to customers under our customer contracts, revenue and operating results could be adversely impacted, and we may be unable to compete effectively. Additionally, our customers may not purchase our applications if they are concerned that they may infringe third-party intellectual property rights. The occurrence of any of these events may harm our business.

In our subscription agreements with our customers, we generally agree to indemnify our customers against any losses or costs incurred in connection with claims by a third party alleging that the customer’s use of our applications infringes the intellectual property rights of the third party. Our customers who are accused of intellectual property infringement may seek indemnification from us. If any claim is successful, or if we are required to indemnify or defend our customers from any of these or other claims, these matters could be disruptive to our business and management and result in additional legal expenses.

The success of our business depends in part on our ability to protect and enforce our intellectual property rights.

Our success is dependent, in part, upon protecting our proprietary technology. Our issued patents, and any patents issued in the future, may not provide us with any competitive advantages or may be challenged by third parties, and our patent applications may never be granted. Additionally, the process of obtaining patent protection is expensive and time-consuming, and we may not be able to prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. Even if issued, there can be no assurance that these patents will adequately protect our intellectual property, as the legal standards relating to the validity, enforceability and scope of protection of patent and other intellectual property rights are uncertain.

Any patents that are issued may subsequently be invalidated or otherwise limited, allowing other companies to develop offerings that compete with ours, which could adversely affect our competitive business position, business prospects and financial condition. In addition, issuance of a patent does not guarantee that we have a right to practice the patented invention. Patent applications in the United States are typically not published until 18 months after filing or, in some cases, not at all, and publications of discoveries in industry-related literature lag behind actual discoveries. We cannot be certain that we were the first to use the inventions claimed in our issued patents or pending patent applications or otherwise used in our software, that we were the first to file for protection in our patent applications, or that third parties do not have blocking patents that could be used to prevent us from marketing or practicing our patented software or technology. Effective patent, trademark, copyright and trade secret protection may not be available to us in every country in which our software is available. The laws of some foreign countries may not be as protective of intellectual property rights as those in the United States (in particular, some foreign jurisdictions do not permit patent protection for software), and mechanisms for enforcement of intellectual

property rights may be inadequate. Additional uncertainty may result from changes to intellectual property legislation enacted in the United States (including the recent “America Invents Act”) and other national governments and from interpretations of the intellectual property laws of the United States and other countries by applicable courts and agencies. Accordingly, despite our efforts, we may be unable to prevent third parties from infringing upon or misappropriating our intellectual property.

Although we enter into confidentiality and invention assignment agreements with our employees and consultants and enter into confidentiality agreements with our customers and the parties with whom we have strategic relationships and business alliances, no assurance can be given that these agreements will be effective in controlling access to and distribution of our applications and propriety information or prevent reverse engineering. Further, these agreements may not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our applications, and we may be unable to prevent this competition.

We may be required to spend significant resources to monitor and protect our intellectual property rights. Litigation may be necessary in the future to enforce our intellectual property rights. Such litigation could be costly, time consuming and distracting to management and could result in the impairment or loss of portions of our intellectual property. Furthermore, 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. We may not prevail in any lawsuits that we initiate. Any litigation, whether or not resolved in our favor, could subject us to substantial costs, divert resources and the attention of management and technical personnel from our business and adversely affect our business. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation, could delay further sales or the implementation of our software and offerings, impair the functionality of our software and offerings, delay introductions of new features or enhancements, result in our substituting inferior or more costly technologies into our software and offerings, or injure our reputation.

We may initiate claims or litigation against third parties for infringement of our proprietary rights or to establish the validity of our proprietary rights. Litigation also puts our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing. Additionally, we may provoke third parties to assert counterclaims against us. We may not prevail in any lawsuits that we initiate, and the damages or other remedies awarded, if any, may not be commercially viable. Any litigation, whether or not it is resolved in our favor, could result in significant expense to us and divert the efforts of our technical and management personnel, which may adversely affect our business, results of operations, financial condition and cash flows.

Future acquisitions could disrupt our business and may divert management’s attention and if unsuccessful, harm our business.

We may choose to expand by making acquisitions that could be material to our business. To date, we have completed one minor acquisition, in 2012, and our ability as an organization to successfully acquire and integrate technologies or businesses is unproven and limited. Acquisitions involve many risks, including the following:

- an acquisition may negatively affect our results of operations and financial condition because it may require us to incur charges or assume substantial debt or other liabilities, may cause adverse tax consequences or unfavorable accounting treatment, may expose us to claims and disputes by third parties, including intellectual property claims and disputes, or may not generate sufficient financial return to offset additional costs and expenses related to the acquisition;
- we may encounter difficulties or unforeseen expenditures in integrating the business, technologies, products, personnel or operations of any company that we acquire, particularly if key personnel of the acquired company decide not to work for us;
- an acquisition may disrupt our ongoing business, divert resources, increase expenses and distract management;
- an acquisition may result in a delay or reduction of customer purchases for both us and the company we acquired due to customer uncertainty about continuity and effectiveness of service from either company;
- we may encounter difficulties in, or may be unable to, successfully sell any acquired products;

- an acquisition may involve the entry into geographic or business markets in which we have little or no prior experience or where competitors have stronger market positions;
- challenges inherent in effectively managing an increased number of employees in diverse locations;
- the potential strain on our financial and managerial controls and reporting systems and procedures;
- potential known and unknown liabilities associated with an acquired company;
- our use of cash to pay for acquisitions would limit other potential uses for our cash;
- if we incur debt to fund such acquisitions, such debt may subject us to material restrictions on our ability to conduct our business as well as financial maintenance covenants;
- the risk of impairment charges related to potential write-downs of acquired assets or goodwill in future acquisitions;
- to the extent that we issue a significant amount of equity or equity-linked securities in connection with future acquisitions, existing stockholders may be diluted and earnings per share may decrease; and
- managing the varying intellectual property protection strategies and other activities of an acquired company.

We may not succeed in addressing these or other risks or any other problems encountered in connection with the integration of any acquired business. The inability to integrate successfully the business, technologies, products, personnel or operations of any acquired business, or any significant delay in achieving integration, could harm our business and operating results.

Provisions of our debt instruments may restrict our ability to pursue our business strategies.

Our credit facility requires us, and any debt instruments we may enter into in the future may require us, to comply with various covenants that limit our ability to, among other things:

- dispose of assets;
- complete mergers or acquisitions;
- incur indebtedness;
- encumber assets;
- pay dividends or make other distributions to holders of our capital stock;
- make specified investments;
- change certain key management personnel; and
- engage in transactions with our affiliates.

These restrictions could inhibit our ability to pursue our business strategies. In addition, we are subject to a financial covenant based on subscription and professional services performance. If we default under our credit facility, and such event of default was not cured or waived, the lenders could terminate commitments to lend and cause all amounts then outstanding with respect to the debt to be due and payable immediately, which in turn could result in cross defaults under any other debt instruments then outstanding. Our assets and cash flow may not be sufficient to fully repay borrowings under all of our outstanding debt instruments if some or all of these instruments are accelerated upon a default.

We may incur additional indebtedness in the future. The debt instruments governing such indebtedness could contain provisions that are as, or more, restrictive than our existing debt instruments. If we are unable to repay, refinance or restructure our indebtedness when payment is due, the lenders could proceed against the collateral granted to them to secure such indebtedness or force us into bankruptcy or liquidation.

Our ability to raise capital in the future may be limited, and if we fail to raise capital when needed, we could be prevented from growing.

Our business and operations may consume resources faster than we anticipate. While we believe our cash and cash equivalents, cash flows from operations and available borrowings under our credit facilities will be sufficient to support our planned operations for at least the next 12 months, in the future, we may need to raise additional funds to invest in future growth opportunities. Additional financing may not be available on favorable terms, if at all. If adequate funds are not available on acceptable terms, we may be unable to invest in future growth opportunities, which could harm our business and operating results. Pursuant to our credit facility, our debt holders have rights senior to common stockholders to make claims on our assets. In addition, our credit facility imposes and future debt instruments may impose, restrictions on our ability to dispose property, make changes in our business, engage in mergers or acquisitions, incur additional indebtedness, and make investments and distributions. Furthermore, if we issue additional equity securities, stockholders will experience dilution, and the new equity securities could have rights senior to those of our common stock. Because our decision to issue securities in any future offering will depend on market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of our future offerings. As a result, stockholders bear the risk that future securities offerings reduce the market price of our Class A common stock and dilute their interest.

We may be subject to additional obligations to collect and remit sales tax and other taxes, and we may be subject to tax liability for past sales, which could harm our business.

We do not collect sales and use, value added and similar taxes in all jurisdictions in which we have sales, based on our belief that such taxes are not applicable in certain jurisdictions. State, local and foreign jurisdictions have differing rules and regulations governing sales, use, value added and other taxes, and these rules and regulations are subject to varying interpretations that may change over time. In particular, the applicability of such taxes to our software in various jurisdictions is unclear. Further, these jurisdictions' rules regarding tax nexus are complex and vary significantly. As a result, we could face the possibility of tax assessments and audits. Our liability for these taxes and associated penalties and interest could exceed our original estimates, and we could be required to collect additional taxes in the future. A successful assertion that we should be collecting additional sales, use, value added or other taxes in those jurisdictions where we have not historically done so and do not accrue for such taxes could result in substantial tax liabilities and related penalties for past sales, discourage customers from purchasing our application or otherwise harm our business and operating results.

Changes in tax laws or regulations that are applied adversely to us or our customers could increase the costs of our applications and adversely impact our business.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could affect the tax treatment of our (and our subsidiaries') domestic and foreign earnings. Any new taxes could adversely affect our domestic and international business operations, and our business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to us. Specifically, taxation of cloud-based applications is constantly evolving as many state and local jurisdictions consider the taxability of software services provided remotely. These events could require us or our customers to pay additional tax amounts on a prospective or retroactive basis, as well as require us or our customers to pay fines or penalties and interest for past amounts deemed to be due. If we raise our prices to offset the costs of these changes, existing and potential future customers may elect not to continue or purchase our platform or applications in the future. Additionally, new, changed, modified or newly interpreted or applied tax laws could increase our customers' and our compliance, operating and other costs, as well as the costs of our software. Any or all of these events could harm our business and operating results.

We are a multinational organization faced with increasingly complex tax issues in many jurisdictions, and we could be obligated to pay additional taxes in various jurisdictions.

As a multinational organization, we may be subject to taxation in several jurisdictions around the world with increasingly complex tax laws, the application of which can be uncertain, and significant judgment and estimates are required in determining our provision for taxes. Our tax expense may be impacted if our intercompany transactions, which are required to be computed on an arm's-length basis, are challenged and successfully disputed by tax

authorities. Our policies governing transfer pricing may be determined to be inadequate and could result in additional tax assessments. The amount of taxes we pay in these jurisdictions could increase substantially as a result of changes in the applicable tax principles, including increased tax rates, new tax laws or revised interpretations of existing tax laws and precedents, which could harm our liquidity and operating results. In addition, the authorities in these jurisdictions could review our tax returns and impose additional tax, interest and penalties, and the authorities could claim that various withholding requirements or other taxes apply to us or our subsidiaries (including withholding and indirect taxes on software licenses and related intercompany transactions) or assert that benefits of tax treaties are not available to us or our subsidiaries, any of which could adversely affect our operating results.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

As of December 31, 2016, we had federal net operating loss carryforwards of approximately \$165.5 million, which will expire between 2027 and 2035. Under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, if a corporation undergoes an “ownership change” (generally defined as a greater than 50-percentage-point cumulative change (by value) in the equity ownership of certain stockholders over a rolling three-year period), the corporation’s ability to use its pre-change net operating loss carryforwards and other pre-change tax attributes (such as research tax credits) to offset its post-change taxable income or taxes may be limited. We may experience such an ownership change in the future as a result of subsequent shifts in our stock ownership, some of which are outside our control. Furthermore, our ability to utilize the net operating losses or other tax attributes of companies that we may acquire in the future may be subject to limitations. There is also a risk that due to regulatory changes, such as suspensions on the use of net operating losses, or other unforeseen reasons, our existing net operating losses could expire or otherwise be unavailable to offset future income tax liabilities. For these reasons, our ability to use our pre-change net operating loss carryforwards and other pre-change tax attributes to offset post-change taxable income or taxes may be subject to limitation, which could potentially result in increased future tax liability to us.

Future changes in the regulations and laws of the United States, or those of the international markets in which we do business, could harm our business.

We are subject to general business regulations and laws, as well as regulations and laws specifically governing the internet and software, in the United States as well as the international markets in which we do business. These regulations and laws may cover employment, taxation, privacy, data protection, pricing, content, copyrights, mobile communications, electronic contracts and other communications, consumer protection, unencumbered internet access to our services, the design and operation of websites, and the characteristics and quality of software and services. It is possible changes to these regulations and laws, as well as compliance challenges related to the complexity of multiple, conflicting and changing sets of applicable regulations and laws, may impact our sales, operations, and future growth.

Significant U.K. or European developments stemming from the U.K.’s referendum on membership in the European Union could have a material adverse effect on us.

On June 23, 2016, the United Kingdom held a referendum and voted in favor of leaving the European Union. This has created political and economic uncertainty, particularly in the United Kingdom and the European Union, and this uncertainty may last for years. Our business in the United Kingdom, the European Union, and worldwide could be affected during this period of uncertainty, and perhaps longer, by the impact of the United Kingdom’s referendum. There are many ways in which our business could be affected, only some of which we can identify as of the date of this report.

The referendum, and the likely withdrawal of the United Kingdom from the European Union it triggers, has caused and, along with events that could occur in the future as a consequence of the United Kingdom’s withdrawal, including the possible breakup of the United Kingdom, may continue to cause significant volatility in global financial markets, including in global currency and debt markets. This volatility could cause a slowdown in economic activity in the United Kingdom, Europe or globally, which could adversely affect our operating results and growth prospects. In addition, our business could be negatively affected by new trade agreements or data transfer agreements between the United Kingdom and other countries, including the United States, and by the possible imposition of trade or other regulatory barriers in the United Kingdom. Furthermore, we currently operate in Europe through an Apptio subsidiary based in the United Kingdom, which currently provides us with certain

operational, tax and other benefits, as well as through other subsidiaries in Europe. The United Kingdom's withdrawal from the European Union could adversely affect our ability to realize those benefits and we may incur costs and suffer disruptions in our European operations as a result. These possible negative impacts, and others resulting from the United Kingdom's actual or threatened withdrawal from the European Union, may adversely affect our operating results and growth prospects.

Increased sales to U.S. federal, state, local and foreign governments expose us to risks inherent in government sales and procurement.

Contracts with U.S. federal, state, local and foreign government entities are subject to various procurement regulations and other requirements relating to their formation, administration and performance. We may be subject to audits and investigations relating to our government contracts and any violations could result in various civil and criminal penalties and administrative sanctions, including termination of contract, refunding or suspending of payments, forfeiture of profits, payment of fines and suspension or debarment from future government business. Further, in order to obtain, and in some cases expedite, sales to certain government customers, we may enter into subcontractor agreements with existing approved government contractors subjecting us to further risks associated with those subcontractor agreements as well as the potential default or breach of the underlying agreements between the approved government contractors and government entity to which we are not a party.

Risks Related to the Ownership of our Common Stock

The dual class structure of our common stock has the effect of concentrating voting control with those stockholders who held our capital stock prior to the closing of our IPO, including our executive officers, employees and directors and their affiliates, which will limit your ability to influence the outcome of important transactions, including a change in control.

Our Class B common stock has 10 votes per share, and our Class A common stock, which is the stock we offered in our IPO, has one vote per share. Our stockholders who held shares prior to our IPO, all of whom hold shares of Class B common stock, collectively hold approximately 98% of the voting power of our outstanding capital stock, as of December 31, 2016. Our executive officers and directors and their related parties, which include funds affiliated with Madrona Venture Group and Shasta Ventures, and the other holder of 5% or more of our common stock, collectively beneficially own shares representing approximately 66% of the voting power of our outstanding capital stock, as of December 31, 2016. Because of the ten-to-one voting ratio between Class B common stock and Class A common stock, the holders of Class B common stock collectively continue to control a majority of the combined voting power of our capital stock and therefore are able to control all matters submitted to our stockholders for approval until the earlier of (1) the seventh anniversary of the closing of our IPO and (2) the date on which the Class B common stock ceases to represent at least 20% of our outstanding common stock, on which date all of the shares of Class B common stock will automatically convert to Class A common stock. These holders of Class B common stock may also have interests that differ from yours and may vote in a way with which you disagree and which may be adverse to your interests. This concentrated control may have the effect of delaying, preventing or deterring a change in control of our company, could deprive our stockholders of an opportunity to receive a premium for their capital stock as part of a sale of our company and might ultimately affect the market price of our Class A common stock.

Future transfers by holders of Class B common stock will generally result in those shares converting into shares of Class A common stock, subject to limited exceptions, such as certain transfers effected for estate planning or charitable purposes. The conversion of shares of Class B common stock into shares of 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, which may include our executive officers and directors and their affiliates.

Our stock price may fluctuate significantly and the value of your investment may decline significantly.

The trading price of Class A common stock may be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. In addition to the other risks discussed in this report, these factors include:

- actual or anticipated fluctuations in revenue and other operating results, including as a result of the addition or loss of any number of customers;
- announcements by us or our competitors of significant technical innovations, acquisitions, strategic partnerships, joint ventures or capital commitments;
- the financial projections we may provide to the public, any changes in these projections or our failure to meet these projections;
- failure of securities analysts to maintain coverage of us, changes in ratings and financial estimates and the publication of other news by any securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- changes in operating performance and stock market valuations of cloud-based software or other technology companies, or those in our industry in particular;
- the size of our public float;
- price and volume fluctuations in the trading of our Class A common stock and in the overall stock market, including as a result of trends in the economy as a whole or in the technology industry;
- new laws or regulations or new interpretations of existing laws or regulations applicable to our business or industry, including data privacy and data security;
- lawsuits threatened or filed against us for claims relating to intellectual property, employment issues or otherwise;
- changes in our board of directors or management;
- short sales, hedging and other derivative transactions involving our Class A common stock;
- sales of large blocks of our common stock including sales by our executive officers, directors and significant stockholders; and
- other events or factors, including changes in general economic, industry and market conditions and trends, as well as any natural disasters that may affect our operations.

The stock market in general, and market prices for the securities of technology companies like ours in particular, have from time to time experienced volatility that often has been unrelated to the operating performance of the underlying companies. These broad market and industry fluctuations may adversely affect the market price of our Class A common stock, regardless of our operating performance. In several recent situations when the market price of a stock has been volatile, holders of that stock have instituted securities class action litigation against the company that issued the stock. If any of our stockholders were to bring a lawsuit against us, the defense and disposition of the lawsuit could be costly and divert the time and attention of our management and harm our operating results.

An active trading market for our Class A common stock may not develop or be sustained.

Prior to our IPO, there was no public market for our Class A common stock and an active trading market for our shares may never develop or be sustained following the IPO. The lack of an active market may impair investors' ability to sell their shares at the time they wish to sell them or at a price that they consider reasonable, may reduce the market value of their shares and may impair our ability to raise capital.

If securities or industry analysts issue an adverse opinion about our business, our stock price and trading volume could decline.

The trading market for our Class A common stock is and will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us issues an adverse opinion about our company, our stock price would likely decline. If one or more of these analysts ceases research coverage of us or fails to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Future sales of our common stock could cause our stock price to fall.

Our stock price could decline as a result of sales of a large number of shares of our common stock or the perception that these sales could occur. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

As of December 31, 2016, 6,900,000 shares of our Class A common stock are outstanding and 31,437,741 shares of our Class B common stock are outstanding. All shares of Class A common stock sold in our IPO are freely tradable without restriction or further registration under the Securities Act, unless held by our “affiliates,” as that term is defined in Rule 144 under the Securities Act. The resale of the 31,437,741 shares of Class B common stock, or approximately 82% of our outstanding shares, is currently prohibited or otherwise restricted as a result of securities law provisions, market standoff agreements entered into by our stockholders with us or lock-up agreements entered into by our stockholders with the underwriters; however, subject to applicable securities law restrictions, these shares will be able to be sold in the public market beginning March 22, 2017. In addition, the shares subject to outstanding options, restricted stock units, or RSUs, and warrants, of which options, RSUs and warrants to purchase 11,203,186 shares, 627,788 shares and 10,604 shares, respectively, were outstanding as of December 31, 2016, and the shares reserved for future issuance under our stock option and equity incentive plans will become available for sale immediately upon the exercise of such options and the expiration of any applicable market stand-off or lock-up agreements, subject to applicable securities law restrictions. On September 23, 2016, we registered the offer and sale of all shares of common stock that we may issue under our equity compensation plans. As a consequence, the sale of shares to be issued under our equity incentive plans can be freely sold in the public market upon issuance, subject to the lockup agreements and the restrictions of Rule 144 under the Securities Act, in the case of our affiliates.

The holders of 21,650,066 shares, or approximately 57% of our common stock, have rights, subject to some conditions, to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. Once we register the offer and sale of shares for the holders of registration rights, they can be freely sold in the public market upon issuance, subject to the lock-up agreements and the restrictions of Rule 144 under the Securities Act, in the case of our affiliates.

In addition, in the future, we may issue additional shares of Class A common stock or other equity or debt securities convertible into Class A common stock in connection with a financing, acquisition, commercial relationship, litigation settlement, employee arrangements or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause our stock price to decline.

Our management team has broad discretion to use the net proceeds from our IPO, and its investment of these proceeds may not yield a favorable return. They may invest the proceeds of this offering in ways with which investors disagree.

We expect to use the net proceeds from the IPO for working capital and other general corporate purposes. We may also use a portion of the net proceeds to expand our current business through acquisitions of or investments in other complementary businesses, technologies or other assets. However, we currently have no agreements or commitments with respect to any such acquisitions or investments at this time.

We could spend the proceeds from our IPO in ways our stockholders may not agree with or that do not yield a favorable return, if at all. If we do not invest or apply the proceeds of this offering in ways that improve our operating results, we may fail to achieve expected financial results, which could cause our stock price to decline.

Anti-takeover provisions in our charter documents and under Delaware or Washington law could make an acquisition of us difficult, limit attempts by our stockholders to replace or remove our current management and adversely affect our stock price.

Provisions of our certificate of incorporation and bylaws may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our stock. Among other things, the certificate of incorporation and bylaws will:

- permit the board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate;
- provide that the authorized number of directors may be changed only by resolution of the board of directors;
- provide that all vacancies, including newly-created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- divide the board of directors into three classes;
- provide that a director may only be removed from the board of directors by the stockholders for cause;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and may not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner, and meet specific requirements as to the form and content of a stockholder's notice;
- prevent cumulative voting rights (therefore allowing the holders of a plurality of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);
- require that, to the fullest extent permitted by law, a stockholder reimburse us for all fees, costs and expenses incurred by us in connection with a proceeding initiated by such stockholder in which such stockholder does not obtain a judgment on the merits that substantially achieves the full remedy sought;
- provide that special meetings of our stockholders may be called only by the chairman of the board, our chief executive officer (or president, in the absence of a chief executive officer) or by the board of directors;
- provide that stockholders will be permitted to amend the bylaws only upon receiving at least two-thirds of the total votes entitled to be cast by holders of all outstanding shares then entitled to vote generally in the election of directors, voting together as a single class; and
- authorize two classes of common stock.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder became an "interested" stockholder. Likewise, because our principal executive offices are located in Washington, the anti-takeover provisions of the Washington Business Corporation Act may apply to us under certain circumstances now or in the future. These provisions prohibit a "target corporation" from engaging in any of a broad range of business combinations with any stockholder constituting an "acquiring person" for a period of five years following the date on which the stockholder became an "acquiring person."

Our certificate of incorporation provides that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our certificate of incorporation provides that, unless we otherwise consent in writing, the Court of Chancery of the State of Delaware is 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, our certificate of incorporation or our bylaws, any action to interpret, apply, enforce, or determine the validity of our certificate of incorporation or bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find the choice of forum provision contained in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

We are an "emerging growth company," and any decision on our part to comply only with certain reduced reporting and disclosure requirements applicable to emerging growth companies could make our Class A common stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups, or JOBS, Act enacted in April 2012, and, for as long as we continue to be an "emerging growth company," we may choose to take advantage of exemptions from various reporting requirements applicable to other public companies but not to "emerging growth companies," including, but not limited to, not being required to have our independent registered public accounting firm audit our internal control over financial reporting under Section 404, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an "emerging growth company" for up to five years following the closing of our IPO, although, if we have more than \$1.0 billion in annual revenue, if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the last business day in June, or we issue more than \$1.0 billion of non-convertible debt over a three-year period before the end of that five-year period, we would cease to be an "emerging growth company" as of the following December 31. We cannot predict if investors will find our Class A common stock less attractive if we choose to rely on these exemptions. If some investors find our Class A common stock less attractive as a result of any choices to reduce future disclosure, there may be a less active trading market for our Class A common stock and our stock price may be more volatile.

As an "emerging growth company" the JOBS Act, allows us to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. We have elected to use this extended transition period under the JOBS Act. As a result, our financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our common stock less attractive to investors.

We will incur increased costs by being a public company.

As a public company, and particularly after we cease to be an "emerging growth company," we will incur greater legal, accounting and other expenses that we did not incur as a private company, including costs associated with public company reporting requirements. We also anticipate that we will incur costs associated with corporate governance requirements, including requirements of the SEC and the Nasdaq Global Market. We expect these rules and regulations to increase our legal and financial compliance costs and to make some activities more time-consuming and costly. We also expect that these rules and regulations may make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified individuals to serve on our board of directors or as executive

officers. We are currently evaluating and monitoring developments with respect to these rules, and we cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

When our independent registered public accounting firm is required to undertake an assessment of our internal control over financial reporting, the cost of our compliance with Section 404 will correspondingly increase. Moreover, if we are not able to comply with the requirements of Section 404 applicable to us in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We lease approximately 89,000 square feet of office space for our corporate headquarters in Bellevue, Washington pursuant to a lease that expires in January 2023. We also lease space in various locations in the United States and internationally. We believe our facilities are adequate for our current needs.

Item 3. Legal Proceedings.

We may, from time to time, be party to litigation and subject to claims incident to the ordinary course of business. As our growth continues, we may become party to an increasing number of litigation matters and claims. The outcome of litigation and claims cannot be predicted with certainty, and the resolution of these matters could materially affect our future results of operations, cash flows or financial position. We are not presently party to any legal proceedings that, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flows.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

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

Market Information for Common Stock

Our Class A common stock is listed on the Nasdaq Global Market under the symbol "APTI."

The following table sets forth for the indicated periods the high and low sales prices for our Class A common stock as reported by the Nasdaq Global Market.

Year ended December 31, 2016

	<u>High</u>	<u>Low</u>
Fourth quarter	\$ 22.10	\$ 15.30
Third quarter (beginning on September 23, 2016)	24.60	20.91

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

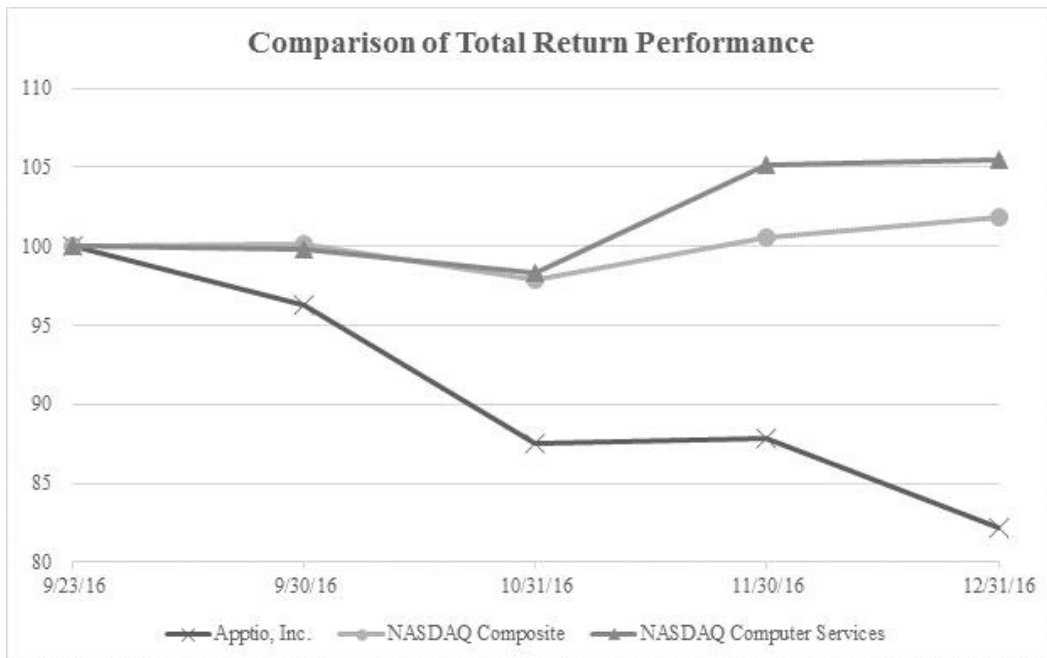
Dividend Policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain any future earnings for use in the operation of our business and do not intend to declare or pay any cash dividends in the foreseeable future. Any further determination to pay dividends on our capital stock will be at the discretion of our board of directors, subject to applicable laws, and will depend on our financial condition, results of operations, capital requirements, general business conditions and other factors that our board of directors considers relevant.

Stockholders

As of January 31, 2017, there was one stockholder of record of our Class A common stock, The Depository Trust Company, which holds shares of our common stock on behalf of an indeterminate number of beneficial owners, as well as 309 stockholders of record of our Class B common stock.

This chart compares the cumulative total return on our common stock with that of the Nasdaq Composite Index and the Nasdaq Computer Services Index. The chart assumes \$100 was invested at the close of market on September 23, 2016, in our Class A common stock, the Nasdaq Composite Index and the Nasdaq Computer Services Index, and assumes the reinvestment of any dividends. The stock price performance on the following graph is not necessarily indicative of future stock price performance.



Company/Index	Base Period				
	9/23/16	9/30/16	10/31/16	11/30/16	12/31/16
Apptio, Inc.	\$ 100.00	\$ 96.23	\$ 87.49	\$ 87.85	\$ 82.17
NASDAQ Composite	100.00	100.13	97.86	100.60	101.79
NASDAQ Computer Services	100.00	99.76	98.32	105.16	105.50

The closing price of our Class A common stock on December 30, 2016, the last day of our 2016 fiscal year, was \$18.53 per share.

Item 6. Selected Financial Data.

We derived the following selected consolidated statements of operations data for the years ended December 31, 2016, 2015 and 2014, and the selected consolidated balance sheet data as of December 31, 2016 and 2015 from our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The consolidated statements of operations for the year ended December 31, 2013 and the consolidated balance sheet data as of December 31, 2014 and 2013, have been derived from our audited consolidated financial statements not included in this Annual Report on Form 10-K.

	Years Ended December 31,			
	2016	2015	2014	2013
	(in thousands, except per share data)			
Revenue				
Subscription	\$ 130,061	\$ 99,924	\$ 78,719	\$ 54,206
Professional services	30,508	29,327	27,896	19,562
Total revenue	160,569	129,251	106,615	73,768
Cost of revenue				
Subscription (1)	27,298	23,457	14,686	8,325
Professional services (1)	26,862	25,720	25,731	19,034
Total cost of revenue	54,160	49,177	40,417	27,359
Gross profit	106,409	80,074	66,198	46,409
Operating expenses				
Research and development (1)	35,475	30,553	23,099	17,804
Sales and marketing (1)	75,856	71,337	60,775	43,415
General and administrative (1)	23,229	17,763	14,245	8,597
Total operating expenses	134,560	119,653	98,119	69,816
Loss from operations	(28,151)	(39,579)	(31,921)	(23,407)
Other income (expense)				
Interest (expense) income and other, net	(1,533)	(18)	2	(51)
Foreign exchange loss	(1,417)	(1,301)	(697)	(163)
Loss before provision for income taxes	(31,101)	(40,898)	(32,616)	(23,621)
Provision for income taxes	(452)	(109)	(256)	(114)
Net loss	\$ (31,553)	\$ (41,007)	\$ (32,872)	\$ (23,735)
Net loss per share attributable to common stockholders, basic and diluted	\$ (1.61)	\$ (3.24)	\$ (2.72)	\$ (2.11)
Weighted-average shares used to compute net loss per share attributable to common stockholders, basic and diluted (2)	19,595	12,653	12,080	11,256

(1) Includes stock-based compensation expense as follows:

	Years Ended December 31,			
	2016	2015	2014	2013
	(in thousands)			
Cost of revenue				
Subscription	\$ 891	\$ 482	\$ 220	\$ 75
Professional services	820	738	609	314
Operating expenses				
Research and development	2,977	2,283	1,465	836
Sales and marketing	3,132	2,477	2,006	1,047
General and administrative	2,639	1,835	1,466	789
Total stock-based compensation	<u>\$ 10,459</u>	<u>\$ 7,815</u>	<u>\$ 5,766</u>	<u>\$ 3,061</u>

- (2) Immediately prior to the completion our IPO on September 28, 2016, 18.2 million shares of convertible preferred stock were converted and reclassified to Class B common stock. In addition, immediately prior to the completion of the IPO, a warrant to purchase 27,321 shares of convertible preferred stock was converted to a warrant to purchase 27,321 shares of Class B common stock, and 25,658 shares of our Class B common stock was issued upon the net exercise of this warrant.

	December 31,			
	2016	2015	2014	2013
	(in thousands)			
Consolidated Balance Sheet Data:				
Cash and cash equivalents	\$ 42,007	\$ 17,256	\$ 19,686	\$ 35,816
Working capital, excluding deferred revenue	124,286	61,544	66,574	77,198
Total assets	194,782	99,151	108,462	110,509
Deferred revenue, current and non-current	100,139	83,225	63,289	46,259
Preferred stock warrant liability	—	414	357	241
Convertible preferred stock	—	133,809	133,809	133,809
Accumulated deficit	(200,324)	(168,771)	(127,764)	(94,892)
Total stockholders' equity (deficit)	71,568	(142,261)	(111,827)	(86,147)

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

You should read the following discussion and analysis together with the financial statements and the related notes to those statements included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. As a result of many factors, such as those set forth in the section of this report captioned "Risk Factors" and elsewhere in this report, our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

We are the leading provider of Technology Business Management, or TBM, solutions. Our cloud-based platform and SaaS applications enable IT leaders to analyze, optimize and plan technology investments, and benchmark their financial and operational performance against peers. We empower IT leaders to transform IT into a service provider, navigate the cloud transition, and shift technology resources to drive more business innovation.

We were founded in 2007 to deliver cloud-based TBM solutions to global enterprises. Our cycle of frequent updates has facilitated rapid innovation and the introduction of new applications throughout our history. We began offering our first TBM application via our extensible platform in 2008. Since then, we have continued to invest in product innovation and have consistently introduced new applications and capabilities to the market.

Because we offer our applications on a subscription basis, typically on contracts with one- to three-year terms, we have visibility into a substantial portion of future revenue. Subscription fees are based on two primary factors: (1) the customer's annual costs being managed by the applications; and (2) the applications or capabilities for which the customer has subscribed. For some applications, pricing is also impacted by the number of users. We recognize revenue from subscription fees ratably over the term of the contract. We currently derive a significant portion of subscription revenue from subscriptions to our Cost Transparency application. We sell our offerings primarily through a direct sales force and we engage in a variety of marketing activities, including traditional and online activities as well as participation in, and support of, the TBM Council, which are designed to provide sales lead generation, sales support and market awareness. Customers may subscribe for one or more of our applications, and within those applications they may choose to subscribe for all or a portion of the respective application's capabilities, which are segmented into modules. For those customers that do not initially implement all of our applications, we seek to sell additional applications and modules over time. We believe that there is a significant opportunity to continue to expand the number of applications deployed by existing customers. We also derive revenue from professional services. Professional services revenue includes revenue from application configuration, integration, change management, education and training services, and conference registration and sponsorship fees. This revenue is largely driven by the number and mix of implementations that we perform in a quarter.

We generate the majority of our revenue in North America; however, we are focused on growing our international business. Revenue generated from customers outside of North America accounted for 25%, 22% and 19% of total revenue in 2016, 2015 and 2014, respectively. For additional information regarding revenue generated from each geographic segment, please see Note 10 of the notes to our consolidated financial statements.

We have grown significantly in a relatively short period of time. Our diverse customer base includes companies across industries and sizes, and our direct sales force has historically targeted organizations with annual IT spend of \$100 million or more. Beginning in 2014, we expanded the focus of our sales force to include a broader set of target customers, often referred to as the Global 10,000, which includes many companies with annual IT spend of less than \$100 million. We expect these customers will account for an increasing amount of our revenue over time. A substantial majority of our revenue growth has come from new customers. Our current financial focus is on growing our revenue and expanding our customer base. While we are incurring losses today, we strive to invest in a disciplined manner across all of our functional areas to drive continued near-term revenue growth and support our long-term initiatives. Our operating expenses have increased in absolute dollars in recent periods, primarily due to employee growth. We had 731 and 636 employees as of December 31, 2016 and 2015, respectively.

As of December 31, 2016, the average annual subscription contract value from all active customers was approximately \$400,000. Average annual subscription contract value has been affected by the fact that, prior to 2014, our sales force focused on selling our entire technology platform to customers, generally with very large IT

spend, which resulted in fewer, but larger, deals as compared to today. Add-on sales to existing customers were not a primary focus. Beginning in 2014, our sales force began to focus on selling discrete applications rather than our entire platform to a broader range of customers in the Global 10,000. Under this approach, we often sell one or two applications initially and subsequently target sales opportunities for additional applications. As a result, although some period-to-period variability may be introduced with one or more large contracts, we expect average annual contract value of newly acquired customers to decrease for the foreseeable future.

We had total revenue of \$160.6 million, \$129.3 million and \$106.6 million for the years ended December 31, 2016, 2015 and 2014, respectively, reflecting year-over-year increases of 24% and 21%. Subscription revenue was \$130.1 million, \$99.9 million and \$78.7 million for the years ended December 31, 2016, 2015 and 2014, respectively, reflecting year-over-year increases of 30% and 27%. We incurred net losses of \$31.6 million, \$41.0 million and \$32.9 million, respectively. We had an accumulated deficit of \$200.3 million as of December 31, 2016. We expect to incur losses for the foreseeable future and may not be able to achieve or sustain profitability.

Our Business Model

Our business model focuses on maximizing the lifetime value of customer relationships. We make significant investments in acquiring new customers and believe that we will be able to achieve a substantial positive return on these investments by retaining customers, increasing the number of applications and modules deployed by customers over time, and increasing the spend managed by our applications. In connection with the acquisition of new customers, we incur significant upfront costs, including sales and marketing costs associated with acquiring new customers, such as sales commission expenses, which are expensed upfront, and marketing costs, which are expensed as incurred. We recognize subscription revenue ratably over the term of the subscription period, which commences when all of the revenue recognition criteria have been met.

Our objective is for each customer relationship to be profitable over its lifetime, however, the costs we incur with respect to any customer relationship may exceed revenue in earlier periods because we recognize those costs faster than we recognize the associated revenue. Over time, we expect a large portion of our customers to renew their subscriptions, purchase additional applications and expand their IT spend managed by our applications. We also expect the proportion of annual revenue from existing customers to grow relative to annual revenue from new customers. Our sales and marketing expense for renewals and additional sales to existing customers are significantly less than those for sales to new customers while the cost of revenue remains relatively constant. As a result, we believe the mix shift over time between new and existing customers will have a positive impact on our operating margins. Specifically, as the percentage of our annual revenue from existing customers grows relative to the annual revenue from new customers, we would expect the percentage of revenue spent on sales and marketing to decline.

Recent Developments

In September 2016, we completed an initial public offering, or IPO, in which we sold 6,900,000 shares of our Class A common stock at the initial price to public of \$16.00 per share. We received net proceeds of \$99.0 million, after deducting underwriting discounts and commissions and offering expenses.

Key Factors Affecting Our Performance

Net Subscription Dollar Retention Rate

We believe that our net subscription dollar retention rate provides insight into our ability to retain and increase revenue from our customers, as well as their potential long-term value to us. Accordingly, we compare the aggregate annual contract value of our customer base at the end of the prior 12 month period, which we refer to as the base annual contract value, to the aggregate annual contract value from the same group of customers at the end of the current 12 month period, which we refer to as the retained annual contract value. We calculate our net subscription dollar retention rate on a trailing 12 month basis by dividing the retained annual contract value by the base annual contract value. In the event a customer renews a subscription for a period that begins and ends in the same 12 month period, the value of that partial-year subscription is included in our calculation of retained annual contract value. Our net subscription dollar retention rate was approximately 98% and 100% for each of the 12 month periods ending December 31, 2016 and 2015, respectively.

Investment in Growth

We intend to continue investing for long-term growth. We plan to continue to expand our sales and marketing organizations to sell our offerings globally. In addition, we have invested, and expect to continue to invest, in our product development efforts to deliver additional compelling applications and to address customers' evolving needs. We are also investing in personnel to service our growing customer base. These investments will increase operating expenses on an absolute dollar basis for the foreseeable future. Many of these investments will occur in advance of our experiencing any direct benefit from them and will make it difficult to determine if we are allocating our resources efficiently. However, we expect research and development, sales and marketing, and general and administrative expenses to decrease as a percentage of total revenue over the long-term as revenue grows, and we anticipate that we will gain economies of scale as our customer base grows.

Since our inception, we have invested in professional services to help ensure that customers successfully deploy and adopt our applications. Additionally, we continue to expand our professional services partner ecosystem to further support our customers. We believe that our investment in professional services, as well as partners building consulting practices around Apptio, will drive additional customer subscriptions and continued growth in revenue. In addition, over the long-term, we expect professional services revenue to decrease as a percentage of total revenue as our customer base continues to grow and as the effort required to deploy our solutions decreases, through product enhancements and our efforts to drive increased customer adoption of our standardized IT operating model, the Apptio TBM Unified Model, or ATUM.

Investment in Infrastructure

We have made, and intend to continue to make, substantial investments in infrastructure that will impact cost of revenue, operating expenses and capital expenditures. We intend to invest to support growth at our leased data centers and with public cloud infrastructure providers to deliver enhanced levels of service to our customers. We intend to continue to invest in enhancements to our cloud architecture, which are designed to provide our customers with enhanced security, scalability and availability. We intend to continue to evaluate the expansion of our data center locations to address additional geographic markets. In addition, we may expand existing and establish new facilities in the future to accommodate our projected headcount growth at various locations around the world. We may incur substantial costs in connection with such expansion efforts, including leasehold improvements, equipment costs, and, if headcount increases faster than we expect, potentially lease termination payments to enter into new leases for larger space.

Sales Cycles

We target sales efforts at enterprises and face long sales cycles, complex customer requirements, substantial upfront sales costs, and a relatively low and difficult to predict volume of sales on a quarter-by-quarter basis. This makes it difficult to predict with certainty our sales and related operating performance in any given period. Our typical sales cycle is approximately six months, but can be highly variable. Historically we have experienced an increased volume of sales in the last few weeks of the quarter which can affect the timing of recognized revenue and the possibility that sales cycles extend beyond the end of a quarter. Extending sales cycles beyond the end of a quarter, particularly for sizeable transactions, can harm forecasting accuracy and impact billings and new customer acquisition metrics for the quarter in which they are forecasted to close.

Meeting our financial plan in part depends on a predictable growth rate in the acquisition of new customers that represent high annual contract value, while additional growth and enhanced predictability in part depends on an increased volume of new customers with a relatively lower annual contract value. Our financial performance and the predictability of our quarterly financial results may be harmed by intermittent failures to secure the higher value enterprise agreements, or increase the volume of transactions overall, according to our forecasts, and depends in large part on the successful execution of our direct sales team.

Focus on Free Cash Flow

We define free cash flow as cash used in operating activities less purchases of property and equipment. We consider free cash flow to be an important measure that we are focused on to run our business. For a reconciliation

of free cash flow to the related U.S. generally accepted accounting principles, or GAAP measure, net cash used in operating activities, see the section captioned “Non-GAAP Financial Measures.”

Components of Our Results of Operations

Revenue

We derive revenue from two sources: (1) subscription revenue, which is comprised of subscription fees from customers accessing our platform, fees for additional support beyond the standard support that is included in the basic subscription fees, and fees for subscription-based online training; and (2) professional services, which consist of fees associated with the implementation and configuration of our applications, as well as fees for in-person training and conference registration and sponsorship fees for the TBM Council, the operations of which we consolidate in our financial statements given the nature of our relationship.

Subscription revenue is driven primarily by the acquisition of new customers and renewals by existing customers, the amount of annual spend our customers are licensed to manage with our applications and the number of applications or capabilities for which the customer has subscribed.

Our contracts typically vary in length between one and three years. All subscription and support fees that are billed in advance of service are recorded in deferred revenue. Subscription and support-based revenue is recognized ratably over the subscription term. As a result, most of the revenue that we report in each period is derived from the recognition of deferred revenue relating to subscriptions entered into during previous periods. Pricing includes multiple environments, hosting and support services, data backup and disaster recovery services, as well as future upgrades, when and if available, offered during the subscription period. We typically invoice our customers for subscription fees in annual increments upon execution of the initial contract or subsequent renewal, but contract lengths and billing frequencies may vary. Therefore, the annualized value of the arrangements that we enter into with our customers may not be fully reflected in deferred revenue at any single point in time. Accordingly, we do not believe that the change in deferred revenue for any period is an accurate indicator of future revenue for a given period of time. Our contracts are generally non-cancelable during the subscription term, though a customer can terminate for breach if we materially fail to perform.

A typical new customer implementation takes three to six months depending on the customer’s complexity and timeliness. All professional services fees that are billed in advance of service are recorded in deferred revenue. Our professional services engagements are priced on either a time-and-materials basis or on a fixed-fee basis. In addition, sometimes partners will perform implementation services directly to our customers for which we do not receive professional services revenue. For time-and-materials arrangements, we recognize revenue as hours are worked at the stated hourly rate. For fixed-fee arrangements, we recognize professional services revenue using the percentage of completion method measured on an hours incurred basis. Professional services yield lower gross margins than subscriptions due to the labor-intensive nature of professional services.

On occasion, we sell our applications through third-party resellers. These arrangements typically call for the reseller to retain a portion of the subscription fee paid by the customer as compensation. Since we are typically responsible for the acceptability of the services purchased by the customer, we are the primary obligor in the transaction and, therefore, record revenue on a gross basis based on the amount billed to the customer. Reseller fees are recognized as sales and marketing expense as incurred.

Cost of Revenue and Gross Margin

Cost of subscription revenue consists primarily of employee-related costs, including payroll, benefits and stock-based compensation expense for our technology operations and customer support teams, fees paid to our managed hosting providers and other third-party service providers, amortization of capitalized software development costs and acquired technology, and allocated overhead costs, which include rent, facilities and costs related to internal IT. We expect cost of subscription revenue to continue to increase in absolute dollars for the foreseeable future as our customer base grows.

Subscription gross margin, or subscription revenue less cost of subscription revenue expressed as a percentage of subscription revenue, can and does fluctuate based on a number of factors, including the timing and extent of the fees that we pay to our hosting providers and other third-party service providers, and the timing and extent of the investments that we make in additional data center infrastructure and capabilities. Due to investments we made in additional data centers and public cloud hosting capabilities prior to December 31, 2015, we expect subscription gross margin to increase modestly over the long-term, although it may fluctuate from period to period depending on the interplay of the factors discussed above. Because we have data centers in each of our three primary geographies, we expect to be able to more efficiently add capacity within these data centers to support our anticipated customer growth.

Cost of professional services revenue consists primarily of personnel costs of our professional services organization, including salaries, employee benefits, travel expenses, bonuses and stock-based compensation expense, as well as allocated overhead costs. Cost of professional services excludes costs associated with TBM Council conferences, which we record as sales and marketing expenses. We expect cost of professional services revenue to continue to increase in absolute dollars for the foreseeable future as we further expand our professional services organization to serve our growing customer base.

Professional services gross margin, or professional services revenue less cost of professional services revenue expressed as a percentage of professional services revenue, can and does fluctuate based on a number of factors, including the timing and extent of our investments in our professional services organization. The primary focus of our professional services business will continue to be providing high-quality customer deployments that allow customers to realize rapid value from our solutions and become long-term, loyal customers. In the future, we may choose to invest in our professional services organization at a pace faster than professional services revenue growth, in which case we may experience a decline in professional services gross margin. We also expect professional services gross margin to be positively affected in periods, particularly the fourth quarter, in which we recognize revenue related to TBM Council events. We expect professional services gross margin to remain relatively consistent over the long-term, although it may fluctuate from period to period depending on the interplay of the factors discussed above.

We expect total gross margin to increase modestly over the long-term as our subscription revenue increases as a percentage of total revenue, as we realize operational efficiencies in our data centers and public cloud hosting environments, and as we continue to leverage our partners to help us provide professional services, although total gross margin may fluctuate from period to period depending on the interplay of the factors discussed above.

Operating Expenses

Research and Development. Research and development expenses consist primarily of personnel costs, employee benefits, stock-based compensation expense and other headcount-related costs associated with product development, hosting costs and depreciation of equipment used in research and development, consulting fees, and allocated overhead costs. For development costs related to our software and internal use software, qualifying internally developed software costs incurred during the application development stage are capitalized. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. 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 applications. However, we expect research and development expenses to decrease modestly as a percentage of total revenue over the long-term as our customer base and revenue grows, although research and development expenses may fluctuate as a percentage of total 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 expenses consist primarily of personnel costs for our sales and marketing employees, including sales commissions and incentives, employee benefits and stock-based compensation expense, marketing programs for lead generation, the costs associated with TBM Council events and allocated overhead costs. We immediately expense sales commissions related to acquiring new customers and subsequent renewals from existing customers. We expect sales and marketing expenses to continue to increase and continue to be our largest component of operating expenses for the foreseeable future as we continue to expand our direct sales teams, increase our marketing activities, grow our international operations, build brand awareness and sponsor additional marketing events. However, we expect sales and marketing expenses to decrease as a percentage of total

revenue over the long-term, although sales and marketing expenses may fluctuate as a percentage of total 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 expenses consist primarily of personnel costs and related expenses, including payroll, employee benefits and stock-based compensation expense for executive, finance, legal, human resources, and administrative personnel, professional fees for external legal, accounting and other consulting services and allocated overhead costs. We expect general and administrative expenses will continue to increase in absolute dollars for the foreseeable future as we continue to grow and incur the costs of compliance associated with being a publicly traded company, including increased legal, audit and consulting fees. Although general and administrative expenses may fluctuate as a percentage of total revenue from period to period due to the seasonality of revenue and the timing and extent of these expenses, in the near term, we expect general and administrative expenses to increase as a percentage of total revenue; however, we expect general and administrative expenses to decrease modestly as a percentage of total revenue over the long-term as we focus on processes, systems and controls to enable our internal support functions to scale with the growth of our business.

Other Income (Expense)

Interest Income (Expense) and Other, Net. Interest income (expense) and other, net consists primarily of interest on our capital leases and debt, and fair value adjustments for our preferred stock warrant liability. Interest income is derived from our available-for-sale investments.

Foreign Exchange Loss. Foreign exchange loss consists primarily of foreign currency transaction gains and losses related to the impact of transactions denominated in a foreign currency other than the functional currency (U.S. dollars). As we have expanded our international operations, our exposure to fluctuations in foreign currencies has increased, and we expect this trend to continue.

Provision for Income Taxes. Provision for income taxes consists primarily of income taxes in certain foreign jurisdictions in which we conduct business. As we have expanded our international operations, we have incurred increased foreign tax expense, and we expect this trend to continue. We have a full valuation allowance for net deferred tax assets, including net operating loss carryforwards, and tax credits related primarily to research and development. We expect to maintain this full valuation allowance for the foreseeable future.

Non-GAAP Financial Measures

In addition to our results determined in accordance with GAAP, we believe free cash flow, which is a non-GAAP measure, is useful in evaluating our business performance. We define free cash flow as net cash used in operating activities, less purchases of property and equipment. We regularly review this liquidity measure because we believe free cash flow facilitates period-to-period comparisons of liquidity. We consider free cash flow to be an important measure because it measures the amount of cash we generate from our operations after our capital expenditures and reflects changes in working capital. We use free cash flow in conjunction with traditional GAAP measures as part of our overall assessment of our liquidity, including the preparation of our annual operating budget and quarterly forecasts, to evaluate the effectiveness of our business strategies and to communicate with our board of directors concerning our liquidity.

Our definitions may differ from the definitions used by other companies and therefore comparability may be limited. In addition, other companies may not publish these or similar metrics. Thus, our free cash flow should be considered in addition to, not as a substitute for, or in isolation from, measures prepared in accordance with GAAP.

We compensate for these limitations by providing investors and other users of our financial information reconciliations of free cash flow to the related GAAP financial measure, net cash used in operating activities. We encourage investors and others to review our financial information in its entirety, not to rely on any single financial measure and to view free cash flow in conjunction with the related GAAP financial measure.

The following table provides a reconciliation of net cash used in operating activities to free cash flow:

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Net cash used in operating activities	\$ (3,994)	\$ (10,591)	\$ (17,957)
Less: purchases of property and equipment	(5,402)	(7,643)	(6,319)
Free cash flow	<u>\$ (9,396)</u>	<u>\$ (18,234)</u>	<u>\$ (24,276)</u>
Net cash (used in) provided by investing activities	\$ (74,644)	\$ 6,658	\$ 606
Net cash provided by financing activities	\$ 101,152	\$ 1,455	\$ 1,396

Results of Operations

The following tables set forth our results of operations for the periods presented and as a percentage of our total revenue for those periods.

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Revenue			
Subscription	\$ 130,061	\$ 99,924	\$ 78,719
Professional services	30,508	29,327	27,896
Total revenue	<u>160,569</u>	<u>129,251</u>	<u>106,615</u>
Cost of revenue			
Subscription (1)	27,298	23,457	14,686
Professional services (1)	26,862	25,720	25,731
Total cost of revenue	<u>54,160</u>	<u>49,177</u>	<u>40,417</u>
Gross profit	<u>106,409</u>	<u>80,074</u>	<u>66,198</u>
Operating expenses			
Research and development (1)	35,475	30,553	23,099
Sales and marketing (1)	75,856	71,337	60,775
General and administrative (1)	23,229	17,763	14,245
Total operating expenses	<u>134,560</u>	<u>119,653</u>	<u>98,119</u>
Loss from operations	(28,151)	(39,579)	(31,921)
Other income (expense)			
Interest (expense) income and other, net	(1,533)	(18)	2
Foreign exchange loss	(1,417)	(1,301)	(697)
Loss before provision for income taxes	(31,101)	(40,898)	(32,616)
Provision for income taxes	(452)	(109)	(256)
Net loss	<u>\$ (31,553)</u>	<u>\$ (41,007)</u>	<u>\$ (32,872)</u>

(1) Includes stock-based compensation expense as follows:

	Years Ended December 31,		
	2016	2015	2014
	(in thousands)		
Cost of revenue			
Subscription	\$ 891	\$ 482	\$ 220
Professional services	820	738	609
Operating expenses			
Research and development	2,977	2,283	1,465
Sales and marketing	3,132	2,477	2,006
General and administrative	2,639	1,835	1,466
Total stock-based compensation	<u>\$ 10,459</u>	<u>\$ 7,815</u>	<u>\$ 5,766</u>

	Years Ended December 31,		
	2016	2015	2014
	(as a percentage of total revenue)		
Revenue			
Subscription	81%	77%	74%
Professional services	19	23	26
Total revenue	<u>100</u>	<u>100</u>	<u>100</u>
Cost of revenue			
Subscription	17	18	14
Professional services	17	20	24
Total cost of revenue	<u>34</u>	<u>38</u>	<u>38</u>
Gross profit	66	62	62
Operating expenses			
Research and development	22	24	22
Sales and marketing	47	55	57
General and administrative	15	14	13
Total operating expenses	<u>84</u>	<u>93</u>	<u>92</u>
Loss from operations	(18)	(31)	(30)
Other income			
Interest expense and other, net	(1)	—	—
Foreign exchange loss	(1)	(1)	(1)
Loss before provision for income taxes	<u>(20)</u>	<u>(32)</u>	<u>(31)</u>
Provision for income taxes	—	—	—
Net loss	<u>(20)%</u>	<u>(32)%</u>	<u>(31)%</u>

Year Ended December 31, 2016 as compared to the Year Ended December 31, 2015

Revenue

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Subscription	\$ 130,061	\$ 99,924	\$ 30,137	30%
Professional services	30,508	29,327	1,181	4
Total revenue	<u>\$ 160,569</u>	<u>\$ 129,251</u>	<u>\$ 31,318</u>	<u>24</u>

Subscription revenue increased for the year ended December 31, 2016 primarily due to the impact of new customer acquisition and sales of additional applications to existing customers. Professional services revenue increased for the year ended December 31, 2016 primarily due to an increase in implementation fees associated with growth in our customer base.

Cost of Revenue and Gross Margin

	Year Ended December 31,		Change	
	2016	2015	Amount	%
(dollars in thousands)				
Cost of revenue:				
Subscription	\$ 27,298	\$ 23,457	\$ 3,841	16%
Professional services	26,862	25,720	1,142	4
Total cost of revenue	<u>\$ 54,160</u>	<u>\$ 49,177</u>	<u>\$ 4,983</u>	10
Gross margin:				
Subscription	79%	77%		
Professional services	12	12		
Total gross margin	66	62		

The overall increase in cost of subscription revenue was primarily attributable to increased personnel-related costs of \$4.6 million driven by headcount growth, which resulted in increased employee compensation, benefits and travel costs of \$4.2 million, and additional stock-based compensation of \$0.4 million. In addition, data center fees increased by \$0.3 million as we increased data center capacity to support our growth, and allocated overhead expenses increased by \$0.7 million. These increases were offset by decreased consulting fees of \$0.6 million. Additionally, professional services personnel are, on occasion, utilized for services associated with general subscription support. As a result, we reallocate the related personnel costs from cost of professional services to cost of subscription. This cost allocation decreased by \$0.5 million as the increased number of our subscription support personnel was sufficient to handle the support workload. In 2016, we began allocating the cost of hosting internal-use instances of our SaaS applications to the departments using them. This resulted in a reduction of \$1.0 million in subscription cost of revenue for the year ended December 31, 2016. We have evaluated the cost of hosting internal-use instances for the year ended December 31, 2015 and prior years, and determined that the impact was immaterial for reclassification.

The overall increase in cost of professional services revenue was primarily attributable to an increase in outside services of \$0.7 million, due to an increase in the use of third parties to supplement internal staff in providing implementation services in 2016, and a reduction of allocated costs to cost of subscription of \$0.5 million for personnel costs related to the use of professional services personnel for general subscription support. In addition, cost of professional services in 2016 includes a \$0.2 million allocation of the cost of hosting internal-use instances of our SaaS applications as discussed above. These increases were offset by a decrease in personnel-related costs consisting of employee compensation, benefits and travel costs of \$0.4 million driven by a reduction in headcount due to a shift toward utilizing more third parties to provide implementation services.

Subscription gross margin increased as a result of an increase in revenue from growth in our customer base, and expanded utilization of existing hosting infrastructure.

Professional services gross margin was flat primarily due to relatively stable effective hourly billing rates for projects delivered during the comparable periods. The effective hourly billing rate may vary period over period based on the composition of projects being delivered.

Operating Expenses

Research and Development

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Research and development	\$ 35,475	\$ 30,553	\$ 4,922	16%
Percentage of total revenue	22%	24%		

Research and development expenses increased primarily due to increased personnel-related costs of \$4.2 million, consisting of increased employee compensation and benefits driven by headcount growth. Total headcount in research and development increased 18% from December 31, 2015 to December 31, 2016 to support continued upgrades and enhancements to our platform and applications and to develop new technologies. Additionally, allocated overhead and internal hosting costs increased by \$1.0 million.

Sales and Marketing

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Sales and marketing	\$ 75,856	\$ 71,337	\$ 4,519	6%
Percentage of total revenue	47%	55%		

Sales and marketing expenses increased due to the expansion of our sales force and increased allocated overhead costs. Total headcount in sales and marketing increased 10% from December 31, 2015 to December 31, 2016, contributing to a \$2.6 million net increase in personnel-related costs, consisting of increased employee compensation, benefits, and increased travel costs, associated with our direct sales force of \$3.0 million and additional stock-based compensation of \$0.7 million, offset by a decrease in commissions expense of \$1.1 million due to a more balanced contribution from our sales force in 2016 versus 2015, resulting in fewer accelerated commission rates. Allocated overhead costs increased by \$1.1 million as a result of additional IT resources and internal hosting costs.

General and Administrative

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
General and administrative	\$ 23,229	\$ 17,763	\$ 5,466	31%
Percentage of total revenue	15%	14%		

General and administrative expenses increased primarily due to a 22% increase in headcount from December 31, 2015 to December 31, 2016 to support our overall growth. This increase in headcount resulted in an increase of \$4.8 million in personnel-related expenses, net of allocations, consisting of increased employee compensation, benefits and travel costs.

Other Income (Expense)

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Interest income (expense) and other, net	\$ (1,533)	\$ (18)	\$ (1,515)	NM*
Foreign exchange loss	\$ (1,417)	\$ (1,301)	\$ (116)	9%

*Not meaningful

The increase in interest expense and other, net was primarily attributable to an increase of \$1.7 million in interest expense associated with term loan borrowings, including the payment of a debt prepayment fee of \$0.2 million and unamortized debt issuance fees of \$0.5 million recorded to interest expense in connection with repayment of term loan borrowings in September 2016. In addition, interest expense associated with fair value adjustments related to our mandatorily redeemable preferred stock warrants increased by \$0.2 million. Partially offsetting this was an increase of \$0.2 million in interest income due to higher investment balances. The increase in foreign exchange loss was primarily due to the strengthening of the U.S. dollar against the British Pound Sterling, EURO and Australian dollar.

Provision for income taxes

	Year Ended December 31,		Change	
	2016	2015	Amount	%
	(dollars in thousands)			
Provision for income taxes	\$ (452)	\$ (109)	\$ (343)	315%

The increase in provision for income taxes was due to an increase in foreign taxes related to our growing foreign operations.

Year Ended December 31, 2015 Compared to the Year Ended December 31, 2014**Revenue**

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
Subscription	\$ 99,924	\$ 78,719	\$ 21,205	27%
Professional services	29,327	27,896	1,431	5
Total revenue	<u>\$ 129,251</u>	<u>\$ 106,615</u>	<u>\$ 22,636</u>	21

Subscription revenue increased in 2015 primarily due to the impact of new customer acquisition. Our customer base increased 29% from December 31, 2014 to December 31, 2015. Professional services revenue increased in 2015 primarily due to an increase in implementation fees associated with the growth in our customer base.

Cost of Revenue and Gross Margin

	Year Ended December 31,		Change	
	2015	2014	Amount	%
(dollars in thousands)				
Cost of revenue:				
Subscription	\$ 23,457	\$ 14,686	\$ 8,771	60%
Professional services	25,720	25,731	(11)	—
Total cost of revenue	<u>\$ 49,177</u>	<u>\$ 40,417</u>	<u>\$ 8,760</u>	22
Gross margin:				
Subscription	77%	81%		
Professional services	12	8		
Total gross margin	62	62		

The overall increase in cost of subscription revenue was primarily attributable to increased personnel-related costs of \$4.9 million driven by headcount growth, which was comprised of increased employee compensation, benefits and travel costs of \$4.6 million, and additional stock-based compensation of \$0.3 million. In addition, data center fees increased by \$0.8 million as we increased data center capacity to support our growth, consulting fees increased by \$0.7 million as we enhanced our disaster recovery functionality in each of our data centers, and allocated overhead expenses increased by \$0.7 million. Additionally, professional services personnel are, on occasion, utilized for services associated with general subscription support. As a result, we reallocate the related personnel costs from cost of professional services to cost of subscription. This cost allocation increased by \$0.3 million due to growth in our customer base and an increase in the number of customers migrating to new versions of our applications. At December 31, 2015, we delivered our service from two data centers in the United States and four data centers internationally, compared to two data centers in the United States and one data center internationally at December 31, 2014. Depreciation and amortization expense also increased by \$0.4 million as we expanded our hosting infrastructure to support our customer growth.

Cost of professional services revenue decreased slightly year-over-year due to a decrease in outside services of \$1.7 million, as a result of a reduction in our use of third parties to supplement internal staff in providing implementation services in 2015, offset by an increase in personnel-related costs of \$1.7 million, driven by headcount growth, consisting of increased employee compensation, benefits and travel costs of \$1.5 million and additional stock-based compensation of \$0.2 million.

Subscription gross margin decreased as a result of an increase in the number of data centers employed in anticipation of increased capacity requirements from customer base growth. These capacity increases occur in advance of generating significant revenue from new customers. Additionally, we increased the use of consulting services in 2015 to assist with the enhancement of disaster recovery functionality in each of our data centers.

Professional services gross margin improved as a result of changes in the way we deploy our applications to our customers, product enhancements that allow deployments to be more efficient, and increased customer adoption of our standardized cost model, ATUM.

Total headcount associated with cost of revenue increased 12% from December 31, 2014 to December 31, 2015 as we invested in additional resources to continue to support our solutions and further develop our professional services group.

Operating Expenses

Research and Development

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
Research and development	\$ 30,553	\$ 23,099	\$ 7,454	32%
Percentage of total revenue	24%	22%		

Research and development expenses increased primarily due to increased personnel-related costs of \$5.7 million, consisting of increased employee compensation and benefits costs of \$4.9 million and an increase in stock-based compensation of \$0.8 million. Additionally, allocated overhead costs increased by \$1.0 million. Total headcount in research and development increased 14% from December 31, 2014 to December 31, 2015 as we continued to upgrade and enhance our platform and applications and develop new technologies.

Sales and Marketing

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
Sales and marketing	\$ 71,337	\$ 60,775	\$ 10,562	17%
Percentage of total revenue	55%	57%		

Sales and marketing expenses increased due to the expansion of our sales force, increases in marketing programs to address additional opportunities in new and existing markets, and increased allocated overhead costs. Total headcount in sales and marketing increased 13% from December 31, 2014 to December 31, 2015, contributing to an \$8.1 million increase in personnel-related costs. This increase consists of increased employee compensation, benefits and increased travel costs of \$7.6 million attributable to the increase in headcount and commission expense from increased sales, and additional stock-based compensation of \$0.5 million. Marketing and event costs increased by \$1.2 million due to our continued efforts to generate sales leads and build brand awareness, and allocated overhead costs increased by \$1.2 million as a result of higher building rent and additional IT resources.

General and Administrative

	Year Ended December 31,		Change	
	2015	2014	Amount	%
	(dollars in thousands)			
General and administrative	\$ 17,763	\$ 14,245	\$ 3,518	25%
Percentage of total revenue	14%	13%		

General and administrative expenses increased primarily due to a 27% increase in headcount from December 31, 2014 to December 31, 2015. Personnel-related expenses increased by \$3.7 million, consisting of increased employee compensation, benefits and travel costs of \$3.3 million, and additional stock-based compensation of \$0.4 million as we added employees to support the growth of our business. These increases were offset by a \$0.2 million decrease in professional services fees.

Other Income (Expense)

	Year Ended December 31,		Change	
	2015	2014	Amount	%
(dollars in thousands)				
Interest income (expense) and other, net	\$ (18)	\$ 2	\$ (20)	NM*
Foreign exchange loss	\$ (1,301)	\$ (697)	\$ (604)	87%

*Not meaningful

The change in interest income (expense) and other, net was primarily attributable to a decrease in interest and other income due primarily to lower investment balances, combined with a decrease in interest expense from fair value adjustments related to our preferred stock warrants. The increase in foreign exchange loss was primarily due to strengthening of the U.S. dollar combined with an increase in foreign currency denominated sales.

Provision for income taxes

	Year Ended December 31,		Change	
	2015	2014	Amount	%
(dollars in thousands)				
Provision for income taxes	\$ (109)	\$ (256)	\$ 147	57%

The decrease in provision for income taxes was due to a decrease in foreign taxes related to our foreign operations.

Seasonality

We have historically experienced seasonality in terms of when we enter into agreements with customers. We typically enter into a significantly higher percentage of agreements with new customers, as well as renewal agreements with existing customers, in the fourth quarter and, to a lesser extent, the second quarter. The increase in customer agreements for the fourth quarter is attributable to large enterprise account buying patterns typical in the software industry. Fourth quarter professional services revenue is also typically positively impacted by recognition of TBM Council conference registration and sponsorship fees.

Sales and marketing expenses are typically higher in the fourth quarter due to commissions on the increase in customer agreements we typically see in that quarter, as well as increased expenses associated with the TBM Council conference.

Furthermore, we usually enter into a significant portion of agreements with customers during the last month, and often the last two weeks, of each quarter. This seasonality is reflected to a much lesser extent, and sometimes is not immediately apparent, in revenue, due to the fact that we recognize subscription revenue over the term of the subscription agreement, which is generally one to three years. Although these seasonal factors are common in the technology industry, historical patterns should not be considered a reliable indicator of future sales activity or performance.

Liquidity and Capital Resources

As of December 31, 2016, we had \$117.2 million of cash and investments, and \$15.0 million in available borrowings under our credit facilities. Historically, we funded our operations principally through sales of equity securities, sales of subscriptions and professional services, or the incurrence of debt. On September 28, 2016, we closed our IPO of 6,900,000 shares of Class A common stock at an initial price to the public of \$16.00 per share, resulting in aggregate net proceeds to us of \$99.0 million, after deducting underwriting discounts and offering expenses. In 2016, our principal uses of cash are funding operations and other working capital requirements. Over

the past several years, revenue has increased significantly from year to year and, as a result, cash flows from customer collections have increased. However, operating expenses have also increased as we have invested in growing our business. Our operating cash requirements may increase in the future as we continue to invest in the strategic growth of our company.

We believe that existing cash and investments, any positive cash flows from operations and available borrowings under our credit facility will be sufficient to support working capital and capital expenditure requirements for at least the next 12 months.

From time to time, we may explore additional financing sources and means to lower our cost of capital, which could include equity, equity-linked and debt financing. We cannot assure you that any additional financing will be available to us on acceptable terms, or at all.

Credit Facilities

In June 2015, we entered into an amended and restated loan and security agreement, or the senior credit facility, to allow for the incurrence of up to \$10.0 million in term loan borrowings and up to \$15.0 million aggregate principal amount of revolver borrowings. In January 2016, we drew the \$10.0 million principal amount of term borrowings under the senior credit facility. In April 2016, the senior credit facility was amended and we entered into a new subordinated loan and security agreement, which provided for an additional \$20.0 million of term loan borrowings. Upon closing, we drew \$10.0 million in term loan borrowings under the subordinated loan and security agreement. Using the proceeds from the IPO, on September 28, 2016, we repaid the \$10.0 million principal amount of term borrowings under the senior credit facility (which are no longer available to be reborrowed) and the \$10.0 million principal amount of term borrowings under the subordinated loan and security agreement. In addition, we paid a debt prepayment penalty and a final payment fee in the aggregate amount of \$0.2 million in connection with the foregoing repayment and extinguishment of the subordinated loan and security agreement. Following such repayments, we continue to have available \$15.0 million in aggregate principal amount of revolver borrowings under the senior credit facility.

The senior credit facility contains customary conditions to borrowing, events of default and covenants, including covenants that restrict our ability to dispose of assets, merge with or acquire other entities, incur indebtedness, incur encumbrances, make distributions to holders of our capital stock, make investments or engage in transactions with affiliates. If cash, cash equivalents and investments held with the lender are below \$25 million as of the last day of the applicable monthly measuring period, we will be required to comply with a financial covenant based on subscription and professional services performance. This financial covenant is measured both monthly and quarterly, generally on a trailing six month basis. We were in compliance with all covenants as of December 31, 2016. Our obligations under the senior credit facility are secured by substantially all of our assets other than intellectual property.

Cash Flows

The following table shows cash flows for the years ended December 31, 2016, 2015 and 2014 (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Cash used in operating activities	\$ (3,994)	\$ (10,591)	\$ (17,957)
Cash (used in) provided by investing activities	(74,644)	6,658	606
Cash provided by financing activities	101,152	1,455	1,396

Operating Activities

Net cash used in operating activities consists primarily of net loss adjusted for certain non-cash items, including stock-based compensation, change in fair value of preferred stock warrant liability, depreciation and amortization and other non-cash charges.

Net cash used in operating activities during 2016 reflected our net loss of \$31.6 million, offset by non-cash expenses that included \$10.5 million of stock-based compensation, \$6.0 million of depreciation and amortization, and \$0.7 million of loss on extinguishment of debt. Working capital sources of cash included a \$16.9 million increase in deferred revenue and a \$2.0 million net increase in accounts payable, accrued expenses and deferred rent. These sources of cash were offset by an increase of \$5.8 million in accounts receivable, primarily due to increased billings to customers in the fourth quarter of 2016 compared to the same period in 2015, and \$3.6 million increase in prepaid expenses and other current assets.

Net cash used in operating activities during 2015 primarily reflected our net loss of \$41.0 million, offset by non-cash expenses that included \$7.8 million of stock-based compensation and \$6.5 million of depreciation and amortization. Working capital sources of cash included a \$19.9 million increase in deferred revenue, primarily resulting from the growth in the number of customers invoiced during the period, and a \$3.1 million increase in accounts payable, accrued expenses and deferred rent. These sources of cash were offset by a \$6.2 million increase in accounts receivable as a result of increased billings to customers consistent with the overall growth of the business, and a \$1.0 million increase in prepaid expenses.

Net cash used in operating activities during 2014 primarily reflected our net loss of \$32.9 million, offset by non-cash expenses that included \$5.8 million in stock-based compensation and \$5.2 million of depreciation and amortization. Working capital sources of cash included a \$17.0 million increase in deferred revenue primarily resulting from the growth in the number of customers invoiced during the period and a \$3.7 million increase in accounts payable, accrued expenses and deferred rent. These sources of cash were offset by a \$15.2 million increase in accounts receivable as a result of increased billings to customers consistent with the overall growth of the business and a \$2.0 million increase in prepaid expenses and other current assets.

Investing Activities

Our investing activities have consisted primarily of purchases, sales and maturities of available-for-sale securities, property and equipment purchases for computer-related equipment, leasehold improvements to leased office facilities and capitalization of software development costs. Capitalized software development costs are related to new applications or improvements to our existing software platform that expands the functionality for customers.

Net cash used in investing activities during 2016 consisted primarily of \$75.3 million in purchases of available-for-sale securities, and \$5.4 million of purchased property and equipment and capitalized software development costs, offset by \$6.2 million of cash maturities from available-for-sale securities.

Net cash provided by investing activities during 2015 was \$6.7 million, consisting primarily of \$16.8 million of cash maturities from available-for-sale securities, offset by \$7.6 million of purchased property and equipment and capitalized software development costs, and \$2.7 million in purchases of available-for-sale securities.

Net cash provided by investing activities during 2014 was \$0.5 million, consisting primarily of \$28.4 million of cash maturities from available-for-sale securities. These sources of cash were partially offset by \$20.7 million in purchases of available-for-sale securities and \$6.3 million of purchased property and equipment.

Financing Activities

Our financing activities consisted primarily of proceeds from our IPO and debt borrowings to fund operations and, to a lesser extent, proceeds from the exercise of options. Cash flows used in financing activities consist primarily of repayment of debt borrowings, payment of IPO costs, loan fees and repayment of capital leases.

Net cash provided by financing activities for 2016 consisted primarily of \$102.7 million of IPO proceeds, net of underwriting discounts, \$20.0 million in principal proceeds from term loan borrowings and \$1.3 million from proceeds received from option exercises, offset by the repayment of \$20.0 million in principal payments on term loan borrowings, and payment of IPO costs and loan fees of \$2.4 million.

Net cash provided by financing activities for 2015 consisted primarily of \$2.7 million of proceeds received from option exercises, offset by the payment of IPO costs of \$1.1 million.

Net cash provided by financing activities for 2014 was \$1.4 million, consisting primarily of proceeds received from option exercises.

Contractual Obligations and Commitments

As of December 31, 2016, our principal obligations consisted of obligations under non-cancellable operating leases that expire at various dates through 2023. Purchase obligations include certain other non-cancellable agreements for software and marketing services that specify all significant terms, including fixed or minimum services to be used, pricing provisions and the approximate timing of the transaction. Obligations under contracts that are cancellable or with remaining terms of 12 months or less are not included.

	Payments Due by Period:				
	Total	Less than 1 Year	1 - 3 Years	3 -5 Years	More than five Years
	(in thousands)				
Capital leases (1)	\$ 98	\$ 46	\$ 46	\$ 6	\$ —
Operating leases	23,869	4,513	8,356	7,041	3,959
Purchase obligations	534	468	66	—	—
	<u>\$ 24,501</u>	<u>\$ 5,027</u>	<u>\$ 8,468</u>	<u>\$ 7,047</u>	<u>\$ 3,959</u>

(1) Includes interest totaling \$4,000.

Off-Balance Sheet Arrangements

During the year ended December 31, 2016, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements.

Emerging Growth Company Status

As an “emerging growth company,” or EGC, the Jump-start Our Business Start-ups Act, or JOBS Act, allows us to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. We have elected to use this extended transition period under the JOBS Act. As a result, our financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective dates for new or revised accounting standards that are applicable to public companies, which may make our common stock less attractive to investors.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations are based upon our financial statements which have been prepared in accordance with GAAP. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets and liabilities and related disclosure of contingent assets and liabilities, revenue and expenses at the date of the financial statements. Generally, we base our estimates on historical experience and on various other assumptions in accordance with GAAP that we believe to be reasonable under the circumstances. Actual results may differ from these estimates.

Critical accounting policies and estimates are those that we consider the most important to the portrayal of our financial condition and results of operations 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 policies and estimates include those related to:

- revenue recognition;
- stock-based compensation;
- income taxes; and
- capitalized internal use software.

Revenue Recognition

We commence revenue recognition when all of the following conditions are met:

- there is persuasive evidence of an arrangement;
- the service has been provided to the customer;
- the collection of related fees is reasonably assured; and
- the amount of fees to be paid by the customer is fixed or determinable.

Signed agreements are used as evidence of an arrangement. If a signed contract by the customer does not exist, we have historically used either a purchase order or a signed order form as evidence of an arrangement. In cases where both a signed contract and either a purchase order or signed order form exist, we consider the signed contract to be the final persuasive evidence of an arrangement.

Subscription revenue is recognized ratably over the contract term beginning on the commencement date of each subscription term, which is generally the date we make the subscribed applications available to customers. Once the subscribed application is available to customers, amounts that we have the contractual right to invoice are recorded in accounts receivable and in deferred revenue. Professional services are priced either on a fixed-fee or a time-and-materials basis. Professional services revenue is recognized as the services are delivered. In instances where final acceptance of non-standard service deliverables are required before revenue is recognized, revenue and the associated costs are deferred until all acceptance criteria have been met.

We assess collectability based on a number of factors such as past collection history with the customer and creditworthiness of the customer. If we determine collectability is not reasonably assured, we defer the revenue recognition until collectability becomes reasonably assured. We assess whether the fee is fixed or determinable based on the payment terms associated with the transaction and whether the sales price is subject to refund or adjustment. Our arrangements do not include general rights of return.

We derive revenue from two sources: (1) subscription revenue, which is comprised of subscription fees from customers utilizing our applications, fees for additional support beyond the standard support that is included in the basic subscription fees, which we refer to as premium support offerings, and fees for subscription based online training offerings; and (2) professional services, which consist of fees associated with the implementation and configuration of our applications, as well as fees for in-person training and TBM Council conference registration and sponsorship fees. Implementation and configuration services primarily consist of consultative services, such as data mapping and establishing best practices. Implementation and configuration services do not result in any significant customization or modification of the software platform or user interface. We present revenue from each of these sources separately in our consolidated financial statements.

We enter into arrangements with multiple deliverables that primarily include subscription and professional services, but may also include premium support, online training and in-person training. The professional services are not considered essential to the functionality of the software. To qualify as a separate unit of accounting, the delivered item must have value to the customer on a stand-alone basis. We believe subscription offerings and professional service offerings have stand-alone value. Subscriptions have stand-alone value because such services

are often sold separately from other professional services. Professional services have stand-alone value because those services may be sold separately by other vendors and there are trained third-party consultants capable of performing the professional services. Deliverables that are accounted for separately consist of software subscription, professional services, premium support and online or in-person training.

When arrangements involve multiple elements that qualify as separate units of accounting, we allocate revenue to each deliverable in a multiple-deliverable arrangement based upon its relative selling price. The estimated selling price for each element is based upon the following hierarchy in order of priority: vender specific objective evidence, or VSOE, of selling price, if available, third-party evidence, or TPE, of selling price, if VSOE of selling price is not available, or best estimate of selling price, or BESP, if neither VSOE of selling price, nor TPE of selling price is available.

We determine VSOE of selling price based on historical stand-alone sales to customers. In determining VSOE, we require that a substantial majority of the selling prices for our subscription or professional services fall within a reasonably narrow pricing range of the applicable median selling price. We have not yet been able to establish VSOE for our subscription and professional services because we have not historically priced our service offerings within a sufficiently narrow range. When VSOE cannot be established, we apply judgment with respect to whether we can establish a selling price based on TPE. TPE is determined based on third-party prices for similar deliverables when sold separately. Generally, our pricing strategy differs from that of our peers and our services and solutions contain a significant level of differentiation such that the comparable pricing of other offerings with similar functionality cannot be obtained. Furthermore, we are unable to reliably determine what similar competitor services' selling prices are on a stand-alone basis. As a result, we use BESP as the selling price for our services.

We estimate BESP for subscriptions, premium support and online training based on the historical amounts for such deliverables on a stand-alone basis. The BESP for professional services is based on the historical average rate per hour charged, and BESP for in-person training is based on historical amounts on a per-seat basis.

We recognize revenue for subscription fees from customers utilizing our applications ratably over the subscription term, which are typically one-to three-years. Our subscription arrangements generally do not allow the customer the contractual right to take possession of the software; as such, the arrangements are considered to be service contracts. In those limited situations where the customer takes possession of the software, we follow the guidance in Accounting Standards Codification, or ASC, 985, *Software Revenue Recognition*. Fees for premium support offerings and subscription-based online training are generally one-year agreements billed upfront, and are recognized ratably over the term of the support or training agreement. Our premium support offerings include all of our standard incident support services, with enhanced response times, dedicated support resources, access to architecture and configuration experts and other services not included with standard support. Our subscription-based online training provides self-directed training for customers via access to recorded training sessions.

Professional services revenue consists of fees associated with application configuration, integration, change management, education and training services, and conference registration and sponsorship fees. Professional services engagements are priced either on a time-and-materials basis or on a fixed-fee basis. The duration of our professional services engagements varies based on the scope of services requested, but typically ranges between three and six months. For time-and-materials arrangements, we recognize revenue as hours are worked. For fixed-fee arrangements, we recognize professional services revenue as delivered using the percentage of completion, or POC method, measured on an hours incurred basis. Under the POC method of accounting, revenue and expenses are recognized as work is performed based on the relationship between actual hours incurred and total estimated hours at the completion of the project. Changes to the original estimates may be required during the life of the project. Estimates of both hours and costs to complete a project are reviewed periodically and the effect of any change in the estimated hours to complete a project is reflected as an adjustment to revenue in the period the change becomes known.

In the event current estimated costs to complete a project exceed the revenue allocated to the project, a loss equal to the amount of estimated excess costs will be recognized in the period the change becomes known. The use of the POC method of accounting involves considerable use of estimates in determining revenue, costs and profits and in assigning the amounts to accounting periods. Associated out-of-pocket travel expenses related to the delivery

of professional services are typically reimbursed by the customer. Out-of-pocket expense reimbursements are recognized as revenue and cost of service expense as incurred.

Fees for in-person training are billed in advance of the training and are recognized in the period the training occurs. Conference registration and sponsorship fees are for TBM Council conferences and related TBM Council activities. Registration fees for TBM Council conferences are billed in advance of the conference and are recognized in the period the conference occurs. TBM Council sponsorship fees are paid in advance and are recognized in the period the sponsorship activities occur, or ratably over the contractual period if the sponsorship entails ongoing activities beyond a single event.

On occasion, we sell subscriptions through third-party resellers. These arrangements typically call for the reseller to retain a portion of the price to the customer as compensation. Since we are typically responsible for the acceptability of the services purchased by the customer, we are the primary obligor in the transaction and, therefore, record revenue on a gross-basis based on the amount billed to the customer. Reseller fees are recognized as sales and marketing expense as incurred.

Deferred revenue represents the unearned revenue on cash receipts or accounts receivable for the sale of subscriptions and for professional services for which services have not yet been provided. The substantial majority of deferred revenue relates to subscription revenue.

Stock-based Compensation

We measure and recognize compensation expense for all stock-based awards granted to our employees and other service providers, based on the estimated fair value of the award on the date of grant, and expense is recognized on a straight-line basis over the vesting period of the award based on the estimated portion of the award that is expected to vest.

We use the Black-Scholes option pricing model to measure the fair value of stock-based awards, other than restricted stock units, or RSUs, when they are granted. RSUs are valued based on the market closing price for our Class A common stock as reported on the Nasdaq Global Market on the date of grant. We make several estimates in determining stock-based compensation and these estimates generally require significant analysis and judgment to develop. These assumptions and estimates are as follows:

- *Fair Value of Common Stock.* Prior to our IPO in September 2016, our board of directors considered numerous objective and subjective factors to determine the fair value of our common stock at each grant date. These factors included, but were not limited to, (i) contemporaneous valuations performed by unrelated third-party valuation firms, (ii) the prices, rights, preferences and privileges of our preferred stock relative to those of our common stock, (iii) the lack of marketability of our common stock, (iv) our stage of development; and (v) the likelihood of achieving a liquidity event, such as an initial public offering or a merger or acquisition of our business given prevailing market conditions.

Subsequent to the completion of our IPO we use the market-closing price for our Class A common stock as reported on the Nasdaq Global Market.
- *Expected Term.* The expected term of equity awards represents the period that stock-based awards are expected to be outstanding. We estimate the expected term using the simplified method due to the lack of historical exercise activity for our company. The expected term for Employee Stock Purchase Plan shares is equivalent to the offering period.
- *Risk-Free Interest Rate.* The risk-free interest rate is based on the implied yield available at the time of the equity grant in U.S. Treasury securities at maturity with a term equivalent to the expected term of the equity award.
- *Expected Volatility.* Expected volatility is based on an average volatility of stock prices for a group of publicly traded peer companies, as we do not have sufficient historical trading experience for our common stock to cover the expected term of awards. In considering peer companies, we assess characteristics such as industry, state of development, size and financial leverage.

- *Dividend Yield.* We have never declared or paid any cash dividends and do not plan to pay cash dividends in the foreseeable future, and, therefore, use an expected dividend yield of zero.

If any assumptions used in the Black-Scholes option pricing model change significantly, stock-based compensation for future awards may differ materially compared with the awards granted previously.

In addition to the assumptions used in the Black-Scholes option pricing model, we must also estimate a forfeiture rate to calculate the stock-based compensation expense for awards. Our forfeiture rate is derived from historical employee termination behavior. If the actual number of forfeitures differs from these estimates, additional adjustments to compensation expense will be required.

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 U.S. 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.

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.

Capitalized Internal Use Software

We capitalize certain costs incurred for the development of computer software for internal use. These costs generally relate to the development of our technology platform and applications. We capitalize these costs during the development of the project, when it is determined that it is probable that the project will be completed, and the software will be used as intended. Costs related to preliminary project activities, post-implementation activities, training and maintenance are expensed as incurred. Internal-use software is amortized on a straight-line basis over our estimated useful life, generally three years, and the amortization expense is recorded as a component of cost of subscriptions for projects associated with delivery of our technology platform and applications, or through operating expenses for projects associated with internal operations. 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.

Recently Adopted Accounting Pronouncements

In November 2016, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2016-18, *Restricted Cash*, which is intended to add or clarify guidance on the classification and presentation of changes in restricted cash on the statement of cash flows and to eliminate the diversity in practice related to such classifications. The guidance in ASU 2016-18 is required for annual reporting periods

beginning after December 15, 2018, which represents the delayed adoption date applicable to private companies available to us pursuant to the Jump-start Our Business Start-ups Act, or the JOBS Act, with early adoption permitted. We early adopted this new standard retrospectively in the fourth quarter 2016. The adoption of this standard resulted in the removal of the change in restricted cash within investing activities and the inclusion of the amount of restricted cash in the total of cash, cash equivalents and restricted cash on the consolidated statements of cash flows for each period presented.

In August 2014, the FASB issued ASU No. 2014-15, *Presentation of Financial Statements – Going Concern (Subtopic 205-40)*, related to the disclosures around going concern. The new standard provides guidance around management’s responsibility to evaluate whether there is substantial doubt about an entity’s ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for all entities for fiscal years ending after December 15, 2016, with early adoption permitted. We adopted this new standard in the fourth quarter of 2016. The adoption of this standard did not have a material impact on our financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Classification of Certain Cash Receipts and Cash Payments*. ASU 2016-15 is intended to add or clarify guidance on the classification of certain cash receipts and payments in the statement of cash flows and to eliminate the diversity in practice related to such classifications. The guidance in ASU 2016-15 is required for annual reporting periods beginning after December 15, 2018, which represents the delayed adoption date applicable to private companies available to us pursuant to the JOBS Act, with early adoption permitted. We early adopted this standard retrospectively in the third quarter of 2016. The adoption of this standard resulted in the classification of \$0.2 million of debt prepayment fees incurred on the early extinguishment of debt within financing activities rather than operating activities on the consolidated statements of cash flows for year ended December 31, 2016. There was no impact on any prior periods.

In April 2015, the FASB issued ASU 2015-03, *Interest – Imputation of Interest*, requiring entities to present debt issuance costs related to a debt liability as a reduction of the carrying amount of the liability. In August 2015, the FASB issued ASU 2015-15, *Interest – Imputation of Interest: Presentation and Subsequent Measurement of Debt Issuance Costs Associated with Line-of-Credit Arrangements*, to provide additional guidance pertaining to debt issuance costs related to line-of-credit arrangements. The guidance is effective for public entities for fiscal years and interim periods beginning after December 15, 2015. For all other entities, the guidance is effective for fiscal years beginning after December 15, 2015, and interim periods within fiscal years beginning after December 15, 2016. Early adoption is permitted. We early adopted this standard in the first quarter of 2016. The adoption of this guidance did not have a material impact on our financial statements.

In April 2015, the FASB issued ASU 2015-05, *Customer’s Accounting for Fees Paid in a Cloud Computing Arrangement*. The new standard provides guidance to customers about whether a cloud computing arrangement includes a software license. If a cloud computing arrangement includes a software license, the customer should account for the software license element of the arrangement consistent with the acquisition of other software licenses. If a cloud computing arrangement does not include a software license, the customer should account for the arrangement as a service contract. The new standard does not change the accounting for a customer’s accounting for service contracts. The new standard is effective for public entities for interim and annual reporting periods beginning after December 15, 2015. For all other entities, the new standard is effective for annual periods beginning after December 15, 2015, and interim periods within annual periods beginning after December 15, 2016. Early adoption is permitted. We early adopted this standard in the first quarter of 2016. The adoption of this new standard did not have a material impact on our financial statements.

New Accounting Pronouncements Not Yet Adopted

In October 2016, the FASB issued ASU 2016-16, *Inter-Entity Transfers of Assets other than Inventory*. The guidance requires entities to recognize the income tax impact of an intra-entity sale or transfer of an asset other than inventory when the sale or transfer occurs, rather than when the assets has been sold to an outside party. The guidance will require a modified retrospective application with a cumulative catch-up adjustment to opening retained earnings at the beginning of the first quarter of fiscal 2019, but permits adoption in an earlier period. We are currently evaluating the impact this guidance will have on our consolidated financial statements and the timing of adoption.

In March 2016, the FASB issued ASU 2016-09, *Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. For public entities, ASU 2016-09 is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. For all other entities, the guidance is effective for fiscal years beginning after December 15, 2017, and interim periods within those annual periods beginning after December 15, 2018. We are currently evaluating the impact this guidance will have on our consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The objective of the update is to improve financial reporting by increasing transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. For public entities, the new standard is effective for interim and annual reporting periods beginning after December 15, 2018. For all other entities, the new standard is effective for annual reporting periods beginning after December 15, 2019, and for interim periods within those annual periods beginning after December 15, 2020. Early application of the amendments is permitted for all entities. We are currently evaluating the impact this guidance will have on our consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, outlining a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers that supersedes most current revenue recognition guidance. This guidance requires an entity to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Additionally, this guidance expands related disclosure requirements. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective date*, which delayed the effective date of ASU No. 2014-09 by one year and is allowing earlier adoption; however, entities reporting under GAAP are not permitted to adopt the standard earlier than the original effective date for public entities. For public entities, the new standard is effective for annual periods and interim periods within those annual periods, beginning after December 15, 2017. For all other entities, the new standard is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods beginning after December 15, 2019. The new standard will require full or modified retrospective application. In March 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, which is intended to improve the operability and understandability of the implementation guidance on principal versus agent considerations. The effective date for ASU 2016-08 is the same as the effective date for ASU 2014-09. In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*, which clarifies the implementation guidance on identifying performance obligations and licensing. The effective date for ASU 2016-10 is the same as the effective date for ASU 2014-09. In May 2016, the FASB issued ASU 2016-12, *Revenue from Contracts with Customers Narrow-Scope Improvements and Practical Expedients*, which clarifies the implementation guidance on collectability, noncash consideration, presentation of sales tax and transition. Based on a preliminary assessment, we anticipate this standard will not have a material impact on subscription or services revenue recognition in our consolidated financial statements. However, the adoption of the standard will require us to capitalize certain contract costs, such as commissions, which are currently being expensed as incurred and could have a material impact on our consolidated financial statements. Additionally, the new guidance requires enhanced disclosures, including revenue recognition policies to identify performance obligations to customers, and significant judgments in measurement and recognition. We are continuing to assess the impact of adoption, which may identify other impacts on our consolidated financial statements, as well as the expected adoption method and timing.

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 Sterling, Euro and Australian dollar. Our sales contracts are primarily denominated in the local currency of the customer making the purchase. In addition, a portion of operating expenses are incurred outside the United States and are denominated in foreign

currencies. Additionally, subscription fees are largely based on customers' anticipated spend as expressed in U.S. dollars as managed by our system, which fee construct may increase the exposure of revenue to currency fluctuations. Decreases 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 operating results.

We have experienced and will continue to experience fluctuations in net loss as a result of transaction gains or losses related to remeasuring certain current asset and current liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. We have not engaged in the hedging of foreign currency transactions to date. We are evaluating the costs and benefits of initiating such a program and may in the future hedge selected significant transactions denominated in currencies other than the U.S. dollar as we expand international operations.

Interest Rate Sensitivity

We hold cash and cash equivalents for working capital purposes. We do not have material exposure to market risk with respect to investments, as any investments we enter into are primarily highly liquid investments. We have a senior credit facility, consisting of \$15.0 million of revolver borrowings, which was undrawn as of December 31, 2016. A 10% increase or decrease in interest rates would not result in a material change in either our obligations under the credit facility, even at the borrowing limit, or in the returns on our cash.

Item 8. Financial Statements and Supplementary Data.

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Report of Independent Registered Public Accounting Firm

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

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of comprehensive loss, of changes in convertible preferred stock and stockholders' equity (deficit), and of cash flows present fairly, in all material respects, the financial position of Apptio, Inc. and its subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

February 17, 2017

Seattle, Washington

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

Apptio, Inc.
Consolidated Balance Sheets
(In thousands)

	December 31,	
	2016	2015
Assets		
Current assets		
Cash and cash equivalents	\$ 42,007	\$ 17,256
Short-term investments	36,741	6,260
Accounts receivable, net of allowance for doubtful accounts of \$122 and \$289	58,587	52,887
Prepaid expenses and other current assets	5,440	3,990
Total current assets	142,775	80,393
Long-term assets		
Property and equipment, net of accumulated depreciation of \$17,091 and \$12,774	12,827	13,487
Long-term investments	38,446	—
Restricted cash	—	2,500
Deferred initial public offering costs	—	1,973
Other long-term assets	734	798
Total assets	\$ 194,782	\$ 99,151
Liabilities, Convertible Preferred Stock and Stockholders' Equity (Deficit)		
Current liabilities		
Accounts payable	\$ 3,574	\$ 3,462
Accrued payroll and other expenses	14,073	14,732
Deferred revenue	97,885	82,422
Deferred rent	799	613
Capital leases	43	42
Total current liabilities	116,374	101,271
Long-term liabilities		
Deferred revenue, net of current portion	2,254	803
Deferred rent, net of current portion	4,360	4,810
Capital leases, net of current portion	51	95
Preferred stock warrant liability	—	414
Asset retirement obligation	175	210
Total liabilities	123,214	107,603
Commitments and contingencies (Note 11)		
Convertible preferred stock	—	133,809
Stockholders' equity (deficit)		
Class A and Class B Common stock	4	1
Additional paid-in capital	271,982	26,509
Accumulated other comprehensive loss	(94)	—
Accumulated deficit	(200,324)	(168,771)
Total stockholders' equity (deficit)	71,568	(142,261)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	\$ 194,782	\$ 99,151

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

Apptio, Inc.
Consolidated Statements of Operations
(In thousands, except per share amounts)

	Years Ended December 31,		
	2016	2015	2014
Revenue			
Subscription	\$ 130,061	\$ 99,924	\$ 78,719
Professional services	30,508	29,327	27,896
Total revenue	160,569	129,251	106,615
Cost of revenue			
Subscription	27,298	23,457	14,686
Professional services	26,862	25,720	25,731
Total cost of revenue	54,160	49,177	40,417
Gross profit	106,409	80,074	66,198
Operating expenses			
Research and development	35,475	30,553	23,099
Sales and marketing	75,856	71,337	60,775
General and administrative	23,229	17,763	14,245
Total operating expenses	134,560	119,653	98,119
Loss from operations	(28,151)	(39,579)	(31,921)
Other income (expense)			
Interest (expense) income and other, net	(1,533)	(18)	2
Foreign exchange loss	(1,417)	(1,301)	(697)
Loss before provision for income taxes	(31,101)	(40,898)	(32,616)
Provision for income taxes	(452)	(109)	(256)
Net loss	\$ (31,553)	\$ (41,007)	\$ (32,872)
Net loss per share attributable to common stockholders, basic and diluted	\$ (1.61)	\$ (3.24)	\$ (2.72)
Weighted-average shares used to compute net loss per share attributable to common stockholders, basic and diluted	19,595	12,653	12,080

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

Apptio, Inc.
Consolidated Statements of Comprehensive Loss
(In thousands)

	Years Ended December 31,		
	2016	2015	2014
Net loss	\$ (31,553)	\$ (41,007)	\$ (32,872)
Other comprehensive loss			
Unrealized loss on available-for-sale securities	(94)	(2)	(11)
Total comprehensive loss	<u>\$ (31,647)</u>	<u>\$ (41,009)</u>	<u>\$ (32,883)</u>

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

Apptio, Inc.
Consolidated Statements of Changes in Convertible Preferred Stock and Stockholders' Equity (Deficit)
(In thousands)

<i>(in thousands)</i>	Convertible Preferred Stock		Class A and B Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount			Comprehensive	
							Income (Loss)	
Balances at January 1, 2014	18,240	\$ 133,809	11,668	\$ 1	\$ 8,731	\$ (94,892)	\$ 13	\$ (86,147)
Stock option exercises	—	—	642	—	1,437	—	—	1,437
Stock-based compensation	—	—	—	—	5,766	—	—	5,766
Comprehensive loss	—	—	—	—	—	(32,872)	(11)	(32,883)
Balances at December 31, 2014	18,240	133,809	12,310	1	15,934	(127,764)	2	(111,827)
Stock option exercises	—	—	587	—	2,670	—	—	2,670
Stock-based compensation	—	—	—	—	7,815	—	—	7,815
Issuance of common stock warrants	—	—	—	—	90	—	—	90
Comprehensive loss	—	—	—	—	—	(41,007)	(2)	(41,009)
Balances at December 31, 2015	18,240	133,809	12,897	1	26,509	(168,771)	—	(142,261)
Proceeds from initial public offering, net of underwriters' discounts	—	—	6,900	1	102,671	—	—	102,672
Initial public offering costs	—	—	—	—	(3,698)	—	—	(3,698)
Conversion of preferred stock to Class B common stock	(18,240)	(133,809)	18,240	2	133,807	—	—	133,809
Issuance of common stock warrants	—	—	—	—	285	—	—	285
Exercise of warrants	—	—	40	—	616	—	—	616
Stock option exercises	—	—	261	—	1,333	—	—	1,333
Stock-based compensation	—	—	—	—	10,459	—	—	10,459
Comprehensive loss	—	—	—	—	—	(31,553)	(94)	(31,647)
Balances at December 31, 2016	—	\$ —	38,338	\$ 4	\$ 271,982	\$ (200,324)	\$ (94)	\$ 71,568

Apttio, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Years Ended December 31,		
	2016	2015	2014
Cash flows from operating activities			
Net loss	\$ (31,553)	\$ (41,007)	\$ (32,872)
Adjustments to reconcile net loss to net cash used in operating activities			
Depreciation and amortization	5,988	6,486	5,229
Amortization of premiums on investments	38	87	228
Loss (gain) on disposal of property and equipment	25	(9)	—
Stock-based compensation	10,459	7,815	5,766
Accretion of capitalized loan fees	136	62	18
Loss on extinguishment of debt	722	—	—
Remeasurement of preferred stock warrant liability	202	57	116
Foreign exchange loss	412	—	—
Change in operating assets and liabilities			
Accounts receivable	(5,765)	(6,193)	(15,201)
Prepaid expenses and other assets	(3,606)	(970)	(2,009)
Accounts payable	278	666	1,407
Accrued expenses	1,626	2,095	2,473
Deferred revenue	16,908	19,936	17,031
Deferred rent	136	384	(143)
Net cash used in operating activities	<u>(3,994)</u>	<u>(10,591)</u>	<u>(17,957)</u>
Cash flows from investing activities			
Purchases of property and equipment	(5,402)	(7,643)	(6,319)
Proceeds from maturities of investments	6,245	16,839	28,385
Purchases of investments	(75,303)	(2,715)	(20,744)
(Payment) return of security deposits	(184)	177	(716)
Net cash (used in) provided by investing activities	<u>(74,644)</u>	<u>6,658</u>	<u>606</u>
Cash flows from financing activities			
Proceeds from initial public offering, net of underwriting discounts	102,672	—	—
Payment of initial public offering costs	(2,362)	(1,092)	—
Proceeds from long-term debt	20,000	—	—
Principal payments on long-term debt	(20,000)	—	—
Payment of debt prepayment fees	(200)	—	—
Proceeds from exercise of common stock options	1,333	2,670	1,437
Principal payments on capital lease obligations	(43)	(45)	(41)
Payment of capitalized loan fees	(248)	(78)	—
Net cash provided by financing activities	<u>101,152</u>	<u>1,455</u>	<u>1,396</u>
Foreign currency effect on cash, cash equivalents and restricted cash	(263)	(37)	(90)
Net increase (decrease) in cash, cash equivalents and restricted cash	<u>22,251</u>	<u>(2,515)</u>	<u>(16,045)</u>
Cash, cash equivalents and restricted cash			
Beginning of year	19,756	22,271	38,316
End of year	<u>\$ 42,007</u>	<u>\$ 19,756</u>	<u>\$ 22,271</u>
Supplemental disclosures			
Cash paid for interest	\$ 771	\$ 13	\$ 18
Purchases under capital lease obligations	—	102	4
Property and equipment additions in accounts payable and accrued expenses	639	234	2,970
Leasehold improvements paid directly by lessor	356	—	1,268
Non-cash warrants issued as debt issuance costs	285	90	—
Initial public offering costs in accounts payable and accrued expenses	244	881	—
Non-cash preferred stock warrant exercise	616	—	—

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

Apptio, Inc.
Notes to Consolidated Financial Statements

Note 1. Description of Operations and Summary of Significant Accounting Policies

Operations

Apptio, Inc. or the Company, was incorporated on October 2, 2007 and is headquartered in Bellevue, Washington. The Company develops and sells Technology Business Management, or TBM, solutions. The Company's cloud-based platform and SaaS applications enable IT leaders to analyze, optimize and plan technology investments, and benchmark their financial and operational performance against peers. The Company operates in the United States, the United Kingdom, Germany, Denmark, the Netherlands, Australia, Canada, France and Singapore.

Initial Public Offering

In September 2016, the Company completed an initial public offering, or IPO, in which the Company sold 6,900,000 shares of its newly-authorized Class A common stock at the initial price to public of \$16.00 per share. The Company received net proceeds of \$99.0 million, after deducting underwriting discounts and commissions and offering expenses, from sales of its shares in the IPO. Immediately prior to the completion of the IPO, (1) all shares of common stock then outstanding were converted to Class B common stock on a one-for-one basis, (2) common stock warrants then outstanding were converted to warrants to purchase 47,893 shares of Class B common stock on a one-for-one basis, (3) a warrant to purchase 27,321 shares of convertible preferred stock was converted to a warrant to purchase 27,321 shares of Class B common stock, and (4) all shares of convertible preferred stock then outstanding were converted into 18,239,475 shares of the Company's common stock on a one-for-one basis, and then reclassified as shares of Class B common stock. See Note 6 for further discussion of Class A and B common stock.

As of December 31, 2016, 6,900,000 shares of the Company's Class A common stock and 31,437,741 shares of the Company's Class B common stock were outstanding.

Deferred Offering Costs

Deferred offering costs of \$3.7 million, consisting of legal, accounting and other costs related to the IPO, were reclassified to additional paid-in capital as a reduction of the proceeds upon the closing of our IPO on September 28, 2016.

Principles of Consolidation

The consolidated financial statements include the Company and its wholly-owned subsidiaries. All significant intercompany balances and transactions have been eliminated.

Accounting Principles

The consolidated financial statements and accompanying notes were prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and 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 materially from those estimates.

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Certain Significant Risks and Uncertainties

The Company continues to be subject to the risks and challenges associated with other companies at a similar stage of development, including risks associated with: dependence on key personnel; successful marketing and sale of its solutions and adaptation of such solutions to changing market dynamics and customer preferences; competition from alternative products and services, including from larger companies that have greater name recognition, longer operating histories, more and better established customer relationships and greater resources than the Company; and the ability to raise additional capital to support future growth. Since inception through December 31, 2016, the Company has incurred losses from operations, and accumulated a deficit of \$200.3 million, and has been dependent on equity and debt financing to fund operations.

Operating Segments

The Company follows the authoritative literature that establishes annual and interim reporting standards for an enterprise's operating segments and related disclosures about its products and services, geographic regions and major customers.

The Company operates its business as one operating segment. Its chief operating decision makers, or CODMs, are its Chief Executive Officer and Chief Financial Officer. The CODMs review separate revenue information for the Company's subscription and professional services revenue, and all other financial information presented on a consolidated basis, for purposes of making operating decisions, assessing financial performance and allocating resources.

Foreign Currency

The functional currency of the Company's international subsidiaries is the U.S. dollar. The results of operations for the Company's international subsidiaries are remeasured from the local currency into U.S. dollars using average exchange rates during each period. The majority of assets and liabilities are remeasured using exchange rates at the end of each period. All equity transactions and certain assets are remeasured using historical rates.

Comprehensive Loss

Certain gains and losses are recognized in comprehensive loss, but excluded from net loss. Comprehensive loss includes net loss and unrealized gains and losses on available-for-sale securities.

Cash and Cash Equivalents

The Company considers all highly liquid investments, including money market investments with an original maturity of three months or less at the date of purchase, to be cash equivalents.

Investments

The Company classifies its investment securities as available-for-sale. Investment securities are stated at fair value with any unrealized gains or losses included as a component of accumulated other comprehensive income (loss) in stockholders' equity (deficit). Realized gains and losses and declines in value of securities judged to be other than temporary are included in interest income (expense) and other, net. The cost of investments for purposes of computing realized and unrealized gains and losses is based on the specific identification method. Investments in securities with maturities of less than one year, or where management's intent is to use the investments to fund current operations, are classified as short-term investments. Investments with maturities of greater than one year are classified as long-term investments.

Restricted Cash

Included in long-term assets at December 31, 2015 is restricted cash of \$2.5 million, for an irrevocable letter of credit in relation to an office lease for the Company's corporate headquarters in Bellevue, WA. This letter of

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

credit was still in effect as of December 31, 2016; however, the requirement to maintain \$2.5 million in cash collateral was removed in connection with the amendment of the senior credit facility in April 2016. This letter of credit names the lessor as the beneficiary, and is required to fulfill lease requirements if the Company should default on the office lease obligation.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the consolidated balance sheets that sum to the total of the same such amounts as shown in the consolidated statement of cash flows (in thousands):

	December 31,	
	2016	2015
Cash and cash equivalents	\$ 42,007	\$ 17,256
Restricted cash	—	2,500
Total cash, cash equivalents and restricted cash shown in the consolidated statements of cash flows	\$ 42,007	\$ 19,756

Fair Value of Financial Instruments

At December 31, 2016 and 2015, the Company has the following financial instruments: cash equivalents, marketable securities, accounts receivable, restricted cash, accounts payable and accrued liabilities. The Company no longer has restricted cash at December 31, 2016.

The fair value of the Company's accounts receivable, restricted cash, accounts payable, and certain accrued liabilities approximates their respective carrying amounts. The Company measures its cash equivalents, marketable securities, and preferred stock warrants using the fair value measurement principles under GAAP, which requires that fair value be based on the assumptions that market participants would use when pricing an asset or liability.

Fair value principles require disclosures regarding the manner in which fair value is determined for assets and liabilities and establishes a three-tiered fair value hierarchy into which these assets and liabilities must be grouped, based upon significant levels of inputs as follows:

Level 1	Observable inputs, such as quoted prices (unadjusted) in active markets for identical assets or liabilities at the measurement date.
Level 2	Observable inputs, other than Level 1 prices, such as quoted prices in active markets for similar assets and liabilities, quoted prices in markets that are not active, 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 lowest level of significant input determines the placement of the entire fair value measurement in the hierarchy. Management's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and consider factors specific to the asset or liability.

Allowance for Doubtful Accounts

The Company performs initial and ongoing evaluations of its customers' financial positions, and generally extends credit on account, without collateral. The Company determines the need for an allowance for doubtful accounts based upon various factors, including past collection experience, credit quality of the customer, age of the receivable balance, and current economic conditions.

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

If the financial condition of the Company's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances might be required. Accounts are charged against the allowance for doubtful accounts once collection efforts are unsuccessful.

Activity within the allowance for doubtful accounts was as follows (in thousands):

	December 31,		
	2016	2015	2014
Balance at beginning of period	\$ 289	\$ 450	\$ 288
Charges, net of reversals	(93)	(3)	176
Write-offs	(74)	(158)	(14)
Balance at end of period	<u>\$ 122</u>	<u>\$ 289</u>	<u>\$ 450</u>

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk are primarily cash, cash equivalents, restricted cash and accounts receivable. The Company maintains its cash accounts with financial institutions where, at times, deposits exceed federal insurance limits. The Company has credit risk regarding trade accounts receivable. One customer accounted for 10.5% of accounts receivable at December 31, 2015. No individual customer represented more than 10% of accounts receivable at December 31, 2016. No individual customer represented more than 10% of revenue during 2016, 2015 or 2014.

Advertising

Advertising costs are charged to operations as incurred or the first time the advertising takes place, based on the nature of the advertising, and include direct marketing, events, public relations, sales collateral materials and partner programs. Advertising expenses were approximately \$7.4 million, \$7.5 million and \$6.5 million for the years ended December 31, 2016, 2015 and 2014, respectively

Interest Expense

Interest expense consists of interest on capital leases and debt, and fair value adjustments for the Company's preferred stock warrant liability. No interest was capitalized during 2016, 2015 or 2014.

Property and Equipment

Property and equipment are recorded at cost and depreciated over their estimated useful lives using the straight-line method and the following estimated useful lives:

Computer and office equipment	2-3 years
Software	1-3 years
Furniture	3 years

Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the related asset. Upon retirement or sale, the cost of assets disposed of, and the related accumulated depreciation, is removed from the accounts and any resulting gain or loss is reflected in the consolidated statements of operations. Repair and maintenance costs are expensed as incurred.

In 2014, the Company recorded an asset retirement obligation related to certain leased facilities and a corresponding leasehold improvement which is depreciated over the expected term of the lease. Revisions to either the timing or the amount of the original expected cash flows are recorded to the related assets and liabilities. The accrued asset retirement obligation is included in other long-term liabilities. The asset retirement obligation in total, and the period over period changes for the years ended December 31, 2016, 2015 and 2014, are immaterial to the financial statements.

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Preferred Stock Warrant Liability

The Company classified its warrants to purchase preferred stock as a liability. The Company adjusted the carrying value of the warrant liability to fair value at the end of each reporting period utilizing the Black-Scholes option pricing model. The preferred stock warrant liability is included on the Company's consolidated balance sheets and its warrant revaluation is recorded as interest expense and is included in interest income (expense) and other, net. Immediately prior to the completion of the IPO, the warrant to purchase shares of convertible preferred stock was converted to a warrant to purchase shares of Class B common stock and was no longer classified as a liability on the Company's consolidated balance sheets. On September 26, 2016, the warrant holder exercised the warrant and the Company issued shares of Class B common stock through a cashless exercise of the warrant, in accordance with its terms. See Note 5 for additional information.

Revenue Recognition

The Company derives its revenue from two sources: (1) subscription revenue, which is comprised of subscription fees from customers utilizing the Company's applications, fees for additional support beyond the standard support that is included in the basic subscription fees, which are referred to as premium support offerings, and fees for subscription based online training offerings; and (2) professional services, which consist of fees associated with the implementation and configuration of the Company's applications, as well as fees for in-person training and TBM Council conference registration and sponsorship fees. Implementation and configuration services primarily consist of consultative services, such as data mapping and establishing best practices. Implementation and configuration services do not result in any significant customization or modification of the software platform or user interface. The Company presents revenue from each of these sources separately in its consolidated statements of operations.

The Company recognizes revenue when all of the following conditions are met: (1) there is persuasive evidence of an arrangement; (2) the service has been provided to the customer; (3) the collection of related fees is reasonably assured; and (4) the amount of fees to be paid by the customer is fixed or determinable. If collection is not reasonably assured, the Company defers the revenue recognition until collectability becomes reasonably assured. In addition, in instances where final acceptance of non-standard service deliverables are required before revenue is recognized, revenue and the associated costs are deferred until all acceptance criteria have been met. The Company's arrangements do not contain general rights of return.

The Company enters into arrangements with multiple deliverables that primarily include subscription and professional services, but may also include premium support, online training and in-person training. The professional services are not considered essential to the functionality of the software. To qualify as a separate unit of accounting, the delivered item must have value to the customer on a stand-alone basis. The Company believes its subscription offerings and its professional services offerings have stand-alone value. The Company's subscriptions have stand-alone value because such services are often sold separately from other professional services. The Company's professional services have stand-alone value because those services may be sold separately by other vendors and there are trained third-party consultants capable of performing the professional services. Deliverables that are accounted for separately consist of software subscription, professional services, premium support and online and in-person training.

When arrangements involve multiple elements that qualify as separate units of accounting, the Company allocates revenue to each deliverable in a multiple-deliverable arrangement based upon its relative selling price. The estimated selling price for each element is based upon the following hierarchy, in order of priority: (1) vender-specific objective evidence, or VSOE, of selling price, if available; (2) third-party evidence, or TPE, of selling price, if VSOE of selling price is not available; or (3) best estimate of selling price, or BEBP, if neither VSOE of selling price nor TPE of selling price is available.

The Company determines VSOE of selling price based on historical stand-alone sales to customers. In determining VSOE, the Company requires that a substantial majority of the selling prices for its subscription or professional services fall within a reasonably narrow pricing range of the applicable median selling price. The Company has not yet been able to establish VSOE for its subscription and professional services because it has not historically priced its service offerings within a sufficiently narrow range. When VSOE cannot be established, the

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Company applies judgment with respect to whether it can establish a selling price based on TPE. TPE is determined based on third-party prices for similar deliverables when sold separately. Generally, the Company's pricing strategy differs from that of its peers and its services and solutions contain a significant level of differentiation such that the comparable pricing of other offerings with similar functionality cannot be obtained. Furthermore, the Company is unable to reliably determine what similar competitor services' selling prices are on a stand-alone basis. As a result, the Company uses BESP as the selling price for its services.

The Company estimates BESP for subscriptions, premium support and online training based on the historical amounts for such deliverables on a stand-alone basis. The BESP for professional services is based on the historical average rate per hour charged, and BESP for in-person training is based on historical amounts on a per-seat basis.

The Company recognizes revenue for subscription fees from customers utilizing its applications ratably over the subscription term, which are typically one to three years. The Company's subscription arrangements generally do not allow the customer the contractual right to take possession of the software; as such, the arrangements are considered to be service contracts. In those limited situations where the customer takes possession of the software, the Company follows the guidance in Accounting Standards Codification, or ASC, 985, *Software Revenue Recognition*. Fees for premium support offerings and subscription-based online training are generally one-year agreements billed upfront, and are recognized ratably over the term of the support or training agreement. The Company's premium support offerings include all of the Company's standard incident support services, with enhanced response times, dedicated support resources, access to architecture and configuration experts and other services not included with standard support. The Company's subscription-based online training provides self-directed training for customers via access to recorded training sessions.

Professional services revenue consists of fees associated with application configuration, integration, change management, education and training services, and conference registration and sponsorship fees. The Company's professional services engagements are priced either on a time-and-materials basis or on a fixed-fee basis. The duration of the Company's professional services engagements varies based on the scope of services requested, but typically ranges between three and six months. For time-and-materials arrangements, the Company recognizes revenue as hours are worked. For fixed-fee arrangements, the Company recognizes professional services revenue as delivered using the percentage of completion, or POC, method measured on an hours incurred basis. Under the POC method of accounting, revenue and expenses are recognized as work is performed based on the relationship between actual hours incurred and total estimated hours at the completion of the project. Changes to the original estimates may be required during the life of the project. Estimates of both hours and costs to complete a project are reviewed periodically and the effect of any change in the estimated hours to complete a project is reflected as an adjustment to revenue in the period the change becomes known.

If current estimated costs to complete a project exceed the revenue allocated to the project, a loss equal to the amount of estimated excess costs will be recognized in the period the change becomes known. The use of the POC method of accounting involves considerable use of estimates in determining revenue, costs and profits, and in assigning the amounts to accounting periods. Associated out-of-pocket travel expenses related to the delivery of professional services are typically reimbursed by the customer. Out-of-pocket expense reimbursements are recognized as revenue and cost of service expense.

Fees for in-person training are billed in advance of the training and are recognized in the period the training occurs. Conference registration and sponsorship fees are for TBM Council conferences and related TBM Council activities. Registration fees for TBM Council conferences are billed in advance of the conference and are recognized in the period the conference occurs. TBM Council sponsorship fees are paid in advance and are recognized in the period the sponsorship activities occur, or ratably over the contractual period if the sponsorship entails ongoing activities beyond a single event.

On occasion, the Company sells its subscriptions through third-party resellers. These arrangements typically call for the reseller to retain a portion of the price to the customer as compensation. Since the Company is typically responsible for the acceptability of the services purchased by the customer, the Company is the primary obligor in the transaction and, therefore, records revenue on a gross basis based on the amount billed to the customer. Reseller fees are recognized as sales and marketing expense as incurred.

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Deferred revenue represents the unearned revenue on cash receipts or accounts receivable for the sale of subscriptions and for professional services for which services have not yet been provided. The substantial majority of deferred revenue relates to subscription revenue.

Research and Development

Research and development costs are expensed as incurred and primarily include payroll, employee benefits, consulting services, stock-based compensation expense and other headcount-related costs associated with product development and depreciation of equipment used in research and development.

Capitalized Software Costs

For development costs related to the Company's software solutions and internal use software, qualifying internally developed software costs, including payroll and stock-based compensation costs, incurred during the application development stage are capitalized and recorded in property and equipment, net. Costs related to preliminary project activities and post-implementation activities are expensed as incurred. The Company capitalized \$1.1 million, \$0.8 million and \$0.5 million for software development costs during the years ended December 31, 2016, 2015 and 2014, respectively. Stock-based compensation costs included in capitalized software costs and amortization of capitalized software costs were immaterial to the consolidated financial statements for all years presented.

Cost Allocation

The Company allocates certain overhead and information technology operating costs between cost of goods sold, research and development, sales and marketing, and general and administration expense based upon the number of employees in the related departments.

Sales Commissions

The Company pays sales commissions to employees shortly after executing customer agreements related to initial sales and subsequent renewals of all subscriptions and related services. Sales commission obligations are accrued to sales and marketing at the time of the initial sale for the full amount of the contract.

Income Taxes

The Company follows the asset and liability method of accounting for income taxes. This method requires recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the carrying amounts and the tax basis of assets and liabilities. A valuation allowance has been established for the full amount of the net deferred tax assets as the Company has determined that the future realization of the tax benefit is not more likely than not.

The Company recognizes the tax benefit from uncertain tax positions only if it is more likely than not that the tax position will be sustained on examination by the tax authorities, based on the technical merits of the position. The tax benefit is measured based on the largest benefit that is more likely than not of being realized upon ultimate settlement. The Company recognizes interest and penalties on amounts due to taxing authorities as a component of income tax expense.

The Company's quarterly income tax provision and its corresponding annual effective tax rate are based on expected income, statutory tax rates and tax planning opportunities available in the various jurisdictions in which the Company operates. For interim financial reporting, the Company estimates the annual effective tax rate based on projected taxable income for the full year and records a quarterly tax provision in accordance with the expected annual effective tax rate. As the year progresses, the Company refines the estimates of the year's taxable income as new information becomes available, including year-to-date financial results. This continual estimation process may result in a change to the Company's expected annual effective tax rate for the year. When this occurs, the Company adjusts the income tax provision during the quarter in which the change in estimate occurs so that the year-to-date

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

income tax provision reflects the expected annual effective tax rate. Significant judgment is required in determining the Company's annual effective tax rate and in evaluating the Company's tax positions.

Stock-Based Compensation

The Company recognizes expense related to the fair value of stock-based compensation. Compensation cost recognized for the years ended December 31, 2016, 2015 and 2014 includes costs for all share-based compensation arrangements based on the grant-date fair value and is recognized using the straight-line attribution method.

The Company's stock price volatility and expected option life involve management's best estimates, both of which impact the fair value of the award calculated under the Black-Scholes option pricing model and, ultimately, the expense that will be recognized over the life of the award. The Company is required to recognize compensation expense for only the portion of awards expected to vest. Therefore, management applies an estimated forfeiture rate that is derived from historical employee termination behavior. If the actual number of forfeitures differs from these estimates, additional adjustments to compensation expense may be required.

Recently Adopted Accounting Pronouncements

In November 2016, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2016-18, *Restricted Cash*, which is intended to add or clarify guidance on the classification and presentation of changes in restricted cash on the statement of cash flows and to eliminate the diversity in practice related to such classifications. The guidance in ASU 2016-18 is required for annual reporting periods ending after December 15, 2018, which represents the delayed adoption date applicable to private companies available to us pursuant to the Jump-start Our Business Start-ups Act, or the JOBS Act, with early adoption permitted. The Company early adopted this new standard retrospectively in the fourth quarter of 2016. The adoption of this standard resulted in the removal of the change in restricted cash within investing activities and inclusion of the amount of restricted cash in the total of cash, cash equivalents and restricted cash on the consolidated statements of cash flows for each period presented.

In August 2014, the FASB issued ASU No. 2014-15, *Presentation of Financial Statements – Going Concern (Subtopic 205-40)*, related to the disclosures around going concern. The new standard provides guidance around management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for fiscal years ending after December 15, 2016, with early adoption permitted. The Company adopted this standard in the fourth quarter of 2016. The adoption of this standard did not have a material impact on the Company's consolidated financial statements.

In August 2016, the FASB issued ASU No. 2016-15, *Classification of Certain Cash Receipts and Cash Payments*. ASU 2016-15 is intended to add or clarify guidance on the classification of certain cash receipts and payments in the statement of cash flows and to eliminate the diversity in practice related to such classifications. The guidance in ASU 2016-15 is required for annual reporting periods beginning after December 15, 2018, which represents the delayed adoption date applicable to private companies available to us pursuant to the JOBS Act, with early adoption permitted. The Company early adopted this standard retrospectively in the third quarter of 2016. The adoption of this standard resulted in the Company classifying \$0.2 million of debt prepayment fees incurred on the early extinguishment of debt within financing activities on the consolidated statements of cash flows for the year ended December 31, 2016. There was no impact on any prior periods.

New Accounting Pronouncements Not Yet Adopted

In October 2016, the FASB issued ASU 2016-16, *Inter-Entity Transfers of Assets other than Inventory*. The guidance requires entities to recognize the income tax impact of an intra-entity sale or transfer of an asset other than inventory when the sale or transfer occurs, rather than when the asset has been sold to an outside party. The guidance will require a modified retrospective application with a cumulative catch-up adjustment to opening retained earnings at the beginning of the first quarter of fiscal 2019, but permits adoption in an earlier period. The

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Company is currently evaluating the impact this guidance will have on our consolidated financial statements and the timing of adoption.

In March 2016, the FASB issued ASU 2016-09, *Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. For public entities, ASU 2016-09 is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. For all other entities, the guidance is effective for fiscal years beginning after December 15, 2017, and interim periods within those annual periods beginning after December 15, 2018. The Company is currently evaluating the impact this guidance will have on the Company's financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842)*. The objective of the update is to improve financial reporting by increasing transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. For public entities, the new standard is effective for interim and annual reporting periods beginning after December 15, 2018. For all other entities, the new standard is effective for annual reporting periods beginning after December 15, 2019, and for interim periods within those annual periods beginning after December 15, 2020. Early application of the amendments is permitted for all entities. The Company is currently evaluating the impact this guidance will have on the Company's financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*, outlining a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers that supersedes most current revenue recognition guidance. This guidance requires an entity to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Additionally, this guidance expands related disclosure requirements. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date*, which delayed the effective date of ASU No. 2014-09 by one year and is allowing earlier adoption; however, entities reporting under GAAP are not permitted to adopt the standard earlier than the original effective date for public entities. For public entities, the new standard is effective for annual periods and interim periods within those annual periods, beginning after December 15, 2017. For all other entities, the new standard is effective for annual periods beginning after December 15, 2018, and interim periods within those annual periods beginning after December 15, 2019. The new standard will require full or modified retrospective application. In March 2016, the FASB issued ASU 2016-08, *Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net)*, which is intended to improve the operability and understandability of the implementation guidance on principal versus agent considerations. The effective date for ASU 2016-08 is the same as the effective date for ASU 2014-09. In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing*, which clarifies the implementation guidance on identifying performance obligations and licensing. The effective date for ASU 2016-10 is the same as the effective date for ASU 2014-09. In May 2016, the FASB issued ASU 2016-12, *Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients*, which clarifies the implementation guidance on collectability, noncash consideration, presentation of sales tax and transition. Based on a preliminary assessment, we anticipate this standard will not have a material impact on subscription or services revenue recognition in our consolidated financial statements. However, the standard will require the Company to capitalize certain contract costs, such as commissions, which are currently being expensed as incurred and could have a material impact on the Company's consolidated financial statements. Additionally, the new guidance requires enhanced disclosures, including revenue recognition policies to identify performance obligations to customers and significant judgments in measurement and recognition. The Company is continuing to assess the impact of adoption, which may identify other impacts on the Company's financial statements, as well as the expected adoption method and timing.

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Note 2. Fair Value Measurements

The following tables present information about the Company's financial assets and liabilities that have been measured at fair value as of December 31, 2016 and 2015, and indicates the fair value hierarchy of the valuation inputs utilized to determine such fair value (in thousands):

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Money market funds	\$ 18,029	\$ —	\$ —	\$ 18,029
Corporate notes and obligations	—	33,840	—	33,840
U.S. government treasury securities	41,347	—	—	41,347
	<u>\$ 59,376</u>	<u>\$ 33,840</u>	<u>\$ —</u>	<u>\$ 93,216</u>

	December 31, 2015			
	Level 1	Level 2	Level 3	Total
Money market funds	\$ 8,015	\$ —	\$ —	\$ 8,015
Corporate notes and obligations	—	2,245	—	2,245
U.S. agency securities	—	3,015	—	3,015
U.S. government treasury securities	1,000	—	—	1,000
Preferred stock warrant liability	—	—	(414)	(414)
	<u>\$ 9,015</u>	<u>\$ 5,260</u>	<u>\$ (414)</u>	<u>\$ 13,861</u>

At December 31, 2016 and 2015, the Company utilized the market approach to value its money market mutual funds and U.S. government treasury securities using Level 1 valuation inputs because published net asset values were readily available. The Company's Level 2 marketable securities are valued using the market approach based on broker or dealer quotations, actual trade data, recent observable transaction information for similar securities, benchmark yields or alternative pricing sources with reasonable levels of price transparency, and include the Company's investments in U.S. government agency securities and corporate notes and obligations.

The Company's preferred stock warrants are categorized as Level 3 because they were valued based on unobservable inputs and management's judgment due to the absence of quoted mark prices, inherent lack of liquidity and the long-term nature of such financial instruments. The Company engaged a third party to perform a fair value assessment of the preferred stock warrant inputs on a quarterly basis using a hybrid allocation methodology. The following allocation methodologies were used: the Black-Scholes option pricing model, the Probability-Weighted Expected Return Method, or PWERM, and secondary transactions. In determining the inputs, the results of the various allocation methodologies are weighted based on multiple factors, including management's expectations on various exit outcomes and the similarities between the Company and its comparable companies in areas such as overall business model, level of revenue, market share, maturity of business and other metrics. The assumptions used in the hybrid allocation methodology are inherently subjective and involve significant judgment. Any change in fair value is recognized as interest expense and is included in interest (expense) income and other, net in the consolidated statements of operations. Immediately prior to completion of the IPO, the preferred stock warrant to purchase shares of convertible preferred stock was converted to a warrant to purchase Class B common stock. The warrant was exercised on September 26, 2016. See Note 5 for additional information.

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

The following table presents a reconciliation of the preferred stock warrant liability measured at fair value using significant unobservable inputs (in thousands):

Balance as of December 31, 2014	\$ 357
Changes in fair value of underlying warrant securities, recorded to interest expense	57
Balance as of December 31, 2015	414
Changes in fair value of underlying warrant securities, recorded to interest expense	202
Conversion of warrant, recorded to additional paid-in capital	(616)
Balance as of December 31, 2016	<u>\$ —</u>

Note 3. Investments

Available-for-sale investments consist of fixed-income securities that are accounted for at fair value. Premiums and discounts paid on securities at the time of purchase are recorded as accrued interest and amortized over the period of maturity. The amortized cost and fair value on the available-for-sale investments and unrealized gains and losses as of December 31, 2016 and 2015 were as follows (in thousands):

	December 31, 2016			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
<i>Amounts maturing in one year or less</i>				
Corporate notes and obligations	\$ 29,866	\$ —	\$ (25)	\$ 29,841
U.S. government treasury securities	6,900	—	—	6,900
Total short-term available-for-sale debt securities	<u>\$ 36,766</u>	<u>\$ —</u>	<u>\$ (25)</u>	<u>\$ 36,741</u>

<i>Amounts maturing in greater than one year</i>				
Corporate notes and obligations	\$ 4,010	\$ —	\$ (11)	\$ 3,999
U.S. government treasury securities	34,505	—	(58)	34,447
Total long-term available-for-sale debt securities	<u>\$ 38,515</u>	<u>\$ —</u>	<u>\$ (69)</u>	<u>\$ 38,446</u>

	December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
<i>Amounts maturing in one year or less</i>				
Corporate notes and obligations	\$ 2,245	\$ —	\$ —	\$ 2,245
U.S. agency securities	3,016	—	(1)	3,015
U.S. government treasury securities	999	1	—	1,000
Total available-for-sale debt securities	<u>\$ 6,260</u>	<u>\$ 1</u>	<u>\$ (1)</u>	<u>\$ 6,260</u>

As of December 31, 2016 and 2015, the Company did not consider any of the unrealized losses on its investments to be other-than-temporarily impaired based on its evaluation of available evidence. None of the investments held as of December 31, 2016 and 2015 have been in a continuous unrealized loss position for more than 12 months. Realized gains and losses on sales of available-for-sale securities were immaterial for all periods presented.

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Note 4. Property and Equipment

A summary of property and equipment is as follows (in thousands):

	December 31,	
	2016	2015
Computer and office equipment	\$ 15,740	\$ 14,253
Software	3,631	2,485
Furniture	1,561	1,278
Leasehold improvements	8,986	8,245
	29,918	26,261
Less: Accumulated depreciation and amortization	(17,091)	(12,774)
Property and equipment, net	<u>\$ 12,827</u>	<u>\$ 13,487</u>

Depreciation and amortization expense related to property and equipment was \$6.0 million, \$6.5 million and \$5.2 million for the years ended December 31, 2016, 2015 and 2014, respectively. During the years ended December 31, 2016 and 2015, the Company retired \$1.5 million and \$5.5 million fully depreciated computer and office equipment, respectively. Property and equipment includes \$198,000 and \$260,000 of capital leases at December 31, 2016 and 2015, respectively. Accumulated depreciation of these leased assets was \$113,000 and \$137,000 at December 31, 2016 and 2015, respectively. These leased assets are included in the computer and office equipment category in the table above.

The Company has an asset retirement obligation related to certain leased facilities. The accrued asset retirement obligation at December 31, 2016 and 2015 was \$175,000 and \$210,000, respectively.

Note 5. Warrants

Convertible Preferred Stock Warrant

The Company previously issued a warrant to purchase 27,321 shares of Series A convertible preferred stock in conjunction with a loan and security agreement with Silicon Valley Bank, or SVB, at an exercise price of \$1.37255 per share. Immediately prior to the completion of the IPO, this warrant was converted to a warrant to purchase 27,321 shares of Class B common stock. The fair value of the warrant at the time of conversion was \$0.6 million and was recorded as additional paid-in capital and a reduction of the preferred stock warrant liability. On September 26, 2016, the warrant holder exercised the warrant and the Company issued 25,658 shares of Class B common stock through a cashless exercise of the warrant, in accordance with its terms.

Common Stock Warrants

In connection with entering into and amending the senior credit facility, see Note 12, the Company issued warrants to purchase 21,444 shares of Class B common stock at an exercise price of \$13.99 per share and 5,241 shares of Class B common stock at an exercise price of \$14.31 per share. The warrants were recorded as additional paid-in capital and as debt issuance costs on the consolidated balance sheet. In connection with the repayment of the debt, the unamortized debt issuance costs related to the warrants were expensed and recorded as interest expense in the consolidated statements of operations.

On September 26, 2016, the warrant holders exercised these warrants and the Company issued 10,055 shares of Class B common stock through a cashless exercise of the warrants.

In addition, in connection with entering into the subordinated loan agreement, see Note 12, the Company issued warrants to purchase an aggregate of 21,208 shares of Class B common stock at an exercise price of \$14.31 per share. The warrants were recorded as additional paid-in capital and as debt issuance costs on the consolidated balance sheet. In connection with the repayment of the debt, the unamortized debt issuance costs related to the warrants were expensed and recorded as interest expense in the consolidated statements of operations.

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Notes to Consolidated Financial Statements (Continued)

On September 26, 2016, one of the warrant holders exercised warrants to purchase 10,604 shares of Class B common stock. The Company issued 3,874 shares of Class B common stock through a cashless exercise of the warrants. The remaining warrants to purchase 10,604 shares of Class B common stock were outstanding as of December 31, 2016.

Note 6. Stockholders' Equity

Convertible Preferred Stock

Immediately prior to the completion of the IPO, all shares of convertible preferred stock then outstanding were automatically converted to 18,239,475 shares of Class B common stock on a one-for-one basis.

Preferred Stock

As of December 31, 2016, the Company had authorized 5,000,000 shares of preferred stock, par value \$0.0001, of which no shares were issued and outstanding.

Common Stock

Immediately prior to the completion of the IPO, all shares of common stock then outstanding were converted to Class B common stock on a one-for-one basis. Shares offered and sold in the IPO were the newly authorized shares of Class A common stock.

As of December 31, 2016 the Company had authorized 451,000,000 shares of Class A common stock and 44,000,000 shares of Class B common stock, each par value \$0.0001 per share, of which 6,900,000 shares and 31,437,741 shares of Class A and Class B common stock, respectively, were issued and outstanding. Holders of Class A and Class B common stock are entitled to one vote per share and ten votes per share, respectively. Each share of Class B common stock is convertible at any time at the option of the holder into one share of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon transfer, subject to certain exceptions, and upon the earlier of (1) the seventh anniversary of the closing of the IPO, and (2) the date on which the Class B common stock ceases to represent at least 25% of the outstanding common stock. The shares of Class A common stock and Class B common stock are identical, except for voting and conversion rights.

As of December 31, 2015, the Company had 12,897,001 shares of common stock outstanding.

Note 7. Equity Incentive Plans

2007 Stock Plan

The Company granted options under its 2007 stock plan, as amended, or the 2007 Plan, until September 23, 2016, when the plan was terminated in connection with the Company's IPO. Accordingly, no shares are available for future issuance under this plan. The 2007 Plan continues to govern outstanding equity awards granted thereunder.

2011 Executive Equity Incentive Plan

The Company granted options under its 2011 executive equity incentive plan as amended, or the 2011 Plan, until September 23, 2016, when the plan was terminated in connection with the Company's IPO. Accordingly, no shares are available for future issuance under this plan. The 2011 Plan continues to govern outstanding equity awards granted thereunder.

2016 Equity Incentive Plan

The Company's 2016 Equity Incentive Plan, or the 2016 Plan, became effective on September 21, 2016. The 2016 Plan provides for the grant of incentive stock options, or ISOs, within the meaning of Section 422 of the

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Notes to Consolidated Financial Statements (Continued)

Internal Revenue Code, to the Company's employees or any of the Company's subsidiaries' employees, and for the grant of nonstatutory stock options, or NSOs, restricted stock, restricted stock units, or RSUs, stock appreciation rights, performance units and performance shares to employees, directors and consultants of the Company and the Company's subsidiaries' employees and consultants. The total number of shares of Class A common stock reserved for issuance under the 2016 Plan is equal to (1) 3,800,000 shares plus (2) a number of shares of Class A common stock equal to the number of shares of Class B common stock subject to awards granted under the 2007 Plan and the 2011 Plan, or our Existing Plans, that, on or after September 22, 2016 expire or otherwise terminate without having been exercised in full, and a number of shares of Class A common stock equal to the number of shares of Class B common stock issued pursuant to awards granted under our Existing Plans that are forfeited to or repurchased by us, provided that the maximum number of shares of Class A common stock that may be added to the 2016 Plan pursuant to (2) is 11,663,388 shares. These available shares will automatically increase each January 1, beginning on January 1, 2017, by the lesser of 5,500,000 shares of Class A common stock, by 5% of the outstanding shares of all classes of the Company's common stock as of the last day of the Company's immediately preceding fiscal year, or such other amount as the Company's board of directors may determine on or before the last day of the Company's immediately preceding fiscal year. Pursuant to the above, on January 1, 2017, the number of available shares automatically increased by 1,916,887.

2016 Employee Stock Purchase Plan

The Company's Employee Stock Purchase Plan, or 2016 ESPP, became effective on September 21, 2016. A total of 750,000 shares of the Company's Class A common stock were initially reserved for issuance under the 2016 ESPP. These available shares will automatically increase each January 1, beginning on January 1, 2017, by the lesser of 1,600,000 shares of Class A common stock, 1% of the number of shares of all classes of the Company's common stock outstanding on the immediately preceding fiscal year, or such lesser number of shares as determined by the Company's board of directors. Pursuant to the above, on January 1, 2017, the number of available shares automatically increased by 383,377.

The 2016 ESPP allows eligible employees to purchase shares of the Company's Class A common stock at a discount of up to 15% through payroll deductions of their eligible compensation, subject to any plan limitations. Except for the initial offering period, the 2016 ESPP provides for separate six-month offering periods beginning November 30 and May 31 of each fiscal year. The initial offering period will run from September 23, 2016 through May 31, 2017. The initial offering period includes the employee enrollment period, which runs from September 23, 2016 to November 10, 2016, at which time employee deductions commenced.

On each purchase date, eligible employees will purchase the Company's Class A common stock at a price per share equal to 85% of the lesser of (1) the fair market value of the Company's Class A common stock on the first trading day of the offering period, which for the initial offering period is the initial price to public in the IPO dated September 23, 2016, and/or (2) the fair market value of the Company's common stock on the purchase date.

During year ended December 31, 2016, no shares of Class A common stock were purchased under the 2016 ESPP.

Stock Options

Stock options are exercisable at a price equal to the market value of the underlying shares of the Company's common stock on the date of the grant as determined by the Company's board of directors or, for those stock options issued subsequent to the IPO, the closing price of the Company's common stock as reported on the Nasdaq Global Market on the date of grant. Stock options granted under the 2007 Plan, 2011 Plan and the 2016 Plan generally vest 25% one year from the date the requisite service period begins and continue to vest monthly for each month of continued employment over the remaining three years. Options granted generally are exercisable for a period of up to 10 years

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Notes to Consolidated Financial Statements (Continued)

Stock option activity under the 2007 Plan, 2011 Plan and the 2016 Plan during the year ended December 31, 2016 was as follows (in thousands, except per share and contractual life data):

	Options Outstanding	Weighted- Average Exercise Price per Share	Weighted- Average Remaining Contractual Life (years)	Total Intrinsic Value
Outstanding at December 31, 2015	10,506	\$ 8.51		\$ 60,911
Options granted	2,217	14.55		
Options exercised	(261)	5.09		
Options forfeited or canceled	(1,259)	11.18		
Outstanding at December 31, 2016	<u>11,203</u>	\$ 9.49	6.87	\$ 101,306
Vested and expected to vest at December 31, 2016	11,090	\$ 9.43	6.84	\$ 100,907
Exercisable at December 31, 2016	6,447	\$ 6.33	5.52	\$ 78,675

The weighted-average grant date fair value per share of options granted during 2016, 2015 and 2014 was \$5.73, \$6.05 and \$5.73, respectively. The total fair value of shares vested during 2016, 2015 and 2014 was \$8.3 million, \$7.6 million and \$5.1 million, respectively.

The total intrinsic value of options exercised during 2016, 2015 and 2014 was \$2.9, \$5.4 million and \$5.7 million, respectively. During 2016, 2015 and 2014, the Company received \$1.3 million, \$2.7 million and \$1.4 million, respectively, from exercises of stock options. Shares are issued from plan reserves upon exercise.

The fair value of stock options granted was estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

	Years Ended December 31,		
	2016	2015	2014
Dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	1.1% - 2.1%	1.3% - 2.0%	1.7% - 2.2%
Expected life	5.6 - 7.9	5.0 - 6.1	5.6 - 9.6
Expected volatility	37.4% - 42.4%	38.9% - 47.0%	46.9% - 51.3%

The weighted-average volatility used in the fair value calculations of option grants for 2016, 2015 and 2014, was 38.9%, 42.7% and 50.5%, respectively.

The Company has not declared or paid any dividends. The risk-free interest rate used in the Black-Scholes option pricing model is based on the implied yield available at the time of the option grant in U.S. Treasury securities at maturity with a term equivalent to the expected life of the option. Expected volatility is based on an average volatility of stock prices for a group of publicly traded companies with similar software product offerings. The expected life of options represents the period that the stock-based awards are expected to be outstanding. Consideration was given to the contractual terms of the stock-based awards, vesting schedules and expectations of future employee behavior. Given the absence of an active market for the Company's common stock, the Company's board of directors was required to estimate the fair value of the Company's common stock at the time of each option grant based on several factors, including consideration of input from management and contemporaneous third-party valuations. These valuations include consideration of enterprise value and assessment of other common and convertible preferred stock transactions occurring during the period. Subsequent to the completion of the IPO, the Company uses the market-closing price for the Company's Class A common stock as reported on the Nasdaq Global Market.

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Notes to Consolidated Financial Statements (Continued)

As of December 31, 2016, there was a total of \$26.0 million of unrecognized compensation cost related to unvested stock-based compensation associated with options granted under the 2007, 2011 and 2016 Plans. That cost is expected to be recognized over a weighted-average remaining expected term of 2.77 years

RSUs

RSU activity under the 2016 Plan during the year ended December 31, 2016 was as follows (in thousands, except per share data):

	RSUs Outstanding	Weighted-Average Grant Date Fair Value per Share
Non-Vested outstanding at December 31, 2015	—	\$ —
Granted	630	16.43
Vested	—	—
Forfeited or canceled	(2)	16.16
Non-Vested outstanding at December 31, 2016	<u>628</u>	\$ 16.43

RSUs granted under the 2016 Plan generally vest 25% one year from the date the requisite service period begins and continue to vest quarterly for each quarter of continued employment over the remaining three years. The aggregate grant date fair value of RSUs granted in 2016 was \$10.4 million.

We recognized \$0.3 million of stock-based compensation associated with RSUs during the year ended December 31, 2016. As of December 31, 2016, total unrecognized compensation cost, adjusted for estimated forfeitures, related to unvested RSUs was approximately \$10.0 million and weighted-average remaining vesting period was 3.9 years.

ESPP

There were no common shares issued under the 2016 ESPP. For the year ended December 31, 2016, the fair value of common shares to be issued under the 2016 ESPP was estimated using the Black-Scholes option pricing model with the following assumptions:

	<u>December 31,</u> <u>2016</u>
Dividend yield	0.0%
Risk-free interest rate	0.6%
Expected life	0.56
Expected volatility	33.9%

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

Stock-based compensation expense recognized in the Company's statement of comprehensive loss was as follows (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Cost of revenue			
Subscription	\$ 891	\$ 482	\$ 220
Professional services	820	738	609
Operating expenses			
Research and development	2,977	2,283	1,465
Sales and marketing	3,132	2,477	2,006
General and administrative	2,639	1,835	1,466
Total stock-based compensation	\$ 10,459	\$ 7,815	\$ 5,766

Note 8. Net Loss Per Share Attributable to Common Stockholders

The Company calculates basic and diluted net loss per share attributable to common stockholders in conformity with the two-class method required for companies with participating securities. The Company considers all series of convertible preferred stock to be participating securities. Under the two-class method, the net loss attributable to common stockholders is not allocated to the convertible preferred stock as the holders of convertible preferred stock do not have a contractual obligation to share in losses.

The diluted net loss per share attributable to common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period. For purposes of this calculation, convertible preferred stock, options to purchase common stock and warrants to purchase common stock and convertible preferred stock are considered common stock equivalents, but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is antidilutive. Basic and diluted net loss per share was the same for each period presented, as the inclusion of all potential common shares outstanding would have been antidilutive.

The following table sets forth the computation of basic and diluted net loss per share (in thousands, except per share data):

	Years Ended December 31,		
	2016	2015	2014
Numerator:			
Net loss attributable to common stockholders	\$ (31,553)	\$ (41,007)	\$ (32,872)
Denominator:			
Weighted-average common shares outstanding - basic and diluted	19,595	12,653	12,080
Net loss per common share - basic and diluted	\$ (1.61)	\$ (3.24)	\$ (2.72)

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

The following weighted-average outstanding shares of common stock equivalents were excluded from the computation of diluted net loss per share attributable to common stockholders for the periods presented because the impact of including them would have been antidilutive (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Options to purchase common shares	10,969	9,294	8,283
Restricted stock units	41	—	—
Employee stock purchase plan shares	29	—	—
Common stock warrant	36	6	—
Convertible preferred shares (as converted)	13,505	18,240	18,240
Preferred stock warrant (as converted)	20	27	27
	<u>24,600</u>	<u>27,567</u>	<u>26,550</u>

Note 9. Income Taxes

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

	Years Ended December 31,		
	2016	2015	2014
United States	\$ (26,161)	\$ (40,805)	\$ (33,155)
Foreign	(4,940)	(93)	539
Total	<u>\$ (31,101)</u>	<u>\$ (40,898)</u>	<u>\$ (32,616)</u>

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

	Years Ended December 31,		
	2016	2015	2014
Current:			
Federal	\$ —	\$ —	\$ —
State	7	21	—
Foreign	445	88	256
Total	<u>452</u>	<u>109</u>	<u>256</u>
Deferred:			
Federal	—	—	—
State	—	—	—
Foreign	—	—	—
Total	—	—	—
Provision for income taxes	<u>\$ 452</u>	<u>\$ 109</u>	<u>\$ 256</u>

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Notes to Consolidated Financial Statements (Continued)

The items accounting for the difference between income taxes computed at the federal statutory income tax rate of 34% and the provision for income taxes consisted of the following (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Income tax benefit at statutory rate	\$ (10,574)	\$ (13,832)	\$ (11,089)
State taxes, net of federal benefit	(213)	14	10
Impact of foreign income taxes	2,124	119	73
Stock-based compensation	2,340	1,629	1,043
Foreign exchange gain	(1,920)	—	—
Change in valuation allowance	9,510	12,673	10,434
Research and development credits	(764)	(674)	(408)
Other	(51)	180	193
	\$ 452	\$ 109	\$ 256

At December 31, 2016, the Company has U.S. net operating loss carryforwards of \$165.5 million, which may be used to offset future taxable income. The carryforwards expire in years ranging from 2027 through 2035. Carryforwards of net operating losses are subject to possible limitation should a change in ownership of the Company occur, as defined by Internal Revenue Code Section 382.

Approximately \$5.3 million of net operating loss carryforwards relate to tax deductible stock-based compensation in excess of amounts recognized for financial statement purposes. To the extent that net operating loss carryforwards, if realized, relate to excess stock-based compensation, the resulting tax benefits will be recorded to stockholders' equity (deficit), rather than to results of operations.

The Company's net deferred tax assets consisted of the following at December 31, 2016 and 2015 (in thousands):

Deferred tax assets (liabilities)	December 31,	
	2016	2015
Deferred tax assets:		
Net operating loss carryforwards	\$ 58,457	\$ 52,145
Deferred revenue	372	80
Tax credits	2,829	2,065
Accrued payroll	935	1,071
Accrued expenses not currently deductible	2,121	2,171
Non-qualified stock options	3,164	1,716
Depreciation and amortization	128	—
Other	46	128
Gross deferred assets	68,052	59,376
Valuation allowance	(68,052)	(58,542)
Total deferred tax assets, net of valuation allowance	—	834
Deferred tax liabilities:		
Depreciation and amortization	—	(399)
Unrealized foreign currency gain/loss	—	(435)
Total deferred tax liabilities	—	(834)
Net deferred assets	\$ —	\$ —

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Notes to Consolidated Financial Statements (Continued)

The Company has established a full valuation allowance equal to the net deferred tax asset balance due to the uncertainty of future realization of the net deferred tax assets.

The net change in the total valuation allowance was as follows (in thousands):

	December 31,		
	2016	2015	2014
Balance at beginning of period	\$ (58,542)	\$ (45,011)	\$ (34,357)
Tax valuation increase	(9,779)	(14,375)	(10,975)
Tax valuation decrease	269	844	321
Balance at end of period	<u>\$ (68,052)</u>	<u>\$ (58,542)</u>	<u>\$ (45,011)</u>

The calculation of the Company's tax obligations involves dealing with uncertainties in the application of complex tax laws and regulations. ASC 740, *Income Taxes*, provides that a tax benefit from an uncertain tax position may be recognized when it is more likely than not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, on the basis of the technical merits. The Company has assessed its income tax positions and recorded tax benefits for all years subject to examination, based upon its evaluation of the facts, circumstances and information available at each period end. For those tax positions where the Company has determined there is a greater than 50% likelihood that a tax benefit will be sustained, the Company has recorded the largest amount of tax benefit that may potentially be realized upon ultimate settlement with a taxing authority that has full knowledge of all relevant information. For those income tax positions where it is determined there is less than 50% likelihood that a tax benefit will be sustained, no tax benefit has been recognized.

Although the Company believes that it has adequately reserved for its uncertain tax positions, it can provide no assurance that the final tax outcome of these matters will not be materially different. As the Company expands internationally, it will face increased complexity, and its unrecognized tax benefits may increase in the future. The Company makes adjustments to its reserves when facts and circumstances change, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different than the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made.

The total balance of unrecognized gross tax benefits was as follows (in thousands):

	Years Ended December 31,		
	2016	2015	2014
Unrecognized tax benefits at beginning of year	\$ 2,065	\$ 1,391	\$ 255
Additions for tax positions in prior years	—	—	408
Additions for tax positions in the current year	764	674	728
Unrecognized tax benefits at end of year	<u>\$ 2,829</u>	<u>\$ 2,065</u>	<u>\$ 1,391</u>

The Company files income tax returns in the U.S. federal jurisdiction, various state jurisdictions, and internationally in the United Kingdom, Germany, Denmark, Netherlands, France, Canada, Australia and Singapore. As of December 31, 2016, 2015 and 2014, there is no accrued interest or penalties associated with income taxes recorded in the consolidated financial statements. The 2010 through 2016 tax years are open to review by taxing authorities.

Note 10. Segments

The Company operates its business as one operating segment. Its chief operating decision makers, or CODMs, are its Chief Executive Officer and Chief Financial Officer. The CODMs review separate revenue information for the Company's subscription and professional services revenue, and all other financial information presented on a

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

consolidated basis, for purposes of making operating decisions, assessing financial performance and allocating resources.

Revenue

The following table sets forth the Company's total revenue by geographic areas for the years ended December 31, 2016, 2015 and 2014, as determined based on the billing address of the customer (in thousands):

	Years Ended December 31,		
	2016	2015	2014
North America	\$ 120,306	\$ 101,192	\$ 86,565
Europe	33,800	22,296	16,077
APAC	6,463	5,763	3,973
	<u>\$ 160,569</u>	<u>\$ 129,251</u>	<u>\$ 106,615</u>

Revenue attributed to the United States was approximately 99% of North America revenue for the years ended December 31, 2016 and 2015, respectively, and 98% for the year ended December 31, 2014.

Long-lived Assets

The following table sets forth the Company's long-lived assets, net of accumulated depreciation, by geographic areas as of December 31, 2016 and 2015 (in thousands):

	December 31,	
	2016	2015
North America	\$ 10,894	\$ 11,353
Europe	1,523	1,435
APAC	410	699
	<u>\$ 12,827</u>	<u>\$ 13,487</u>

Note 11. Commitments and Contingencies

Leases

The Company has entered into non-cancellable operating leases, primarily related to rental of office space and certain office equipment. Certain lease agreements include rent payment escalation clauses and free rent (rent holidays). The total amount of base rentals over the term of the leases is charged to expense using the straight-line method with the amount of the rental expense in excess of lease payments recorded as a deferred rent liability. Total rent expense for operating leases was \$3.8 million, \$3.5 million and \$2.8 million for the years ended December 31, 2016, 2015 and 2014, respectively.

In May 2016, the Company amended its primary office space lease by adding an additional 9,000 square feet.

The Company also finances the purchase of certain office equipment under capital lease arrangements.

Other Commitments

The Company has entered into certain other non-cancellable agreements for software and marketing services that specify all significant terms, including fixed or minimum services to be used, pricing provisions and the

Apptio, Inc.
Notes to Consolidated Financial Statements (Continued)

approximate timing of the transaction. Obligations under contracts that are cancellable or with remaining terms of 12 months or less are not included.

Future minimum payments under non-cancellable operating and capital lease agreements and other non-cancellable agreements as of December 31, 2016 were as follows (in thousands):

Years Ending December 31,	Operating Leases	Capital Leases	Other Obligations
2017	\$ 4,513	\$ 46	\$ 468
2018	4,181	24	66
2019	4,175	22	—
2020	3,485	6	—
2021	3,556	—	—
Thereafter	3,959	—	—
Total Minimum Lease Payments	<u>\$ 23,869</u>	<u>\$ 98</u>	<u>\$ 534</u>
Less amounts representing interest		(4)	
Present value of capital lease obligations		94	
Less: Current portion		(43)	
Long-term portion of capital lease obligations		<u>\$ 51</u>	

Legal Matters

From time to time, the Company has become involved in claims and other legal matters arising in the ordinary course of business. The Company investigates these claims as they arise. Although claims are inherently unpredictable, the Company is currently not aware of any matters that may have a material adverse effect on the Company's business, financial position, results of operations or cash flows, individually or in the aggregate. The Company accrues estimates for resolution of legal and other contingencies when losses are probable and estimable. As of December 31, 2016, the Company does not believe that any material losses relating to claims were probable and estimable, and therefore has not recorded a reserve for any material contingencies.

Note 12. Credit Facilities

On April 20, 2016, the Company amended its revolving credit agreement, or the senior credit facility, with SVB and entered into a new subordinated loan and security agreement, or subordinated loan agreement, with SVB and ORIX Ventures, LLC. The Company incurred a total of \$20.0 million in term loan borrowings under these agreements in 2016.

Using the proceeds from the IPO, on September 28, 2016, the Company repaid the \$10.0 million principal amount of term borrowings under the senior credit facility, which is no longer available, and the \$10.0 million principal amount of term borrowings under the subordinated loan and security agreement. In addition, the Company paid a debt prepayment penalty and a final payment fee in the aggregate amount of \$0.2 million in connection with the foregoing repayment under the subordinated loan and security agreement. Unamortized debt issuance costs of \$0.5 million were expensed and recorded as interest expense in the consolidated statements of operations in the year ended December 31, 2016. The subordinated loan agreement was extinguished as a result of the repayment and no amounts were available to the Company under this agreement as of December 31, 2016.

The Company can incur revolver borrowings on a borrowing base tied to the amount of eligible accounts receivable, not to exceed \$15.0 million. Interest on the revolver borrowings accrues at a floating rate equal to the prime rate and is payable monthly. The revolver matures on June 16, 2017. No amounts were outstanding under the senior credit facility as of December 31, 2016 or 2015.

The senior credit facility contains customary conditions to borrowing, events of default and covenants, including covenants that restrict our ability to dispose of assets, merge with or acquire other entities, incur indebtedness, incur encumbrances, make distributions to holders of our capital stock, make investments or engage in transactions with our affiliates. If the Company's cash and cash equivalents, as defined in the senior credit facility,

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Notes to Consolidated Financial Statements (Continued)

are below \$25.0 million as of the last day of the applicable monthly measuring period, the Company will be required to comply with a financial covenant based on subscription and professional services bookings. This financial covenant is measured both monthly and quarterly, generally on a trailing six month basis. The Company was in compliance with all covenants as of December 31, 2016. The Company's obligations under the senior credit facility are secured by substantially all of the assets of the Company other than intellectual property.

Note 13. Quarterly Financial Information (Unaudited)

The following table contains selected unaudited financial data for each quarter of 2016 and 2015. The unaudited information should be read in conjunction with the Company's financial statements and related notes included elsewhere in this report. The Company believes that the following unaudited information reflects all normal recurring adjustments necessary for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period (in thousands):

	Three Months Ended							
	Dec 31, 2016	Sept 30, 2016	June 30, 2016	March 31, 2016	Dec 31, 2015	Sept 30, 2015	June 30, 2015	March 31, 2015
Total revenue	\$ 44,320	\$ 40,627	\$ 38,779	\$ 36,843	\$ 34,842	\$ 32,254	\$ 31,684	\$ 30,471
Gross profit	\$ 29,900	\$ 26,638	\$ 25,624	\$ 24,247	\$ 22,700	\$ 19,397	\$ 19,655	\$ 18,322
Net loss	\$ (7,917)	\$ (8,755)	\$ (8,985)	\$ (5,896)	\$ (12,736)	\$ (9,865)	\$ (9,211)	\$ (9,195)
Net loss per share attributable to common stockholders, basic and diluted	\$ (0.21)	\$ (0.63)	\$ (0.69)	\$ (0.45)	\$ (0.99)	\$ (0.77)	\$ (0.74)	\$ (0.74)

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has 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 the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our principal executive officer and principal financial officer have concluded that as of such date, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Control Over Financial Reporting

This annual report does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of the company's registered public accounting firm due to a transition period established by rules of the Securities and Exchange Commission for newly public companies.

Changes in Internal Control

There was no change in our internal control over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(e) of the Exchange Act that occurred during the three months ended December 31, 2016 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item will be included in an amendment to this annual report on Form 10-K or incorporated by reference from our definitive proxy statement to be filed pursuant to Regulation 14A.

Item 11. Executive Compensation.

The information required by this item will be included in an amendment to this annual report on Form 10-K or incorporated by reference from our definitive proxy statement to be filed pursuant to Regulation 14A.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item will be included in an amendment to this annual report on Form 10-K or incorporated by reference from our definitive proxy statement to be filed pursuant to Regulation 14A.

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

The information required by this item will be included in an amendment to this annual report on Form 10-K or incorporated by reference from our definitive proxy statement to be filed pursuant to Regulation 14A.

Item 14. Principal Accounting Fees and Services.

The information required by this item will be included in an amendment to this annual report on Form 10-K or incorporated by reference from our definitive proxy statement to be filed pursuant to Regulation 14A.

PART IV

Item 15. Exhibits, Financial Statement Schedules.

(a) The following documents are filed as a part of this Annual Report on Form 10-K:

(1) Consolidated Financial Statements:

Our Consolidated Financial Statements are listed in the "Index to Consolidated Financial Statements" under Part II, Item 8 of this Annual Report on Form 10-K.

(2) Financial Statement Schedules:

Schedules not listed above have been omitted because the information required to be set forth therein is not applicable or is shown in the financial statements or notes herein.

(3) Exhibits:

The documents listed in the Exhibit Index of this Annual Report on Form 10-K are incorporated by reference or are filed with this Annual Report on Form 10-K, in each case as indicated therein (numbered in accordance with Item 601 of Regulation S-K).

Item 16. Form 10-K Summary.

None.

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 Report to be signed on its behalf by the undersigned, thereunto duly authorized.

Apptio, Inc.

Date: February 17, 2017

By: _____ /s/ Sachin Gupta

Sachin Gupta
President and Chief Executive Officer

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

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Sachin Gupta</u> Sachin Gupta	President and Chief Executive Officer (Principal Executive Officer)	February 17, 2017
<u>/s/ Kurt Shintaffer</u> Kurt Shintaffer	Chief Financial Officer (Principal Financial and Accounting Officer)	February 17, 2017
<u>/s/ Thomas Bogan</u> Thomas Bogan	Chairman of the Board	February 17, 2017
<u>/s/ Peter Klein</u> Peter Klein	Director	February 17, 2017
<u>/s/ John McAdam</u> John McAdam	Director	February 17, 2017
<u>/s/ Matthew McIlwain</u> Matthew McIlwain	Director	February 17, 2017
<u>/s/ Ravi Mohan</u> Ravi Mohan	Director	February 17, 2017
<u>/s/ Rajeev Singh</u> Rajeev Singh	Director	February 17, 2017

Exhibit Index

Exhibit Number	Description	Schedule Form	Incorporated by Reference		Filing Date	Filed Herewith
			File Number	Exhibit		
3.1	Amended and Restated Certificate of Incorporation	10-Q	001-37885	3.1	November 4, 2016	
3.2	Amended and Restated Bylaws	S-1/A	333-213334	3.2	September 12, 2016	
4.1	Form of Specimen Stock Certificate	S-1	333-213334	4.1	August 26, 2016	
4.2	Amended and Restated Investors' Rights Agreement, dated May 3, 2013, by and among the registrant and the investors and founders named therein	S-1	333-213334	4.2	August 26, 2016	
4.2A	Amendment to the Amended and Restated Investors' Rights Agreement dated October 11, 2013	S-1	333-213334	4.2A	August 26, 2016	
10.1	Amended and Restated Loan and Security Agreement, dated June 16, 2015, by and between the registrant and Silicon Valley Bank	S-1	333-213334	10.1	August 26, 2016	
10.2	First Amendment to Amended and Restated Loan and Security Agreement, dated April 20, 2016, by and between the Registrant and Silicon Valley Bank	S-1	333-213334	10.2	August 26, 2016	
10.3	Subordinated Loan and Security Agreement, dated April 20, 2016, by and among Silicon Valley Bank; SVB, Orix Ventures, LLC; and the Registrant	S-1	333-213334	10.3	August 26, 2016	
10.5	Warrant to purchase Common Stock, issued to Silicon Valley Bank on June 16, 2015	S-1	333-213334	10.5	August 26, 2016	
10.6	Warrant to purchase Common Stock, issued to Silicon Valley Bank on April 20, 2016	S-1	333-213334	10.6	August 26, 2016	
10.7	Form of Warrant to purchase Common Stock, issued to lenders on April 20, 2016	S-1	333-213334	10.7	August 26, 2016	
10.8	Office Lease, dated May 15, 2012, by and between the registrant and Plaza East Property LLC	S-1	333-213334	10.8	August 26, 2016	
10.8A	First Amendment to the Office Lease Agreement dated August 20, 2012	S-1	333-213334	10.8A	August 26, 2016	
10.8B	Second Amendment to the Office Lease Agreement dated July 31, 2014	S-1	333-213334	10.8B	August 26, 2016	
10.8C	Third Amendment to the Office Lease Agreement dated May 13, 2016	S-1	333-213334	10.8C	August 26, 2016	
10.9*	Offer Letter, dated September 6, 2014 by and between John Morrow and the registrant	S-1	333-213334	10.9	August 26, 2016	
10.10*	Form of Director and Executive Officer Indemnification Agreement	S-1	333-213334	10.10	August 26, 2016	

Exhibit Number	Description	Schedule Form	Incorporated by Reference		Filing Date	Filed Herewith
			File Number	Exhibit		
10.11*	2007 Stock Plan, as amended	S-1/A	333-213334	10.11	September 12, 2016	
10.12*	UK Addendum to 2007 Stock Plan, as amended	S-1	333-213334	10.12	August 26, 2016	
10.13*	Form of Stock Option Grant Notice and Stock Option Agreement under the 2007 Stock Plan, as amended	S-1	333-213334	10.13	August 26, 2016	
10.14*	Form of Stock Option Grant Notice and Stock Option Agreement permitting early exercise under the 2007 Stock Plan, as amended	S-1	333-213334	10.14	August 26, 2016	
10.15*	Form of Notice of Stock Purchase Right and Restricted Stock Purchase Agreement under the 2007 Stock Plan	S-1	333-213334	10.15	August 26, 2016	
10.16*	Canadian Addendum to Forms of Stock Option Agreements under the 2007 Stock Plan, as amended	S-1	333-213334	10.16	August 26, 2016	
10.17*	2011 Executive Equity Incentive Plan, as amended	S-1	333-213334	10.17	August 26, 2016	
10.18*	Form of Stock Option Grant Notice and Stock Option Agreement under the 2011 Executive Equity Incentive Plan, as amended	S-1	333-213334	10.18	August 26, 2016	
10.19*	Form of Stock Option Grant Notice and Stock Option Agreement permitting early exercise under the 2011 Executive Equity Incentive Plan, as amended	S-1	333-213334	10.19	August 26, 2016	
10.20*	2016 Equity Incentive Plan	S-1/A	333-213334	10.20	September 12, 2016	
10.21*	Form of Stock Option Grant Notice and Stock Option Agreement under the 2016 Equity Incentive Plan	S-1/A	333-213334	10.21	September 12, 2016	
10.22*	Form of Restricted Stock Grant Notice and Restricted Stock Agreement under the 2016 Equity Incentive Plan	S-1/A	333-213334	10.22	September 12, 2016	
10.23*	Form of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement under the 2016 Equity Incentive Plan	S-1/A	333-213334	10.23	September 12, 2016	
10.24*	2016 Employee Stock Purchase Plan	S-1/A	333-213334	10.24	September 12, 2016	
10.25*	Executive Change in Control Severance Plan	S-1/A	333-213334	10.25	September 12, 2016	
10.26*	Outside Director Compensation Policy	S-1/A	333-213334	10.26	September 12, 2016	

Exhibit Number	Description	Schedule Form	Incorporated by Reference		Filing Date	Filed Herewith
			File Number	Exhibit		
10.27*	Executive Incentive Compensation Plan	S-1	333-213334	10.27	August 26, 2016	
21.1	List of Subsidiaries					X
23.1	Consent of Independent Registered Public Accounting Firm					X
31.1	Certification of Periodic Report by Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
31.2	Certification of Periodic Report by Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002					X
32.1	Certification of Principal 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 Principal 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	XBRL Instance Document					
101.SCH	XBRL Taxonomy Extension Schema Document					
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					

*Indicates a management contract or compensatory plan.

List of Subsidiaries

Subsidiary	Jurisdiction of Organization
Apptio Europe Limited	United Kingdom
Apptio France SAS	France
Apptio GmbH	Germany
Apptio Nordic ApS	Denmark
Apptio NL B.V.	The Netherlands
Apptio Pty Ltd.	Australia
Apptio Singapore PTE. LTD.	Singapore
Apptio Technology Canada Ltd.	Canada
Technology Business Management Council Ltd.	United States

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-213755) of Apptio, Inc. of our report dated February 17, 2017 relating to the consolidated financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Seattle, Washington

February 17, 2017

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

I, Sachin Gupta, certify that:

1. I have reviewed this Annual Report on Form 10-K of Aptio, 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)) 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. 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
 - c. 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 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 controls 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 controls over financial reporting.

Date: February 17, 2017

/s/ Sachin Gupta

Sachin Gupta

Chief Executive Officer

(Principal Executive Officer)

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

I, Kurt Shintaffer, certify that:

1. I have reviewed this Annual Report on Form 10-K of Apptio, 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)) 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. 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
 - c. 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 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 controls 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 controls over financial reporting.

Date: February 17, 2017

/s/ Kurt Shintaffer

Kurt Shintaffer

Chief Financial Officer

(Principal Financial and Accounting Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Apptio, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Sachin Gupta, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 17, 2017

By: _____
/s/ Sachin Gupta
Sachin Gupta
President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Apptio, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Kurt Shintaffer, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: February 17, 2017

By: _____
/s/ Kurt Shintaffer
Kurt Shintaffer
Chief Financial Officer
(Principal Financial and Accounting Officer)

